EA DV CONGRESS
AMSTERDAM 25-28 SEPTEMBER 2024
EUROPEAN ACADEMY OF DERMATOLOGY & VENEREOLOGY

Abstract N°: 109

Five-Year Real-World Drug Survival of Dupilumab In Severe Atopic Dermatitis and Associate Predictors

Francesca Barei*[1], Paolo Calzari[2], Luca Valtellini[2], Alessandra Chiei Gallo[2], Gabriele Perego[2], Simona Tavecchio[2], Martina Zussino[1], Angelo Valerio Marzano[1], Silvia Ferrucci[1]

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Introduction & Objectives:

Atopic dermatitis (AD) is a chronic, inflammatory skin disease, characterized by intense itch and recurrent eczematous skin lesions. Dupilumab is a humanized IgG4 monoclonal antibody that blocks both IL-4 and IL-13 signaling. Drug survival is an analysis which gives a reflection of daily practice by analyzing the time from initiation to discontinuation of therapy.

Materials & Methods:

The study population comprises patients with severe AD undergoing treatment with dupilumab, affiliated with the Allergological Dermatology Service at the Dermatology Unit of the Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico in Milan, Italy. The first patient commenced dupilumab treatment in June 2018, with data lock occurring in November 2023. At baseline, data were collected on sex, age, atopic comorbidities, other comorbidities, AD phenotype, involvement of specific sites, AD pattern, atopic family history, AD onset pattern and previous use of systemic drugs for AD. Drug survival was analyzed using unadjusted Kaplan-Meier survival curves to estimate the risk and time to discontinuation. Reasons for overall drug discontinuation were categorized as adverse events (AEs), loss of efficacy or ineffectiveness, and other reasons, including patient's decision, difficulty in obtaining the drug (e.g. during COVID pandemic), pregnancy, AEs and death unrelated to AD.

Results:

The entire population of the Allergological Dermatology Service, in November 2023 consisted of 709 patients. Months of follow-up ranged from 0 to 65 months of treatment. Among these, 591 (83.4%) patients were still under treatment, 26 (3.7%) were lost to follow-up (13 moved to another city and 13 did not attend the follow-up appointment), and 92 (13.0%) discontinued dupilumab. Reasons for discontinuation included AEs for 38 patients (41.3%), ineffectiveness for 19 (20.7%), loss of efficacy for 10 (10.9%), pregnancy for 12 (13.0%), other reasons for 13 (14.1%). The "other" reasons for discontinuation comprised difficulty obtaining the drug (4), diagnosis of chronic lymphocytic leukemia (1), myocarditis (1), major depressive event (1), patient's decision due to clinical remission (5), death due to other cause (1). The following AEs were recorded: ocular adverse events (17), psoriasis (9), hypereosinophilia (1), facial redness (7), arthralgias (3) and hypersensitivity reaction to injection (1). Out of the 637 patients statistically considered as "censored", 591 were still under treatment, 26 were lost to follow-up, 12 became pregnant and 8 discontinued dupilumab due to a cause not related to the drug.

The present study confirms an optimal long-term safety profile and effectiveness of dupilumab in 709 adult subjects with severe AD, reflecting a high drug survival rate, up to 56 months of observation. In particular, the overall drug survival rates were 96.6%, 93.4%, 89.9%, 84.2% and 74.1% at 12, 24, 48 and 60 months of treatment. Considering drug discontinuation exclusively due to inefficacy or loss of efficacy, the survival rate was 98.8%, 97.2%, 95.8%, 92.8 and 86.4% at 12, 24, 48 and 60 months of treatment. Considering drug discontinuation exclusively due to AEs, the survival rate was 97.8%, 96.4%, 94.0%, 91.7% and 83.2% at 12, 24, 48 and 60 months of treatment.

Conclusion:

The present study confirms an optimal long-term safety profile and effectiveness of dupilumab in 709 adult subjects with severe AD, reflecting a high drug survival rate, up to 56 months of observation.

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Abstract N°: 198

Study Design of Phase 3 Trials Evaluating Rocatinlimab Efficacy and Safety in Moderate-to-Severe Atopic Dermatitis: the ROCKET Program

Emma Guttman-Yassky*[1], Eric Simpson[2], Robert Bissonnette[3], Lawrence Eichenfield[4, 5], Kenji Kabashima[6], Paula Luna[7], Jana Tresnak Hercogova[8, 9], Lynda Spelman[10], Margitta Worm[11], Takahiro Arai[12], Ehsanollah Esfandiari[13], Hirotaka Mano[14], Prista Charuworn[15], Andrea Wang[15], Greg Kricorian[15]

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Introduction & Objectives:

Patients (pts) with moderate-to-severe atopic dermatitis (msAD) experience chronic symptoms resulting in significant clinical burden and impaired quality of life. Many pts fail to achieve or sustain an adequate response, cannot tolerate, and/or are not suitable for available treatment options. OX40, a key co-stimulatory molecule transiently expressed on activated effector and memory T cells, has been implicated in the pathogenesis and chronicity of AD. In a phase 2b study, rocatinlimab (AMG 451/KHK4083), an anti-OX40 monoclonal antibody that inhibits and reduces pathogenic OX40+ T cells, showed significant and progressive improvement in multiple measures of clinical severity compared with placebo, with a well-tolerated safety profile and no signs of immunosuppression (Guttman-Yassky E, et al. *Lancet*. 2023;401:204-14).

Materials & Methods:

The global ROCKET phase 3 program will evaluate rocatinlimab as monotherapy and combination therapy in 8 pivotal trials of adults and adolescents with msAD (Figure). Pts with or without prior exposure to biologics or systemic Janus kinase inhibitors (JAKi) are included. For adults with msAD, three 24-week, randomized, placebo-controlled studies will evaluate the efficacy and safety of rocatinlimab as monotherapy (IGNITE [NCT05398445], HORIZON [NCT05651711]) or in combination with topical corticosteroid and/or topical calcineurin inhibitor (SHUTTLE [NCT05724199]). ASTRO (NCT05704738) is a randomized study with an initial 24-week placebo-controlled period followed by 28-week rerandomized maintenance period evaluating the efficacy and safety of rocatinlimab as monotherapy or combination therapy in adolescents (aged ≥12 to <18 years) with msAD. The co-primary endpoints for IGNITE, HORIZON, SHUTTLE, and ASTRO are the achievement of a Validated Investigator's Global Assessment for Atopic Dermatitis (vIGA-ADTM) score of 0 (clear) or 1 (almost clear) with ≥ 2-point reduction from baseline and ≥ 75% reduction in Eczema Area and Severity Index (EASI) score from baseline at week 24. ORBIT (NCT05633355), a 52-week, open-label study, will assess the safety of rocatinlimab in adolescents with msAD. In addition, the effect of rocatinlimab on antibody responses to tetanus and meningococcal vaccinations will be evaluated in VOYAGER (NCT05899816). Adult or adolescent pts who complete a parent study (IGNITE, HORIZON, SHUTTLE, ASTRO, ORBIT, or VOYAGER) are eligible to enter ASCEND (NCT05882877), a long-term extension study evaluating the safety, tolerability, durability, and maintenance efficacy of rocatinlimab. Lastly, OUTPOST (NCT06224192) will evaluate the success of self-administered subcutaneous rocatinlimab in adults and adolescents with msAD.

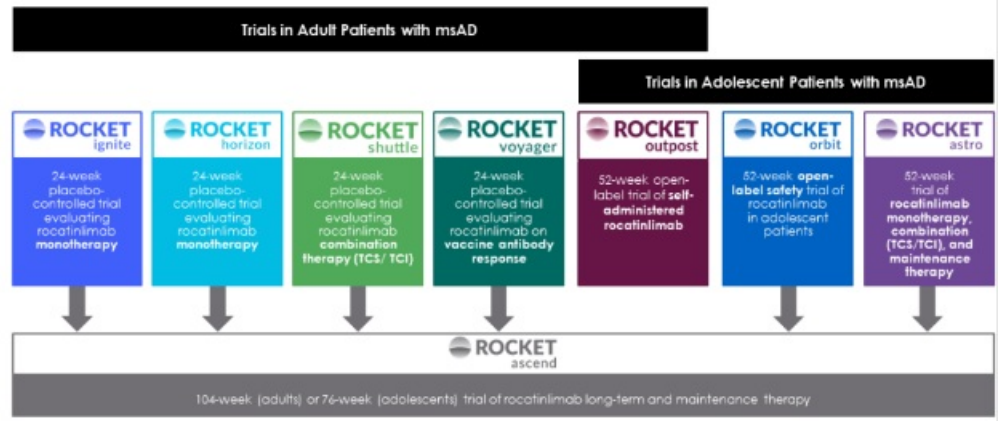
Results:

As of January 2024, ROCKET has enrolled 2235 pts from IGNITE, HORIZON, SHUTTLE (n=2065 adults), and ASTRO (n=170 adolescents). Mean (SD) age was 38.2 (14.7) and 14.7 (1.7) years for adults and adolescents, respectively, and 61.4% and 48.8% were White. Mean (SD) duration of AD was 23.3 (15.4) years in adults and 11.0 (4.8) years in adolescents. Baseline mean (SD) EASI score was 29.0 (11.1) in adults and 29.0 (10.8) in adolescents. Overall, 20.9% of adults and 14.7% of adolescents reported prior use of biologics or systemic JAKi for AD. The ROCKET program is ongoing.

Conclusion:

The comprehensive ROCKET phase 3 program will allow robust investigation of the efficacy and long-term safety of rocatinlimab in adults and adolescents with msAD.

Figure. ROCKET: Phase 3 Development Program Evaluating Rocatinlimab in Moderate-to-Severe AD



msAD, moderate-to-severe atopic dermatitis; SC, subcutaneous; TCI, topical calcineurin inhibitor; TCS, topical corticosteroid.

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Abstract N°: 223

Psychological burden, anxiety, depression, and quality of life in patients with hand eczema: a systematic review and meta-analysis.

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Psychological burden, anxiety, depression, and quality of life in patients with hand eczema: a systematic review and meta-analysis.

Mie Siewertsen1,2, Charlotte Näslund-Koch1,2,3, Jeanne Duus Johansen4, Anne Birgitte Simonsen1,4, Thi Thao Nguyen5, Claus Zachariae1,2,3, Lone Skov1,2,3, Nikolai Loft1,2

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Background and objectives: Living with hand eczema (HE) has been associated with impaired quality of life (QoL), having anxiety and depression but the magnitude is not clear. The aim of this systematic review and meta-analysis was to determine the psychological burden in terms of anxiety, depression, and quality of life in patients with HE.

Materials and Methods A systematic literature search across several databases was performed. Weighted means with standard deviation (SD) were calculated for disease severity, QoL, depression, and/or anxiety scores among patients with HE. For studies presenting QoL, depression, and/or anxiety scores in patients with HE and in controls the weighted means were compared with an unpaired T-test. In studies reporting Hand Eczema Severity Index (HECSI) and Dermatology Life Quality Index (DLQI), the correlation between HE severity and quality of life was estimated using Spearman's rank correlation (rs).

Results

In total, 81 studies encompassing 17,835 patients with HE and 31,541 controls were included. Across the included studies, the weighted mean DLQI was 10.66 (SD 8.93) corresponding to a moderate-to-large effect on the patient's life and a strong correlation (rs: 0.76, 95% CI:0.56-0.87) between DLQI and HECSI was observed. The mean EQ-5D-VAS was significantly lower in patients with HE compared with controls (68.03 (SD 10.52) vs 80.63 (SD 1.17), $p<0.00001$). Patients with HE had a higher mean HADS (Hospital Anxiety and Depression Scale)-anxiety score (7.4 vs. 5.8, $p=0.0008$) than controls but not depression score (6.5 vs 5.7, $p=0.32$). Only one study assessed risk of anxiety, depression, and suicidal ideation among patients with HE compared with controls. Here, patients

with HE had an increased odds of having depression (odds ratio (OR): 4.00 (2.01 to 7.97, p<0.001), anxiety (OR: 2.60 (95% CI: 1.45 to 4.67, p<0.001), and suicidal ideation (14.2% vs. 8.3% (OR 1.83 95% CI 1.10 – 3.02), p=0.02) compared with healthy controls.

Conclusion

Hand eczema has a moderate-to-severe impact on quality of life with a strong correlation between disease severity and impact on quality of life. Patients with HE appear to have a higher risk of depression, anxiety, and suicidal ideation than healthy controls although more and larger studies are warranted.

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Abstract N°: 251

Efficacy and Safety of LNK01001, a Highly Selective Janus Kinase 1 Inhibitor, in Chinese Patients with Moderate to Severe Atopic Dermatitis: Results from a, Randomized, Double-Blind, Placebo-Controlled Phase 2 Study

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Introduction & Objectives: LNK01001 is an oral JAK1 inhibitor with high selectivity over JAK2, JAK3, and tyrosine kinase 2. It is currently in clinical development for the treatment of autoimmune and inflammatory diseases, including atopic dermatitis (AD). Here, we present the 12-week efficacy and safety outcomes of LNK01001 in Chinese adult patients with moderate to severe AD from a randomized, double-blind, placebo-controlled Phase 2 study.

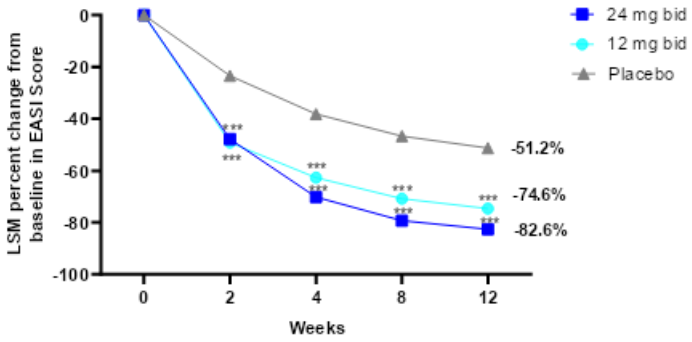
Materials & Methods: Eligible patients were adults (aged 18 to 75 years) with moderate-to-severe atopic dermatitis, as defined by an Eczema Area and Severity Index (EASI) score of ≥16, a validated Investigator's Global Assessment for Atopic Dermatitis score of 3 (moderate) or 4 (severe), and affected body surface area of ≥10%, with documented evidence of inadequate response or intolerant to topical, or have been treated with systemic, treatments. Patients were randomly assigned (1:1:1) to receive oral LNK01001 12 mg, LNK01001 24 mg or placebo (PBO) twice daily for 12 weeks. The efficacy primary endpoint was the percent change from baseline in EASI at week 12. Safety was also assessed.

Results: A total of 150 patients (84 [56%] male & 66 [44%] female; mean age 38.7 years [SD 15.8]) were enrolled, 50 each in the LNK01001 12 mg bid, 24mg bid and placebo group. Compared with placebo (-51.2% [95% CI -59.7% to -42.8%]), significant least-squares mean percent reductions in EASI score at week 12 were observed in both LNK01001 12 mg bid group (-74.6% [95% CI -83.1% to -66.1%]; $p < 0.001$) and 24 mg bid group (-82.6%

[95% CI -91.0% to -74.1%]; p< 0.001) (Figure). The proportion of patients who had achieved an EASI-75 response was significantly higher in both LNK01001 12 mg bid group (56.0% vs 34.0%; p < 0.05) and 24 mg bid group (72.0% vs 34.0%; p < 0.001) than the placebo group at week 12. Additionally, the proportion of patients who had achieved an IGA 0/1 response was significantly higher in LNK01001 12 mg bid group (38.0% vs 16.0%; p < 0.05) and 24 mg bid group (54.0% vs 16.0%; p < 0.001). The most frequently reported treatment-emergent adverse event (TEAE) was blood creatine phosphokinase increase in patients receiving LNK01001 (16/100), all were grade 1 based on CTCAE v5.0. No malignancy, major adverse cardiovascular event, thrombosis, or death were reported.

Conclusion: LNK01001 at doses of 12 mg bid and 24 mg bid resulted in greater improvements of AD than placebo and was generally safe and well-tolerated in Chinese adult patients with moderate to severe atopic dermatitis. Larger and longer-duration trials are required to determine the durability of its effects and longer-term safety in AD patients.

Figure. LSM percent change from baseline in eczema area and severity index (EASI) score over time



LSM, least-squares mean. ***P□0.001 versus placebo.

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Abstract N°: 297

Lebrikizumab as monotherapy improves the signs of moderate-to-severe atopic dermatitis across different body regions including the head and neck over one year of treatment

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Introduction & Objectives: Some areas of the body, and some individual signs may be more resistant to treatment in atopic dermatitis (AD). The efficacy of lebrikizumab (LEB), a high-affinity monoclonal antibody targeting interleukin-13, in improving body signs, such as erythema, edema/papulation, excoriation, and lichenification, by anatomical region at Week 16 has already been published for moderate-to-severe AD (1). The aim of this analysis was to determine the efficacy of LEB as monotherapy for AD across four clinical signs by anatomical region in two phase 3 clinical trials ADvocate1 (NCT04146363) and ADvocate2 (NCT04178967A) up to one year of treatment.

Materials & Methods: ADvocate1&2 were two identically designed, randomized, placebo- controlled, monotherapy trials assessing efficacy and safety of LEB in adult (≥18 years) and adolescent (12 to <18 years, ≥40kg) patients with moderate-to-severe AD. Responders were defined as patients achieving a 75% reduction in the Eczema Area and Severity Index (EASI) from baseline (EASI 75) or an Investigator's Global Assessment (IGA) 0/1 with a ≥2-point improvement from baseline, without use of rescue medication at W16. Patients who responded to LEB 250 mg every two weeks (Q2W) at the end of the 16-week induction period were re-randomized 2:2:1 to receive LEB 250 mg Q2W, LEB 250 mg every 4 weeks (Q4W), or placebo (LEB withdrawal) for 36 additional weeks (maintenance period). Each body region (head and neck, trunk, upper extremities, and lower extremities) was assessed separately for the following four EASI clinical signs of AD on a scale of 0 (absent) to 3 (severe): erythema, edema/papulation, excoriation, and lichenification. The mixed-effects model of repeated measures (MMRM) was used to evaluate change from baseline (CFB) at Week 52 in clinical signs of AD by anatomical regions. Data after rescue therapy usage or discontinuation of treatment were considered as missing and were handled using MMRM. Results were converted to percent CFB (%CFB) by dividing least squares mean CFB by total baseline mean in each clinical sign for each anatomical region. The modified Maintenance Primary Population (mMPP) was used for analyses.

Results: In ADvocate 1&2, the mean %CFB at Week 52 (LEB withdrawal/LEB Q2W/LEB Q4W) in erythema, edema/papulation, excoriation, and lichenification EASI sign scores were -48.0/- 47.9/-57.8, -52.2/-57.3/ -67.2, -69.7/-74.1/-90.0, -58.5/-65.6/-71.4, respectively, for head and neck (Figure 1); -40.7/-51.3/-61.0, -45.5/-60.4/-64.5, -62.4/-74.1/-79.1,-54.7/-68.1/-71.4, respectively, for trunk (Figure 2); -46.0/-48.4/-58.6, -53.5/-60.8/-65.7, -56.2/-74.1/-77.5, -53.3/- 60.6/-60.4, respectively, for upper extremities (Figure 3); and -39.6/-60.6/-61.4, -47.2/-63.2/-74.6, -68.1/-72.6/-87.4, -52.8/-69.4/-72.9, respectively, for lower extremities (Figure 4).

Conclusion: Lebrikizumab as monotherapy consistently reduced the severity of AD and the extent of involvement

across all body regions, including the head and neck, and the response was sustained from Week 16 up to Week 52. Lebrikizumab also reduced the severity of all four clinical signs of AD, including lichenification, in all body regions, and the response was sustained from Week 16 up to Week 52.

References:

1. Simpson et al. J Clin Aesthet Dermatol 2023;16(4 Suppl 1):S5–S31.

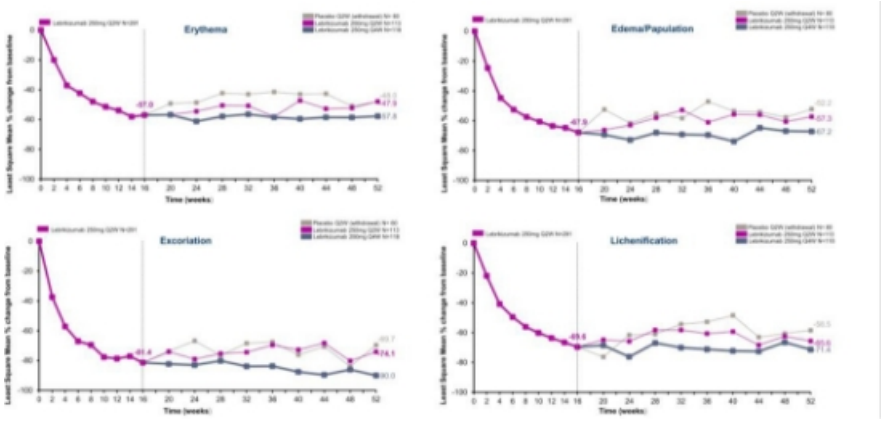


Figure 1. Head and neck

Figure 2. Trunk

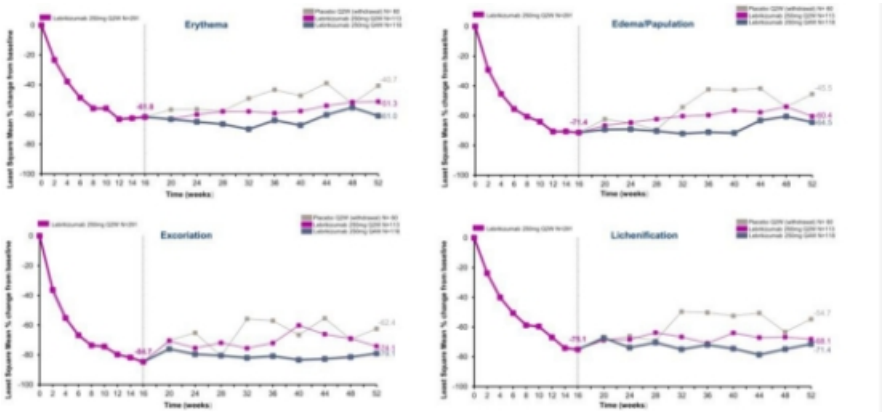


Figure 3. Upper extremities

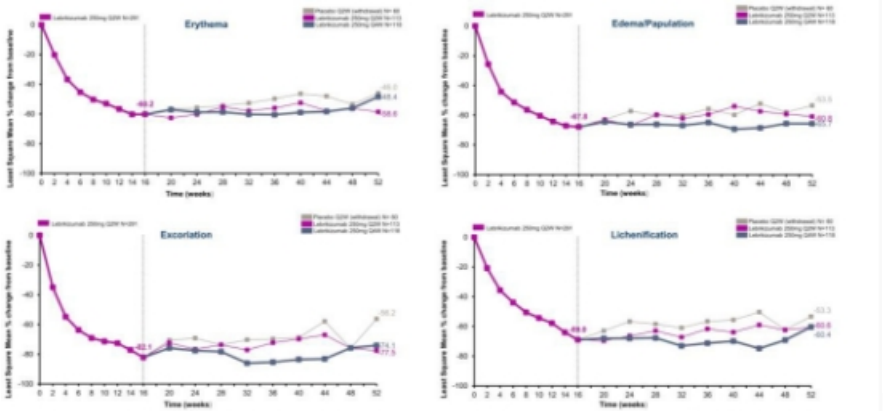
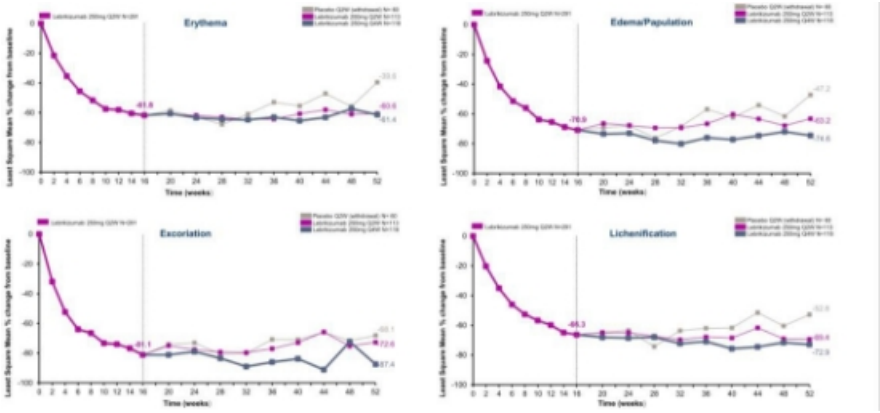


Figure 4. Lower extremities


Erythema
Edema/Papulation
Excoriation
Lichenification
Time (weeks)

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Abstract N°: 305

Increased expression of HMGB1 correlates with Th17/Treg imbalance in patients with atopic dermatitis

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Introduction & Objectives:

High-mobility group box (HMGB1) might participate in the regulation of Th17/Treg balance in various inflammatory diseases. However, the relationship between HMGB1 and the imbalance of Th17/Treg in AD has not yet been reported. The present study explored correlations between serum HMGB1 levels and Th17/Treg imbalance in AD patients.

Materials & Methods:

30 patients and 20 healthy individuals were enrolled. We stratified patients into mild, moderate, and severe based on the scoring severity of AD (SCORAD) score. Peripheral venous blood was collected. IL-17 and IL-10 concentrations were detected by ELISA, the frequencies of Th17 and Treg cells were detected by flow cytometry. Serum HMGB1, IL-17, IL-10, the frequencies of Th17 and treg cells were compared using Mann-Whitney U between AD patients and healthy controls. The Spearman rank correlation was used to assess correlation between HMGB1 and IL-17、IL-10、the frequencies of Th17 and treg cells.

Results:

Serum levels of IL-10 and IL-17A in AD patients were higher compared to healthy control. HMGB1 and the percentage of peripheral eosinophils were significantly higher in patients with severe than with mild to moderate AD. The percentages of Th17 cells and the ratio of Th17 to Treg cells were significantly higher than healthy control. The percentages of Treg cells lower than healthy control. The levels of serum HMGB1 were positively correlated with the percentage of Th17 cells、Th17/Treg and IL-17A.

Conclusion:

Serum HMGB1 was elevated in AD patients. HMGB1 was significantly higher in patients with severe than with mild to moderate AD. The levels of serum HMGB1 were positively correlated with the percentage of Th17 cells、Th17/Treg and IL-17A. We speculate that HMGB1 could regulate Th17 differentiation to promote the development of AD.

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Abstract N°: 339

Oxyresveratrol Attenuates Inflammation in Human Keratinocyte via Regulating NF-kB Signaling and Ameliorates Eczematous Lesion in DNCB-Induced Dermatitis Mice

Hung Gia Tran*[1, 2], Aussavashai Shuayprom[3], Asada Leelahavanichkul[2], Apiwat Tawatsin[3], Kriangsak Ruchusatsawat[3], Jongkonnee Wongpiyabovorn[2]

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Oxyresveratrol Attenuates Inflammation in Human Keratinocyte via Regulating NF-kB Signaling and Ameliorates Eczematous Lesion in DNCB-Induced Dermatitis Mice

Introduction & Objectives: Oxyresveratrol (2,4,3',5'-tetrahydroxystilbene; ORV) is a phytoalexin present in large amounts in the heartwood of *Artocarpus lakoocha*, which has been used in traditional medicine for decades. However, the role of ORV in skin inflammation has not been clearly demonstrated. Therefore, we investigated the anti-inflammatory effects of ORV on dermatitis model. Our purpose is to determine the anti-proliferative and anti-inflammatory effect of Oxyresveratrol (ORV) on keratinocytes, and the therapeutic efficacy of ORV cream on DNCB-induced dermatitis mice.

Materials & Methods: The effect of ORV was examined on human immortalized and primary skin cells exposed to bacterial components including peptidoglycan (PGN) and lipopolysaccharide (LPS). PGN and LPS were used to induce inflammation on immortalized keratinocytes (HaCaT) and human epidermal keratinocytes (HEKa). We then performed MTT assay, Annexin V and PI assay, cell cycle analysis, real-time PCR, ELISA and Western blot in these in vitro models. On mouse model, 2,4-Dinitrochlorobenzene (DNCB) was used to induce dermatitis. H&E staining, immunohistochemistry (IHC) staining with CD3, CD4 and CD8 markers were used to evaluate the effects of ORV in *in vivo* model of skin inflammation using BALB/c mice.

Results: Treatment with ORV on HaCaT cells showed the anti-proliferation effect through inducing apoptosis by activating caspase-3. Pretreatment of HaCaT and HEKa cells with ORV inhibited pro-inflammatory cytokine production on both mRNA and protein level through inhibition of NF-κB pathway. In DNCB-induced dermatitis mouse model, ORV treatment reduced lesion severity, and skin thickness and numbers of CD3, CD4 and CD8 T cells in the sensitized skin of mice.

Conclusion: It has been demonstrated that ORV treatment can ameliorate inflammation in the in vitro models of skin inflammation and in vivo models of dermatitis, suggesting a therapeutic potential of ORV for treatment of skin diseases particularly eczema.

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Abstract N°: 341

Therapeutic Success with Abrocitinib in the Treatment of a Teenager with Severe Atopic Dermatitis Poorly Responsive to Dupilumab

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Introduction & Objectives:

Abrocitinib is a selective JAK-1 inhibitor, approved in Brazil for patients above 12 years old with severe atopic dermatitis (AD) since June 2023.

We present a case of a teenager who did not achieve a satisfactory response with Dupilumab (an immunobiologic that acts by blocking the IL-4 and IL-13 signaling pathways) and had significant improvement after switching to Abrocitinib.

Materials & Methods:

Male patient, 13 years old, followed up in our clinic since September 2021 with severe AD and a history of multiple hospitalizations due to secondary infections, prolonged use of systemic corticosteroids, in addition to Methotrexate (MTX).

Initially, we introduced Cyclosporine A (CsA), but did not obtain a satisfactory response.

Due to the therapeutic failures with MTX, CsA and multiple courses of systemic corticosteroid therapy, as well as the repeated bacterial infections and an episode of eczema herpeticum, we decided to introduce Dupilumab.

The patient presented a good response to the immunobiologic, with improvement to the eczema, itching, and reduction in secondary infections. His only side effect was mild conjunctivitis.

However, after about 1 year of treatment, his condition began deteriorating and the conjunctivitis significantly worsened. Therefore, in December 2023, after 80 weeks of Dupilumab use, we opted to discontinue it and prescribe Abrocitinib 200 mg/day.

The response to the JAK-1 inhibitor was quick and excellent. After 3 weeks, the SCORAD (SCORing Atopic Dermatitis) dropped from 64.45 to 7.9, with a significant reduction in itchiness and improvement in sleep quality, as well as resolution of the conjunctivitis.

After 11 weeks of treatment, the patient has a SCORAD of 0 and has not shown any side effects of Abrocitinib.

Results:

Dupilumab (IL-4 and IL-13 signaling blocker immunobiologic) and Abrocitinib (JAK-1 selective inhibitor) are some of the drugs recently incorporated into the therapeutic arsenal for moderate to severe AD in Brazil.

The JADE COMPARE trial evaluated the effectiveness and safety of Abrocitinib (at doses of 100 and 200 mg/day, orally), in comparison to Dupilumab 300 mg every 2 weeks subcutaneously and placebo, regarding two AD severity scores: The Investigator's Global Assessment (IGA) and the Eczema Area Severity Index (EASI), for a period of 16 weeks. It also analyzed the reduction in itchiness after 2 weeks. The Abrocitinib, at the dose of 200 mg, was superior to every other group in all the evaluated criteria, the highlight being the rapid improvement in

itching.

Concerning safety, the main adverse effects found were nausea and acne in the Abrocitinib groups and conjunctivitis in the Dupilumab group.

An extension of this study, the JADE EXTEND trial, evaluated the outcome of switching from Dupilumab to Abrocitinib, after a 4-week washout period. Apart from the improvement in clinical condition in patients who hadn’t responded initially to Dupilumab, superior responses were observed with Abrocitinib 100 and 200 mg even in those who initially had success with Dupilumab. Furthermore, a rapid resolution of the Dupilumab-associated conjunctivitis was seen after switching.

Conclusion:

Our findings of swift and significant improvement in itching, as well as eczematous lesions, after switching from Dupilumab to Abrocitinib, in addition to the resolution of the Dupilumab-associated conjunctivitis, are in accordance with the presented literature.

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Abstract N°: 384

Assessment of Long-term Safety and Efficacy of Dupilumab Therapy in Patients with Moderate-to-Severe Atopic Dermatitis in the UAE: A Real-Life Observational Study

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Introduction & Objectives: *Background:* Atopic Dermatitis (AD) is a chronic relapsing and remitting inflammatory skin disease characterized primarily scaly, pruritic, and erythematous skin lesions, all of which can have a profound negative impact on a patient's quality of life. Dupilumab, is currently used for treating moderate-to-severe AD with promising efficacy and safety outcomes, however, limited data about long-term outcomes is available.

***Objective:* To assess the long-term safety and efficacy of Dupilumab therapy, as well as the quality of life in patients with moderate-to-severe AD in the UAE.**

Materials & Methods: This retrospective observational study was conducted in Al-Qassimi and Tawam Hospitals, UAE. Patients' data were extracted from the electronic medical records. Long-term efficacy and quality of life upon Dupilumab use were assessed by multiple validated assessment tools for patients with AD (SCORAD, EASI, DLQI/CDLQI, vIGA, and Pruritus NRS). The safety of therapy was also assessed through documented adverse events. The change in the scores of the assessment tools was determined by paired t-test and repeated measures ANOVA.

Results: This study included 96 patients with moderate-to-severe AD from two hospitals in the UAE between 2019 and 2023, who were followed- up over 36 months (3 years). Mean age was 23.7±13.8 years old and nearly half of the patients were females (52.1%, n= 50). In the study sample, AD most commonly appeared on the upper (88.5%, n= 85), lower extremities (71.3%, n= 78), and head-neck region (77.1%, n= 74). There was a significant improvement in patients' symptoms and' quality of life, which was observed in SCORAD, EASI, DLQI, vIGA, and Pruritus-NRS scores ($p<0.001$) over three consequence years of receiving Dupilumab therapy (weeks 2,6,12,24,52,104, and 156). Dupilumab demonstrated considerable safety with few patients reporting side effects such as drowsiness, injection site reaction, flaring AD, and conjunctivitis.

Conclusion: This study demonstrated that Dupilumab therapy was effective in the management of moderate-to-severe AD over long-term use and significantly improved patients' quality of life with an acceptable safety profile among children and adults.

Fig 1. Improvement in SCORAD score after Dupilumab therapy over 3 years.

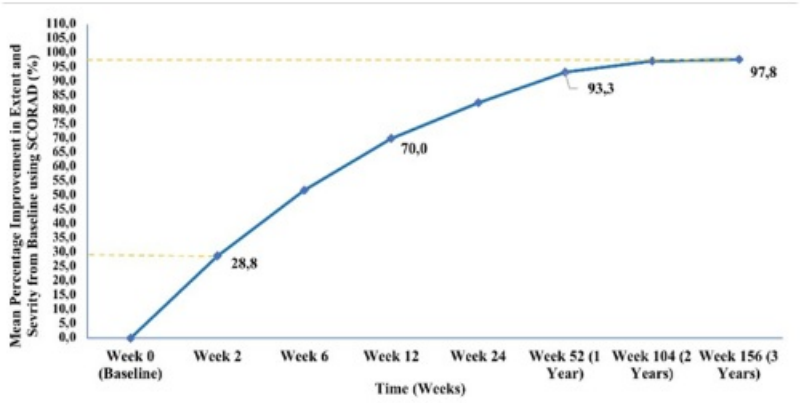

Fig 2. Improvement in EASI score after Dupilumab therapy over 3 years.

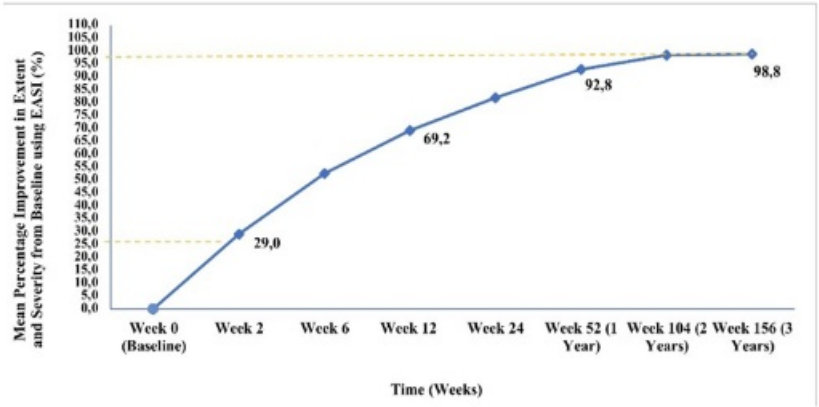

Fig 3. Improvement in IGA score after Dupilumab therapy over 3 years.

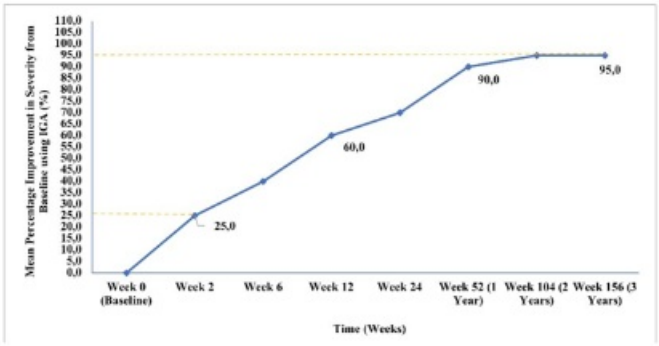

Fig 4. Improvement in DLQI and CDLQI scores after Dupilumab therapy over 3 years.

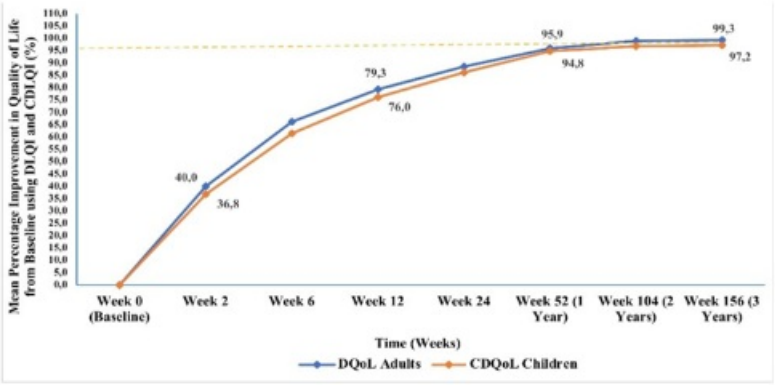

Fig 5. Improvement in Pruritus NRS score after Dupilumab therapy over 3 years.

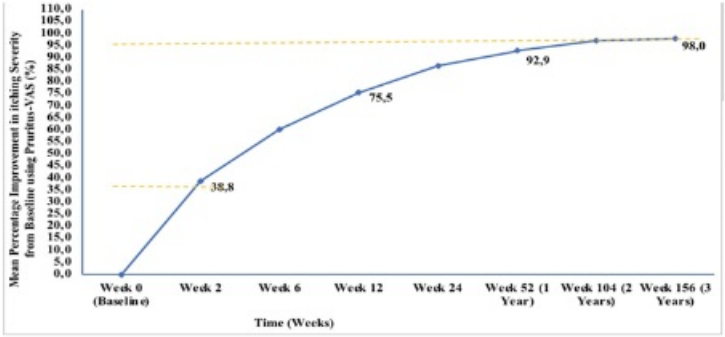

Fig 5. Improvement in Pruritus NRS score after Dupilumab therapy over 3 years.

Table 2. Incidence of Adverse drug reactions after receiving Dupilumab therapy and discontinuation of the treatment (n= 96)

ADRs	n (%)	Discontinuation of treatment n (%)	Continued treatment n (%)
Drowsiness	3 (3.1)	1 (1.0) at week 6	2 (2.1)
ISR	5 (5.2)	4 (4.2) at week 6	1 (1.0)
HSV	1 (1.0)	-	1 (1.0)
Flaring AD	2 (2.1)	1 (1.0) at week 60	1 (1.0)
Punctal Stenosis	1 (1.0)	1 (1.0) at week 95	-
Vitiligo	1 (1.0)	1 (1.0) at week 60	-
Conjunctivitis	4 (4.2)	1 (1.0) at week 60	3 (3.1)
Total (n out of 96)	**17(17.7)**	**9 (9.4)**	**8 (8.3)**

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Abstract N°: 396

Comprehensive Safety Data in Adult and Adolescent Patients With Atopic Dermatitis Treated With Dupilumab: Real-World Insights 1 Year Into the GLOBOSTAD Multinational Prospective Observational Study

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Introduction & Objectives: Atopic dermatitis (AD) is a chronic disease causing dry, inflamed, and itchy skin. Long-term AD disease management with systemic treatments, such as immunosuppressants, may be limited by safety concerns. In multiple randomized controlled trials (RCTs), dupilumab demonstrated robust efficacy and an acceptable safety profile1 in patients with moderate-to-severe AD. The ongoing GLOBOSTAD study aims to collect, along with long-term effectiveness, safety data in real-world AD treatment. Here we report a summary of adverse events (AEs) in patients 1 year after initiating dupilumab treatment.

Materials & Methods: The GLOBOSTAD 5-year, multinational, prospective, observational study (NCT03992417) enrolled patients 12 years of age or older with moderate-to-severe AD. Patients received dupilumab based on country-specific prescribing information. AEs were recorded at baseline, 3 months (±1 month), 6 months (±2 months), and 12 months (±2 months). Data are reported as observed for the enrollment/safety population (N = 955; data cutoff, March 2023).

Results: From the 955 patients enrolled in the GLOBOSTAD study, 942 (98.6%) were ≥18 years of age and 13 (1.4%) were 12 to 17 years of age. In the 12 months prior to enrollment, 672 (70.4%) patients were reported to have one or more type 2 inflammatory comorbidities. Patients were treated with dupilumab for a mean (standard deviation) of 11.7 (1.2) months. 758/863/705 patients completed the assessments at 3/6/12 months, and 155 (16.2%) patients discontinued the study within the 1-year time frame. During the study, AEs were reported in 359 (37.6%) patients (**Table 1**), with the most frequent AEs by Medical Dictionary for Regulatory Activities (MedDRA) Preferred Term (PT) reported in ≥1% of patients being allergic conjunctivitis (73 patients; 7.6%) and conjunctivitis (50 patients; 5.2%). Among the 73 patients with allergic conjunctivitis, 68.7% (57/83) events were classified as mild and 30.1% (25/83) events as moderate; 53.0% (44/83) events were resolved, and 20.5% (17/83) events were resolving at the end of the 12-month observation period. Similarly, among the 50 patients with conjunctivitis, equal number of events were mild and moderate (49.1% [28/57] each); 54.3% (31/57) events were resolved, and 21.0% (12/57) events were resolving at the end of the observation period. The most frequent events that led to permanent discontinuation of dupilumab were pregnancy (7 patients; 0.7%) and conjunctivitis PT (4 patients; 0.4%).

Conclusion: The incidence of AEs reported in the GLOBOSTAD study up to 1 year was lower than that seen in previous placebo-controlled studies of dupilumab.1 Nearly all allergic conjunctivitis and conjunctivitis events were

mild to moderate in severity and most events were resolved or resolving by the end of the 1-year observation period, consistent with previous RCTs of dupilumab.2 Aside from the lower AE incidence, safety data from this real-world study were overall consistent with the known safety profile and product label of dupilumab.

Table 1: Overview of adverse events in patients 1 year after initiating dupilumab treatment.

	Total (N = 955) n (%)	Number of events
Patients with ≥1 event(s)		
Any adverse events	359 (37.6)	718
Adverse events considered related to dupilumab by investigator[a]	187 (19.6)	255
Any serious adverse event	22 (2.3)	29
Any serious adverse event considered related to dupilumab by investigator	2 (0.2)	3
Adverse event leading to permanent discontinuation of dupilumab[b]	23 (2.4)	25
Adverse event leading to death[c]	1 (0.1)	1

[a]MedDRA PTs allergic conjunctivitis (5.4%) and conjunctivitis (4.7%) were the most common adverse events reported in patients. [b]MedDRA PTs pregnancy (0.7%) and conjunctivitis (0.4%) were the most common events leading to dupilumab discontinuation. [c]Reported cause of death was cardiac death (MedDRA PT) unrelated to treatment.

References:

1. Blauvelt A, et al. Lancet. 2017;389:2287-303.
2. Akinlade B, et al. Br J Dermatol. 2019;181:459-73.

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Abstract N°: 417

Comparison of Therapeutic Effects of Combined Oral Melatonin and Topical Betamethasone with Topical Betamethasone Alone in the Treatment of Atopic Dermatitis: A Randomized Clinical Trial

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Introduction & Objectives:

Considering the anti-inflammatory effects, immune system modulation, and sleep-regulating properties of melatonin, the present study was aimed at comparing the effects of topical betamethasone alone with topical betamethasone combined with oral melatonin in the treatment of atopic dermatitis.

Materials & Methods:

This randomized clinical trial was carried out on 62 patients with atopic dermatitis aged 18-65 years in Isfahan (Iran), with 50 participants (37 females and 13 males) completing the study. Participants were randomly assigned to two treatment groups, with one group receiving the standard treatment plus 3 mg oral melatonin tablets for 12 weeks. The disease status of participants was assessed using the SCORAD scale.

Results:

Both treatment groups showed significant changes in SCORAD score, affected area, disease intensity, and reported symptoms like insomnia and itching so that at the end of the treatment, the SCORAD index in the intervention group had decreased on average by 29.44, while in the control group, it decreased by 33.56. However, no significant difference was observed between the two groups in these changes. Additionally, no specific treatment-related side effects were reported during this study.

Conclusion: :

Although both treatment regimens resulted in significant improvement in the condition of atopic dermatitis, this study did not find a significant difference in the effectiveness of these two treatment regimens. The lack of a significant difference between the two treatments suggests the need for further investigation into alternative topical corticosteroid therapies to provide similar efficacy with reduced side effects.

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Abstract N°: 505

Successful Atopic Dermatitis Mouse Model for House Dust Mite Immunotherapy

Sylvia Anggraeni*[1], Dinar Chieko Triesayuningtyas[1], Anang Endaryanto[2], Cita Rosita Sigit Prakoeswa[1]

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Introduction & Objectives:

Atopic dermatitis (AD) mouse models has been widely explored to facilitate clinical interventional studies of potential treatment medicines in human AD. A mouse model that shows the resemblances of the clinical effectiveness of immunotherapy in AD patients is needed to study the underlying processes and develop novel immunotherapy techniques. This study aimed to assess the effectiveness of house dust mite (HDM) immunotherapy in BALB/c mice by evaluating the SCORAD and scratching behavior.

Materials & Methods:

This experimental study involved male BALB/c mice, 6 to 8 weeks old, separated into control, AD model, and immunotherapy group. The mice were sensitized with *Dermatophagoides pteronyssinus* allergen patch for a week and continuous allergen spray 30 minutes per day, except the control group which received placebo. The immunotherapy was injected into the mice subcutaneously with increasing dose every 4 injections and 3 days interval between injections. The doses were 0.1, 1, 10, and 100 µg. The control and AD model group received placebo injections. The mice were given allergen patch twice for one week with 2 weeks interval after the immunotherapy. The mice clinical scores (SCORAD and scratching behavior) were observed throughout the treatment on day 0, 8, 24, 36, 48, 60, 73 and 93.

Results:

The agreement between two researchers was significant with Cohen's kappa coefficient of 0.478 – 0.824 and p <0.001 for SCORAD evaluation and 0.708 – 0.919 and p <0.001 for scratching behavior evaluation. The SCORAD of the immunotherapy group was found to be lower than the AD model group since the observation on day 8. The scratching behavior of the immunotherapy group was higher than the AD model group on day 8 and 24 but from day 36 (the last day of immunotherapy dose II) onward, it was lower than the AD model group.

Conclusion:

BALB/c mice that were sensitized with HDM allergen and given HDM immunotherapy were proven to be a successful AD mouse model for immunotherapy.

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Abstract N°: 528

A child with severe atopic dermatitis treated successfully with HDM immunotherapy.

Khaloud Alhatmi*[1], Tariq Alfarsi,[2]

[1]OMSB, Dermatology, Muscat, Oman, [2]Royal hospital, Pediatric Immune, Muscat, Oman

Introduction & Objectives:

The clinical efficacy of allergen immunotherapy (IT) using house dust mite (HDM) extract has been proven for the treatment of allergic rhinitis, allergic asthma, and bee venom hypersensitivity. However, the clinical usefulness of IT for atopic dermatitis is still controversial. Here we describe an Omani male child with severe atopic dermatitis, treated successfully with HDM immunotherapy.

Materials & Methods:

Here we describe a 6 years old male child, known to have atopic dermatitis since age of 1 year, running severe course; affecting his overall quality of life. He presented to the outpatient department with long standing severe eczematous skin lesions. The known triggers for his eczema were fish, some types of chocolates, nuts and egg. His aunt was known to severe atopic dermatitis too. Over the last 3 years, he had developed progressive intractable pruritic eczema on the face, upper and lower extremities, predominantly on both flexural areas. The application of topical corticosteroids, such as betamethasone cream, along with an oral antihistamine did not help. His overall quality of life severely affected especially at nighttime. Skin examination exhibited dry erythematous to hyperpigmented lichenified hyperkeratotic scaly plaques with overlying erosions and excoriations over face and both upper and lower limbs. His allergy workup revealed a positive skin prick test and an elevated specific IgE to HDM (Table-1). His SCORAD Scoring Atopic Dermatitis was 72.65 (severe).

Results:

Given the severity of his condition, the patient was initiated on sublingual HDM IT; initially as initial phase with 10 IR/ml as per protocol (Figure-1). Ultimately, he was kept on maintenance phase with 300IR/ml (3 puffs) daily. There was a slight increase in his eczema in the first 2 weeks of therapy, however he improved later. Two months at follow up, the child's overall condition improved. His mother reported a significant improvement in child's symptoms especially the pruritis. The quality of life for both the child and parents have improved as well. SCORAD at that point of time was 22.2 (Mild).

Conclusion:

SLIT to HDM can improve pruritis and QoL for patients with severe AD. A period of 2 months of therapy may be required to observe a significant clinical improvement.

Table-1: Investigations

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SPT	Positive HDM
Immunoglobulin E (IgE)	7901
Eosinophils	1.3 (normal: 0.1-0.8),
Allergy testing specific IgE-House dust mite	D1=84.60 D2=>100

-1: Figure protocol for HDM immunotherapy therapy

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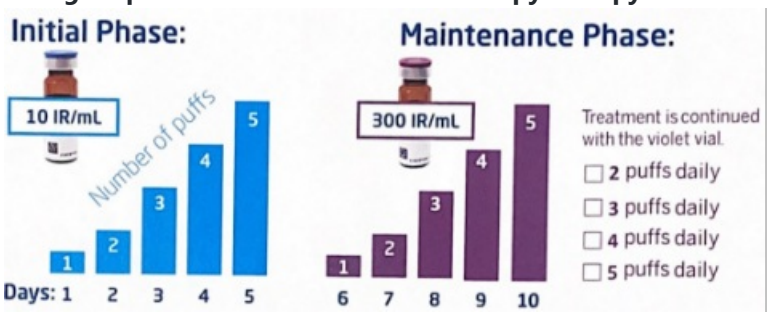

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Abstract N°: 541

Title: Spinal biomechanical alterations and intrinsic atopic dermatitis

Ignacio Umbert[1]

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Introduction & Objectives:

Intrinsic atopic dermatitis is a chronic inflammatory skin disease, with pruritus and eczematous lesions of skin. A long-lasting cycle of itch-scratch roots produces substantial morbidities and discomforts. While in patients with mild dermatitis, treatment can be accomplished with topical therapies. However, in patients with moderate to severe dermatitis, treatment is still a challenge.

In this context, to characterize the relationship between spinal biomechanical alterations (SBA) and the clinical involvement of intrinsic atopic dermatitis, as well as with the levels in blood of calcitonin gene-related peptide (CGRP). Furthermore, we also set out to investigate whether chiropractic can be an effective complementary treatment.

Materials & Methods:

In this prospective study, 33 patients with severity index (EASI) less than 7 were compared with 40 patients with EASI greater than 7. The severity level of SBA were quantified through the full spine radiographic description. The expression of CGRP was determined in blood using an ELISA test.

From the 73 patients, 51 were randomly assigned to the chiropractic treatment group and 22 were assigned to the control group. All patients were prescribed an anti-inflammatory topical cream. Patients in the treatment group also underwent chiropractic management. All data was compared and analyzed before and after the treatment.

Results:

A strong correlation between the overall SBA and the altered state of the skin as well as the CGRP levels. The EASI values correlated with the different segments of the spine including the cervical spine, the sagittal balance of the spine, the thoracic spine and the lumbar spine.

Although the EASI level of the patients in control group decreased after 2 weeks of using compound cream, after 3 months the dermatitis symptoms flared up again and the EASI levels returned to the original values. However, in patients included in the chiropractic treatment group, after 3 months, both the EASI and the CGRP levels remained at low levels.

Conclusion:

This study indicated that severity of intrinsic dermatitis was related to the SBA and that the levels of CGRP may serve as a valuable pathological marker. Moreover, the chiropractic treatment of patients proved to be a valuable complementary therapeutic tool.

CGRP (pg/ml)

EASI (Units)

R= 0.70

p< 0.001

3

4

5

6

0

20

40

60

80

CGRP Vs EASI

0

20

40

60

80

0

20

40

60

80

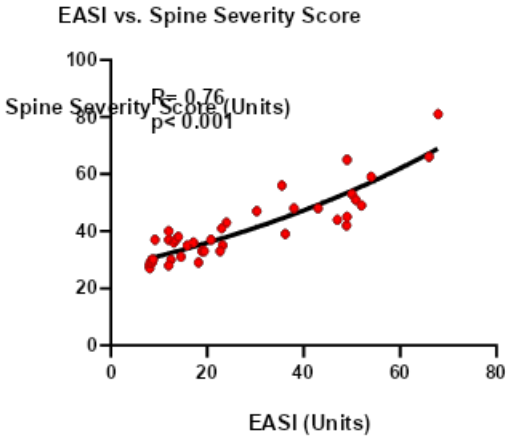
100

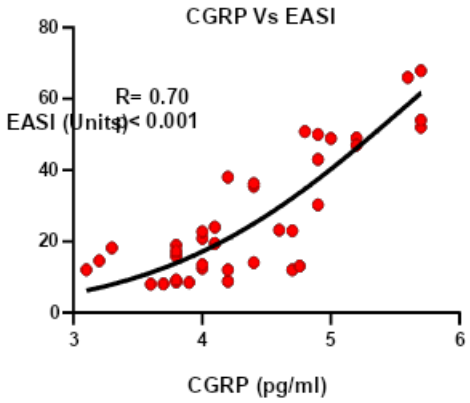
EASI vs. Spine Severity Score **

Spine Severity Score (Units)

EASI (Units)

R= 0.76


EASI vs. Spine Severity Score
Spine Severity Score (Units)
R= 0.76
p< 0.001
EASI (Units)


CGRP Vs EASI
EASI (Units)
R= 0.70
p< 0.001
CGRP (pg/ml)

p< 0.001

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Abstract N°: 551

Spinal biomechanical alterations and intrinsic atopic dermatitis

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Introduction & Objectives:

Intrinsic atopic dermatitis is a chronic inflammatory skin disease, with pruritus and eczematous lesions of skin. A long-lasting cycle of itch-scratch roots produces substantial morbidities and discomforts. While in patients with mild dermatitis, treatment can be accomplished with topical therapies. However, in patients with moderate to severe dermatitis, treatment is still a challenge.

In this context, to characterize the relationship between spinal biomechanical alterations (SBA) and the clinical involvement of intrinsic atopic dermatitis, as well as with the levels in blood of calcitonin gene-related peptide (CGRP). Furthermore, we also set out to investigate whether chiropractic can be an effective complementary treatment.

Materials & Methods:

In this prospective study, 33 patients with severity index (EASI) less than 7 were compared with 40 patients with EASI greater than 7. The severity level of SBA were quantified through the full spine radiographic description. The expression of CGRP was determined in blood using an ELISA test.

From the 73 patients, 51 were randomly assigned to the chiropractic treatment group and 22 were assigned to the control group. All patients were prescribed an anti-inflammatory topical cream. Patients in the treatment group also underwent chiropractic management. All data was compared and analyzed before and after the treatment.

Results:

A strong correlation between the overall SBA and the altered state of the skin as well as the CGRP levels. The EASI values correlated with the different segments of the spine including the cervical spine, the sagittal balance of the spine, the thoracic spine and the lumbar spine.

Although the EASI level of the patients in control group decreased after 2 weeks of using compound cream, after 3 months the dermatitis symptoms flared up again and the EASI levels returned to the original values. However, in patients included in the chiropractic treatment group, after 3 months, both the EASI and the CGRP levels remained at low levels.

Conclusion:

This study indicated that severity of intrinsic dermatitis was related to the SBA and that the levels of CGRP may serve as a valuable pathological marker. Moreover, the chiropractic treatment of patients proved to be a valuable complementary therapeutic tool.

CGRP (pg/ml)

EASI (Units)

R= 0.70

p< 0.001

3

4

5

6

0

20

40

60

80

CGRP Vs EASI

0

20

40

60

80

0

20

40

60

80

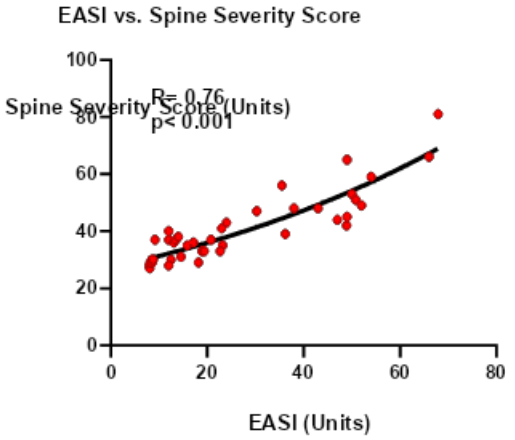
100

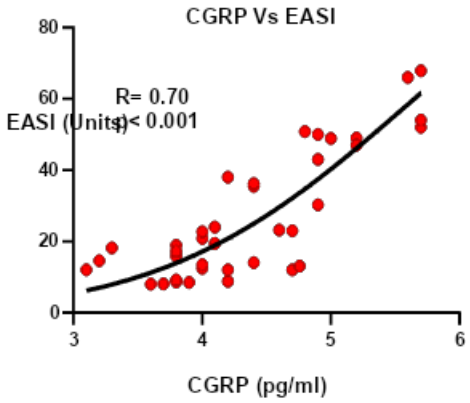
EASI vs. Spine Severity Score **

Spine Severity Score (Units)

EASI (Units)

R= 0.76


EASI vs. Spine Severity Score
Spine Severity Score (Units)
R= 0.76
p< 0.001
EASI (Units)


CGRP Vs EASI
EASI (Units)
R= 0.70
p< 0.001
CGRP (pg/ml)

p< 0.001

EADV CONGRESS
AMSTERDAM 25-28 SEPTEMBER 2024
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Abstract N°: 618

Impact of Atopic Dermatitis on Quality of life: Perspectives from Patients and Dermatologists.

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Introduction & Objectives:

Atopic Dermatitis (AD) is one of the most common inflammatory condition in developed countries affecting 20% of children and 10% of adults. It is a chronic, relapsing condition, associated with symptoms of itch, skin pain and dryness of skin. Beyond the skin, AD is increasingly recognized as a multi-systemic condition with disruptions to quality of life (QOL) across various domains ranging from sleep, daily functioning, relationships and work. AD is multi-faceted and its overall impact to the individual and in the different domains of life is varied. Several studies have shown that there is a discordance in the assessment of severity of the AD between patient and physicians. It is unclear if such discrepancy extends to the disease burden experienced by patients and what is perceived by physicians. Such insights are vital for patient engagement, holistic management and treatment adherence.

Materials & Methods:

In order to clarify the burden of disease in AD and to compare the responses between patients and dermatologists, an electronic questionnaire was sent via a QR link to participants of a patient education event (World Eczema Day Patient Forum). The questionnaire included basic demographics, disease characteristics, impact of the disease on various domains (symptoms/signs, psychological impact, social functioning, finances). An abridged version of the questionnaire evaluating impact of disease was sent to dermatologists and residents who were blinded to patients' responses.

Results:

The electronic survey questionnaire link was shared with 722 participants. 85 patient responses were included for analysis. Separately, there were 32 responses from healthcare providers (dermatologists, n=19 and residents, n=13). The top 5 attributes of AD impacting QOL as experienced by patients were itch (95%), poor quality of sleep (48%), extent of skin involvement (43%), skin pain (28%), anxiety/depression (24%) and cost of treatment (24%). From the dermatologist's perspectives, the top 5 attributes were itch (100%), poor quality of sleep (87.5%), disruption to work and study (81%), cost of treatment (50%), extent of skin involvement (43%) and embarrassment over skin (43%). Although both patients and healthcare providers recognized itch and poor quality of sleep (48% of patients; 87.5% of dermatologists) as important drivers of quality of life, skin pain and anxiety/depression were under-appreciated by dermatologists.

Conclusion:

These preliminary findings highlight potential gaps and opportunities: Addressing the itch and sleep impairment in AD is paramount and would have the largest impact on improving the QOL. Secondly, recognition and addressing skin pain and anxiety/depression in AD is important. Until recently, skin pain as a feature of atopic dermatitis was under-recognized. Skin pain in AD is increasingly recognized as a unique feature of disease, that is distinct from itch, and associated with significant impact on QOL. As such, assessment of skin pain should be performed routinely and strategies to manage skin pain should be a management and research priority.

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Abstract N°: 655

Phenotypic profile and clinical evolution in pediatric patients with moderate-severe atopic dermatitis of different origins. Descriptive case series multicenter observational study. AD-SKINS Project

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Introduction & Objectives: Atopic dermatitis (AD) is the most common chronic inflammatory dermatosis and represents a significant public health problem worldwide. In recent years, marked clinical variability has been described based on the ethnic and/or racial origin of patients, which could be related to different endotypes. There is limited information in the literature regarding the clinical description of the different phenotypic variants and their correlation with therapeutic response in each of them. We propose this study with the aim of identifying and defining the clinical characteristics of AD in pediatric age in our environment, based on different physiognomic groups, and their response to systemic treatment.

Materials & Methods: Descriptive case series multicenter observational study including all patients ≤18 years diagnosed with moderate-severe AD who initiated systemic treatment between June 2022 and December 2023. Data were collected on sex, age, physiognomic groups, overweight/obesity, phototype, clinical morphology, age at diagnosis, comorbidities, affected areas, baseline IgE, epicutaneous tests, systemic treatment received, treatment response (EASI, NRS, cDLQI, BSA, and IGA), number of admissions due to AD and treatment adverse effects.

Results: A total of 147 patients were included. The data from the variables, after a hierarchical method of agglomerative cluster analysis, were organized into three groups of clinical profiles: (1) Amerindians, phototype IV, overweight, atopic comorbidities, and classic morphology, (2) Asians, phototype V, without overweight, without atopic comorbidities, and lichenified and nummular morphology, and (3) Whites, phototype III, without overweight, with atopic comorbidities, and classic morphology. 56% of the sample were non-white. The most frequent systemic treatment consisted of innovative immunomodulatory drugs, particularly dupilumab. 80% of patients achieved an EASI 90 response at week 24 of follow-up, with good tolerance in most cases.

Conclusion: This study provides valuable information regarding the description of phenotypic heterogeneity in our context in AD and the promising outlook with new systemic treatments in all pediatric patient groups.

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Abstract N°: 685

Treatment and maintenance of xerotic skin using a once daily lipid replenishing cleanser and moisturizer

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Introduction & Objectives:

Xerotic skin presents with dryness, scales, and flakes, which can lead to fissures, cracks and sometimes eczema. These signs and symptoms can negatively affect patients' quality of life.

The purpose of this open-label, multicentre cohort study was to evaluate the improvement of mild-to-moderate xerosis following the use of a once-daily gentle cleanser and moisturizer, over a duration of 28 days.

Materials & Methods:

The study recruited subjects from 4 Canadian sites with a documented history of xerosis on the torso, arms, and/or legs. Clinical assessments were performed at baseline and end of study (Day 28 +/- 5 days) using the physician-assessed Dry Skin Classification Scale (DSCS) and the Global Aesthetic Improvement Scale (GAIS). The primary study endpoint was the proportion of subjects having at least a one-grade improvement in skin dryness, based on the DSCS.

Results:

48 Subjects were enrolled [8 males (16.67%); 40 females (83.33%)], with 47 subjects completing all study endpoints. The average age of the sample was 47.14 years (SD: 18.08). The population included Caucasian (n = 35; 72.92%), Asian (n = 8; 16,67%), other (n = 5; 10.41%) All subjects (100%) reported being entirely compliant with the once-daily application regimen. No product-related adverse events were reported. In addition, 91.49% (N = 43/47) of subjects in the per-protocol population met the primary endpoint, including: 51.06% (n = 24) of subjects demonstrating a multi-point decrease and 40.43% (n = 19) of subjects demonstrating a multi-point decrease in skin dryness. At the end of the study, 95.74% (45/47) of subjects at least "improved" based on the physician-assessed GAIS.

Conclusion:

The once-daily regimen was very well tolerated in a cohort of subjects that are prone to skin irritation. The investigative cleanser and moisturizer significantly improved clinical signs of xerosis, including skin dryness.

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Abstract N°: 746

The AbroAD study: Patient characteristics, treatment pattern and effectiveness of abrocitinib in adult patients with moderate to severe atopic dermatitis in Germany.

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Introduction & Objectives:

Atopic dermatitis (AD) is a chronic inflammatory skin disease characterized by severe pruritus and eczematous lesions with unpredictable periods of acute worsening alternating with periods of relative calm after treatment. For patients with moderate to severe disease severity that do not respond to topical therapy alone, induction of systemic treatment is recommended. In 2022, the oral janus kinase 1 (JAK-1) inhibitor abrocitinib has been approved for treatment of moderate to severe AD in adult patients eligible for systemic treatment. Randomized clinical trials demonstrated a fast relief of pruritus and skin clearance already after 4 weeks of treatment. This prospective, single-arm, multi-center, observational non-interventional study (NIS) evaluates patient characteristics, treatment pattern, long-term effectiveness, and safety data of abrocitinib in adult patients with moderate to severe AD in Germany.

Materials & Methods:

Adult patients with moderate to severe AD eligible for systemic treatment with abrocitinib are included in the NIS and documented over a time period of 12 months per patient. Efficacy endpoints include the proportion of patients achieving skin clearance (Investigator´s Global Assessment [IGA] of 0 or 1 [clear / almost clear]) and ≥75% improvement in Eczema Area and Severity Index [EASI-75] at month 3 (primary endpoints) and at all other visits, compared to baseline (secondary endpoints). SCORAD and several patient questionnaires such as DLQI complement the evaluation of treatment effectiveness. In AbroAD study, 750 patients shall be enrolled. All patients that had already undergone 2 visits until 18 Dec 2023 data cut off were evaluated within this unplanned ad hoc analysis.

Results:

Interim study population (N=65) was on average 40 years old, mainly male (44/65), suffered from mainly moderate (42/65) or severe AD (17/65) at baseline, and had onset of disease at <12 years of age (37/65). Looking at pretreatments for AD, 26/65 patients received systemic treatment from which 12/26 patients received biologics. Reasons for treatment initiation with abrocitinib were due to disease severity (53/65) and/or pretreatment failure (30/65). Initial dose of abrocitinib were 200 mg (49/65; 75.38%) or 100 mg (15/65; 23.08%) and only 1 patient starting with 50 mg (1/65; 1.54%). For 31/65 patients 75% disease reduction was achieved after 4 weeks (EASI-75). Effectiveness of treatment with abrocitinib is further demonstrated by mean IGA reduction of 1.38 after this treatment period (mean at baseline: 3.21; mean after 4 weeks treatment: 1.83; IGA ≤1 after 4 weeks: 16/69). Compared to the mean at baseline (56.42), SCORAD was reduced by 47.04% after 4 weeks. Compared to the mean at baseline (13.89), DLQI was reduced by 61.12% after 4 weeks. Itch reduction was demonstrated by PP-NRS4 achieved for 26/65 patients (compared to baseline) and PP-NRS0/1 of 16/65 with a mean reduction of the PP-NRS score by 58.92% after 4 weeks treatment.

Conclusion:

First interim results of the AbroAD study showed that abrocitinib provides rapid skin clearance and itch reduction, and is an effective treatment option, confirming the data from previous phase 3 clinical trials in this real-world setting.

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Abstract N°: 759

Dupilumab Treatment Improves Skin Barrier Function in Chinese Adolescent and Adult Patients with Moderate-to-Severe Atopic Dermatitis: BALISTAD-CN

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Introduction & Objectives:

Atopic dermatitis (AD) is a chronic inflammatory skin disease characterised by skin barrier dysfunction. It has been shown that dupilumab improves skin barrier function in patients (pts) with AD, but data for Chinese pts are limited. The skin Barrier function And LIpidomics STudy in Atopic Dermatitis in ChiNa (BALISTAD-CN; NCT05624112) evaluated dupilumab's effect on skin barrier function in Chinese patients with moderate-to-severe AD as compared with normal skin barrier function.

Materials & Methods: This open-label study (16-week [16W] treatment period + 4W safety follow-up) enrolled pts with moderate-to-severe AD aged 12–65 years and age-/sex-matched healthy volunteers. For AD pts, adults and adolescents ≥60 kg received dupilumab 300 mg every 2W (q2w) and adolescents <60 kg received dupilumab 200 mg q2w after loading doses on day 1 of 600 and 400 mg, respectively. Endpoints included: change from baseline (BL) at W16 in transepidermal water loss (TEWL) before skin tape strippings (STS) and after 5, 10, 15 and 20 STS on lesional skin (primary endpoint: after 5 STS), and on non-lesional skin in AD pts and normal skin in healthy volunteers; disease severity (Eczema Area and Severity Index [EASI], SCORing Atopic Dermatitis [SCORAD], and Peak Pruritus Numerical Rating Scale [PP-NRS] scores); quality of life (QoL; Dermatology Life Quality Index [DLQI]/Children DLQI [CDLQI]); sleep quality NRS; and safety.

Results:

Twenty-four pts (mean age 23.3 years; 58.3% male) with moderate-to-severe AD (Investigator's Global Assessment score of 3 or 4 in 9 pts [37.5%] and 15 pts [62.5%], respectively) were matched with 20 healthy volunteers (Table 1). At W16, dupilumab significantly improved skin barrier function in AD pts: the absolute mean (90% confidence interval [CI]) change from BL in TEWL after 5 STS was −25.6 (−35.0, −16.3; P<0.0001), before STS was −23.3 (−29.1, −17.4; P<0.0001), and after 10, 15 and 20 STS was −21.3 (−31.0, −11.6; P=0.0005), −18.0 (−27.9, −8.1; P=0.0024), and −6.0 (−14.2, 2.2; P=0.1119), respectively (n=23). For lesional skin in AD pts, the absolute change in TEWL after 5 STS was significantly reduced by W2 (−14.2; 90% CI −22.5, −6.0; P=0.0036); this was generally sustained through to W16, with similar results for TEWL before STS and after 10, 15 and 20 STS (Table 2). Significant improvements from BL were seen in EASI (absolute mean change: −24.7), SCORAD (−40.3), PP-NRS (−3.5), DLQI (−7.8) and sleep quality NRS scores (+2.6) at W16 in AD pts. Treatment-emergent adverse events occurred in 11/24 pts with AD (45.8%); none were serious or led to dupilumab dose reduction/discontinuation.

Conclusion:

In Chinese pts with moderate-to-severe AD, dupilumab improved skin barrier function, as seen by significant reductions in TEWL in lesional skin, and improvements in signs and symptoms, and QoL. Overall safety was consistent with its known safety profile.

Table 1. Baseline demographics and clinical characteristics (ITT population)

Characteristic	AD patients n=24	Healthy volunteers n=20
Age, years	23.3 ± 9.0	24.5 ± 6.5
Age group, n (%)		
≥12 to <18 years	7 (29.2)	4 (20.0)
≥18 years	17 (70.8)	16 (80.0)
Male sex, n (%)	14 (58.3)	12 (60.0)
Height, cm	166.7 ± 6.9	166.5 ± 9.1
Bodyweight, kg	61.9 ± 13.8	60.1 ± 13.0
BMI, kg/m^2	22.1 ± 3.8	21.6 ± 3.7
AD disease duration, months	60.9 ± 40.2	–
IGA score, n (%)		
0–2	0	–
3	9 (37.5)	–
4	15 (62.5)	–
EASI score	29.7 ± 9.1	–
ISS score	9.2 ± 1.9	–
POEM score	20.3 ± 6.3	–
SCORAD score	64.6 ± 11.5	–
PP-NRS score	5.7 ± 1.9	–
DLQI	13.1 ± 5.4[a]	–
CDLQI	10.3 ± 3.0[a]	–
Sleep quality NRS score	5.5 ± 2.1	–

Data are presented as mean ± standard deviation, unless stated otherwise.
[a]QoL was assessed in patients with AD aged ≥16y (n=20) using the DLQI and those aged ≥12 and <16y (n=4) using the CDLQI
AD, atopic dermatitis; BMI, body mass index; CDLQI, Children's Dermatology Life Quality Index; DLQI, Dermatology Life Quality Index; EASI, Eczema Area and Severity Index; IGA, Investigator's Global Assessment; ISS, Individual Signs Score; ITT, intention to treat; NRS, Numerical Rating Scale; POEM, Patient Oriented Eczema Measure; PP-NRS, Peak Pruritus Numerical Rating Scale; Q1, quartile 1; Q3, quartile 3; QoL, quality of life; SCORAD, SCORing Atopic Dermatitis.

Table 2. Baseline TEWL and change at Week 16

TEWL	AD patients		Healthy volunteers
	Lesional skin n=24	*Non-lesional skin n=24*	*Normal skin n=20*
Baseline			
Before STS	51.2 ± 14.2	28.2 ± 13.0	12.7 ± 3.9
After 5 STS	63.1 ± 19.1	32.8 ± 15.9	15.8 ± 6.7
After 10 STS	73.2 ± 20.7	41.9 ± 21.6	21.2 ± 10.7
After 15 STS	81.6 ± 21.8	55.9 ± 26.5	31.4 ± 16.3
After 20 STS	84.7 ± 19.9	63.5 ± 27.5	46.3 ± 24.5
Change at Week 16, mean (90% CI)[a]			
Before STS	−23.3 (−29.1, −17.4) P<0.0001[b]	−5.3 (−7.4, 5.1) P=0.0933[b]	2.5 (1.1, 3.9) P=0.9968[b]
After 5 STS	−25.6 (−35.0, −16.3) P<0.0001[b]	−5.8 (−12.4, 0.8) P=0.0716[b]	2.9 (1.1, 6.3) P=0.0086[b]
After 10 STS	−21.3 (−31.0, −11.6) P=0.0005[b]	−3.9 (−12.5, 4.7) P=0.2212[b]	4.2 (0.1, 8.4) P=0.9553[b]
After 15 STS	−18.0 (−27.9, −8.1) P=0.0024[b]	0.6 (−8.9, 10.1) P=0.5401[b]	8.8 (1.6, 16.1) P=0.9758[b]
After 20 STS	−6.0 (−14.2, 2.2) P=0.1119[b]	9.0 (−0.4, 18.4) P=0.9420[b]	21.3 (10.1, 32.6) P=0.9980[b]

Data are presented as mean ± standard deviation, unless stated otherwise.
[a]At week 16, 23 AD patients and 18 healthy volunteers completed the STS measurements.
[b]Versus baseline.
CI, confidence interval; AD, atopic dermatitis; SD, standard deviation; STS, skin tape strippings; TEWL, transepidermal water loss.

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Abstract N°: 846

A Case of Old Age Resistant Long-Standing Severe Atopic Dermatitis Complicated with Multiple Comorbidities Effectively and Safely Treated with Tralokinumab

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Introduction & Objectives:

Atopic dermatitis (AD), is one of the most common skin disorders worldwide. It is a chronic, inflammatory, and relapsing skin disease marked by repeated exacerbations and remissions. The prolonged disease course impairs the quality of life of affected patients. Reduced daily activities, fatigue, and decreased productivity due to sleep disturbances are common burdens in patients with atopic dermatitis.

Diagnosis of AD in old age becomes more difficult. There are no guidelines that differentiate AD from other pruritic skin conditions in elderly patients. Elderly patients also present with a range of comorbidities and medications that can cause pruritis and xerosis that can be confused with AD.

The management of atopic dermatitis in the elderly is complicated by multiple factors including age, comorbidities, and contraindications.

Materials & Methods:

Here, we present a case of a 76-year-old patient who had been struggling with severe atopic dermatitis for the last 50 years. Despite suffering from multiple comorbidities (type 2 diabetes, hypertension, hyperlipidaemia, parkinsonism, schizophrenia, and depression), the patient was effectively and safely treated with Tralokinumab.

The patient was initiated on Tralokinumab in Nov2022 with a loading dose of 600 mg administered subcutaneously as four prefilled syringes followed by 300 mg (equivalent to two syringes) administered subcutaneously every 2 weeks.

Results:

Following the first 2 weeks of treatment, the patient was assessed. While his Body surface area (BSA) remained the same, his skin healed gradually, and all erosions and excoriations improved.

The itching started to improve, and the patient reported reduced night pruritis and better sleep quality. The patient reported significant quality of life improvement.

After 3 months of treatment, patient reported significant improvement in all the outcomes; BSA reduced by 50% compared with baseline, DLQI reported to be 5/30, EASI 90 is almost achieved, and itch score reported as 1/10, and the injection was very well tolerated without any safety concerns.

Conclusion:

In conclusion, the clinical evidence supports the use of tralokinumab as an effective therapeutic option for patients with moderate-to-severe AD. The safety of Tralokinumab has been established in patient groups with multiple comorbidities or receiving multiple medications.

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Abstract N°: 847

Effectiveness of systemic therapy for head-and-neck dermatitis – a systematic review

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Introduction & Objectives:

Head-and-neck dermatitis (HND), a clinical variant of atopic dermatitis, is often difficult to treat, thus assessing effectiveness of therapy is of great importance. The aim of this systematic review was to describe the effectiveness of systemic treatments in patients with HND.

Materials & Methods:

A literature search was performed on Medline (Pubmed), Embase, and Web of Science. Inclusion criteria were original studies of all types, including a minimum of 20 patients with HND and reporting clinical response to systemic therapy for the head-and-neck region. There were no restrictions regarding age. All papers written in English and published from inception to December 2023 were included. Screening and data extraction were performed independently by three reviewers.

Results:

Of the 1671 screened titles, 19 manuscripts covering 23 studies and 6,696 patients were included for data synthesis: abrocitinib (1 study, n = 451 patients), baricitinib (7 studies, n = 1,685 patients), dupilumab (11 studies, n = 1,876 patients), lebrikizumab (3 studies, n = 514 patients), upadacitinib (3 studies, n = 440 patients), methotrexate (1 study, n = 114 patients), and cyclosporine (1 study, n = 121 patients). The 23 studies each covered between 1 and 3 systemic therapies. A total of 6, 7, and 5 papers comprised adults, children, and both, respectively. One abstract did not specify the age group. The most commenly reported effect outcomes were improvement of ≥ 75% in the Eczema Area and Severity Index (EASI)-75 for the head-and-neck region at 16 weeks, which varied from 20% (baricitinib 2 and 4 mg/day) to 65% (upadacitinib 30 mg/day), and mean % change in EASI for the head-and-neck region at 16 weeks, ranging from -59 (Dupilumab 300 mg/2 weeks, patients ≥60 kg) to -79 (Dupilumab 200 mg/2 weeks, patients ≥30 kg). Placebo responses in EASI-75 were registrered in 8% to 25% of patients.

Conclusion:

Despite variance in effect outcomes, ranging from 20% to 65% for EASI-75 in the head-and-neck region at 16 weeks, biologics and JAK-inhibitors show promising results in treating atopic dermatitis in this anatomical region. Future studies should compare the efficacy of these treatments in the head-and-neck area.

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EUROPEAN ACADEMY OF DERMATOLOGY & VENEREOLOGY

Abstract N°: 893

Characterization of atopic dermatitis medication use before and during pregnancy in the United States

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Introduction & Objectives: There are limited data on peri-partum use of atopic dermatitis (AD) therapies, including for dupilumab, the first AD biologic drug approved by the United States (US) Food and Drug Administration. We characterized AD medication (systemic therapy or phototherapy) use among pregnant individuals.

Materials & Methods: Individuals from two US-based commercial health insurance claims databases, the Optum Research Database and the Healthcare Integrated Research Database, were eligible for inclusion if they met the following criteria: 1) start of pregnancy (i.e., estimated date of last menstrual period [LMP]) 01 April 2017 – 31 October 2023; 2) ≥ one AD diagnosis code; 3) continuous health plan enrollment for ≥6 months prior to and including LMP (baseline period); 4) age 18–49 years at LMP; and 5) an additional indicator for AD beginning from up to one year prior to LMP through end of pregnancy: receipt of systemic or topical AD therapy; use of phototherapy; or receipt of a second AD diagnosis. We included the first qualifying pregnancy per person. AD medication use during pregnancy was assessed beginning at LMP minus 5x the therapy half-life (e.g., LMP – 10 weeks for dupilumab) through the end of pregnancy (earlier of a pregnancy outcome [e.g., miscarriage, live birth] or 42 weeks after LMP). We describe characteristics and medication use among those: 1) exposed to dupilumab (dupilumab cohort), 2) exposed to phototherapy or systemic AD therapy other than dupilumab (other systemic therapy cohort), and 3) not exposed to systemic AD therapy or phototherapy (unexposed cohort), which were hierarchically defined based on therapy use any time during pregnancy.

Results: We identified 19,643 pregnant individuals with AD. Of these, 419 (2%) were included in the dupilumab cohort, 2,639 (13%) in the other systemic therapy cohort, and 6,807 (35%) in the unexposed cohort, yielding 9,865 individuals; the remaining 9,778 were excluded due to having a single AD diagnosis. While the majority (56-61%) in all cohorts were age 25-34 years at LMP, more individuals in the dupilumab cohort were age 18-24 years (23%) compared to those in the other systemic therapy (14%) or unexposed cohorts (12%). Among the dupilumab cohort, 90% used dupilumab in the baseline period prior to pregnancy; 30% had exposure to other systemic therapy prior to pregnancy. Very few individuals (<1%) had baseline exposure to dupilumab prior to pregnancy in either the other systemic therapy or the unexposed cohorts. More individuals in the other systemic therapy cohort had exposure to other systemic therapy (50%) prior to pregnancy than in the unexposed cohort (15%); in both cohorts, oral or parenteral corticosteroids accounted for >97% of other systemic therapies used. Dupilumab use among pregnant individuals increased over time, from 28 pregnancies in 2018 to 108 in 2022 (+286%); use of other systemic therapy increased slightly (~23%) over this time (Figure 1). Among the dupilumab cohort, use of any systemic AD therapy or phototherapy became less common over the course of pregnancy (>98%, 45%, and 21% in the first, second and third trimesters, respectively), which is aligned with the findings of general AD pregnant populations in the literature.

Conclusion: Among individuals with AD, a minority used systemic AD therapy or phototherapy prior to and during pregnancy. However, use of dupilumab is observed to have grown in this population. Ongoing studies are analyzing safety outcomes of dupilumab use during pregnancy.

EADV CONGRESS
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Abstract N°: 949

Efficacy and safety of dupilumab in elderly patients: a multicenter, retrospective study in Korea

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Introduction & Objectives:

Recently, the prevalence of atopic dermatitis in the elderly has been increasing and has been reported to be as high as 4%, thus emphasizing its clinical significance. Treating pruritus in elderly patients can be challenging due to higher prevalence of comorbidities and adverse events to conventional systemic medications. Dupilumab has demonstrated favorable safety and effectiveness across all age groups, making it promising treatment option for the elderly. We conducted this study to evaluate the efficacy and safety of dupilumab for elderly patients with atopic dermatitis or other pruritic conditions.

Materials & Methods:

A multicenter retrospective, real-world study on the efficacy and safety of dupilumab was conducted in patients aged ≥65 years. Patients with atopic dermatitis and other pruritic conditions were assessed separately for efficacy of dupilumab by objective and subjective scores. Those receiving regular injections were evaluated at 16 and 40 weeks.

Results:

A total of 47 patients participated, with 37 patient diagnosed with atopic dermatitis, and 10 patients classified as other pruritic condition patients. In atopic dermatitis patients, there was 78.6% reduction in the mean Eczema Area and Severity Index score at week 16 compared to baseline. All other pruritic condition patients experienced an Investigators' Global Assessment score reduction of at least 2 points or and numerical rating score score reduction of at least 4 points. Adverse events occurred in 5 patients, but no serious adverse reaction was observed.

Conclusion:

Dupilumab can be considered as a safe and effective treatment for elderly patients with atopic dermatitis and other pruritic conditions.

EADV CONGRESS
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Abstract N°: 983

The significance of procalcitonin in the diagnosis of allergic skin diseases

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Introduction & Objectives: Recently, there has been a steady increase in severe allergic skin diseases. The mechanism for the development of severe forms of morbidity lies in the development of opportunistic infections of bacterial and/or fungal flora. Among the diagnostic criteria for assessing the development of bacterial invasion or sensitization in the body of patients, determining the level of procalcitonin in the blood serum plays a significant role.

The purpose of the study was to assess the significance of the procalcitonin test as a specific marker of generalized and local infection in patients with allergic dermatoses, as well as to determine its role in assessing the activity of the inflammatory process in various allergic dermatoses.

Materials & Methods: We examined 57 patients with allergic skin diseases aged from 3 to 74 years. All patients underwent clinical (determination of severity using the SCORAD index, DISHS), microbiological cultural studies of the severity of colonization (according to the method of Mavlyanova Sh.Z., Maksudova M.R. 2022), ELISA studies, and statistical studies.

Results: In patients with allergic skin diseases, there was an unreliable increase in the level of procalcitonin in the blood serum, but they had a direct correlation with opportunistic microorganisms St. aureus r=+0.8, St. saprophyticus – r=+0.5, St. Haemoliticus = r=+0.6 had a direct high correlation (P<0.05), opportunistic flora St. epidermidis had a noticeable correlation – r =+0.4.

Conclusion: An increase in the concentration of procalcitonin, taking into account the skin microbiome and duration of the disease in patients with allergic dermatoses, indicates the development of a chronic superficial invasive form of bacterial infection on the skin, which may be a proinflammatory mediator in determining the infectious process.

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Abstract N°: 1061

A case report of Eczema Herpeticum and Atopic Flare in an Atopic Dermatitis Child Treated with Abrocitinib.

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Introduction & Objectives:

A 16-year-old female patient presented to our atopic dermatitis (AD) outpatient clinic with severe itching and dryness throughout the body. Dermatologic examination revealed xerotic eczematous plaques around the eyes and flexural regions and lichenification secondary to scratching. The Eczema Area and Severity Index (EASI) and Scoring Atopic Dermatitis (SCORAD) were 39.20 and 78.45, respectively. She was diagnosed with atopic dermatitis six years ago and using only topical emollients and topical corticosteroids. She had no known other diseases and in family history allergic rhinitis was presented in parents. The patient was evaluated as an acute exacerbation of severe AD. Since dupilumab and baricitinib had no approval for under 18-years-old patients in our country and a rapid response was expected, the patient was started on 100 mg/day oral abrocitinib. When the patient came to the second month follow-up, her complaints had significantly regressed and EASI and SCORAD calculated as 11.9 and 28.15, respectively. The patient was followed up with abrocitinib 100 mg and her EASI was 1.50 and SCORAD was 9.9 at the end of 9 months. Twelve months after the initiation of the treatment, the patient presented to our AD clinic with the complaint of upper face rash and pain around the eyes. Dermatologic examination revealed intact vesicular eruption and vesicular debris with punched out appearance, which is dense on the periorbital region and forehead, spreading to the nose. The patient was hospitalized with eczema herpeticum prediagnosis. Since there are no FDA approved standardized antiviral regimens in eczema herpeticum; the patient received intravenous acyclovir therapy for 12 days until ophthalmologist concluded that the corneal involvement disappeared, and the skin lesions completely regressed. 3 days after discharge, she presented to our clinic with a severe atopic dermatitis flare (15 days after oral abrocitinib was stopped). EASI was 30.50 and SCORAD was 74.65. Due to earlier good response and Dupilumab could not planned as the patient described xerophthalmia, abrocitinib 100 mg was reinitiated. The patient was scheduled valacyclovir 500 mg PO 1 time daily for 6 months for herpes suppression treatment. The patient has been followed up without any symptoms.

Materials & Methods: -

Results:

Eczema herpeticum or Kaposi’s varicelliform eruption is a cutaneous infection caused by HSV type 1 or type 2, in patients with atopic dermatitis (AD). Treatment of atopic dermatitis with dupilumab is considered to reduce the risk of many skin infections, including eczema herpeticum while topical calcineurin inhibitors increase. Abrocitinib is a JAK1 selective inhibitor that has high safety profile and treatment success. During the clinical trial phase studies, an increased eczema herpeticum incidence was reported in AD with abrocitinib, which is supporting our case report. The effect of abrocitinib on the symptoms of AD is thought to start rapidly and to regress just as rapidly after discontinuation.

Conclusion:

The effect of abrocitib on the symptoms of AD is thought to start rapidly and to regress just as rapidly after discontinuation. However, abrocitinib is a good and effective choice as high disease activity effects the patient’s life quality directly so that they expect to have rapid response from the treatment.

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Abstract N°: 1184

Emollient lotion containing bacterial polysaccharides and L-isoleucine restores microbial homeostasis and antimicrobial peptide expression in preclinical models of atopic dermatitis

Anthony Brown[1], Adrià Ribes[1], Antonio R. Fernández de Henestrosa[1], Martina Trabacchi[1], Monica Foyaca[1]

[1]ISDIN

Emollient lotion containing bacterial polysaccharides and L-isoleucine restores microbial homeostasis and antimicrobial peptide expression in preclinical models of atopic dermatitis

Anthony Brown, Adrià Ribes, Antonio R. Fernández de Henestrosa, Martina Trabacchi, Mónica Foyaca

Introduction & Objectives:

Atopic dermatitis (AD) is a chronic inflammatory skin disease of the face and body that affects up to 20% of the pediatric population and 10% of the adult population worldwide. The pathophysiology of AD is complex, involving interplay between genetic and environmental factors. Patients with AD commonly exhibit microbial dysbiosis and immune dysregulation, characterized by predominance of *Staphylococcus aureus* and reduced expression of antimicrobial peptides, such as β-defensin-2 (hBD-2). This study sought to determine if a body lotion containing a bacterial polysaccharide and L-isoleucine** could help restore microbial homeostasis and hBD-2 expression in preclinical models of AD.

Materials & Methods:

To examine the effect on hBD-2 expression, 10 day-old reconstructed human epidermis (RHE) was topically treated with the lotion (5 mg/cm2) for 24 hours and then stimulated with a Th2–type cytokine mix (IL-4 + IL-13 + IL-22 + TNF-α; 3 ng/ml each) for 48 hours to induce an AD-like phenotype. After 48 hours, hBD-2 expression was determined by immunostaining. To determine its effect on growth of pathogenic *Staphylococcus aureus* and beneficial commensal bacteria such as *Staphylococcus epidermidis* and *Staphylococcus hominis*, 1 mL of the lotion was added to 1 mL of a mixture (50/50) of *S. aureus* (1-5 x 104 – 1-5x105 cfu/ml) and *S. epidermidis* or *S. hominis* (1-5 x 106 – 1-5 x 106 cfu/ml) and incubated at 37°C for 24 hours. After incubation the respective counts of each bacterial species were determined by plating on selective media.

Results:

Compared to unstimulated RHE, levels of hBD-2 in RHE stimulated by the cytokine mix were reduced by 73% ($p<0.05$), mirroring the reduction in hBD expression seen in AD and validating the model. Treatment with the lotion, however, increased hBD-2 expression by more than 28-times ($p<0.01$). In a mixed suspension of commensal (*S. epidermidis* and *S. hominis*) and pathogenic (*S. aureus*) bacteria, the lotion promoted the survival of *S. epidermidis* and *S. hominis* with respect to *S. aureus* by a factor of 374.34 and 42.01, respectively.

Conclusion:

These data suggest that topical treatment with a lotion containing bacterial polysaccharides and L-isoleucine may help restore immune dysfunction and microbial dysregulation in AD by promoting AMP expression and selectively favoring the survival of commensal bacteria over pathogenic *S. aureus*.

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Abstract N°: 1198

Race and ethnicity differences in patient-reported disease severity and quality of life in adult patients with atopic dermatitis: results from a United States-based patient survey

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[1]University of Arkansas for Medical Sciences, [2]Chicago Medical School, Rosalind Franklin University of Medicine and Science, [3]Center for Medical Dermatology and Immunology, United States, [4]University of Alabama at Birmingham, [5]Perelman School of Medicine, [6]Eli Lilly and Company, [7]Patient-Centered Research, Evidera, [8]National Eczema Association, [9]Lewis Katz School of Medicine at Temple University

Introduction & Objectives:

Atopic dermatitis (AD) is a heterogeneous disease and prevalence varies by race and ethnicity. The primary study objective is to understand racial and ethnic variations of reported quality of life (QoL) among patients with AD.

Materials & Methods:

Adults diagnosed with AD living in the United States (US) were recruited through the National Eczema Association, an advocacy group focused on supporting people with eczema and the AmeriSpeak panel, a national sample of US adults. Sampling targets were used to achieve condition-based population proportions across multiple ethnic and racial categories. Severity of AD in last month was measured using the Patient Global Impression of Severity (PGI-S) scale. Patient QoL was assessed using the EQ-5D-5L, EQ-visual analogue scale (VAS) and the Protocol for Responding to & Assessing Patients' Assets, Risks & Experiences (PRAPARE) question on stress. Descriptive statistics were used to characterize responses to study questions.

Results:

The study included 260 adults with AD (mean [SD] age: 40.6 [13.8] years; White: 55.0%; Black/African American: 23.5%; Asian: 11.5%; Other: 10.0% [which included, American Indian/Alaskan Native, Native Hawaiian/Other Pacific Islander, or ≥ two races]) 13.5% were Hispanic/Latino and 86.5% were Non-Hispanic/Latino. Participants rated AD severity across race/ethnicity as mild (White: 52.4%; Black/African American: 45.9%; Asian: 40.0%; Other: 53.8%; Hispanic/Latino: 42.9%; Non-Hispanic/Non-Latino: 50.7%), moderate (42.0%; 44.3%; 53.3%; 34.6%; 48.6%; 42.2%), and severe (5.6%; 9.8%; 6.7%; 11.5%; 8.6%; 7.1%). The mean (SD) EQ-5D-5L and EQ VAS scores across race/ethnicity were White: 0.7 (0.3) and 71.9 (17.4); Black/African American: 0.8 (0.2) and 71.9 (19.9); Asian: 0.8 (0.1) and 77.3 (8.3); Hispanic/Latino: 0.7 (0.2) and 74.0 (14.5); Non-Hispanic/Non-Latino: 0.8 (0.2) and 72.2 (17.5). In usual activities, 32.0% of Non-Hispanic/Non-Latino participants reported moderate–severe problems followed by Other (19.2%), White (16.8%), Hispanic/Latino (14.3%), Black/African American (11.5%), and Asian (3.3%). When asked about anxiety/depression, almost 15% of White, Black/African American, Hispanic/Latino, and Non-Hispanic/Non-Latino participants were severely–extremely anxious or depressed. However, only approximately 3% of Asian participants reported being severely–extremely anxious or depressed. When asked about stress using the question from PRAPARE, 37.7% of Black/African American participants reported quite a bit–very much stressed followed by White (37.1%), Non-Hispanic/Non-Latino (36.0%), Hispanic/Latino (31.4%), Other (30.8%), and Asian (26.7%).

Conclusion:

These data suggest that differences by race and ethnicity were observed in patient-reported disease severity and QoL among patients with AD. This heterogeneity emphasizes importance of inclusion of diverse patient populations in research studies and in recognition of clinical and QoL as important in care and management of AD.

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Abstract N°: 1203

Risk factors that limit use of oral JAK inhibitors in chronic hand eczema – findings from the Danish Skin Cohort

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Introduction & Objectives:

Oral Janus kinase (JAK) inhibitors may lead to serious adverse events including cardiovascular disease, infections, and cancer. In real-world settings, these drugs may be used off-label for chronic hand eczema (CHE), but CHE patients are known to be older, more obese, and more frequently smoking than e.g., atopic dermatitis patients. The aim of the present study was to assess prevalence of risk factors potentially impacting oral JAK inhibitor safety in CHE patients.

Materials & Methods:

In the Danish Skin Cohort, dermatologist-verified CHE patients were examined for risk factors potentially affecting oral JAK inhibitor use (as defined by the European Medicines Agency guidance) at baseline and followed for 12 months. Data were collected through register linkage (e.g., cancer history) and through patient interviews (e.g., smoking habits).

Results:

Of 941 adults with CHE (66.2% women), mean age was 55.5 (standard deviation 13.3) years and 30.9% (n=291) had atopic dermatitis. A total of 768 (81.6%) patients had at least one risk factor impacting oral JAK inhibitor use, including 682 (72.5%) with non-modifiable risk factors. Most common risk factors were current or former heavy smoking (62.8%, n=591), obesity (28.1%, n=264), hypercholesterolemia (21.5%, n=202), and hypertension (18.8%, n=177). Among patients without any risk factors at baseline (n=173), 20.2% (n=35) developed at least one risk factor during the following 12 months.

Conclusion:

Most CHE patients may have risk factors limiting the appropriateness of using oral JAK inhibitors. While the JAK/STAT pathway may be a favorable therapeutic target for CHE, topical JAK inhibitors with minimal systemic absorption may be preferred over oral JAK inhibitors. **

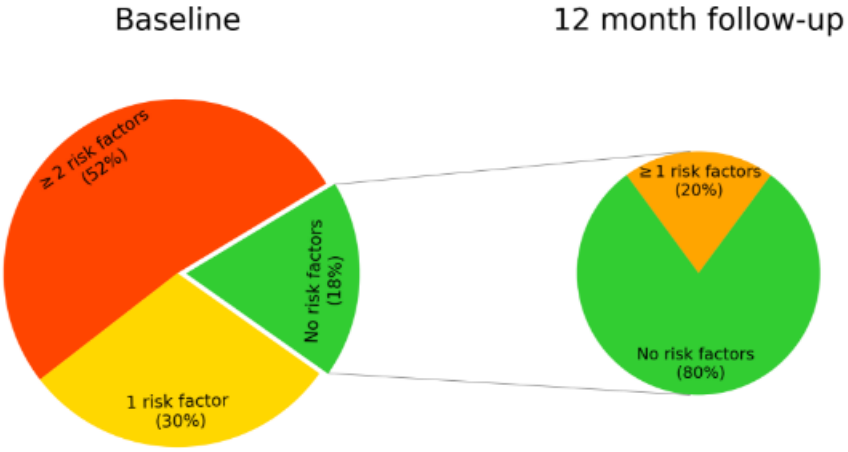
Table 1 – Baseline characteristics

	Chronic Hand Eczema
	(n=941)
Age, mean (SD)	55.5 (13.3)
Sex, n (%)	
Female	623.0 (66.2)
Male	318 (33.8)
AD, n (%)	291 (30.9)
Asthma, n (%)	174 (18.5)
Allergic rhinitis, n (%)	254 (27.0)
Current CHE severity, n (%)	
Clear or almost clear	731 (77.7)
Moderate	163 (17.3)
Severe	39 (4.1)
Very severe	8 (0.9)
DLQI, mean (SD)	3.5 (4.0)
Skin pain (NRS 0-10), mean (SD)	1.7 (2.4)
Pruritus (NRS 0-10), mean (SD)	2.9 (2.8)
AD, atopic dermatitis; CHE, chronic hand eczema; DLQI, dermatology life quality index; NRS, numerical rating scale; SD, standard deviation	

Table 2 – Prevalence of risk factors limiting the use of oral JAK inhibitors

	Chronic Hand Eczema
	(n=941)
Number of risk factors, n (%)	
No risk factors	173 (18.4)
One risk factor	280 (29.8)
Two or more risk factors	488 (51.9)
Number of non-modifiable risk factors, n (%)	
No non-modifiable risk factors	259 (27.5)
One non-modifiable risk factor	427 (45.4)
Two or more non-modifiable risk factors	255 (27.1)
Specific risk factors, n (%)	
Diabetes, n (%)	69 (7.3)
Hypertension, n (%)	177 (18.8)
Hypercholesterolemia, n (%)	202 (21.5)
Current or former long-term smoking*, n (%)	591 (62.8)
Obesity, n (%)	264 (28.1)
Hormonal contraception, n (%)	18 (1.9)
Cancer ex NMSC, n (%)	74 (7.9)
VTE, n (%)	22 (2.3)
MACE, n (%)	37 (3.9)
Age ≥ 65, n (%)	257 (27.3)
CHE, chronic hand eczema; DLQI, dermatology life quality index; MACE, major adverse cardiovascular event; NMSC, non-melanoma skin cancer; SD, standard deviation; VTE, venous thromboembolism * defined as ≥10 pack years	

Figure 1 - Proportion of patients reporting with no, 1, or ≥2 risk factors at baseline, and distribution at 12 months follow-up among patients without risk factors at baseline


Baseline
12 month follow-up
≥ 2 risk factors
(52%)
1 risk factor
(30%)
No risk factors
(18%)
≥ 1 risk factors
(20%)
No risk factors
(80%)

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Abstract N°: 1249

Patient preferences for treatment of atopic dermatitis – findings from the Danish Skin Cohort

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Introduction & Objectives:

Atopic dermatitis (AD) is a chronic skin disease with substantial impacts on patients' quality of life. Understanding patient preferences in treatment is crucial for optimizing therapeutic decisions and improving adherence to treatment. This study aimed to quantify patient preferences regarding AD treatment, focusing on time to efficacy, side effects, and administration routes, in a large cohort of adult AD patients.

Materials & Methods:

Data were obtained from the Danish Skin Cohort. Participants were surveyed about their preferences for AD treatment attributes, including time to efficacy, side effects, and administration routes. Responses were analyzed using descriptive statistics and stratified analysis based on sex, age, and current disease severity.

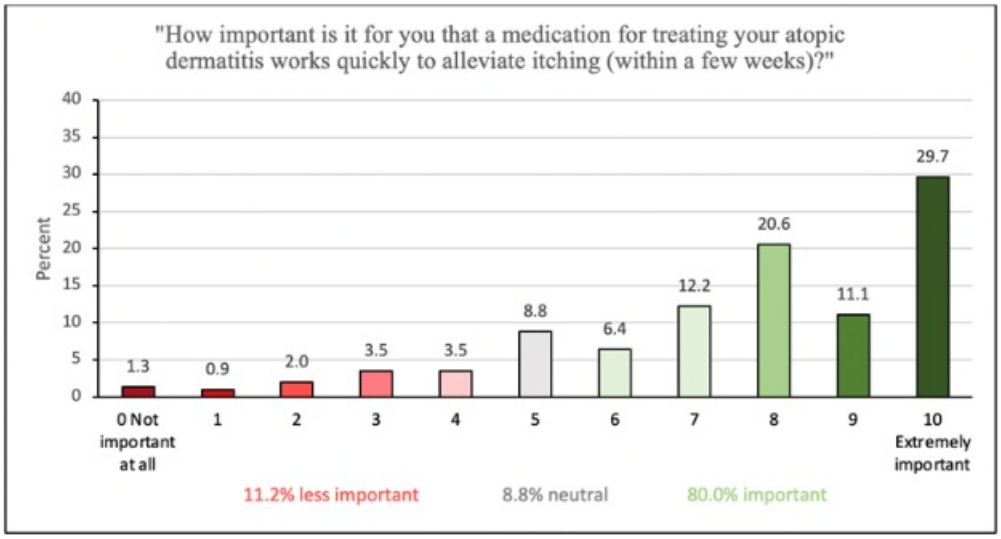
Results:

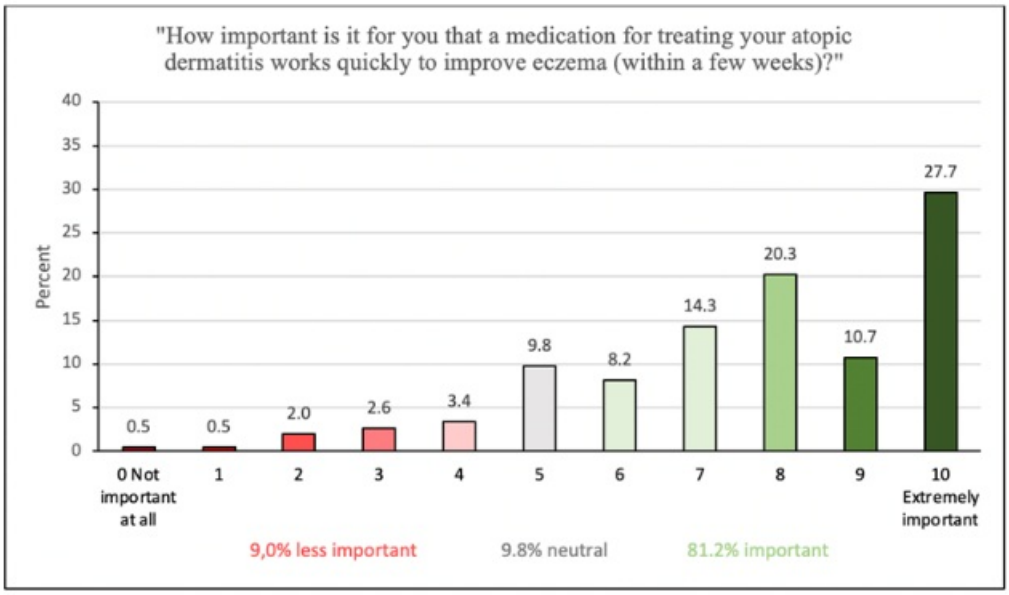
The study comprised 1274 patients with AD. The majority of patients prioritized rapid effectiveness and minimal side effects regarding treatment of AD. Safety emerged as a primary concern, with patients preferring treatments with lower risk of adverse events, even if they had a slower onset of action. Oral once-daily dosing was generally preferred over subcutaneous injections, particularly when safety was comparable. However, in the presence of even a very small risk of venous thromboembolic events or malignancy associated with oral therapy, preference shifted towards injections leading to a sixfold higher preference for injections every 14 days (81.8%; n=1,042) over the once-daily oral treatment (12.2%; n=155).

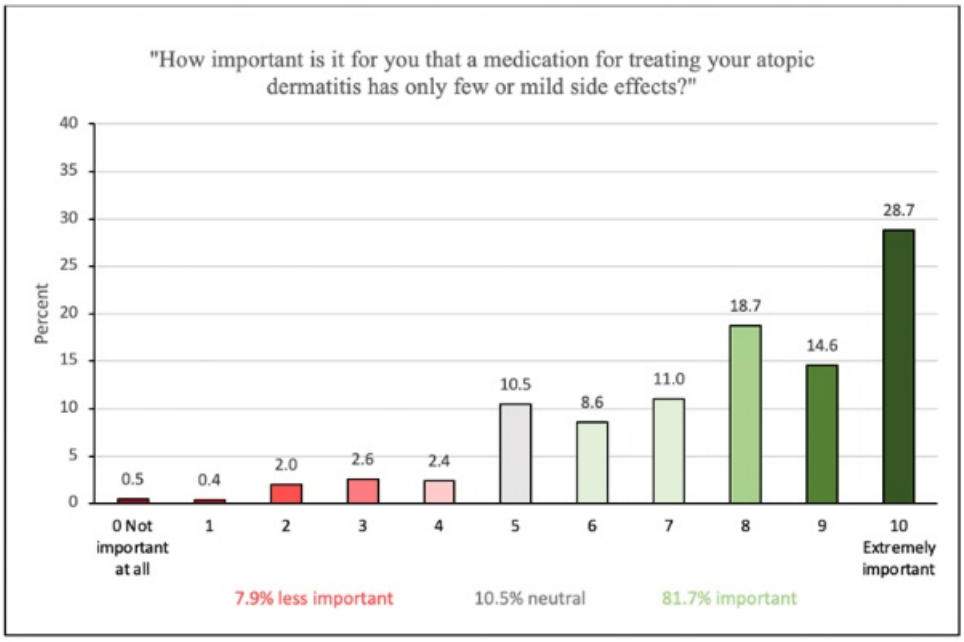
Conclusion:

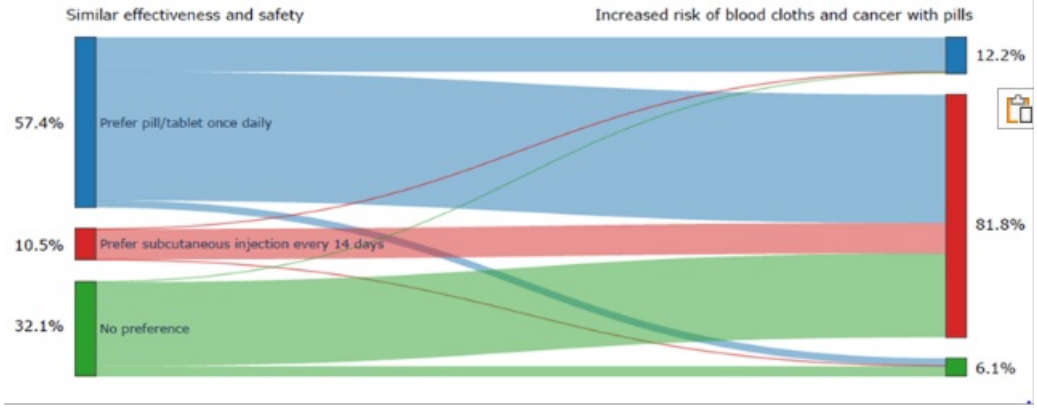
Patient preferences in AD treatment were predominantly driven by safety considerations, highlighting the importance of drug safety in therapeutic decision-making. The study's inclusion of patients across all severity levels enhances the generalizability of findings. These results underscore the importance of considering patient perspectives in shared decision-making to improve treatment adherence and outcomes in AD management.

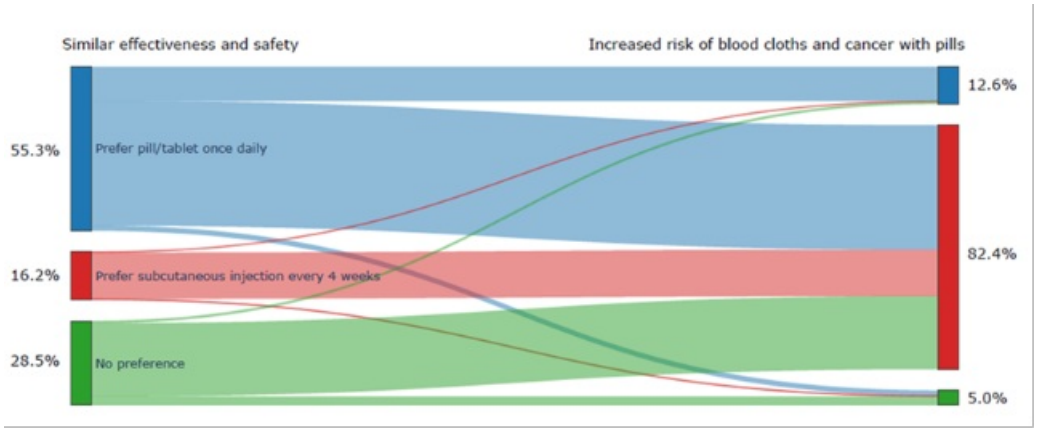
Table 1 Baseline characteristics of the respondents (N=1274)	
Characteristic	**Respondents**
Sex, n (%)	
Female	**858 (67.3)**
Male	**416 (32.7)**
Age in years, mean (SD)	**51.5 (13.5)**
Fitzpatrick skin type (assessed by the patient), n (%)	
Skin type 1	**57 (4.5)**
Skin type 2	**369 (29.4)**
Skin type 3	**677 (53.9)**
Skin type 4	**145 (11.6)**
Skin type 5	**5 (0.4)**
Skin type 6	**0**
Number of flares in the past 12 months, mean (SD)	**8.2 (6.7)**
AD, atopic dermatitis; SD, standard deviation.	


"How important is it for you that a medication for treating your atopic dermatitis works quickly to alleviate itching (within a few weeks)?"
Percent
40
35
30
25
20
15
10
5
0
1.3
0.9
2.0
3.5
3.5
8.8
6.4
12.2
20.6
11.1
29.7
0 Not important at all
1
2
3
4
5
6
7
8
9
10 Extremely important
11.2% less important
8.8% neutral
80.0% important


"How important is it for you that a medication for treating your atopic dermatitis works quickly to improve eczema (within a few weeks)?"
Percent
40
35
30
25
20
15
10
5
0
0.5
0.5
2.0
2.6
3.4
9.8
8.2
14.3
20.3
10.7
27.7
0 Not important at all
1
2
3
4
5
6
7
8
9
10 Extremely important
9,0% less important
9.8% neutral
81.2% important


"How important is it for you that a medication for treating your atopic dermatitis has only few or mild side effects?"
Percent
40
35
30
25
20
15
10
5
0
0.5
0.4
2.0
2.6
2.4
10.5
8.6
11.0
18.7
14.6
28.7
0 Not important at all
1
2
3
4
5
6
7
8
9
10 Extremely important
7.9% less important
10.5% neutral
81.7% important


Similar effectiveness and safety
Increased risk of blood cloths and cancer with pills
57.4%
Prefer pill/tablet once daily
10.5%
Prefer subcutaneous injection every 14 days
32.1%
No preference
12.2%
81.8%
6.1%


Similar effectiveness and safety
Increased risk of blood cloths and cancer with pills
55.3%
Prefer pill/tablet once daily
16.2%
Prefer subcutaneous injection every 4 weeks
28.5%
No preference
12.6%
82.4%
5.0%

EA DV CONGRESS
AMSTERDAM 25-28 SEPTEMBER 2024
EUROPEAN ACADEMY OF DERMATOLOGY & VENEREOLOGY

Abstract N°: 1339

prevalence and correlates of anxiety and depression among adults with atopic dermatitis: findings from a tertiary center in northern tanzania.

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Introduction & Objectives:

Persons with Atopic Dermatitis are at a higher risk of developing and aggravating anxiety and depression both at an immunological, physiological, and aesthetic level. However, this connection remains largely unexplored in Sub-Saharan Africa, particularly in Tanzania, where data are lacking

The objectives of this study were to:

1. Determine the prevalence of anxiety among adults with Atopic Dermatitis receiving care at a tertiary facility in northern Tanzania.
2. Determine the prevalence of depression among adults with Atopic Dermatitis receiving care at a tertiary facility in northern Tanzania.
3. Identify the factors associated with anxiety in adults with Atopic Dermatitis at a tertiary facility in northern Tanzania.
4. Identify the factors associated with depression in adults with Atopic Dermatitis at a tertiary facility in northern Tanzania.

Materials & Methods: This study, conducted in a hospital setting, involved 241 adult patients diagnosed with atopic dermatitis at a tertiary center in northern Tanzania between September 2022 and May 2023. Eligible participants underwent screening and, upon approval, received information about the study objectives before providing consent. Social-demographic information was gathered using a structured questionnaire, while the severity of atopic dermatitis was assessed using SCORAD scores, and depression and anxiety levels were evaluated using the PHQ-9 and GAD-7 scales, respectively. Individuals identified with anxiety and/or depression were referred to a psychiatrist. Subsequently, data were cleaned and analyzed using SPSS v22.

Results:

- Participant Characteristics: A total of 241 adult patients diagnosed with atopic dermatitis were enrolled, with a median age of 38 years (interquartile range: 28.0 - 56.0). Females constituted the majority (57.3%). The distribution of disease severity among patients was as follows: mild atopic dermatitis (n=104, 43.2%), moderate atopic dermatitis (n=90, 37.3%), and severe atopic dermatitis (n=47, 19.5%).
- Prevalence of Anxiety and Depression: Of the participants, 41.5% reported mild to moderate anxiety symptoms, while 30.3% reported depressive symptoms.
- Associated Factors of Anxiety: Factors associated with anxiety included disease severity and cigarette smoking.
- Associated Factors of Depression: Factors associated with depression included disease severity, female gender, occupation, and obesity.

Conclusion:

The identification of affective symptoms emphasizes the necessity for a multidisciplinary approach in the care of individuals with AD.

Based on our findings, we advocate for routine screening for anxiety and depression in patients with atopic dermatitis, particularly among those deemed at higher risk, prior to the commencement of treatment.

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Abstract N°: 1447

Two-year follow-up of dupilumab patients in routine care for atopic eczema: results from the German national registry TREATgermany

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Introduction & Objectives: The TREATgermany registry was set-up in its current form in 2016 and is one of the largest atopic dermatitis (AD) registries in Europe. 1,849 patients (mean age 39.8 ± 14.8 years, 45.3% female) were enrolled by 65 recruitment sites between June 2016 and July 2023. Here, we provide results on long-term dupilumab therapy in moderate and severe AD patients in a routine care setting.

Materials & Methods: Specifically, we present results on 294 patients (mean age 40.9 ± 14.5 years, 42.2% female) who were initiated on dupilumab at or after enrollment in the registry and were followed for 2 years (regardless, whether the patient was continuously treated with dupilumab throughout those 2 years (n=237) or therapy was discontinued (n=57) within that window). The outcomes presented include the core outcomes of the HOME (Harmonising Outcome Measures for Eczema) initiative and were assessed several times between initiation of dupilumab and the end of the two-year follow-up. Outcomes obtained after discontinuation of dupilumab were excluded from the calculation of the summary statistics. A sensitivity analysis for the EASI response rates was conducted, which includes all patients and treats patients after dupilumab discontinuation as non-responders in order to assess a possible selection effect due to the use of an on treatment cohort in the main analysis.

Results: 225 (76.5%) of the patients had received systemic therapy for AD at least for a period of time before they were initiated on dupilumab in the registry. Systemic glucocorticoids (n=180, 61.2%) and cyclosporine (n=106, 36.1%) were most frequently used. Patients had a high disease activity at the therapy start visit with a mean Eczema Area Severity Index (EASI) of 21.0, a mean Patient-Oriented Eczema Measure (POEM) of 19.4 and a mean Dermatology Life Quality Index (DLQI) of 13.3.

The mean dupilumab treatment duration in the two-year follow-up window was 667 days (median: 730 days). The mean EASI score fell to 3.1 and the mean DLQI score decreased to 3.5 at month 24, indicating an improved quality of life. The mean POEM sum score, reflecting the patients' symptom frequency and severity, also decreased to 6.2. The EASI 75 and EASI 90 response rates for patients on treatment at month 24 were 78.8% and 51.2%, respectively. Generally, the outcomes improved markedly by month 3 and continued to improve until a plateau was reached around month 6.

To gauge the proportion of the observed effect that can potentially be attributed to the selection of on-treatment patients we performed a sensitivity analysis, where we assumed that patients after dupilumab discontinuation are non-responders. The resulting EASI response rates at month 24 (EASI 75 of 65.6% and EASI 90 of 42.7%) provide lower, but still substantial thresholds for the effectiveness of dupilumab.

Regarding safety: ocular problems were reported for 107 (36.4%) patients, whereby 88 patients (29.9%) had at least one record of conjunctivitis. The severity of conjunctivitis was mild for about 1/3 and moderate for the other 2/3 of cases. Dupilumab was discontinued due to conjunctivitis in 13 patients.

Conclusion: The results demonstrate positive trajectories in patient-reported and physician assessed outcomes

over the 2-year course of dupilumab therapy for this cohort of TREATgermany patients – patients initiated on dupilumab in the registry and with a registry visit two years after. The decrease in disease burden persisted in general for the entire two-year period.

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Abstract N°: 1449

Stapokibart improves patient-reported outcomes in adults with moderate-to-severe atopic dermatitis over 52 weeks: a post-hoc analysis of a pivotal phase 3 trial

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Introduction & Objectives: Atopic dermatitis (AD) is a chronic disease characterized by recurrent pruritus and inflammatory skin lesions, leading to significant impairment in patient's quality of life. Patients with moderate-to-severe AD require long-term management. Stapokibart is a humanized monoclonal antibody directed against the interleukin-4 receptor alpha subunit (IL-4Rα). This post-hoc analysis aimed to evaluate the effect of stapokibart on patient-reported outcomes (PROs) in adults with moderate-to-severe AD from a pivotal phase 3 trial.

Materials & Methods: In a multicenter, randomized, double-blind, placebo-controlled, phase 3 trial (NCT05265923) conducted across 59 hospitals in China, eligible patients were randomized 1:1 to receive subcutaneous stapokibart 300 mg (loading dose 600 mg) or placebo every two weeks (Q2W) for 16 weeks. In the subsequent open-label maintenance period, patients in the stapokibart group continued the same dose of stapokibart while those in the placebo group switched to stapokibart at a dose of 300 mg (loading dose 600 mg) Q2W for 36 weeks. PROs analyzed included the proportions of patients who achieved a weekly average of daily

peak pruritus numerical rating scale (PP-NRS) score ≤4, PP-NRS score of 0-1, and Dermatology Life Quality Index (DLQI) score ≤5 over 52-week treatment.

Results: 500 patients were randomly assigned to stapokibart (n=251) or placebo (n=249). As of October 31, 2023, total 430 patients completed 52-week treatment, including 216 in the stapokibart group and 214 in the placebo/stapokibart group. At baseline, 3 (1.2%) patients in the stapokibart group and 4 (1.6%) patients in the placebo group had PP-NRS ≤4, and 12 (4.8%) and 11 (4.4%) patients in the two groups had DLQI ≤5, respectively. A higher proportion of patients in the stapokibart group achieved PP-NRS ≤4 compared with the placebo group at week 12 (47.0% vs. 25.8%) and week 16 (49.8% vs. 24.2%) (both P<0.0001); the proportion at week 52 increased to 84.9% for the stapokibart group and 80.9% for the placebo group who switched to stapokibart. In addition, 35.2% and 32.1% of patients in the stapokibart and placebo/stapokibart groups, respectively, achieved PP-NRS 0/1 at week 52. The proportion of patients achieving DLQI ≤5 was 41.6% vs. 28.2% at week 12, 46.2% vs. 28.8% at week 16, and 68.7% vs. 73.6% at week 52 in the stapokibart vs. placebo/stapokibart group (**Fig 1**).

Conclusion: Stapokibart effectively improved PROs in adults with moderate-to-severe AD, with significant and long-term effects on relieving pruritus symptoms and improving quality of life.

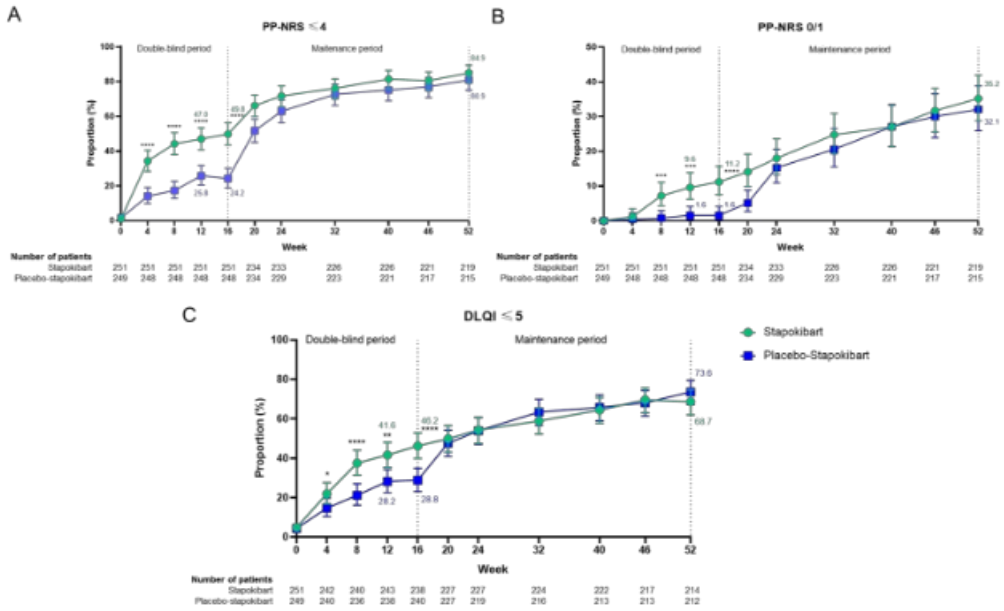

Figure 1. Treatment response over 52-week treatment. (A) PP-NRS score ≤4. (B) PP-NRS score of 0/1. (C) DLQI score ≤5. PP-NRS, peak pruritus numerical rating scale; DLQI, Dermatology Life Quality Index; CI, confidence interval. *P<0.05, **P<0.01, ***P<0.001, ****P<0.0001 compared to the placebo/stapokibart group.

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Abstract N°: 1535

Palmar Hyperlinearity at 2 months of Age as a Predictor of the Development of Childhood Atopic Dermatitis

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Introduction & Objectives:

Identifying predictive biomarkers for pediatric atopic dermatitis (AD) is crucial for developing future preventive strategies. Hyperlinear palms are characterized by an increased number and depth of skin creases in the palms and have been associated with filaggrin gene (*FLG*) mutations and AD. In this prospective birth cohort study of 450 children, we investigated whether palmar phenotyping may be used to predict the onset of AD, and whether skin biomarkers could further improve prediction.

Materials & Methods:

The Danish prospective birth cohort study, The Barrier dysfunction in Atopic newBorns study (BABY), comprises 300 term and 150 preterm newborns. Children were enrolled at birth and followed by clinical examinations by a medical doctor until 2 years of age. Hyperlinearity was assessed from photographs of the palmar aspect of the hand at 2 months of age in a blinded manner by 3 dermatology professors and 1 dermatology resident and dichotomized. Tape strips were collected from the dorsal aspect of the hand at 0-3 days of age and 2 months of age in term children and from the skin between the shoulder blades at 2 months of age in preterm children. Tape strips were analyzed for immune biomarkers and dichotomized at a cut-off level of ≥75th percentile (defined as elevated levels). Logistic regression analysis was used to calculate odds ratios (OR) estimated with 95% confidence intervals (CIs) and the risk of AD was calculated using Hazard ratio (HR) with 95% confidence interval (CI) by Cox-regression models.

Results:

A total of 245 children (180 term and 65 preterm) were included in the analyses. Of these, 36 children (14.7%) were classified as having hyperlinear palms (31 term children (17.2%) and 5 preterm children (7.7%)). Hyperlinear palms at 2 months of age was strongly associated with having *FLG* mutations among all children (OR 15.58; 95% CIs [5.29-45.93]; p <.0001) and among term children (OR 9.75; 95% CIs [3.16-30.07]; p = 0.009). Hyperlinear palms at 2 months of age significantly increased the risk of AD within the first 2 years of life among all children in crude analysis (HR 2.40; 95% CI [1.39-4.13]; p = 0.002) as well as among term children (HR 2.14; 95% CI [1.21-3.77]; p = 0.009), and among preterm children, however not statistically significantly (HR 2.30; 95% CI [0.29-18.00]; p = 0.4).

When adjusting for parental atopy, the association remained significant among all children (aHR 2.65; 95% CI [1.53-4.58]; $p = 0.0005$) and term children (aHR 2.31; 95% CI [1.30-4.09]; $p = 0.004$). The association became borderline-significant when adjusting for *FLG* mutation status among all children (aHR 1.79; 95% CI [0.94-3.38], $p = 0.08$) and among term children (HR 2.14; 95% CI [1.21-3.77]; $p = 0.009$). Having both hyperlinear palms and elevated TARC/CCL17 at 2 months of age increased the risk of developing AD significantly within the first 2 years of age among term children in crude analysis (HR 5.66; 95% CI [1.74-18.41]; $p = 0.004$) and in adjusted analyses for parental atopy (aHR 5.59, 95% CI [1.69-18.51]; $p = 0.005$) and *FLG* mutations (aHR 5.86; 95% CI [1.48-23.18]; $p = 0.01$).

Conclusion:

This prospective birth cohort study shows that having hyperlinear palms at 2 months of age can predict the development of pediatric AD. Further, having both hyperlinear palms and elevated TARC/CCL17 increase the risk of AD significantly within the first 2 years of life among term children. These findings may serve as clinically relevant tools for future identification and prevention of pediatric AD.

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Abstract N°: 1548

Cutaneous point of view of the role of gasdermin-D activation and IL-1β-secreting macrophages in severe atopic dermatitis

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Introduction & Objectives: Atopic dermatitis (DA) is a common, enduring, inflammatory skin disease with intense pruritus and xerosis, and a chronic skin colonization by *Staphylococcus aureus*. To understand the inflammatory status in the AD, it is crucial to investigate the inflammasome complex, which are cytosolic pattern recognition receptors (PRR), whose activation culminates in activation of caspase-1 and gasdermin-D (GSDMD)and production of IL-1β and IL-18. The aim of this study is to evaluate the expression profile of the inflammasome pathway in AD adults' skin.

Materials & Methods: Thirty patients with moderate to severe AD and 20 healthy controls (HC) were enrolled in the study. The analysis of the expression of the components of the inflammasome NLRP1, NLRP3, AIM-2, IL-1β, IL-18, Caspase-1, ASC, GSDMD, and CD68 expression (macrophage marker) were performed by immunohistochemistry and immunofluorescence.

Results: We detected increased expression of NLRP3, NLRP1 and AIM-2 at dermal level of severe AD; augmented IL-18 and IL-1β expression at epidermis of moderate and severe AD, and in the dermis of severe AD; improved expression of ASC, caspase-1 and GSDMD in both epidermis and dermis of moderate and severe AD. We detected positive correlation between caspase-1, GSDMD and IL-1b (epidermis) and caspase-1 (dermis) and AD severity. We also found a correlation between NLRP-3 and IgE serum level at dermis. We also evidenced presence of CD68+ macrophages secreting GSDMD, ASC and IL-1β in moderate and severe AD.

Conclusion: We highlight the relevance of macrophages and their plasticity ability in both innate and adaptive immunity, orchestrating and integrating the several immunological profiles of AD. Our study also indicates a canonical activation pathway of inflammasomes in AD, reinforced by the chronic status of inflammation in AD. The analysis of the inflammasome complex evidenced an imbalance in its regulation, with increased expression of multiple components in severe AD, emphasizing its relevance as potential disease biomarkers and possible targets for immunomodulatory interventions.

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Abstract N°: 1564

Long-term 5-year safety of upadacitinib in moderate-to-severe atopic dermatitis: An integrated analysis including over 7000 patient-years of exposure

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EADV 2024 Encore Abstract - Long-Term 5yr Integrated Safety UPA AD - (Winter RAD 2023)

EADV 2024 Encore Abstract – Long Term 5yr Integrated Safety UPA AD – (Winter RAD 2023)

Introduction & Objectives:

Upadacitinib is a selective, reversible oral Janus kinase 1 (JAK1) inhibitor approved in multiple countries for the treatment of moderate-to-severe Atopic dermatitis (AD) in adults and adolescents. We evaluated the long-term safety for up to 5 years of upadacitinib 15 mg and 30 mg use in adolescents and adults with moderate-to-severe AD, based on the results of integrated data from three ongoing global pivotal Phase 3 studies.

Materials & Methods:

Measure Up 1, Measure Up 2, and AD Up studies are ongoing pivotal Phase 3, randomized, placebo-controlled, multicenter studies evaluating the safety and efficacy of upadacitinib 15 mg and upadacitinib 30 mg in adolescents and adults with moderate-to-severe AD. Patients were randomized 1:1:1 to receive oral upadacitinib 15 mg, upadacitinib 30 mg, or placebo once daily alone (Measure Up 1 and 2) or with concomitant topical corticosteroids (AD Up). At Week 16, patients receiving upadacitinib 15 mg or 30 mg during the double-blinded period continued their assigned treatment in the blinded extension (BE) period, whereas patients receiving placebo were re-randomized 1:1 to receive either upadacitinib 15 mg or 30 mg in the BE period (upadacitinib treatment for up to 260 weeks).

Results:

A total of 2683 patients (2154 adults, 529 adolescents) who received at least 1 dose of upadacitinib (15 mg,1337; 30 mg,1346) were included in the integrated analysis. Treatment-emergent adverse events of special interest (AESI) were analyzed as exposure-adjusted rates per 100 patient-years (PY) for the entire treatment period to

adjust for potentially different durations of follow-up. Rates of AESIs were similar at the 1-year analysis and up to 5-year analysis for upadacitinib for: serious infections, 15 mg, 2.3 (1 yr) and 2.2 (5 yrs)/30 mg, 2.8 (1 yr) and 2.6 (5 yrs); opportunistic infections, 15 mg, 1.6 (1 yr) and 1.7 (5 yrs)/30 mg, 1.9 (1 yr) and 2.2 (5 yrs); active tuberculosis, <0.1 at both timepoints for both doses; herpes zoster, 15 mg, 3.5 (1 yr) and 3.1 (5 yrs)/30 mg, 5.2 (1 yr) and 5.5 (5 yrs); non-melanoma skin cancer (NMSC), 15 mg, 0.3 (1 yr) and 0.4 (5 yrs)/30 mg, 0.4 (1 yr) and 0.3 (5 yrs); malignancy excluding NMSC, 15 mg, 0.1 (1 yr) and 0.3 (5 yrs)/30 mg, 0.5 (1 yr) and 0.4 (5 yrs); gastrointestinal perforations, 15 mg, 0 at both time points/30 mg, 0 (1 yr) and <0.1 (5 yrs); adjudicated major adverse cardiovascular events (MACE), 15 mg, 0.1 (1 yr) and 0.2 (5 yrs)/30 mg, <0.1 at both timepoints; adjudicated venous thromboembolic events (VTE), <0.1 for both doses at 1 year and 0.1 for both doses at 5 years. Rates of adverse events leading to death were: 15 mg, 0 (1 yr) and <0.1 (5 yrs)/30 mg, <0.1 at both timepoints. Rates of serious infection at both timepoints and doses remained low (<3.0 E/100PYs). Upadacitinib was well-tolerated by both adults and adolescents.

Conclusion:

Integrated analysis of long-term safety data for up to 5 years indicates that rates of AESIs remained low throughout treatment with upadacitinib 15 mg or 30 mg among adults and adolescents with moderate-to-severe AD. There were no new safety risks. Current safety analysis continues to support a favorable benefit-risk profile of upadacitinib in the treatment of adults and adolescents with moderate-to-severe AD for up to 5 years of treatment, including over 7000 years of patient exposure.

Table 1. Rates of Treatment-Emergent Adverse Events of Special Interest (AESIs) in Adults and Adolescents at 1 year and up to 5 years of Treatment with Upadacitinib

	1 Year		Up to 5 Years	
	UPA 15 mg (N=1239) PY=1373.4	UPA 30 mg (N=1246) PY=1414.2	UPA 15 mg (N=1337) PY=3823.0	UPA 30 mg (N=1346) PY=4076.9
Treatment-Emergent AE of Special Interest	Events per 100 Patient-Years (E/100 PY)			
Serious Infections	2.3	2.8	2.2	2.6
Opportunistic Infections[1]	1.6	1.9	1.7	2.2
Eczema Herpeticum	1.6	1.8	1.5	2.0
Active Tuberculosis	<0.1	<0.1	<0.1	<0.1
Herpes Zoster	3.5	5.2	3.1	5.5
Non-Melanoma Skin Cancer (NMSC)[2]	0.3	0.4	0.4	0.3
Malignancy Excluding NMSC[2]	0.1	0.5	0.3	0.4
Lymphoma[2,3]	0	<0.1	<0.1	<0.1
Gastrointestinal Perforations	0	0	0	<0.1
Major Adverse Cardiovascular Events (MACE)[2,3]	0.1	<0.1	0.2	<0.1
Venous Thromboembolic Events (VTE)[2,3]	<0.1	<0.1	0.1	0.1
Adverse Events Leading to Death	0	<0.1	<0.1	<0.1

MACE was defined as CV death, non-fatal MI, and non-fatal stroke. VTE was defined as deep vein thrombosis and pulmonary embolism. AE, adverse events; CV, cardiovascular events; UPA, upadacitinib; PY, patient-years. Rates shown are n/100 PY=number of subjects with at least one event per 100 PY

[1] Excluding tuberculosis/herpes zoster.
[2] Rates shown are n/100 PY=number of subjects with at least one event per 100 PY
[3] Adjudicated

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Abstract N°: 1603

Long-term safety and efficacy of tralokinumab in patients 65 years or older with moderate-to-severe atopic dermatitis

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Introduction & Objectives:

Tralokinumab is a well-tolerated and effective treatment indicated for moderate-to-severe atopic dermatitis (AD). Data supporting the long-term safety and efficacy in adults as well as short-term data on adults ≥65 years have recently been published (1,2). Long-term safety and efficacy analyses in adults ≥65 years are warranted, as this population typically has increased safety risks and comorbidities. Here, long-term safety and efficacy of tralokinumab in AD patients aged ≥65 years are reported.

Materials & Methods:

This pooled post-hoc analysis included patients aged ≥65 years with moderate-to-severe AD who were treated with tralokinumab ± optional topical corticosteroids (TCS) for up to 1 year in 6 parent trials (ECZTRA 1 [NCT03131648], ECZTRA 2 [NCT03160885], ECZTRA 3 [NCT03363854], ECZTRA 5 [NCT03562377], ECZTRA 7 [NCT03761537], ECZTRA 8 [NCT04587453]) plus up to 3.5 years in the ongoing 5-year extension trial ECZTEND (NCT03587805; data cutoff 30 April 2022). Populations analyzed for safety and efficacy are shown in Table 1. Safety analyses covered all treatment-emergent adverse events (AEs), including predefined AEs of special interest. Efficacy was analyzed as observed; assessments included Investigator's Global Assessment, Eczema Area and Severity Index (EASI), worst weekly pruritus numeric rating scale, and Dermatology Life Quality Index.

Results:

No deaths were reported and no new safety signals were identified in patients aged ≥65 years. The AE profile was comparable for tralokinumab and placebo during initial treatment. The long-term safety profile of tralokinumab remained favorable, with no increased reporting of events of particular concern (Table 2). The most frequently reported AEs were consistent with the known safety profile of tralokinumab. The long-term efficacy profile of tralokinumab in patients aged ≥65 years showed sustained improvements of AD signs, symptoms, and quality of life (Table 3), consistent with outcomes in the overall trial population.

Conclusion:

This pooled interim analysis suggests that long-term use of tralokinumab ± optional TCS was well-tolerated and provided enduring control, reflecting predominantly mild to no disease activity, in a subpopulation of more vulnerable patients aged ≥65 years who had moderate-to-severe AD at treatment onset.

References:

1. Blauvelt A et al. J Am Acad Dermatol. 2022; 87(4): 815-24.
2. Merola JF et al. JAMA Dermatol. 2023; 159(10): 1119-23.

Table 1. Populations analyzed for safety and efficacy

	Safety analysis		Efficacy analysis
	Placebo-controlled dataset	All-tralokinumab dataset	Efficacy dataset
Trial period(s) included in analysis	W0–W16 in parent trials	From first tralokinumab dose in parent trials to last dose (or data cutoff) in ECZTEND	W0, W16, W56, W104 in ECZTEND
Number of subjects	117	109	71
Exposure, median (IQR)	16.4 weeks (16.4–16.4)	64.1 weeks (32.1–168.7)*	130.1 weeks (48.8–163.4)
Age cutoff	≥65 years at parent trial baseline		≥65 years at ECZTEND baseline
Age, median (range)	69 years (65–92)		70 years (65–87)
EASI score at parent trial baseline, median (IQR)	24.5 (18.4–40.2)	24.3 (18.4–37.5)	24.2 (18.4–35.5)

*Exposure was defined over the active treatment periods.
EASI = Eczema Area and Severity Index; IQR = interquartile range; W = week number.

Table 2. Summary of adverse events in patients ≥65 years treated with tralokinumab for up to 4.5 years

	Placebo-controlled dataset (0–16 weeks)				All-tralokinumab dataset (up to 4.5 years)
	Placebo N=35; PYE=10.1		Tralokinumab N=82; PYE=24.8		N=109; PYE=197.7
Adverse event category	Adj. %	Adj. IR	Adj. %	Adj. IR	Adj. IR
All adverse events	64.5%	415.3	65.1%	367.8	184.5
Severe adverse events	2.9%	10.4	5.0%	18.0	8.6
Serious adverse events	8.6%	32.7	4.4%	15.1	12.9
Adverse events leading to withdrawal	5.8%	21.6	3.6%	12.1	8.2
Adverse events of special interest:					
Eye disorders*	7.7%	29.3	5.0%	17.7	5.0
Eczema herpeticum	2.9%	10.7	0		0.5
Malignancy**	0		0.8%	2.6	3.0
Skin infections requiring systemic treatment	0		3.6%	12.4	4.2

*Including conjunctivitis, keratoconjunctivitis, and keratitis. **Diagnosed after treatment assignment and excluding basal cell carcinoma, localized squamous cell carcinoma of the skin, and carcinoma in situ of the cervix.
Adj. = adjusted using Cochran Mantel Haenszel weights; IR = incidence rate (number of patients divided by PYE until first event multiplied by 100); N = number of patients in dataset; PYE = patient-years of exposure.

Table 3. Efficacy of tralokinumab (up to 3 years) in patients ≥65 years

	Number (%) of responders			
Efficacy parameter	ECZTEND W0	ECZTEND W16	ECZTEND W56	ECZTEND W104
EASI-75	50/71 (70.4%)	50/62 (80.6%)	38/47 (80.9%)	37/40 (92.5%)
EASI-90	37/71 (52.1%)	41/62 (66.1%)	34/47 (72.3%)	30/40 (75.0%)
EASI score ≤7	52/71 (73.2%)	51/62 (82.3%)	38/47 (80.9%)	34/40 (85.0%)
IGA 0/1	31/71 (43.7%)	41/62 (66.1%)	27/47 (57.4%)	21/40 (52.5%)
DLQI score ≤5	48/67 (71.6%)	47/61 (77.0%)	33/44 (75.0%)	29/38 (76.3%)
Worst weekly pruritis NRS score ≤4	45/70 (64.3%)	52/63 (82.5%)	35/48 (72.9%)	32/40 (80.0%)

DLQI = Dermatology Life Quality Index; EASI = Eczema Area and Severity Index; EASI-75 / EASI-90 = ≥75% / ≥90% reduction in EASI score relative to baseline in parent trial; IGA = Investigator's Global Assessment of 0 (clear) or 1 (almost clear); N = number of patients in analysis set; NRS = numeric rating scale; W = week number.

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Abstract N°: 1639

Effectiveness of eDiary alarms on participant completion compliance in atopic dermatitis clinical trials

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Introduction & Objectives: In atopic dermatitis (AD) clinical trials, patient-reported outcome measures (PROMs) are invaluable resources that can be used to supplement endpoint data and to determine a study medication's effectiveness during treatment. These PROMs can be completed either at the site, or at home. For example, the Peak Pruritus Numerical Rating Scale (PP-NRS) is a validated instrument used to assess the maximum severity of pruritus and is often used to monitor a participant's worst itch between study visits through an eDiary. To ensure timely completion of the assessment, best practice recommends implementing device alarms or reminders to enhance compliance. The objective of this study was to observe how device alarms and reminders can influence the completion of the PP-NRS eDiaries in AD clinical trials.

Materials & Methods: Over 650,000 PP-NRS eDiary entries were collected from 5532 patients across 8 ongoing studies in AD. The eDiaries were completed on the participant's own device or a provisioned device every day throughout the study period. Alarms were programmed for each eDiary reporting window, and the difference between the participant's eDiary alarm time and the time the eDiary was first opened was compared. Only completed entries were used.

Results: Across all studies, sixty-seven percent (67%) of eDiaries (n=448,200) were opened after the scheduled alarm time. Fifty-eight percent (58%) of these eDiary entries (n=261,718) were answered within 30 minutes of the alarm time, and eighty-three (83%) of the eDiary entries (n=371,468) were answered within 2 hours of the alarm time. Thirty-three percent (33%) of eDiaries (n=219,427) were opened ahead of the scheduled alarm time, not requiring a reminder for completion.

Conclusion: Implementation of eDiary alarms is essential in supporting high completion compliance rates in clinical trials. The analysis performed here suggests that eDiary alarms are useful to encourage participants to answer their eDiary within a two-hour window of their scheduled alarm time. Interestingly, the analysis also shows that some participants may not require reminders for completion, opening their eDiaries ahead of their scheduled alarm. Although this supports the use of eDiary alarms to drive completion compliance in AD clinical trials, sites and study teams should continue to communicate the importance of eDiary completion to the participants throughout the trial to ensure optimal compliance and proper completion of their eDiaries.**

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Abstract N°: 1746

2D Imaging Analyses of Xerosis & Atopic Dermatitis in Diverse Ethnically Patients Following Prebiotic Skincare Regimen

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Introduction & Objectives:

Variations in the epidemiology, clinical presentation, and disease course in Atopic Dermatitis (AD) patients with skin of color (SOC) compared to white counterparts have been reported. Currently, there is a lack of representative images of pathologies, including AD, in patients with skin of color with darker-skin tones. This results in the deficiency of dermatology education, which relies heavily on the use of images to teach disease diagnosis. In patients with melanin-rich skin, hyper- or hypopigmentation, plus greater visibility of scaling and dryness are distinct features of AD and xerosis. The lack of visible erythema on darker skin may challenge a proper diagnosis and undercount the severity of the disease in diverse ethnic/racial groups. In view of this, here we evaluated the capability of a new imaging device for effectively monitoring improvement of AD and xerosis in diverse ethnically patients following 10 weeks of using a prebiotic skincare regimen.

Materials & Methods:

A total of 39 subjects from diverse racial/ethnic backgrounds, aged 3-76 years old with skin phototypes I-VI, presenting with mild-AD and moderate to severe xerosis, were enrolled into study. All subjects used a prebiotic cleanser alone for 2 weeks, followed by a prebiotic moisturizer in conjunction for an additional 8 weeks. 2D standardized images of subjects' legs were taken with new device at several time points (baseline, week 2 and 10), and analyzed for skin texture parameters, color and irregularity.

Results:

Our results demonstrate that both skin texture irregularity and skin color patterns significantly improve overtime with prebiotic skincare regimen in AD (n=12) and xerosis (n=24) patients. Interestingly, image analyses showed better improvement overtime in xerosis and AD patients of color (n=18 Fitz IV-VI) compared to white counterparts (n= Fitz I-III). Lastly, skin texture analyses from new imaging device correlated with dermatological clinical assessments, showing significant improvement by prebiotic skincare regimen in all patients by week 10. Overall, we conclude from our results that this new imaging device has the capability to effectively monitor skin texture parameters overtime in both AD and xerosis diverse ethnically patients with lightly and darkly-pigmented skin following 10 weeks of prebiotic skincare regimen.

Conclusion:

Our findings highlight that this new device allows for both 2D qualitative and standardized imaging of various skin conditions on multiple skin tones. The standardized images of mild-AD and severe xerosis obtained during our study help raise awareness on the different clinical presentations of both skin conditions depending on race/ethnicity, plus help support clinicians on disease diagnosis and management strategies to consider for all patients, particularly for patients of color

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Abstract N°: 1752

ANB032, a BTLA Checkpoint Agonist Antibody, Attenuates Dendritic Cell (DC) Maturation and Function: A Novel Mechanism Addressing Atopic Dermatitis Pathophysiology

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Introduction & Objectives: Atopic Dermatitis (AD) is characterized by heterogeneous immunologic drivers including broad T cell and DC activity. Modulating co-inhibitory checkpoint receptors is a promising strategy to regulate immune cells for the treatment of systemic, heterogeneous autoimmune and inflammatory disorders such as AD. One co-inhibitory checkpoint receptor that modulates the activity of T cells, B cells, and DCs is B and T Cell Lymphocyte Attenuator (BTLA). ANB032 is an investigational BTLA checkpoint agonist antibody that has been shown to reduce T cell proliferation and reduce secretion of inflammatory cytokines (Th1, Th2, Th17, Th22) in AD patient-derived peripheral blood mononuclear cells (PBMCs). Since DCs represent a heterogeneous population of myeloid cells that play a pivotal role in the initiation of adaptive immune responses and the maintenance of immune tolerance, the role of BTLA agonism in modulating DC activation and maturation was investigated.

Materials & Methods: Purified monocytes from healthy PBMCs were differentiated to DCs and stimulated with lipopolysaccharide (LPS) to determine the expression of BTLA on the DCs. DCs were then stimulated with LPS in the presence or absence of ANB032 and the maturation state of the DCs was assessed. MHC II expression and costimulatory molecule expression were measured by FACS. ANB032-treated DCs were washed and then co-cultured with allogeneic naïve CD4 T cells in a mixed lymphocyte reaction (MLR) for an additional five days to evaluate the frequency of differentiated FOXP3+ regulatory T cells and secretion of inflammatory cytokines by FACS and MSD, respectively.

Results: LPS induced rapid DC maturation and expression of high levels of BTLA on mature DCs. ANB032, included in the DC culture during LPS stimulation, reduced the absolute number of mature DCs by 53%. Additionally, ANB032 reduced HLA-DR expression and costimulatory molecule expression of CD80, CD86, CD40, and OX40L. When co-cultured with allogeneic naïve CD4 T cells, ANB032-treated DCs increased the frequency of FOXP3+ Tregs and reduced the secretion of Th1 and Th2 cytokines in the MLR.

Conclusion: These data demonstrate the induction of BTLA expression on mature DCs by a stimuli relevant in AD and provides additional insight regarding the effect of BTLA agonism on DC maturation and function. BTLA agonism by ANB032 has the potential to restore immune balance by impacting a broad range of pathogenic immune cells, including T cells and DCs, while inducing Tregs, which may provide therapeutic value in the treatment of autoimmune and inflammatory disorders, including AD. These data, additional in vitro data and results from a Phase 1 healthy volunteer study support the ongoing double-blind, placebo-controlled, global Phase 2b study of ANB032 in moderate-to-severe AD (NCT05935085).

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Abstract N°: 1903

The development of Conversation Cards for optimising consultations for patients with atopic dermatitis

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Introduction & Objectives:

Atopic dermatitis (AD) is a chronic inflammatory skin disease that requires ongoing self-management. The impact of AD on the patients and their families is considerable, with persistent itching, pain, sleep disturbance, and psychological burdens resulting in decreased quality of life. AD has heterogeneous signs and symptoms, making treatment with a universal approach complex; thus, focusing on optimal patient-centred care is essential from an economic and well-being perspective. Patients with AD need skills and support from healthcare professionals to manage life with their disease.

In close cooperation with end-users (patients and healthcare professionals), we aimed to develop a patient-centred agenda-setting tool that can be used in consultations with patients suffering from AD to co-construct the consultation set-up with the patient's needs for self-management support as a starting point.

Materials & Methods:

This research project used the design thinking process as a method. We first *emphasised and defined key challenges* by conducting a secondary analysis of 26 interviews with patients with AD from a private and hospital-based dermatological outpatient clinic. We secondly *ideated* possible solutions by reviewing the literature and creating an initial prototype. We thirdly prepared *for implementation* through iterative user testing at the dermatology outpatient clinic, which incorporated two workshops with healthcare professionals and patients, 11 observations of consultations using the developed agenda-setting tool, and 18 interviews with healthcare professionals and patients after a consultation where the agenda-setting tool had been employed.

Results:

We included 64 end-users. We identified seven categories - Everyday life with eczema, Medication & treatment plans, Thoughts & feelings, Sexuality & intimacy, Work/study/school, Economy, Hay fever, asthma, & food allergies, that patients find significant to discuss in consultations. Based on the results from the patient interviews, a literature review, clinical experience, and discussions between the authors, Conversation Cards were considered an appropriate solution for incorporating agenda-setting in the consultation. In the iterative user testing of the Conversation Cards, we find that patients perceive the cards as inspiration and an invitation from healthcare professionals to discuss their needs in the consultations. Healthcare professionals find the Conversation Cards easy to use, and they have the potential to enhance the consultation process despite disrupting the "usual" way of conducting consultations.

Conclusion:

Our findings demonstrate that Conversation Cards are an easy and feasible way to create a shared agenda that focuses on the patient's needs and is applicable in a real-world clinical setting. However, to validate the Conversation Cards further, the cards must be tested in a larger setting.

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Abstract N°: 1906

Investigation of dynamics in skin barrier function of atopic dermatitis following targeted therapy

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Introduction & Objectives:

Atopic dermatitis (AD) is a common chronic inflammatory skin disease that is characterized by impaired epidermal barrier functions. Transepidermal water loss (TEWL) and hydration can reflect skin barrier functions. Various skin barrier proteins and molecules are abnormal in AD. Targeted therapeutics like IL-4Rα blockades and JAK inhibitors have shown tremendous efficacy for AD. However, the disparity of different treatments in improving skin barrier functions remains largely unidentified. We aim to investigate the skin barrier function of both lesional and non-lesional skin in AD patients before and following targeted therapy.

Materials & Methods:

Thirty adult patients with moderate-to-severe AD and 15 adult healthy controls were recruited. One patient with thyroid disease was excluded. Twenty-nine patients were randomized into two groups. While one group (N = 14) received dupilumab injections (initial 600mg followed by 300mg every other week), the other (N = 15) was treated with abrocitinib (100mg/day). Both groups received skin moisture. Clinical manifestation measured by eczema area and severity index (EASI) and peak pruritus numeric rating scale (PP-NRS), and skin barrier parameters including TEWL and hydration of lesional and non-lesional skin were collected at baseline and following 4 and 12 weeks of treatment. Furthermore, skin tape strips were collected from the lesional and non-lesional skin of AD patients (N = 21) and healthy skin of controls (N = 15) and subjected to four-dimensional label-free quantification (4D-LFQ) proteomics at the same time points.

Results:

Skin lesions and pruritus have significantly improved since the fourth week of the treatment period. Skin lesions in AD patients exhibited significantly higher TEWL and lower hydration compared to either healthy skin or non-lesional skin. Lesional TEWL improved in both groups following treatment at week 4 and week 12. However, abrocitinib treatment induced a more significant reduction of lesional TEWL than dupilumab. Abrocitinib, rather than dupilumab, led to a robust improvement of non-lesional TEWL in AD patients. The improvement of lesional hydration reached statistical significance following abrocitinib treatment but was not significantly different in the dupilumab-treated group. Compared to the healthy skin, while upregulated proteins were enriched in cornification (IVL, keratins, JUP, DSP, SPRR2D, SPRR2F, PRSS27) and the sphingolipid metabolism pathway (SMPD4, HACD3, PPP2R1A, GLTP, ALDH3A1), proteins related to the skin barrier (FLG2, LOR, keratins), keratinocyte differentiation (SPINK5, KLKs, TGM3), and the sphingolipid metabolism pathway (NEU2, PSAP, SMPD1, GLA, ASAH1, GBA1, GLB1) were robustly downregulated in the AD lesional skin. Following 4 weeks of abrocitinib therapy, levels of FLG2, LOR, SPINK5, KLK7, KLK8, KLK10, KLK11, and TGM3 that are related to the skin barrier or keratinocyte differentiation in the lesional skin were significantly increased. Non-lesional skin showed an upregulation of KLK8 at week 4 after abrocitinib therapy. Regarding dupilumab, 12 weeks of therapy led to increased levels of KLK8, KLK11, and TGM3 in the lesional skin compared to the baseline.

Conclusion:

Skin barrier function can be significantly reconstituted following targeted therapy. The dynamics of skin barrier improvement are diverse across different therapeutics. JAK inhibitors provide a rapid intervention to restore skin barrier functions in AD.

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Abstract N°: 1943

The validity and reliability of patient-provided photographs for the diagnosis and severity of hand eczema – Preliminary results

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Introduction & Objectives: Hand eczema (HE) is a common skin disease. Although HE is a clinical diagnosis, real-time dermatological examination is often not feasible in research and daily-practice settings. However, data on remote assessment of HE is limited. Therefore, the aim of this study was to assess the criterion validity and inter- and intra-rater reliability of patient-provided photographs to diagnose HE, and to assess the severity of this skin disease.

Materials & Methods: Adult patients with and without HE, visiting the dermatology outpatient clinic, were eligible. Presence and severity of HE (based on the HE severity index (HECSI) and photographic guide) were assessed by one of the two experienced raters at the clinic. In addition, participants took four smartphone photographs of their hands (left/right, dorsal/palmar), following standardized instructions. Afterwards, all photographs were assessed twice by four experienced raters. Criterion validity was based on the photographic assessment conducted by the identical rater who conducted the clinical assessment. Inter- and intra-rater reliability were based on the photographic assessment of all four experienced raters combined.

Results: In total, 50 patients were included in these preliminary analyses. The sensitivity, specificity, negative predictive value and positive predictive value for diagnosing HE based on patient-provided photographs were respectively 91.9%, 92.3%, 97.1% and 80.0%. Kappa values of respectively 0.26 and 0.71 were found for the inter- and intra-rater reliability of diagnosing HE based on photographs. Intra-class correlation coefficient (ICC) values of 0.95, 0.96 and 0.98 were found for the criterion validity and inter- and intra-rater reliability of the photographic severity assessment based on the HECSI, respectively. Kappa values for the criterion validity and inter and intra-rater reliability by using the photographic guide were respectively 0.78, 0.34-0.75 and 0.72.

Conclusion: Remote assessment of HE shows excellent criterion validity for diagnosing HE and assessing the severity of HE by using the HECSI, and substantial criterion validity for assessing the severity of HE by using the photographic guide. Respectively fair, excellent and good inter-rater reliability, and substantial, excellent and good intra-rater reliability were found. Although further research is necessary, these results indicate a potential role for remote assessment of HE, both in clinical and research settings.

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Abstract N°: 1947

The Sex-specific Association between Wet Work and Hand Eczema in the Dutch General Population: Application of a Job Exposure Matrix to the Lifelines Cohort Study

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Introduction & Objectives: Hand eczema (HE) is a common skin disease, with wet work exposure being considered as one of the most important risk factors. To date, studies on the association between wet work and HE frequently rely solely on self-reports, and do not take sex-specific associations into account. Therefore, the aim of this study was to assess the sex-specific association between wet work and moderate-to-very-severe HE, within the Dutch general population, by using a wet work-specific job exposure matrix (JEM).

Materials & Methods: Within the Lifelines Cohort Study, participants with self-reported moderate-to-very-severe HE at worst in the past year were linked to data from the Danish wet work-specific JEM in 2020. The JEM links occupations with wet work indices (including duration and probability of occupational exposure regarding gloves, wet hands and total wet work for at least two and four hours daily), based on results from national surveys on working environment in Denmark. Associations between moderate-to-very-severe HE vs no HE in lifetime and wet work were examined using binary logistic regression analyses, adjusted for age, sex, atopic dermatitis and contact allergies.**

Results: In total, 56.978 (41.9%) participants were included. Among females, significant associations were found between the duration of wet work (hours per working day) and moderate-to-very-severe HE (wet hands: Odds Ratio (OR) 1.11 [95% confidence interval (CI):1.05-1.18], gloves: OR 1.13 [95%CI:1.06-1.19] and total wet work: OR 1.10 [95%CI:1.04-1.15]). In addition, significant associations were found for a higher probability of wet work for at least two hours per working day (wet hands: OR 1.66 [95%CI:1.28-2.14], gloves: OR 1.79 [95%CI:1.37-2.34] and total wet work: OR 1.58 [95%CI:1.25-2.00]). No significant associations were found among males.

Conclusion: This study is the first to use a wet work-specific JEM in a large general population sample, which highlights sex-specific differences in the association between wet work and HE. The contrasting sex-specific findings should be interpreted with caution, due to limitations inherent in using a JEM, such as the inability to capture variations in exposure among individuals within the same occupation. Future research should further explore the sex-specific differences, by using observational study designs, with a focus on duration, frequency and type of exposure.

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Abstract N°: 1975

Baseline Demographics and Disease Characteristics Among Patients With Atopic Dermatitis Who Initiate Abrocitinib: Real-World Data From the DREAM-to-TREAT AD Study

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Introduction & Objectives: Moderate-to-severe atopic dermatitis (AD) is treated with conventional or new systemic therapies (biologics or Janus kinase [JAK] inhibitors). Clinical practice treatment patterns of abrocitinib (JAK 1-selective inhibitor) use in real-world settings are currently unknown. DREAM-to-TREAT AD is a 3-year, ongoing, pan-European, observational study of AD registries in Denmark, Germany, Ireland, Netherlands/Belgium, and the United Kingdom, united in the TREAT Registry Taskforce, that aims to characterise patients (pts) with moderate-to-severe AD who initiate treatment with abrocitinib or conventional systemic therapies. Here, we provide a planned interim report of baseline characteristics of pts who initiated abrocitinib treatment in the DREAM-to-TREAT AD study.

Materials & Methods: Data for all pts enrolled since register inception and who initiated abrocitinib treatment were aggregated from national TREAT registries. Previous exposure to JAK inhibitors does not preclude inclusion. Data collected upon enrolment to the registry includes pt demographics, comorbidities and prior systemic therapies. Data on treatments and disease severity is updated in subsequent visits as measured by Eczema Area and Severity Index (EASI), Patient-Oriented Eczema Measure (POEM), Dermatology Life Quality Index (DLQI), and Peak Pruritus Numerical Rating Scale (PP-NRS). To evaluate homogeneity of pt data at the time of their first abrocitinib prescription across registries, fixed-effect and random-effect meta-analysis models were employed, each estimated for every variable.

Results: A total of 154 pts initiated abrocitinib treatment in the SCRATCH DK (n=27), TREATgermany (n=53), TREAT NL/BE (n=29), and ASTAR UK (n=45) registries (Table). Based on the fixed-effect model, mean (SD) age was 36.9 (±14.0) years and 64.9% were male (Table). Mean duration of AD was 30.5 (±14.5) years. Most pts reported comorbid allergic rhinoconjunctivitis (59.3%), followed by asthma (52.6%) and food allergies (45.2%).

Mean number of prior systemic therapies was 2.4 (±1.6). Most pts (71.4%) received prior conventional systemic therapies, of which ciclosporin (43.5%) was the most frequently prescribed. Among pts who received prior biologic therapies (57.8%), 55.2% had received dupilumab. Among pts who received prior JAK inhibitors (31.2%), 22.7% and 9.7% of pts had received baricitinib and upadacitinib, respectively. The mean EASI score was 17.5 (±12.0); 18.6%, 51.7%, and 29.7% of pts had mild, moderate, and severe AD, respectively. Mean POEM score at baseline was 17.4 (±7.5) and mean DLQI score was 12.2 (±7.7). Mean PP-NRS score was 6.1 (±2.9); with 56.6% of pts reporting severe pruritus. Similar results were observed with the random-effect model (**Table**).

Conclusion: This interim baseline analysis of real-world data across 4 European pt registries highlights the use of abrocitinib in a diverse population of pts with AD. Most pts had moderate/severe AD and severe pruritus with a substantial impact on their quality of life. Among prior treatments, conventional systemic therapy was most common. Further analyses of this ongoing study will provide valuable insights into the real-world effectiveness and treatment patterns of abrocitinib in pts with AD.

Table. Demographic and Baseline Characteristics of Patients Initiated on Abrocitinib Treatment in the DREAM-to-TREAT AD Study

Variable	Country Registry				Fixed-Effect Meta-Analysis[b]	Random-Effect Meta-Analysis[c]
	Denmark (SCRATCH DK) n = 27	Germany (TREATgermany) n = 53	Netherlands, Belgium (TREAT NL/BE) n = 29	UK[a] (ASTAR UK) n = 45		
Age, mean ± SD, years	41.6 ± 13.8	40.5 ± 13.3	32.4 ± 12.6	31.5 ± 16.2	36.9 ± 14.0 P = 0.0013	36.5 ± 14.8 R^2 = 10.2%
Male, %	66.7	71.7	72.4	51.1	64.9 P = 0.1393	65.2 (range, 21.3)
AD duration, mean ± SD, years	35.8 ± 16.6	33.3 ± 14.4	28.5 ± 12.5	26.6 ± 15.0	30.5 ± 14.5 P = 0.0509	30.7 ± 14.9 R^2 = 4.3%
Comorbidities, %						
Allergic rhinoconjunctivitis	57.1	67.4	59.3	51.2	59.3 P = 0.4913	59.3 (range, 16.2)
Asthma	57.1	47.8	44.4	61.0	52.6 P = 0.4790	52.6 (range, 16.5)
Food allergies	52.4	26.1	51.9	58.5	45.2 P = 0.0117	46.2 (range, 32.4)
Depression	33.3	17.4	0	9.8	14.1 P = 0.0026	11.7 (range, 33.3)
Anxiety	14.3	NA	22.2	4.9	8.1 P = 0.0024	6.6 (range, 22.2)
Number of prior systemic therapies, mean ± SD	3.1 ± 1.8	1.4 ± 1.5	2.4 ± 1.4	3.2 ± 1.6	2.4 ± 1.6 P < 0.0001	2.5 ± 1.8 R^2 = 20.7%
Any prior conventional systemic therapy, %	70.4	49.1	82.8	91.1	71.4 P < 0.0001	75.9 (range, 42.1)
Ciclosporin	18.5	22.6	79.3	60.0	43.5 P < 0.0001	43.9 (range, 60.8)
Methotrexate	59.3	5.7	17.2	68.9	35.7 P<0.0001	31.3 (range, 63.2)
Other conventional systemic therapies	63.0	45.3	58.6	55.6	53.9 P = 0.4243	53.9 (range, 17.7)
Any prior biologic therapy, %	63.0	39.6	55.2	77.8	57.8 P = 0.0015	59.3 (range, 38.2)
Dupilumab	63.0	35.8	48.3	77.8	55.2 P = 0.0002	56.7 (range, 41.9)
Other biologic therapy	7.4	5.7	13.8	6.7	7.8 P = 0.6458	7.8 (range, 8.1)
Any prior JAK inhibitor therapy, %	66.7	22.6	17.2	28.9	31.2 P = 0.0002	31.7 (range, 49.4)
Baricitinib	66.7	13.2	3.4	20.0	22.7 P < 0.0001	19.5 (range, 63.2)
Upadacitinib	0	11.3	13.8	11.1	9.7 P = 0.0998	9.7 (range, 13.8)
EASI score, mean ± SD	13.4 ± 10.9	18.9 ± 11.7	15.9 ± 12.5	20.2 ± 12.8	17.5 ± 12.0 P = 0.0748	17.3 ± 12.2 R^2 = 3.6%
Mild, %	33.3	14.9	22.2	11.4	18.6 P = 0.1270	18.8 (range, 22.0)
Moderate, %	55.6	53.2	51.9	47.7	51.7 P = 0.9230	51.7 (range, 7.8)
Severe, %	11.1	31.9	25.9	40.9	29.7 P = 0.0429	28.0 (range, 29.8)
POEM score, mean ± SD	17.0 ± 7.2	17.5 ± 7.5	14.5 ± 8.6	17.9 ± 7.5	17.4 ± 7.5 P = 0.7512	17.4 ± 7.5 R^2 = 0.0%
DLQI score, mean ± SD	11.0 ± 7.9	11.2 ± 7.2	8.8 ± 7.6	14.7 ± 8.2	12.2 ± 7.7 P = 0.0771	11.9 ± 7.9 R^2 = 4.6%
PP-NRS score, mean ± SD	6.5 ± 2.8	5.9 ± 3.1	4.9 ± 2.8	6.3 ± 2.8	6.1 ± 2.9 P = 0.4947	6.1 ± 2.9 R^2 = 0.0%
Mild, %	18.5	25.7	25.0	18.6	21.2 P = 0.8561	21.2 (range, 7.2)
Moderate, %	14.8	22.9	50.0	20.9	22.1 P = 0.2676	22.1 (range, 35.2)
Severe, %	66.7	51.4	25.0	60.5	56.6 P = 0.1660	56.6 (range, 41.7)

AD, atopic dermatitis; DLQI, Dermatology Life Quality Index; EASI, Eczema Area and Severity Index; NA, not applicable; POEM, Patient-Oriented Eczema Measure; PP-NRS, Peak Pruritus Numerical Rating Scale.
[a]In the UK, abrocitinib is licensed for use in adolescent patients with moderate-to-severe AD requiring systemic treatment.
[b]The mean (continuous variables) or mean proportion (categorical variables) of the fixed-effect meta-analysis are shown. Also shown is the "average" standard deviation of individuals within the nodes (σ_w), which is the averaging across of the nodes' variances using the same weights used to calculate the mean; this reflects the individual variability. The p-value of homogeneity test across the nodes' means are shown. If p-values are small, the hypothesis that all nodes have the same mean value is rejected, and the random effects model is used.
[c]For continuous variables, the mean denotes the average effect size estimated in the random-effects meta-analysis. Estimated SD between the means of the nodes $\sigma_b$reflects variability between the registry means. $R^2 = 100 * \sigma_b^2/(\sigma_w^2 + \sigma_b^2)$ quantifies the percentage of total variability between individuals attributed to differences between node means. For categorical variables, this is the mean proportion of the random-effects meta-analysis and the range between the largest and the smallest proportions in the nodes.

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Abstract N°: 1977

Long-Term Efficacy of Abrocitinib in Patients With Moderate-to-Severe Atopic Dermatitis Who Had Prior Exposure to Systemic Therapies: A Post Hoc Analysis of JADE EXTEND

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Introduction & Objectives: Patients (pts) with moderate-to-severe atopic dermatitis (AD) with inadequate response to topical therapies may require treatment with systemic therapies. Prior exposure to systemics impacts the efficacy of subsequent systemic treatment in pts with other chronic inflammatory conditions such as psoriasis. This post hoc analysis evaluated the long-term efficacy of abrocitinib, an oral, once-daily, Janus kinase 1-selective inhibitor, in pts with moderate-to-severe AD with prior exposure to systemic therapies.

Materials & Methods: Data were included from pts randomised to abrocitinib (200 mg/100 mg) or placebo in the phase 3 JADE MONO-1 (NCT03349060), MONO-2 (NCT03575871), COMPARE (NCT03720470), TEEN (NCT03796676), MOA (NCT03915496), and DARE (NCT04345367) trials and subsequently enrolled in the ongoing extension study, EXTEND (NCT03422822; data cutoff: September 5, 2022). Pts may have received their first abrocitinib dose in JADE EXTEND if they received placebo in the qualifying phase 3 trials. Pts were classified by prior exposure to oral corticosteroids, methotrexate (MTX, administered via all routes), systemic cyclosporine (CsA), biologics (including dupilumab), ≥2 systemic therapies, or no systemic therapies (systemic therapy naïve) before enrolment in the parent trial. Assessments were the proportions of pts achieving ≥75%/90% improvement from baseline in Eczema Area and Severity Index (EASI-75/-90), Investigator's Global Assessment score of 0 (clear) or 1 (almost clear) with ≥2-point improvement from baseline (IGA 0/1), ≥4-point improvement from baseline in Peak Pruritus Numerical Rating Scale score (PP-NRS4), and PP-NRS score of 0/1 with ≥2-point reduction from baseline (itch-free state) up to Week 112. Data are reported as observed.

Results: A total of 1054 pts were systemic therapy naïve. Prior systemic therapy exposure included oral corticosteroids (n=446), MTX (n=21), systemic CsA (n=213), biologics (n=70), and ≥2 systemic therapies (n=126). Efficacy responses were sustained through Week 112 of continuous treatment with abrocitinib 200 mg and 100 mg across all subgroups (**Table**). EASI-75, EASI-90, IGA 0/1, PP-NRS4, and PP-NRS 0/1 responses were largely dose-dependent across subgroups. Notably, 43.6%-83.3% of pts achieved a stringent response of EASI-90 and 27.8%-75.0% of pts achieved an itch-free state (ie, PP-NRS 0/1) with both abrocitinib doses across subgroups by prior exposure to oral corticosteroids, MTX, systemic CsA, and ≥2 systemic therapies after 112 weeks of abrocitinib treatment; in the prior biologic therapy subgroup, 28.6%-45.5% of pts in the abrocitinib 100 mg and 200 mg treatments arms achieved EASI-90 and 33.3% achieved itch-free state. Week 112 efficacy responses with

abrocitinib tended to be lower in pts with prior systemic therapy exposure compared with those who were systemic therapy naïve, except in the MTX subgroup, likely due to the small sample size.

Conclusion: Previous exposure to systemic therapies had only a modest impact on abrocitinib response. Importantly, abrocitinib at either dose provided sustained long-term efficacy for >2 years in pts with moderate-to-severe AD, regardless of prior exposure to systemic therapies. Long-term improvements with abrocitinib generally occurred in a dose-dependent manner across the subgroups, consistent with the overall population. This analysis is limited by small samples sizes in some subgroups.

Table. Abrocitinib Efficacy Responses at Week 112 by Prior Exposure to Systemic Therapies

	EASI-75		EASI-90		IGA Response		PP-NRS4		Itch-Free State (PP-NRS 0/1 Response)	
n/N (%)	Abrocitinib 100 mg	Abrocitinib 200 mg	Abrocitinib 100 mg	Abrocitinib 200 mg	Abrocitinib 100 mg	Abrocitinib 200 mg	Abrocitinib 100 mg	Abrocitinib 200 mg	Abrocitinib 100 mg	Abrocitinib 200 mg
Oral corticosteroids	84/113 (74.3)	65/81 (80.2)	59/113 (52.2)	43/81 (53.1)	40/91 (44.0)	35/76 (46.1)	55/90 (61.1)	48/75 (64.0)	25/90 (27.8)	30/77 (39.0)
MTX	5/6 (83.3)	4/5 (80.0)	5/6 (83.3)	4/5 (80.0)	4/6 (66.7)	2/3 (66.7)	5/6 (83.3)	4/4 (100.0)	4/6 (66.7)	3/4 (75.0)
Systemic CsA	36/55 (65.5)	37/45 (82.2)	24/55 (43.6)	24/45 (53.3)	19/45 (42.2)	16/39 (41.0)	25/45 (55.6)	28/38 (73.7)	13/45 (28.9)	13/39 (33.3)
Biologics	7/14 (50.0)	8/11 (72.7)	4/14 (28.6)	5/11 (45.5)	3/9 (33.3)	4/9 (44.4)	4/9 (44.4)	6/9 (66.7)	3/9 (33.3)	3/9 (33.3)
≥2 systemic therapies	21/31 (67.7)	19/24 (79.2)	17/31 (54.8)	12/24 (50.0)	12/26 (46.2)	7/20 (35.0)	15/25 (60.0)	14/20 (70.0)	7/25 (28.0)	8/20 (40.0)
Systemic therapy naïve	186/226 (82.3)	212/249 (85.1)	129/226 (57.1)	162/249 (65.1)	100/170 (58.8)	131/209 (62.7)	93/166 (56.0)	143/204 (70.1)	59/170 (34.7)	97/209 (46.4)

CsA, cyclosporin; EASI-75/-90, ≥75/90% improvement from baseline in Eczema Area and Severity Index; IGA, Investigator's Global Assessment; MTX, methotrexate; PP-NRS4, ≥4-point improvement from parent study baseline in Peak Pruritus Numerical Rating Scale.
IGA response defined as Investigator's Global Assessment score of 0 (clear) or 1 (almost clear) with ≥2-point reduction from parent study baseline. Itch-free state/PP-NRS response defined as PP-NRS score of 0 (no itch) or 1 (very little itch) with ≥2-point reduction from parent study baseline. PP-NRS used with permission from Regeneron Pharmaceuticals, Inc., and Sanofi.

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Abstract N°: 2038

Impact on Quality of Life (QoL) Results from the APOLO Study in Spain: Atopic Dermatitis – Cross-sectional Study of the Characteristics of the Disease and its Impact on Patients

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Introduction & Objectives: Despite Atopic Dermatitis (AD) being one of the most prevalent inflammatory skin diseases, there are scarce data focusing on the outlook of this disease, its impact, demographic and clinical characteristics of patients with AD, treatment, and the use of sanitary resources for this disease. The objective of this study is to clarify these aspects on patients with moderate to severe (M2S) AD on their first visit to their referral hospital before receiving specific treatment.

Materials & Methods: Cross-sectional, multicenter study including 12 medical sites and aiming to identify the impact in terms of quality of life in patients suffering from M2S AD.

Results: Seventy-one patients were included throughout the 7-month recruitment period, 62 of which were assessable. The mean score for the Dermatology Life Quality Index (DLQI) in patients >16 (N=58) years of age was 14.3, resulting in very large effect on patient's life. The mean score for the Visual Analog Scale (VAS) for health on that day in the EuroQol 5 Dimensions 3 Levels (EQ-5D-3L) (N=57) was 55.6. The mean score for Patient-Oriented Eczema Measure (POEM) (N=61) was 19.8, resulting in severe eczema and the mean score for Peak Pruritus Numerical Rating Scale (PP-NRS) (N=60) (ranging from 0: no pruritus – 10: worst pruritus) was 7.8 in the past 24 hours. For the VAS for sleep in the past 3 nights (N=59) (ranging from 0: no sleep disturbance – 10: worst sleep disturbance) and for pain during the past week (N=57) (ranging from 0: no pain – 10: worst pain) was 5.7. The following were the main causes of pain: open scars caused by scratching (N=31), erythematous and inflamed skin (N=28), skin fissures (N=24) and stinging from topical treatments (N=12). Regarding the Work Productivity and Activity Impairment (WPAI) questionnaire, the mean percent for overall work, classroom and activity impairment due to AD was 49.1%, 58.7% and 48.3%, respectively.

Conclusion: These results that include a wide range of measures (sleep disturbance, pain, itch, work impairment…) depict the great impairment on quality of life and normal functioning in patients suffering from M2S AD in Spain.

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Abstract N°: 2067

Real-world clinical review of Tralokinumab in a tertiary centre

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Introduction & Objectives:

Tralokinumab, a human IgG4 monoclonal antibody inhibiting the IL-13 pathway, is approved for the treatment of atopic dermatitis; however, real world data are lacking and needed to inform its efficacy and safety in broader populations.

Materials & Methods:

This retrospective study reviewed the Eczema Area and Severity Index (EASI) and Dermatology Life Quality Index (DLQI) at baseline and 16-20 weeks of consecutive patients who received subcutaneous tralokinumab at the label dose in a tertiary centre. Adverse events, including conjunctivitis, were also captured.

Results:

Twenty-nine out of thirty-nine patients had an EASI score recorded after 16-20 weeks. Seven patients have not reached the 16-week point, one patient did not attend follow up and two patients discontinued treatment before 16 weeks.

The mean average length of treatment was 9.6 months (N=39). At 16-20 weeks, 65.5% (19/29) of patients achieved EASI 50; 37.9% (11/29) achieved EASI 75; and 27.8% (9/29) achieved EASI 90. DLQI showed a mean average change of -10.4 points (range + 6 to - 26) by 16-20 weeks. Sixteen patients (41.0%) reported at least one adverse event. Ten patients (25.6%) experienced eye problems including watery eyes (1/39), dry eyes (8/39), itchy eyes (2/39) and conjunctivitis (4/39).

Nine patients (23.0%) discontinued tralokinumab due to: ineffectiveness (5/9); painful injections (1/9); increased pruritis (1/9); both ineffectiveness and painful injections (1/9) and patient preference (1/9). The latter patient passed away with covid pneumonitis several months after stopping treatment; their death was deemed unrelated to therapy. No serious adverse events were reported in any other patients and no patients stopped therapy for eye related issues.

Twenty-one patients in this cohort were previously treated with dupilumab and switched to tralokinumab due to ineffectiveness (n=8), conjunctivitis/eye irritation (n=9), facial erythema/ dermatitis (n=3), drug eruption (n=1) and arthralgia (n=2). Six out of 7 patients that experienced conjunctivitis with dupilumab had no recurrence with tralokinumab; the remaining patient continued treatment despite symptoms. EASI response data was available for 14 of the 21 patients previously treated with dupilumab. They achieved EASI 50 and EASI 75 of 71.4% and 35.7% respectively at 16-20 weeks (n=14).

Conclusion:

Our study supports the use of tralokinumab in atopic dermatitis with similar real-world efficacy to that shown in

clinical trials1. Tralokinumab offers an alternative for patients failing dupilumab due to conjunctivitis. Longer term follow up is needed to fully evaluate the real-world efficacy and tolerability of this promising therapy.

\1. Wollenberg A, Blauvelt A, Guttman-Yassky E et al. Tralokinumab for moderate-to-severe atopic dermatitis: Results from two 52-week, randomized, double-blind, Multicentre, placebo-controlled phase III trials (ECZTRA 1 and ECZTRA 2)*. British Journal of Dermatology. 2020 Dec 30;184(3):437–49

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Improving Patient's Quality of Life Using a Ceramide-Containing Moisturiser as Monotherapy in Mild to Moderate Atopic Dermatitis

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Improving Patient's Quality of Life Using a Ceramide-Containing Moisturiser as Monotherapy in Mild to Moderate Atopic Dermatitis

Introduction & Objectives: Atopic dermatitis (AD) is associated with skin barrier dysfunction and altered levels and composition of ceramides. Though regular use of moisturisers is cornerstone of therapy for all severities of AD, many moisturisers only hydrate skin without restoring barrier function. The present study evaluates efficacy of a ceramide-containing moisturiser (CCM) formulated using multivesicular emulsion (MVE) technology in improving patient's quality of life, reducing severity of AD and restoring skin barrier function when used as monotherapy in patients with mild to moderate AD.

Materials & Methods: 120 adults with 'SCORAD categorized' mild to moderate AD applied CCM twice daily over entire body as monotherapy for 28 days (treatment phase), followed by a 7-day treatment-free phase, during which no moisturizer was applied. SCORAD, overall dryness score (ODS), scaling, roughness, redness and cracks (SRRC) grading, numerical rating scale (NRS) for average itch, transepidermal water loss (TEWL), skin hydration and adverse effects were assessed at baseline (Day-0), during treatment phase (D-14 & 28), and treatment free phase (D-31 & D-35), while Dermatology Life Quality Index (DLQI) was assessed on D-0, D-14 and D-28. Additionally ODS, SRRC, TEWL and skin hydration were assessed 15 minutes after 1st application of CCM. A questionnaire to assess patient satisfaction with the test moisturizer on 19 parameters was administered to patients at the end of treatment.

Results: 117 patients completed the study. A statistically significant improvement (p-value <0.05, using paired t-test or Wilcoxon signed ranked test) in the mean of percentage change in scores from D-0 was noted on D-14, D-28, D-31 and D-35 in SCORAD (- 34.5, -56.5, - 51.1 & -43.5% respectively), in ODS (-31.8, -48.9, -40.2 & -33.1% respectively), in SRRC (-37.4, -61.7, -51.0 & -42.5% respectively), in NRS for average itch (-33.9, -61.4, -56.9 & -51.7% respectively), in skin hydration (+61.8,+73.7, +59.6 & +47.6% respectively) and in TEWL (-7.5, -14.6, -8.2 & -4.2% respectively). Similarly, there was a statistically significant improvement in ODS, SRRC, TEWL and skin hydration (-54.0, -54.6, -9.1 & +132.9% respectively) 15 minutes after 1st application of CCM. A statistically significant improvement (p-value <0.05, using Wilcoxon signed ranked test) in the mean of percentage change in scores from D-0 was noted on D-14 and D-28 (-72.6 & -91.2% respectively) in DLQI. On D-28, in 84 (71.8%) patients there was >50% reduction in SCORAD, while in 104 (88.1%) patients there was at least 1 grade improvement in ODS. No side effects were noted. There was 96.6% cosmetic acceptability of CCM on all parameters evaluated.

Conclusion: Our study demonstrates immediate and prolonged efficacy of a ceramide-containing moisturizer formulated using multivesicular emulsion technology when used as monotherapy in mild to moderate AD as demonstrated by improvement in skin barrier function and severity of AD, resulting in significant improvement in patient's quality of life. The study also indicates the improvement in clinical parameters persist for at least 7 days

after treatment is stopped, indicating a significant residual effect attributable to restoration of the skin barrier function.

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Abstract N°: 2120

Treatment in real practice in Spain: efficacy and safety results from a 24-week multicenter study

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Introduction & Objectives:

Atopic dermatitis (AD) is a chronic, inflammatory and pruritic skin disease, with a prevalence of 4% among the adult population. The therapeutic approach of these patients can be complicated, as phototherapy and/or systemic therapies often do not guarantee adequate control of the disease. We currently have two biological therapies and three JAK inhibitors authorized for the treatment of moderate-to-severe AD. The last authorized JAK inhibitor is abrocitinib, with scarce real practice experience.

Materials & Methods:

We present a series of 68 moderate-to-severe AD patients from 15 Spanish hospitals who received abrocitinib in real practice. The doses of abrocitinib were either 100 or 200 mg per day, depending on clinical criteria.

Data collected included age, time of evolution of the disease, personal history (comorbidities), and previous systemic/biological treatments. Disease severity was measured by SCORAD, EASI, BSA and Peak pruritus NRS scores at the baseline visit, and at follow up weeks 4, 12 and 24. Quality of life was assessed with DLQI. Adverse effects related to the drug and the following analytical parameters were collected: haemoglobin, eosinophils, total IgE, CPK, cholesterol, LDH, GGT, GOT, GPT, and plaquetes.

Results:

The mean age was 33,93 (SD=12.22) years old (18-65). 57,89% of the patients were male. The median time of evolution of the disease was 20,21 (SD=10,89) years (1-50). The mean weight was 73.37kg (SD = 16.37) and the BMI was 25.40 (SD = 5.91). Concomitant atopic diseases were present in the following proportions: allergic rhinitis 42,11%, asthma 34.21%, conjunctivitis 22.37%, food allergies 9,21%, nasal polyps 2.63%, and 1.32 eosinophilic esophagitis. 86.84% of the patients had received previous cyclosporine, 43.42% Dupilumab, 27.63% tralokinumab, 22.37% upadacitinib, and 10.53% baricitinib. 36.84% of patients were naïve to advanced therapy, 34.21% had received 1 previous drug, 17.11% 2, 7.89% 3 and 3.95% 4. The mean baseline SCORAD was 47.04 (SD=12.02), EASI 21.79(SD=9.64), DLQI 15.01 (SD=6.69), PGA 3.39 (51.32% PGA 4) and the pruritus VAS was 7.50 (SD=2.00).

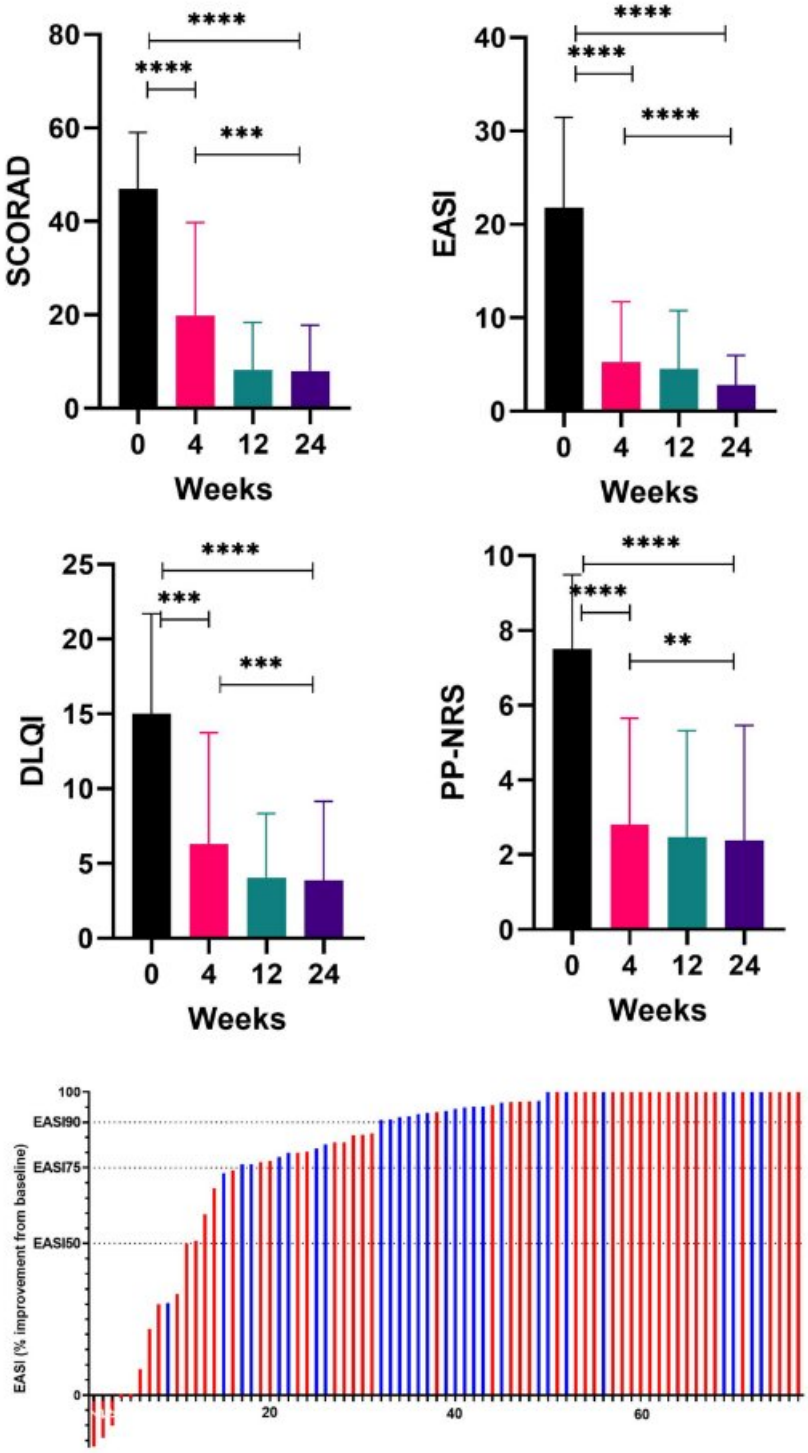
In the 12-week follow-up visit, EASI diminished to 4.51 (SD=6.27), and PP-NRS reduced to 2,47 (SD=2.86). In the 24-week follow-up visit, EASI diminished to 2.81 (SD=3.19) and PP-NRS to 2.38 (SD=3.09).

78.95% of the patients reached an EASI 75 at week 12 and 60.53% an EASI 90. 72.13% reached an IGA 0/1 at week 12. 18.42% discontinued treatment during follow-up. 78.57% of these patients due to lack of efficacy and 21.43% due to adverse effects.

The safety profile was favourable. 17 patients (22.37%) reported some mild adverse events. Three had to discontinued, including the diagnosis of cutaneous lymphoma one month after starting treatment. 3.95% of patients had nausea, elevated CPK, digestive discomfort and acne; 2.63% asthenia; 1.32% headache and herpes zoster. In laboratory controls, only one case of mild lymphopenia was found.

Conclusion:

This is the first Spanish national series that assesses the efficacy and safety of abrocitinib in real conditions. The included patients significantly improved the signs and symptoms of AD, measured by EASI, SCORAD and pruritus VAS, as well as QoL, despite initial severity and refractoriness to multiple previous treatments. ensayo. Quizás diría algo así como “ These. The treatment was well-tolerated, with few severe adverse events.


SCORAD
EASI
DLQI
PP-NRS
Weeks
0
4
12
24
****
***
**

EASI (% improvement from baseline)
EASI90
EASI75
EASI50
100
0
20
40
60

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Abstract N°: 2158

Contact sensitization in adults with atopic dermatitis: a 21years Single Tertiary center Experience

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Introduction & Objectives: atopic dermatitis is a common, chronic skin condition affecting up to 15–30% of children and 2–10% of adults worldwide. While childhood atopic dermatitis is a well-known entity, the evidence surrounding the persistence of atopic dermatitis into adult life are lacking. Investigate the prevalence of contact sensitization in patients with atopic dermatitis compared to those without.

Materials & Methods: our monocentric, retrospective and observational study analyzed a sample of 8813 patients, aged ≥ 16 years, who were referred to the Unit of Dermatology of University of Padua to perform patch tests from 1997 to 2018. We patch tested each patient with our standard baseline series including 44 allergens. Our study population included 540 (6.50%) patients affected by atopic dermatitis, while the control group included 8273 (93.50%) patients without atopic dermatitis. We compared patch test results between the two groups of patients.

Results: patients with atopic dermatitis included 353 women (66.50%) and 186 men (33.50%). The same M/F percentages were also found in the control group without atopic dermatitis. The age of patients with atopic dermatitis was lower than patients without ($p<0.00001$). The prevalence of contact sensitization to contact allergens in the atopic dermatitis group were: nickel sulphate (21.30%), cobalt chloride (13.72%), thimerosal (9.72%), potassium dichromate (9.28%), formaldehyde (8.46%), Kathon CG (8.16%), fragrance mix I (7.60%), cocamidopropylbetaine (6.74%), carba mix (6.49%), palladium chloride (6.37%). Sensitization to contact allergens in the non atopic dermatitis group were: nickel sulphate (27.59%), cobalt chloride (13.51%), thimerosal and potassium dichromate (10.77%), palladium (9.77%), fragrance mix II (7.15%), balsam of Peru (7.15%), Kathon CG (6.51%), fragrance mix I (5.85%). Contact sensitizations to formaldehyde ($p <0.00001$), Lyral ($p = 0.04$), thiuram mix ($p = 0.03$) and carba mix ($p = 0.004$) were more frequent in the atopic dermatitis population. Contact sensitizations to Nickel sulphate ($p = 0.001$), disperse blue ($p = 0.006$) and primin ($p = 0.05$) were more frequent in the patients without atopic dermatitis.

Conclusion: the reported higher prevalence of contact sensitization to some allergens in patients with atopic dermatitis could be useful to propose a patch test series including allergens that investigate rubber, fragrance components and preservatives specific for patients with atopic dermatitis. The observed significant decrease of prevalence of contact sensitization to metals in individuals with atopic dermatitis could also suggest that there may be different immunological mechanisms behind contact sensitization to these allergens which should be further investigated.

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Abstract N°: 2170

Atopic Dermatitis is Characterized by Enrichment in a BTLA Transcriptomic Signature

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Introduction & Objectives: B and T lymphocyte attenuator (BTLA) is a co-inhibitory immune checkpoint receptor present on T cells, B cells, and dendritic cells (DCs). ANB032 is an investigational BTLA agonist antibody currently in a Phase 2b study in atopic dermatitis (AD) and has been shown to reduce the proliferation of activated T cells, reduce cytokine secretion by T helper cells, and modulate DC function in vitro. In this study, transcriptomic data from preclinical models with a focus on T cell genes were used to study the immune effects of ANB032-mediated BTLA agonism. This signature was applied to transcriptomic data from AD tissues.

Materials & Methods: Xenogeneic graft-versus-host disease (GvHD) studies were used to study human immune cell biology with bulk RNA-sequencing to capture the differential transcriptome signals between ANB032-treated and control groups. Purified human PBMCs were adoptively transferred into irradiated NOD-scid IL2Rγnull mice and cohorts were treated with ANB032 or isotype control. At the study midpoint, gene signatures of sorted human T cells were profiled. To generate a robust BTLA signature, the most differentially expressed genes from this study were combined with previously identified genes altered by BTLA agonism in B and T lymphocytes (Stienne et al. 2022). Next, enrichment of this BTLA signature in skin from AD patients and healthy controls using a published data set was probed (Guttman-Yassky et al. 2019).

Results: ANB032 downregulated multiple inflammatory pathways in the GvHD model and reduced expansion of human T cells. ANB032-treated cohorts decreased immune pathways including T cell activation and proliferation, T-helper cell differentiation, co-stimulatory receptor signaling, TLR signaling, and type 1 IFN signaling compared to controls. Downregulated genes of interest included those encoding OX40, IL-4R, IL-2Ra, IL-18RAP, NFKBIA, T-bet, and granzyme B. These same pathways were upregulated in AD lesional skin compared to healthy skin. In AD lesional skin, BTLA levels were elevated, and HVEM (a natural BTLA agonist ligand) levels were decreased suggesting insufficient agonism. Gene set variation analysis (GSVA) using the BTLA signature showed significant enrichment in AD patients compared to healthy controls (p-value = 6.58 x 10-14) (Figure 1).

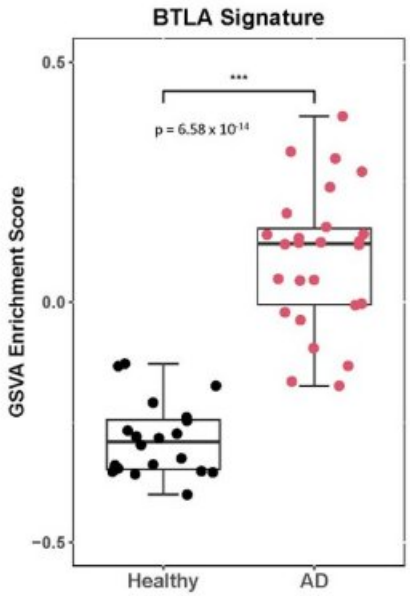
Conclusion: A BTLA transcriptomic signature was derived from experimental data to study the relevance of the BTLA pathway in human disease. Significant overlap between genes modulated by BTLA agonism via ANB032 and clinically validated immune genes/pathways in AD patient skin was demonstrated. Furthermore, this BTLA signature was enriched in AD skin highlighting the potential role for this pathway in the pathogenesis of AD. These human translational data, additional in vitro data, and results from a Phase 1 healthy volunteer study support the ongoing double-blind, placebo-controlled, global Phase 2b study of ANB032 in moderate-to-severe AD (NCT05935085).

References:

Guttman-Yassky E, et al. J Allergy Clin Immunol 2019;143:155-72.

Stienne C, et al. Cell Rep 2022;38:110553.

Figure 1. BTLA signature gene set enrichment shows statistically significant increase in AD lesional skin compared to healthy skin



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Abstract N°: 2172

Maintenance of Investigator and Patient Reported Outcomes over 52 Weeks were Observed with Rademikibart in Patients with Moderate-to-Severe Atopic Dermatitis (SEASIDE CHINA)

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Introduction & Objectives: Rademikibart (formally, CBP-201) is a next-generation monoclonal antibody targeting the IL-4Rα subunit. Rademikibart achieved all Week 16 primary and secondary endpoints in a global Phase 2 atopic dermatitis (AD) trial (WW001; NCT04444752) and a pivotal trial in China (SEASIDE CHINA or CN002; NCT05017480)1 in patients with moderate-to-severe AD. In this abstract, we now report Stage 2, long-term 52-week data from both investigator and patient reported outcomes from the SEASIDE CHINA pivotal trial.

Materials & Methods: Adults (n=318) and adolescents (n=12) (IGA ≥3, EASI ≥16, BSA ≥10%, PP-NRS ≥4) were randomized (2:1) to rademikibart (300mg Q2W) or placebo for 16 weeks (Stage-1). EASI-50 responders, regardless of Stage 1 treatment, were re-randomized to Q2W (n=113) or Q4W rademikibart (n=112). Non-responders received open-label Q2W rademikibart (n=86).

Results: The initial baseline measurements revealed a mean EASI score of 29.3 (ranging from 16.0 to 72.0), a mean PP-NRS score of 7.1 (2.1 to 10.0), and a mean BSA involvement of 47.7% (13.5 to 100.0) among Stage 1 responders, with 54.7% classified as having an IGA score of 4. For non-responders, the respective measurements were 23.7 (ranging from 16.0 to 66.6) for EASI, 7.4 (ranging from 3.1 to 10.0) for PP-NRS, and 48.0% (ranging from 13.0 to 100.0) for BSA involvement, with 51.2% categorized as IGA 4.

For investigator reported outcomes, the numbers of patients achieving IGA 0/1 (n=74) and EASI-75 (n=155) response were examined. In patients who achieved IGA 0/1 at the end of Stage 1, 76.0% (Q2W) and 87.2% (Q4W) maintained their response at Week 52. Similarly, 91.7% (Q2W) and 91.9% (Q4W) maintained their EASI-75 response from the end of Stage 1. The percent improvement from baseline in BSA involvement at Week 16 and Week 52 respectively were -74.7% and -88.0% (Q2W) and -75.6% and -87.5% (Q4W). Similarly, the respective percent improvement from baseline for the clinical tool, SCORAD, was -62.4% and -76.4% (Q2W) and -62.4% and -74.1% (Q4W).

For patient reported outcomes, patients with a ≥4-point reduction in PP-NRS, 81.6% (Q2W) and 95.2% (Q4W) maintained that response at Week 52. A clinically meaningful ≥5-point reduction on the DLQI was maintained by 93.4% (Q2W) and 90.0% (Q4W). Additionally, for scores on the POEM, the absolute change from baseline at Week 16 and Week 52 respectively was maintained: -9.5 vs -12.4 (Q2W) and -9.8 vs -12.2 (Q4W) respectively. Treatment with rademikibart was generally well tolerated.

Conclusion: Maintenance data with rademikibart are compelling and build upon strong results shown in Stage 11. The observed efficacy remains consistently high with a convenient Q4W dosing during the maintenance period with both investigator and patient reported outcomes demonstrating sustained clinically meaningful changes in skin clearance, pruritus and quality of life.

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Abstract N°: 2175

Combining an anti-IL-4Rα biologic with a JAK1 inhibitor leads to a higher treatment response in resistant atopic dermatitis vs monotherapy alone: a case series

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Introduction & Objectives:

Atopic dermatitis (AD) is a common chronic inflammatory disease with a complex pathophysiology. Although biologics and JAK inhibitors have revolutionized the treatment landscape of severe AD, in practice many patients remain extremely difficult to treat even with the most advanced treatments. Given their diverse mechanisms of action (MoA), combining a JAK inhibitor with biologic holds promise for enhancing clinical outcomes. This case series aims to explore the efficacy and safety of this combination strategy in overcoming partial responses and resistances to conventional systemic agents in severe AD patients.

Materials & Methods:

We conducted a prospective description of three cases involving male patients aged 20, 21, and 28 years, respectively, suffering from severe AD which failed to respond to, at least, two conventional immunosuppressants, a biologic and a JAK inhibitor. To overcome this therapeutic resistance, we combined dupilumab, an anti-IL-4Rα biologic, and upadacitinib, a JAK1-inhibitor. Objective outcome measures, patient-reported outcomes measures (PROMs), and laboratorial evaluations were performed at baseline and at a 12-week follow-up.

Results:

Combining upadacitinib with dupilumab resulted in significant improvements compared with monotherapy alone, showcasing reductions in objective measures, with drops of EASI scores by 65%, 82%, and 87% at the 12-week follow-up. Moreover, complete resolution of pruritus and sleep disturbance was observed in all cases. Importantly, no unwarranted side effects were reported.

Conclusion:

The combination of a JAK inhibitor with a biologic demonstrates potential for improving clinical outcomes in severe AD patients who have previously shown resistance to conventional therapies. This approach capitalizes on the distinct MoA of each therapy, offering a promising avenue for addressing the therapeutic challenge of recalcitrant AD.

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Abstract N°: 2182

Real-World Patient Characteristics and Treatment Outcomes with Dupilumab Use in Children and Adolescents with Moderate-to-Severe Atopic Dermatitis: Results from the ADOPED-STAD Study in China

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Introduction & Objectives: Atopic dermatitis (AD) is a chronic inflammatory system condition with skin lesions that commonly occurs in children and adolescents. In China, the biological agent dupilumab is approved in patients with AD aged ≥6 months. The primary objectives of the ongoing ADOPED-STAD study are to understand the real-world use of dupilumab therapy for 1 year in children and adolescents with AD in China, including patient characteristics and treatment patterns, and to study its effectiveness in this clinical setting. Here, we report the patient baseline characteristics and preliminary data from this study.

Materials & Methods: This prospective, observational study (started from 28 Sep 2022) is enrolling patients with AD aged ≥6 months to <18 years, from 15 clinical sites, who are prescribed dupilumab, administered according to a bodyweight-guided regimen as per label recommendations. Baseline (BL) data is collected within 30 days before starting dupilumab therapy. Effectiveness outcomes at Week 4 (W4) and W12 include Eczema Area and Severity Index (EASI), Investigator Global Assessment (IGA), Patient Oriented Eczema Measure (POEM) score, Atopic Dermatitis Control Test (ADCT) and pruritus Numerical Rating Scale (p-NRS). Safety is also being evaluated. This analysis included children aged ≥6 to <18 years who were enrolled at data cut-off 15 Oct 2023.

Results: For this analysis, 343 patients were screened, 335 were enrolled (261 [77.9%] aged ≥6 to <12 years, 74 [22.1%] aged ≥12 to <18 years) and 305 completed ≥1 follow-up assessment. At BL, most patients (n=319; 95.2%) had moderate-to-severe AD (IGA 3/4), with similar disease severity in the two age cohorts (Table). The most common dupilumab regimen was initial dose 600mg + 300mg every 4 weeks (n=141/305; 46.2%). In the effectiveness analysis, the proportion of patients achieving EASI-75 was 38.6% (95% CI 33.0–44.4%; n=115/298) at W4 and 71.5% (64.7–77.6%; n=143/200) at W12, and with IGA 0/1 increased from 1.0% (0.2–2.8%; n=3/305) at BL to 15.1% (11.2–19.7%; n=45/298) at W4 and 33.0% (26.5–40.0%; n=66/200) at W12. Mean ± SD POEM scores decreased from 17.0 ± 6.3 at BL to 7.9 ± 5.8 at W4 and 6.4 ± 5.2 at W12. In patients aged ≥12 to <18 years, the ADCT score was <7 in 35/59 patients (59.3% [45.7–71.9%]) at W4 and in 32/43 (74.4% [58.8–86.5%]) at W12. In both age groups, a ≥4-point reduction from BL in p-NRS was reported in 123/298 patients (41.3% [35.6–47.1%]) at W4 and in 141/238 (59.2% [52.7–65.5%]) at W12. Adverse events (AEs) occurred in 72/335 patients (21.5%), with the most common AEs being pyrexia (n=15; 4.5%) and upper respiratory tract infection (n=13; 3.9%); 3 patients (0.9%) had serious AEs.

Conclusion: In paediatric patients with AD in China, dupilumab is mainly prescribed in those with moderate-to-severe disease and provides improvement in signs and symptoms after 12 weeks of treatment in real-world practice. Safety profile was consistent with that previously reported.

Table. Baseline patient and disease characteristics overall and by age subgroup

Characteristic	All patients n=335	≥6 to <12 years n=261	≥12 to <18 years n=74
Age, years	9.1 ± 2.8	8.0 ± 1.8	13.3 ± 1.4
Male sex, n (%)	177 (52.8)	141 (54.0)	36 (48.6)
Height, cm	138.6 ± 17.5	131.7 ± 12.5	162.7 ± 9.4
Bodyweight category, n (%)			
≥15 to <30 kg	158 (47.2)	157 (60.2)	1 (1.4)
≥30 to <60 kg	157 (46.9)	102 (39.1)	55 (74.3)
≥60 kg	20 (6.0)	2 (0.8)	18 (24.3)
Age at AD onset, years	6.0 ± 3.6	5.3 ± 2.9	8.6 ± 4.7
AD disease duration, months	39.7 ± 42.5	34.9 ± 36.2	56.8 ± 57.0
IGA score, n (%)			
0/1/2 (clear/almost clear/mild)	16 (4.8)	14 (5.4)	2 (2.7)
3 (moderate)	198 (59.1)	154 (59.0)	44 (59.5)
4 (severe)	121 (36.1)	93 (35.6)	28 (37.8)
Clinical symptoms, n (%)[a]			
Eczema lesions	287 (85.7)	225 (86.2)	62 (83.8)
Pruritus	259 (77.3)	200 (76.6)	59 (79.7)
Dry skin	239 (71.3)	187 (71.6)	52 (70.3)
Redness and swelling	170 (50.7)	129 (49.4)	41 (55.4)
Other	64 (19.1)	53 (20.3)	11 (14.9)
EASI score	20.1 ± 11.3	19.5 ± 10.9	22.1 ± 12.6
POEM score	17.2 ± 6.3	17.3 ± 6.2	16.9 ± 6.6
ADCT score	13.4 ± 5.2	–	13.4 ± 5.2
pNRS score	6.9 ± 2.3	7.0 ± 2.2	6.4 ± 2.4
Other common atopic comorbidities,[b] n (%)			
Rhinitis allergic	191 (57.0)	137 (52.5)	54 (73.0)
Food allergy	90 (26.9)	68 (26.1)	22 (29.7)
Conjunctivitis allergic	35 (10.4)	25 (9.6)	10 (13.5)
Urticaria	35 (10.4)	23 (8.8)	12 (16.2)
Asthma	29 (8.7)	14 (5.4)	15 (20.3)
Concomitant AD treatment, n (%)			
Topical treatment	279 (83.3)	217 (83.1)	62 (83.8)
Corticosteroids	255 (76.1)	200 (76.6)	55 (74.3)
PDE-4 inhibitors	96 (28.7)	76 (29.1)	20 (27.0)
Calcineurin inhibitors	83 (24.8)	66 (25.3)	17 (23.0)
Antimicrobials	119 (35.5)	95 (36.4)	24 (32.4)
Others	76 (22.7)	61 (23.4)	15 (20.3)
Systemic treatment	163 (48.7)	133 (51.0)	30 (40.5)
Antihistamines	157 (46.9)	129 (49.4)	28 (37.8)
Corticosteroids	3 (0.9)	2 (0.8)	1 (1.4)
JAK inhibitors	2 (0.6)	1 (0.4)	1 (1.4)
Biological therapy	1 (0.3)	1 (0.4)	0
Others	23 (6.9)	17 (6.5)	6 (8.1)
Phototherapy	4 (1.2)	3 (1.1)	1 (1.4)

Data are presented as mean ± SD, unless stated otherwise; all data are reported as observed, with missing data excluded.

[a]Patients may have >1 clinical symptom.
[b]Occurring in ≥10% of patients in either age group.

AD, atopic dermatitis; ADCT, Atopic Dermatitis Control Test; BMI, body mass index; EASI, Eczema Area and Severity Index; IGA, Investigator Global Assessment; JAK, Janus kinase; PDE-4, phosphodiesterase-4; pNRS, pruritus-Numerical Rating Scale; POEM, Patient Oriented Eczema Measure; SD, standard deviation.

The first three authors of this abstract equally contributed to this study and should be regarded as co-first authors.
The last three authors are the co-corresponding authors.

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Abstract N°: 2194

Disease burden and treatment patterns of dupilumab in patients with atopic dermatitis: real-world experience from CORNERSTONE

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Introduction & Objectives:

Patients with atopic dermatitis (AD) commonly experience variable disease signs and symptoms that impact their health-related quality of life. This study presents the disease burden and treatment patterns of dupilumab among Chinese AD patients of all age groups in a real-world setting.

Materials & Methods:

This study analyzed 3,960 AD patients of all age groups from the CORNERSTONE database (NCT05316805) who initiated dupilumab at the index date (i.e., the first visit in CORNERSTONE) between August 2021 and July 2022. Descriptive statistics were performed on physician assessments, patient-reported outcomes (PROs), dupilumab regimen, and concomitant treatments at the index date.

Results:

At the index date for these 3960 AD patients of all age groups who initiated dupilumab, the mean age was 38.5±24.4 years, with 4.1% infants and preschoolers (≤5 years), 12.5% children (6-11 years), 10.6% adolescents (12-17 years), and 72.7% adults (≥18 years). Male accounted for 58.5% of the study population. The mean (standard deviation, SD) eczema area and severity index (EASI) total score was 13.5 (11.4), percent body surface area (BSA) affected by AD was 29.7% (23.1%), with 3,353 (85.2%) patients having moderate or severe disease according to the investigator's global assessment (IGA) total score. The mean daily peak pruritus numerical rating scale (PP-NRS) score, patient-oriented eczema measure (POEM) total score, and atopic dermatitis control tool (ADCT) total score were 7.2 (2.2), 15.3 (6.3), and 15.0 (5.1), respectively. Average total scores of infants' dermatology life quality index (IDQOL), children's dermatology life quality index (CDLQI), and dermatology life quality index (DLQI) in patients aged < 4 years, ≥ 4 and < 16 years, ≥ 16 years were 16.9 (4.4), 13.8 (6.0) and 13.1 (6.7), respectively. The mean HADS total score was 13.6 (7.4), with subscores for anxiety at 7.6 (4.1) and depression at 6.1 (3.9) (**Table 1)**. Dupilumab was initiated with a 600mg loading dose and a 300mg every 2 weeks (Q2W) in 46.1% of 3322 (1531/3322) patients with available records of dupilumab dose regimen. At the index date, 57.1% (2261/3960) of the patients received at least one concomitant treatment, including topical corticosteroids (any potency, 53.8%,1216/2261), topical calcineurin inhibitors (14.8%, 334/2261), antihistamines (62.0%, 1401/2261), immunosuppressants (7.0%, 159/2261) and systemic corticosteroids (6.8%, 153/2261) (**Table 2**).

Conclusion:

Dupilumab meets an unmet need for AD patients as represented by moderate-to-severe physician assessments, itching, impaired quality of life, and inadequate disease control. In routine clinical care in China, dupilumab was commonly initiated in combination with TCS and/or antihistamines for the treatment of AD.

Table 1 Physician assessments and patient reported outcomes at index date

Assessment	Total (N=3960)
Age (years), mean (SD), n=3955	38.5 (24.36)
Age group, n (%)	
≤5 years	162 (4.1%)
6-11 years	494 (12.5%)
12-17 years	421 (10.6%)
≥18 years	2878 (72.7%)
Missing	5 (0.1%)
Gender	
Male	2317 (58.5%)
Female	1643 (41.5%)
EASI, mean (SD), n=3874	13.475 (11.3594)
BSA (%), mean (SD), n=3526	29.728 (23.1172)
IGA, mean (SD), n=3936	3.1 (0.72)
Clear	17 (0.4%)
Almost clear	59 (1.5%)
Mild	507 (12.9%)
Moderate	2099 (53.3%)
Severe	1254 (31.9%)
Daily PP-NRS, mean (SD), n=3887	7.211 (2.2058)
POEM, mean (SD), n=3653	15.3 (6.32)
ADCT, mean (SD), n=3797	15.0 (5.11)
IDQOL[a], mean (SD), n=49	16.9 (4.37)
CDLQI[b], mean (SD), n=760	13.8 (6.04)
DLQI[c], mean (SD), n=2935	13.1 (6.74)
HADS-Total, mean (SD), n=3709	13.6 (7.43)
HADS-Anxiety, mean (SD), n=3709	7.6 (4.05)
HADS-Depression, mean (SD), n=3709	6.1 (3.92)

[a]IDQOL is applied to subjects < 4 years. [b]CDLQI is applied to subjects ≥ 4 and < 16 years. [c]DLQI is applied to subjects ≥ 16 years.

ADCT Atopic Dermatitis Control Tool; BSA Body Surface Area of Atopic Dermatitis Involvement; CDLQI Children's Dermatology Life Quality Index; DLQI Dermatology Life Quality Index, EASI Eczema Area and Severity Index; HADS Hospital Anxiety and Depression Scale; IDQOL Infants' Dermatology Life Quality Index; IGA Investigator's Global Assessment; NRS Numerical Rating Scale; POEM Patient-Oriented Eczema Measure; PP-NRS Peak Pruritus Numerical Rating Scale, SD Standard Deviation.

Table 2 Dupilumab Treatment Regimen and current treatments

	Total (n=3960)
Dose regimen	
Initial 600mg + 300mg Q2W	1531 (38.7%)
Initial 300mg + 300mg Q2W	1280 (32.3%)
Initial 300mg + 300mg Q4W	209 (5.3%)
Others	302 (7.6%)
Missing	638 (16.1%)
Patients with at least one concomitant treatment at index date	2261 (57.1%)
Topical treatment	1888 (83.5%)
Topical Corticosteroids (TCS) (any potency)	1216 (53.8%)
Corticosteroids (mild)	257 (11.4%)
Corticosteroids (mid-potency)	648 (28.7%)
Corticosteroids (high potency)	336 (14.9%)
Corticosteroids (super-high potency)	31 (1.4%)
Corticosteroids (potency not coded)	7 (0.3%)
TCI (topical calcineurin inhibitors)	334 (14.8%)
Topical Antimicrobials	98 (4.3%)
Topical PDE-4 inhibitors	87 (3.8%)
Others	172 (7.6%)
Systemic treatment	1586 (70.1%)
Antihistamines	1401 (62.0%)
Immunosuppressants	159 (7.0%)
Cyclosporin	62 (2.7%)
Azathioprine	2 (0.1%)
Methotrexate	2 (0.1%)
Systemic Corticosteroids	153 (6.8%)
Systemic Antimicrobials	21 (0.9%)
Biological agent	20 (0.9%)
JAK Inhibitors	16 (0.7%)
Others	405 (17.9%)
Traditional Chinese medicine	295 (13.0%)
Others	166 (7.3%)
Vitamin/Mineral supplements/other non-AD drugs	118 (5.2%)
UV Light Therapy	54 (2.4%)

Percentage for any specific defined category was calculated using the number of patients with at least one concomitant treatment at index date as the denominator.
JAK, Janus-activated kinase, PDE-4 Phosphodiesterase 4, Q2W every 2 weeks, Q4W every 4 weeks, TCI Topical calcineurin inhibitors.

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Abstract N°: 2197

Real-world data on epidemiological baseline characteristics of atopic dermatitis patients initiating advanced therapies. Comparative analysis of biologic drugs and small molecules in a single-centre study

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Introduction & Objectives:

Atopic Dermatitis (AD) is a chronic inflammatory skin disorder characterized by intense itch and eczematous lesions. Systemic advanced therapies, including biologic drugs and JAK inhibitors, have revolutionized AD management by targeting specific immune pathways involved in its pathogenesis. However, comparative analyses of the baseline epidemiological profiles between AD patients treated with each of these modalities in the real world are limited. This communication aims to describe and compare the baseline demographic characteristics and clinical profiles of patients with Atopic Dermatitis treated with biologic therapies versus those receiving JAK inhibitors at a single tertiary referral hospital over the last five years.

Materials & Methods:

We conducted an observational, descriptive, retrospective study on AD patients with systemic advanced treatments from 2019 to 2024. Patients were grouped into those initiating treatment with biologic therapies (Group A) and those proposed for JAK inhibitors (Group B), and data were collected on patient demographics, body measures and medical history. Descriptive and inferential statistics were applied to compare the two groups when feasible. Data were processed and analyzed with SPSS v.24 (SPSS, Chicago, IL, USA). Central tendency measures have been accompanied by their corresponding dispersion measure: Mean (±Standard Deviation). Sometimes minimum and maximum values were indicated when they proved relevant. All the confidence intervals were estimated at 95%. All the contrasts were bilateral (two-sided), and those with $p < 0.05$ were considered significant.

Results:

A total of 136 patients were analyzed considering demographic variables (sex, age, residence area type), body measurements (weight, height, body mass index, abdominal perimeter) and relevant medical history (including comorbidities, toxic habits and associated cardiovascular risk factors). In total, 96 patients had received biologic therapies (dupilumab or tralokinumab), whereas 40 patients had received JAK inhibitors (upadacitinib, baricitinib or abrocitinib). Ages ranged from 11 to 76 years, and the mean age of the patients treated was 36 years (35 years for the group A and 38 for group B). Only one minor (17-year-old) has been treated with JAK inhibitors. There were 84 men (59 in group A, and 25 in group B) and 52 women (37 in group A, and 15 in group B), (sex ratio 1.61).

Conclusion:

This study further characterized the baseline characteristics, including demographics, of patients treated with advanced systemic therapies in real clinical practice at a Spanish referral hospital. It also pointed to distinct profiles of AD patients treated with biologics versus JAK inhibitors in our area. This could correlate with the

physician choice of therapeutic alternative, considering their different mechanism of action. Understanding baseline differences is crucial for optimizing personalized treatment strategies in AD.

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Abstract N°: 2208

Efficacy, safety, pharmacokinetics (PK), and pharmacodynamics (PD) of SHR-1819 in patients with moderate-to-severe atopic dermatitis (AD): a multicenter, randomized, double-blind, placebo-controlled phase 2 study

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Introduction & Objectives: Interleukin-4 receptor alpha (IL-4Rα), a shared receptor subunit for IL-4 and IL-13, represents a promising therapeutic target for type 2 inflammatory diseases, such as AD. SHR-1819, a novel monoclonal antibody targeting IL-4Rα, exhibited good tolerability, favorable PK properties, and efficacy in reducing inflammatory biomarkers TARC/CCL17 and IgE in a phase 1 study involving healthy participants. This phase 2 study aimed to evaluate the efficacy, safety, PK, and PD profiles of SHR-1819 in patients with moderate-to-severe AD.

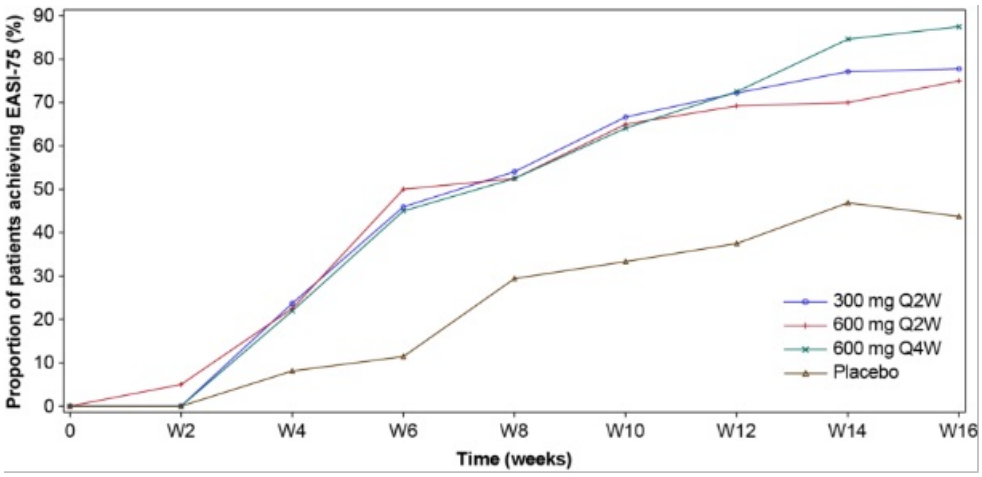
Materials & Methods: Eligible patients, aged 18-75 years, with an Eczema Area and Severity Index (EASI) score ≥16, an Investigator's Global Assessment (IGA) score ≥3, and ≥10% of body surface area (BSA) affected by AD, were recruited from 22 centers in China. Patients were randomly assigned in a 1:1:1:1 ratio to receive SHR-1819 300 mg every 2 weeks (Q2W), 600 mg Q2W, 600 mg every 4 weeks (Q4W), or placebo for 16 weeks. The primary endpoint was the proportion of patients achieving ≥75% reduction from baseline in EASI score (EASI-75) assessed at week 16.

Results: A total of 157 patients received assigned treatment, with 39, 40, 41, and 37 patients in the 300 mg Q2W, 600 mg Q2W, 600 mg Q4W, and placebo group, respectively. At week 16, all three SHR-1819 groups exhibited significantly higher EASI-75 rates (300 mg Q2W: 69.2% [95% CI 53.6%-81.4%]; 600 mg Q2W: 75.0% [59.8%-85.8%]; 600 mg Q4W: 85.4% [71.6%-93.1%]; all p values <0.01) compared to the placebo group (37.8% [24.1%-53.9%]; Figure 1). Moreover, more patients in the SHR-1819 groups achieved an IGA score of 0 or 1 and a reduction of ≥2 from baseline (300 mg Q2W: 53.8%; 600 mg Q2W: 50.0%; 600 mg Q4W: 65.9%; all p values <0.01) compared to placebo (16.2%). SHR-1819 also resulted in a higher proportion of patients achieving a peak daily pruritus Numeric Rating Scale (NRS) score reduction of ≥4 from baseline at week 16 (300 mg Q2W: 41.0%; 600 mg Q2W: 47.5%; 600 mg Q4W: 43.9%; all p values <0.05) compared to placebo (16.2%). Adverse events (AEs) were reported in 86.0% of patients, predominantly mild (46.5%) to moderate (34.4%) in severity. Treatment-related AEs were reported in 44.6% of patients, with injection site reactions (9.6%) being the most common. PK data indicated an

approximately dose-proportional increase in steady-state trough SHR-1819 concentrations within the studied dose range. PD data showed that SHR-1819 led to significant reductions in the median concentrations of TARC/CCL17, IgE, and eotaxin-3 across all dose levels, although no clear dose-dependent relationship was observed.

Conclusion: SHR-1819 effectively ameliorated the signs and symptoms of AD, demonstrating a well-tolerated safety profile, favorable PK and PD characteristics. The findings from this study support the development of SHR-1819 in phase 3 trials for the treatment of AD.

Figure 1. The proportion of patients achieving EASI-75 over time



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Abstract N°: 2256

Efficacy of a Oat and Helichrysum extract-containing cream on atopic dermatitis patients using a clinical approach combined with measurements from wearable devices

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Introduction & Objectives:

Atopic Dermatitis (AD) is a chronic inflammatory disease. Clinically, erythema is associated with intense skin dryness and pruritus, which can be exacerbated at night, disturbing normal sleep patterns and quality. New technologies such as wearable devices make it possible to measure nocturnal pruritus and objectively evaluate the efficacy of a product to reduce nocturnal scratching.

To assess the efficacy of a Oat and Helichrysum extract-containing cream, we performed a clinical study on adults suffering from AD using clinical assessment and including measures with wearable devices.

Materials & Methods:

Women suffering from mild to moderate AD with erythema ≥ 1, xerosis > 1 and presenting a pruritus intensity ≥ 3 on SCORAD (SCORing Atopic Dermatitis) visual analog scale have been enrolled in a monocentric, open-labelled study. Two periods were designed: one 7-day period (D1 to D8) without any product application and one 21-days product application period (D8 to D29) during which patients applied Oat and Helichrysum extract-containing cream on whole body except on face once a day in the evening. Patients wore wearable devices on wrist during the study: from D1 to D8 to record baseline nocturnal pruritus and from D8 to D29 to follow the efficacy of product's application on nocturnal pruritus. At every visit (D1, D8, D29), we performed photographs, investigator's clinical assessment of AD severity using the SCORAD, patient's clinical assessment of pruritus using Chronic Itch Burden Scale©(CIBS), sleep quality evaluation using Insomnia Severity Index© (ISI) questionnaire.

Results:

21 women (19 to 50 years) suffering from AD (SCORAD from 21.8 to 39) were included in the study. After 3 weeks of daily application of Oat and Helichrysum extract-containing cream (D29), AD severity significantly decreased compared to D1 (-30.9%, p=0.0009). A significant improvement of pruritus and sleep assessed using SCORAD was also observed at D29 vs. D1 (-48.4% and -64.3% respectively, p<0.0001). Clinical results have been confirmed by measurements from wearable devices as we observed a significant decrease in the number of nocturnal scratches and in the duration of the longest scratching phases (>120 seconds) from the first nights after product application (-44.8%, p=0.0085 and -39.6%, p=0.0335 respectively). At the same time, sleep efficiency significantly increased (p=0.0224). Patient's assessment from questionnaires also confirmed the efficacy of the product. The CIBS showed that application of Oat and Helichrysum extract-containing cream significantly decreased pain associated with pruritus at D29 vs. D1 (p<0.0001). Difficulties in concentration and bad mood due to pruritus significantly decreased after 3 weeks of application (p=0.0137 and p=0.0002 vs. D1 respectively). Patients also expressed significant improvement in pruritus related stress at D29 vs. D1 (p=0.0020). Moreover, a significant improvement in sleep quality was shown from ISI questionnaire with a significant decrease of the impact of sleep problems on daily activities at D29 vs. D1 (p=0.0107).

Conclusion:

This study demonstrates the efficacy of a Oat and Helichrysum extract-containing cream in improving AD clinical and functional signs as well as pruritus severity and its impact on stress, concentration, mood and sleep quality. The use of wearable devices objectively shows the improvement of nocturnal pruritus and sleep efficiency from the first nights of product's application.

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Abstract N°: 2284

Emotions in Atopic Dermatitis: a new parameter for a better evaluation by parents and children.

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Introduction & Objectives:

The frequency of Atopic Dermatitis (AD) is rising in adults (3-9% of population). Severity is higher than for children. Specificities are involvement of head and neck (50%), hands (>50%), lichenification, intense pruritus and xerosis. It was then important to certify that a new natural emollient, initially formulated for babies and children with the help of parents and sensory analysis experts to select preferred formulation/galenic, was suitable and active for adults with AD.

Materials & Methods:

Two studies conducted in Poland, included adults with mild to moderate AD, for 28 days. They evaluated SCORAD and Quality of Life (QOL) with a specific questionnaire focusing on emotions and well-being. Tested emollient was applied twice daily. If topical steroids were needed, patients were excluded of the trial.

Study 1: 40 subjects, aged 43 ± 14 years old, 30 women and 10 men, were included. POEM*(Patient Oriented Eczema Measurement)*, IGA *(Investigator Global Assessment),* DLQI (*Dermatitis Life Quality of Life Index*) and a questionnaire for partners' QOL were evaluated.

D-Squam samplings were performed for nil red/involucrin ratio of corneocytes and long chain ceramides EOS analysis.

Study 2: 22 subjects, aged 33 ± 4 years, 19 women and 3 men, were included. Instrumental assessment of hydration and cutaneous microbiota by samplings for 16S RNA analysis (data on file) were studied.

Results:

Studies 1 & 2:

Among the 62 adult patients with AD, there was no need for steroid applications. Adherence and tolerance were excellent. Mean initial SCORAD was 30.1 ± 4.3 and mean QOL score was 61.0 ± 18.2. SCORAD decreased by -78,9% ($p<0.05\%$) and Local SCORAD by -77.2%. QOL improved by 45.6% ($p<0.05\%$).

Study 1 :

POEM decreased by 82.6%.* Using* IGA, 45% of patients were clear and 40% almost clear. DLQI improved by 76.3% . QOL Partner questionnaire improved by 15.9% with maximum impact on well-being, social, familial and sexual life.

Long chain ceramides EOS increased by 14.1% meaning a better lipidic skin barrier.

Ratio Nil red/Involucrin increased by 14.2% meaning a better maturation of skin barrier.

Patients' questionnaires emphasized on the non-greasy, non-sticky formulation and quick absorption characteristics of the product.

Study 2

Hydration increased by 34.3%. Data on file for cutaneous microbiota.

Conclusion:

Although AD in adults is often long term and difficult to treat, rigorous applications of an emollient with a galenic formulated for AD patients could drastically decrease the intensity of mild to moderate forms with improvement of skin barrier.

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Abstract N°: 2294

TADPol study: a real-world evidence on dupilumab and upadacitinib in the treatment of moderate-to-severe atopic dermatitis in Poland.

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Introduction & Objectives:

TADPol (Treatment of Atopic Dermatitis in Poland) study is a prospective multicenter project aimed to compare the effectiveness and safety of dupilumab (DUPI) and upadacitinib (UPA) in the treatment of moderate to severe atopic dermatitis (AD) over a 52-week period among AD patients in Poland. Additionally, TADPol assessed the impact of treatment on patients' quality of life using various validated instruments. The study aimed to recruit a total of 200 patients. The findings of this study, including the assessment of quality of life using multiple instruments, may influence clinical decision-making and optimize treatment strategies for patients with AD.

Materials & Methods:

TADPol (Treatment of Atopic Dermatitis in Poland) study is a prospective multicenter project aimed to compare the effectiveness and safety of dupilumab (DUPI) and upadacitinib (UPA) in the treatment of moderate to severe atopic dermatitis (AD) over a 52-week period among AD patients in Poland. Subjects were assessed at Baseline visit (Week 0), Week 4/8, Week 16, Week 28, Week 40 and Week 52. Collected data included demographics, disease characteristics, treatment regimens, and clinical outcomes. The primary endpoints were changes in disease severity measured by Eczema Area and Severity Index (EASI), Investigator's Global Assessment (IGA) and SCORing of Atopic Dermatitis (SCORAD). The impact of treatment on patients' well being was evaluated with Dermatology Life Quality Index (DLQI), EuroQol-5D (EQ-5D), Patient Health Questionnaire (PHQ-2), General Anxiety Disorder Assessment (GAD-2), Perceived Stigmatization Questionnaire (PSQ) and Dysmorphic Concern Questionnaire (DCQ). Patients were also monitored for adverse events.

Results: A total of 90 out of 200 planned patients from seven different clinical centers have been already recruited from November 2022: 47 (52.2%) patients have been treated with UPA, 43 (47.8%) with DUPI. The mean age of patients was 27.2±16.6 years. The mean EASI scoring at Week 0 was 29.9±8.9 points. Our preliminary results showed that both DUPI and UPA demonstrated significant improvements in disease severity scores. However, the magnitude of improvement and treatment response rates varied between these therapies. Assessment of quality of life indicated improvements in various domains with both therapies. Additionally, safety profiles differed, with distinct patterns of adverse events observed in each treatment group.

Conclusion: This prospective multicenter real-world data study provides valuable insights into the comparative effectiveness and safety of DUPI and UPA in the management of moderate to severe AD in the Polish population over a 52-week period. The findings of this study, including the assessment of quality of life using multiple instruments, may influence clinical decision-making and optimize treatment strategies for patients with AD.

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Abstract N°: 2322

Long-Term Safety of Flexible Abrocitinib Dosing in Patients With Moderate to Severe Atopic Dermatitis With Up to 4.1 Years of Exposure: An Interim Analysis of JADE EXTEND

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Introduction & Objectives:

Abrocitinib is an oral, once-daily Janus kinase 1-selective inhibitor approved for the treatment of patients (pts) with moderate to severe AD at dosages of 100 mg and 200 mg. Results of the phase 3 JADE REGIMEN (NCT03627767) trial supported both abrocitinib 200 mg induction followed by abrocitinib 200 mg maintenance (consistent abrocitinib 200 mg dose) and abrocitinib 200 mg induction followed by abrocitinib 100 mg maintenance (abrocitinib 200 mg/100 mg dose) as effective treatment strategies, with abrocitinib 200 mg plus topical therapy as an acceptable approach to regain response after flare. The safety profile of abrocitinib observed in JADE REGIMEN reflected the dose received during the maintenance period, suggesting that abrocitinib safety is related to current rather than initial dose. This post hoc analysis of data from the ongoing phase 3 extension study JADE EXTEND (NCT03422822) evaluated the long-term safety of abrocitinib with consistent abrocitinib 200 mg dose or abrocitinib 200 mg/100 mg dose approaches in pts with up to 4.1 years of exposure.

Materials & Methods:

The consistent abrocitinib 200 mg dose cohort included pts who received abrocitinib 200 mg in all phases of JADE REGIMEN (12-week open-label induction, 40-week maintenance period, and 12-week rescue period [for pts who experienced flare]) and in JADE EXTEND. The abrocitinib 200 mg/100 mg dose cohort included pts who received abrocitinib 200 mg in the induction period, abrocitinib 100 mg in the maintenance period, and abrocitinib 200 mg in the rescue period (for pts who experienced flare) in JADE REGIMEN, and subsequently received abrocitinib 100 mg in JADE EXTEND (data cutoff, September 5, 2022). Safety was assessed via treatment-emergent adverse event (TEAE) monitoring.

Results:

This analysis comprised 531 pts, including 266 pts (patient-years [PY]: 662.2) in the consistent abrocitinib 200 mg cohort and 265 pts (PY: 648.0) in the abrocitinib 200 mg/100 mg cohort; treatment duration ranges were 92-1447 days and 91-1526 days, respectively. Incidence rates (IRs) per 100 PY (95% CI) were numerically lower, with overlapping CIs in the abrocitinib 200 mg/100 mg cohort vs the consistent abrocitinib 200 mg cohort for all TEAEs (218.41 [192.07, 247.35] vs 260.53 [229.05, 295.13]), serious TEAEs (3.75 [2.40, 5.58] vs 5.64 [3.95, 7.81]), severe TEAEs (5.65 [3.93, 7.85] vs 7.24 [5.28, 9.69]), TEAEs leading to discontinuation (4.60 [3.11, 6.57] vs 6.78 [4.94, 9.07]), serious infections (1.38 [0.63, 2.63] vs 2.25 [1.26, 3.71]), all herpes zoster (HZ) infections (3.02 [1.82, 4.72] vs 3.95 [2.56, 5.83]), and adjudicated opportunistic HZ infections (0.46 [0.10, 1.35] vs 0.90 [0.33, 1.97]). Events of MACE, VTE, and adjudicated malignancies (excluding nonmelanoma skin cancer) were infrequent and comparable in

both cohorts. There were no reports of adjudicated tuberculosis (TB), opportunistic infections (excluding TB and HZ), deep vein thrombosis, rhabdomyolysis, rhabdomyolysis/myopathy, or death in either cohort.

Conclusion:

Both consistent abrocitinib 200 mg and abrocitinib 200 mg/100 mg treatment for up to 4.1 years were well-tolerated, with no new safety signals observed compared to the known safety profile of abrocitinib. Numerically lower IRs of AEs in the abrocitinib 200 mg/100 mg cohort may indicate a more favourable safety profile. These data may help inform clinician and pt decision-making regarding the benefit/risk profile of abrocitinib dose changes.

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Abstract N°: 2323

Integrated Analysis Examining Safety of Abrocitinib in Adolescents With Moderate to Severe Atopic Dermatitis With up to 4.6 Years of Exposure and Efficacy at 112 Weeks of Treatment

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Introduction & Objectives: Atopic dermatitis (AD) occurs in 15% of adolescents and often requires long-term management. Abrocitinib, an oral, once-daily, Janus kinase 1-selective inhibitor approved for the treatment of moderate to severe AD, has previously shown an acceptable long-term safety profile with exposure of ~3 years (y), and short- (12-week [wk]) and long-term (48-wk) efficacy in adolescents. This post hoc analysis evaluated safety of abrocitinib in adolescents with up to 4.6 y of exposure, and efficacy at 112 wks of treatment.

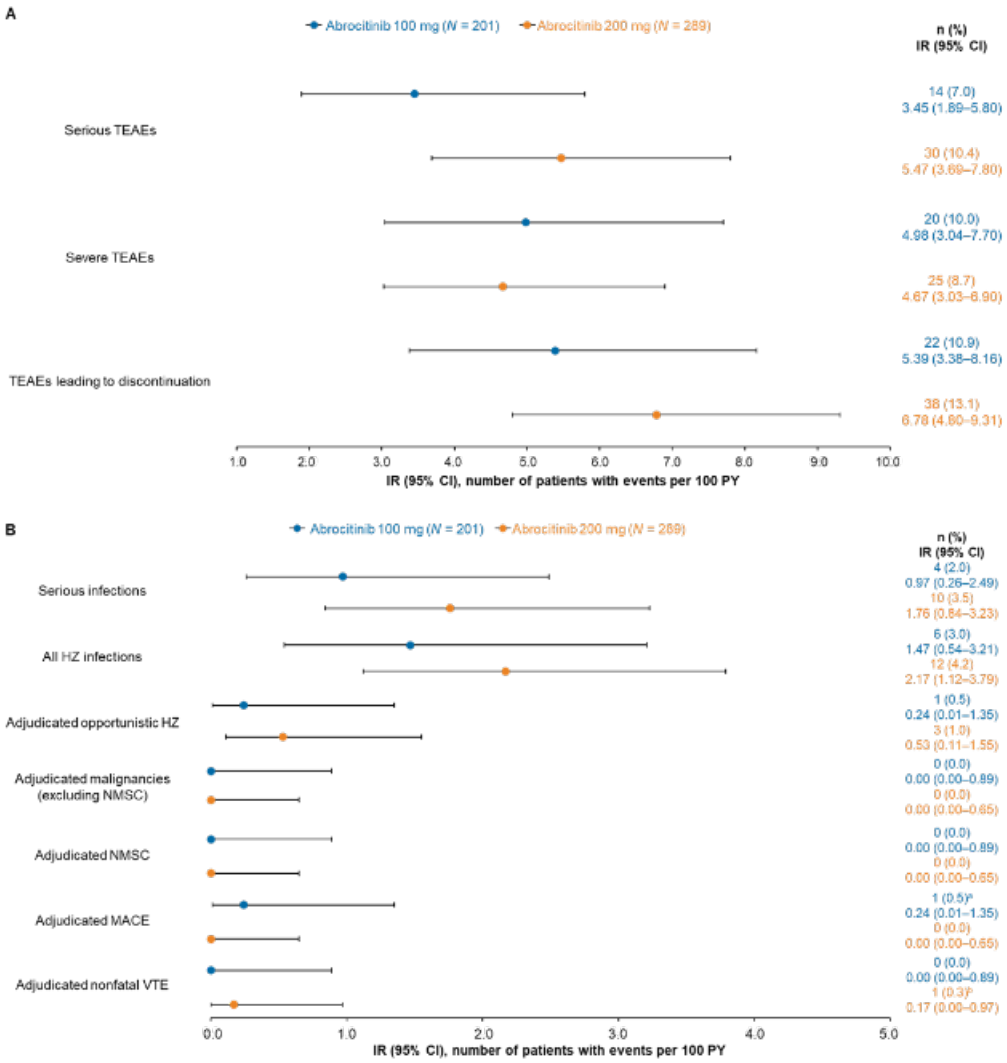
Materials & Methods: Data were included from patients (pts) aged 12 to <18 years in phase 3 JADE MONO-1 (NCT03349060), MONO-2 (NCT03575871), TEEN (NCT03796676), or REGIMEN (NCT03627767) trials who subsequently enrolled in the phase 3 extension trial, JADE EXTEND (NCT03422822; data cutoff: September 5, 2022; study is ongoing). Concomitant topical therapies were permitted in TEEN, REGIMEN (rescue period), and EXTEND. Safety was assessed via treatment-emergent adverse event (TEAE) monitoring in pts who received the same abrocitinib dose throughout MONO-1, MONO-2, TEEN, the induction phase of REGIMEN (pts ineligible to enter the maintenance period), and/or EXTEND. Efficacy was assessed in pts who were randomised to and received ≥1 dose of abrocitinib (100 mg/200 mg) in MONO-1, MONO-2, and TEEN who subsequently enrolled into JADE EXTEND. Efficacy assessments were: proportions of pts achieving ≥75%/≥90%/100% improvement from baseline in Eczema Area and Severity Index (EASI-75/-90/-100), Investigator's Global Assessment score of 0 (clear) or 1 (almost clear) with ≥2-grade improvement from baseline (IGA 0/1), ≥4-point improvement from baseline in Peak Pruritus Numerical Rating Scale (PP-NRS4; with permission from Regeneron Pharmaceuticals, Inc., and Sanofi), and least squares mean changes in Children's Dermatology Life Quality Index (CDLQI) and Patient Global Assessment (PtGA) scores. Efficacy data were reported as-observed.

Results: The safety population included 289 and 201 pts in the abrocitinib 200 mg and 100 mg arms, respectively; median (Q1–Q3) duration of exposure was 882.0 days (199.0–1068.0) and 863.0 days (329.0–1035.0). Incidence rates (IR)/100 pt-years were numerically higher with abrocitinib 200 mg vs 100 mg with largely overlapping confidence intervals (CIs) for serious TEAEs (IR [95% CI]; 5.47 [3.69–7.80] vs 3.45 [1.89–5.80]) and TEAEs leading to discontinuation (6.78 [4.80–9.31] vs 5.39 [3.38–8.16]); IRs for severe TEAEs were similar across doses (4.67 [3.03–6.90] vs 4.98 [3.04–7.70]) (**Figure 1A**). IRs for other TEAEs of special interest are shown in **Figure 1B**. The efficacy

population included 170 and 187 pts treated with abrocitinib 200 mg and 100 mg, respectively; median (Q1–Q3) exposure duration was 971.0 days (623.0–1058.0) and 899.0 days (420.0–1043.0). At Wk 112, comparable proportions of pts treated with abrocitinib 200 mg vs 100 mg achieved EASI-75 (85% vs 83%), EASI-90 (62% vs 60%), and IGA 0/1 (57% vs 57%); EASI-100 was achieved by a numerically higher proportion of pts in the abrocitinib 200 mg vs 100 mg arm (30% vs 19%), however 95% CIs overlapped. Improvements in CDLQI, PP-NRS, and PtGA scores observed by Wk 2 were maintained through Wk 112 for both dose groups.

Conclusion: This analysis of adolescents with moderate to severe AD treated for up to 4.6 y supports the acceptable long-term safety profile of abrocitinib with no new safety signals observed; efficacy was maintained up to 112 wks with both doses.

Figure 1. IRs for (**A**) serious TEAEs, severe TEAE, TEAEs leading to study discontinuation, and (**B**) TEAEs of special interest in adolescent patients who received the same abrocitinib dose (100 mg or 200 mg) throughout JADE MONO-1, MONO-2, TEEN, the induction phase of REGIMEN (pts who did not meet the criteria to enter the maintenance period), and/or EXTEND.



HZ, herpes zoster; IR, incidence rate; MACE, major adverse cardiovascular event; NMSC, nonmelanoma skin cancer; PY, patient-year; QD, once daily; TEAE, treatment-emergent adverse event; VTE, venous thromboembolism.

[a]One event of MACE was reported in a 16-year-old Asian male patient with ongoing AD, gout, and hyperuricaemia (treated with febuxostat) in the abrocitinib 100 mg arm; an incidental finding of a little lacunar white matter degeneration on the right ventricle was adjudicated as an ischaemic stroke based on the magnetic resonance imaging report despite no report of clinical syndrome concerning stroke; there was no suspicion of stroke and the event was not considered serious.

[b]One nonfatal pulmonary embolism occurred in a 16-year-old Black/African American male patient with morbid obesity in the abrocitinib 200 mg arm; the patient had an extensive family history of pulmonary embolism, including his 18-year-old brother with pulmonary embolism (Simpson JI et al. *Am J Clin Dermatol*. 2021;22(5):693-707).

IR (95% CI) was defined as the number of patients with events per 100 patient-years.

No events of adjudicated malignancies (excluding NMSC), adjudicated NMSC, deep vein thrombosis, thrombocytopenia, lymphopenia, rhabdomyolysis, or rhabdomyolysis/myopathy were reported.

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Abstract N°: 2345

Change in prescribing practice of JAK inhibitors in treatment of eczema following release of MHRA drug class safety update in a teaching hospital in England

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Introduction & Objectives:

Janus Kinase inhibitors (JAKi) have been increasingly prescribed for severe Atopic Dermatitis with favourable outcomes1. On 23 January 2023, EMA's human medicines committee endorsed the measures recommended by the Pharmacovigilance Risk Assessment Committee (PRAC) to minimise the risk of serious side effects with JAKi used to treat several chronic inflammatory conditions2. This informs of increased risks of malignancy, major cardiovascular events, venous thromboembolism, serious infection, and death.

Recommendations advise that prescribing a JAKi only when there are no other alternatives for the following group of patients: individuals who are over 65 years of age, current or past smokers, and those who have risk factors for cardiovascular disease or malignancy.

Additionally, caution is recommended in patients who have other risk factors for venous thromboembolism (VTE) and revised dosage recommendations for at-risk groups.

As a direct result of this, we performed a small retrospective study in our local Dermatology Department in a UK Teaching Hospital. The aim was to identify whether the publication of Article 20 caused a change in prescribing a JAKi to highlighted at-risk groups and alter if this affected commencement in new patients.

Materials & Methods:

All patients prescribed a JAKi were identified. Data collection included: patients' age, specific JAKi prescribed, cardiovascular and malignancy risk factors, smoking history, family planning, and baseline and follow-up blood tests. Anonymous data was obtained from the local electronic patient records and analysed using Microsoft Excel.

Results:

Since Article 20 was published the total number of patients treated with JAKi decreased by 25% and 33% had JAKi stopped completely. Additionally, all new patients who started on JAKi treatment were younger than 65 years of age. 41.8% of patients treated with JAKi had a known cardiovascular risk factor, which reduced to 38.1% after Article 20 and 20% in new starters on JAKi. Smoking status documentation improved, at the beginning of the study, 34.6% of patients were past or current smokers, 10.9% patients' smoking status was unknown. After Article 20, these percentages changed to 40.5% and 4.8%, respectively. Only one new start patient had a history of smoking. As for family planning, at the start of the study, only 12.7% had a documented family planning consultation, this percentage increased to 20% in new patients and 14.3% across all patients.

Conclusion:

After the publication of Article 20, there was a notable improvement in the practice of prescribing JAKi inhibitors for the treatment of atopic dermatitis in our hospital. Furthermore, highlighted risk factors were discussed in detail with identified at-risk patients. Our findings suggest that this improvement will lead to a reduction in the healthcare burden and serious side effects associated with this type of medication, particularly in at-risk patient

groups.

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\1. Sesi, J., & Feldman, S. R. (2024). Comparative efficacy of systemic treatments for atopic dermatitis in adults. *Expert Review of Clinical Immunology, 20*(3), 313–320

\2. Medicines and Healthcare products Regulatory Agency and its independent advisor the Commission on Human Medicines. Drug safety update. The monthly newsletter 2023;16:7-11. Available at: https://assets.publishing.service.gov.uk/media/6448f6fd529eda000c3b0487/April-2023-DSU.pdf.

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Abstract N°: 2351

Comorbidities of patients with senile atopic dermatitis

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Comorbidities of patients with senile atopic dermatitis

Introduction & Objectives:

A significant contribution to the pathogenesis and course of senile atopic dermatitis (AD) is made by somatic diseases characteristic of people over 60 years of age, as well as the therapy that patients receive for these comorbidities. As patients age, the number of concomitant diseases of different systems and organs inevitably increases, which requires taking medications: diuretics, antihypertensive drugs, corticosteroids, non-steroidal anti-inflammatory drugs.

The aim of this study was to investigate comorbidities in patients with senile atopic dermatitis and to evaluate possible side effects of medications taken by the patients.

Materials & Methods:

54 patients over 60 years old, treated in hospital with the diagnosis of atopic dermatitis, were under observation. The prevalence of concomitant pathology and the possibility of the influence of taking medications on the skin process were evaluated.

Results:

In the overall evaluation of patients with senile atopic dermatitis, it was found that only 80% were diagnosed with comorbid pathology.

Arterial hypertension was identified in 53%, cerebrovascular pathology in 26.3%, heart disease in 23.7%, and diabetes mellitus in 20% of patients with senile AD. Several pathologies simultaneously - in 32%.

Drug therapy with beta-blockers was received by 51%, diuretics - 19%, statins - 21%.

In addition to systemic therapy, external treatment with topical glucocorticosteroids was received by 88% of patients. In 67% of patients receiving systemic therapy for concomitant pathology undesirable events in the form of skin itching, skin xerosis were noted.

Epidermal atrophy, ecchymoses were noted in 17% of patients receiving external therapy with topical glucocorticosteroids.

Conclusion:

Drugs prescribed to patients due to comorbidities may increase dehydration, reduce the barrier function of the epidermis, which aggravates xerosis and skin fragility and may be a factor contributing to the chronic course of dermatosis. In addition to systemic therapy, external treatment, including topical anti-inflammatory agents, may increase the risk of adverse events. For example, topical steroids, which are anti-inflammatory drugs of first choice

for AD, in older patients may increase epidermal barrier defects and potentiate senile atrophy of the epidermis.

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Abstract N°: 2373

ME3183, a Novel and Promising Oral PDE4 Inhibitor for Psoriasis, has Highly Potent Inhibitory Effects on Th2 Cytokine Production and Histamine-Induced Vascular Permeability

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Introduction & Objectives:

Phosphodiesterase 4 (PDE4) is an enzyme that plays critical roles in diverse inflammatory responses, and thus has been considered as a promising therapeutic target for inflammatory diseases including atopic dermatitis (AD). While topical PDE4 inhibitors are available for AD, limited efficacy and side effects have prevented the approval of oral formulations. ME3183, a novel oral PDE4 inhibitor, was designed to achieve high pharmacological activity while reducing brain distribution to reduce adverse effects. In a Phase 2 clinical trial, ME3183 demonstrated high efficacy and good tolerability in patients with moderate to severe plaque psoriasis (Papp KA et al. EADV2023). To assess their potential application in AD, we evaluated the inhibitory effects of ME3183 and other oral PDE4 inhibitors on Th2 cytokine production in human whole blood cells (WBC). We also evaluated their effects on histamine-induced vascular permeability in mice, a model of type I hypersensitivity reaction.

Materials & Methods:

To assess the inhibitory effects on Th2 cytokine production, human WBC were stimulated with PHA in the absence or presence of anti-CD28 antibodies. The levels of IL-4, -5, and IL-13 were measured by ELISA. Histamine-induced vascular permeability was assessed in male ICR mice. ME3183 and marketed oral PDE4 inhibitors (apremilast and roflumilast) were orally administered at different time points (1, 2 and 4 hrs) prior to the histamine challenge. The extent of vascular permeability was determined by measuring extravasated dye.

Results:

In human WBC, the geometric mean IC50s (GM IC50s) of ME3183 for production of Th2 cytokines such as IL-4, IL-5 and IL-13 were 33.1, 42.5, and 584 nM, respectively, while those of apremilast and roflumilast were 987, 1431, >13540 nM and 134, 151, >12238 nM, respectively. In the type I-hypersensitivity reaction model, ME3183 significantly suppressed histamine-induced vascular permeability at all time points. Apremilast and roflumilast also showed significant inhibitory capacities in the early time points but not thereafter. The inhibitory activities of ME3183 on histamine-induced vascular permeability were stronger than those of apremilast or roflumilast at all time points.

Conclusion:

ME3183 inhibited Th2 cytokines more potently than existing oral PDE4 inhibitors and significantly suppressed histamine-induced vascular permeability. Previous studies have demonstrated the efficacy of ME3183 in a model of type IV hypersensitivity reaction (Kubota-Ishida N et al. Eur J Pharmacol. 2024) . These findings suggested that ME3183 effectively targeted multiple key mechanisms underlying the pathogenesis of AD, making it a promising candidate for a novel oral treatment for this chronic inflammatory skin disease.

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Abstract N°: 2450

Comparative Effectiveness of Upadacitinib Versus Dupilumab for Moderate-to-severe Atopic dermatitis: A Retrospective Cohort Study

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Introduction & Objectives:

Although efficacy and safety of upadacitinib and dupilumab for moderate to severe atopic dermatitis (AD) have been shown in clinical trials, real life data are still scant. to compare the effectiveness, safety and tolerability of upadacitinib and dupilumab in real world practice.

Objectives: The aim of this retrospective study was to indirectly compare the efficacy and safety of upadacitinib and dupilumab in patients with moderate to severe AD.

Materials & Methods:

A single-center retrospective cohort study enrolled patients with moderate to severe AD from May 2022 to March 2024 to indirectly compare the efficacy and safety of receiving 12 weeks of upadacitinib and dupilumab.

Results:

Eighty-seven patients were included (46 received upadacitinib and 41 dupilumab). Compared with week 0, there was a significant decrease in Eczema Area and Severity Index (EASI) scores, atopic dermatitis control tool (ADCT) scores and pruritus Numerical Rating Scale (NRS) scores in both groups of patients at weeks 4, 8, and 12. At week 4, the reduction in EASI scores ADCT scores and NRS scores were significantly greater in patients treated with upadacitinib compared to those receiving dupilumab. Compared to baseline, at week 12, the decrease in IL-4, IL-13, and IL-31 levels in the serum of upadacitinib patients was significantly greater than that of dupilumab patients. The total IgE of patients receiving dupilumab treatment decreased significantly, while there was no significant change in the group of patients receiving upadacitinib treatment. Although upadacitinib has more adverse reactions than dupilumab, no serious adverse reactions were observed.

Conclusion:

In conclusion, our study confirmed the high efficacy and safety profiles for both upadacitinib and dupilumab, which resulted to be highly efficacious treatments for the management of moderate to severe AD with comparable outcomes. Moreover, compared with dupilumab, upadacitinib has better efficacy and rapid onset in the treatment of patients with moderate to severe AD, but there are more adverse reactions caused by upadacitinib. Upadacitinib was more effective in controlling IL-4, IL-13, IL-31 levels, but no significant improvement in total IgE levels.

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Abstract N°: 2471

Improvement in the Symptoms of Anxiety and Depression With Long-Term Abrocitinib Treatment in Adults and Adolescents With Moderate-to-Severe Atopic Dermatitis: A Post Hoc Analysis of JADE EXTEND

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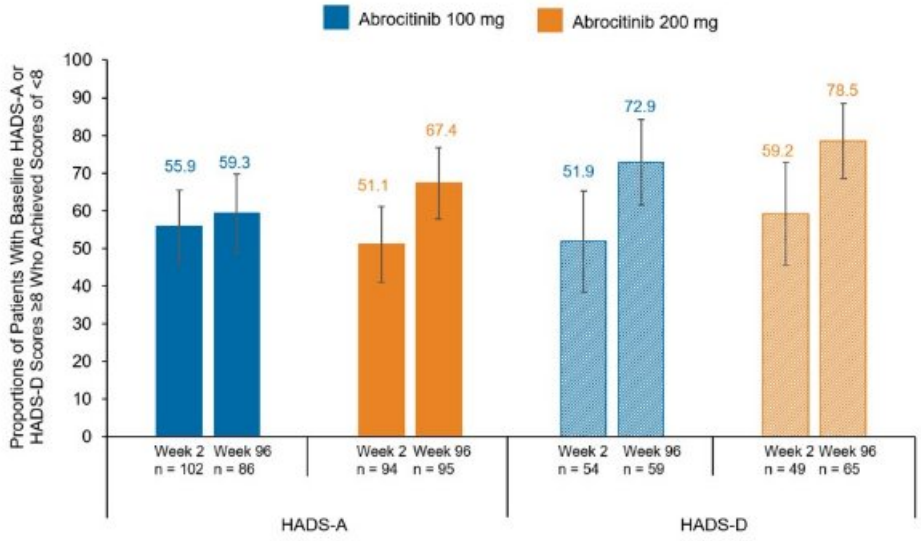
Introduction & Objectives: Patients (pts) with atopic dermatitis (AD) have an increased risk of anxiety and depression that increases with disease severity. Abrocitinib, an oral, once-daily, Janus kinase 1–selective inhibitor, improved symptoms of anxiety and depression in the short term in pts with moderate-to-severe AD. Here, we assessed the long-term efficacy of abrocitinib on anxiety and depression using the Hospital Anxiety and Depression Scale (HADS) in adults and adolescents with AD.

Materials & Methods: Pts received abrocitinib (100 or 200 mg) as monotherapy or in combination with topical therapy or placebo in the phase 3 JADE MONO-1 (NCT03349060), JADE MONO-2 (NCT03575871), JADE COMPARE (NCT03720470), JADE TEEN (NCT03796676), JADE MOA (NCT03915496), and JADE DARE (NCT04345367) trials and subsequently received the same dose of abrocitinib in a long-term extension trial, JADE EXTEND (NCT03422822). Least squares mean (LSM) change from baseline (BL) in HADS Anxiety (HADS-A) and Depression (HADS-D) and Patient Global Assessment (PtGA) scores were evaluated in Weeks 2-96 of abrocitinib treatment. HADS-A or HADS-D scores ranged from 0 to 21, with 0-7 representing normal, 8-10 mild, 11-14 moderate, and 15-21 severe levels of anxiety or depression. PtGA scores ranged from 0 to 4 (0 = clear, 1 = almost clear, 2 = mild, 3 = moderate, and 4 = severe). Safety was also assessed.

Results: Of a total of 1659 pts at BL, mild to severe symptoms of anxiety or depression (i.e., HADS-A or HADS-D score ≥8) were reported in 201/720 pts (28%) and 118/720 pts (16%), respectively, in the abrocitinib 100 mg treatment arm and in 264/939 pts (28%) and 139/939 pts (15%) in the 200 mg treatment arm. As early as Week 2, a substantial proportion of these pts reported improvements in anxiety and depression (HADS-A or HADS-D score <8) with abrocitinib 100 mg (56% and 52%, respectively) and 200 mg (51% and 59%, respectively); these improvements continued to increase through Week 96 (100 mg: 59% and 73%; 200 mg: 67% and 79%) (**Figure 1**). Change from BL in HADS scores for anxiety and depression decreased with abrocitinib in a dose-dependent manner as early as Week 2 and was sustained through Week 96; LSM change from BL in HADS-A scores was −1.0 (95% CI, −1.2, −0.7) with abrocitinib 100 mg and −1.1 (−1.4, −0.9) with abrocitinib 200 mg at Week 2 and −1.5 (−1.8, −1.3) and −2.0 (−2.3, −1.7) at Week 96. A similar trend was observed for LSM change from BL in HADS-D scores, which were −0.7 (−0.9, −0.5) with abrocitinib 100 mg and –0.9 (−1.1, −0.7) with 200 mg at Week 2 and −0.9 (−1.2, −0.7) and −1.3 (−1.5, −1.0) at Week 96. LSM change from BL scores in PtGA decreased as early as Week 2 (100 mg, −0.9 [95% CI, −1.0, −0.8]; 200 mg, −1.1 [−1.2, −1.0]) and continued to decrease through Week 96 (100 mg, −1.5 [−1.6, −1.4]; 200 mg, −1.7 [−1.8, −1.6]). Notably, LSM change from BL scores in HADS-A, HADS-D, and PtGA was greater in adolescents than adults at all evaluated timepoints in both treatment arms (**Figure 2**). Rates of AEs were similar in pts regardless of severity of anxiety or depression, as were discontinuations due to AEs.

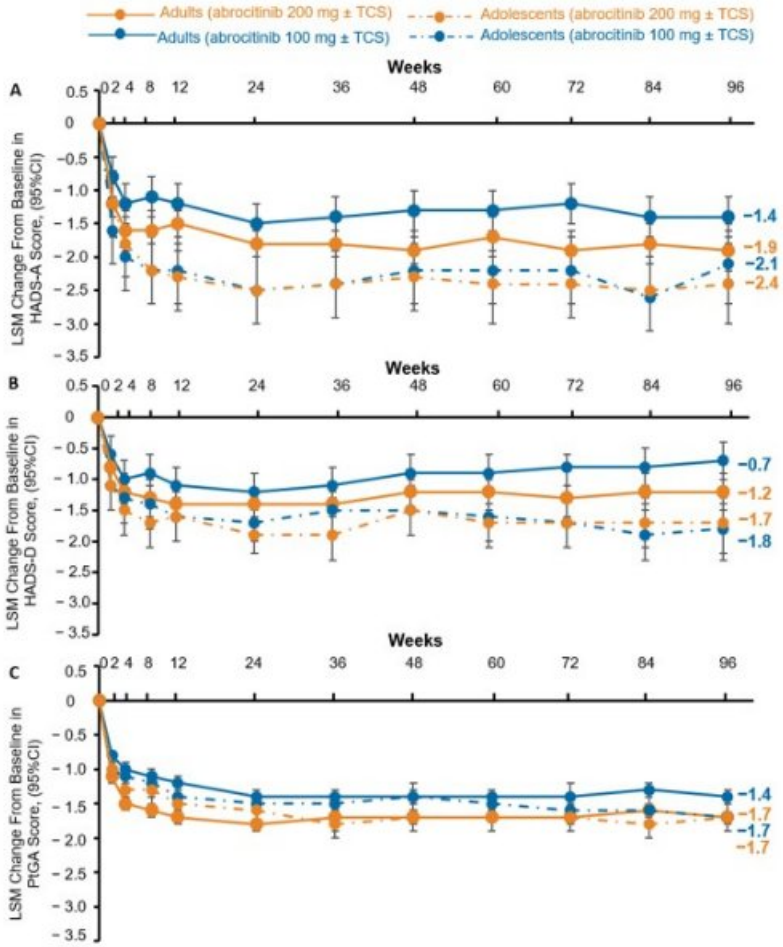
Conclusion: Abrocitinib improved the symptoms of anxiety and depression and severity of disease in pts with moderate-to-severe AD, which was sustained in the long-term. Improvements in the symptoms of anxiety and depression were greater in adolescents than adults, with no notable differences between abrocitinib treatment arms. Abrocitinib's safety profile was consistent in pts regardless of the severity of their anxiety or depression.

Figure 1. Proportions of Patients With Baseline HADS-A or HADS-D Scores ≥8 Who Achieved Scores <8 With Abrocitinib Treatment



HADS-A, Hospital Anxiety and Depression Scale Anxiety; HADS-D, Hospital Anxiety and Depression Scale Depression.

Figure 2. LSM Change From Baseline in (A) HADS-A, (B) HADS-D, and (C) PtGA Score in Adults and Adolescents Treated With Abrocitinib for up to 96 Weeks



HADS-A, Hospital Anxiety and Depression Scale Anxiety; HADS-D, Hospital Anxiety and Depression Scale Depression; LSM, least squares mean; PtGA, Patient Global Assessment.

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Abstract N°: 2497

Systemic JAK1 Inhibition by Abrocitinib in Patients With Moderate-to-Severe Atopic Dermatitis Is Associated With Decreased Lesional Skin Staphylococcus aureus Abundance and Increased Microbial Diversity

Madeline Kim*[1], Ester Del Duca[1], Joel Correa Da Rosa[1], Juliana Pulsinelli[1], Yeriel Estrada[1], Dan Xu[2], Gary Chan[3], Allshine Chen[3], Erman Guler[4], Karen Page[5], Emma Guttman-Yassky[1]

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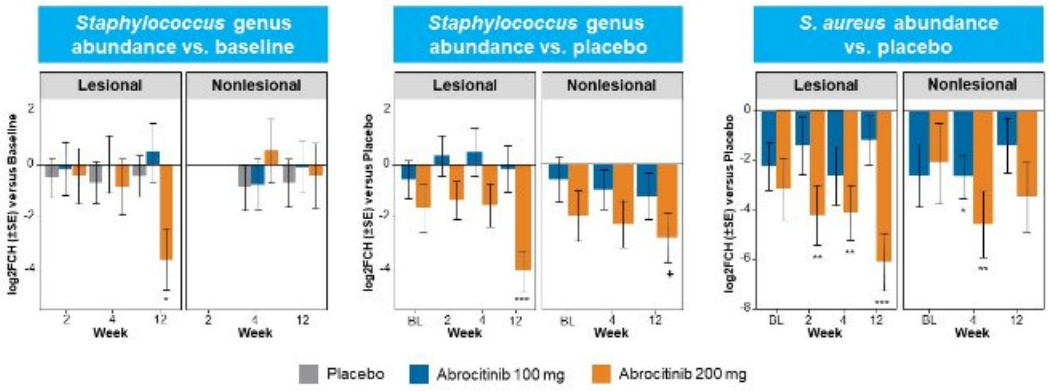
Introduction & Objectives: Atopic dermatitis (AD) is characterised by alterations in the skin microbiome, notably increased *Staphylococcus aureus* (*S. aureus*) colonisation and decreased microbial diversity compared with healthy skin. Treatment with dupilumab, an injectable interleukin-4 receptor alpha subunit antagonist, is associated with decreased *S. aureus* colonisation and increased microbial diversity in AD skin (Callewaert C et al. *J Invest Dermatol*. 2020;140[1]:191-202.e7). The effect of the Janus kinase 1 (JAK1)-selective inhibitor abrocitinib on the AD skin microbiome and associations with clinical improvement remain uncharacterised. The phase 2a trial JADE MOA (NCT03915496) investigated the effect of abrocitinib treatment on the expression of skin biomarkers in patients with moderate-to-severe AD. This post hoc analysis of JADE MOA aimed to evaluate the effect of abrocitinib on microbial diversity and *S. aureus* abundance in lesional and nonlesional AD skin, and to investigate whether changes in the skin microbiome mediated by abrocitinib treatment correlate with improvement in clinical metrics.

Materials & Methods: This study examined skin microbiome alterations in patients with moderate-to-severe AD treated with once-daily abrocitinib (200 mg, n=14; 100 mg, n=16) or placebo (n=16) for 12 weeks. Skin microbiota were analysed using 16S rRNA gene sequencing from swabs collected from lesional and nonlesional skin at baseline and Weeks 2 (lesional only), 4, and 12.

Results: Significant differential clustering of treatment groups was observed by Week 2 in lesional skin and Week 4 in nonlesional skin using Bray-Curtis dissimilarity ($P<0.05$). At Week 12, *Staphylococcus* genus *and S. aureus* abundance were significantly reduced with abrocitinib 200 mg in lesional skin versus baseline and placebo (false discovery rate <0.05; **Figure**). In lesional and nonlesional skin, abrocitinib 200 mg significantly increased microbial alpha diversity (Inverse Simpson index) at Week 12 ($P<0.05$). Decreased *S. aureus* and *Corynebacterium* abundance in lesional skin and increased *Corynebacterium* abundance in nonlesional skin correlated with improvements in Eczema Area and Severity Index, Investigator Global Assessment score, percentage of body surface area affected, and/or itch numeric rating scale with abrocitinib 200 mg treatment ($r>0.5$, $P<0.05$).

Conclusion: Together, these findings link JAK1 inhibition to normalisation of cutaneous dysbiosis and clinical improvement, expanding the understanding of mechanisms underlying abrocitinib efficacy in AD.

Figure. Abrocitinib 200 mg treatment reduces *Staphylococcus* genus and *S. aureus* abundance in lesional skin of patients with moderate-to-severe AD.



BL, baseline; FCH, fold change; FDR, false discovery rate; *S. aureus*, *Staphylococcus aureus*; SE, standard error.
*FDR<0.1; **FDR<0.05; ***FDR<0.01; ****FDR<0.001.

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Abstract N°: 2547

Stapokibart consistently reduces blood eosinophil count and demonstrates efficacy independent of baselin e blood eosinophil status in adults with moderate-to-severe atopic dermatitis

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Introduction & Objectives:

A transient increase in blood eosinophil (EOS) count has been noted in moderate-to-severe atopic dermatitis (AD) patients treated with dupilumab, raising concerns regarding the long-term supervision of the agent's use. In addition, immunoglobulin E (IgE) is also a crucial biomarker of AD. Stapokibart is a novel humanized monoclonal antibody targeting the interleukin-4 receptor α (IL-4Rα) that significantly improved signs and symptoms of AD. This post-hoc analysis aims to evaluate: (1) effect of stapokibart treatment on blood EOS count in adults with moderate-to-severe AD; and (2) whether baseline blood EOS count or serum total IgE concentration affect the efficacy of stapokibart.

Materials & Methods:

This post-hoc study analyzed the data from a randomized, double-blind, placebo-controlled phase 3 trial

(NCT05265923). Eligible patients were randomized 1:1 to receive subcutaneous stapokibart 300 mg (loading dose, 600 mg) or placebo every two weeks (q2w) for 16 weeks (double-blind period). Then all patients continued to receive stapokibart (q2w) for 36 weeks (maintenance period). Blood EOS count was assessed at corresponding visits. The proportion of patients achieving an Eczema Area and Severity Index ≥75% improvement from baseline (EASI-75) was evaluated by subgroups with different baseline blood EOS count (≥0.5×109/L vs. <0.5×109/L) and serum total IgE concentration (≥200 KU/L [extrinsic AD] vs. <200 KU/L [intrinsic AD]).

Results:

Of the 500 patients enrolled, 251 received stapokibart and 249 received placebo for 16 weeks. Then, 476 patients entered the maintenance period, receiving stapokibart for 36 weeks. Stapokibart consistently reduced blood EOS count. The percentage change in median blood EOS count from baseline was -9.1% at week 4, -35.0% at week 16, and sustained to -41.5% at week 52 in patients persistently received stapokibart **(Fig 1)**. At week 16, the EASI-75 response rate in stapokibart-treated patients was significantly higher than that in placebo-treated patients in both baseline EOS high and low subgroups (65.9% vs. 21.3% and 67.5% vs. 27.7%, respectively, both P<0.0001). During the maintenance period, the EASI-75 response rate steadily rose in patients who continued stapokibart, reaching 90.7% and 93.5% at week 52 in the two subgroups, respectively **(Fig 2A, B)**. Similar EASI-75 response rates were also observed between extrinsic and intrinsic AD subgroups categorized by baseline serum total IgE at week 16 and throughout 52 weeks of stapokibart treatment **(Fig 2C, D)**.

Conclusion:

Stapokibart treatment led to persistent reductions in blood EOS count in adults with moderate-to-severe AD. Furthermore, regardless of baseline blood EOS count or serum total IgE concentration, stapokibart effectively and continuously improved skin clearance in adults with moderate-to-severe AD.

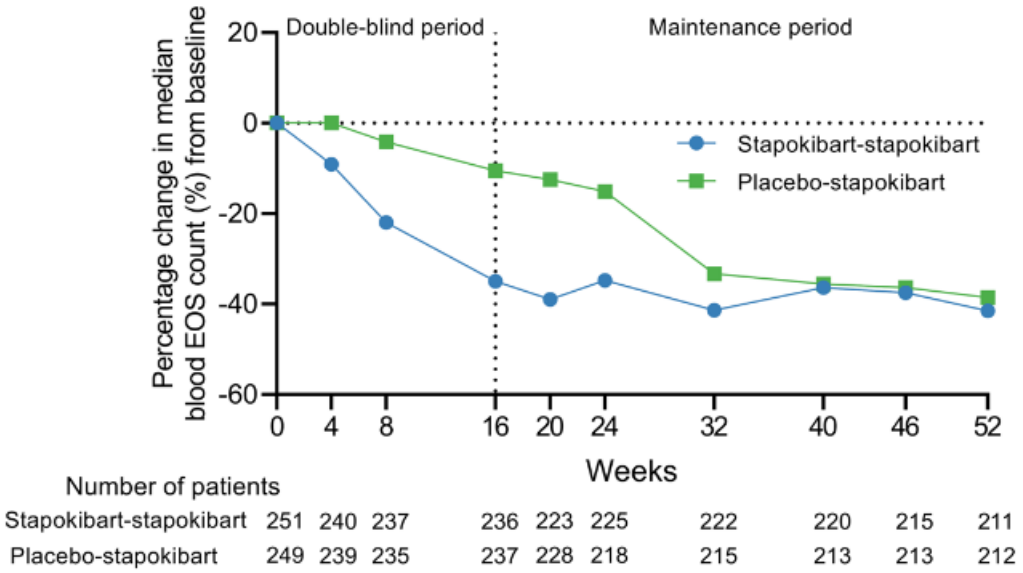

Figure 1. Percentage change in median blood EOS count (%) from baseline to week 52. EOS, Eosinophil. Stapokibart-stapokibart group indicated patients receiving stapokibart treatment for 52 weeks; Placebo-stapokibart group indicated patients switching from placebo to stapokibart at week 16.

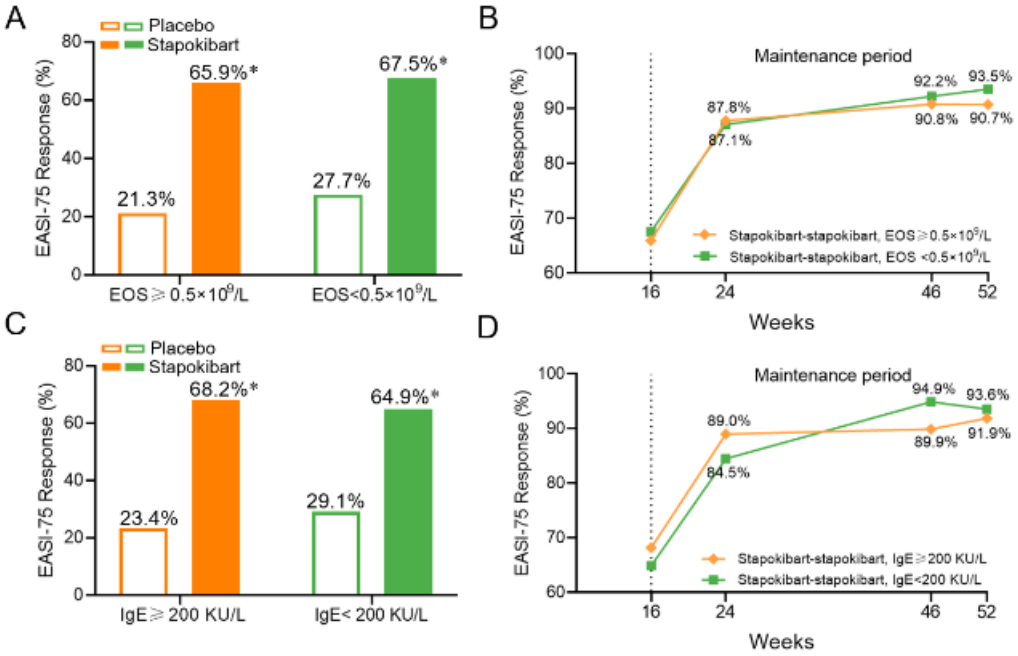

Figure 2. Proportion of patients achieving EASI-75 response in different subgroups of AD. (A, B) ESAI-75 response rate in subgroups with different baseline blood EOS count (≥0.5×10⁹/L vs. <0.5×10⁹/L) at week 16 (A), and over time from week 16 to week 52 (B). (C, D) ESAI-75 response rate in subgroups with different baseline serum total IgE concentration (≥200 KU/L vs. <200 KU/L) at week 16 (C), and over time from week 16 to week 52 (D). EOS, Eosinophil; IgE, immunoglobulin E. *, p<0.0001, compared with placebo at week 16. Panels B and D analyzed patients who persistently received stapokibart treatment for 52 weeks.

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Abstract N°: 2564

Exploring the skin-brain axis in atopic dermatitis through genome-wide pleiotropy analyses

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Introduction & Objectives: Several reports have associated atopic dermatitis (AD) with mental health disorders, including major depressive disorder (MDD), bipolar disorder (BD), schizophrenia (SCZ), autism spectrum disorder (ASD) and attention-deficit hyperactivity disorder (ADHD). However, the exact mechanisms that governs the skin-brain axis during atopic eczema remain elusive. In this work, we conducted a genome-wide pleiotropy analysis between 5 mental health disorders and AD, global genetic correlations and investigated bi-directional relationships accounting for sample overlap.

Materials & Methods: We leveraged genome-wide association (GWAS) summary statistics from large-scale meta-analyses in AD (n=864982), MDD (n=807553), BD (n=413466), SCZ (n=320404), ASD (n=46350) and ADHD (n=225534) participants of European ancestry. We explored the global genetic correlation patterns between AD and mental health disorders. Pleiotropy analysis was conducted under the composite null hypothesis, using shared bi-allelic variants with minor allele frequency (MAF≥0.01) in non-major histocompatibility complex (MHC) loci. We next employed gene-level, gene-set, tissue enrichment and colocalization analyses to explore the biological implications of pleiotropic loci. Finally, we performed bi-directional Mendelian randomization analyses to investigate potential causal trait pairs.

Results: AD showed a modest, nevertheless positive genome-wide correlation with BD (rg=0.11), MDD (rg=0.13), and ADHD (rg=0.14). In total, 38 non-overlapping pleiotropic loci were observed between AD and mental health diseases, with the largest number observed in schizophrenia (n=15). Gene-based analyses reported TRAF3 and IL4 as potentially pleiotropic genes between AD and mental health diseases excluding ASD. Gene-set analyses were largely enriched in various inflammatory processes, similarly to tissue enrichment reporting significant DNase I hypersensitive sites in CD4+ T cells. Genetic liability to MDD (OR, 95% CI: 1.12 (1.01-1.23) and BD (OR: 95% CI: 1.06 (1.02-1.1) reported significant causal effects in AD risk, results that are consistent after account for sample overlap.

Conclusion: We found that the genetic overlap between AD and major mental health disorders is distributed across the genome with a particular focus on inflammatory-related genes including IL4 and TRAF3. Our results elucidate the skin-brain axis in the pathogenesis of AD-related mental health disorders and provide novel insights in the intervention and treatment of AD.

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Abstract N°: 2576

Assessing the variation in severity classification and associated patient characteristics, based on Fitzpatrick skin type, in patients with atopic dermatitis

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Introduction & Objectives:

Atopic dermatitis (AD) severity is often determined via physicians' visual assessment of the patient's skin. However, symptoms, like erythema, could present differently, or not at all, on darker skin tones, potentially resulting in the underestimation of disease severity in these patients** 1,2. This study aimed to explore severity classification variations and associated patient characteristics, based on the Fitzpatrick skin tone scale.

Materials & Methods:

A multi-centre online medical chart review study of patients with AD was conducted between October – December 2023 among dermatologists from the UK, FR, DE, IT & ES. Physicians were screened for practice duration, patient volume and ability to prescribe advanced therapies. Charts of patients with moderate-severe AD were included in the analysis. Patients were grouped into three categories based on Fitzpatrick Skin Type: Light skin (pale/fair type I&II), Medium skin (olive/moderate brown type III&IV), and Dark skin (dark brown/black type V&VI).

Results:

235 EU4&UK dermatologists reported on 950 moderate-severe AD patients, treated with a topical or systemic medication; 458 were classified with Light skin, 465 with Medium skin, and 27 with Dark skin *(note: base <30, view findings qualitatively)*. The Dark skin patients were more often determined 'severe' and experienced more flares in the past year, as per dermatologist interpretation. Where EASI score was known, a greater proportion of Dark skin patients had elevated scores compared to the Light and Medium cohorts. AD involvement everywhere or on the groin/genitals was most prevalent in the Dark skin cohort. Comparatively, Light skin patients mainly showed face and neck involvement (see table 1).

Table 1. Recorded clinical and disease characteristics of reported patients

	Fitzpatrick Skin Type
	Light skin (n=458)
% Currently deemed as 'severe' AD	36%
Mean number of flares in past year	2.4
% AD patients who have an EASI score of ≥22, where this information was known	16% (n=267)
% AD disease location	
Groin/ genital area	11%
Face	32%
Neck	35%
Everywhere	17%

The Dark skin patients also frequently had co-existing conditions alongside their AD (82% vs 66% Light skin & 57% Medium skin), with food allergies and acne being especially common compared to the other cohorts.

Joint AD management by multiple healthcare professionals (HCPs) occurred more in the Dark skin patients (67%) than in Light (34%) and Medium (30%) cohorts, with family physicians/GPs more involved in Dark skin patient care (22% vs 14% & 17%).

Conclusion:

Comparisons in this study cohort suggest that Dark skin patients typically exhibit more severe AD, with greater frequency of flares and broader body involvement. These patients frequently have co-existing conditions, and are often managed by multiple HCPs, including GPs and family physicians, indicating potential disparities in accessing specialized dermatological care. These findings underscore the need for heightened awareness of their unique challenges and ensuring equal access to optimal care. Further investigation using comparator cohort is warranted.

1. Chiricozzi, A., Maurelli, M., et al, *Journal of Clinical Medicine,* 2023, *12* (7), https://doi.org/10.3390/jcm12072701
2. Gan, C., Mahil, S., et al, *Clinical and Experimental Dermatology*, 2023, *48*(10), 1091-1101 https://doi.org/10.1093/ced/llad162

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Abstract N°: 2594

Baseline demographics, clinical characteristics, and treatment history of atopic dermatitis patients with initiation of dupilumab from CORNERSTONE

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Introduction & Objectives:

Dupilumab was approved in China for the treatment of moderate to severe atopic dermatitis (AD) in patients aged ≥6 months. This study aimed to describe the real-world patient characteristics and prior treatments of AD patients with initiation of dupilumab in China.

Materials & Methods:

A retrospective study was conducted on patients with AD who initiated treatment with dupilumab in a real-world setting between August 2021 to July 2022, utilizing data collected from over 220 sites in the CORNERSTONE database (NCT05316805). Eligible patients were followed up from the index date (i.e., the first visit in CORNERSTONE) to the end of study cut-off date (December 31, 2022) or last contact in the database, whichever came first. Descriptive analyses were conducted on socio-demographics, clinical characteristics, and prior treatments of AD at the index date.

Results:

Of the 3,960 patients included, 58.5% were male and 91.2% lived in urban areas. The mean age was 38.5 (± 24.4) years, with distribution across age groups of ≤5 (4.1%), 6-11 (12.5%), 12-17 (10.6%), and ≥18 years (72.7%). A majority (57.8%) had AD onset in adulthood, mostly affecting the patient's trunk, arms, and legs. 8.8% reported aggravation factors, and 35.1% had atopic condition(s) reported in at least one of their first- or second-degree relatives. The most prevalent atopic comorbidities at index date were allergic rhinitis/sinusitis (72.6%), followed by food allergy (20.9%) and bronchial asthma (16.3%). 47% of the patients' AD diagnosis met the Williams Criteria, of which an itching skin condition in the last 12 months was the most common item (93.0%). Nearly half (49.8%) had typical flexural dermatitis as the clinical phenotype. Mean total IgE (kU/L) and eosinophils (10×9/L) were 763.6 (n=1117) and 0.7 (n=1227), respectively (**Table 1**). The average investigator's global assessment (IGA) score was 3.1 (± 0.7), highlighting moderate to severe disease in most patients (85.2%). Over half (55.8%, 2209/3960) received at least one treatment for AD within 6 months prior to the index date, including topical treatment (76.2%), systemic treatment (73.2%), and UV light therapy (2.3%). Antihistamines (64.0%), topical corticosteroids (any potency, 58.7%), topical calcineurin inhibitors (14.0%), and immunosuppressants (10.0%) were the most frequently prescribed prior medications (**Table 2**).

Conclusion:

AD patients initiating dupilumab span from young children to adults, in which different clinical phenotypes and topographies of AD were observed. Family history, comorbidities, and biomarkers also exhibited a heterogeneous pattern. Of the patients with at least one prior treatment of AD, more than 70% received systemic therapies, with antihistamines being the most frequently prescribed medication. The increasing use of dupilumab in AD patients with diverse clinical characteristics indicates that it is becoming a standard of care in treating moderate-to-severe

AD.

Table 1 Socio-demographics and clinical characteristics at index date

Characteristics	Total (N=3960)
Age (years), mean (SD), n=3955	38.5 (24.36)
Age group, n (%)	
≤5 years	162 (4.1%)
6-11 years	494 (12.5%)
12-17 years	421 (10.6%)
≥18 years	2878 (72.7%)
Missing	5 (0.1%)
Gender	
Male	2317 (58.5%)
Female	1643 (41.5%)
Ethnicity	
Han	3736 (94.4%)
Other	211 (5.3%)
Missing	13 (0.3%)
Place of residence	
Urban	3613 (91.2%)
Rural	293 (7.4%)
Missing	54 (1.4%)
Career type	
Preschool / student	1372 (34.7%)
Employed	1628 (41.1%)
Retired or unemployed	899 (22.7%)
Missing	61 (1.5%)
Education level	
Primary school or below	911 (23.0%)
Junior high school	735 (18.6%)
Senior high school	709 (17.9%)
Junior college	589 (14.9%)
Undergraduate or above	961 (24.2%)
Missing	55 (1.4%)
Marital status	
Single	1756 (44.3%)
Married	2121 (53.6%)
Divorced	25 (0.6%)
Missing	58 (1.5%)
Onset age of AD	
≥ 0 to < 2 years	507 (12.8%)
≥ 2 to < 6 years	375 (9.5%)
≥ 6 to < 12 years	350 (8.8%)
≥ 12 to < 18 years	334 (8.4%)
≥ 18 to < 60 years	1633 (41.2%)

Characteristics	Total (N=3960)
⩾ 60 years	655 (16.6%)
Missing	106 (2.7%)
Onset Location of AD[1]	
Scalp	418 (10.6%)
Face	1110 (28.0%)
Neck	884 (22.3%)
Ear	337 (8.5%)
Trunk	2277 (57.5%)
Arm	2117 (53.5%)
Hand	792 (20.0%)
Leg	2095 (52.9%)
Foot	287 (7.2%)
Perineum	39 (1.0%)
Aggravation factors for AD [1, 2]	345 (8.7%)
Environment	301 (87.2%)
Season	260 (75.4%)
Food	244 (70.7%)
Mental or stress	230 (66.7%)
Contact	164 (47.5%)
Family history of atopy [1, 2]	1389 (35.1%)
Allergic rhinitis/chronic sinusitis	728 (52.4%)
Eczema	669 (48.2%)
Bronchial asthma	122 (8.8%)
Chronic urticaria	78 (5.6%)
Food allergy	66 (4.8%)
Allergic conjunctivitis	21 (1.5%)
Any atopic disease [1, 2]	1776 (44.8%)
Allergic rhinitis / Sinusitis	1289 (72.6%)
Food allergy	372 (20.9%)
Bronchial asthma	289 (16.3%)
Chronic urticaria	189 (10.6%)
Allergic conjunctivitis	107 (6.0%)
AD diagnosis met Williams Criteria [3]	1863 (47.0%)
An itchy skin condition in the last 12 months	3683 (93.0%)
Onset below age 2	536 (13.5%)
History of flexural involvement	3281 (82.9%)
History of a generally dry skin	594 (15.0%)
Personal history of other atopic disease	2491 (62.9%)
Visible flexural dermatitis as per photographic protocol	2525 (63.8%)
Clinical phenotype	
Typical flexural dermatitis	1972 (49.8%)
Erythrodermic	98 (2.5%)

Characteristics	Total (N=3960)
Inflammatory [4]	642 (16.2%)
Lichenoid	219 (5.5%)
Xerosis	484 (12.2%)
Prurigo	278 (7.0%)
Nummular	36 (0.9%)
Localized	165 (4.2%)
Total IgE (kU/L), mean (SD), n=1117	763.5773 (1007.5133)
Eosinophils (10×9/L), mean (SD), n=1227	0.7409 (1.2447)

[1]Not mutually exclusive.

[2]Percentage of each specific category was calculated using the number of patients with the condition as the denominator.

[3]Williams Criteria includes one major criterion and minor criteria. One major criterion is an itchy skin condition in the last 12 months. Minor criteria consist of the following criteria: (1) onset below age 2 (not used in children aged under 4 years); (2) history of flexural involvement, (3) history of a generally dry skin, (4) personal history of other atopic disease (in children aged under 4 years, history of atopic disease in first degree relative maybe included) and (5) visible flexural dermatitis as per photographic protocol. Patients who met one major criterion and at least three minor criteria were diagnosed as AD.

[4]Inflammatory clinical phenotype of AD refers to diffuse erythema that is predominantly exudative and crusted eczematous lesions.

IgE Immunoglobulin E, SD Standard Deviation

Table 2 AD treatment within 6 months prior to index date

Prior treatments	Total (n=3960)
At least one treatment for AD within 6 months prior to index date	2209 (55.8%)
Topical treatment	1684 (76.2%)
Topical Corticosteroids (TCS) (any potency)	1296 (58.7%)
Corticosteroids (mild)	358 (16.2%)
Corticosteroids (mid-potency)	616 (27.9%)
Corticosteroids (high potency)	428 (19.4%)
Corticosteroids (super-high potency)	64 (2.9%)
Corticosteroids (potency not coded)	2 (0.1%)
TCI (topical calcineurin inhibitors)	310 (14.0%)
Topical Antimicrobials	126 (5.7%)
Topical PDE-4 inhibitors	37 (1.7%)
Others	158 (7.2%)
Systemic treatment	1616 (73.2%)
Antihistamines	1414 (64.0%)
Immunosuppressants	222 (10.0%)
Cyclosporin	82 (3.7%)
Methotrexate	22 (1.0%)
Azathioprine	3 (0.1%)
Systemic Corticosteroids	173 (7.8%)
JAK inhibitors	26 (1.2%)
Systemic Antimicrobials	17 (0.8%)
Biological agent	11 (0.5%)
Others	311 (14.1%)
Traditional Chinese medicine	607 (27.5%)
Others	110 (5.0%)
Vitamin/Mineral supplements/other non-AD drugs	61 (2.8%)
UV Light Therapy	50 (2.3%)

Percentage for any specific defined category was calculated using the number of patients with at least one AD treatment within 6 months prior to index date as the denominator.

TCI Topical calcineurin inhibitors; PDE-4 Phosphodiesterase 4; JAK, Janus-activated kinase.

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EUROPEAN ACADEMY OF DERMATOLOGY & VENEREOLOGY

Abstract N°: 2600

Washing with emollients. An influence of ceramides or silicones on sensory differences, washing and moisturizing properties of a 3-in-1 emollient ointments.

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Introduction & Objectives:

Emollients are medical moisturizers used to treat eczema and other dry skin symptoms. Emollients soothe and relieve itch, producing a protective layer on the skin surface. Some of emollient formulations may combine three functions like washing, bathing and moisturizing. Daily emollient bath/shower is recommended to remove dirt and skin debris, which could cause infection, irritation, itch. Plain water without emollient will dry out the skin, whereas an emollient will gently cleanse the skin, reduce itchiness and repair the skin barrier by trapping moisture. Objectives of this study was to evaluate safety and efficacy of two versions of emollient ointments based on canola oil, hempseed oil, shea butter and parrafin on washing and moisturizing properties. Differences between both versions was that, one of them additionaly comprised of ceramides and the second one - of dry emollient - cyclopentasiloxane.

Materials & Methods:

Safety of a products was evaluated in accordance with ISO 10993 by performing in vitro MTT cytotoxicity test whereas irritation potential was tested on Epiderm skin model. Medium was collected to perform Elisa for interleukin IL-18 (only for version with ceramides).

Penetration through stratum corneum of the tested device was measured by Raman spectroscopy.

For observational study, 8 children (age 1-16 y.o.) and 10 adults (29-69 y.o.) with dry skin and mild to moderate atopic dermatitis, were enrolled for the test. Participants and caregivers were instructed to use both ointments as bath-additives or as a soap-substitute or apply both products as moisturizers for 10 days, one or twice daily.

Results:

In vitro MTT study confirmed that both ointments did not exhibit cytotoxic properties towards L929 cells at the concentration of at least or equal to 0.001%. Furthermore, the products did not express irritation potential (EpiDerm tissue viability for product with cyclopentasiloxane was 69,4% and with ceramides 107,3%, respectively). Elisa did not show any significant changes in the concentration of IL-18 indicating lack of sensitisation properties of the product with ceramides.

Raman spectroscopy revealed that both formulations did not penetrate to deeper layers of skin tissue, but only created protective layer on the skin.

Volunteers assessed that the product version with ceramides displays better properties in preparing bath or convenient washing. Also skin condition was better assessed for the version with ceramides. As a skin “leave-on” moisturizer, skin condition was better evaluated in version with silicones, however overall assessment of application properties and efficacy was higher for emollient with ceramides. Product version with cyclopentasiloxane during test caused some mild side effects.

Conclusion:

Better sensory parameters and no advere effects during the test indicate that the emollient with ceramides represent a promising, cost-effctive, 3-in-1 approach in atopic dermatitis treatement.

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Abstract N°: 2603

Clinical Effectiveness And Tolerability Of The Use Of Emollient "PLUS" Versus Urea 10% Moisturizer In Patients With Mild-Moderate Atopic Dermatitis

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Clinical Effectiveness And Tolerability Of The Use Of Emollient "PLUS" Versus Urea 10% Moisturizer In Patients With Mild-Moderate Atopic Dermatitis

Introduction & Objectives: Atopic dermatitis (AD) is a chronic inflammatory skin disease that has the potential to disrupt patient's quality of life. The pathophysiology of AD is a triangle with skin barrier disruption, microbiome dysbalance, and Th2 cell-mediated inflammation. Current AD guidelines recommend the daily use emollients or event emollient "plus" and then depending on the AD severity, topical corticosteroids (TCS), calcineurin inhibitors, and/or systemic immunomodulators. Emollient "plus" containing probiotic lysates such as *Vitroscella filiformis* have shown their benefit in randomised control trials in improving AD signs and symptoms, reducing flares and use of TCS. To evaluate the efficacy of emollient "plus' that has promising effect to improve skin barrier and stabilize skin microbiome. this study was conducted to compare the effectiveness and tolerability of an emollient "plus" containing *Vitreoscella filiformis* (Vf) and *Microresyl* compared to usual emolient contain of urea 10% moisturizer in mild to moderate AD. This study was conducted to compare the effectiveness and tolerability of an emollient "plus" containing *Vitreoscella filiformis* and *Microresyl* to urea 10% moisturizer in atopic dermatitis.

Materials & Methods: This is a double blind clinical trial comparing an emollient "plus" to urea 10% in mild-moderate AD patients. Both products were used twice a day for 12 weeks. Evaluations included clinical parameters; transepidermal water loss (TEWL), SCORAD, skin pH, pruritus visual analog scale (VAS), and safety.

Results: Emollient "plus" group showed a superior efficacy versus urea 10% in the following parameters at different time points: TEWL and skin pH values at week 4 (TEWL p=0.05; skin pH p=0.03), week 8 (TEWL p=0.01; skin pH p=0.001), and week 12 (TEWL p=0.001; skin pH p=0.001). There was a significant difference in favor of Emollient "plus" in SCORAD after week 8 (p=0.01) and week 12 (p= 0.001). Pruritus VAS value was also significantly superior at week 12 (p=0.001). Emollient "plus" was also better tolerated than Urea 10%.

Conclusion: Both products improve AD over time, although emollient "plus" showed a superior efficacy in improving clinical signs and symptoms, skin barrier function, and was better tolerated compared to urea 10% moisturizer.

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Abstract N°: 2624

Real-life effectiveness and treatment patterns in patients with moderate-to-severe atopic dermatitis not controlled by topical therapy: Interim Analysis of the China Atopic Dermatitis Registry Study (ChinaSTAD)

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Introduction & Objectives:

Atopic dermatitis (AD) is the most common chronic type 2 inflammatory skin disease, with a lifetime prevalence of up to 20% and substantial effects on quality of life (QoL). This analysis, based on the ongoing China Atopic Dermatitis Registry Study (NCT05023668), a prospective observational study, was initiated to focus on describing the treatment pattern and effectiveness of AD treatments in a real-world setting in Chinese patients with moderate-to-severe AD.

Materials & Methods:

Patients aged ≥12 years with moderate-to-severe AD (SCORing AD [SCORAD] score ≥25, Investigator Global Assessment score ≥3 or Eczema Area and Severity Index ≥24) not controlled by topical therapy were included. Visits were scheduled at baseline (BL), months 1, 4, 8 and 12. This interim analysis reports on patient characteristics, changes in treatment and disease severity, and patient-reported outcomes up to 4 months. SCORAD, peak pruritus numerical rating scale (PP-NRS), Patient Oriented Eczema Measures (POEM), Dermatitis Life Quality Index (DLQI) or children DLQI (cDLQI), and Atopic Dermatitis Control Test (ADCT) were included for the effectiveness evaluation.

Results:

A total of 7490 patients were recruited across 84 sites from July 2021 to June 2023, and 7341 were included in the Full Analysis Set (FAS). The mean (±SD) age was 43.2±20.7 years, 57.0% of patients were male, and 60.5% had a personal history of allergic diseases. In the effectiveness analysis, at BL and month 4, the mean scores (±SD) for SCORAD were 53.8±16.3 and 24.5±16.2, PP-NRS were 6.9±2.3 and 3.2±2.2, POEM were 15.9±6.9 and 6.5±5.4, DLQI were 11.5±7.1 and 5.1±4.9. (Table 1) A ≥3-point reduction from BL in PP-NRS was reported in 45.7% and 67.0% of patients, and the ADCT score was <7 in 45.5% and 68.6% of patients at months 1 and 4, respectively. For the treatment patients received, 4577 (65.05%) patients used topical corticosteroids or topical calcineurin inhibitors (TCS/TCI), 4142 (58.87%) used antihistamines and 2746 (39.03%) had systemic anti-inflammatory

therapy for AD at BL. An increasing percentage of systemic anti-inflammatory therapy use was observed, accounting for 52.45% (3074/5861) at month 1 and 53.13% (2442/4596) at month 4. Meanwhile, TCS/TCI and antihistamine use were decreased. (Table 2) Dupilumab was the most used systemic anti-inflammatory therapy during the 4-month follow-up, with the percentage of patients who used dupilumab with or without topical moisturizing emollients increasing from 34.04% (692/2033) at BL to 61.35% (1278/2083) at month 4.

Conclusion:

This analysis of ChinaSTAD indicated a high disease burden in patients with moderate-to-severe AD not controlled by topical therapy and showed short-term improvements in the signs and symptoms of the disease. An increasing trend of using biologics as systemic anti-inflammatory therapy, and less TCS/TCI or antihistamine use during the follow-up (up to 4 months) was observed.

Table 2. Treatments for AD at baseline, month 1 and month 4

AD treatment	Baseline(N=7036)	Month 1(N=5861)	Month 4(N=4596)
Topical moisturizing emollients	**2156 (30.64%)**	**2106 (35.93%)**	**1921 (41.80%)**
Topical anti-inflammatory therapy	**4577 (65.05%)**	**3118 (53.20%)**	**2044 (44.47%)**
Topical corticosteroids (TCS)	4229 (60.11%)	2782 (47.47%)	1778 (38.69%)
Topical calcineurin inhibitor (TCI)	1058 (15.04%)	836 (14.26%)	502 (10.92%)
Systemic anti-inflammatory therapy	**2746 (39.03%)**	**3074 (52.45%)**	**2442 (53.13%)**
Oral conventional immunosuppressive therapy	448 (6.37%)	174 (2.37%)	106 (1.44%)
Systemic corticosteroids	354 (5.03%)	117 (2.00%)	69 (1.50%)
Cyclosporine	68 (0.97%)	43 (0.73%)	27 (0.59%)
Methotrexate	32 (0.45%)	15 (0.26%)	12 (0.26%)
Azathioprine	2 (0.03%)	1 (0.02%)	1 (0.02%)
Mycophenolate mofetil	3 (0.04%)	0 (0%)	0 (0%)
Biologics	2040 (28.99%)	2574 (43.92%)	2092 (45.52%)
Dupilumab	2033 (28.89%)	2564 (43.75%)	2083 (45.32%)
Dupilumab ± topical moisturizing emollients*	692/2033 (34.04%)	1235/2564 (48.17%)	1278/2083 (61.35%)
Omalizumab	11 (0.16%)	10 (0.17%)	9 (0.20%)
Janus kinase inhibitor	406 (5.77%)	386 (6.59%)	280 (6.09%)
Ultraviolet phototherapy	**52 (0.74%)**	**13 (0.22%)**	**5 (0.11%)**
Traditional Chinese medicine therapy	**1430 (20.32%)**	**758 (12.93%)**	**457 (9.94%)**
Tripterygium wilfordii	207 (2.94%)	97(1.66%)	35 (0.76%)
Traditional Chinese Medicine	1252 (17.79%)	673 (11.48%)	426 (9.27%)
Other treatments			
Antihistamines	4142 (58.87%)	2541 (43.35%)	1531 (33.31%)
Compound glycyrrhizin	870 (12.36%)	439 (7.49%)	231 (5.03%)
Systemic anti-infectives	198 (2.81%)	65 (1.11%)	29 (0.63%)
Antimicrobial agents for topical use	434 (6.17%)	226 (3.86%)	111 (2.42%)
Sodium thiosulfate	70 (0.99%)	15 (0.26%)	4 (0.09%)
Zinc oxide preparation	105 (1.49%)	56 (0.96%)	31 (0.67%)
Others	1322 (18.79%)	875 (14.93%)	544 (11.84%)

* Dupilumab ± topical moisturizing emollients: topical moisturizing emollients is the only concomitant treatment with dupilumab

Table 1. Results for effectiveness endpoints at baseline, month 1 and month 4

Effectiveness endpoints	Baseline		Month 1		Month 4	
	n	Mean±SD/%	n	Mean±SD/%	n	Mean±SD/%
SCORAD, n	7341	53.8±16.3	6379	35.7±17.5	5498	24.5±16.2
PP-NRS, n	7341	6.9±2.3	6441	4.4±2.4	5574	3.2±2.2
POEM, n	7341	15.9±6.9	6439	9.3±6.0	5571	6.5±5.4
DLQI, n	6799	11.5±7.1	5957	7.3±5.7	5125	5.1±4.9
cDLQI, n	542	10.3±6.4	480	7.0±4.9	430	4.8±4.0
ADCT, n(%)						
≥ 7 points	6451	87.9%	3509	54.5%	1748	31.4%
< 7 points	890	12.1%	2933	45.5%	3821	68.6%

Data are presented as mean ± standard deviation, unless stated otherwise; all data are reported as observed, with missing data excluded.

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Abstract N°: 2652

Clinical and epidemiological features of the course of herpetic eczema in childhood

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Introduction & Objectives: Herpetic eczema (HE) is a manifestation of a disseminated herpesvirus infection that develops exclusively against the background of chronic dermatoses, among which atopic dermatitis plays a leading role. In the vast majority of cases, HE is caused by the herpes simplex virus type 1 (HSV-1). Despite the widespread prevalence of atopic dermatitis in the general population and the high incidence of HSV-1, eczema herpeticum is relatively rare. This can be explained by the fact that herpetic eczema is a complex manifestation of a phenotype that requires the combined effects of many negative external and internal factors, reflecting the complex relationship between the skin and the immune system.

Materials & Methods: For the period 2010-2015 38 patients with herpetic eczema aged from 4 months to 13 years were observed.

Results: The average age of all examined patients was 1.7±0.3 years, which is associated with a sharp drop in intrauterinely transmitted antibodies to HSV by the 6th month of life and the appearance of own antibodies to HSV only by 1-2 years. No gender predisposition was identified in patients with GE: the disease was equally common in both boys - 19 patients (50%) and girls - 19 (50%) respectively. In 27 (71.1%) patients, HE was associated with primary HSV infection. In 15 (39.5%) cases, when examining close relatives, it was possible to detect residual effects of herpes simplex, localized mainly on the lips, wings of the nose, conjunctiva of the eyes, and hands. In the overwhelming majority of patients, we noted the earlier development of atopic dermatitis—at the 2nd month of life. All patients with HE showed a more severe course of atopic dermatitis than in the general population, with a higher prevalence of eczematous skin lesions localized primarily in the head and neck area. It was found that 33 (86.8%) children were bottle-fed from an early age.

The study also revealed that 26 (68.4%) patients had increased sensitization to aeroallergens, a higher frequency of food allergies and/or asthma, allergic rhinitis, and conjunctivitis. The vast majority of patients with HE had a secondary skin infection caused by pathogens such as Staphylococcus aureus 30 (78.9%) and molluscum contagiosum 3 (7.9%). It was observed that in 26 (68.4%) patients, corticosteroids and topical calcineurin inhibitors were used for a long time in the external treatment of atopic dermatitis. In 2 cases (5.3%) HE developed against the background of atopic dermatitis and ichthyosis vulgaris and was characterized by a more severe torpid course.

An important criterion for the development of HE is the presence of immune changes confirmed by laboratory test data. Immunopathological mechanisms are not fully understood and are caused by genetic defects that lead to abnormalities in the immune response, expressed in an excessive IgE reaction, which was found in 36 (94.7%) patients, or an imbalance between T-helper subpopulations, namely, in the predominance of type 2 cells. These biomarkers dynamically reflect the severity of atopic disease.

Conclusion: The data presented provide a brief clinical and epidemiological description of patients with atopic dermatitis who are at greatest risk of developing a potentially life-threatening viral infection such as eczema herpeticum.

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Abstract N°: 2658

Predictors of the development of herpetic eczema in children and adolescents suffering from atopic dermatitis

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Introduction & Objectives: Herpetic eczema (HE) is a manifestation of disseminated herpesvirus infection, complicating the course of chronic dermatoses, among which atopic dermatitis plays a leading role. In the vast majority of cases, HE is caused by the herpes simplex virus type 1 (HSV-1). Despite the widespread prevalence of atopic dermatitis in the general pediatric population and the high incidence of HSV-1, eczema herpeticum is relatively rare.

Materials & Methods: Under our supervision at the Tushino Children's Hospital named after. Z.A. Bashlyaeva for the period 2005-2015. There were 58 patients with GE aged from 4 months to 18 years, of which 20 (34.5%) were girls, 38 (65.5%) were boys.

Results: The average age of all examined patients was 1.5±0.3 years, which is associated with a sharp drop in intrauterinely transmitted antibodies to HSV by the 6th month of life and the appearance of own antibodies to HSV only by 1-2 years. Most patients (65.5%) fell ill with HE in the autumn-winter period. In 41 (70.7%) patients, HE was caused by a primary HSV infection. In 23 (39.7%) cases, when examining the closest relatives, it was possible to detect residual effects of herpes simplex, localized mainly on the lips, wings of the nose, and hands. In the overwhelming majority of patients, we noted the earlier development of atopic dermatitis—at the 2nd month of life. All patients with HE were found to have a more severe course of atopic dermatitis than in the general population, with a high prevalence of eczematous skin lesions localized primarily in the head and neck area. It was found that 49 (84.5%) children were bottle-fed from an early age. In 40 cases (69%), patients had a positive family history of atopic dermatitis. The study also revealed that 39 (67.2%) patients had increased sensitization to aeroallergens, a higher frequency of food allergies and/or asthma, allergic rhinitis, and conjunctivitis. The vast majority of patients with HE had a secondary skin infection caused by pathogens such as Staphylococcus aureus 45 (77.6%) and molluscum contagiosum 4 (6.9%). Corticosteroids and topical calcineurin inhibitors were used for a long time in 39 (67.2%) patients. In 3 cases (5.2%) HE developed against the background of atopic dermatitis and ichthyosis vulgaris, and was characterized by a more severe torpid course. An important criterion for the development of HE is the presence of immune changes confirmed by laboratory test data. Immunopathological mechanisms are not fully understood and are caused by genetic defects that are associated with mutations in the skin barrier protein Filaggrin, deficiency of antimicrobial peptides of the skin, and lead to abnormalities of the immune response, expressed in an excessive IgE reaction, which was found in 55 (94.8%) patients, or an imbalance between T-helper subpopulations, namely, the predominance of type 2 cells. These biomarkers dynamically reflect

Conclusion: The data presented provide a brief clinical and epidemiological description of patients with atopic dermatitis who are at greatest risk of developing a potentially life-threatening viral infection such as eczema herpeticum. Predictors of the development of HE are: early childhood (from 7 months to 2 years), earlier onset of AD in combination with a chronic relapsing course until adulthood, the presence of other atopic diseases, sensitization to many common allergens and the more frequent presence of skin infections with Staphylococcus

aureus.

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Abstract N°: 2667

Incidence of comorbidities in a cohort of patients during the first year following initiation of systemic treatment for atopic dermatitis: a retrospective matched-control analysis of a US claims database

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Introduction & Objectives:

The treatment of patients with atopic dermatitis (AD) who do not respond to topical therapies is rapidly evolving with the approval of new systemic treatments, including biologics. This study aimed to estimate the incidence of comorbidities during the first year after initiation of any systemic therapy, in comparison with a matched control group.

Materials & Methods:

Patients with AD were identified (via the ICD-10-CM L20.xx code) in the MarketScan claims databases as they initiated systemic treatment with oral corticosteroids, immunosuppressants, or biologics, between 1/1/2017 and 6/30/2022 (index = first treatment). Included patients were required to be continuously enrolled for 12 months before (baseline) and after index (follow-up), to have at least one additional claim (of any type) with an AD diagnosis within 60 days (+/-) of the index date, and at least one claim for a prescription for topical therapy anytime from 3 years prior to 12 months after the index date.

Controls had no evidence of AD or prurigo nodularis and had a 12-month baseline and follow-up. A combination of direct and propensity score matching was used to balance cases and controls (1:3) on baseline demographic (Table 1) and clinical characteristics (Table 2) respectively.

Incident disease was calculated among patients without evidence of the specific comorbidity in the baseline period. A subgroup (unmatched) descriptive analysis of patients that received a biologic vs. those that received a non-biologic therapy as first systemic treatment was performed.

Results:

20,295 patients with AD initiating systemic treatment were included (mean/median age 25/18 years, 26.1% aged less than 6, 1.7% aged 75 or older, 55% female), and matched to 60,885 controls. At index-date 12% of patients with AD initiated biologics, 86% oral corticosteroids and 2% immunosuppressants; the biologic cohort was older and had a higher baseline prevalence of several comorbidities compared to the non-biologic cohort (98% receiving oral corticosteroids).

During follow-up (Table 3), patients with AD were more likely to be diagnosed with several new comorbidities, including infections (53.8% vs 33.9%), asthma (11.8% vs 2.9%), allergic rhinitis (21.1% vs. 6.2%), acute sinusitis (9.4% vs 5.8%), food allergies (7.2% vs 0.6%), urticaria (6.8% vs 1.1%), seborrheic dermatitis (4.0% vs. 0.7%) and autoimmune diseases (3.5% vs 1.2%) compared to their matched controls (with $p<0.001$ for all differences).

The incidence of infections, asthma, allergic rhinitis, food allergies, and urticaria was lower in the biologic compared to the non-biologic subcohort.

Conclusion:

Patients with AD whose disease severity warrants the initiation of a systemic treatment appear to be exposed to an increased risk of being newly diagnosed with several acute and chronic comorbidities during the year following treatment initiation, which contributes to their overall disease burden. Further studies are needed to understand the relationship between the initiation of a systemic treatment and the incidence of comorbidities in AD.

Table 1: Demographic Characteristics at Baseline

	Unmatched Cohorts			Matched Cohorts		
	AD Cohort N=20,503	Controls N=12,117,234	Standardized Difference	AD Cohort N=20,295	Controls N=60,885	Standardized Difference
	N (%)/Mean (SD)	N (%)/Mean (SD)		N (%)/Mean (SD)	N (%)/Mean (SD)	
Age (Mean, SD)	25.1 (22.0)	37.8 (20.3)	0.60	25.3 (21.9)	25.9 (21.6)	0.03
Sex (N, %)						
Male	9,154 (44.7%)	5,916,186 (48.8%)	0.08	9,023 (44.5%)	27,069 (44.5%)	0.00
Female	11,349 (55.4%)	6,200,997 (51.2%)	0.08	11,272 (55.5%)	33,816 (55.5%)	0.00
Payer (N, %)						
Commercial	19,641 (95.8%)	11,299,698 (93.3%)	0.11	19,457 (95.9%)	58,371 (95.9%)	0.00
Medicare supplemental	531 (2.6%)	559,285 (4.6%)	0.11	516 (2.5%)	1,548 (2.5%)	0.00
Medicare Advantage	331 (1.6%)	258,200 (2.1%)	0.04	322 (1.6%)	966 (1.6%)	0.00
Insurance plan type (N, %)						
Comprehensive/indemnity	805 (3.9%)	520,166 (4.3%)	0.02	787 (3.9%)	2,361 (3.9%)	0.00
EPO/PPO	9,947 (48.5%)	5,791,421 (47.8%)	0.01	9,856 (48.6%)	29,568 (48.6%)	0.00
POS/POS with capitation	1,385 (6.8%)	926,791 (7.7%)	0.03	1,380 (6.8%)	4,140 (6.8%)	0.00
HMO	3,067 (15.0%)	1,728,737 (14.3%)	0.02	3,039 (15.0%)	9,117 (15.0%)	0.00
CDHP/HDHP	5,035 (24.6%)	2,962,572 (24.5%)	0.00	5,001 (24.6%)	15,003 (24.6%)	0.00
Other/Unknown	264 (1.3%)	187,496 (1.6%)	0.02	232 (1.1%)	696 (1.1%)	0.00
Geographic region (N, %)						
New England	678 (3.3%)	467,213 (3.9%)	0.03	674 (3.3%)	2,022 (3.3%)	0.00
Middle Atlantic	2,375 (11.6%)	1,462,463 (12.1%)	0.02	2,337 (11.5%)	7,011 (11.5%)	0.00
East North Central	2,999 (14.6%)	2,178,147 (18.0%)	0.09	2,986 (14.7%)	8,958 (14.7%)	0.00
West North Central	733 (3.6%)	619,430 (5.1%)	0.08	725 (3.6%)	2,175 (3.6%)	0.00
South Atlantic	7,251 (35.4%)	3,361,367 (27.7%)	0.16	7,160 (35.3%)	21,480 (35.3%)	0.00
East South Central	1,460 (7.1%)	841,042 (6.9%)	0.01	1,439 (7.1%)	4,317 (7.1%)	0.00
West South Central	2,072 (10.1%)	1,058,043 (8.7%)	0.05	2,059 (10.2%)	6,177 (10.2%)	0.00
Mountain	988 (4.8%)	762,620 (6.3%)	0.06	982 (4.8%)	2,946 (4.8%)	0.00
Pacific	1,898 (9.3%)	1,325,984 (10.9%)	0.06	1,890 (9.3%)	5,670 (9.3%)	0.00
Unknown	49 (0.2%)	40,874 (0.3%)	0.02	43 (0.2%)	129 (0.2%)	0.00
Index year (N, %)						
2017	3,649 (17.8%)	3,151,096 (26.0%)	0.20	3,610 (17.8%)	10,830 (17.8%)	0.00
2018	3,944 (19.2%)	2,509,923 (20.7%)	0.04	3,911 (19.3%)	11,733 (19.3%)	0.00
2019	4,153 (20.3%)	2,136,152 (17.6%)	0.07	4,112 (20.3%)	12,336 (20.3%)	0.00
2020	3,087 (15.1%)	1,478,919 (12.2%)	0.08	3,055 (15.1%)	9,165 (15.1%)	0.00
2021	3,825 (18.7%)	1,887,463 (15.6%)	0.08	3,775 (18.6%)	11,325 (18.6%)	0.00
2022	1,845 (9.0%)	953,630 (7.9%)	0.04	1,832 (9.0%)	5,496 (9.0%)	0.00

**

Table 2: Comorbidities and Clinical Characteristics at Baseline

	Unmatched Cohorts			Matched Cohorts		
	AD Cohort N=20,503	Controls N=12,117,234	Standardized difference	AD Cohort N=20,295	Controls N=60,885	Standardized difference
	N (%)/Mean (SD)	N (%)/Mean (SD)		N (%)/Mean (SD)	N (%)/Mean (SD)	
Components of Charlson Comorbidity Index (N, %)						
Myocardial infarction	50 (0.2%)	57,260 (0.5%)	0.04	50 (0.3%)	163 (0.3%)	0.00
Congestive heart failure	148 (0.7%)	139,594 (1.2%)	0.04	148 (0.7%)	433 (0.7%)	0.00
Peripheral vascular disease	187 (0.9%)	147,967 (1.2%)	0.03	187 (0.9%)	462 (0.8%)	0.02
Cerebrovascular disease	172 (0.8%)	143,425 (1.2%)	0.03	172 (0.9%)	467 (0.8%)	0.01
Chronic pulmonary disease	3,335 (16.3%)	848,038 (7.0%)	0.29	3,282 (16.2%)	8,270 (13.6%)	0.07
Dementia	42 (0.2%)	43,676 (0.4%)	0.03	41 (0.2%)	149 (0.2%)	0.01
Diabetes (mild to moderate)	775 (3.8%)	802,150 (6.6%)	0.13	766 (3.8%)	2,376 (3.9%)	0.01
Diabetes with chronic complications	262 (1.3%)	250,826 (2.1%)	0.06	253 (1.3%)	713 (1.2%)	0.01
Chronic renal disease	244 (1.2%)	233,707 (1.9%)	0.06	242 (1.2%)	758 (1.2%)	0.00
Hemiplegia or paraplegia	28 (0.1%)	23,502 (0.2%)	0.01	28 (0.1%)	150 (0.3%)	0.02
Mild liver disease (various cirrhosis)	190 (0.9%)	149,243 (1.2%)	0.03	188 (0.9%)	487 (0.8%)	0.01
Moderate or severe liver disease	11 (0.1%)	8,009 (0.1%)	0.01	11 (0.1%)	34 (0.1%)	0.00
Peptic ulcer disease	45 (0.2%)	31,040 (0.3%)	0.01	45 (0.2%)	103 (0.2%)	0.01
Rheumatologic disease	205 (1.0%)	132,505 (1.1%)	0.01	203 (1.0%)	575 (0.9%)	0.01
Metastatic solid tumor	31 (0.2%)	30,624 (0.3%)	0.02	31 (0.2%)	75 (0.1%)	0.01
Any other malignancy	337 (1.6%)	294,704 (2.4%)	0.06	333 (1.6%)	886 (1.5%)	0.02
HIV	39 (0.2%)	21,456 (0.2%)	0.00	39 (0.2%)	107 (0.2%)	0.00
Other conditions (N, %)						
Actinic keratoses	561 (2.7%)	316,123 (2.6%)	0.01	557 (2.7%)	1,246 (2.1%)	0.05
Acute sinusitis	1,770 (8.6%)	901,621 (7.4%)	0.04	1,744 (8.6%)	7,670 (12.6%)	0.13
Allergic conjunctivitis, keratitis, blepharitis, eye pruritis	796 (3.9%)	209,079 (1.7%)	0.13	787 (3.9%)	1,077 (1.8%)	0.13
Allergic contact dermatitis	996 (4.9%)	96,156 (0.8%)	0.25	976 (4.8%)	1,194 (2.0%)	0.16
Allergic rhinitis	5,076 (24.8%)	851,863 (7.0%)	0.50	4,998 (24.6%)	7,583 (12.5%)	0.32
Asthma	2,996 (14.6%)	573,449 (4.7%)	0.34	2,952 (14.6%)	7,301 (12.0%)	0.08
Eosinophilic esophagitis	64 (0.3%)	12,599 (0.1%)	0.05	61 (0.3%)	182 (0.3%)	0.00
Food allergy	2,367 (11.5%)	69,435 (0.6%)	0.47	2,249 (11.1%)	5,758 (9.5%)	0.05
Neurotic excoriation	21 (0.1%)	1,577 (0.0%)	0.04	20 (0.1%)	11 (0.0%)	0.03
Urticaria	1,053 (5.1%)	95,501 (0.8%)	0.26	1,018 (5.0%)	2,477 (4.1%)	0.05
Seborrheic dermatitis	1,236 (6.0%)	108,658 (0.9%)	0.28	1,194 (5.9%)	3,696 (6.1%)	0.01
Xerosis cutis	1,020 (5.0%)	70,947 (0.6%)	0.27	995 (4.9%)	2,573 (4.2%)	0.03

Table 3: Incidence of Comorbidities during the Follow-up Period

	Incidence of Conditions			
	AD Cohort N=20,295 N (%)	Controls N=60,885 N (%)	P values	Biologic Subcohort N=2,476 N (%)
Asthma	2,038 (11.8%)	1,565 (2.9%)	<0.001	113 (5.3%)
Acute sinusitis	1,752 (9.4%)	3,091 (5.8%)	<0.001	100 (4.3%)
Allergic conjunctivitis, keratitis, blepharitis, eye pruritis	698 (3.6%)	694 (1.2%)	<0.001	111 (4.7%)
Allergic contact dermatitis	1,429 (7.4%)	425 (0.7%)	<0.001	83 (3.7%)
Allergic rhinitis	3,231 (21.1%)	3,312 (6.2%)	<0.001	175 (9.3%)
Eosinophilic esophagitis	38 (0.2%)	47 (0.1%)	<0.001	5 (0.2%)
Food allergy	1,293 (7.2%)	336 (0.6%)	<0.001	64 (2.8%)
Urticaria	1,318 (6.8%)	624 (1.1%)	<0.001	52 (2.2%)
Actinic keratoses	272 (1.4%)	629 (1.1%)	<0.001	30 (1.3%)
ADHD	252 (1.3%)	816 (1.4%)	0.276	46 (2.0%)
Arthralgia	1628 (8.9%)	3784 (6.9%)	0.001	212 (9.6%)
Autoimmune disease	667 (3.5%)	700 (1.2%)	<0.001	82 (3.6%)
Alopecia areata	73 (0.4%)4	47 (0.1%)	<0.001	12 (0.5%)
Ankylosing spondylitis	10 (0.1%)	20 (0.0%)	0.292	(0.0%)
Celiac disease	32 (0.2%)	50 (0.1%)	0.003	2 (0.1%)
Crohn's disease	23 (0.1%)	38 (0.1%)	0.022	3 (0.1%)
Hashimoto's thyroiditis	59 (0.3%)	121 (0.2%)	0.016	4 (0.2%)
Multiple sclerosis (MS)	5 (0.0%)	20 (0.0%)	0.564	1 (0.0%)
Psoriasis/psoriatic arthritis	396 (2.0%)	226 (0.4%)	<0.001	54 (2.3%)
Rheumatoid arthritis (RA)	48 (0.2%)	91 (0.2%)	0.010	2 (0.1%)
Sarcoidosis	8 (0.0%)	10 (0.0%)	0.096	2 (0.1%)
Scleroderma	10 (0.1%)	11 (0.0%)	0.017	3 (0.1%)
Sjogren's syndrome	26 (0.1%)	43 (0.1%)	0.015	3 (0.1%)
SLE	22 (0.1%)	26 (0.0%)	<0.001	3 (0.1%)
Type 1 diabetes	21 (0.1%)	63 (0.1%)	0.997	2 (0.1%)
Ulcerative colitis	30 (0.2%)	65 (0.1%)	0.138	1 (0.0%)
End-stage renal disease	3 (0.0%)	16 (0.0%)	0.438	1 (0.0%)
Infections, cutaneous	1,756 (9.8%)	1,701 (2.9%)	<0.001	90 (4.1%)
Infections, extra-cutaneous	3,924 (44.0%)	9,838 (31.0%)	<0.001	460 (31.6%)
Cardiovascular disease	713 (4.1%)	1,838 (3.4%)	<0.001	98 (4.7%)
Stroke	26 (0.1%)	99 (0.2%)	0.278	3 (0.1%)
Type 2 diabetes	158 (0.8%)	461 (0.8%)	0.772	16 (0.7%)
Neurotic excoriation	26 (0.1%)	18 (0.0%)	<0.001	4 (0.2%)
Pneumonia	578 (2.9%)	947 (1.6%)	<0.001	13 (0.5%)
Seborrheic dermatitis	756 (4.0%)	414 (0.7%)	<0.001	102 (4.5%)
Xerosis cutis	842 (4.4%)	351 (0.6%)	<0.001	89 (3.9%)

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Abstract N°: 2704

Prevalence and knowledge assessment of asteatotic eczema in elderly population: A clinic-based study

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Introduction & Objectives:

Asteatotic eczema, though often overlooked, presents a significant burden on the elderly population, particularly amidst the backdrop of global climate changes. As temperatures drop, the condition exacerbates, underscoring the need for comprehensive understanding and management strategies. This clinic-based study aims to shed light on two critical aspects: the prevalence of asteatotic eczema among individuals aged 65 years and above, attending dermatology clinics during the cold months of November, December, and January, and the level of knowledge among elderly patients regarding their condition and its management. With the prevalence on the rise, it becomes imperative to gauge the extent of its impact on this vulnerable demographic. By elucidating both the prevalence rates and the knowledge gaps, this study seeks to pave the way for targeted interventions and enhanced care practices, thus alleviating the burden of asteatotic eczema on the elderly population.

Materials & Methods:

A clinic-based study was conducted at the dermatology clinic of national hospital Kandy over the course of November , December of 2023 and December 2024. Patients aged 65 years and above presenting to the clinic during the specified months were included in the study. Diagnosis of asteatotic eczema was based on clinical evaluation by dermatologist. A questionnaire was distributed to patients diagnosed with asteatotic eczema, focusing on their understanding of the disease and its management. The questionnaire was developed specifically for this study due to the lack of established scoring systems in the literature. The questionnaire also included a knowledge assessment section, scored out of 100, with predefined categories: satisfactory (75-100), average (50-75), some knowledge (25-50), and very poor knowledge (<25).

Results:

Out of the 102 patients assessed, 76.5% (78 patients) were diagnosed with asteatotic eczema. Among these patients, 43.6% (34 patients) directly sought treatment for asteatotic eczema, while 34.6% (27 patients) had asteatotic eczema without any other dermatoses, and 83.3% (65 patients) had a combination of asteatotic eczema and other dermatoses.The distribution of knowledge levels among patients with asteatotic eczema was as follows:

17.9% (14 patients) demonstrated satisfactory knowledge (75-100),

47.4% (37 patients) had average knowledge (50-75),

41% (32 patients) possessed some knowledge (25-50),

12.8% (10 patients) exhibited poor knowledge (<25)

Conclusion:

The study highlights a significant prevalence of asteatotic eczema among the elderly population attending a dermatology clinic during cold months. The findings also indicate varied levels of knowledge among patients regarding their condition and its management. These results emphasize the importance of patient education and

awareness programs aimed at improving understanding and management of asteatotic eczema among the elderly population. Further research is warranted to develop standardized assessment tools and interventions tailored to address the specific needs of this patient population.

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Abstract N°: 2774

Abrocitinib In Combination Therapy of Atopic Dermatitis Patients

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Introduction & Objectives:

Atopic dermatitis is an autoinflammatory, genetically determined, itchy disease characterized by a long, relapsing course and a sharp decrease in the patient's quality of life. Atopic dermatitis (AD) is caused by a complex interaction of immune dysregulation, epidermal gene mutations, and multi-environmental factors that affects the skin, causing intense itchy rashes. The Janus kinase inhibitor Abrocitinib is currently approved by the US Food and Drug Administration (FDA) as well as in Russia for the treatment of patients with moderate to severe AD refractory to other systemic medications. To evaluate the safety and efficiency of Abrocitinib combined with UVB-311 nm in the treatment of moderate to severe atopic dermatitis.

Materials & Methods:

Patients aged 18 years or older with diagnosis of moderate to severe AD who had inadequate response to topical treatments or were intolerant to systemic treatments with IGA score of >3 and BSA involvement of >10%. The 20 AD patients were assigned to the 200mg/day of abrocitinib (2 weeks)and 100mg/day (4 weeks) and assessed with SCORAD and DLQI. The first 2 weeks of treatment abrocitinib was combined with UVB-311 nm 4 times a week. The secondary endpoints included improvement in pruritus (itching) measured by the Peak Pruritus Numerical Rating Scale (PP-NRS)

Results:

The results of the clinical trial evaluating the efficacy and safety of the treatment of moderate to severe atopic dermatitis (AD) showed that treatment with Abrocitinib resulted in significant improvement in the signs and symptoms of atopic dermatitis.The SCORAD index decreased 1.2 times after 2weeks from the start of therapy (p±0.0004),3 times after 4 weeks (P± 0,0001). Before treatment, the SCORAD index was 63 points; a 6 weeks later, against the background of complex therapy, the SCORAD index was reduced to 27points. The patient's quality of life has significantly improved, as evidenced by a decrease in the DIQI index from 21 points (before treatment) to 6 points (after treatment). No side effects were observed during the treatment, the prescribed regime was strictly observed by the patient.

Conclusion:

The submitted clinical cases are interesting because they demonstrate the excellent clinical efficacy and safety of abrocitinib in AD, both as a monotherapy and in combination with UVB-311 nm where the results were more prominent . Despite the short period of treatment and observation of patients. the objective severity of AD manifestations, and a significant decrease in patient quality of life. A reduction in clinical indices was achieved with a dose of the drug 200 mg/day, exceeding 75% overall. Throughout the observation period, there were no adverse clinical reactions or changes in test markers while taking abrocitinib. These initial pilot results raise confidence in the necessity for larger studies to examine the efficacy of abrocitinib in combination therapy.

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Abstract N°: 2822

Non-invasive evaluation of skin surface cytokines in pediatric Atopic dermatitis

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Introduction & Objectives:

Despite extensive research, the molecular signature and key biomarkers in atopic dermatitis and their influence still need to be investigated. Previous studies demonstrate the differences in the expression of pro-inflammatory markers in AD skin compared to healthy skin by techniques that include biopsies or tape stripping. Still, the ability to sample cytokines present on the skin surface by non-invasive methods in AD has never been examined in pediatric patients. The study aims to identify the key cytokines present on the skin surface of pediatric AD patients and healthy subjects and compare the protein expression between lesioned and non-lesioned areas to better understand AD molecular signatures.

Materials & Methods:

The prospective study included fifty children (≤18 years), forty diagnosed with mild to moderate AD [IGA 2-3] as a case group and ten without AD as a control group. Samples were taken by placing a sticky bandage soaked in sterile phosphate-buffered saline. We measured the concentrations of 15 cytokines present in the eluted buffer by a multiplex immunoassay. To study the effect size of the various factors on the cytokine expression we used the redundancy analysis (RDA) approach, while to identify the cytokines, whose expression significantly changes among the groups, we carried out a factorial ANOVA test.

Results: The** pro-inflammatory cytokine IL-1β was present in patients' non-lesioned skin areas in higher concentrations compared to healthy subjects. Moreover, lesioned areas express higher amounts of IL-1β and IL-6 cytokines. Other factors that contribute to the variance of cytokine secretion are fold vs. non-fold skin region, skin type, and sex. Cytokines associated with Th activation, such as IL-2, IL-4, IL-5, and IL-17, are secreted in higher amounts in folded, non-lesioned skin areas compared to non-fold skin. This observation is more pronounced with female patients.

Conclusion: Our study demonstrates for the first time the ability to identify cytokines secreted to the skin surface of pediatric AD patients in a non-invasive manner. We show that IL-1β and IL-6, both associated with the innate immune response, are overexpressed on the skin surface of AD pediatric patients, which may positively correlate with their higher tendency for skin infection. Both markers were previously shown to be involved in the pathogenesis of AD and are associated with perturbed skin barrier. We also show the importance of the sampling location that may affect cytokine identification, as observed in the differences in marker expression between fold vs. non-fold skin. Changes in lipid composition and microbiome population may be involved in this observation. Our research highlights the potential of non-invasive sampling of the skin surface of pediatric patients. Identification of additional markers on the skin surface can provide complementary information to studies that demonstrated changes in the cutaneous transcriptome in deeper skin layers.

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Abstract N°: 2937

Acute eosinophilic pneumonia associated with dupilumab in a patient with atopic dermatitis

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Introduction & Objectives:

Dupilumab is a monoclonal antibody for the treatment of moderate to severe atopic dermatitis, which can effectively reduce interleukin (IL)-4 and IL-13 and indirectly affect IL-5 and eosinophils (EOS). It was previously considered to have mild adverse events and high safety in the elderly. We report a 71-year-old patient who developed acute eosinophilic pneumonia (AEP) after the first 600 mg dose of dupilumab.

Materials & Methods:

Case report

Results:

EOS were also transiently increased (up to 1600 cells/μl). After the AEP was effectively treated with glucocorticoids, dupilumab treatment was continued. Rash, itching, and immunoglobulin E levels continued to decrease in the patient, and no further pulmonary adverse events occurred.

Conclusion:

AEP is a rare lung disease that has previously been reported to be drug-related; however, to our knowledge, there are no reports related to dupilumab use. We recommend that blood EOS be closely monitored in elderly patients with previous chronic obstructive pulmonary disease or asthma during the use of dupilumab. If EOS continue to rise, it should alert to the risk of AEP. However, even if this occurs, it may not affect the subsequent continuation of dupilumab treatment, as increased blood EOS has been reported in previous studies. Nonetheless, more cases should be examined, and the relationship between increased blood EOS, pulmonary EOS infiltration, and dupilumab should be further explored.

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Abstract N°: 2973

Corticophobia among parents of children with atopic dermatitis

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Introduction & Objectives:

Corticophobia, the fear of applying topical corticosteroids (TCS), is a rising issue in industrialized countries. It involves erroneous beliefs and negative feelings about TCS, promoted by misinformation, leading to therapeutical nonadherence, despite the actual safety and effectiveness of TCS treatment. Aim of this study was to measure corticophobia among parents of children with atopic dermatitis (AD) and identify related risk factors.

Materials & Methods:

Patients attending the Pediatric Dermatology Unit for skin examination in the last six months were screened for AD. All patients (0-18 years) with AD were included in the study. Demographic data (age, sex, disease onset, previous healthcare professional consultations, parental educational degree) were collected. AD severity was assessed with EASI: ≤21 was considered mild/moderate, >21 severe. Parents of AD patients completed the self-administered Topical Corticosteroid Phobia (TOPICOP) questionnaire, to measure corticophobia, and the Parental Dermatological Life Quality Index (DLQI) questionnaire. For each parent, TOPICOP score was calculated as a percentage (0–100% TCS phobia): A score ≤ 50% was considered mild/moderate, > 50% severe. A DLQI score ≤10 was considered mild/moderate, ≥11 severe.

Results:

Overall, 100 patients were included (53 females; 47 males; mean age 5.9 years). A mean EASI score of 19.7 was registered: 44 patients had mild/moderate AD, 56 severe AD. Of patients, 33 never consulted healthcare providers for AD, 67 did. Parental educational degree was low/intermediate in 60 cases, high (gymnasium or university degree) in 40. Parental DLQI scores ranged from 0 to 30 (mean value 10.7). Mean parental TOPICOP percentage was 39.1%: 51 had mild/moderate corticophobia, 49 severe corticophobia. Severe corticophobia was registered for parents of 17 very young (age ≤4 years) patients, 32 older (age >4 years) patients; 6 patients with severe AD, 43 patients with mild/moderate AD; 3 patients with late disease onset (after 1 year of age), 46 patients with early disease onset (prior to 1 year of age); 8 patients with no previous healthcare professionals consultations, 41 patients with previous consultations. Parental mild/moderate corticophobia was registered for 35 very young patients, 16 older patients; 38 patients with severe AD , 13 patients with mild/moderate AD; 20 patients with late disease onset, 31 patients with early disease onset; 25 patients with no previous healthcare professionals consultations, 26 patients with previous consultations. At logistic regression analysis, high parental DLQI (OR 38,5; p <0,0001) and high parental education (OR 4,1; p< 0,0338), accounted for major risk factors influencing severe parental corticophobia, as well as older age of patients (OR 14,5; p =0,0015), and early disease onset (OR 8,1; p<0,0513). At $\chi 2$ test, severe parental corticophobia was significantly associated with mild/moderate AD (p<0.001), and with previous healthcare professionals consultations (p<0.001), accounting for minor risk factors of severe parental corticophobia.

Conclusion:

Assessing risk factors for severe parental corticophobia is essential to comprehend the origin of this complex phenomenon and to address especially groups of parents at higher risk for corticophobia with educational

programs, to overcome their unfunded fears and ultimately augment treatment adherence and satisfaction and improve disease outcome of their children with AD.

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Abstract N°: 2993

Real life data on the evolution of dupilumab-associated conjunctivitis in patients with atopic dermatitis after discontinuation of dupilumab and switching to tralokinumab or Janus kinase inhibitors (RESO-ADOC study)

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Introduction & Objectives: Clinical trials and real-life data have reported an increased incidence of conjunctivitis in patients treated with dupilumab for their atopic dermatitis (AD). The literature on the evolution of these conjunctivitis after dupilumab discontinuation and switching to other AD treatments and the factors associated with the complete resolution of these ocular events are lacking.

The aims of our study were (1) To describe the characteristics of patients developing conjunctivitis requiring discontinuation of dupilumab; and (2) to analyze the factors associated with a complete conjunctivitis improvement after dupilumab discontinuation and a switch to tralokinumab or Janus kinase inhibitors (JAKi).

Materials & Methods: Multicenter retrospective cohort study that included all patients with AD treated with dupilumab who developed conjunctivitis leading to dupilumab discontinuation and switching to tralokinumab or JAKi in daily practice. Data on patients, their AD, and conjunctivitis were analyzed at the inclusion visit (corresponding to discontinuation of dupilumab and the institution of new AD treatment), at visit 2 (3–6 months after inclusion) and at visit 3 (corresponding to the last medical visit).

Results: In the 12 French centers, 1109 patients were treated with dupilumab for their AD and 83 patients developed a conjunctivitis, described as severe for 30% of them, leading to dupilumab discontinuation. The mean time between dupilumab initiation and conjunctivitis onset was 4.5 months (± 3.63). Only 3% of patients experienced conjunctivitis complications (herpetic keratitis for two patients). None of the patients who were retreated with dupilumab achieved a complete conjunctivitis improvement. Only 12% of those who were switched to tralokinumab achieved a complete improvement at visit 2 and 45% at visit 3. Most of these patients needed to pursue ophthalmologic treatments. A total of 81% of patients who were switched to a JAKi (abrocitinib, baricitinib or upadacitinib) achieved a complete improvement at visit 2 and 96% at visit 3 without needing to pursue ophthalmologic treatments for their conjunctivitis. After multivariate analysis the only factors associated with a complete resolution of dupilumab-associated conjunctivitis at visit 2 and/or visit 3 were conjunctivitis duration (OR 8.98, 95% CI 1.47–55) (p=0.018), personal history of asthma (OR 10.66, 95% CI 1.82–62.63) (p=0.009), and switching from dupilumab to JAKi (OR 17.11, 95% CI 2.94–99.66) (p=0.002).

Conclusion: Although uncommon, cunjunctivis can occur with dupilumab. In these cases, and in the absence of improvement, our study seems to suggest that a rapid switch to another molecule, particularly a JAKi, should be

quickly considered for complete and rapid resolution of these ocular issues.

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Abstract N°: 3051

Atopic Dermatitis in the National´s Children´s Hospital as a reference center in Costa Rica

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Introduction & Objectives:

Atopic Dermatitis (AD) is the most frequent chronic inflammatory skin disease, with a high number of consultations1. It is associated with sleeping difficulties and the socioeconomic environment of the patients, which produces a significant deterioration in the quality of life2. Also, despite its high prevalence in Costa Rica, there are no epidemiological or clinical data on pediatric patients with AD. It has been established that there are barriers to AD control in Latin America, so determining the characteristics of the population in our country may be one of the first steps to overcome these barriers3.

The aim of the study is to describe a series of patients with AD referred to the National Children´s Hospital during 2016 to 2019. The results will help improve diagnosis and treatment.

Materials & Methods:

A retrospective observational study was performed. Digital electronic records were reviewed for patients that attended the dermatology outpatient clinic of the National Children's Hospital (HNN) in San José, Costa Rica. between January 01st 2016 and December 31s 2019. Inclusion criteria were: children aged between 2 and 12 years of age with a diagnosis of AD based on Hanifin and Rajka criteria4 and Williams criteria5. Patients with more than 30% of missing data were excluded. It was approved by the Scientific Ethics Committee of the National Children's Hospital (number CEC-HNN-040-2020). Sociodemographic, clinical information and treatment of the patients was obtained. For the statistical analysis, the Rstudio software was used.

Results:

Two hundred one patients were included with an average age of 7.61 years. The largest number of diagnoses were made within the first year of life. 50.7% were female and the majority of patients came from urban areas (75.62%) and regarding the development index by district of origin, 55.72% of patients reported a medium development index.

The average age of diagnosis was 1.6 years. The most prevalent atopic disease was asthma (23.88%), then food allergy (8.46%). Only 13 patients had IgE levels measured, for 6.47%, of which 89% had high values. Edema/papules was seen in 78.11% of patients, followed by erythema with 45.77%. An 84% of patients presented mild dermatitis, while only 6.90% were severe cases.

Emollients were prescribed in 82.59% (n=166) of patients, topical glucocorticoids in 96% (n=193) and only one patient received systemic steroids. Three patients were hospitalized for management. 93% of the patients had a good response to initial treatment, only 14 patients required a systemic immunosuppressive drug, of which one patient required therapy with a monoclonal antibody.

Conclusion:

There are limitations due to the retrospective nature of the study and that DA is hilgy prevalent and seen in other hospital and clinical settings, so this is just a small sample. In our study, a positive relationship was not demonstrated between the area of origin or the development index with the prevalence of atopic dermatitis. No significant differences were observed between area of origin regarding disease severity. In both rural and urban areas, asthma is the most prevalent concomitant atopic pathology. Most patients showed a mild presentation and there was an adequate response to first-line treatment.

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Abstract N°: 3106

High Response Rates and Minimal Disease Activity Correlate with Enhanced Quality of Life: Findings from a German Non-interventional Study

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Introduction & Objectives:

Moderate and high treatment targets are recommended for the treatment of atopic dermatitis (AD). However, limited data exist demonstrating the attainability of these targets in a real-world clinical environment. Additionally, there is a lack of evidence comparing the effects of achieving high versus moderate treatment targets on patient-reported outcomes.

Materials & Methods:

Up-TAINED is a prospective, multicenter, non-interventional study that involved patients aged ≥12 years with moderate to severe AD treated with UPA 15 or 30 mg QD. Outcome measures included Eczema Area and Severity Index (EASI), Dermatology Life Quality Index (DLQI), SCORAD Sleep VAS, ADerm-SS skin pain and 6-scale stigmatization scale. For this interim analysis, data from 284 patients with baseline and 12-week follow-up visits were descriptively analyzed. Data was stratified by EASI according to AHEAD recommendations for optimal treatment target (EASI <3) versus moderate treatment target (EASI 3-7).

According to the AHEAD recommendations, in order to achieve moderate treatment targets based on Patient-reported outcomes (PRO) at least one of the following criteria has to be met: \1) Absolute change in either WP-NRS ≤-4 or Sleep VAS ≤-3 or HADS-A <11 or HADS-D< 11 or absolute change in ADerm-SS Skin pain ≤-3 or \2) Absolute change in DLQI/ cDLQI ≤-4.

Whereas to achieve optimal PRO treatment targets, as per AHEAD recommendations, at least one of the following criteria has to be met: \1) WP-NRS ≤ 1 or Sleep VAS ≤ 1 or HADS-A <8 or HADS-D< 8 or ADerm-SS Skin pain ≤1 or \2) DLQI/ cDLQI ≤1.

Results:

Most patients achieved a moderate treatment target with an EASI <7 (88.3%), and 73% reached an optimal treatment target with an EASI <3 after three months of treatment.

Significant differences in the PROs stratified by an EASI <3 versus EASI 3-7 were observed. Patients achieving an EASI <3 displayed significantly lower mean absolute DLQI scores (2.6 ±3,6 versus 4.6 ±3,3 for EASI 3-7). This was also true for other outcomes such as SCORAD sleep VAS (1.4 ±2,1 versus 2 ±2,4), skin pain (1 ±1,6 versus 2 ±1,9), and 6-scale stigmatization (1.6 ±2,1 versus 2.7 ±2,6).

After three months of Upadacitinib treatment, 91% of patients reached a moderate physician-reported treatment target, and 74% achieved an optimal target. For patient-reported treatment targets, 88% of patients reached a moderate target, and 74,8% achieved an optimal treatment target.

Conclusion:

The results of this study indicate that Upadacitinib treatment can feasibly achieve moderate and high treatment targets in real-world settings. Furthermore, these findings suggest that achieving high treatment targets can significantly improve patients' daily lives, as measured by various PROs.

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Abstract N°: 3142

Attributes of treatment and factors influencing patient preference and satisfaction in Atopic Dermatitis: Literature review

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Introduction & Objectives:

Atopic dermatitis (AD) worldwide prevalence is around 3% and it affects up to 10% of adults in certain countries. As many AD treatments and care options become available to a wider number of patients, there is a growing need for more information about willingness and preference from those that are living with moderate-to-severe AD to engage with these treatments. Stated patient preference research methods help predict factors that influence health behaviors in the future. This is a literature review of findings from stated preference and qualitative studies regarding the choices of people living with AD when considering their AD treatment to deliver a conceptual model of attributes impacting treatment choice, satisfaction and adherence.

Materials & Methods:

A targeted literature review of papers published from January 1st, 2013 to February 14th, 2023 was performed to identify concepts relevant to patients with moderate to severe AD and their caregivers when managing AD and to identify any key wording and terminologies used by patients and caregivers to describe these treatment products and preferences.

Results:

The 19 articles identified included 10 qualitative studies, 4 discrete choice experiments (DCEs), 4 surveys and 1 mixed-method study. Each DCE tested 6 to 9 treatment attributes, that were classified as 'perceived efficacy', 'risk of side effects', 'practicality' and 'cost'. 'Perceived efficacy' was defined as itch reduction, skin lesions, prevention of progression and speed of onset. 'Risk of side effects' overall was tested, as well as risk of venous thrombo-embolism, serious infection, malignancy, injection site reaction and eye inflammation. 'Practicality' was tested through oral vs injectable modes of administrations, frequency of administration, frequency of check-ups, administration settings, flare adaptability or interrelationship to topicals. 'Treatment efficacy' and 'risk of side effects' were the most valued by DCE participants. In fact, efficacy and rapid onset were also factors increasing treatment satisfaction and adherence. On the opposite, side effects, injection, high cost, low access, frequency, burdensome routine and duration of administration were compromising treatment satisfaction and potentially adherence. Communication with Health Care Practitioners including recommendations or information on treatment and access to medical consultation influenced treatment perception and subsequent compliance. Lastly, patient medical literacy about AD or treatment, forgetfulness and busyness were also factors of treatment satisfaction and adherence.

Conclusion:

This literature review highlights efficacy and safety are pivot of treatment satisfaction and use but other treatment attributes as well as personal and environmental factors interfere. New treatments must achieve higher efficacy and safety. Plus, delivery route, frequency and process of administration must be convenient to a broad population expecting minimal burden of treatment.

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Abstract N°: 3145

Clinical trial exit interviews in patients with moderate to severe Chronic Hand Eczema: perspectives on disease burden and its impact on quality of life from participants in the phase 3 DELTA 1 trial

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Introduction & Objectives:

Clinical trial exit interviews can be utilised to explore patient experiences, supplementing trial results by providing a more detailed insight into patient perspectives on disease burden. Here we summarise insights into the burden of Chronic Hand Eczema (CHE) as reported in exit interviews by patients who completed the DELTA 1 clinical trial of delgocitinib cream versus cream vehicle.

Materials & Methods:

DELTA 1 (NCT04871711) was a phase 3 trial in which adult patients with moderate to severe CHE were randomised to double-blind treatment with delgocitinib cream 20 mg/g (n=325) or cream vehicle (n=162) twice daily for 16 weeks. Patients enrolled in Canada or the UK who completed treatment were invited to participate in a semi-structured telephone/video call interview (within 2 weeks of completing treatment) lasting approximately one-hour. Patients were asked to consider the signs/symptoms they were experiencing and their impact in the week prior to the start of the trial. Initial questions were open-ended and did not lead patients, who were given an opportunity to highlight concepts without being asked by the interviewer. Patients provided written informed consent and had to be verbally fluent and literate in English. Artificial intelligence software (ATLASti.com) was used for qualitative analysis of verbatim interview transcripts, with thematic analysis coding of the impacts of CHE across six health-related quality of life domains (see figure).

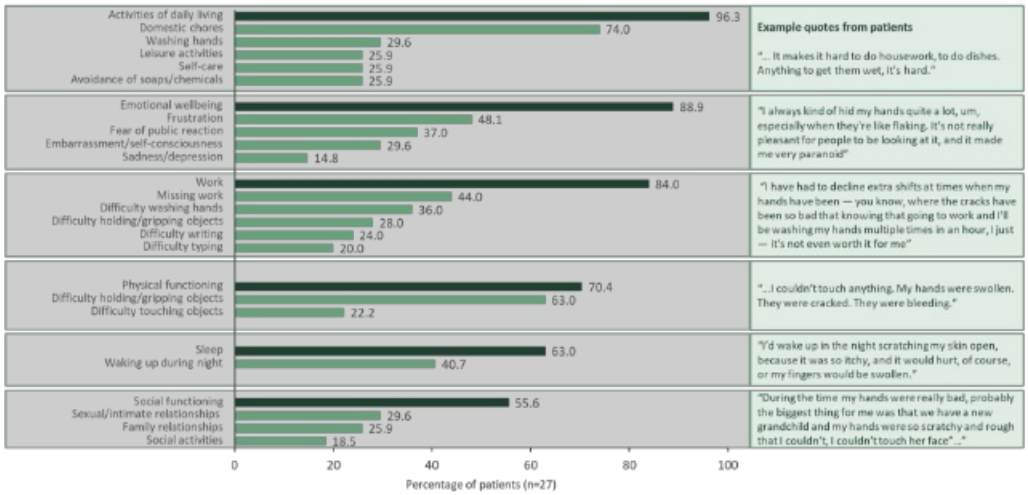
Results:

A total of 27 people participated in exit interviews (mean age: 43.5 years, female 66.7%, white 81.5%), two-thirds of whom had moderate IGA-CHE at baseline. The most frequently reported skin-related signs/symptoms of CHE experienced before the trial were cracking (92.6%), pain (88.9%), dryness (70.4%), itch (66.7%) and flaking (63.0%). Cracked skin was frequently reported as an initial sign/symptom, which then led to pain and/or bleeding. An impact on activities of daily living was reported by 96.3% of patients (n=26), with 20 of these reporting difficulty with domestic chores, especially housework; difficulties with washing hands, leisure activities, and self-care were also reported. Twenty-four patients (88.9%) reported an impact on emotional wellbeing due to their CHE; the most frequently reported feelings were frustration, fear of public reaction, and embarrassment/self-consciousness. An impact on work was reported by 21/25 patients (84%), with missing work the most frequent. Difficulties in washing hands, holding/gripping objects, writing, and typing were also mentioned, as were stigma/lack of understanding in the workplace and the need to alter job roles. Nineteen patients (70.4%) reported an impact on physical functioning, primarily holding/gripping or touching objects, 17 (63.0%) reported an impact on sleep, especially waking during the night, and 15 (55.6%) reported an impact on social functioning. Behaviour modifications or coping strategies used to manage or help reduce CHE signs/symptoms and associated impacts were reported by 88.9% of patients, with wearing gloves and use of emollients being the most frequent.

Conclusion:

This qualitative analysis of exit interviews with patients with moderate to severe CHE confirm the high impact of disease burden, with a range of signs/symptoms that negatively impact on patients' daily and work-related activities, physical and social functioning, quality of sleep, and emotional wellbeing.

Figure. Proportion of patients who reported experiencing impacts of CHE across the six health-related quality of life domains of activities of daily living, emotional wellbeing, work, physical functioning, sleep and social functioning



All percentages are of the full cohort of 27 patients, except for work (n=25, not applicable to two patients). Only impacts reported by ≥5 patients are included. Artificial intelligence software (ATLAS.ti.com) was utilised for qualitative analysis of verbatim interview transcripts, with coding using a thematic analysis approach to categorise impacts of CHE across six health-related quality of life domains: activities of daily living, emotional wellbeing, work, physical functioning, sleep, and social functioning.

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Abstract N°: 3172

Long-term ophthalmological follow-up of atopic dermatitis patients treated with dupilumab

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Introduction & Objectives:

Dupilumab-associated ocular surface disease (DAOSD) is a frequently reported side effect in dupilumab-treated patients with atopic dermatitis (AD). However, little is known about the long-term ocular safety of dupilumab. Therefore, this study investigated the effect of long-term dupilumab treatment on the frequency and severity of DAOSD and on conjunctival goblet cells (GCs).

Materials & Methods:

This prospective, single-center study included moderate-to-severe AD patients treated with dupilumab between February 2020 and April 2024. At the start of dupilumab (baseline visit), after 28 weeks, and after at least two years (last follow-up visit) of dupilumab treatment, patients were examined by a dermatologist and ophthalmologist. The ophthalmologic examination was based on the Utrecht Ophthalmic Inflammatory and Allergic disease (UTOPIA) score, which assesses the severity of the ocular inflammation. DAOSD was defined as a ≥ 3-point increase in UTOPIA score from baseline. Lastly, conjunctival impression cytology was used to study the quantity and function (i.e. percentage of CK-19-CD45-MUC5AC+ cells) of conjunctival GCs.

Results:

Twenty-one dupilumab-treated AD patients were included, with a median follow-up period of 2.92 (IQR 2.5-3.46) years. Ocular surface disease (OSD) was present in 19/21 (90.5%) patients at baseline. At the last follow-up visit, OSD was present in all patients, categorized as mild, moderate, and severe in 13/21 (61.9%), 7/21 (33.3%), and 1/21 (4.8%) patients, respectively. Median UTOPIA scores at baseline (3, IQR 2-4), week 28 (3, IQR 2-4), and the last follow-up (4, IQR 2-6) slightly increased, with no significant differences between the visits. A total of 7/21 (33.3%) patients developed DAOSD during dupilumab treatment (median 2.5 [0-33.3] months), of which 3/21 (14.3%) patients had DAOSD at the last follow-up visit. Any ophthalmic medication was used by 9/21 (42.9%) patients at the last follow-up, and anti-inflammatory treatment (e.g. tacrolimus skin ointment or steroidal eye drops) was used by 6/21 (28.6%) patients. The median number of conjunctival GCs significantly decreased at the last follow-up (66.99 [IQR 28.84-228.36]) compared to both baseline (505.17 [IQR 202.25-686.20], $p<0.001$) and week 28 (355.14 [IQR 110.73-825.71], $p<0.001$). No significant change was observed between baseline (505.17 [IQR 202.25-686.20]) and week 28 (355.14 [IQR 110.73-825.71], $p=0.520$).

Conclusion:

This study shows that (DA)OSD is common in AD patients undergoing long-term treatment with dupilumab. UTOPIA scores slightly increased over time, but no significant differences were reported. However, patients still developed DAOSD after week 28 of dupilumab treatment. In addition, a significant decrease in the number of conjunctival GCs was observed at long-term follow-up compared to both baseline and week 28. Further research on GC function will be conducted soon.

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Abstract N°: 3176

Thymus Size Correlates with the Development and Early Onset of Childhood Atopic Dermatitis

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Introduction & Objectives:

Atopic dermatitis (AD) is one of the most common inflammatory skin diseases in early childhood. The immunopathogenesis of AD involves a complex interplay of skin barrier dysfunction and immune dysregulation, including a significant T cell-mediated immune response. The thymus is a key organ of T-cell receptor gene rearrangement and T-cell maturation in early life. Previous studies have proposed an association between thymus size and AD, as well as a lower incidence rate of AD among young children undergoing thymectomy. In this prospective birth cohort study comprising 300 children we examined whether the size of the thymus was associated with AD onset and severity during the first 2 years of life.

Materials & Methods:

The Barrier dysfunction in Atopic newBorns study (BABY) cohort is a Danish prospective birth cohort of 300 term newborns followed from birth until 2 years of age. Children were included on day 0-3 after birth and followed by clinical examinations at birth, at 2 months, and at 12 months of age. If any skin symptoms appeared during the first 2 years, the children participated in an extra study visit to confirm the diagnosis of AD and assess the severity using the Eczema Area and Severity Index (EASI). Trans-sternal ultrasound scans of the thymus were performed by a medical doctor at each study visit. The thymic index, a product of the largest sagittal area and the largest horizontal width of the gland, was calculated by a radiologist. The thymic index was dichotomized at a cutoff level of ≥90th percentile (defined as elevated index). At birth and at 2 months of age skin tape strips were collected from the dorsal side of the hand and analyzed for immune biomarkers. Hazard ratios (HR) with 95% confidence intervals [95% CI] were calculated using uni- and multivariate (adjusted for sex, weight, height,* filaggrin mutation status and parental atopic disease). Cox regression for the risk and early onset of AD.

Results:

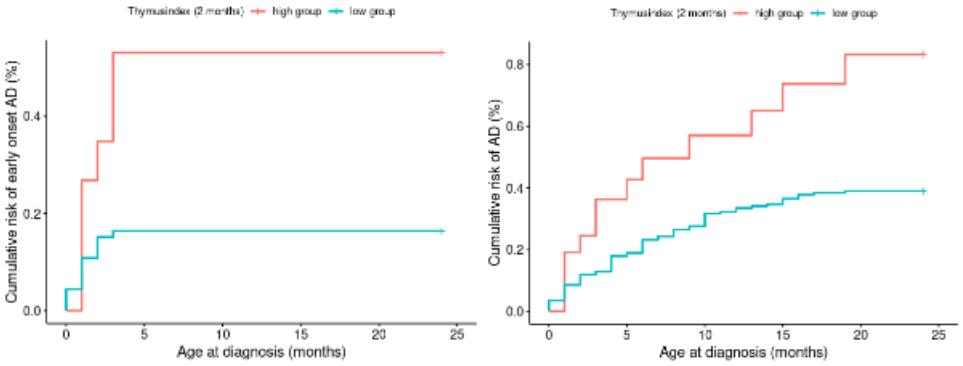
300 children born to term were enrolled, and 290 (97%) were eligible for analyses. The 2-year prevalence of AD was 34.6% (99 of 286). Elevated thymic index at 2-months-of-age increased the risk of AD within the first 2-years-of-life in crude and adjusted analyses (HR: 3.51; 95% CI: [1.73-7.12]; $p<0.001$), (aHR: 4.25; 95% CI: [1.96-9.18];

p<0.001). Furthermore, elevated thymic index at 2 months of age increased the risk of early onset of AD (HR: 2.95; 95% CI: [1.29-6.76]; *p*= 0.01), (aHR: 3.61; 95% CI: [1.44-9.08]; *p*= 0.01). A moderate correlation between thymic index and EASI was observed at 2-months-of-age (*r* = 0.39). We found no correlation between thymic index and thymus and activation-regulated chemokine (TARC(CCL17)) at either birth (*r* = - 0.14), at 2 months of age (*r* = 0.08) or other immune biomarkers.

Conclusion:

This prospective birth cohort study found that a larger thymus size at 2 months of age was significantly associated with an increased risk of AD as well as early onset of AD within the first 2 years of life. These novel findings suggest the potential role of the thymus' early cellular immune response in the pathogenesis of AD. Importantly, thymus size as a potential predictive factor for AD offers new insights into the pathophysiology of AD and early detection and intervention strategies in managing this common childhood disease.

Figure 1: The cumulative risk of AD and early onset of AD during the first 2 years of life using Thymic Index



at 2 months of age.

*High group: the 10% highest values of Thymic Index. Low group: the 90% lowest values of Thymic Index.

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Abstract N°: 3190

Baseline criteria from a real world non-interventional study with Upadacitinib for the Treatment of Systemic Atopic Dermatitis: An Analysis Based on Guideline Criteria

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Introduction & Objectives:

Atopic dermatitis (AD) patients treated with UPA in real-world clinical practice may vary from those selected for clinical trials. Currently, there is a lack of real-world data on how many patients treated with Upadacitinib (UPA) fulfill the checklist criteria for systemic therapy as defined by the German guideline. This analysis aims to bridge this gap by analyzing data from a German non-interventional trial to understand the patient profile and real-world use of UPA and compare it with to the checklist criteria.

Materials & Methods:

Up-TAINED is a prospective, multicenter, non-interventional study, enrolling 772 patients aged ≥12 years with moderate to severe AD treated with UPA 15 or 30 mg QD in real life. The study evaluates multiple outcomes such as Eczema Area and Severity Index (EASI), Dermatology Life Quality Index (DLQI), puritus WP-NRS and SCORAD sleep VAS. Additionally, the study collects data on treatment-emergent adverse events (TEAE) and AEs of special interest.

For this interim analysis, baseline visit data from 351 patients were descriptively analyzed and compared to the German Checklist for the indication of systemic therapy.

The German guidelines includes a checklist to assess the eligibility of AD patients for a systemic treatment based on the following criteria:

- A (Objective Disease Severity): EASI >15 or SCORAD >40 or BSA >10% or eczema on sensitive/visible areas
- B (Subjective Disease Burden): DLQI > 10 or pruritus >6 (VAS/ NRS) or significant sleep disturbance due to eczema/pruritus
- C (Lack of treatment Response): Unsatisfactory response to local therapy as per guidelines or lack of expected success from local therapy alone, or failure of an indicated systemic therapy.

Results:

The results show that patients treated with UPA met the German checklist criteria. The mean EASI was 22.6 ±14.2, fulfilling criterion A (objective disease severity). Furthermore, sensitive areas were affected in most patients, with 70% presenting with head and neck atopic dermatitis, 33.4% with feet eczema, and 21% with genital area affliction. 78.5% of the patients presented with an affected trunk.

The patients also met criterion B (subjective disease burden), with mean DLQI of 13.8 ±6.8, mean pruritus as measured by WP-NRS of 7.1 ±2.2, and mean sleep VAS (NRS) of 5.8 ±2.9.

Regarding criterion C (lack of treatment response), UPA was mainly used for patients who responded inadequately to local therapy, with 54.4% being first-line systemic patients. Only 21.2% of the UPA patients were already bio-experienced.

The evaluation of the special risk populations showed that 28% of the patients were above 65 years old, 36.2% were overweight, and 17.4% obese. A considerable number were either current (23.7%) or former smokers (18%).

Conclusion:

Real-world data suggest that the patient population aligns with the general AD patient population, including those with risk factors, indicating that also for those patients an additional value for UPA is seen by dermatologists.

The patient population meets the checklist criteria for the eligibility of systemic therapy, as criteria of all categories were applicable to the real-world patient population. This indicates that the checklist is well-suited for identifying potential candidates for UPA therapy.

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Abstract N°: 3195

AUF-1 and skin inflammation: atopic dermatitis and psoriasis

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Introduction & Objectives: Atopic dermatitis (AD) and psoriasis (Pso) are the most common chronic inflammatory skin diseases driven by distinct but sometimes overlapping immunological mechanisms. Both diseases are orchestrated by a wide range of cytokines, many of which are encoded by mRNAs that contain adenylate-uridylate (AU)-rich elements (ARE) in their 3′-untranslated region. These sequences are specifically recognized by a subgroup of RNA-binding proteins (RBPs) defined ARE binding proteins (AREBPs), including AUF-1, tristetraprolin (TTP), and Human antigen R (HuR), which are key effectors of post-transcriptional gene regulation in inflammatory responses. Alterations in RBPs expression and function are strongly associated with the onset and progression of inflammatory response; in this regard, AUF-1-deficient mice display chronic pruritic eczematous skin dermatitis that shares several clinical and histological features of human atopic dermatitis (AD).

In this pilot study we have explored the expression of AUF-1 in skin biopsies of AD, compared to samples from patients with psoriasis and healthy subjects. We then investigated *in vitro,* using HaCaT cell line the effect of AD- and psoriasis-related cytokine stimulation on the expression of AUF-1, TTP, and HuR.

Materials & Methods: AUF-1 mRNA expression was evaluated in lesional and non-lesional skin of AD and psoriasis patients (n=5, respectively) and control donors (n=5). Protein levels of AUF-1, HUR, TTP, and AUF-1-regulated genes were evaluated by Western blot, ELISA, and RT-PCR in HaCat cells stimulated with interleukin (IL)-13, IL-4, IL-17 or TNF-α for 24h. RBP levels were next evaluated in a public microarray database of skin biopsies of lesional (n=12) and non-lesional (n=12) AD patients and controls (n=10).

Results: AUF-1 mRNA expression in AD skin (both lesional and non-lesional) was not changed compared to control subjects. Conversely, AUF-1 mRNA significantly increased in lesional psoriatic skin compared to controls and lesional AD. AUF-1 mRNA levels were slightly decreased in the AD lesional skin biopsies *versus* control biopsies in the GSE32924 database. Western blotting in HaCaT cells showed that treatment with AD-related cytokines IL-4 and IL-13 significantly decreased the expression of AUF-1 protein, while stimulation with psoriasis-related TNF-α and IL-17 significantly increased AUF-1 protein respect to unstimulated cells. HuR and TTP expression were not affected by any of the cell treatments. AUF-1-regulated genes, IL-6 and IL-1β, were significantly upregulated in IL-4+IL-13 stimulated HaCaT.

Conclusion: This is the first investigation of AUF-1 in human chronic inflammatory skin diseases. Our results showed a different pattern of expression of AUF-1 in AD compared with psoriasis, suggesting a possible role of AUF-1 in chronic, immune-driven skin inflammation.

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Abstract N°: 3246

Real-world observational study of Abrocitinib in adults with moderate-to-severe atopic dermatitis after switching from dupilumab

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Introduction & Objectives:

A proportion of patients with moderate-to-severe atopic dermatitis (AD) don't experience an adequate response to dupilumab. Abrocitinib efficacy by prior dupilumab non-response status in patients with moderate-to-severe AD has been studied in a clinical trial. Further evaluation of this novel treatment option in real-world scenarios is needed. Accordingly, we we conducted a prospective study to explore the efficacy and safety of the abrocitinib in AD patients who experienced no or limited response to dupilumab in the real-world settings.

Materials & Methods:

The eligible patients had a documented history of inadequate response to dupilumab therapy for 16 weeks to control AD. After excluding all the contraindications of JAK1 inhibitor and obtaining complete informed consent, all the patients switched the therapy from dupilumab to JAK1 inhibitor. We then conducted the follow-up at the start of JAK1 inhibitor therapy (week 0).

All patients were followed up and assessed at week 0, 2, 4, 8 and 12. The severity scores were obtained by using a standardized data collection application, including Scoring Atopic Dermatitis Index (SCORAD), Eczema Area and Severity Index (EASI) score, investigator global assessment (IGA) score, Peak Pruritus Numerical Rating Scale (PP-NRS) score, Dermatology Life Quality Index (DLQI) score, and Atopic Dermatitis Control Tool (ADCT) score at baseline and at each follow-up visit. Meanwhile, we monitored the two laboratory indicators at week 4 and 12 during the therapy of abrocitinib.

Results:

Five patients (29.41%) achieved EASI-75, and three (18.75%) achieved SCORAD-75 at week 12. Two patients (11.76%) experienced a relapse due to irregular medication usage. Patient-reported scales were all decreased to varying degrees. Seven patients (43.70%) reported the adverse events (AEs), with acne (25.00%) being the most common. No serious AEs were observed.

Conclusion:

AD patients who failed to reach the treatment goal with dupilumab in our study were able to gain clinical benefits with abrocitinib after 12 weeks, in terms of both skin clearance and itch relief. The safety profile of abrocitinib in these patients was consistent with previous studies, with no new safety signals observed at week 12. These results provide an effective alternative option for patients who do not respond well to dupilumab. **

|

Scale

Time

Scale Time

|**Primary outcomes**|**Secondary outcomes**| | - | :-: | :-: | ||SCORAD|EASI score|IGA score|PP-NRS score|DLQI score|ADCT score| |Baseline|56.20 ± 8.16*|19.16 ± 4.63ns|4 (IQR 4-4)*|8.5 (IQR 8-9) *|21.50 ± 4.66ns|20.25 ± 3.36ns| |Week 0|50.42 ± 6.59|16.63 ± 4.48|3 (IQR 3-3.75)|7 (IQR 7-8)|18.69 ± 4.08|18.38 ± 3.01| |Week 2|40.33 ± 7.94*|13.46 ± 4.01ns|3 (IQR 2-3)ns|3 (IQR 2-5.5)*|12.88 ± 5.20*|12.88 ± 2.42*| |Week 4|34.81 ± 7.31*|11.18 ± 3.40*|2 (IQR 2-3)*|3 (IQR 2-3.75)*|9.94 ± 3.89*|9.31 ± 2.52*| |Week 8|28.91 ± 7.56*|9.02 ± 3.31*|2 (IQR 1-2.75)*|2 (IQR 1-3)*|6.44 ± 3.61*|6.81 ± 1.91*| |Week 12|23.54 ± 11.12*|7.14 ± 3.97*|1 (IQR 1-2)*|1 (IQR 1-2)*|3.56 ± 2.80*|4.81 ± 2.23*| Table 1. Six scale measurements of 16 patients during the follow-up.
The score at each follow-up visit was compared to that obtained at week 0. (ns: no significance, *P <0.05);

AD: atopic dermatitis; SCORAD: Scoring Atopic Dermatitis Index; EASI: Eczema Area and Severity Index; IGA: Investigator Global Assessment; PP-NRS: Peak Pruritus Numerical Rating Scale; DLQI: Dermatology Life Quality Index; ADCT: Atopic Dermatitis Control Tool; IQR: interquartile range

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Abstract N°: 3269

Transcriptomics- and Genomics-Guided Drug Repurposing for the Treatment of Vesicular Hand Eczema

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Introduction & Objectives:

Vesicular hand eczema (VHE), a clinical subtype of hand eczema (HE), showed limited responsiveness to alitretinoin, the only approved systemic treatment for severe chronic HE. This emphasizes the need for alternative treatment approaches. Therefore, our study aimed to identify drug repurposing opportunities for VHE using transcriptomics and genomics data.

Materials & Methods:

We constructed a gene network by combining 52 differentially expressed genes (DEGs) from a VHE transcriptomics study with three quantitative trait locus (QTL) genes associated with HE. Through network analysis, clustering, and functional enrichment analyses, we investigated the underlying biological mechanisms of this network. Next, we leveraged drug-gene interactions and retrieved pharmaco-transcriptomics data from the DrugBank database to identify drug repurposing opportunities for (V)HE. We developed a drug ranking system, primarily based on efficacy, safety, practical and pricing factors, to select the most promising drug repurposing candidates.

Results:

Our results revealed that the (V)HE network comprised of 78 genes (as shown in Figure 1) that yielded several biological pathways underlying the disease. The drug-gene interaction search together with pharmaco-transcriptomics lookups revealed 123 unique drug repurposing opportunities (Figure 2). Based on our drug ranking system, our study identified the most promising drug repurposing opportunities (e.g. vitamin D analogues, retinoids, and immunomodulating drugs) that might be effective in treating (V)HE.

Conclusion:

Our (V)HE network, based on transcriptomic VHE and genomic HE data, provided potential drug repurposing opportunities for the treatment of (V)HE through drug-gene interactions.

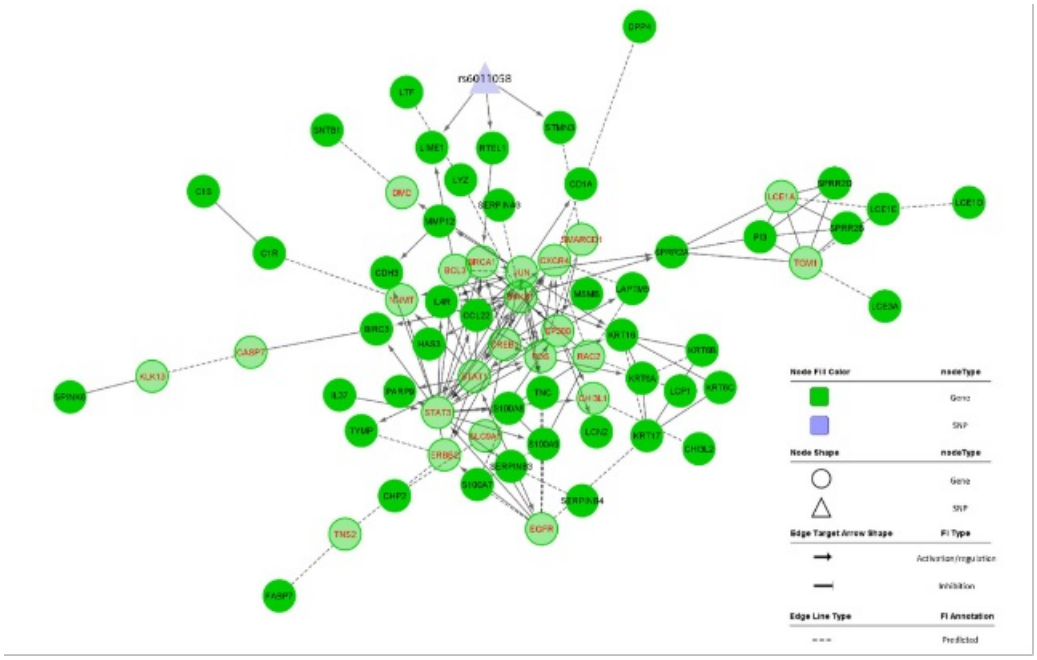
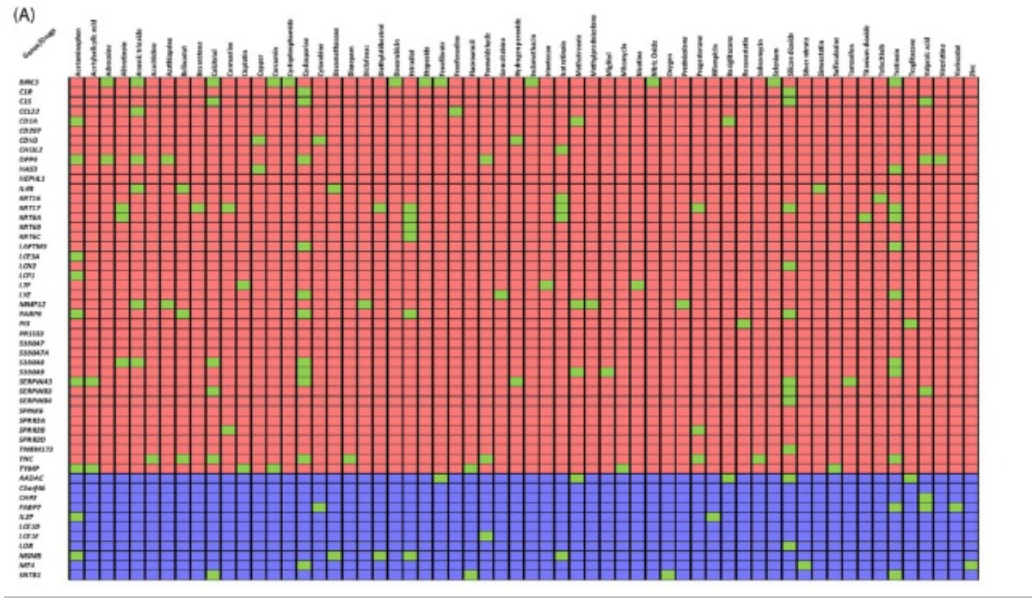


Figure 1. Combined network of the 52 vesicular hand eczema differentially expressed genes, 3 quantitative trait locus genes from the hand eczema locus (presented with black labels), and 23 linker genes (presented with partly transparent fill color and red labels). Interactions with no specified direction e.g., complex formation, are shown as simple lines without an arrow at the edge.



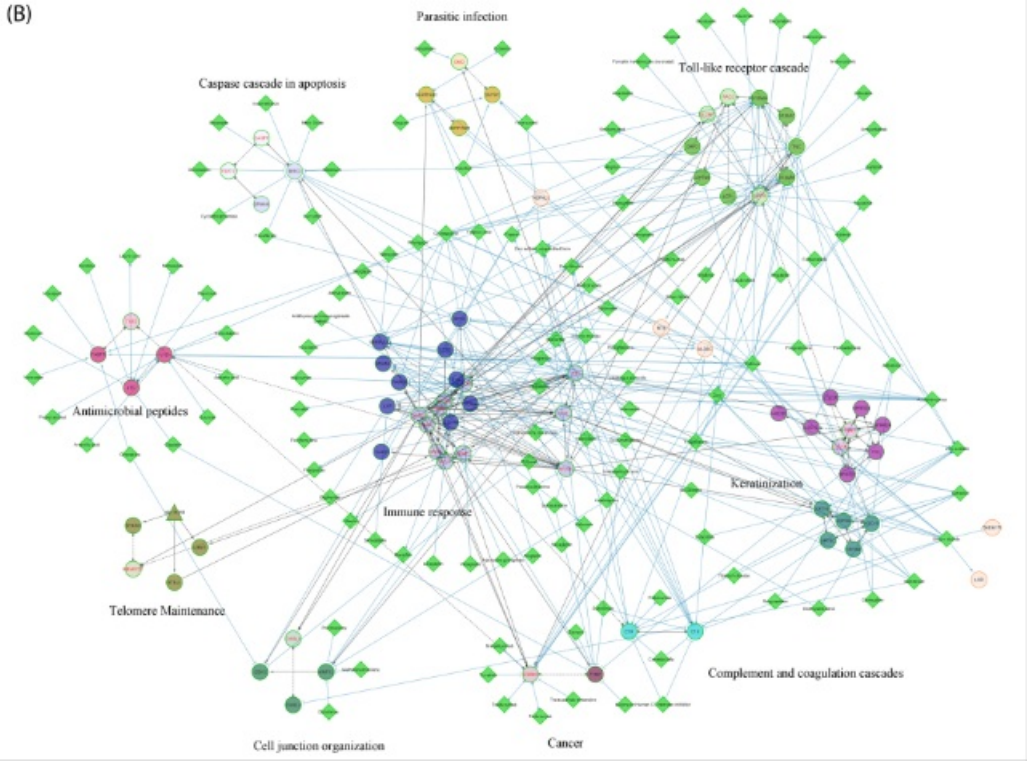


Figure 2. Drug–gene interactions of (vesicular) hand eczema ((V)HE) genes based on the DrugBank database. (A) Pharmaco-transcriptomic lookups of 52 VHE DEGs (red and blue cells indicate up/downregulated genes; green cells indicate gene expression changes of the drugs opposing those of VHE. (B) The combined (V)HE gene network classified in the different functional modules with general functions annotated. The interacting drugs (physical interaction or gene expression regulations) targeting these functional modules with a general function are shown as green diamonds.

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Abstract N°: 3285

Effect of Tralokinumab on Skin Barrier Function in Atopic Dermatitis

Clara Ureña-Paniego[1], Raquel Sanabria de la Torre[2], Trinidad Montero-Vilchez[1], Salvador Arias-Santiago[1]

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Introduction & Objectives:

Atopic dermatitis (AD) is a chronic inflammatory skin disease characterized by eczema, itching, dryness which complicates the impartial assessment of its severity. Skin barrier dysfunction is considered a primary step in the pathogenesis of the disease and can be objectively evaluated. There is scarce information about the impact of tralokinumab on skin barrier.** The aim of this study is to assess the impact of tralokinumab on skin barrier function up to 24 weeks in patients with AD.

Materials & Methods:

A prospective observational study involving patients treated at the Atopy Unit of Virgen de las Nieves University Hospital (Granada) who underwent treatment with tralokinumab 300mg bi-weekly for 24 weeks. Clinical severity scores of AD such as Eczema Area and Severity Index (EASI), SCORing Atopic Dermatitis (SCORAD), Investigator's Global Assessment (IGA), and Numerical Rating Scale for Pruritus (NRS) were collected. Skin barrier function was measured considering transepidermal water loss (TEWL; measured in $g \cdot h^{-1} \cdot m^{-2}$), erythema (measured in arbitrary units, AU), stratum corneum hydration (SCH; measured in AU), and skin temperature (measured in °C). All measurements were assessed at baseline, 4, 16, and 24 weeks after the start of treatment. Sociodemographic variables were collected.

Results:

Six patients, all female, with an average age of 32.67 years were included in the study. After 24 weeks of treatment, EASI (from 27.1 to 3; - 24.1) and SCORAD (from 49.8 to 31.4; -18.4) significantly improved. Additionally, NRS showed a reduction in itch severity, dropping by 2.3 points. Improvements in skin barrier function were evidenced by a decrease of erythema (from 344 to 224; -41 AU), TEWL (from 26.9 to 6.5; 20.5 $g/h/m^2$), skin temperature (from 32.6 to 31.4; -1.8°C) and an increase of SCH (from 18.4 to 42.6; +24.2 AU).

Conclusion:

Tralokinumab demonstrates a promising effect on improving skin barrier function in patients with AD, showcasing significant improvements across various parameters such as TEWL, erythema, SCH, and skin temperature after 24 weeks of treatment.

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Abstract N°: 3301

Restoration of the skin barrier and antimicrobial defense in atopic dermatitis with a non-steroidal emollient cream containing Rhamnosoft, ceramides and isoleucine: clinical and preclinical evidence

Alfonso Fernandez Botello[1], Anthony Brown[1], Adrià Ribes[1], Antonio R. Fernández de Henestrosa[1], Javier Bustos[1], Georgina Logusso*[1], Monica Foyaca[1]

[1]ISDIN

Restoration of the skin barrier and antimicrobial defense in atopic dermatitis with a non-steroidal emollient cream containing Rhamnosoft, ceramides and isoleucine: clinical and preclinical evidence

Alfonso Fernandez, Anthony Brown, Adrià Ribes, Antonio R. Fernández de Henestrosa, Javier Bustos, Georgina Logusso, Mónica Foyaca

Introduction & Objectives:

The hallmarks of atopic dermatitis (AD) are intense pruritus and chronic and relapsing skin inflammation. In AD skin lesions, altered skin barrier and immune dysregulation are also thought to result in reduced synthesis of antimicrobial peptides (AMPs) that leads to increased susceptibility to bacterial infection, particularly by *Staphylococcus aureus*. Patients with AD also exhibit marked reductions in the amount and composition of ceramides in the stratum corneum. We proposed that treating skin with an emollient-rich cream containing ceramides and other substances that have been shown to promote AMP expression (L-isoleucine) and prevent S. aureus colonization (Rhamnosoft™) should help improve the skin barrier and normalize AMP production in AD lesions.

Materials & Methods:

Barrier restoring properties of the cream were determined in 24 subjects with dry skin by instrumental assessment of skin hydration and TEWL. Subjective evaluation of irritation, pruritus and clinical signs of skin damage and inflammation were evaluated by questionnaire in 31 subjects with atopic skin following 1 month of use.

Capacity to restore AMP expression was evaluated in an in vitro model of AD. Briefly, 10 day-old reconstructed human epidermis (RHE) was topically treated with the cream (5 mg/cm2) for 24 hours and then stimulated with a Th2–type cytokine mix (IL-4 + IL-13 + IL-22 + TNF-α; 3 ng/ml each) for 48 hours to induce an AD-like phenotype. After 48 hours, hBD-2 expression was determined by immunostaining.

Capacity to inhibit *S. aureus* colonization was evaluated by incubating a bacterial suspension (1-5 x 105 cfu/mL) with a 5% solution of the product for 12 and 24 hours.

Results:

Skin hydration levels were significantly increased up to 24 hours after application. TEWL was significantly increased for up to 2 hours after application. Subjective assessment of efficacy in atopic skin was high (Table 1).

Table 1. Subjective assessment of clinical signs and symptoms of AD

Question	% positive response (n=31)
The product calms my skin	93.5
After applying the product, redness on my skin has improved	93.5
After applying the product, itching sensation has decreased	100
The product relieves itching immediately after application	100
After applying the product, the need to scratch has decreased	100
After applying the product, my skin is less flaky	93.5
After treatment with the product, my atopic / dry / hypersensitive / allergic skin has improved	96.8

Compared to unstimulated RHE, levels of hBD-2 in RHE stimulated by the cytokine mix were reduced by 73% ($p<0.05$), mirroring the reduction in hBD expression seen in AD and validating the model. Treatment with the cream, however, increased hBD-2 expression by more than 3.8-times ($p<0.01$).

Compared to untreated bacterial suspensions, *S. aureus* counts were reduced by 99% after 12 hours of contact with the product and by 95% after 24 hours.

Conclusion:

These data suggest that a cream designed to restore skin's barrier function and promote AMP expression can help prevent *S. aureus* colonization and alleviate the clinical signs and symptoms of AD.

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Abstract N°: 3310

68-week safety results of amlitelimab (an anti-OX40 Ligand antibody) in patients with moderate-to-severe atopic dermatitis from STREAM-AD Phase 2b dose-ranging and withdrawal study

Stephan Weidinger*[1], Linda Stein Gold[2], Yoko Kataoka[3], Yanzhen Wu[4], John T O'malley[5], Charlotte Bernigaud[6], Sam Adelman[5]

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Introduction & Objectives: Atopic dermatitis (AD) is a chronic inflammatory disorder for which many individuals do not achieve adequate disease control with current treatment. Amlitelimab is a fully human, non-depleting, anti-OX40 Ligand (OX40L) antibody that modulates the immune system via OX40L inhibition. The safety results over 68 weeks from the Phase 2b STREAM-AD trial in participants with moderate-to-severe AD are presented here.

Materials & Methods: STREAM-AD (NCT05131477) is a 2-part, Phase 2b, randomised, double-blind, placebo-controlled trial of amlitelimab in adults with moderate-to-severe AD. Part 1 involved a 24-week treatment period (last dose at Week 20) with 388 participants treated with subcutaneous amlitelimab or placebo every 4 weeks (Q4W; 250mg with 500mg loading dose [250mg +LD], n=77; 250mg, n=78; 125mg, n=77; 62.5mg, n=78; placebo, n=78). Among the participants who completed Part 1, 190 clinical responders (defined as achieving Eczema Area and Severity Index-75 and/or Investigator Global Assessment 0/1 at Week 24) entered Part 2 and were re-randomised 3:1 to placebo (withdrawal group) or to continue the pre-Week 24 Q4W amlitelimab dose. Of those re-randomised, 186 participants were treated in Part 2 (250mg +LD, n=34 [withdrawal]/n=13 [continuing]; 250mg, n=28/n=11; 125mg, n=32/n=12; 62.5mg, n=34/n=7; placebo responders continuing placebo, n=15). In Part 2, participants received their last dose (of amlitelimab or placebo) at Week 48, with final efficacy analysis at Week 52, and an additional 16-week safety follow-up to Week 68 if they did not enrol in the long-term extension.

Results: Week 0–68 safety data are presented from the 186 participants who completed Part 1, were re-randomised and received ≥1 dose of amlitelimab or placebo in Part 2. No dose-dependent relationship was observed in the total incidence of treatment-emergent adverse events (TEAEs), serious adverse events (SAEs), or adverse events of special interest; therefore, pooled data are presented (continued amlitelimab, n=43; withdrawn, n=128; continued placebo, n=15). From Week 0–68, incidence of TEAEs was 83.7%, 92.2%, and 93.3% for continuing amlitelimab, withdrawn, and continuing placebo, respectively. The majority of TEAEs were mild or moderate in severity. From Week 0–68, incidence of SAEs was 4.7%, 2.3%, and 0 for continuing amlitelimab, withdrawn, and continuing placebo, respectively; with 1 (0.8%) considered related to treatment in the withdrawn group by the investigator. One participant in the continued-125mg arm had 4 TEAEs leading to treatment discontinuation (all related to laboratory abnormalities). These were considered not related to amlitelimab/placebo by the investigator. No other TEAEs leading to treatment discontinuation were reported. There were no deaths in the study.

Conclusions: In the STREAM-AD Phase 2b trial, amlitelimab was well tolerated and demonstrated an acceptable safety profile in the Part 2 (responder) population up to 68 weeks.

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Abstract N°: 3320

Amlitelimab (an anti-OX40 Ligand antibody) normalises the atopic dermatitis gene signature in the skin of patients with moderate-to-severe atopic dermatitis

Shawn Kwatra[1], Margitta Worm[2], Stephan Weidinger[3], Franck Auge[4], Shaima Belhechmi[3], Annick Peleraux[5], John T O'malley[6], Charlotte Bernigaud[4], Natalie Rynkiewicz[6]

[1]University of Maryland, Baltimore, Baltimore, United States,[2]Medical center Berlin-Hellersdorf, Berlin, Germany, [3]Universitätsklinikum Schleswig-Holstein, Campus Kiel, Kiel, Germany, [4]Sanofi, Paris, France, [5]Sanofi, Montpellier, France, [6]Cambridge, Cambridge, United Kingdom

Introduction & Objectives: Amlitelimab is a fully human, nondepleting, anti-OX40 Ligand (OX40L) monoclonal antibody that binds OX40L on antigen-presenting cells, preventing interaction with OX40 on activated T cells. In adult patients with moderate-to-severe atopic dermatitis (AD), amlitelimab demonstrated clinically meaningful improvements in AD lesions and pruritus compared to placebo-treated patients, in addition to a reduction in several Th2 and Th17/Th22 inflammatory biomarkers in the serum over 24 weeks, in Part 1 of the STREAM-AD Phase 2b study. Here, the effect of amlitelimab on differentially expressed genes (DEGs) included within the Meta-Analysis Derived Atopic Dermatitis (MADAD)1 transcriptome signature was assessed in lesional skin from Week 16 of STREAM-AD.

Materials & Methods: STREAM-AD (NCT05131477) is a 2-part, 52-week, randomised, double-blind, placebo-controlled, dose-ranging, Phase 2b trial (24-week Part 1; 28-week maintenance/withdrawal Part 2). In Part 1, adults with moderate-to-severe AD were randomised 1:1:1:1:1 to receive subcutaneous amlitelimab (250 mg with 500 mg loading dose [LD; n=77], 250 mg [n=78], 125 mg [n=77], or 62.5 mg [n=79]), or placebo (n=79) every 4 weeks over 24 weeks. MADAD is a set of 595 DEGs (387 upregulated and 208 downregulated genes) identified in AD lesional skin.1 Gene expression levels in paired lesional and nonlesional skin biopsies collected at baseline and lesional skin biopsies collected at Week 16 were assessed by bulk RNA sequencing. Changes in lesional skin from baseline to Week 16 in DEGs up- and downregulated in AD were assessed in the combined amlitelimab groups (n=27) and in the placebo group (n=7) by evaluating genes included within the MADAD skin molecular signature.

Results: In the biopsies analysed, 478 genes of the MADAD transcriptome signature were found to be differentially expressed in lesional skin biopsies at baseline. At Week 16, the genes upregulated in AD were reduced in the lesional skin biopsies of patients treated with amlitelimab compared to baseline. Conversely, there was an increase in genes downregulated in AD at Week 16 with amlitelimab treatment compared to baseline in lesional skin. The DEGs identified in AD lesional skin represent key pathways associated with AD, including epidermal differentiation, T-cell signalling, barrier disruption, and antimicrobial genes.1 Limited conclusions could be drawn in the placebo group because of the small sample size.

Conclusions: Following 16 weeks of treatment with amlitelimab, a normalisation in the AD gene signature was observed in lesional skin compared to baseline, supporting the clinical improvements seen in AD lesions.

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Abstract N°: 3322

Effect of Tralokinumab on Skin Barrier Function in Atopic Dermatitis

Clara-Amanda Ureña-Paniego[1], Raquel Sanabria de la Torre[2, 3], Trinidad Montero-Vilchez[1, 2], Salvador Arias-Santiago[1, 2]

[1]Virgen de las Nieves University Hospital, Dermatology, Granada, Spain,[2]ibs.GRANADA Instituto de Investigación Biosanitaria, Granada, Spain, [3]University of Granada (UGR), Department of Biochemistry, Molecular Biology III and Immunology, Granada, Spain

Introduction & Objectives:

Atopic dermatitis (AD) is a chronic inflammatory skin disease characterized by eczema, itching and dryness which complicates the impartial assessment of its severity. Skin barrier dysfunction is considered a primary step in the pathogenesis of the disease and can be objectively evaluated. Aim: To assess the impact of tralokinumab on skin barrier function up to 24 weeks in patients with AD.

Materials & Methods:

Prospective observational study involving patients with AD treated at the Atopy Unit of Virgen de las Nieves University Hospital (Granada) who started treatment with tralokinumab 300mg bi-weekly for 24 weeks. Clinical severity scores of AD such as Eczema Area and Severity Index (EASI), SCORing Atopic Dermatitis (SCORAD), Investigator's Global Assessment (IGA), and Numerical Rating Scale for Pruritus (NRS) were collected. Skin barrier function was measured considering transepidermal water loss (TEWL; measured in $g \cdot h^{-1} \cdot m^{-2}$), erythema (measured in arbitrary units, AU), stratum corneum hydration (SCH; measured in AU), and skin temperature (measured in °C). All measurements were assessed at baseline, 4, 16, and 24 weeks after the start of treatment. Sociodemographic variables were collected.

Results:

Six patients, all female, with an average age of 32.67 years were included in the study. After 24 weeks of treatment, there was a significant reduction in TEWL (6.5 $g \cdot h^{-1} \cdot m^{-2}$), erythema (120 AU) and skin temperature (1.2°C). In contrast, SCH increased by 24.2 AU. These results were paralleled by an improvement in disease severity with an improvement in EASI (-18.1); SCORAD (-18.4), IGA (-2.17) and NRS (-2.3) scores.

Conclusion:

Tralokinumab demonstrates a promising effect on improving skin barrier function in patients with AD, showcasing significant improvements across various parameters such as TEWL, erythema, SCH, and skin temperature after 24 weeks of treatment.

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Abstract N°: 3326

Herpes Zoster and Herpes Simplex Infections in Patients From Japan and Korea With Moderate-to-Severe Atopic Dermatitis Following Treatment With Abrocitinib in the JADE Clinical Program

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Introduction & Objectives: Patients with atopic dermatitis (AD) are susceptible to viral skin infections including eczema herpeticum, a disseminated herpes simplex (HS) virus infection. Janus kinase (JAK) inhibitors may increase the risk of herpes zoster (HZ) in patients with AD. Findings from randomised clinical trials have shown that treatment with abrocitinib, an oral, once-daily, JAK 1-selective inhibitor may be associated with a dose-dependent increase in the incidence of HZ and HS infections. Here, we aimed to assess events of HZ and HS infections in a subpopulation of patients from Japan and Korea from the JADE global clinical trial program who received abrocitinib for moderate-to-severe AD.

Materials & Methods: This analysis included patients aged ≥12 years from Japan, Korea, and other Asian regions who received oral abrocitinib 200 mg or 100 mg once daily (QD) as monotherapy or in combination with topical therapy in the phase 2b trial (NCT02780167), phase 3 trials JADE MONO-1 (NCT03349060), MONO-2 (NCT03575871), COMPARE (NCT03720470), REGIMEN (NCT03627767), TEEN (NCT03796676), and the long-term extension JADE EXTEND (NCT03422822). The probability of HZ and HS events, proportions of patients with HZ and HS infections, and hazard ratios (HRs) of the risk factors of HZ and HS were evaluated. Mean absolute lymphocyte counts (ALCs) were also evaluated.

Results: Of a total of 3128 patients in the overall global clinical trial population, 452 were enrolled from Asia (abrocitinib 100 mg, n=143; abrocitinib 200 mg, n=309); of these, 135 were from Japan (100 mg, n=62; 200 mg, n=73), 63 were from Korea (100 mg, n=34; 200 mg, n=29), and 254 (100 mg, n=47; 200 mg, n=207) were from other Asian regions. The probability of not having HZ or HS events was similar in patients from Japan and Korea, the overall Asian region, and the overall global clinical trial population treated with abrocitinib. Greater proportions of patients from Japan and Korea than those from the overall Asian region and the overall global clinical trial population had mild HZ (71.4% vs 55.6% and 31.9%) and mild HS (94.7% vs 87.5% and 71.8%). The risk of HZ was numerically greater in Asian patients who received abrocitinib 200 mg versus 100 mg (HR, 1.30 [95% CI, 0.34, 4.95]) (**Table**). The risk of HZ and HS was numerically higher in Asian patients with severe AD than moderate AD (HZ: HR, 2.51 [95% CI, 0.89, 7.07]; HS: HR, 1.19 [0.57, 2.49]) and in patients from Japan than those from Korea (HZ: HR, 3.77 [0.41, 34.72]; HS: HR, 1.44 [0.48, 4.29]) or other regions in Asia (HZ: HR, 2.23 [0.38, 13.29]; HS: HR, 1.35 [0.45, 4.04]) (**Table**). The risk of HS was numerically higher in Asian patients with body mass index (BMI) of <25 kg/m2 (HR for ≥25 vs <25 kg/m2: 0.38 [95% CI, 0.15, 0.95]) and baseline estimated glomerular filtration rate (eGFR) of ≥90 mL/min (HR for ≥90 vs <90 mL/min: 0.45 [0.16, 1.21]) (**Table**). Mean ALCs were similar between patients with or without HZ or HS infections.

Conclusion: The probability of not having HZ or HS events was similar in patients from Korea/Japan, the overall Asian population, and the global clinical trial populations. In the Asian population, the risk of HZ was numerically higher in patients who received a higher dose of abrocitinib, and the risk of both HZ and HS was numerically

higher in patients who had severe AD, resided in Japan, had a baseline BMI <25 kg/m2, or had a baseline eGFR ≥90 mL/min; most HZ and HS infections were mild. Mean ALCs were similar among patients with or without HZ or HS infections.**

Table. Hazard Ratios (95% CI) of Fixed Effects for Identifying Risk Factors Associated With Time to All Treatment-Emergent Herpes Zoster and Herpes Simplex Infections in Patients From Asia With Moderate-to-Severe AD

	Hazard Ratio (95% CI)	
	Herpes Zoster	**Herpes Simplex**
Study treatment		
Abrocitinib 200 mg QD vs abrocitinib 100 mg QD	1.30 (0.34, 4.95)	0.63 (0.28, 1.42)
Baseline age, y		
≥18 vs <18	1.63 (0.20, 13.34)	0.66 (0.17, 2.54)
Baseline disease severity		
Severe vs moderate	2.51 (0.89, 7.07)	1.19 (0.57, 2.49)
Sex		
Female vs male	1.08 (0.39, 2.96)	0.83 (0.38, 1.80)
BMI, kg/m²		
≥25 vs <25	0.93 (0.33, 2.63)	0.38 (0.15, 0.95)
Asian Region		
Japan vs Korea	3.77 (0.41, 34.72)	1.44 (0.48, 4.29)
Japan vs other Asian regions[a]	2.23 (0.38, 13.29)	1.35 (0.45, 4.04)
Korea vs other Asian regions[a]	0.59 (0.04, 7.92)	0.94 (0.25, 3.53)
Prior systemic therapy		
No vs yes	0.60 (0.22, 1.60)	1.23 (0.57, 2.66)
Baseline eGFR, mL/min		
<90 vs ≥90	0.54 (0.15, 1.97)	0.45 (0.16, 1.21)
Confirmed ALC <1.0 (10^3/mm³) prior to event	0.95 (0.12, 7.52)	1.09 (0.25, 4.77)

AD, atopic dermatitis; ALC, absolute lymphocyte count; BMI, body mass index; eGFR, estimated glomerular filtration rate; HZ, herpes zoster; HS, herpes simplex, QD, once daily; y, years

Hazard ratios and the associated confidence intervals were estimated from a Cox regression model including fixed effects of treatment, study (parent), categorical variables of baseline age, baseline disease severity, sex, BMI, Asian region, prior systemic therapy, baseline eGFR, and time-dependent variable of confirmed absolute lymphocyte count prior to the event (≥1.0 or <1.0 [10^3/mm³]).

[a]Other Asian regions included China (n=188), Israel (n=8), and Taiwan (n=58).

EADV CONGRESS
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Abstract N°: 3332

Superresponders to tralokinumab in moderate-to-severe atopic dermatitis: a real-world multicentre study

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Introduction & Objectives:

The anti-IL-13 monoclonal antibody Tralokinumab is indicated for the treatment of moderate to severe atopic dermatitis (AD). In clinical trials, reaching an EASI 75 is considered to be the response target at week 16. However, evidence suggests that a subgroup of "super-responders" (SRs) may achieve this level of improvement before week 16. The identification of these patients' characteristics could allow for the identification of patients who are likely to respond better, thereby optimising the therapeutic approach.

Materials & Methods:

An observational and retrospective multicentre study was conducted (three centres in the Community of Madrid), with a total of 46 patients diagnosed with AD who had received Tralokinumab in accordance with the technical data sheet for at least six months. The patients were defined as SR if they reached an EASI 75 at week 4 and/or an EASI 90 at week 8. The objective of this investigation was to quantify and characterise SR patients by evaluating the EASI of the patients prior to treatment and at weeks 4, 8, 16, 24 and 52.

Results:

Of the total number of patients, 30 (65%) were male. The median age was 43 years. Efficacy markers were observed in 32 patients at weeks 4 and 8. Sixteen patients (50%) met the criteria for SR. In this group, 75% were female, which was statistically significant. The mean pre-treatment EASI was 28.2, with no statistically significant differences observed between the SR and non-SR groups. The SR patients were significantly younger, with a mean age of 34 years, while the mean age of the non-SR group was 51 years. Comorbidities and previous systemic treatments were independent of response to tralokinumab, as they showed similar results between groups.

Conclusion:

There is currently a paucity of evidence regarding the actual clinical practice experience of tralokinumab in the first weeks of treatment. At this time, no predictive factors for a rapid response have been established. The findings of this study indicate that a subset of patients exhibit a positive and rapid response to tralokinumab, which is sustained over time. A young, female patient profile might predict a faster and more optimal response to the drug. However, further studies are needed to define the characteristics of this SR population. These patients could potentially profit from earlier spacing, which would have a positive clinical and economic impact.

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Abstract N°: 3342

Lebrikizumab demonstrated early improvement in both clinician and patient reported outcomes as measured by SCORAD in Japanese patients with moderate-to-severe atopic dermatitis

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Introduction & Objectives: Lebrikizumab (LEB) has demonstrated efficacy for the treatment of atopic dermatitis (AD) in phase 3 trials including the monotherapy studies ADvocate1 and ADvocate2, and ADhere and ADhere-J in combination with topical corticosteroids (TCS) [1-4]. Here we evaluate the impact of LEB combined with low- to mid-potency TCS on the SCORing Atopic Dermatitis (SCORAD) measure in Japanese patients with moderate-to-severe AD up to Week 16.

Materials & Methods: ADhere-J was a 68-week randomized, double-blind, placebo-controlled, phase 3 trial evaluating safety and efficacy of LEB in combination with TCS using a 16-week induction period and 52-week maintenance period. Eligible patients (N=286) were randomized 3:2:2 to receive 250 mg LEB by subcutaneous injection every 2 weeks (LEBQ2W+TCS; N=123; 500 mg loading dose at baseline and Week 2), every 4 weeks (LEBQ4W+TCS; N=81; 500 mg loading dose at baseline) or placebo (PBO+TCS; N=82).

SCORAD is a composite** score of clinician-reported (extent and intensity of disease) and patient-reported (subjective symptoms of pruritus and sleeplessness) outcomes [5]. The percentage change in SCORAD from baseline to Week 16 and proportion of patients achieving ≥ 75% improvement from baseline in SCORAD (SCORAD 75) were assessed. The percentage change from baseline to Week 16 was also assessed for the SCORAD domains of Itch and Sleeplessness. Patients who received rescue medication (high potency TCS or systemic treatments for AD), or discontinued treatment due to any reason had subsequent values set to missing through Week 16. Missing data were handled using mixed model repeated measures for continuous variables and non-responder imputation for categorical variables.

Results: Mean SCORAD at baseline was balanced across LEBQ2W+TCS (61.8, SD 13.6), LEBQ4W+TCS (65.8, SD 13.4) and PBO+TCS (63.2, SD 12.1) groups. Both LEB+TCS groups showed statistically significant improvement in percentage change from baseline in SCORAD compared with PBO+TCS from as early as Week 2 and at each timepoint through Week 16 ($p<.001$; Figure 1A). SCORAD 75 response rates were statistically significant at Week 16 for both LEBQ2W+TCS ($p<.001$) and LEBQ4W+TCS ($p=0.038$) compared with PBO+TCS (Figure 1B). Similar results were reported for the SCORAD domains of Itch (Figure 2A) and Sleeplessness (Figure 2B), with significant differences observed for both LEBQ2W+TCS and LEBQ4W+TCS by Week 4 compared with PBO+TCS.

Conclusion: Treatment with LEB in combination with TCS resulted in significant improvements in SCORAD compared with PBO in Japanese patients with moderate-to-severe AD as early as Week 2. Benefits were observed for Q2W dosing and the less frequent Q4W dosing.

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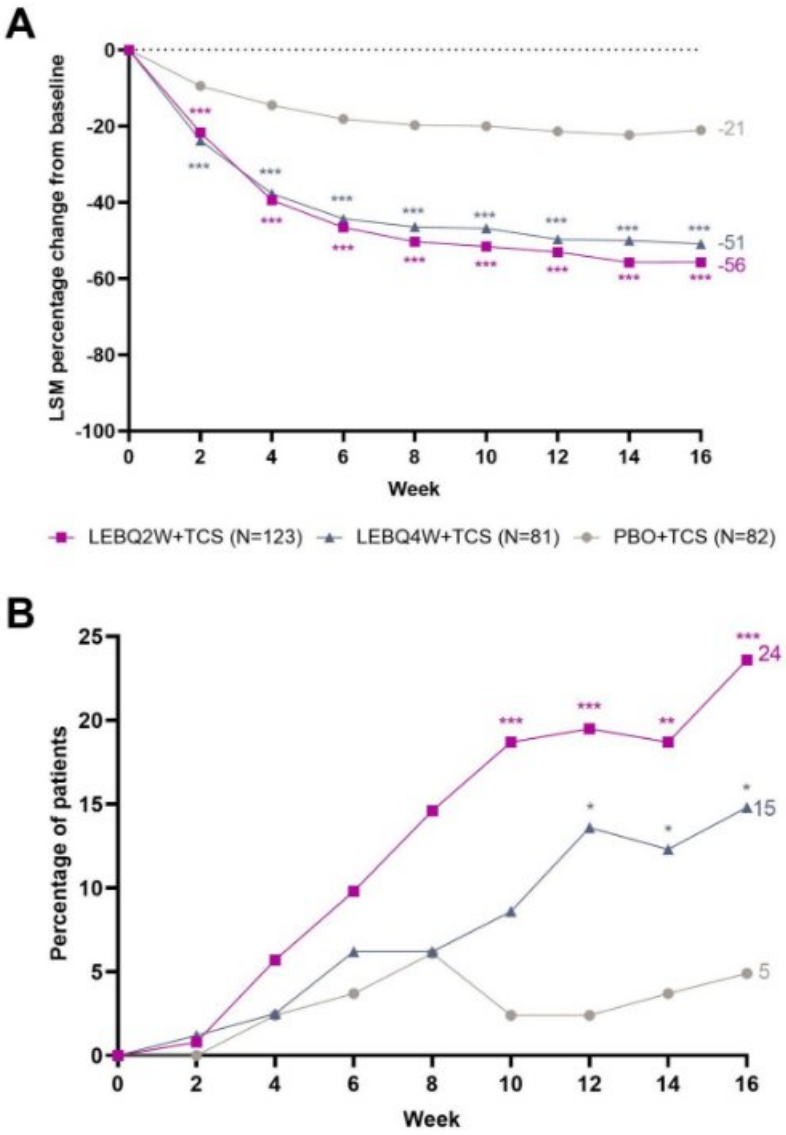

Figure 1: (A) LSM percentage change from baseline in SCORAD; (B) Proportion of patients achieving SCORAD 75 through 16 Weeks of treatment with LEBQ2W+TCS, LEBQ4W+TCS, and PBO+TCS.

LEB, lebrikizumab; LSM, least squares mean; PBO, placebo; Q2W, every two weeks; Q4W, every four weeks; SCORAD, SCORing Atopic Dermatitis; SCORAD 75, ≥ 75% improvement from baseline in SCORAD; TCS, topical corticosteroids.

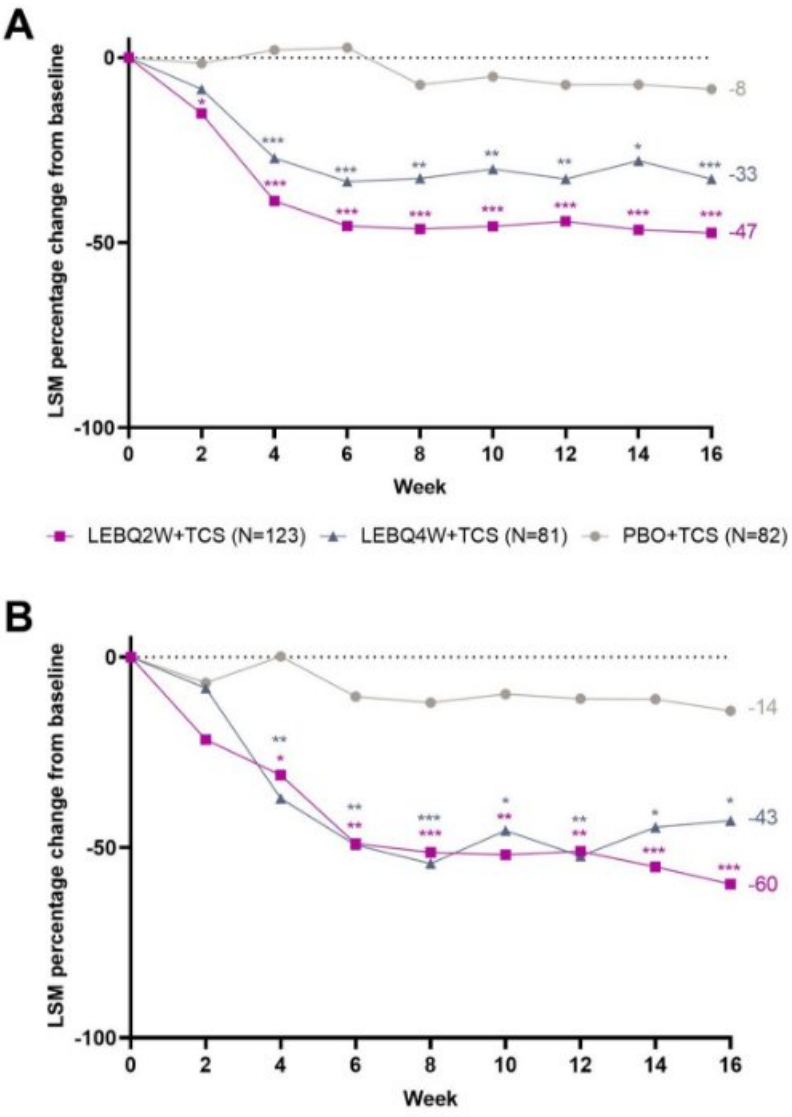

Figure 2: LSM percentage change from baseline in SCORAD domains of (A) Itch and (B) Sleep Loss through 16 Weeks of treatment with LEBQ2W+TCS, LEBQ4W+TCS, and PBO+TCS.

LEB, lebrikizumab; LSM, least squares mean; PBO, placebo; Q2W, every two weeks; Q4W, every four weeks; SCORAD, SCORing Atopic Dermatitis; TCS, topical corticosteroids.

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Abstract N°: 3363

Early Itch and Skin Pain Responses With Abrocitinib and Dupilumab in Patients With Moderate-to-Severe Atopic Dermatitis: A Post Hoc Analysis of the Phase 3 JADE COMPARE and JADE DARE Trials

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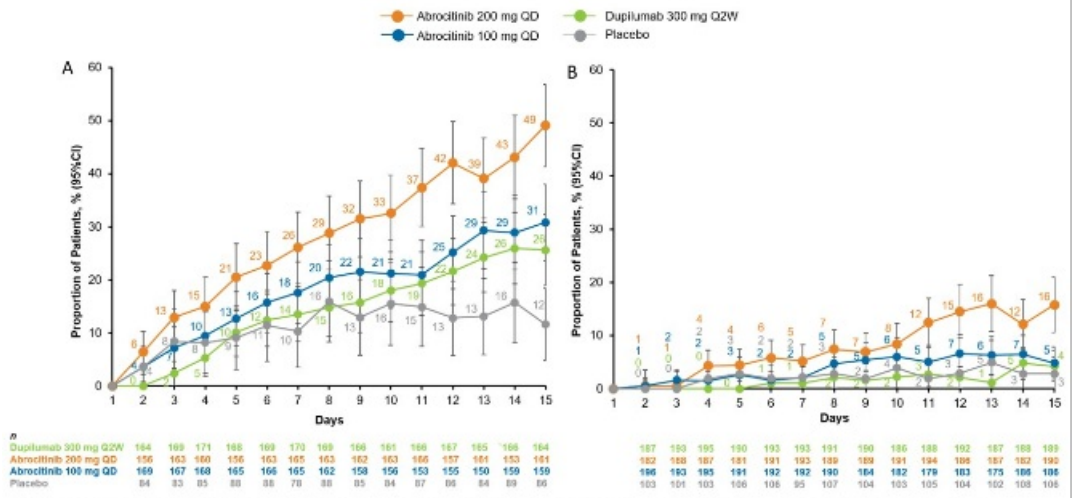
Introduction & Objectives: Itch and skin pain are common and bothersome symptoms in patients (pts) with atopic dermatitis (AD). Pts consider rapid itch relief and skin pain improvement to be critical factors when assessing AD treatment response. Abrocitinib, an oral, once-daily, Janus kinase 1–selective inhibitor, demonstrated clinically meaningful improvements in itch and skin pain in pts with moderate-to-severe AD in the JADE clinical program. Here, we assessed early itch and skin pain responses from Day 2 through Day 15 of treatment with abrocitinib versus dupilumab.

Materials & Methods: This post hoc analysis included adult pts who received oral abrocitinib (200 or 100 mg) once daily (QD), subcutaneous dupilumab 300 mg once every 2 weeks (Q2W, after a 600-mg loading dose), or placebo in combination with topical therapy in the phase 3 JADE COMPARE trial (NCT03720470) and pts who received abrocitinib 200 mg QD or dupilumab 300 mg Q2W in the phase 3 JADE DARE trial (NCT04345367). Itch response was assessed using the Peak Pruritus Numerical Rating Scale (PP-NRS). In JADE COMPARE, pts rated their skin pain daily using the skin pain numerical rating scale (NRS) of the Pruritus and Symptoms Assessment for Atopic Dermatitis (PSAAD) instrument, which asks pts "How painful was your skin over the past 24 hours?" on a scale from 0 (not painful) to 10 (extremely painful). Individual or combined itch and skin pain responses were assessed from Day 2 through Day 15 of treatment. In the JADE DARE trial, early skin pain response was not assessed; however, itch response (proportions of pts who achieved score <2 in PP-NRS or mean PP-NRS scores) was assessed and is included in this analysis.

Results: As early as Day 2 of JADE COMPARE, the proportions of pts who achieved a ≥4-point improvement from baseline in both PP-NRS and PSAAD skin pain NRS were numerically higher with abrocitinib 200 mg (6%) and abrocitinib 100 mg (4%) versus dupilumab (0%), and were similar to placebo (4%); these responses continued to increase through Day 15 (49% [abrocitinib 200 mg] and 31% [abrocitinib 100 mg] vs 26% [dupilumab], or 12% [placebo]; **Figure 1A**). Similar trends were observed for the proportions of pts who achieved high-threshold scores of <2 in both PP-NRS (itch-free state) and PSAAD skin pain NRS (**Figure 1B**). Individual itch or skin pain responses were numerically greater with abrocitinib 200 mg and abrocitinib 100 mg versus dupilumab or placebo as early as Day 2 (itch-free state: 0.5% [abrocitinib 200 mg] and 0.5% [abrocitinib 100 mg] vs 0% [dupilumab], or 0% [placebo]; ≥4-point improvement from baseline in PSAAD skin pain NRS: 13% and 8% vs 5%, or 7%; score of <2 in PSAAD skin pain NRS: 8% and 5% vs 2%, or 4%); these responses increased through Day 15 for itch-free state (16% and 8% vs 5%, or 3%), ≥4-point improvement from baseline in PSAAD skin pain NRS (58% and 47% vs 40%, or 23%), and score of <2 in PSAAD skin pain NRS (42% and 28% vs 25%, or 11%). Similar trends were observed for itch response with abrocitinib versus dupilumab in the JADE DARE trial.

Conclusion: Abrocitinib provided relief in the symptoms of itch and skin pain assessed either individually or as a combined endpoint. Itch and skin pain responses with abrocitinib 200 mg and 100 mg were observed as early as Day 2 after treatment initiation and continued to increase through Day 15 in a dose-dependent manner. Proportions of pts who achieved clinically meaningful thresholds of itch and skin pain relief were numerically greater with both abrocitinib 200 mg and 100 mg than with dupilumab.

Figure 1. Proportions of Patients Who Achieved (A) a ≥4-Point Improvement From Baseline or (B) Scores of <2 on Both the PP-NRS and PSAAD Skin Pain NRS in JADE COMPARE



NRS, numerical rating scale; PP-NRS, Peak Pruritus Numerical Rating Scale (used with permission from Regeneron Pharmaceuticals Inc., and Sanofi); PSAAD, Pruritus and Symptoms Assessment for Atopic Dermatitis (©2016 Pfizer Inc., all rights reserved); Q2W, every 2 weeks; QD, once daily.

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Abstract N°: 3364

In vitro evidence demonstrating the nondepleting mechanism of action of amlitelimab, an OX40 Ligand monoclonal antibody

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Introduction & Objectives: OX40 Ligand (OX40L) and OX40 are inducibly expressed on antigen-presenting cells (APCs) and T cells, respectively. OX40L signalling by APCs promotes T-cell proliferation and survival and cytokine release in atopic dermatitis (AD) inflammation. Amlitelimab is a fully human nondepleting anti-OX40L IgG4-PE monoclonal antibody currently being investigated for AD. Here, the nondepleting mechanism of action of amlitelimab was evaluated *in vitro* against several cell types.

Materials & Methods: To assess whether amlitelimab or anti-OX40 antibodies induce antibody-dependent cellular cytotoxicity (ADCC) against activated conventional CD4 T cells and Foxp3+ regulatory T cells (Tregs), an *in vitro* ADCC assay was established. CD4 T cells were enriched from peripheral blood mononuclear cells (PBMCs) by negative selection and activated by anti-CD3/CD28. Activated CD4 T cells (target cells) were labelled and cocultured with unlabelled autologous NK-containing PBMCs (effector cells) overnight in the presence of amlitelimab, depleting anti-OX40 IgG1 antibodies A and B, and isotype control. ADCC activity was assessed by flow cytometry evaluating the viability of activated conventional CD4 T cells (CD4+CD25+Foxp3-) and Foxp3+ Tregs (CD4+CD25+Foxp3+CD127-). To assess the ADCC activity between OX40L IgG1 and IgG4 antibodies, the activity of amlitelimab was compared to two different depleting anti-OX40L IgG1 antibodies and isotype controls in an *in vitro* ADCC assay with hOX40L-transfected HEK cells (target cells) and *ex vivo* human NK cells (effector cells) using the DELFIA® Cell Cytotoxicity kit. Fluorescence proportional to target cell lysis was measured using the PHERAstar (615nm). OX40L surface expression on HEK cells was confirmed by flow cytometry.

Results: Amlitelimab was found to not induce NK-cell-mediated ADCC against activated OX40-expressing conventional CD4 T cells, Tregs, and OX40L-expressing cells in* vitro. In ADCC cocultures of activated OX40-expressing CD4 T cells with NK-cell-containing PBMCs as effectors, the percentages of both OX40-expressing activated conventional CD4 T cells and Foxp3+ Tregs were decreased in the presence of anti-OX40 IgG1 antibodies compared to isotype controls and amlitelimab. Following coculture of hOX40L-transfected HEK cells with *ex vivo* NK cells as effectors, the percentage of specific hOX40L-HEK cell lysis was significantly increased in the presence of anti-OX40L IgG1 antibodies but not with amlitelimab compared to isotype controls.

Conclusions: Activated T cells and Tregs remained intact upon amlitelimab treatment, whereas OX40-expressing activated CD4 T cells and Tregs were found to be depleted via ADCC upon treatment with anti-OX40 antibodies. These antibodies also led to a reduction in the percentage of live Tregs. Furthermore, no ADCC activity was observed against hOX40L-transfected HEK cells with amlitelimab, suggesting a nondepleting mechanism of action for amlitelimab.

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Abstract N°: 3372

Amlitelimab (an anti-OX40 Ligand antibody) vs placebo in patients with moderate-to-severe atopic dermatitis: Study design of phase 3 OCEANA clinical trials COAST 1/2, SHORE, AQUA, and ESTUARY

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Introduction & Objectives: Amlitelimab is a fully human, nondepleting anti-OX40 Ligand (OX40L) monoclonal antibody that blocks OX40L-OX40 interactions. Phase 2a and 2b trials demonstrated safety and efficacy of amlitelimab in achieving lesional and symptomatic (pruritus) endpoints in patients with moderate-to-severe atopic dermatitis (AD). Patients maintained improvement after a 28-week withdrawal, indicating potential for 12-week dosing (Q12W). Phase 3 trials will investigate the efficacy and safety of amlitelimab at four-week (Q4W) and Q12W dosing intervals.

Materials & Methods: OCEANA phase 3 clinical trials (COAST 1, COAST 2, SHORE, AQUA, and ESTUARY) assess the efficacy and safety of two subcutaneous dosing regimens of amlitelimab in multinational, randomized, double-blind, placebo-controlled trials. Key inclusion criteria for COAST 1/2, SHORE, and AQUA include: patients (≥12 years old) with AD ≥1 year and inadequate response to topical and/or systemic treatments, validated Investigator Global Assessment scale for Atopic Dermatitis (vIGA-AD) baseline score of 3 or 4, Eczema Area and Severity Index (EASI) baseline score of ≥16, AD involvement of ≥10% of body surface area at baseline, and weekly average Peak Pruritus Numerical Rating Scale score of ≥4. COAST 1/2 are 24-week monotherapy studies; SHORE is a 24-week study with background topical corticosteroids (TCSs) and topical calcineurin inhibitors (TCIs). AQUA is a 36-week study with background TCSs and TCIs for patients with an inadequate response to prior AD biologics or oral Janus kinase inhibitors.

Primary endpoints for COAST 1/2, SHORE, and AQUA include vIGA-AD 0/1 and a reduction from baseline of ≥2 points (US and US reference countries) and vIGA-AD 0/1 and EASI-75 (Japan, EU, and EU reference countries). Adult patients ≥40 kg will be randomized to amlitelimab 250 mg Q4W + 500 mg loading dose (LD), amlitelimab 250 mg Q12W + 500 mg LD, or placebo; dose will be adjusted for patients <40 kg. Trials have a 2- to 4-week screening period. Primary endpoints will be evaluated at Week 24 for COAST 1/2 and SHORE and at Week 36 for AQUA, with expected enrollment of 420, 420, 496, and 249 patients in each study, respectively. Patients who complete COAST 1/2 or SHORE can enter the ESTUARY blinded extension study; patients completing AQUA can enter RIVER-AD, an open-label long-term study. ESTUARY and RIVER-AD will evaluate long-term safety and efficacy. Participants not entering ESTUARY or RIVER-AD will be included in a 16-week safety follow-up. Biopsies and blood samples will be collected at various timepoints in the OCEANA phase 3 trials.

Results: Enrollment for OCEANA began Q4 2023. Expected completion for COAST 1/2, SHORE, and AQUA is 2026.

Conclusions: Results should provide further evidence demonstrating the efficacy and safety of** amlitelimab in treating moderate-to-severe AD using two different dosing regimens, including an extended dosing regimen, in patients with various treatment histories.

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Abstract N°: 3384

Effects of anti–IL-18 monoclonal antibody GSK1070806 on skin transcriptomics in moderate-to-severe AD: Biomarker analyses from a randomised, double-blind, placebo-controlled trial

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Introduction & Objectives: Interleukin 18 (IL-18) is a pleiotropic immune modulator, implicated in the pathogenesis of atopic dermatitis (AD). Plasma IL-18 levels have been shown to be elevated in patients with AD,1 and genetic variants at the IL-18 receptor locus are associated with increased AD susceptibility.2 In our randomised, placebo-controlled trial of patients with moderate-to-severe AD (GSK215253, NCT04975438), anti−IL-18 monoclonal antibody GSK1070806 was associated with improvements in Eczema Area and Severity Index score and patient-reported outcome measures of itch and quality of life versus placebo.3,4 These biomarker analyses aimed to explore the mechanistic signals underlying the observed efficacy.

Materials & Methods: Thirty-four patients with moderate-to-severe AD received a single infusion of 2 mg/kg GSK1070806 or placebo. Skin biopsies were collected from non-lesional and lesional sites at baseline, and from lesional sites at Weeks 4 and 12, and were analysed by RNA sequencing. For genes identified as differentially expressed between lesional and non-lesional sites at baseline, transcriptome improvement scores were calculated at Weeks 4 and 12. Significance versus placebo was defined using two-sample t-tests, and gene set enrichment analysis (GSEA) was performed on differential expression output comparing GSK1070806- and placebo-treated lesional samples with baseline.

Results: Transcriptome improvement analysis demonstrated that GSK1070806 modulated the lesional skin profile towards that of non-lesional skin. At Week 12, GSK1070806 normalised expression of the meta-analysis–derived atopic dermatitis transcriptome (MADAD) gene subset by 45% versus 14% with placebo ($p<0.001$) and similarly normalised expression of an immune gene subset by 43% versus 4% with placebo ($p<0.001$) (**Figure 1**). GSEA indicated changes from baseline in AD-associated signalling pathways for patients treated with GSK1070806 (false discovery rate <0.01), including reduced T helper 2 (Th2) and tumour necrosis factor α (TNFα) induced inflammation, reduced interferon (IFN)γ, Th2, IL-6 and IL-17 signalling, and increased extracellular matrix/tissue remodelling (**Figure 2**).

Conclusion: Although this study is small, these data suggest GSK1070806 can modulate a broad range of mechanisms associated with AD that are not limited to type 2 immunity. These findings should be explored further to elucidate the mechanism of action of GSK1070806 in AD. A Phase 2b study investigating the safety and efficacy of GSK1070806 is ongoing.

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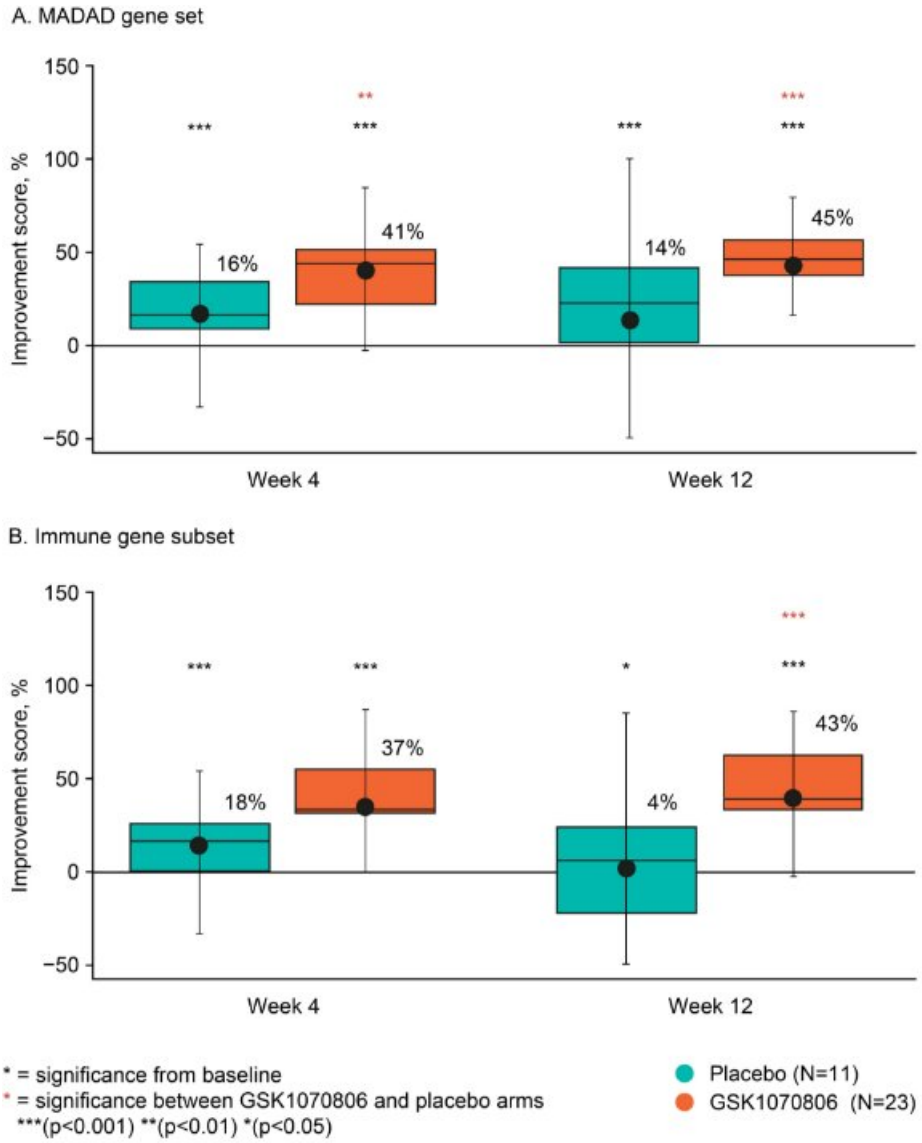
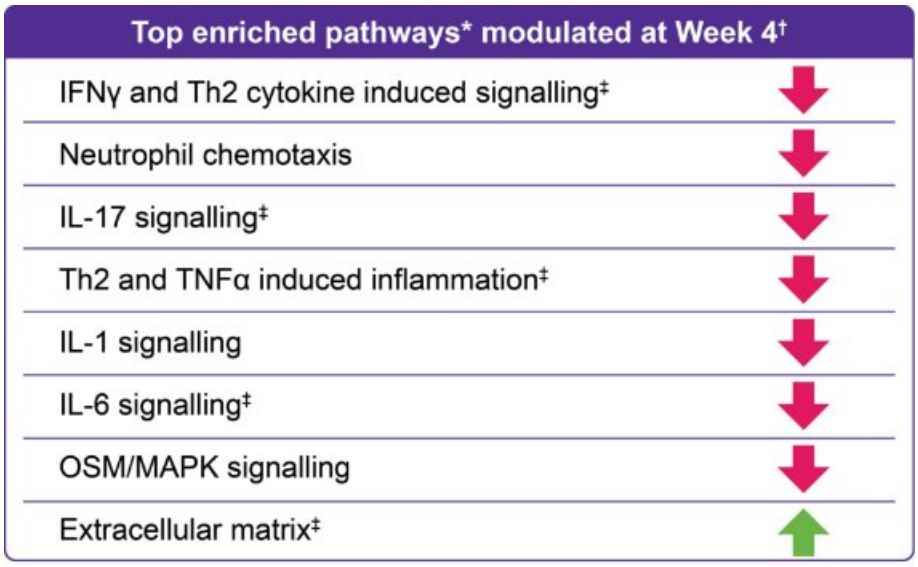
Figure 1: Improvement score† in lesional skin biopsies at Week 4 and 12 for the MADAD gene set (A) and an immune gene subset (B)



†Positive scores indicated a profile towards that of a non-lesional biopsy, with an 100% improvement score for each gene equivalent to non-lesional baseline score.

Figure 2. Modulated pathways in lesional skin biopsies following GSK1070806 dosing



*false discovery rate <0.01; †similar enrichment observed at Week 12;
‡pathways uniquely enriched following GSK1070806 treatment.

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Abstract N°: 3391

Line-field confocal optical coherence tomography in the monitoring of atopic dermatitis treated with pimecrolimus: clinical resolution does not always correlate with imaging clearing

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Introduction & Objectives:

Atopic dermatitis (AD) is a common chronic, remitting-relapsing dermatitis. Topical calcineurin inhibitors, i.e. tacrolimus and pimecrolimus, are a class of steroid-sparing, anti-inflammatory agents that have shown to be efficacious for the treatment of AD acute flares. Line-field confocal optical coherence tomography (LC-OCT) is a new non-invasive imaging technique that allows the in vivo recognition of histopathological clues like spongiosis and vesiculation in acute AD. The aim of this pilot study was to evaluate the role of LC-OCT in the non-invasive assessment of the therapeutic response of AD to pimecrolimus, particularly whether clinical changes or clearing correlate with skin imaging.

Materials & Methods:

Five patients affected by mild-to-moderate acute AD starting treatment with pimecrolimus cream twice daily were enrolled. For each patient, a target lesion was selected and monitored clinically (by a 5-point score: 1=worsening; 0=no changes; 1=mild improvement; 2=great improvement; 3= clearing) and by LC-OCT (evaluating the presence or absence of the AD pattern) at baseline (T0) and after 1 (T1), 2 (T2), and 4 (T3) weeks of treatment.

Results:

An improvement of both clinical and LC-OCT outcome parameters of the target lesions over time was observed. Comparing clinical and LC-OCT results: at T1 no target AD lesions were rated as clear; at T2, clearing was clinically observed in 3 cases, but LC-OCT showed persistence of the AD pattern in all cases; finally, at T3 a complete clearing was observed in all cases both clinically and by LC-OCT.

Conclusion:

Our study confirms the effectiveness of pimecrolimus in treating acute AD, showing a complete clinical and imaging clearance of the target lesions in all cases after 4 weeks. Interestingly, LC-OCT was able to show after 2 weeks the persistence of some microscopic alterations in 3 cases, clinically judged as clear. This may indicate that AD lesions may still show disease activity despite clinical remission, suggesting that treatment should be prolonged until imaging normalization. Further studies on a larger number of patients are required to confirm these preliminary data.

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Abstract N°: 3657

Health literacy in hand eczema and atopic dermatitis: Revealing the extent of the problem both in the general and the clinical population

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Introduction & Objectives: Health literacy is defined as the degree to which individuals have the capacity to obtain, process, and understand health information and services needed to make appropriate health decisions. As of today, patients are more and more considered to actively participate in their own health and health-related aspects. However, it can be complicated to meet the complex demands of health care in a modern society, especially among those with limited health literacy. When specifically looking into atopic dermatitis (AD), there are several aspects of this skin disease in which adequate health literacy is of major importance in understanding, treating, and managing of this condition.** Therefore, the objective of this study was to investigate the proportion of patients with HE and AD with limited health literacy in the Dutch general population, and in a tertiary referral center.

Materials & Methods: Among the general population, participants with HE were identified by sending a questionnaire to the participants of the Lifelines Cohort Study (n=135.950). Functional health literacy was measured by three validated screening questions (Set of Brief Screening Questions (SBSQ)), and communicative and critical health literacy were assessed by three single questions from the validated Dutch Functional Communicative and Critical Health Literacy (FCCHL) questionnaire. Among the clinical population (n=322) health literacy was measured by the Newest Vital Scale (NVS), a performance based instrument assessing reading and numeracy skills, and by the European Health Literacy Survey Questionnaire (HLS-EU-Q16) a perception based instrument including questions related to health care, disease prevention, and health promotion.

Results: Of the 8.550 subjects with HE in the general population, 24.7% had limited functional health literacy. In addition, 49.5% and 39.1% of the subjects with HE never or occasionally talk and collect information about their problems or complaints, respectively. Of the 322 patients with AD from the clinical population, 32.4% and 20.3% had limited HL according to the HLS-EU-Q16 and NVS, respectively. Limited health literacy was associated with a lower educational level, older age, and impaired quality of life.

Conclusion: A substantial proportion of the subjects with HE and AD reported signs of limited health literacy, which was associated with older age, a lower educational level and impaired quality of life. This emphasizes the need for more awareness of limited health literacy among this patient populations. Further research should evaluate the influence of inadequate health literacy on health outcomes and focus on strategies to improve organizational health literacy to eventually improve patient-centered care.

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Abstract N°: 3667

The effect of dupilumab on the microbiome of lesional skin, facial skin and nose in AD patients treated with dupilumab in daily practice

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Introduction & Objectives: Atopic dermatitis (AD) is associated with an altered skin microbiome and both lesional and nasal *Staphylococcus aureus (S. aureus)* colonization. Dupilumab treatment showed to reduce skin inflammation and therefore AD signs and symptoms, but it is also associated with facial adverse events (AEs). Therefore, the aim of this study was to evaluate the effect of dupilumab treatment on the microbiome of AD patients and to investigate clonality of *S. aureus* strains present on lesional and facial skin, and anterior nares.**

Materials & Methods: Lesional, facial and nasal swabs were taken from AD patients at baseline (T0) and after 4 (T4) and 28 (T28) weeks of dupilumab treatment. AD severity was measured with the Eczema Area and Severity Index (EASI). Relative abundance, microbial diversity and differential abundances (DA) were analysed using 16s rRNA gene sequencing. Data were compared with non-atopic healthy controls (HCs). Whole genome sequencing (WGS) was performed on *S. aureus* cultures.

Results: : In total, 31 AD patients and 30 matched HCs were included. The mean EASI significantly decreased from 17.0 (SD 11.1) at T0 to 3.9 (SD 2.9) at T28 ($p<0.001$). In lesional skin, *S. aureus* was significantly more abundant at T0 compared to T4 and T28 with a Log Fold Change (LFC) of -5.14 and -5.54 to -9.18, respectively, with *S. aureus* abundance having an opposite effect with the second most abundant species *C. acnes.* Both the inverse Simpson and Shannon index revealed an increase in microbial diversity between T0 and T28 ($p<0.05$), where the latter was comparable to HCs. Bray-Curtis dissimilarities showed a significant decrease in mean dissimilarity between HC and T0 versus T4/T28 samples. Similar changes, although mostly non-significant, were found in the facial microbiome of AD patients. No clear differences were observed in *S. aureus* abundance in the nose during treatment, while WGS revealed that *S. aureus* strains were mostly clonal within patients and across different body regions, irrespective of treatment.

Conclusion: The lesional skin microbiome, and to a lesser extent the facial microbiome, of AD patients shifted towards healthy skin during 28-weeks of dupilumab treatment. No clear effect was found on *S. aureus* abundance in the nose and the nasal microbiome.

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Abstract N°: 3668

Long-term flare patterns in atopic dermatitis – An unsupervised machine learning approach

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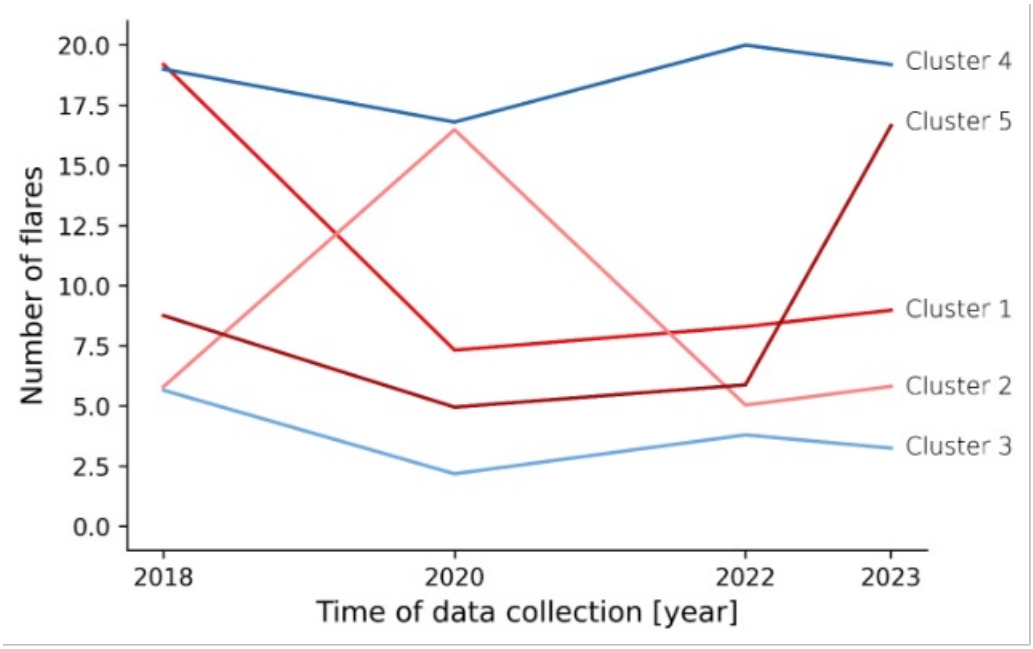
Introduction & Objectives: Atopic Dermatitis (AD) is a heterogenous disease with several different disease trajectories. Patients are burdened with unpredictable flare-ups which can possibly lead to impaired chronic mental health. The objective of this study was to determine if long-term instability within the AD disease course affects patients' mental health regarding anxiety and depression.

Materials & Methods: With unsupervised clustering using data on AD patients from the Danish Skin Cohort, patients were grouped according to their flare activity during five years (with data from 2018, 2020, 2022, and 2023). To handle the time-series aspect of the data, we used the standard k-means clustering algorithm combined with dynamic time warping and barycenter averaging. These clusters were further analyzed according to current anxiety and depression (HADS) scores in relation to long-term stability and severity (PO-SCORAD) across five years.

Results: We had complete data on 263 patients with AD from 2018 through 2023. Patients answered questions about AD flare-ups every year, PO-SCORAD and current HADS score (for 2023). The clustering method yielded five groups as the optimal number. Cluster 3 was characterized by a mild to moderate disease course, with an average of <6 flare-ups per year, with a median (IQR) severity score (PO-SCORAD) changing from 33.5 (20.4-40.4) to 28.4 (19.5-36.2) resulting in a current median (IQR) anxiety score of 3.0 (1.0-7.0) and a depression score of 1.0 (0.0-4.0). Cluster 4 was characterized by a consistently unstable disease course having between an average of 17 and 20 flare-ups every year and a median severity score ranging from 44.7 (31.5-60.2) to 47.6 (33.6-62.5) over the years, resulting in a current anxiety score of 4.5 (1.8-7.0) and depression score of 2.5 (1.0-6.2). Cluster 1, 2, and 5 was characterized by different unstable disease courses, having a fluctuating number of flare-ups over the years (on average from 5 to 19 flare-ups per year) and with a median moderate severity score (from 31.2 [23.6-44.0] to 45.6 [36.2-55.7]) every year. Specifically, cluster 1 decreased from an average of 19 flare-ups to 9 flare-ups over the years. Cluster 2 was highly fluctuating from 5 flare-ups to 16 and back to 5 flare-ups over the years. The instability of Cluster 5 decreased from 9 flare-ups to 5-6 flare-ups and increased again to 17 flare-ups. Cluster 1 and 5 had a current anxiety score of 6.0 (2.0-9.0) and 6.0 (1.5-9.5), respectively and depression score of 3.0 (1.0-6.0) and 3.0 (1.0-5.5), respectively.

Conclusion: Patients characterized by an unstable moderate-severity AD disease course, with a very fluctuating number of flare-ups each year, were more severely impaired by a higher burden of anxiety and depression compared to patients having a severe disease course with consistently many flares. These results emphasize the importance of long-term flare patterns, within patients with moderate AD, in clinical decision-making.

Figure 1: The number of flares according to each point in time for all 5 clusters


20.0
17.5
15.0
12.5
10.0
7.5
5.0
2.5
0.0
Number of flares
2018
2020
2022
2023
Time of data collection [year]
Cluster 4
Cluster 5
Cluster 1
Cluster 2
Cluster 3

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Abstract N°: 3679

Atopic dermatitis and risk of Graves' disease and Hashimoto's thyroiditis: a bidirectional two-sample Mendelian randomization study

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Introduction & Objectives: Observational studies have yielded inconsistent findings regarding the correlation between atopic dermatitis (AD) and Graves' disease (GD) as well as Hashimoto's thyroiditis(HT). Hence, it is crucial to determine whether or in which direction causal relationships exist. The main objective of this study is to explore the causal association of AD with GD and HT.

Materials & Methods: A bidirectional two-sample Mendelian randomization (MR) study was performed utilising summary-level genome-wide association study (GWAS) statistics.

Results: In the forward MR analysis with AD as exposure, the inverse-variance weighted (IVW) method identified non-casual association between genetically predicted AD and GD (odds ratio [OR]=1.15, 95% confidence interval [CI]: 0.88-1.5, P=0.317) as well as HT (OR=1.14, 95%CI: 0.98-1.32, P=0.083). In the reverse direction, genetically predicted GD was not correlated with AD (OR 0.99, 95%CI 0.97-1.02, P=0.544), nor was HT(OR 0.99, 95%CI 0.9-1.09, P=0.831).

Conclusion: Results of this MR study did not support a causal effect of AD on GD and HT. This may reduce the concerns about the potential adverse effects of AD on thyroid autoimmunity.

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Abstract N°: 3683

Lebrikizumab is an Effective Treatment for Moderate-to-Severe Atopic Dermatitis in Patients ≥60 Years of Age

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Introduction & Objectives: Lebrikizumab (LEB) is a high-affinity monoclonal antibody which targets IL-13, the key cytokine implicated in AD. This analysis investigated the efficacy and safety of LEB in adults ≥60 years with moderate-to-severe AD.

Materials & Methods: Data was pooled from two Phase 3 trials, ADvocate1 and ADvocate2 and included 98 patients (≥60 years; N=28 placebo (PBO), N=70 LEB). Patients were treated with lebrikizumab 250mg every 2 weeks or PBO, for 16 Weeks. Efficacy was assessed in the pooled modified intent to treat population at Week 16 with Investigator's Global Assessment (IGA) (0,1) with ≥2-point improvement, ≥75% improvement in Eczema Area and Severity Index (EASI 75), EASI percentage change from baseline (CFB), and Pruritus Numeric Rating Scale (NRS) ≥4-point improvement. Categorical outcomes were evaluated by Cochran Mantel Haenszel tests to compare treatment groups. Continuous outcomes were analyzed using the analysis of covariance model. Data collected after use of rescue medication or discontinuation due to lack of efficacy were imputed with non-responder imputation (NRI) for categorical endpoints, or baseline values for continuous endpoints. Safety was also assessed in the integrated modified safety population.

Results: The baseline mean (standard deviation [SD]) age was 67.2 (6.7) years in LEB- treated patients and 69 (6.2) in PBO. The LEB-treated population was 62.9% male (n=44/70) vs PBO 46.4% (n=13/28). Race was comparable between groups. At baseline 67.1% LEB (n=47/70) and 57.1% PBO (n=16/28) patients had IGA 3, while 32.9% LEB (n=23/70) and 42.9% PBO (n=12/28) had IGA 4. Other baseline characteristics were comparable: EASI: LEB 26.1, [10.6] vs PBO 27.1, [8.1]; BSA: LEB 38.3, [19.8] vs. PBO 40.9, [18.1]; and Pruritus NRS: LEB 7.5, [2.0] vs PBO 7.4, [1.7].

At Week 16, IGA (0,1) was achieved by 34.5% LEB-treated patients vs 11% PBO (P=0.022). EASI 75 was achieved by 48.9% and 16.3% of LEB- and PBO-treated patients, respectively (P=0.004). Pruritus NRS with ≥4-point improvement was reported by 45.5% and 12.2% of LEB vs PBO, respectively (P=0.004). The mean percent CFB EASI was LEB -58.5% (SE 8.5) and PBO -29.4% (SE 11.1) (P=0.002). Safety results in the older adult population were consistent with the overall modified safety population.

Conclusion: At Week 16, efficacy and patient reported outcome endpoints were met in the older adult population. These results indicate that lebrikizumab is an effective treatment for moderate-to-severe AD in the adult population ≥60 years of age and has a consistent safety profile.

Disclosure: Presented at Maui Derm for Dermatologists,22-26 January 2024.

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Abstract N°: 3697

Epidemiological study of skin manifestations associated with nemolizumab use

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Introduction & Objectives:

Nemolizumab is a monoclonal antibody specifically designed to target the IL-31 receptor and inhibit IL-31 signaling. Skin manifestations after receiving nemolizuman have been reported in the clinical trials. And, in actual clinical practice, several patients developing skin manifestations after the treatment with nemolizumab have been experienced. However, the frequency and mechanism of occurrence of this skin manifestation remain unclear. The purpose of this study is to investigate the features of patients prone to the skin manifestation and to help predict, prevent, and treat the adverse effects associated with nemolizumab.

Materials & Methods:

This study is a retrospective study of skin manifestations after nemolizumab administration. The patients who received nemolizmab from August 1, 2022 to February 29, 2024 at 12 centers in Japan were enrolled. The information was collected from clinical records in 133 patients (85 males and 48 females) including age, gender, type of AD skin manifestation prior to nemolizumab administration, Eczema Area and Severity Index (EASI), TARC level, eosinophil count, serum total IgE level, systemic therapy prior to nemolizumab administration, frequency of nemolizumab administration, and the timing and form of skin manifestation .

Results:

About half of the patients had the skin manifestations as adverse reactions. The incidence of skin manifestation was 44 of 85 males (51.7%) and 29 of 48 females (60.4%). The most frequent one was erythema in 47 (35.3%), followed by nummular eczema in 4 (18%), dry/scaling in 17 (12.8%), papule in 13 (9.1%), edema in 2(0.8%), and blistering in 1 case (0.8%). 40 of 73 patients (54.8%) had these reactions after the first dose of nemolizumab. The mean EASI was 20.0 in cases with the appearance of skin manifestation and 19.6 in those without skin manifestation. The incidence of skin manifestations in the elderly was lower: 52 of 95 (55%) in patients under 65 years of age and 17 of 38 (44.7%) in patients over 65 years of age.

Conclusion:

In this study, we investigated the characteristics of patients with skin manifestation as an adverse reaction associated with nemolizumab administration. It is hoped that the results of this study will provide important insights for predicting the appearance of adverse skin manifestation.

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Abstract N°: 3701

Decoding real-world outcomes: exploring clinical features associated with efficacy in patients treated with dupilumab

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Introduction & Objectives:

Real-world data comparing the effectiveness of dupilumab in patients with different clinical features is lacking, which is essential for both treatment options and therapy's tolerability. To address this gap, we conducted a prospective study including 233 patients with moderate-to-severe AD treated with dupilumab for 16 weeks. Analysis was undertaken to identify the clinical features of participants in the real-world study at baseline that may be associated with achieving EASI-75 (≥75% improvement from baseline in Eczema Area and Severity Index) at week 16.

Materials & Methods:

We accessed the efficacy of dupilumab in a total of 233 patients who received at least 16 consecutive weeks of therapy. Treatment effectiveness was defined as achieving the treatment goal of EASI-75 (≥75% improvement from baseline in Eczema Area and Severity Index) at week 16. Stepwise logistic regression analysis were applied to identify the clinical features associated with the dupilumab efficacy at week 16. **Results:**

Specific clinical factors were found to be significantly associated with treatment response to dupilumab. Children and adolescent patients with early-onset AD responded less favorably to dupilumab, while a history of allergic diseases, particularly history of allergic asthma in adult were linked to a positive response to dupilumab. Laboratory index showed eosinophil count was a potential biomarker for predicting a favorable response in adult patients. Early improvements in itch were found to predict later clinical efficacy, suggesting that rapid itch relief within two weeks of starting dupilumab treatment may indicate a positive treatment outcome. Regarding safety, no serious AEs were observed.

Conclusion:

The therapeutic response of dupilumab might be affected by some specific clinical features of AD patients.

Table 1. Logistic regression analysis of clinical feature associated with the efficacy at week 16 in patients treated with dupilumab

	Univariate	Multivariate
	P-value	**Odds ratio (95% CI)**
Decline PP-NRS score at week 2 (N=233)	0.05*	1.590 (1.289-1.962)
Children (N=46)		
• Onset age (years)	0.002*	7.714 (2.070-28.744)
• Disease duration until start of dupilumab (years)	0.121	0.614 (0.332-1.137)
• Food allergy	0.018*	7.615 (1.421-40.803)
• AD phenotype: Type I a	0.036*	6.000 (1.127-31.938)
• AD phenotype: Type III c	0.013*	0.051 (0.005-0.533)
Adolescent (N=50)		
• Onset age (years)	0.039*	1.308 (1.014-1.687)
• Disease duration until start of dupilumab (years)	0.005*	1.664 (1.165-2.322)
Adult (N=88)		
• Prior allergic diseases	0.009*	6.282 (1.588-24.847)
• Eosinophil count (×109/L)	0.013*	19.449 (1.870-202.298)
Elderly (N=49)		
• Prior allergic diseases	0.010*	8.643 (1.662-44.955)
• AD phenotype: Type I a	0.018*	13.412 (1.574-114.262)
• AD phenotype: Type VI f	0.001*	0.057 (0.011-0.289)

PP-NRS: Peak Pruritus Numerical Rating Scale;**AD:** atopic dermatitis; **a**: multiple extensive erythematous exudative and lichenoid plaques with flexor side of four limbs and trunk, head and neck; **c**: prurigo with highly pruriginous papules and nodules; **f**: lichenoid pattern with generalized lichenification, excoriations, crusts, and xerosis; **N:** number

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Abstract N°: 3706

Efficacy and Safety of Lebrikizumab for Moderate-to-Severe Atopic Dermatitis With TCS: A 68-Week Result of Adhere-J Trial

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Introduction & Objectives: In this study, Japanese patients aged ≥12 years and weighing ≥40 kg with moderate-to-severe AD received Lebrikizumab (LEB) with Topical Corticosteroids (TCS).

Materials & Methods: During the induction period (0-16 weeks), LEB 250 mg was administered every 2 weeks (Q2W)/ every 4 weeks (Q4W)/ placebo (PBO) combined with TCS. Co-primary endpoints were Investigator's Global assessment (IGA) [0,1] and/or Eczema Area and Severity Index (EASI 75).

Results: At week 16, the percentage achieving those endpoints were significantly higher in the LEB Q2W/Q4W group than those in the PBO group. In the maintenance phase (16-68 weeks), of the 103 patients in the MPP (maintenance primary population), the Q2W group was reassigned to Q2W or Q4W, and the Q4W group continued to be treated with Q4W. 168 patients in the MEP (maintenance escape population), including the PBO group in the induction period, were treated with Q2W until 68 weeks regardless of the frequency of administration in the induction period. The percentage of achieving IGA [0,1] and EASI-75 at 68 weeks in MPP/MEP were 66-81%/32-38% and 83-89%/71-80%, respectively.

Conclusion: Patients in the MPP tended to maintain improvements recorded at W16, and in the MEP group, an increase in the IGA [0,1] and EASI-75 was observed after 16 weeks. Safety outcomes were aligned with previous reports for lebrikizumab treatment in global studies.

Disclosure: Presented at Japanese Dermatological Association - 123rd Annual Meeting, Kyoto, Japan; 6-9 June,2024.

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Abstract N°: 3713

Rosacea-like skin reaction under treatment with dupilumab for atopic dermatitis

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Introduction:

Dupilumab is a standard treatment for moderate to severe atopic dermatitis1. In contrast to common side effects such as conjunctivitis, skin side effects may occur less frequently2. The occurrence of paradoxical rosacea under dupilumab treatment has only been described in a few case reports, leading to the discontinuation of systemic therapy with a biologic agent3.

Case report:

We present a 52-year-old female patient with atopic dermatitis and aireborne dermatitis since 1990. The patient also had a diagnosis of bronchial asthma, chronic spontaneous urticaria and hypertension. The patient's atopic dermatitis was treated with topical therapy for many years. However, due to worsening symptoms, including severe pruritus (10/10 NRS), systemic therapy with dupilumab was initiated in June 2023. At first, the therapy was very well tolerated; in November 2023, the EASI was 0 and the patient showed no side effects apart from occasional conjunctivitis. In January 2024, the patient presented acutely at our outpatient clinic with pustules and papules on her face for 6 weeks, accompanied by a strong feeling of heat. Clinically, there were multiple erythematous nodules and papules in the forehead area, on the temples, nose and chin, partially excoriated, accompanied with a slight infraorbital swelling and cuperosis on both cheeks. The patient reported unsuccessful prior treatments with prednicarbate cream, prednisolone orally once 40 mg, then 20 mg for 4 days, followed by nystatin cream, pimecrolimus cream, and zinc ointment, each for one week.

The patient was diagnosed with rosacea-like dermatitis and prescribed oral doxycycline 40 mg twice daily, along with topical metronidazole gel in the morning and ivermectin cream in the evening. Dupilumab was initially continued. After a further dose, the patient's skin condition worsened significantly and dupilumab treatment was stopped. A treatment with lebrikizumab was initiated. The concomitant therapy for rosacea was continued. The papules and pustules regressed significantly within a few weeks. As a result, we stopped treatment with doxycycline. The treatment with lebrikizumab was well tolerated, the patient showed no side effects.

Conclusion:

The cause of the rosacea-like reaction associated with dupilumab treatment is currently unknown. It is possible that Th2 pathway inhibition by dupilumab may promote Demodex proliferation, which could lead to increased IL-17-mediated inflammation. Rosacea disease is dominated by TH1/Th17 cells, often accompanied by infiltration of macrophages and mast cells4

In our case, systemic therapy with an IL-13 inhibitor could be continued without worsening of the skin reaction. This raises the question of whether the humoral immune response induced by IL-4, such as increased mast cell infiltration, might have led to the skin reaction described above.

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EADV CONGRESS
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Abstract N°: 3714

The risk of serious cardiovascular events is increased in patients withsevere atopic dermatitis. A real world study from the TriNetX globalcollaborative network

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Introduction & Objectives:

BACKGROUND: Atopic dermatitis (AD) may increase risk for major adverse cardiovascular events (MACE).

OBJECTIVE: Determine MACE risk among patients with AD

Materials & Methods:

We performed a retrospective cohort study of all patients aged 18 or over with atopic dermatitis on the TriNetX platform, a global collaborative network providing access to real-time electronic medical records. Adults with AD were matched to patients without AD on age, gender, race and cardiovascular risk factors. Treatments used served as proxies of AD severity. Outcomes were incident myocardial infarction, cerebrovascular accident (CVA), angina pectoris, deep vein thrombosis (DVT), and pulmonary embolism.

Results:

Comparing 265,771 adults with AD to 6,158,504 unaffected adults, AD was not associated with an increased risk of MACE overall (Risk Ratio [RR] 0.926; 95% confidence interval [95% CI] 0.911-0.942) but rather with a slight increase in venous thromboembolism (RR 1.226; 95% CI 1.187-1.267). Of the 85,426 patients with atopic dermatitis treated with systemic medications (severe AD group), there was an increased risk of developing any MACE compared with the non-AD group (Table 1).

Conclusion:

Atopic dermatitis was associated with higher risk of venous thromboembolism. Severe AD was associated with a higher risk of all major adverse cardiovascular events. # Table 1 .

	Overall AD (95% CI)	Severe AD (95% CI)
	RR: 0.926 (0.911-0.942)	RR: 1.616 (1.574-1.660)

MACE	OR: 0.949 (0.942-0.956)	OR: 1.735 (1.685-1.789)
	HZ: 1.019 (1.001-1.037)	HZ: 1.406 (1.366-1.447)
Venous thromboembolism	RR: 1.226 (1.187-1.267)	RR: 1.983 (1.869-2.103)
	OR: 1.233 (1.192-1.275)	OR: 2.021 (1.902-2.147)
	HZ: 1.332 (1.288-1.377)	HZ: 1.662 (1.566-1.765)
Cerebrovascular accident	RR: 0.957 (0.925-0.990)	RR: 1.550 (1.466-1.638)
	OR: 0.956 (0.923-0.990)	OR: 1.571 (1.484-1.663)
	HZ: 1.044 (1.009-1.081)	HZ:1.475 (1.216-1.361)
Myocardial infarction	RR: 0.922 (0.905-0.939)	RR: 1.703 (1.652-1.755)
	OR: 0.915 (0.897-0.934)	OR: 1,811 (1.751-1.873)
	HZ: 1.014 (0.995-1.034)	HZ: 1.475 (1.429-1.523)

	(0.999-1.054)	(1.429-1.925)
	Overall AD	Severe AD

RR: Risk Ratio . OR: Odds Ratio. HZ: Hazard Ratio.

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Abstract N°: 3737

A pan-European registry-based observational study of abrocitinib and conventional systemic therapies in moderate and severe atopic dermatitis: the DREAM TO TREAT AD study protocol

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Introduction & Objectives:

Atopic dermatitis (AD) is one of the most common chronic inflammatory skin conditions. Currently, there is a lack of real-world evidence regarding the effectiveness of conventional and novel systemic therapies for moderate to severe AD. Abrocitinib is one of the novel systemic medications, a Janus kinase 1 (JAK1) selective inhibitor licensed in the EU and the UK for moderate-to-severe AD in adults and adolescents requiring systemic treatment. The DREAM TO TREAT AD (D2T AD) study was set up to collect real-world data on abrocitinib use in AD as well as conventional systemic treatments, with the aim to describe treatment (prescription) patterns as well as treatment effectiveness within a three-year follow-up period in five European AD registries: Germany (TREATgermany), the Netherlands and Belgium (TREAT NL/BE), Denmark (SCRATCH), Ireland (ASTAR Ireland), and the United Kingdom (ASTAR UK).

Materials & Methods:

The study protocol and methodology were developed collaboratively by academic members of the participating registries as well as the study funder. The study follow-up time points and outcomes are based on an international Delphi exercise previously run by the TREAT Registry Taskforce. All five registries systematically collect data on patients' characteristics and treatment outcomes in patients with moderate-severe AD receiving systemic

treatment. Assignment to intervention was decided by the treating physician and not by the study. Using the novel DataSHIELD solution allowing decentralised data aggregation across country borders, harmonised datasets will be created to answer research questions on baseline demographic and clinical characteristics, as well as clinician- (EASI), and patient-reported outcomes (POEM, (C)DLQI, PP-NRS) at baseline and during the follow-up, while on abrocitinib and conventional systemics. Additionally, days lost of work/studies and/or usual activities will be analysed. DataSHIELD provides a secure environment for data aggregation, enabling analyses without data leaving the registry of origin. DataSHIELD environment includes central statistical analysis hubs and local data nodes, allowing the registries to be interrogated using one analytical code. Analysis results will consist of individual results from each registry database as well as combined meta-analysis of these results. To the best of our knowledge, D2T AD is the first study to utilise DataSHIELD in the context of dermatology research.

Conclusion:

D2T AD undertakes a novel federated data analysis approach across national registries in observational dermatology research and will provide crucial information on available AD treatment outcomes for clinical decision-making, in addition to proving that this type of scientific collaboration is possible.

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Abstract N°: 3773

Delgocitinib cream reduces itch and pain in adults with moderate to severe Chronic Hand Eczema: pooled analyses of the Phase 3 DELTA 1 and 2 trials

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Introduction & Objectives: Itch and pain are two of the most common and burdensome symptoms of Chronic Hand Eczema (CHE). Delgocitinib cream, a topical pan-Janus kinase inhibitor, was well tolerated and demonstrated significant improvement in primary and all secondary efficacy endpoints in DELTA 1 (NCT04871711) and DELTA 2 (NCT04872101). The objectives of this analysis were to assess the effect on itch and pain of twice-daily applications of delgocitinib cream 20 mg/g, including early onset of reductions, compared with cream vehicle in the treatment of adults with moderate to severe CHE in a pooled analysis of the pivotal Phase 3 DELTA 1 and DELTA 2 trials.

Materials & Methods: This analysis includes pooled data from DELTA 1 and 2 (delgocitinib cream 20 mg/g [n=639]; cream vehicle [n=321]; twice-daily). The Hand Eczema Symptom eDiary (HESD) captured patient-reported worst severity of itch and pain over the past 24 hours on an 11-point numeric rating scale (0=no itch/pain to 10=severe itch/pain). Changes in itch and pain from baseline were assessed daily during Week (W)1 and weekly from W1-16.

Results: For itch, a significant least squares (LS) mean reduction from baseline was detected 1 day after patients first applied delgocitinib 20 mg/g (0.75) versus the cream vehicle group (0.32, $P<0.001$). For pain, a significant LS mean reduction was detected 3 days after the first application of delgocitinib cream (0.98) versus cream vehicle (0.58, $P<0.001$). The LS mean itch and pain reductions continued for delgocitinib cream-treated patients up to W16 ($P<0.001$). A clinically meaningful ≥4-point reduction in itch was achieved by significantly more patients applying delgocitinib cream from W2 (14.2%) versus cream vehicle (6.3%, $P<0.001$) and onwards to W16 (delgocitinib cream: 47.2%; cream vehicle: 21.5%; $P<0.001$). Similar results for a ≥4-point reduction in pain were observed.

Conclusion: Early onset of itch and pain reduction was observed within W1 for delgocitinib-treated patients, with reductions remaining significantly greater versus cream vehicle-treated patients from W1 to W16.

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Abstract N°: 3781

Long-term safety and efficacy of delgocitinib cream for up to 36 weeks in adults with Chronic Hand Eczema: results of the Phase 3 open-label extension DELTA 3 trial

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Introduction & Objectives: In patients with moderate to severe Chronic Hand Eczema (CHE), delgocitinib cream, a topical pan-Janus kinase inhibitor, was well tolerated and demonstrated significant improvement in all efficacy endpoints in DELTA 1 and 2. The objectives of this study were to evaluate the long-term safety and efficacy of twice-daily applications of delgocitinib cream 20 mg/g as needed for up to 36 weeks in adults with CHE in the Phase 3 open-label DELTA 3 trial (NCT04949841), an extension trial of the 16-week DELTA 1 (NCT04871711) and DELTA 2 (NCT04872101) trials.

Materials & Methods: In DELTA 3, patients who completed the 16-week (W) treatment period in DELTA 1 and DELTA 2 were treated on an as-needed basis with twice-daily delgocitinib cream 20 mg/g for 36 weeks (n=801). Subjects with Investigator's Global Assessment for CHE (IGA-CHE) ≥2 received delgocitinib cream until symptoms resolved (i.e., IGA-CHE 0/1 [clear/almost clear]). Primary endpoint was number of treatment-emergent adverse events (TEAEs). Key secondary endpoints were IGA-CHE 0/1 and ≥75%/≥90% improvement in Hand Eczema Severity Index (HECSI-75/90) scores; Hand Eczema Symptom eDiary captured patient-reported worst severity of itch/pain over the past 24 hours.

Results: No safety concerns were identified during delgocitinib cream treatment in DELTA 1 (n=325; R=305.4; PYO=100.9), DELTA 2 (n=313; R=280.6; PYO=95.9) and DELTA 3 (n=801; R=231.1; PYO=535.7). In DELTA 3, the most frequent TEAEs were COVID-19 and nasopharyngitis. In DELTA 3, IGA-CHE 0/1, HECSI-75, HECSI-90 and ≥4-point itch/pain reduction were maintained from baseline (24.6%, 51.8%, 31.8%, and 50.6%/51.9%, respectively) to W36 (30.0%, 58.6%, 36.6%, and 52.4%/55.4%, respectively) among delgocitinib cream-treated subjects in the

parent trials. Among those treated with cream vehicle in parent trials, response rates improved from baseline (9.1%, 23.7%, 12.0%, and 26.3%/32.3%, respectively) to W36 (29.5%, 51.5%, 35.7%, and 41.3%/43.3%, respectively).

Conclusion: With delgocitinib cream 20 mg/g treatment, no safety concerns were identified and efficacy further improved, supporting the benefit of long-term as-needed use of delgocitinib cream in patients with moderate to severe CHE.

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Abstract N°: 3786

Retrospective real-life study to describe the use of dupilumab in pediatric atopic dermatitis in Spain: Analysis of patient profile, effectiveness and safety in adolescent population (READAP study)

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Introduction & Objectives:

The READAP study aims to describe the profile of patients treated with dupilumab as well as the effectiveness and safety in real life in children with severe AD and adolescents with moderate-severe AD. The present communication shows the results for adolescents.

Materials & Methods:

National, multicentre, observational, and retrospective study, based on data extracted from medical records in September 2023. Adolescents (12-17 years) with moderate-severe AD (Eczema Area and Severity Index, EASI≥16) at the start of dupilumab treatment, and who had been treated with dupilumab for at least 3 months, were included in this subanalysis.

Results:

A total of 124 adolescent patients were analyzed. The main demographic and clinical characteristics at baseline are shown in **Table 1**. Among the adolescent patients, 72.4% had one or more atopic comorbidities, the most frequent of which were asthma (57.3%) and food allergies (50.6%); and 97.6% of patients had been treated before dupilumab with systemic treatments, being the most frequent cyclosporine (22.5%).

At 16 and 52 weeks, the mean (standard deviation, SD) percentage reduction in EASI from baseline was 75.9% (29.6) and 87.0% (12.6), respectively. In the same way, 69.6% and 84.8% of adolescents achieved an EASI≤7. A total of 59.6% and 75% of adolescents achieved IGA scores 0-1 at weeks 16 and 52, respectively. A reduction of ≥4 pp-NRS (Peak Pruritus Numerical Rating Scale) points was observed at weeks 16 and 52 in 54.3% and 70.8% of patients, respectively, and 66.7% and 76.9% of patients achieved a reduction of ≥6 points on the DLQI (Dermatology Life Quality Index) scale, respectively, at these time points.

No serious adverse events related to dupilumab were reported. Overall, 6.5% of patients 12-17 years reported conjunctivitis and 0.8% reported treatment-related eosinophilia, but they did not result in treatment discontinuation.

Conclusion:

The adolescents (12-17 years) included in the study had a pronounced disease burden, as defined by signs, symptoms, quality of life scales, atopic comorbidities, and use of systemic treatments before initiation of dupilumab treatment. The treatment with dupilumab rapidly (16 weeks) demonstrated a clinically relevant improvement in this subpopulation in eczema severity, pruritus intensity, and quality of life in most patients, and were maintained over the long term (52 weeks), with an acceptable safety profile.

Table 1: Main demographic and clinical characteristics of all patients and adolescents' subgroupat the start of dupilumab treatment

Parameters	**Adolescents n=124**
Gender: Male; n (%)	68 (54.8)
Age, mean (SD)	15.9 (1.8)
Age at diagnosis, mean (SD)	8.8 (3.6)
Non-AD-related comorbidities, n (%)a	57 (46.3)
Main AD-related comorbidities, n (%)b	89 (72.4)
Asthma	51 (57.3)
Food Allergy	45 (50.6)
Allergic rhinitis	35 (39.3)
Other	28 (31.5)
Clinical characteristicsc	
EASI (0-72), median (range)	25.6 (21.5-31.8)
IGA 4 (0-4)d, n (%)	54 (72.0)
pp-NRS (0-10)e, median (range)	8.0 (7.0-9.0)
DLQI (0-30)f, median (range)	15.0 (7.5-23.0)

Abbreviations: AD = Atopic dermatitis; DLQI = Dermatology Life Quality Index; EASI = Eczema Area and Severity Index; IGA = Investigator's Global Assessment; pp-NRS = Peak Pruritus Numerical Rating Scale; SD = Standard deviation.

aData not known 1 case; bData not known in 1 case; cThe score ranges for each scale are indicated in brackets; dData not known 48 cases; eData not known in 61 cases; fData not known in 91 cases.

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Abstract N°: 3791

Rocatinlimab Significantly Improves Clinical Responses in Patients with Moderate-To-Severe Atopic Dermatitis by Week 2 in a Randomized Double-Blind Placebo-Controlled Phase 2b Study

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Introduction & Objectives:

Moderate-to-severe atopic dermatitis (msAD) can cause chronic cycles of pruritus and scratching, impacting quality of life. Rocatinlimab (AMG 451/KHK4083) is an investigational anti-OX40 monoclonal antibody that inhibits and reduces the number of OX40-expressing pathogenic T cells responsible for driving inflammatory responses. In a multicenter, randomized, double-blind, placebo-controlled phase 2b trial (NCT03703102) that evaluated rocatinlimab for msAD, rocatinlimab met its primary endpoint by demonstrating significantly improved change in the Eczema Area and Severity Index (EASI) from baseline compared with placebo at Week 16. Here, we describe the onset of clinical response with rocatinlimab in adults with msAD in the phase 2b trial through analysis of pruritis Numerical Rating Scale (pNRS) and EASI.

Materials & Methods:

Patients were randomized (1:1:1:1:1) to receive subcutaneous rocatinlimab every 4 weeks (Q4W; 150 mg or 600 mg) or every 2 weeks (Q2W; 300 mg or 600 mg) for 36 weeks, or to receive placebo for 18 weeks, followed by 18 weeks of rocatinlimab (placebo group switched to 600 mg Q2W). All cohorts had a 20-week off-treatment follow-up. The onset of clinical response with rocatinlimab was evaluated *post-hoc* (267 patients; rocatinlimab: n=210, placebo: n=57) by investigating pNRS and EASI between baseline and Week 16.

Results:

Difference in the least squares mean of percent change from baseline between rocatinlimab cohorts and placebo were assessed. Pruritus was significantly improved with rocatinlimab by Week 2 in all cohorts (−18.40% to −21.96%; $p \leq 0.018$) except 600 mg Q4W (−9.66%; $p = 0.208$), and in all cohorts by Week 4 (−15.70% to −27.19%; $p \leq 0.045$). EASI improvements compared with placebo were significant in all rocatinlimab cohorts by Week 6 (−20.50% to −32.13%; $p \leq 0.001$), and in the 300 mg and 600 mg Q2W cohorts by Week 2 (−13.27% and −13.66%; $p \leq 0.028$). Further improvements with rocatinlimab compared with placebo continued to Week 16; improvements from baseline continued in all active cohorts to Week 36 and were maintained for 20 weeks off-treatment.

Conclusion:

Rocatinlimab improved pNRS and EASI by Week 2; improvements continued and were maintained off-treatment until the end of study. Rocatinlimab represents a potential novel treatment option for patients with msAD and is being explored further in the comprehensive phase 3 ROCKET program.

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Abstract N°: 3801

The quality of life in patients with atopic dermatitis in Romania

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Introduction & Objectives: Atopic dermatitis (AD) is an inflammatory chronic skin disease that poses a significant burden to patients. This condition affects the quality of life, with patients reporting higher levels of mental health-related impairments (depression and anxiety) than patients diagnosed with other skin diseases or the general population, and decreased productivity and participation in social activities. This is the first study conducted in Romania to assess the quality of life of patients with atopic dermatitis.

Materials & Methods: We used data from 622 patients (aged > 18 years) collected using a web survey disseminated at the national level. We analyzed utilities derived from EQ-5D-5L and variables such as age, sex, severity, and time since diagnosis and conducted ANOVA tests and multiple linear regression.

Results: The average value for utilities derived from the EQ-5D-5L data was 0.8578. Most patients were over 36 years (n=522), female (n=471), had moderate severity (n=368), and were diagnosed in the past 3 years (n=180). The ANOVA tests showed that there were group differences across severity levels ($p < 0.001$), while the group differences for age, sex, and time since diagnosis were not statistically significant. The results of the multiple linear regression showed that mild cases are associated with higher utilities (0.037, $p<0.001$) and severe cases with lower utilities (-0.168, $p<0.001$); sex, age, and time since diagnosis were not significant predictors. However, although this model is statistically significant ($p<0.001$), it accounts for only 43% of the variance in utilities.

Conclusion: Our results show that two severity levels influence the quality of life in this nationally representative sample. These results highlight the need for additional studies (with measurements at multiple timepoints) to identify other factors that could influence the quality of life in patients with atopic dermatitis (with different severity levels) in Romania.

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Abstract N°: 3804

Efficacy and safety of delgocitinib cream in adults with moderate to severe Chronic Hand Eczema: pooled results of the Phase 3 DELTA 1 and 2 trials

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Introduction & Objectives: Chronic Hand Eczema (CHE) is a frequent inflammatory skin disease associated with pain, pruritus, and significant occupational, functional, social, and psychological burden. Delgocitinib is a topical pan-JAK inhibitor which showed a dose-dependent efficacy in adults with CHE in a Phase 2b trial. The objectives of this analysis were to study (1) the efficacy, as assessed by Investigator's Global Assessment for CHE (IGA-CHE) treatment success (primary outcome), and the secondary outcomes ≥75%/≥90% improvement in Hand Eczema Severity Index (HECSI-75/90) and ≥4-point improvement in the Dermatology Life Quality Index (DLQI), and (2) the safety of twice-daily applications of delgocitinib cream 20 mg/g compared with cream vehicle in the treatment of adults with moderate to severe CHE in a pooled analysis of the DELTA 1 and DELTA 2 trials.

Materials & Methods: In the Phase 3 DELTA 1 (NCT04871711) and DELTA 2 (NCT04872101) trials, adults with moderate to severe CHE were randomized 2:1 to twice-daily delgocitinib cream 20 mg/g or cream vehicle for 16 weeks. The primary endpoint was the IGA-CHE treatment success at Week 16, defined as IGA-CHE score of 0/1 (clear / almost clear, i.e., no or barely perceptible erythema and no other signs), with a ≥2-step improvement from baseline. Key secondary endpoints included HECSI-75/90 and ≥4-point improvement in the DLQI. This DELTA 1 and 2 pooled analysis included 639 patients treated with delgocitinib cream and 321 with cream vehicle.

Results: At Week 16, a significantly greater proportion of delgocitinib-treated patients, versus cream vehicle, achieved IGA-CHE treatment success (24.3% vs. 8.4%; $P<0.001$), HECSI-75 (49.4% vs. 20.9%; $P<0.001$), HECSI-90 (30.3% vs. 10.6%; $P<0.001$), and DLQI ≥4-point improvement (73.3% vs. 47.8%; $P<0.001$). Most frequent adverse events (occurring in ≥5% of patients) were COVID-19, nasopharyngitis, and headache with similar rates in both treatment groups.

Conclusion: In the DELTA 1 and 2 pooled analysis, delgocitinib cream twice-daily confirmed its clinical efficacy in patient- and clinician-reported efficacy outcomes versus cream vehicle in adult CHE patients and suggests an innovative treatment option in this often difficult-to-treat patient population.

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Abstract N°: 3805

Longitudinal Outcome of Dupilumab for Children and Adolescents with Atopic Dermatitis: An Asian Perspective

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Introduction & Objectives: Atopic dermatitis (AD) is a chronic inflammatory skin condition that mostly affects children and adolescents, significantly affecting their quality of life. Dupilumab, a monoclonal antibody targeting interleukin-4 receptor alpha, has emerged an effective therapeutic option for moderate-to-severe AD in children six months and older. Longitudinal data looking at 2- year follow up on pediatric patients who were treated with dupilumab is limited.

Materials & Methods: The medical records of AD patients aged 6 to 18 years at KK Women's and Children's Hospital. who had been initiated on dupilumab from at least 2 years prior to the data collection period, whether they are still being treated with Dupilumab, were reviewed. Outcome measures include changes in disease severity assessed by Eczema Area and Severity Index (EASI) and Investigator Global assessment (IGA), as well as adverse events such as eye complications, injection site reactions, head and neck erythema.

Results: 59 patients were included and the mean duration of AD was 10.1 ± 4.6 years. 72% were males and the median age was 16 ± 3.7 years old. 75% were Chinese,15% Malays 3% Indians and 7% of other ethnicities, similar to the ethnic distribution in Singapore. 42% received prior phototherapy (of at least 10 sessions), 15% received prior methotrexate, 34% received prior cyclosporin, 5% received prior mycophenolate mofetil. The mean EASI score pre-dupilumab was 24.5 ± 11.1. Of the 59 patients, 47 (79.7%) patients had 1-year EASI scores charted and 29 (49.2%) patients had 2-year EASI scores charted. Both 1-year and 2-year EASI scores showed significant improvement. The results showed at least achieved 43% 1-year EASI 50, 22% achieved at least EASI 75 and 19% achieved at least EASI 90; 27% achieved at least 2-year EASI 50, 12% achieved at least 2-year EASI 75 and 12% achieved at least 2-year EASI 90. Before treatment, the mean IgA score was 3.9 ± 0.3, and this improved to 1.6 and 1.3 after 1 and 2-years respectively. Hospitalization rates improved from 17% 1 year before dupilumab to 0% and 2% 1-year and 2-years post initiation respectively. Reported adverse outcomes include eye complications (12%). Eye complications reported were conjunctivitis (71%), limbitis (14%) and blepharitis (14%). There were no cases of injection site reactions and no head and neck erythema.

Conclusion: The results suggest that dupilumab therapy leads to significant improvement in disease severity and reduction in pruritus among Asian pediatric patients with AD. Moreover, the safety profile of dupilumab appears favorable, with few reported adverse events and those that were reported were mild and transient. Eye complication rates were consistent with outcomes measured in adults. This study provides valuable insights into the long-term efficacy and safety of dupilumab in managing AD in Asian children and adolescents, contributing to the optimization of treatment strategies in this population.

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Abstract N°: 3841

Using social media listening to understand the patient perspective of atopic dermatitis symptoms, treatments, and quality of life in the United States

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Introduction & Objectives: Atopic dermatitis (AD) is a chronic, pruritic, inflammatory disease primarily affecting children but also adults. Treatments include topical corticosteroids and advanced therapies such as monoclonal antibodies (mAbs) and Janus kinase inhibitors (JAKis). Understanding patients' perspective on AD experience is crucial for improving outcomes. Social media listening is an emerging approach to understand patients' disease experience, and as patients with AD actively discuss symptoms, treatments, and quality of life (QoL) concerns on social media platforms, it may lead to novel insights. This study used social listening to analyse patients' AD-related conversations to explore opinions on AD symptoms, QoL and treatments.

Materials & Methods: Publicly available information on digital platforms (including forums, X/twitter and Reddit) in the English language between November 2018 and October 2023 in the US was collected. Posts that mentioned AD and defined key words were filtered and contextualised so only posts potentially shared by patients and caregivers were analysed. Posts were categorised based on content including symptoms, flares, treatments, remedies, diagnostic tests and healthcare professionals (HCPs).

Results: Of the sample 1559** posts in the current analysis, 89% were from patients (n=1388), 8% were from caregivers (n=125) and 3% were unidentified (n=46). Among patient posts mentioning gender (n=489), 64% were female, and among patient posts mentioning age (n=283), 92% were ≤30 years old. Top conversation topics included AD symptoms (98%, n=1527), QoL (50%, n=783), AD skin care (39%, n=613), AD treatments (33%, n=507) and HCP interactions (14%, n=223). Among AD symptoms (n=1527), itching was the most reported symptom (88%, n=1348) and one of the most bothersome. Of the QoL topics (n=783), the most reported impacts were frustration (39%, n=307), sleep disturbance (36%, n=283) and skin pain (24%, n=191). Among AD treatment posts that specified treatments and indicated treatment use (n=487), topical corticosteroids (49%, n=241), antihistamines (38%, n=187), and mAbs (25%, n=121) were the most mentioned, while 2.3% of posts mentioned JAKis (n=11). Sentiment analysis showed mostly negative views towards topical corticosteroids (N=169, 60% negative vs 40% positive) and mostly positive views towards mAbs (N=91, 35% negative vs 65% positive). The top positive sentiment for topical corticosteroids (n=67) was improved AD (36%, n=24), while the top negative sentiment (n=102) was withdrawals (46%, n=47). The top positive sentiment for mAbs (n=59) was controlled AD (39%, n=23), while the top negative sentiment was ineffectiveness (34%, n=11). Despite fewer mentions of JAKis, sentiment was mostly positive (N=6, 67% positive vs 33% negative); the top positive sentiment was controlled AD (n=4), while cost/insurance issues (n=1) and side effects (n=1) were identified as negative sentiments.

Conclusion: Despite mAbs and JAKis availability, patients with AD still report high symptom and QoL burdens. Although sentiment analysis revealed greater patient satisfaction with mAbs compared with topical corticosteroids, there was evidence of dissatisfaction for both treatments. This study highlights unmet AD treatment needs and emphasises the need for patient-centred therapeutic development.

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Abstract N°: 3868

Topical pan-JAK inhibition with delgocitinib restores the molecular signature of lesional skin in patients with Chronic Hand Eczema

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Introduction & Objectives: Chronic Hand Eczema (CHE) is a multifactorial, inflammatory skin disease characterized by several clinical subtypes and association with innate immune and T helper (Th)1/Th2 /Th17 inflammation. Delgocitinib, a pan-Janus kinase (JAK) inhibitor, blocks JAK-mediated signalling of inflammatory cytokines that play a key role in CHE pathogenesis. In this analysis, we investigated (1) the molecular endotype underlying CHE and (2) to what extent the topical application of delgocitinib ointment reduced local inflammation and restored skin barrier function.

Materials & Methods: Seventy-two biopsy samples from 41 patients with CHE from the Phase 2a trial (NCT02664805) were collected: 38 from baseline and 34 from end of treatment (EoT). Thirty-one patients (delgocitinib ointment: n=20; ointment vehicle: n=11) had paired samples from both baseline and EoT. RNA was extracted and global gene expression was profiled by microarray analysis. A pairwise comparison of biomarker expression was made between severe, moderate, and mild CHE at baseline. Severe and mild CHE were compared to assess the regulation of the most relevant inflammatory pathways, including the Th1/Th17 and JAK pathways. A comparison between baseline and EoT was made for both the delgocitinib and vehicle groups. The gene set analysis was conducted on the Gene Ontology (GO) biological processes, and annotated gene sets and pathways collected in Reactome and Kyoto Encyclopedia of Genes and Genomes (KEGG) databases.

Results: Gene expression largely differed between patients with severe and mild CHE, including the downregulation of genes associated with maintaining skin barrier homeostasis in severe cases (e.g., *LORICRIN*, *FLG2*, and *SERPINA12*), and upregulation of genes involved in the Th1, Th17, Th22, and Th2 immune pathways. Delgocitinib treatment led to a significant normalization of the dysregulated genes in the Th1, Th17, Th22, (all $P<0.05$) and Th2, and JAK pathways ($P<0.01$). Furthermore, delgocitinib treatment normalized the expression of key skin barrier function and tissue integrity markers that were downregulated at baseline, including *FLG*, *FLG2*, *AQP9*, *SCEL*, and *LORICRIN* ($P<0.001$); none were up- or down-regulated in samples from vehicle patients. Delgocitinib-treated patients demonstrated normalized GO biological processes in the gene set analysis, with epidermis development and keratinocyte differentiation being among the most significant.

Conclusion: Severe CHE was associated with a strong dysregulation of genes in various pathways involved in skin inflammation and barrier function. Delgocitinib normalized the inflammatory processes and restored skin barrier integrity in CHE by inhibiting JAK signalling pathways.

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Abstract N°: 3870

Treatment response of delgocitinib cream according to Chronic Hand Eczema (CHE) subtypes in adults with moderate to severe CHE: results from the Phase 3 DELTA 1, DELTA 2, and DELTA 3 trials

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Introduction & Objectives: Chronic Hand Eczema (CHE) is a heterogeneous, multifactorial, inflammatory skin disease associated with significant psychological, functional, social, and occupational burdens. It presents as several etiological and clinical subtypes. In patients with moderate to severe CHE, the topical pan-Janus kinase inhibitor delgocitinib cream demonstrated significant improvement in all key efficacy endpoints and was well tolerated versus cream vehicle in the phase 3 DELTA 1 (NCT04871711) and DELTA 2 (NCT04872101) trials and in the open-label DELTA 3 trial (NCT04949841) when used long-term as needed. The aim of this post hoc analysis of DELTA 1, 2, and 3 trials was to assess the efficacy of twice-daily topical applications of delgocitinib cream (20 mg/g) at Weeks (W)16 and 52 according to CHE subtypes in adults with moderate to severe CHE.

Materials & Methods: This pooled analysis included 638 patients treated with delgocitinib cream 20 mg/g in DELTA 1 or DELTA 2 and DELTA 3. In DELTA 3, patients who completed the 16-week DELTA 1 or DELTA 2 treatment period continued using delgocitinib cream on an as-needed basis for 36 weeks (i.e., W52) according to the IGA-CHE score. The primary endpoint of DELTA 1 and DELTA 2 was the Investigator's Global Assessment for CHE (IGA-CHE) treatment success (TS) at W16, defined as IGA-CHE score of 0/1 (clear or almost clear, i.e., no/barely perceptible erythema and no other signs), with a ≥2-step improvement from baseline. One of the key secondary endpoints was ≥75% improvement in Hand Eczema Severity Index (HECSI-75). For this analysis, data were assessed at W16 and W52, according to the patient's main CHE subtype (atopic hand eczema [n=225]; hyperkeratotic hand eczema [n=143]; irritant contact dermatitis [n=123]; allergic contact dermatitis [n=78]; vesicular hand eczema [n=69]).

Results: IGA-CHE TS and HECSI-75 was achieved at W16 by 24.3% and 49.4% of delgocitinib-treated patients, respectively, and at least once during initial 16 weeks of treatment by 42.0% and 66.5%, respectively (**Table**). The proportion of patients achieving IGA-CHE TS and HECSI-75 continued to increase to 59.9% and 83.5%, respectively, after 52 weeks of treatment. By W52, IGA-CHE TS was achieved at least once by 75.7% (irritant contact dermatitis), 72.5% (vesicular hand eczema), 66.0% (allergic contact dermatitis), 58.9% (atopic hand

eczema), and 38.2% (hyperkeratotic hand eczema) of patients treated with delgocitinib cream. By W52, HECSI-75 was achieved at least once by 92.5% (irritant contact dermatitis), 87.7% (vesicular hand eczema), 89.4% (allergic contact dermatitis), 84.7% (atopic hand eczema), and 68.6% (hyperkeratotic hand eczema) among delgocitinib-treated patients.

Conclusion: Delgocitinib cream 20 mg/g was effective across all CHE subtypes at W16, with increasing treatment effects observed up to W52 and was well tolerated, supporting the long-term benefit of delgocitinib cream in patients with moderate to severe CHE.

Table. Proportion of patients achieving response at Week 16 and estimated cumulative incidence of IGA-CHE treatment success and HECSI-75 at Weeks 16 and 52 by CHE subtype in patients treated with delgocitinib cream 20 mg/g (pooled analysis of DELTA 1, DELTA 2 and DELTA 3 data)

CHE subtypes[a]	IGA-CHE treatment success[b]		HECSI-75	
Proportion of patients achieving response, % (95% CI)	**Week 16**		**Week 16**	
Irritant contact dermatitis[c] (N=123)	29.3 (22.0,37.8)		58.5 (49.7,66.9)	
Vesicular hand eczema (pompholyx) (N=69)	31.9 (22.1,43.6)		60.9 (49.1,71.5)	
Allergic contact dermatitis[c] (N=78)	24.4 (16.2,34.9)		52.6 (41.6,63.3)	
Atopic hand eczema (N=225)	28.0 (22.5,34.2)		55.6 (49.0,61.9)	
Hyperkeratotic hand eczema (N=143)	10.5 (6.5,16.6)		24.5 (18.2,32.1)	
Total (N=638)	24.3 (21.0,27.6)		49.4 (45.5,53.3)	
Estimated cumulative incidence,[d] % (95% CI)	**Week 16**	**Week 52**	**Week 16**	**Week 52**
Irritant contact dermatitis[c] (N=123)	55.3 (46.0,63.6)	75.7 (66.9,82.5)	76.4 (67.8,83.0)	92.5 (85.7,96.1)
Vesicular hand eczema (pompholyx) (N=69)	53.6 (41.1,64.6)	72.5 (60.0,81.6)	78.3 (66.3,86.4)	87.7 (76.2,93.8)
Allergic contact dermatitis[c] (N=78)	39.7 (28.8,50.4)	66.0 (54.1,75.5)	67.9 (56.2,77.2)	89.4 (79.3,94.7)
Atopic hand eczema (N=225)	45.4 (38.7,51.7)	58.9 (52.1,65.1)	70.7 (64.2,76.2)	84.7 (79.2,88.8)
Hyperkeratotic hand eczema (N=143)	21.0 14.7,28.0)	38.2 (30.1,46.3)	44.8 (36.4,52.7)	68.6 (60.1,75.7)
Total (N=638)	42.0 (38.2,45.8)	59.9 (55.9,63.6)	66.5 (62.6,70.0)	83.5 (80.4,86.2)

In DELTA 1 and DELTA 2 (up to Week 16) patients were treated with delgocitinib cream 20 mg/g. Patients completing the 16-week of treatment period in DELTA 1 and DELTA 2 could enrol in DELTA 3 and were assigned to as-needed treatment based on the IGA-CHE score for 36 weeks (i.e. Week 52). In DELTA 3, patients with an IGA-CHE score of 0 or 1 were not assigned to treatment while patients with an IGA-CHE score ≥2 were assigned to delgocitinib cream 20 mg/g treatment. During DELTA 3, delgocitinib cream 20 mg/g treatment was stopped when patients on treatment achieved an IGA-CHE score of 0 or 1. Treatment was re-initiated when patients off-treatment experienced an IGA-CHE score ≥2.

[a]Patient's main CHE subtype according to trial investigator; [b]IGA-CHE treatment success was defined as IGA-CHE score of 0 (clear) or 1 (almost clear) with a ≥2-step improvement from parent trial baseline; [c]Only patients were included who were adherent to standard non-medicated skin care including avoidance of known and relevant irritants and allergens; [d]Cumulative incidence was estimated using the Aalen-Johansen estimator with permanent discontinuation of trial drug and initiation of rescue treatment as competing risks. Patients completing the treatment period were censored at the day of completion (Week 16 or Week 52).

CI, confidence interval; CHE, Chronic Hand Eczema; HECSI-75, ≥75% improvement in hand eczema impact scale; IGA-CHE, Investigators global assessment for Chronic Hand Eczema; N, number of patients with data available at parent trial (DELTA 1 and DELTA 2) baseline.

ClinicalTrial.gov ID: DELTA 1, NCT04871711; DELTA 2, NCT04872101; DELTA 3, NCT04949841.

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Abstract N°: 3885

Tralokinumab formulated as a pre-filled pen was efficacious and well-tolerated in adults and adolescents with moderate-to-severe atopic dermatitis

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Introduction & Objectives: Tralokinumab, a high-affinity monoclonal antibody that specifically neutralizes interleukin-13, is approved in multiple countries for adults and adolescents with moderate-to-severe atopic dermatitis (AD). The approved dose for adults is 300 mg every 2 weeks, whereas the approved dose for adolescents is 300 mg every 2 weeks in the EU and 150 mg every 2 weeks in the USA. Tralokinumab was initially developed as a pre-filled syringe and has recently been developed as a pre filled pen, which offers a more convenient method of administration and reduces the number of injections per dose to 2 injections for the loading dose and 1 injection for subsequent doses. The phase 3 open-label trial INJECZTRA (NCT05194540) assessed the efficacy, safety, and usability of the tralokinumab pre-filled pen in adult and adolescent patients with moderate-to-severe AD.

Materials & Methods: 136 patients (105 adults, 31 adolescents) received tralokinumab administered with the pre-filled pen for 16 weeks. An initial loading dose (600mg tralokinumab, 2 injections) was administered at baseline. At this time patients were trained in correct handling and use of the tralokinumab pre-filled pen. During the rest of the trial, patients self-administered 300 mg tralokinumab (1 injection) every 2 weeks at the trial site or at home. Patients' ability to successfully self-administer tralokinumab with the pre-filled pen was assessed at the site at Week 4 and at home at Week 8. Primary endpoints were IGA 0/1 and EASI-75 at Week 16. Secondary endpoints included number of adverse events. Topical corticosteroids (TCS) were allowed as rescue medication; patients using TCS were considered non-responders.

Results: At baseline, 33.1% of patients had severe AD (i.e. an IGA score of 4) (adults 32.4%; adolescents 35.5%) and mean EASI score was 25.2 (adults 24.9; adolescents 26.1). At Week 16, 28.7% of patients achieved IGA 0/1 (adults 28.6%; adolescents 29.0%) and 43.5% of patients achieved EASI-75 (adults 44.8%; adolescents 38.7%). 96.2% of patients successfully self-administered tralokinumab at Week 4 (adults 98.0%; adolescents 89.7%) and 97.5% of patients successfully self-administered tralokinumab at Week 8 (adults 96.9%; 100.0% adolescents). 86 adverse events were reported in 50 patients (66 adverse events in 37 adults; 20 adverse events in 13 adolescents). The most common adverse events were injection site reaction (5.9%), atopic dermatitis (4.4%), and conjunctivitis (2.9%).

Conclusion: Tralokinumab formulated as a pre-filled pen was efficacious and well tolerated. Both adult and adolescent patients were able to self-administer tralokinumab successfully with the pre-filled pen. There were no new AEs compared with the pivotal trials in adults and adolescents. Across all efficacy endpoints, efficacy data were numerically better or comparable to the pivotal adult and adolescent data.

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Abstract N°: 3904

Long-term progressive improvement of skin condition and reconstitution of the skin barrier by a herbal ginger-Cannabidiol emollient plus product combination in a 3-months clinical trial

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Introduction & Objectives:

Atopic dermatitis (AD) is one of the most prevalent chronic skin diseases and characterized by flares of dry, inflamed and itchy skin. Baseline therapy with topical skin care products including emollients and emollients *plus*, the cornerstone of AD management, aims to reduce the number of exacerbations and thus, the need for pharmacological intervention (e.g. with corticosteroids). The objective of the reported three-months monocentric pre post study was the evaluation of the long-term efficacy of an herbal ginger-Cannabidiol emollient *plus* consisting of a body lotion and an intensive care product (oil-in-water emulsions). Rapid therapeutic effects on pruritus by treatment of AD-patients with the intensive care product alone up to one week have already been published.

Materials & Methods:

Participants were advised to apply the body lotion twice daily and use the intensive care product as required. Evaluation of skin condition and symptom severity by experienced dermatologists (vIGA-AD), subjective assessments (peak pruritus NRS-11) and validated PROMs (DLQI/ CDLQI, RECAP) was carried out at the start, every four weeks during the trial and at the end. Additionally, participants completed a twice weekly diary to document flare-up related corticosteroid use. Tape-stripping of the stratum corneum (SC) and subsequent analysis of the composition of intercellular lipids via HPTLC as well as TEM imaging for illustration of the lipid lamellae structure in the interstitial SC space were performed in a subgroup of adults at the start and end of the trial.

Results:

The study population comprised a total of 94 participants, including 51 adults (mean age ±SD: 43.6 ±15.3) and 43 children (8.9 ±3.8). Significant reduction in mean peak pruritus (Itch NRS-11) by 53% after four weeks with progressive improvement over three months was observed. Participants reported a significant improvement in eczema control according to the mean RECAP sum score. In comparison to real-world data (RWD) of patients applying their individually established skin care routine, participants needed reduced corticosteroid intervention (12% vs 73% RWD) in relation to a reported flare-up. Objective dermatological assessments showed significant improvement of erythema, dryness, scaling and papules after four weeks as well as progressive significant improvement in mean vIGAAD score by 63% over three months, with a 59% vIGAAD success rate at the end of the study. The physiological assessment of tape-stripped SC samples of a subgroup (N= 16) revealed a significant increase of the content of relevant intercellular lipids and the length of lipid lamellae. The area with no or substantially reduced lipid lamellae in the interstitial space of the SC was reduced by 94% (from 53% to 3%) over three months. Importantly, the products were very well tolerated.

Conclusion:

Application of a ginger-CBD emollient *plus* combination consisting of a body lotion for regular use along with an

intensive care product for irritated skin areas over three months reduced pruritus and improved visible signs of AD by restoring the epidermal permeability barrier. PROMs indicated significant relief in subjective disease burden and improved quality of life. Participants used less corticosteroids in comparison to complementary RWD.

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Abstract N°: 3915

Epidermal TET2 Regulates the Inflammatory Microenvironment in Atopic Dermatitis

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Introduction & Objectives:

Atopic dermatitis is a common chronic inflammatory skin disease with complex pathogenic mechanisms. Environmental factors can interact with genetic factors and participate in AD pathogenesis through epigenetic modifications. TET2, known as an important demethylating enzyme, plays an important role in AD, but its specific mechanism of action needs to be further investigated.

Materials & Methods:

Skin lesion specimens from AD patients and healthy controls were collected and the expression levels of TET2 and its metabolite 5-hmC were labeled by immunohistochemical staining. Using epidermal-specific TET2 knockout mice (K14cre+/TET2fl/fl), MC903-AD dermatitis mouse model was constructed to observe its inflammatory phenotype, histopathological changes, and degree of itching. Their skin lesion tissues were collected and the levels of type 2 inflammatory factors IL-4, IL-13, IL-31 and TSLP were detected using ELISA, and the expression levels of important barrier molecules filaggrin, claudin-1 and occludin were labeled using immunofluorescence staining. Staphylococcus aureus was also inoculated on the AD mouse model to detect differences in the amount of colonized bacteria.

Results:

Immunohistochemical staining showed significantly lower expression levels of TET2 and its metabolite 5-hmC in AD patients compared to healthy controls. K14cre+/TET2fl/fl-AD mice showed more pronounced inflammatory phenotypes including erythema, swelling, dryness, and scratching compared to WT-AD, and H&E staining revealed a more severe inflammatory cellular infiltrate, and the number of scratches in mice was were significantly increased. Meanwhile, we found that the expression levels of filaggrin, claudin-1 and occludin were significantly reduced after TET2 knockdown, and the expression levels of type 2 inflammatory factors IL-4, IL-13, IL-31 and TSLP were significantly increased in mice, as well as the amount of colonized bacteria after inoculation with S. aureus.

Conclusion:

TET2, as an important epigenetic modification molecule, is able to interact with environmental factors to regulate the AD2-type inflammatory response, disruption of epidermal barrier function, and dysbiosis of microflora, which in turn affects the formation of the inflammatory microenvironment of AD. The role of TET2 in the pathogenic mechanism of AD deserves further investigation and has the potential to become a new targeted therapeutic molecule for AD.

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Abstract N°: 3938

Blood proteomic atherosclerotic profile in atopic dermatitis and psoriasis: comparative study in the search for atherosclerosis biomarkers

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Introduction & Objectives: Systemic inflammation is a promoter of atherosclerosis, with psoriasis being one of the conditions with the strongest association with cardiovascular events. Atopic dermatitis (AD), especially moderate-severe forms, has also been associated with an increased incidence of cardiovascular disease, although this question remains controversial. Our objective was to assess the expression of different proteins related to atherosclerosis in blood of patients with moderate-severe AD and psoriasis, comparing the proteomic profile of both conditions and searching for markers that correlate with the presence of subclinical atherosclerosis in these populations.

Materials & Methods: Cross-sectional study that included adults without cardiovascular disease with moderate-severe AD, moderate-severe psoriasis, and healthy controls. A multiterritorial assessment of subclinical atherosclerosis was performed by 2-dimension ultrasound of the carotid and femoral arteries. An OLINK multiplex assay (Olink Bioscience, Uppsala, Sweden) was used for the proteomic analysis of 92 atherosclerosis-related proteins in peripheral blood (Olink Target Cardiovascular III panel). The study protocol was approved by the Institutional Review Board of the Hospital Ramon y Cajal.

Results: Thirty-four patients with AD, 34 with psoriasis and 20 controls were included, with a median age of 37 (IQI 31-46), a median BMI of 25.9 (IQI 23.5-29.4), and a men proportion of 70%, without significant differences between the 3 populations. Median EASI was 22.1 (IQI 17.4-28.4) in AD group, with a median PASI of 9 (IQI 7-14) in patients with psoriasis. The prevalence of subclinical atherosclerosis in the femoral and/or carotid arteries was 38% in AD, 50% in psoriasis and 20% in controls (p=0.164 AD vs controls; p=0.029 psoriasis vs controls). Patients with AD showed 3 overexpressed proteins in plasma compared with controls: ST2, matrix extracellular phosphoglycoprotein (MEPE) and epithelial cell adhesion molecule (Ep-CAM). When AD patients were stratified according to subclinical atherosclerosis, those with subclinical atherosclerosis showed significantly higher values of low-density lipoprotein receptor (LDL receptor) and Cadherin-5 (CDH5). Psoriasis patients showed up-regulation of ST2 and Elafin (Pl3), and when stratified according to atherosclerosis status, higher levels of tumor necrosis factor receptor superfamily member 10C (TNFRSF10C) and C-C motif chemokine 16 (CCL16), as well as lower levels of metalloproteinase inhibitor 4 (TIMP4), were found in the group with atheroma plaques.

Conclusion: Patients with AD and psoriasis showed upregulation of atherosclerosis related markers in peripheral blood, with a distinct profile. Furthermore, we identified a set of proteins associated with atheroma plaques in these populations, which may constitute biomarkers of early cardiovascular disease.

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Abstract N°: 3952

Changes in quality of life measured by EQ-5D-5L in patients treated with lebrikizumab for moderate-to-severe atopic dermatitis

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Introduction & Objectives:

Atopic dermatitis (AD) is a chronic skin disorder with high disease burden and an adverse impact on quality of life. Lebrikizumab (LEBRI) is a novel monoclonal antibody that binds with high affinity and slow off-rate to interleukin (IL)-13, a key cytokine in AD. Phase 3 trials have illustrated that lebrikizumab improves disease-specific quality of life, including itch and sleep loss due to itch, in adults and adolescents with moderate-to-severe AD.

To report on general aspects of quality of life among patients with moderate-to-severe AD in two randomized, double-blind, placebo-controlled monotherapy Phase 3 trials, ADvocate1 (NCT04146363) and ADvocate2 (NCT04178967).

Materials & Methods:

The analysis was performed on the pooled modified intention-to-treat population from ADvocate1 and ADvocate2. Eligible adults and adolescents (≥12 to ˂18 years of age and weighing ≥40 kg) with moderate-to-severe AD were randomized to receive LEBRI 500 mg at baseline and Week 2 followed by LEBRI 250 mg, or to receive placebo (PBO), every 2 weeks (Q2W) as a subcutaneous injection, to Week 16.

The EQ-5D-5L measures general aspects of quality of life and covers 5 domains (mobility, self-care, usual activities, pain/discomfort, anxiety/depression) utilizing 5 health state levels each, which was converted into a single index score using the US algorithm and a general health visual analogue scale (VAS). The missing data were imputed using Last Observation Carried Forward (LOCF).

At Week 16, proportions of patients who rated "no problem" in each EQ-5D domain, change from baseline (CFB) in VAS and US index score were compared for LEBRI Q2W vs. PBO. Within LEBRI Q2W group, the outcomes among %EASI CFB response subgroups (<50%, 50-75%, 75-90%, and ≥90%) were also compared (patients with missing data, treatment discontinuation, or use of rescue medication were classified in the worst EASI responder category).

EQ-5D domain outcome was analyzed by Cochran-Mantel-Haenszel method, and CFB in VAS and US index score were analyzed by analysis of covariance.

Results:

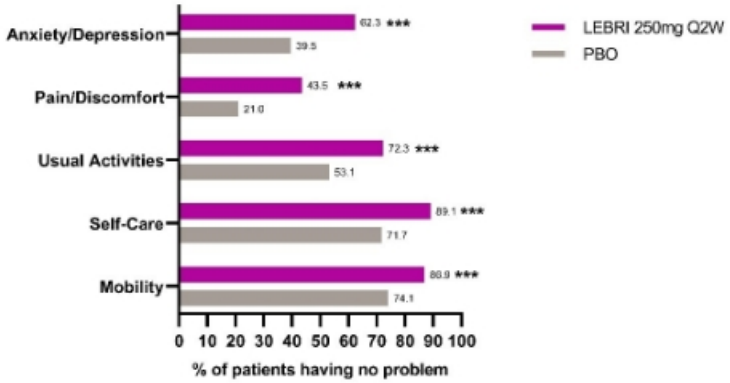
Compared to PBO, significantly higher proportions of LEBRI Q2W treated patients reported having “no problems” in all EQ-5D domains, and there were larger improvements from baseline in VAS and US index scores in LEBRI Q2W patients compared to PBO (P<0.001 for all comparisons). Within LEBRI Q2W group, compared to patients with <50% EASI CFB, significantly higher proportions of those with at least 90% EASI CFB reported having “no problems” in all EQ-5D domains, and there were larger improvements in VAS and US index scores in at least 90% EASI CFB group compared to <50% EASI CFB group (P≤0.002 for all comparisons).

Conclusion:

LEBRI monotherapy treatment every 2 weeks for 16 weeks improved general, not just disease-specific quality of life in patients with moderate-to-severe AD. The improvement in quality of life correlated with the degree of EASI response.

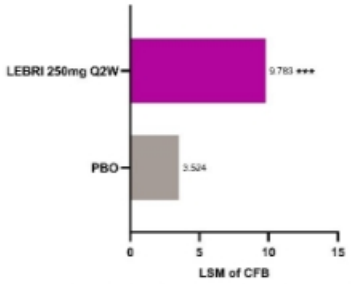
Figures

Figure 1. EQ-5D 5L domain score by treatment



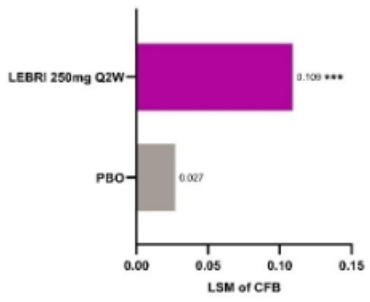
*** indicates P<0.001. Comparison with placebo group.
LEBRI=lebrikizumab; PBO=placebo; Q2W=every 2 weeks

Figure 2. LSM of CFB in VAS score by treatment



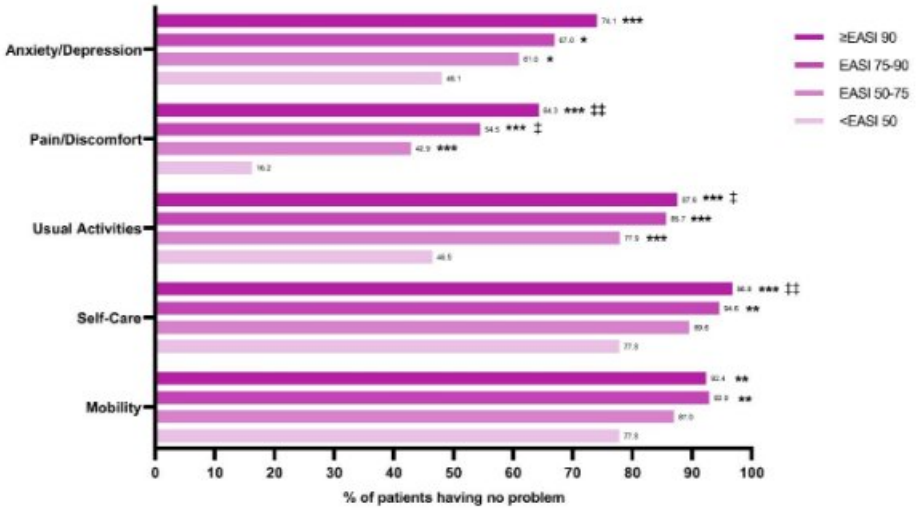
*** indicates P<0.001. Comparison with placebo group.
CFB=change from baseline; LEBRI=lebrikizumab;
LSM=least squares mean; PBO=placebo; Q2W=every 2 weeks;
VAS=Visual Analogue Score

Figure 3. LSM of CFB in US index score by treatment



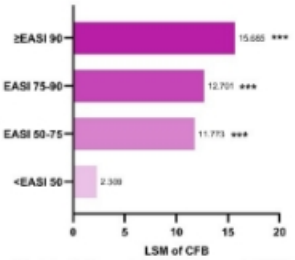
*** indicates P<0.001. Comparison with placebo group.
CFB=change from baseline; LEBRI=lebrikizumab;
LSM=least squares mean; PBO=placebo; Q2W=every 2 weeks

Figure 4. EQ-5D 5L domain score by EASI subgroups



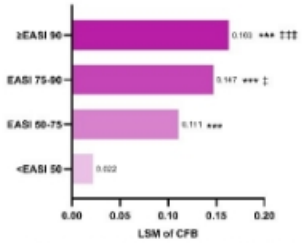
[1]Lebrikizumab treated patients were divided into subgroups by EASI % change from baseline.
* indicates P<0.05, ** indicates P<0.01, *** indicates P<0.001 vs <EASI 50;
‡ indicates P<0.05, ‡‡ indicates P<0.01 vs EASI 50-75.
EASI=Eczema Area and Severity Index; LEBRI=lebrikizumab; Q2W=every 2 weeks

Figure 5. LSM of CFB in VAS score by EASI subgroups[1]



[1]Lebrikizumab treated patients were divided into subgroups by EASI % change from baseline.
*** indicates P<0.001. All comparisons were comparing with <EASI 50 group.
EASI=Eczema Area and Severity Index; LEBRI=lebrikizumab; LSM=least squares mean; Q2W=every 2 weeks;VAS=Visual Analogue Score

Figure 6. LSM of CFB in US index score by EASI improvement[1]



[1]Lebrikizumab treated patients were divided into subgroups by EASI % change from baseline.
*** indicates P<0.001 vs <EASI 50;
‡ indicates P<0.05, ‡‡‡ indicates P<0.001 vs EASI 50-75.
EASI=Eczema Area and Severity Index; LEBRI=lebrikizumab; LSM=least squares mean; Q2W=every 2 weeks

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Abstract N°: 3980

The current status of dermocosmetic products in the treatment of atopic dermatitis in China

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Introduction & Objectives:

Dermocosmetics have garnered much attention from dermatologists for their role in repairing the skin barrier in AD patients, but their practical application in the clinical treatment in China remains unclear. This study aimed to investigate the current status of dermocosmetics in the clinical treatment of AD patients.

Materials & Methods:

An online questionnaire survey was conducted. The collected questionnaires were reviewed, screened, and checked, and the qualified questionnaire data was cleaned and processed for analysis. The study used descriptive statistics and inferential statistical analysis, with intergroup comparisons conducted using chi-square tests or Fisher's exact tests (SPSS 23.0 software).

Results:

The study collected 255 valid questionnaires completed by dermatologists. Among them, 79 were from first tier/new first-tier cities (30.98%), and 176 were from second and third-tier cities (69.02%). Among the respondents, 91 were chief physicians/deputy chief physicians (35.69%), while 164 were attending physicians/resident physicians (64.31%).

The majority of dermatologists (87.45%) recommended dermocosmetics to patients with AD of varying severity, and compared to attending physicians/residents physicians, chief physicians/deputy chief physicians were relatively more likely to recommend the use of moisturizers to AD patients of different severity (Figure 1).

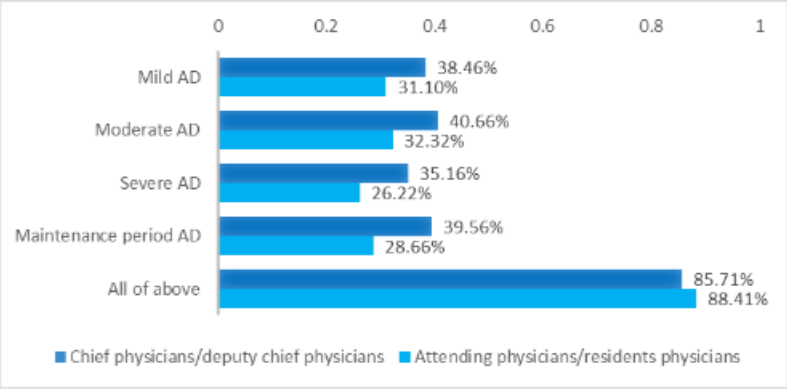

Figure 1. The dermatologists recommends dermocosmetics to patients with AD of varying severity

The main purposes for dermatologists recommending dermocosmetics to AD patients were collaborative enhancement in clinical treatment (78.43%), providing daily skin care (75.29%), and repairing the skin barrier (74.51%). Compared to dermatologists in first tier / new first tier cities, dermatologists in second and third-tier cities were more likely to consider the role of dermocosmetics as daily skin care (80.11% vs 64.56%, p□0.05). In

comparison to chief physicians/deputy chief physicians, attending physicians/resident physicians were more likely to consider the role of dermocosmetics as daily skin care (78.66% vs 69.23%) and repairing skin barrier (78.05% vs 68.13%) (Table 1).

	All	Regions			Titles		
		First tier / new first tier cities	Second and third-tier cities	*P*	Chief physicians /Deputy chief physicians	Attending physicians /Resident physicians	*P*
Collaborative enhancement in clinical treatment	78.43%	81.01%	77.27%	0.61	78.02%	78.66%	1
Providing daily skincare	75.29%	64.56%	80.11%	<0.05	69.23%	78.66%	0.13
Repairing the skin barrier	74.51%	75.95%	73.86%	0.84	68.13%	78.05%	0.11
Alleviating adverse reactions to medications	36.08%	36.71%	35.80%	1	42.86%	32.32%	0.12
Preventing recurrence	18.04%	21.52%	16.48%	0.43	23.08%	15.24%	0.17
Maintaining treatment efficacy	15.29%	20.25%	13.07%	0.20	18.68%	13.41%	0.35

a Note: Data are presented as n(%)

Table 1. The purposes for dermatologists recommending moisturizers to AD patientsa

When recommending dermocosmetics to AD patients, dermatologists primarily considered the product factors of moisturizing effect (83.92%) and safety (64.71%). Compared to dermatologists in second and third-tier cities, dermatologists in first tier/new first tier cities placed more emphasis on safety (72.15% vs 61.36%). Compared to chief physicians/deputy chief physicians, attending physicians/resident physicians focused more on moisturizing effect (86.59% vs 79.12%) and skin barrier repair effect (40.85% vs 32.97%) (Table 2). There were no significant differences in the factors considered by dermatologists of different city levels and professional titles.

	All	Regions			Titles		
		First tier / new first tier cities	Second and third-tier cities	*P*	Chief physicians/ Deputy chief physicians	Attending physicians /Resident physicians	*P*
Moisturizing efficacy	83.92%	87.34%	82.39%	0.42	79.12%	86.59%	0.17
Safety	64.71%	72.15%	61.36%	0.13	68.13%	62.80%	0.47
Alleviating itching	45.49%	44.30%	46.02%	0.91	50.55%	42.68%	0.28
Skin barrier repair effect	38.04%	34.18%	39.77%	0.48	32.97%	40.85%	0.27
Anti-inflammatory effect	25.10%	16.46%	28.98%	<0.05	26.37%	24.39%	0.84
Containing ceramide components	13.33%	11.39%	14.20%	0.68	16.48%	11.59%	0.36
Non-greasy with quick absorption	12.55%	20.25%	9.66%	0.06	14.29%	11.59%	0.67
Easy to apply and spread	7.06%	8.86%	6.25%	0.63	4.40%	8.54%	0.33
High cost-effectiveness	7.06%	3.80%	8.52%	0.27	5.49%	7.93%	0.64
Fading pigmentation	0.39%	0.00%	0.57%	1	0.00%	0.61%	1
Skin microbiome	0.39%	1.27%	0.00%	0.31	0.00%	0.61%	1

a Note: Data are presented as n(%);

Table 2. The factors that dermatologists considered when recommending moisturizers for AD patientsa

Conclusion:

This study investigated the use of dermocosmetics in the clinical treatment of AD patients. Our study provides a basis for optimizing the treatment of AD and the application of dermocosmetics. We advocate for further research

and industry responses in order to enhance the treatment outcomes and quality of life for AD patients in the future.

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Abstract N°: 4006

Systemic exposure and safety profile of delgocitinib cream in adults with moderate to severe Chronic Hand Eczema in the Phase 3 DELTA 2 trial

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Introduction & Objectives: In the DELTA 2 (NCT04872101) Phase 3 trial, delgocitinib cream 20 mg/g, a topical pan-Janus kinase inhibitor, was well-tolerated and demonstrated significant improvement in all efficacy endpoints versus cream vehicle in adults with moderate to severe Chronic Hand Eczema (CHE). The objectives of this analysis were (1) to examine systemic exposure of delgocitinib cream 20 mg/g in adults with moderate to severe CHE in the randomized, double-blind, vehicle-controlled DELTA 2 trial, (2) to compare the DELTA 2 systemic exposure with corresponding data following oral administration of delgocitinib in a Phase 1 trial, and (3) to present a summary of safety related to delgocitinib cream from the randomized, double-blind, vehicle-controlled DELTA 2 trial.

Materials & Methods: Pharmacokinetic blood sampling in DELTA 2 was performed 2-6 hours after delgocitinib application at Weeks 1, 4, and 16 using a liquid chromatography/mass spectrometry-based method (lower limit of quantitation: 5 pg/ml). In the Phase 1 trial (NCT05050279), single oral doses of delgocitinib were tested in healthy volunteers with sampling performed for up to 24-hours post-administration.

Results: In DELTA 2, minimal systemic exposure was recorded in 313 delgocitinib-treated patients, with the highest geometric mean plasma concentration being 0.21 ng/ml at Week 1 (n=286). In the Phase 1 trial, the lowest oral delgocitinib dose tested (1.5 mg; n=8) is regarded as subtherapeutic and showed a peak systemic exposure (geometric mean Cmax) of 7.2 ng/ml. In DELTA 2, adverse events (AEs) were reported by 45.7% (n=143/313; delgocitinib cream) and 44.7% (n=71/159; cream vehicle) of patients, with COVID-19 being most common (11.5% vs 12.6%, respectively). The rate of possibly or probably related AEs was low and similar between delgocitinib cream and cream vehicle. No deaths were reported. Few serious AEs were reported with none assessed as related to the study drug.

Conclusion: The DELTA 2 trial demonstrated minimal systemic exposure in association with a favourable safety profile, supporting a lack of meaningful systemic effect from twice-daily applications of delgocitinib cream in patients with moderate to severe CHE.

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Abstract N°: 4012

Stringent Efficacy Response of Skin Clearance and Itch-Free State With Abrocitinib 100 mg Versus Dupilumab in Patients With Moderate-to-Severe Atopic Dermatitis: A Post Hoc Analysis of JADE COMPARE

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Introduction & Objectives: Atopic dermatitis (AD) is a chronic inflammatory skin condition which manifests in recurring eczematous lesions and intense itch. Patients with more severe AD who do not respond to topical therapy may receive systemic therapies, including dupilumab, an interleukin-4 receptor alpha antagonist, administered subcutaneously as a 300-mg dose every 2 weeks, or abrocitinib, a Janus kinase 1-selective inhibitor administered orally as a once-daily dose of 100 mg or 200 mg. In the phase 3 JADE DARE trial (NCT04345367), patients receiving abrocitinib 200 mg with concomitant topical medicated therapy had an earlier onset of response as early as Week 2 and an advantage over biweekly dupilumab 300 mg on stringent outcomes, defined as a ≥90% or 100% improvement from baseline on the Eczema Area and Severity Index (EASI-90 or EASI-100) that was maintained until the study's end at Week 26. In a post hoc analysis of JADE DARE, a significantly greater proportion of patients receiving abrocitinib 200 mg achieved the combined response of EASI-90 and a score of 0 or 1 on the Peak Pruritus Numerical Rating Scale (PP-NRS 0/1 or itch-free state) compared with dupilumab from Week 2 through Week 26. Here, we evaluated the efficacy of abrocitinib 100 mg compared with dupilumab or placebo in achieving stringent outcomes in JADE COMPARE (NCT03720470), a phase 3 randomized clinical trial of patients with moderate-to-severe AD who received study treatment concurrent with topical medicated therapy.

Materials & Methods: This post hoc analysis included data from adult patients who received once-daily abrocitinib 100 mg, biweekly dupilumab 300 mg (following a 600-mg loading dose), or placebo in JADE COMPARE. Assessments were the proportions of patients achieving the composite endpoint of EASI-90 and PP-NRS 0/1 (ie, itch-free state).

Results: Data were analyzed from 238, 242, and 131 patients treated with abrocitinib 100 mg, dupilumab, and placebo, respectively. As early as Week 2, a greater proportion of patients achieved the composite endpoint of EASI-90 + PP-NRS 0/1 after treatment with abrocitinib 100 mg compared with dupilumab and placebo and continued to increase through the study's end at Week 16 (20.2% [95% CI, 14.2-26.3] vs 15.5% [10.3-20.7] and 5.4% [0.8-10.0]). Results at Week 16 from the same dataset showed a greater proportion of patients achieving the stringent endpoints of EASI-100 (ie, complete resolution of eczema severity) and the Investigator's Global Assessment (IGA) score of 0 (ie, complete skin clearance) after treatment with abrocitinib 100 mg compared with dupilumab or placebo; EASI-100 responses were achieved in 12.7% (95% CI, 8.4-17.0), 5.2% (2.3-8.0), and 4.0% (0.6-7.5) of patients with abrocitinib 100 mg, dupilumab, and placebo, respectively, and IGA score of 0 was

achieved in 12.6% (95% CI, 8.3-16.9), 6.5% (3.3-9.6), and 4.8% (1.1-8.6) of patients, respectively.

Conclusion: More patients treated with abrocitinib 100 mg achieved the composite stringent response of near complete/complete skin clearance and an itch-free state than those treated with dupilumab or placebo. Treatment with abrocitinib 100 mg may provide a complete and robust response in patients with moderate-to-severe AD.

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Abstract N°: 4031

Tralokinumab for the treatment of atopic dermatitis in adolescents, a multicenter, real-world study

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Abstract

Title: Tralokinumab for the treatment of atopic dermatitis in adolescents, a multicenter, real-world study

Background: Atopic dermatitis (AD) is a chronic, inflammatory skin disease that shows a wide heterogeneity of clinical phenotypes among patients of all age groups, and races. It is characterized by intense pruritus and flares of eczematous lesions. Recently, new biological drugs and small molecules have been approved for the management of AD that target the underlying mechanisms of the disease. One of these is tralokinumab, the first biologic that specifically targets and neutralizes the cytokine IL-13Tralokinumab has proven safe and effective in adolescents with atopic dermatitis (AD) in clinical trials. However, comprehensive real-world studies in the pediatric AD population are still needed.

Objective: To characterize the treatment responses and adverse events of Tralokinumab-treated adolescents with AD during dermatology follow-up assessments.

Methods: This was an observational, multicenter, retrospective, study to collect data from adolescent patients (12-17 years) with moderate-severe AD treated with tralokinumab. We reviewed electronic medical records from March 2023 to April 2024 of moderate to severe AD patients starting Tralokinumab at less than age 18 years. Demographics, AD scores (body surface area [BSA], Eczema Area and Severity Index [EASI], and Investigator's Global Assessment [IGA]), Quality of Life (QoL) scores (Children Dermatology Life Quality Index (cDLQI) and Itch Numerical Rating Scale (I-NRS)) as well as safety data were collected.

Results: A total of 21 patients, 7 females (34%) and 14 males (66%), were included. Ethnicities include Caucasian, Hispanic, and Asian. All patients were naïve to advanced therapies (biologics and JAKis) and 62% had at least one atopic comorbidity, the most frequent being astma. The Tralokinumab treatment duration was 16 weeks. All patients presented with severe disease at baseline, with Eczema Area and Severity Index (EASI) scores of 24,2 (SD 6,9), Body Surface Area (BSA) of 33,8 (SD 16,4), Investigator global assessment (IGA) of 3,2 (SD 0.5), Itch Numerical Rating Scale (I-NRS) of 7.4 (SD 1.5). Substantial improvements were observed across all scales. The safety profile remained consistently acceptable throughout the study.

Conclusions: Tralokinumab was well-tolerated and effective in treating adolescents with AD regardless of age, sex, AD phenotype, or ethnicity. This positive response aligns with clinical trial results, affirming tralokinumab as a valuable therapeutic option for moderate-to-severe AD.

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Abstract N°: 4032

Evaluation of the effect of botulinum toxin injection in aggravating or improving seborrheic dermatitis symptoms: A prospective, single-arm clinical trial

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Introduction & Objectives:

Considering the proven therapeutic effect of botulinum toxin and the pathophysiology of seborrheic dermatitis, conflicting hypotheses have been put forward regarding the effect of injection of this toxin on the improvement or exacerbation of seborrheic dermatitis. Because of the lack of consistent studies investigating this relationship, we decided to conduct this study to investigate the effect of local botulinum toxin injection on sebum production and improvement or worsening of seborrheic dermatitis lesions.

Materials & Methods:

This study was a prospective, single-arm clinical trial that involved the injection of botulinum toxin into 20 patients with complaints of skin wrinkles and simultaneous symptoms of seborrheic dermatitis. The trial was conducted at a dermatology clinic between March 2019 and March 2021. Two important characteristics of these patients were seborrheic dermatitis on the face or scalp and a referral for botulinum toxin injection to remove facial wrinkles. The Seborrheic Dermatitis Area and Severity Index (SDASI) was used to determine the severity of symptoms.

Results:

In study of 20 patients with an average age of 40 years, despite the decrease in the average scores of all examined criteria of seborrheic dermatitis symptoms in study, 1 month after botulinum toxin injection, no significant effect of using this toxin was seen on the improvement of patients' symptoms (p value >0.05).

Conclusion:

Despite the emphasis of many studies on the effectiveness of botulinum toxin in reducing the activity of sebaceous glands, the use of botulinum toxin as a therapeutic modality for control the symptoms of seborrheic dermatitis is not suggested by this study. Conducting studies in which the location and technique of injection and the follow-up intervals of patients in them are based on the standard of other studies, are the suggestions made by comparing the results and method of the current study with other studies.

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Abstract N°: 4033

Once-daily roflumilast cream 0.15% for the treatment of atopic dermatitis in patients with diverse skin types: Pooled subgroup analysis from the phase 3 INTEGUMENT-1 and-2 trials

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Introduction & Objectives:

Once-daily, nonsteroidal topical roflumilast is a selective, highly potent phosphodiesterase 4 inhibitor with demonstrated safety and efficacy in patients with atopic dermatitis (AD), psoriasis, and seborrheic dermatitis. Overall results from two phase 3 randomized controlled trials (INTEGUMENT-1: NCT04773587; INTEGUMENT-2: NCT04773600) in patients aged ≥6 years with Validated Investigator Global Assessment for AD (vIGA-AD) of Mild (2) or Moderate (3) and body surface area of ≥3% with no upper limit treated with roflumilast cream 0.15% or vehicle for 4 weeks were reported previously.

Materials & Methods:

This pooled analysis reports the efficacy of roflumilast cream 0.15% in patients with diverse skin types based on race (White: 59.5%; Black or African American: 20.3%; Asian: 13.2%; Others: 7.0%), ethnicity (Hispanic or Latino: 16.6%; Not Hispanic or Latino: 82.8%), and Fitzpatrick score (I–III: 53.8%; IV–VI: 46.2%).

Results:

At Week 4, vIGA-AD Success (Clear [0] or Almost Clear [1] with ≥2-grade improvement) was achieved by 31.3% of roflumilast-treated and 14.1% of vehicle-treated patients (P<0.0001). Higher percentages of vIGA-AD Success for roflumilast- vs. vehicle-treated patients were observed regardless of race (White: 32.3% vs. 13.3%; Black or African American: 25.8% vs 11.5%; Asian: 33.7% vs. 21.8%; Others: 33.2% vs. 13.7%), ethnicity (Hispanic or Latino: 32.9% vs. 16.5%; Not Hispanic or Latino: 31.1% vs 13.8%) or Fitzpatrick score (I–III: 33.0% vs. 13.4%; IV–VI: 29.2% vs. 14.8%). Roflumilast-treated patients also achieved greater reductions in Worst Itch-Numeric Rating Scale (WI-NRS) Success (≥4-point improvement in patients with baseline WI-NRS score ≥4) at Week 4 than vehicle-treated patients (31.9% vs. 16.6%; P<0.0001), with consistent results regardless of subgroup (White: 33.5% vs. 16.5%; Black or African American: 30.6% vs. 21.0%; Asian: 25.4% vs. 7.9%; Others: 34.3% vs. 22.7%; Hispanic or Latino: 37.4% vs. 30.5%; Not Hispanic or Latino: 30.9% vs. 13.8%; Fitzpatrick score I–III: 35.5% vs. 15.0%; Fitzpatrick score IV–VI: 27.3% vs. 18.2%). Similar findings were observed when efficacy by these subgroups was assessed for vIGA-AD of 0/1 and 75% improvement in the Eczema Area and Severity Index. In these subgroups, the incidence of treatment-emergent adverse events (TEAEs) was low in both roflumilast- and vehicle-treated patients. The incidence of TEAEs in roflumilast-treated patients was generally similar across these subgroups. Local tolerability was also favorable.

Conclusion:

Roflumilast cream 0.15% provided consistent and meaningful improvements in signs and symptoms of AD in patients across race, ethnicity, and Fitzpatrick skin types.

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Abstract N°: 4037

Patient Education and Counseling Needs in Atopic Dermatitis: Perspectives on Pregnancy and Treatment

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Introduction & Objectives:

Atopic dermatitis (AD) is an inflammatory skin disease that affects approximately 20% of children and up to 10% of adults in affluent countries. AD can persist into adulthood, meaning that many adult patients will have to deal with their disease and medication during family planning and pregnancy (FPP). This study aims to investigate to what extent patients with AD receive information about FPP from their dermatologist and to investigate what concerns these patients might have regarding FPP.

Materials & Methods:

This study is a Danish questionnaire-based cross-sectional study. Patients were mainly enrolled at two hospitals and a few from private dermatological clinics. Patients were included if they had a diagnose of AD, were between 18 and 45 years old, and received either topical and/or systemic treatment. Both men and women were included.

Results:

A total of 121 patients were enrolled, apportioned between 70 women and 51 men. Only 60% of those receiving systemic treatment had received information from their dermatologist about FPP at the initiation of their treatment. Additionally, nearly 90% of all patients expressed concerns, including concerns about the heredity of AD (88.43%) and teratogenicity of the treatments (29.75%). The ability to breastfeed was a major concern among women (37.14%).

This study also found that AD influenced patients' decisions regarding having children, revealing that 15% have had or planned to have fewer children than desired due to their disease.

Conclusion:

90% of patients with AD in this study were concerned about FPP, with some of the patients even adjusting their ambitions for their family life due to their disease. This, combined with a lack of information about FPP from the dermatologist, underlines the need for more awareness in this area. All patients of reproductive age should receive information from their dermatologist about options and precautions while receiving systemic treatment. This could potentially reduce concerns about FPP, thus giving the patients the best opportunity to achieve the family life they desire.

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Abstract N°: 4085

Potent and selective oral STAT6 degrader, KT-621, inhibits IL-4 and IL-13 functions in human cells and blocks TH2 inflammation in vivo

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Introduction & Objectives:

STAT6 is an essential transcription factor in the IL-4/IL-13 signaling pathways and the central driver of TH2 inflammation in allergic diseases. Multiple gain of function mutations of STAT6 have been identified to cause severe atopic/allergic diseases in human. Dupilumab, an injectable monoclonal antibody that blocks IL-4/IL-13 signaling, is an approved therapy for multiple atopic/allergic diseases. STAT6 targeting in these diseases is therefore validated by both human genetics and dupilumab's clinical pathway validation. STAT6 functions through protein-protein and protein-DNA interactions. It has been challenging to selectively and potently inhibit STAT6 with traditional small molecule inhibitors. It is, however, well suited for a novel targeted protein degradation approach, where a simple binding event is sufficient to drive degradation.

Materials & Methods:

We have developed a highly potent, selective, orally administered heterobifunctional degrader of STAT6, KT-621, and assessed functions in disease-relevant human primary immune and tissue cells *in vitro,* including TH2 functional assays. Additionally, KT-621 was assessed *in vivo* across multiple preclinical species for STAT6 degradation. We also compared the efficacy of KT-621 to dupilumab *in vivo* in an MC903 induced atopic dermatitis model and a HDM induced asthma model in the IL4/IL4RA humanized mice.

Results:

KT-621 potently and selectively degraded STAT6 in various disease relevant human primary cells including lymphocytes, myeloid cells, epithelial cells, smooth muscle cells, and vascular endothelial cells. As a result of STAT6 degradation, KT-621 fully blocked various IL-4/IL-13 functions in these cells with picomolar potencies comparable or superior to dupilumab, and did not degrade or inhibit any other STAT transcription factors or other proteins. In addition, KT-621 showed potent STAT6 degradation and IL-4/IL-13 functional inhibition in human whole blood. At low oral doses, KT-621 demonstrated deep *in vivo* STAT6 degradation, suppressed TH2 biomarkers, and was well-tolerated in multiple preclinical studies. In the MC903-induced atopic dermatitis mouse model, orally administered KT-621 demonstrated robust degradation of STAT6 in vivo and marked reduction of total serum IgE comparable to the activity of an IL-4Ralpha saturating dose of dupilumab. In the HDM induced asthma model, orally administered KT-621 demonstrated similar robust degradation and reduced all cytokine, cell infiltration, and disease severity readouts in the lung and bronchoalveolar lavage fluid comparable or superior to the IL-4Ralpha saturating dose of dupilumab.

Conclusion:

STAT6 degradation is a potential novel oral approach for blocking the IL-4/IL-13 pathways. These data demonstrate the potential of KT-621 for the treatment of atopic dermatitis and other allergic diseases with best-in-pathway potential given its biologics-like activity profile and oral bioavailability. KT-621 is expected to be in a

human Phase 1 trial in the second half of 2024.

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Abstract N°: 4126

Slime-Associated Contact Dermatitis with Active Inflammatory Border Sign Mimicking Tinea Manuum

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Introduction & Objectives: The phenomenon of playing with slime has surged in popularity among children in recent years, concurrently leading to an increase in cases of hand dermatitis. Along with the increase in this activity, slime has become an important cause of hand dermatitis in children whose skin barrier is weaker. Sensitization to various allergens, notably isothiazolinones, is prevalent, particularly in homemade slime formulations. Accurate diagnosis through patch testing is crucial for identifying the causative allergen and preventing recurrent episodes. We present two cases to emphasize the 'active border sign,' indicative of isothiazolinone sensitization, acquired through slime exposure in two patients aged 8 and 9 years.

Cases: A 9-year-old girl presented with hand dermatitis localized to the palms, which started a year ago. On questioning about her history of slime contact, she stated that she had prepared slime at home 1 year ago. Despite discontinuation of slime contact, her symptoms persisted. Clinical examination revealed erythematous plaques with vesicles and vesicle residue on the palmar surfaces of both hands. Mycologic examination was evaluated because of the active border and was negative. Second patient, an 8-year-old girl, presented with an 8-month history of hand dermatitis. She reported involvement in homemade slime preparation using liquid soap, dishwashing detergent, and unspecified additives, preceding the onset of symptoms. Clinical examination demonstrated erythematous plaques on both palms with an active border and residual vesicular debris. Both patients underwent patch testing with the European Baseline Series, utilizing IQ Ultra Chambers from Chemotechnique Diagnostics (Vellinge, Sweden). Positive reactions (++/++) to methylisothiazolinone/ methylchloroisothiazolinone 0.02% aqueous solution (MI/MCI) were observed on days 2 and 3 in both cases. Patients were informed to avoid products containing isothiazolinones. Over the subsequent one-year follow-up period, no recurrence of symptoms was noted.

Conclusion: The incidence of slime-related hand dermatitis is escalating. Eczematized plaques with vesicular remnants on the palms of individuals exposed to homemade or industrialized slime warrant suspicion of isothiazolinone sensitivity and the patch test we performed confirmed this sensitivity. Since isothiazolinones are commonly found in hygiene and household products, patch test confirmation is important to prevent recurrences. With avoidance of allergen contact, the clinical outcome improved, and no recurrences were observed. We present two cases with MI/MCI positive reactions in patch tests and aim to emphasize 'active border sign' which may be confused with tinea manuum. We postulate that this clinical finding could be associated with the repetitive mechanical damage of slime sticking and pulling in the palm of the hand while playing with slime and the irritating effect of the substances in the slime.

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Abstract N°: 4159

Association of countries' atopic dermatitis burden and sociodemographic index with dupilumab and tralokinumab utilization

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Introduction & Objectives:

Biologics have transformed the therapeutic landscape for moderate-to-severe atopic dermatitis, offering a more targeted approach with improved efficacy and a reassuring safety profile. However, the high cost of biologics for atopic dermatitis could result in access disparities. To date, global trends in biologic utilization, including international differences, remain poorly understood.

The objective of this study is to describe global utilization patterns of biologics indicated for atopic dermatitis from 2017 to 2022 and estimate the association of country-level economic status and atopic dermatitis disease burden with biologics utilization.

Materials & Methods:

We used IQVIA MIDAS® pharmaceutical quarterly sales data to obtain country-level purchasing of dupilumab and tralokinumab from 2017 to 2022. We calculated each country's yearly utilization of biologics per 100,000 population. We obtained sociodemographic index (SDI) and disability-adjusted life years (DALY) from atopic dermatitis from the Global Burden of Disease Study. We used multivariable linear regression to estimate the association between countries' SDI and atopic dermatitis DALY and biologic utilization.

Results:

A total of 51 countries were included in the analysis. From 2017 to 2022, the overall average utilization of biologics increased by 150.4 times. In 2022, the utilization rate was 28.6 times higher in high-SDI countries compared to low-middle/middle-SDI countries. SDI was associated with greater biologic utilization, whereas atopic dermatitis DALYs were not. High-middle SDI countries utilized 12.1 units (95% CI; -86.3 to 110.5), and high-SDI countries utilized 124.5 units (95% CI; 35.4 to 213.7) more biologics per 100,000 people compared to low-middle and middle-SDI countries. Similar findings were observed when limiting our analysis to dupilumab alone; effect estimates from analyses limited to tralokinumab were imprecise.

Conclusion:

Dupilumab and tralokinumab utilization is greater in high-SDI countries than in lower-SDI countries, independent of atopic dermatitis burden. While biologic utilization is increasing globally, there are ongoing challenges in achieving equitable access to biologic therapies across diverse socioeconomic settings.

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Abstract N°: 4176

EASI 100 in pediatric atopic dermatitis treated with dupilumab – a single center cohort study

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Introduction & Objectives:

Dupilumab, a monoclonal antibody targeting interleukin-4 receptor alpha, has emerged as a promising therapeutic option for atopic dermatitis (AD) in pediatric patients. Extensive clinical trials and real-world evidence have demonstrated its efficacy in achieving significant improvements in Eczema Area and Severity Index (EASI) scores, particularly EASI 50, 75, and 90 endpoints, reflecting substantial disease control. However, a paucity of data persists concerning the EASI 100 endpoint, including the number of patients meeting this criterion, the duration required to achieve it, and the demographics of this population. Our goal is to evaluate clinical outcomes in the real-world setting of pediatric patients with moderate to severe atopic dermatitis treated with dupilumab, with a special emphasis on patients achieving EASI 100.

Materials & Methods:

We performed a retrospective analysis of the records of pediatric patients (age<18) with moderate to severe atopic dermatitis treated with dupilumab from September 2020 to April 2024 at our center. Demographics, clinical, and patient reported outcomes were analyzed. Descriptive and statistical analysis were performed using SPSS® version 29. Statistical significance was defined as $p<0.05$.

Results:

A total of 25 patients were included, 12 females and 13 males, with median age 13 [8;14]. Baseline EASI score was 30.3 [23;36] and dupilumab treatment duration 20 [9;33] months. Worst Itch Numeric Rating Scale (WI-NRS) at baseline was 8.5 [6;9.5] and sleep-NRS 7.4 (DP 2.3). At the time of the last follow-up, WI-NRS 2 [0;3] and sleep-NRS 0 [0;0]. Regarding EASI score, at Week 16 (n=25): 5.4 [1.5;9.7]; Week 32 (n=19): 2.8 [0;5.4]; Week 52 (n=17): 1.6 [0;6.2]; Week 104 (n=12): 1.0 [0.2;8.8].

A total of ten patients (40%), 3 females and 7 males, median age 11.5 [9;14], achieved EASI 100 at a median 52 [16;104] weeks. Baseline EASI was 30.2 [23;36]. Patients who achieved EASI 100 were compared with those who did not. No statistical differences were found between both groups regarding age (p = 0.955), sex (p = 0.226), baseline EASI (p = 1.000), baseline WI-NRS (p = 0.792), baseline sleep-NRS (p = 0.786), or presence of atopic comorbidities, specifically, asthma (p = 0.659), rhinitis (p = 0.397), or food allergy (p = 0.345).

Only one patient suspended treatment during follow-up due to inefficacy, transiting to upadacitinib with good response. In the study population, one patient (4%) reported mild and transient facial dermatitis which did not require cessation of dupilumab.

Conclusion:

Our study, although limited by a small sample, highlights the well-known efficacy and safety of dupilumab in AD treatment. It also adds that, even though infrequently reported, a significant proportion of patients (40%) reaches a complete response as indicated by EASI 100. In our study, no differences were found between the group of

patients achieving EASI 100 with the group who did not. Further investigation into factors influencing the achievement of complete disease control in a larger size population is warranted to optimize treatment strategies and enhance outcomes for pediatric patients with atopic dermatitis.

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EUROPEAN ACADEMY OF DERMATOLOGY & VENEREOLOGY

Abstract N°: 4190

Utilization of newly approved targeted immunomodulating treatments for atopic dermatitis

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Introduction & Objectives: The FDA has recently approved several efficacious systemic medications to treat atopic dermatitis (AD). Factors influencing treatment choices, including prior treatments, insurance type and race remain unclear.

We sought** to describe the uptake, patient characteristics and predictors associated with preferences for topical ruxolitinib or systemic dupilumab, tralokinumab, upadacitinib or abrocitinib among patients with AD.

Materials & Methods: Using nationwide United States longitudinal claims data, we identified patients with AD who started a study drug between 2017 and 2023. We determined the proportion of initiators who used each drug by calendar year; and, for each drug, assessed over 100 patient characteristics in the year before start. Key subgroups included Black race and Medicaid insurance. We used LASSO to determine predictors of specific drug initiation.

Results: The number of patients with AD who started dupilumab, tralokinumab, upadacitinib, abrocitinib or topical ruxolitinib increased from 14,081 in 2017 to 69,298 in 2022. More than 70% of users were prescribed dupilumab during the study period.

Among 23,339 patients who initiated dupilumab (19,915), tralokinumab (1,171), upadacitinib (1,996), or abrocitinib (257), the mean age was 37 years and 50% of patients used oral glucocorticoids in the past year. 80% of dupilumab starters had no prior systemic treatment other than systemic steroids, vs. 40% of upadacitinib and abrocitinib starters. 7% of dupilumab starters used topical ruxolitinib compared to 20% of tralokinumab, abrocitinib and upadacitinib starters. Compared to dupilumab, upadacitinib initiators had similar prevalence of prior major adverse cardiovascular events (MACE, each 0.1%) and venous thromboembolism (VTE, each 0.6%), but lower prevalence of malignancy (0.9% vs. 0.4%), heart disease (3% vs. 4%) and antiplatelet use (2% vs. 3%). Tralokinumab users had more comorbidities compared to all agents.** Black patients and those covered by Medicaid insurance had more dupilumab use, less use of the newer agents and less ruxolitinb use. Younger age (OR 1.6 [1.4-1.8]), female sex (OR 1.2 [1.1-1.3]), diabetes (OR 1.2 [1.0-1.4]), hypertension (OR 1.3 [1.2-1.5]), allergies (OR 1.4 [1.2-1.5]), pregnancy (OR 1.9 [1.4, 2.7]) and VTE or anticoagulant use (OR 1.4 [1.0, 1.8]) were associated with higher odds of starting dupilumab vs. starting any other study drug. Use of topical ruxolitinib (OR 2.2 [1.9-2.6]), non-biological systemic agent use (OR 1.2 [1.3-1.8]), conjunctivitis (OR 1.4 [1.2-1.7]), alopecia (OR 3.8 [2.8-5.1]) and AD-related hospitalization (OR 1.9 [1.3-2.8]) were associated with higher odds of starting upadacitinib vs. any other study drug, whereas pregnancy was associated with lower odds (OR 0.4 [0.2, 0.6]).

Alcohol abuse (OR 1.4 [1.0-1.9]) and conjunctivitis (OR 1.7 [1.4-2.0]) were associated with tralokinumab initiation.

Conclusion: Use of targeted treatments for AD increased markedly in the US over the past 6 years, with dupilumab by far most initiated and its use rarely preceded by AD treatments other than steroids. Initiators of tralokinumab, abrocitinib and upadacitinib had greater prior use of topical ruxolitinib and other treatments. Black race and Medicaid insurance were less likely to get newer treatments. Overall, we did not observe substantial channeling to any of the 4 treatments.

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Abstract N°: 4234

A scalable approach to assess the safety of novel systemic treatments for atopic dermatitis in clinical practice: First analysis cycle of the ADVANCES sequential monitoring system

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Introduction & Objectives: New targeted systemic immune-modulating drugs (IMDs) to treat atopic dermatitis (AD) are highly efficacious in randomized trials. The small and short trials leave many questions on the safety of these treatments that can be answered with pharmacoepidemiology studies.

We sought to specify a data and analytics structure for the production of timely, high-quality evidence on the comparative safety of newly marketed IMDs in patients with AD in clinical practice, the **AD**VANCES (**A**topic **D**ermatitis no**V**el **A**ge**N**ts **C**omparative **E**ffectiveness and **S**afety) system. To present findings from the first analysis cycle.

Materials & Methods: A series of sequential propensity score (PS)-balanced cohorts that grow in size with each annual data refresh were established in a commercial US claims database. Multiple health outcomes of interest were identified using previously validated coding algorithms: infections (serious infection with hospitalization, outpatient infection with treatment, outpatient herpes, candida, opportunistic infection with hospitalization), acne, major adverse cardiac events, venous thromboembolism, drug induced liver injury, cytopenia, malignancy, and squamous cell carcinoma, plus conjunctivitis as a positive tracer outcome. Each outcome had a separate cohort and analysis to allow for outcome-specific exclusions and appropriate outcome-driven risk factor selection for PS. The initial treatment comparison was dupilumab, an IL-4/IL-13 inhibitor, and tralokinumab, an IL-13 inhibitor, versus upadacitinib and abrocitinib, both JAK-1 selective inhibitors. Follow-up begun the day after treatment start (i.e., cohort entry) up to 180 days. Risks, risk ratios, and 95% confidence intervals were computed. The first analysis cycle covered January 2022 through August 2023.

Results: The first analysis cycle included 269 patients using upadacitnib/abrocitinib and 2,650 dupilumab/tralokinumab. Patient characteristics were well balanced before and after 1:1 PS-matching. The majority of dupilumab initiators had no systemic treatment except for topical steroids in the past (88%). Given the limited study size of this first analysis cycle the numbers of events were low and in line with expected background rates. Outpatient infections occurred in 18% of upadacitnib/abrocitinib users during 180 days versus 12% among dupilumab/tralokinumab users (RR=1.50; 0.96 - 2.33), herpes occurred in 2.6% vs. 0.4% (RR=6.5; 0.73 - 49), and acne occurred in 6.5% vs. 3% (RR=2.29; 0.96 - 5.46). Conjunctivitis occurred in 7% of dupilumab users vs. 3.5% (RR=1.88; 0.85-4.2).

Conclusion: In its first analysis cycle **AD**VANCES has already detected associations observed in RCTs (increased risk of herpes and acne in JAK-1 inhibitors and increased risk of conjunctivitis in dupilumab) and has begun

producing essential comparative safety information of IMDs to treat AD with pre-defined yearly updates.

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Abstract N°: 4258

Exploring a Novel Mixed Phenotype of Atopic Dermatitis and Hyper IgE Syndrome: A Scoping Review

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Introduction & Objectives:

Individuals with severe atopic dermatitis (AD) may exhibit serum IgE levels exceeding 10,000 IU/mL. STAT3 Hyper-IgE syndrome (STAT3-HIES), a rare immunosuppressive disorder with dysregulation in the STAT3 signalling pathway, exhibits similar clinical, genetic, and serological features to AD. Despite these overlaps, AD patients with very high IgE levels are not routinely tested for genetic overlap with STAT3-HIES, which may be relevant in therapeutic intervention.

A literature review was conducted to identify individuals with a potential novel mixed phenotype of AD and STAT3-HIES (AD/STAT3-HIES) whereby overlap of both conditions is present. Janus kinase (JAK) inhibitors may have therapeutic benefits in this subgroup as they target the STAT3 signaling pathways shared between both diseases. This review explores the identification of the AD/STAT3-HIES phenotype and its response to JAK inhibitors.

Materials & Methods:

A literature review was undertaken on PubMed, Scopus, Ovid, and Google Scholar. Studies published in English between January 2005 and December 2023, addressing clinical features, treatment, pathogenesis, and genetics of AD or STAT3-HIES were included. Search terms included “Atopic dermatitis,” “Hyper-IgE syndrome,” “HIES,” “Job Syndrome,” “STAT3,” “JAK/STAT pathway,” and “Janus kinase inhibitors.”

Results:

A total of 159 studies were identified from the search with 24 studies meeting the inclusion criteria.**Table 1** outlines the features between AD, STAT3-HIES and areas of overlap (AD/STAT3-HIES).

Clinically, AD and STAT3-HIES possess shared characteristics of elevated IgE levels, eczematous lesions, and staphylococcal skin infections. STAT3-HIES is distinguished from AD by the presence of immunoparesis and extracutaneous manifestations. Genetically, STAT3 and IL6 genes are associated with both AD and STAT3-HIES. Multiple studies have demonstrated the efficacy of JAK inhibitors in treating AD. To date, only one ex-vivo study suggested a potential treatment utility of JAK inhibitors in dominant negative-STAT3 mutation.

Conclusion:

We propose that AD patients with IgE levels elevated beyond the typical range may benefit from further genotyping of the STAT3 and IL6 genes, with the aim of identifying the AD/STAT3-HIES phenotype. Further clinical trials could investigate the potential utility of targeted JAK inhibitor interventions in this subgroup, as well as in patients with AD and markedly elevated serum IgE levels.

Table 1:

	AD	AD/STAT3-HIES	STAT3-HIES
Clinical Features			
Characteristic	Pruritic eczematous lesions		
Distribution	Flexural regions (older children/adults) Extensor regions (infants/young children)		Atypical distribution
Other cutaneous presentation	Staphylococcal skin infections		
			Cold staphylococcal abscess
			Mucocutaneous candidiasis
Extra-cutaneous presentation	Nil		Recurrent pneumonia
			Skeletal abnormalities
			Retained primary teeth
			Connective tissue abnormalities
Allergy	Common		Lower allergy rates
Serology			
IgE levels	Elevated		
Genetic associations			
Genes	STAT3		
	IL6R		
	FLG		IL6ST
	IL2/IL21		ZNF341
	IL7R		TYK2
	IL15RA/IL2RA		
Immunological			
IL-4 levels	Elevated		
IL-13 levels	Elevated		

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Abstract N°: 4268

The effectiveness of applying ointment containing selected cannabinoids in the topical therapy of atopic dermatitis

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The effectiveness of applying ointment containing selected cannabinoids in the topical therapy of atopic dermatitis

Introduction & Objectives:

In dermatological therapy, both systemic and topical, cannabinoids such as cannabidiol (CBD) and cannabigerol (CBG) play a crucial role. They are successfully utilized as active substances in the production of compounded medications or commercially available formulations such as solutions, gels, ointments, creams, pastes, and suspensions.

Materials & Methods:

The experimental (medical-research) study on topical therapy was conducted on a sample consisted of 9 patients with atopic dermatitis (5 males, 4 females) aged between 20 and 67 years. The studies took place between May to July 2022 and September to December 2023.

Patients with negative results of allergic skin test were admitted to the next stage of the study, which involved the application of an ointment containing: 70 grams of cholesterol ointment, 10.0 grams: 30% cannabidiol (CBD), 5% cannabigerol (CBG), and *Cannabis Sativa L. oil* to the skin under home conditions.

The effects of the therapy were assessed using biophysical skin parameters such as hydratation, sebum, melanin, erythema, pH, and transepidermal water loss.

Statistical analyses were performed using Statistica v.13.3 (Tibco Software, Palo Alto, California, USA). Quantitative data were presented as the median value with lower and upper quartiles (Me (Q1 – Q3)). The Shapiro-Wilk test and quantile-quantile plots were used to assess distribution. The independent samples t-Test was used to compare differences between gender groups. The effectiveness of the therapy was evaluated using ANOVA for repeated measures, and sphericity was verified using Mauchley's test. Detailed comparisons at specific time points were conducted using the Tukey post-hoc test.

Results:

A statistically significant increase in skin sebum levels was observed in the sebumetric study at the 8th week of treatment ($p<0.05$), while a decrease in erythema during ointment application was observed as early as the 4th week ($p<0.005$), and further at the 8th week ($p<0.01$). The therapy led to increased hydration, with results after 4

weeks of treatment not differing from hydration levels before treatment (p=0.943). However, an increase in hydration was observed in the 8th week compared to both pre-treatment data (p<0.001) and the 4th week of therapy (p<0.01). The therapy resulted in a reduction of transepidermal water loss values in the 8th week compared to pre-treatment values (p<0.001) and the fourth week (p<0.05).

The achieved results indicated a statistically significant improvement in skin hydration, sebum level, and TEWL, as well as a reduction in erythema of the studied areas - forearms .

Conclusion:

The current findings indicate that local application of an ointment containing: Cannabis sativa L. var sativa hemp oil, cholesterol ointment, 30% cannabidiol (CBD), and 5% cannabigerol (CBG) significantly led to remission of skin lesions on the forearms, as evidenced by capillaroscopy. Furthermore, in the assessment of skin biophysical parameters, satisfactory levels were observed in terms of hydration, sebum production, reduction in erythema, and transepidermal water loss.

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Abstract N°: 4270

Improvement of the head and neck regions with continuous tralokinumab treatment for up to 4 years in adults with moderate-to-severe atopic dermatitis

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Introduction & Objectives: Atopic dermatitis (AD) is a chronic, inflammatory disease that can affect multiple regions of the body, but can be particularly burdensome on exposed areas of skin, such as the head and neck (H&N).Tralokinumab, a high-affinity monoclonal antibody that specifically neutralizes interleukin-13, is approved in multiple countries for adults with moderate-to-severe AD. Phase 3 trials showed tralokinumab provided significant improvements in AD severity and was well-tolerated up to 52 weeks of treatment. The ongoing open-label, 5-year extension trial, ECZTEND (NCT03587805), assesses the safety and efficacy of tralokinumab after the completion of parent trials (PT). Here, tralokinumab efficacy was assessed in the H&N region.

Materials & Methods: This *post hoc* analysis included adult patients with moderate-to-severe AD initially randomized to tralokinumab 300mg Q2W in the phase 3 PTs ECZTRA 1 (NCT03131648) or ECZTRA 2 (NCT03160885). Patients on active tralokinumab treatment were followed for up to 52 weeks in PTs and for up to 152 weeks in ECZTEND as of data cutoff April 30, 2022. Patients re-randomized to placebo at Week (Wk) 16 were not included beyond that timepoint. For this analysis, overall EASI and H&N regional EASI (H&N EASI) were evaluated. H&N EASI (0-7.2) was calculated based on the severity of erythema, induration/papulation, excoriation, lichenification and area of involvement. All data were analyzed and presented as observed.

Results: At baseline, 87.8% (1047/1192) of patients had H&N involvement (H&N EASI>1), and 49.9% (591/1192) of patients exhibited severe AD (IGA 4). Baseline median H&N EASI for the pooled PTs was 3.0 (IQR 1.8; 4.5). In the pooled PTs, 48.2% (542/1125) and 71.2% (558/784) of patients achieved H&N EASI≤1, at Wk16 and Wk52, respectively. After 3 years additional treatment (Wk152 in ECZTEND), the proportion of patients with H&N EASI≤1 was 87.2% (232/266) and the median H&N EASI was 0.2 (IQR 0.0; 0.5). In the subgroup of patients (n=301) with severe AD (IGA 4) and high H&N involvement (H&N EASI≥4), median H&N EASI improved from 5.4 at baseline to 2.4 and 0.8 at Wk16 and Wk52, respectively, and 0.4 at Wk152. Improvements in H&N region were comparable to overall EASI improvement.

Conclusion: Tralokinumab provided sustained improvements in the H&N regions in patients with moderate-to-severe AD for up to 4 years. Sustained improvements were also seen in patients with severe disease and substantial H&N involvement at baseline.

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Abstract N°: 4291

Stability of long-term therapeutic responses to tralokinumab in adults with moderate-to-severe atopic dermatitis

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Introduction & Objectives: To ensure minimal residual disease and to prevent relapses, recently published consensus reports have defined optimal long-term treatment targets for atopic dermatitis (AD).1,2 Tralokinumab, a monoclonal antibody specifically neutralizing interleukin-13, is approved for the treatment of moderate-to-severe AD. ECZTEND (NCT03587805) is an ongoing open-label, 5-year extension trial investigating the long-term safety and efficacy of tralokinumab 300 mg every other week (Q2W) plus optional topical corticosteroids (TCS). Objectives of this analysis were to determine the proportion of patients treated for up to 4 years with tralokinumab in AD clinical trials who: 1) exhibit stable improvement, with no or minimal fluctuations, in lesion extent and severity long-term (ie, response in ≥80% of attended visits), and 2) exhibit a stable long-term composite response (ie, up to 4 years of tralokinumab treatment and response in ≥80% of attended trial visits) in signs and symptoms of AD, and quality of life based on recent treat-to-target recommendations (EASI ≤7 and either DLQI ≤5 or Itch NRS ≤4).

Materials & Methods: This *post hoc* analysis included 347 patients who were continuously treated with tralokinumab for 52 weeks in the identically designed phase 3 monotherapy trials ECZTRA 1&2 and subsequently for up to 152 weeks in ECZTEND as of the April 30, 2022 data cutoff. Stability of long-term response, with no or minimal fluctuations, was defined as meeting the target endpoints at ≥80% of attended visits between Weeks 16-152 in ECZTEND. Endpoints analyzed were EASI ≤7, EASI ≤2, and a composite long-term treatment target: EASI ≤7 and either DLQI ≤5 or worst weekly pruritus NRS ≤4.

Results: A stable EASI ≤7 response (at ≥80% of attended visits) was observed in 70.2% (233/332) of tralokinumab-treated patients over Weeks 16-152 of ECZTEND. A stable EASI ≤2 response was observed in 34.0% (113/332) of patients, and a long-term optimal composite target, EASI ≤7 and either DLQI ≤5 or Itch NRS ≤4, was observed in 60.5% (201/332) of patients.

Conclusion: High proportions of clinical trial patients maintained stable responses, with no or minimal fluctuations in efficacy, with continued tralokinumab 300 mg Q2W plus optional TCS for up to 4 years of treatment.

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Abstract N°: 4352

Characterizing Atopic Dermatitis and Abrocitinib Response through Tape-Stripped and Serum Biomarker

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Introduction & Objectives: Atopic dermatitis (AD) is a heterogeneous disease, with different subtypes having distinct immune characteristics and treatment responses. Our study aims to identify biomarker characteristics of different AD subtypes and to search for biomarkers that may predict abrocitinib treatment.

Materials & Methods: Skin samples from lesional and nonlesional AD patients(n=50) before and after abrocitinib treatment(n=15) and from 13 healthy controls were collected, using a tape-stripping method. Gene expression was detected by PCR array. Serum samples were collected at the same time, and the Luminex assay technology was used to detect the expression of related biomarkers.

Results: We observed upregulation of Th1, Th2, Th17/22, general inflammation-related factors, and JAK-STAT signaling molecules in the skin and serum of patients with AD. Intrinsic AD showed high expression of Th17/Th22 type inflammation. Following treatment with abrocitinib, there was a significant decrease in the expression of inflammation-related biomarkers in the skin and serum. And the levels of JAK1 and JAK3 in the skin post-treatment did not show significant differences compared to those in health controls, although high inflammation persisted in the serum. Changes in lesional, nonlesional, and serum IL-33 levels were correlated with clinical improvements (Eczema Area and Severity Index). The multivariate correlation model significantly improved the correlation between biomarkers and clinical severity before and after treatment.

Conclusion: Abrocitinib can rapidly relieve the symptoms and inflammation of AD patients. IL-33 shows potential as a valuable marker for assessing disease severity and predicting treatment outcomes. Biomarker integration models contribute to the precise treatment of AD.

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Abstract N°: 4356

Efficacy and safety of orismilast, a potent PDE4B/D inhibitor, in adults with moderate-to-severe atopic dermatitis: a phase 2b randomized, double-blinded, placebo-controlled clinical trial (ADESOS)

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Introduction & Objectives:

Orismilast is a potent selective phosphodiesterase 4 (PDE4)-B and -D inhibitor, showing significant efficacy in a Phase 2b psoriasis study. PDE4-B and PDE4-D isoforms are over-expressed in the skin of patients with atopic dermatitis (AD), compared to healthy individuals. Enhanced PDE4 activity has also been observed in peripheral blood leukocytes in AD. Orismilast inhibits PDE4-B/D isoforms up to 39 times more potently than apremilast, leading to potent suppression of Th1, Th17, and Th2 effector cytokines. Here, efficacy and safety of orismilast were evaluated versus placebo in adults with moderate-to-severe AD.

Materials & Methods:

ADESOS is a 16-week, phase 2b, double-blinded, placebo-controlled, dose-finding study assessing efficacy and safety of orismilast in adults with moderate-to-severe AD. Patients were randomized (1:1:1:1) to orismilast 20, 30, 40 mg, or placebo, twice daily. Randomized and dosed patients were included in the Intent-to-Treat Population. Missing data were handled using Multiple Imputation (MI) for the analysis of primary and secondary efficacy endpoints.

Results:

Baseline demographics and disease characteristics were generally balanced across groups for the 233 dosed patients. Significantly more patients achieved IGA0/1 responses at Week 16 in orismilast 20 (n=58), 30 (n=61), and 40 mg (n=59) groups, compared to placebo (n=55) (26.3%, 24.3%, 30.9%, and 9.5%, respectively; all p-values <0.05). All active arms demonstrated a significant ≥4-point reduction in itch NRS at Week 2, compared to placebo (p <0.05). Similarly, Patient Global Impression of Change of "much or very much improved" was significant in active arms compared to placebo at Week 16. Mean percentage changes in EASI at Week 16 were -55.1%, - 52.2%, -61.4%, and -50.4%, in orismilast 20, 30, 40 mg and placebo groups, respectively (p>0,05). Mean EASI at baseline was 23, the least severe reported in Phase 2b/3 studies in moderate-to-severe AD. In a subgroup analysis of patients with baseline EASI >21 separation from placebo was increased in the 20 and 40 mg arms, as patients on

placebo achieving EASI75 and EASI90 were reduced by 50% and 67%, for the severe population versus the full population.

At Week 16, percentages of patients experiencing any Treatment Emergent Adverse Event (TEAE) were orismilast 20 mg, 76%; 30 mg, 79%; 40 mg, 86%; and placebo, 64%. Infection rates were numerically lower in the orismilast groups compared to placebo groups. The most common TEAEs were diarrhea, nausea, and headache, mainly seen within the first month, mostly mild in severity, with few leading to treatment discontinuation.

Conclusion:

Orismilast demonstrated early itch reduction NRS≥4 and statistically significant efficacy versus placebo at Week 16 as measured by IGA0/1. The study was impacted by a high EASI placebo rate; however, in severe patients, the 20 and 40 mg doses separated from placebo for EASI75 and EASI90 measurements, consistent with the overall findings as measured by IGA 0/1, patient-reported efficacy, and objective biomarkers.

No new safety signals were identified, and the profile was aligned with the well-established experience from the PDE4 inhibitor class. The most frequent TEAEs were gastrointestinal-related and headache.

These data confirm the clinical relevance of high potency PDE4B/D selective inhibition with orismilast, potentially offering a convenient, novel, oral therapy for the treatment of AD and other inflammatory diseases.

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Abstract N°: 4492

Digital Health Program for Atopic Dermatitis: Reduced Symptoms and Reduced Scratching in a Real World Setting

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Introduction & Objectives: Atopic dermatitis (AD) is characterized by dry skin, pruritus, and skin lesions. Symptoms negatively affect quality of life (QOL). A 12-week digital health program was developed to help people with AD self-manage their treatment and symptoms, build habits around the itch-scratch cycle, and provide education, motivation, and support. The objective of the study was to report the use of the program in a real-world setting and to assess changes in self-reported AD symptoms and their severity as well as QOL.

Materials & Methods: The program was distributed in multiple European countries. Recruitment channels included patient organizations, health care providers' referrals, and social media. Users active in the program in week two and onwards (activated users) were included in the analyses. Users logged AD symptoms and severity weekly and reported on indicators of QOL (energy, sleep, and stress levels). Users were classified into highly-engaged and less-engaged groups using iterative K-means clustering based on active days in-app. Mixed models were used to estimate the group differences in change for symptom frequency and severity, and QOL.

Results: A total of 639 users were considered activated, and out of those, 327 were included in the analysis as they had logged their symptoms and QOL parameters at least twice (Table 1). Mean compliance rate of symptom logging was 62% for the first 12 weeks. The occurrence of the most common symptoms and reported triggers at baseline are shown in Table 1. The total number of symptoms was reduced (IRRtime (95% CI) = 0.947 (0.936, 0.957), $p<0.001$) (Figure 1) and symptom severity for itch, irritated skin, rough or dry skin and flaking skin were all significantly reduced over 12 weeks (all $p<0.001$). For itch, more engaged users had significantly more reduction, the difference between engagement groups at week four: -0.28 (95% CI -1.07, -0.05), $p = 0.029$, and at week 12 difference (95% CI): -1.33 (-2.14, -0.52), $p = 0.001$. Interaction between time and engagement group was significant $p = 0.02$ (see Figure 2 for change in itch). The proportion of users who scratched in reaction to itch was significantly reduced; users reporting scratching less than 50% of the time rose from 16% in week 1 to 50% in week 12 ($p < 0.001$) (Figure 3). Scratching behavior improved significantly more in highly engaged users compared with less engaged ($p<0.001$). Energy levels improved, and stress decreased across the 12 weeks; quality of sleep was also improved, particularly in highly engaged users (Figure 4).

Conclusion: These results provide real-world evidence that digital health programs can improve symptoms and QOL in people with AD and have the potential to transform the management of AD.

Table 1: User baseline demographics, common symptoms and in-app activities

Demographics

	Overall	Highly Engaged	Less Engaged
n	327	180	147
Age, mean (SD)	39.6 (14.7)	39.4 (15.0)	39.9 (14.4)
Gender, n (%)			
Female	283 (86.5)	154 (85.6)	129 (87.8)
Male	31 (9.5)	16 (8.9)	15 (10.2)
No record	8 (2.4)	6 (3.3)	2 (1.4)
Other	5 (1.5)	4 (2.2)	1 (0.7)
Weight, mean (SD)	73.4 (22.9)	73.2 (24.0)	73.6 (21.4)
Height, mean (SD)	165.9 (9.3)	165.3 (8.6)	166.6 (10.1)
5 most reported symptoms at baseline, n (%)			
Itching skin	295 (90.2)	161 (89.4)	134 (91.2)
Rough or dry skin	284 (86.9)	156 (86.7)	128 (87.1)
Irritated skin	240 (73.4)	131 (72.8)	109 (74.1)
Flaking skin	201 (61.5)	119 (66.1)	82 (55.8)
Sleep disturbance	142 (43.4)	74 (41.1)	68 (46.3)
5 most reported triggers* at baseline, n (%)			
Stress	185 (56.6)	98 (54.4)	87 (59.2)
Scratching	168 (51.4)	89 (49.4)	79 (53.7)
Weather	154 (47.1)	82 (45.6)	72 (49.0)
Allergies	131 (40.1)	72 (40.0)	59 (40.1)
Dry air	126 (38.5)	67 (37.2)	59 (40.1)
Disease status, n (%)			
I've had Atopic Dermatitis for more than a year	277 (84.7)	159 (88.3)	118 (80.3)
I've had Atopic Dermatitis for less than a year	16 (4.9)	8 (4.4)	8 (5.4)
Other (including free text)	34 (10.4)	13 (7.2)	21 (14.3)
Overall active days, median [Q1,Q3]	34.0 [14.0,68.0]	65.0 [37.0,80.0]	13.0 [7.0,23.0]
Overall active weeks, median [Q1,Q3]	9.0 [5.0,13.0]	12.0 [8.0,14.0]	6.0 [3.0,9.0]
Overall number of activities, median [Q1,Q3]	200.0 [87.0,475.0]	424.5 [243.5,583.5]	79.0 [37.5,160.0]

* Assessed by the question "What do you think triggered your symptom(s)"

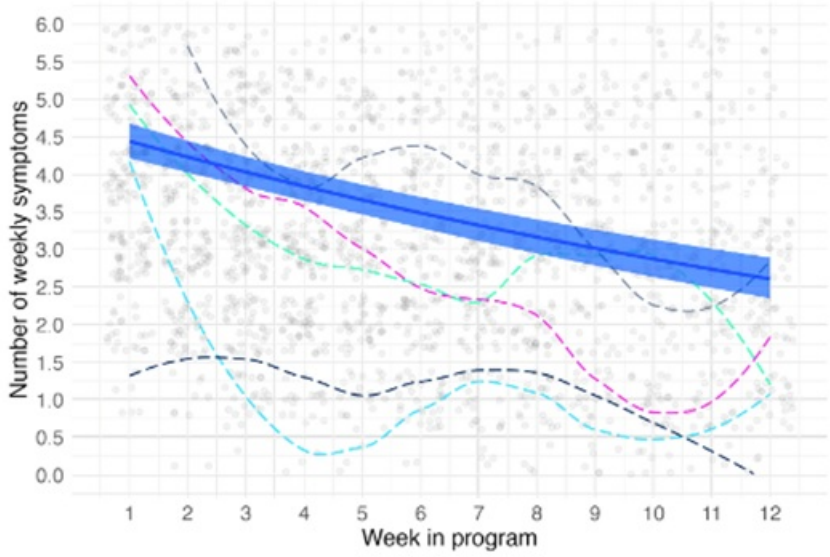

Figure 1: Symptom frequency reduction over time. Blue solid line and shading show the predicted mean number of symptoms with 95%CI; IRR_{time} (95% CI) = 0.947 (0.936, 0.957), p<0.001. Gray dots represent the reported number of symptoms for individual users. Coloured dashed lines represent symptom count trajectories for randomly selected users, highlighted for visualization.

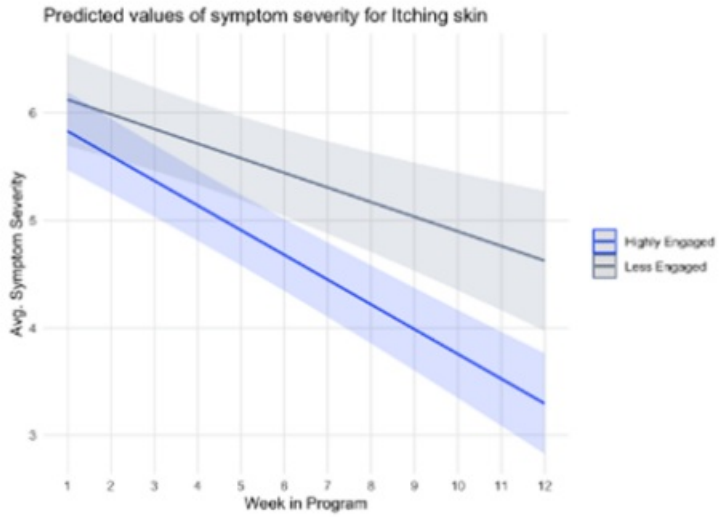

Figure 2: Itch symptom severity reduction over time. Solid lines and shading show the mean predicted symptom severity with 95% CI for each group. Week 4 difference between groups (95% CI): -0.28 (-1.07, -0.05), p = 0.029, Week 12 difference (95% CI): -1.33 (-2.14, -0.52), p = 0.001. Interaction between time and engagement group significant p = 0.02.

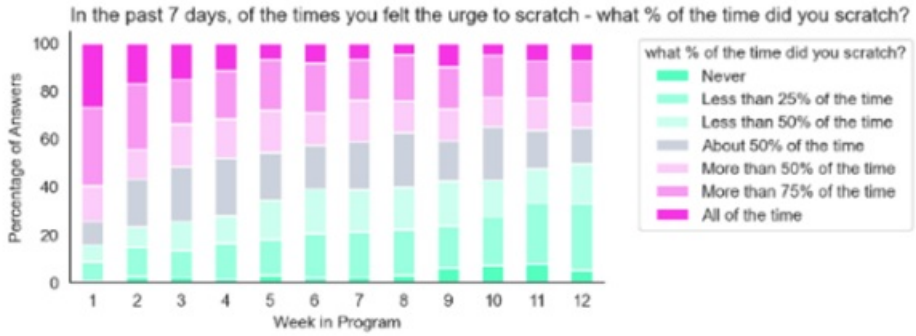

Figure 3: The proportion of users reporting scratching less than 50% of the time (green) increased over time, rising from 16% in week 1 to 50% in week 12 (p < 0.001).

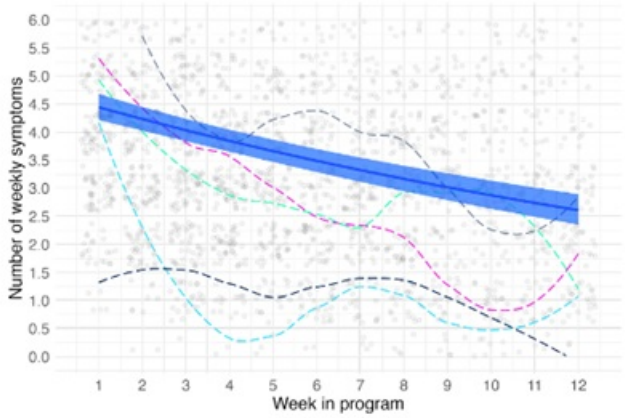

Figure 1: Symptom frequency reduction over time. Blue solid line and shading show the predicted mean number of symptoms with 95%CI; IRR_{time} (95% CI) = 0.947 (0.936, 0.957), p<0.001. Gray dots represent the reported number of symptoms for individual users. Coloured dashed lines represent symptom count trajectories for randomly selected users, highlighted for visualization.

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Abstract N°: 4505

A Phase 2b, Randomized, Double-Blinded, Parallel-Group, Placebo-Controlled, International, Multicenter, Study to Evaluate the Efficacy and Safety of Rezpegaldesleukin in Adults with Moderate-to-Severe Atopic Dermatitis

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Introduction & Objectives:

Atopic dermatitis (AD) is a chronic, relapsing inflammatory skin disorder. Dysfunction of

regulatory T cells (Treg) may play a role in AD immunopathogenesis.1 Rezpegaldesluekin (REZPEG) is an interleukin-2 receptor (IL-2R) pathway agonist that has been shown to stimulate the expansion and function of regulatory T cells (Tregs) that are impaired in inflammatory cutaneous conditions including atopic dermatitis (AD). 2 It represents a potential novel therapeutic approach for patients with moderate-to- severe AD. A Phase 1b study

of REZPEG for patients with moderate-to-severe AD demonstrated a rapid time to response (2-4 weeks) during induction therapy and a prolonged durability of response, i.e., throughout the 36- week follow-up after cessation of therapy.3 These results support further development of REZPEG for patients with AD.

Materials & Methods:

This Phase 2b, randomized, double-blinded, placebo-controlled, international, multicenter study of REZPEG vs placebo enrolls biologic and JAK-inhibitor (JAKi) naïve adults with moderate-to-severe AD, defined by a baseline Eczema Area and Severity Index (EASI) score of ≥16, an Investigator's Global Assessment (IGA) AD score of ≥3, affected total body surface area (BSA) of ≥10%, and chronic AD history of at least one year. Patients are randomized in a 3:3:3:2 ratio to three different REZPEG dosing regimens or placebo, administered subcutaneously during the induction phase. Responders achieving EASI50 post-induction are re-randomized to maintenance dosing every 4 or 12 weeks. Non-responders or those experiencing acute exacerbations are transferred to an open-label rescue arm receiving REZPEG. The primary outcome is the least squares mean percentage reduction in EASI from baseline at the end of induction. Secondary and exploratory endpoints include proportions achieving IGA 0/1 with a ≥2 point reduction, EASI75, EASI90, EASI50, itch relief (≥4 point improvement on the Numerical Rating Scale), % BSA improvement, safety, tolerability, patient-reported outcomes (PROs), pharmacokinetics, and pharmacodynamics.

Conclusion:

REZPEG represents an innovative approach to stimulate regulatory T cells, potentially offering lasting benefits for patients with moderate-to-severe AD. This Phase 2b trial seeks to define the optimal dosing schedule and further establish the efficacy and safety profile of REZPEG in a population new to biologic and JAK inhibitor therapies.

References:

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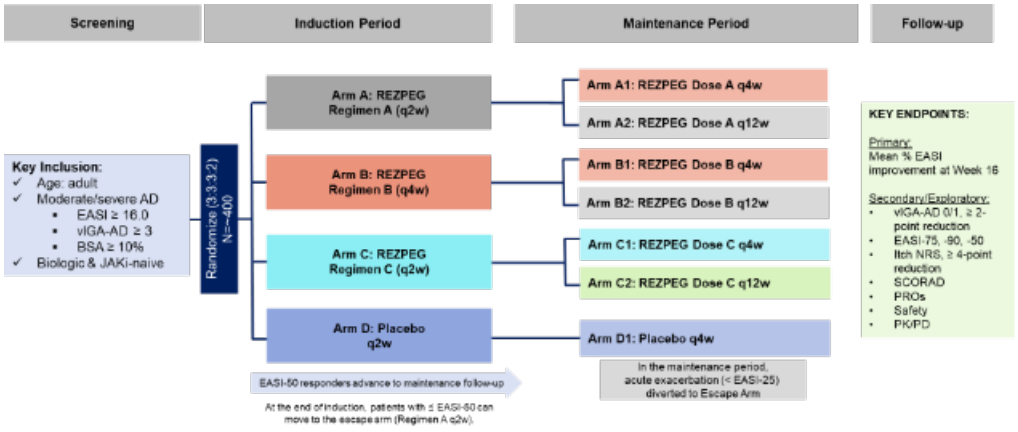
3. Silverberg, J, et al. "LBA 6685: Efficacy and Safety of Single Agent Rezpegaldesleukin, A Selective Regulatory T-Cell-Inducing Interleukin-2 Conjugate, in the Treatment of Atopic Dermatitis: Final Results from a Randomized Phase 1b Study." European Academy for Dermatology and Venereology Annual Meeting, Berlin, Germany, October 11-14, 2023.

Keywords: Rezpegaldesleukin, NKTR-358, trial in progress, IL-2, Treg, atopic dermatitis, biologic naïve, JAK-inhibitor naïve.

Figure 1:



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Abstract N°: 4516

Follow-up in Clinical Practice of Spanish patients with Atopic Dermatitis Treated with Tralokinumab in the ECZTEND Clinical Trial: Post-ECZTEND Study

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Introduction & Objectives:

Tralokinumab, the recently approved selective interleukin (IL)-13 inhibitor for moderate-to-severe atopic dermatitis (AD), demonstrates promising long-term efficacy and safety in real-life settings. The international ECZTEND trial (LP0162-1337) evaluated the long-term performance of tralokinumab in patients with moderate-to-severe atopic dermatitis. The follow-up period for these patients extends over 4.5 years, making it crucial to understand the long-term behavior of tralokinumab in real-world clinical practice.

Materials & Methods:

The study includes 72 adult patients who participated in the ECZTEND trial, with an average follow-up of 55 months. Baseline and follow-up data, such as demographics, disease characteristics, severity, and quality of life scales, were collected at baseline (post-ECZTEND) and 16 weeks into real-world clinical practice.

Results:

The results show that disease severity and subjective quality of life improved or remained stable during the 16-week follow-up period. Most patients had mild or very mild disease burden at baseline (EASI≤5=72%; IGA0/1=57%), which further improved at week 16 (EASI≤5=75%; IGA0/1=68%). Around 45.5% of patients maintained a positive response with tralokinumab dosing every 4 weeks. Patient and dermatologist satisfaction with the treatment remained high, and over 80% of patients continued tralokinumab at week 16. Some patients discontinued treatment due to loss of efficacy or adverse effects.

Conclusion:

This is the first study that demonstrates the persistence of long-term efficacy and safety with tralokinumab

treatment in adults with moderate-to-severe AD, with an average follow-up of 55 months (over 4.5 years) and an additional 16 weeks of post-ECZTEND follow-up. The results are consistent with those reported in clinical trials and real-world publications.

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Abstract N°: 4603

Multimorbidity in adults with atopic dermatitis in the Dutch general population

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Introduction & Objectives: Due to underlying systemic immune activation and a multitude of reported comorbidities, atopic dermatitis (AD) has been proposed a systemic disease. Thus, we aimed to assess the prevalence of multimorbidity (MM), and association of AD with MM in the Dutch adult general population. Further, we aimed to determine the effects of MM on health-related quality of life (HRQoL) in the subpopulation with AD.

Materials & Methods: This cross-sectional study within the Lifelines cohort assessed lifetime prevalence of 52 diseases, clustered into 15 domains, combining data from questionnaires, medication and clinical, physical and laboratory assessments. Lifetime AD was self-reported, physician-diagnosed and severity was based on Patient Oriented Eczema Measure (POEM). MM was defined as two diseases ever present, excluding AD. A categorized morbidity score (cMS) reflected the number of diseases. Measures of HRQoL included physical and mental component scores (PCS and MCS) of the SF-36, as well as utility index score (UIS) and visual analogue scale (VAS) of the EQ-5D-3L. Associations of AD and AD severity with MM and cMS were analysed using binary logistic regression and multinomial logistic regression, respectively. Differences in HRQoL in the subpopulation with AD were tested using One-Way ANOVA. All statistical analyses were adjusted for age and sex.

Results: We enrolled 37,193 participants, of which 3,242 (8.7%) reported AD. MM prevalence was 64.9% among those with AD and 52.4% among those without, increasing with disease severity (mild 62.4% and moderate-to-severe 68.4%). The most prevalent disease domains in the AD group were atopic diseases (48.4%), haematologic diseases (25.5%) and respiratory diseases (21.2%). Odds Ratio (OR) of having MM was 1.95-fold higher (95% Confidence interval (CI) 1.81-2.11) for individuals reporting AD. Regarding disease severity, odds of having MM were higher in moderate-to-severe (OR 2.49, CI 2.12-2.93) than in mild AD (OR 1.73, CI 1.38-2.18). Those with AD, had 1.46-fold higher odds of having one morbidity than those without, increasing with each additional morbidity, reaching 4.08-fold for ≥5 morbidities. All HRQoL measures showed significant differences for multimorbid subjects with AD, compared to those without MM. We observed a higher PCS, but lower MCS, UIS and VAS scores in the multimorbid with AD.

Conclusion: This is the first investigation of this scale exploring associations of AD with MM in the adult general population. Our findings demonstrate that participants with AD, especially moderate-to-severe disease, are at higher risk for having MM. Further, MM was associated with HRQoL in subjects with AD, with lower MCS and self-perception of health according to VAS scores, highlighting the mental disease burden of multimorbid subjects with AD. To assess whether these findings can be explained by underlying systemic inflammation described in AD, further research is needed.

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Abstract N°: 4605

DAapp (Dermatite Atopica App): an innovative project for patients with Atopic Dermatits

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Introduction & Objectives: The DAapp (Dermatite Atopica App) project aims to develop an app for Android and iOS to assist patients with Atopic Dermatitis (AD) in monitoring individual progress and managing prescribed therapy. The primary aim is to enhance the quality of life of the patients by replacing frequently lost or incomplete paper records.

Materials & Methods: The app does not replace medical advice but, thanks to the available functionalities, provides an helpful instrument for patients and physicians. Self-assessment tests are crucial for follow-up and evaluation of therapies for AD. However, due to time constraints during medical visits, they are often conducted inconsistently and their execution is not always feasible.

Results: The application features key questionnaires administered to patients with AD, including Atopic Dermatitis Control Tool (ADCT), Patient Oriented Eczema Measure (POEM), Hospital Anxiety and Depression Scale (HADS), Dermatology Life Quality Index (DLQI), Investigator Global Assessment (IGA), Physician Global Assessment (PGA), Sleep and Itch Self-Assessment Tests that will be available before every appointment in order to standardize and accelerate this phase of the examination. Additionally, our platform includes other crucial functionalities such as tracking past and current therapies of the patient, input of the EASI score calculated by the physicians during visits and reminders for appointments and medications. Finally, there will be a section providing information on AD, aimed at addressing patients' main queries. **Conclusion:** Thanks to DAapp, patients will have at their disposal a tool readily available, facilitating improved data gathering and optimization of dermatological appointment times, thereby enhancing their quality of life. Initially accessible only to patients, in the future it is planned to introduce a web panel for healthcare professionals opening many other possibilities for the application's development.

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Abstract N°: 4606

IL-4 plays a dominant role, relative to IL-13, in IgE-dependent human mast cell responses

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Introduction & Objectives: Involvement of type 2 (T2) inflammation in orchestrating the pathology of multiple cutaneous inflammatory diseases has been validated by blockade of the IL-4Ra pathway (for example, in atopic dermatitis and prurigo nodularis). IL-4Rα is the shared receptor subunit for the T2 cytokines, IL-4 and IL-13, which are implicated in promoting pleiotropic effects, including inflammation, pruritus and remodeling. Mast cells, as producers and targets of IL-4/13, are key cellular players in T2 responses, and relevant to these skin diseases. In addition to their direct effects on mast cells, IL-4 and IL-13 also indirectly affect mast cell responses via IgE production, wherein allergen-crosslinking of IgE-FceR1a complexes on mast cells further amplifies disease pathology.

Materials & Methods: To dissect the role of IL-4 and IL-13 on mast cell functions, we conducted cytokine stimulation assays with primary human immune cells (B cells and mast cells) coupled with flow cytometry and RNA sequencing approaches.

Results: Here we show that IL-4, and to a lesser extent IL-13, induces IgE class-switching in primary human B cells. Consistently, IL-4 also strongly upregulated FceR1a on mast cells relative to IL-13, suggesting a coordinated role in IgE-mediated effector functions. We next evaluated effects of cytokine stimulation on mast cell transcriptional responses, with and without IgE-crosslinking. RNAseq revealed that IL-4 affects more genes in human mast cells relative to IL-13. Additionally, IL-4 dominates IgE-dependent human mast cell responses, uniquely regulating the expression of multiple genes relevant to T2 inflammation, including IL-31, a cytokine involved in promoting pruritus.

Conclusion: In summary, these data highlight a dominant role for IL-4, relative to IL-13, in coordinating IgE-dependent human mast cell responses.

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Abstract N°: 4614

Real world experience of efficacy and safety of tralokinumab use in atopic dermatitis: a multicentre audit

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Introduction & Objectives:

Systemic treatment of atopic dermatitis has seen significant advances in recent years with the advent of licensed biologics and janus kinase inhibitors. Tralokinumab, a fully human monoclonal antibody targeting interleukin-13, was approved in 2022 in the United Kingdom for the treatment of moderate to severe atopic dermatitis not responsive to conventional management. To date there is limited published local evidence of its efficacy and safety outside of clinical trials. We sought to retrospectively review the practices surrounding use of tralokinumab for moderate to severe atopic dermatitis, its efficacy and safety in two regional dermatology departments.

Materials & Methods

Patient data was retrospectively reviewed for those for whom tralokinumab had been prescribed. Baseline demographics, duration of treatment with tralokinumab, previous treatments, clinical scoring and documentation of adverse effects were collected. These reviews were registered and approved locally with audit committees to ensure regulation and data protection.

Results

39 patients were treated with tralokinumab from October 2022 to April 2024 in our centres. Data were missing for 10 patients, and these were excluded from analysis. Median treatment duration was 8 months (range 2-84 months). Median baseline EASI and DLQI scores were 18 and 20 respectively. At 16 weeks, these improved to 2.2 and 7 respectively. At 16 weeks, 73%, 67%, and 33% had achieved EASI50, EASI75 and EASI90 respectively. 26-week data was available for 10 patients, with a median EASI of 5 and a median DLQI of 9. EASI50 and EASI75 was achieved in 70%, and 30% achieved EASI90.

Almost all patients were treated with standard 2-weekly dosing. One patient was on 4-weekly dosing and maintained an EASI of 1 and DLQI of 4 at 84 months. 6 patients stopped treatment; reasons included severe keratoconjunctivitis (one patient), and suboptimal disease control (4 patients). One patient was lost to follow up before 16-week review.

8 patients (27%) had ocular surface problems (dry, itchy eyes) during treatment, 3 of which were newly reported (10% of patients), and 5 of which were pre-existent prior to starting tralokinumab. One patient discontinued treatment after 7 months due to persistence of severe pre-existing keratoconjunctivitis. Another patient had erythema multiforme in the context of viral illness on one occasion. One patient (3%) experienced flares of facial dermatitis on treatment, but continued at standard dosing. One patient died, unrelated to their atopic dermatitis or tralokinumab.

Conclusion

Our real-world experience of tralokinumab supports trial data of its clinical efficacy and safety in treating atopic dermatitis. Ocular surface dryness and irritation was the most common reported adverse effect, though only emergent in 10% of patients. Minor infections or viral illnesses were likely underreported at follow up, though

there were no serious infections. Longer term follow up will provide further evidence of efficacy and safety outside of trial settings.

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Abstract N°: 4615

IMG-007, a novel nondepleting anti-OX40 monoclonal antibody, showed potent in vitro and in vivo inhibitory effects on OX40-OX40L signalling

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Introduction & Objectives:

The OX40-OX40L axis plays an important role in the pathogenesis of many immunological and inflammatory (I&I) diseases through boosting a broad subsets of T cell responses. Antagonizing this pathway has shown therapeutic effects in atopic dermatitis (AD).

IMG-007 is a novel nondepleting anti-OX40 monclonal antibody (mAb) with a silenced antibody-dependent cell-mediated cytotoxicity (ADCC) function to minimize safety risks. Here we report the preclinical pharmacological activity of IMG-007 in binding to OX40 and blocking OX40-OX40L signaling in various in vitro assays and an in vivo T cell disease model.

Materials & Methods:

The kinetics of IMG-007's binding to human OX40 was evaluated using surface plasmon resonance (SPR) Biacore 8K (Cytiva). IMG-007's binding capacity to other TNFR superfamily members was evaluated by an enzyme linked immunosorbent assay (ELISA). Effect of IMG-007 on OX40-OX40L interactions was assessed by an ELISA. The inhibitory effect of of IMG-007 on OX40L-induced NFκB activation in HEK293-OX40-Luc reporter cells and IFNγ release in primary human T cells was also measured. A prophylactic acute xeno-graft versus host disease (GvHD) model in NCG mice was employed to evaluate the in vivo efficacy of IMG-007 on the disease activity and T cell activation.

Results:

IMG-007 bound to OX40 with high affinity (KD=1.79 nM). It had minimal binding to other TNFR superfamily members. It inhibited, in a dose-dependent manner, OX40-OX40L protein-protein interactions, OX40L-induced NFκB activation in HEK293-OX40-Luc cells and OX40L-induced IFNγ release in human T cells. In the acute xeno-GvHD mouse model, IMG-007 demonstrated a dose-dependent improvement in survival time, body weight and clinical symptoms by suppressing T cell reconstitution and activation in vivo.

Conclusion:

IMG-007, a novel nondepleting anti-OX40 mAb with a slienced ADCC function, exhibited potent inhibition of OX40-OX40L signaling in vitro and protective efficacy in a xeno-GvHD mouse model in vivo. IMG-007 represents a promising OX40 antagonist potentially for the treatment of I&I diseases.

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Abstract N°: 4629

Upadacitinib for the treatment of severe atopic dermatitis: Real-world data from the Czech Republic BIOREP Registry

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Introduction & Objectives: Atopic dermatitis (AD) is a multifactorial chronic inflammatory skin disease posing a significant burden on patients' quality of life. According to European guidelines, patients with severe AD should be treated with biological drugs or Janus kinase (JAK) inhibitors. Upadacitinib is a JAK1 inhibitor with demonstrated efficacy in patients with atopic dermatitis. The objective of our study was the retrospective assessment of upadacitinib effectiveness in patients with severe atopic dermatitis.

Materials & Methods: This observational, retrospective, multicenter cohort study analyzed data from patients included in the Czech national registry of patients with inflammatory skin diseases, BIOREP. As of April 2024, a total of 1,756 treatment series were recorded in the BIOREP AD database, and among these, 213 patients received treatment with upadacitinib. Three validated scores - the Eczema Area and Severity Index (EASI), itch severity, and sleep disturbance - were recorded at baseline, as well as at weeks 16, 24, and 52. The effectiveness of treatment was evaluated at baseline and subsequently at the 4th, 6th, and 12th month of therapy in terms of mean percentage change from baseline and the percentage of patients experiencing reductions in EASI scores of >50%, >75%, >90%, and 100% from baseline. Additionally, improvements in itch severity and quality of sleep were observed.

Results: The study enrolled a total of 213 patients with severe atopic dermatitis who were treated with upadacitinib. At baseline, the mean EASI score was 27.8 (SD±9.3). In the 4th month, 119 patients were evaluated, followed by 84 patients in the 6th month, and 20 patients in the 12th month. The EASI50 response was observed in 95.0%, 98.8%, and 100% of patients after 4, 6, and 12 months, respectively. The EASI75 response was achieved by 77.3%, 91.6%, and 85.0% of patients after 4, 6, and 12 months, respectively. EASI90 response rates were 53.8%, 63.1%, and 60.0% after 4, 6, and 12 months, respectively. The EASI100 response was achieved by 18.5% of patients after 4 months, 27.4% after 6 months, and 10.0% after 12 months. We used a 10-point numeric rating scale (NRS) to assess itch severity and sleep disturbance. At baseline, the mean itch score was 7.5, which decreased to 2.4 after 4 months, 2.0 after 6 months, and 1.9 after 12 months of treatment. The quality of sleep, measured on a 10-point NRS, was impaired before therapy with an average score of 6.1. This score improved to 1.4 after 4 months, 1.2 after 6 months, and 1.3 after 12 months of treatment.

Conclusion: Data from clinical trials involving upadacitinib demonstrated that at week 16, the mean rates of achieving a treatment response of EASI 75 and EASI 90 were 70.9% and 53.9% of patients, respectively. By week 52, the average proportions of patients treated with upadacitinib who experienced EASI 75 were 59.9%. In our analysis of treatment responses in real-world clinical practice we observed even better rates of achieving EASI responses during the specified periods. Overall, 77.3% and 53.8% of patients achieved an EASI 75 and EASI 90

response, respectively, in the 16th week of treatment, and a total of 85.0% of patients achieved EASI 75 after one year of treatment. Additionally, there was a significant improvement in itch severity and quality of sleep. Based on our real-life experience, upadacitinib demonstrated notable effectiveness.

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Abstract N°: 4633

The multifactorial and heterogenous nature of Chronic Hand Eczema in clinical practice: Results from the RWEAL study

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Introduction & Objectives:

Chronic Hand Eczema (CHE) is a prevalent disease which can have significant impact and burden on patients. Real-world multinational data on clinical subtypes, presenting features, and physician determination of CHE severity is lacking. A key objective of this study was to investigate the presenting features of CHE.

Materials & Methods:

The RWEAL study (Real-World trEatment & mAnagement of chronic hand eczema in cLinical practice) is a medical chart review in Canada, Germany, France, Italy, Spain, and the UK, by dermatologists and general practitioners with roles in dermatology (UK/Canada). Patients ≥18 years of age with moderate to severe CHE treated with TCS in the last 12 months, or contraindicated to TCS, were randomly selected from physician's overall caseload in the preceding 12 months.

Results:

In total, 1939 patients with moderate-to-severe CHE were identified. In the vast majority of cases (74.7%), physicians determined the disease severity by clinical evaluation. Other methods to assess disease severity included assessment of psychosocial burden/impact on quality of life (38.9%), impact on ability to work (35.9%), and CHE treatment history (32.1%). A hand eczema scoring system was only used in 26.5% of cases.

At the last visit, CHE signs included erythema (59.6%), pruritus (59.3%), scaling (48.6%), fissures (46.7%), lichenification (36.2%), hyperkeratosis (35.9%), pain (32.4%), vesicles (26.9%) and edema (22.3%). The majority of patients, 73.9%, had three signs or more, whereas 15.5% had two signs, and only 10.6 %, had one sign.

Etiological subtypes of CHE reported were irritant contact dermatitis (40.1%), atopic dermatitis (33.1%), allergic contact dermatitis (27.5%), protein contact urticaria (3.0%) and unknown (13.6%). Multiple subtypes were reported in 14.2% of cases. Atopic dermatitis as the sole cause was reported in less than one quarter of cases (24.1%).

CHE was most commonly localized on the palms (56.6%), but also frequently on the fingertips (41.6%), back of hands (40.8%) and interdigital spaces (37.3%). One localization was reported in 39.5% of cases, two localizations in 29.2% and three or more in 30.2% of cases (1.1% unknown).

Conclusion:

This large multi-national study, reflecting clinical practice, suggests that the severity of CHE was most often assessed by clinical evaluation and seldom with a formal scoring system. Results show that patients with CHE often present with a combination of many different signs, symptoms and with multiple aetiological subtypes. The most common was irritant contact dermatitis, while atopic dermatitis was rarely the sole cause. Current treatment options do not sufficiently address this multifactorial and heterogenous nature of CHE.

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Abstract N°: 4647

A community-based, decentralized pragmatic single-blind trial of emollient therapy for the prevention of pediatric atopic dermatitis-The CASCADE Study

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Introduction & Objectives:

Atopic dermatitis (AD) is a common, chronic inflammatory skin disorder affecting 21-38% of children in US primary care practices. An abnormal skin barrier may represent an important initiating factor in AD development. Studies on AD prevention using skin barrier enhancement have been mixed and often exclude low-risk families.

Materials & Methods:

We enrolled 1247 parent-infant dyads up to 8 weeks of age unselected for AD risk from 25 primary care clinics participating in the Meta-LARC Practice-based Research Network (PBRN) consortium in Oregon, Colorado, Wisconsin, and North Carolina. Informed consent and participant-reported data were captured remotely via secure interfaces. The intervention was once daily full-body application of a parent choice of one of five bland emollients of varying formulations provided by mail after 1:1 randomization. The control arm was instructed to refrain from regular emollient use. The primary outcome was the cumulative incidence of AD at 2 years recorded in the health record by a trained clinician. All participants were contacted quarterly via e-mail to gather skin product-related adverse events.

Results:

Cohort retention at 2 years was >80% and baseline demographics reflected the general U.S. population. We observed a significant reduction in the cumulative incidence of AD in the emollient group with a RR 0.84 (95%CI 0.73-0.97), P<0.015. The protective effect was greater in infants without atopic risk factors: RR 0.76 (95%CI 0.62-0.93). Sensitivity analyses using different definitions of AD were consistent with the primary analysis. AD medication use was lower in intervention than control, with more prescription (45% v 35%) anti-inflammatory or antibiotic and over-the-counter (22% v 17%) anti-inflammatory therapies used for children who developed AD. No treatment-related SAEs were identified and more cutaneous AEs occurred in the control group. The incidence of skin infections was low in both groups and reported provider-diagnosed food allergy was lower in the intervention group.

Conclusion:

These data support emollient therapy as a safe, effective and generalizable approach to reduce the burden of AD in community settings. Cost-effective analyses are needed and longer-term follow-up of disease severity and comorbidity development would be of interest.

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Abstract N°: 4743

First in Human Phase 2 Trial of Zabalafin (AB-101): A Novel Topical Drug Candidate for Mild, Moderate and Severe Atopic Dermatitis in Children and Adults – Itch and Quality of Life Interim Results

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Introduction & Objectives:

The main patient-related concern in atopic dermatitis (AD) is persistent, disrupting itch (pruritus). Itch relief leads to improvement in quality of life (QOL) for AD patients. An unmet need exists for an AD drug without restrictions on long-term continuous use that provides a strong improvement in pruritus and QOL, treats inflammation and bacteria to control bacteria-associated AD flares, treats infected AD, and is worry-free for extended use in children and adults. Current AD drugs have shortcomings in efficacy, pain/stinging and/or boxed warnings. Zabalafin (AB-101) is a novel, topical first-in-class multi-target therapeutic natural source drug with multiple bioactive compounds providing multiple mechanisms of action including antipruritic, anti-inflammatory, and antibacterial activity, indicating zabalafin should be effective in AD.

This first-in-human Phase 2 study was designed to assess the itch and QOL improvement and the safety and efficacy of zabalafin hydrogel against the inflammatory and bacterial components of AD.

Materials & Methods:

All participants entered uniquely with secondary infected AD as determined by the Secondary Infection Rating Scale (SIRS) and investigator clinical judgment and were assessed for infection and AD response, including itch and QOL improvement. Investigators were queried for clinical assessment of infection resolution.

Population included mild, moderate, and severe AD in ages 3 through adult. Participants received zabalafin BID 8 weeks open label. Participants returned for evaluation at multiple visits throughout the trial for assessments.

Itch relief was assessed using the Pruritus Numeric Rating Scale (NRS), where decrease of ≥ 4 points at end of treatment (EOT) is considered clinically meaningful. QOL was assessed using Patient Oriented Eczema Measure (POEM), where decrease of ≥6 points at EOT is considered clinically meaningful. AD assessment scales including EASI and IGA were used to evaluate inflammatory response.

Results:

Interim results for 10 participants are reported with 7 participants age 3-17; 3 age 18-45. All participants began with AD lesions secondarily infected. Zabalafin effectiveness in treating AD inflammation and infection was demonstrated using EASI, IGA and SIRS in all age groups. Pruritis NRS score reduction of ≥4 was achieved in 8/10 participants (80%, baseline score = 8 out of 10) at EOT. Itch reduction was demonstrated both in immediacy of onset and long term. POEM score reduction of ≥6 was achieved in 10/10 participants (100%, baseline = 18.6 out of 28) at EOT.

Conclusion:

These results for zabalafin suggest its capability to be an effective treatment of both non-infected AD and AD with secondary bacterial infection. Zabalafin demonstrated clinically meaningful results in pediatric and adult

populations for itch and QOL improvement. Zabalafin is a promising unique topical AD drug for children and adults with the potential for limitless long-term continuous use.

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Abstract N°: 4761

Two-Year Multicenter Study on Tralokinumab: Drug Survival, Safety and Efficacy in Severe Atopic Dermatitis

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Introduction & Objectives:

Atopic dermatitis (AD) is a chronic inflammatory skin condition impacting up to 20% of individuals in developed nations, with a significant subset requiring ongoing systemic treatment. Tralokinumab, a monoclonal antibody, effectively targets IL-13, mitigating downstream signaling pathways and systemic markers of type 2 inflammation. Limited data exist on tralokinumab's long-term use and real-world adherence, with only one study covering a 52-week period.

Materials & Methods:

The study enrolled patients with severe atopic dermatitis receiving tralokinumab treatment across fifteen tertiary centers in Italy. The first patient initiated tralokinumab treatment in July 2021, with data lock completed in March 2024. Clinical scores such as Eczema Assessment Severe Index (EASI), Pruritus Numerical Rating Scale (NRS), Sleep NRS, Dermatology Life Quality Index (DLQI), and Atopic Dermatitis Control Tool (ADCT) were recorded. Given the retrospective nature of the study and variable follow-up intervals, data were collected at as many follow-up points as possible, aggregated every 2 months of treatment as follows: T3-T4, T5-T6, T7-T8, T9-T10, T11-T12, T13-T14,

T15-T16, T17-T18, T19-T20, T21-T22, T23-T24. Drug survival was analyzed using unadjusted Kaplan-Meier survival curves to estimate the risk and time to discontinuation.

Results:

We herein present the preliminary analysis. The definitive analysis will be presented at the EADV congress in September.

In March 2024, the entire population comprised 471 patients. Among these patients, 373 were still undergoing treatment, 15 were lost to follow-up and 83 discontinued tralokinumab. The reasons for discontinuation included adverse events (AEs) for 12 patients, primary inefficacy for 50, secondary inefficacy for 9, and other reasons for 12.

Overall DS rates were 94.7%, 89.8%, 81.5%, 74.5% and 70.5% at 3, 6, 12, 18 and 24 months of treatment respectively.

In the entire population, the median percentage improvement of EASI was 70.0 (45.5-87.5) at T3-T4, 80.0 (63.5-93.8) at T5-T6, 95.8 (81.3-100.0) at T11-T12, 100.0 (83.33-100.0) at T15-T16, with stable results thereafter until 24 months of treatment, showing a median improvement of 100.0 (100.0-100.0). When considering bio-naïve and bio-experienced patients, statistically significant differences were observed at several follow-ups, indicating that bio-experienced patients exhibited slower clinical improvement.

The improvement in clinical manifestations was accompanied by a significant reduction in Patient-Reported Outcomes (PROs). The median improvement in Pruritus NRS scores showed significant increases over time with tralokinumab treatment, reaching 100% improvement from baseline at T13-T14 and remaining stable thereafter, with differences observed between bio-naïve and bio-experienced patients at certain follow-up intervals. ADCT, Sleep NRS, DLQI have also shown good clinical improvement.

Conclusion:

The study showed significant improvements in clinical manifestations, measured by the Eczema Area and Severity Index (EASI) and in Patient-Reported Outcomes (PROs). Overall, the study suggests that tralokinumab treatment led to significant improvements in both clinical manifestations and patient-reported outcomes in patients with atopic dermatitis. However, there were variations in response rates and tolerability among patients, especially those with prior treatment experience.

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Abstract N°: 4794

"From Skin to Mind: Investigating the Bidirectional Relationship between Atopic Dermatitis and Obsessive-Compulsive Disorder"

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Introduction & Objectives:

Elevated IgE levels, a hallmark of AD, can result from allergic disorders, chronic infections, autoimmune disorders, liver disease, inflammatory bowel disease, and cancer. IgE levels may indicate underlying allergic disorders but may fluctuate without symptoms.

Atopic dermatitis (AD) is a chronic skin condition with a lifetime prevalence of up to 20%, characterized by impaired skin barrier, elevated total immunoglobulin E (IgE), and immune dysregulation. Genetic predisposition and environmental triggers contribute to its pathogenesis. Treatments include moisturizing, topical anti-inflammatory preparations, phototherapy, and systemic therapy for severe cases. Studies show a positive association between AD and allergic/autoimmune diseases.

Atopic disease and eczema correlate with increased risk of developing attention deficit/hyperactivity disorder (ADHD) and autism spectrum disorder. Limited data exists on the association between AD and obsessive-compulsive disorder (OCD), characterized by recurrent thoughts and repetitive behaviors causing distress.

Materials & Methods:

This study presents a case of severe, persistent pruritus in a 30-year-old patient despite two years of topical steroid therapy. No significant medical history, recent travel, or medication intake was reported. Scratch marks were observed on the back without primary skin lesions, prompting a skin biopsy showing dermal eosinophilia. Blood tests indicated eosinophilia and markedly elevated IgE levels (7280 IU/mL), suggestive of allergic pathology. Allergy testing yielded negative results. Treatment with montelukast, antihistamines, and desensitization program was initiated with no significant improvement after six months. Further evaluation and repeated biopsies failed to reveal the underlying cause. Eventually, the patient was diagnosed with obsessive-compulsive disorder (OCD) following consultation with a psychiatrist. High IgE levels were attributed to sterilization obsessions due to the COVID-19 pandemic and excessive use of alcohol-based sanitizers.

Results:

Systemic antidepressants, with behavior adjustment programs, improved the patient's condition significantly. Allergic dermatitis diagnosis was confirmed, with symptomatic improvement. This case highlights the complex relationship between dermatological and psychiatric conditions, emphasizing comprehensive evaluation and interdisciplinary collaboration.

Findings align with literature on atopic dermatitis and OCD link. Dysregulated inflammatory responses and autoimmune triggers are implicated in OCD pathophysiology, similar to AD. Bidirectional relationship between dermatological and psychiatric disorders stresses increased awareness and early intervention for optimal outcomes.

Conclusion:

In conclusion, our case emphasizes the complex link between atopic dermatitis and obsessive-compulsive disorder, requiring clinician vigilance. Early psychiatric comorbidity recognition and treatment optimize therapeutic outcomes and quality of life. Future research should explore shared genetic and environmental pathways in larger cohorts, aiding targeted interventions and patient care improvement. Integrating psychiatric screening in dermatological practice promises to identify comorbidities and guide personalized treatments.

EA DV CONGRESS
AMSTERDAM 25-28 SEPTEMBER 2024
EUROPEAN ACADEMY OF DERMATOLOGY & VENEREOLOGY

Abstract N°: 4837

Anaphylaxis in atopic dermatitis

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Introduction & Objectives:

The most frequent causes of anaphylaxis are food allergy (FA) in children; hymenoptera venom allergy and drug hypersensitivity in adults. Data about anaphylaxis in AD are limited. We aimed at analyzing factors associated with anaphylaxis in AD.

Materials & Methods:

Specific sensitizations of 863 AD patients (37.1 ± 19.1 years) and 230 controls without AD (36.3 ± 15.3 years) were analyzed using multiplex assays (ISAC ImmunoCAP). Anaphylaxis was defined as anaphylactic reaction involving ≥2 organs with cardiovascular and/or respiratory symptoms. Associations of anaphylaxis with sensitizations and other clinical and epidemiological factors were analyzed using binary logistic regression.

Results:

Anaphylaxis involving ≥2 organs with cardiovascular and/or respiratory symptoms was reported by 39.7% (343/863) of AD patients and 10.0% (23/230) of controls, any clinical reaction to ≥1 allergen in 684/864 (79.3%) AD patients and 95/230 of controls (41.3%). We detected sensitizations in 89.3% of symptomatic AD patients (611/684) and 74.7% of symptomatic controls (71/95), with sensitizations to ≥1 food allergen in 69.2% of AD patients and 44.2% of controls. Detected sensitizations were frequently not fitting to the self-reported "allergies", and were underreported e.g. celery, or overreported e.g. cow´s milk. In AD patients, odds of anaphylaxis increased with childhood onset of AD, disease duration; age between 18 and 60 years (reference <12 years); atopic comorbidities (asthma, allergic rhinitis, FA or multiple (3-4) atopic comorbidities at once), sensitizations to ≥1 food allergen with high risk of anaphylaxis, e.g. peanut (rAra h 6)), maternal asthma or FA. An emergency kit was carried by 153 subjects (AD n=148, controls n=5), but only in 54 subjects an epinephrine autoinjector. 58 patients with an emergency kit completed an additional questionnaire. Hereof, reported triggers of anaphylaxis were food (48.3%), insect stings (10.3%), drugs (8.6%), others 32.8%. 34.5% had 1 systemic anaphylactic reaction (SAR), 24.1% 2 SAR, 13.8% 3 SAR, 10.3% 4 SAR. Reported reactions were cutaneous in 96%, respiratory in 86.6%, cardiovascular in 69.8%, gastrointestinal in 60.4% of these patients. 37.7% of patients reported an AD flare following the SAR.

Conclusion:

The high rates of anaphylaxis in AD patients and mismatch of self-reported allergies versus detected sensitizations underlines the necessity for a detailed history and thorough allergological diagnostics to estimate patients´ risk for anaphylaxis and unravel clinically relevant sensitizations as cause of anaphylaxis with unknown trigger factors. The detected risk factors might help to identify patients at risk with practical consequences in terms of patient counseling and prevention. Our data point towards an ongoing need for education not only for patients, but also for physicians in terms of allergological diagnostics and correct prescription of a complete emergency kit.

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Abstract N°: 4876

25-Hydroxycholesterol Aggravates Atopic Dermatitis by Activating Mast Cells via MRGPRX2.

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Introduction & Objectives:

The quantity and composition of skin lipids are notably altered in patients with atopic dermatitis (AD). Cholesterol, which accounts for 25% of the stratum corneum lipids, is significantly elevated in AD skin lesions. However, the exact role of cholesterol and its metabolites in AD skin is not yet fully understood. This study examines the impact of 25-hydroxycholesterol (25-HC), a cholesterol metabolite, on the pathogenesis of atopic dermatitis.

Materials & Methods:

Lipid metabolism-related genes were extracted from the GeneCards database. Two skin transcriptomics datasets for AD patients were retrieved from the Gene Expression Omnibus (GEO) and overlap-analyzed to identify differentially expressed genes (DEGs) related to lipid metabolism in AD. The level of 25-HC and Cholesterol-25-hydroxylase (CH25H), the enzyme responsible for 25-HC biosynthesis, were measured in skin samples of AD patients and healthy controls. Their correlation with the AD disease severity and immune cell infiltration in skin lesions were investigated. The effect of exogenous 25-HC on AD-related skin inflammation was studied using the MC903-induced AD mouse model. Furthermore, mast cell-deficient *W-sash* c-*kit* Mutant KitW-sh/W-sh Mice and MrgprB2-conditional knockout (MrgprB2-/-) mice were used to determine whether 25-HC's effects in AD were mediated via mast cells through MRGPRX2. Additionally, we employed the human mast cell line LAD2, assessing the effect of 25-HC on mast cells via MRGPRX2 by knocking down MRGPRX2 with siRNA.

Results:

In skin lesions, most lipid metabolism-related genes (LMRGs) (58.64%, 475 out of 810) showed differential expression between atopic dermatitis (AD) patients and healthy controls. Cholesterol oxidase Ch25h was among the most significantly altered, with a progressive increase from the healthy control group to non-lesions in AD patients, and then to AD lesions. Our clinical samples also confirmed elevated CH25H expression and accumulation of 25-hydroxycholesterol (25-HC) in human AD lesions. Additionally, we found a significant correlation between higher CH25H expression and AD severity and mast cell infiltration in lesional tissue. Treatment with 25-HC further exacerbated AD lesions and increased scratching behavior in the mouse model. However, the exacerbating effects of 25-HC on AD were rescued in KitW-sh/W-sh mice and MrgprB2−/− mice. In vitro experiments showed that 25-HC activated the human mast cell line LAD2, causing Ca2+ influx, degranulation, and the release of inflammatory cytokines, and the activation effects were reversed by MRGPRX2 knock down. Additionally, molecular docking analysis indicated that 25-HC could form hydrophobic interactions with MRGPRX2.

Conclusion:

25-Hydroxycholesterol promotes itching and inflammation in AD by activating mast cells via MRGPRX2.

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Abstract N°: 4925

Treatment goals and preferences of pediatric atopic dermatitis patients, young adults, and caregivers

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Introduction & Objectives: The management of Atopic Dermatitis (AD) in young patients can be challenging given the evolving nature of AD and the changing era of new treatment options. Improved understanding of the treatment goals and preferences of young AD patients and their caregivers is needed to improve patient-centered care. Therefore, this study aimed to explore the treatment goals and preferences of young patients and caregivers of patients with AD, and to explore the heterogeneity in treatment goals and preferences among subgroups of patients.

Materials & Methods: A web-based survey was conducted in Dutch children (6-11 years), adolescents (12-17 years), young patients (18-30 years), and caregivers of patients with AD. Survey questions included multiple-choice, open-ended, and 4-point Likert scale questions. Treatment goals and preferences were compared within groups and were further stratified by gender, current treatment, self-reported disease severity, presence of visible lesions, and presence of atopic comorbidities.

Results: A total of 279 respondents were included in the analyses, comprising 28 children, 34 adolescents, 115 young adults, and 102 caregivers. Respondents considered 'no itch', 'no lesions' and 'preventing new atopic dermatitis lesions' as the most important treatment goals. 'Long-term safety', 'high effectiveness', and 'short-term safety' were considered to be the most important treatment characteristics (Figure 1). Young patients considered convenience of treatment (including 'easy to travel with' (p=.005), 'consumes little time' (p=.003), 'not sticky/greasy' (p=.022)), and minimal monitoring ('no/few hospital visits' (p=.017) and 'no/few blood samples needed' (p=.058)) more important than caregivers. In contrast, caregivers considered 'long-term safety' (p<.001) and 'short-term safety' (p=.001) more important than young patients. Psychosocial goals (including 'feeling less depressed or sad' (p=.015), 'not being different from peers' (p<.001), 'being able to have more contact with peers' (p<.001)) were considered more important in pediatric patients than in young adult patients. In addition, psychosocial goals were considered more important in patients with moderate-to-severe disease than in patients with mild disease. Differences in goals and preferences were also found when stratifying by gender, current treatment, presence of visible lesions, and presence of atopic comorbidities.

Conclusion: Young AD patients and caregivers mainly strive to clear itch and lesions with effective and safe treatment. However, perspectives differ within individuals at different stages of life. The identified differences underline the relevance of addressing individual needs and contribute to improved patient-centered care.

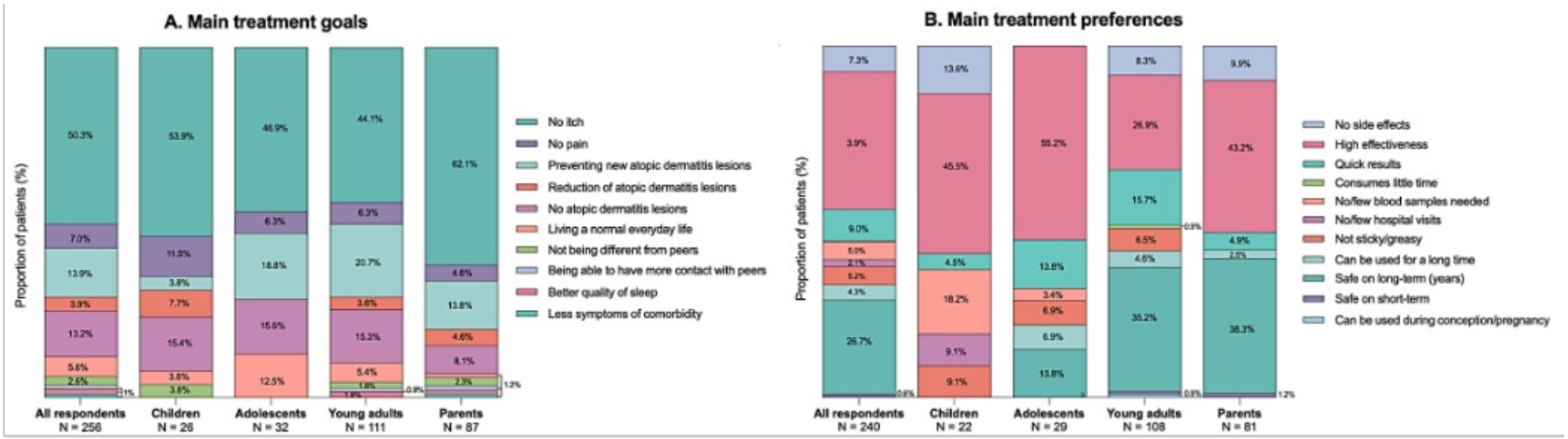

Figure 1. Main treatment goals (A) and main treatment characteristic preferences (B) of young atopic dermatitis patients and caregivers of atopic dermatitis patients.

Respondents mentioned (A) their most important treatment goal and (B) their most important treatment characteristic (B) preference out of a predefined list of items. Each respondent mentioned one treatment goal and one treatment characteristic.

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Abstract N°: 4947

Effectiveness of Petrolatum and Panthenol Ointment Versus 0.1% Triamcinolone Acetonide in 10% Urea Cream for Treating Mild-to-Moderate Chronic Hand Eczema: A Split-Hand, Evaluator-Blinded, Randomized, Controlled Trial.

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Introduction & Objectives: There are many side effects resulting from the long-term use of conventional therapy, e.g. high potency topical corticosteroid, for treatment of chronic hand eczema (CHE). This study aimed to explore the efficacy of CHE treatment using the healing ointment (HO) of anti-inflammatory ingredients compared with 0.1% Triamcinolone acetonide in 10% urea cream (TAU).

Materials & Methods: A split-hand, evaluator-blinded, randomized, controlled study was conducted in 26 patients (88.5% females, mean age 50.04 ± 9.63 years) with mild-to-moderate CHE. All patients were randomly assigned to apply HO or TAU twice daily on each side of the hand for consecutive 28 days.

Results: There was an improvement of HECSI, TEWL, SCH, hemoglobin index, DLQI, and VAS on the HO treated side at day 28, with statistical significance. Also, a statistically significant difference of TEWL reduction was observed on the HO treated side when compared to the TAU treated side at the same visit. Moreover, the superior post-moisturizing efficacy at 7 days was noted for TEWL and SCH on the HO treated side.

Conclusion: Interestingly, the use of HO with anti-inflammatory ingredients could be alternatively efficacious for treatment of CHE to prevent complications from the long-term application of steroids.

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Abstract N°: 4959

Sustained Achievement of No or Minimal Patient-Reported Atopic Dermatitis Skin Symptoms With Long-Term Upadacitinib Use: Week 140 Results From Phase 3 Measure Up 1 and Measure Up 2 Clinical Trials

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Introduction & Objectives:

Atopic dermatitis (AD)—a chronic inflammatory skin disease characterized by multiple skin manifestations such as intense itch, rash, dryness, and pain—can adversely impact patient quality of life.1 Upadacitinib (UPA), an oral selective Janus kinase inhibitor, was previously shown to provide rapid and sustained improvements in patient-reported AD skin symptoms over 52 weeks in the ongoing, phase 3, Measure Up 1 and Measure Up 2 clinical trials.2 Here, an updated analysis of the effect of UPA on patient-reported AD skin symptoms over 140 weeks is reported.

Materials & Methods:

The Measure Up 1 (NCT03569293) and Measure Up 2 (NCT03607422) clinical trials are replicate phase 3, double-blinded, placebo-controlled studies of UPA in patients (aged 12–75 years) with moderate-to-severe AD. Patients were randomized 1:1:1 at baseline to once-daily UPA 15 mg, UPA 30 mg, or placebo (PBO). At week 16, patients receiving PBO were re-randomized 1:1 to once-daily UPA 15 mg or UPA 30 mg; patients initially receiving UPA maintained their assigned regimen during the blinded extension period. This analysis included patients allocated to UPA 15 mg or UPA 30 mg treatment groups at study baseline. Skin symptoms were assessed by the Atopic Dermatitis Symptom Scale (ADerm-SS), a patient-reported instrument comprising 11 items, each rated 0–10, with higher scores indicating worse symptoms. Treatment response to UPA was evaluated for each ADerm-SS item at weeks 16, 52, and 140 as proportions of patients achieving no or minimal skin symptoms (i.e., in patients with a baseline score >1 who achieved a score of 0 or 1 during UPA treatment) and proportions of patients with a baseline score ≥4 who achieved a meaningful improvement (considered a ≥4-point reduction in the current analysis). Data were analyzed using observed cases without missing data imputation.**

Results:

Proportions of patients achieving no or minimal AD skin symptoms with UPA 15 mg at week 16 (35%–64% across symptom types) generally increased through week 52 (39%–73%) and were maintained through week 140 (40%–73%; **Figure 1A**). No or minimal skin symptoms with UPA 30 mg were generally sustained from week 16 (52%–80%) through weeks 52 (48%–77%) and 140 (50%–80%; **Figure 1B**). Similar findings were observed with UPA 15 mg and UPA 30 mg for achievement of meaningful improvements in AD skin symptoms (**Figure 2**)** . Response rates for achievement of meaningful improvements in AD skin symptoms with UPA 15 mg at week 16 (61%–75%) generally increased through week 52 (67%–80%), and were sustained through week 140 (64%–82%; **Figure 2A**). Meaningful improvements in AD skin symptoms with UPA 30 mg were sustained from week 16 (73%–86%)

through weeks 52 (72%–86%) and 140 (75%–88%; **Figure 2B**). Numerically higher proportions of patients treated with UPA 30 mg vs UPA 15 mg experienced improvement in skin symptoms at weeks 16, 52, and 140 (**Figures 1** and **2**).**

Conclusion:

Treatment of patients with moderate-to-severe AD with once-daily UPA monotherapy (15 mg or 30 mg) was associated with the achievement of no or minimal skin symptoms, including itch, pain, and other skin manifestations. These improvements were sustained through week 140, demonstrating the long-term efficacy of UPA in managing AD symptoms.

Figure 1. Proportions of Patients With Baseline ADerm-SS Score >1 Who Achieved an ADerm-SS Score of 0 or 1 by Week 16, Week 52, and Week 140 of (A) UPA 15 mg and (B) UPA 30 mg Treatment by Individual ADerm-SS Item. ADerm-SS, Atopic Dermatitis Symptom Scale; UPA, upadacitinib. Percentages are calculated from observed cases with no missing data imputation.

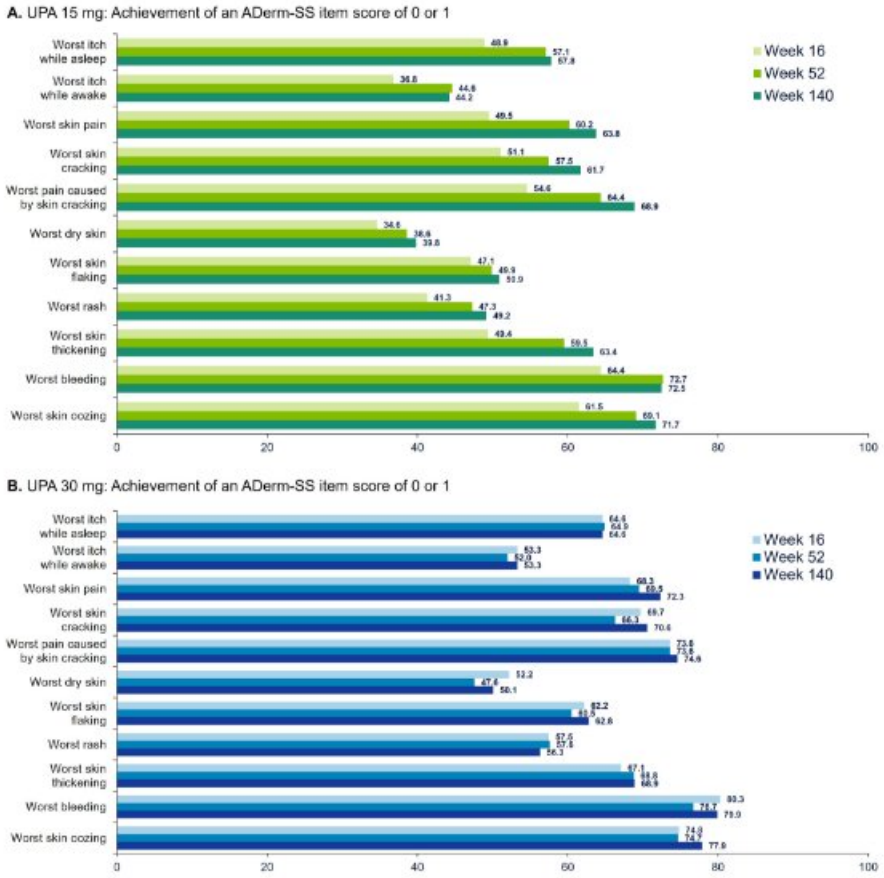
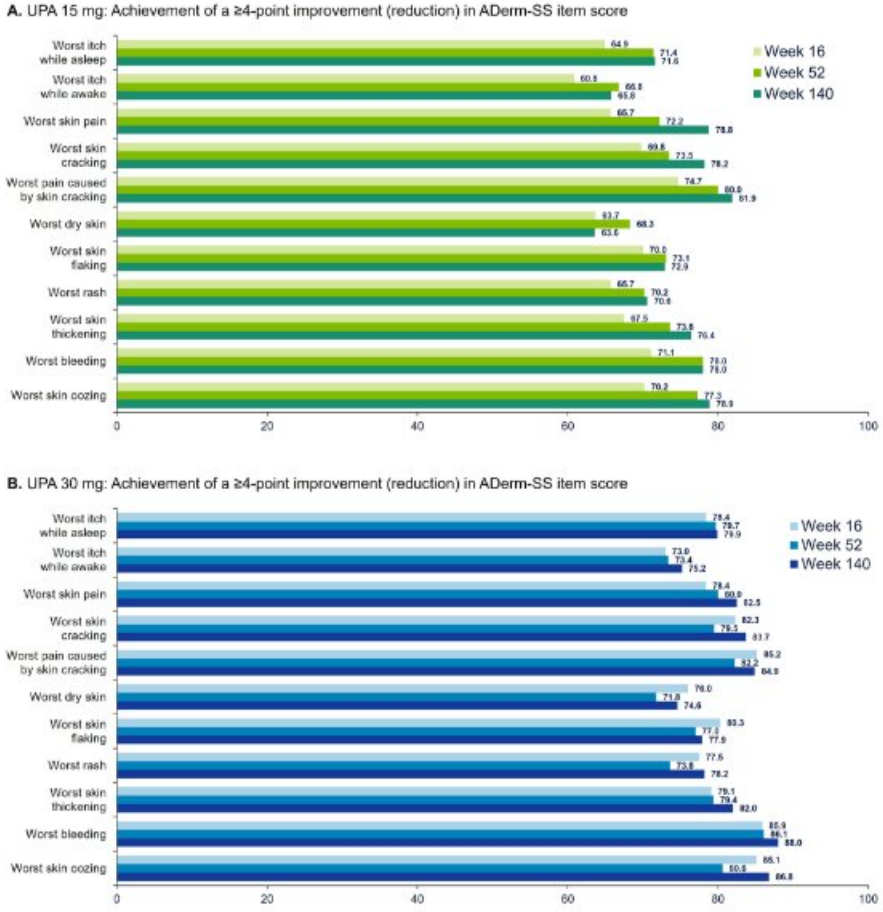


Figure 2. Proportions of Patients With a Baseline ADerm-SS Score ≥4 Who Achieved a ≥4-Point Improvement (Reduction) in Score by Week 16, Week 52, and Week 140 of (A) UPA 15 mg and (B) UPA 30 mg Treatment by Individual ADerm-SS Item. ADerm-SS, Atopic Dermatitis Symptom Scale; UPA, upadacitinib. Percentages are calculated from observed cases with no missing data imputation.



EADV CONGRESS
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Abstract N°: 4985

Complementary effects of two botanical extracts on the Type 2-associated pruritogenic pathway in atopic dermatitis.

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Introduction & Objectives: Atopic dermatitis (AD) is a chronic inflammatory dermatosis characterized by skin manifestations, including intense pruritus, that significantly impairs patient quality of life. The pathophysiology of AD involves barrier impairment and microbiota dysbiosis, which are closely associated with type 2 inflammation and pruritogenic biomarkers, notably those related to the IL-31 axis. This study aimed to elucidate the complementary anti-inflammatory activities of two botanical extracts, Rhealba® oat and *Helichrysum gymnocephalum* (*H.g.),* on various aspects of the inflammatory cascade in AD.

Materials & Methods: The anti-inflammatory properties of both extracts were assessed using shared models, including the inhibition of the arachidonic acid pathway and the suppression of IL-8 and TSLP release in Th2-stimulated Normal Human Epidermal Keratinocytes (NHEKs). Additionally, immune-inflammatory responses were evaluated by measuring cytokine release from CD4+ T lymphocytes following superantigen Staphylococcal Enterotoxin B stimulation. *H.g.* extract was further tested for its specific immunological effects on dendritic cell maturation and mast cell cytokine release. A STAT phosphorylation assay was conducted on Th2-stimulated NHEKs with this extract. A sensory neuron-keratinocyte co-culture model was used to examine nerve growth and Brain Natriuretic Peptide (BNP) release in response to IL-31 stimulation.

Results: In addition to its previously published findings (Stalder et al., 2014), our Rhealba® oat extract inhibited NF-κB pathway in HaCaT cells upon TNFα stimulation, while *H.g.* extract reduced PGD2 synthase (PG6KF1α) release following calcium ionophore A23187 stimulation. Both extracts significantly decreased TSLP and IL-8 release in a cytokine and TLR agonist-stimulated NHEK model. Similarly, they markedly inhibited cytokine release (including IL-13, IL-22, IL-17, and IFNγ) from CD4+ T lymphocytes activated by superantigen SEB. *H.g.* extract uniquely modulated immunological responses, attenuating the expression of dendritic cell maturation markers (CD1ahi, CD83hi/CD86hi) and reducing IL-5 and IL-13 release in TSLP-stimulated mast cells. It also decreased the pSTAT6/STAT6 ratio in Th2-challenged NHEKs. Finally, this extract inhibited neurotransmitter BNP release and neuronal sprouting in the sensory neuron-keratinocyte model stimulated by IL-31.

Conclusion: This comprehensive investigation demonstrated that Rhealba® oat and *H.g.* extracts exert complementary effects on general inflammatory markers and highlighted the added value of H.g. extract in targeting the Th2 axis implicated in AD pathophysiology. Particularly, the pruritogenic aspect of AD was efficiently modulated through the inhibition of the IL-31/TSLP axis, suggesting that *H.g.* is a potent inhibitor of JaK STAT-signaling pathway. Overall, these findings suggest that developing an emollient with these two botanical extracts may offer therapeutic benefit in alleviating the AD burden.

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Abstract N°: 5043

Dupilumab for Treatment of Prurigo Nodularis: Real-Life effectiveness for up to 84 Weeks

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Dupilumab for Treatment of Prurigo Nodularis: Real-Life effectiveness for up to 84 Weeks

Introduction & Objectives

Prurigo nodularis (PN) is a chronic dermatological condition characterized by intense itching and the formation of nodules. These symptoms have a significant impact on patients' quality of life and psychological well-being. Managing PN is challenging due to the limited efficacy and potential side effects of current treatments. Dupilumab, a monoclonal antibody that inhibits the interleukin IL-4 and IL-13 signaling pathway, has shown promise in treating various dermatological conditions. This study aims to investigate the efficacy of dupilumab in treating PN among adult patients with PN, who had tried various other treatments without success.

Materials & Methods

The study was designed to evaluate the clinical efficacy of dupilumab in adult patients PN. Data were collected from October 2019 to November 2023 at the Dermatology Unit of the Polyclinic Tor Vergata Foundation, Rome, Italy. The severity of PN was evaluated using several metrics, including the Investigator's Global Assessment - Chronic Nodular Prurigo (IGA-CNPG), the itch Numeric Rating Scale (itch-NRS), the sleep Numeric Rating Scale (sleep-NRS), and the Dermatology Life Quality Index (DLQI).

Results

The study included 16 patients with PN. The mean age of the study population was 69 years, with a standard deviation of 18.9 years, and ten patients were female. The mean disease duration was 21.6 years, with varying ages at onset. Most participants had a history of cardiovascular disease, and some had diabetes, COPD, or autoimmune disorders. Patients were previously treated with various therapies, including topical corticosteroids, antihistamines, systemic corticosteroids, systemic drugs like Cyclosporine or Methotrexate, and phototherapy.

Dupilumab was effective in reducing various outcome measures, with significant improvements observed at Week 6 and throughout the study duration of 84 weeks. The mean IGA-CNPG score dropped from 3.7 at baseline to 0.6 at Week 16 and 0.0 at Week 84, indicating a significant improvement in disease severity. The mean itch-NRS score decreased from 8.7 to 0.7, and the sleep-NRS score improved from 5.8 to 0.0, showing a notable reduction in pruritus and enhanced sleep quality. The mean DLQI score also declined from 11.3 to 0.0, reflecting an overall improvement in quality of life.

All patients achieved an IGA-CNPG score of 0/1 by Week 32, with significant proportions reaching ≥4-point improvements in DLQI, itch-NRS, and sleep-NRS across various time points. These results indicate that dupilumab is a successful treatment for PN, leading to significant reductions in itching and nodule formation, along with an enhanced quality of life.

Conclusion

The study concludes that dupilumab is an effective treatment option for PN, showing a significant reduction in disease severity, pruritus, and an overall improvement in patients' quality of life. Dupilumab's safety profile and

reduced risk of drug interactions make it a suitable choice, especially for elderly patients with multiple comorbidities. The findings suggest that dupilumab can disrupt the itch-scratch cycle and improve the healing of pruritic skin lesions, offering a promising therapeutic approach for PN. The study emphasizes the importance of further research into the pathogenesis of PN and the exploration of innovative multimodal treatment strategies to enhance patient care.

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Abstract N°: 5048

Efficacy and safety of dupilumab in the treatment of hand eczema

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[1]University of Rome "Tor Vergata", Departement of system Medicine, Rome, Italy

Efficacy and safety of dupilumab in the treatment of hand eczema

Introduction & Objectives

Hand eczema (HE) is a chronic inflammatory condition affecting approximately 10% of the general population, with higher prevalence among individuals in high-risk occupations such as healthcare workers, hairdressers, cooks, and cleaners. It has various clinical manifestations and subjective symptoms, including pruritus, erythema, and disruptions in sleep patterns, significantly impacting quality of life and work ability. Dupilumab, a fully human monoclonal antibody targeting the shared receptor component for interleukins IL-4 and IL-13, has shown efficacy in treating various dermatologic conditions. This study examines the use of dupilumab in treating HE in adult patients, presenting twenty-one cases of dupilumab administration for HE treatment. All participants had experienced chronic and severe manifestations of HE and previously tried multiple treatment modalities with limited success.

Materials & Methods

The study included adult patients (≥18 years old) who were receiving monotherapy treatment at the Dermatology Unit of the Polyclinic Tor Vergata Foundation, Rome, Italy. Data were collected from September 2019 to January 2024. The efficacy of dupilumab was evaluated by measuring the hand chronic eczema severity index (HECSI), the itch Numeric Rating Scale (itch-NRS), the sleeplessness Numeric Rating Scale (sleep-NRS), and the Dermatology Life Quality Index (DLQI). Outcome measures were recorded at week 6, week 16, and every 16 weeks thereafter.

Results

The study included 21 adult patients with a mean age of 43.5 years; 11 were female. The mean HECSI score reduced from 161.2 at baseline to 14.0 at Week 16, maintaining this reduction at Week 104 with a mean score of 0. Similarly, the mean itch-NRS score decreased from 8.2 to 1. This highlights significant amelioration of pruritus symptoms. The mean sleep-NRS score improved from 5.1 to 0, indicating enhanced sleep quality. The mean DLQI score decreased from 14.0 to 0, reflecting a notable improvement in dermatology-related quality of life. Dupilumab also showed efficacy in achieving disease clearance among the 12 patients with HE and active atopic dermatitis (AD), with the mean EASI score dropping from 20.8 at baseline to 0.6 at Week 104.

Regarding outcome measures, the achievement of HECSI 50 was 89.5% at Week 6 and 100% at Week 16, maintaining this until Week 104. HECSI 75 was achieved by 57.9% of patients at Week 6, reaching 100% at Week 104. Furthermore, HECSI 90 and HECSI 100 were achieved by 75% and 60% of patients at Week 16, and by 100% and 85% at Week 68, respectively. All patients reaching Week 104 maintained complete disease remission. The safety profile was consistent with literature, with one patient experiencing conjunctivitis, managed with eye drops.

Conclusion

Dupilumab has shown significant efficacy in treating HE, leading to substantial reductions in HECSI, itch-NRS, sleep-NRS, and DLQI scores. It achieved disease clearance and sustained improvements in dermatology-related

quality of life. Its safety profile and ability to be used continuously without long-term adverse events make it a promising therapeutic option for HE. Given the significant impact of HE on quality of life and its direct and indirect costs to society, dupilumab provides an efficient and safe treatment choice, contributing to improved patient outcomes and societal benefits.

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Abstract N°: 5049

Impact of Upadacitinib on Atopic Keratoconjunctivitis Exacerbated by Dupilumab Treatment in Atopic Dermatitis Patients: A Prospective Dermatological and Ophthalmological Clinical Evaluation in Common Clinical Practice

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Impact of Upadacitinib on Atopic Keratoconjunctivitis Exacerbated by Dupilumab Treatment in Atopic Dermatitis Patients: A Prospective Dermatological and Ophthalmological Clinical Evaluation in Common Clinical Practice

Introduction & Objectives Atopic dermatitis (AD) is a prevalent chronic inflammatory skin condition with a substantial impact on patients, particularly due to ocular involvement known as atopic keratoconjunctivitis. Current therapeutic approaches, such as dupilumab, often lead to conjunctivitis, prompting exploration of alternative treatments like upadacitinib. This study focuses on six adult patients with moderate-to-severe AD who switched from dupilumab to upadacitinib, a JAK inhibitor, due to eye-related side effects and decreased efficacy, particularly in the head and neck area. The objective was to examine if upadacitinib could reduce skin and eye symptoms. **Materials & Methods** We collected dermatological and ophthalmological prospective clinical evaluations of six patients observed for at least six months. Clinical evaluations were conducted at baseline, Week 12, and Week 24. Dermatological evaluations included EASI scores, Itch and Sleep Numeric Rating Scale (NRS), and Dermatology Life Quality Index (DLQI). Ophthalmological assessments, conducted in collaboration with a team of ophthalmologists, included various parameters like conjunctival hyperemia, corneal neovascularization, and papillary reactions as also indicated by Visual Analogue Scale (VAS), Efron scale, and Ocular Surface Disease Index Symptom Severity (OSDISS) scores. **Results** Upadacitinib demonstrated significant efficacy in reducing both skin and eye symptoms. The mean EASI score decreased from 20.17 (SD 7.62) to 2.0 (SD 3.34) at Week 12 and maintained a low level at Week 24 with a score of 1.6 (SD 2.06). The mean itch-NRS score dropped from 8.83 (SD 1.33) to 2.16 (SD 1.94) at Week 24, indicating a notable reduction in itching. The mean sleep-NRS score improved from 6.83 (SD 4.11) to 0.16 (SD 0.40), showing improved sleep quality. Upadacitinib treatment significantly reduces clinical signs of ocular inflammation, including mucus filaments, conjunctival hyperemia, and papillary reaction, with notable reductions in these symptoms from baseline to Week 12 and Week 24. For example, mucous fishing dropped from 0.66 to 0.08 by Week 12, maintaining this improvement at Week 24. Conjunctival hyperemia showed a similar decline, from 2.50 to 0.08 over the 24-week period, indicating a significant decrease in ocular inflammation. Although the treatment did not impact irreversible signs like subconjunctival tarsal fibrosis, Meibomian Gland Dysfunction decreased as Tear Break-Up Time increased, suggesting better tear film quality. The decreasing trend in corneal neovascularization points to reduced chronic inflammation. **Conclusion** The study underscores the substantial impact of biological and small-molecule therapies on AD, emphasizing the limitation posed by dupilumab-associated conjunctivitis. Switching to upadacitinib significantly improved both clinical and functional ocular outcomes, suggesting its potential as an alternative therapeutic option for AD patients with ocular involvement. This study provides insights into the complex interplay between systemic therapies and ocular manifestations in AD. Upadacitinib emerges as a promising option to address dupilumab-associated conjunctivitis, offering improved quality of life for patients.

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Abstract N°: 5050

The impact of phototherapy on the expression levels of the AHR, ARNT and FLG genes in patients with atopic dermatitis.

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Introduction & Objectives:

Atopic dermatitis is associated with epidermal filaggrin deficiency. Gene *FLG* coding filaggrin can be up-regulated by ultraviolet irradiation as a result of activation of the aryl hydrocarbon receptor (*AHR*), which heterodimerizes with AHR nuclear translocator (*ARNT*) and thereafter binds to the *FLG* promoter.

The aim of our study was to evaluate the effect of ultraviolet-based phototherapy on the expression of the *AHR*, *ARNT* and *FLG* genes.

Materials & Methods:

The study included 76 patients with atopic dermatitis, with 37 patients receiving NB-UVB-phototherapy and 39 patients receiving UFA1 therapy. Course of phototherapy included 20 procedures. 14 healthy volunteers were enrolled as control group. The dynamics of the expression levels of the *AHR*, *ARNT* and *FLG* genes was analyzed in patients with atopic dermatitis before and after UV therapy. The mRNA expression levels in skin biopsies were measured with real-time quantitative reverse transcription PCR using *GAPDH* as endogenous control. Statistical analysis was performed in the R programming language using the 2-ΔΔCt method.

Results:

In patients with atopic dermatitis there was a decrease in the expression levels of the *AHR*, *ARNT* and *FLG* genes compared to the control group by 1.2, 1.7 and 1.4 times, respectively. When comparing the expression levels of the *AHR*, *ARNT* and *FLG* genes before and after UV therapy, statistically significant differences ($p < 0.05$) were found for all three genes. After UV therapy there was an increase of the expression levels of the *AHR*, *ARNT* and *FLG* genes in patients by 1.5, 1.3 and 1.7 times, respectively. It should be noted that after therapy, the expression levels of the studied genes were not statistically significantly different from the control group.

Conclusion:

Data have been obtained indicating that the effectiveness of phototherapy in atopic dermatitis may be due to the activation of *AHR* and subsequent stimulation of the *FLG* coding filaggrin, an important protein of the epidermal barrier.

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Abstract N°: 5066

Evaluation of Natural Moisturizing Factors in Diverse Ethnically Patients with Atopic Dermatitis and Xerosis Following Prebiotic Skincare Regimen

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Introduction & Objectives:

Loss-of-function mutations in the gene filaggrin (FLG), a structural protein involved in skin barrier integrity, are associated with the development of Atopic Dermatitis (AD). Variations in AD epidemiology, clinical presentation, and disease course between racial/ethnic populations have been reported. Despite experiencing higher incidence, patients of color with AD show much less frequent FLG loss-of-functions mutations compared to white counterparts, indicating another plausible mechanism for the nuances in disease prevalence. Natural moisturizing factors (NMF) are endogenous water-retaining molecules in the stratum corneum. Under normal conditions, NMF are generated via the controlled degradation of FLG to maintain skin barrier integrity and hydration. Deficiency in NMF levels have been found in xerosis and itchyosis, plus are associated with FLG loss-of-functions mutations in AD patients. Given the nuances of AD persistence across racial/ethnic groups, here we investigated skin barrier properties of diverse ethnically patients with AD & Xerosis following prebiotic skincare regimen.

Materials & Methods:

A total of 40 subjects from diverse racial/ethnic backgrounds, aged 3-80 years old with skin phototypes I-VI, and presenting with mild-AD and moderate to severe xerosis completed study. After dermatological evaluations, all subjects started using a prebiotic skincare regimen, consisting of a cleanser and moisturizer for 10 weeks. Evaluations on patients 'legs included tape-stripping for NMF analysis, clinical and instrumental assessments, plus imaging at baseline and week 10.

Results:

Following 10 weeks of prebiotic regimen (cleanser and moisturizer) significantly increased NMF levels in both xerosis (n=19) and AD (n=18) patients' lesional skin. Interestingly, sub-analyses comparisons between racial/ethnic groups revealed that xerosis patients of color showed significant lower NMF basal levels in their skin compared to white counterparts, including following prebiotic regimen. We also observed that AD patients of color showed significant lower NMF basal levels compared to white counterparts only on normal skin, not lesional. Consistent with NMF levels increase with prebiotic regimen, clinical and instrumental assessments demonstrated significant improvement in xerosis and global eczema severity, increased skin hydration and decreased pH levels on both normal and lesional skin overtime.

Conclusion:

In summary, our findings suggest that a prebiotic cleanser and moisturizer can effectively decrease AD and xerosis severity and improve symptoms by restoring skin barrier integrity in diverse ethnically patients. Lower NMF levels in patients of color first identified in our study may contribute to racial/ethnic variations in skin-barrier compromised conditions prevalence, plus help support clinicians on disease diagnosis and management strategies to consider for all patients, particularly for patients of color.

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Abstract N°: 5100

Therapeutic modulation of dupilumab in patients with severe atopic dermatitis: clinical effectiveness in real-life

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Introduction & Objectives:

De-escalation strategies became increasingly used in the treatment of atopic patients with dupilumab. Dose spacing (D-S) refers to dose reduction by dosage elongation strategies from 2 up to 8 weeks between dupilumab injections, in patients with stable response to treatment or affected by numerous adverse events.

Materials & Methods:

A retrospective cohort study was conducted onAD patients aged >=18 years treated with dupilumab undergoing D-S. Pre-post analyses were conducted on this cohort, termed cohort A, between effectiveness outcomes at baseline, at 16 weeks of treatment, at the index date identified as the mean follow up (FU) time between dupilumab initiation and D-S, subsequent two FU visits: T1 and T2. Based on index date, a cohort B of AD patients on dupilumab treatment not experiencing D-S was then compared to cohort A for the same outcomes at the same time points.

Results:

Seventy-three out of 452 patients treated with dupilumab underwent D-S. The mean time since treatment initiation was 28.6 months. Mean EASI from the index date remained stable until the second follow-up visit (T2) 0.2 to 0.8 with no significant pre-post differences ($p>0.05$). Similar considerations can be made for mean NRSp, NRSds, mean DLQI, EASI H&N. Attainment of relative outcomes remained stable for EASI75, 90, <=7, DLQI<=5, and NRSp<=4. When compared with Cohort B, no clinically significant differences were observed in mean reductions in all outcomes analysed.

Conclusion:

D-S in our study appears to be an effective and safe strategy in treating patients with severe AD after the initial therapeutic response.

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Abstract N°: 5118

Atopic eczema: Aggravating factors experienced by patients in a global study. Results of the ALL Project.

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Introduction & Objectives:

Atopic dermatitis [AD], often referred to as eczema, is a prevalent, persistent skin condition distinguished by intense itching and recurring outbreaks. While the disorder is widespread worldwide, the factors and triggers can differ among various regions and cultural contexts.

Materials & Methods:

The ALL PROJECT is a large-scale study of individuals representative of the adult population in 20 countries on five continents: Europe [France, Italy, Germany, Poland, Portugal, Spain, Denmark; n=17500], Latin America[LA] [Brazil, Mexico; n=6501], Asia [China, India, South Korea; n=10500], North America [NA] [Canada, USA; n= 7500); Middle East [ME] [Israel, United Arab Emirates; n=2750], Australia [Australia; n=2000] and Africa [Kenya, South Africa, Senegal; n=1800] Together, these countries represent more than 50% of the world's population.

In each of the 20 countries surveyed, representative and extrapolable samples of the general population aged 16 and over were interviewed. This methodology ensures that the results of the study can be generalised to the entire population of each country included in the project, providing a global and diversified perspective of the subjects studied. Patients with professionally diagnosed atopic dermatitis/eczema were identified. The results were compared using Chi-square or Fisher's exact test. The alpha risk was set at 5% and two-tailed tests were used. Statistical analysis was performed using EasyMedStat (version 3.34; www.easymedstat.com).

Results:

The prevalence of AD in Europe is 8.9% ± 0.4%. In Asia and LA, the prevalence of AD is 13.2% ± 0.6% and 10.2% ± 0.8%, respectively. These two regions stand out statistically with significantly higher prevalences than in Europe (χ^2 < 0.001). In Africa, NA and Australia, the prevalences are significantly lower, with respective values of 6.1% ± 1.1% for the first, 7.5% ± 0.6% for the second and 8. The prevalence in the ME is comparable to that observed in Europe, with a prevalence of 8.9% ± 1.334

In order to avoid any potential bias, we have identified patients who reported no other skin disease than AD to describe their care pathway [n=991].

Regardless of the continent, stress was identified as the primary factor contributing to the exacerbation of the disease, with 61.4% of respondents indicating this as a significant factor. Pollution was identified as the second most significant factor, with 33.3% of respondents indicating this as a significant factor. The proportion of patients who identified these factors as significant was as follows: 0% for patients in Africa, 24.9% in Europe, and 46.8% in Asia; 28.7% for patients in Africa, 27.1% in Europe, and 37.9% in Africa. It is also noteworthy that one in three women (35.2%) identified hormonal variations as an exacerbating factor. Furthermore, the application of certain

products to the skin was identified as an aggravating factor by 19.5% of respondents, with significant variations observed between regions: 36.2% in Africa and 19.0% in Europe.

Conclusion:

The ALL PROJECT study underscores variances in atopic dermatitis prevalence, noting elevated rates in Asia and LA compared to Europe, and lower rates in Africa and NA. These regional distinctions hint at potential impacts from environmental or genetic factors. Notably, stress emerges as the primary exacerbating factor, closely trailed by environmental pollution and diet, advocating for universal stress management strategies for eczema patients.

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Abstract N°: 5167

Impact of atopic dermatitis on leisure activities in adults (The results of the Atopy Family project)

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Introduction & Objectives:

Atopic dermatitis (AD) significantly affects the quality of life of adults, particularly with regard to leisure activities. The aim of this survey is to examine in detail the impact of AD on four specific leisure activities in French adults.

Materials & Methods:

The survey included 2530 adults diagnosed with AD from a representative sample of the French general population, for a total of 2300 respondents. Severity was assessed using the POEM. Holidays (choice of destination), sports activities, events (family events) were assessed.

Results:

Of the respondents, 61.3% were women and 47.7% were under 40 years of age. The severity of AD was mild in 48.7% of patients, moderate in 40.9% and severe in 10.4%. When asked about giving up holidays or leisure activities, 32.3% of men and 30.5% of women responded positively. Clinical severity had an effect, with 59.6% of severe patients giving up leisure activities compared to 15.1% of mild cases. Regarding choice of holiday destination, 45.5% of severe patients and only 15.4% of mild patients reported that their choice was influenced by their AD. Regarding limitations in sports, 54.7% of severe cases reported limitations compared to 14.7% of mild cases. Finally, AD caused 48.4% of severe patients to miss family or work events, compared with 16.3% of mild cases.

Conclusion:

The analysis of the results shows a clear correlation between the severity of AD and the renunciation of leisure activities, choice of holiday destination, participation in sports and attendance at important events. The impact is particularly strong in patients under 40 years of age and increases with disease severity. The data suggest that DA may be perceived as severe by patients because of its impact on quality of life, even when clinically classified as moderate. Holistic management, including medical treatment and psychological support, is essential to improve the quality of social and leisure life of patients with atopic dermatitis.

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Abstract N°: 5168

Sexuality impairment in patients with atopic dermatitis (The results of the Atopy Family project)

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Introduction & Objectives:

Atopic dermatitis (AD) is a chronic inflammatory skin disease that is very common in children and can persist or develop into adulthood. This study aims to examine the factors associated with impaired sexual health in adults with AD, focusing on eight specific aspects of this impairment.

Materials & Method

Participants in this multicentre study were adults (age ≥ 18 years) diagnosed with AD, recruited from a sample of the general French population. Of 2530 AD patients invited to participate, 2271 answered questions relating to sexuality

Results:

Of the 2271 respondents, 59.0% were women. The age distribution was 10.4% under 26, 64.2% between 26 and 50, and 25.4% over 50. Moderate to severe clinical severity (POEM score >8) was observed in 53.2% of patients. A high level of stress (>6 out of 10) was reported by 35.2% of participants, and 52.8% said they were often tired because of their AD. Sexual problems were more frequently reported by younger patients, those with greater clinical severity, higher stress levels, and those expressing fatigue. Men reported problems more frequently than women, with the exception of reduced sexual desire *(Does your AD decrease your sexual desire*?) and the effect of AD symptoms on sexuality *(Does the appearance of AD (redness, dry skin) affect your sex life?),*where 36.5% of patients reported reduced sexual desire in their partner.

Conclusion:

The study reveals significant variations in impaired sexual health according to gender, age, disease severity, stress, and fatigue. The analysis indicates that the management of AD should include a comprehensive assessment of the psychosocial consequences to improve the quality of life. Sexual disorders, which are often linked to depression and anxiety, should be proactively addressed to improve the quality of life of patients. The differences in the perception and reporting of sexual problems between men and women indicate that particular attention should be paid to gender-specific management.

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Abstract N°: 5170

Work impairment in patients with atopic dermatitis (The results of the Atopy Family project)

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Introduction & Objectives:

Atopic dermatitis (AD), can persist or appear in adulthood. The point prevalence of adult AD is estimated at 4.6% in the French adult population and has a major impact on health-related quality of life (HRQoL). As work is an essential component of HRQoL, this study aims to investigate the impact of DA on patients' working lives.

Materials & Methods:

Adults (aged ≥18 years) reporting a diagnosis of AD confirmed by a physician were selected from a representative sample of the French adult population. The impact on work was assessed through three items; i.e. absenteeism (no sick leave prescribed), sick-leave prescribed by a physician, and reduction of workload in relation to AD.

Results:

Of the 2,530 patients with AD, 1,905 (75.3%) were professionally active. Of these, 1654 were employed, 70 on sick leave and 181 searching for work. Men were 39.3% of the active sample. Moderate to severe AD was observed in 53.9% of patients.

Of the 1905 active patients, 25.9% reported absence from work (Q1), with an average of 20.6 days per year. The frequency and duration of absences were higher in patients with moderate/severe AD compared to those with less severe disease. More specifically, 31.2% of men versus 22.5% of women reported absences, with an average of 21.8 and 19.5 days respectively. With regard to sick-leave (Q2), 18.6% of patients reported prescription of these, with an average of 26.3 days of sick-leave per year. This situation was more common among men (24.3%) than women (15.0%), with no significant difference in the length of interruption. As for workload reduction (Q3), 16.1% of patients had to reduce their working hours, with an average of 5.9 days per year with men (20.0%) being were susceptible than women to reduce their workload(13.6%).

Conclusion:

A significant correlation between the AD severity and decreased HRQoL, particularly in the work/school domain of the Dermatology Life Quality Index (DLQI), was observed.

Work productivity decreases with disease severity. Various factors may contribute to the higher impact in men, such as higher social expectations in men preventing them from discussing their situation and seeking support at work. Absenteeism related to AD has repercussions on productivity and a consequent economic impact.

In conclusion, AD has a significant impact on working life, which is exacerbated in patients suffering from moderate to severe forms of the disease. Men are more concerned than women for absenteeism and reduced workload, which may be explained by distinct social and professional pressures. These data reflect the need for targeted management strategies to reduce the economic and personal impact of AD on the working lives of adults.

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Abstract N°: 5192

A novel Emollient Plus containing a combination of a Zingiber officinale root extract and Cannabidiol with potent in vitro anti-inflammatory effects provides rapid pruritus relief in a clinical study of atopic dermatitis

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Introduction & Objectives:

Atopic dermatitis (AD) is a chronic inflammatory skin disease characterized by the relapsing occurrence of eczematous, itchy lesions. Pruritus is considered the most burdensome AD symptom; therefore, itch relief represents a primary therapeutic goal for AD patients.

Regular baseline therapy with emollients is essential in AD management and recently a novel generation of topical products, termed 'Emollients *Plus*', have been recognized by the European guideline on AD. These topicals combine vehicle-type substances with active, non-medicated substances (active cosmetic ingredients, ACIs) aiming to exceed purely hygroscopic and occlusive effects and provide additional benefits for AD patients.

High-quality plant extracts may represent potent ACIs by exhibiting a multitude of biological effects. Therefore, 24 plant extracts and phytochemicals were screened for their potential anti-inflammatory and antioxidative activities in a combination of cell assays. The identified *Zingiber officinale* root extract and Cannabidiol (CBD) were extraordinarily active *in vitro* and formulated in an oil-in-water emulsion to develop a novel herbal Emollient*Plus* for the intensive care of irritated areas of very dry and eczema-prone skin.

Materials & Methods:

Preclinical: Anti-inflammatory effects of a lipophilic *Zingiber officinale* root extract, CBD and a combination thereof were evaluated in *in vitro* assays relevant for skin inflammation (TNF-α-stimulated NF-κB activation, poly(I:C)-stimulated cytokine and chemokine secretion as well as quantitative analysis of key endocannabinoids). *Clinical*: The efficacy of the newly developed Emollient *Plus* was investigated in comparison to a benchmark product in 22 adults (mean age ±SD: 41.8 ±14.4 years) and 22 children (7.2 ±3.6 years) with a history of AD and suffering from pruritus sensation at baseline. Participants were instructed to apply the product twice daily on individually defined skin areas. Skin condition was evaluated by objective dermatological assessments as well as instrumental measurements of skin parameters at baseline and after five days of treatment. Peak pruritus intensity was assessed daily by the numerical rating scale (NRS-11).

Results:

Preclinical: Zingiber officinale root extract and CBD exhibited synergistic anti-inflammatory effects *in vitro*, which were associated with elevated concentrations of the endocannabinoid anandamide, confirming relevant activities of these ACIs regarding inflammation and pruritus. *Clinical:* Treatment with the Emollient *Plus* significantly reduced symptoms of AD including skin dryness, erythema, scaling and papules as confirmed by objective dermatological assessments and instrumental skin evaluations. Most importantly, pruritus sensation was significantly reduced by 55% (decrease of mean NRS-11 score from 5.1 to 2.3) within only five days with 75% of participants classifying as responders indicated by an improvement of at least 2 points. No adverse events were reported.

Conclusion:

The identification of a unique herbal ACI combination enabled the development of a novel Emollient*Plus* exhibiting very good tolerability and providing rapid and significant relief of pruritus, the most burdensome AD symptom.

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Abstract N°: 5194

Therapeutic effects and impact of individual skin care regimes as baseline therapy in the management of atopic dermatitis: Prospective observational study in adults and children suffering from AD

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Introduction & Objectives:

Atopic dermatitis (AD) is one of the most prevalent chronic skin diseases and characterized by flares of dry, inflamed and itchy skin. To reduce the need for pharmacological intervention (e.g. with corticosteroids), baseline therapy with emollients represents a cornerstone in AD management. While pharmacological therapies typically involve defined dosage regimes, emollient use is subject to individual factors making therapeutic success challenging to quantify. The aim of this three-months prospective observational study was to assess the effects of individual skin care regimes as baseline therapy in AD on under real-world conditions.

Materials & Methods:

Participants reported their individual skin care regimes and provided data regarding their skin condition in an online survey monthly over three months (Jan-Apr/2023). Peak pruritus intensity was rated by NRS-11. Eczema control was captured by the *Recap of atopic eczema* (RECAP) questionnaire. The occurrence of flare-ups and the frequency of flare-up related corticosteroid use and doctor's visits were documented twice weekly in an online diary. Data was analyzed descriptively and differences were compared before and after three months for RECAP (two-sided paired t-test) and NRS-11 (Wilcoxon signed-rank test) scores. The collected data was further analyzed by sex, age groups, skin care use and corticosteroid use.

Results:

The study population comprised a total of 304 participants, including 159 adults (mean age ±SD: 34.6 ±11.4) and 145 children (5.5 ±3.5). Even though initial evaluation showed that over 90% of participants used emollients for the management of atopic dermatitis, the majority (81%) applied the products less frequently (<twice daily) than recommended by current guidelines. A RECAP sum score (mean ±SEM) of 12.2 ±0.3 and a Peak Pruritus of 5.4 ±0.1 (mean ±SEM) *via* NRS-11 indicate that AD was not well controlled at the start of the study. During the three months study period both parameters improved significantly (D85: RECAP: -2.4 ±0.3; NRS-11 Itch: -0.9 ±0.1) but relevant disease burden remained. Nearly all participants (96%) reported at least one flare-up and over 70% of participants documented corticosteroid use related to a flare-up. The population showed significantly different control of atopic dermatitis (RECAP) at baseline in the subgroups 'sex' ($p = 0.04$) and 'skin care use' ($p < 0.001$). Female participants had higher RECAP sum scores (mean ±SEM: 12.6 ±0.4) than male (11.4 ±0.5), showcasing worse controlled eczema in females. Regular skin care users (at least once daily body-lotion use and using intensive care) reported worse eczema control (14.1 ±0.6) at baseline compared to irregular skin care users (11.6 ±0.4), indicating that higher AD-burden seems to lead to better adherence to skin care use.

Conclusion:

Over the study period improvements of the skin condition, itch sensation and eczema control were observed, but appear to be subject to observation bias (Hawthorne effect). Additionally, participants likely altered their skin care

behavior in response to the awareness of study participation. Despite the improvements, reported RECAP and NRS-11 itch results clearly demonstrate an insufficient real-world effectiveness of the individual basic therapy applied by AD patients.

EADV CONGRESS
AMSTERDAM 25-28 SEPTEMBER 2024
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Abstract N°: 5254

Atopic dermatitis in association with mucoviscidosis

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Introduction & Objectives: Atopic dermatitis (AD) and mucoviscidosis, or cystic fibrosis (CF), are two distinct yet potentially interconnected conditions that have garnered significant attention in clinical and research settings. AD is a chronic inflammatory skin disorder related to mutations in the filaggrin gene and characterized by pruritus, erythema, and eczematous lesions frequently beginning in infancy, but affecting individuals of all ages. CF is a multisystemic autosomal recessive disorder caused by mutations in the cystic fibrosis transmembrane conductance regulator (CFTR) gene, affecting the production of mucus, sweat and digestive enzymes leading to significant morbidity and impaired quality of life.

Materials & Methods: A 24-year-old man was hospitalized in the Dermatology department for complaints of 2 years duration, consisting of an itchy rash on the skin of the scalp, face, trunk and extremities. Additionally, the patient was diagnosed with mucoviscidosis since the third month of birth (homozygous for delF508) and suffered from diabetes mellitus, delayed maturation, mental retardation and frequent respiratory infections. Family and detailed personal history for atopy was missing, as the patient came from an orphanage. On admission, diffuse erythema, papules, excoriations, generalized xerosis, lichenification and presence of Dennie-Morgan’s infraorbital folds were observed.

Results: Laboratory results showed mild eosinophilia, accelerated ESR, elevated IgG. Mycological and epicutaneous tests were negative. Dermatoscopic findings excluded scabies infestation. Histological examination of skin biopsy confirmed the diagnosis of atopic dermatitis based on typical features such as moderate acantosis and inflamatory round-cell infiltrate in upper and middle dermis. Therapy with systemic antibiotics, antihistamines, topical corticosteroids and emollients led to significant itch reduction and involution of the skin rash. Shortly after, a therapy with lumacaftor and ivacaftor was initiated for CF.

Conclusion: Cutaneous manifestations in patients with CF are heterogenous. In infancy, the skin changes of mucoviscidosis are more related to malabsorption and malnutrition rather than atopy. In contrast, atopy was reported in adult patients with CF together with mild eosinophilia, which might be explained with abnormalities in epithelial and barrier function, retention of allergens and subsequent sensitization. Given the chronic nature of both conditions and their impact on patients’ well-being, a multidisciplinary approach may be essential for comprehensive care. Future research efforts should focus on elucidating the shared pathophysiological mechanisms, identifying potential biomarkers, and developing targeted therapies to improve concomitant AD and CF in parallel.

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Abstract N°: 5269

A novel 2-step regimen improves severity, itch, and quality of life in an atopic dermatitis prone skin in a multi-ethnic population: a randomized clinical study

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Introduction & Objectives:

Atopic dermatitis (AD) is a chronic relapsing skin disease associated with unpredictable flares of erythema, rash, and pruritus. AD arises from a combination of immune system dysregulation and abnormal skin barrier function. It can also affect sensitive skin leading to unpleasant, itchy skin and worsening burden on quality of life in adults. A 2-step regimen featuring a soap-free wash and an innovative cream, including colloidal oatmeal (w. 2% colloidal oat) and a patented technology (sodium pyrrolidone carboxylic acid and arginine), was specifically designed to manage AD-prone skin related symptoms.

Materials & Methods:

This was a global (China & USA), open multi-center, 4 weeks clinical study of a skincare regimen in adults with mild-to-moderate AD prone, dry, itchy skin and sensitive skin. Assessments included a SCORAD index for AD severity, a dynamic pruritis scale to assess itch perception, and a PROMIS itch quality of life questionnaire, Sensitive-Scale-10 to assess itch severity and sensitivity, tolerability, and a self-assessment about product attributes and preference.

Results:

Forty-four Asian, Hispanic, and African American subjects (avg. age 45) were enrolled and completed the study with a baseline SCORAD index between 11 and 36, itch severity score between 3 and 10 out of 10 from Sensiscale-10 and sensitive skin. Mean AD severity (SCORAD Index) improved by 39.7% from 23.25 ±6.44 at baseline to 14.02 ±7.92 at day 14 and by 56.1% at Day 28 with a score of 10.20 ±15.77 ($P \leq 0.05$). Mean itch severity scoring improved by 78.2% ($P \leq 0.05$) from 5.73/10 ±1.88 at baseline to 1.25/10 ±1.89. Itch perception (dynamic pruritis scale) was significantly improved by 27.3% immediately after first use, 48.8% after 7 days, 70.5% after 14 days, and 84.8% after 28 days ($P \leq 0.05$). In 7 days and up to 28 days, itch related quality of life measures (PROMIS QoL) showed significant improvement for activity and clothing, mood and sleep, life interference, scratching behavior and severity, compared to baseline ($p<0.05$). Global sensitivity scoring (Sensiscale-10) improved by 78.8% from 34.7/100 ±15.65 at baseline to 7.36/100 ±12.52 at 28 days. There was no related adverse event, the regimen was well tolerated, and subjects had positive perceptions of the skincare regimen.

Conclusion:

Four-week topical application of a specifically designed skincare regimen resulted in significant improvements in AD severity, itch severity as well as quality of life within a multi-ethnic population.

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Abstract N°: 5280

Impact of Atopic Dermatitis Severity on Physical Activity: A Cross-Sectional Study

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Introduction & Objectives: Atopic dermatitis (AD) is correlated with chronic itching, cutaneous discomfort, depressive symptoms, and anxiety, all of which can result in reduced levels of physical activity (PA). The objective of the present research was to evaluate the influence of disease severity and itch intensity on the PA of adults with AD.

Materials & Methods: A cross-sectional study was designed including adult patients with AD. PA was assessed using the International Physical Activity Questionnaire (IPAQ). AD severity was calculated using SCORing Atopic Dermatitis (SCORAD), Eczema Area and Severity Index (EASI), Investigator Global Assessment (IGA), Numerical Rating Scale (NRS) for itch, Patient Oriented Eczema Measure (POEM), Dermatology Life Quality Index (DLQI) and Atopic Dermatitis Control Tool (ADCT) scales.

Results: 124 patients with AD were included, with a mean age of 35±16 years, being 59.7% (74/124) female, with a mean body mass index of 25.09±6.10 kg /m2. Patients presented with moderate disease, reflected in a mean SCORAD of 31.43±23.12, EASI 11.44±11.64, IGA 1.85±1.21 and NRSitch 5.15±.29. The mean POEM score was 12.46±7.79, DLQI 6.84±5,72 and ADCT 8.78±6.23. Regarding PA, 51.61% (64/124) of our population showed a moderate PA pattern, followed by 28.23% (35/124) with low PA pattern, and the lowest proportion of patients showed a high PA pattern 20.16% (25/124).

Higher severity of AD was associated with lower PA, reflected in a negative association between IPAQ score and POEM (r=-0.234, p=0.015), DLQI (r=-0.251, p=0.018), ADCT (r=-0.254, p=0.009), IGA (r=-0.104, p=0.05), SCORAD (r=-0.124, p=0.05) and NRSitch (r=-234, p=0.003). In addition, patients with higher EASI scores walks fewer minutes per day than less severe patients (p=0.005). Furthermore, patients with more severe pruritus as assessed by NRSitch tend to walk less minutes daily (p=0.002) and weekly (p=0.015) and perform less intense PA daily (p=0.009) and weekly (p=0.015).

Conclusion: AD patients with more severe disease have decreased levels of PA. The extent of the illness influences the duration of daily walks for individuals with AD. Itching might also exert a detrimental influence on walking and vigorous PA in AD patients.

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Abstract N°: 5282

Dupilumab demonstrates higher likelihood of achieving improvements in signs, symptoms, and quality of life vs lebrikizumab: results from a placebo-adjusted indirect comparison analysis

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Introduction & Objectives: Dupilumab and lebrikizumab are both monoclonal antibodies that have demonstrated efficacy and safety in clinical trials of patients with moderate-to-severe atopic dermatitis (AD). Dupilumab targets both interleukin (IL)-4 and IL-13, and is fully human, whereas lebrikizumab selectively targets IL-13 and is humanized. However, no direct head-to-head clinical trials have been performed to compare efficacy of dupilumab vs lebrikizumab in combination with topical corticosteroids (TCS). Bucher indirect treatment comparisons (ITCs), in which treatment effects are anchored to a common comparator (e.g. placebo), provide a robust and widely accepted method of evaluating the relative efficacy of drugs in the absence of direct comparisons. The objective of our study was to report the results of a placebo-adjusted Bucher ITC of 16-week therapy for moderate-to-severe AD, comparing the efficacy of dupilumab every 2 weeks (q2w) (LIBERTY AD CHRONOS) vs lebrikizumab q2w (ADhere), in combination with TCS.

Materials & Methods: Placebo-adjusted Bucher ITC was conducted using published phase 3 trial data from LIBERTY AD CHRONOS (NCT02260986) and ADhere (NCT04250337). For both studies, data from the 16-week period were used, employing non-responder imputation, with the following doses: 300mg dupilumab + TCS q2w, or placebo + TCS, and 250mg lebrikizumab q2w + TCS, or placebo + TCS. No adjustments were made for baseline characteristics. Outcomes included proportion of patients achieving ≥75% improvement from baseline in Eczema Area and Severity Index (EASI-75), Investigator's Global Assessment score 0/1 (IGA-0/1; clear/almost clear), 4-point improvement from baseline in peak pruritus Numerical Rating Scale score (PP-NRS ≥4), and ≥4-point improvement from baseline in Dermatology Life Quality Index (DLQI ≥4). Odds ratio (OR) with 95% confidence interval (CI) are reported.

Results: Examination of baseline disease characteristics indicated that the patient populations enrolled in ADhere presented with lower disease severity compared with LIBERTY AD CHRONOS, based on IGA; however, PP-NRS, EASI, and DLQI scores were similar between both trials. This placebo-adjusted Bucher ITC favored dupilumab vs lebrikizumab with TCS combination treatment for all outcomes evaluated. Patients treated with dupilumab + TCS had a significantly higher likelihood of achieving EASI-75 (OR=2.39, 95%CI 1.10–5.19) and PP-NRS ≥4 (OR=2.63, 95%CI 1.17–5.95) at Week 16 vs those treated with lebrikizumab + TCS. OR for the endpoints IGA 0/1 and DLQI ≥4 favored dupilumab, but did not reach statistical significance: IGA 0/1 (OR=1.90, 95%CI 0.81–4.42), DLQI ≥4 (OR=2.35, 95%CI 0.94–5.87).

Conclusion: A placebo-anchored Bucher ITC approach showed that the likelihood of achieving improvements in signs, symptoms, and quality of life is higher for patients treated with dupilumab + TCS vs lebrikizumab + TCS.

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Abstract N°: 5304

Malassezia specific IgE in Head and Neck Dermatitis of Eczema: A Systematic Review & Meta-Analysis

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Introduction & Objectives:

Head and Neck Atopic Dermatitis (HNAD) is a subtype of atopic dermatitis (AD), a common inflammatory skin condition with a distinctive clinical appearance. Due to its frequent relapses, AD worsens patients' quality of life and manifests as a chronic pruritic and eczematous disorder. One subtype of AD that affects seborrheic areas, including the head, face, neck, and upper trunk, is known as Head and Neck Atopic Dermatitis (HNAD). A common presentation of HNAD includes eczema and lichenification of the neck, and might involve an erythematous appearance across the face in severe HNAD. *Malassezia spp.*, a predominant skin yeast, is considered to exacerbate HNAD. HNAD has been linked to dupilumab use in AD therapy, and baseline Malassezia-specific IgE is proposed as a potential biomarker for predicting the development or exacerbation of HNAD. In this study, we investigate the prevalence of *Malassezia*-specific IgE among HNAD patients.

Materials & Methods:

A comprehensive search was performed for observational studies analysing the association between Malassezia-specific IgE and HNAD. This study was performed according to the Preferred Reporting Items for Systematic reviews and Meta-Analyses 2020 checklist and quality was assessed via the Newcastle-Ottawa Quality Assessment Scale (NOS).

Results:

Fourteen observational studies (840 patients) were included in analysis. One study utilized a cohort study design and 13 studies were case-control studies. There were four studies performed in Asia, and 10 were from non-Asian countries. 58% of HNAD patients were male (95% CI: 45.2-69.7). The overall prevalence of *Malasezzia*-specific IgE among HNAD patients was 79.3% (95% CI: 57.5-91.5). The prevalence of *Malasezzia*-specific IgE among HNAD patients varied significantly between geographical regions (p=0.0441), with 88% in non-Asian regions (95% CI: 61.06-97.17) and 54.73% in Asian regions (95% CI: 34.36-73.63). *Malasezzia*-specific IgE prevalence among HNAD patients varied significantly among studies of higher and lower NOS quality score (p=0.0386), with 95.42% in studies with NOS≥7 (95% CI: 63.54-99.60) and 58.05% in studies with NOS<7 (95% CI: 41.44-73.01). *Malasezzia*-specific IgE prevalence among HNAD patients did not vary significantly between more and less predominant *Malassezia* species (p=0.1048).

Conclusion:

Malassezia spp. plays a crucial role in the pathogenesis of HNAD, and IgE anti-*Malassezia* antibodies appeared to be a common marker for HNAD. HNAD has been linked to dupilumab use in AD therapy, and baseline Malassezia-specific IgE is proposed as a potential biomarker for predicting the development or exacerbation of HNAD. This emphasizes understanding individual patient profiles before initiating dupilumab use among AD patients. Understanding the pathophysiology of *Malassezia* in HNAD can help develop more targeted therapeutic approaches in managing AD, and reduce disease burden of HNAD by limiting exposure to exacerbating factors.

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Abstract N°: 5334

Correlation between The Infants' Dermatitis Quality of Life Index (IDQOL) for children aged 0-4 years and the severity of the disease assessed according to The Scoring Atopic Dermatitis Scale (SCORAD) in children with atopic dermatitis

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Introduction & Objectives:

Atopic dermatitis (AD) is an inflammatory, itchy, and chronic relapsing skin disease that occurs frequently in families with other allergic diseases. Due to its chronic impact on daily functioning, AD can significantly affect the quality of life (QoL) of children of all ages. In the world, studies are showing that the more severe the disease, the greater the impact on the decline in QoL of children with AD. In Vietnam, there have been no studies to determine the correlation between The Infants' Dermatitis Quality of Life Index (IDQOL) for children aged 0-4 years and the severity of the disease assessed according to The Scoring Atopic Dermatitis Scale (SCORAD) in children with atopic dermatitis.

This study aimed to determine the correlation between IDQOL for children aged 0-4 years and the severity of the disease assessed according to SCORAD in children with atopic dermatitis.

Materials & Methods:

A cross-sectional study on 284 children aged 0-4 years with atopic dermatitis at Children's Hospital 1, Children's Hospital 2, and City Children's Hospital from February 2023 to July 2023.

They fill out the data collection form based on recording general information, asking for medical history, clinical examination (severity classification according to SCORAD), explaining the IDQOL questionnaire, and encouraging detailed answers.

Results:

- Median IDQOL score was 7 (interquartile range 5-9).
- Our results showed a negative impact of atopic dermatitis on children's quality of life (59.9%), of which 10.9% had their quality of life seriously affected. Median SCORAD score was 35 (interquartile range 27.5-42).
- IDQOL and SCORAD scores showed a positive correlation ($r=0.6033$, $p<0.001$).

Conclusion:

There is a positive correlation between the severity of the disease and the quality of life of children with atopic dermatitis aged 0-4 years. IDQOL index and severity classification according to SCORAD are useful tools to contribute to a comprehensive assessment of children aged 0-4 years with atopic dermatitis.

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Abstract N°: 5335

Quality of life of children >4 years old with atopic dermatitis

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Introduction & Objectives:

Atopic dermatitis (AD) is an inflammatory, itchy, and chronic relapsing skin disease that occurs frequently in families with other allergic diseases. Due to its chronic impact on daily functioning, AD can significantly affect the quality of life (QoL) of children of all ages. In the world, many scales and indices used to assess the QoL of children with AD have been developed. In Vietnam, there is currently no scale and index assessing QoL in children with AD that is routinely performed in clinical practice so the QoL of Vietnam children with AD has not been sufficiently explored.

This study aimed to evaluate the quality of life of children with atopic dermatitis based on the Children's Dermatology Life Quality Index (CDLQI) for children >4 years old.

Materials & Methods:

A cross-sectional study on 102 children >4 years old with atopic dermatitis at Children's Hospital 1, Children's Hospital 2, and City Children's Hospital from February 2023 to July 2023.

They fill out the data collection form based on recording general information, asking for medical history, clinical examination (severity classification according to SCORAD), explaining the CDLQI questionnaire, and encouraging detailed answers.

Results:

- Median CDLQI score was 6 (interquartile range 4-9).
- Our results show that there is a negative impact of atopic dermatitis on children's quality of life (46.1%), of which 16.7% of children had their quality of life seriously affected.
- The components with the highest scores of the CDLQI are itchy feeling, "scratchy" 2 (1-2) points, sleep impact 1(0-2) points and treatment problems 1(1-1) points, the lowest is personal relationship impact 0 (0-0) points.

Conclusion:

Atopic dermatitis significantly affects the quality of life of children >4 years old with atopic dermatitis at Children's hospitals. The CDLQI index provides a detailed and comprehensive assessment of pediatric patients' quality of life that may help clinicians monitor and provide effective treatment.

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Abstract N°: 5343

Quality of life of families, parents, or direct caregivers of children with atopic dermatitis

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Introduction & Objectives:

Atopic dermatitis (AD) is a chronic and recurrent inflammatory skin disease. This disease often begins early in children, so parents and other family members directly involved in the child's care process are affected, and these effects are very diverse.

We researched to specifically survey the effects of atopic dermatitis on families or direct caregivers of afflicted children using the DFI (Dermatitis Family Impact Questionnaire) questionnaire.

Materials & Methods:

A cross-sectional descriptive study on 408 fathers, mothers, and direct caregivers of children with AD at Children's Hospital 2 and Hospital of Dermato-Venereology, from February 2023 to July 2023.

Data were collected using the DFI questionnaire, which includes 10 questions: influence on housework, food choices, the sleep of family members, entertainment activities, social relationships, family financial problems, physical health, mental health, relationships between family members, and the impact of medical support for disease treatment.

Results:

The results show that all aspects of the quality of life of families of children with AD are affected. Highlights are aspects that affect housework, family finances, sleep, and the physical and mental health of the child's direct caregivers. Specifically:

- 49% of families have a high level of influence in increasing the frequency of housework.
- 33.58% of families have a high level of influence in changing family meals.
- 33.58% of families have a high level of influence on sleep.
- 10.54% of families have a high level of influence in limiting outside activities.
- 6.37% of families have a high level of influence in social relationships.
- 38.09% of families have a lot of financial influence.
- 27.21% of families have a high level of influence on physical health
- 69.61% of families have a high level of influence on mental health.
- 2.2% of families have a high degree of influence on the relationships between family members
- 88.48% of families believe that medical support is not or less effective in improving the quality of life of direct caregivers.

Conclusion:

Atopic dermatitis profoundly affects various aspects of life for families, parents, and caregivers of afflicted children. This underscores the necessity for targeted health education programs and more effective treatment approaches

for this population.

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Abstract N°: 5346

Epidemiological and clinical characteristics of children with atopic dermatitis and the impact of the disease on the family, parents, and direct caregivers of the child through the DFI questionnaire

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Introduction & Objectives:

Atopic dermatitis is a common inflammatory skin disease, more prevalent in children than in adults. Because the disease mainly begins in childhood, family members, especially parents and direct caregivers of children, are also affected. Numerous tools have been developed to assess the impact of this condition. Among these, the DFI questionnaire is the earliest, published worldwide, and has been evaluated by many research projects as valuable. High reliability, widely used in many studies on atopic dermatitis and other skin diseases.

We conducted this study to determine the epidemiological and clinical characteristics of children with atopic dermatitis and their families and evaluate the disease's effects on them using the DFI questionnaire.

Materials & Methods:

A descriptive cross-sectional study on 408 children and direct caregivers of children with atopic dermatitis at Children's Hospital 2 and Ho Chi Minh City Hospital of Dermato-Venereology, from February 2023 to July 2023.

Research subjects were asked for information about the epidemiological characteristics and clinical characteristics of the disease and answered questions in the DFI score sheet to calculate the DFI score.

Results:

The median age of the children was 3.67 years old. The male/female ratio is 1.1/1. Most mothers are direct caregivers for children, accounting for 79.9%, and housewives account for the highest percentage, 25.98%, and 21.57% of children have a family history of atopic dermatitis. The median age of disease onset is 12 months, median disease duration is 8.25 months. The median SCORAD score is 33.65 points. The average DFI score is 9.45 ± 4.32 points, the median is 9 points, and there is a positive correlation between the SCORAD score and the DFI score (p=0.001).

Conclusion:

The epidemiological and clinical characteristics of children with atopic dermatitis and their families are very diverse. Most children have moderate severity of the disease, with an average SCORAD score of 33.65 points. The disease moderately impacts parents and caregivers, as shown by the DFI score of 9.45 ± 4.32 points, with a positive correlation between the DFI score and the severity of the disease according to SCORAD.

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Abstract N°: 5347

Atopic Dermatitis: Impact on Sleep, Work Performance, and Its Associated Costs

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Introduction & Objectives:

Despite the prevalence of atopic dermatitis (AD), its impact on work performance and associated economic costs remains insufficiently investigated. This study seeks to uncover the relationships between sleep quality, work performance, predictive factors, and the financial implications of work performance loss.

Materials & Methods:

This study was conducted using the validated Pittsburg Sleep Quality Index (PSQI) with the World Health Organization Health and Work Performance Questionnaire among patients across different AD severity. The estimated costs of work impairment were calculated based on purchasing power parity values.

Results:

Out of a total of 402 AD visits during the study period, 78 patients fulfilled the study criteria. The mean age was 31.7 ± 9.2 years with 57 (73.1%) females. Sleep quality was poor across all categories of AD severity, mild AD included. Higher scores were observed in severe AD (Global PSQI score 6.65 + 3.85, 12.32 + 5.96, 16.63 + 3.44 for mild, moderate and severe AD respectively). Besides itchiness, skin pain, feeling too hot or too cold were were major contributors to sleep disturbance. In severe AD, sleep quality, sleep latency, sleep duration, sleep efficiency, sleep disturbance score, daytime dysfunction, absenteeism and presenteeism were significantly affected. The estimated annual costs for work impairment (absenteeism and presenteeism) were €2683 + €2614 for mild AD, €7371 + €7650 for moderate AD, and €11271 + €9873 for severe AD ($p < 0.001$). Poor work performance was significantly associated with sleep quality (adjusted odds ratio [aOR]: 2.72, 95% confidence interval [CI]: 1.06–6.95), severe AD (aOR: 1.14, 95% CI: 1.06–1.24), and caffeine intake (aOR: 1.02, 95% CI: 1.01–1.03)

Conclusion:

AD adversely affects sleep and work performance, resulting in economic losses. Severe AD, poor sleep quality and high caffeine intake are predictors of poor work performance.

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Abstract N°: 5349

Investigation of the knowledge of parents and direct caregivers of children with atopic dermatitis

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Introduction & Objectives:

Atopic dermatitis is a common inflammatory skin disease in children. Its frequency has recently increased, creating a significant burden on public health. Several factors can influence the treatment effectiveness for children's atopic dermatitis. Among these, parental and caregivers' knowledge about the disease can considerably help control its course.

Our research enrolled parents and direct caregivers of children with atopic dermatitis to determine the proportion of people who have a good understanding of this disease. We also aimed to determine any associations between knowledge score and the participants' sociodemographic characteristics, as well as the children's sociodemographic and clinical features.

Materials & Methods:

A cross-sectional study was conducted at Children's Hospital 2 from January 2023 to May 2023, involving 206 participants. We collected data such as general information and clinical features of atopic dermatitis.

Subsequently, we directly interviewed participants using a questionnaire consisting of 12 questions. These questions covered topics like nomenclature, frequency, etiology, pathogenesis, promoting factors, comorbidities, clinical symptoms, foundational treatment, progression, and prognosis of atopic dermatitis.

Results:

- The average score of participants' knowledge was 9 ± 1,7. 38.8% of participants had a strong understanding of the disease, while 58.8% had a moderate understanding.
- The knowledge related to comorbidities, heredity, and disease progression was still not good.
- Significant associations were found between the knowledge score and the frequency of searching for atopic dermatitis, participants' education levels, and their relationships with children. Participants who researched the disease scored higher on knowledge compared to those who did not ($p < 0,05$). Mothers scored higher than fathers ($\beta = 0.9$; $p = 0.031$). Participants with postgraduate education scored higher compared to those with primary education ($\beta = 3.77$; $p=0.043$).

Conclusion:

Most of the participants had moderate to good knowledge about atopic dermatitis. However, it is essential to organize educational programs for caregivers to successfully manage the disease in children.

EA DV CONGRESS
AMSTERDAM 25-28 SEPTEMBER 2024
EUROPEAN ACADEMY OF DERMATOLOGY & VENEREOLOGY

Abstract N°: 5351

Investigation of the attitude, and behavior of parents or direct caretakers of children with atopic dermatitis

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Introduction & Objectives:

Atopic dermatitis is a common chronic disease. Its control largely depends on the patient's and their caregivers' adherence and self-management. Poor adherence to treatment can lead to suboptimal outcomes. The attitude and behavior of parents or caregivers significantly impact the treatment outcomes of childhood atopic dermatitis.

Our research aimed to investigate the attitude and behavior of parents or direct caretakers towards atopic dermatitis in children and to identify associations between the attitude and behavior of parents or direct caretakers and their demographic features, children's demographic, and clinical characteristics.

Materials & Methods:

We conducted a cross-study with 206 participants at Children's Hospital 2, between January 2023 and May 2023.

We collected general information and disease characteristics. Participants then completed a questionnaire. This questionnaire consisted of 8 attitude questions and 4 behavior questions. The attitude questions evaluated desires for support from family, friends, and society; the impact on the child's learning, recreational activities, and other social functions, financial burden, and diet concerns. The behavior questions surveyed acute treatment approaches, preventive measures, bathing, and moisturizing for the child.

Results:

· Over 60% of participants had positive attitudes towards the impacts of atopic dermatitis on learning and making friends. About 50% considered atopic dermatitis a financial burden. More than 70% were concerned about their child's diet.

· Younger participants had more positive attitudes towards the effects of this disease on learning (β = -0.04; p = 0.04) and finance (β = -0.04; p = 0.01).

· When the child's condition worsened, the majority of fathers, mothers, and caregivers would seek medical help from a clinic or hospital. To prevent further deterioration, 67% opted for strict dietary restrictions. Over 50% used gentle bath milk for their child.

· 64,6% of participants used moisturizers for their children. The associations between using moisturizers and the age of onset (β = -0.02; p = 0,006), as well as the children's SCORAD score (β = 0.04; p = 0,004), were significant.

Conclusion:

The attitude and behavior of parents or direct caretakers play important roles in controlling disease in children with atopic dermatitis.

EADV CONGRESS
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Abstract N°: 5354

Psoriasiform reaction to dupilumab with good response and control of atopic dermatitis with tralokinumab

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Introduction:

Dupilumab treatment can cause psoriasiform eruptions due to possible activation of the IL-23/TH17 pathway, which can sometimes be difficult to control. The most recommended treatment, despite the limited experience available, for these patients with psoriasiform reactions requiring discontinuation of dupilumab, is with JAK inhibitors.

Clinical Case:

A 29-year-old woman with a history of atopic dermatitis since early childhood, universal alopecia areata, vitiligo, asthma and multiple food/environmental allergies was referred to our clinic. After treatment with multiple topicals and systemic drugs as methotrexate, azathioprine and cyclosporine without control of the disease, it was decided to start dupilumab (EASI 25, BSA 62%, IGA 4, pruritus 8). Since the induction dose, the patient presented generalized cutaneous hypersensitivity, with the appearance of scaly erythematous plaques all over the body that were histologically compatible with psoriasiform and espongiotic dermatitis with parakeratosis compatible with psoriasiform reaction attributable to dupilumab treatment.

Results:

After diagnosis, dupilumab was discontinued with improvement of the psoriasiform lesions but persistence of severe eczema. Treatment with cyclosporine, upadacitinib, baricitinib and abrocitinib were tried without achieving control of the atopic dermatitis and developing, on the other side, severe outbreaks of herpes simplex. Finally, tralokinumab was started with EASI 45, BSA 90%, IGA 4 and pruritus 7, with great improvement in the first weeks without psoriasiform reactions. Currently with an EASI 8, BSA 10%, IGA 1 and pruritus 1 after a follow-up at 16 weeks.

Conclusion:

Treatment with tralokinumab is presented as an alternative option to JAK inhibitors for patients who have experienced psoriasiform reactions attributed to dual inhibition of IL-4-/IL-13, as suppression of IL-4 can partly explain the occurrence of these reactions due to the disinhibition of IL-23/IL-17 axis.

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Abstract N°: 5370

Dupilumab drug survival in atopic dermatitis and asthma: a nationwide register-based study

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Introduction & Objectives:

In 2018, dupilumab was approved as the first advanced therapy for treating atopic dermatitis (AD) in Denmark, and two years later, as the fifth biological treatment, it was approved for treating severe asthma. Drug survival measures treatment persistence (time-on-drug) to a specific drug. It represents information on drug effectiveness, safety, adherence, tolerability, and preferences. Results from AD post-approval real-world evidence studies of dupilumab show high drug survival (80-93%) after 2 years of follow-up. Similar studies do not yet exist for asthma. Daily-practice real-world studies may be prone to missing data, selection bias and loss-to-follow-up. In this study, we examined drug survival rates of dupilumab for AD and asthma specifically, using national administrative high-quality register data that ensure a complete and nationwide representation.

Materials & Methods:

Using the Danish National Patient Registry and the Danish Register of Medicinal Product Statistics, both requiring mandatory registration of treatment and filled prescriptions, this study investigated drug survival of dupilumab from the date of market availability until December 31, 2022. The last inclusion date was the 1st of July 2022 allowing a minimum of 6 months of follow-up time. A treatment commenced at the time of the first prescription and ended at the end of drug supply, migration, death, or the initiation of a dupilumab alternative. A period of 180 days was considered an allowable gap in drug supply.

In the main analysis, we identified two dupilumab-treated patient populations: I) AD only and II) asthma only.

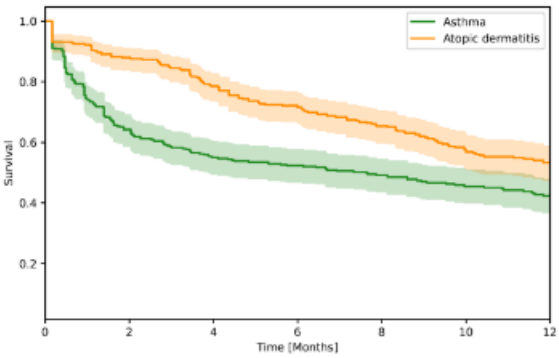
Results:

We included 323 and 338 dupilumab-treated patients with AD only and asthma only, respectively. Kaplan-Meier curves showed higher dupilumab drug survival for AD patients: after 6 months 48% of the asthma patients had discontinued dupilumab treatment, while for AD patients this was 28%. Cox regression showed that patients with asthma had an almost two-fold increased risk of discontinuing dupilumab (HR 1.69, 95% CI 1.28-2.23, p<0.001) compared to patients with AD. Compared to women, men had a slightly lower risk of discontinuing dupilumab (HR 0.79, 95% CI 0.64-0.98, p=0.031). We found no significant differences in drug survival according to patient age, history of ocular symptoms, disease duration, socioeconomic status, or calendar year.

Conclusion:

Female sex and being treated with dupilumab for asthma rather than AD were associated with a higher risk of discontinuing dupilumab treatment. However, the lower drug survival rate in asthma patients might be explained by the availability of more biological treatment alternatives for asthma at the time of market availability.

Figure – Drug survival of dupilumab in patients with asthma, and atopic dermatitis


Asthma
Atopic dermatitis
Survival
1.0
0.8
0.6
0.4
0.2
0
2
4
6
8
10
12
Time [Months]

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Abstract N°: 5377

Comparison of a Soothing Moisturizer Versus Itch Relief Moisturizing Lotion on Hydration and TEWL in Patients with Eczema-Prone Skin

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Introduction & Objectives:

Many adults suffer from dry, itchy skin, particularly those with eczema-prone skin. This study compared the subject perception of two over-the-counter moisturizing products, as well as their ability to improve skin hydration and reduce transepidermal water loss (TEWL).

Materials & Methods:

Single-center, randomized, double-blind, split-body study comparing the effectiveness of two products – an eczema soothing moisturizer (ESM) and an itch relief moisturizing lotion (IRML) – applied twice-daily for 4 weeks in healthy adults with self-perceived persistent mild-to-moderate eczema-prone skin. Assessments included corneometer to measure hydration, and tewameter to evaluate skin barrier function/TEWL. Subjects had a corneometer measurement of <30 au at baseline (BL).

Results:

30 adults completed the study. Both products significantly increased skin hydration of the arm and leg at week 4 ($P<0.05$ vs baseline); however, ESM was superior to IRML (arm increase: 49.8% vs 28.9%, $P<0.05$; leg increase: 42.1% vs 21.3%, $P<0.05$). Both products also significantly improved skin barrier function/TEWL at week 4 vs baseline ($P<0.05$); differences between the two were not significant. On a satisfaction questionnaire both products were well-perceived, although 50.0% of subjects preferred ESM compared to 33.3% who preferred IRML (16.7% had no preference) and 93.3% noticed a significant improvement in eczema-pone skin with ESM vs 88.3% with IRML.

Conclusion:

Both moisturizer and lotion improved skin hydration and skin barrier function after 4 weeks, although ESM achieved significantly better hydration. ESM was preferred by subjects over IRML. Use of efficacious products with high acceptability may lead to increased adherence/better outcomes.

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Abstract N°: 5381

Comparison of Two OTC Itch Relief Products After Single Application

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Introduction & Objectives:

Study to compare efficacy, tolerability, and subject perception between an over-the-counter itch relief gel (IRG) and itch relief moisturizing cream (IRMC) after a single application.

Materials & Methods:

Single-center, randomized, blinded, split-body study comparing IRG vs IRMC in adults with eczema-prone skin and mild-to-moderate itch. Assessments included itch relief duration upon application, itch severity (0=none to 9=severe at baseline (BL), 8, 12, and 24 hours), tolerability (0=none to 3=severe), and self-assessment questionnaire about product attributes and preference.

Results:

Thirty-three females and males with a mean age of 49.7 completed the study. Average time to itch relief was 28.5 seconds for IRG vs 41.8 for IRMC ($P<0.05$), with first onset at 10 seconds. In the IRG group, itch severity was reduced from 4.4 at BL to 1.4 at 8 hours; in comparison, itch was reduced from 4.4 at BL to 2.6 at 8 hours in the IRMC group ($P<0.05$). Both products significantly relieved itch versus baseline at all time points. IRG had better tolerability, with burning/stinging going from 1.5 at BL to 0.8 at 24h vs 1.5 BL to 1.2 for IRMC ($P<0.05$). There was a trend in favor of IRG vs IRMC on the self-assessment questionnaire.

Conclusion:

IRG provided rapid itch relief and significantly outperformed IRMC. Both products significantly improved itch severity for up to 24 hours after application, but IRG moderated stinging/burning sensations better than IMC. Further, IRG was preferred by subjects over IRMC.

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Abstract N°: 5385

Efficacy and Safety of Upadacitinib vs Dupilumab in Adults and Adolescents with Moderate-to-Severe Atopic Dermatitis: Results of an Open-label, Efficacy Assessor-Blinded Head-to-Head Phase 3b/4 Study (Level Up)

Jonathan I. Silverberg[1], Christopher Bunick[2], Chih-Ho Hong[3, 4], Pedro Mendes-Bastos[5], Linda Stein Gold[6], Antonio Costanzo[7], Nadia Ibrahim[8], Cristina Sancho Sanchez[8], Xiaoqiang Wu[8], Yu Han[8], Gweneth Levy[8], Kathy Altman[8], Kilian Eyerich*[9]

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Encore (RAD2024)

Introduction & Objectives: Atopic dermatitis (AD) is a chronic inflammatory skin disease characterized by intense itch and eczematous skin lesions. Some patients with AD continue to experience flares and substantial clinical burden despite the use of systemic therapy. Both upadacitinib (UPA) and dupilumab (DUPI) are approved in multiple countries for the treatment of moderate to severe AD in adolescents and adults. This monotherapy study assessed the efficacy and safety of UPA, initiated at 15 mg once daily (QD) and dose-escalated to 30 mg QD based on clinical response, compared with DUPI per its label. Results presented here are based on the Week 16 primary analysis.

Materials & Methods: Level Up is a phase 3b/4 global, randomized, open-label, efficacy assessor blinded, head-to-head, multi-center study evaluating UPA vs DUPI in adolescents and adults with moderate to severe AD who had inadequate response to systemic therapy or when use of those therapies was inadvisable. Patients were randomized to UPA 15 mg or DUPI per its label for 16 weeks of treatment (Period 1), with an extension period to 32 weeks (Period 2) for patients not achieving at least 75% reduction in Eczema Area and Severity Index from baseline (EASI 75) at Week 16. Patients on UPA 15 mg were dose-escalated to 30 mg starting from Week 4 if they had a <EASI 50 response, or a <4-point improvement from baseline for their weekly rolling average of Worst Pruritus Numerical Rating Scale (WP-NRS) score. Patients taking UPA 15 mg who did not achieve EASI 75 starting at Week 8 also had their dose increased to 30 mg. Starting at Week 4, rescue with topical therapy was optional and per investigator's discretion if protocol criteria were met. The primary endpoint of the study was the simultaneous achievement of 90% or greater reduction in EASI from baseline (EASI 90) and a WP-NRS of 0 or 1 (WP-NRS 0/1) at Week 16.

Results: A total of 920 patients (803 adults, 117 adolescents) were randomized to UPA (458) or DUPI (462). At Week 16, UPA showed superior efficacy versus DUPI in the primary endpoint, where a significantly higher proportion of patients simultaneously achieved EASI 90 and WP-NRS 0/1 at Week 16 (19.9% vs 8.9% for UPA and DUPI respectively, $p<0.0001$). UPA also showed superiority versus DUPI for all ranked secondary endpoints including skin and itch response endpoints at varying response levels and timepoints (Table 1). No new safety signals were identified during Period 1. Proportions of patients with any treatment-emergent adverse event were

higher for UPA (65.3%) than DUPI (52.7%). Severe adverse events (AEs) and AEs leading to discontinuation of study treatment were similar between UPA and DUPI, with no difference in the proportion of serious AEs (0.9%). The most common AE reported was nasopharyngitis for both UPA and DUPI. One serious infection (0.2%) was reported for DUPI, and none for UPA. Five opportunistic infections (excluding tuberculosis and herpes zoster) occurred for UPA (all eczema herpeticum) with none for DUPI. No malignancies, adjudicated major adverse cardiac events, adjudicated venous thromboembolic events (VTEs) or deaths were reported in either treatment group.

Conclusion: Treatment of moderate to severe AD with UPA demonstrated superiority versus DUPI for the primary endpoint of simultaneous achievement of near complete skin clearance (EASI 90) and no to little itch (WP-NRS 0/1) at Week 16 and for all ranked secondary endpoints. There were no new safety risks compared to the known safety profile of UPA.

Table 1. Level Up primary and secondary endpoints.

% (95% CI)	Upadacitinib (N=458)	Dupilumab (N=462)	p-value
Primary endpoint			
Week 16 EASI 90 and WP-NRS 0/1	19.9 (16.2, 23.5)	8.9 (6.3, 11.5)	<0.0001
Ranked secondary endpoints			
Week 16 EASI 90	40.8 (36.3, 45.3)	22.5 (18.7, 26.3)	<0.0001
Week 16 WP-NRS 0/1[a]	30.2 (26.0, 34.4)	15.5 (12.2, 18.8)	<0.0001
Week 16 Improvement in WP-NRS ≥4[b]	54.7 (50.1, 59.3)	38.1 (33.6, 42.5)	<0.0001
Week 4 WP-NRS 0/1[a]	16.1 (12.7, 19.5)	2.8 (1.3, 4.3)	<0.0001
Week 2 WP-NRS 0/1[a]	7.7 (5.3, 10.2)	1.3 (0.3, 2.3)	<0.0001
Week 4 EASI 90	23.8 (19.9, 27.7)	9.7 (7.0, 12.4)	<0.0001
Week 2 EASI 75	26.7 (22.7, 30.8)	8.2 (5.7, 10.7)	<0.0001
Week 16 EASI 100	14.8 (11.6, 18.1)	5.6 (3.5, 7.7)	<0.0001

EASI, Eczema Area and Severity Index; WP-NRS, Worst Pruritus Numerical Rating Scale
[a]Among patients with baseline WP-NRS >1
[b]Among patients with baseline WP-NRS ≥4

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Abstract N°: 5411

Lebrikizumab provides stable skin response with no or minimal fluctuations for up to two years in patients with Atopic dermatitis

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Introduction & Objectives: Lebrikizumab, a high-affinity IL-13 inhibitor, demonstrated safety and efficacy as monotherapy through 52 weeks of treatment in adults and adolescents (≥40 kg) with moderate-to-severe atopic dermatitis (AD) in recent phase 3 trials (ADvocate1, NCT04146363; ADvocate2, NCT04178967). This study assessed the long-term efficacy of LEB in adults and adolescents with AD and assessed the efficacy of 250 mg lebrikizumab every four weeks (LEB Q4W) or every two weeks (LEB Q2W) in atopic dermatitis.

Materials & Methods: Here, we assessed the stability of response after 2 years of lebrikizumab in the subpopulation of patients who responded at week 16 to 250 mg lebrikizumab LEB Q2W without the use of rescue medication and who then received LEB Q2W or LEB Q4W in ADvocate1 and 2 and continued the same treatment (LEB Q2W, n=82; LEB Q4W, n=99) in ADjoin (NCT04392154), a long-term extension study of lebrikizumab.

Results: Response at week 16 was defined as an Investigators Global Assessment 0/1 or a ≥75% reduction in Eczema Area and Severity Index (EASI-75). Stability of response with treatment from week 16 through week 104 (Adjoin week 52) was defined as the proportion of patients with an EASI-75 response during ≥80% of attended visits, using all observed data. A ≥90% reduction in EASI (EASI-90) was also assessed. A stable EASI-75 response was achieved for 96.0% of patients receiving LEB Q4W and 91.5% for LEB Q2W. A stable EASI-90 response was achieved for 64.6% of patients receiving LEB Q4W and 59.8% for LEB Q2W.

Conclusion: In summary, most lebrikizumab responders had a stable EASI-75 response with no or minimal fluctuations during 2 years of treatment.

Disclosure: Presented at American Academy of Dermatology, San Diego, 8-12 March 2024.

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EUROPEAN ACADEMY OF DERMATOLOGY & VENEREOLOGY

Abstract N°: 5413

Efficacy of lebrikizumab in adults and adolescents with moderate-to-severe atopic dermatitis by age of onset: analysis of two phase 3 clinical trials

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Introduction & Objectives: Lebrikizumab (LEB), a novel, high affinity monoclonal antibody, selectively targeting IL-13 with high affinity and slow dissociation rate, has been approved in the EU, UK, and Japan and is under investigation in the US and elsewhere for the treatment of moderate-to-severe Atopic Dermatitis (AD).

This post-hoc analysis evaluated the Week-16 efficacy of LEB monotherapy by age of AD onset in adults and adolescents with moderate-to-severe AD from ADvocate1 and ADvocate2, identically-designed, randomized, double-blind, placebo-controlled phase 3 trials.

Materials & Methods: In ADvocate1 and ADvocate2, eligible patients were randomly allocated 2:1 to receive LEB 250 mg or placebo (PBO) every 2 weeks. Patients were stratified by age of AD-onset as ≤2, >2-to-<18, and ≥18 years. Efficacy assessed at Week 16: Investigator's Global Assessment score of 0 or 1 with ≥2-point improvement (IGA 0,1; the trials' primary endpoint); ≥75% (EASI 75) and ≥90% (EASI 90) improvement in the Eczema Area and Severity Index from baseline; ≥4-point Pruritus Numeric Rating Scale (NRS) improvement from baseline (with baseline score ≥4), and percentage change in total EASI from baseline. Data from patients who received topical or systemic rescue medication/ discontinued treatment due to lack of efficacy were imputed as non-responders/ set to baseline values. Data from patients who discontinued treatment for other reasons were set to missing and analyzed by multiple imputation. This analysis was conducted on the modified, pooled intent-to-treat population. Treatment-by-age subgroup interaction was assessed with logistic regression. Binary outcomes were analyzed by the Cochran-Mantel-Haenszel method, and continuous outcomes were analyzed with ANCOVA.

Results: At baseline, the numbers of patients treated with LEB and PBO, respectively, were 215 and 117 in the ≤2 years AD-onset subgroup, 178 and 103 in the >2-to-<18 years subgroup, and 171 and 67 in the ≥18 years subgroup. At baseline, the percentages of patients with ≥1 atopic comorbidity were 81% in the ≤2 years subgroup, 74% in the >2-to-<18 years subgroup, and 58% in the ≥18 years subgroup.

At Week 16, treatment-by-age subgroup interactions were not significant at the 0.10 level for IGA 0,1; EASI 75; EASI 90; and Pruritus NRS 4-pt improvement. Within each subgroup, a higher proportion of LEB-treated compared

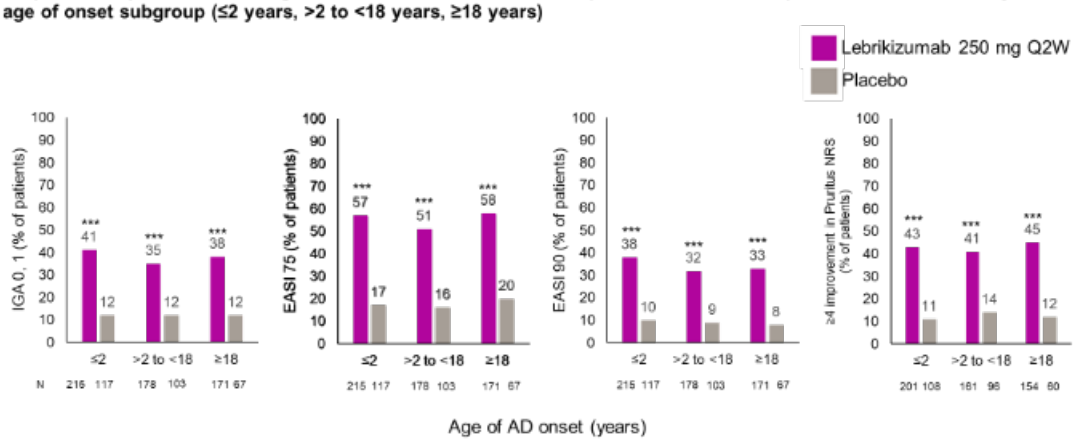
with PBO-treated patients (p<0.001) reported IGA 0,1 responses (≤2 years: 41% vs. 12%; >2-to-<18 years: 35% vs. 12%; ≥18 years: 38% vs. 12%), EASI 75 responses (≤2 years: 57% vs. 17%; >2-to-<18 years: 51% vs. 16%; ≥18 years: 58% vs. 20%), and EASI 90 responses (≤2 years: 38% vs. 10%; >2-to-<18 years: 32% vs. 9%; ≥18 years: 33% vs. 8%). Additionally, the least-squares mean percentage change from baseline in total EASI score for LEB and PBO, respectively, was -65% and -26% in the ≤2 years subgroup, -60% and -26% in the >2-to-<18 years subgroup, and -63% and -30% in the ≥18 years subgroup (p<0.001 for LEB vs. PBO in all subgroups). The proportion of LEB-treated patients who achieved ≥4-point improvement in the Pruritus NRS from baseline (baseline score ≥4) was greater than PBO-treated patients ([N]; ≤2 years: 43% [201] vs. 11% [108]; >2-to-<18 years: 41% [161] vs. 14% [96]; ≥18 years: 45% [154] vs. 12% [60]; p<0.001).

Conclusion: Regardless of age of AD onset, LEB was associated with significant improvements in AD signs and symptoms compared with placebo over 16 weeks of treatment.

Disclosure: Presented at RAD 6th Annual.

Figure

Proportion of patients achieving IGA 0,1; EASI 75; EASI 90; or ≥4-point Pruritus NRS improvement at Week 16 by age of onset subgroup (≤2 years, >2 to <18 years, ≥18 years)



***All comparisons lebrikizumab Q2W vs placebo, p<0.0001
The proportion of patients with ≥4-point improvement from baseline in Pruritus NRS was calculated among patients who had baseline Pruritus NRS ≥4
AD=Atopic Dermatitis; EASI=Eczema Area and Severity Index; IGA 0, 1= Investigator's Global Assessment 0 or 1 with ≥2-point improvement from baseline; NRS= Numeric Rating Scale; Q2W=Every 2 Weeks

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AMSTERDAM 25-28 SEPTEMBER 2024
EUROPEAN ACADEMY OF DERMATOLOGY & VENEREOLOGY

Abstract N°: 5446

Lebrikizumab monotherapy maintained improvement of itch and sleep-loss due to itch after two years in patients with moderate-to-severe Atopic dermatitis

Gil Yosipovitch[1], Peter Lio[2], David Rosmarin[3], Marta Casillas[4], Fan Emily Yang[4], Chaoran Hu[4], Evangeline Pierce[4], Laia Bardolet[5], Franz Legat[6], Jose-Manuel Carrascosa[7], Sonja Ständer[8]

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Introduction & Objectives: Atopic dermatitis (AD) is a chronic disease with itch and sleep-loss due to itch as key symptoms, which requires long-term treatment and sustained response. We describe the impact of lebrikizumab on itch and sleep-loss due to itch at 104-weeks in a long-term extension study, ADjoin (NCT04392154).

Materials & Methods: Responders from monotherapy ADvocate1&2 (achieved Eczema Area and Severity Index 75 or Investigator Global Assessment score (0,1), without rescue medication), who completed ADvocate1&2 and enrolled into ADjoin, received LEB 250mg every 2-weeks (Q2W) or 4-weeks (Q4W) for an additional 52-weeks. Itch was assessed using Pruritus Numeric Rating Scale (NRS), an 11-point scale [0 (no itch) to 10 (worst imaginable itch)]. Sleep-loss due to itch was assessed using Sleep-Loss Scale (SLS), a 5-point Likert scale [0 (not at all) to 4 (unable to sleep at all)]. Outcomes are reported as observed at Week 104: change from baseline (CFB), Pruritus NRS (0,1), ≥3-point improvement in Pruritus NRS, ≥1-point and ≥2-point improvement in SLS. ADvocate1&2 data were pooled.

Results: At Week 104, CFB in Pruritus NRS was -5.24 Q2W and -5.06 Q4W, Pruritus NRS (0,1) was 57.4% Q2W and 55.4% Q4W, and ≥3-point improvement in Pruritus NRS was 85.2% Q2W and 85.5% Q4W. At Week 104, CFB in SLS was -1.78 Q2W and -1.52 Q4W, ≥1-point improvement in SLS was 93.0% Q2W and 94.0% Q4W and ≥2-point improvement in SLS was 64.3% Q2W and 71.4% Q4W.

Conclusion: Patients with moderate-to-severe AD achieved and maintained improvement of itch and sleep-loss due to itch after two-years of treatment with lebrikizumab monotherapy.

Disclosure: Presented at American Academy of Dermatology, San Diego, 8-12 March 2024.

EA DV CONGRESS
AMSTERDAM 25-28 SEPTEMBER 2024
EUROPEAN ACADEMY OF DERMATOLOGY & VENEREOLOGY

Abstract N°: 5479

Absolute itch and quality of life response with lebrikizumab through 52 weeks

Diamant Thaçi*[1], Lluís Puig[2], Kim Papp[3], Linda Stein Gold[4], Pablo Fernández-Peñas[5], Yu-Huei Huang[6], Andrew Blauvelt[7], Bruce Strober[8], Martin Dossenbach[9], Meritxell Falqués[10], Laia Bardolet[10], Christian Vestergaard[11]

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Introduction & Objectives: Lebrikizumab (LEB) is a monoclonal antibody for moderate-to-severe atopic dermatitis (AD) that binds with high affinity to interleukin (IL)-13. Pruritus is the most frequent symptom of AD and may impact patient quality of life (QoL) [1]. Treatment response in AD can be assessed by improvements in symptoms and QoL as recommended by Harmonizing Outcome Measures in Eczema (HOME) committee [2]. Moreover, the attainment of absolute endpoints is clinically relevant and provides additional information to patients and physicians of the remaining amount of disease. Here, efficacy of LEB in terms of achieving Dermatology Life Quality Index (DLQI) ≤5 (indicative of a minimal effect on patient's QoL) and Pruritus Numeric Rating Scale (NRS) ≤4 (indicative of mild pruritus) are reported at W52 among W16 responders in the ADvocate1 and ADvocate2 trials.

Materials & Methods: ADvocate1 and ADvocate2 were two identically designed, randomized, placebo-controlled, monotherapy Phase 3 trials assessing LEB efficacy and safety in moderate-to-severe AD patients (adult patients [≥18 years] and adolescents [12 to <18 years, ≥40kg]). LEB responders were defined as patients achieving a 75% reduction in the Eczema Area and Severity Index (EASI) from baseline (EASI 75) or an Investigator's Global Assessment (IGA) 0/1 with a ≥2-point improvement from baseline without rescue medication use at W16. LEB W16 responders (n=291) were re-randomized 2:2:1 to receive LEB 250 mg Q2W (n=113), LEB 250 mg every 4 weeks (Q4W; n=118), or placebo (PBO) (LEB withdrawal; n=60) for 36 additional weeks (maintenance period) [3]. Clinically meaningful responses were defined as Pruritus NRS ≤4 and DLQI ≤5. To assess Pruritus NRS ≤4, patients with baseline Pruritus NRS>4 (n=266 [LEB Q2W n=108, LEB Q4W n=103, PBO n=55]) were included, whereas to assess DLQI ≤5, patients with DLQI >5 (adults: n=209 [LEB Q2W n=83, LEB Q4W n=82, PBO n=44]) were included. Analyses were performed on the pooled modified Maintenance Primary Population (mMPP). Proportions of responders at W16 achieving Pruritus NRS ≤4 and achieving DLQI ≤5, respectively, were assessed at W52. Missing data due to lack of efficacy or data after rescue medication usage were imputed as non-responder imputation (NRI). Other missing data were imputed using MI.

Results: The proportion of patients reporting Pruritus NRS ≤4 at W52 was 80.0% in the LEB Q2W arm, 80.4% in the LEB Q4W arm and 73.3% in the PBO (LEB withdrawal) arm. The proportion of patients reporting a DLQI ≤5 response at W52 were 69.6%, 74.3% and 57.5% (LEB Q2W, LEB Q4W and PBO (LEB withdrawal), respectively) (Fig. 1).

Conclusion: At W52,** 8 out of 10 patients treated with LEB Q2W or Q4W had mild pruritus (Pruritus NRS ≤4) and 7 out of 10 had no or minimal effect on patient's QoL (DLQI ≤5). Thus, continued treatment with LEB in W16 responders provides sustained clinically meaningful improvements in the long-term in both symptoms and QoL in patients with moderate-to-severe AD.

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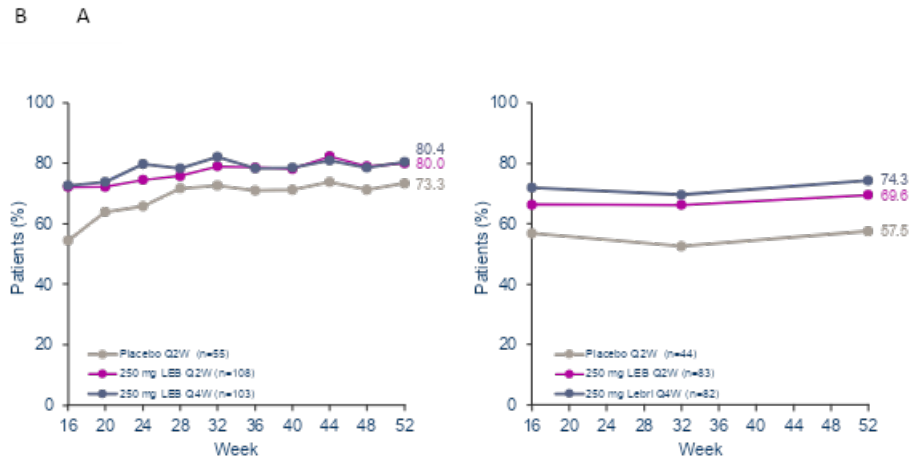
Figure 1. Absolute endpoints of patients who were EASI75 responders at W16 to Week 52: Pruritus NRS ≤4 (A) and DLQI ≤5 (B). NRI/MI

B

A



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Abstract N°: 5483

Improvement across disease dimensions with lebrikizumab in combination with topical corticosteroids in atopic dermatitis refractory or ineligible to cyclosporine: results from the ADvantage study

Richard B Warren[1], Marjolein de Bruin-Weller[2], Athanasios Tsianakas[3], Abdallah Khemis[4], Jacek C Szepietowski[5], H Chih-Ho Hong[6], Meritxell Falqués[7], Laia Bardolet[7], Esther Garcia Gil[7], Stephan Weidinger[8]

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Introduction & Objectives: Atopic dermatitis (AD) is a multidimensional disease that requires improvement in clinical signs, symptoms, and quality of life (QoL) to provide adequate disease control. The efficacy of lebrikizumab (LEB) in monotherapy and combination with topical corticosteroids (TCS) for patients with moderate-to-severe atopic dermatitis (AD) has been reported before [1-4]. Here, we present the magnitude of changes across signs and symptoms of AD with LEB in combination with TCS in a population who has failed or is ineligible to cyclosporine over the 16-week period in the Phase 3 ADvantage study (NCT05149313).

Materials & Methods: ADvantage is a 52-week study with a 16-week, randomized, double-blind, placebo (PBO)-controlled, parallel-group period followed by a 36-week open-label maintenance period. Eligible patients were adults (≥18 years) and adolescents (≥12 to <18 years weighting at least 40Kg) with an Eczema Area and Severity Index (EASI) ≥16, Investigator's Global Assessment (IGA) ≥3, and ≥10% body surface area of AD involvement who were not adequately controlled or were non-eligible for cyclosporine A. Patients were randomized 2:1 to LEB 250 mg with a loading dose of LEB 500 mg at baseline and W2, or PBO every two weeks (Q2W). All patients were to receive concomitant mid-potency TCS through W16; dosage could be tapered to low-potency TCS once lesions were controlled and stopped after 7 days. Here, efficacy endpoints reported are percent change from baseline (CFB) in EASI, Pruritus Numeric Rating Scale (NRS), Dermatology Life Quality Index (DLQI), Patient Oriented Eczema Measure (POEM), and Sleep-Loss Score. The percent CFB for the five endpoints at W4, W8, W12 and W16 is shown by spider diagrams. Analyses were performed in the full analysis set (FAS) population. Mixed Model for Repeated Measures (MMRM) was used.

Results: A total of** 331 patients were randomized (220 to LEB + TCS and 111 to PBO + TCS) and 212 and 100 patients, respectively, completed the 16-week period. Treatment groups had similar baseline characteristics.** Percentage of CFB in EASI, Pruritus NRS, DLQI, POEM and Sleep-Loss Scale at W4, W8, W12 and W16 are shown in the spider plots (Figure 1A, B, C, and D, respectively).

Conclusion: LEB in combination with TCS resulted in significant improvements in five measures representative of three dimensions of disease (skin signs, key symptoms, and QoL) in patients with moderate-to-severe AD up to W16. These results expand our understanding of the impact of LEB across multiple dimensions of AD disease.

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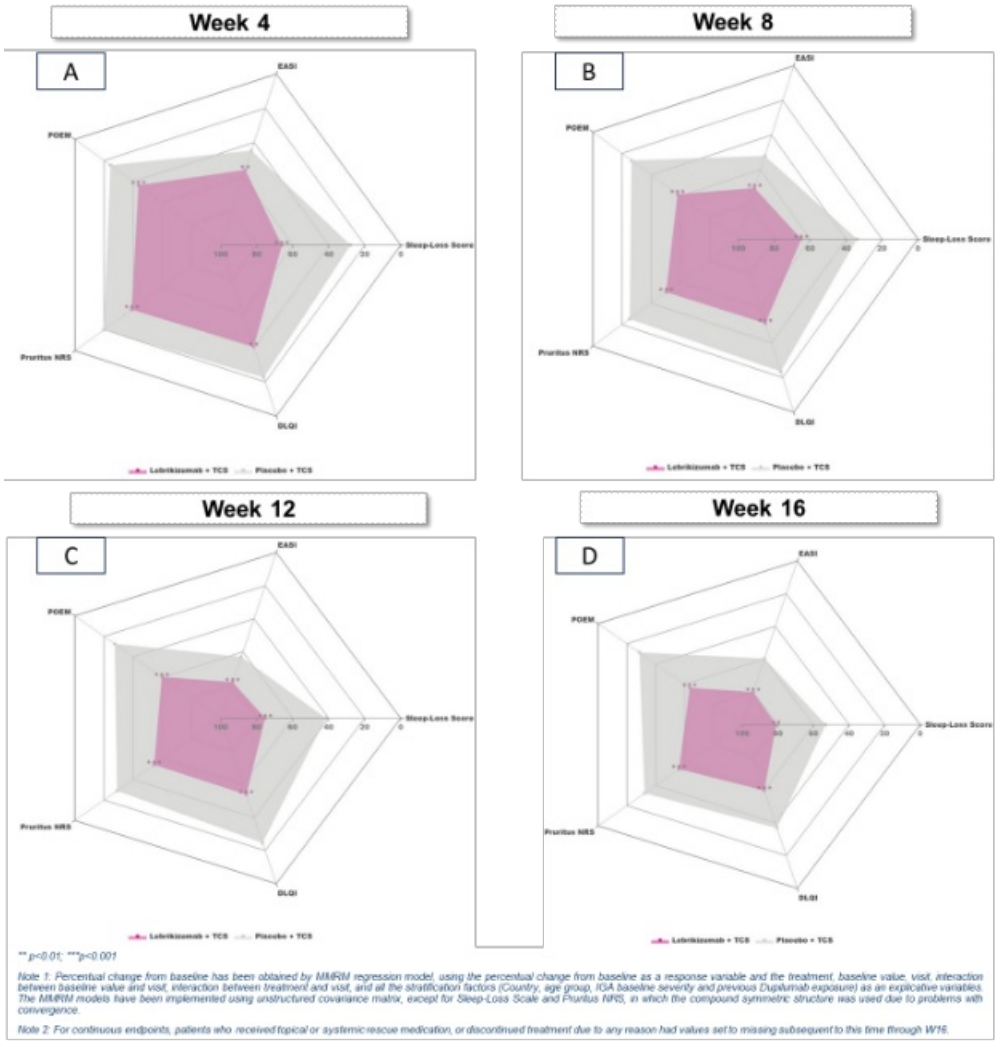
Figure 1



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Abstract N°: 5487

Clinical remission and therapy-free remission in pediatric patients with moderate-to-severe atopic dermatitis treated with dupilumab: open-label extension study preliminary data

Elaine C. Siegfried[1, 2], Thomas Bieber[3], Amy S Paller[4, 5], Eric L Simpson[6], Michael J Cork*[7, 8], Stephan Weidinger[9], Lawrence F Eichenfield[10, 11], Zhen Chen[12], Ashish Bansal[12], Henry Yu[12], Ana B Rossi[13]

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Introduction & Objectives: Pediatric and adolescent patients with moderate-to-severe atopic dermatitis (AD) have a high burden of disease with higher severity and earlier onset predicting disease persistence. The need for lifelong treatment is a common concern among physicians and caregivers who are considering systemic therapy that must be weighed against the potential benefit of early intervention on disease progression. We provide preliminary data for pediatric and adolescent patients with moderate-to-severe AD achieving clinical remission with dupilumab and maintaining remission after discontinuing dupilumab.

Materials & Methods: Patients 6 to <18 years old with moderate-to-severe AD (N=356) who were enrolled in the ongoing LIBERTY AD PED open-label extension (OLE; NCT02612454) received weight-tiered dupilumab dosing (5 kg to <15 kg: 200 mg every 4 weeks [q4w]; 15 kg to <30 kg: 300 mg q4w; 30 kg to <60 kg: 200 mg every 2 weeks [q2w]; ≥60 kg: 300 mg q2w) for ≥52 weeks of follow up. Clinical remission was defined as maintaining an Investigators Global Assessment (IGA) score of 0 or 1 (clear or almost clear) for ≥12 weeks after 40 weeks on dupilumab. Patients reaching clinical remission discontinued dupilumab and were monitored for recurrent AD per protocol. Dupilumab was restarted for patients who regressed to IGA score ≥2 (mild or greater) at one visit.

Results: Clinical remission was achieved for 29.4% (30/102) of adolescents and 28.7% (73/254) of children. Clinical remission was maintained in 43.3% (13/30) of adolescents and 60.3% (44/73) of children off dupilumab. Median time from drug withdrawal to last visit off drug was 18.0 and 15.7 weeks, respectively. **

Conclusion: About one third of pediatric patients experienced sustained remission on dupilumab and about half of these maintained prolonged remission off treatment. The likelihood of therapy-free remission appears to be higher in younger patients.

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Abstract N°: 5489

Lebrikizumab improves signs and symptoms of moderate-to-severe atopic dermatitis in patients inadequately controlled or ineligible for cyclosporine: week 52 results of a phase 3 clinical study (ADvantage)

Richard B Warren[1], Marjolein de Bruin-Weller[2], Athanasios Tsianakas[3], Abdallah Khemis[4], Jacek C Szepietowski[5], H Chih-Ho Hong[6], Esther Garcia Gil[7], Yanislav Mihaylov[7], Meritxell Falqués[7], Helena Agell[7], Stephan Weidinger[8]

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Introduction & Objectives

Lebrikizumab (LEB) is a novel monoclonal antibody that binds precisely to interleukin (IL)-13 with high affinity and slow off-rate, thereby blocking the downstream effects of IL-13 with high potency. LEB has previously demonstrated clinical efficacy and safety in adults and adolescents with moderate-to-severe atopic dermatitis (AD) in 3 randomized, placebo (PBO)-controlled, phase 3 trials.1-3 Cyclosporine A (CsA) is approved in the EU for treatment of severe AD, but its efficacy may not be optimal in some patients and its safety limits longer-term use4. Here, we report the long term (52-week) data of LEB combined with low- or mid-potency topical corticosteroids (TCS) in patients with moderate-to-severe AD not adequately controlled or non-eligible for CsA (ADvantage study; NCT05149313).

Materials & Methods

Eligible patients were adults and adolescents (≥12 to <18 years) with an Eczema Area and Severity Index (EASI) ≥16, Investigator's Global Assessment (IGA) ≥3, and ≥10% body surface area who were not adequately controlled or ineligible for CsA. Patients were randomized 2:1 to LEB 250 mg with a loading dose of LEB 500 mg at baseline and week 2, or PBO every two weeks (Q2W). After a 16-week, randomized, double-blind, PBO-controlled, parallel-group period, all patients received LEB 250mg Q2W during the open-label 36-week maintenance period. All patients were to receive concomitant mid-potency TCS through week 16; from week 16 to week 52, TCS use was at investigator discretion. The week 16 primary and key secondary efficacy and safety data have been reported before5. The week 52 key efficacy data include percentage of patients who achieved 75% reduction from baseline in EASI (EASI 75), and percentage of patients achieving EASI 90, IGA 0/1, and ≥4-point improvement in pruritus Numeric Rating Scale (NRS). Safety endpoints include treatment-emergent adverse events (TEAE), serious adverse events (SAE) and TEAE leading to discontinuation. Data are presented as observed.

Results

331 patients were randomized (220 LEB+TCS and 111 PBO+TCS) and 212 and 100, respectively, completed the 16-week period. At week 52, the proportion of patients treated with LEB 250mg Q2W+TCS throughout the study achieving EASI 75 and EASI 90 was 88.9%% and 71.7%, respectively; 64.4% of patients achieved IGA 0/1 and

71.3% of patients achieved ≥4-point improvement in pruritus NRS. Among the PBO+TCS to LEB 250mg Q2W+TCS population similar improvements at week 52 were observed: 90.8% achieved EASI 75, 71.3% achieved EASI 90, 70.1% achieved IGA 0/1 and 68.1% achieved ≥4-point improvement in pruritus NRS at week 52. Incidence of TEAE among the 312 patients entering the maintenance period was 71.5%, with nasopharyngitis (21.8%) and conjunctivitis (11%) being the most common TEAE. Overall, SAE and TEAE leading to discontinuation were low (5.1% and 2.6%, respectively).

Conclusion

Lebrikizumab 250mg Q2W+TCS significantly improved signs and symptoms of AD in adults and adolescents with moderate-to-severe AD inadequately controlled or ineligible for cyclosporine up to week 52. Safety was consistent with the known profile of lebrikizumab.

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Abstract N°: 5491

Absolute EASI response achieved by lebrikizumab over 16 weeks in patients with moderate-to-severe atopic dermatitis

Diamant Thaçi[1], Lluís Puig[2], Kim Papp[3], Linda Stein Gold[4], Pablo Fernández-Peñas[5], Yu-Huei Huang[6], Martin Dossenbach[7], Meritxell Falqués[8], Helena Agell[8], Christian Vestergaard[9]

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Introduction & Objectives: Lebrikizumab (LEB) is a monoclonal antibody that binds with high affinity and slow off-rate to interleukin (IL)-13, thereby blocking the downstream effects of IL-13 with high potency. The efficacy of LEB monotherapy for patients with moderate-to-severe atopic dermatitis (AD) as the percentage of improvement in the Eczema Area and Severity Index (EASI) has been established previously [1]. Nevertheless, attainment of absolute EASI thresholds may provide additional clinically meaningful information about the response to LEB. This post-hoc analysis assessed the percentage of patients in the ADvocate1 (ADv1) and ADvocate2 (ADv2) monotherapy trials achieving absolute EASI ≤7 (mild) and EASI≤1 (clear/almost clear) [2] and two new cut-offs proposed as optimal targets: EASI≤3 and EASI≤5 [3].

Materials & Methods: Adults (≥18 years) and adolescents (12 to <18 years, ≥40kg) were randomized 2:1 to receive LEB 250mg every 2 weeks, Q2W(n=564) or placebo (PBO) (n=287) for 16 weeks (W). Eligible patients had moderate-to-severe AD, with an EASI ≥16 at baseline. Analyses in ADv1+ADv2 were performed on the pooled modified ITT (mITT) population. The proportion of patients who achieved an EASI of ≤7, ≤5, ≤3 and ≤1, at W16 was assessed for the overall population and stratified by baseline EASI severity subgroups (BESS) (16–21 [moderate], 21.1–50 [severe], and >50 [very severe]) [2]. Missing data and data after rescue were imputed using non-responder imputation (NRI).

Results: In the overall ADv1&2 population, a significantly greater proportion of patients treated with LEB vs PBO achieved EASI≤7 at W16 (54% [n=307/564] vs 18% [n=52/287], p<0.001), overall, and by BESS (LEB vs PBO): moderate (64% [n=104/163] vs 38% [n=27/71], p<0.001); severe (52% [n=185/359] vs 13% [n=25/193], p<0.001); and very severe (43% [n=18/42] vs 0%, p<0.001).

A significantly greater proportion of patients treated with LEB vs PBO achieved EASI≤5 at W16 (48% [n=272/564] vs 13% [n=37/287], p<0.001), overall, and by BESS (LEB vs PBO): moderate (58% [n=94/163] vs 27% [n=19/71], p<0.001); severe (46% [n=164/359] vs 9% [n=18/193], p<0.001); very severe (33% [n=14/42] vs 0%, p<0.05).

Moreover, a significantly greater proportion of patients treated with LEB vs PBO achieved EASI≤3 at W16 (36% [n=203/564] vs 10% [n=29/287], p<0.001) overall, and by BESS (LEB vs PBO): moderate (41% [n=66/163] vs 20% [n=14/71], p<0.05); severe (35% [n=126/359] vs 8% [n=15/193], p<0.001); very severe (26% [n=11/42] vs 0%, p<0.05).

Finally, A significantly greater proportion of patients treated with LEB vs PBO achieved EASI≤1 at W16 (20% [n=113/564] vs 4% [n=10/287], p<0.001). Similar results were observed by BESS (LEB vs PBO): moderate (20% [n=33/163] vs 9% [n=6/71], p<0.05); severe (20% [n=73/359] vs 2% [n=4/193], p<0.001); very severe (17% [n=7/42] vs 0%, p<0.05).

Conclusion: Regardless of baseline severity, over 50% of patients treated with LEB 250mg Q2W monotherapy for 16 weeks achieved an EASI indicating mild AD, 48% and 36% of patients achieved optimal targets (EASI≤5 and EASI≤3, respectively), and even more stringent endpoints indicating clear/almost clear skin were attained in approximately 20% of patients.

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Figure 1

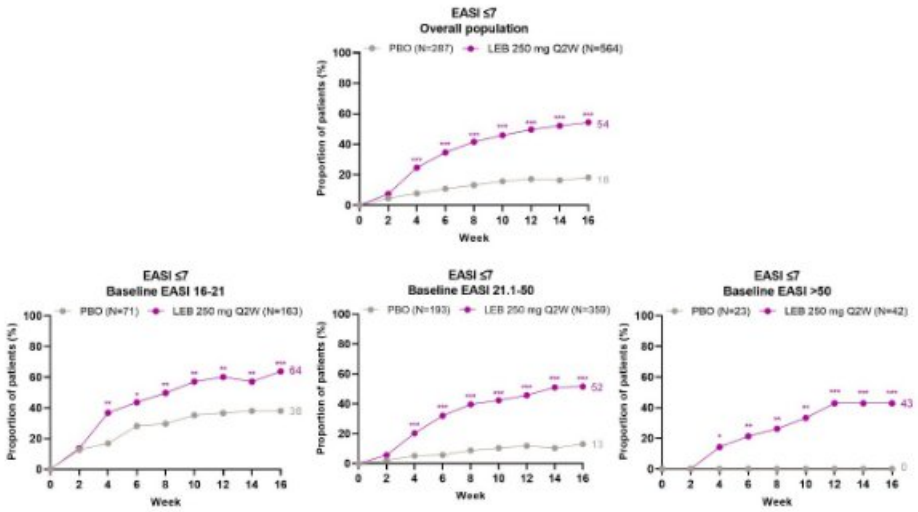
B ᴬ

C ᴬ

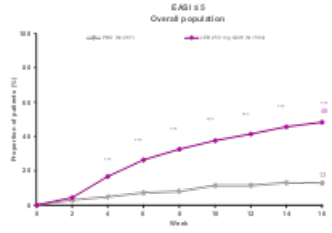
D ᴬ

A

B C D A



A ᴬ A **Figure 2**



D ᴬ

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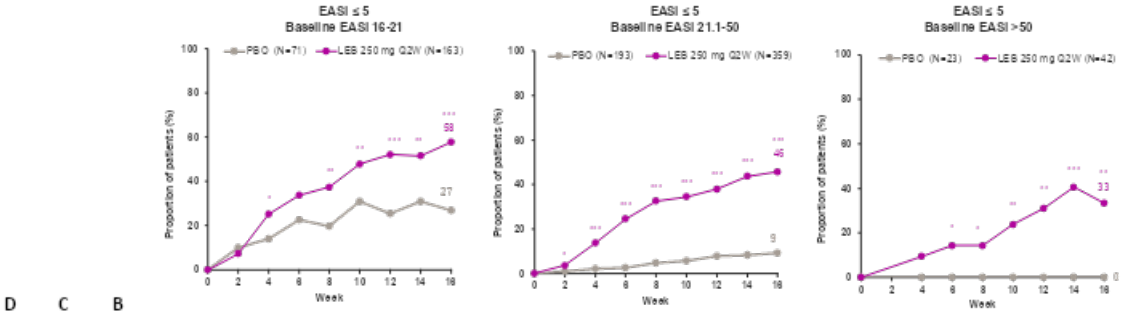

D C B

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A **Figure 3**

D ^

C ^

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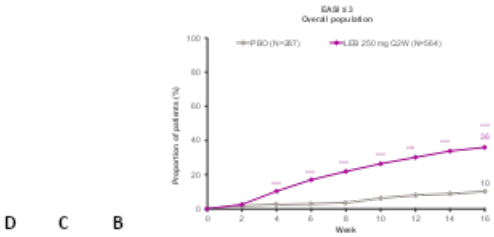
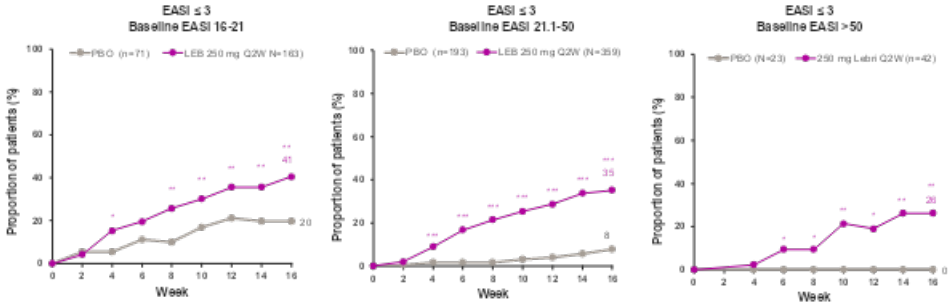


D C B



B ^

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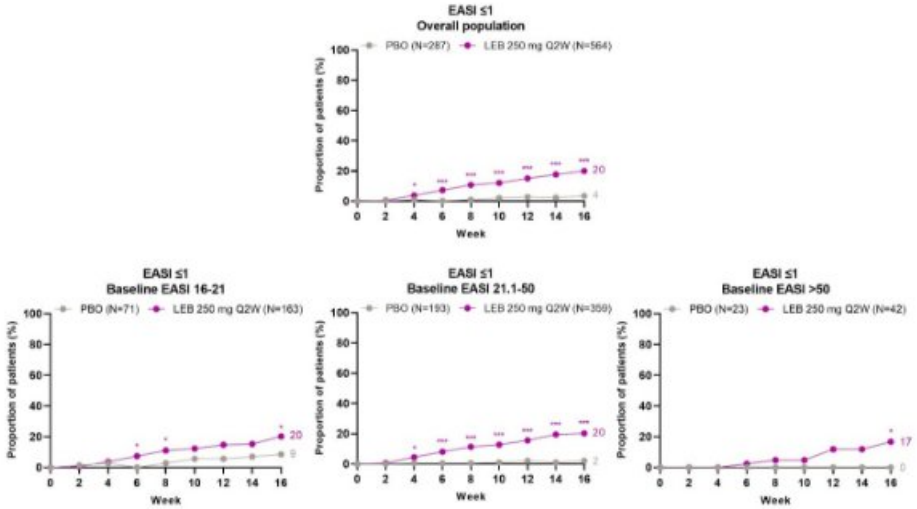
A B C D A **Figure 4**



* p<0.05, ** p<0.01, *** p<0.001 vs. PBO

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AMSTERDAM 25-28 SEPTEMBER 2024
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Abstract N°: 5496

Number needed to treat with lebrikizumab monotherapy at Week 16 in patients with moderate-to-severe atopic dermatitis

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Introduction & Objectives: Treatment options for moderate-to-severe atopic dermatitis (AD) after inadequate response to topical therapy include biologics and Janus Kinase inhibitors. A 16-week network meta-analysis (NMA), including ADvocate 1 and 2 phase 3 lebrikizumab (LEB) monotherapy trials (1), showed that LEB had a similar response rate to abrocitinib, dupilumab, and upadacitinib (1). This analysis seeks to report number needed to treat (NNT) with LEB monotherapy at Week 16 compared to other advanced systemic treatments.

Materials & Methods: The study population included adult (≥18 years) and adolescent (12-17 years) patients with moderate-to-severe AD. The analysis was based on previous NMA data provided as the base case (baseline risk-adjusted random-effects model) (1). The NMA included randomized clinical trials of targeted systemic therapies (monotherapy-only, published before April 2023) before any treatment switch: abrocitinib, baricitinib, dupilumab, lebrikizumab, tralokinumab, and upadacitinib. Efficacy endpoints were** ≥75% improvement in Eczema Area and Severity Index score from baseline (EASI 75), Investigator's Global Assessment of 0 (clear) or 1 (almost clear) (IGA 0/1), and Pruritus Numeric Rating Scale (NRS) ≥4-point improvement from baseline at Week 16. NNT was calculated as 1/ARR, where ARR was the absolute risk reduction obtained by the response rate on the experimental treatment minus the response rate on placebo, and was estimated with a 95% credible interval (CrI).

Results: For achieving EASI 75 at week 16, LEB 250 mg Q2W showed, based on non-overlapping 95% CrI, significantly lower NNT values than tralokinumab 300 mg Q2W, baricitinib 4 mg and 2 mg QD and comparable values to abrocitinib 200 mg and 100 mg QD, upadacitinib 15 mg QD and dupilumab 300 mg Q2W (Figure 1). For achieving IGA 0/1 at week 16, LEB 250 mg Q2W showed significantly lower NNT values than tralokinumab 300 mg Q2W and baricitinib 2 mg QD and comparable NNT values to baricitinib 4 mg QD, abrocitinib 100 mg and 200 mg QD, dupilumab 300 mg Q2W and upadacitinib 15 mg QD (Figure 2). For achieving Pruritus NRS ≥4-point improvement at Week 16, LEB 250 mg Q2W showed significantly lower NNT values than baricitinib 4 mg and 2 mg QD, tralokinumab 300 mg Q2W and comparable NNT values to abrocitinib 100 mg and 200 mg QD, upadacitinib 15 mg and 30 mg QD and dupilumab 300 mg Q2W (Figure 3).

Conclusion: Lebrikizumab has similar NNT values vs. dupilumab, and more favourable NNT than tralokinumab for

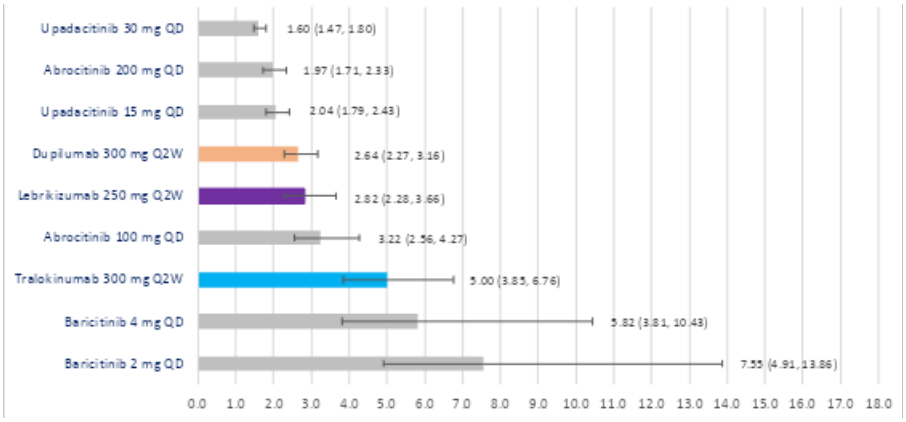
the treatment of moderate-to-severe AD.

References:

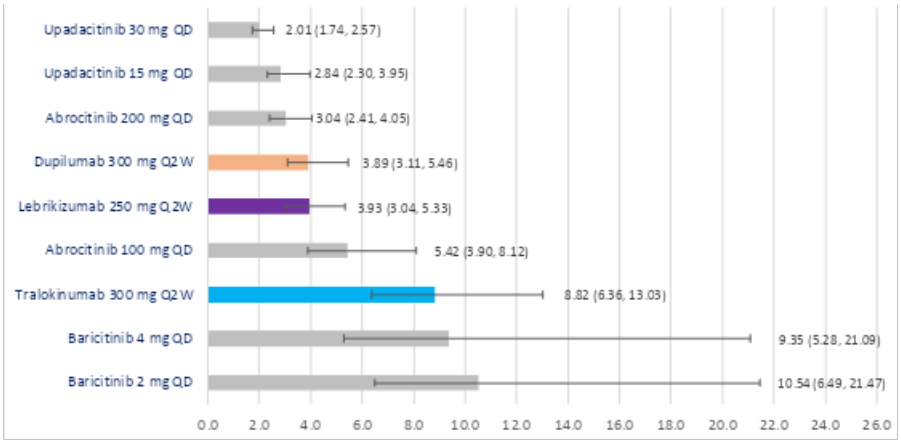
1. Silverberg et al. 2024; doi: 10.25251/skin.8.supp.313.

Figure 1. Number needed to treat (95% credible interval) for achieving EASI 75 (**A**), IGA 0/1 (**B**) and Pruritus NRS ≥4-point improvement (**C**) at Week 16 (baseline risk-adjusted random-effects model)

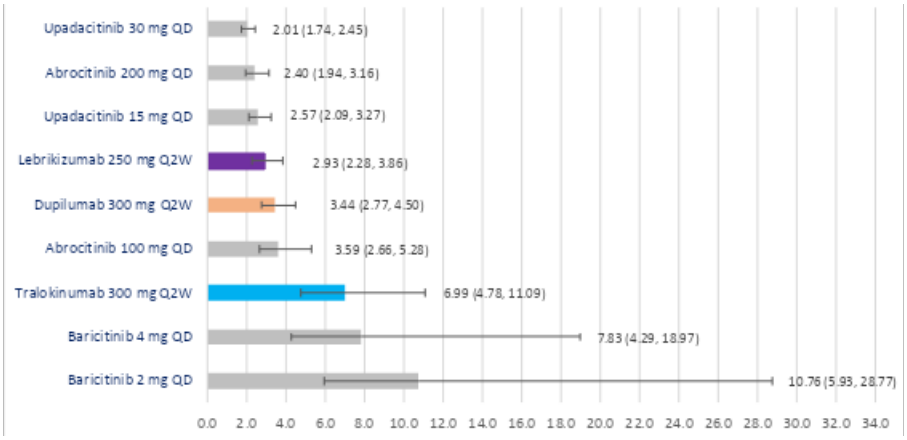
A



B



C



EASI, Eczema Area and Severity Index; IGA, Investigator's Global Assessment; NRS, Numeric Rating Scale; Q2W, once every 2 weeks; QD, once daily.

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Abstract N°: 5534

The Effect of a Soothing Moisturizer on Ceramide Levels in Patients with Eczema-Prone Skin

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[1]Medical Dermatology Associates of Chicago, United States,[2]Galderma Laboratories, L.P., Medical affairs, United States, [3]Galderma, Medical affairs, Switzerland

Introduction & Objectives:

Many adults suffer from dry, itchy skin, particularly those with eczema-prone skin. Ceramides are an important component of the stratum corneum and function to maintain a healthy skin barrier. Research has shown that those with skin conditions such as eczema may have fewer skin ceramides. This study evaluated the effect of an over-the-counter moisturizing product on skin ceramide levels using the minimally invasive method of tape stripping.

Materials & Methods:

Single-center, randomized, double-blind, split-body study evaluating the effectiveness of an eczema soothing moisturizer (ESM) applied twice daily for 4 weeks in healthy adults with self-perceived persistent mild-to-moderate eczema-prone skin. Assessments included tape stripping to monitor ceramide NS and AS levels in skin from the arm and leg.

Results:

30 adults completed the study. At week 4, the mean % increase in NS and AS ceramides from baseline (BL) was 41.6% (P=NS vs BL) in arm samples and 48.3% in leg samples (P<0.05 vs BL); there was a 44.9% increase in overall samples (P<0.05 vs BL).

Conclusion:

The Eczema Soothing Moisturizer significantly improved ceramide levels in skin, the greatest effect occurring in leg samples, which is beneficial in patients with eczema and eczema prone skin

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Abstract N°: 5538

A Novel 3-Step OTC Regimen Improves Eczema-Prone Skin Severity, Itch, and Life Quality: Randomized Study

Kristi Hawley[1, 2], Peter Lio[3], Thu Nguyen[4], Krzysztof Piotrowski*[5], Christine Emesiani[4], Matthew Meckfessel[4]

[1]The Derm Institute of West Michigan, United States, [2]Michigan State University College of Osteopathic Medicine, United States, [3]Medical Dermatology Associates of Chicago, United States, [4]Galderma Laboratories, L.P., Medical affairs, United States, [5]Galderma, Medical affairs, Switzerland

Introduction & Objectives:

Eczema, or atopic dermatitis (AD), is a chronic relapsing skin disease associated with unpredictable flares of erythema, rash, and pruritus. AD arises from a combination of immune system dysregulation and abnormal skin barrier function. Skin barrier support with proper skincare regimens have a central role in management.

Materials & Methods:

This was a multi-center, 12-week in-use study of a skincare regimen in children and adults with mild-to-moderate eczema (6-16) on the Patient-Oriented Eczema Measure (POEM), and ≥2 flares within 3 months prior to screening. The regimen included an itch relief gel, eczema soothing lotion, and flare relief cream. Efficacy assessments included POEM, ItchyQuant, Eczema Area and Severity Index (EASI), Quality of Life and digital photography, along with gathering of adverse events and cutaneous tolerability.

Results:

34 subjects completed the study. In 12 weeks, mean POEM scores improved from 9.7 to 5.3, and EASI scores improved by 17.9% ($P<0.05$ vs baseline). Additionally, mean ItchyQuant scores showed that pruritus was significantly improved from 5.4 at baseline to 2.7 at week 12 ($P<0.05$). The number of flares decreased from 4.2 to 3.2 after 12 weeks of regimen application ($P<0.05$ vs 12 weeks before baseline). Quality of life measures also showed improvement in both children and adults from baseline ($P<0.05$). There were no related adverse events, the regimen was well-tolerated, and subjects had positive perceptions of the regimen.

Conclusion:

12-week use of this skincare regimen resulted in significant improvements on EASI, POEM, and ItchyQuant scores, a reduced number of flares, and improved quality of life.

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Abstract N°: 5549

Upadacitinib response pattern in a difficult-to-treat Atopic Dermatitis subpopulation

Clara Valente*[1], Ana Ferreirinha[1], Pedro Farinha[1], Tomás Pessoa e Costa[1], Bruno Duarte[1]

[1]Santo Antonio dos Capuchos Hospital, Lisboa, Portugal

Introduction & Objectives:

Upadacitinib is a JAK-1 inhibitor approved for the treatment of patients with moderate-to-severe Atopic Dermatitis (AD). While its efficacy and safety are well-documented in clinical trials, real-world evidence remains scarce. In Portugal, access to upadacitinib is restricted to patients with the most severe and refractory forms of AD. Eligibility requires adult patients to have unsuccessfully tried at least two conventional systemic immunosuppressants, dupilumab and baricitinib.

Materials & Methods:

We conducted a 26-week prospective observational study at an AD referral center. Our goal was to assess the effectiveness and safety of upadacitinib in patients who have collectively failed two systemic imunossupressants, baricitinib and dupilumab. Baseline demographic data and objective and subjective scores were captured at weeks 0/6/16/26.

Results:

Fourteen adult patients (mean age 29.9Y; 64.3% male) were eligible for analysis. All patients received upadacitinib 30mg/day and failed previously to respond to oral prednisolone, cyclosporine, methotrexate, dupilumab, and baricitinib.

Significant improvements were seen across all subjective and objective scores in just 6 weeks. An average reduction of 69.2% in Eczema Area and Severity Index (EASI), 56.3% in itch-Numeric Rating Scale (NRS) and 52.0% in sleep-NRS were seen. By week 6, 42.9% of patients achieved EASI-75 and 78.6% EASI-50 response.

At week 16, continued improvements are seen, with an average reduction of 67.7% in EASI, 57.2% in itch-NRS, and 49.7% in sleep-NRS. By week 16, 64.3% of patients achieved an EASI-75 and 78.6% an EASI-50 response.

Milder improvements continued through week 26, with reductions of 58.9% in EASI, 47.9% in itch-NRS, and 47.0% in sleep-NRS. By week 26, 38.5% of patients achieved an EASI-75 and 76.9% an EASI-50 response.

Mild adverse effects were observed in 42.9% of patients, the most common being acne vulgaris (28.6%) and dyslipidemia (14.2%). One patient developed eczema herpeticum, which motivated a temporary stop of upadacitinib. Only one patient discontinued the drug throughout the study period, and another started adjuvant dupilumab at week 16.

Conclusion:

In a challenging subgroup of fourteen patients resistant to several conventional immunosuppressants and advanced systemic therapies, upadacitinib 30mg/day demonstrated rapid efficacy, as documented by week 6. A trend towards reduced treatment outcomes was observed by weeks 16 and 26, although response remained clinically significant. This pattern suggests an oscillating but overall effective response in resistant AD. Additionally, our findings underline the potential for successful switches within the JAK class, given prior exposure to another

JAK inhibitor in all patients of this group. The safety profile observed is satisfactory and mirrors those reported in the literature, with no permanent discontinuations due to adverse events.

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Abstract N°: 5560

Serum proteomic biomarker analysis of the interleukin-2 receptor pathway agonist rezpegaldesleukin in patients with atopic dermatitis

Danni Yu[1], Joshua Levy[2], Takahiro Miyazaki[1], Saul Kivimae[1], Yi Liu[1], Mary Tagliaferri[1], Jonathan Zalevsky[1], Christie Fanton[1]

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Introduction & Objectives:

Rezpegaldesluekin (REZPEG) is an interleukin-2 receptor (IL-2R) pathway agonist that has been shown to stimulate the expansion and function of regulatory T cells (Tregs) that are impaired in inflammatory cutaneous conditions including atopic dermatitis (AD). REZPEG has demonstrated clinical activity in AD (Silverberg et al, 2023) and has the potential to orchestrate immune homeostasis through the restoration of the Treg compartment. While Tregs are the primary cellular target of REZPEG, we sought to evaluate REZPEG's disease-modifying agonistic mechanisms of action and dynamics at the biomolecular level.

Materials & Methods:

Patients with moderate-to-severe AD received 12 or 24 µg/kg REZPEG or placebo once every 2 weeks for 12 weeks. The Olink proteomics platform with the Explore 384 cardiometabolic, inflammation, neurology, and oncology panels was used to measure the levels of 1461 soluble serum proteins from patients at baseline and throughout the induction period on weeks 2, 3, 4, and 12. Results were analyzed using a longitudinal linear mixed effects model to identify proteins that were differentially expressed as a function of REZPEG dose and time on treatment, and further assessed for pathway enrichment using the Reactome knowledgebase.

Results:

There were 328 proteins that were significantly elevated or decreased in response to REZPEG treatment relative to baseline and compared to placebo. The expression profiles of these biomarkers exhibited REZPEG dose- and administration time-dependency over the 12-week induction period. The serum protein profiles that differed between REZPEG treatment and placebo included those that a) increased across all timepoints through week 12, b) increased over the first month of treatment then normalized toward baseline by week 12, and c) decreased across all timepoints through week 12. Consistent with its biological activity as an IL-2R agonist, REZPEG modulated Treg pathways and those involving lymphocyte immune homeostasis as well as cellular migration and adhesion processes. REZPEG reduced the expression of serum proteins known to be elevated in patients with AD as well as demonstrating an effect on the expression levels of known targets for current AD therapy.

Conclusion:

The serum proteomic biomarker analysis presented here provides a greater mechanistic understanding of the observed therapeutic effects of REZPEG in AD.

References:

Silverberg, J, et al. "LBA 6685: Efficacy and Safety of Single Agent Rezpegaldesleukin, A Selective Regulatory T-Cell-Inducing Interleukin-2 Conjugate, in the Treatment of Atopic Dermatitis: Final Results from a Randomized Phase 1b Study." European Academy for Dermatology and Venereology Annual Meeting, Berlin, Germany, October 11-14, 2023.

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AMSTERDAM 25-28 SEPTEMBER 2024
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Abstract N°: 5568

Decyl-Glucoside; this eco-friendly but skin-unfriendly surfactant:a case report

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Introduction & Objectives:

Alkyl glucosides are a family of mild non-ionic surfactants which are increasingly used in a wide range of cosmetics, household products and wound dressings. Contact allergy to alkyl glucosides may be more common than previously thought, particularly in atopic patients. We report one case.

Materials & Methods:

Results:

Case report

A 25-year-old female patient with personal and family history of atopy had been presenting with a pruritic facial rash lasting for two months as intermitent episodes, resistant to the usual treatment of her atopic dermatitis (local corticosteroids of moderate class: desonide).

On clinical examination, we found pruritic erythematous papules, involving the malar regions and the eyelids. The diagnosis of contact dermatitis was evoked. The course of action was to make a detailed interrogation and perform a patch test which came back positive for Decyl Glucoside ++. This surfactant was found in the patient's shampoo, introduced 4 months ago. Treatment was based on avoiding Decyl Glucoside containing products with local immunomodulating therapy (tacrolimus) wich showed good results.

Conclusion:

The use of decyl glucoside is becoming increasingly common with the emergence of the "Green" label. The cosmetics industry is rediscovering this eco-friendly alkyl glucoside, synthesized from natural, renewable sources and considered a mild surfactant, but it shouldn't escape suspicion during an allergological investigation into contact dermatitis.

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Abstract N°: 5599

Predictive factors affecting dupilumab treatment response in atopic dermatitis

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Introduction & Objective: Dupilumab is approved for the treatment of adult patients with moderate-to-severe AD whose current treatment options are limited. We aimed to evaluate dupilumab treatment efficacy, safety, and the relationship between comorbidities and treatment response in AD patients.

Materials & Methods: Approval for the study was received from Bezmialem Vakif University ethics committee. Adult patients who received dupilumab treatment with a diagnosis of moderate-severe AD between 2019 and 2024 at the dermatology outpatient clinic of Bezmialem Vakif University were retrospectively screened. Demographic information of the patients, age, gender, average disease duration, allergic comorbidities, family atopy history, accompanying comorbidities, AD onset type (early/late), laboratory parameters before and after treatment, duration of dupilumab treatment,side effects and reasons for discontinuation of dupilumab were recorded**.** Descriptive statistics of the qualitative variables in the study were given as numbers and percentages. Compliance with normal distribution was evaluated with the Shapiro Wilk test. Wilcoxon signed rank test was used to compare the means of two dependent groups. Friedman test was used for mean comparison of repeated measurements involving more than two periods. Bonferroni was used as a post hoc method for detailed evaluation of pairwise comparisons.

Results: Fifty-five-point six percent of the 36 patients included in the study were male. The average age was 39.81 years and 25% of the patients were over 50 years of age. The mean disease duration was 14.15 years and 61.1% of patients were late-onset type. Allergic comorbidity was present in 44.4% of patients. The average treatment duration of the patients was 22.9 months. The post-treatment itch- NRS score in 69.4% of patients had a decrease of 4 or more points. The post-treatment IGA value in 86.1% of patients was below 2. Forty-four-point four percent of patients had a SCORAD50 of 4th-16th reached weeks (early), 25% reached SCORAD50 in the 32nd-52nd weeks;63.9% of the patients reached EASI50 early, 13.9% reached EASI 50 in the 32nd-52nd week. SCORAD50 was reached early in 62.5% of patients without allergic comorbidities and in 37.5% of patients with allergic comorbidities. Basal total IgE values are significantly higher in patients who reached EASI50 in the 32nd and 52nd weeks than in those who reached it early (p=0,051). Initial EASI and SCORAD score of EASI50 late responders is significantly higher than EASI50 early responders (p=0,019; p=0.010). Along with clinical improvement, a decrease in total IgE and LDH levels was detected with dupilumab treatment. Side effects were detected in 22.2% of patients. Allergic conjunctivitis was observed in 16.6% of patients, head - neck dermatitis in 8.3%, influenza infection and disease exacerbation in 2.7%. Dupilumab was discontinued in the patient due to side effect and in another due to primary ineffectiveness.

Conclusion: In our study, the rate of patients reaching SCORAD50 early in the presence of allergic comorbidity was significantly lower and EASI50 was reached significantly later in patients with high baseline IgE.This result leads us to think whether the presence of allergic comorbidity is a clinic marker of late response to dupilumab. Also, total IgE and LDH levels may be used as biomarkers of response to dupilumab treatment.

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Abstract N°: 5601

Growth Analysis in Children Aged Less Than 12 Years with Moderate-to-Severe Atopic Dermatitis

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[1]Northwestern University Feinberg School of Medicine, Chicago, United States,[2]Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago, United States, [3]University of California, Division of Allergy & Immunology, San Diego, United States, [4]Trinity College Dublin, Dublin, Ireland, [5]Saint Louis University, St. Louis, United States, [6]Cardinal Glennon Children's Hospital , St. Louis, United States,[7]University of Sheffield, Sheffield Children's Hospital, Sheffield Dermatology Research, United Kingdom, [8]Alberta Children's Hospital, Calgary, Canada, [9]University of Calgary, Calgary, Canada,[10]University of California , Departments of Dermatology and Pediatrics, San Diego, United States, [11]Rady Children's Hospital, Division of Pediatric and Adolescent Dermatology, San Diego, United States, [12]Sanofi , Cambridge, United States,[13]Regeneron Pharmaceuticals Inc., Tarrytown, United States

Introduction & Objectives: Atopic Dermatitis (AD) has the potential to impact children's growth, especially those who have received topical corticosteroids and immunosuppressants. Analysis of height, weight and Body Mass Index (BMI) of children with AD in comparison to the general population could characterize the impact of AD on childhood growth.

Materials & Methods: A total of 1329 children were enrolled in PEDISTAD (NCT03687359); an ongoing, international, observational study for patients aged <12 years with moderate-to-severe AD. This analysis assesses the percentage of patients above the 50th percentile and the mean percentiles for height, weight and BMI at baseline against the CDC Learning Management System reference healthy population, by age in months.

Results: Compared with the age-specific population norms, in the PEDISTAD study, at baseline 50% of males were above the 50th percentile for weight but only 38% were above for height. In females these figures were 51% and 52% respectively. In patients aged 5 to 11 years only 28% of males and 47% of females were above the 50th percentile for height. For BMI, 69% of males and 71% of females were above the 50th percentile. Overall, average across all age specific percentiles for height, weight and BMI were the 46th, 51st and 58th for male; and 50th, 50th and 59th for females in the PEDISTAD population.

Conclusion: The data may suggest that moderate-to-severe AD has a negative impact on growth in children aged <12 years, potentially due to sleep deprivation or long-term exposure to topical or systemic glucocorticoids and immunosuppressants.

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Abstract N°: 5606

Dupilumab improves disease severity in children <12 years of age with severe atopic dermatitis: Interim Results from PEDISTAD Registry

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Introduction & Objectives: In phase 3 studies, dupilumab significantly improved disease severity in children with moderate-to-severe atopic dermatitis (AD). This study assesses the impact of systemic treatment on children with severe AD in real-world treatment settings.

Materials & Methods: PEDISTAD (NCT03687359) is an ongoing, international, longitudinal, observational 10-year registry study in patients aged 6 months to 11 years at enrollment with moderate-to-severe AD, whose disease is not adequately controlled by topical prescription therapies or for whom those therapies are medically inadvisable. This interim analysis assessed the effect of dupilumab on patient-reported disease severity and quality of life (QOL) among children with severe AD using Patient-Oriented Eczema Measure (POEM) and Children's Dermatology Life Quality Index (CDLQI). Overall safety was also evaluated.

Results: A total of 84 patients with severe AD received dupilumab. The mean (± SD) POEM score decreased over time from 20.2 ± 6.7 at therapy start to 11.5 ± 7.7 at 3 months, 11.1 ± 7.1 at 6 months and 8.7 ± 7.7 at 12 months. Similarly, the mean (± SD) CDLQI score decreased with dupilumab use, from 15.0 ± 6.8 at therapy start to 9.7 ± 7.7 at 3 months, 9.4 ±7.5 at 6 months and 8.5 ± 7.0 at 12 months. 29.8% of patients had adverse events.

Conclusion: Dupilumab significantly improved patient-reported symptoms of AD and QoL in children aged 6 months to 11 years with severe AD in real-world daily practice.

EADV CONGRESS
AMSTERDAM 25-28 SEPTEMBER 2024
EUROPEAN ACADEMY OF DERMATOLOGY & VENEREOLOGY

Abstract N°: 5611

Lower Total IgE After Dupilumab Treatment is Associated With a Reduction in Flares in Patients With Moderate-to-Severe Atopic Dermatitis

Brian Kim[1], Lisa A Beck*[2], Eric L Simpson[3], Lawrence F Eichenfield[4, 5], Jonathan I Silverberg[6], Kilian Eyerich[7, 8], Shinichi Imafuku[9], Zhen Chen[10], Ana B Rossi[11], Sonya L Cyr[10]

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Introduction & Objectives: Previous reports show that dupilumab treatment reduces IgE levels in patients with moderate-to-severe atopic dermatitis (AD). This analysis reports the impact of dupilumab-induced reduction in total IgE levels on flare probability in adult patients with moderate-to-severe AD.

Material & Methods: This post-hoc analysis evaluated the likelihood of having flares with respect to change in total IgE, from baseline to first flare, or from baseline value to end of study. It included patients with moderate-to-severe AD from the phase 3 study CHRONOS (NCT02260986), randomized to either dupilumab 300 mg every 2 weeks (n=106) or placebo weekly(n=315) for 52 weeks. All patients received topical corticosteroids (TCS). Flares were defined as worsening of the disease that required escalation/intensification of treatment. A significant likelihood of having flares is associated with a significant *P* value.

Results: In adult patients with moderate-to-severe AD, the reduction in total IgE levels following dupilumab treatment was associated with a lower likelihood of having flares, regardless of baseline IgE levels (parameter estimate [95% confidence interval (CI)]) = −0.05 [−0.63, 0.52]; *P*=0.86 for dupilumab + TCS and 0.46 [0.17, 0.76]; *P*<0.01 for placebo + TCS). This reduction in total IgE levels was further associated with a lower likelihood of having flares in those patients over 52 weeks of dupilumab treatment (parameter estimate [95% CI] = 0.27 [−0.39, 0.94]; *P*=0.42 for dupilumab + TCS and 0.44 [0.15, 0.73]; *P*<0.01 for placebo + TCS).

Conclusion: Dupilumab treatment reduction in total IgE levels is associated with a reduction in the likelihood of having flares in adult patients with moderate-to-severe AD, regardless of baseline IgE levels.

EA DV CONGRESS
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EUROPEAN ACADEMY OF DERMATOLOGY & VENEREOLOGY

Abstract N°: 5620

Identification of factors influencing anxiety and depression in adults with atopic dermatitis

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Introduction & Objectives:

Anxiety and depression are twice as prevalent in patients with atopic dermatitis (AD) compared to the general population. Factors influencing AD's impact on depression and anxiety are poorly understood. The objective of this study was to conduct a systematic literature review of factors that influence anxiety and depression in patients with atopic dermatitis.

Materials & Methods:

A search algorithm was entered in four different databases (PubMed, Embase, Web of Science, American Psychological Association) which were last consulted on 4/12/2023. Articles were first screened based on title, then on abstract, then on full text. Two independent researchers (EV & IB) conducted the screening of these articles, and conflicts were resolved by a third researcher (DDC). The screening was facilitated using Rayyan software. Figure 1 shows the in- and exclusion criteria. The PRISMA checklist was used as a reporting tool.

Results:

A total of 7682 unique articles were screened Finally, 82 articles could be included in the review. Figure 2 shows the flow chart of the screening.

Several factors were found to potentially influence anxiety and depression in patients with atopic dermatitis, including disease severity or activity, disease duration, sex, age, affected body parts, smoking status, and interventions such as a digital self-help group. A high degree of heterogeneity of the resulting findings must be noted. The analysis of potential influencing factors was complicated by the fact that different methods were used to diagnose atopic dermatitis, anxiety, and depression.

These are preliminary results. Inclusion will continue by snowballing to identify additional relevant studies. Additionally, each article will undergo a risk of bias assessment. Ultimately, the data from these articles will be synthesized in a meta-analysis if possible.

Conclusion:

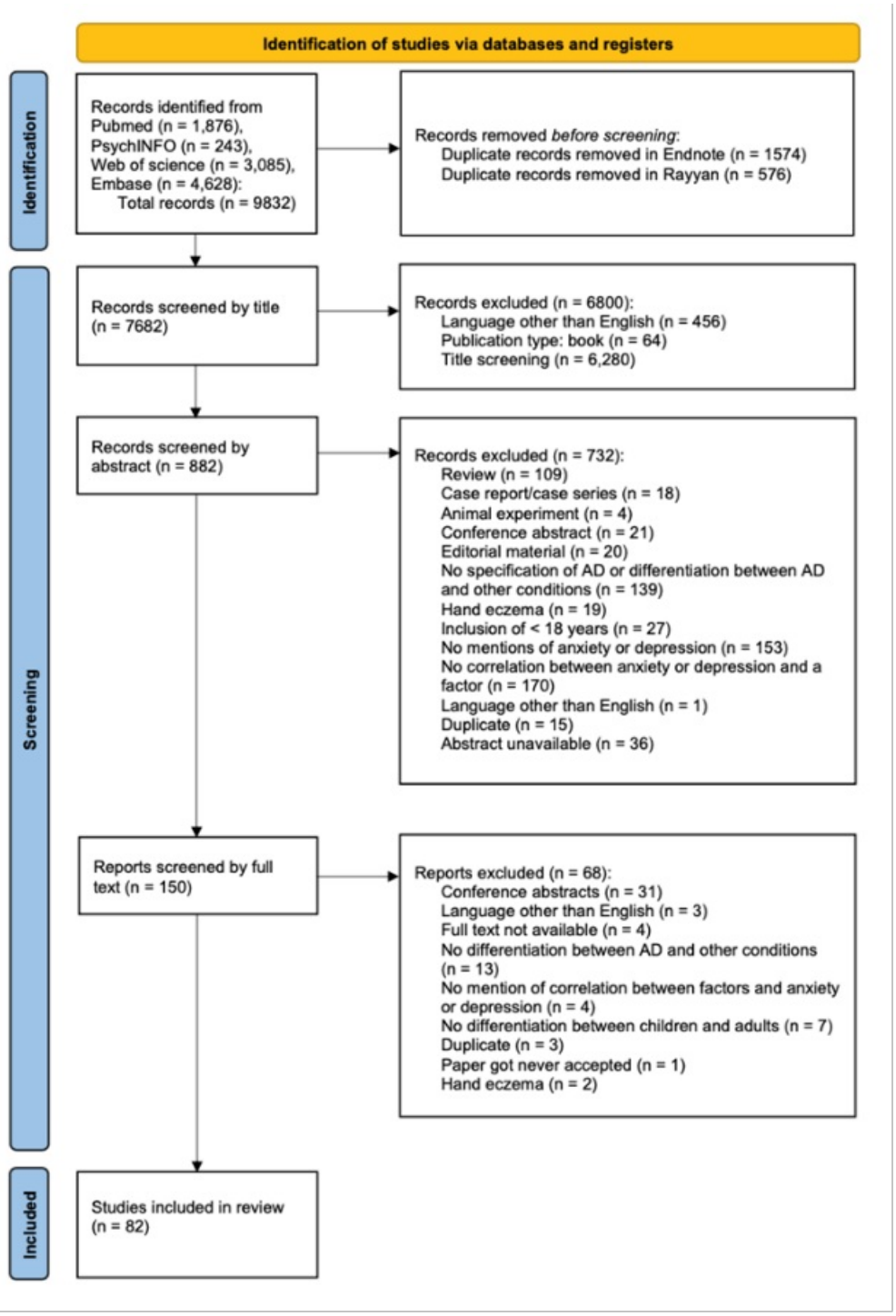
Several factors were found to potentially influence anxiety and depression in patients with atopic dermatitis. A high degree of heterogeneity of the resulting findings highlights the need to further investigate potential influencing factors of anxiety and depression in adults living with atopic dermatitis.

Tables and figures:

Figure 1

Inclusion criteria	Exclusion criteria
Original peer-reviewed articles	Reviews, case reports, meeting abstracts, educational material
English	Languages other than English
Adults (18+)	< 18 years old
Atopic dermatitis (AD)	No differentiation between AD and other (dermatological) diseases
Anxiety and/or depression	No mention of anxiety and/or depression
Correlation between anxiety and/or depression and any other factor	Animal experiments

Figure 2



EA DV CONGRESS
AMSTERDAM 25-28 SEPTEMBER 2024
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Abstract N°: 5624

Maintained Improvement of Outcomes related to Skin Clearance, Itch, Sleep and Quality of Life with Baricitinib in Adults with Moderate-to-Severe Atopic Dermatitis who were Treated for up to 200 Weeks in a Randomized Trial

Andreas Wollenberg[1], Antonio Costanzo[2], Christian Vestergaard[3], Jose-Manuel Carrascosa[4], Katarzyna Morawska[5], Burcu Vadar[5], Hitendra Pandey[6], Silvia Sabatino[7], Jonathan I. Silverberg[8]

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Introduction & Objectives:

Atopic dermatitis (AD) is a chronically relapsing skin disease characterized by itch and skin lesions. Baricitinib (BARI), a selective Janus kinase (JAK)1/JAK2 inhibitor, is approved in more than 70 countries for the treatment of moderate-to-severe AD in adults and, for children and adolescents from age two, in the EU, who are candidates for systemic therapy and in Japan, for patients who have inadequate response to conventional therapies. We report maintenance of response based on skin clearance, itch, sleep and quality of life (QoL), from Week (W) 52 to W200, for patients initially assigned to BARI 4 mg at W0 of BREEZE-AD3, who were eligible to be re-randomized to continue treatment with BARI 4 mg or down-titrate to BARI 2 mg.

Materials & Methods:

Patients who participated in the originating studies, BREEZE-AD1 (NCT03334396), BREEZE-AD2 (NCT03334422), and BREEZE-AD7 (NCT03733301), could enroll in the multicentre, Phase 3, long-term extension study BREEZE-AD3 (NCT03334435). This analysis focuses on patients with moderate-to-severe AD treated with once daily BARI 4 mg who, at W52, were responders or partial responders for vIGA-AD® score 0, 1 or 2, were not on study treatment interruption, and had not used high-potency topical corticosteroid (TCS) for the previous 14 days. At W52, these patients were re-randomised (1:1:1) to dose continuation (4 mg to 4 mg), dose down-titration (4 mg to 2 mg) or dose withdrawal (4 mg to placebo). Low-and moderate potency TCS use was permitted at investigators discretion. Measures were assessed up to W200. Missing data, with the most recent non-missing post-baseline assessment, was handled using a modified last observation carried forward imputation technique.

Results:

In the BARI 4 mg continuation (N=84) cohort, skin response from W52 to W200 was generally maintained, as measured by vIGA-AD (0/1) and EASI75 (Fig.1a, b). A maintained reduction of severity based on EASI change from baseline (CFB) was observed from W52 to W200 (Fig. 1c), and improvements in mean SCORAD itch and sleep loss CFB were maintained from W52 through W200 (Fig. 2a,b). In this cohort, DLQI (0,1) and POEM response was also maintained from W52 through W200 (Fig.2c, d). Patients who were down-titrated to BARI 2 mg (N=84) at W52, maintained most of their improvements in skin, itch, and sleep responses (Fig. 1, 2).

Conclusion:

In this randomized down-titration sub-study from the long-term extension study (BREEZE-AD3), patients with AD who received continued BARI 4 mg, and patients who were down-titrated to BARI 2 mg, maintained long-term efficacy in skin clearance, itch, sleep and quality of life from W52 up to 200.

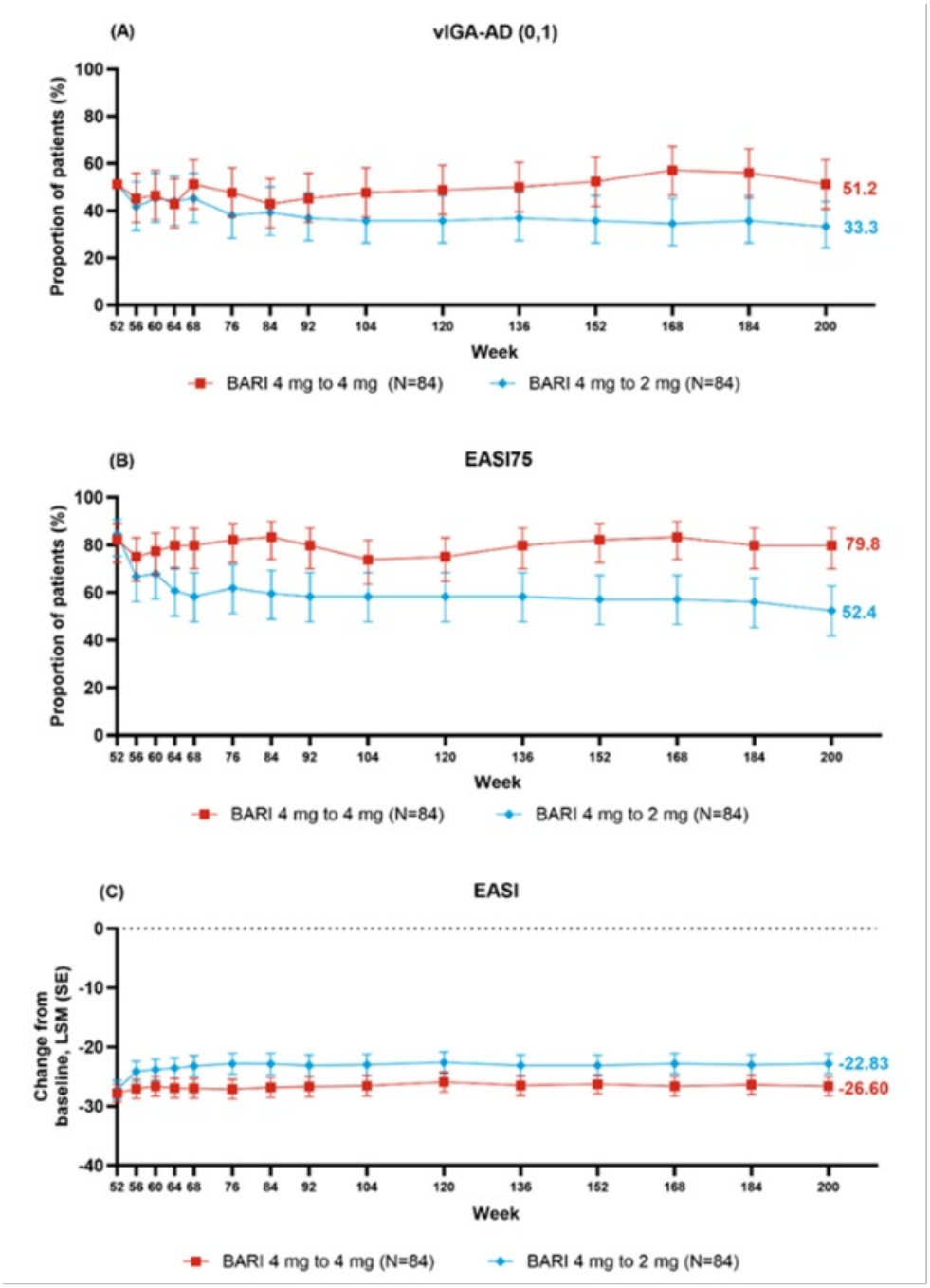

Figure 1. Skin response over time: (A) vIGA-AD (0,1), (B) EASI75, and changes from baseline over time for (C) EASI.

Abbreviations: BARI= Baricitinib; EASI= Eczema Area and Severity Index; vIGA-AD= validated Investigator Global Assessment.

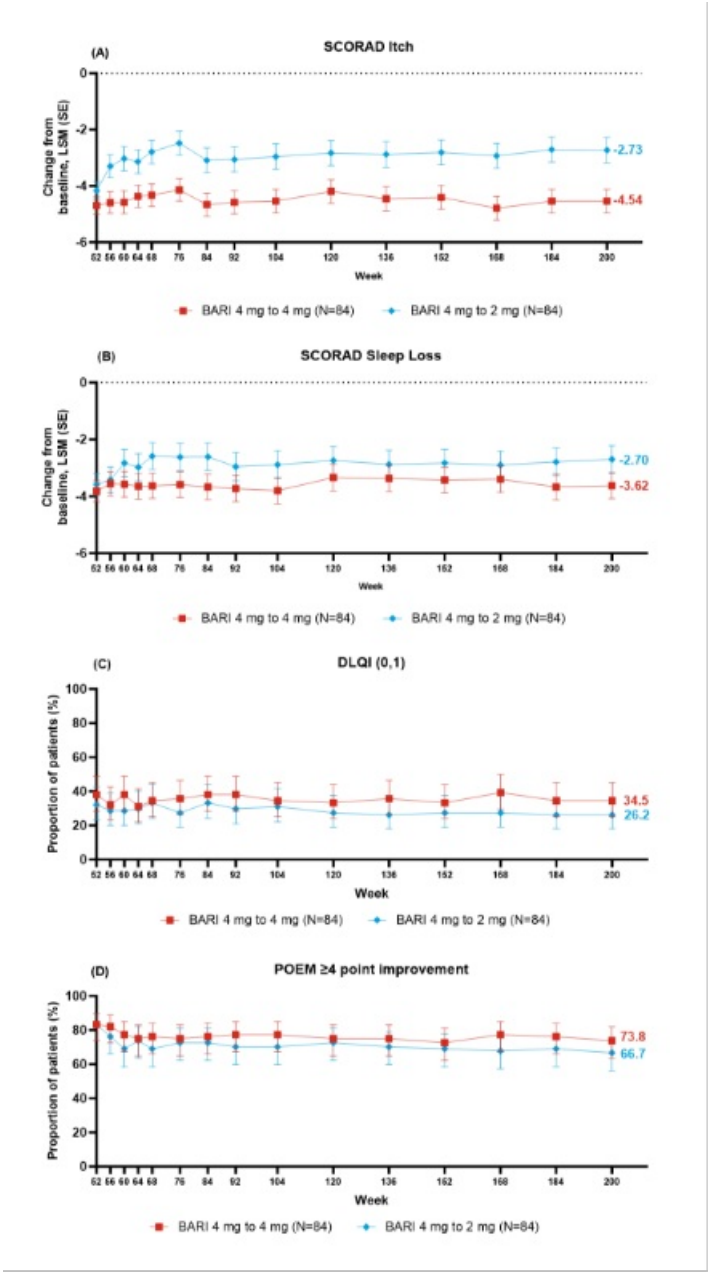

Figure 2. Change from baseline over time: (A) SCORAD Itch, and (B) SCORAD sleep loss, and

Patient-reported responses over time: (C) DLQI (0,1), (D) POEM ≥4-point improvement.

Abbreviations: BARI= Baricitinib; DLQI= Dermatology Life Quality Index; POEM= Patient Outcome Eczema Measure; SCORAD= SCORing Atopic Dermatitis.

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Abstract N°: 5625

Safety of Baricitinib for the Treatment of Atopic Dermatitis Over a Median of 1.6 and up to 4.6 Years Treatment: Final Integrated Analysis of 8 Clinical Trials

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Introduction & Objectives:

Baricitinib, a selective Janus kinase (JAK)1/JAK2 inhibitor, is approved in more than 70 countries for the treatment of moderate-to-severe atopic dermatitis (AD) in adults, and for children and adolescents from age two, in the EU, Saudi Arabia, and Japan, with moderate-to-severe atopic dermatitis (AD) who are candidates for systemic therapy. Here, we report the final integrated safety data for baricitinib in adult patients with AD and up to 4.6 years of treatment.

Materials & Methods:

This safety analysis included data from six randomized, double-blinded, placebo-controlled studies (one phase 2 study and five phase 3 studies), one long-term extension (LTE) study with both a randomized, double-blinded period and open-label period; and 1 open-label LTE. These data are reported as three datasets: 1) placebo controlled, 2) 2-mg to 4-mg extended, and 3) all-bari AD for patients that received any dose of baricitinib (1-mg, 2-mg, or 4-mg) during the study. TCS use was permitted, either as combination treatment or as rescue, in all studies. The proportion of patients with events and incidence rates (IR)/100 patient years at risk were reported.

Results:

A total of 2637 patients received baricitinib for 5216.2 patient years, with a median exposure duration of 594 days (1.6 years) and a maximum exposure of 4.6 years. In all-bari AD, the rate of discontinuation due to AEs was low (IR=3.3; Table 1). The IR per 100 patient years for serious adverse events (SAE) in all-bari AD was 5.0. The most frequently reported SAEs were in the infections system organ class (IR=1.7), and the IR for any infection was 64.0, while IRs for Herpes simplex, Herpes zoster, and opportunistic infection were 6.2, 2.7 and 0.3 respectively. The IRs for these events did not increase with increased years of exposure. AESIs in all-bari AD included 10 positively adjudicated major adverse cardiovascular events (MACE) (IR=0.19), 3 of which were categorized as myocardial infarctions (IR=0.06) and 6 stroke (IR=0.11); 4 pulmonary embolisms (PE; 1 patient experienced both a deep vein thrombosis and PE) (IR= 0.07); 21 malignancies excluding nonmelanoma skin cancer (IR=0.39) and 6 deaths (IR=0.1). Incident rates for the AESIs were lower than or within background rates (Fig. 1).

Conclusion:

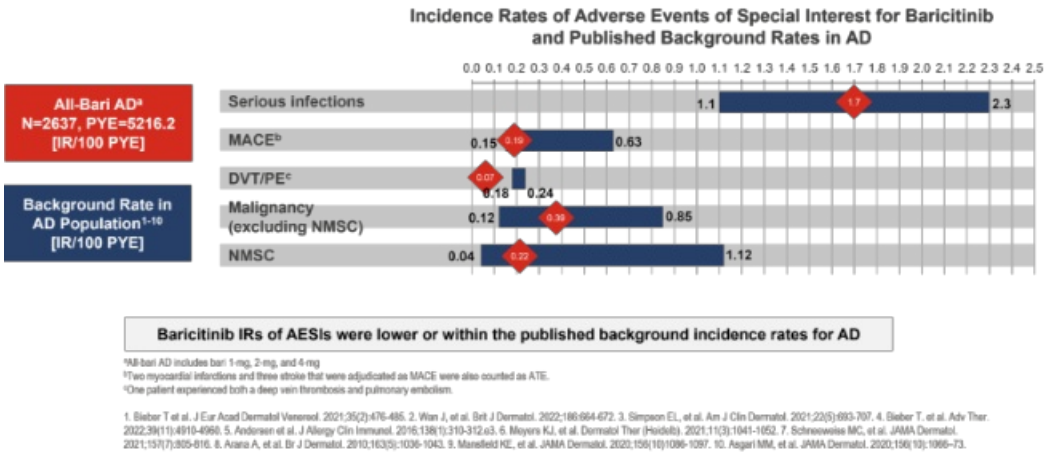
The present report concludes the safety analysis for moderate-to-severe adult AD that was derived from 8 trials with a duration of up to 200 weeks resulting in a maximum exposure of 4.6 years of therapy. The safety outcomes continue to demonstrate a consistent and well-established safety profile for baricitinib, with no new safety signals.

Table 1. Overview of safety measures including drug exposure, treatment emergent adverse events, and adverse events of special interest.

	Placebo-controlled (to week 16)			2-mg – 4-mg extended		All-bari-AD[a]
	Placebo (N=743)	Bari 2-mg (N=576)	Bari 4-mg (N=489)	Bari 2-mg[b] (N=584)	Bari 4-mg (N=497)	All-Bari-AD (N=2637)
Exposure						
Total patient-years	211.8	169.1	147.1	803.6	882.3	5216.2
Patients with ≥52 weeks, n (%)	–	–	–	300 (51.4)	317 (63.8)	1681 (63.7)
Patient with ≥84 weeks, n (%)	–	–	–	160 (27.4)	192 (38.6)	1328 (50.4)
Median duration, days	113.0	113.0	113.0	364.0	475.0	594.0
Longest exposure, days	168	128	155	1579	1644	1688
Adverse events, n (adj %) [adj IR][c]						
Any TEAE	388 (43.2) [234.7]	347 (49.3) [281.4]	300 (51.0) [300.1]	428 [207.2]	408 [209.1]	2067 [140.5]
SAE	21 (2.3) [8.0]	10 (1.4) [4.4]	14 (2.3) [7.7]	37 [4.3]	61 [7.6]	258 [5.0]
Interruption of study drug due to AE	14 (1.6) [5.4]	27 (3.4) [11.6]	26 (4.6) [15.8]	84 [11.4]	88 [11.1]	447 [9.4]
Discontinuation of study drug due to AE	13 (1.4) [4.6]	10 (1.5) [4.7]	15 (2.1) [6.5]	26 [2.9]	40 [4.5]	177 [3.3]
Death, n (IR)	0	0	0	0	0	6 [0.1][d]
Infections, n (adj %) [adj IR][c]						
Treatment-emergent infections	216 (24.2) [100.3]	212 (29.8) [128.0]	183 (31.5) [134.5]	330 [96.2]	315 [92.5]	1567 [64.0]
Serious infections	5 (0.6) [2.1]	3 (0.4) [1.0]	3 (0.6) [1.9]	13 [1.4]	20 [2.4]	90 [1.7]
Herpes zoster	3 (0.3) [1.0]	6 (0.8) [2.7]	0	23 [2.9]	25 [3.0]	142 [2.7]
Herpes simplex	22 (2.7) [9.4]	25 (3.6) [12.4]	35 (6.1) [21.3]	52 [6.8]	73[9.8]	304 [6.2]
Eczema herpeticum	4 (0.4) [1.3]	1 (0.2) [0.7]	7 (1.4) [4.5]	9 [1.0]	18 [2.0]	70 [1.3]
Skin infections requiring antibiotic treatment	38 (4.4) [15.7]	31 (4.8) [16.6]	18 (3.4) [11.4]	31 [4.0]	19 [2.3]	76 [1.5]
Malignancy, n (adj %) [adj IR][c]						
Malignancy excluding NMSC	2 (0.2) [0.66]	0	0	4 [0.48]	1 [0.11]	21 [0.39]
NMSC	1 (0.2) [0.68]	0	0	1 [0.09]	1 [0.11]	12 [0.22]
Adverse cardiovascular events of special interest, n (adj %) [adj IR][c]						
MACE	0	0	0	1 [0.09]	1 [0.10]	10 [0.19][e]
DVT/PE	0	0	1 (0.1) [0.38]	0	2 [0.21]	4 [0.07][f]
GI disorder, n (adj %) [adj IR][c]						
GI perforations	0	0	0	0	1 [0.16]	1 [0.02]

Abbreviations: AE=adverse event; adj=adjusted; ATE=arterial thromboembolic event; DVT=deep vein thrombosis; GI=gastrointestinal; IR=incidence rate; LTE=long-term extension; MACE=major adverse cardiovascular event; NMSC=nonmelanoma skin cancer; PE=pulmonary emboli; PYE=patient-years of exposure; SAE=serious adverse event; TB=tuberculosis; TEAE=treatment emergent adverse event

[a]All-bari AD includes bari 1-mg, 2-mg, and 4-mg
[b]103 patients on 2-mg baricitinib in the originating studies who were non-responders were re-randomized to 4-mg at entry to BREEZE-AD3; their data were censored at start of the 4-mg dose in the LTE
[c]IRs for the placebo-controlled datasets and the 2-mg – 4-mg extended dataset are study-size adjusted incidence rates; adjusted percentages are only shown for the placebo-controlled dataset. For the all-Bari dataset, IRs are presented.
[d]Two additional deaths were reported. One patient's cause of death was reported as endocarditis (related to sepsis). The second patient's cause of death was myocardial infarction.
[e]Two myocardial infarctions and three stroke that were adjudicated as MACE were also counted as ATE.
[f]One patient experienced both a deep vein thrombosis and pulmonary embolism.



Baricitinib IRs of AESIs were lower or within the published background incidence rates for AD

[a]All-bari AD includes bari 1-mg, 2-mg, and 4-mg
[b][c]Two myocardial infarctions and three stroke that were adjudicated as MACE were also counted as ATE.
[c]One patient experienced both a deep vein thrombosis and pulmonary embolism.

1. Bieber T et al. J Eur Acad Dermatol Venereol. 2021;35(2):476-485. 2. Wan J, et al. Brit J Dermatol. 2022;186:664-672. 3. Simpson EL, et al. Am J Clin Dermatol. 2021;22(5):693-707. 4. Bieber T. et al. Adv Ther. 2022;39(11):4910-4960. 5. Andersen et al. J Allergy Clin Immunol. 2016;138(1):310-312.e3. 6. Meyers KJ, et al. Dermatol Ther (Heidelb). 2021;11(3):1041-1052. 7. Schneeweiss MC, et al. JAMA Dermatol. 2021;157(7):805-816. 8. Arana A, et al. Br J Dermatol. 2010;163(5):1036-1043. 9. Mansfield KE, et al. JAMA Dermatol. 2020;156(10):1086-1097. 10. Asgari MM, et al. JAMA Dermatol. 2020;156(10):1066–73.

Figure 1. Incident rates for TEAEs of special interest in all-Bari AD relative to the general AD population.

Abbreviations: AESI=adverse event of special interest; ATE=arterial thromboembolic event; DVT=deep vein thrombosis; IR=incidence rate; MACE=major adverse cardiovascular event; NMSC=nonmelanoma skin cancer; PE=pulmonary emboli; PYE=patient-years of exposure.

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Abstract N°: 5631

Real-world efficacy and safety of Upadacitinib in adults with moderate to severe atopic dermatitis: results from a large tertiary care centre in the U.K.

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Introduction & Objectives:

Upadacitinib, an oral Janus kinase-1 inhibitor, was approved for the treatment of atopic dermatitis in patients 12 years or older in the UK in 2022. Although efficacy and safety have been demonstrated in clinical trials, these highly selected patient cohorts may not be representative of the wider population; as such, there is a crucial need for real-world data to aid and inform clinician decision making. The objective of this study was to assess the real-world efficacy and safety of Upadacitinib prescribed to patients with moderate to severe atopic dermatitis in a tertiary centre.

Materials & Methods:

This retrospective study reviewed the medical records of all patients (n=60) treated with Upadacitinib for atopic dermatitis. Eczema Area and Severity Index (EASI) and Dermatology Life Quality Index (DLQI) were assessed at baseline and after 12-24 weeks of treatment. Adverse events, laboratory parameters and rationale for treatment discontinuation were also reviewed.

Results:

Average age was 34-years (range 18-77), 35 patients (58%) were male and 41 patients (68%) had co-existent atopic disease. Fifty-nine patients (98%) had failed ≥1 systemic treatment prior to commencing Upadacitinib, 31 patients (52%) had previously received ≥3 systemic treatments. Thirty-six patients were switched from Dupilumab due to treatment failure (28), eye symptoms (7) or patient preference (1).

Fourty-four patients (73%) received 30mg OD, seven patients (12%) received 15mg OD with the remaining 15% having received both doses during their follow up. Baseline mean EASI and DLQI were 25 and 19 respectively. The mean baseline Itch Numeric Rating Scale (NRS) was 8 (53/60). At review (12-24 weeks), 73% (44/60), 53% (32/60) and 12% (7/60) of patients achieved ≥EASI75, ≥EASI90 and ≥EASI100 respectively. The mean DLQI and NRS were 6 (57/60) and 3 (47/60). Thirty-nine patients had longer-term data available; 85% (33/39), 54% (21/39) and 18% (7/39) achieving ≥EASI75, ≥EASI90 and ≥EASI100 respectively.

Of the patients that had previously received Dupilumab, 75% (27/36), 56% (20/36) and 14% (5/36) achieved ≥EASI75, ≥EASI90 and ≥EASI100 respectively.

The most common adverse events were eczema herpeticum (18%, n=11/60) and acne/folliculitis (13%, n=8/60). GI upset (1), shingles (1), fatigue (2), and respiratory infections (2) were also described. The most common laboratory parameter changes were elevations in nonfasting total cholesterol (23%, n=14/60) and alanine transaminase (12%, n=7/60) with an mean increase of 1.2mmol/L and 36.1U/L respectively, Additionally, reduced haemoglobin (1/60) and lymphopenia (1/60) were noted.

Eleven patients (18%) discontinued treatment due to lack of efficacy (4), side effects (5), raised ALT (1) and pregnancy (1). One patient was lost to follow up.

Conclusion:

These data are comparable to those from the phase 3 clinical trial programme and suggest that Upadacitinib is an efficacious and well tolerated treatment for patients with moderate-severe atopic dermatitis in this real-world cohort. Moreover, Upadacitinib may be a useful therapeutic optionin patients who have previously experienced treatment failure or adverse events with Dupilumab.

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Abstract N°: 5638

Impact of Dupilumab Treatment on Seasonal Disease Severity in Adults With Moderate-to-Severe Atopic Dermatitis

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Introduction & Objectives: Seasonal trends in atopic dermatitis (AD)-related healthcare visits vary by geographical location and climate. Changes in temperature, moisture, and allergen exposure contribute to disease fluctuation. Long-term treatment strategies for AD should strive to reduce seasonal flares or exacerbations. We aimed to examine if there are seasonal trends in AD severity and to report the effect of dupilumab treatment in adults with moderate-to-severe AD across seasons.

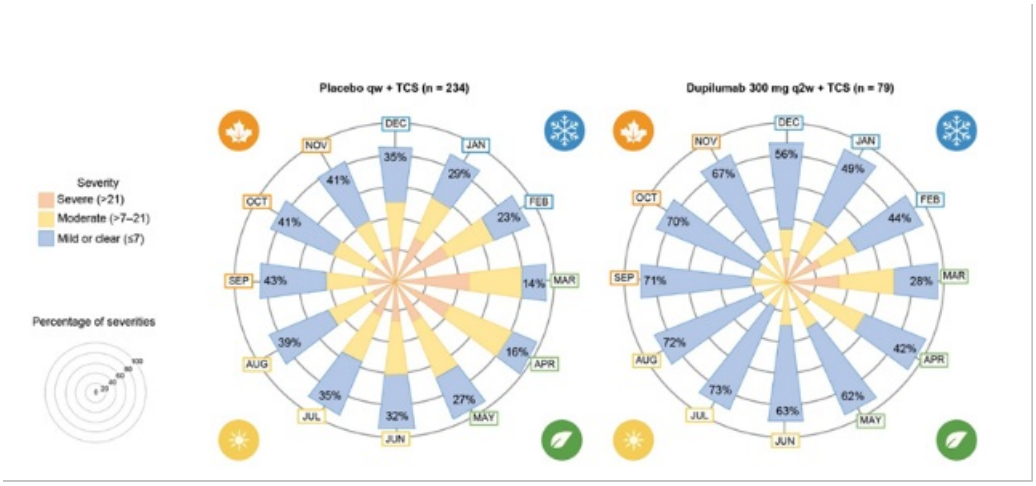
Materials & Methods: LIBERTY AD CHRONOS (NCT02260986) was a global, 1-year, randomized, double-blind, phase 3 trial of adults with moderate-to-severe AD.1 Patients were treated with dupilumab 300 mg every week (qw), every two weeks (q2w), or placebo qw, all with concomitant topical corticosteroids (TCS). In this post hoc analysis, the proportion of patients per severity category of Eczema Area and Severity Index (EASI) score (range 0–72) by month was compared between patients receiving dupilumab 300 mg q2w + TCS (n = 79) or placebo qw + TCS (n = 234) for 1 year across 22 countries in the Northern Hemisphere. Meteorological seasons were defined as winter (December 1 – February 28/29), spring (March 1 – May 31), summer (June 1 – August 31), and fall (September 1 – November 30). Sensitivity analyses confirmed that season of enrollment was balanced across treatment arms and disease seasonality was independent of treatment length. *P* values are based on Chi-Square tests or Monte Carlo simulations of the Exact Test, based on sample size. All *P* values are nominal, and no adjustments have been made for multiple testing. Data are presented as observed.

Results: The proportion of patients in both treatment arms with mild or clear EASI scores (≤7) was lowest in March and April (spring months) (March: 14% vs 28%; April: 16% vs 42%; May: 27% vs 62%; placebo vs dupilumab). The proportion of patients with mild or clear disease increased through summer (June: 32% vs 63%; July: 35% vs 73%; August: 39% vs 72%; placebo vs dupilumab) and fall (September: 43% vs 71%; October: 41% vs 70%; November: 41% vs 67%; placebo vs dupilumab), before beginning to decline in winter (December: 35% vs 56%; January: 29% vs 49%; February: 23% vs 44%; placebo vs dupilumab). Overall, EASI scores indicated significantly better outcomes for patients receiving dupilumab treatment vs placebo throughout the year ($P < 0.05$ for all 12 months).

Conclusion: Across the Northern Hemisphere, clinically assessed disease severity in adult patients with moderate-to-severe AD was higher overall in the late winter and early spring months. The proportion of adults with mild or clear AD was greater in patients receiving dupilumab than those who received placebo across all seasons, supporting the need for continued therapy to maintain disease control.

Figure. Dupilumab increases the proportion of patients with mild and clear EASI scores year-round for

patients in the Northern Hemisphere.



Percentages are based on the total number of patients in the treatment group. Data are presented as observed. The distribution of disease severity by month was significantly different between placebo qw + TCS and dupilumab q2w + TCS groups (*P* value per month ranged from <0.0001 to 0.0117), with higher proportions of mild or no disease in the dupilumab vs placebo arm.

Reference:

1. Blauvelt A, et al. Lancet. 2017;389:2287-303.

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Abstract N°: 5661

Promoter demethylation contributes to Interleukin-4 overexpression on atopic dermatitis patients CD4+ cells

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Introduction & Objectives:

Interleukin-4 (IL-4), a major cytokine, affects native CD4+ lymphocytes differentiation into Th1 and Th2 lineage; overexpression in atopic dermatitis (AD) patients may contribute to AD pathogenesis. However, IL-4 overexpression mechanism remains unclear. The objective of this study was to investigate DNA methylation of IL-4 gene in AD patients and epigenetic mechanism of IL-4 overexpression.

Materials & Methods:

Th2 percentage in peripheral blood mononuclear cells from AD patients and healthy controls were detected by Flow cytometric analysis. IL-4 mRNA and protein levels of these samples were quantified by real-time RT-PCR and ELISA. Bisulfite sequencing was utilized to determine methylation of CpG islands in IL-4 promoter region. Employing patch methylation and 5-azacytidine treatment, methylation and demethylation effect on IL-4 transcription were investigated.

Results:

Higher Th2 percentage, relative mRNA expression and IL-4 protein level were detected in AD patients than controls. Decreased methylation of IL-4 promoter region inversely correlated with IL-4 expression in AD patients. Luciferase assay confirmed effect of promoter methylation on IL-4 transcription activity. Furthermore, 5-azacytidine treated Jurkat cells showed down-regulated methylation level and upregulation of IL-4 gene transcription and protein level.

Conclusion:

Demethylation of IL-4 Promoter contributes to IL-4 overexpression on CD4+ cells of AD patients. This clarified epigenetic mechanism of IL-4 in AD pathophysiology might suggest future epigenetic interventions.

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Abstract N°: 5773

Bidirectional associations between atopic dermatitis and sleep-disordered breathing: a systematic review and meta-analysis

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Introduction & Objectives:

Atopic dermatitis (AD) has been associated with several respiratory comorbidities, including allergic rhinitis, asthma, and respiratory infections. Several studies had unveiled the bidirectional association between sleep-disordered breathing (SDB) and allergic diseases, such as allergic rhinitis and asthma. However, the relation between AD and SDB has been largely unclear. We aimed to evaluate the association between AD and SDB.

Materials & Methods:

We performed a systematic review and searched The Cochrane Central Register of Controlled Trials, Medline, and Embase from their respective inception through 22nd November 2023 for relevant studies. The Newcastle-Ottawa Scale (NOS) was applied to assess the risk of bias of included studies. We performed a random-effects model meta-analysis to quantify the association between AD and SDB. Subgroup analysis was also conducted according to potential confounders, such as study quality and crude / adjusted odds ratio (OR). Studies rated as high risk of bias in any domain of NOS were regarded as low quality. The random-effects model was adopted because of anticipated clinical heterogeneity.

Results:

Among 560 records identified from database searching, eight cross-sectional / case-control studies and two cohort studies with a total of 376,788 subjects were included. The study population in most studies were children. Three studies were rated as high risk of bias (Figure 1). The meta-analysis on six cross-sectional studies revealed a significant association of SDB with AD (pooled OR 1.66; 95% CI 1.22-2.28; $I2$=72%; Figure 2). Another included cohort study also reported the same result (adjusted hazard ratio 1.5; 95% CI 1.15-1.95). Subgroup analysis identified significant positive association with low heterogeneity in unadjusted subgroup (pool OR 2.35; 95% CI 1.58-3.50; $I2$ = 0%) rather than adjusted subgroup (pool OR 1.46; 95% CI 0.99-2.13;$I2$ = 78%) (Figure 3); high-quality studies (pool OR 1.99; 95% CI 1.49-2.68; $I2$ = 27%) rather than low-quality studies (pool OR 1.34; 95% CI 0.81-2.22; $I2$ = 78%) (Figure 4). Pool OR after adjustment illustrated no significant association of SDB with AD may be explained by half of the studies in this subgroup were lower-quality studies, resulting in imprecise analysis. This may be confirmed by high heterogeneity between studies in adjusted subgroup and higher odds of AD in SDB patients among higher study quality. On the other hand, two case-control studies and one cohort study showed a significant association of AD with SDB (Figure 5).

Conclusion:

We found bidirectional associations between AD and SDB. This association highlights the therapeutic implication in both diseases since they may accentuate the severity of each other's comorbidity, especially those related to sleep deprivation. Sleep quality should be evaluated for patients with AD. Dermatologists should be consulted when SDB patients presenting with skin symptoms.

Figure 1. Risk of bias of included studies

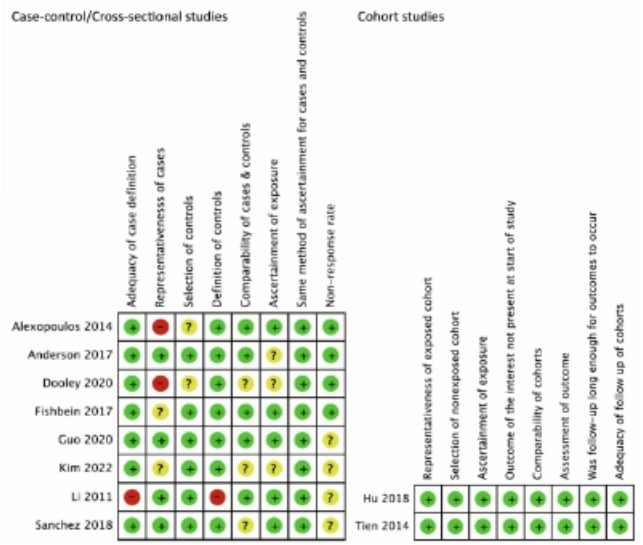


Figure 2. The odds of atopic dermatitis in sleep-disordered breathing patients

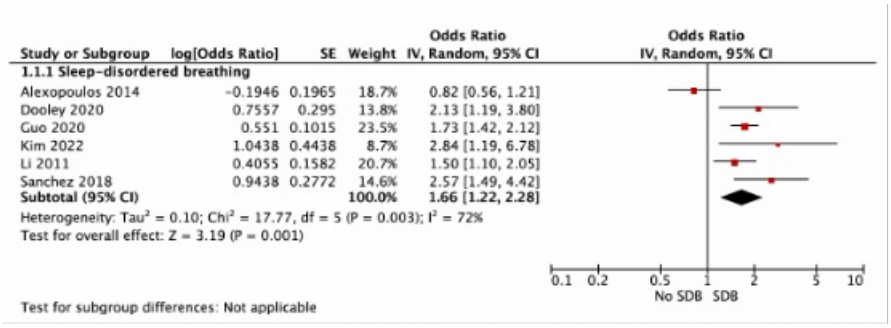


Figure 3. The odds of atopic dermatitis in sleep-disordered breathing patients, stratified by adjustment

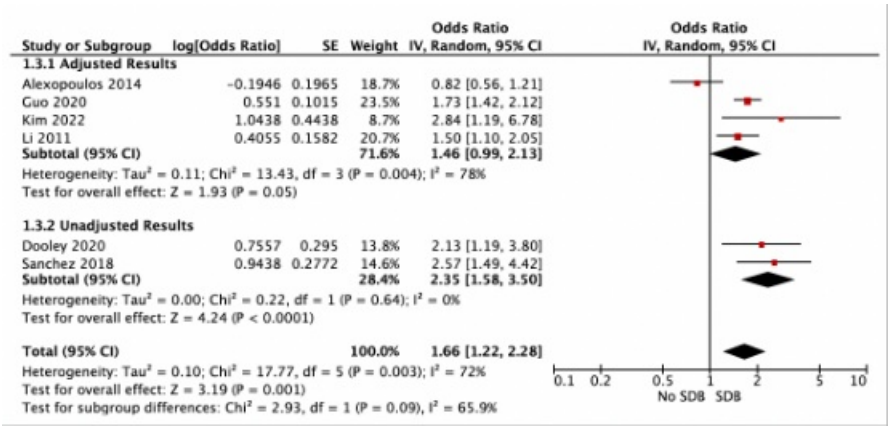


Figure 4. The odds of atopic dermatitis in sleep-disordered breathing patients, stratified by study quality

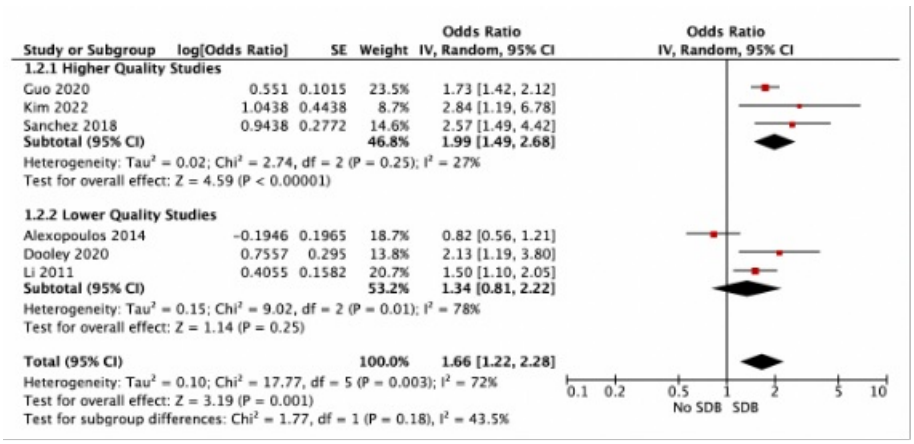
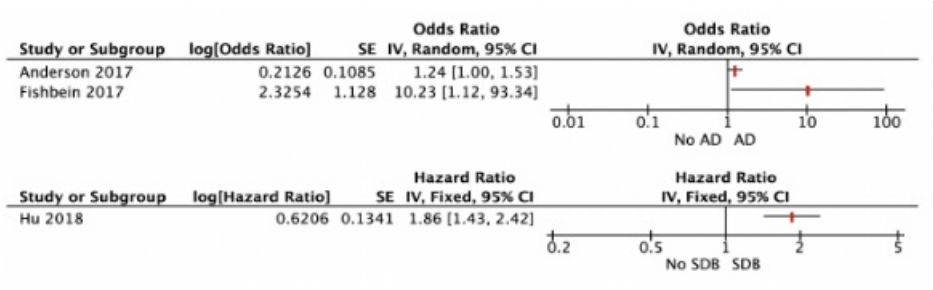


Figure 5. Forest plot for included studies on the association of atopic dermatitis with sleep-disordered breathing



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Abstract N°: 5898

Upadacitinib Dose Reduction Regimen in Atopic Dermatitis Among Elderly Patients, Guided by the Treat-to-Target Consensus

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Introduction & Objectives:

Given the age-related increase in the prevalence of adverse events (AEs) associated with the long-term treatment of Janus kinase inhibitors (JAKis), older adults with atopic dermatitis (AD) are often underrepresented in both clinical trials and real-world study. Besides, once AD clinical response is achieved with the JAKis, it is unknown whether control could be maintained with longer dosage intervals. Accordingly, we assessed a strategy of prolonging JAK inhibitor dosing intervals which based on the Treat-to-Target (T2T) consensus in older adults and to determine the characteristics of patients for whom it may be recommended for it.

Materials & Methods:

A prospective observational cohort study was conducted from July 2022 to February 2024. According to the evaluation of two senior dermatologists, 58 older patients (age ≥65 years) were eligible for the study and treated with upadacitinib (a JAK-1 inhibitor) using a progressively extended dosing interval regimen for 12 months. Based on the T2T consensus, two treatment targets (consistent with the treatment goals set on the month 3 and 6 according to the T2T consensus) were established. Patients were assessed at each visit to determine whether the treatment targets have been met and to decide whether to prolong or shorten the dosing interval. The dose reduction depended on shared-decision making between patients and doctors.

The primary outcome was the proportion of patients maintaining different treatment interval at the end of the follow-up, as well as the assessment of six scales at every visit. Prognostic factors for successful tapering were analyzed with logistic regression and a cost saving analysis was performed in patients who completed the whole follow-up.

Results:

A total of 13 (22.4%) and 36 (62.1%) patients, respectively, maintained the dose interval of three days and two days a time at the last visit. There was sustained improvement in six clinical indicators during the dose reduction: 46.0% of the patients reached EASI-75 and 92.0% reached EASI-50 at month 12. The overall incidence of AEs was 34.5% among all patients, eight patients (13.8%) had the AEs leading to discontinuation. The most common AEs reported was herpes virus infection(13.8%) and two patients (3.45%) experienced the severe AEs. The prognostic factors for successful dose reduction from univariable analysis showed that non-significant odds ratios for all incorporated variables.

Conclusion:

The dose reduction regimen based on the T2T is well tolerated and safety in patients 65 years or older with moderate-to-severe AD. Interval prolongation can be both beneficial for the patient and from a socio-economic perspective.

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Abstract N°: 5899

Safety and efficacy of IMG-007, a nondepleting anti-OX40 monoclonal antibody, in adult patients with moderate-to-severe atopic dermatitis: results from a phase 2a study

Yancong Shen[1], Zi Lin[1], Ct Guo[1], Aswin Nair[2], Yufang Lu[1], Jonathan I. Silverberg[3]

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Introduction & Objectives:

OX40 antagonists have shown efficacy in treating atopic dermatitis (AD). IMG-007 is a nondepleting OX40 antibody with a Fc N297A mutation designed to eliminate ADCC, thereby potentially minimizing safety risks. In a Phase 1 single-dose study in healthy adults, IMG-007 was well-tolerated, without any reports of pyrexia or chills. It also exhibited an extended half-life of 31 days at anticipated therapeutic doses, which would potentially enable less frequent dosing, such as once every 12 weeks (Q12W). Here we are reporting safety and efficacy data from a Phase 2a proof-of concept study in adult patients with moderate-to-severe AD.

Materials & Methods:

In this Phase 2a study, patients with moderate-to-severe AD (≥10% body surface area [BSA], investigator global assessment [IGA] ≥3, and eczema area and severity index [EASI] ≥16) were enrolled and received three intravenous (IV) infusions of 300 mg IMG-007 over 4 weeks, in an open-label fashion. Patients were followed until Week 24 for safety and efficacy including EASI, IGA, BSA, and SCORing atopic dermatitis (SCORAD), pharmacokinetic and pharmacodynamic assessments. The primary endpoint was safety, and key secondary endpoint was EASI percent change from baseline at week 12.

Results:

A total of 13 patients were enrolled from 6 centers in the US and Canada. Baseline characteristics included a mean (standard deviation [SD]) age of 49.8 years (15.0) with 69.2% males, mean EASI of 29.5 (13.7), mean SCORAD of 71.7 (10.6), 61.5% patients with IGA=3 vs 38.5% with IGA=4. As of an interim data cutoff of April 1, 2024, all patients ongoing in the study had completed at least the Week 16 visit. Of these patients, 9 (69.2%) reported a total of 17 adverse events (AEs). There were no serious adverse events (SAEs), treatment-related AEs, or infusion-related reactions, such as pyrexia or chills. All AEs were of mild (grade 1) or moderate (grade 2) intensity, except for one patient who experienced a severe (grade 3) AE of AD flare. Treatment with IMG-007 resulted in a rapid and significant reduction from baseline in EASI score as early as Week 1, with continued improvement sustained through Week 20. Similar improvements were noted for other efficacy variables, such as IGA, SCORAD, and BSA. Final safety and efficacy results up to the end of the study will be presented during the European Academy of Dermatology and Venereology (EADV) 2024 conference.

Conclusion:

IMG-007, a novel nondepleting OX40 mAb, was safe and well tolerated without any reports of pyrexia or chills in patients with moderate-to-severe AD. The favorable safety profile is consistent with a silenced ADCC function. Treatment with IMG-007 for 4 weeks led to rapid and sustained improvements in AD disease activity.

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Abstract N°: 5903

Type 2 immune-dominant endotype is not associated with increased responsiveness to dupilumab treatment in adult atopic dermatitis patients

Coco Dekkers[1], Hidde Smits[1], Dora Stölzl[2], Lotte Spekhorst[1], Edward Knol[1], Femke van Wijk[1], Inken Harder[2], Thomas Werfel[3], Jochen Schmitt[4], Andreas Kleinheinz[5], Susanne Abraham[4], Judith Thijs[6], Stephan Weidinger[2], Marjolein de Bruin-Weller[1], Daphne Bakker[1], Julia Drylewicz[1]

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Type 2 immune-dominant endotype is not associated with increased responsiveness to dupilumab treatment in adult atopic dermatitis patients

Dekkers et al.

Introduction & Objectives:

Increased understanding of the pathophysiology of atopic dermatitis (AD) has led to the development of targeted therapies. Endotyping of patients with AD may be important to better inform clinicians which patients are most likely to benefit from specific targeted therapies.

Therefore, the aim of our study is to investigate serum protein profiles in AD patients with different responses to dupilumab treatment and to assess the role of the measured proteins in predicting response to dupilumab treatment.

Materials & Methods:

All patients were categorized based on their response to dupilumab treatment at week 12-16 compared to baseline by the Eczema Area and Severity Index (EASI). For each patient, concentrations of 60 candidate AD biomarker proteins were measured in serum. Cluster analysis was performed, and the different response groups were compared.

Results:

A total of 127 patients were selected. Out of these patients, 47 showed at least 90% improvement of the EASI, 49 showed improvement of at least 75% but less than 90%, and 31 patients showed improvement less than 50% after 12-16 weeks of follow-up.

None of the proteins were identified as predictive for treatment response. Based on the expression pattern of the measured proteins, a type 2 immune dominant and non-dominant cluster were identified. These clusters were not associated with response to treatment.

Conclusion:

Our results reaffirm that many patients with AD benefit from dupilumab treatment regardless of baseline protein concentrations, and that a type 2 dominant cluster is not associated with increased responsiveness. So far, there is no biological evidence to guide treatment selection in AD.

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Abstract N°: 5904

Tralokinumab-associated ocular surface disease in adult patients with atopic dermatitis: clinical characteristics, goblet cell- and tear fluid analyses

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Introduction & Objectives:

Since the introduction of dupilumab as treatment for atopic dermatitis (AD), dupilumab-associated ocular surface disease (DAOSD) has emerged as an important adverse event. Dupilumab targets the interleukin(IL)-4 receptor alpha which inhibits signaling of both IL-4 and IL-13, whereas tralokinumab specifically neutralizes IL-13. Despite the more specific mechanism of action compared to dupilumab, tralokinumab has also been associated with the development of ocular surface disease (OSD). This study aimed to investigate the clinical and biological characteristics of tralokinumab-associated OSD (TAOSD) in AD patients (*Fig. 1A*).

Methods:

This prospective study enrolled AD patients who were examined by a dermatologist and an ophthalmologist) prior to tralokinumab treatment (baseline), and after 4 and 28 weeks. At each visit, (TA)OSD severity was assessed by the Utrecht Ophthalmic Inflammatory and Allergic disease (UTOPIA) score (*Fig. 1B*). Conjunctival impression cytology was performed to quantify conjunctival goblet cell (GC) numbers and their functionality was further analyzed using flow cytometry. Tear fluid biomarkers were evaluated using multiplex technology, while tralokinumab levels in tear fluid and serum were measured by liquid chromatography coupled with tandem mass spectrometry (*Fig. 1C*).

Results:

A total of 32 patients, all exhibiting OSD characteristics prior to tralokinumab treatment, were included. Median GC numbers at baseline were significantly lower compared to healthy controls (382 per mm2 vs. 1256 per mm2, respectively, $p<0.001$). TAOSD, defined as an increase in UTOPIA score of ≥3 points, was observed in 21.9% of patients after a median of 5 weeks of treatment. GC numbers remained stable after 28 weeks of tralokinumab treatment and no significant changes were seen in the percentage of MUC5AC-producing cells, compared with baseline. At baseline, median tear fluid concentrations of the AD-severity biomarkers periostin, TARC/CCL17, PARC/CCL18 and IL-22 were higher in patients with moderate-to-severe OSD compared to patients with no or mild OSD. During tralokinumab treatment, median tear fluid concentrations of these AD-severity biomarkers decreased. After 4 weeks of treatment with tralokinumab, significant higher tralokinumab tear fluid concentrations were found in patients with moderate-to-severe OSD compared to patients with no or mild OSD (0.47 mg/L vs. 0.18 mg/L, respectively, $p=0.04$).

Conclusion:

These results reaffirm that OSD is common in AD patients before starting biological treatment, with low GC numbers and increased tear fluid concentrations of AD-related severity biomarkers in patients with moderate-to-severe OSD. TAOSD was observed in 21.9% of patients. During treatment with tralokinumab, overall, the number

of GCs and MUC5AC production remained stable, which contrasts with prior findings on DAOSD. Additionally, it was demonstrated that tralokinumab reaches the ocular surface.

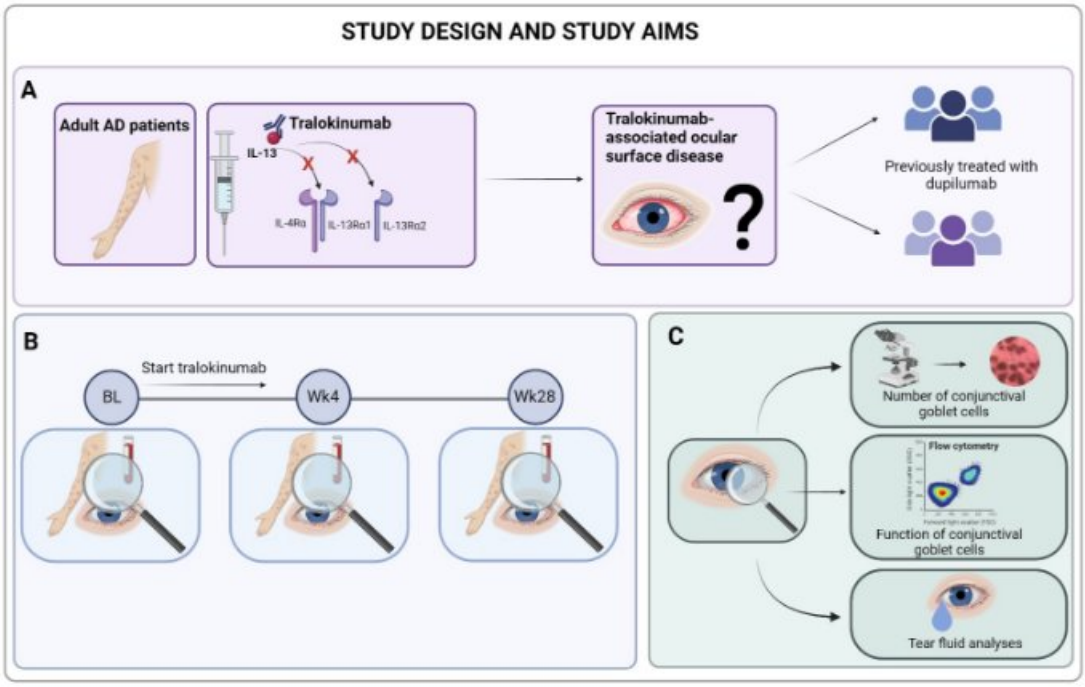

Figure 1: Study design and study aims

Abbreviations: AD; Atopic Dermatitis, BL; Baseline (prior to tralokinumab treatment), Wk4; Week 4, Wk28; Week 28.

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Abstract N°: 5923

Touch avoidance and emotional impact of chronic hand eczema in patients from the Danish Skin Cohort

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Introduction & Objectives:

Chronic hand eczema (CHE) is a very common inflammatory skin disease with both physical and psychological consequences. It is characterized by redness, edema, vesicles, dry and scaly skin, fissures, and hyperkeratosis, and patients experience itch, stinging, burning, and pain. Touch is one of the most fundamental human experiences, and supports both verbal and tactile interaction between people, but the emotional impact of CHE, including touch avoidance, was not previously studied. Objectives of this study were to investigate touch avoidance and emotional impact of CHE in adults diagnosed with CHE.

Materials & Methods:

Patients with CHE from the Danish Skin Cohort; a nationwide population-based prospective cohort, were included if they have had active disease within the past 12 months. Patients were interviewed and data on demographics, CHE characteristics and CHE perception were collected and analyzed. CHE severity was assessed using a photographic guide. Patients used a numeric rating scale (NRS, 0=least/best; 10=highest/worst), to rate the extent to which they avoid touching other people (e.g., handshakes) because of their CHE. We also asked patients about their feelings towards their CHE and if their CHE had affected their social life.

Results:

The study comprised 514 patients with CHE. Patients had a mean age of 55.3 [standard deviation 12.6] years and were predominantly women (n=344 (66.9%)). A total of 426 (82.8%) patients had current CHE and 383 (74.5%) reported CHE located on their left hand and 366 (71.2%) reported CHE located on their right hand. Moreover, 339 (66.0%) patients' current CHE severity was clear or almost clear, while 100 (19.5%), 41 (8.0%) and 17 (3.3%) patients had moderate, severe, or very severe CHE, respectively. There was no difference in touch avoidance when stratifying by CHE location, however the level of touch avoidance increased with greater CHE severity; patients with severe or very severe CHE reported a median of 4 [interquartile range: 0-7] while patients with almost clear CHE reported a median of 0 [0-1]. Moreover, almost half of patients (46.5%) with severe or very severe CHE reported that their CHE made them feel very much or extremely embarrassed while 51.7% reported that they very much or extremely much disliked the appearance of their hands and 53.5% reported that their hands made them feel very much or extremely frustrated. In contrast, 3.1%, 5.3% and 1.3% of patients with almost clear CHE and 13.0%, 22.0% and 17.0% of patients with moderate CHE answered 'very much' or 'extremely' to the same

questions, respectively.

Conclusion:

Patients with CHE experience emotional distress because of their CHE and there is a noticeable impact of CHE severity on touch avoidance among patients. This emphasizes the negative impact of CHE on patients' emotional and social well-being.

Figure 1. Touch avoidance in patients with chronic hand eczema stratified by hand eczema severity and hand eczema location.

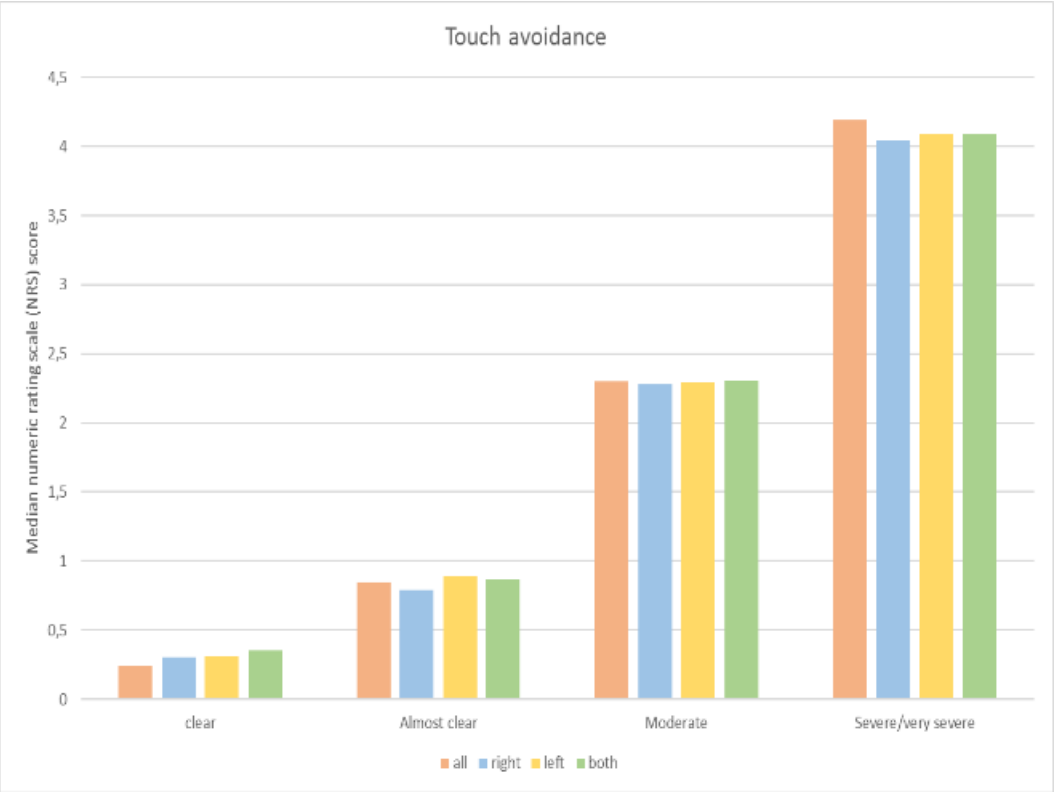
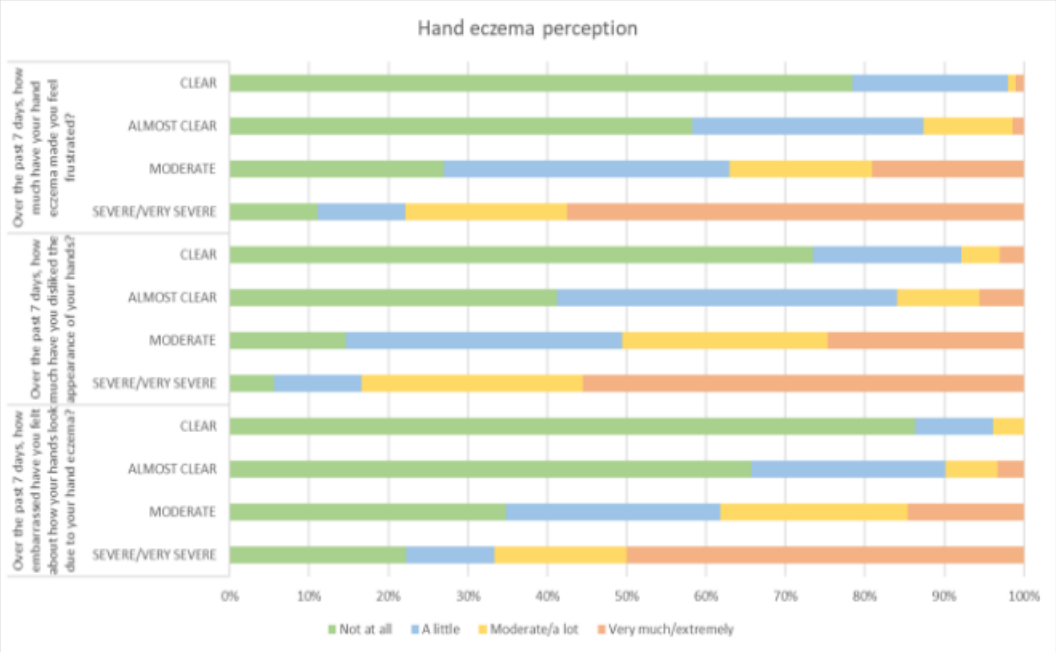


Figure 2. Emotional impact of chronic hand eczema based on patients' perception of their chronic hand eczema.



EA DV CONGRESS
AMSTERDAM 25-28 SEPTEMBER 2024
EUROPEAN ACADEMY OF DERMATOLOGY & VENEREOLOGY

Abstract N°: 5933

Treatment willingness and importance of skin clearance for patients with chronic hand eczema

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Introduction & Objectives:

Chronic hand eczema (CHE) is a common skin disease with a significant impact on quality of life and high disease burden. Treatment of CHE can be complicated and time consuming and patients' willingness to allocate daily time to treat the disease in return of complete disease resolution is measured by daily time trade-off (dTTO). Knowledge about the importance of skin clearance and dTTO willingness in patients with CHE is sparse. Objectives of this study were to investigate the importance of skin clearance and dTTO in adult patients with CHE.

Materials & Methods:

Patients with CHE were included from the Danish Skin Cohort; a nationwide population-based prospective cohort. Data on patient demographics, hand eczema characteristics and importance of obtaining skin clearance were collected through an online questionnaire. Patients were asked about the importance of obtaining 50%, 75%, 90% and 100% skin clearance, respectively, using a numeric rating scale (NRS, 0-10) where high scores indicated high importance. Patients were also asked how much time they were willing to allocate daily to treat their CHE, if a treatment would result in complete disease resolution.

Results:

Data from 514 included patients with CHE (66.9% women; mean age 55.3 [standard deviation 12.6] years) were analyzed. A total of 384 patients reported mild (n=226 (44.0%)), moderate (n=100 (19.5%)), severe (n=41 (8.0%)), or very severe CHE (n=17 (3.3%)) while 113 (22.0%) patients reported that their CHE was currently clear. Overall, on a NRS, patients reported a median of 9 [interquartile range (IQR): 5-10], 9 [6-10], 10 [8-10] and 10 [9-10] when asked about the importance of obtaining 50%, 75%, 90% and 100% skin clearance, respectively. Similar medians [IQR] were found when stratifying by CHE severity and the importance of 50%, 75%, 90% and 100% skin clearance increased with increasing CHE severity ($p<0.001$). Moreover, 13% reported that they were willing to allocate >1 hour a day to treat their CHE if it would result in complete disease resolution while 34.8% of CHE patients reported that they were willing to allocate <15 minutes a day. Stratifying by CHE severity revealed that 6.2% of patients with clear or almost clear CHE were willing to allocate >1 hour a day to treat their CHE while 40.4% were willing to allocate <15 minutes. In contrast, 36.2% and 12.1% of patients with severe or very severe CHE were willing to allocate >1 hour and <15 minutes a day to treat their CHE, respectively.

Conclusion:

This study highlights the importance of obtaining skin clearance in patients with CHE. Patients were willing to allocate a substantial amount of time every day to treat their CHE, especially patients with severe or very severe CHE.

Figure 1. Importance of skin clearance for patients with chronic hand eczema stratified by hand eczema severity.

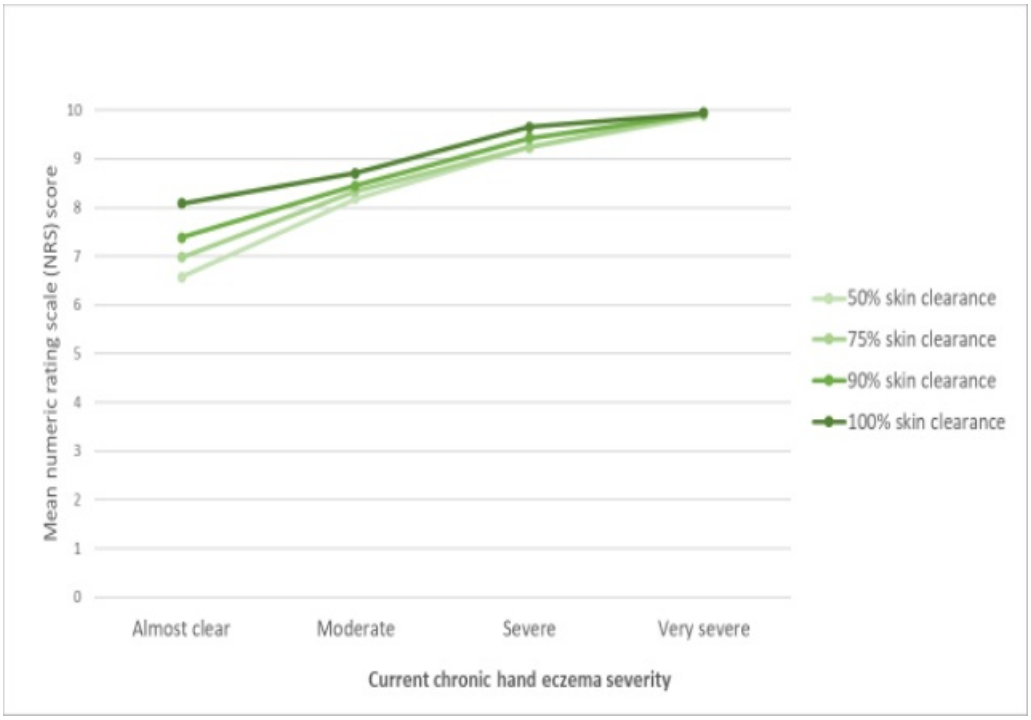
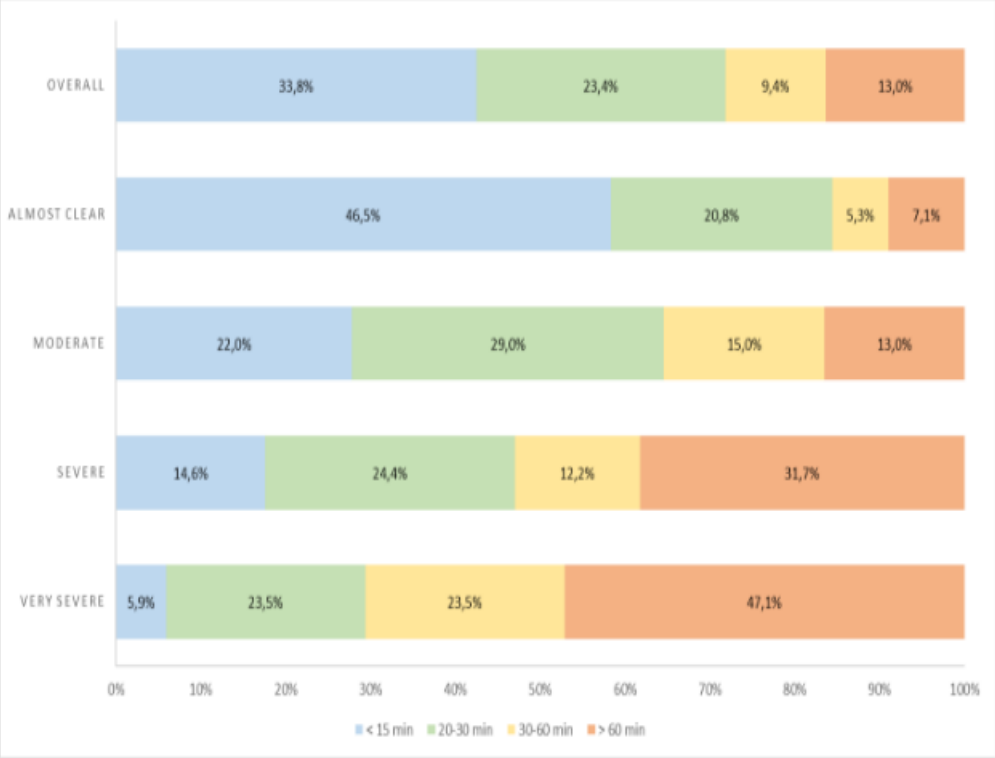


Figure 2. Daily time trade-off (dTTO) in patients with chronic hand eczema overall and stratified by hand eczema severity.



EADV CONGRESS
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EUROPEAN ACADEMY OF DERMATOLOGY & VENEREOLOGY

Abstract N°: 5958

Assessment of salivary cortisol levels, perceived stress values and personality features of atopic dermatitis patients in relation to the severity of their disease

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Introduction & Objectives:

Patients with atopic dermatitis (AD) commonly experience a high level of psychological stress and notice the negative impact of AD on their everyday functioning. The aim of this study was to compare AD patients' salivary cortisol values and levels of perceived stress with AD severity and other associated psychological parameters

Materials & Methods:

This prospective study analyzed salivary cortisol levels (by enzyme-linked immunosorbent assay) and perceived stress levels in relation to the severity of their disease (SCORAD) and characteristics of personality. The study involved 84 AD patients: 42 symptomatic patients and 42 asymptomatic patients (in remission). Each subject filled out the Perceived Stress Scale (PSS), Brief Illness Perception Questionnaire, and the Crown-Crisp Experiential Index, which concerns personality features.

Results:

The levels of perceived stress (PSS) were not dependent on disease severity (SCORAD), but correlated with the perceived effect of AD on emotional states, personality traits, anxiety and depression ($P < 0.001$). Increased cortisol values were found in both symptomatic and asymptomatic AD patients and were not dependent on disease severity (Scoring Atopic Dermatitis [SCORAD]) and perceived stress (PSS). Patients with severe AD had significantly lower cortisol levels than those with moderate and mild AD ($P = 0.042$).

Conclusion:

The severity of perceived stress in AD patients correlates with the impact of AD on patients' emotional states and personality features (anxiety, depression). All AD patients (regardless of disease severity) should be assessed for impacts of stress, and a multidisciplinary approach should address mental wellness.

EA DV CONGRESS
AMSTERDAM 25-28 SEPTEMBER 2024
EUROPEAN ACADEMY OF DERMATOLOGY & VENEREOLOGY

Abstract N°: 5998

Absolute EASI response achieved with lebrikizumab over 52 weeks in patients with moderate-to-severe atopic dermatitis

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Introduction & Objectives: Lebrikizumab (LEB) is a monoclonal antibody for moderate-to-severe atopic dermatitis (AD) that binds with high affinity and slow off-rate to interleukin-13, thereby blocking the downstream effects of IL-13 with high potency. The efficacy of LEB monotherapy based on patients achieving Eczema Area and Severity Index (EASI) 50, 75 and 90 thresholds has been presented in previous studies [1, 2]. However, efficacy based upon absolute EASI scores is considered clinically relevant as it helps measure remaining disease regardless of baseline severity, with EASI scores of ≤7 indicating mild disease, EASI ≤5 and EASI ≤3 suggesting optimal therapeutic targets and EASI ≤1 indicating clear/almost clear skin [3]. Here we report the efficacy of LEB monotherapy in skin, measured as absolute EASI, at Week (W) 52 in W16 lebrikizumab responder patients from ADvocate1 (ADv1, NCT04146363) and ADvocate2 (ADv2, NCT04178967) clinical trials (pooled data).

Materials & Methods: ADv1 and ADv2 were two identically designed, randomized, placebo-controlled, monotherapy Phase 3 trials assessing efficacy and safety of LEB in adult (≥18 years) and adolescent patients (12 to <18 years, ≥40kg) with moderate-to-severe AD. Responders were defined as patients achieving a 75% reduction in EASI from baseline (EASI 75) or an Investigator's Global Assessment (IGA) 0/1 with a ≥2-point improvement from baseline, without use of rescue medication at W16. W16 lebrikizumab responders (n=291) were re-randomized 2:2:1 to receive LEB 250 mg Q2W (n=112), LEB 250 mg every 4 weeks (Q4W; n=115), or placebo (LEB withdrawal; n=57) for 36 additional weeks (maintenance period). EASI scores were assessed from W16 to W52 and categorized as ≤7 (mild), ≤5, ≤3, and ≤1 (clear/almost clear). .Analyses were performed on the EASI 75 responders of the pooled modified Maintenance Primary Population (mMPP). Missing data due to lack of efficacy or data after rescue medication usage was imputed using non-responder imputation (NRI). Other missing data were imputed using MI.

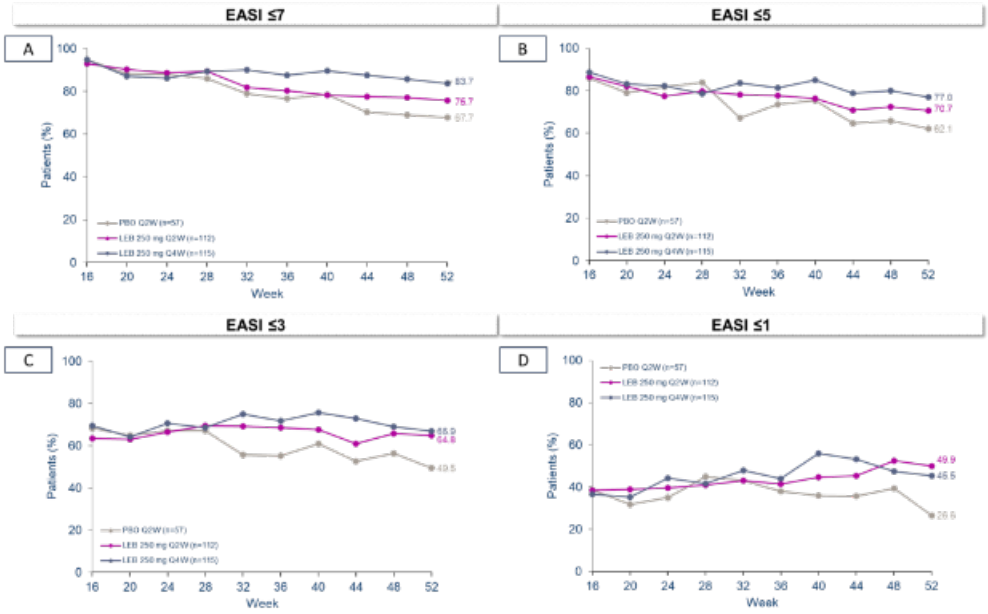
Results: Out of the LEB W16 EASI 75 responders, 75.7% of LEB Q2W, 83.7% of LEB Q4W and 67.7% of LEB withdrawal patients maintained EASI ≤7 at W52 (Figure 1A). The proportion of patients maintaining EASI ≤5 at W52 was 70.7% for LEB Q2W, 77.0% for LEB Q4W and 62.1% for LEB withdrawal (Figure 1B). 64.8% of LEB Q2W patients, 66.9% of LEB Q4W patients and 49.5% of LEB withdrawal patients reported EASI ≤3 at W52 (Figure 1C). Finally, the proportion of patients reporting EASI ≤1 for LEB Q2W and LEB Q4W was maintained and even increased from W16 to W52 (49.9% and 45.5%, respectively), while 26.6% of patients in the LEB withdrawal maintained it at W52 (Figure 1D).

Conclusion: A high proportion of patients with moderate-to-severe AD who achieve EASI ≤7, ≤5, and ≤3 at W16 maintained this value at W52 in both active treatment arms while the proportion of patients who achieved EASI ≤1 was maintained and even increased from W16 to W52.

References:

1. Silverberg et al. *doi: 10.1056/NEJMoa2206714*.
2. Blauvelt et al. *doi: 10.1093/bjd/ljad022*.
3. Silverberg et al. *doi: 10.1093/bjd/ljac140.022*

Figure 1



EA DV CONGRESS
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EUROPEAN ACADEMY OF DERMATOLOGY & VENEREOLOGY

Abstract N°: 6037

Effectiveness of Upadacitinib in Adults and Adolescents With Atopic Dermatitis: 6-Month Interim Analysis of the Real-World Multicountry AD-VISE Study

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Introduction & Objectives:

Upadacitinib (UPA), an oral selective Janus kinase (JAK) inhibitor administered once daily, is approved for the treatment of moderate-to-severe atopic dermatitis (AD).1 Clinical studies have demonstrated the efficacy and safety of UPA for treating AD,1 though real-world data remain limited. The AD-VISE study was conducted to characterize the real-world utilization patterns, effectiveness, and durability of response to UPA 15 mg and 30 mg in adults and adolescents with AD in clinical practice.

Materials & Methods:

AD-VISE is an ongoing observational, prospective, multicountry study evaluating the clinical effectiveness of UPA in adults and adolescents with AD over 2 years.** This updated interim analysis (data cutoff: Dec 14, 2023) reports baseline and 2-, 4-, and 6-month (mo) UPA effectiveness data from patients (pts) who enrolled ≥6 mo before data cutoff date or had discontinued the study. Outcome measures included validated Investigator Global Assessment for Atopic Dermatitis (vIGA-AD) 0/1 (primary), Eczema Area and Severity Index (EASI), Worst Pruritus Numeric Rating Scale (WP-NRS), Dermatology Life Quality Index (DLQI), Patient Oriented Eczema Measurement (POEM), and Atopic Dermatitis Control Tool (ADCT). Data were analyzed using non-responder imputation with multiple imputation.

Results:

Of the 578 pts included in this analysis (UPA 15 mg, n=313; UPA 30 mg, n=265), 48 (8.3%) were adolescents and 314 (54.3%) were male. Most pts resided in Canada (39.0%), Spain (9.4%), Australia (6.1%), or Czechia (6.1%). Pts were primarily started on UPA 15 mg to attempt use of the lowest possible effective dose (46.0% [122/265]), while pts were primarily started on UPA 30 mg due to high disease burden/severity of skin (42.0% [97/231]) and itch symptoms (18.6% [43/231]). More pts started on UPA 30 mg vs 15 mg were 18 to <65 years old (95.8% vs 74.1%), had asthma (38.5% vs 26.2%), and/or had severe AD (vIGA-AD score 4: 50.8% vs 41.2%; **Table 1**). Other characteristics, including percentage of body surface area affected by AD, were generally similar for both UPA treatment groups. Mean (SD) UPA exposure was 289.7 (±198.5) days; 10.7% of pts discontinued UPA and 6.6% discontinued the study. The majority of pts (53.6% [225/419]) achieved vIGA-AD 0/1 by 2 mo; this proportion increased by 4 mo (63.4% [266/419]) and was sustained at 6 mo (63.0% [264/419]; **Table 2**). A similar temporal trend in UPA effectiveness was seen with EASI outcomes (**Figure 1**), including achievement of a ≥90%

improvement in EASI score (2 mo, 47.3% [197/416]; 4 mo, 58.1% [242/416]; 6 mo, 60.7% [252/416]) and achievement of an EASI score ≤3 (2 mo, 57.8% [242/419]; 4 mo, 69.1% [289/419]; 6 mo, 72.1% [302/419]).** Proportions of pts achieving a WP-NRS score of 0 or 1 at 2 mo (40.5% [170/419]) were sustained to 6 mo (42.3% [177/419]; **Table 2**). Clinically meaningful improvements and minimal disease burden thresholds in other outcomes measures (DLQI, POEM, and ADCT) at 2 mo were generally sustained through to 6 mo (**Table 2**).

Conclusion:

Consistent with findings from AD clinical trials,2,3 results of this 6-mo interim real-world analysis suggest that most pts with AD achieved clear/almost clear skin and clinically meaningful itch improvement by 2 mo of UPA treatment, which was further improved or maintained through 6 mo.

References:

1. RINVOQ (upadacitinib). Prescribing information. AbbVie Inc.; 2023. Available at: https://www.accessdata.fda.gov/drugsatfda_docs/label/2023/211675s019lbl.pdf. Accessed March 19, 2024.
2. Silverberg JI, et al., *J Allergy Clin Immunol*. 2022;149:977–987. e14.
3. Simpson EL, et al., *JAMA Dermatol*. 2022;158:404-413.

Table 1. Baseline Demographic and Disease Characteristics by Starting Dose of Upadacitinib

Characteristic	UPA 15 mg (n=313)	UPA 30 mg (n=265)
Age, mean (SD) years	36.4 (18.2)	37.7 (13.5)
<18 years, n (%)	46 (14.7)	2 (0.8)
18 to <65 years, n (%)	232 (74.1)	254 (95.8)
≥65 years, n (%)	35 (11.2)	9 (3.4)
Male, n (%)	164 (52.4)	150 (56.6)
Duration of AD symptoms, years		
Mean (SD)	24.4 (15.9)[a]	27.8 (15.3)
Median (range)	21 (2–73)	26 (2–74)
Disease-related comorbidities, n (%)		
Asthma	82 (26.2)	102 (38.5)
Allergic rhinitis	101 (32.3)	92 (34.7)
Food allergies	32 (10.2)	29 (10.9)
Eosinophilic esophagitis	1 (0.3)	0
AD location, n (%)		
Face	235 (76.3)[b]	189 (72.4)[c]
Neck	230 (74.7)[b]	181 (69.3)[c]
Scalp	123 (39.9)[b]	96 (36.8)[c]
Arm	285 (92.5)[b]	240 (92.0)[c]
Hand	241 (78.2)[b]	175 (67.0)[c]
Leg	277 (89.9)[b]	234 (89.7)[c]
Foot	159 (51.6)[b]	128 (49.0)[c]
Anterior trunk	242 (78.6)[b]	211 (80.8)[c]
Posterior trunk	244 (79.2)[b]	205 (78.5)[c]
Genitalia	65 (21.1)[b]	57 (21.8)[c]
Body surface area, %, mean (SD)	35.3 (23.2)[b]	38.3 (24.1)[d]
Prurigo nodules, n (%)	44 (14.1)	50 (18.9)
Prior dupilumab use, n (%)	45 (14.4)	42 (15.8)
vIGA-AD, n (%)		
Moderate (3)	161 (52.3)[b]	116 (44.3)[d]
Severe (4)	127 (41.2)[b]	133 (50.8)[d]
EASI, mean (SD)	21.5 (11.5)[b]	22.8 (11.8)[d]
WP-NRS, mean (SD)	7.0 (2.3)[e]	7.0 (2.3)[f]
POEM, mean (SD)	18.0 (6.7)[g]	19.2 (6.5)[h]
ADCT, mean (SD)	14.9 (5.9)[i]	15.2 (5.9)[h]
DLQI,[j] mean (SD)	14.1 (7.3)[k]	15.0 (7.7)[l]

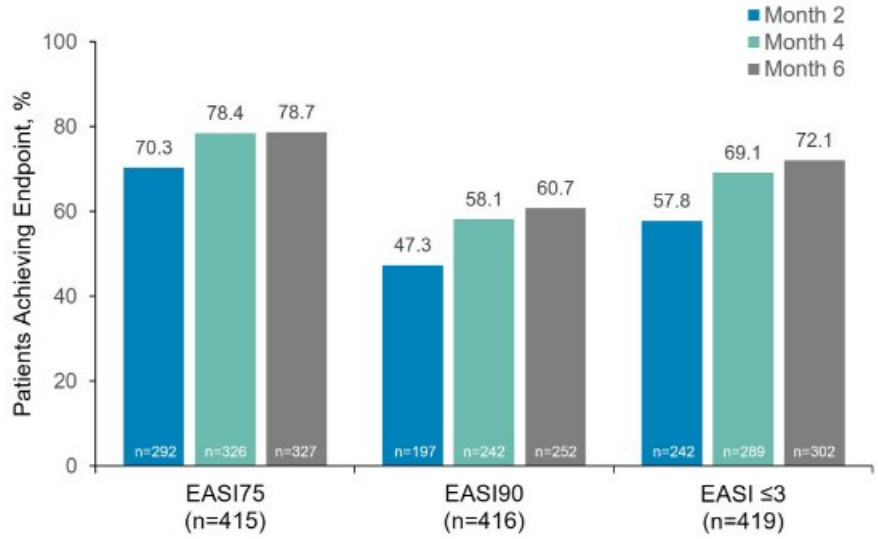
AD, atopic dermatitis; ADCT, Atopic Dermatitis Control Tool; DLQI, Dermatology Life Quality Index; EASI, Eczema Area and Severity Index; POEM, Patient Oriented Eczema Measurement; UPA, upadacitinib; vIGA-AD, validated Investigator Global Assessment for Atopic Dermatitis; WP-NRS, Worst Pruritus Numeric Rating Scale.
Percentages are calculated based on nonmissing values.
[a]N=311. [b]N=308. [c]N=261. [d]N=262. [e]N=293. [f]N=246. [g]N=292. [h]N=243. [i]N=294. [j]DLQI was assessed in patients aged ≥16 years. [k]N=229. [l]N=210.

Table 2. Effectiveness Outcomes at Months 2, 4, and 6 of Treatment With Upadacitinib in Adolescent and Adult Patients With AD

Endpoint, n (%)	N	Any UPA		
		Month 2	Month 4	Month 6
vIGA-AD 0/1	419	225 (53.6)	266 (63.4)	264 (63.0)
WP-NRS 0/1	419	170 (40.5)	179 (42.6)	177 (42.3)
WP-NRS ≥4-point reduction from baseline[a]	380	257 (67.7)	252 (66.4)	245 (64.6)
DLQI[b] 0/1	400	143 (35.8)	167 (41.6)	145 (36.2)
DLQI[b] ≥4-point reduction from baseline[a]	369	295 (80.0)	316 (85.6)	309 (83.8)
POEM ≤2	419	145 (34.6)	147 (35.0)	153 (36.6)
POEM ≥4-point reduction from baseline[a]	407	349 (85.8)	342 (84.0)	330 (81.0)
ADCT <7	419	300 (71.7)	298 (71.0)	291 (69.4)
ADCT ≥5-point reduction from baseline[c]	393	314 (80.0)	314 (79.8)	312 (79.3)

AD, atopic dermatitis; ADCT, Atopic Dermatitis Control Tool; DLQI, Dermatology Life Quality Index; POEM, Patient Oriented Eczema Measurement; UPA, upadacitinib; vIGA-AD, validated Investigator Global Assessment for Atopic Dermatitis; WP-NRS, Worst Pruritus Numeric Rating Scale.
[a]Baseline score ≥4. [b]DLQI was assessed in patients aged ≥16 years. [c]Baseline score ≥5.

Figure 1. Effectiveness of UPA on EASI Outcomes at Months 2, 4, and 6 of Treatment in Adolescent and Adult Patients With AD



AD, atopic dermatitis; EASI, Eczema Area and Severity Index; EASI75, proportion of patients achieving ≥75% improvement in EASI score; EASI90, proportion of patients achieving ≥90% improvement in EASI score.

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EUROPEAN ACADEMY OF DERMATOLOGY & VENEREOLOGY

Abstract N°: 6039

Transcriptional differences between vesicular hand eczema and atopic dermatitis

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Introduction & Objectives:

Transcriptome analysis through RNA-sequencing of vesicular hand eczema (VHE) indicated that there's a large overlap between the transcriptome of VHE and the transcriptome of atopic dermatitis (AD). However, differentially expressed genes (DEGs) that differentiate VHE from AD remain unknown. The objective of this study was to identify distinctive transcriptional features between the transcriptome of VHE and AD by comparing DEG and enrichment analyses.

Materials & Methods:

We re-analysed RNA sequencing data of 10 lesional palmar VHE epidermal biopsies and performed DEG analyses. We adjusted the obtained DEG results of 57 lesional whole AD skin biopsies of the upper extremities or trunk to our criteria. Up- and down-regulated DEGs in both skin diseases, VHE-only, AD-only, and opposite regulated DEGs were identified. Enrichment analyses and Chi-squared tests were conducted to test for differences in gene set enrichment between both skin diseases.

Results:

Comparing 3028 DEGs in VHE (1645 up; 1383 down) with 5391 DEGs in AD (3842 up; 1549 down), revealed 1516 shared DEGs (1179 up; 337 down) and 1512 DEGs unique to VHE (466 up, 1046 down). In addition, interferon signalling with potentially subsequent Th1 responses and necroptosis were more prominent in VHE compared to AD. Downregulated genes identified only in VHE (like *DNASE1L2*, *KRT2*, *KRT9* and *KRT25*) indicate an aberrant epidermal differentiation.

Conclusion:

In conclusion, comparing the transcriptome of VHE with AD skin indicates a common pathophysiology, but also reveals transcriptional differences between VHE and AD. More transcriptome studies are needed to substantiate these findings, which is crucial for translation towards novel diagnostic and treatment approaches.

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Abstract N°: 6071

Impact of amlitelimab (an anti-OX40 Ligand antibody) on atopic dermatitis of the head and neck: post hoc results from the STREAM-AD phase 2b study of moderate-to-severe atopic dermatitis

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Introduction & Objectives: Atopic dermatitis (AD) is a chronic inflammatory disease characterised by recurrent eczematous lesions and impaired skin-barrier function, with multiple immune pathways involved. Amlitelimab is a fully human, nondepleting anti-OX40 Ligand (OX40L) monoclonal antibody that blocks OX40L-OX40 interactions upstream of T cell expansion and inflammatory cytokine production. Lesions on the head and neck are often difficult to treat and have a high impact on patients' quality of life. Here we report the 24-week efficacy of amlitelimab on head and neck lesions from Part 1 of the STREAM-AD trial in patients with moderate-to-severe AD.

Materials & Methods: STREAM-AD (NCT05131477), a randomised, double-blind, placebo-controlled, phase 2b trial, included a 24-week treatment period (Part 1), a 28-week maintenance/withdrawal period (Part 2), and a 16-week safety follow-up. In Part 1, adult participants with moderate-to-severe AD were randomised 1:1:1:1:1 to subcutaneous amlitelimab every 4 weeks (250 mg with 500 mg loading dose [250 mg +LD], n=77; 250 mg, n=78; 125 mg, n=77; 62.5 mg, n=79) or placebo every 4 weeks (n=79). The primary endpoint was percent change in Eczema Area and Severity Index (EASI) score from baseline at Week 16. A key secondary endpoint was percent change in EASI score at Week 24. Head and neck region EASI subscores were analysed using least-squares (LS) mean percent change from baseline up to Week 24 (post hoc analysis). Any data on or after treatment discontinuation or use of rescue/prohibited medications impacting efficacy, whichever earlier, are set to missing and imputed by WOCF.

Results: Baseline EASI head and neck subscores were well balanced across treatment groups. All doses of amlitelimab demonstrated improvements in percent change in EASI head and neck subscores from baseline at Week 24 vs placebo; highest response was seen with 250 mg +LD. LS mean percent change from baseline in head and neck region subscore was -52.6, -40.9, -41.2, -38.3, and -25.3 for 250 mg +LD, 250 mg, 125 mg, 62.5 mg, and placebo, respectively, at Week 24. LS adjusted mean percent change from baseline in the four head and neck sign subscores were as follows at Week 24: erythema (-57.3, -44.6, -47.4, -42.4, and -19.9), oedema/papulation (-58.7, -50.3, -49.2, -40.9, and -25.1), excoriation (-67.5, -57.8, -58.3, -47.9, and -22.8), lichenification (-64.2, -53.0, -53.6, -46.2, and -19.9), for 250 mg +LD, 250 mg, 125 mg, 62.5 mg, and placebo, respectively.

Conclusion: Amlitelimab improved EASI head and neck subscores vs placebo at Week 24, and was effective across all signs (erythema, oedema/papulation, excoriation, and lichenification) of head and neck AD. Amlitelimab may be an effective future treatment option for patients with moderate-to-severe AD with hard-to-treat lesions on the head and neck.

EA DV CONGRESS
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EUROPEAN ACADEMY OF DERMATOLOGY & VENEREOLOGY

Abstract N°: 6084

Effectiveness and tolerability of an Emollient 'plus' formulation in monotherapy and adjunctive therapy in patients with atopic dermatitis: results of a real-world observational study conducted in Poland

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Introduction & Objectives:

Atopic dermatitis (AD) is a chronic inflammatory skin disorder characterized by an epidermal physical, immunological, and microbial barrier defect. The use of emollients, which aim to maintain or restore epidermal barrier function, proper hydration, and skin elasticity, is the foundation of AD treatment. Recently, a special range of emollient 'plus' formulations, enriched with additional active substances, has been developed and recommended for AD treatment. Findings from a recent randomized controlled trial indicate that an emollient 'plus' containing shea butter, niacinamide, mannose, *Vitreoscilla filiformis* biomass extract grown in thermal spring water (VFB-TSW), and *Ophiopogon japonicum* root extract had significantly better outcomes in reducing itching and improving quality of life compared to usual emollient in patients with moderate-to-severe AD receiving systemic treatment. The study aimed to assess the impact of this emollient 'plus' in monotherapy or adjunctive therapy on clinical symptoms, and patient-reported outcomes in adults with AD.

Materials & Methods:

Adult AD patients aged >18 years participated in an observational study conducted in Poland between November 2021 and January 2022. The study involved two patient visits at dermatologists' practices: an initial visit and a follow-up visit after 4 weeks of the emollient 'plus' use. The measurement tool was a designed questionnaire assessing the skin condition and the patient-reported outcomes.

Results:

331 adult patients with AD (67.1% of females and 32,6% of males) were recruited. Most of them were aged 18-25 years (44.7%), followed by 25-40 years (41.7%) and over 40 years old (13.6%). At baseline, most patients exhibited moderate skin disease severity (57.3%), moderate skin dryness (54.5%), and inflammatory lesions affecting 10-30% of the skin area (39.1%). Moreover, 49.8% of patients experienced moderate itching, and their disease caused moderate discomfort in daily life (43.6%) and had a mild (31.5%) or moderate (31.5%) impact on sleep quality. 55.4% of patients were recommended to use the emollient 'plus' in monotherapy. 44.6% were recommended to use emollient 'plus' in adjunct to other AD treatment, which mainly included topical anti-inflammatory drugs (topical corticosteroids, topical calcineurin inhibitors) and/or antihistamine drugs. After a 4-week treatment, the disease severity decreased in 78.2% of AD adults using only emollient 'plus' and in 85.6% of AD adults using emollient 'plus' with other AD treatments. Reductions in skin dryness and the percentage of skin area affected by inflammatory lesions were observed in 85.0% and 58.6% of AD adults using emollient 'plus' monotherapy, respectively, while in the group using emollient 'plus' in adjunct to other AD treatment, improvements were seen in 91.0% and 71.8% of AD adults, respectively. Similarly, significant improvements in patient-reported outcomes were observed in both monotherapy and adjunctive groups such as itching (87.1%, 90.8%), sleep quality (65.6%, 84.8%), and daily discomfort (80.0%, 85.7%).

Conclusion:

This real-world study supports the clinical effectiveness of an emollient ‘plus’ in both monotherapy and adjunctive therapy for adults with AD. These findings highlight the crucial role of regular emollient application, especially emollient ‘plus’, in all stages of treatment to alleviate objective and subjective symptoms for AD patients effectively.

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Abstract N°: 6086

Prediction of the efficacy of extended dosing of amlitelimab (an anti-OX40 Ligand antibody) in patients with moderate-to-severe atopic dermatitis using a modeling approach

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Introduction & Objectives: The efficacy and safety of amlitelimab, an anti-OX40 Ligand monoclonal antibody, was shown across a broad range of Q4W subcutaneous (SC) dose regimens. Additionally, maintenance of clinical response was observed during the withdrawal phase of the STREAM-AD Phase 2b trial in patients with moderate-to-severe atopic dermatitis (AD). The lowest dose in STREAM-AD (62.5mg Q4W) demonstrated efficacy and safety similar to that of 250mg Q4W with 500mg loading dose (+LD), supporting the evaluation of an extended dose in future Phase 3 trials. Here, we developed a population pharmacokinetic (PopPK)/pharmacodynamic (PD) model used to perform simulations to predict the efficacy of extended amlitelimab dosing regimens.

Materials & Methods: A PopPK model for amlitelimab was developed with individual data from three Phase 1 and two Phase 2 (Phase 2a and 2b) trials. A 2-compartment model with linear and non-linear clearances, and lag-time and first order rate for SC route was selected and the relationship between individual estimates and covariates was investigated. A PopPK/PD Eczema Area and Severity Index (PopPK/PD-EASI) model was also developed using interim data from 269 amlitelimab-treated patients with AD from the completed Phase 2a and ongoing 2b trials, including 66 patients with observations of ≥16 wks in the withdrawal phase. Population parameters and individual estimates were computed, followed by an exploration of amlitelimab concentrations and EASI score relationship. Covariates were investigated, including body weight and a responder covariate, defined as achieving validated Investigator Global Assessment (vIGA)-AD 0/1 at Wk 16 (Phase 2a) or achieving IGA 0/1 and/or EASI-75 at Wk 24 (Phase 2b). The PopPK and PopPK/PD-EASI models were qualified and used to simulate different dosing regimens to support decision making for Phase 3.

Results: 439 participants (78 healthy adults; 361 adults with AD) were included in the PopPK analysis (median body weight 74.5kg [40.5-148kg]). Amlitelimab exposure in patients with AD following SC Q4W increased in a dose proportional manner. Median steady state exposure (AUC4W) was ~42-58% higher in patients with a body weight <74.5kg vs ≥74.5kg. Simulations performed in patients from STREAM-AD based on the final PopPK model, showed that exposures following an extended dose of 250mg Q12W +LD, predicted exposures between the range observed in the Phase 2b for the 62.5mg Q4W and 250mg Q4W +LD regimens (Figure 1A). The PopPK/PD-EASI model was used to predict the percent change in EASI from baseline for the whole population (responders and nonresponders), demonstrating that responders at 250mg Q12W +LD had a percent change from baseline in EASI in the range observed with Q4W dosing regimens in STREAM-AD (Figure 1B). **Conclusion:** The PopPK/PD-EASI model simulations support the Q12W extended dose regimen for Phase 3 studies, demonstrating 250mg Q12W +LD predicts similar exposures and efficacy in the range of Q4W dosing regimens evaluated in the STREAM-AD Phase 2b trial.

Figure 1A: Exposures for an extended regimen of 250 mg Q12W +LD and the lowest and highest dosing regimens in STREAM-AD (62.5mg Q4W and 250 mg Q4W +LD) simulated in all patients using the final PopPK model

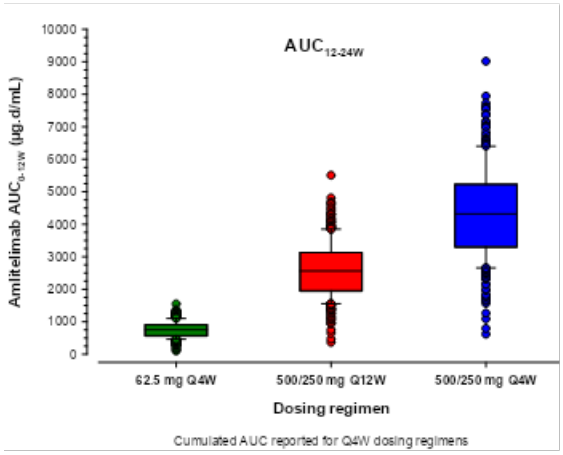
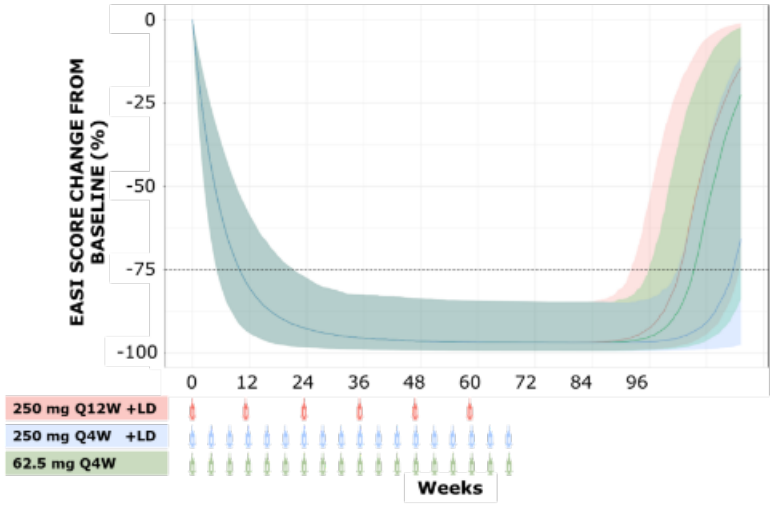


Figure 1B: PopPK/PD-EASI model predicted percent change in EASI score from baseline in responders for an extended regimen of 250 mg Q12W +LD (last injection Week 60) in the range of the observed for the highest and lowest Q4W dosing regimens from STREAM-AD (250 mg Q4W +LD and 62.5mg Q4W; last injection Week 68)



EADV CONGRESS
AMSTERDAM 25-28 SEPTEMBER 2024
EUROPEAN ACADEMY OF DERMATOLOGY & VENEREOLOGY

Abstract N°: 6103

Chronic pruritus revealing contact dermatitis to henna

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Introduction & Objectives:

Henna, the dried and powdered leaf of *Lawsonia inermis*, is widely used as a dye for the skin, hair, and nails, and as an expression of body art especially in Islamic and Hindu cultures. It generally carries a reputation for being safe and having a low inherit risk of allergic reaction. We herein report an unusual case of allergic contact dermatitis to pure henna.

Materials & Methods:

We present a case of contact dermatitis to pure henna.

Results:

A 54- year old woman presented with chronic pruritus evolving for 4 years. On examination, there are scratch marks and excoriated lesions localized to the nape of the neck, the back and the abdomen without other elementary dermatological lesions. Additional tests were done to rule out other etiologies and came back without abnormalities. Upon further questioning, the patient mentioned using henna as a hair dye and also as a bandage after scarifying her forehead to relieve her headaches. The patient was patch tested with the European standard series, hairdressing series and pure henna. Positive reactions have been found at day 2 and day 3 to pure henna

Conclusion:

Henna boasts a long history of use as a dye in both Hindu and Islamic cultures. While the natural product itself rarely triggers allergic contact dermatitis, the production process can introduce complications. Manufacturers sometimes add PPD, a chemical commonly found in hair dye, to achieve a darker shade and faster drying time. This modified version, often called “black henna,” carries a higher risk of allergic reactions. Despite its extensive use, pure henna poses a minimal risk of allergic reactions. Reported cases of allergic reactions to henna are scarce, and the vast majorities are directly linked to the presence of PPD. Only 2 cases of contact dermatitis to pure henna have been reported in the literature.

This case shows even if pure henna is known of low allergenicity, it still poses a risk of contact dermatitis.

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Abstract N°: 6123

Real-world effectiveness of tralokinumab in adults with atopic dermatitis: Interim data on improvements in physician-assessed disease severity after up to 9 months of follow-up in the TRACE study

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Introduction & Objectives: Tralokinumab, a monoclonal antibody that specifically targets interleukin-13, is indicated for the treatment of moderate-to-severe atopic dermatitis (AD). Phase 3 clinical trials have shown that tralokinumab is effective and well tolerated, and real-world data are now becoming available. Here, the objective is to evaluate changes in investigator-assessed disease severity of AD in an interim analysis (IA) of the non-interventional TRACE study.

Materials & Methods: TRACE is a prospective, non-interventional, international, single-cohort study of adult patients with AD who were prescribed tralokinumab according to national approved labels. Patients were enrolled between November 2021 and July 2023. At data cut-off (October 15th, 2023) for the IA, the following number of patients were included in the full analysis set (FAS): baseline (n=824), 3 months (n=668), 6 months (n=331), and 9 months (n=143). Outcome measures collected included: Body Surface Area (BSA), Eczema Area and Severity Index (EASI), and/or Investigator's Global Assessment (IGA), as per individual clinical practice.

Results: At baseline, patients had a mean age of 44.1 years, mean AD duration of 18.9 years, more than half were male (52.2%), and the majority were White (75.7%). Regarding prior AD treatments at baseline (n=818), 42.7% of patients were categorized as 'systemic and biologic naïve', 32.4% as 'systemic user but biologic naïve' and 24.9% as 'biologic user,' with 23.9% dupilumab-experienced. For the FAS, mean EASI improved from 20.1 at baseline (n=631) to 6.4 at 3 months (n=482), 5.4 at 6 months (n=212), and 3.6 at 9 months (n=88). The proportion of patients with EASI ≤7, equivalent to no or mild disease, increased from 14% at baseline (n=631) to 72% at 3 months (n=482), 77% at 6 months (n=212), and 80% at 9 months (n=88). The proportion of patients with IGA 4 (corresponding to severe disease) decreased from 34.0% at baseline (n=808) to 4.6% at 3 months (n=632), 2.7% at 6 months (n=298), and 2.5% at 9 months (n=120). Among patients with IGA ≥2 at baseline, the proportion achieving ≥2-point improvement in IGA increased from 46% at 3 months (n=566) to 58% at 6 months (n=279) and 70% at 9 months (n=112). Mean BSA improved from 28.5% at baseline (n=689) to 12.1% at 3 months (n=528), 9.3% at 6 months (n=262), and 7.6% at 9 months (n=105). In dupilumab-experienced patients, mean EASI score decreased from 16.9 at baseline (n=132) to 6.8 at 3 months (n=92), 5.9 at 6 months (n=41), and 3.8 at 9 months (n=20). The proportion of dupilumab-experienced patients with EASI ≤7 increased from 26% at baseline (n=132) to 70% at 3 months (n=92), 76% at 6 months (n=41), and 80% at 9 months (n=20).

Conclusion: Results from the IA (up to 9 months) of the non-interventional study TRACE show effectiveness of tralokinumab treatment in adult patients with AD in a real-world setting. More data will be available when the study is finalized.

Table 1: Investigator-assessed disease outcomes after up to 9 months of follow-up in the TRACE study.

	Baseline (N=824)	3 months (N=668)	6 months (N=331)	9 months (N=143)
Full analysis set				
EASI, mean (SD)	20.1 (10.96) n=631	6.4 (7.53) n=482	5.4 (7.38) n=212	3.6 (4.92) n=88
EASI ≤7, % (95% CI)	14 (0.11; 0.17) n=631	72 (0.67; 0.76) n=482	77 (0.71; 0.83) n=212	80 (0.70; 0.87) n=88
IGA 4 (severe disease), n (%)	275 (34.0) n=808	29 (4.6) n=632	8 (2.7) n=298	3 (2.5) n=120
IGA ≥2-point improvement, % (95% CI)	-	46 (0.42; 0.50) n=566	58 (0.52; 0.64) n=279	70 (0.60; 0.78) n=112
BSA, mean (SD)	28.5 (21.71) n=689	12.1 (16.65) n=528	9.3 (13.90) n=262	7.6 (13.10) n=105
Dupilumab-experienced				
EASI, mean (SD)	16.9 (10.82) n=132	6.8 (7.99) n=92	5.9 (8.10) n=41	3.8 (5.70) n=20
EASI ≤7, % (95% CI)	26 (0.19; 0.34) n=132	70 (0.59; 0.79) n=92	76 (0.60; 0.88) n=41	80 (0.56; 0.94) n=20

BSA, body surface area; CI, confidence interval; EASI, Eczema Area and Severity Index; IGA, Investigator's Global Assessment; n, patients in the analysis set; SD, standard deviation.

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Abstract N°: 6131

Real-world effectiveness of tralokinumab in adults with atopic dermatitis: Interim data on improvements in patient-reported outcomes after up to 9 months of follow-up in the TRACE study

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Introduction & Objectives: Tralokinumab, a monoclonal antibody that specifically targets IL-13, is indicated for the treatment of moderate-to-severe atopic dermatitis (AD). Tralokinumab demonstrated efficacy and a favorable safety profile in clinical trials and real-world tralokinumab data are now becoming available. AD can result in severe itch and have negative consequences on quality of life (QoL) and sleep. Here, we evaluated the impact of tralokinumab treatment for up to 9 months on patient-reported outcomes (PROs) in an interim analysis (IA) of the non-interventional TRACE study.

Materials & Methods: TRACE is a prospective, non-interventional, international, single-cohort, up to 12-month study of adult patients with AD (enrolled between November 2021 and July 2023) who were prescribed tralokinumab according to national approved labels. At data cut-off (October 15th, 2023) for the IA, the following number of patients were included in the full analysis set (FAS): baseline (n=824), 3 months (n=668), 6 months (n=331), and 9 months (n=143). PROs collected included Peak Pruritus Numeric Rating Scale (PP-NRS), Dermatology Life Quality Index (DLQI), and/or Sleep Numeric Rating Scale (NRS), depending on use at each participating site.

Results: At baseline, the majority of patients were White (75.7%) and male (52.2%), and patients had a mean age of 44.1 years and a mean AD duration of 18.9 years. 42.7% of patients were categorized as “systemic and biologic naïve”, 32.4% as “systemic user but biologic naïve” and 24.9% as “biologic user”, with 23.9% dupilumab-experienced. The mean PP-NRS [0 (“no itch”) to 10 (“worst itch imaginable”)] improved from 6.3 at baseline (n=484) to 4.2 at 3 months (n=261), 3.5 at 6 months (n=125), and 3.3 at 9 months (n=65), while the proportion of patients who achieved PP-NRS ≤4 increased from 23% to 72% during the same 9-month period. Mean DLQI improved from 12.8 at baseline (n=446) to 7.0 at 3 months (n=246), 5.7 at 6 months (n=113), and 5.4 at 9 months (n=69), while the proportion of patients who achieved DLQI ≤5 (no to small effect on patient QoL) increased from 20% to 64% during the same 9-month period. Mean Sleep NRS [0 (“no sleep loss”) to 10 (“I did not sleep at all”)] improved from 5.0 at baseline (n=372) to 2.8 at 3 months (n=206), and 2.2 at both 6 months (n=94) and 9 months (n=59). The proportion of patients with Sleep NRS ≥3 at baseline who improved by ≥2 points increased from 65% at 3 months (n=142) to 68% at 6 months (n=65) and 82% at 9 months (n=39). Similar improvements in PP-NRS, DLQI, and Sleep NRS, from baseline to 9 months, were observed in dupilumab-experienced patients.

Conclusion: Treatment up to 9 months with tralokinumab improved AD patient-reported itch, QoL, and sleep quality in a real-world setting. More data will be available when the study is finalized.

Table 1: PROs after up to 9 months of follow-up in the TRACE study.

	Baseline (N=824)	3 months (N=668)	6 months (N=331)	9 months (N=143)
PP-NRS, mean (SD)	6.3 (2.6), n=484	4.2 (2.7), n=261	3.5 (2.7), n=125	3.3 (2.6), n=65
PP-NRS ≤4, % (95% CI)	23 (19; 27), n=484	52 (45; 58), n=261	68 (59; 76), n=125	72 (60; 83), n=65
DLQI, mean (SD)	12.8 (7.5), n=446	7.0 (6.0), n=246	5.7 (5.6), n=113	5.4 (5.4), n=69
DLQI ≤5, % (95% CI)	20 (16; 24), n=446	49 (43; 56), n=246	64 (54; 73), n=113	64 (51; 75), n=69
Sleep NRS, mean (SD)	5.0 (3.2), n=372	2.8 (2.8), n=206	2.2 (2.6), n=94	2.2 (2.5), n=59
Sleep NRS ≥2-pt reduction*, % (95% CI)	-	65 (57; 73), n=142	68 (55; 79), n=65	82 (66; 92), n=39

*In patients with Sleep NRS ≥3 at baseline.

CI, confidence interval; DLQI, Dermatology Life Quality Index; n, patients in the analysis set; NRS, Numeric Rating Scale; PP-NRS, Peak Pruritus Numeric Rating Scale; PROs, patient-reported outcomes; SD, standard deviation.

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Abstract N°: 6135

Individual responses to IL-22RA1 inhibition in Asian patients with moderate-to-severe atopic dermatitis in Phase 1 and 2a clinical trials

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Introduction & Objectives: Atopic dermatitis (AD) is considered to be a chronic, Type 2 inflammatory skin disease in which increased interleukin (IL)-22 expression contributes substantially to epidermal hyperplasia and barrier defects. The Asian AD phenotype presents as a blend of European ancestry AD and psoriasis-like phenotypes, with Asian AD patients exhibiting higher levels of T helper (Th) 17 and Th22 inflammation, including increased IL-22, compared to patients of European ancestry. Selective therapeutic approaches against the Th22 pathway will help elucidate its contribution to various AD endotypes. Temtokibart (LEO 138559) is a monoclonal antibody that specifically targets the IL-22 receptor subunit alpha-1 (IL-22RA1). In a phase 2a trial in patients with moderate-to-severe AD (NCT04922021), 16 weeks of temtokibart was well-tolerated and led to significantly greater proportions of patients, vs placebo, achieving EASI-75 (41.6% vs 13.7%), EASI-90 (30.8% vs 3.5%), and EASI-100 (20.9% vs 0%). Here, we examined individual responses to IL-22RA1 inhibition in Asian patients across temtokibart phase 1 and 2a trials for AD.

Materials & Methods: We performed a post hoc analysis of temtokibart phase 1 and 2a clinical trials presenting individual patient-level EASI and Itch NRS data, including using last observation carried forward for patients discontinuing study drug. In the phase 1 trial (NCT03514511), one patient received 2, and one patient 5, weekly SC doses of temtokibart 450 mg. In two phase 2a trials (NCT05470114, NCT04922021) patients received temtokibart 450 mg SC every 2 weeks for 16 weeks with an additional dose at Week 1. Patients from the US, UK, Canada, and Austria who self-reported their race as Asian (phase 1, n=2; phase 2a, n=5) were included in the analysis.

Results: Among the 7 Asian patients, the mean age was 32.7 years, mean weight was 70.4 kg, and 5 were female. At baseline, patients exhibited a mean EASI of 21.6 and mean Itch NRS of 8.1. At Week 1, 4 of 5 patients with available data showed improvement in EASI from baseline, ranging from 29.3% to 53.8%, and all 5 patients showed a reduction in Itch NRS, ranging from -0.2 to -2.4. At Week 4, all 7 patients showed improvement in EASI from baseline, with 85.7% (6/7) and 42.9% (3/7) achieving EASI-50 and EASI-75, respectively. At Week 16, 100% (7/7), 71.4% (5/7), 57.1% (4/7), and 14.3% (1/7) of patients achieved EASI-50, EASI-75, EASI-90, and EASI-100, respectively. Although only receiving treatment for 2 and 5 weeks, both phase 1 trial patients achieved 99% improvement in EASI at Week 16. Additionally, 40% (2/5) and 80% (4/5) of patients achieved ≥4-point improvement from baseline in Itch NRS at Weeks 4 and 16, respectively. No patients used rescue medication through Week 16. Temtokibart was well-tolerated in Asian patients and the safety profile was consistent with that observed in overall temtokibart trial populations.

Conclusion: Although the sample size is small, these data are the first to indicate that targeting the IL-22 pathway with an anti-IL-22RA1 antibody in Asian AD patients can provide early and substantial/profound clinical responses. Notably, strong responses at Week 16 in two phase 1 trial patients, despite no treatment for 3 months, suggests a potential for less frequent dosing with temtokibart.

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Abstract N°: 6167

Patients' Perception of the Impact of Moderate to Severe Atopic Dermatitis on their Sexual Well-Being: Comparison of Pre- and Post- Treatment with Advanced Therapies

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Introduction & Objectives:

Atopic dermatitis (AD) is a chronic inflammatory skin disease. AD is associated with a significant negative impact on the quality of life (QoL) of affected patients. Studies have shown that patients with AD experience severe itching, sleep disturbances, poor body image, and strain on personal relationships. However, limited literature exists on the impact of AD on sexual well-being. In this study, we aim to evaluate the impact of moderate-to-severe atopic dermatitis (MtS-AD) on the sexual well-being of affected patients, and to assess the effects of advanced therapies, specifically abrocitintib and dupilumab, on sexual health.

Materials & Methods:

Adult patients (≥ 18) years or more with MtS-AD completed a questionnaire about their sexual well-being at baseline and after 52 weeks of treatment with advanced therapies (abrocitinib or dupilumab) for AD. We employed a questionnaire featuring eight simple questions with dichotomous responses, utilizing "yes" and "no" options. A retrospective review of their responses at baseline and week 52 of treatment. Additionally, their electronic records were reviewed including data about demographic information, duration of AD, involvement of genital and/or buttocks area, PGA score, DLQI scores before and after 52 weeks of treatment.

Results:

Mean age was 30.8 (range: 18-56) and 43.2% were female. Genital and/or buttocks involvement was reported in approximately 32% of patients. All patients had PGA scores of 2 or more, and all patients had DLQI scores reflecting moderate, large or extremely large impact on QoL. At baseline, 88.6% of participants reported that AD skin changes affected their sexual well-being. Additionally, 79.5% felt unattractive, 68.2% avoided sexual activity, 68.2% felt ashamed or embarrassed, and 56.8% experienced rejection. Treatment with dupilumab and abrocitinib resulted in a statistically significant decrease in the proportion of patients answering "yes" to questions regarding the overall impact of AD on sexual well-being, feeling unattractive, avoiding sexual activity, feeling ashamed/embarrassed, experiencing rejection, feeling pain, and enduring burning sensations ($p<0.001$).

Conclusion:

MtS-AD poses a significant impact on the sexual well-being of affected patients. Our study suggests that treatment with advanced therapies, specifically abrocitinib and dupilumab, can significantly improve this aspect of patients' well-being. Limitations of the study include the survey design, the absence of a validated scoring system to assess sexual well-being of patients with inflammatory skin diseases, and the small sample size.

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Abstract N°: 6180

Raising the bar of efficacy in atopic dermatitis: lebrikizumab maintains depth of response over 2 years

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Introduction & Objectives: ADvocate1 and ADvocate2 are identically designed Phase 3 trials that evaluated Lebrikizumab (LEB) as a monotherapy treatment for moderate-to-severe atopic dermatitis (AD). Many patients who met the protocol-defined response criteria at Week 16, defined as achieving ≥75% improvement in the Eczema Area and Severity Index (EASI 75) or an Investigator's Global Assessment of 0 or 1 (IGA 0/1) without use of rescue therapy, maintained a deep response up to Week 52. Deep response defined: IGA 0 (clear skin), a 100% improvement in the Eczema Area and Severity Index (EASI 100), or a Pruritus Numeric Rating Scale score of 0/ 1 (Pruritus NRS 0/1). Patients completing Week 52 were given the option to roll over into a long-term extension (LTE) study, ADjoin, allowing the opportunity to analyze deep response for a longer period. This post hoc analysis evaluates long-term maintenance of LEB's depth of response for up to 104 weeks of treatment (52 weeks in the ADvocate studies and 52 weeks in the ADjoin study).

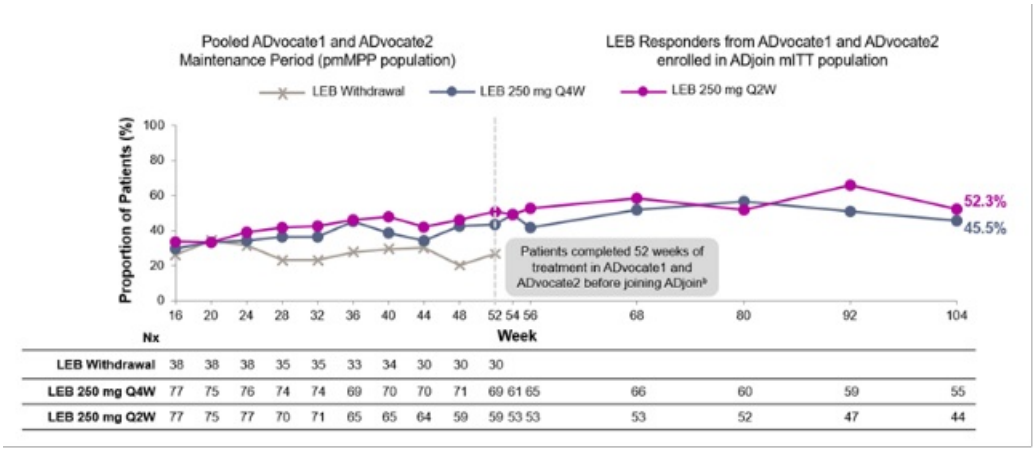
Materials & Methods: Patients entering ADjoin from ADvocate1 and ADvocate2 continued taking the same LEB dose as the parent study. Patients receiving placebo (LEB withdrawal) during the maintenance period of ADvocate1 and ADvocate2 transitioned to receive LEB every 2 weeks (Q2W) during ADjoin (data not included in this analysis). The proportion of patients achieving IGA and EASI responses were calculated from the LEB-treated patients who were IGA 0/1 or EASI 75 responders, respectively, at Week 16 in ADvocate1 and ADvocate2. The proportion of patients achieving a Pruritus NRS 0/1 response were calculated from the LEB patients who were per protocol responders at Week 16 of ADvocate1 and ADvocate2. Each patient's absolute Pruritus NRS score was calculated by averaging daily scores from the previous seven days with at least one nonmissing value. The weekly score was then rounded to the nearest integer. Consistent with common reporting practices for LTE studies, this analysis reports observed data which were analyzed regardless of rescue medication use or treatment discontinuation.

Results: From Week 52 to Week 104, the proportion of IGA 0 responders was maintained and slightly increased in patients treated with LEB Q2W (50.8% [N=59] to 52.3% [N=44]) and LEB every 4 weeks (Q4W; 43.5% [N=69] to 45.5% [N=55]). Greater improvements over the second year of treatment were seen in the proportion of EASI 100 responders treated with LEB Q2W (36.4% [N=88] to 39.7% [N=68]) and LEB Q4W (30.7% [N=101] to 41.3% [N=80]) as well as the proportion of Pruritus NRS 0/1 responders treated with LEB Q2W (46.3% [N=80] to 57.4% [N=61]) and Q4W (47.9% [N=94] to 55.4% [N=65]). Although rescue medication was allowed during ADjoin, a relatively low proportion of patients received ≥1 topical rescue medication in the LEB Q2W (9.8%) and LEB Q4W (15.2%) treatment arms.

Conclusion: These 2-year results demonstrate an extended maintenance of deep response in patients treated with

LEB Q2W and LEB Q4W after responding to 16 weeks of LEB Q2W. Approximately 50% and 40% of LEB-treated patients sustained total skin clearance (IGA 0 and EASI 100, respectively) and more than 55% of LEB-treated patients reported no or minimal itch (Pruritus NRS 0/1). Maintenance treatment with LEB Q2W and LEB Q4W allows patients and providers to elevate their expected treatment goals in AD beyond EASI 75 and IGA 0/1 response.

Figure 1: Proportion of ADvocate1 and ADvocate2 Lebrikizumab Responders Enrolled in ADjoin and Maintaining IGA 0[a]



[a]As Observed analysis by visit, based on pmMPP population who were IGA 0/1 responders at Week 16 of the parent study. ADvocate2 analyses were performed on a modified population, excluding 14 patients (from a single study site) whose eligibility could not be confirmed. [b]Not all patients completing ADvocate1 and ADvocate2 were enrolled to ADjoin.

IGA 0=Investigator's Global Assessment score of 0; LEB=Lebrikizumab; mITT=Modified Intent-to-Treat; Nx=Number of Patients with Non-Missing Values; pmMPP=Pooled Modified Maintenance Primary Population; Q2W=Every 2 Weeks; Q4W=Every 4 Weeks.

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Abstract N°: 6219

Efficacy and Safety of Nemolizumab in Adolescents with Moderate-to-Severe Atopic Dermatitis: A Sub analysis from Two Phase 3 Randomised Clinical Trials (ARCADIA 1 and ARCADIA 2) after 16 weeks

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Introduction & Objectives: Atopic dermatitis (AD) is a chronic inflammatory skin disease characterized by intense itch and eczematous lesions, which affects about 25% of children worldwide. Nemolizumab, a potential first-in-class interleukin-31 receptor alpha antagonist, has demonstrated rapid and significant improvements in skin lesions and itch with a favorable safety profile in two identically designed global phase 3 studies in adult and adolescent patients with moderate-to-severe AD. In the current sub-analyses, we evaluated efficacy of nemolizumab in adolescent patients in the initial 16- week treatment period.

Materials & Methods: Data for adolescent patients were pooled from the initial 16-week treatment period of two 48-week randomised, placebo-controlled double-blind, phase 3 studies (ARCADIA 1 [NCT03985943; N=941] and ARCADIA 2 [NCT03989349; N=787]). Eligible patients (12-17 years old) with moderate-to-severe AD and associated pruritus were randomly assigned (2:1) to either nemolizumab 30 mg (60 mg at baseline [BL]) or placebo, administered subcutaneously every 4 weeks (Q4W) with concomitant background topical corticosteroids (TCS) of low/medium potency with or without topical calcineurin inhibitors (TCI). The key endpoints analysed include Investigator's Global Assessment (IGA) success (IGA score of 0/1 [clear/almost clear skin] with a reduction of ≥2 points from BL) at Week (W) 16 and ≥75% improvement in the Eczema Area and Severity Index (EASI-75) at W16. Considering that these are analyses in sub-populations, none of the analyses were powered to assess the efficacy in the patient group. Additionally, other endpoints included evaluation of itch response (≥4-point improvement in Peak Pruritus Numerical Rating Scale [NRS] score at W16 and earlier timepoints) and an improvement in sleep disturbance (≥4-point improvement in Sleep Disturbance NRS score) at W16. Safety was assessed throughout the study.

Results: A total of 266 adolescents were included in both studies and had an average age of 14 years. At W16, improvement in skin lesions was achieved; 48.9% of patients (nemolizumab) vs 34.4% (placebo) achieved IGA success and 53.4% (nemolizumab) vs 43.3% (placebo) achieved EASI-75. A higher proportion of nemolizumab- vs placebo-treated patients showed an early and sustained improvement in itch (Peak Pruritis NRS response: 26.1% vs 4.4% at W4 and 40.9% vs 17.8% at W16). An improvement in sleep disturbance was observed in a higher proportion of patients in the nemolizumab vs placebo group at W16 (31.8% vs 20.0%) across both studies. The safety profile was consistent between nemolizumab- and placebo-treated arms. Most treatment-emergent adverse events were non-serious and mild or moderate in severity.

Conclusion: Overall, nemolizumab Q4W with background TCS/TCI was well tolerated among the adolescents and led to clinically meaningful improvements in core signs and symptoms of moderate-to-severe AD as previously

reported in the adult population of the two ARCADIA studies. Resolution of itch was rapid and sustained through W16. Reduced sleep disturbance was also sustained through W16.

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Abstract N°: 6220

Impact of the COVID-19 pandemic waves on adults with moderate-to-severe atopic dermatitis in the Dutch general population

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Introduction & Objectives:

The COVID-19 pandemic has gone through several waves worldwide and caused substantial health impacts on populations. Moreover, atopic dermatitis (AD), as a common inflammatory chronic skin disease, has significant impact on patients' quality of life (QoL). However, few studies have examined the impact of multiple COVID-19 waves on populations with AD. Therefore, this study aims to investigate the impact of COVID-19 waves on mental health, pandemic-related well-being, and social functioning on moderate-to-severe atopic dermatitis (AD) and non-AD participants in the Dutch general population.

Materials & Methods:

The current study was conducted within the Lifelines COVID-19 cohort study, which aims to broadly investigate the impact of COVID-19 pandemic on the Dutch population. A total of 31 COVID-19 questionnaires (COVQs) were continuously sent to adult Lifelines participants (n=167,729) between 2020-2022 to collect data on mental health (major depression disorder (MDD), generalized anxiety disorder (GAD)), pandemic-related well-being (COVID-19-related concerns, QoL), and social functioning (loneliness, social relations). According to the COVID-19 timeline, growth speed of daily confirmed cases, and the reproduction number in the Netherlands, COVQs were divided into three waves: March-June 2020 (wave1); July 2020-June 2021 (wave2); July 2021-October 2022 (wave3). AD information was collected through a digital questionnaire sent to all the adult Lifelines participants in 2020. Generalized linear mixed models (GLMMs) were performed for each health outcome, with additional adjustment for age and sex. Results were shown as odds ratio (OR) and 95% confidence interval (CI) for categorical outcomes, estimate and standard error (SE) for continuous outcomes.

Results:

A total of 49,216 participants who completed 790,936 COVQs were included. Compared with wave1, the prevalence of current GAD (OR (95%CI): 0.87 (0.83-0.91)), COVID-19-related concerns (estimate (SE): -1.10 (0.01)), loneliness (-0.50 (0.005)), and social relations (-0.72 (0.01)) were decreased during wave3, and QoL (0.24 (0.01)) was improved during the third wave. Moreover, the prevalence of current MDD increased during wave2 (1.92 (1.75-2.12)), but decreased during wave3 to a level similar to that of wave1 (wave3: 1.02 (0.92-1.14)). Furthermore, participants with moderate-to-severe AD, females, and young adults (18-29 years old) reported significantly worse mental health status, more impaired pandemic-related well-being, and poorer social functioning than their counterparts.

Conclusion:

Compared with the first wave of COVID-19, the overall health status of both participants with moderate-to-severe AD and non-ADs were recovered during the third wave. However, future study should find solutions to enhance the impaired social relations, and pay more attention to the health of higher-risk groups, such as females, young

adults and individuals with moderate-to-severe AD.

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Abstract N°: 6228

Absolute response of lebrikizumab at Week 52 in patients with moderate-to-severe atopic dermatitis who did not achieve protocol-defined response after initial 16 weeks of treatment

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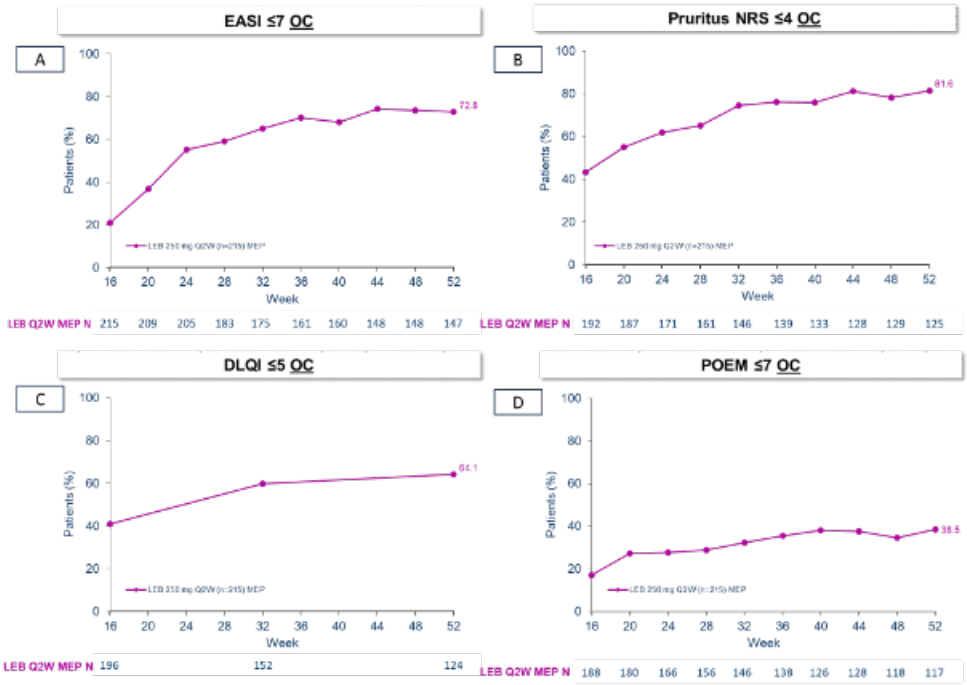
Introduction & Objectives: Lebrikizumab (LEB) is a monoclonal antibody that binds with high affinity and slow off-rate to interleukin (IL)-13, thereby blocking the downstream effects of IL-13 with high potency. Efficacy based on absolute values is considered clinically relevant as they show response and remaining disease regardless of baseline severity. Here, we present week 52 absolute response of LEB in patients who did not achieve protocol-defined criteria for response after initial 16 weeks of treatment in ADvocate1 (NCT04146363) and ADvocate2 (NCT04178967) clinical trials (pooled data).

Materials & Methods: ADvocate1 and ADvocate2 were two identically designed, randomized, placebo-controlled, monotherapy Phase 3 trials assessing efficacy and safety of LEB in adult patients (≥18 years) and adolescents (12 to <18 years, ≥40 kg) with moderate-to-severe AD. Non-responders at W16 were defined as patients who did not achieve a 75% reduction in the EASI from baseline (EASI 75) or an Investigator Global Assessment (IGA) 0/1 with a ≥2-point improvement from baseline, or who received rescue medication. Non-responders to LEB at W16 were assigned to the escape arm (Maintenance Escape Population, MEP) and continued to receive LEB 250 mg every two weeks (Q2W) up to W52. Low- and mid-potency topical corticosteroids (TCS) use was permitted during this period. The proportion of patients who did not respond to LEB at W16 but had continuous improvement from W16 up to W52, achieving Eczema Area and Severity Index (EASI) of ≤7 (indicating mild disease), Pruritus Numeric Rating Scale (NRS) ≤4 (mild severity), Dermatology Life Quality Index (DLQI) ≤5 (minimal effect on patient's quality of life, QoL), and Patient Oriented Eczema Measure (POEM) ≤7 (mild patient-reported symptoms) are reported here. For Pruritus NRS ≤4 assessment, only patients with Pruritus NRS >4 at baseline were included. For DLQI ≤5 assessment, patients with DLQI >5 at baseline were included. For POEM ≤7 assessment, only patients with POEM >7 at baseline were included. Data are presented as observed cases (OC) with no imputation for missing data or for patients receiving rescue medication after Week 16.

Results: In the** pooled population of patients who did not achieve the per protocol-defined response criteria at W16 (N=215) and continued to receive LEB 250 mg Q2W up to W52, 72.8% of patients achieved EASI ≤7 (Figure 1A) and 81.6% achieved Pruritus NRS ≤4 at W52 (Figure 1B). 64.1% of patients achieved DLQI ≤5 (Figure 1C) at W52 and 38.5% of patients achieved POEM ≤7 at W52 (Figure 1D).

Conclusion: Despite not meeting the W16 per-protocol response definition, a high percentage of LEB initial partial responders reported meaningful improvements in different dimensions of the disease (skin, itch, QoL) at W16, and continued to improve through W52. Continuing long-term therapy with LEB beyond 16 weeks can lead to high levels of response up to Week 52, even in cases where short-term treatment benefit is not optimal.

Figure 1


EASI ≤7 OC
A
Patients (%)
Week
72.8
LEB Q2W MEP N 215 209 205 183 175 161 160 148 148 147
Pruritus NRS ≤4 OC
B
Patients (%)
Week
81.6
LEB Q2W MEP N 192 187 171 161 146 139 133 128 129 125
DLQI ≤5 OC
C
Patients (%)
Week
64.1
LEB Q2W MEP N 196 152 124
POEM ≤7 OC
D
Patients (%)
Week
38.5
LEB Q2W MEP N 188 180 166 156 146 138 126 128 118 117

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Abstract N°: 6235

Prevalence and factors associated with the use of dermocosmetics) by patients with atopic dermatitis: a worldwide study in 20 countries : The results of ALL project

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Introduction & Objectives:

Dermo cosmetics (DC) are formulated to enhance the skin barrier function and regulate transepidermal water loss. DC is advised as an initial treatment in various guidelines for Atopic Dermatitis (AD). Both clinical and experimental data suggest that moisturizers rich in lipids can facilitate healing and reduce the likelihood of Atopic Dermatitis recurrence . This study aimed to evaluate the prevalence of Dermo cosmetics usage among Atopic Dermatitis patients and explore the utilization rates of conventional treatments, such as topical and systemic medications, among Dermo cosmetics users.

Materials & Methods:

This online survey was conducted among a representative sample of the population of AD patients aged 16 years or older from 20 countries. The questionnaire focused on patient experience. It collected information on demographics, any dermatological conditions in the past 12 months, type of physician and therapeutic management. The main analysis of this study was the prevalence of use of one or more DCs available in pharmacies without physician prescription, alone or in combination with standard treatments for atopic dermatitis, during the 12 months preceding the survey. The secondary analysis was a comparison of emollient and non-emollient users to evaluate predictors: socio-demographic, clinical parameters and treatments used to treat psoriasis. Descriptive analyses were performed using absolute and percentage frequencies. The significance test was two-tailed and set at 5% ($p \leq 0.05$). Student's t-test and Pearson's chi-squared were used to compare Atopic Dermatitis subjects who reported using DC with those who did not.

Results:

A population of 2514 Atopic Dermatitis patients was selected, including 1156 (46%) males and 1358 (54%) females (mean age 44.8 +/- 14.7years). min 17-88years. Among the responders, 536(21.3%) use DC as part of the therapeutic management of AD. 253(47,2%) Dermo cosmetics users use a DC only for the treatment of Atopic Dermatitis. 274(51,1%) were prescribed a DC by their doctor,126 (23,5%) on the sole advice of a pharmacist and 5(0.9%) on the advice of a nurse. 174(32,5%) chose their own DC without consulting a health professional. 124(23,1%) use a systemic treatment in combination with a DC, including 13 (2,4%) injectable treatments for Atopic Dermatitis. 159(29,7%) use a DC in combination with local dermo corticoid treatment. 289(53,9%) use a Dermo cosmetics daily,216 (40,3%) twice a day (morning and evening) and 31(5,8%) three or more times a day.273(50,9%) stated that the cost of dermo cosmetics prevented them from using them more frequently. 175(32,6%) also used hygiene products and skincare products adapted to psoriasis, 157(29,3%) only skincare products and 83(15,5%) only hygiene products. Age (46.3 vs 44.3 years, $p \leq 0.05$)and female gender (62.1% vs 51.8%, $p \leq 0.05$) were predictive of Dermo cosmetics use. Of the 1978 respondents who did not use DC, 793(%) reported that the cost of Dermo cosmetics had prevented them from using it.

Conclusion:

This is the first study to assess the prevalence of Dermo cosmetics in patients with AD. This study needs to be complemented by more mechanistic research into why people choose to use DC and the impact of Dermo cosmetics on the wellbeing and quality of life of people with AD

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Abstract N°: 6240

Assessing disease control in patients with atopic dermatitis by using the Atopic Dermatitis Control Tool (ADCT) in daily practice

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Introduction & Objectives:

Atopic dermatitis (AD) is a chronic inflammatory skin disease, placing a significant burden on patients' quality of life (QoL). The validated Atopic Dermatitis Control Tool (ADCT) is recommended to assess AD control in adults. The aim of this study is to assess AD control and explore associations with demographic characteristics, patient-reported outcome measures (PROMs), and treatment.

Materials & Methods:

In this cross-sectional study, questionnaires were sent to 2066 adults from two tertiary referral centers who had previously physician-diagnosed AD and had visited the outpatient clinic at least once between 2020-2022. Questionnaires were completed between May and October 2022. AD control was assessed by the ADCT, with a score ≥7 indicating uncontrolled AD. AD severity, QoL and weekly average pruritus were simultaneously measured using the Patient-Oriented Eczema Measure (POEM), Dermatology Life Quality Index (DLQI), and Numeric Rating Scale (NRS), respectively, with higher scores indicating more severe symptoms. Moreover, treatment-related questions were included. Associations between uncontrolled AD, age, sex and treatment were explored using multivariate logistic regression analysis.

Results:

In total, 863 patients (41.8%) filled out the questionnaire and 812 were included in the analysis, of which 59% reported controlled AD. Uncontrolled AD was associated with higher PROMs scores and receiving topical anti-inflammatories only (adjusted odds ratio (95% confidence interval) ranged from 1.33 (0.995-1.88) to 2.55 (2.21-2.86)). Of those treated with topical anti-inflammatories only, 54% reported uncontrolled AD. Furthermore, 28.5% of patients receiving systemic treatment for more than 16 weeks reported uncontrolled AD.

Conclusion:

The majority of the patients reported controlled AD. Patients with uncontrolled AD often reported more severe symptoms and were more likely to receive topical anti-inflammatories only. Although topicals being the mainstay treatment for AD, patients with uncontrolled AD may be considered for switching from topical to systemic treatment. Future studies should investigate the benefits to patients and health care professionals of using ADCT in daily practice in a longitudinal setting.

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Abstract N°: 6252

Dupilumab Improved Quality of Life in Patients With Localized Atopic Hand Dermatitis

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Introduction & Objectives: Atopic hand dermatitis has a substantial negative impact on the health-related quality of life (HRQoL) of patients, even in those with no/mild atopic dermatitis (AD) in other body areas. The objective of this study was to determine the effect of dupilumab vs placebo on the Quality of Life in Hand Eczema Questionnaire (QoLHEQ), overall and by domain, in patients with atopic hand dermatitis but no/mild AD beyond the hands and feet.

Materials & Methods: This was a post hoc analysis of data from the phase 3, randomized, double-blind, placebo-controlled LIBERTY-AD-HAFT (NCT04417894) study in patients ≥12 years of age with moderate-to-severe atopic hand and/or foot dermatitis (Hand and Foot Investigator's Global Assessment [HF-IGA] 3/4). Patients in LIBERTY-AD-HAFT received dupilumab monotherapy (300 mg [adults] or 200/300 mg according to body weight [adolescents]), or placebo, every 2 weeks for 16 weeks. Only patients with atopic hand dermatitis, but no/mild AD (global IGA score ≤2) outside the hands and feet, were included in this analysis. The validated QoLHEQ instrument, with a minimally important change (MIC) of ≥22-point reduction from baseline, was used to evaluate impairment in HRQoL (scale 0–117: 0–10 = not at all impaired, 11–39 = slightly impaired, 40–61 = moderately impaired, 62–86 = strongly impaired, ≥87 = very strongly impaired).

Results: Data from 60 patients (45% of the total trial population) were analyzed (n = 30 for each dupilumab and placebo). All patients had hand dermatitis, and 41.7% of patients had hand and foot dermatitis. The baseline demographic and disease characteristics were generally balanced between treatment groups. At baseline, the mean (standard deviation [SD]) QoLHEQ was 64.0 (23.8) and 89.9% of patients reported a score corresponding to "moderate" to "very strong" impaired QoL. At Week 16, a greater proportion of patients in the dupilumab vs placebo group achieved the MIC of ≥22-point reduction from baseline in QoLHEQ (72.4% vs 37.9%, respectively; $P < 0.05$), with a significant benefit for dupilumab vs placebo evident from week 4 onwards. Treatment with dupilumab vs placebo led to a greater improvement (reduction) from baseline at Week 16 in the QoLHEQ overall score (65.9 to 34.0 vs 62.0 to 46.4; $P < 0.05$, respectively), and in scores for each of the 4 QoLHEQ domains (Symptoms, Emotions, Functioning, and Treatment/Prevention). At Week 16, the proportion of patients reporting scores corresponding to "not at all/slightly" impaired QoL was numerically greater in the dupilumab group vs placebo group for the QoLHEQ overall (66.6% vs 43.3%), as well as for each of the 4 domains. Safety was consistent with the known dupilumab safety profile.

Conclusion: Patients with moderate-to-severe atopic hand dermatitis reported strongly impacted HRQoL, despite the relatively small area of body surface affected. Treatment with dupilumab for 16 weeks provided significant and clinically meaningful improved QoL in patients with localized atopic hand dermatitis.

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Abstract N°: 6273

Severe atopic dermatitis along with anhidrotic ectodermal dysplasia treated with baricitinib.

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Introduction & Objectives: Ectodermal dysplasia is a group of rare inherited disorders of at least two ectodermal structures, resulting in their deformity or/and dysfunction. The most common form is X-linked hypoidrotic ectodermal dysplasia (XLHED). Atopic dermatitis (AD) is a common comorbidity in these patients, because of the epidermal barrier disruption due to anhidrosis/hypohidrosis. There is very poor data in the literature about the use of JAK inhibitors for the treatment of severe AD on an ectodermal dysplasia background.

Materials & Methods: A 7-year-old male patient presented with severe AD, with continuous relapses despite the use of topical and systemic treatment and repetitive hospitalizations due to impetiginization of his eczema, with the need of intravenous administration of antibiotic therapy. The patient has XLHED, confirmed by genetic testing with a c.595-613del EDA mutation, which is pathogenic for the disease.

Results: Due to patient's genodermatosis, a severe exacerbation of AD with severe complications, such as repetitive infections, was observed. Incomplete response using topical treatment and systemic corticosteroids was noticed. According to the available guidelines by the clinical presentation, the only approved systemic treatment for the patient's age, dupilumab (anti-IL4/13), was chosen, with an inadequate response after a four month-administration. Afterwards, JAK1,2 inhibitor, baricitinib was approved for the treatment of severe AD in paediatric population over 2 years old and was therefore selected for the abovementioned patient.

Conclusion: It is assumed that EDA-genes mutations activate JAK signaling through defective activation of NF-κB pathway and upregulation of inflammatory cytokines. JAK inhibitors could potentially be a favorable treatment for patients with AD along with ectodermal dysplasia.

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Abstract N°: 6309

Efficacy and tolerance of a prebiotic and panthenol-containing multipurpose healing dermocosmetic on patients with dry eczematides: Results of an international observational study

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Introduction & Objectives:

Dry eczematides, are characterized by dry plaques with indistinct redness, or pityriasiform aspect, occurring on different parts of the body or face. While the exact causes can vary, factors like environmental irritants, changes in temperature, sun exposure, with underlying skin conditions such as xerosis or atopic dermatitis often contribute to their development. A multipurpose healing dermocosmetic (DC) containing prebiotic active ingredients (Aqua Posae Filiformis, a prebiotic complex made of ferments, sugars and plant extracts, panthenol, madecassoside, and zinc) may be a very interesting solution.

Materials & Methods:

This observational study encompassed 17 countries and enrolled patients of all ages presenting with dry eczematides. Treatment response was defined as a reduction of at least one severity grade on a five-point scale assessing the characteristic features of eczematides. Clinical evaluations conducted by dermatologists, general practitioners, or pediatricians, along with patient self-assessments, were performed at baseline and at the end of the study visit. Additionally, the Dermatology Life Quality Index (DLQI) and Children's Dermatology Life Quality Index (cDLQI) were employed to assess the impact of dry eczematides on patients' quality of life.

Results:

The study included 1243 patients with dry eczematides, the majority (59.9%) being female, with an average age of 29.6 years (SD=22.9), and 33.3% having phototypes IV to VI. The DC formulation was primarily applied twice or thrice daily (78.2%) by the patients. Lesion sizes varied, 27.3% being between 1 and 2 cm^2, 48.4% between 3 and 10 cm^2, and 24.2% exceeding 10 cm^2. Following an average treatment duration of three weeks, significant improvements were observed across various clinical parameters. Erythema showed improvement in 77.0% of patients (P-value <0.001), while desquamation and cracks improved in 80.5% (P-value <0.001) and 81.0% (P-value <0.001) of patients, respectively. Furthermore, 86.0% of patients reported reduced burning sensations (P-value <0.001). The overall quality of life, as measured by DLQI and cDLQI, demonstrated significant improvement. Adults experienced an average improvement of 69.6% (P-value <0.001), while children showed a 71.3% improvement. Notably, the product exhibited a good tolerance rate of 87.0%.

Conclusion:

This study demonstrates that daily use of the DC may significantly improve dry eczematides and enhanced patients' quality of life. Both clinical assessments and patient self-evaluations revealed substantial reductions in erythema, desquamation, cracks and burning, leading to a notable decrease in the disease's impact. The good tolerance profile further supports the DC formulation as a promising approach for managing dry eczematides.

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Abstract N°: 6332

Dupilumab Improves Patient-Reported Symptom Control Among Adults With Moderate-to-Severe Atopic Dermatitis in Clinical Practice: 5-Year Follow-Up Results From the RELIEVE-AD Study

Bruce Strober[1, 2], Jason Wang*[3], Min Yang[4], Jingdong Chao[3], Bruno Martins[4], Kerry Noonan[5], Brad Shumel[3], Debra Sierka[5], Alexa B. Kimball[6]

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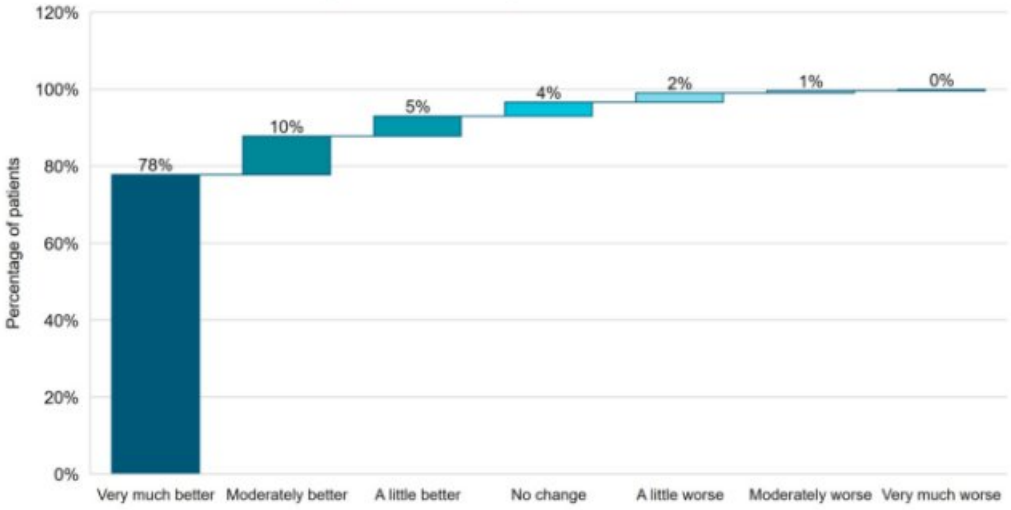
Introduction & Objectives: In the RELIEVE-AD study, adults with moderate-to-severe atopic dermatitis (AD) initiated dupilumab in real-world clinical practice.1 Results showed that dupilumab treatment resulted in significant improvement in disease control, skin symptoms, sleep, quality of life, treatment satisfaction, and reduction in use of concomitant AD treatments up to 4 years. 1-4 Here we report 5-year patient-reported symptom control data from RELIEVE-AD.

Materials & Methods: RELIEVE-AD is a single-arm, prospective, observational study including adults with moderate-to-severe AD prescribed dupilumab and enrolled in the US dupilumab patient support program who agreed to participate in online surveys at baseline (BL) and Months (M) 1, 2, 3, 6, 9, 12, 33, 48, and 60. The outcomes presented here are global change in itch since dupilumab initiation, evaluated using a 7-point Likert scale ranging from "very much better" to "very much worse"; absence of flares (increased itching/redness and/or new/spreading lesions) reported in the previous 4 weeks; skin sensations (pain, hot/burning, sensitivity) in the past week (0 – no symptoms to 10 – worst symptoms); and AD-related sleep problems reported in the past week. Statistical significance analysis was conducted using generalized estimating equations to account for correlated data from the same patients. Normal distributions with an identity link function were used for continuous outcomes, and binomial distributions with a logit link function were used for categorical outcomes. Only patients who responded to at least one of the M33 or M48 surveys were contacted for the M60 survey.

Results: Among 471 patients at BL who responded at M33 and/or M48, 329 patients completed the M60 survey. At BL, mean age was 46.0 years and 62,4% were female; common comorbidities included 36,9% non-seasonal allergies, 31,8% asthma. 78% of patients reported their itch as "very much better" at M60 (**Figure 1**). 43,2% of patients reported no flares over the last 4 weeks at M60, compared to 3,4% at BL ($P < 0.001$ for all time points vs BL). Skin sensations such as skin pain, skin feeling hot/burning, and skin sensitivity improved significantly as early as M1 following dupilumab treatment, and were maintained throughout the study period up to M60 ($P < 0.001$ for all time points vs BL). AD-related sleep problems were reported by 77,9% of patients at BL, decreasing to 24,9% at M1 and 12,5% at M60 ($P < 0.001$ for all time points vs BL).

Conclusion: Dupilumab treatment in real-world clinical practice led to rapid and sustained improvements in multiple patient-reported AD symptoms (itch, flares, skin sensations, and sleep problems) over 5 years.

Figure 1: Global Change in Itch at Month 60 [1]



[1] Question: "Please choose the response below that best describes the overall change in your itching now compared to just before you started taking dupilumab."

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\1. Strober B, et al. JAMA Dermatol 2022;158:142-150.

\2. Strober B, et al. JAAD 2022;87:AB47.

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\4. Wang Z, et al. poster communication, Abstract N°: 5011, EADV 2023

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Abstract N°: 6339

Atopic dermatitis in the French West Indies and French Guiana: clinical, biological, histological and therapeutic aspects

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Introduction & Objectives: Atopic dermatitis is a very common inflammatory dermatosis. Differences in clinical presentation according to phototype or ethnicity have already been reported in the literature, but very few data are available for the French West Indies and French Guiana. We aimed to establish a clinical description of atopic dermatitis in patients from the French West Indies and French Guiana, according to their phototype or ethnicity, and to determine their biological, histological and therapeutic features.

Materials & Methods: We conducted a prospective observational study between October 2022 and October 2023. All patients consulting a dermatologist (hospital or one of the private practice investigators) in Martinique, Guadeloupe or French Guiana with a clinical diagnosis of atopic dermatitis were eligible for inclusion. Data were collected using interviewer-administered questionnaires.

Results : 92 patients were included, about two-thirds in French Guiana and one-third in Martinique, mainly in hospitals (94.6%). More than half of the patients were of Afro-Caribbean origin. The most frequently described lesions were xerosis (78.3%), erythema (63%) and scaling skin (52.2%). Hyperpigmentation and lichenification affected around half of patients. The most frequent locations were the limbs (90.2%) and the trunk (51.1%). The two most common treatments were topical steroids (88%) and emollients (83%). Only one case of impetigo was reported with topical steroids. Ciclosporin was poorly tolerated in about half the patients. Biologics (dupilumab, janus kinase inhibitors) were generally well tolerated and effective, with the only adverse event being a case of conjunctivitis with dupilumab.

Conclusion : These results suggest that atopic dermatitis in Caribbean populations can involve different clinical features than in Caucasian population. The influence of climate has not been clearly established. These data suggest that topical steroids and biologics used in atopic dermatitis in tropical areas are associated with a good safety profile. Larger studies in Afro-American populations should be conducted to strengthen these conclusions.

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Abstract N°: 6349

Sustained Improvement in Atopic Dermatitis Disease Control and Treatment Satisfaction with Dupilumab in Clinical Practice: 5-Year Follow-up Results From the RELIEVE-AD Study

Bruce Strober[1, 2], Jason Wang*[3], Min Yang[4], Jingdong Chao[3], Bruno Martins[4], Kerry Noonan[5], Brad Shumel[3], Debra Sierka[5], Alexa B. Kimball[6]

[1]Yale University School of Medicine, New Haven, United States,[2]Central Connecticut Dermatology Research, Cromwell, United States, [3]Regeneron Pharmaceuticals Inc., Tarrytown, United States,[4]Analysis Group Inc., Boston, United States, [5]Sanofi, Cambridge, United States,[6]Harvard Medical School, Boston, United States

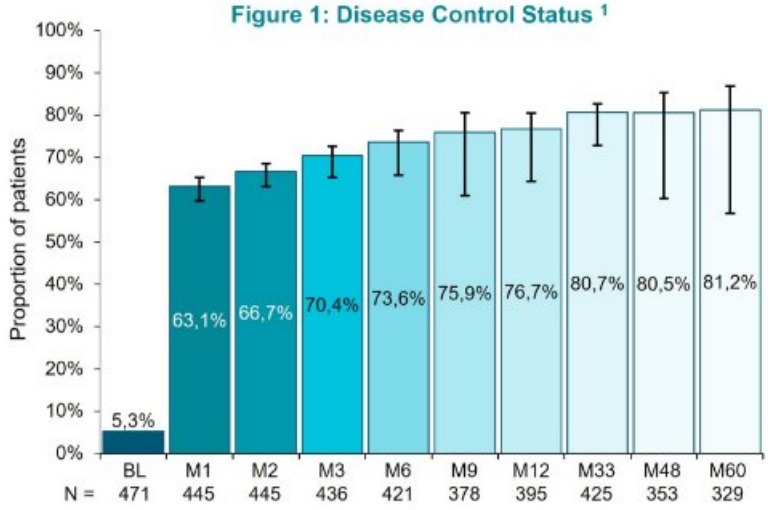
Introduction & Objectives: In the RELIEVE-AD study, adults with moderate-to-severe atopic dermatitis (AD) initiated dupilumab in real-world clinical practice.1 Results showed that most of the dupilumab-treated patients reported controlled disease and were satisfied with their real-world AD treatment despite moderate-to-severe AD at baseline up to 4 years. 1-4 Here we report 5-year disease control, treatment satisfaction, and concomitant medication data from RELIEVE-AD.

Materials & Methods: RELIEVE-AD is a single-arm, prospective, observational study including adults with moderate-to-severe AD prescribed dupilumab and enrolled in the US dupilumab patient support program who agreed to participate in online surveys at baseline (BL) and Months (M) 1, 2, 3, 6, 9, 12, 33, 48, and 60. The outcomes presented here are disease control, assessed using the Atopic Dermatitis Control Tool (ADCT; range: 0–24; total score <7 indicating controlled disease); treatment satisfaction, evaluated using a 7-point Likert scale ranging from "extremely satisfied" to "extremely dissatisfied"; and use of concomitant treatments for AD (topical [excluding crisaborole], crisaborole, systemic steroids, systemic immunosuppressants, ultraviolet therapy). Statistical significance analysis was conducted using generalized estimating equations to account for correlated data from the same patients. Normal distributions with an identity link function were used for continuous outcomes, and binomial distributions with a logit link function were used for categorical outcomes. Only patients who responded to at least one of the M33 or M48 surveys were contacted for the M60 survey.

Results: Among 471 patients at BL who responded at M33 and/or M48, 329 patients completed the M60 survey. At BL, mean age was 46.0 years and 62,4% were female; common comorbidities included 36,9% non-seasonal allergies, 31,8% asthma. Controlled disease (ADCT <7) was reported by 5,3% of patients at BL, increasing to 63,1% at M1 and maintained throughout the study period, up to 81,2% at M60 ($P < 0.001$ for all time points vs BL) (**Figure 1**). Patient satisfaction with current AD treatments improved over time, with 87,2% reporting "extremely/very/somewhat satisfied" at M60 vs 18,3% at BL. The number of patients reporting use of concomitant AD treatment decreased significantly ($P < 0.001$ for all time points vs BL), and 56,5% of patients reported no concomitant AD treatment in the past 4 weeks at M60, compared to 12,5% at BL.

Conclusion: Most adult patients (>80%) with moderate-to-severe AD treated with dupilumab reported controlled disease and remained satisfied with their treatments at 5 years in real-world clinical practice. The majority of dupilumab-treated patients did not use concomitant AD medications at year 5.

Figure 1: Disease Control Status [1]



[1] Assessed using the ADCT, with a score <7 on a scale of 0-24 indicating controlled disease. Vertical bars represent the range of imputed outcome values for the study follow-up period using pattern mixture models, for patients who completed the BL survey. ADCT, Atopic Dermatitis Control Tool; BL, baseline; M1, Month 1, etc.

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\4. Wang Z, et al. poster communication, Abstract N°: 5011, EADV 2023

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Abstract N°: 6363

Efficacy of Tralokinumab for the treatment of moderate-severe atopic dermatitis in the elderly

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Introduction & Objectives:

Tralokinumab is a fully human monoclonal antibody that specifically inhibits interleukin (IL)-13, demonstrating proven efficacy and safety for the treatment of atopic dermatitis (AD) in both adult and adolescent patients. However, evidence in other populations, routinely excluded from clinical development, remains limited. Treatment of adult patients aged ≥ 65 years presents specific challenges, such as managing comorbidities or polypharmacy. In this context, the efficacy and safety of Tralokinumab for the treatment of moderate-severe AD was evaluated in a cohort of patients ≥ 65 years.

Materials & Methods: A retrospective study of a 7-patient cohort treated with Tralokinumab for at least 24 weeks. Adult patients ≥ 65 years with moderate-severe AD were included. Severity evolution of patients was evaluated by Eczema Area and Severity Index (EASI), Physician Global Assessment (PGA), body surface area (BSA) and peak pruritus numerical rating scale (PP-NRS) in week 16, 24 and 52.

Results: At baseline, the analyzed cohort had a mean EASI score of 24.29 ± 4.92, a pruritus of 8.14 ± 1.35, PGA 3.57 ± 0.53 and BSA 25,29 ± 7.95%, all of which showed substantial improvements from week 16 (EASI 1.4 ± 1.58 and pruritus 1.86 ± 1.07) maintained over time until week 52 (EASI 1.4 ± 3.13 and pruritus 1.2 ± 2.17). At least 6 patients achieved EASI ≤ 3 and pruritus ≤ 3 by week 16.

Conclusion: Tralokinumab proved to be an effective and safe treatment in patients aged ≥ 65 years after one year of treatment without the appearance of clinically relevant adverse effects.

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Abstract N°: 6397

Upadacitinib 30 mg for the optimal management of moderate-to-severe atopic dermatitis: a 52-week single-center real-world study

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Introduction & Objectives: Upadacitinib is a selective inhibitor of JAK-1, and it is indicated for the treatment of moderate-to-severe AD across two dosages, 15 and 30 mg daily. Real-world data on the effectiveness and safety profile of upadacitinib are currently limited, in particular regarding upadacitinib 30 mg.

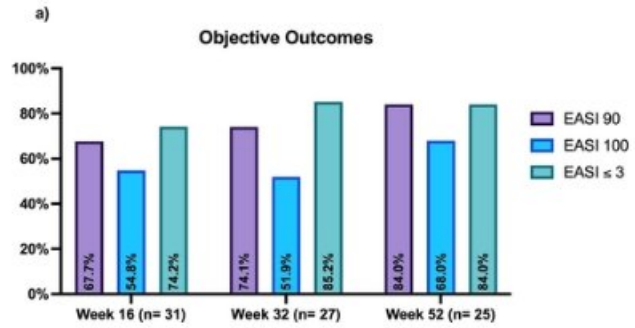
Materials & Methods: We conducted a real-world single-center retrospective study on 31 patients affected by moderate-to-severe AD, all treated with upadacitinib 30 mg daily in a clinical setting. Patients' eligibility for the treatment was assessed according to EuroGuiDerm guidelines for AD. The effectiveness of upadacitinib 30 mg was assessed at weeks 16, 32 and 52 in terms of EASI90, EASI100 and absolute EASI≤3. The impact of upadacitinib on itch and sleep was evaluated at the same time points as percentages of patients achieving an itch-NRS (numerical rating scale) and a sleep NRS of 0/1.

Results: Twenty patients (64.5%) were male, with a mean age of 42.90 (standard deviation [SD] 14.85). At baseline, the mean EASI was 19.69 (6.18), while the itch-NRS and sleep-NRS scores were 8.06 (1.57) and 6.81 (1.89), respectively. Complete demographic characteristics of our population at baseline are shown in Table 1. At week 16, EASI90, EASI100 and an absolute EASI≤ 3 were reached by 21 (67.7%), 17 (54.8%) and 23 patients (74.2%), respectively (Fig. 1a). At the same time point, 20 (64.5%) and 23 (74.2%) reported an itch-NRS score and sleep-NRS score of 0/1, respectively (Fig. 1b). Twenty-five patients reached one year of follow-up. Among them, 21 (84%) achieved an absolute EASI≤3, 21 (84%) reached EASI90 and 17 (68%) achieved a complete skin clearance (Fig. 1a). In terms of patient-reported outcomes at week 52, an itch-NRS score and a sleep-NRS score of 0/1 were achieved by 18 (72%) and 22 patients (88%), respectively (Fig. 1b). Adverse events (AEs) were reported from 9 patients (29%). Only three patients discontinued upadacitinib 30 mg because of AEs such as lymphopenia, herpes zoster, and severe hyperlipidemia.

Conclusion: In our experience, upadacitinib 30 mg showed comparable or higher effectiveness and safety compared to phase-III clinical trials. In particular, in our study, at week 16, most of the patients achieved optimal clinical outcomes. Upadacitinib 30 mg was well-tolerated in the absence of new significant safety findings. Despite a few limitations, due to the retrospective nature of the study, the relatively short follow-up and the limited sample size, our experience could provide more information on the use of upadacitinib 30 mg in clinical practice. Further studies are needed to confirm our findings and to better explore the effectiveness and safety of this drug in patients with AD.

**	N (%)
Male	20 (64.5)
Involvement of face/neck	23 (72.4)
Involvement of hands	13 (41.9)
Previous failure to dupilumab	9 (29)
Allergic conjunctivitis	7 (22.6)
Allergic rhinitis	12 (38.7)
Allergic asthma	4 (12.9)
Phenotype	*
Classic	26 (83.9)
Nummular eczema	2 (6.5)
Generalized inflammatory	2 (6.5)
Prurigo nodularis	1 (3.2)
**	**Mean ± SD**
Age, years	42.90 ± 14.85
BMI, kg/m2	30.58 ± 29.58
Age of onset	19.36 ± 20.56
EASI at baseline	19.69 ± 6.18
itch-NRS score at baseline	8.06 ± 1.57
sleep-NRS score at baseline	6.81 ± 1.89

Table 1. Demographic characteristics of our cohort of patients at baseline.



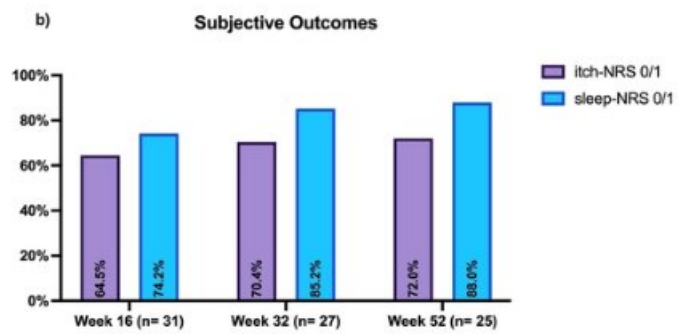


Figure 1. Objective (1a) and subjective (1b) outcomes of our population throughout 52 weeks of treatment with upadacitinib 30 mg.

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Abstract N°: 6400

Clinical effectiveness and patient-reported outcomes in moderate-to-severe atopic dermatitis patients treated with oral systemics: 12 weeks Interim results from AD-REAL focusing on patients with BSA <40 and itch NRS above 7 ("itch dominant")

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Introduction & Objectives:

Atopic dermatitis (AD) is a relapsing inflammatory skin disease. The use of oral systemic therapies for the treatment of AD is not well documented in clinical practice. Baricitinib (BARI) was the first oral Janus Kinase inhibitor (JAKi) approved in Europe for the treatment of adults with moderate-to-severe AD and recent data demonstrated patients (pts) with Body Surface Area (BSA) ≤40% and itch Numerical Rating Scale (NRS) ≥7 are more likely to respond to baricitinib [1]. AD-REAL is an ongoing 1-year multinational observational cohort study evaluating oral systemic therapies in the management of adult with AD in a real-world practice across several European countries. Herein we aim to provide interim evidence of clinical effectiveness up to 12 weeks of treatment with BARI or other oral systemics (OOS).

Materials & Methods:

AD-REAL involves adults with moderate-to-severe AD for ≥6 months, who are initiated on an oral systemic treatment within routine clinical care. Participating countries include France, Germany, Spain and the United Kingdom. Here we report data collected at routine clinical visits at baseline (BL) and up to week 12 which include clinician-assessed outcomes (Eczema Area and Severity Index [EASI], validated Investigator Global Assessment for AD [vIGA-AD], Itch Numerical Rating Scale [NRS]), and other patient reported outcomes (PROs). Continuous outcomes were reported using mean and standard deviation (SD) and categorical variables using frequencies. Data is reported as observed when available.

Results:

This interim analysis included a total of 320 pts with a BL visit, n=88 (27.5%) receiving BARI and n=232 (72.5%) OOS. OOS included cyclosporin, methotrexate, mycophenolate mofetil, azathioprine, upadacitinib (25.9%), abrocitinib (14.7%) and systemic corticosteroids. The mean age (standard deviation) is 38.4 (15.8) and 33.9 (12.4) for BARI and OOS, respectively. Pts receiving BARI and the OOS had longstanding AD (25.2 and 23.4 years), respectively. More pts were prescribed systemic treatments prior to entering the study for BARI than the OOS cohort, the most frequent being dupilumab [BARI; n=30 (33.7%) and OOS n=51 (22.1%)] and cyclosporine [BARI; n=27 (30.3%) and OOS; n=51; (22.1%)]. At BL, pts had a mean (standard deviation) EASI score of 15.8 (10.5) vs 18.4 (11.1), mean affected BSA of 28.6 (19.9) vs 40.0 (25.8) and itch NRS of 6.0 (2.3) vs 6.5 (2.3) for Bari vs OOS, respectively. 23.3% (BARI) and 35.9% (OOS) of pts had a vIGA-AD score of 4 at BL (Table 1).

For those with available data at 12 weeks of treatment, n=35/59 (59.3%) (BARI) and n=71/126 (56.3%) (OOS) achieved 75% improvement in EASI (EASI75) response scores. Of the BARI cohort who achieved EASI75 at week 12, n=15/27 (55.6%) of them had a BSA≤40/Itch≥7 at BL versus n=25/62 (40.3%) for OOS. A reduction in itch NRS, vIGA-AD and skin pain NRS was observed for both cohorts at 12 weeks.

Conclusion:

The results indicate that pts on BARI treatment in real-world practice are as likely to experience improved signs

and symptoms of AD as pts receiving OOS, despite pts on BARI being older, having a slightly longer disease duration and failures to more previous systemics including cyclosporine and dupilumab. Most of the EASI75 responders in the BARI group were "itch dominant" with BSA≤40/Itch≥7. Limitations of this study include, small sample size and limited observation period.

Reference:

1. Thyssen JP et al., Adv Ther. 2023Aug;40(8):3574-3587.

Table 1: Baseline Demographics and Disease Characteristics for the Baricitinib and Other Oral Systemic Treatment Cohorts

	BARI Cohort N=88	Other oral systemic Cohort N=232	Overall N=320
Baseline Demographics and Disease Characteristics*			
Age	38.4 (15.8)	33.9 (12.4)	35.1 (13.6)
Female, n (%)	52 (59.1)	111 (47.8)	163 (50.9)
Time elapsed between onset of AD diagnosis to baseline (years)	25.2 (15.5)	23.4 (14.7)	23.9 (15.0)
Systemic Naive, Previous cyclosporine Previous dupilumab n (%)	22 (25.0) 27 (30.3) 30 (33.7)	92 (39.7)) 51 (22.1) 51 (22.1)	114 (35.6)) 78 (24.4) 81 (25.3)
EASI	15.8 (10.5)	18.4 (11.1)	17.7 (11.0)
BSA	28.6 (19.9)	40.0 (25.8)	36.9 (24.8)
vIGA-AD, (n) %			
3	48 (55.8)	118 (52.9)	166 (53.7)
4	20 (23.3)	80 (35.9)	100 (32.4)
Itch NRS	6.0 (2.3)	6.5 (2.3)	6.3 (2.3)
Skin Pain NRS	4.8 (2.6)	5.3 (2.8)	5.1 (2.8)
ADSS Item 2	1.8 (1.9)	2.6 (3.8)	2.4 (3.4)
DLQI	14.9 (6.1)	14.0 (7.1)	14.3 (6.8)
POEM	14.0 (7.2)	18.4 (7.4)	17.1 (7.6)
Week 12 Outcomes*			
EASI 75 response, n %	n=35/59 59.3	n=71/126 56.3	n=106/185 57.3
Itch NRS	n=46/88 3.6 (2.8)	n=99/232 3.7 (2.5)	n=145/320 3.6 (2.6)
Skin Pain NRS	n=46/88 3.2 (2.8)	n=100/232 2.7 (2.6)	n=146/320 2.8 (2.7)
vIGA-AD ≥2 point improvement, n %	n=24/61 39.3	n=56/137 40.9	n=80/198 40.4

*Observed data are reported as mean (standard deviation) when available unless stated otherwise. Abbreviations: N/n=number; BARI=baricitinib; AD=atopic dermatitis; EASI=Eczema Area and Severity Index; BSA=Body Surface Area; vIGA-AD= validated Investigator Global Assessment for AD; NRS=Itch Numerical Rating Scale; ADSS=Atopic Dermatitis Sleep Scale; DLQI=Dermatology Life Quality Index; POEM=Patient-Oriented Eczema Measure. Other oral systemic cohort included cyclosporin, methotrexate, mycophenolate mofetil, azathioprine, upadacitinib, abrocitinib and systemic corticosteroids.

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Abstract N°: 6438

Maintenance of itch response in adult patients with moderate-to-severe Atopic Dermatitis treated with dupilumab: post-hoc analysis from LIBERTY AD SOLO-CONTINUE

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Introduction & Objectives: Pruritus is an essential feature of atopic dermatitis (AD) and is consistently reported by patients as the most burdensome symptom of the disease. Itch does not only impact QoL but also contributes to AD pathogenesis through the itch-scratch cycle and added breakdown of the epidermal barrier. A treat-to-target concept established goals to guide treatment with systemic therapies in AD, including those for itch.1-3 The objective of this analysis is to assess maintenance of itch response according to the treat-to-target concept in adult patients with moderate-to-severe AD treated with dupilumab monotherapy.

Materials & Methods: LIBERTY AD** SOLO-CONTINUE, a 36-week trial, enrolled patients aged ≥18 years with moderate-to-severe AD who achieved either Investigator's Global Assessment (IGA) 0/1 or 75% improvement from baseline in Eczema Area and Severity Index (EASI-75) at Week 16 after completing treatment with dupilumab 300 mg every 2 weeks (q2w) or weekly (qw) monotherapy in the 16-week parent studies SOLO1/2. Patients were re-randomized at SOLO-CONTINUE baseline to dupilumab 300 mg qw, q2w, every 4 weeks (q4w), every 8 weeks (q8w), or placebo. Only patients achieving a PP-NRS score ≤4 at Week 16 of SOLO1/ 2 (baseline of SOLO-CONTINUE) were considered for this post-hoc analysis. This is in alignment with the treat-to-target concept that proposes a PP-NRS score ≤4 as optimal target for itch to be reached within 6 months of treatment. For SOLO-CONTINUE, we assessed the maintenance of optimal itch response, both as percentage of patients maintaining itch response and number of weeks with maintenance of itch response.

Results: After 36 weeks, the percentage of patients that maintained optimal itch response was highest for patients who continued treatment with dupilumab 300 mg qw (78.3%) or q2w (81.0%), and it decreased in treatment arms with extended dosing intervals. Only 42.6% of placebo-treated patients maintained optimal itch response at Week 36. Median (Q1–Q3) number of weeks with maintenance of optimal itch response was 34.0 (23–37) for dupilumab qw, 35.5 (19–37) for q2w, 31.0 (10–35) for q4w and 27.0 (12.5–36) for q8w compared to 14.5 (6–30) for placebo ($P < 0.0001$ for all dupilumab arms vs placebo).

Conclusion: In this subgroup of patients with PP-NRS ≤4 at baseline of SOLO-CONTINUE, the proportion of patients maintaining optimal itch response was highest in the dupilumab qw and q2w treatment arms. Optimal itch response was also maintained for a longer time in dupilumab-treated patients. Maintenance of itch response was decreased with less frequent dosing of dupilumab.

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Abstract N°: 6455

Rilzabrutinib improves itch in atopic dermatitis

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Introduction & Objectives: Itch is the most common and debilitating symptom in patients with atopic dermatitis (AD). Mast cells and basophils are thought to play critical roles in itch-signalling pathways by releasing various pruritogens that activate sensory neurons upon binding to their receptors. Bruton tyrosine kinase (BTK) is a key intracellular signalling molecule broadly expressed in many immune cells, including B cells, mast cells, and basophils. Rilzabrutinib is an oral reversible covalent drug that inhibits BTK. Here, we explore the effect of rilzabrutinib on pruritogenic and neurosensory pathways involved in itch with AD.

Materials & Methods: This was a phase 2, randomised, double-blind, placebo-controlled, proof-of-concept study evaluating the efficacy and safety of rilzabrutinib (SAR444671; NCT05018806). Adults (aged ≥18 years) with moderate-to-severe AD and inadequate response or intolerance to topical corticosteroids were enrolled in 2 staggered dose regimen cohorts—800 mg/day (n=45) or 1200 mg/day (n=79)—and randomised 3:2 to receive rilzabrutinib (800 mg/day, n=27; 1200 mg/day, n=48) or matching placebo (800 mg/day, n=18; 1200/day, n=31) for 16 weeks. Lesional and nonlesional skin samples from 24 patients in the 800 mg/day cohort and 27 patients in the 1200 mg/day cohort were collected using a tape-stripping procedure at baseline and week 16. RNA sequencing (RNA-seq), followed by gene set enrichment analysis, of the skin tape strips were performed to identify pathways of genes altered with rilzabrutinib.

Results: A consistent trend favouring rilzabrutinib in patients achieving a Peak Pruritus Numerical Rating Scale (PP-NRS) score ≥4 was confirmed by rapid improvements in absolute and relative change in weekly average of daily PP-NRS scores, which were seen as early as week 1 with rilzabrutinib 1200 mg/day and week 2 with 800 mg/day. Gene set enrichment analysis of lesional skin supported downregulation of various itch-associated pathways upon treatment with rilzabrutinib at week 16 with a dose effect. The main pathways downregulated with 1200 mg/day in lesional skin from baseline to week 16 include nerve growth factor-tropomyosin receptor kinase A (normalised enrichment score [NES])= -1.91; *P*<.0001), IL-31 (NES= -1.78, *P*=.004), serotonin (NES= -1.78; *P*=.006), neuromedin (NES= -1.47; *P*=.026) and leukotriene (NES= -1.54; *P*=.029) pathways.

Conclusion: Rapid improvement in absolute and relative change in weekly average of daily PP-NRS was demonstrated with rilzabrutinib.** RNA-seq and gene set enrichment data show rilzabrutinib dampens itch signalling not only through inhibition of pruritogen secretion but also by reducing neurosensory signalling, suggesting that rilzabrutinib could be an attractive drug for the treatment of itch-related conditions.

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Abstract N°: 6473

Dupilumab Treatment Restores Skin Barrier in Children Aged 6 to 11 Years With Moderate-to-Severe Atopic Dermatitis

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Introduction & objectives: Atopic dermatitis (AD) is a chronic inflammatory systemic disease in which skin barrier dysfunction and type 2 immune system hyperactivity play important roles. Previous studies show that following remission, the skin of patients with AD continues to present skin structure abnormalities, including an increase in transepidermal water loss (TEWL) and increased epidermal thickness (TE) as measured by optical coherence tomography (OCT), which is associated with skin inflammation. This analysis reports the effect of dupilumab treatment on skin barrier function and structure in patients aged 6 to 11 years with moderate-to-severe AD.

Materials & methods: PELISTAD (NCT04718870) was an open-label, exploratory study on skin barrier function in children aged 6 to 11 years with moderate-to-severe AD treated with dupilumab for 16 weeks (follow-up: 12 weeks) based on baseline patient weight (300 mg every 4 weeks: ≥15 kg to <30 kg; 200 mg every 2 weeks: ≥30 kg to <60 kg) and matched with healthy volunteers. TEWL (g/m2/h) was assessed longitudinally after 10 skin tape stripping (STS) from lesional and non-lesional skin of patients with AD treated with dupilumab, and from healthy skin. Epidermal hyperplasia was assessed by OCT, which has been shown to be a reliable tool for the monitoring of skin inflammation, in TE (µm) and superficial plexus depth (SPD [µm]). LS means were derived from mixed models for repeated measures with absolute TEWL as response variable and baseline values of TEWL after 10 STS, age, sex, and -skin type as covariates. All *P* values are nominal and there is no adjustment for multiple testing.

Results: 23 patients treated with dupilumab and 18 healthy volunteers were included in the study. Following 16 weeks of dupilumab treatment, median (95% CI) TEWL after 10 STS significantly decreased in the lesional skin of patients with AD (38.4 [22.3–54.5]) compared with baseline (82.8 [62.4–103.3]; $P < 0.0001$). At Week 28, least squares (LS) mean (standard error [SE]) TEWL after 10 STS in the lesional skin of patients with AD (31.5 [4.5]) had reached levels comparable to that of healthy skin (32.5 [4.9]; $P = 0.88$). This improvement was also observed in non-lesional skin (25.1 [3.3]), which did not significantly differ from healthy skin at Week 28 (30.7 [3.8]); $P = 0.30$). By the end of treatment, mean (SE) TE had significantly improved in both lesional (196.8 [18.4]) and non-lesional skin (141.9 [11.9]) compared with baseline (251.1 [25.8]; $P < 0.01$ and 166.1 [15.2]; $P < 0.05$, respectively). In lesional skin, a similar effect was observed in mean (SE) SPD, which had significant improvement at Week 16 (182.4 [14.7], compared with baseline (214.2 [14.6]); $P < 0.05$). Significant improvement in all 3 outcomes persisted up to 3 months after the end of treatment.

Conclusion: Dupilumab normalized epidermal hyperplasia and skin barrier function in both lesional and non-lesional skin in patients aged 6 to 11 years with moderate-to-severe AD.

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Abstract N°: 6484

Itch Reduction and Quality of Life Improvement in AD for First Human Use of Zabalfin

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Introduction & Objectives:

The main patient-related concern in atopic dermatitis (AD) is persistent, disrupting itch (pruritus). Itch relief leads to improvement in quality of life (QOL) for AD patients. An unmet need exists for an AD drug without restrictions on long-term continuous use that provides a strong improvement in pruritus and QOL, treats inflammation and bacteria to control bacteria-associated AD flares, treats infected AD, and is worry-free for extended use in children and adults. Current AD drugs have shortcomings in efficacy, pain/stinging and/or boxed warnings. Zabalafin (AB-101) is a novel, topical first-in-class multi-target therapeutic natural source drug with multiple bioactive compounds providing multiple mechanisms of action including antipruritic, anti-inflammatory, and antibacterial activity, indicating zabalafin should be effective in AD.

This first-in-human Phase 2 study was designed to assess the itch and QOL improvement and the safety and efficacy of zabalafin hydrogel against the inflammatory and bacterial components of AD.

Materials & Methods:

All participants entered uniquely with secondary infected AD as determined by the Secondary Infection Rating Scale (SIRS) and investigator clinical judgment and were assessed for infection and AD response, including itch and QOL improvement. Investigators were queried for clinical assessment of infection resolution.

Population included mild, moderate, and severe AD in ages 3 through adult. Participants received zabalafin BID 8 weeks open label. Participants returned for evaluation at multiple visits throughout the trial for assessments.

Itch relief was assessed using the Pruritus Numeric Rating Scale (NRS), where decrease of ≥ 4 points at end of treatment (EOT) is considered clinically meaningful. QOL was assessed using Patient Oriented Eczema Measure (POEM), where decrease of ≥6 points at EOT is considered clinically meaningful. AD assessment scales including EASI and IGA were used to evaluate inflammatory response.

Results:

Interim results for 10 participants are reported with 7 participants age 3-17; 3 age 18-45. All participants began with AD lesions secondarily infected. Zabalafin effectiveness in treating AD inflammation and infection was demonstrated using EASI, IGA and SIRS in all age groups. Pruritis NRS score reduction of ≥4 was achieved in 8/10 participants (80%, baseline score = 8 out of 10) at EOT. Itch reduction was demonstrated both in immediacy of onset and long term. POEM score reduction of ≥6 was achieved in 10/10 participants (100%, baseline = 18.6 out of 28) at EOT.

Conclusion:

These results for zabalafin suggest its capability to be an effective treatment of both non-infected AD and AD with secondary bacterial infection. Zabalafin demonstrated clinically meaningful results in pediatric and adult

populations for itch and QOL improvement. Zabalafin is a promising unique topical AD drug for children and adults with the potential for limitless long-term continuous use.

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Abstract N°: 6499

Charting a New Course: Tralokinumab in the Treatment of Refractory Hand Eczema

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Charting a New Course: Tralokinumab in the Treatment of Refractory Hand Eczema

Introduction & Objectives:

Hand eczema (HE) is a condition with a high estimated prevalence of up to 10% of the population. It encompasses various etiological and morphological conditions, often manifesting as a multifactorial disease with mixed clinical forms in many patients. In the majority of cases (83.5%), eczema is chronic, severe (21.3%), and refractory (62.0%), resulting in significant morbidity and impairment of quality of life. Despite numerous guidelines for diagnostic and therapeutic management, after assessing contact dermatitis and exhausting topical options, we encounter a scenario where recommended systemic therapies lack approved indications and often entail assuming significant immunosuppressive or adverse effects. Only alitretinoin is indicated for use up to 24 weeks. In this context, amid a new therapeutic arsenal in atopic conditions, it remains to be seen how these therapies will fit into the management of hand eczema.

Materials & Methods:

We conducted an observational study involving patients with severe and very severe hand eczema refractory to topical treatment who received subcutaneous Tralokinumab 600mg as a single dose followed by maintenance with 300mg weekly. Baseline characteristics, results of patch testing, prior treatments, and treatment response in terms of Hand Eczema Severity Index (HECSI) were collected.

Results:

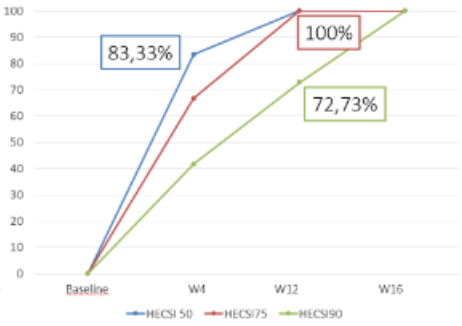
We included a total of 12 patients, 4 men and 7 women, with a mean age of 57.2 years and a mean duration of hand eczema of 11.2 years. 66.7% had received prior systemic treatments. Among etiological subtypes, 5 patients (55.5%) had contact dermatitis, with only 3 cases being allergic. Starting from a baseline HECSI of 126, we found a HECSI-50 response rate of 83.33% at week 1, with HECSI-75 achieved in 100% of patients by week 12 and HECSI-90 in 72.73%.

RESULTS

HECSI RESPONSE

	Baseline	Week 4	Week 12	Week 16
N	12	12	11	4
HECSI 50 N (%)	0 (0)	10 (83,33)	11 (100)	4 (100)
HECSI 75 N (%)	0 (0)	8 (66,67)	11 (100)	4 (100)
HECSI 90 N (%)	0 (0)	5 (41,67)	8 (72,73)	4 (100)

Fast: week 4 → 83,33% HECSI-50
Progressive: week 12 → 100% HECSI-75
week 12 → 72,73% HECSI-90



Conclusion:

Hand eczema is a common and often severe and refractory condition. Tralokinumab may represent an effective treatment for this condition. Clinical trials are needed to assess the efficacy of biological therapies and available anti-JAKs for atopic dermatitis in hand eczema.

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Abstract N°: 6518

Continued Improvement of Investigator and Patient Reported Outcomes into the 52-Week Maintenance Period were Observed with Rademikibart in Patients with Moderate-to-Severe Atopic Dermatitis (SEASIDE CHINA)

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Introduction & Objectives: Rademikibart (formally, CBP-201) is a next-generation, high affinity, monoclonal antibody targeting the IL-4Rα subunit. Rademikibart achieved all Week 16 (Stage 1) primary and secondary endpoints in an atopic dermatitis (AD) pivotal trial in China (SEASIDE CHINA or CN002; NCT05017480) in patients with moderate-to-severe AD. In this report, we describe the continuing efficacy improvement during the Stage 2, long-term 52-week period from both investigator and patient reported outcomes from the SEASIDE CHINA pivotal trial.

Materials & Methods: Adults (n=318) and adolescents (n=12) (IGA ≥3, EASI ≥16, BSA ≥10%, PP-NRS ≥4) were randomized (2:1) to rademikibart (300mg Q2W) or placebo for 16 weeks (Stage-1). EASI-50 responders, regardless of Stage 1 treatment, were re-randomized to Q2W (n=113) or Q4W rademikibart (n=112). Non-responders (n=86) received open-label Q2W rademikibart during Stage 2.

Results: The initial baseline measurements revealed a mean EASI score of 29.3 (ranging from 16.0 to 72.0), a mean PP-NRS score of 7.1 (2.1 to 10.0), and a mean BSA involvement of 47.7% (13.5 to 100.0) among Stage 1 responders, with 54.7% classified as having an IGA score of 4. For non-responders, the respective measurements were 23.7 (ranging from 16.0 to 66.6) for EASI, 7.4 (ranging from 3.1 to 10.0) for PP-NRS, and 48.0% (ranging from 13.0 to 100.0) for BSA involvement, with 51.2% categorized as IGA 4.

From Week 16 to Week 52, 28.2% (Q2W/Q2W; n=91) and 20.8% (Q2W/Q4W; n=91) additional patients achieved IGA 0/1, and additional patients achieving EASI-75 was 16.3% and 11.0%, respectively. The change from baseline in BSA involvement also continued to improve from -34.7% to -41.3% and from -35.8% to -41.2%, respectively. Similarly, the respective improvement from baseline for SCORAD improved from -41.8 to -51.5 and from -42.5 to -50.2. For 26 rademikibart non-responders from Stage 1, EASI scores improved by 45% with 51.4% acheiving EASI-75 by Week 52. Treatment with rademikibart was generally well tolerated.

Patient reported outcomes also continued to improve. The percent change from baseline in PP-NRS improved from a change of -50.1% to -64.8% (Q2W/Q2W) and from -46.1% to -63.9% (Q2W/Q4W) for the two treatment groups. For PEOM scores, the percent change from baseline continued to improved from -49.2% to -60.3% and from -48.6% to -55.2%, respectively. Similarly, DLQI percent change from baseline continued to improve from -46.1% to -55.5% and from -45.4% to -54.5%, respectively.

Conclusion: The maintenance data with rademikibart are striking, further bolstering the robust findings seen in Stage 1. Notably, the efficacy remains consistently high with a convenient Q4W dosing, and there are additional improvements observed with prolonged treatment. Moreover, both investigator and patient reported outcomes demonstrate sustained clinically meaningful changes in skin clearance, pruritus and quality of life, underscoring the comprehensive benefits of continued therapy.

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Abstract N°: 6546

Rademikibart (IL-4Rα Blocker) Integrated Exposure-Response Analysis Supports Differentiated Once Monthly Dosing Regimen

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Introduction & Objectives: Rademikibart (formally, CBP-201) is a next-generation, optimized monoclonal antibody targeting the IL-4Rα subunit. Rademikibart achieved all primary and secondary endpoints in a global Phase 2 atopic dermatitis (AD) trial (WW001; NCT04444752) and a pivotal trial in China (SEASIDE CHINA or CN002; NCT05017480) while demonstrating high maintenance of effect out to one year in patients with moderate-to-severe AD. To support the Phase 3 once monthly dosing regimen, the sponsor conducted an integrated Exposure-Response (ER) Analysis.

Materials & Methods: Briefly, the ER analysis incorporated one specific efficacy assessment, EASI, from two clinical studies, including one Phase 1b study (Study CBP-201-AU002) and one Phase 2 study (Study CBP-201-CN002 [Stage 1]). The final ER model combined placebo and drug effect models, which incorporated both time and rademikibart concentration. The placebo model was a first-order asymptotic model, and the drug effect model was an indirect response semi-mechanistic model which characterized the delay of response in relation to rademikibart exposure. The ER model was used to simulate longitudinal and landmark responses at different dose regimens to characterize the exposure-response curve.

Results: The optimized benefit of loading doses when examining the probability of achieving EASI-75 demonstrates an increasing trend in the probability of an early response at Week 4 when simulating two 600 mg loading doses (Week 0 and Week 1) followed by 300 mg Q4W dosing regimen (starting at Week2) compared with a single loading dose (Week 0). The probability of EASI-75 at Week 16 for 300 mg Q4W with two loading doses performed similarly compared to 300 mg Q2W with one loading dose. Furthermore, rademikibart trough concentrations with Q4W dosing is expected to remain above the estimated clinical IC50 value of 3.5 mcg/mL over the dosing interval. Lastly, Q4W dosing is consistent with the observed long half-life of ~25 days supporting once monthly dosing.

It is important to note that use of a double loading dose will have a predicted Cmax of 67.6 mcg/mL for the recommended Phase 3 dosing regimen. This value is approximately 90-fold lower than the corresponding peak plasma drug concentration of approximately 6,279 mcg/mL observed at the NOAEL dose of 200 mg/kg in a pre-clinical toxicity study.

Conclusion: In conclusion, the recommended Phase 3 once monthly dose and schedule (300 mg Q4W) is optimal as it maximizes the probability of EASI-75 response achieved early in treatment with no added safety risk and maintains comparable Week 16 efficacy to the 300 mg Q2W regimen.

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Abstract N°: 6608

Does female sex correlate to faster responses of dupilumab in patients with moderate-to-severe atopic dermatits? A real-life experience

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Introduction & Objectives:

Atopic dermatitis (AD) significantly impacts the lives of both pediatric patients and their caregivers, often leading to psychosocial burdens and disrupted daily routines. Dupilumab, a monoclonal antibody targeting the IL-4 receptor alpha, has emerged as a promising therapy for moderate-to-severe AD. While its effectiveness and safety have been extensively studied in adults, real-world data for pediatric populations remain limited. This study aims to analyze the effectiveness and safety of dupilumab in treating moderate-to-severe AD in pediatric patients aged 6 to 17 years over a period exceeding one year and to study potential differences in response between the two sexes and age groups.

Materials & Methods:

This retrospective single-center cohort study included pediatric patients diagnosed with moderate-to-severe AD, aged 6 to 17 years, and treated with dupilumab from May 2020 to January 2024.

Effectiveness was assessed using the Eczema Area and Severity Index (EASI), Pruritus-Numerical Rating Scale (P-NRS), Sleep Loss-Numerical Rating Scale (S-NRS), and Children's Dermatology Life Quality Index (cDLQI). Safety was evaluated through adverse event analysis. Statistical analysis was performed using descriptive statistics and appropriate tests of significance.

Results:

Among 62 treated patients, dupilumab demonstrated significant effectiveness in reducing EASI scores, pruritus, and sleep loss, with sustained improvement over the 64-week treatment period (*Figure 1; Table 1*). Notably, 45.5% of patients achieved complete disease remission (EASI-100) at week 64. Females exhibited a quicker response to treatment compared to males (*Table 2*). Adverse events were mild, with conjunctivitis being the most prevalent but not leading to treatment discontinuation.

Conclusion:

Dupilumab showed consistent and enduring effectiveness and safety in treating moderate-to-severe AD in pediatric patients aged 6 to 17 years. These findings align closely with existing literature on both clinical trials and real-world experiences available in the current literature. Further investigations are needed to explore potential differences in treatment response related to sex.

FIGURE 1 – EASI-75, -90 and -100 achievement at week 16, 32, 48 and 64

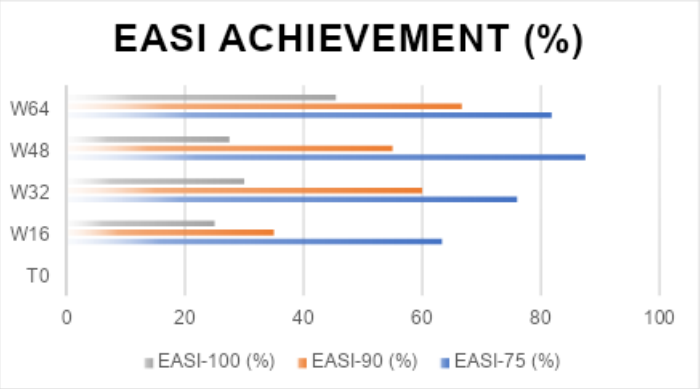

TABLE 1 – Atopic dermatitis outcome at week 16, week 32, week 48 and week 64 of therapy with dupilumab

AD severity score ***N***	**Baseline Value [SD]** ***62***	**16W Value [SD]** ***60***	**32W Value [SD]** ***50***	**48W Value [SD]** ***39***	**64W Value [SD]** ***33***
EASI	23,37 [6,34]	4,65 [4,71]	3,27 [4,49]	2,63 [2,28]	2,76 [2,96]
EASI reduction (%)	-	79,18	85,67	88,80	87,08
EASI-75 (%)	-	63,33	76,00	87,50	81,82
EASI-90 (%)	-	35,00	60,00	55,00	66,67
EASI-100	-	25,00	30,00	27,50	45,45
P-NRS	8,52 [1,58]	3,78 [2,73]	3,46 [2,57]	3,41 [2,40]	2,73 [2,45]
P-NRS reduction (%)	-	56,1	55,8	61,4	67,4
S-NRS	7,03 [2,68]	1,47 [2,59]	1,16 [2,39]	0,49 [1,63]	0,24 [0,92]
S-NRS reduction (%)	-	80,0	81,2	94,0	98,2
cDLQI	12,11 [6,64]	4,17 [4,36]	3,66 [5,43]	2,96 [2,25]	2,88 [2,77]
cDLQI reduction (%)	-	60,3	64,9	75,7	77,5

Abbrevetions: AD, Atopic dermatitis; SD, Standard deviation; EASI, Eczema Area and severity Index; P-NRS, Pruritus-Numerical Rating Scale; S-NRS, Sleep Loss-Numerical Rating Scale; cDLQI, Children's Dermatology Life Quality Index

TABLE 2 – Dupilumab effectiveness in adolescent and pediatric patients with moderate-to-severe AD at week 16, 32, 48 and 64*

Week 16

Parameters	*N*	EASI-75 (%)	EASI-90 (%)	EASI-100 (%)	EASI mean	P-NRS mean	S-NRS mean	cDLQI mean
All patients	60	63,3	35,0	25,0	4,65	3,78	1,47	4,17
Gender								
Male	27	12 (44,4)	4 (14,8)	3 (11,1)	6,79	3,91	1,81	4,22
Female	33	26 (78,8)*	17 (51,5)*	12 (26,4)*	2,91*	3,70	1,21	4,13
Age								
6-11	14	10 (71,4)	7 (50,0)	2 (14,3)	4,07	3,50	0,93	2,69
12-17	46	28 (60,9)	14 (30,4)	13 (28,3)	4,83	3,87	1,64	4,56

Week 32

Parameters	*N*	EASI-75 (%)	EASI-90 (%)	EASI-100 (%)	EASI mean	P-NRS mean	S-NRS mean	cDLQI mean
All patients	50	76,0	60,0	30,0	3,27	3,46	1,16	3,66
Gender								
Male	23	16 (69,6)	13 (56,5)	5 (21,7)	4,53	3,96	0,65	2,87
Female	27	22 (81,5)	17 (63,0)	10 (37,0)	2,20	3,64	1,59	4,33
Age								
6-11	10	7 (70,0)	4 (40,0)	2 (20,0)	4,14	4,50	1,63	3,40
12-17	40	31 (77,5)	26 (65,0)	13 (32,5)	3,13	3,20	1,11	3,73

Week 48

Parameters	*N*	EASI-75 (%)	EASI-90 (%)	EASI-100 (%)	EASI mean	P-NRS mean	S-NRS mean	cDLQI mean
All patients	39	87,5	55,0	27,5	2,63	3,41	0,49	2,96
Gender								
Male	16	13 (81,3)	9 (69,2)	6 (37,5)	3,42	3,26	0,06	2,31
Female	23	22 (95,7)	13 (56,5)	5 (21,7)	2,09	3,63	0,78	3,43
Age								
6-11	7	7 (100,0)	3 (42,9)	1 (14,3)	1,83	3,29	1,17	2,17
12-17	32	28 (87,5)	19 (59,4)	10 (31,3)	2,71	3,44	0,21	3,11

Week 64

Parameters	*N*	EASI-75 (%)	EASI-90 (%)	EASI-100 (%)	EASI mean	P-NRS mean	S-NRS mean	cDLQI mean
All patients	33	81,8	66,7	45,5	2,76	2,73	0,24	2,88
Gender								
Male	15	12 (80,0)	9 (60,0)	6 (40,0)	3,67	3,25	0,40	3,33
Female	18	15 (83,3)	13 (72,2)	9 (50,0)	2,00*	3,52	0,11	2,50
Age								
6-11	6	4 (66,7)	4 (66,7)	3 (50,0)	1,80	2,17	0,25	1,83
12-17	27	23 (85,2)	18 (66,7)	12 (44,4)	3,04	2,85	0,24	3,11

Abbrevetions: AD, Atopic dermatitis; EASI, Eczema Area and severity Index; P-NRS, Pruritus-Numerical Rating Scale; S-NRS, Sleep Loss-Numerical Rating Scale; cDLQI, Children's Dermatology Life Quality Index

***p < 0,05**

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Abstract N°: 6615

Evaluating the Impact of a Ceramide-Containing Moisturizing Cream on Dry to Very Dry Atopic Skin: A Global Observational Study

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Introduction & Objectives:

Dry to very dry skin is a common symptom associated with atopic dermatitis (AD), a chronic inflammatory skin condition characterized by impaired skin barrier function and altered ceramide levels. Moisturizers play a crucial role in restoring the skin barrier, improving hydration, and alleviating symptoms of AD. Given the impact of AD on patient quality of life and the relevance of moisturizers as effective therapeutic interventions, there is a need for observational studies to assess physician and patient satisfaction and evaluate the impact of moisturizers on their symptoms. In this global observational study, the effect of a ceramide-containing moisturizing cream on dry to very dry atopic skin was evaluated in addition to patient quality of life and patient satisfaction with the product experience.

Materials & Methods:

This 4-week global observational study involved 2,411 patients from 12 countries and took place at participating physician's offices across two visits, baseline and week 4. To meet inclusion criteria patients were 18 years or older and had AD with mild to severe skin dryness On Day 0, skin condition was assessed by the doctor and patient, a questionnaire was completed, and the prescription for a ceramide-containing moisturizing cream was submitted. During the 4-week visit, skin condition was reassessed by the doctor and patient, and a questionnaire was completed. Doctor questionnaires collected patient demographics, medical history, prescribed medical treatment, adjunctive skincare prescriptions, and assessed the patient's clinical condition. Patient questionnaires focused on self-assessment of discomfort and quality of life.

Results:

The ethnic/racial distribution of the participants was as follows: 39% white, 31% Arab/West Asian, 13% Chinese, Japanese, Korean, South Asian, and East Asian, 9% Latin American, 2% Filipino, 2% Black, 2% Aboriginal, and 3% other. All Fitzpatrick skin types were included, with most patients being types II, III, and IV. 54% of patients in the study were prescribed treatments in addition to ceramide-containing moisturizing cream. Prior to treatment, most participants had mild to moderate AD, with lesions covering 30% or less of the skin surface, as assessed by physicians. After the treatment period, there was an overall decrease in the intensity of AD, with a 42% reduction in intensity and a 51% decrease in affected skin surface. Before the trial, moderate skin dryness and mild to moderate desquamation and erythema were commonly reported. Physicians observed significant decreases in the occurrence and severity of these symptoms post-treatment. Patients also experienced significant decreases in the most common symptom of itching in addition to reduced emotional concerns caused by their AD.

Conclusion:

The study findings demonstrate positive and consistent perceptions of tolerance and efficacy towards the ceramide-containing moisturizing cream for both physicians and patients. The results suggest the effectiveness of the cream in reducing AD associated symptoms, including dry skin, desquamation, erythema, and itching highlighting the potential benefits in managing AD and improving patient quality of life.

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Abstract N°: 6662

Symptoms, comorbidities, and treatment response in patients with atopic dermatitis treated at a specialized center between 2018-2022

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Introduction & Objectives:

Atopic dermatitis (AD) is a prevalent chronic inflammatory condition affecting both children (15-20%) and adults (1-3%), with increasing rates globally. There's geographical variation in prevalence. AD in adults is often severe, impacting sleep, social life, and work, reducing quality of life. Advances in understanding its pathogenesis have led to new drug developments and a focus on managing physical and psychological comorbidities for personalized care. Thus, there's a need to explore clinical, sociodemographic characteristics, quality of life, and treatment responses in AD patients at specialized health centers.

Materials & Methods:

An observational, longitudinal, retrospective cohort study was conducted. Patients diagnosed with atopic dermatitis undergoing dermatological management at a healthcare institution in the city of Medellin were included, during the period 2018-2022. Patients aged 2 years and older, all with a clinical diagnosis issued by dermatology, were included, and demographic, clinical, and treatment data were collected. Demographic and clinical variables and clinimetry to evaluate response to treatment were collected from the clinical history of each patient. Clinimetry measurements including EASI, POEM, DLQI values were considered both at the beginning of the defined evaluation period as well as at the end, which were considered dependent variables. Patients were receiving different therapies, including the use of biological therapy.

Results:

A total 301 patients were included in the study, of whom the 32.2% were under 18 years old. Most patients were female (62.8%). The average follow-up was 33.23 +/- 22.11 months. In 65.1% of the evaluated patients, symptoms appeared before the age of 2, while in 32.4% of the population, symptoms started in adolescence or adulthood. Of the atopic stigmas, 83.7% of patients had xerosis, 25.2% facial pallor, and 38.9% had lichenification. The tendency to develop skin infections was present in 14.7% of the evaluated population. Psychiatric disorders were detected in 7.3% of patients and cardiovascular comorbidities in 10.6%. At the beginning, a moderate to severe severity of the disease was observed. The mean EASI score at study entry in the total evaluated population was 11.24, and the mean at the end of the follow-up period was 6.41. With the DLQI and POEM scales, we had entry means of 10.54, corresponding to a significant impact on quality of life, and 15.14, respectively. The means at the end of the follow-up were 6.20 for DLQI and 8.75 for POEM. A significant reduction in itching was associated with adequate disease control through therapy. Additionally, patients treated with biology therapy experienced a 30% decrease in clinical evaluation values during follow-up.

Conclusion:

The study involves a diverse group of patients with atopic dermatitis treated at a specialized healthcare facility for immune-related conditions. Biologic drugs offer expanded treatment choices, especially for moderate to severe

cases resistant to traditional therapies or unsuitable for systemic immunosuppressants. Understanding disease characteristics in both children and adults is vital for tailored care. Essential data includes age of onset, symptoms, lesion locations by age, comorbidities, and treatment responses.

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Abstract N°: 6664

Safety profile of upadacitinib in adolescent and adult patients with atopic dermatitis: a long-term analysis of a real-world retrospective review

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Introduction & Objectives:

Clinical trials have evaluated the long-term safety profile of upadacitinib (UPA) for atopic dermatitis (AD); however, real-world evidence is limited. We conducted a multicenter retrospective review of three institutions in Canada.

Materials & Methods:

A total of 93 patients with AD (>1-year follow-up) were included. Mean age was 44.3 (range: 12-79) years; 50.5% (47/93) were female and 8.6% (8/93) were adolescents. Initial UPA doses were 15 mg (UPA15: 35.5%, 33/93) or 30 mg (UPA30: 64.5%, 60/93) once daily. Patients were assessed at week 16, week 26, week 52, week 72, and week 102. At each endpoint, incidence of clinical and laboratory-related adverse events (AEs) was documented.

Results:

Clinical AEs at any point up to week 102±6 were: herpes simplex (10.8%, 10/93), folliculitis (9.7%, 9/93), acne (8.6%, 8/93), skin/soft tissue infection (7.5%, 7/93), gastrointestinal (GI) upset (4.3%, 4/93), myalgia/arthralgia (2.1%, 2/93), herpes zoster (2.1%, 2/93), conjunctivitis (1.1%, 1/93), headache (1.1%, 1/93), lower respiratory tract infection (1.1%, 1/93), and non-fatal venous thromboembolism (VTE; 1.1%, 1/93). Laboratory-related AEs at any point up to 102±6 were as follows: elevated triglycerides (total: 47.3%, 44/93; new-onset: 15.1%, 14/93), elevated LDL (total: 29%, 27/93; new-onset: 7.5%, 7/93), elevated creatine phosphokinase (CPK; total: 28%, 26/93; new-onset: 22.6%, 21/93), anemia (total: 19.4%, 18/93; new-onset: 10.8%, 10/93), neutropenia (total: 12.9%, 12/93; new-onset: 10.8%, 10/93), elevated ALT (total: 7.5%, 7/93; new-onset: 4.3%, 4/93), elevated AST (total: 6.5%, 6/93; new-onset: 1.1%, 1/93), and elevated creatinine (new-onset: 1.1%, 1/93). Mean laboratory-related change from baseline to last follow-up were as follows for the following laboratory test parameters: triglycerides (2.2 to 3.0 mmol/L), LDL (3.6 to 3.7 mmol/L), elevated CPK (200 to 234 units/L), and neutrophils (3.0 to 2.0 x 109 units/L). Maximum mean change from baseline was documented for CPK (+194 units/L at week 52); platelets (-68 x 109 units/L at week 104), and LDL (+0.5 mmol/L at week 26). Treatment-related discontinuations due to AEs occurred in 8.6% (8/93) patients (GI upset [n=2], myalgia/arthralgia [n=2], folliculitis [n=1], herpes simplex [n=1], transaminitis [n=1], and venous thromboembolism [n=1]). In patients that continued UPA, the highest rate of improvement in non-self-limited safety-related AEs was seen with: folliculitis (55.6%, 5/9), elevated CPK (53.8%,

14/26), acne (50%, 4/8), gastrointestinal upset (50%, 2/4), elevated AST (50%, 3/6), and neutropenia (41.7%, 5/12).

UPA30 was associated with an increased proportion of reported AEs (58.3%, 35/60) as compared to UPA15 (36.4%, 12/33). Dose reduction due to safety was documented in 2.2% (2/93) patients.

Across 117 patient-years of safety follow-up, no serious infections, major adverse cardiovascular events, gastrointestinal perforation, malignancy, or deaths were observed.

Conclusion:

In 52-week phase III trials, common AEs reported were: acne (14%), nasopharyngitis (17%), and elevated CPK (7%-8.4%). Our real-world data demonstrated lower overall rates of acne (8.6%) but higher overall rates of elevated CPK (28%). Reassuringly, certain AEs such as elevated CPK, folliculitis, and acne resolved despite continued UPA treatment and no serious AEs (except one case of non-fatal VTE) occurred. Study limitations include its sample size and retrospective nature.

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Abstract N°: 6712

Dupilumab demonstrates higher likelihood of maintaining efficacy outcomes compared with lebrikizumab in monotherapy at Week 52: results from a placebo-adjusted indirect comparison analysis

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Introduction & Objectives: The monoclonal antibodies dupilumab (fully human) and lebrikizumab (humanized) have both demonstrated efficacy and safety in clinical trials of atopic dermatitis (AD). In the absence of direct head-to-head comparisons between dupilumab and lebrikizumab, Bucher indirect treatment comparisons (ITCs), in which treatment effects are anchored to a common comparator (e.g. placebo), provide a robust and widely accepted method of evaluating the relative efficacy of drugs, and can offer a useful framework for decision-making. The objective of our study was to report the results of a placebo-adjusted Bucher ITC comparing maintenance of efficacy outcomes between dupilumab and lebrikizumab monotherapy at Week 52 in patients with moderate-to-severe AD who had achieved ≥75% improvement from baseline in Eczema Area and Severity Index (EASI-75), or Investigator's Global Assessment (IGA) score 0/1 (clear/almost clear) at Week 16.

Materials & Methods: Placebo-adjusted Bucher ITC utilized phase 3 trial data from SOLO-CONTINUE (dupilumab; NCT02395133) and ADVOCATE 1 and 2 (lebrikizumab; NCT04146363 and NCT04178967) maintenance phase were used. Data at Week 52 was used with the following doses: 300mg dupilumab every 2 weeks (q2w) or placebo, and 250mg lebrikizumab q2w or every 4 weeks (q4w) or placebo. No adjustments were made for baseline characteristics, and missing data were imputed using non-responder imputation (NRI), excluding patients who had received topical corticosteroids during the maintenance phase, similar as ADVOCATE 1 and 2. Outcomes included proportion of patients maintaining IGA 0/1, EASI-75, EASI-90, and 4-point improvement in peak pruritus Numerical Rating Scale score (PP-NRS ≥4) at Week 52 from SOLO-CONTINUE and ADVOCATE 1 and 2 maintenance phase baseline (Week 16). Odds ratio (OR) with 95% confidence interval (CI) are reported.

Results: Comparison of baseline disease characteristics indicated that the patient populations enrolled in ADVOCATE 1 and 2 maintenance phase baseline presented with lower disease severity compared with SOLO-CONTINUE, based on percentage body surface area affected. However, mean EASI and pruritus NRS baseline scores were similar in the compared trials. This analysis favored dupilumab for all outcomes evaluated at Week 52. Comparing q2w dosing, dupilumab had significantly higher ORs for EASI-75 (OR=4.15, 95%CI 1.41–12.18); EASI-90 (OR=3.72, 95%CI 1.09–12.76); IGA 0/1 (OR=4.62, 95%CI 1.02–20.92); PP-NRS ≥4 (OR=11.96, 95%CI 1.24–115.34). Compared with lebrikizumab q4w, dupilumab q2w maintained significantly higher EASI-75 OR (OR=3.53, 95%CI 1.18–10.53), while OR for the other 3 outcomes favored dupilumab, but did not reach statistical significance: EASI-90 (OR=3.31, 95%CI 0.97–11.33), IGA 0/1 (OR=3.31, 95%CI 0.73–15.08), and PP-NRS ≥4 (OR=8.79, 95%CI 0.91–84.81).

Conclusion: Based on a Bucher ITC utilizing data from trials with similar designs, patients treated with dupilumab q2w demonstrated higher likelihood of maintaining improvements in signs and symptoms at Week 52 compared with patients treated with lebrikizumab q2w or q4w.

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Abstract N°: 6713

Comparative evaluation of the efficacy and safety of crisaborole ointment versus tacrolimus ointment for the topical treatment of atopic dermatitis-A randomized controlled trial

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Introduction & Objectives:

Topical calcineurin inhibitors (TCI) and crisaborole are the mainstays among the corticosteroid-sparing agents in the management of mild to moderate atopic dermatitis (AD). We have insufficient data comparing the efficacy and safety of crisaborole and TCI. This randomized controlled trial (RCT) aimed to compare crisaborole ointment with tacrolimus ointment in mild to moderate AD cases.

Materials & Methods:

A total of 40 children between 12 and 16 years were randomized into two groups of either crisaborole or tacrolimus ointment. The primary efficacy endpoint was achieving an Investigator's Static Global Assessment (ISGA) score of 0 or 1 by day 29 and a 2-grade or greater improvement from baseline. The changes in the Severity of Pruritus Scores (SPS), the clinical signs of AD, quality of life, and the side effects of each treatment group were also noted.

Results:

Baseline characteristics were similar between the two groups. By day 29, both groups demonstrated a marked reduction in ISGA scores from baseline. The crisaborole group reached an ISGA score of 0.95 ± 0.78, while the tacrolimus group was at 0.94 ± 0.64 (P-value=0.99). Similarly, there was no difference between the two groups in terms of SPS scores (p=0.962), CDLQI (p=o.489), and clinical signs of AD.. Localized burning sensation was seen in both groups, with tacrolimus showing more incidence of the adverse event.

Conclusion:

The study demonstrated that crisaborole and tacrolimus ointment have comparable efficacy in treating atopic dermatitis; however, crisaborole has a superior safety profile.

Table 2:-Comparison of ISGA between Crisaborol and Tacrolimus.

ISGA	Crisaborol	Tacrolimus	Total	P value
At baseline	2.63 ± 0.5	2.62 ± 0.5	2.62 ± 0.49	0.937*
At day 8	2.11 ± 0.74	2.14 ± 0.57	2.12 ± 0.65	0.857*
At day 15	1.74 ± 0.73	1.86 ± 0.73	1.8 ± 0.72	0.606*
At day 22	1.42 ± 0.61	1.5 ± 0.62	1.46 ± 0.61	0.698*
At day 29	0.95 ± 0.78	0.94 ± 0.64	0.95 ± 0.7	0.99*

*** Independent t test**

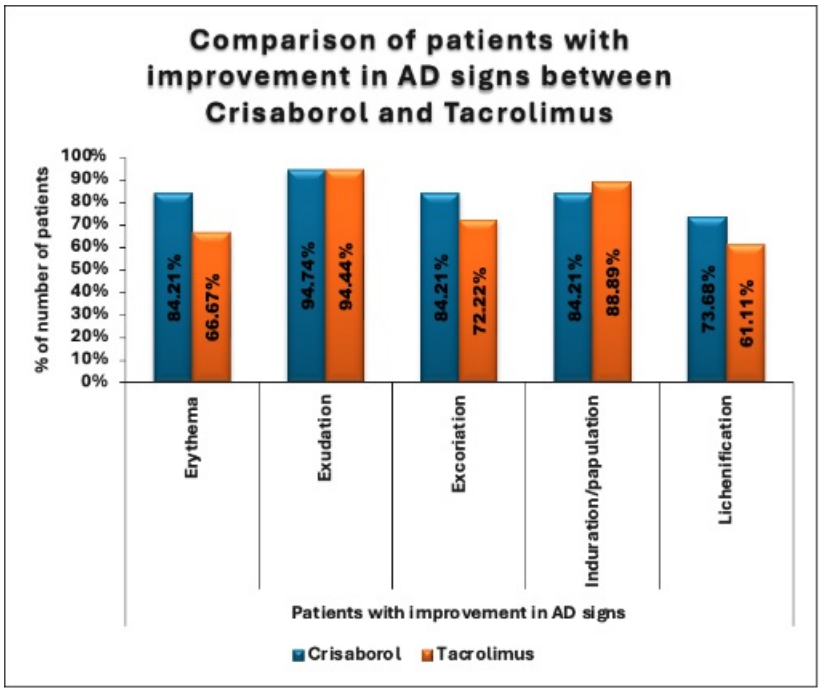
Figure 1:-Comparison of trend of ISGA at different time intervals between Crisaborol and Tacrolimus.

Table 3:-Comparison of SPS between Crisaborol and Tacrolimus.

SPS	Crisaborol	Tacrolimus	Total	P value
At baseline	2.32 ± 0.48	2.33 ± 0.48	2.33 ± 0.47	0.909*
At day 8	1.89 ± 0.66	1.9 ± 0.54	1.9 ± 0.59	0.958*
At day 15	1.47 ± 0.7	1.57 ± 0.6	1.52 ± 0.64	0.636*
At day 22	1.16 ± 0.6	1.33 ± 0.59	1.24 ± 0.6	0.379*
At day 29	0.84 ± 0.6	0.83 ± 0.51	0.84 ± 0.55	0.962*

*** Independent t test**

Figure 4:-Comparison of patients with improvement in AD signs between Crisaborol and Tacrolimus.


Comparison of patients with improvement in AD signs between Crisaborol and Tacrolimus
% of number of patients
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
84.21%
66.67%
94.74%
94.44%
84.21%
72.22%
84.21%
88.89%
73.68%
61.11%
Erythema
Exudation
Excoriation
Induration/papulation
Lichenification
Patients with improvement in AD signs
Crisaborol
Tacrolimus

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Abstract N°: 6737

German ADBest-TREAT Registry – Baseline results

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Introduction & Objectives:

Atopic dermatitis (AD) is a chronic inflammatory skin disease associated with distressing itchiness and skin inflammation that leads to significant psychosocial impairment and a severe reduction in quality of life. A growing number of treatment options for AD have been developed, markedly improving the chances of living well with the disease. These innovations need to be evaluated for benefits, risks, and specific treatment profiles under real-world conditions.

Materials & Methods:

ADBest-TREAT is a digital, web-based, large-scale, non-interventional, observational registry of patients with AD in dermatological practices in Germany, contributing to the academic TREAT registry. Unlike the TREAT registry, ADBest-TREAT focuses exclusively on collecting real-world data on systemic therapies for atopic dermatitis, complementing TREAT's valuable contributions in this field. The collaboration between the two registries enables the exploration of inquiries arising from real-world dermatological care through basic research. The registry was developed by experts in the field of dermatology, biostatistics, and information technology (IT) in collaboration with patients. Multiple investigational sites in Germany will observe 5000 patients with AD over a period of five years (with a possible extension to 10 years). The registry provides real-world data on the effectiveness, patient benefits, treatment patterns, and safety of systemic therapies (biologics/janus-kinase inhibitors (JAKi)) for the treatment of AD. It facilitates the development of predictive models and the optimization of guidelines. The data presented were collected during enrollment visits from January 2023 to January 2024 at the Institute for Health Services Research in Dermatology and Nursing Professions (IVDP) of the University Medical Center Hamburg-Eppendorf.

Results:

Between 2023 and 2024, 109 patients were enrolled in ADBest-TREAT, 61% (n=67) female, with a mean age of 37 years (M= 34, SD= 13.52). 82% (n=89) received systemic treatment. The most common systemic treatment was dupilumab (n=42), followed by tralokinumab (n=22), abrocitinib (n=9), upadacitinib (n=8), lebrikizumab (n=5), baricitinib (n=1), and others (n=2). Of the 79% (n=86) receiving topical treatment, 42% (n=36) were treated with tacrolimus, 37% (n=32) with pimecrolimus, and 20% (n=17) with topical steroids. The feasibility of completing digital forms by doctors and patients was high.

Conclusion:

In this ADBest-TREAT registry cohort, the majority of AD patients received systemic therapy with a biologic,

indicating that JAKi are not a dermatologist's first choice. This underscores the need to generate more real-world data on the treatment of AD patients with JAKi in routine care. ADBest-TREAT can help provide this large-scale data by offering an easy digital collection of routine data from dermatological practices and outpatient clinics in Germany.

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Abstract N°: 6756

Long-term safety and tolerability of treatment with dupilumab in patients with moderate-to-severe atopic dermatitis: real-world data from the large prospective, non-interventional PROLEAD study

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Introduction & Objectives:

Dupilumab is the first biologic licensed for the treatment of patients with moderate-to-severe atopic dermatitis (AD). Dupilumab has been shown to have a favourable safety and tolerability profile in this patient population over a period of 5 years, as reported in Phase 3 clinical trials. Here we report the 24-month real-world safety results from PROLEAD, the largest non-interventional study of dupilumab in Germany to investigate the real-world effectiveness and safety of dupilumab in adults with moderate-to-severe AD in a clinical setting.

Materials & Methods:

PROLEAD was the first multicentre, prospective, non-interventional study in Germany conducted from April 2018 to October 2022, with a 2-year observation period. The primary and secondary objectives were to describe the real-world effectiveness and safety of dupilumab in routine clinical practice as treatment per label for adults with moderate-to-severe AD, respectively. The present analysis assessed the safety of up to two years of treatment with dupilumab, reported as adverse events (AEs), serious AEs (SAEs), treatment-emergent AEs (TEAEs), AEs leading to discontinuation and deaths, including those related to study treatment. Safety was assessed in the safety analysis set (SAS; all patients who received ≥1 dose of dupilumab), and study discontinuations were analysed in the full analysis set (FAS; patients with baseline and ≥1 follow-up effectiveness assessment).

Results:

Overall, 818 and 780 patients were included in the SAS and FAS, respectively. At Month 24, 339 (41.4%) patients had experienced ≥1 AE, with 56 (6.9%) experiencing ≥1 SAE. TEAEs were reported in 325 (39.7%) patients, with serious TEAEs reported in 51 (6.2%). Drug-related TEAEs were reported in 185 (22.6%) patients, none of which experienced serious drug-related TEAEs. The most frequently reported TEAEs were ‘conjunctivitis’ (13.0%, n=106), ‘nasopharyngitis’ (3.1%, n=25), and ‘drug ineffective’ (2.6%, n=21). A total of three deaths occurred, none of which were related to study drug. The reasons for death were cited as ‘breast carcinoma’ (n=1), and ‘death of unknown cause’ (n=2). Of 780 patients in the FAS, 255 (32.7%) discontinued the study prior to the end of the observation period. The most common reasons for discontinuation were loss of contact (6.2%, n=48), occurrence of AEs (5.6%, n=44) and lack of efficacy (4.1%, n=32).

Conclusion:

PROLEAD was the German non-interventional study to evaluate long-term safety data up to 2 years of treatment with dupilumab in clinical practice. The findings of PROLEAD confirm the established safety and tolerability profile of dupilumab in clinical trials, and are consistent with that observed in real-world conditions, with no new safety signals identified. The frequency of study discontinuation was predominantly unrelated to the study drug, and is a common observation in long-term, unmonitored, non-interventional studies.

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Abstract N°: 6757

Drug survival in patients with atopic dermatitis: dupilumab vs upadacitinib

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Introduction & Objectives:

Dupilumab is a recombinant IgG4 monoclonal antibody that specifically binds to the α-subunit of the shared chain of interleukin-4 and interleukin-13 receptors. Upadacitinib is a Janus kinase (JAK) inhibitor, that has greater inhibitory potency at JAK1. These two mechanisms decrease the type 2 inflammatory mediators in patients with atopic dermatitis (AD). Nevertheless, it is still unknown what drug is more effective or which is the proper patient to be treated with each treatment. The aim of the study is to analyse the survival time of dupilumab versus upadacitinib in patients with AD.

Materials & Methods:

A prospective observational study was designed. It was carried out in a tertiary level hospital including patients who started treatment with dupilumab or upadacitinib from 01/04/2020 and who had been on treatment for at least 20 weeks on 23/04/24. The variables collected were sex, age, start and end date of treatment, the Ezcema Area and Severity Index (EASI) and the Body Surface Assessment (BSA). Survival analysis was conducted using Kaplan-Meier curves.

Results:

97 patients with AD were included in the study, 59.8% (58/97) started treatment with dupilumab and 40.2% (39/97), with upadacitinib. The mean age was 32.11 (SD: 13.52) years, being 53.6% (52/97) female. The baseline EASI was 28.58 (SD: 8.85) and the BSA was 42.25 (SD: 20.20). There were no statistically significant differences in these sociodemographic and clinical parameters between these two groups. Treatment discontinuation was reported in 27.8% (27/97) of patients, 31.0% (18/58) in the dupilumab group and 23.1(9/39) in the upadacitinib group. The mean overall drug survival was 157.40 (SD: 8.52) weeks, 156.82 (SD: 10.43) in the dupilumab group and 93.75 (SD:6.32). A log-rank test was carried out, showing that there were no statistically significant differences between these two groups (p=0.924). In those patients who discontinued treatment, mean drug survival was 41.93 (SD: 4.60) weeks, 44.22 (SD: 4.96) in the dupilumab group vs. 37.33 (SD: 9.86) in the upadacitinib group (p=0.724).

Conclusion:

No differences between treatment survival were found in this study. More studies are needed in this direction to compare persistence time between different drugs in order to identify those patients who would benefit most from one or another treatment.

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Abstract N°: 6795

Dupilumab efficacy and safety up to 2 years in children aged 6 months to 5 years with atopic dermatitis

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Introduction & Objectives:

While previous studies into continuous long-term dupilumab treatment for adults with moderate-to-severe atopic dermatitis (AD) demonstrated sustained efficacy, further study into long-term safety and efficacy data regarding dupilumab in children is needed. This analysis evaluates the impact of treatment with dupilumab and low-potency topical corticosteroids (TCS) for up to 2 years on efficacy and safety measures in children aged 6 months to 5 years with moderate-to-severe AD.

Materials & Methods:

Children aged 6 months to 5 years with moderate-to-severe AD, who had participated in prior dupilumab pediatric AD studies were enrolled in a phase 3 open label extension (OLE) study (NCT03346434 Part A or B). Patients received subcutaneous dupilumab every 4 weeks; 200 mg for children weighing 5 to <15 kg, 300mg for 15 to <30 kg. Topical AD treatments were allowed. Efficacy outcomes assessed include the proportion of patients who achieved 75% improvement from baseline in Eczema Area and Severity Index (EASI-75) score and the proportion of patients who achieved an Investigator Global Assessment (IGA) score of 0/1 as observed from OLE baseline to 2 years. Safety was also evaluated.

Results:

A total of 180 patients were included in the 6 months to 5 years cohort; mean (±SD) age at OLE baseline was 3.9 (1.3) years with mean (SD) duration of AD of 3.5 (1.3) years. At OLE baseline, 29.4% of patients achieved EASI-75, improving to 85.1% at 52 weeks and 92.1% at 104 weeks. Similarly, 12.8% of patients achieved IGA 0/1 at OLE baseline, improving to 36.0% at Week 52 and 40.6% at Week 104. Total treatment-emergent adverse events (TEAEs) were observed in 87.8% of patients (intensity: mild 24.4%, moderate 52.2%, severe 11.1%). TEAEs assessed as related to dupilumab by the study investigators were reported in 18.3% of patients; the most prevalent were conjunctivitis (2.8%), allergic conjunctivitis (1.7%), nasopharyngitis (1.7%) and urticaria (1.7%). Serious TEAEs assessed as related to dupilumab by the study investigators were observed in 0.6% of patients.

Conclusion:

Treatment with dupilumab for up to 2 years in young children with moderate-to-severe AD demonstrated efficacy outcomes, with sustained improvement in clinical signs reported in a large proportion of patients. Results are consistent with the known safety profile for dupilumab.

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Abstract N°: 6842

Utilization and related harms of systemic glucocorticosteroids for atopic dermatitis: claims data analysis

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Introduction & Objectives: Systemic glucocorticosteroids (SGCs) are used in the short-term treatment of atopic dermatitis (AD), but are not recommended for long-term use since associated with severe side effects. This study aimed to characterize the utilization and potentially negative effects of SGC use for AD in German statutory health insurance (SHI) claims data.

Materials & Methods: Cross-sectional and longitudinal analysis of a large nationwide SHI dataset. SGC drug prescriptions and incidences of predefined comorbidities after drug initiation known as potentially harmful side effects were analysed. The SGC use was quantified by 1) the number of quarters with at least one SGC prescription and 2) the defined daily doses (DDD). Adjustments in comparisons were made for age, gender and morbidity.

Results: The AD prevalence was 4.07% in 2020 (4.12% women, 3.71% men). During this period 9.91% of persons with AD were prescribed SGCs compared with 5.54% in persons without AD ($p<0.01$). The use of SGCs was significantly higher in women (10.20% vs.9.42% in men, $p=<0.01$) and the elderly. AD and sGC prevalence varied regionally. In a three-year follow-up period, 51% of persons with AD receiving a SGC prescription were prescribed SGCs in > 1 quarter and 15% in > 6 quarters. The odds of developing osteoporosis (odds ratio 3.95 [approach 1] and 1.80 [approach 2]) and diabetes (odds ratio 1.90 [approach 1] and 1.38 [approach 2]) were significantly higher in people with AD on sGCS, especially in the high use group compared with the low use group, regardless of quantified use.

Conclusion: In a considerable number of patients with AD in Germany SGCs are used longterm. The onset of medical conditions known to be harmful effects from steroids was significantly more frequent in SGC “high-users”, indicating the need for optimized health care.

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Abstract N°: 6886

Dupilumab increases levels of bone alkaline phosphatase irrespective of prior systemic corticosteroids use in children with moderate-to-severe Atopic Dermatitis

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Introduction & Objectives: Moderate-to-severe atopic dermatitis (AD) in children can be associated with shorter stature, as well as increased risk of bone morbidities and lower bone mineral density (BMD). The magnitude of peak bone mass in prepubescent years affects lifetime risk of fractures and osteoporosis. Bone Alkaline Phosphatase (BALP) facilitates bone mineralization and contributes to density and linear growth in children. Systemic corticosteroids (SCS) can negatively affect bone health and vertical growth. The objective of this analysis is to describe the effect of dupilumab treatment on BALP in children aged 6–11 years with moderate-to-severe AD and a prior history of SCS use.

Materials & Methods: BALP levels in sera from participants receiving dupilumab (300 mg every 4 weeks [q4w] or 100/200 mg every 2 weeks [q2w]) or placebo in LIBERTY AD PEDS (NCT03345914) and dupilumab (300 mg q4w or 100/200 mg q2w) in LIBERTY AD PED-OLE (NCT02612454) were analyzed at baseline and at 8, 12, 16 (PEDS), and 52 weeks (PED-OLE). Serum BALP levels (mcg/L) were stratified by prior use (with SCS; n=72) or by no prior use of SCS (w/o SCS; n=295), as captured in PEDS patient histories at baseline.

Results: With or without prior SCS use, dupilumab treatment led to a significant increase in BALP levels in children with moderate-to-severe AD at Week 16 compared to the placebo group (with SCS: dupilumab [n=55] vs placebo [n=17], mean change [standard deviation] in BALP levels of 14.0 mcg/L [15.5] vs −5.5 mcg/L [16.0], *P* value = 0.0035; w/o SCS: dupilumab [n=189] vs placebo [n=106], 12.7 mcg/L [17.6] vs 2.2 mcg/L [16.3], *P* = 0.0006). By Week 52, BALP levels further increased vs baseline regardless of prior SCS use, and were comparable with reference intervals (with SCS: 19.3 mcg/L [18.1], *P* = 0.0005; w/o SCS: 15.6 mcg/L [21.0],*P*** <** 0.0001). Patients in the placebo group who switched to dupilumab in PED-OLE had improved to levels similar to those of patients continuing treatment by Week 52 (with SCS: 23.3 mcg/L [19.3], *P* = 0.0067 [vs baseline]; w/o SCS: 18.4 mcg/L [20.4], *P* < 0.0001 [vs baseline]).

Conclusion: Dupilumab treatment increased BALP levels in children aged 6–11 years with moderate-to-severe AD irrespective of prior history of SCS use. These results add to growing knowledge that moderate-to-severe AD can negatively impact BALP levels in children. The increase in BALP levels suggests that dupilumab may help improve bone mineralization in children with moderate-to-severe AD when treated during the prepubescent period.

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Abstract N°: 6903

Dupilumab Treatment Provides Long-Term Improvement in Sleep Loss and Disease Control Over 1 Year in Pediatric Patients With Moderate-to-Severe Atopic Dermatitis

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Introduction & Objectives: As signs and symptoms of atopic dermatitis (AD) can wax and wane over time, disease control is better represented by consistency of response over time rather than at a single time point. Here we evaluate the proportion of pediatric patients achieving EASI <7 (mild or no disease activity) and mild or no sleep loss across 5 visits during 52-weeks of an ongoing, open label extension trial of dupilumab.

Materials & Methods: Patients aged 0.5–17 years who previously participated in 16-week trials aged 0.5– 5 years (LIBERTY AD PRESCHOOL; NCT03346434), 6–11 years (LIBERTY AD PEDs; NCT03345914), and 12–17 years (LIBERTY AD ADOL; NCT03054428) were subsequently enrolled in the phase 3, open-label extension trial, LIBERTY AD PED-OLE (NCT02612454). Patients were treated with 300 mg q4w or 200/300 mg q2w (weight <60kg/≥60 kg). In this analysis, patients were assessed for consistency of Eczema Area and Severity Index score <7 and SCORing Atopic Dermatitis (SCORAD) sleep loss VAS score <4, at 5 timepoints: Weeks 4, 16, 28, 40, and 52.

Results: In the 763 pediatric patients assessed, at least half of the patients maintained EASI <7 for at least 4 of 5 timepoints (0.5–5 years [109/173; 63%], 6–11 years [189/324; 58%], 12–17 years [133/266; 50%]). In the 266 pediatric patients with a SCORAD sleep loss VAS score of >4 at baseline, more than half of the patients achieved mild or no sleep loss for at least 4 of 5 timepoints (0.5–5 years [56/90; 62%], 6–11 years [60/96; 63%], 12–17 years [50/80; 63%]). Across these age groups, over 60% maintained EASI <7 and over 75% maintained mild or no sleep loss for at least 3 of 5 timepoints. Safety was consistent with the known dupilumab safety profile in patients with atopic dermatitis.

Conclusion: Most pediatric patients achieved clinically relevant improvements in sleep loss and lesion severity, which were sustained throughout 1 year of treatment with dupilumab.

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Abstract N°: 6916

Atopic dermatitis characteristics and sensitization profiles in Polish children: a cross-sectional study.

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Introduction & Objectives:

Atopic dermatitis (AD) is a chronic skin condition that often begins in the first two years of life. It involves complex interactions between the immune system and environmental factors. This condition is marked by persistent inflammation and periodic flares, leading to considerable distress and impairment in quality of life for both patients and their families. We aimed to obtain thorough knowledge of the factors contributing to AD, its comorbidities as well as clinical phenotypes of the disease, which is critical for its effective management and enhancing patient outcomes. This study also analyzes sensitization profiles among children with different AD phenotypes based on age of onset, current age and POEM severity.

Materials & Methods:

A countrywide survey was conducted in Poland, targeting 435 children diagnosed with AD. The online questionnaire were filled out by the children's legal guardians. The severity of AD was evaluated using the Patient-Oriented Eczema Measure (POEM) tool.

Results:

74% of children had positive family history of atopic dermatitis. Most common anatomical region of AD onset was the arms and legs (69%), followed by the head/neck (62%), trunk (48%) and hands/feet (26%). Most children (67%) developed AD during the first 6 months of life and were more likely to start the disease with facial involvement compared with children with onset at 6-24 months and after 2 years of age (73%, 41% and 30%; $p<0.05$). Remarkably, 90% of the children were sensitized to at least one allergen, with the most frequent sensitizations being to bovine milk (42%), eggs (28%), and birch (27%). Food sensitizations were more prevalent in children under 6 years old compared to older children (30.92% vs. 9.21%; $p<0.05$). Conversely, children older than 6 years exhibited higher rates of inhalant sensitization or combined food and inhalant sensitizations (34.21% vs. 9.19% and 46.05% vs. 24.79%; $p<0.05$). A link was found between food sensitization and the age at AD onset, with children diagnosed after 2 years more likely to be sensitized solely to inhalants than those diagnosed before 6 months (51.85% vs. 7.19%; $p<0.05$). Additionally, children sensitized to both allergen categories had a higher incidence of asthma compared to those sensitized to only one category (50.98% vs. 21% and 9.8%; $p<0.05$). Viral infections were also more common among sensitized than non-sensitized children (32.7% vs. 20%; $p<0.05$).

Conclusion:

Children with disease onset before 6 months were more likely to first develop AD in the facial area. Sensitization patterns vary significantly with the age of onset and current age of the child, and are associated with increased risks of comorbid conditions such as asthma and viral infections. This underscores the importance of a comprehensive medical diagnosis in managing AD, suggesting potential pathways for targeted therapeutic strategies aimed at modulating the allergic response or boosting compromised immunity.

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Abstract N°: 6936

Searching for new candidate genes associated with Atopic Dermatitis in Ethiopians

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Introduction & Objectives:

Atopic dermatitis (AD) is a chronic inflammatory skin disorder that affects approximately 2–10% of adults and 15–30% of children. The pathogenesis of AD involves complex interactions between genetic and environmental factors. While three loss-of-function variants in the FLG gene are identified as the most recognized susceptibility factor in European populations, these variants are absent in African populations, where the prevalence of AD is notably high. This study aims to identify genetic origins of AD in African ancestry populations by examining multigenerational families and case-control cohorts from Ethiopia.

Materials & Methods:

DNA samples and skin biopsies were collected from a three generation Ethiopian AD family with twelve individuals; AD patients (n = 189) and healthy controls (n = 203). Whole genome sequencing (WGS) was performed in three affected and two unaffected individuals of the family. Variants were analyzed using computational tools such as SIFT, Polyphen2, CADD, and GERP++. The identified variants were further genotyped in the case-control cohort. The protein expression was detected in skin biopsies by immunohistochemistry.

Results:

WGS revealed two rare deleterious missense variants within *FLG2* (D13Y) and *NOD2* (A918S) genes co-segregating with AD in all the affected individuals of the family. Notably, genotyping in the case-control Ethiopian cohort demonstrated a significant association with *FLG2* p.D13Y variant ($p < 0.0003$), as well as the previously reported *NOD2* variants p.A849V ($p < 0.0085$) and p.G908R ($p < 0.0036$). In addition, immunohistochemistry of skin biopsies of Ethiopian AD individuals carrying the associated variants show reduced expression of FLG, FLG2 and NOD2. FLG2 expression was remarkably reduced in the stratum granulosum of carriers of the p.D13Y variant.

Conclusion:

Our findings suggest that the identified variants in the *NOD2* and FLG2 genes may play significant roles in the etiology of AD in Ethiopians. Further genetic and functional research is required to confirm the involvement of these genes and their associated variants in the development of AD.

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Abstract N°: 6949

Tofacitinib therapy is a promising treatment option in chronic actinic dermatitis: a real-world efficacy and safety analysis

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Introduction & Objectives:

Chronic actinic dermatitis (CAD) is a challenging skin disorder and no treatment option offers complete response in all patients. Oral Tofacitinib has been used successfully in many eczematous skin disorders. The study aims to analyze the real-world experience of therapeutic efficacy and adverse effect profile of oral Tofacitinib in patients with CAD.

Materials & Methods:

We report on 22 patients of CAD treated at our institute with oral Tofacitinib between January 2022 and October 2023. Data of all these patients was analyzed in March 2024 and the response to treatment, mean duration of treatment received, and adverse effects noted were recorded. All these patients were treated with Tofacitinib monotherapy and received only topical Tacrolimus in addition to the oral treatment.

Results:

All patients were males with an age range of 45-74 years (mean, 56.9 years). Duration of disease ranged from 2 years to 25 years (mean, 9.63 years). Majority of patients had already received one or more immunosuppressants and had not responded satisfactorily to these therapeutic options. The median treatment duration with oral Tofacitinib was 31 weeks (range, 8–54). More than 90% of patients (20/22) showed excellent response to treatment with complete/near complete resolution of signs and symptoms of the disease. Patients noted relief of symptoms as early as the 2nd week of treatment. The most significant adverse effects noted were reversible peripheral neuropathy in 1 patient, neutropenia in 3, and hypertriglyceridemia in 4 patients.

Conclusion:

Tofacitinib demonstrates an excellent therapeutic efficacy in CAD but needs close monitoring of adverse effects including laboratory investigations.

EA DV CONGRESS
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Abstract N°: 7024

Comparison of the Involved Body Surface Area as Assessed by Two Distinct Clinician-Reported Outcome Measures in Atopic Dermatitis Clinical Trials

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Introduction & Objectives:

In atopic dermatitis (AD) clinical trials, clinician-reported outcomes (ClinROs) are used extensively as primary and secondary endpoint measures. ClinROs that have often been used concurrently in AD studies are the Eczema Area and Severity Index (EASI) and the body surface area (BSA) affected by AD. In contrast to the BSA, the EASI assesses both the extent and severity of AD lesions. To determine percentage skin affected using the EASI, the clinician scores each body region on a scale from 0 (no active eczema) to 6 (90-100% affected). These region scores are converted to an overall percentage BSA (EASI_BSA) affected using a weighted average. The main objective of this evaluation was to compare the estimated total areas affected using the EASI and BSA (rule of nines, R9_BSA) approaches. In addition, to account for differences in how total scores are estimated using each approach, the affected BSA was also compared for each body region.

Materials & Methods:

A total of 660 EASI_BSA and R9_BSA measurements were collected from 170 patients across three ongoing AD clinical trials. For EASI scores, we calculated a range of EASI_BSA values using the lower and upper bounds of each scoring category used.

Results:

When comparing these measurements on a visit-by-visit basis, the R9_BSA was outside of the EASI_BSA range for 133 assessments (20.2%). For 50 (37.6%) of these assessments, the R9_BSA was reported below the lower limit of the EASI_BSA range, and 81 (60.9%) assessments had R9_BSA above the upper EASI_BSA limit. To further investigate the observed differences between the EASI_BSA and R9_BSA measures, the different body regions were compared individually. There were 59, 172, 77, and 102 assessments that were below the lower limit of the EASI_BSA range, and 141, 66, 126, and 72 assessments above the upper limit for the head/neck, trunk, upper extremities, and lower extremities regions respectively (see table below). The pooled mean R9_BSA affected by AD was 34.4%, and within the pooled mean range of the EASI_BSA (28.1–43.9%).

Body region	Number of R9_BSA assessments below lower limit of EASI_BSA range, n (%)	Number of R9_BSA assessments above upper limit of EASI_BSA range, n (%)
Head/Neck	59 (8.9)	141 (21.4)
Trunk	172 (26.1)	66 (10.0)
Upper extremities	77 (11.7)	126 (19.1)
Lower extremities	102 (15.5)	72 (10.9)
Full body	410 (15.5)	405 (15.3)

Conclusion:

The EASI and BSA are two important ClinROs utilized in AD clinical trials. The comparison performed between the EASI_BSA and R9_BSA has shown that for almost 80% of assessments the R9_BSA values do fall within the EASI_BSA range. More research needs to be done to fully compare the differences between these measures. In the meantime, utilizing rater training to ensure individual raters apply a consistent and standardized approach to scoring each assessment is important. In-study data analytics may also be helpful to detect and rectify rater inconsistencies early and ensure ongoing data quality.

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Abstract N°: 7052

Efficacy of Upadacitinib in Treating Atopic Dermatitis in the Head and Neck Regions

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Introduction & Objectives: Atopic dermatitis (AD) occurring on the head and neck can be challenging to treat and is often refractory to existing therapies. Treatment response in areas of the head and neck, including the face, is of particular importance as AD in these visible regions coincides with increases in depression and anxiety and is linked to worsening measures of quality of life. Upadacitinib (UPA) is a selective oral Janus kinase (JAK) inhibitor with greater inhibitory potency for JAK1 than JAK2, JAK3, and tyrosine kinase 2. Previous clinical trials have demonstrated that UPA was superior to placebo and to dupilumab in the treatment of moderate-to-severe AD. The objective of the current analysis was to assess the efficacy of UPA 15 mg (UPA 15), UPA 30 mg (UPA 30), or placebo (PBO) once daily for the treatment of AD among study subjects stratified by severity of the Eczema Area and Severity Index (EASI) head and neck region score at baseline (mild, 0 to <1; moderate, 1 to <4; severe, 4 to 7.2).

Materials & Methods: The Measure Up 1 and Measure Up 2 studies are ongoing pivotal Phase 3, randomized, placebo-controlled, studies evaluating the safety and efficacy of UPA 15 and UPA 30 in adults and adolescents with moderate-to-severe AD. Patients were randomized 1:1:1 to receive UPA 15, UPA 30, or PBO once daily. The proportion of patients achieving EASI head & neck score of <1 was reported by treatment group and visit through week 16 among subjects stratified by baseline EASI head and neck score (1 to <4, 4 to 7.2). Additionally, data was stratified by baseline EASI head and neck score (0 to <1; 1 to <4; 4 to 7.2) for the proportion of patients achieving at least a 4-point improvement (reduction) in DLQI among subjects with baseline DLQI ≥4, the proportion achieving DLQI 0/1, the proportion achieving Worst Pruritus Numerical Rating Scale (WP-NRS) scores of 0/1, and the proportion achieving an improvement in WP-NRS score of ≥4 from baseline.

Results: The current analysis included 1682 adults and adolescents from Measure Up 1 (N=847) and Measure Up 2 (N=835) randomized to UPA 15 (N=557), UPA 30 (N=567), or placebo (N=558). Analysis stratified by baseline EASI head and neck scores (1 to <4 or 4 to 7.2) across 16 weeks indicated a greater proportion of patients taking UPA 15 or UPA 30 compared to PBO achieved an EASI head and neck score of <1. Additionally, a greater proportion of patients treated with UPA 15 or UPA 30 achieved at least a 4-point reduction in DLQI scores relative to baseline compared to placebo across all three EASI head and neck score subgroups (0 to <1; 1 to <4; 4 to 7.2), with similar results for those achieving DLQI 0/1. Measures of itch were improved for patients taking UPA 15 or UPA 30 compared to placebo across all three EASI head and neck score subgroups as indicated by a reduction in WP-NRS of ≥4, and achievement of WP-NRS scores of 0/1 (Table 1).

Conclusion: Treatment with UPA 15 or UPA 30 compared to PBO resulted in a greater proportion of patients with clinically meaningful improvement, indicated by reduction of AD in the head and neck area (EASI <1) over 16

weeks. Improvements were present across stratified groups, including patients with severe head and neck involvement at baseline. Treatment with UPA 15 or UPA 30 compared to PBO resulted in patient-reported improvements in quality of life based on reduction of 4 points or more from baseline DLQI scores across 16 weeks.

Table 1. Proportion of subjects achieving efficacy endpoints at Week 16 stratified by EASI head and neck score at baseline.

% (N)	Placebo	UPA 15 mg	UPA 30 mg
EASI head & neck score < 1			
1 to <4	27.4 (307)	67.8 (320)	75.9 (323)
4 to 7.2	10.5 (152)	47.2 (142)	63.2 (136)
Reduction in DLQI ≥4			
0 to < 1	34.9 (86)	79.8 (84)	83.2 (95)
1 to <4	32.0 (278)	73.1 (294)	79.7 (290)
4 to 7.2	19.1 (136)	73.2 (127)	79.5 (122)
DLQI 0 or 1			
0 to < 1	5.7 (87)	38.4 (86)	45.5 (99)
1 to <4	4.6 (283)	25.3 (296)	38.0 (295)
4 to 7.2	4.3 (139)	25.0 (128)	41.5 (123)
Reduction in WP-NRS ≥4			
0 to < 1	15.8 (95)	51.6 (93)	64.5 (107)
1 to <4	10.9 (302)	46.5 (312)	57.5 (318)
4 to 7.2	6.1 (148)	46.0 (139)	61.5 (135)
WP-NRS 0/1			
0 to < 1	7.2 (97)	43.6 (94)	55.6 (108)
1 to <4	4.9 (304)	28.8 (319)	42.8 (320)
4 to 7.2	3.3 (150)	31.2 (141)	45.9 (135)

Results are based on non-responder imputation (NRI) with no special handling for missing due to COVID-19.
UPA, upadacitinib; EASI, Eczema Area and Severity Index; DLQI, Dermatology Life Quality Index; WP-NRS, Worst Pruritus Numerical R

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Abstract N°: 7090

The clinical characteristics of Dupilumab nonresponders in atopic dermatitis

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Introduction & Objectives:

Dupilumab, an antibody against interleukin-4 receptor α, is the first biological agent approved for the treatment of moderate-to-severe atopic dermatitis (AD). Although there have been promising outcomes in clinical trials and accumulating real-world evidence supports the efficacy of dupilumab for AD, some patients do not respond to dupilumab in the real world. Factors associated with an inadequate response to dupilumab and whether there is a way to predict them are largely unknown. We aimed to investigate the efficacy of dupilumab in Polish patients with moderate-to-severe AD and attempt to identify potential clinical factors affecting the treatment outcomes.

Materials & Methods:

Patients with moderate-to-severe AD from the Department of Dermatology, Venereology, and Allergology of the Medical University of Gdansk who started dupilumab treatment between April 2022 and December 2023 were included and retrospectively analyzed based on medical records. Patient characteristics, including gender, age at dupilumab initiation, EASI, age of AD onset, comorbidities, atopic family history, specific and contact allergens, blood eosinophil count, body mass index (BMI), and smoking were collected at baseline. BMI was categorized as normal weight (BMI <25) and overweight (BMI ≥25). For patients aged <18 years, normal weight and overweight were defined according to the BMI standardized percentile charts used in Poland. Potential factors were analyzed with the treatment outcome defined as achieving an improvement of ≥75% in the Eczema Area and Severity Index from baseline (EASI-75).

Results:

59 AD patients were enrolled, including 21 patients aged <18 years and 38 adult patients aged >18 years. The group of patients aged <18 years consisted of 8 children (6-11 years of age) and 13 adolescents (12-17 years of age). At week 16, the proportion of patients, who achieved EASI-75 was 61,9% (13/21) and 60,5% (23/38) in the group of children and adolescents, and adults, respectively. In the group of adults, early-onset defined by the onset of AD <2 years old and smoking were significantly associated with reduced odds of achieving EASI-75 (OR = 0.14, 95% CI: 0.03-0.77; p = 0,02, OR = 0.14, 95% CI: 0.02-0.85; p = 0,03, respectively). Additionally, adult patients with baseline eosinophilia (blood eosinophil count >500 cells/μL) were marginally significantly more likely to achieve EASI-75 (OR = 3.75, 95%CI: 0.95-14.82; p = 0,059) compared to those with normal baseline blood eosinophil count. In the group of children, we did not identify any potential factors influencing the treatment outcomes. Of the patients who did not achieve EASI-75 at week 16 (23/59), 17.4% of patients (4/23) achieved EASI-75 at week 26.

Conclusion:

Based on our findings, age of AD onset and smoking status may be potential phenotype factors predicting the response to dupilumab in adult patients with AD. However, further research is needed to verify these assumptions.

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Abstract N°: 7104

Environmental influences on the prevalence of toilet seat dermatitis among Indonesian children with atopic dermatitis

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Introduction & Objectives:

Toilet seat dermatitis is increasingly recognized due to repeated exposure to allergenic compound and residues from harsh cleaning chemicals commonly found on toilet seats. Characterized by distinct, patchy lesions on the buttocks and thighs, this condition is often overlooked by clinicians, particularly in children with atopic dermatitis (AD) who are prone due to their compromised skin barriers. This study explores the prevalence and characteristics of toilet seat dermatitis in Indonesian children with AD, aiming to highlight its significance in a tropical climate that may exacerbate its occurrence.

Materials & Methods:

This cross-sectional study was conducted in 2022 at the main tertiary referral center in Bandung, West Java, Indonesia. The study included participants aged 4 to 18 years, diagnosed with AD by pediatric dermatologist according to the Hanifin and Rajka criteria, including full body skin examination. We assessed all Hanifin and Rajka minor criteria, except for delayed blanching, keratoconus, anterior subcapsular cataracts, immediate skin test reactivity, and serum immunoglobulin E (IgE) levels. Toilet seat dermatitis is defined by the distribution of skin lesions localized specifically across the buttocks, as well as the posterior and medial aspects of the thighs. The severity of AD was evaluated using the SCORAD Index. Descriptive statistics were used for demographic and clinical characteristics. Univariate analysis were carried out to select relevant variables for further analysis. These identified variables were included in a multivariable logistic regression analysis.

Results:

Among the total of 101 participants diagnosed with AD, toilet seat dermatitis was observed in 28 (27.72%) with a median age of 10, female 53.6%. Based on severity, 18 children (64.3%) had moderate AD, while the remaining 10 (35.7%) were categorized as having severe AD. The most prevalent findings, identified in over 50% were a predisposition to non-specific hand or foot dermatitis in 85.7%, course influence by environmental factors in 82.1%, xerosis 82.1%, and orbital darkening in 53.6%. The odds of having toilet seat dermatitis were higher for course influence by environmental factor (OR=4.003, 95%CI:1.339-11.967, p=0.013).

Conclusion:

Environmental factor appears to be a potential determinant for toilet seat dermatitis development. In Southeast Asia, including Indonesia, the prevalent use of bidets or shower toilets along with bathroom detergents that contain sensitizing chemicals often leads to persistently moist toilet seats environment. This can exacerbate skin lesions, particularly across the buttocks, posterior and medial thighs in children with AD. Recognizing and addressing the factors that contribute to this condition are crucial, especially in tropical climates where a compromised skin barrier heightens susceptibility to irritants. Preventative measures such as using toilet seat covers and reducing time spent on the toilet are recommended to mitigate contact with irritants and help prevent

the development of toilet seat dermatitis in AD populations and also to prevent the development of secondary skin infections.

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Abstract N°: 7107

Serum SCCA2 as a Biomarker for Evaluating Upadacitinib Response in Patients With Moderate-to-Severe Atopic Dermatitis

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Introduction & Objectives:

Serum TARC/CCL17 is routinely used in Japanese clinical practice as a biomarker of atopic dermatitis (AD) disease severity and progression1 and of AD response to dupilumab (DUP) treatment. Although limited, available data suggest that serum TARC/CCL17 is a less robust biomarker of AD response to upadacitinib (UPA) vs DUP treatment.2 To identify a more relevant surrogate for UPA response, we evaluated the effect of UPA vs DUP on the serum levels of multiple clinical biomarkers: SCCA2 (approved in Japan as a biomarker for AD severity in patients aged <15 years)1 relative to TARC/CCL17 and other AD biomarkers currently used in Japan (serum eosinophil [EOS], C-reactive protein [CRP]); as well as potential AD biomarkers not currently used in Japan (CCL18, CCL26, interleukin [IL]-22, β-Defensin 2 [BD-2]).

Materials & Methods:

We analyzed change in expression levels of serum biomarkers** in patients with moderate-to-severe AD who received oral UPA 30 mg once daily (n=40) or subcutaneous DUP 300 mg every other week (n=40) over 24 weeks in the phase 3b, randomized, double-blind Heads Up clinical trial (NCT03738397; **Figure 1**).3 Serum biomarker level changes during UPA and DUP treatments were compared with previously-reported changes in the percentage of patients achieving ≥75% improvement in Eczema Area and Severity Index (EASI) score (EASI75) and/or Worst Pruritus Numerical Rating Scale (WP-NRS) score.2 A repeated measures linear mixed model was used to account for the dependent relationship over time. We conducted correlation analyses between change in serum biomarkers and EASI (Pearson's correlation) and WP-NRS (Kendall's correlation) outcomes. Data are presented as scatterplots with estimated linear regression.**

Results:

Changes in serum SCCA2 levels during UPA and DUP treatments (**Figure 2A**) more closely matched previously-reported improvements in EASI75 (i.e., significantly greater improvement with UPA vs DUP)3, compared with changes in serum TARC/CCL17 levels (**Figure 2B**). There was a significant correlation between serum SCCA2 level and EASI outcomes for both UPA and DUP treatments at baseline, week 16, and week 24 (P<.001; **Figure 3**). A responder analysis conducted at week 16 showed less of a reduction in serum SCCA2 levels with UPA and DUP treatments among EASI non-responders (≤60% decrease in EASI) vs responders (EASI75; **Figure 4**); however, the limited number of non-responders (n=6) makes it difficult to interpret this difference.** A significant correlation between serum SCCA2 and WP-NRS score outcomes was also observed with UPA and DUP treatments at weeks 16 and 24 (P<.05; **Figure 5**).** Change in serum SCCA2 levels during UPA and DUP treatments (**Figure 2A**)**

aligned more closely with improvement in EASI753** than change in other AD biomarkers used in Japan (EOS** and CRP; **Figure 6A and B**. Analysis of potential biomarkers not currently used in Japanese clinical practice (CCL18, CCL26, IL-22, and BD-2; **Figure 7A–D**) showed that UPA had a stronger effect than DUP on changes in serum IL-22 (**Figure 7C**) and BD-2 (**Figure 7D**) levels, suggesting the possibility of mechanistically broader disease control with UPA vs DUP.

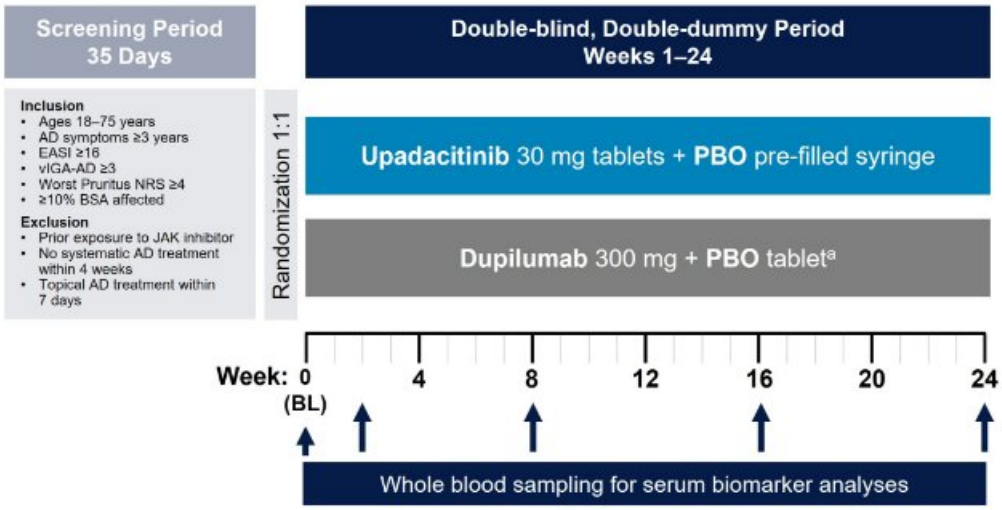
Conclusion:

These results show the clinical potential of serum SCCA2 as a biomarker to monitor AD response to UPA treatment over time. Further investigation of SCCA2 profile over the long-term and its clinical potential as a predictive biomarker of UPA treatment outcome is needed.

References:

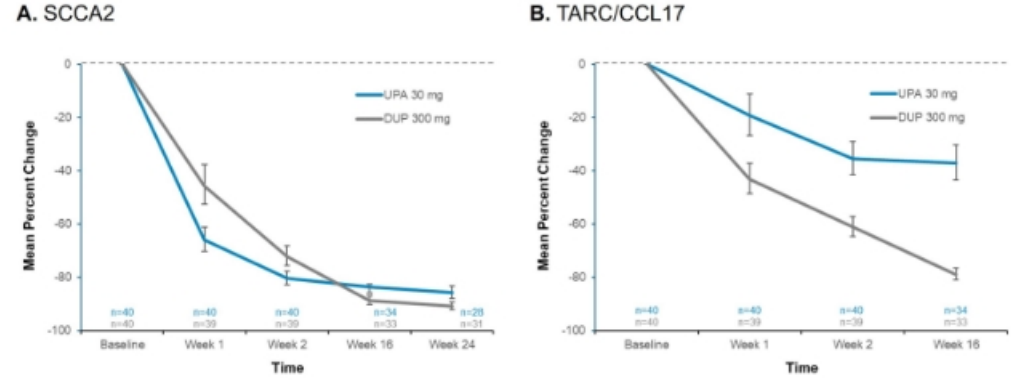
1. Saeki H, et al. *J Dermatol*. 2022;49:e315–e375.
2. Hagino T, et al. J Dermatol. 2022;49:1158–1167.
3. Blauvelt A, et al. *JAMA Dermatol*. 2021;157:1047–1055.

Figure 1. Study Design of Heads Up Clinical Trial



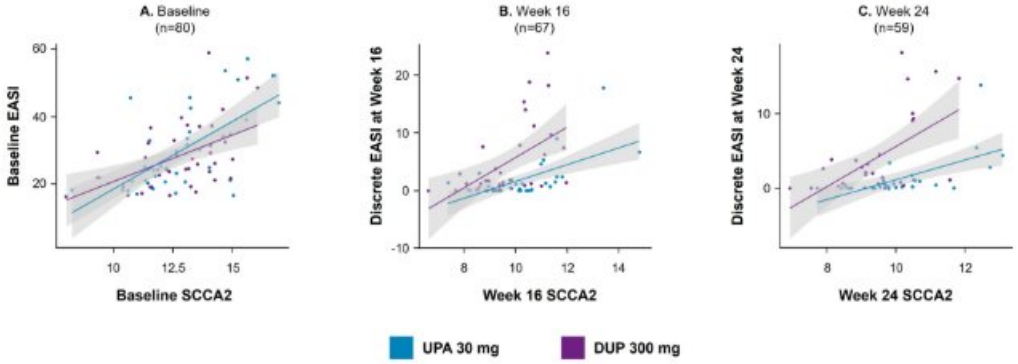
AD, atopic dermatitis; BL, baseline; BSA, body surface area; EASI, Eczema Area and Severity Index; JAK, Janus kinase; NRS, Numerical Rating Scale; PBO, placebo; SC, subcutaneous; vIGA, validated Investigator Global Assessment for Atopic Dermatitis.
[a]Dupilumab 300 mg SC injection was administered every other week starting at the week 2 visit and until the week 22 visit, after an initial dose of 600 mg at the BL visit.

Figure 2. Changes in Serum Levels of **(A)** SCCA2 and **(B)** TARC/CCL17 During UPA vs DUP Treatment in Patients With Moderate-to-Severe AD in the Heads Up Trial[a]



Note: Error bars represent standard deviation.
AD, atopic dermatitis; DUP, dupilumab; UPA, upadacitinib.
[a]Blauvelt A, et al. *JAMA Dermatol*. 2021;157:1047–1055.

Figure 3. Correlation Between Serum SCCA2 and EASI at Baseline, Week 16, and Week 24 of UPA vs DUP Treatment in Patients With Moderate-to-Severe AD in the Heads Up Trial[a]



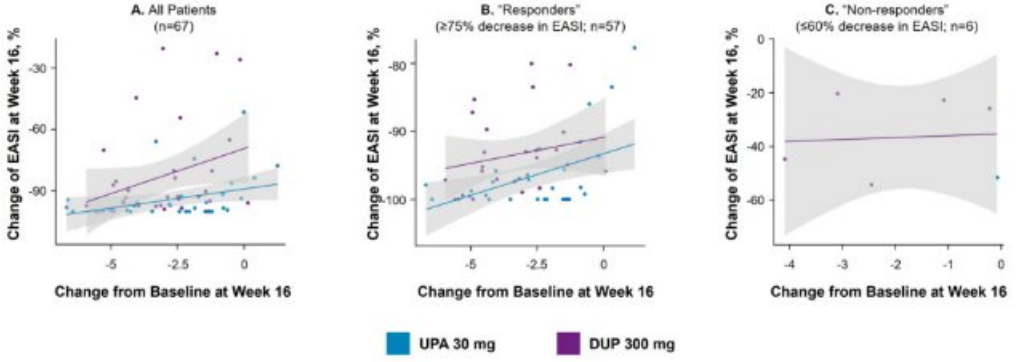
Correlation Between SCCA2 and EASI at Baseline		
Outcome	Pearson	p.Value
DUP 300mg	0.51	7e-04***
UPA 30mg	0.66	3.9e-06****

Correlation Between SCCA2 and EASI at Week 16		
Outcome	Pearson	p.Value
DUP 300mg	0.52	0.0018**
UPA 30mg	0.62	8.9e-05***

Correlation Between SCCA2 and EASI at Week 24		
Outcome	Pearson	p.Value
DUP 300mg	0.58	0.00086***
UPA 30mg	0.62	0.00058***

AD, atopic dermatitis; DUP, dupilumab; EASI, Eczema Area and Severity Index; UPA, upadacitinib.
[a]Blauvelt A, et al. *JAMA Dermatol*. 2021;157:1047–1055.

Figure 4. Correlation Between Change From Baseline in Serum SCCA2 and EASI Response at Week 16 of UPA vs DUP Treatment in Patients With Moderate-to-Severe AD in the Heads Up Trial[a]



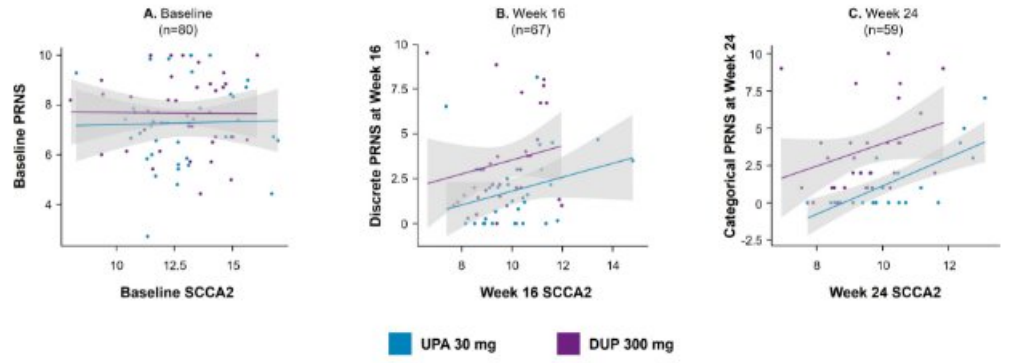
Correlation Between SCCA2 and EASI at Week 16		
Outcome	Pearson	p.Value
DUP 300mg	0.31	0.075
UPA 30mg	0.35	0.041*

Correlation Between SCCA2 and EASI at Week 16		
Outcome	Pearson	p.Value
DUP 300mg	0.20	0.32
UPA 30mg	0.48	0.0069**

Correlation Between SCCA2 and EASI at Week 16		
Outcome	Pearson	p.Value
DUP 300mg	0.45	0.45

AD, atopic dermatitis; chg, change; DUP, dupilumab; EASI, Eczema Area and Severity Index; UPA, upadacitinib.
[a]Blauvelt A, et al. *JAMA Dermatol*. 2021;157:1047–1055.

Figure 5. Correlation Between Serum SCCA2 and WP-NRS Score at Baseline, Week 16, and Week 24 of UPA vs DUP Treatment in Patients With Moderate-to-Severe AD in the Heads Up Trial[a]



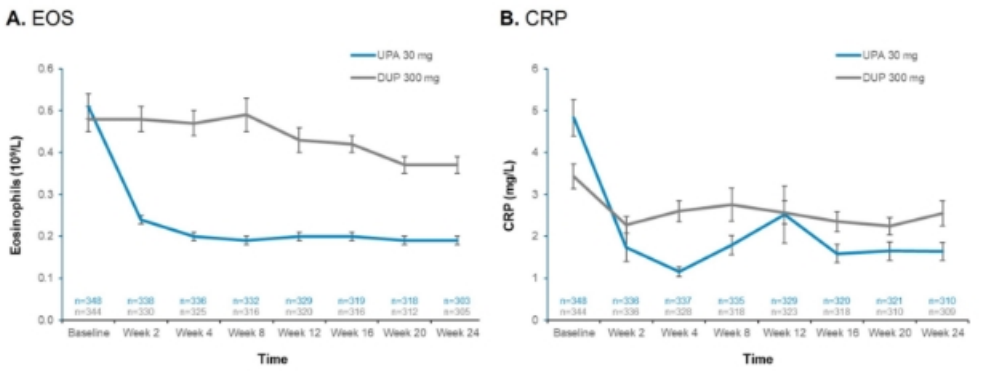
Correlation Between SCCA2 and WP-NRS at Baseline		
Outcome	Kendall's Correlation	p.Value
DUP 300mg	0	1.0
UPA 30mg	0.065	0.56

Correlation Between SCCA2 and WP-NRS at Week 16		
Outcome	Kendall's Correlation	p.Value
DUP 300mg	0.29	0.021*
UPA 30mg	0.28	0.029*

Correlation Between SCCA2 and WP-NRS at Week 24		
Outcome	Kendall's Correlation	p.Value
DUP 300mg	0.31	0.024*
UPA 30mg	0.45	0.0058**

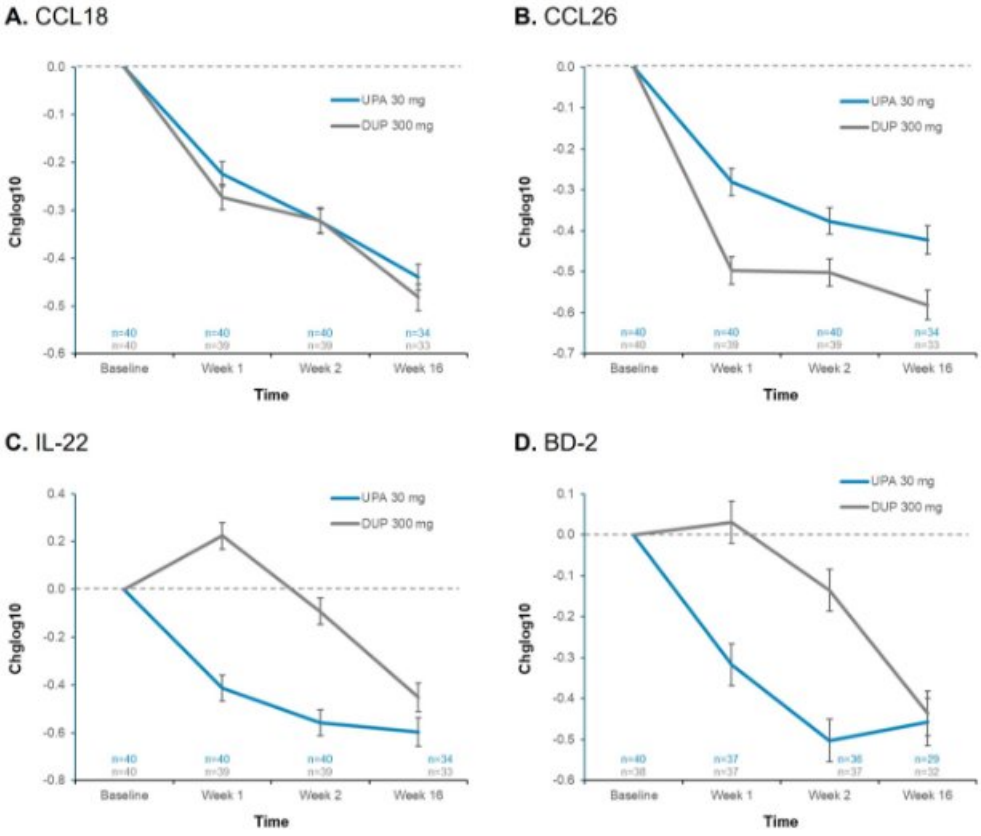
AD, atopic dermatitis; DUP, dupilumab; WP-NRS, Worst Pruritus Numerical Rating Scale; UPA, upadacitinib.
[a]Blauvelt A, et al. *JAMA Dermatol*. 2021;157:1047–1055.

Figure 6. Change in Serum Levels of **(A)** EOS and **(B)** CRP During UPA vs DUP Treatment in Patients With Moderate-to-Severe AD in the Heads Up Trial[a]



Note: Error bars represent standard deviation.
AD, atopic dermatitis; CRP, C-reactive protein; DUP, dupilumab; EOS, eosinophil; UPA, upadacitinib.
[a]Blauvelt A, et al. *JAMA Dermatol*. 2021;157:1047–1055.

Figure 7. Change in Serum Levels of **(A)** CCL18, **(B)** CCL26, **(C)** IL-22, and **(D)** BD-2 During UPA vs DUP Treatment in Patients With Moderate-to-Severe AD in the Heads Up Trial[a]



Note: Error bars represent standard deviation.
AD, atopic dermatitis; BD-2, β-Defensin 2; DUP, dupilumab; IL, interleukin; UPA, upadacitinib.
[a]Blauvelt A, et al. *JAMA Dermatol*. 2021;157:1047–1055.

EADV CONGRESS
AMSTERDAM 25-28 SEPTEMBER 2024
EUROPEAN ACADEMY OF DERMATOLOGY & VENEREOLOGY

Abstract N°: 7137

Topical delivery of skin-identical lipids reinforces the skin barrier to reduce skin susceptibility to irritants

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Introduction & Objectives: An altered composition of stratum corneum lipids, particularly ceramides, underpins the reduced skin barrier function of people with atopic dermatitis and other dry skin conditions. This leaves the skin more susceptible to irritant and allergen penetration, and colonization by pathogenic bacteria, which drive skin inflammation. This study aimed to determine whether skin-identical lipids, comprising ceramides, delivered in a multivesicular emulsion containing glycerine (MVE+GL) can improve skin function and protect against irritation compared to a commonly prescribed oil-in-water emulsion containing glycerine (OW+G).

Materials & Methods: We conducted a double-blind within-participant-controlled interventional study in adults with dry eczema-prone skin, wherein each participant underwent 28 days treatment (twice daily application) with MVE+GL on one forearm and leg and OW-G on the other (randomized allocation). The appearance and biophysical properties of the skin were assessed before, during and after treatment. The composition and structure of skin lipids were assessed by shot-gun lipidomics on stratum corneum samples and *in vivo* ATR-FTIR spectroscopy respectively.

Results: 58 people, aged 46±21 (SD) years, were included in the study. After 4 weeks of treatment, there were significantly higher levels of AP(18C) and NP(18C) ceramides in areas treated with MVE+GL compared to OW+G (by 31.6±44.2% and 36.0±57.3% respectively). Whilst OW+G did not affect skin barrier integrity (35.6±18.39 g/m2/h TEWL20 before treatment versus 37.4±16.69 g/m2/h after treatment), MVE+GL significantly improved it (38.0±18.64 versus 29.8±13.47, before versus after, p=0.0019). The improvement was significantly associated with the rebalancing of ceramide levels (NP[18C]:NdS ceramides vs TEWL20, r= -0.437, p<0.0001). Skin sensitivity to irritation (sodium lauryl sulphate) was significantly reduced at sites pre-treated with MVE+GL compared to OW+G (1.0±0.66 versus 1.4±0.76 visual redness score [scored from 0-3] respectively) and compared to baseline (1.4±0.77 visual redness). Skin hydration (capacitance) increased more rapidly at sites treated with MVE+GL compared to OW+G, which was reflected in a more rapid reduction in visual skin dryness.

Conclusion: Whilst a commonly used glycerine-containing emollient was able to reduce skin dryness, it did not have an impact on the skin barrier, debunking the widely held belief that emollients inherently repair the skin barrier. In contrast, the MVE+GL cream increased the levels of key ceramide species, strengthened the skin barrier in eczema-prone individuals and protected against irritation following challenge with a common household irritant known to exacerbate AD. Together with a more rapid resolution of skin dryness, this suggests that MVE+GL is a superior intervention for the maintenance of healthy skin by protecting against key triggers of inflammation.

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Abstract N°: 7139

Atopic Dermatitis in Ethiopian Children: A multicentre study of clinical severity, characteristics and socio-demographic factors

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Introduction & Objectives: Atopic dermatitis (AD) is a chronic relapsing, pruritic, inflammatory skin disease. Assessing the characteristics and risk factors of severe AD is central to healthcare worker understanding and subsequent education of patients. AD has been well documented in the global north in mainly Caucasian populations whilst very few studies have been conducted in African patients residing in Africa. This study assessed the clinical characteristics and associated factors of severe AD among children in Ethiopia.

Materials & Methods: A hospital based cross-sectional study was conducted among 461 children and their caregivers in four randomly selected hospitals in Southern Ethiopia from October 2022 to September 2023. A systematic sampling technique was used to enrol study participants. Clinical profile and sociodemographic data were collected by trained data collectors. The SCORAD index tool was used. The descriptive analysis was done to characterize study participants. Univariate and ordinary logistic regression was used to identify factors associated with SCORAD index score. The OR with 95% was used to show the strength of association and P value <0.05 was used to declare the level significance.

Results: Out of 461 AD diagnosed children, 212(46%) were females and 249(54%) were males. In the sample of the paediatric patients, 149(32.3%) exhibited mild AD, 231(46.2%) presented with moderate, and 99(21.5%) showed sign and symptoms of severe AD. All patients had itching. Dryness of skin, excoriation, erythema followed by lichenification was the most observed signs. In ordinary logistic regression model, age onset of the disease(AOR 95% CI 1.95(1.3-2.94)), gender of caregiver or family(AOR 95% CI 0.61(0.41-0.90)), family atopy history(AOR 95% CI 0.64(0.44-0.93)), mother education status(95% CI 2.45(1.1-5.47)) and use of herbal medication(AOR 95% CI 0.50(0.33-0.79)) were significantly associated with the severity of AD

Conclusion: In this study, sixty-eight per cent of children were found to have moderate to severe AD. Early-onset, maternal education, familial atopy history, gender of caregiver, and use of herbal medication were independent predictors of severe AD in children. We recommend further investigation into these variables for their potential to serve as markers to assess the severity of AD, improve the care and management of AD children in Ethiopia.

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Abstract N°: 7145

A case of Povidone iodine-induced eczema in a parturient

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Introduction:

Povidone iodine is an antiseptic with antibacterial and antifungal activity, widely used in surgical settings for perioperative disinfection.

The use of povidone iodine is associated with numerous allergic reactions ranging from allergic dermatitis to anaphylactic reactions.

We report a case of rapidly developing contact dermatitis occurring minutes after the application of povidone iodine.

Case report:

We present the case of a 26-year-old female, with no previous medical history and no history of atopy or known drug allergies. And she has been known to use povidone iodine.

Fifteen minutes after being coated with povidone iodine solution, the patient experienced itching and burning sensations on her back and abdomen, precisely corresponding to the areas coated for spinal anesthesia and cesarean section incision.

Postoperatively, the patient experienced intensified itching, followed by the appearance of a well-defined erythematous plaque with small vesicles several hours later, affecting the coated areas but sparing the surgical wound.

A diagnosis of contact eczema was made, and the patient received treatment with potent topical corticosteroids, resulting in excellent improvement.

Discussion:

Contact eczema or allergic contact dermatitis is a delayed type 4 hypersensitivity reaction corresponding to an immunological response occurring when the skin of a sensitized individual comes into contact again with the allergen. The interval between initial allergen contact and symptom onset can be up to 92 hours. Upon subsequent contact, symptoms appear more rapidly, as seen in our patient.

Clinically, acute forms of this dermatosis present with significant itching, an erythematous plaque, and vesicles or blisters. Severe edema may sometimes complicate the clinical picture, especially in facial and eyelid involvement.

Antiseptics are widely used in hospital settings, particularly in surgical preparation. An observational study conducted over two years among patients with contact allergies to antiseptics showed a 19% allergy rate to povidone iodine-based antiseptics.

Allergic contact dermatitis caused by povidone-iodine solutions is a common adverse effect, especially postoperatively, and may be underdiagnosed and underreported. It typically occurs within the area occluded by the surgical dressing or covered by surgical drapes used during the procedure, often more intense and with

clearer boundaries where pressure and occlusion are greater. It does not necessarily or commonly affect the surgical wound itself, as observed in our patient. These characteristics sometimes lead to a misdiagnosis of irritant contact dermatitis, as reported in a Spanish study before the allergic component was confirmed by patch testing.

Short-term treatment relies on topical corticosteroids if the involvement affects less than 20% of the body surface area. Oral corticosteroid therapy may be considered for extensive forms, involving more than 20% of the body surface area.

Conclusion:

Contact eczema or allergic contact dermatitis to povidone iodine is common but underreported, as only severe or extensive cases are referred to dermatologists. Diagnosis is based on the distribution of lesions around the surgical site. Long-term treatment involves avoiding povidone iodine, with the use of alternative antiseptics warranted, particularly in our patient for future pregnancies.

EADV CONGRESS
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Abstract N°: 7185

Atopic dermatitis: Risk factors in ecuadorian children. A cross sectional study.

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Introduction & Objectives:

The term atopy is known as the immunological hyperreactivity presented by a subject to common allergens in the environment that are related as risk factors. Being part of a group of diseases called the atopic spectrum, atopic dermatitis is a chronic inflammatory skin disorder accompanied by a set of characteristic alterations and lesions that occur in atopic people. Its appearance occurs most frequently in children of early ages, presenting up to 60% before 5 years of age. Due to its multifactorial etiology several studies have been developed in order to know the risk factors associated with this pathology, the most studied risk factors are personal and family history of atopy, maternal exposure during pregnancy to harmful agents, hygiene hypotheses and others that are still under investigation. In Southamerica, there is a lack of data about epidemiological factors in atopic population.

The aim of this study is to determine the association between clinical and sociodemographic risk factors and atopic dermatitis in Ecuadorian children.

Materials & Methods:

A cross-sectional study was performed in the Unidad Educativa Santo Tomás Apóstol Riobamba, from June to August 2020. By means of the sample calculation it was possible to obtain a representative set of 175 individuals who met the inclusion and exclusion criteria. The data obtained were analyzed by the SPSS statistical tool using Pearson's Chi-square test considering a 95% confidence interval and a significance error $\alpha = 0.05$, finally Odds Ratio estimator was used to measure risk factors found in the study.

Results:

Of the total of 175 individuals who were part of the investigation,14% of them had a mild to moderate Atopic Dermatitis. . Among the most relevant factors, it was found that exposure to passive smoking in childhood gives 3.7 more probability of developing Atopic dermatitis and also, growth in small families increases the risk of AD 2.5 ($p = 0.042$). Personal and parental history of allergic rhinitis and atopic dermatitis increases the risk of AD by 2.6 and 9 times, respectively.

Conclusion:

The study reveals that family history of diseases such as allergic rhinitis and atopic dermatitis as well as the personal history of diseases that are part of the atopic spectrum other than AD, exposure to tobacco smoke at home and grow in a small family are risk factors associated with atopic dermatitis

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Abstract N°: 7235

Sustained Improvement in Patient-Reported Sleep, Daily Activity, and Emotional State With Long-term Upadacitinib Treatment: 140-Week Atopic Dermatitis Impact Scale (ADerm-IS) Results From Phase 3 Measure Up 1 and Measure Up 2 Studies

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Introduction & Objectives:

Upadacitinib (UPA), an oral selective Janus kinase (JAK) inhibitor approved for the treatment of moderate-to-severe atopic dermatitis (AD),1 was previously shown to provide rapid and sustained clinically meaningful reductions in the patient-reported impact of AD through week 52 in the ongoing, phase 3, Measure Up 1 and Measure Up 2 clinical trials.2 Herein, we describe an updated analysis of the effect of UPA on patient-reported impact of AD through week 140.

Materials & Methods:

Measure Up 1 (NCT03569293) and Measure Up 2 (NCT03607422) are replicate phase 3, double-blind, placebo-controlled clinical trials evaluating UPA monotherapy in patients aged 12–75 years with moderate-to-severe AD. Eligible patients were randomized 1:1:1 at baseline to once-daily UPA 15 mg, UPA 30 mg, or placebo (PBO). After 16 weeks, patients receiving PBO were rerandomized 1:1 to once-daily UPA 15 mg or UPA 30 mg; patients initially receiving UPA continued their assigned treatment during the blinded extension period.** This analysis included patients allocated to UPA 15 mg or UPA 30 mg groups at baseline. The Atopic Dermatitis Impact Scale (ADerm-IS) questionnaire, an instrument comprising 10 items (each rated on an 11-point scale from 0 [no impact] to 10 [extreme impact]), was used to assess AD impact on sleep (items 1–3), daily activity (items 4–7), and emotional state (items 8–10). Treatment response was assessed for each ADerm-IS item as the proportion of patients reporting no or minimal AD impact (ie, score of 0 or 1) and the proportion of patients achieving a ≥4-point reduction (considered a meaningful improvement in this analysis). Data were analyzed from observed cases without missing data imputation.**

Results:

The proportion of patients who reported no or minimal AD impact on sleep, daily activity, and/or emotional state at week 16 with UPA 15 mg (47%–57%) and UPA 30 mg (63%–74%) treatments generally increased by week 52 and were sustained through week 140 (UPA 15 mg, 58%–72%; UPA 30 mg, 66%–81%; **Figure 1**). At week 140, the proportion of patients reporting no or minimal AD impact exceeded 70% for 3 ADerm-IS items (waking up at night, household activity limitations, and social activity limitations) among patients receiving UPA 15 mg (**Figure**

1A), and for all but 2 ADerm-IS items (self-consciousness and embarrassment) among patients receiving UPA 30 mg (**Figure 1B**). A similar temporal course was observed in the proportion of patients reporting meaningful improvements in sleep, daily activity, and/or emotional state between week 16 (UPA 15 mg, 64%–71%; UPA 30 mg, 79%–81%) and week 140 (UPA 15 mg, 76%–84%; UPA 30 mg, 80%–87%; **Figure 2**). At week 140, the proportion of patients reporting meaningful improvements exceeded 80% for 4 ADerm-IS items (waking up at night, physical activity limitations, social activity limitations, and sadness) among patients receiving UPA 15 mg (**Figure 2A**) and for all ADerm-IS items among patients receiving UPA 30 mg (**Figure 2B**). In general, a numerically greater proportion of patients treated with UPA 30 mg vs UPA 15 mg reported improvement in sleep, daily activity, and/or emotional state at weeks 16, 52, and 140 (**Figures 1** and **2**).

Conclusion:

Long-term treatment of moderate-to-severe AD with UPA 15 mg or UPA 30 mg monotherapy was associated with rapid improvements (ie, reductions) in impact of AD on sleep, daily activity, and emotional state by week 16 that generally continued to improve by week 52 and were sustained through 140 weeks of treatment.

References:

1. RINVOQ (upadacitinib). Prescribing Information. AbbVie Inc.; 2023. Available at: https://www.accessdata.fda.gov/drugsatfda_docs/label/2023/211675s019lbl.pdf. Accessed March 13, 2024.
2. Silverberg J, et al. *Am J Clin Dermatol*. 2024 Mar 25. doi: 10.1007/s40257-024-00853. Online ahead of print.

Figure 1. Proportion of Patients With an ADerm-IS Score of >1 at Baseline Who Achieved a Score of 0 or 1 by Week 16, Week 52, and Week 140 of (A) UPA 15 mg and (B) UPA 30 mg Treatments by Individual ADerm-IS Item. ADerm-IS, Atopic Dermatitis Impact Scale; UPA, upadacitinib. Percentages are calculated from observed cases with no missing data imputation.

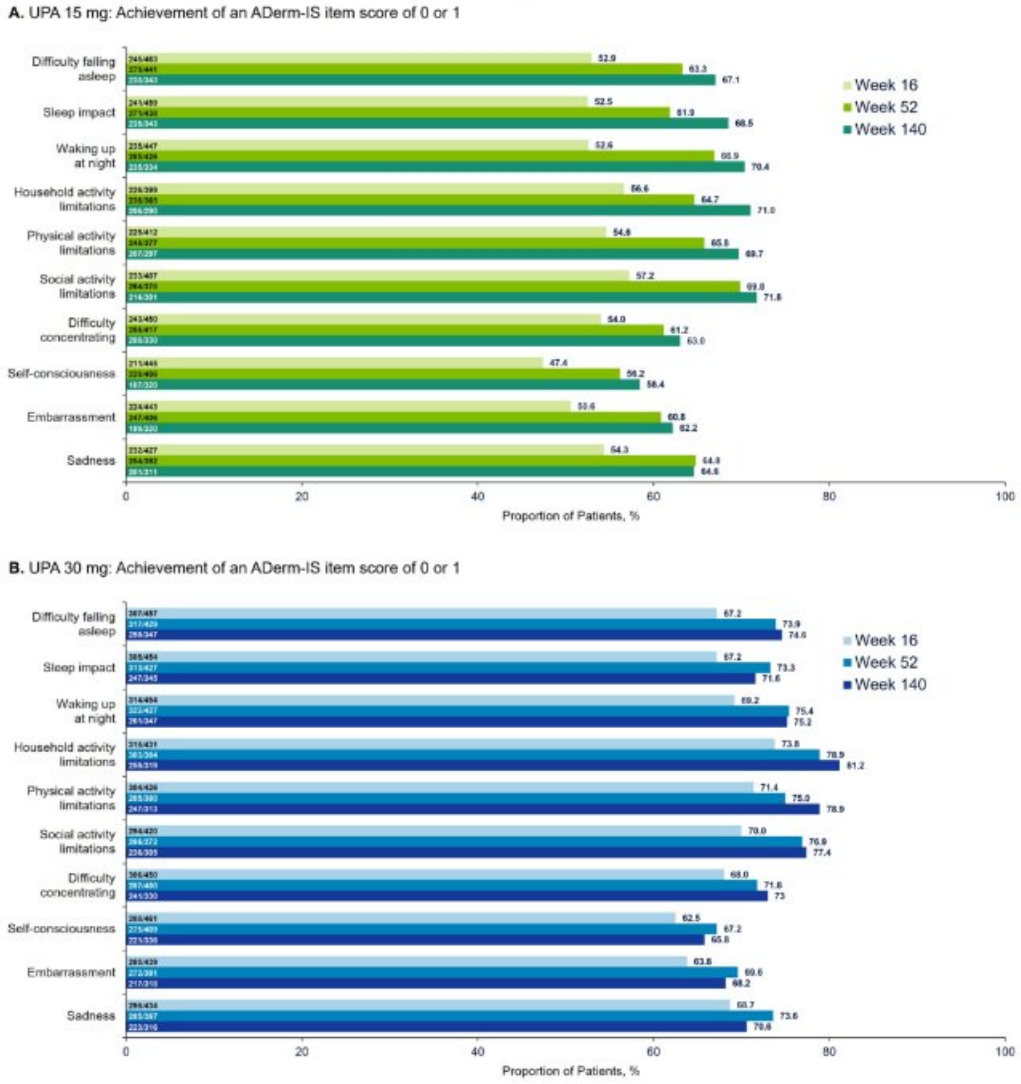
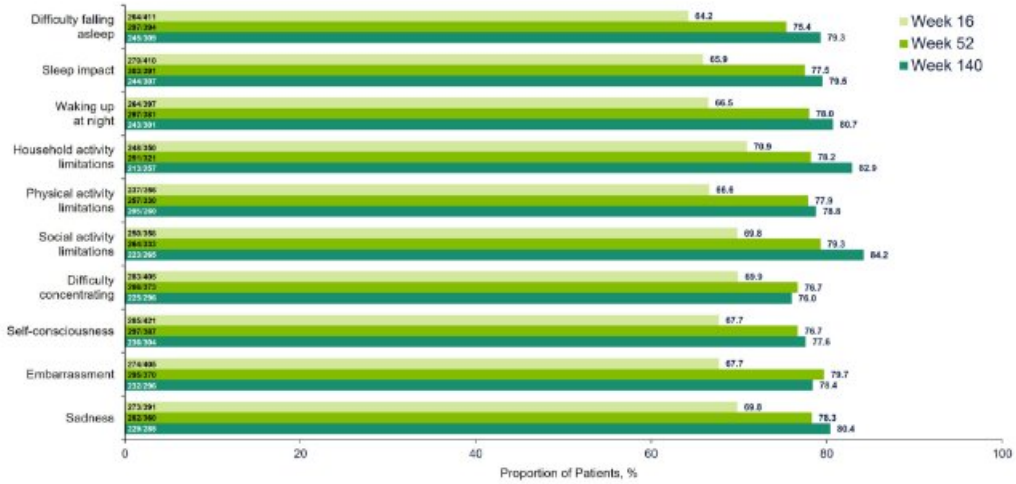
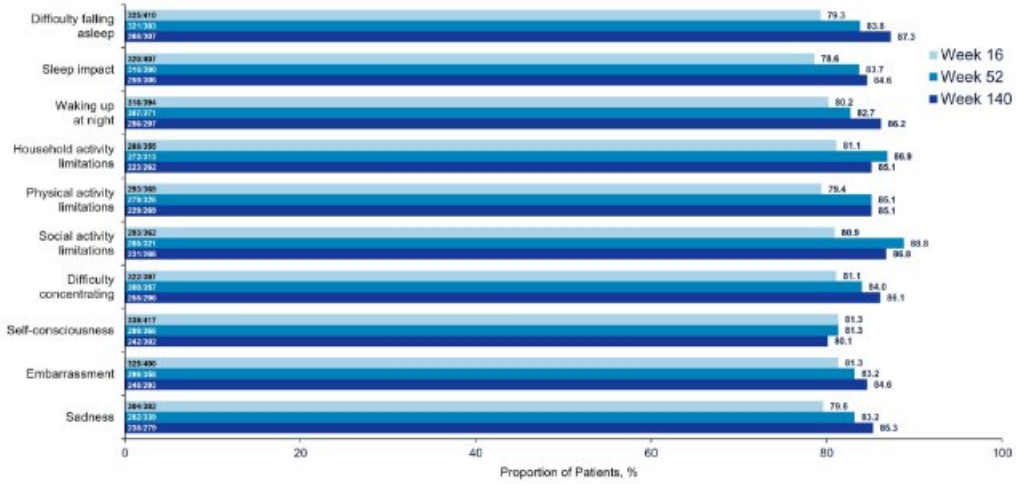


Figure 2. Proportion of Patients With an ADerm-IS Score of ≥4 at Baseline Who Achieved a ≥4-Point Improvement (Reduction) in Score by Week 16, Week 52, and Week 140 of (A) UPA 15 mg and (B) UPA 30 mg Treatments, by Individual ADerm-IS Item. ADerm-IS, Atopic Dermatitis Impact Scale; UPA, upadacitinib. Percentages are calculated from observed cases with no missing data imputation.

A. UPA 15 mg: Achievement of a ≥4-point improvement (reduction) in ADerm-IS item score



B. UPA 30 mg: Achievement of a ≥4-point improvement (reduction) in ADerm-IS item score



EADV CONGRESS
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Abstract N°: 7271

Is skin barrier function different in patients with atopic dermatitis depending on the age of disease onset?

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Introduction & Objectives: Skin barrier function plays an important role in atopic dermatitis (AD). It has been described that the age of onset defines two different profiles of AD: pediatric-onset AD (POAD) and adult-onset AD (AOAD). Patients with POAD have lower expression of terminal differentiation, lipids and cell adhesion markers, likely reflecting higher barrier abnormalities. So, the objective of this study is to compare skin barrier function between POAD and AOAD.

Materials & Methods: A cross-sectional study was designed that included patients with AD. Disease severity was assessed using the Eczema Area and Severity Index (EASI) and the SCORing Atopic Dermatitis (SCORAD). Temperature, pH, transepidermal water loss (TEWL), erythema and stratum corneum hydration (SCH) were measured on an eczematous lesion on the volar forearm and on an uninvolved area.

Results: The study included 47 patients, 33 (70.2%) POAD and 14 (29.8%) AOAD. It was observed that AOAD have higher SCH than POAD (37.30 vs 30.07 arbitrary units (AU), p =0.006) on uninvolved AD skin while no other differences in skin barrier function parameters were found between groups. Temperature, pH, TEWL, erythema and SCH on eczematous lesions were similar between POAD and AOAD.

Conclusion: This study found that SCH is higher in AOAD than in POAD, what might be reflecting a greater skin barrier dysfunction. Nevertheless, other skin barrier parameters were similar between groups. More studies are needed to conclude if skin barrier function is different in patients with AD depending on the age of disease onset.

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Abstract N°: 7275

efficacy and safety of oral tofacitinib in refractory adult atopic dermatitis of skin of colour: a case series

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Introduction & Objectives:

Adult Atopic dermatitis (AD) represents a subset of atopic dermatitis presenting inflammatory eczema with lichenification, affecting the flexures and extensors, hands, shoulders, neck, face and eyelids. Challenges in achieving remission persist due to limited treatment options. Among new molecules on the block are Janus kinase inhibitors which are proving a handy treatment option in managing AD patients.

Our objective was to study the efficacy and safety of oral tofacitinib in adult atopic dermatitis refractory to conventional treatments in patients of skin of colour.

Materials & Methods:

A series of 20 patients aged less than 60 years who were diagnosed with moderate to severe atopic dermatitis with disease duration > 3 months who were unresponsive or showing partial response or treatment failure with topical and systemic immunomodulatory drugs were included. Patients with eczema area severity index(EASI) >20, and Dermatology Life Quality Index(DLQI) >10 were only included. Patients were thoroughly investigated and started on oral tofacitinib 5mg twice daily for week 24. The patients were put on maintenance therapy for 3 months with gradual dose tapering. Clinical pictures, EASI score, Itch severity score, DLQI along with investigations (CBC, LFT, Lipid profile) were kept at baseline and at every visit. Patients were followed up at week 48 to check for relapse.

Results:

At the end of 6 months, there was marked improvement (EASI 75%) in 15 patients with a significant reduction in the Itch severity score and DLQI. No major adverse effects were seen except for mild derangement of lipid profile in 3 patients, neutropenia in 1 patient and herpes zoster reactivation in 2 patients.

Conclusion:

The positive results in the case of refractory adult AD suggest that oral tofacitinib can be considered as a therapeutic option. However, it is not devoid of side effects. Therefore, consistent monitoring of laboratory parameters is of paramount importance. This paper represents the first data on tofacitinib, a pan jak inhibitor, for adult AD in the skin of colour patients.

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Abstract N°: 7289

AI Meets Evidence-Based Research: A Comparative Evaluation of ChatGPT and Meta-Analyses in Treatment Efficacy for Atopic Dermatitis

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Introduction & Objectives: Artificial intelligence (AI)-powered systems such as ChatGPT have emerged as a multifaceted tool in medical research through their ability to conduct comprehensive literature review, synthesis, complex data analysis and interpretation. Conversely, meta-analyses (MAs) are considered one of the highest levels of evidence, especially in assessing treatment efficacy, through investigation of multiple studies. Little research has been performed in dermatology regarding the ability of such digital instruments to reproduce and estimate results similarly to human intelligence, therefore, this analysis aims to evaluate it in atopic dermatitis (AD), one of the most common chronic inflammatory conditions.

Materials & Methods: We examined the capacity of an AI chatbot (ChatGPT version 4.0) to postulate statements referring to treatment efficacy in atopic dermatitis in comparison to specific queries investigated by meta-analyses. By performing a search on PubMed of MAs from 2021 to December 2023 (the time period between the knowledge cut-off date of the first ChatGPT version and its updated form), 73 articles were selected, with exclusion of non-English non-human studies or those with absent abstracts or full text. Queries were formulated to match the objectives of selected MAs, including both general and specific outcomes, such as exploration of validated parameters. An evaluation of the level of reproducibility of meta-analyses' results was performed and analysed.

Results: Most meta-analyses focused on systemic therapies (n=62), especially targeted ones (biologics and Janus kinase inhibitors). Although predominantly reaching the same general conclusion, comparative evaluation with MAs examining drugs versus placebo (n=23) failed to provide specific results in terms of investigated parameters (severity scores or symptoms) due to unreproducible statistical methods of MAs. In contrast, comparison of different dose regimes or ranking of multiple molecules (n=18) performed well, particularly in analysis of a maximum of 4 substances, with nonspecific or different results in only 5 cases. In studies of probiotics' efficacy as add-ons, most queries (6 out of 10) were nonspecific or opposing when comparing strain efficacy but showed similarity when investigating efficacy in different age and ethnic groups. Similar results were obtained in topical treatment versus placebo, however ranking of active ingredients mostly highlighted different results (3 out of 4 cases) compared to other substances like emollients.

Conclusion: ChatGPT has an adequate result estimation when assessing general outcomes, certain parameters or ranking of molecules compared to MAs in effectiveness of AD treatment but lacks consistency in evaluating certain drug categories or objectives. Considering the risk of bias and methodological heterogeneity of MAs and constant updating of such chatbots, they could become henceforward a complementary tool in large-scale research.

EADV CONGRESS
AMSTERDAM 25-28 SEPTEMBER 2024
EUROPEAN ACADEMY OF DERMATOLOGY & VENEREOLOGY

Abstract N°: 7425

Pharmacogenetic Biomarkers of Response and Toxicity to Dupilumab Treatment in Patients with Moderate-Severe Atopic Dermatitis

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Introduction & Objectives:

Atopic dermatitis (AD) is an inflammatory dermatosis characterized by itching and eczema that deeply affects the quality of life of patients. The therapeutic arsenal available for AD has significantly increased in recent years with the introduction of biological therapies such as dupilumab. Dupilumab is a monoclonal antibody that inhibits the IL-4 and IL-13 signalling pathway and has shown significant efficacy in the treatment of moderate-severe AD. However, some patients do not achieve adequate control of their disease, suggesting certain clinical heterogeneity within the spectrum of AD. Therefore, identifying predictive factors of response to these new therapies becomes crucial, providing guidance for clinical decisions. The aim of this pilot study is to assess the influence of genetic factors as predictors of response and toxicity to dupilumab treatment in patients with AD.

Materials & Methods:

An ambispective cohort study was conducted in patients with moderate-severe AD who have received or are undergoing treatment with dupilumab at tertiary territory hospital. Baseline clinical variables were collected through severity scales such as the Eczema Area and Severity Index (EASI), Investigator Global Assessment (IGA), and Scoring Atopic Dermatitis (SCORAD) from week 4 to 48, as well as DNA samples via buccal swab and subsequent real-time PCR analysis. Dupilumab failure was defined as necessitating a change in treatment regimen. Patients were classified as super-responders if they achieved EASI50 by week 4.

Results:

Twenty-six patients with moderate-severe AD were included. The IL4Rrs1805010 GG genotype was associated with a longer survival on dupilumab ($p>0.001$) while the CC variant for IL4R rs2243250 was significantly associated with poorer survival ($p<0.05$). Additionally, super-responders were associated with GG genotypes for the IL13RA1 rs2495636 polymorphism ($p<0.05$) and the CT genotype for IL13RA2 rs638376 ($p<0.05$). No genotypic variants were associated with higher probability of adverse effects related to dupilumab or failure to dupilumab.

Conclusion:

This pilot study underscores the potential of pharmacogenetic testing to tailor and enhance the treatment of AD by identifying genetic predictors of response to dupilumab. These preliminary insights could lead to more personalized and cost-effective approaches to managing AD. Future research should focus on expanding the sample size and comparing these biomarkers with responses to other therapies, such as JAK inhibitors.

EADV CONGRESS
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Abstract N°: 7578

Drug survival of upadacitinib and predicting factors of discontinuation in adult patients affected by moderate to severe atopic dermatitis: an Italian multicenter analysis.

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Introduction & Objectives: Limited real-world data are available on upadacitinib drug survival in patients with atopic dermatitis (AD). The objective of this study was to investigate upadacitinib drug survival, the reasons and the predictors of drug discontinuation in AD patients.

Materials & Methods: All consecutive patients aged 18-75 years, affected by moderate-to-severe AD and treated with upadacitinib more than 1 month at dermatological clinics were included during November 2020-August 2023. Upadacitinib survival was investigated through Kaplan-Meier survival analysis and the predictors through multivariable logistic regression analysis.

Results: Overall 325 adult AD patients [mean (SD) age, 38.6(15.6) years] had a 1-year and 1.5-year upadacitinib drug survival of 91.5% and 80.2%, respectively. The main reasons of drug discontinuation [(25/325 (7.7%)] were adverse events (4.9%), including cutaneous or infectious diseases (1.5%) such as acne and herpes zoster, blood tests changes (1.2%), including hypercholesterolemia, creatine phosphokinase or liver enzymes elevation and lymphopenia, urinary or respiratory infections (0.9%), deep venous thrombosis (0.3%), malignancies (0.3%), loss of consciousness (0.3%), and arthralgias (0.3%), followed by ineffectiveness (0.6%). No specific characteristic was significantly associated with an increased risk of upadacitinib discontinuation.

Conclusion: Our findings show that upadacitinib was effective in moderate-to-severe AD after more than 1 year of continuous treatment but point to the need for patients' clinical and laboratory monitoring.

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Abstract N°: 7598

Treatment of moderate-severe atopic dermatitis in adolescents with Upadacitinib: experience in a tertiary service.

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Introduction & Objectives:

Atopic dermatitis (AD) is the most common chronic inflammatory skin disease presented during childhood. The JAK-1 inhibitor Upadacitinib was approved to be a long-term treatment of moderate-severe AD in adolescents (12 years and above) with good efficacy and safety in clinical studies. However, real-world data is currently limited to only one study for this age group. We aimed to attest the efficacy and safety of using upadacitinib in adolescents unresponsive to other systemic treatments.

Materials & Methods:

A retrospective longitudinal study collecting data from medical records on upadacitinib-treated AD adolescent patients (age of onset under 18 years), completing at least 16 weeks of therapy. Treatment efficacy was determined by the atopic dermatitis severity index (SCORAD).

Results:

10 patients were selected, with an average age of 14.2 years and male predominance (90%). Regarding efficacy, 9 individuals (90%) achieved a significant rapid response (after 4 weeks); one patient (the only female) interrupted treatment due to an unsatisfactory response after 16 weeks. Eight of 10 patients completed 52 weeks of treatment and seven of them (87,5%) remained with a good long-term response. Adverse effects were observed in 5 patients (50%), alone or in combination: acne in 2 patients (20%), both after 52 weeks; viral infections in 3 patients (30%) and secondary bacterial infection in only 1 patient (10%).

Conclusion:

Upadacitinib was effective in reducing SCORAD in the short and long term. Despite the adverse effects observed, there was no dose reduction or medication interruption. Our experience confirms the efficacy and safety of upadacitinib for the treatment of moderate to severe AD in adolescents.

TABLE 1: Demographic characteristics of the study population.
Characteristics
Total population
Male
Female
Mean age at the onset upadacitinib (years)
Moderate AD
Severe AD
Previous treatment
Methotrexate
Cyclosporine
Dupilumab
Adverse effects
Patients
Acne
Viral infections
Bacterial infections
AD atopic dermatites; n number

Fig. 1 Treatment response to upadacitinib in terms of SCORAD among week 0 and week 4.

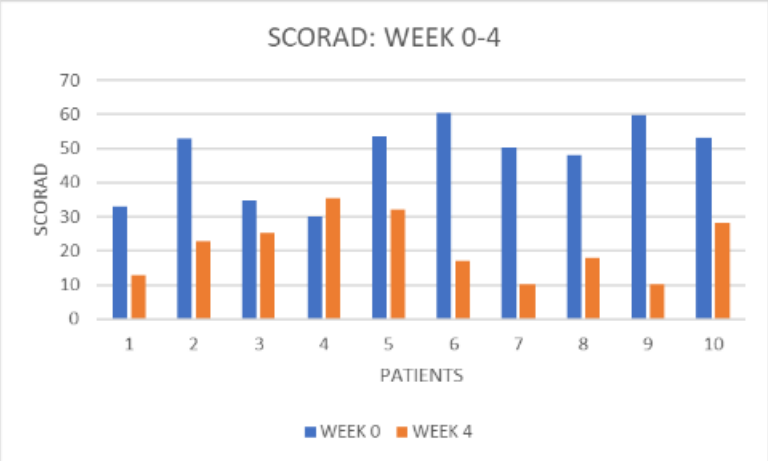


Fig. 2 Treatment response to upadacitinib in terms of SCORAD among week 4 and week 16.

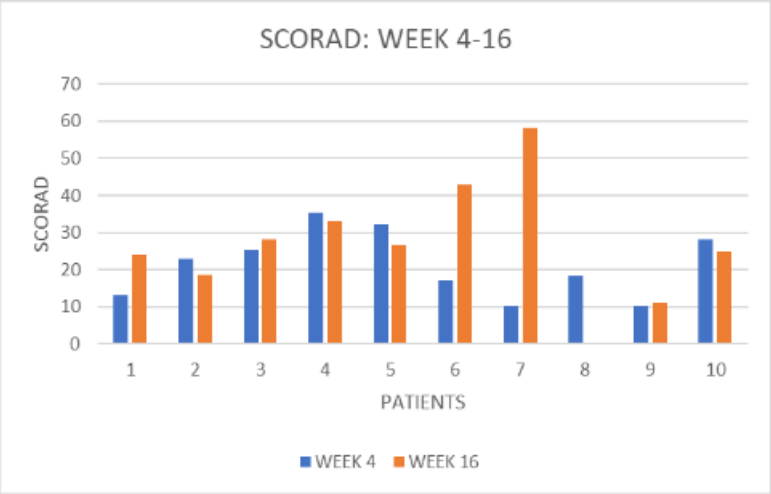
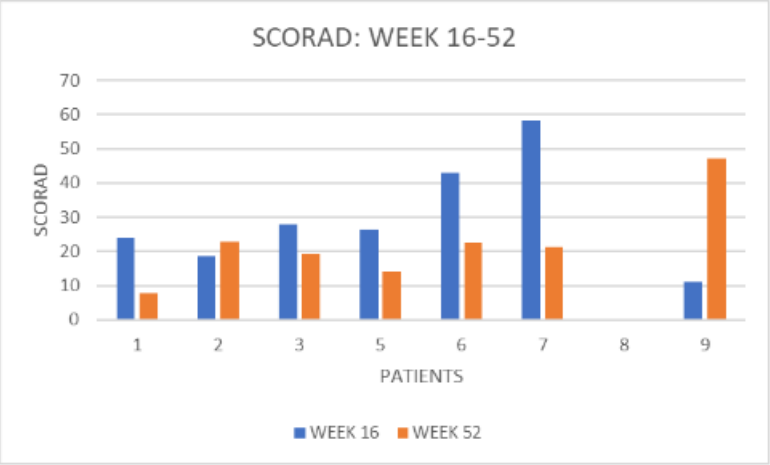


Fig. 3 Treatment response to upadacitinib in terms of SCORAD among week 16 and week 52.



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Abstract N°: 7694

Protective factors against anxiety and depression in patients with atopic dermatitis

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Introduction & Objectives:

There is a higher prevalence of anxiety and depression among patients with atopic dermatitis (AD). The identification of protective factors can support prevention and treatment of anxiety and depression in the context of AD through directed screening, earlier intervention, and a tailored psychotherapeutic approach. The object of this study was to explore factors that protect against the development of anxiety and depression in patients with atopic dermatitis.

Materials & Methods:

For this qualitative study, patients with AD were recruited via a university hospital, a secondary care hospital and a dermatology private practice. Participants were interviewed with a semi-structured interview guide. The interviews were recorded, and the audio files were transcribed ad verbatim. Analysis was facilitated using Nvivo software. Two independent researchers with different profiles (EV, a dermatologist, and IVD, a patient expert and psychologist) performed the coding of the interviews. Thematic analysis by grounded theory was used to analyze the interviews. Conflicts in interpretation were resolved by a third researcher, ensuring the accuracy and reliability of the data analysis.

Results:

A total of 12 patients was included until data saturation, defined as no new information after 3 interviews, was reached. Each interview lasted approximately 2 hours, allowing for in-depth exploration of patient experiences within the scope of the study's objectives. Preliminary results show that several different themes can be attributed to the content of the interviews, including 'protective factors', 'disease limitations', 'feelings', 'the role of the physician' and 'treatments'. The identification of factors that might protect against the development of anxiety and depression in patients with AD included social contacts, work, stress reduction, clothing, and humor. Figure 1 gives an overview of the code and theme schedule.

Conclusion:

Rich data were obtained through interviews and their analysis. Several aspects of the lives of patients with AD were identified to act as potential protection against the development of anxiety and depression.

Figure 1:


Atopic dermatitis
Limitations
Feelings
Treatment
Other
Role of the physician
Protective factors
Stress
Reactions of others
Visible skin damage
Allergies
Triggers
Work/ school absence
Un-predictable
Alcohol
Binge eating
Financial impact
Depression
Being mis-understood
Helpless-ness
Guilt
Clothing
Friends
Work
Partner
Parents
Scratching
Sadness
Shame
Anxiety
Humour
Stress reduction
Injustice
Need for recognition
Disappoint-ment
Ease of access
The feeling of being helped
Trust
Expectations
Patient organisation
Causes
Start of symptoms
Stop smoking
Cortisone use
Skin care
Alternative treatments
Medication
Light therapy
Anti-depressants
Psychologist/ psychiatrist

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Abstract N°: 7744

ZL-1503, a bispecific, serum half-life extended antibody targeting both inflammatory and pruritogenic pathways for atopic dermatitis and other IL-13/IL-31 related diseases

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Introduction & Objectives:

Inhibiting IL-4/IL-13 signaling has markedly improved the therapeutic landscape for atopic dermatitis (AD). However, many patients exhibit slow and modest clinical responses. This is partly due to certain AD symptoms being mediated by IL-31, which is only partially attenuated by IL-4/IL-13 inhibition. Thus, there is a critical need for treatments that simultaneously target both the inflammatory and pruritogenic pathways.

Materials & Methods:

To block both IL-4/IL-13 and IL-31 signaling pathways, we developed ZL-1503, a bispecific antibody that targets both IL-13 and IL-31Rα, with specific modifications to the Fc region that result in enhanced binding to human FcRn, thereby extending its serum half-life. Specifically, ZL-1503 targets IL-31Rα with a vHH single-chain anti-IL-31Rα antibody domain attached to an anti-IL-13 monoclonal antibody.

Results:

In vitro, ZL-1503 effectively inhibited IL-13-induced STAT6 signaling in a reporter cell line, IL-13-mediated proliferation of TF1 cells, and CCL26 production from HaCaT cells, as well as CCL17 production from human PBMCs, demonstrating comparable efficacy to the benchmark antibody Lebrikizumab. Regarding the IL-31 pathway, ZL-1503 inhibited IL-31 binding to cells expressing IL-31Rα, reduced IL-31-stimulated proliferation in receptor-positive cells, inhibited pSTAT3 in A549 cells, and suppressed IL-31-induced IL-6 production in HaCaT cells, mirroring the effects of benchmark antibody Nemolizumab.

In vivo, ZL-1503 significantly reduced IL-13-mediated eosinophil infiltration and production of CCL11, comparable to Lebrikizumab. Additionally, ZL-1503 outperformed Nemolizumab by significantly reducing hIL-31-induced scratching behavior in mice.

Pharmacokinetic studies in monkeys revealed that ZL-1503 exhibited excellent serum exposure following a 3 mg/kg dose via both intravenous (IV) infusion and subcutaneous (SC) injection. The IV route showed a terminal half-life of 27.7 days, and the SC route demonstrated complete drug absorption.

Conclusion:

Collectively, these findings justify advancing ZL-1503 into IND-enabling studies as a potential treatment for moderate-to-severe AD and other diseases involving the IL-13 and IL-31 pathways.

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Abstract N°: 7812

Orismilast efficacy in adults with moderate-to-severe atopic dermatitis in a phase 2b trial: early impact on itch and patient-reported outcomes

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Introduction & Objectives:

Orismilast is a potent selective phosphodiesterase 4 (PDE4)-B and -D inhibitor, which showed significant efficacy in a Phase 2b psoriasis study.1,2 Orismilast inhibits PDE4-B/D isoforms up to 39 times more potently than apremilast,1 leading to potent suppression of Th1, Th17, and Th2 effector cytokines.1 Here, efficacy of oral orismilast was evaluated versus placebo in adults with moderate-to-severe AD. Early impact on patient-reported outcomes (PROs) and subgroups of severe patients were investigated.

Materials & Methods:

ADESOS is a 16-week, phase 2b, double-blinded, placebo-controlled, dose-finding study assessing efficacy and safety of orismilast in adults with moderate-to-severe AD. Patients were randomized (1:1:1:1) to orismilast 20, 30, 40 mg, or placebo, twice daily. Randomized and dosed patients were included in the Intent-to-Treat Population.

Results:

Baseline demographics and disease characteristics were generally balanced across groups for the 233 dosed patients. All active arms demonstrated a significant ≥4-point reduction in itch Numerical Rating Scale (NRS) at Week 2, compared to placebo ($p < 0.05$). Additional PROs, including change in pain and sleep NRS, as well as patient global impression of change, were significantly improved in the 20 mg group at Week 2. Significantly more patients achieved Investigator Global Assessment (IGA) 0/1 responses at Week 16 in orismilast 20 (n=58), 30 (n=61), and 40 mg (n=59) groups, compared to placebo (n=55) (26.3%, 24.3%, 30.9%, and 9.5%, respectively; all p-values <0.05). Mean percentage changes in EASI at Week 16 were: 55.1%, - 52.2%, -61.4%, and -50.4%, in orismilast 20, 30, 40 mg and placebo groups, respectively ($p>0.05$). Mean EASI at baseline was 23, the least severe reported in Phase 2b/3 studies in moderate-to-severe AD.4 Response rates in the placebo group were lower in severe patients (EASI >21). No new safety signals were identified, and the safety profile was aligned with that seen for the PDE4 class. The most common TEAEs were diarrhea, nausea, and headache, mainly seen within the first

month, mostly mild in severity, with few leading to treatment discontinuation.

Conclusion:

Orismilast demonstrated early reduction in itch, significant for all doses as early as Week 2. Early improvements were also demonstrated for pain, sleep, and patient global impression of change, as well as a statistically significant efficacy versus placebo at Week 16 as measured by IGA 0/1. The high EASI placebo rate seen in this trial was decreased in severe patients, and the 20 and 40 mg doses separated from placebo for EASI75 and EASI90 measurements, consistent with the overall findings as measured by IGA 0/1, patient-reported efficacy, and objective biomarkers. These data confirm the clinical relevance of high potency PDE4B/D selective inhibition with orismilast in patients with atopic dermatitis.

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EA DV CONGRESS
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Abstract N°: 7829

Efficacy and safety of lebrikizumab is maintained up to 3 years in patients with moderate-to-severe atopic dermatitis: ADvocate 1 and ADvocate 2 to ADjoin long-term extension trial

Diamant Thaçi[1], Alan Irvine[2], Eric Simpson[3], Melinda Gooderham[4], Stephan Weidinger[5], Lynda Spelman[6], Jonathan I. Silverberg[7], Hany Elmaraghy[8], Louise Ann Deluca-Carter[8], Heidi M. Crane[8], Maria Lucia Buziqui Piruzeli[8], Chaoran Hu[8], Evangeline Pierce[8], Helena Agell[9], Emma Guttman-Yassky[10]

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Introduction & Objectives:

Patients with moderate-to-severe atopic dermatitis (AD) suffer from flares and itch and require a long-term treatment strategy aimed at achieving disease control. In this regards, long-term data from advanced treatments is of great importance to inform clinical practice. Interleukin-13 (IL-13) is the key cytokine in AD; lebrikizumab (LEB) is a novel monoclonal antibody that binds with high affinity and slow off-rate to Il-13 thereby blocking its downstream effects with high potency. Here we report longer-term efficacy and safety from the ADjoin long-term extension study (NCT04392154) for up to 152 weeks (wks) of continuous LEB treatment.

Materials & Methods:

In ADvocate1 & 2, adults aged ≥18 years and adolescents aged 12 to <18 years weighing ≥40 kg were randomized 2:1 to receive LEB 250 mg every 2 wks (LEBQ2W) monotherapy, with a 500 mg loading dose at baseline and wk 2, or placebo (PBO). After wk 16, pts receiving LEBQ2W who met protocol-defined response criteria (Eczema Area and Severity Index 75% improvement [EASI 75] or Investigator Global Assessment [IGA] score of 0/1 with ≥2-point improvement from baseline without rescue medication) were randomized 2:2:1 to receive LEBQ2W, LEB 250 mg every 4 wks (LEBQ4W), or PBO (LEB withdrawal). Pts who completed wk 52 of ADvocate1 & 2 were able to enroll in the ADjoin LTE and received the same treatment regimen as in the maintenance period of ADvocate1 & 2. Pts randomized to PBO (LEB withdrawal) during wks 16 to 52 of ADvocate1 & 2 received LEBQ2W in ADjoin and are not reported here. Intermittent use of topical rescue medications and short-term systemics was permitted in ADjoin.

Response rates are reported as observed, using all collected data regardless of rescue medication use for the LEBQ2W and LEBQ4W treatment arms in ADvocate1 & 2 and ADjoin. Efficacy was assessed through wk 100 of ADjoin using IGA 0/1 and EASI 75. Safety is reported from ADjoin enrollment up to the data cutoff of 24 April 2024.

Results:

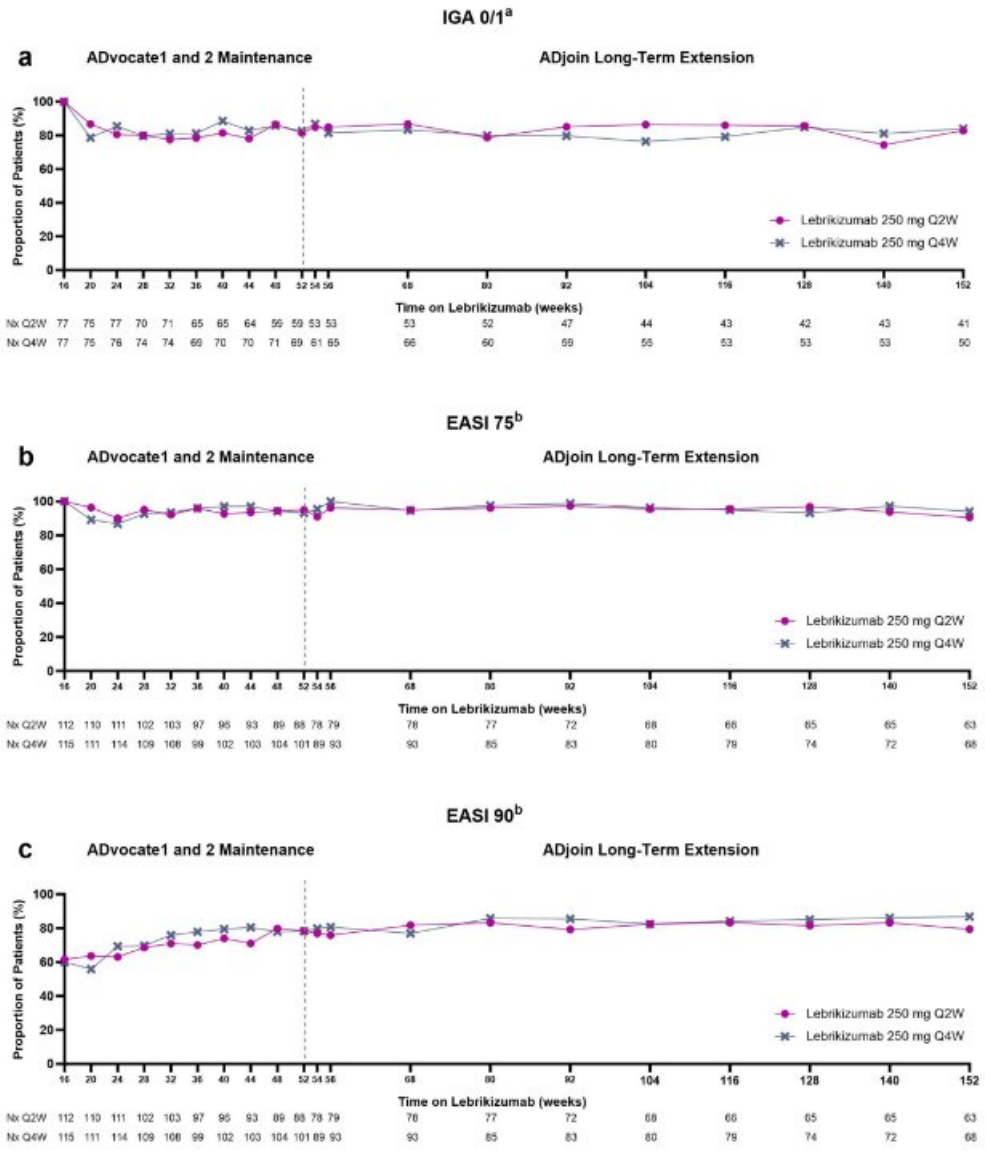
Overall, 291 pts in ADvocate1 & 2 achieved EASI 75 or IGA 0/1 at wk 16, were rerandomized, and entered the maintenance period until wk 52. Of these, 82 (LEBQ2W) and 99 (LEBQ4W) pts entered ADjoin; 76.8% (n=63) and 71.7% (n=71) completed wk 100 of ADjoin (152 wks of continuous LEB treatment). Among pts with IGA 0/1 at wk 16 in the LEBQ2W and LEBQ4W arms, respectively, 81.5% and 83.3% maintained IGA 0/1 at wk 52 (ADjoin wk 0)

and 82.9% and 84.0% maintained IGA 0/1 at wk 152 (Figure 1a). Of pts who achieved EASI 75 at wk 16 of ADvocate1& 2 in the LEBQ2W and LEBQ4W arms, respectively, 96.3% and 93.7% maintained EASI 75 at wk 52 and 90.5% and 94.1% maintained EASI 75 at wk 152 (Figure 1b). Of pts who achieved EASI 75 at wk 16 of Advocate1 & 2 in the LEBQ2W and LEBQ4W arms, respectively, 80.0% and 81.1% achieved EASI 90 by wk 52 and 79.4% and 86.8% achieved EASI 90 at wk 152(Figure 1c). Throughout ADjoin, 14.6% of pts receiving LEBQ2W and 24.2% receiving LEBQ4W used any rescue therapy. During ADjoin, 126/181 pts who received LEB reported adverse events (AEs), most of which were mild (n=53) or moderate (n=64) in severity (Table 1). Serious AEs were reported by 6 pts, no deaths occurred, and 5 pts had AEs that led to treatment discontinuation.

Conclusion:

The majority of pts maintained clear or almost clear skin over 152 wks of continuous LEB treatment in both the LEBQ2W and LEBQ4W arms. The LEB safety profile was consistent with that of previous LEB studies in pts with moderate-to-severe AD.

Figure 1. Efficacy outcomes in patients receiving lebrikizumab Q2W or Q4W through 152 weeks



[a]In patients with IGA 0/1 at week 16 of parent study.
[b]In patients with EASI 75 at week 16 of parent study.
EASI, Eczema Area and Severity Index; IGA, Investigator Global Assessment; Nx, number of patients with non-missing values; Q2W, every 2 weeks; Q4W, every 4 weeks.

Table 1. Overview of TEAEs in patients who met week 16 protocol-defined response criteria (IGA 0/1 or EASI 75) during weeks 16–52 of ADvocate1 and 2 and from enrollment in ADjoin for patients in the Q2W and Q4W treatment arms

	ADvocate1 and 2[a]		ADvocate1 and 2 → ADjoin[b]	
Overview of AEs, n (%)	**LEB 250 mg Q2W (N=113)**	**LEB 250 mg Q4W (N=118)**	**LEB 250 mg Q2W (N=82)**	**LEB 250 mg Q4W (N=99)**
TEAE	56 (49.6)	61 (51.7)	59 (72.0)	67 (67.7)
Mild	35 (31.0)	24 (20.3)	28 (34.1)	25 (25.3)
Moderate	17 (15.0)	31 (26.3)	28 (34.1)	36 (36.4)
Severe	4 (3.5)	6 (5.1)	3 (3.7)	6 (6.1)
SAE	2 (1.8)	2 (1.7)	3 (3.7)	3 (3.0)
Death	0	0	0	0
AEs leading to treatment discontinuation	1 (0.9)	2 (1.7)	2 (2.4)	3 (3.0)
Conjunctivitis cluster[c]	2 (1.8)	12 (10.2)	3 (3.7)	5 (5.1)
Keratitis cluster[d]	1 (0.9)	1 (0.8)	0	1 (1.0)
Infections[e]	23 (20.4)	36 (30.5)	38 (46.3)	45 (45.5)
Herpes infections	3 (2.7)	7 (5.9)	6 (7.3)	3 (3.0)
Skin infections	4 (3.5)	4 (3.4)	1 (1.2)	3 (3.0)
Parasitic infections	0	0	0	0
Potential opportunistic infections[f]	1 (0.9)	1 (0.8)	4 (4.9)	1 (1.0)
Injection site reactions[g]	0	1 (0.8)	1 (1.2)	0
Malignancies	0	0	0	0
Anaphylactic reactions	0	0	0	0
Eosinophilia[h]	0	0	1 (1.2)	1 (1.0)

[a]Pooled ADvocate1 and ADvocate2 modified safety population from week 16 through week 52 among patients who met week 16 protocol-defined response criteria (IGA 0/1 or EASI 75).

[b]Modified safety population from week 0 of ADjoin through to the data cutoff of 24 April 2024.

[c]Conjunctivitis cluster includes MedDRA PTs of conjunctivitis, conjunctivitis allergic, conjunctivitis bacterial, conjunctivitis viral, and giant papillary conjunctivitis.

[d]Keratitis cluster includes MedDRA PTs of keratitis, atopic keratoconjunctivitis, allergic keratitis, ulcerative keratitis, and vernal keratoconjunctivitis.

[e]Infections are defined using the MedDRA PTs from the Infections and Infestations system organ class.

[f]All potential opportunistic infections were assessed as not opportunistic based on the Winthrop et al (*Ann Rheum Disease*, 2015;74:2107-2116) criteria.

[g]Injection site reactions are defined using the MedDRA high level term of Injection site reactions excluding joint-related PTs.

[h]Eosinophilia is defined as MedDRA PTs of eosinophilia and allergic eosinophilia plus the following PTs under the high-level term of white blood cell analysis: eosinophil count abnormal, eosinophil count increased, and eosinophil percentage increased. No eosinophilic-related disorders were reported.

AE, adverse event; EASI, Eczema Area and Severity Index; IGA, Investigator Global Assessment; LEB, lebrikizumab; MedDRA, Medical Dictionary for Regulatory Activities; N, number of patients in the analysis population; n, number of patients in the specified category; PT, preferred term; Q2W, every 2 weeks; Q4W, every 4 weeks; SAE, serious adverse event; TEAE, treatment-emergent adverse event.

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Abstract N°: 7861

Impact of atopic dermatitis in adults depends on its age of onset: Results of the "Scars of Life" project

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Introduction & Objectives:

Atopic eczema [AE], is a chronic inflammatory skin disorder affecting millions of people worldwide.. While the physical manifestations of eczema are extensively studied, its psychological and social implications remain less clear, especially in distinguishing between individuals with childhood-onset vs adult-onset AE

The "Scars of Life" (SOL) project aimed to fill this gap by analysing how the age of onset of AE affects the severity of its symptoms and impact on daily and occupational life.

Materials & Methods:

The SOL project involved 30,801 adults in 27 countries on five continents. People were divided into several groups according to the timing of onset of AE.

Initial results compare adult populations with AE according to whether it appeared in childhood (ECA -[starts before age 10]) or exclusively in adulthood (EOA).

The questionnaire was developed in collaboration with multiple patient associations and international AE experts and included questions related to AE, and PUSH-D questionnaire for stigmatization1. The project was reviewed by a French ethics committee and was found to be in accordance with the ethical standards set forth by that committee. These first results compare ECA with EOA populations.

Results:

A total of 10,258 participants with current AE were recruited in 27 countries between February and May 2024, including 5,931 (57.8%) women and 4,237 (42.2%) men. The mean ± SD age was 41.84 ± 14.70 years. A total of 2,875 individuals were identified as having ECA, while 7,883 were identified as having EOA.

In their daily lives, 31.6% of respondents indicated that, as a result of their EA, individuals avoided shaking hands, while 29.1% reported experiencing discrimination in the workplace. At the individual level, 28.5% of respondents indicated that they had been rejected by their partner, while 39.2% admitted to experiencing a reluctance to present themselves or to conceal their condition. Additionally, 28.1% of those surveyed reported having already felt a sense of shame from their family or relatives.

To address potential biases in baseline characteristics between groups, a 1:1 propensity score matching without replacement was performed. Propensity scores were calculated using a logistic regression model including the following normalized covariates: gender, severity and age.

A total of 5,750 matched individuals were identified, and two ECA and EOA comparable groups were constructed [Table 1]. Patients who had AE in childhood exhibited greater stigma as measured by the PUSH-D score, [23.0 ± 20.1 vs 18.1 ± 17.6 , P-value <0.0001].

Atopic patients whose disease began in childhood were significantly more likely to report that their AE presented a barrier to becoming a parent, affected their love life or sexuality, had a negative impact on their self-image and self-confidence, and hindered their professional career. [Table 1]

Conclusion:

Adults with AE whose eczema started during childhood had significantly more difficulties in several crucial areas, including occupational relationship daily life (transportation, administrative procedures) , personal life, and partner's or family's relationships, compared to those whose AE started in adulthood.

The strong correlation between early onset AE and its extensive stigma suggests that the atopic eczema affects not only physical health but also has a deep influence on psychological and social aspects throughout life.

Table 1: Population in each group after propensity score

	EOA Eczema Only Adult		ECA Eczema Child & Adult		P-value
GENDER	N=2875		N=2875		
Men	1104	38.4%	1106	38.47%	0.978
Women	1771	61.6%	1769	61.53%	
AGE	37.3	±12.51	37.29	±12.46	0.999
SEVERITY (evaluated by the POEM)					
Mild	1146	39.86%	1148	39.93%	0.979
Moderate & severe	1729	60.14%	1727	60.07%	
DECLARE THAT THEIR ATOPIC ECZEMA ...					
...avoid appearing in family photos for fear of ruining them.	977	37.96%	1197	43.69%	<0.001
...avoid some people.	1089	40.51%	1375	49.62%	<0.001
...not use a professional for body care (hairdresser, masseur, manicure)	1011	39.9%	1273	46.84%	<0.001
...not approaching other people spontaneously.	1004	39.87%	1328	47.98%	<0.001
...refuse direct contact with the public.	1141	42.50%	1320	47.45%	<0.001
...avoid being put in the spotlight (physically)	1428	54.34%	1441	52.32%	0.146
...conceal/hide the visible parts of your affected skin.	1382	52.29%	1594	56.97%	<0.001
...not show yourself, hide yourself.	1130	41.62%	1348	48.21%	<0.001
...that you have been less loved (appreciated) by your family, your friends.	854	32.86%	1089	38.96%	<0.001
...that you brought shame to your family, your relatives.	863	32.89%	1016	36.64%	0.004
...that you were pushed away by your partner.	806	30.85%	1011	36.98%	<0.001
...that people avoided shaking your hand.	935	35.36%	1129	40.51%	<0.001
...that you have been treated differently during administrative procedures.	935	35.63%	1072	38.94%	0.013
...that some people view you as dirty.	868	33.14%	1134	40.59%	<0.001
...that you have faced discrimination at work.	854	32.86%	1020	37.27%	<0.001
...that you have been left out by your colleagues at work.	800	30.79%	1090	39.88%	<0.001

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Abstract N°: 7885

Nemolizumab long-term safety and efficacy up to 56 weeks in ARCADIA open-label extension study in adolescents and adults with moderate-to-severe atopic dermatitis

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Introduction & Objectives: Atopic dermatitis (AD) is a common chronic, flaring neuroinflammatory skin disease, requiring long-term disease control. The ARCADIA long-term extension (LTE), prospective, multicenter, open-label, pooled study (NCT03989206) enrolled patients from ARCADIA-1 and -2 Phase 3 studies and other nemolizumab studies to evaluate long-term safety and efficacy of nemolizumab in adolescents and adults with moderate-to-severe AD.

Materials & Methods: Patients with previous nemolizumab experience [PNE] or nemolizumab-naïve [NN] in lead-in studies received 30 mg subcutaneous nemolizumab every 4 weeks up to Week (W) 200 with background topical corticosteroids of low/medium potency or topical calcineurin inhibitors. Efficacy assessments included proportion of patients achieving Investigator's Global assessment (IGA) score of 0/1 (clear/almost clear) and Eczema area and severity index (EASI)-75 (75% improvement in EASI score), and changes in SCORing Atopic Dermatitis (SCORAD) score (including itch and sleep Visual analog scale [VAS] components) and quality of life (QoL). Results of W56 data cut-off are presented. Efficacy endpoints are summarized using observed data.

Results: Of 1740 patients, 723 patients completed W56 at data cut-off. At baseline, the proportion of PNE and NN patients with IGA 0/1 was 29% and 18% and with EASI-75 was 38% and 24%, respectively. At W56, IGA 0/1 was achieved in 47% and 49% and EASI-75 in 73% and 79% of PNE and NN patients, respectively. Improvements in itch, sleep, and QoL were also observed over time. Safety profile was consistent with that previously reported.

Conclusion: Nemolizumab was well-tolerated up to W56 of treatment. Clinically meaningful improvements in AD signs and symptoms and patient-reported outcomes were observed with continuous treatment with nemolizumab.

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Abstract N°: 7996

Matching-adjusted indirect comparison of the efficacy of delgocitinib and dupilumab in the treatment of moderate to severe atopic hand eczema

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Introduction & Objectives:

Delgocitinib cream is an investigational topical pan-JAK inhibitor that has demonstrated significant efficacy across chronic hand eczema (CHE) aetiological subtypes, including atopic hand eczema (AHE), and is well tolerated with a favorable safety profile. Dupilumab is a biologic that inhibits interleukin (IL)-4/IL-13 signalling pathways and is approved for the treatment of moderate to severe atopic dermatitis (AD), including AD of the hands. As no head-to-head studies have been conducted, an analysis was performed comparing the efficacy of delgocitinib and dupilumab in patients with AHE in a matching-adjusted indirect comparison (MAIC) based on the DELTA 1 and 2 and LIBERTY-AD-HAFT trials.

Materials & Methods:

DELTA 1 and DELTA 2 (NCT04871711/NCT04872101) were identically designed phase 3 trials in which adult patients with all subtypes of moderate to severe CHE were randomised 2:1 to double-blind treatment with delgocitinib cream 20 mg/g or cream vehicle twice daily for 16 weeks. LIBERTY-AD-HAFT (NCT04417894) was a phase 3 trial in which adults and adolescents (≥12 to <18 years) with moderate to severe AD with hand and/or foot involvement were randomised to subcutaneous injection with dupilumab or placebo every 2 weeks for 16 weeks. An anchored MAIC was conducted using individual patient data (IPD) from DELTA 1/2 and aggregate published data from LIBERTY-AD-HAFT, with cream vehicle and placebo arms as the common anchor. IPD from patients with AHE as the primary subtype in DELTA 1/2 were weighted to match age, race, sex, and baseline Hand Eczema Severity Index (HECSI) score in LIBERTY-AD-HAFT. Endpoints compared were HECSI 75, HECSI 90, and HECSI percent improvement from baseline at week 16. Investigator's Global Assessment for Chronic Hand Eczema (IGA-CHE) response in the DELTA 1/2 trials and Hand and Foot Investigator's Global Assessment (HF-IGA) response in the LIBERTY-AD-HAFT trial were also compared, although the two scales differed in how response was defined. Pruritus scores were not compared since different scales with different score descriptors were used (Hand Eczema Symptom Diary in DELTA 1/2 and Hand and Foot-Peak Pruritus Numerical Rating Scale in the LIBERTY-AD-HAFT trial) and were thus not comparable.

Results:

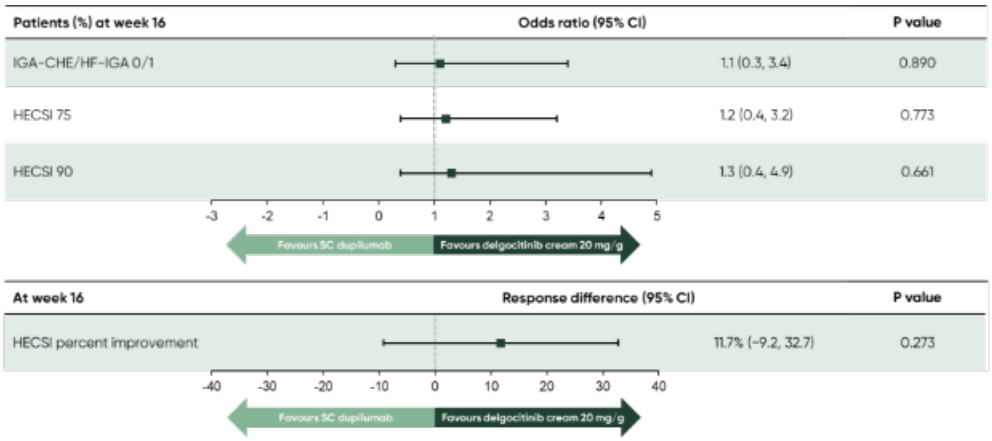
The LIBERTY-AD-HAFT trial included 133 patients (dupilumab, n=67, placebo, n=66) while DELTA 1/2 included 959 patients, 345 with AHE (delgocitinib, n=225; cream vehicle, n=120). The effective sample size after weighted matching was 201 subjects (delgocitinib, n=128, cream vehicle, n=73). Anchor adjusted odds ratios comparing delgocitinib versus dupilumab were 1.1 (95% CI: 0.3, 3.4; p=0.890) for IGA-CHE/HF-IGA score 0/1, 1.2 (95% CI: 0.4, 3.2; p=0.773) for HECSI 75 and 1.3 (95% CI: 0.4, 4.9; p=0.661) for HECSI 90 (**Figure 1**). Treatment differences were

not statistically significant for these three endpoints; however, all point estimates were numerically in favor of delgocitinib. Similarly, the anchor-adjusted response difference comparing delgocitinib versus dupilumab for HECSI percent improvement from baseline at week 16 (11.7% [95% CI: −9.2%, 32.7%]; p=0.273) was not statistically significant but was also numerically in favor of delgocitinib.

Conclusion:

The efficacy of topical delgocitinib was comparable to systemic use of the biologic dupilumab at 16 weeks in patients with AHE, with all results being numerically in favor of delgocitinib, though not stastistically significant.

Figure:



HECSI 75: Proportion of patients achieving ≥ 75% improvement in baseline HECSI; HECSI 90: Proportion of patients achieving ≥90 improvement in baseline HECSI. Cream vehicle and placebo arms were used as the common anchor and were assumed to be of similar efficacy. HF-IGA/IGA-CHE, HECSI 75 and HECSI 90: non-responder imputation for patients with missing data due to rescue treatment, discontinuation or other reasons. HECSI percent improvement: Patients with missing data at week 16 (due to rescue treatment, adverse events or lack of efficacy) were imputed by worst observation carried forward (WOCF). Data missing for other reasons were imputed using Markov chain Monte Carlo (MCMC) estimation. Odds ratios calculated for binary endpoints.
CI, confidence interval; HECSI, Hand Eczema Severity Index; HF-IGA, Hand and Foot Investigator's Global Assessment; IGA-CHE, Investigator's Global Assessment-Chronic Hand Eczema; SC, subcutaneous.

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Abstract N°: 8035

Targeting IL-22RA1 with temtokibart in patients with moderate to severe atopic dermatitis induces fast clinical and molecular responses, distinct from dupilumab

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Introduction & Objectives:

Type 2 blockade through the IL-4Rα is currently one of the therapeutic mainstays of moderate-to-severe atopic dermatitis (AD), but insufficient efficacy or side effects in a subset of patients warrant exploration of alternative treatment strategies. The IL22RA1 blocker temtokibart showed significant clinical improvement in moderate-to-severe AD patients in a recent phase 2a trial, but underlying molecular mechanisms remain to be investigated.

Materials & Methods:

We performed a 16-week randomized mode of action (MoA) phase 2a clinical trial in moderate-to-severe AD patients either with the IL-22RA1 blocker temtokibart (n=8) or the IL-4Rα blocker dupilumab (n=4). Clinical scores, skin biopsies and tape strips were collected at baseline and weeks 1, 4 and 16, and processed for single-cell RNA sequencing and natural moisturizing factor (NMF) analyses, respectively.

Results:

Both temtokibart and dupilumab led to comparable reductions in clinical scores (EASI and NRS itch). In line with current concepts, dupilumab showed a strong and consistent decrease in type 2-associated inflammatory markers particularly in immune cells and fibroblasts (*CCL17*, *CCL18*, *CCL22*, *COL6A5*, *COL6A6*, *POSTN*). By contrast, temtokibart showed a primary impact on barrier-related markers, such as terminal differentiation (*KRT1*, *KRT10)* or cell adhesion molecules (*DSC1*, *DSG1*, *CLDN1)*, consistent with a predominant expression of *IL22RA1* by keratinocytes. In line with the change in barrier related markers, the skin hydration markers (NMFs) 2-pyrrolidone-5-carboxylic acid (PCA) and urocanic acid (UCA) were significantly improved compared to baseline already at week 1 in the temtokibart group ($p<0.0001$), as opposed to dupilumab. Of note, type 1-associated mediators (*IFNG*, *CCL2*) showed increases in a subset of dupilumab-treated patients, which was not observed with temtokibart.

Conclusion:

This is the first randomized trial comparing clinical and molecular effects of two biologics in AD. Our data suggest that IL-22RA1 blockade does not directly affect skin immune cells but rapidly improves epidermal barrier abnormalities. Despite the limited sample size, our findings indicate that anti-IL-22RA1 treatment can lead to similar reductions in clinical disease activity as IL-4Rα blockade, identifying a new treatment MoA with potential benefit for patients with moderate-to-severe AD. Furthermore, these data demonstrate that not only type 2, but also Th22 inflammation can be intercepted as a major driver of skin disease in moderate-to-severe AD.

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Abstract N°: 8036

Cardiovascular effects of JAK inhibitors in atopic dermatitis: A retrospective cohort study

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Introduction & Objectives:

JAK inhibitors, particularly oral upadacitinib and abrocitinib, have emerged as pivotal treatment options in the management of moderate-to-severe atopic dermatitis (AD). Despite their proven effectiveness, there remains a level of apprehension among dermatologists when prescribing these medications due to their link to major adverse cardiac events (MACE). Due to the high prevalence of AD, which affects up to 20% of adolescents and 10% of adults worldwide, it is important to assess the occurrence of MACE and other cardiovascular diseases in patients with AD treated with upadacitinib or abrocitinib.1 The goal of this retrospective cohort study is to analyze the occurrence of MACE and other common cardiovascular diseases in patients with AD treated with upadacitinib or abrocitinib compared to control. While these medications have been linked to cardiovascular disease in the treatment of other inflammatory dermatoses, comprehensive data specific to AD is lacking.2,3 Therefore, investigating the risk of JAK inhibitor use in AD is essential for dermatologists to choose the best treatment option for patients who have failed conventional first- and second-line therapies.

Materials & Methods:

We conducted a retrospective cohort study using the TriNetX Research Network, which is a global federated health research network providing access to electronic medical records for over 275 million patients from over 120 healthcare organizations. The TriNetX database was queried for patients diagnosed with atopic dermatitis via ICD code 10 L20. The exposed cohort included patients who were treated with oral upadacitinib or abrocitinib, two FDA approved JAK-1 inhibitors for treatment of atopic dermatitis. The control cohort was defined as patients with atopic dermatitis who had never used oral upadacitinib or abrocitinib. All administered medication strengths listed on the TriNetX database for upadacitinib and abrocitinib were included in this study.

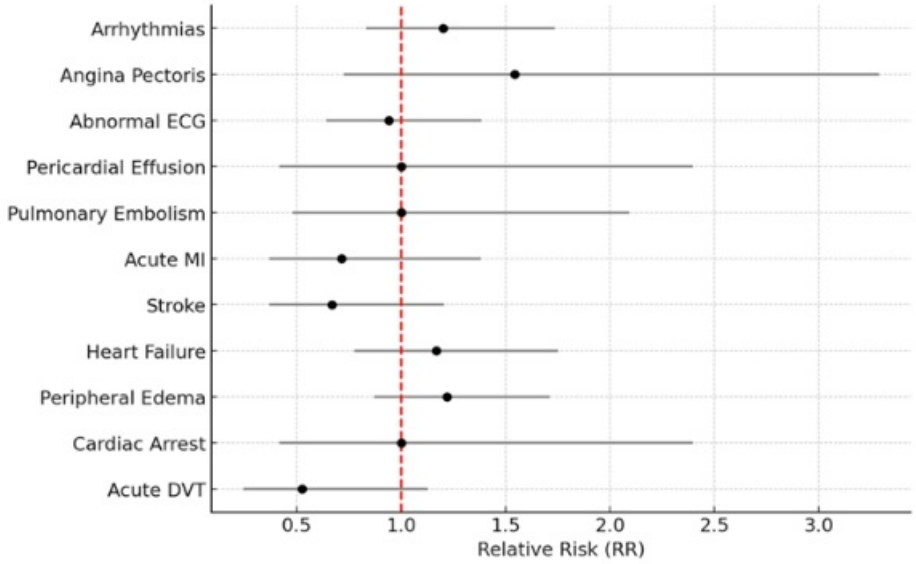
The exposed cohort yielded 1,802 patients and the control cohort yielded 1,281,768 patients. These two cohorts were propensity-score matched based on age at index, biological sex, and cardiovascular comorbidities to yield 1,802 patients in each cohort (Table 1). These cohorts were then analyzed for incidence of adverse cardiovascular effects after JAK-1 inhibitor use.

Results:

Table 1: Baseline Characteristics After Propensity Score Matching

	Used JAK-1 inhibitor	Did not use JAK-1 inhibitor
Age at index	44.2 +/- 21.2	43.5 +/- 20.6
Male	38.9% (n=701)	39.3% (n=708)
Female	55.5% (n=1,001)	55.2% (n=995)
Hypertensive diseases	26.9% (n=484)	27.6% (498)
Complications and ill-defined descriptions of heart disease	3.9% (n=70)	4.8% (n=87)
Heart disease, unspecified	1.8% (n=32)	2.1% (n=38)
Ischemic heart diseases	6.8% (n=122)	7.4% (n=133)
Other forms of heart disease	15.8% (n=284)	17.1% (n=308)
Cardiovascular agents, other	2.3% (n=42)	3.3% (n=60)

Figure 1: Forest Plot of Major Adverse Cardiac Events



Conclusion:

The forest plot of relative risk shows no increased concern for adverse cardiovascular events with oral administration of upadacitinib and abrocitinib in patients with AD. Dermatologists can safely consider using oral upadacitinib and abrocitinib in treatment of moderate-to-severe AD, even in patients with cardiovascular comorbidities.

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Abstract N°: 8052

Tape-strips transcriptomic analysis from patients with moderate to severe atopic dermatitis treated with nemolizumab

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Introduction & Objectives:

Nemolizumab is an anti-interleukin (IL)-31Rα monoclonal antibody that completed two phase 3 clinical trials in patients with moderate-to-severe atopic dermatitis (AD) aged ≥12 years (ARCADIA 1: NCT03985943 and ARCADIA 2: NCT03989349). A biomarker sub-study aimed to evaluate the effect of nemolizumab on the cutaneous transcriptomic profile in a subset of AD patients of the ARCADIA 1 and 2 studies using tape-stripping.

Materials & Methods:

72 AD patients treated with nemolizumab and 29 patients on placebo were evaluated before and after 16 weeks of treatment (nemolizumab in combination with background TCS/TCI) using tape-strips. Tape-strips were obtained from lesional (LS) and non-lesional (NL) skin at baseline and from LS skin at week 16 in both treatment arms and subjected to RNA sequencing. Differentially expressed genes/DEGs were defined as fold changes/|FCH|>1.5, and false discovery rate/FDR<0.05. Changes in gene expression in nemolizumab treated LS skin were also correlated with changes in clinical scores: SCORAD, peak pruritus numerical rating scale (PP-NRS), and weekly sleep disturbance numerical scale (SD-NRS). Nemolizumab patients were further stratified as having moderate or severe itching, based on the baseline PP-NRS score (above or below 7).

Results:

At Week 16, nemolizumab significantly downregulated many markers related to pruritus (e.g. TRPM1, TRPV3, OSMR). Nemolizumab also downregulated markers related to epidermal hyperplasia/fibrosis (e.g. KRT6C, SERPINB, COL1A1, COL12A1, IGFBP3, SOX9), including those regulated by IL-17/IL-22 (e.g. S100A7, S100A8, S100A9, S100A12, IL36G, PI3). Th1 markers (e.g. CCL2, MX1, OASL) were also significantly modulated. Decreases in the pruritus markers (KLK6, TLR3, SPTLC1) were correlated with improvements in PP-NRS and SD-NRS after nemolizumab treatment and improvement in SCORAD correlated with reductions in Th17 markers (CGNL1) (R>0.34, p<0.05 for all). Further, improvements in EASI, IGA, DLQI, and/or SD-NRS correlated with elevated baseline expression of Th2/IL22 markers (KRT10, KRT33A, CALML5), fibrosis (FGF22), and pruritus (KLK6) (R>0.34, P<0.05 for all).

When stratifying nemolizumab-treated patients by baseline itch intensity, patients with severe itching showed more robust and greater downregulation of Th1 (CCL3/4, CXCL8), Th2 (IL4R, CCL17), Th17 (CXCL1, IL17RA, PI3) with treatment compared to baseline, including of markers not downregulated in the less itchy patients (e.g IL4R, CCL17). In contrast, both moderate and severely itchy patients showed attenuation of pruritus markers (OSMR, CTSB) and Th22/IL22/hyperplasia-related markers (S100A's, SERPINB) compared to baseline.

Conclusion:

Nemolizumab treatment induced significant downregulation of pruritus and hyperplasia markers, as well as Th17/Th22 and some Th1-related markers, which also correlated with improvements in clinical outcomes. Attenuation of Th2 and greater immune modulation was seen in severely itching patients, indicating that nemolizumab may hold even greater promise in patients heavily impacted by pruritus.

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Abstract N°: 8073

Growth analysis in children aged 6 to 11 years with severe atopic dermatitis and impact of 16 weeks of dupilumab treatment on height

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Introduction & Objectives: In a 2007-2008 assessment of atopic dermatitis (AD) severity and height, adolescents with moderate and severe AD were found to have significantly higher odds of height <25th percentile of the CDC growth reference chart.1 Children with AD and in the ≤25th height percentile are at higher risk of low bone mineral density and low alkaline phosphatase (ALP).2 AD development was also associated with an increased risk of subsequent fracture.3 The mechanisms underlying this phenomenon are unclear and may relate to chronically poor sleep associated with AD, use of oral and topical glucocorticoids and the effects of a prolonged inflammatory state.1 Dupilumab vs placebo was shown to significantly increase levels of bone ALP in serum from children aged 6–11 years with moderate-to-severe AD enrolled in a phase 3 + OLE trial.4 We report the proportion of children 6–11 years with severe AD and lower stature who reach a ≥5 percentile improvement in height in 16 weeks compared with children in the placebo group, following treatment with dupilumab.

Materials & Methods: Height and weight for children aged 6–11 years with severe AD (NCT03345914) were collected. Data were analyzed by gender and stratified per proportion of patients above and below the 50th percentile of CDC growth reference charts for height, weight and BMI at baseline. Proportion of patients with change from baseline in height percentile ≥5 (patients below the 25th, 30th, 40th and 50th height percentiles at baseline) were reported at Week 16.

Results: Girls aged 6−11 years (n = 153) with severe AD were overrepresented below the 50th percentile in height by 4.2%; boys (n = 151) by 7.6%. In contrast, children with AD were overrepresented above the 50th percentile for weight (5.6% in girls and 7.6% in boys) and BMI (17.3% in girls; 12.9% in boys). A significantly greater proportion of children below the 25th, 30th or 40th percentiles at baseline achieved a ≥5 percentile improvement in height when treated with dupilumab compared with placebo [<25th percentile: 11.9% placebo (n = 42) vs 30.6% dupilumab (n = 62), P = 0.0329; <30th percentile: 11.1% placebo (n = 45) vs 31.9% dupilumab (n = 69), P = 0.0129; <40th percentile: 15.5% placebo (n = 58) vs 31.3% dupilumab (n = 83), P = 0.0467]. A difference in the proportion of children achieving ≥5 percentile improvement in height was observed in patients <50th percentile at baseline, but it was no longer significant [<50th percentile: 15.7% placebo (n = 70) vs 29% dupilumab (n = 100), P = 0.0653].

Conclusion: These data from a rigorously selected population for phase 3 evaluation support the body of real-world evidence indicating that severe AD during childhood carries a risk of lower stature, as well as higher weight and BMI compared with healthy reference standards. Prompt and effective management of AD with dupilumab in younger children may have lifelong benefit in those who are below expected height by improving vertical growth.

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Abstract N°: 8082

52-week safety and disease control with ruxolitinib cream in children aged 2 to 11 years with atopic dermatitis: Results from the phase 3 TRuE-AD3 study

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Introduction & Objectives:

Atopic dermatitis (AD) is a chronic, highly pruritic, inflammatory skin disease with onset usually occurring in childhood. Twice-daily (BID) continuous application of ruxolitinib (RUX; Janus kinase [JAK] 1/JAK2 inhibitor) cream was well tolerated and demonstrated efficacy vs vehicle in patients aged ≥2 years with mild to moderate AD. Long-term safety and disease control with as-needed RUX cream has been reported for patients aged ≥12 years and for patients aged 2–11 years in a maximum use study (affected body surface area [BSA] ≥35%). Here, we report safety and disease control with as-needed RUX cream use in children aged 2–11 years with mild to moderate AD from the TRuE-AD3 study.

Materials & Methods:

TRuE-AD3 included children aged 2–11 years with AD for ≥3 months, an Investigator's Global Assessment (IGA) score of 2/3, and an affected BSA of 3%–20%. Patients were randomized 2:2:1 to apply 0.75% RUX cream, 1.5% RUX cream, or vehicle BID for 8 weeks (VC period). At Week 8, patients initially randomized to RUX cream continued their regimen for an additional 44-week, long-term safety (LTS) period, but only treated lesions as needed (stopping 3 days after clearance); patients initially randomized to vehicle were rerandomized 1:1 (blinded) to either RUX cream regimen for the LTS period. Safety and tolerability were assessed by frequency and severity of treatment-emergent adverse events (TEAEs). Disease control was assessed as the proportion of patients with an IGA score of 0/1 and by affected BSA; data are reported as observed.

Results:

Of 330 randomized patients, 282 patients (female, 52.8%; White, 55.7%) were evaluated in the LTS period (≥1 application of RUX cream); patients had a baseline mean (SD) BSA of 10.4% (5.4%), and 77.0% had an IGA of 3. No new safety signals emerged in the LTS period. Both strengths of RUX cream were well tolerated throughout the entire 52-week study, with no meaningful differences between strengths. Among patients who applied RUX cream throughout the 52-week study (either strength; n=264), there was a low incidence of application site reactions (5.3%). The most common TEAEs were upper respiratory tract infection (14.8%) and nasopharyngitis (9.1%). There were no TEAEs suggestive of systemic JAK inhibition, consistent with generally low RUX plasma concentrations. At Week 8, IGA 0/1 was achieved by substantially more patients who applied 0.75% and 1.5% RUX cream vs vehicle

cream (50.0% and 72.4% vs 24.5%, respectively) in the VC period. Improvements were maintained or further improved out to Week 52 (0.75% RUX cream, 79.5%; 1.5% RUX cream, 72.3%), and a similar proportion of patients who crossed over from vehicle at Week 8 achieved IGA 0/1 at Week 52 (vehicle to 0.75% RUX cream, 78.9%; vehicle to 1.5% RUX cream, 72.2%). Affected absolute BSA was substantially lower with 0.75% and 1.5% RUX cream vs vehicle in the VC period (Week 8, 4.3% and 2.9% vs 7.2%), with maintained or lower values in the LTS period (Week 52: 0.75% RUX cream, 2.0%; 1.5% RUX cream, 1.9%; vehicle to 0.75% RUX cream, 1.5%; vehicle to 1.5% RUX cream, 1.6%).

Conclusion:

In children with AD, both 0.75% and 1.5% RUX cream were well tolerated over the entire 52-week study, with similar safety profiles compared with the VC period and previous findings in adolescents and adults. Both strengths of RUX cream resulted in effective disease control, with >60% of patients achieving clear or almost clear skin and a low mean affected BSA (≤3%) for the majority of the 44-week as-needed treatment period.

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Real-world effectiveness of tralokinumab in adults with atopic dermatitis: Interim data on improvements in patients with head and neck atopic dermatitis after up to 9 months of treatment in the TRACE study

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Introduction & Objectives: Atopic dermatitis (AD) is a chronic inflammatory skin disease affecting multiple areas, including the head and neck (H&N) region, reported in 72% of patients with moderate-to-severe AD [1]. AD involvement of H&N, more than other body regions, is associated with social embarrassment, stigmatization, and negative impact on patients' quality of life and mental health [2]. Tralokinumab, a monoclonal antibody that specifically targets interleukin-13, is indicated for the treatment of moderate-to-severe AD. Here, we evaluated the effectiveness of tralokinumab on AD signs and symptoms in patients with H&N AD in an interim analysis (IA) of the non-interventional TRACE study.

Materials & Methods: TRACE is an international, prospective, single-cohort study of adult patients with AD (enrolled between November 2021 and July 2023) that were prescribed tralokinumab according to national approved labels. IA data cut-off was October 15th, 2023, and hence not all patients had completed all visits. This analysis included patients who had AD involvement on face, scalp, and neck at baseline. Outcomes collected included AD localization, and overall AD measures, including Investigator's Global Assessment (IGA), Dermatology Life Quality Index (DLQI), The RECap for AtoPic eczema (RECAP), Peak Pruritus Numeric Rating Scale (PP-NRS), and/or Sleep NRS according to individual clinical practice. Data presented as observed.

Results: At baseline, 79.5% of patients in the full analysis set (FAS) had H&N AD (n=655/824). At baseline, mean age was 42.1 years, mean AD duration was 20.6 years, more than half were male (53.0%), and the majority were White (76.6%). In patients with H&N AD at baseline, the percentages of patients that still reported AD on the H&N area decreased to 67.2% (363/540) at 3 months and to 52.1% (62/119) at 9 months. Consistent decreases were seen in dupilumab-naïve (50%, 42/84) and dupilumab-experienced (57.1%, 20/35) patients at 9 months. Among patients with baseline H&N AD, the percentage with IGA 0/1 increased from 1.4% (9/650) at baseline to 33.6% (172/512) at 3 months, 48.4% (121/250) at 6 months, and 57.4% (58/101) at 9 months of tralokinumab treatment. The percentages of patients with IGA 4 decreased from 37.7% (245/650) at baseline to 4.7% (24/512) at 3 months, 2.8% (7/250) at 6 months, and 2.0% (2/101) at 9 months. Among patients with baseline IGA≥2, the percentages achieving ≥2-point improvement in IGA increased from 46.4% (220/474) at 3 months to 59.1% (140/237) at 6 months, and 71.6% (68/95) at 9 months. Among patients with DLQI ≥6 at baseline, the majority achieved ≥6-point reduction in DLQI with tralokinumab: 57.9% (84/145) at 3 months, 63.6% (49/77) at 6 months, and 74.4% (32/43) at 9 months. Mean PP-NRS improved from 6.4 (n=387) at baseline to 4.2 (n=213) at 3 months, 3.5 (n=111) at 6 months, and 3.3 (n=59) at 9 months. Mean Sleep-NRS improved from 5.2 (n=305) at baseline to 2.8 (n=170) at 3 months, and 2.3 at 6 and 9 months (n=84 and n=53, respectively) of tralokinumab. Similar improvements were observed across all endpoints in both dupilumab-naïve (n=154) and dupilumab-experienced (n=501) patients with H&N AD at baseline, despite higher baseline disease severity in dupilumab-naïve patients.

Conclusion: Up to 9 months of tralokinumab treatment in a real-world setting reduced H&N involvement and improved disease severity and QoL in patients with AD in the difficult to treat H&N area; all improvements were similar regardless of prior dupilumab use.

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