# Analysis and Description of Hospital Consultations in the Dermatology Department at a Tertiary-level Medical Center in Mexico

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# **Introduction & Objectives:**

Dermatological consultations are crucial in the treatment of hospitalized and emergency patients. This study examines the scope and characteristics of skin disorders in a tertiary Mexican medical center.

#### Materials & Methods:

This descriptive, observational, retrospective study spanned two years and involved 1,134 patients. It aimed to evaluate the types and frequencies of dermatological consultations in emergency and inpatient settings.

## **Results:**

A total of 1,134 consultations were analyzed, with 50.2% corresponding to females with a mean age of 54 years. A total of 909 consultations (80.1%) were conducted in the inpatient service, and 225 (19.9%) in the emergency service. The main causes of consultation were of infectious etiology (49.7%): viral, fungal, and bacterial. The second most common reason for consultation was reactive dermatoses (15.8%), and lastly, adverse drug reactions. When analyzing the aims for consultation comparatively (emergency vs. inpatient), it was noted that infectious causes were the primary reason for consultation in emergencies compared to inpatient (66.7% vs. 45.5%). Among these, soft tissue infections (purulent and non-purulent) were significantly higher in emergencies (38.7% vs. 9.9%) (P < 0.005). On the other hand, eczema and dermatitis were a significantly more common cause of consultation in inpatient compared to emergencies (18.8% vs. 3%) (p < 0.005). Drug reactions with cutaneous manifestations (drug eruptions) were similarly consulted in both services (9% vs. 9.5%).

#### **Conclusion:**

This study highlights the essential role of dermatologists in hospital environments, particularly in identifying and treating infectious skin conditions. It underscores the need for specialized dermatological expertise in emergency and inpatient departments, contributing significantly to patient care and management strategies in hospital settings.

E. coli	2.0 %
S. aureus	1.4 %
P. aeruginosa	0.6 %
E. coli BLEE	0.5 %
S. agalactiae	0.5 %
K. pneumoniae	0.4 %
P. mirabilis	0.3 %
E. faecalis	0.2 %
C. neoformans	0.2 %
E. cloacae	0.1 %
K. aerogenes	0.1 %
M. colombiense	0.1%
M. morganii	0.1 %
Nocardia spp	0.1 %
S. lugdunensis	0.1%
S. pyogenes	0.1%
S. caprae	0.1 %
S. marcescens	0.1 %
Vibrio vulnificus	0.1 %
S. maltophilia	0.1%
M. romeroi	0.1%
Other agents	0.8 %

**Table 1.** Etiological agents isolated in skin cultures from bacterial infections of soft tissues.

# STI: Soft Tissue Infection

Some patients had more than two infectious agents in the same tissue culture

	Hospitalization N= 909 (80.1%)	Emergency N=225 (19.9%)
Infectious causes	N= 414 (45.5 %)	N=150 (66.7%)
Viral infections	21.5 %	33.2%
Herpes simplex	11.5%	10.6%
Varicella-Zoster Virus (VZV) infections	3.6%	14.7%
Condylomas	2.7%	1.7%
Viral Warts	1.8%	0.9%
Molluscum contagiosum	1.2%	2.2%
Viral rash	0.4%	0.9%
Mpox	0.2%	1.8%
Herpangina	0.1%	0.4%
Fungal infections	19.4%	10.6
Candidal intertrigo	9.5 %	3.6%
Ringworm	7.7%	4.4%
Malassezia infections	1.4%	-
Opportunistic infections	0.4%	1.8%
Candidiasis (except intertrigo and oral cavity)	0.7%	0.4%
Phaeohyphomycosis	0.3%	03
Deep dermatophytosis	0.1%	0.4%
Bacterial infections ±	9.9%	38.7%
Non-purulent soft tissue infections	5.3%	26.7%
Purulent soft tissue infections	1%	8.4%
Folliculitis, furunculosis and Abscess	2.3%	0.9%
Impetigo	1%	0.9%
Mycobacterial infections	0.2%	1.8%
Erythrasma	0.1%	-
Sexually Transmitted Diseases	1.8%	3.1%
Herpes simplex	1.5%	0.9%
Syphilis	0.3%	1.8%
Lymphogranuloma venereum	-	0.4%
Parasitosis	0.6%	1010.10
Scabies	0.2 %	*
Pediculosis	0.4%	2

**Table 2.** Infectious Etiology Consultations in Dermatology Services: Motives and Causes

 $\pm$  Consultations for bacterial infections were significantly higher in the emergency room with a p < 0.05 using a Fisher's exact test.

	Hospitalization N= 909 (80.1%)	Emergency N=225 (19.9%)
Eczema and dermatitis*	18.89%	3%
Britant contact dermatitis Selecciosis deceantitis	3.60%	0.40%
Lichen zimplex chronicus Stusis devenablis	0.80%	0.40%
Nodular prurigo Nummular accesso	0.40%	0.00%
Atopic devocatitis Cristiani scormo	0.30%	
Allergic contact dermatitis	0.10%	
Urticaria and angioedema  Anne articario	1.10%	1.50%
Argioedenic Reactive dermatoses and mechanical agents	0.10%	0.40%
	2.20%	1.30%
Simple intertrigo Graft-servas-invi disease	0.30%	
Hurse Inner bits	0.10%	0.40%
Eruptive pseudosingsomatiess Liekus ploma	0.10%	
Erythematosquamous diseases		
Proriaria	0.80%	0.40%
Eryshrodorma Pityriasti rossa	0.10%	0.40%
Payment delencades elementes  Drug reactions	0.10%	9,50%
Morbilfore emption	4.10%	4,40%
Aconform reactions  Local receivers	1,50%	0.40%
DBeSS University	0.30%	2.20%
PEP Charatherapy.induced crytheras	0.30%	0.40%
SECTEN		0.90%
Methorresate intersection Erythoma multiforme like	0.30%	0.40%
Phototoxicity	0.10%	
AGEP Serum sickness-like reaction	0.10%	
SDAIFE Tumors	5%	0.40% 13.30%
Berign Schurrheir keretaris and filtrames	1,60%	1,30%
Benign melanocytic ienionz Epidermul cysti	0.90%	1.30%
Piarculer	0.40%	0.90%
Poroqueratoris Annenisos tumos	0.10% 0.20%	0.40%
Meliguare Infiltration/metastatis	1%	3.10% 2.70%
Rapoul surroma Squamous cell carcinoma	0.50%	2.70%
Cuantonia T cell Introhoma	0.30%	1.50%
Basel cell cercinema Melanoma	0.10%	0.90%
B-cell custovens () imphema Others (Porcearcinosus)	0.10%	0.40%
Premalignant Active kerestores	1.10%	0.40%
Hair disorders Nail apparatus disorders	1%	0.40%
On elony costs Onless	8.9 1.70%	6.20%
Acute perenyelse	0.80%	0.80%
Chromotyckia Ingrove social	0.70%	0.80%
Sahangsani hawatona Oral cavity disorders	3%	
Oval condiduction	9.1 5.90%	4.40% 2.80%
Orefoctel inspec Others	3.70%	0.40%
ANGU Menetis	1% 0.6	0.40%
Deficiency ziomatitis Deficiency dermutosis Pervocusz Lenkoplaitis	0.40%	0.40%
Neutropens: alcero	0.90%	0.40%
Hairy tongue Infiltration	0.20%	
Autolimmuno disenses Systemic Lupus Erythomatorus	1.80%	1.80%
Dermatanyonitis Systemic Solwonia	1.30%	3.60%
Asia syndrome	0.50%	1.30%
Mintering diseases Penghipan valgaria	0.20%	0.40%
Bellout pemphigoid Psychodermatosis	0.10%	0.40%
Gangdarmotous	0.20%	0.90%
Epidermolynir hallosa Neurofilmomatossi	0.10%	0.90%
Epidermodyaplasia verrsaformia Packydormoperusiosis		0.40%
Purpura Anylum	2.10 %	9,30 %
Non-seiform Vasculitis	4.50%	0.00% 4.40%
Sweat gland and sebaceous gland disorders		
Milaria done	0.90%	
Rozavea Hidrodonita apparativo	0.30%	0.40%
	0.10%	
Neutrophilie dormatoses  Pyodorno gaugronoum	0.30%	0.40%
Short spedrawer Others	0.20%	0.90%
Pigmentary disorders  Fustiquemetery hyperpigmentation	0.40%	2711
Cherry	0.80%	0.40%
Pinfigo Pootinflammatory hapopigmentation	0.40%	0.40%
Ukers	0.30%	
Pressure silvers Planes silvers	5% 0.40%	1.80% 0.40%
Arterial and venera sivers	0.10%	w.4076
Ulears caused by biomelower aspection.	0.10%	2.70%
Non-autoimmune inflamatory conditions	3,60%	0.90%
Stil's disease Offices	0.20%	0.40%
Deposition diseases	0.70%	
Amylaidesis Offices	0.30%	0.40%
Gne	0.20%	0.40%
Miscollaneous Nanézonaz	0.10%	
Erroris Chrome renous parafferency ++	2.50% 1.50%	2.70%
Acute inflammatory edimia Province	1.10%	0.90%
Neglected dermatenes Scurvy	1.10%	0.40%
	0.40%	0.4079
Parentalitis Esperan hade constitue		
Parenicularia Foreign body reaction Other martitional deficiencies	0.50%	

 Table 3. Non-Infectious Etiology Consultations in Dermatology Services

DReSS: Drug Reaction with Eosinophilia and Systemic Symptoms

FEP: Erythema pigmentosum erythema

SJS/TEN: Stevens-Johnson syndrome/ toxic epidermal necrolysis

AGEP: Acute generalized exanthematous pustulosis

SDRIFE: Symmetrical drug-related intertriginous and flexural exanthema

ANUG: Acute necrotizing ulcerative gingivitis

 $^{\rm a}$  Consultations for eczema and dermatitis were significantly higher hospitalization with a p < 0.05 using a Fisher's exact test.

## Skin aging in Indonesian population: A study based on the skin aging atlas

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# **Introduction & Objectives:**

In this decade, the aging population keeps growing. Hence, the aging profile as well as how to treat and prevent aging gain special attention. Asians have distinctive skin aging characteristics compared to other races. Skin aging atlas is one of the skin aging assessments specialized for the Asian population but there has been no study describing the use of this assessment in the Indonesian population. This study aims to describe the skin aging profile of the Indonesian population based on the skin aging atlas.

## **Materials & Methods:**

A cross-sectional study was performed from 2021 to 2022. This study recruited women and men aged 18 – 70 years old without a prior history of skin diseases on the face and comorbidities consecutively. Subjects who used any topical agents on the face, any oral medications, and facial aesthetic treatments in the last month before the study were excluded. Sociodemographic data and clinical findings were documented by dermatologists. The clinical findings were categorized according to skin aging atlas.

### **Results:**

Five hundred and forty healthy females and males with an average age of  $40.25 \pm 9.92$  years old were recruited for this study. Most subjects had an intermediate level of education, a history of smoking, no history of alcohol intake, worked outdoors, and did not use sunscreen routinely. Only 11.7% of the subjects had prior melasma diagnosis. The most common severe aging signs were cheek sebaceous pores, horizontal neck folds, and nasolabial folds. Mild forehead wrinkles, interocular wrinkles, eye bags, underneath eye wrinkles, wrinkles of the corner of the lips, neck sagging, density of pigmentary spots, localized pigmentary spots on the cheek, contrast of isolated pigmentary spot of the face, size of an isolated spot, ocular area pigmentation, and small folds on nasolabial zone were also identified.

## **Conclusion:**

This study highlighted the aging profile of Indonesian women and men which characterized by prominent cheek sebaceous pores, nasolabial folds, and horizontal neck folds

Unraveling the peaks: the age-related incidence of male genital lichen sclerosus through a retrospective review of 487 patients.

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**Introduction & Objectives:** # Male genital lichen sclerosus (MGLSc) is a chronic and acquired inflammatory dermatosis associated with substantial sexual dysfunction and urological morbidity and mortality. The ageincidence of MGLSc is held to be biphasic, with a peak in infancy and another in adulthood, but one paper, with a small sample size, has suggested two peaks in adulthood; this has been our emergent clinical impression from a voluminous practice. MGLSc has been associated with smoking, but this has not been our clinical impression.

The primary objectives of this study were to illuminate the age-specific incidence of adult men with GLSc, and the relationship between MGLSc and smoking.

#### **Materials & Methods:**

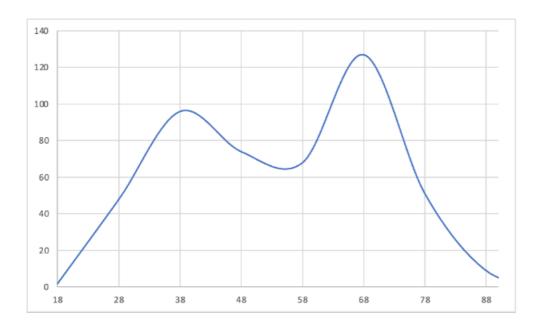
We retrospectively reviewed the medical notes of 487 adult MGLSc patients from a large specialist male genital dermatology clinic. We abstracted data about the age of diagnosis and smoking history.

# Results:

A biphasic U-shaped age distribution was identified with two clear peaks between the ages of 30-40 years, and another between the 60-70 years (Hartigan's dip-stat= 0.03; p<0.01). Thirty six percent had been smokers at some point in their lives.

#### **Conclusion:**

These findings confirm that MGLSc is biphasic in its adult incidence, confirming an earlier supposition; including the previously well-acknowledged paediatric peak, it is thus triphasic. The smoking data are probably unremarkable compared with available data for smoking habits from the UK. These findings reflect what is postulated about the likely pathogenesis of MGLSc; urinary micro-incontinence, occlusion and epithelial susceptibility.



**Figure 1:** The age distribution of patients diagnosed with MGLSc. A U-shaped biphasic peak can be observed around the ages of 30-40 and 60-70 years respectively.

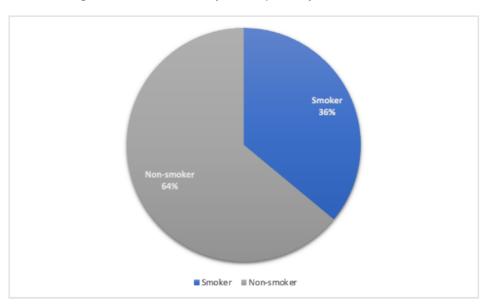


Figure 2: The percentage of current/previous smokers and non-smokers in those with a diagnosis of MGLSc.

The Double-Edged Sword: Discovering the Impact of Medical Interventions on Skin Health

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**Introduction & Objectives:** Iatrogenic dermatoses are those cutaneous conditions which are caused by medical treatments or diagnostic procedures. This group of dermatoses represent a wide spectrum of dermatoses, varying from minor, transient rashes to severe, potentially fatal complications. The prevalence and characteristics of these conditions in a specific region of XXX country have not been thoroughly investigated. This lack of data highlights an essential need for information to guide both dermatological and other medical practices. This study seeks to assess the prevalence of iatrogenic dermatoses in patients visiting dermatology clinics in this region, to identify the most frequently occurring types and associated risk factors. The objective is to enlighten dermatologists with the knowledge to predict and identify such conditions and to educate other physicians and medical practitioners about iatrogenic dermatoses, thereby enhancing patient care and outcomes.

**Materials & Methods:** In this retrospective study, one year patient data was collected from an Electronic Medical Records (EMR) software. The details of each patient with iatrogenic dermatoses was meticulously reviewed and pertinent information collected. The study bypassed the need for ethical clearance by exclusively analysing data in an anonymized way, thus ensuring patient confidentiality while producing results this providing a thorough overview of iatrogenic dermatoses prevalence and characteristics.

**Results:** The study identified the five most prevalent iatrogenic dermatoses as drug reactions (specifically fixed drug eruptions), steroid-modified dermatophytoses, acneiform eruptions, surgical site allergic contact dermatitis, and hyperpigmentation induced by steroid injections. Notably, steroids were found to be the leading cause of iatrogenic dermatoses.

**Conclusion:** This research emphasizes the significant role of steroids in the onset of iatrogenic dermatoses in the studied region. The findings highlight the importance of careful prescription practices and increased awareness among dermatologists and other healthcare providers about the potential iatrogenic effects of prescription medicines, especially steroids. It advocates for customized patient education regarding the risks and for implementing monitoring strategies to prevent steroid-induced dermatoses, ultimately aiming to improve patient safety and care outcomes.

# Clinical and epidemiological characteristics of Leprosy in pediatric patients in a reference health center in a low-income country

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# **Introduction & Objectives:**

Leprosy in infants is not far from that observed in adults. In the Dominican Republic, our cases in the pediatric population are characterized by presenting few manifestations on the skin, in the peripheral nervous system, and exceptionally we observe visible disabilities. The current investigation describes the behavior of the disease in this age group in terms of clinical and epidemiological characteristics, as well as sources of detection and degree of disabilities.

## **Materials & Methods:**

This is a retrospective, observational and descriptive study, whose data was obtained from the Leprosy Control Program of the Dominican Dermatology Institute "Dr. Huberto Bogaert Díaz", during the period 2014-2022, in patients under 15 years of age registered in our program.

### **Results:**

During this period, a total of 1,226 patients were diagnosed with Leprosy, of which 94 corresponded to children under 15 years of age (7.6%). Most of them were male (59.6%), within the group of 10-15 years (54%), diagnosed by active search (58%), reporting 50% of cases of both multibacillary and paucibacillary leprosy. Of the total number of patients, only two of them reported disabilities, both grade 1 and grade 2.

## **Conclusion:**

The appearance of leprosy in children under 15 years of age is an important epidemiological indicator that reflects the expansion, severity, and high endemicity of the disease. The importance of active surveillance lies in making an earlier diagnosis of the disease, which translates into increasingly reducing the disabilities that could arise as a result of it.

# Demographics and Comorbidities of Clinical Interest among Patients with Cutaneous Lupus Erythematosus in a Large US Electronic Health Record Database Study

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# **Introduction & Objectives:**

There are limited population-based observational studies exploring the demographic and clinical characteristics of cutaneous lupus erythematosus (CLE) patients. Electronic Health Record (EHR) databases are rich sources of data with large numbers of patients with CLE, that could help to further evaluate the epidemiology and clinical characteristics of CLE. Earlier studies of CLE in EHRs relied on a single International Classification of Disease-9, Clinical Modification (ICD-9-CM) code for CLE and systemic lupus erythematosus (SLE), respectively. Since 4 new CLE ICD-10 CM codes were introduced in 2015, little has been published on the epidemiology of CLE in the US EHRs. Informed by a recent study validating EHR-based algorithms to more rigorously identify CLE populations and support robust interpretation of such analyses (Guo L, et al. 2022 Arthritis Rheumatol), this descriptive study reports on a large cohort of CLE patients in the Optum® EHR from 2016 to 2022, utilizing newer case definitions to identify CLE subjects. The objectives were to describe the demographics of the CLE population, CLE subtypes, and CLE patients with and without coexisting SLE; and to explore the frequency of comorbidities among CLE patients.

## **Materials & Methods:**

This cross-sectional study utilized the Optum® de-identified EHR dataset, including inpatient and ambulatory care records for ~113 million people in the US. The definitions of CLE, SLE, and the CLE subtypes used in this study are presented in **Table 1**. CLE patients were defined as having  $\geq$ 2 ICD-10 CM codes for CLE with  $\geq$ 1 code from a dermatologist or rheumatologist during the study period (2016–2022). The date of the first CLE diagnostic code on record (index date) was considered the diagnosis date. Comorbidities were identified by  $\geq$ 1 ICD-10 CM code.

### Results:

**Demographics:** Among the 10,025 CLE patients identified, 84% were female. CLE patients were 62% Caucasian, 25% African American (AA), and 3% Asian (**Figure 1**). The mean (standard deviation) age at diagnosis was 51 (±16) years.

CLE subtype representation overall and among AAs are presented in Table 2.

Coexisting SLE was observed in 47% (n=4,718) of CLE patients. The proportion of AAs was ~10% higher among CLE patients with SLE (29.5%) compared with CLE-only patients (20%) (**Figure 1**).

**Comorbidities:** The comorbidities of clinical interest occurring any time during the study period included: SLE-related conditions such as renal involvement (as glomerular disease [7.5%] or as tubulo-interstitial disease [0.8%]), lung involvement (2.1%), pericarditis (1.8%), and nonspecific organ involvement (14.6%); mental health disorders such as anxiety disorder (30.1%) and depression (25.6%); and cardiovascular risk factors such as essential hypertension (45%), disorders of lipids (36%), obesity (27.9%), and type 2 diabetes (13.9%).

## **Conclusion:**

The current EHR-based study provides valuable insights into the demographics of CLE patients overall, by CLE subtype, and by presence or absence of coexisting SLE in a large sample of CLE patients in the US. The comorbidities identified among CLE patients in this descriptive study provide an opportunity to generate hypotheses for future association studies in this CLE population. This information can be highly relevant to investigators in a landscape where no CLE-specific therapies exist and emerging potential treatments are being developed.

Table 1 Definitions of CLE, CLE with and without coexisting SLE, SLE, and CLE subtypes utilized in the analyses

Condition	Definition		
Overall CLE	≥2 CLE ICD-10 codes, with ≥1 ICD-10 code from a dermatologist OR a rheumatologist between 2016–2022		
CLE with coexisting SLE	Overall CLE with ≥3 ICD-9/10 codes for SLE¹		
CLE without coexisting SLE	Overall CLE with no ICD-9/10 codes for SLE¹ ever		
SLE	≥3 ICD-9/10 codes for SLE¹ between 2007–2022		
CLE subtype			
DLE AND SCLE	≥1 L93.0 AND ≥1 L93.1 codes		
Other local LE	≥2 L93.2 codes, no DLE or SCLE codes		
DLE only	≥2 L93.0 codes, no SCLE codes		
SCLE only	≥2 L93.1 codes, no DLE codes		
Undetermined CLE subtype	Overall CLE patients who do not meet any of the 4 subtype definitions above		

#### Abbreviations

CLE: Cutaneous Lupus Erythematosus; SLE: Systemic Lupus Erythematosus; DLE: Discoid Lupus Erythematosus; SCLE: Subacute Cutaneous Lupus Erythematosus; LE: Lupus Erythematosus; ICD: International Classification of Disease.

## ICD-9/10 codes used:

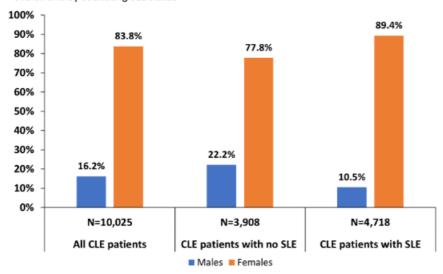
Discoid lupus erythematosus: ICD-10 CM: L93.0; Subacute cutaneous lupus erythematosus: ICD-10 CM: L93.1; Other local lupus erythematosus: ICD-10 CM: L93.2; Systemic lupus erythematosus: ICD-9 CM: 710; ICD-10 CM: M32.\*

References:

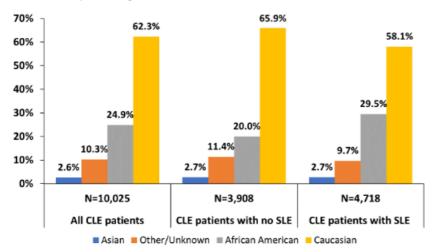
1-Barnado et al. 2017, Developing Electronic Health Record Algorithms That Accurately Identify Patients With Systemic Lupus Erythematosus. Arthritis Care Res.;69(5):687–693.

**Figure 1** Demographic characteristics of CLE patients in the Optum® EHR Database 2016–2022, overall and by coexisting SLE status<sup>1,2,3</sup>

1a. Sex distribution among CLE patients in the Optum® EHR Database 2016–2022, overall and by coexisting SLE status



**1b.** Race distribution among CLE patients in the Optum® EHR Database 2016–2022, overall and by coexisting SLE status



Abbreviations: CLE: Cutaneous Lupus Erythematosus; EHR: Electronic Health Record; SLE: Systemic Lupus Erythematosus.

- Barnado et al.2017, Developing Electronic Health Record Algorithms That Accurately Identify Patients With Systemic Lupus Erythematosus. Arthritis Care Res.;69(5):687–693.
- 2. Includes ICD-9 or ICD-10 codes for SLE during the full study period (2007-2022).
- 3. The numbers of CLE patients with and without SLE do not add up to the total number of all CLE patients because individuals with <3 SLE codes are not counted as having coexisting SLE.

**Table 2** Distribution of CLE subtypes among CLE patients in the Optum® EHR Database 2016–2022, overall and among African Americans

CLE Subtrace	Overall	African American	
CLE Subtype	N (%)	N (%)	
Total CLE Cases	10,025 (100)	2,492 (24.9)	
≥2 DLE codes, no SCLE codes	6,441 (64.3)	2,066 (82.9)	
≥2 Other local LE	1,370 (13.7)	179 (7.2)	
≥1 DLE AND ≥1 SCLE	823 (8.2)	131 (5.3)	
≥2 SCLE codes, no DLE codes	952 (9.5)	54 (2.2)	
Undetermined CLE Subtype	439 (4.4)	62 (2.5)	

#### Abbreviations:

CLE: Cutaneous Lupus Erythematosus; EHR: Electronic Health Record; DLE: Discoid Lupus Erythematosus; SCLE: Subacute Cutaneous Lupus Erythematosus; LE: Lupus Erythematosus.

## Worldwide interest in tattoos and tattoo removal between 2004 and 2024 using Google Trends

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# **Introduction & Objectives:**

Google Trends (GT) provides data on the relative search volume (RSV) of queries and topics over time and across geographical areas. It allows seasonal and long-term assessment of trends in public interest. In 2019, we reported a GT analysis showing an increased RSV for the topic "Tattoo" between 2004 and 2018 with summer peaks and from Latin American countries. We performed a new study about tattoos and tattoo removal.

#### **Materials & Methods:**

We analyzed here the data generated through GT, for the RSV on the topic "tattoo" and "tattoo removal", worldwide from January 1, 2004 to March 31, 2024. Results are displayed as a set of time series. The values are not the actual search counts but percentages relative to the total searches across the specified geography and time period. The resulting numbers are then scaled from 0 to 100 based on the proportion to all searches on all topics. All data are publicly available and anonymous. No ethical approval was required.

# Results:

After a constant increase from 2004 to 2018, searches for Tattoo have started to decrease (Fig 1). There is a dip in April 2020 due to COVID-19 followed by a surge during summer 2020, but overall, a decrease has been notable since 2018. Seasonal peaks are observed every year during summer, while searches reach their lowest during winter. In northern hemisphere, searches peak in July-August, while in southern hemisphere around January. For the 2004-2024, only Latin American countries are in the top 10 searches (table 1). They account for 14 of the top 20 countries and 16 if we include European Latin countries (Spain, Italy). The Philippines are the only Asian country in the top 20.

Regarding tattoo removal, the interest has been growing regularly with no decrease for the past 20 years (Fig 2). Tattoo removal search follows a seasonal pattern with a decrease in winter. The pattern of countries is completely different as only in the top 5 there are only English - speaking countries and in the top 20 feature 6 EU countries and only one South American country (Brazil) is present.

#### **Conclusion:**

Despite a consistent interest for tattoos in Latin America, we observed a global decrease in interest in tattoos that started in 2018. The surge in Spring 2020 may be explained by the lifting of lockdowns. Interest in tattoo removal is increasing in English speaking western countries and Europe. Less interest in winter time may be explained as the tattoos are covered by clothes, possible financial restrictions due to Christmas and lastely articles for the general public for the subject in summer.

Figure 1. Relative search volumes for "Tattoos; worldwide" from 2004 to 2024

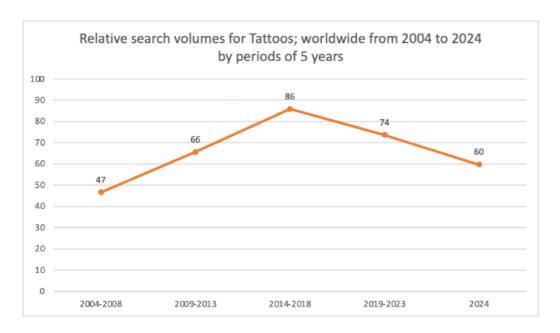


Figure 2. Relative search volumes for "Tattoo removal; worldwide" from 2004 to 2024

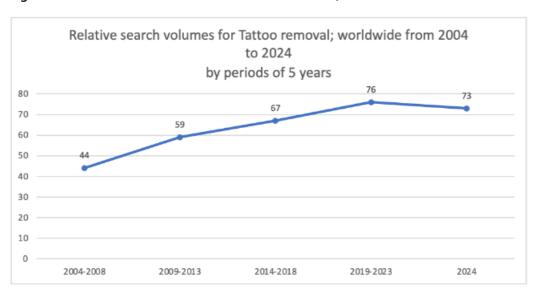


Table 1. Table 1. The top 20 countries in worldwide search volume values for the topic "Tattoo: subject" and "Tattoo removal: subject" for 2004-2024

	Tattoo	Tattoo removal
1	Brazil (100)	Australia (100)
2	Costa Rica (98)	United States (82)
3	Argentina (97)	United-Kingdom (78)
4	Uruguay (89)	New-Zealand (77)
5	Mexico (87)	South Africa (69)
6	Paraguay (85)	Canada (66)
7	Puerto Rico (84)	Ireland (65)
8	Colombia (80)	Lebanon (59)
9	Panama (74)	Singapore (40)
10	Chili (72)	Philippines (34)
11	Ecuador (68)	UAE (33)
12	Philippines (67)	Brazil (30)
13	United States (64)	Kenya (30)
14	Guatemala (64)	Greece (24)
15	Australia (59)	India (23)
16	Bolivia (59)	France (22)
17	Dominican Republic (59)	Italy (22)
18	Italy (57)	Malaysia (16)
19	New-Zealand (57)	Belgium (16)
20	Spain (56)	Portugal (16)

**UAE: United Arab Emirates** 

## Prevalence of Alopecia Areata and Vitiligo and psychological comorbidities in Norway

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**Introduction & Objectives:** Alopecia Areata (AA) and Vitiligo (V) are autoimmune disorders that cause sudden loss of patches of hair and pigmentation of the skin, respectively. Although the pathogeneses of AA and V remain unclear, generation of tissue-specific self-antigen triggering an immune response in the epithelium is suspected to catalyze the characteristics of the disorders. The origin and relapsing nature of these disorders may cause discomfort resulting in psychological comorbidities such as depression, anxiety, and stress. In the present study, the primary objective was to generate real-world evidence of the prevalence of AA and V in Norway, patient characteristics as well as the comorbidity rates of depression, anxiety and stress.

**Materials & Methods:** The present study was based on data from the Norwegian Patient Registry (NPR, specialized health care), the Norwegian Registry for Primary Health Care and the Statistics Norway (National Statistical Institute of Norway). Patients diagnosed with AA or V were included in the period from 2017 - 2022. Inclusion criteria for AA patients were ICD-10 L63.0-.2, L63.8 and/or L63.9 and for V patients ICD-10 L80/H.02.7, respectively. For these subpopulations, identification of comorbidities was carried out by co-detecting ICPC-2 P76 or ICD-10 F32-33 (depression), ICPC-2 P74 or ICD-10 F40-41 (anxiety) and ICPC-2 P82 and ICD-10 F43 (stress). Comparison of the depression rates was performed using data provided elsewhere1. As the study was based on anonymized and retrospective data ethical approval from the Regional Committee for Medical and Health Research Ethics (assessment no. #722865) was not required.

**Results:** In total 5026 patients with AA (64% females) and 5761 patients with V (55% females) were identified. The annual and six-year prevalence per 1000 were as follows: AA, 0.55 and 2.6; V, 0.68 and 3.1. The median age of the AA and V populations were 35 years (Interquartile range, IQR: 21-51) and 53 years (IQR: 25-58) respectively. For AA and V, as many as 22.9% and 18.3% were diagnosed with psychological comorbidities, including 16.4% and 12.8% diagnosed specifically with depression. In 2020, the depression rates of the AA and V populations were 83.2 (95%CI: 66.9-99.6) and 49.3 (37.2-61.5) per 1000 patients, thus significantly higher compared to the general depression rates globally (31.5; 27.2-36.6) or in high-income countries (39.4; 34.7-45.21). In addition, the depression rates were higher in patients >24 years vs. younger patients, both in AA and V.

**Conclusion:** In Norway, the annual prevalence of AA and V based on specialized health care data were 0.55 and 0.68 per 1000 inhabitants. Although a slight female majority in both AA and V cases, more females were present in AA vs. V cases. The proportion of psychological comorbidities among AA and V patients impacts 1 in 5 patients. Compared with high-income countries, the depression rates were 2.1- and 1.3-fold higher among AA and V patients, respectively, thus indicating that depression is frequently present and should be accounted for in the treatment of both AA and V.

## References

\1. Collaborators C-MD. Global prevalence and burden of depressive and anxiety disorders in 204 countries and territories in 2020 due to the COVID-19 pandemic. **Lancet**. 2021;398(10312):1700-12.

# Baseline characteristics of participants from a prospective cohort study in four different dermatological disorders.

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# **Introduction & Objectives:**

Atopic dermatitis (AD), alopecia areata (AA), psoriasis, and vitiligo collectively affect 0.5 – 5% of Danish adults. Despite their prevalence, knowledge regarding the natural progression of these diseases is limited. Furthermore, prognostic factors associated with disease flares and general disease activity are scarce. Real-world treatment data for these skin conditions is often limited, why common treatment patterns are based on limited evidence that may not fully capture the individualized patient experience.

Our study aims to explore various clinical and biochemical parameters and their potential associations with disease severity, activity, and prognosis in AD, psoriasis, AA, and vitiligo in Denmark.

# **Materials & Methods:**

This prospective, non-interventional observational study of adult patients with the above mentioned disorders has a follow-up period of one year. Recruitment is ongoing, with participants being recruited through social media. Throughout the study period, participants provide detailed information regarding their prior and current medical history, medication usage, self-assessed severity, and quality of life. Blood samples are collected for biomarker analysis. Trained physicians evaluate participants during site visits using standardized assessment tools: Psoriasis Area Severity Index (PASI) and physician global assessment (PGA) for psoriasis, Eczema Area and Severity Index (EASI), Validated Investigator Global Assessment (vIGA-AD), and SCORing Atopic Dermatitis (SCORAD) for AD, Severity of Alopecia Tool (SALT) for AA, and Vitiligo Area Scoring Index (VASI) for vitiligo. Through remote follow-up medication usage, self-assesed severity and photos of the lesions are collected. Data for this analysis are from baseline visits for patients enrolled until March 15, 2024.

## **Results:**

A total of 68 participants have been enrolled, with females comprising 57% of the participants. Psoriasis being the most frequently enrolled condition with 35 participants thus far (Table 1). Among the four disorders, those with AD were the youngest with a mean age of 37 years and a mean disease onset at 9.71 years (SD: 19.91). Severity across the cohorts is consistent: 71% mild ,29% moderate for AD; 50% mild, 50% moderate for AA; 69% mild, 22% moderate, 9% severe for Psoriasis; 64% mild, 18% moderate, 18% severe for vitiligo. With mean scores indicating mild severity: PASI 4.2 (SD: 3.6) and PGA 1.9 (SD: 8.5) for psoriasis, EASI 5.16 (SD: 5.6) and vIGA-AD 1.8 (SD: 0.7) for AD, SALT 14.4 (SD: 11.8) for AA, and VASI 14.9 (SD: 20.2) for vitiligo. On average, participants with psoriasis received 1.9 different disease-related therapies, while those with AD received on average 3 treatments. Participants with AA and vitiligo are not treated.

## **Conclusion:**

Our early analysis of baseline characteristics offers insights into the demographics, severity, and treatment patterns of adult patients living with these conditions in Denmark. As recruitment and follow-up visits progress, we expect to get more real-life data on disease progression, treatment efficacy, and patient outcomes.

	Psoriasis	Atopic dermatitis	Alopecia Areata	Vitiligo
N	35	14	6	13
Age	47.4 (15.74)	37.07 (13.37)	40.17 (15.12)	54 (14.89)
Sex, female	17 (48.6%)	10 (71.4%)	4 (66.7%)	8 (61.5%)
Fitzpatrick skin type				
Type1	3 (9.4%)	1 (7.1%)	0	1 (8.3%)
Type2	5 (15.6%)	5 (35.7%)	2 (40%)	2 (16.7%)
Type 3	18 (56.2%)	7 (50%)	1 (20%)	5 (41.7%)
Type 4	6 (18.8%)	1 (7.1%)	1 (20%)	3 (25%)
Type 5	0	0	1 (20%)	1 (8.3%)
Onset of disease	24.91 (15.33)	9.71 (19.91)	34.83 (19.03)	30.31 (18.71)
Number of years from diagnosis	19.49 (13.51)	26.86 (14.77)	10 (8.43)	27.25 (17.03)
Number of ongoing treatments for	1.91 (2.21)		0	0
the condition		3 (2.51)		
Quality of life (1 very poor-5 very good)	3.88 (0.83)	3.93 (0.47)	3.83 (0.75)	3.92 (1.12)
Severity total score				
PASI	4.26 (3.69)	-	-	-
PGA	1.95 (0.86)	-	-	-
EASI	-	5.16 (5.61)	-	-
vIGA	-	1.86 (0.77)	-	-
SALT	-	-	14.43 (11.88)	-
VASI	-	-	-	14.98 (20.23)
Severity	PASI (n=32)	EASI (n=14)	SALT (n=6)	VASI (n=11)
Mild	22 (68.75%)	10 (71%)	3 (50%)	7 (64%)
Moderate	7 (22%)	4 (29%)	3 (50%)	2 (18%)
Severe	3 (9%)	-	-	2 (18%)

<sup>\*</sup>Continuous data are given in mean with standard deviation in brackets and categorical data are given in number and percentage in brackets

## assessment of quality of life in hair disorders

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# **Introduction & Objectives:**

Assessment of Quality of Life (QoL) in patients with hair disorder in 1000 adult patients presenting at the OPD of a tertiary care hospital of New Delhi, India.

#### **Materials & Methods:**

Design - Cross sectional descriptive study. Population - About 0.12 million. Study done at - Tertiary care hospital at New delhi India. Sample size - 1000 patients. Time of study - 01st June 2014 to 31st Dec 2015. Inclusion criteria - Any adult patient (18-60 yrs) presenting to OPD with hair fall complaints. And willingness to enroll for the survey with informed consent. Exclusion criteria - Hair fall secondary to pre diagnosed dermatological or other systemic disease; Hair fall as side effect of some medical or surgical treatment; Hair fall secondary to infectious conditions of scalp; Unwillingness to enroll in the study. Method - Patients were given a printed questionnaire of 16 questions, on hair fall disorder and they were asked to choose one of the options best describing their condition vis-à-vis that particular question, and in this way they were assessed for each of the 16 questions. Statistical analysis of all the questions (divided into three groups) and answers was done, analyzing the psychological, physical & social impact of hair fall on QoL of the patients. Results were further analyzed based on their age and gender. Analysis focused on; Overall negative effect on QoL; Any particular parameter having more pronounced effect on QoL compared to other; Age & gender specific effects and their comparative values.

Statistical analysis was done using SPSS program for Windows, continuous variables presented as mean + SD, median and categorical variables presented as absolute numbers and percentage. Normally distributed variables were compared using ANOVA, to evaluate the significance of the mean difference among different groups. For all statistics, p value < 0.05 was taken to indicate a significant difference.

# **Results:**

In general, among the respondents, Psychological effects were maximally noted (22.67%) followed by Physical effects (21.49%) and lastly Social effect (08.88%). Psychological effects on QoL was maximum pronounced in patients more than 50yrs of age, physical effects in 41-50 years age group. In psychological impact, most concerning question was the "feeling of shame/ stigmatization due to hair fall/loss. Gender wise, females were more affected than male in all three category of questions. In less than 20 yrs age group, physical effects were more important. In 31-40 yrs age group, females were more affected than males on all parameters.

### **Conclusion:**

The negative impact of hair fall on QoL is heavily under rated and needs a very compassionate and considerate redress. Self confidence and self esteem is closely related to one's appearance and to this a major contribution is done by the quality & quantity of hair. Hair loss disorders negatively affect the Quality of life in both male and female & across all age groups.

Patients' knowledge, clinical characteristics and socioeconomic impact of COVID 19 on patients with psoriasis; a Hospital Based survey in a tertiary care center in Egypt.

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# **Introduction & Objectives:**

With emerging new variants and increasing cases, the threat of Covid-19 is far from being over. The burden of Covid-19 on patients with psoriasis is still lacking data.

Objective: To elucidate the clinical characteristics, socioeconomic burden of COVID-19 pandemic together with patients' knowledge in a cohort of psoriatic patients.

#### **Materials & Methods:**

A semi-structured questionnaire was designed. Demographic features were recorded. Questions discussed patients' follow up during pandemic, their adherence to treatment and its types, socioeconomic burden, psoriasis exacerbation, and patients' awareness about their immune status, vaccination, and the effect of immunosuppressive therapy.

### **Results:**

239 patients were enrolled, 52.7% of the patients could contact their physician easily for follow up during the pandemic. 71.1% of the patients were receiving treatment at the time of the pandemic. 39.7% of the patients experienced loss of work or problems at work due to the closure. 44.8% of the patients were using all types of safety precautions. 40.9% of the patients got infected with COVID-19 while 9.6% reported hospital admission. Comorbidities, except respiratory diseases and the type of psoriasis treatment, did not show a statistically significant difference in the COVID-19 infected and negative groups (P > .05). Most patients answered the awareness questions by "I don't know".

## **Conclusion:**

The authors report increased rate of COVID-19 infection in psoriasis than similar studies from Europe. Neither the immunosuppressive medications nor the co-morbidities increased the susceptibility to COVID-19 infection. Patients with psoriasis still have misconceptions about the nature of their immune status in psoriasis.

# Reporting quality of noninferiority randomized controlled trials for skin disease: a meta-epidemiological study

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# **Introduction & Objectives:**

Noninferiority randomized controlled trials (NI-RCTs) aim to demonstrate that an intervention has acceptable efficacy compared to an established treatment. Reporting quality in NI-RCTs is important as additional methodologic considerations are critical for internal validity. We assessed the reporting quality of NI-RCTs evaluating treatments for skin conditions.

### **Materials & Methods:**

We searched MEDLINE and Embase from inception to April 2024 for NI-RCTs published in top general medical journals and top dermatology journals determined by the h5-index. Screening, full-text review, and data-extraction were conducted independently and in-duplicate. We extracted data on reporting quality based on the Consolidated Standards of Reporting Trials reporting guidelines. We assessed study characteristics' influence on reporting quality using multivariable linear regression.

#### **Results:**

We included 174 NI-RCTs. Overall, 128 (73.6%) studies provided rationale for the noninferiority design and 57 (32.8%) studies reported the noninferiority hypothesis. Eighty (46.0%) studies reported a noninferiority margin of which 34 (19.5%) provided justification; 57 (32.8%) studies used this margin to calculate sample size. For analysis, 31 (17.8%) studies conducted both intention-to-treat (ITT) and per-protocol (PP), while 55 (31.6%) studies used ITT and 17 (9.8%) used PP alone. Conclusion was misleading for 113 (64.9%) studies; 105 (60.3%) concluded noninferiority despite inconclusive data. Reporting of other details specific to NI-RCTs varied: 131 (75.3%) studies referenced past RCTs that confirmed efficacy of established treatment, but only 24 (13.8%) studies commented on the similarity of participants and 33 (19.0%) studies reported the similarity of outcomes in the NI-RCT to past RCTs. Journal of publication (p<0.001), age of study population (p<0.01), year of publication (p<0.001), multicentred studies (p<0.01), lack of rationale (p<0.05), and trial registry (p<0.01) significantly influenced overall reporting quality.

# **Conclusion:**

Reporting quality of NI-RCTs for skin conditions is low, with crucial information missing from most publications. Improved reporting of NI trials is essential to incorporating their results into clinical practice.

#### Increase of in situ and thin cutaneous melanoma in Slovenia between 1997 and 2021

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# **Introduction & Objectives:**

Studies in the EU and USA have shown that incidence of *in situ* and thin cutaneous melanoma (tCM, Breslow £1mm, no regional/distant spreading) is increasing more rapidly compared to the incidence of thick tumours. At the same time thin melanocytic lesions represent a diagnostic grey area. Slovenia, an independent country since 1991, has the seventh highest incidence rate of CM in the EU. Sentinel node biopsy (SNB) has been introduced in national CM guidelines in 2004. For the first time, trends of *in situ* and CM incidence in Slovenia were systematically analysed.

#### Materials & Methods:

Data were obtained from Slovenian Cancer Registry. Stage at diagnosis was in the form of the summary extent of disease for period 1970–2021 and in the form of Breslow for 1995–2021. For assessing time trends, the average annual change (APC) in age-standardised incidence rates (ASR) was calculated using the Slovenian standard population with a joinpoint regression analysis (Joinpoint Regression Program v 4.1.1).

## **Results:**

Incidence of localized CM increased rapidly in the period 1979-2007 with an APC of 6.85% (p<0.0001). APC was not statistically significant in 1970-1979 and 2007-2021. Regionally spread CM increased by 5.92% annually in 1970-2011 (p<0.0001), but not in 2011-2021. Analysis according to Breslow shows a change in time trend after the year 2005 for *in situ* (APC=3.1% in 1995-2005; APC=70.7% in 2005-2008; APC=4.5% in 2008-2021) and tCM (APC=12.4% in 1995-2008; APC=1.8% in 2008-2021). For thick tumours, similar trend is not observed (APC=4.5% in 1995-2003; APC=0.7% in 2003-2021).

## **Conclusion:**

Incidence of *in situ* and\* tCM has increased significantly in Slovenia over the last 50 years. Time trend corresponds to economic changes, raising skin cancer awareness in the 90's, and 2005 implementation of new guidelines with improved registration.

# Impact of socioeconomic status and distance to dermatologist on the disease burden of keratinocyte carcinoma and precursors in Danish office-based dermatological practice

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# **Introduction & Objectives:**

Socioeconomic status (SES) and access to dermatological care are thought to influence rates of keratinocyte carcinoma (KC) in a given population. However, few studies examine these factors' impact on disease burden of specific KC tumour subtypes. The objective is to determine the impact of SES and distance to dermatologist on the burden of KC disease, determined by tumour incidence rate ratios (TIRRs) and tumour size, for nodular basal cell carcinoma (nBCC), superficial BCC (sBCC), squamous cell carcinoma (SCC), and the KC precursor, Bowen's disease (BD).

# **Materials & Methods:**

Based on a nationwide registry (The Danish Skin Cancer Registry), the study included 100,705 patients with 190,468 histologically- or clinically verified KC or BD registered in state-funded office-based dermatology practice. A negative binomial regression was applied to compute the TIRRs, while impact on lateral tumour size at treatment was estimated with a log-linear quantile regression. SES was determined based on disposable income and compiled into 3 categories (Lower 25%, middle 25-75% and top 25% earners), while "distance to dermatologist" was defined as the distance (km) from the centre of patients' municipality of residence to nearest dermatologist clinic.

## **Results:**

High SES was strongly associated with increased incidence rates and smaller tumours for all KC subtypes. As such, incidence of nBCC and sBCC was 174% and 138% higher among top-25% earners versus the lowest income quartile (nBCC: 2.74 (95% CI:2.69-2.79); sBCC: 2.38 (95% CI:2.30-2.47)) (Figure 1). At the same time, top earners had 9.5% (nBCC: 95% CI:8.2-10.7%) and 8.5% (sBCC: 95% CI:5.6-11.3%) smaller BCC tumours (Table 2). Similarly for SCC and BD, incidences were higher among the top-25% earners (SCC:2.08 (95% CI:1.94-2.22); BD:1.87 (95% CI:1.73-2.03)) but also 11.3% (95% CI:7.4-15.1%) and 13.9% (95% CI:9.9-17.7%) smaller in size. Impact of distance to dermatologist depended on KC subtype. For nBCC, rising incidence rates were noted with shorter distances, as reflected by a 15% decrease in TIRR with every 10 km increase (TIRR: 0.85 (95% CI: 0.85-0.86)). The opposite trend was seen for SCC and BD, where incidence rates increased 7% and 14% with every 10 km increase in distance (TIRR: 1.07 (95%CI:1.05-1.09) and 1.14 (95%CI:1.11-1.17)). Individuals living further away were found to have larger nBCC and sBCC, resulting in an 8.1% (95% CI: 7.5-8.7%) and 2.2% (95% CI: 0.9-3.5%) increase in tumour size per 10 km. An opposite trend was observed for BD tumours, whose size decreased by 4.1% (95% CI: 2.4-5.7%) per 10 km. No correlation between size and distance was found for SCC.

# **Conclusion:**

High SES was associated with increased incidence and smaller tumours for all KC subtypes, reflecting either higher rates of detection or disease occurrence. Distance to dermatologist was an independent risk factor for KC burden, with shorter distances leading to increased incidence but smaller nBCC tumours and decreased incidence of SCC.

Tables

Table 1: Baseline characteristics of the Danish population between 2013-2022.

	Danish population over 30 years old from 2013-2022	Danish population 2013-2022
Total number of people	4 342 219	6 281 701
Men n (%)	2 145 556 (49.41)	3 135 494 (49.91)
Total number of patients	100 485	100 705
Total number of tumours	190 200	190 468
Tumour size (mm), median (QT)	7.00 (5.00,10.00)	7.00 (5.00,10.00)
Person-years	32 982 880	-
Age median (IQT)	54.79 (42.68, 68.38)	42.27 (22.41, 61.00)
Stratified by tumours		
nBCC n (%)	131 091 (68.92)	131 287 (68.93)
sBCC n (%)	37 156 (19.54)	37 206 (19.53)
SCC n (%)	13 190 (6.93)	13 204 (6.93)
BD n (%)	8 763 (4.61)	8 771 (4.60)
Individual disposable income DKK, median (IQT)	426 706 (271 466, 664 202)	291 062 (78 079, 524 342)
Distance to dermatological clinic		
<15 km [9.3 miles]	3 345 566 (77.05)	4 921 532 (78.35)
15-25 km [9.3-15.5 miles]	798 137 (18.38)	1 091 935 (17.38)
>25 km [>15.5 miles]	198 516 (4.57)	268 234 (4.27)

Abbreviations: IQT: Interquartile. nBCC: Nodular basal cell carcinoma. sBCC: Superficial basal cell carcinoma. SCC: Squamous cell carcinoma. BD: Bowen's disease.

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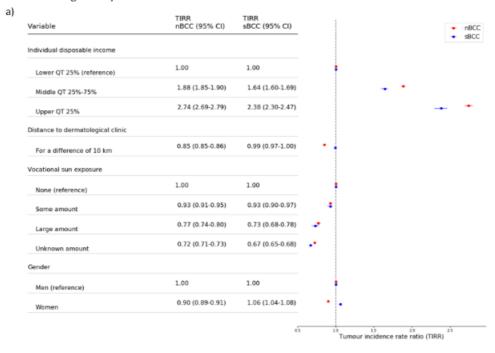
Table 2: Percentage change in tumour size based on a log-linear regression.

	KC coefficients* 95% CI	BCC coefficients* 95% CI	nBCC coefficients* 95% CI	sBCC coefficients* 95% CI	SCC coefficients* 95% CI	BD coefficients* 95% CI
Individual disposable income						
Middle TT 25%-75% (Ref: lower TT 25%)	-5.40 (-6.30,-4.50)	-5.86 (-6.90,-4.80)	-5.74 (-6.82,-4.65)	-4.70 (-7.12,-2.22)	-8.18 (-10.77,-5.51)	-5.67 (-8.43,-2.82)
Upper TT 25% (Ref: lower TT 25%)	-10.26 (-11.32,-9.18)	-9.72 (-10.94,-8.48)	-9.46 (-10.73,-8.17)	-8.48 (-11.25,-5.63)	-11.33 (-15.11,-7.38)	-13.90 (-17.71,-9.91)
Distance [km]	0.63 (0.58,0.67)	0.73 (0.68,0.79)	0.81 (0.75,0.87)	0.22 (0.09,0.35)	-0.03 (-0.19,0.12)	-0.41 (-0.57,-0.24)
Sex						
Female (Ref: male)	-10.69 (-11.38,-10.01)	-12.11 (-12.88,-11.33)	-12.70 (-13.50,-11.90)	-8.56 (-10.38,-6.70)	-6.56 (-8.96,-4.10)	-4.52 (-7.05,-1.92)
R <sup>2</sup>	0.0197	0.0168	0.0207	0.0100	0.0124	0.0126

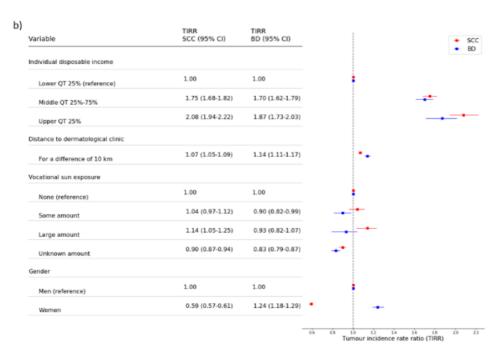
Abbreviations: Ref: Reference. KC: Keratinocyte carcinoma. BCC: Basal cell carcinoma. nBCC: Nodular Basal cell carcinoma. sBCC: Superficial basal cell carcinoma. BCC: Squamous cell carcinoma. BD: Bowen's disease. TT: tertile.

<sup>\*</sup>In percentage (%) calculated from  $e^{coefficient}$ -1

Fig 1: Tumour incidence rate ratios for a) nodular basal cell carcinoma (red) and superficial basal cell carcinoma (blue), b) squamous cell carcinoma (red) and Bowens disease (blue) in the Danish population over the age of 30 years from 2013-2022.



**Figures** 



Abbreviations: TIRR: Tumour incidence rate ratios. nBCC: Nodular Basal cell carcinoma. sBCC: Superficial basal cell carcinoma. SCC: Squamous cell carcinoma. BD: Bowen's disease.

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## Epidemiology and burden of generalised pustular psoriasis: A comprehensive literature review

Alexander Navarini\*<sup>1</sup>, Bryony Langford<sup>2</sup>, Anna Pagotto<sup>2</sup>, Birgit Gradl<sup>3</sup>, Peter van de Kerkhof<sup>4</sup>

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# **Introduction & Objectives:**

Generalised pustular psoriasis (GPP) is a chronic, heterogeneous, inflammatory disease characterised by skin and systemic symptoms and recurrent, unpredictable flares, which can be life-threatening. Due to the rarity of GPP, estimates of prevalence, mortality and morbidity (such as flare burden) and comorbidities (such as anxiety and depression) are limited. Here, we present the results of two rapid literature reviews reporting on the epidemiology and burden of GPP.

#### Materials & Methods:

The Cochrane Rapid Reviews Methods Group guidance was followed. Studies were identified in electronic database searches (Embase, Medline, Cochrane Library), bibliographic screening of literature reviews and consensus studies, and congress abstracts. Search periods were 2010–2023 for epidemiology and 1990–2023 for GPP flare evidence, e.g. number of flares/proportion of patients experiencing a flare (no time restriction was applied to studies reporting mortality). Information on study design, population characteristics, relevant outcomes, treatments, and follow-up duration was tabulated and summarised descriptively.

## **Results:**

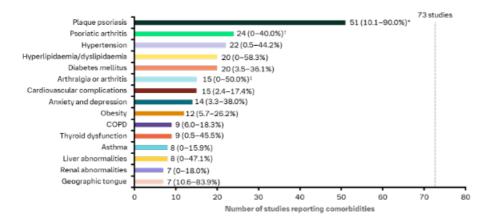
In total, 121 international studies were included across both literature reviews in the analysis: 105 studies were observational (59 included <100 patients with GPP, and 46 included ≥100 patients with GPP) and 16 were clinical trials. Overall, 72 studies were conducted in a hospital or clinical setting, 34 studies were analyses of medical databases or registries, and 15 studies had an unclear study setting. Applied methodologies and their findings across all studies were heterogeneous. Mortality was reported in 38/121 studies (18 studies conducted in Asia). Estimates ranged from 1.1–30.8% in 21 studies (1994–2023) reporting ≥1 death; the proportion of deaths was higher in European (1.5–30.8%) than Asian studies (1.1–8.3%). The most commonly reported causes of death were sepsis or septic shock (10 studies), and cardiovascular complications and GPP-related reasons (3 studies each).

GPP prevalence was reported in 55/121 studies. The estimated prevalence of GPP was 0.9–14 per million (7 potential outliers; those with specific inclusion criteria or patient populations were excluded). Among all patients with psoriasis, the estimated prevalence of GPP was 0.44–7.8% (17 studies), and in patients with pustular forms of psoriasis, it was 7.7–98.1% (10 studies; estimates likely confounded by disease definition and study design). GPP-associated comorbidities were reported in 73/121 studies, with plaque psoriasis the most commonly reported (51 studies; >40% prevalence in most studies), and cardiovascular and metabolic disorders reported in ≥20 studies each (0.5–58.3% prevalence) (Figure). Anxiety and depression were reported in 14 studies (all published since 2018), affecting 3.3–38% of patients. GPP flare evidence was reported in 49/121 studies, with the proportion of patients experiencing flares and the average number of flares per patient ranging from 6.7–40% (18/23 studies [excluding outliers]) and 0.53–3.5 (9 studies), respectively.

# **Conclusion:**

Based on observational studies and clinical trials, GPP is associated with numerous comorbidities and significant, life-limiting morbidity, as shown by GPP flare evidence. Patients with GPP experience a substantial emotional and psychological burden, demonstrated by reports of anxiety and depression, which can be linked to the chronicity of the disease.

Figure



Numbers in parentheses show range of prevalence estimates for each comorbidity.

\*29 of 48 studies reported a prevalence of >40%. †19 of 24 studies reported a prevalence of 0–20%. †One further study reported a prevalence of 90.1–100%, which was excluded.

COPD, chronic obstructive pulmonary disease.

# Prevalence of prurigo nodularis in Sweden

Annarita Antelmi<sup>1</sup>, Alexandra Metsini<sup>2</sup>, Simon Regnell<sup>3</sup>, Michael Carlberg<sup>4</sup>, Åke Svensson<sup>5</sup>, Laura von Kobyletzki<sup>6</sup>

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# Title: Prevalence of prurigo nodularis in Sweden

**Introduction & Objectives:** Prurigo nodularis (PN) is a chronic inflammatory skin disease characterized by intensely pruritic nodules. PN may be related to atopic dermatitis and systemic conditions such as cholestasis or renal insufficiency. PN represents a therapeutic challenge to the extent that recent international treatment guidelines suggest a combination of topical and systemic treatments. PN has been previously coded in the International Classification of Diseases (ICD) either as other prurigo or with atopic dermatitis. A distinct code (L28.1) for PN, 10th Revision (ICD-10) was assigned in 2015, enabling improved assessment of PN prevalence using patient records. There is a lack of data about the prevalence of PN in adults and the prescription patterns for the disease in Sweden. This study aims to assess the prevalence and treatment patterns of PN in adults in Sweden.

**Materials & Methods:** Linkage cohorts of adults with PN diagnosed who lived in Sweden in 2015 - 2020 were created from large-scale Swedish linked register data including patients records and prescriptions registers to determine the prevalence, prescription patterns, healthcare visits and burden of the disease in specialist care.

**Results:** The cumulative prevalence of adult PN patients in the years 2015 - 2020 was 49.2 per 100,000 (n = 3,253). Almost half of adults (n = 1,510,46.4%) diagnosed with PN experienced a severe form of the disease, defined according to expert opinion by the use of one or a combination of systemic treatments. 488 (32.9%) patients had one treatment, 274 (18.5%) two, and 23 (1.5%) three additional treatments. In total, there were more than 100 treatment combinations in the study group. The systemic treatments mostly used in case of severe PN were systemic glucocorticoids and methotrexate, used by 78.7% and 38.7% of patients respectively. PN accounted for over 24,000 healthcare visits between 2015 - 2020 in Sweden. On average, about 3,460 visits took place per year and patients had 4.1 healthcare visits each. Additional data will be displayed in the presentation.

**Conclusion:** The high prevalence and\*\* complex systemic treatment regimens of PN in adults underscores the need for targeted treatments to reduce the overall burden of the disease.

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Table . Treatments included in severe PN\*, 2015-2020, ≥18 years old

	n	Percent of all PN (n=3,253)	Percent of severe PN (n=1,510)
Ciclosporin (L04AD01)	121	3.7	8.0
Gabapentin (N03AX12)	283	8.7	18.7
Pregabalin (N03AX16)	176	5.4	11.7
Systemic glucocortiocoids	1,189	36.6	78.7
-Betamethasone (H02AB01)	466	14.3	30.9
-Prednisolone (H02AB06)	1,008	31.0	66.8
-Prednisone (H02AB07)	11	0.3	0.7
-Triamcinolone acetonide (H02AB08)	21	0.6	1.4
Dupilumab (D11AH05)	61	1.9	4.0
Methotrexate (L04AX03)	585	18.0	38.7
Thalidomide (L04AX02)	5	0.2	0.3
Lenalidomide (L04AX04)	1	0.03	0.1
Mycophenolate mofetil (L04AA06)	56	1.7	3.7

<sup>\*</sup> Individuals with and without topical treatment are included.

# Temporal Trend of Cutaneous Melanoma Mortality in Brazil from 2000 to 2019: Latitude and Racial Characteristics

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<sup>1</sup>Hospital Santa Virginia, Dermatologia, São Paulo, Brazil, <sup>2</sup>USCS - Universidade Municipal de São Caetano do Sul - Campus Centro, Brazil, <sup>3</sup>Hospital Santa Virginia, Brazil

**Introduction & Objectives:** UV radiation, associated with intermittent exposure, has a remarkable melanomagenic action. Studies suggest that lower latitudes are related to higher UV radiation, due to their proximity to the equator, and therefore have a higher incidence and mortality of cutaneous melanoma (CM). However, there is evidence of an inverse trend in regions of European countries (EU), Russia (RU), Australia (AU) and New Zealand (NZ). This study aims to analyze the geographical influence on the temporal trend of mortality from CM in Brazil (BR) from 2000 to 2019.

**Materials & Methods:** This is an ecological study, with five Federation Units (FUs) as the unit of analysis: the states of Bahia (BA), Goiás (GO), Pará (PA), Rio Grande do Sul (RS) and São Paulo (SP), to represent different Brazilian regions and their residents are the study population. Data on deaths from CM (C43) were obtained from the Mortality Information System (SIM) of DATASUS - BR, from 2000 to 2019. Population data was obtained from the 2022 Census of the Brazilian Institute of Geography and Statistics -IBGE, which includes retroactive data since 2010 and its comparison with 2000. The crude mortality coefficient (MoC) per 100,000 inhabitants was calculated from the ratio of the number of deaths per CM, per population exposed to the risk. Graphics were constructed according to latitude using a Microsoft Excel spreadsheet. Comparative studies were selected from PubMed.

**Results:** A total of 14,288 deaths from CM were recorded in the five Federative Units during the selected period, all with an upward trend in mortality. The MoC and the speed of mortality growth follow the same increasing order: PA, SP, BA, GO and RS. The race data and the time trend graphics in Figure 1, demonstrate that in north-south extremes, PA has the highest percentage of brown people in the country (69.9%), the lowest latitude and has the lowest MoC, while RS has the highest proportion of white population in the country (78.4%), the highest latitude and has the highest MoC among the studied states.

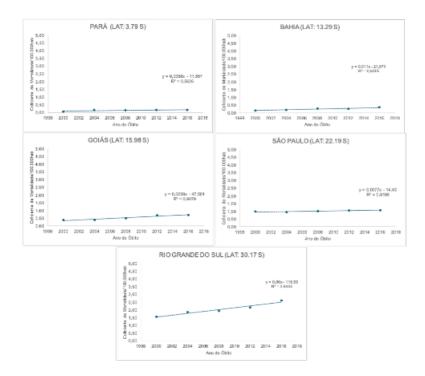


Figure 1: MoC for CM, according to year of death and latitude in BR from 2000 to 2019, grouped every 4 years by standardization.

SP has a heterogeneous population with similar proportions of blacks and whites and is an area of high migratory flow from low latitude regions, which could import the risk from these regions to make up a lower MoC. The state of BA has a low percentage of white population (19,6%) and low latitude, and its high growth in mortality may be related to UV factors. The state of GO has 37% of white population, associated with its position relatively close to the equator, which could justify a higher MoC.

**Conclusion:** Brazil shows a population trend in mortality from CM similar to countries such as northern Norway, northern England, RU, AU and NZ. This highlights the effect of susceptibility in predominantly white population areas, once it overcomes the expected effect of radiation in lower latitude areas and emphasizes the dangers of sun exposure in white-skinned individuals.

## Skin lesions in runners - systematic review

Aleksandra Kozik<sup>1</sup>, Wiktoria Bajek<sup>1</sup>, Karina Polak<sup>2</sup>, Bartosz Miziołek<sup>2</sup>, Beata Bergler-Czop<sup>2</sup>

<sup>1</sup>Students Scientific Association at the Department of Dermatology, Medical University of Silesia, Katowice, Poland, <sup>2</sup>Chair and Department of Dermatology, Medical University of Silesia, Katowice, Poland

# **Introduction & Objectives:**

Regular running training provides multiple health benefits, such as body weight control, reduced risk of cardiovascular diseases and prevention of depression. As the estimated number of runners in Europe tends to reach 50 million people, it is important to keep in mind that running also creates a risk of many dermatological diseases, with the average risk of onychomycosis increasing twice versus healthy individuals. The aim of the authors was to investigate the occurrence of dermatological diseases among runners and joggers.

#### **Materials & Methods:**

We performed literature review in PubMed, EMBASE and Google Scholar databases from inception until March 2024, concerning reports about trauma, infectious, inflammatory, and malignant changes among runners and joggers. The searching was as broad as possible, including EMTREE and MESH approaches, conducted according to the PRISMA guidelines. The following inclusion criteria were applied: original trials, case reports, case series, with or without any concomitant reported treatment methods, published in English from the database inception until April 2024. After applying inclusion and exclusion criteria, results were identified and given further analysis with additional manual research.

## **Results:**

The dermatoses present among runners ang joggers do not only affect the skin on feet, but may also be present in other body regions, including hair, face, trunk, and groins. The most common changes include trauma-related lesions (blisters, nail dystrophies, traction alopecia, bleeding nipples, petechiae of the heel). The runners and joggers are also in greater risk of some infectious (onychomycosis, tinea pedis, pityriasis versicolor, Lyme disease), inflammatory diseases (urticaria, atopic dermatitis) and malignant nature (basal cell carcinoma, squamous cell carcinoma, melanoma). Running was possibly found to exacerbate pre-existing skin diseases such as acne vulgaris and plantar warts. Factors including length of the run, clothing, footwear of the runner and weather conditions may exert influence on the occurrence of skin lesions.

#### **Conclusion:**

Running is beneficial but can increase the possibility of skin changes therefore it is essential to take it into consideration in medical interviews and effectively avoid its complications.

## Medical Lasers: between myths and realities

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<sup>1</sup>Chu Mohammed Vi Tanger, Dermatology, Tanger, Morocco

# **Introduction & Objectives:**

Lasers are now widely used in many medical specialties in several ways, the treatment is constantly evolving and progressing. This type of intervention is advantageous for patients; it is non-invasive and offers excellent long-term results.

We conducted this study with the aim of evaluating the knowledge of the population about medical lasers and thus correcting the myths received in order to facilitate its prescription.

#### Materials & Methods:

This is a cross-sectional study conducted within the dermatology department of the Tangier University Hospital, over a period of 3 months. Using a questionnaire through social media, addressed to individuals aged 18 and above, the data were collected and then entered on Google Form, and analyzed on the SPSS 2021 software, a p < 0.05 value was used to compare the frequencies of qualitative variables

# **Results:**

We received a total of 127 responses. The dominant average age group was between 26 and 35 years (59.1%), the level of education was university in (85.8%) and (53.2%) worked in public service compared to (30.6%) in the liberal sector and (16.1%) without a profession.

According to the results only (35.2%) of participants know the different types of depilatory laser, of which (29%) said that laser is equivalent to pulsed light therapy. They seem to be aware of the other types of laser (76.4%) and considers that it cannot be handled by untrained staff (90.6%). Dermatologists were the main professionals in patients who had already received laser hair removal sessions (49%) compared to (33.3%) in non-medical offices. The high cost of the procedure prevented more than half (52.5%) of participants from benefiting from it. (66.7%) of participants find that this procedure is painful and that it does not work on all skin and hair types (46.8%) (49.2%). The myths around the laser are irradiation (34.6%), cancers (27.6%) and infertility (15%); mainly received by word of mouth (44.9%).

Personal desire to get rid of hair (60.7%), ingrown hair (16.1%) and hirsutism (10.7%) are the main indications for participants who have already received laser depilatory sessions.

Side effects were mainly erythema (64.1%), pruritus (23.1%), dry skin (17.9%), hyperhidrosis (10.3%), and scars (5.1%) while (20.5%) had no side effects.

The need for information on lasers is present in (92.9%)

# **Conclusion:**

There is great confusion about different types of laser (64.6%) despite their college degree (85.8%). On the other hand, they seem to know that this is not an insignificant procedure and cannot be performed by untrained staff. The fact that almost half of the patients received sessions in beauty centers seems to be explained by the high cost

at doctors. As for subjects who have never had this type of intervention (63%) find the laser dangerous or do not have enough information, and therefore conclude that it can expose to irradiation, induce cancers and decrease fertility; which is totally false. These myths are essentially influenced through word of mouth. The satisfaction after the procedure is high to the point of recommending it with information is necessary. The success of this therapy depends on the good clinical and pathophysiological knowledge of the conditions, the indications of the laser, and the experience of the practitioner. Like any medical practice, the risk of side effects is increased if performed by inexperienced staff. A better knowledge of this process, its indications, and its side effects by the population will allow its generalization.

## Podiatric Conditions: Diagnosis, Management, and Follow-up: Where does the dermatologist fit in?

Khediija Bennani\*1, Ouiame El Jouari<sup>1</sup>, Salim Gallouj<sup>1</sup>

<sup>1</sup>Tangier, dermatology, tanger

# **Introduction & Objectives:**

The foot is the primary organ for walking and also aids in maintaining standing posture in humans. Consequently, it is subject to structural deformities, joint issues, and debilitating, painful lesions. Foot pathologies are a common reason for dermatological consultation, whether it involves the nail, the sole, interdigital spaces, or the foot in its entirety. Often trivialized and managed by non-professionals, podiatric pathologies can lead to complications. The objective was to study the management of podiatric pathologies

## **Materials & Methods:**

we did a prospective study gathering 264 responses via a questionnaire launched on Google Forms, indexed with iconography to facilitate pathology recognition. Statistical analysis was conducted by using SPSS 21. Quantitative data were presented as averages, and categorical variables were presented as percentages.

## **Results:**

We found an average age of 32 years. The distribution by gender revealed a female predominance with a sex ratio of 1:3. 93% lived in urban areas, 96% had a university level of education, and 55% were employed. In our series, corns were the most frequent pathology at 31.8%, followed by ingrown toenails at 27%, then paronychia and plantar warts tied at 22.7%. Other pathologies included onychomycosis at 19.3%, plantar warts at 18.18%, plantar hyperkeratosis at 13.6%, and plantar eczema at 7.9%.

Regarding habits and risk factors, wearing tight shoes for long hours was the most incriminated factor in developing corns, ingrown toenails, interdigital intertrigo, and onychomycosis by over 50%. Having deformed nails favored the appearance of corns and ingrown toenails by 30% and 58%, respectively. Other studied factors included frequenting pools, toe traumas, and walking barefoot.

To treat their podiatric conditions, dermatologists were the first choice for 70% of cases of onychomycosis and 50% of interdigital intertrigo cases. However, for corns, they were only consulted in 39.3% of cases, 29% for ingrown toenails, 35% for paronychia, 37.5% for warts, and 29.4% for plantar hyperkeratosis. Podiatrists were mostly consulted by patients with corns at 14.3% and patients with warts at 12%, while 44% of patients with plantar hyperkeratosis and 16.7% with interdigital intertrigo chose to be treated by beauty centers.

The choice criteria for care providers were mainly based on competence, with an average of 45%. However, budget was also a major criterion. Social media influence was a selection criterion for 18% of patients with ingrown toenails.

Complete satisfaction was noted in the management of corns, ingrown toenails, and paronychia, with over 90% satisfaction rates. However, warts and plantar hyperkeratosis had dissatisfaction rates of over 50%, mainly due to recurrence. The recurrence rate was significant for corns at 30%. Some complications were noted, especially in cases of onychomycosis and interdigital intertrigo.

#### **Conclusion:**

We observed that corns were the most frequent condition in our series. Erysipelas was the most common complication, posing a threat to life prognosis. Despite our patients having a high level of education, some chose care based on budget rather than competence, leading to a frequent recurrence rate. Dissatisfaction was mainly due to care provided by non-professionals, leading to diagnostic and therapeutic errors.

Insights into hair dye use and self-reported adverse skin reactions in the Dutch general population: a cross-sectional questionnaire-based study

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# **Introduction & Objectives:**

Hair dyes are widely used in daily life. However, data on the proportion of self-reported skin reactions due to hair dye use is scarce. Therefore, this study aimed to estimate the proportion of hair dye use at least once in lifetime and self-reported adverse skin reactions to hair dye use in the Dutch general population. Another aim was to investigate factors associated with hair dye use.

#### **Materials & Methods:**

This study used data from the population-based Lifelines cohort. Data were collected regarding hair dye use at least once in lifetime, self-reported adverse skin reactions due to hair dye use, temporary black henna tattoo use, history of self-reported patch testing, hand eczema and a profession as hairdresser or beautician. In addition, we collected data regarding sociodemographic factors including, age, sex, smoking habits, ethnicity, and socioeconomic status. We conducted univariate and multivariate logistic regression analyses adjusted for age and sex to investigate the association between hair dye use and above-mentioned factors.

## **Results:**

In total, 70,987 participants were included. The proportion of lifetime hair dye use was estimated at 63.1%, of which 6.8% experienced an adverse skin reaction, mostly self-reported mild (77.7%). We identified significant (p<0.05) positive associations between hair dye use and female sex [OR15.8, 95%CI:15.2-16.4], middle-age (OR2.6, 95%CI:2.4-2.8], black henna tattoo use [OR31.2, 95%CI:29.8-34.7], history of patch testing [OR1.1, 95%CI:1.1-1.2], a positive patch test result for a substance of hair dye/black henna tattoo [OR1.7, 95%CI:1.1-2.5], a profession as hairdresser [OR4.4, 95%CI:3.0-6.5] or beautician [OR3.1, 95%CI:1.9-5.1], smoking habits [OR1.8, 95%CI:1.7-1.9], non-White ethnicity [OR1.3, 95%CI:1.1-1.6], and a lower neighborhood socio-economic status [OR1.2, 95%CI:1.1-1.3], educational attainment [OR1.5, 95%CI:1.4-1.6], and net household income [OR1.2, 95%CI:1.1-1.3].

# **Conclusion:**

Hair dye use is common in the Dutch general population, frequently causes adverse skin reactions, and is positively associated with several factors.

## the evolution of clinico-epidemiologic profile of pemphigus in south Morocco between 1990 and 2023

Oumaima Lafdali<sup>1</sup>, Bendaoud Layla<sup>1</sup>, Maryem Aboudourib<sup>1</sup>, Ouafa Hocar<sup>1</sup>, Said Amal<sup>1</sup>

<sup>1</sup>CHU Mohamed VI, dermatology and venerology

# **Introduction & Objectives:**

Introduction: Pemphigus is a relatively common autoimmune blistering dermatosis in Morocco compared to other countries. Its management requires long and repeated hospitalizations. Our study aims to describe the epidemiological, clinical, and therapeutic profile evolution of pemphigus over the past three decades in the southern region of Morocco.

Discussion:

#### **Materials & Methods:**

A comparative study was conducted between two series of patients hospitalized for pemphigus at the Mohamed VI University Hospital of Marrakech. Series 1: 282 patients hospitalized between January 1990 and January 2017. Series 2: 52 patients hospitalized between February 2017 and August 2023.

The average number of new pemphigus cases decreased from 10.4 cases between 1990 and 2017 to 7.4 cases between 2017 and 2023. The average age increased from 44.4 years to 53.4 years, with a change in sex ratio from 0.4 to 1.08. Urban origin became predominant after 2017, contrary to previous data. Socioeconomic status was mostly low in both series. Recent use of direct immunofluorescence became almost systematic, with 86.5% of recent cases having a positive DIF, compared to only 46% in the old series. Seborrheic superficial pemphigus remains the most frequent histological type, but an increase in new cases of pemphigus vulgaris has been observed recently (from 18% to 36%), while pemphigus foliaceus has decreased (from 24% to 11%). Although corticosteroid therapy remains a cornerstone therapeutic, the use of corticosteroid-sparing agents has significantly increased over the years. Rituximab treatments have increased (1 case between 1990 and 2017, compared to 7 cases between 2017 and 2023). Hospital stay duration has decreased over the years (from 60 to 28 days), with main complications, notably infectious. The number of deaths has also decreased (7 cases between 1990 and 2017, 1 case between 2017 and 2023).

# **Results:**

Over the past three decades, the epidemiological profile of pemphigus in Morocco has evolved in parallel with sociodemographic changes. The decrease in annual new cases can be attributed to the opening of specialized dermatology services in southern Morocco. The increase in average age and urban origin is related to increased life expectancy and rural exodus. The common use of immunofluorescence reflects its availability in laboratories. The increase in cases of pemphigus vulgaris after 2017 suggests a probable change in the histological profile, indicating a tendency towards westernization. Immunosuppressants, more accessible and familiar to healthcare professionals, have gained importance. Although Rituximab is the first-line treatment, its use remains limited due to cost and availability. The reduction in hospitalization duration and infectious complications is a major progress.

#### **Conclusion:**

The epidemiological profile of pemphigus in Morocco is constantly changing. The predominance of males and the increase in the number of cases of the vulgar type are the two main advantages of our study compared with the

usual spectrum of Moroccan pemphigus. Our study is limited by the number of cases. A larger sample would be more representative of these variations.

## Characterizing Disparities in Dermatology Publishing: A Bibliometric Analysis of Authorship Trends

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<sup>1</sup>Massachusetts General Hospital, Dermatology, Boston, United States, <sup>2</sup>LSUHSC-NO School of Medicine, New Orleans, United States, <sup>3</sup>University of Kansas School of Medicine, Kansas City, United States, <sup>4</sup>Hôpital Militaire de Kameng, Bujumbura, Burundi, <sup>5</sup>Hospital General Guasmo Sur., Guayaquil, Ecuador, <sup>6</sup>Max Planck Digital Library, ESAC Initiative, Munich, Germany, <sup>7</sup>L'Oréal Dermatological Beauty, Paris, France, <sup>8</sup>University of KwaZulu Natal, Dermatology, Durban, South Africa, <sup>9</sup>Massachusetts General Hospital, Medical Practice Evaluation Center, Boston, United States, <sup>10</sup>Massachusetts General Hospital, Center for Global Health, Boston, United States

# **Introduction & Objectives:**

Low- and middle-income countries (LMIC, as defined by World Bank 2022) represent a disproportionate share of the global burden of dermatologic disease. However, research funding and publishing have historically been skewed towards the interests of high-income countries. Power imbalances often exist in collaborations between researchers based in high-income countries versus those in LMIC. Little has been published about authorship trends in dermatology literature. Our objective was to explore recent LMIC publishing metrics, including authorship order, in academic dermatology journals.

## **Materials & Methods:**

We assessed authorship representation among the top 6 dermatology journals based on impact factor: Journal of the American Academy of Dermatology, JAMA Dermatology, British Journal of Dermatology, Journal of the European Academy of Dermatology and Venereology, American Journal of Clinical Dermatology, and Journal of Investigative Dermatology. Clarivate's Web of Science (WoS) Core Collection database was searched for publications of any type in these journals between January 1, 2018 and December 3, 2023. After removing scientific meeting abstracts, each article was categorized by its authors' country affiliations and corresponding World Bank economic classifications.

# **Results:**

A total of 38,451 publications were extracted from WoS, and 19,502 publications remained after abstracts were removed. Of these 19,502, the U.S. was the most represented country (42.8%) with Germany following at 10.9%. Only 2,381 (12.2%) of publications included ≥1 LMIC-affiliated author. Within this smaller subset of LMIC authored publications, the first author was primarily affiliated with a high-income country (55.5%), with very few first authors with low-income affiliations (<1%, only 11 papers). Senior-author affiliations showed a similar trend, with a majority (48.3%) being upper-middle income and 15.5% being lower middle- or low-income. In papers with ≥1 LMIC author, the People's Republic of China was represented most with 833 first-author affiliations and 757 senior-author affiliations, and India was the second-most represented across all authorship positions. African country authors were primarily in a middle authorship position. Only 83 (3.5%) of the LMIC-affiliated publications had an African first-author affiliation and 68 (2.9%) had an African senior-author affiliation.

# **Conclusion:**

Academic publishing in dermatology primarily centers around authors affiliated with high-income countries. Even

among the small proportion of LMIC-affiliated publications, the highest proportion comes from upper middle-income countries like China and Brazil. This gap likely has several contributing factors. There is less research funding investment in countries with lower-income economies. Where such funding does exist, global south research funding often comes from high-income countries in the global north. In working with high-income partners who often drive funding agendas, lower middle- and low-income researchers may be relegated to a secondary role on publications. LMIC health professionals, especially those in Africa, are fewer in number and often have less institutional support, funding, and protected time to pursue research. Greater global representation is needed in dermatology publishing to increase the research capacity of LMIC authors and global visibility of topics relevant to disease burden in these communities.

A Questionnaire - based Survey of Indian Dermatologists to estimate the prevalence of Superficial Dermatophytoses - Diagnostic Practices and Management Strategies

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# **Introduction & Objectives:**

According to surveys conducted by the World Health Organisation, it has been found that approximately 25% of the global population is impacted by dermatophytes. Tinea rubrum is presently recognized as the primary causative agent of cutaneous and onychomycosis fungal infections on a worldwide basis. However, the epidemiology of fungal infections varies being dependent on socioeconomic attributes and geo-ecological characteristics leading to substantial impacts on health. This qualitative survey objected to elucidate real-world patterns of the disease, drugs, dosages, and durations, which would inform future strategies aimed at optimizing treatment outcomes.

#### **Materials & Methods:**

The study employs a prospective, cross-sectional design utilizing a questionnaire-based survey pan India across varied climates to investigate Superficial Dermatophytoses. A qualitative survey comprising of various questions was utilized to gather comprehensive insights from 180 participants with diverse clinical experience.

## Results:

As per the survey, Dermatologists have observed a marked elevation in the prevalence and incidence rates of Superficial Dermatophytoses, with approximately 70% noting a significant increase. The cause has also been attributed to COVID-19. Approximately 50% of the superficial fungal infections have been Recalcitrant in nature and pose challenges in treatment despite various interventions. Fungal infections predominantly occur during summers and monsoon seasons with active humidity. In managing recalcitrant cases, around 74% of participants preferred a combination therapy approach, utilizing both topical agents and oral medications. Itraconazole is the preferred oral medication for recurrent fungal infections, favored by about 81% of Dermatologists for its broadspectrum activity. Both 100mg BD and 200mg OD dosing regimens of Itraconazole are preferred, chosen by 85% of Doctors for optimal efficacy. Itraconazole is commonly prescribed for 4 to 8 weeks by approximately 57% of dermatologists and approximately 45% advocate for therapy continuation for 2 weeks post-asymptomatic status. In cases of recalcitrant fungal infections, 46% of experts prefer a therapy duration of 6 to 12 weeks.

## **Conclusion:**

The findings highlight the evolving landscape of fungal infections and approaches taken by Dermatologists in their management. The consensus on combination therapy and preference for specific medications underscores the importance of tailored treatment strategies in addressing these challenging conditions. Despite advancements in treatment options, concerns persist. Overall, while progress has been made in understanding and treating fungal infections, ongoing efforts are necessary to address challenges and optimize patient outcomes.

# Spectrum changes of pediatric dermatological disorders in China single National Center for Children's Health experience

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# **Introduction & Objectives:**

The sudden COVID-19 has changed people's living habits, and skin diseases closely related to lifestyle have also changed quietly. We aimed to analyze the changing of pediatric dermatological disorders spectrum before and during the COVID-19 pandemic in China.

#### **Materials & Methods:**

This retrospective study encompasses consecutive patients attending a number of dermatological outpatient clinics in National Center for Children's Health from 1 January 2019 and 31 December 2021. The information about the season, age, number, disease type and origin of the patients was filled in for all the patients. The diseases were sub-classified on etiological basis.

### **Results:**

The total number of patients was 449032, including 323142 newly diagnosed patients, with a male/female ratio of 1.15:1. The patients were mainly school-age children. 91.3% of the patients suffered from a single skin disease. During the epidemic of COVID-19-epidemic, Atopic Dermatitis (AD ) and other types of dermatitis constituted the main diseases, followed by infectious skin diseases, urticaria, erythema and drug responsive skin diseases, and finally parasites and bite responsive skin diseases. The top three skin diseases ranked in descending order of incidence from 2019 to 2021 were the same, followed by AD, urticaria and papular urticaria. During the epidemic period, the proportion of patients with molluscum contagiosum, verruca vulgaris and vitiligo increased. Because of wearing masks, the proportion of infectious skin diseases transmitted by respiratory tract has decreased significantly. In addition, pediatric telemedicine can be used to increase timely access and improve practical efficiency during the epidemic.

## **Conclusion:**

The pediatric dermatological disorders spectrum has changed during the epidemic of COVID-19. AD is the most common skin disease, and the proportion of infectious skin diseases has decreased significantly. During the epidemic, pediatric internet medical services were fully used to promote the sustainable development of children's skin health.

# Descriptive study: Prevalence of Androgenetic Alopecia in Sultan Qaboos University students

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# Descriptive study: Prevalence of Androgenetic Alopecia in Sultan Qaboos University students

# **Introduction & Objectives:**

Androgenetic alopecia is a chronic dermatological condition of non-scaring progressive hair loss. It affects both men and women, although the pattern and severity of hair loss may differ between both genders. Androgenetic alopecia in male characterized as hair loss and receding hairline on the top of the scalp, temporal scalp and vertex. However, in female characterized as thinning of hair on the mid frontal area with preservation of frontal margin. The aim of this study to estimate and assess the prevalence of Androgenetic Alopecia Sultan Qaboos university students and compare it with the world wide statistics. Study attributed also to highlight the impact of Androgenetic Alopecia on several factors among samples of the selected population.

## **Materials & Methods:**

Randomly selected groups from different Sultan Qaboos university students will be assessed for diagnosis of Androgenetic Alopecia through a modified Arabic questionnaire. Study samples will involve participants from different colleges among the university including those who live in the university campus and out side private campuses. Data where summarized using frequencies and proportions for binary and categorical variables.

#### **Results:**

The study included 700 individuals. Among the whole population (60.8%) reported that they encountered chronic hair loss with a p-value: 0.009. Only (18%) have been diagnosed with androgenetic alopecia after visiting dermatologist or family physician.

Following commonly used Norwood-Hamilton scale (76.7%) of male population describe hair loss with different stages of androgenetic alopecia most of them in stage 2 and 3. Where as (69%) of female population describes having chronic hair loss majority at initial stages (I and I-I) according to ludwing scale. About (40.7%) of population feels embarrassed and had negative daily impact with significant p-value of 0.38 due to hair loss.

## **Conclusion:**

In conclusion, our research underscores the significant prevalence of androgenetic alopecia among Sultan Qaboos University students, highlighting its noteworthy presence within our population in general. Moreover, our findings shed light on the psychological impact associated with this condition, emphasizing the importance of addressing not only the physical manifestations but also the emotional well-being of those affected. Such insights are crucial for implementing targeted interventions and support systems to alleviate the burden of androgenetic alopecia, ultimately enhancing the overall quality of life for affected individuals within academic settings and daily life.

## Sun exposure behaviour in patients with rosacea

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## **Introduction & Objectives:**

Exposure to the sun can significantly aggravate rosacea symptoms such as redness and irritation. It is therefore essential that people with rosacea implement an effective and regular sun exposure strategy to reduce these adverse effects. Our research assesses the understanding and application of public health guidelines on sun exposure in patients diagnosed with rosacea. The main objective of this study was to determine whether the diagnosis of rosacea leads to greater caution regarding sun exposure, particularly through the adoption of preventive measures such as avoiding the sun during the most intense hours of the day and applying sunscreen every 2 hours.

### **Materials & Methods:**

Using the ALL database, which includes 50,552 subjects from 20 countries, we selected individuals who reported rosacea confirmed by a healthcare professional. To analyse the sun exposure behaviour of people with rosacea, we restricted our study to patients with rosacea and no other dermatoses.

#### **Results:**

Of the participants, 1,575 reported medically confirmed rosacea, with a female predominance [3.9% (n = 971) versus 2.5% (n = 605), p-value 0.001]. 489 subjects were identified as having rosacea only [65% female versus 62% in the general population]. 75.3% reported being aware of recommendations regarding the risks of sun exposure. 40.9% admitted to exposing themselves to the sun during the hottest hours, 34.2% in the morning before 11am and 25.8% after 4pm. 23.1% say they avoid all exposure. Of those who expose themselves to the sun during the hottest hours, 32.5% justify this choice by the convenience of their activities, 23% because they find these times more pleasant and 32% because they are available. 5% do not believe in prevention messages and 3.5% say that their skin tolerates the sun well despite rosacea. 38% use sunscreen every two hours, 48.4% use it less regularly and 13.6% admit to not using any sunscreen at all. 59% use sunscreen to prevent sunburn, 46.5% to prevent premature skin ageing and 46.5% to reduce the risk of skin cancer. For those who don't follow the recommendations to the letter, 19.3% cite the cost of the products as an obstacle and 42.9% say they simply don't think about it.

#### **Conclusion:**

To counteract the noncompliance of rosacea patients with adverse sun exposure, it is imperative to increase education about the specific risks of sun exposure in general and in rosacea in particular. It is essential to improve communication on the vital importance of constant photoprotection by adapting advice to the daily reality of patients and offering products adapted to the sensitive skin of rosacea patients.

## Skin Disease in the Eastern Cape (SKINSCAPE): a Global Psoriasis Atlas point prevalence study

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# **Introduction & Objectives:**

The Eastern Cape is an under-resourced province in South Africa where little is known about how commonly people are affected with skin disease. We aimed to examine the nature and prevalence of skin diseases in two rural villages in the Eastern Cape for the first time.

## **Materials & Methods:**

A house-to-house\*\* cross-sectional point prevalence study of residents (adults and children) in the villages of Mtyholo Dlova and Mdolomba was conducted in\*\* December 2023. We collected information on the households, demographics, and skin diagnoses following screening by dermatologists. Point prevalence rates and 95% confidence intervals (CI) were calculated for each skin condition. Multivariable logistic regression was used to identify associations between demographic characteristics (age, gender, education, employment, income, dwelling type, water and sources, sanitation facilities, smoking status, alcohol use, other substance use) and presence of skin disease.

## **Results:**

A total of 309 households were visited, 94 in Mtyholo Dlova and 215 in Mdolomba. Most households were standalone houses including traditional round huts, with rainwater tanks as the main source of drinking water (85%), electricity as the main energy source (96%), and sanitation facilities consisting of pit latrines with or without ventilation (92%). Seventy-five percent of households had an average monthly income of <3000 South African Rand (148 EUR), with 22% having <R1500 (74 EUR). Across the two villages, the surveyed population included 698 people; mean age 37.4±24.2 years, 56% female, 12% had no schooling, 26% partially or fully completed only primary school education, 55% partially or fully completed secondary school education, 39% were unemployed, 18% were retired, 60% were non-smokers, and 69% did not drink alcohol.

In total, 439 people were identified as having at least one skin disease, with 100 different conditions identified in this population. The overall point prevalence of any skin disease was 62.9% (95% CI 59.2-66.5%). The most prevalent diagnoses were acne vulgaris (prevalence 9.0%), xerosis cutis (6.6%), tinea capitis (4.9%), melasma (4.3%), seborrhoeic keratosis (3.9%), pityriasis alba (3.4%), seborrhoeic dermatitis (2.6%), postinflammatory hyperpigmentation (2.6%), nonscarring alopecia (2.4%) and scarring alopecia (2.4%). The point prevalence of

psoriasis was 0.3% (0.1-1.0%) and atopic dermatitis was 2.3% (1.3-3.7%).

The prevalence of individual skin diseases was broadly similar in the two villages. In general, overall skin disease was more common in women than men (65.8% vs. 59.2%). There were statistically significant sex-specific differences in the prevalence of certain diseases; alopecia (scarring and nonscarring) and melasma were more prevalent in women whereas men were more likely to have pseudofolliculitis barbae and tinea capitis.

In a multivariable logistic regression model, female gender (adjusted odds ratio 1.53 [95% CI 1.03-2.29]) and living in a traditional hut (15.02 [1.21-35.68]) were significantly associated with skin disease.

#### **Conclusion:**

Skin disease is common in the Eastern Cape, South Africa. These findings may help inform on the provision of resources in the region and highlight training opportunities for local community and healthcare workers.

## Prevalence of ichthyoses in Denmark - a nationwide registry-based study

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## **Introduction & Objectives:**

Ichthyosis consists of multiple genetically heterogeneous skin disorders involving dysregulation of cornification. A high-level division of disease is non-syndromic and syndromic ichthyoses, with the non-syndromic types including ichthyosis vulgaris, X-linked recessive ichthyosis, autosomal recessive congenital ichthyosis, and keratinophilic ichthyosis. Although the genetic pathogenesis and genetic variation in the general population have increased, studies on the prevalence of ichthyosis remain limited. The most recent estimated prevalence is 2.7 per 10,000 and was published by Wells and Kerr in 1966. The objective was thus to investigate the prevalence of ichthyosis in Denmark using the Danish national registries.

## **Materials & Methods:**

We investigated the prevalence of ichthyoses among a source population of 5,873,420 people, alive and resident in Denmark on December 31st, 2021. A diagnosis of ichthyosis was defined as a recorded International Classification of Diseases, 10th revision (ICD-10) code of either ichthyosis vulgaris (Q80.0), X-linked ichthyosis (Q80.1), lamellar ichthyosis (Q80.2), epidermolytic hyperkeratosis, (Q80.3), Harlequin ichthyosis (Q80.4), other congenital ichthyosis (Q80.8), or congenital ichthyosis, unspecified (Q80.9). The diagnosis of Q80.8 comprised ichthyosis hysterix, Sjögren-Larssons syndrome, ichthyosis linearis circumflexa, and keratitis ichthyosis deafness syndrome (KIDS). Patients were only required to have been diagnosed once. For conflicting registration of diagnoses, congenital diagnoses (except congenital ichthyosis, unspecified) were used.

## **Results:**

A total of 952 patients had been diagnosed with ichthyosis. Stratified according to disease, 374 (39.3%) had ichthyosis vulgaris, 92 (9.7%) had X-linked ichthyosis, 64 (6.7%) had lamellar ichthyosis, 25 (2.6%) had epidermolytic hyperkeratosis, 4 (0.4%) had Harlequin ichthyosis, 211 (22.2%) suffered from other congenital ichthyosis, and 182 (19.1%) suffered from congenital ichthyosis, unspecified. Only 3% of patients had conflicting registrations. The mean age on December 31st, 2021, was 38.8 years (standard deviation (SD) 25.8), and 48.7% were female. The point prevalence of any type of ichthyosis was 1.6 per 10,000. Ichthyosis vulgaris was the most common disease with a prevalence of 0.64 per 10 000 followed by other congenital ichthyosis (0.36), congenital ichthyosis (unspecified) (0.31), for X-linked ichthyosis (0.16), lamellar ichthyosis (0.11), epidermolytic hyperkeratosis (0.04), and Harlequin ichthyosis (0.007).

## **Conclusion:**

The results demonstrate a prevalence of all types of ichthyoses of 1.6 per 10,000. A study of this size and depth has not been completed before, but may still underestimate the prevalence and potential burden of the diseases, as not all patients may seek medical consultation, and data was based on hospital diagnosis.

## Prevalence and characteristics of chronic hand eczema in an adult general population

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# **Introduction & Objectives:**

While the epidemiology of hand eczema (HE) has been broadly investigated in the general population, data on the epidemiology of chronic HE (CHE) remain limited. The objective was thus to investigate the prevalence and characteristics of individuals with CHE in a general adult population.

#### **Materials & Methods:**

Using a general population sample from the Danish Skin Cohort (DSC), the study investigated the prevalence of CHE based on self-reported data. CHE was defined according to the most recent European guideline: occurrence of eczema on the hands or wrists during a minimum of three consecutive months or reoccurrence of HE at least twice within 12 months. The sample was randomly chosen from the general Danish population, and data were collected between January 2, 2023, and February 3, 2023. Adults were divided into 'CHE within the past year' and 'HE within the past year'. Furthermore, basic characteristics were compared using Pearson's chi-square or Fisher's exact test for categorical variables and a two-sample t-test for continuous variables.

#### **Results:**

Out of 11,166 adults, 1,306 had experienced HE at some point. Within the last 12 months, 408 had experienced HE, of which 332 (81.4%) had CHE. The one-year prevalence of CHE was 3.0%, with an equal split between clear/almost clear disease (1.5%) and moderate-to-severe disease (1.4%). Of the adults with CHE, 70.8% were female, and the mean age was 48.0 years (standard deviation 16.6). Most individuals with CHE met the criteria of two relapses (n = 309, 93.1%), and 206 (61.1%) met the criteria of persisting HE for more than three months. More than half of individuals with CHE met both criteria (n=180, 54.2%). Compared to HE, CHE was more likely to be diagnosed by a dermatologist and to affect the fingers and the back of the hand. When comparing clear/almost clear CHE and moderate-to-severe CHE, adults with moderate-to-severe CHE were more likely to have been diagnosed by a dermatologist, suffer from atopic dermatitis, and have eczema on the palms, fingers, wrists, and feet.

#### **Conclusion:**

The estimated one-year period prevalence was 3.0% and 3.7% for CHE and HE, respectively. While baseline characteristics of adults with HE and CHE were similar, the vast majority of adults with recent HE met the criteria for CHE. Close to all individuals with CHE had experienced two relapses, and more than six in ten individuals experienced persisting HE for more than three months. This could suggest a large degree of chronicity in the HE population experiencing episodes within the last 12 months.

# Evaluating the role of ChatGPT in Dermatology: A Study on Healthcare Workers' Perceptions and Expectations

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# **Introduction & Objectives:**

Artificial Intelligence (AI) has increasingly shown promise in various fields, including the medical sector. In recent years, AI has been used to assist doctors in diagnosis, treatment planning, and research. One of the most notable AI technologies is ChatGPT, an advanced language model developed by OpenAI.

#### **Materials & Methods:**

This is a study based on an analytical cross-sectional survey, conducted over a period of 5 months, from December 2023 to April 2024, in the northern region of Morocco. All healthcare professionals, including dermatology professors, specialists, and residents, were included. This survey was tested on a group of 79 healthcare professionals, representing a diversity of demographic profiles, to ensure its clarity, coherence, and relevance, all aimed at evaluating healthcare professionals' perceptions towards ChatGPT. The survey consists of three parts. The survey included multiple-choice questions, with respondents selecting one or more options to indicate their responses. No Likert scale was used in this study.

## Results:

A total of 79 healthcare professionals participated in the study. Most participants were female (58%), with the highest percentage belonging to the 25 to 34 age group (39.5%), followed by 28.6% in the 18 to 24 age group. Nearly half of the participants were specialists (67.1%), 30.4% were residents, and 2% were teachers. Regarding familiarity with ChatGPT, 64.6% were very familiar with it, while 35.4% were not familiar. Among those who had not used it, 74.1% expressed the intention to use it in the future. Among the surveyed healthcare professionals, only 34.2% reported using ChatGPT in their medical practice, while 65.8% did not. The perception of ChatGPT's usefulness in medical practice was captured among participants using multiple-choice questions, including positive diagnosis including definition and treatment with a percentage of 16.5%, writing a letter or medical certificate (25.3%), writing a medical report (25.5%), and aiding medical research (19.9%). Most healthcare professionals (76.7%) anticipate a positive effect, with 25.3% anticipating a negative impact and 7.6% anticipating no impact at all. Most healthcare professionals were concerned about the lack of credibility and unclear information sources fueling AI Chatbots (56.9%), followed by concerns about erroneous or harmful medical recommendations made by AI models (38.2%). More than a third of healthcare professionals (40.1%) expressed difficulties in accessing AI models in their work environment. The medicolegal implications associated with the use of AI in patient care were also a concern for many healthcare professionals, with a percentage of 44.9%. Interestingly, 58.2% of healthcare professionals were concerned about the integration of ChatGPT into routine medical practice.

#### **Conclusion:**

Will ChatGPT transform healthcare? The rapid advancements in artificial intelligence elicit both excitement and concern regarding their impact on healthcare delivery. ChatGPT, as an AI-powered conversational tool, holds considerable potential to enhance various aspects of healthcare, such as patient-physician communication, patient

education, and medical data management.

## **Epidemiological Profile of Hospitalized Patients in the Dermatology Department**

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**Introduction & Objectives:** The dermatology-venereology department is among the most important facilities capable of admitting patients of all ages requiring hospital care for their dermatological conditions.

**Materials & Methods:** We conducted a descriptive, cross-sectional, monocentric study with a retrospective component (January - March 2022) and a prospective component (April - May 2022).

**Results:** We enrolled 130 patients, with 56.92% hospitalized during the first quarter and 43.08% during the second. A slight female predominance was observed, with a sex ratio of 0.78. Patient ages ranged from 2 months to 85 years, with an average of 33.95 years. Of these, 31.53% were under 18 years old, while 6.15% were aged over 75 years. The average duration of hospitalization was 10.64 days (range: 2 to 67 days), with the longest duration seen in patients with bullous dermatoses (67 days). In the second quarter, 62.5% were admitted for the first time, 30.36% for the second time, 3.57% for the third time, and 3.57% for more than three times. The predominant reasons for hospitalization were inflammatory pathologies (42.3%), followed by vascular pathologies (16.2%), bullous dermatoses (8.5%), genodermatoses (8.5%), hypersensitivity reactions (6.9%), systemic diseases (5.4%), infectious pathologies (5.4%), tumor pathology (3.8%), and other rare dermatoses (3.1%). During the study period, three patients (two with bullous dermatoses and one with melanoma) passed away, resulting in a mortality rate of 2.3%.

**Conclusion:** The duration of hospitalization in our dermatology department could be further reduced to accommodate a larger number of patients, thereby enhancing access to care and support. Early diagnosis and management of autoimmune bullous dermatoses can contribute to reducing their mortality rate.

## UV rays and scars: A paradox of protection and behaviour

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# **Introduction & Objectives:**

Subjecting scars to UV rays without sufficient protection can substantially elevate the likelihood of scarring, rendering them more conspicuous and diminishing their prospects for healing in an aesthetically pleasing manner. Furthermore, scars that are exposed to UV radiation are at heightened risk of experiencing hyperpigmentation or an extended inflammatory reaction.

#### **Materials & Methods:**

The ALL project collected data from 50552 individuals from different continents, including 20501 in Europe. The main objective was to describe the photoprotective behaviour of individuals reporting one or more scars.

## **Results:**

31409 (61%) individuals reported the presence of one or more scars (including 3598 on the face). 52.3% (n=16431) admitted to exposing themselves during the hottest hours of the day, despite prevention messages. They were significantly more likely to expose themselves than those who did not report having scars (43.6%, n=8355, p<0.0001).

33.7% said they did so because it was the most convenient time and 29% said it was the time when they were most available. The figures for those without scars were 27.7% and 28.9% respectively. While 74% admitted to using a sunscreen, only 28.7% (n=7364) said they applied it every 2 hours. While 71.4% of those without scars admitted to using sunscreen, only 26.1% (n=3707) reported using it every 2 hours.

Among those with scars, a sensitivity analysis was performed by isolating those with facial scars. Of these, 49.8% (n=1791) reported exposure between 11am and 4pm. 81% reported using sunscreen, while 36.9% (n=1035) reported using it every 2 hours.

Looking at the European population, 48% of those with scars admitted to exposing themselves at noon (41% of those without scars and 43.9% of those with facial scars).

32.8% of those with a scar used sunscreen every 2 hours (compared with 30.8% of those without a scar and 41.1% of those with a facial scar).

## **Conclusion:**

The phenomenon wherein individuals with scars tend to expose themselves more to sunlight while also practicing better photoprotection measures presents an intriguing paradox, underscoring a nuanced complexity in health behaviours. This dual behaviour underscores the distinction between awareness of risks and the actual implementation of recommended preventive measures.

We know that hyperpigmentation can affect scars, especially if they are exposed to the sun without protection. This can make scars more visible, harder to treat and more likely to cause psychological distress.

In fact, protecting scars from the sun can prevent hyperpigmentation and other complications that can affect appearance and self-esteem.

## **Facultative Paraneoplastic Dermatoses**

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# **Introduction & Objectives:**

Paraneoplastic Dermatoses (PNDs) encompass a group of skin or cutaneomucous conditions characterized by their association with neoplasms and a parallel evolution with these latter.

They are classified into 3 groups: obligatory, facultative, and exceptional paraneoplastic dermatoses. Facultative PNDs comprise various conditions whose association with cancer is less consistent compared to obligatory PNDs but frequent enough to warrant systematic investigation for an associated neoplasm.

The aim of our study is to investigate the prevalence of neoplasms in certain facultative paraneoplastic dermatoses.

## **Materials & Methods:**

We conducted a retrospective and descriptive study that included the medical records of patients hospitalized in our department for pathologies classified as facultative paraneoplastic dermatoses.

### **Results:**

We studied a total of 113 cases, including 50 cases of chronic pruritus (44%), 27 cases of dermatomyositis (23%), 23 cases of erythroderma (20%), and 6 cases of Leser-Trélat syndrome (5%).

Chronic pruritus accounted for 44% of cases (50 cases), with a cancer diagnosis confirmed in 2 male patients (4%) with a mean age of 70 years (+/- 15). The cancers represented in our series were large-cell lung cancer and prostatic adenocarcinoma. The cancer diagnosis followed the chronic pruritus diagnosis in both cases, with a median time of 33 months [6 months, 5 years].

Dermatomyositis represented 23% of cases (27 cases), with a cancer diagnosis confirmed in 8 patients (29.6%). The female-to-male ratio was 1.6, and the mean age was 57.7 years (+/- 16.6). The most common cancer in our series was nasopharyngeal carcinoma present in 3 patients (37.5%), followed by breast cancer present in 2 female patients (25%), laryngeal cancer, endometrial cancer, and gastric cancer each present in 1 case (12.5%). The cancer diagnosis preceded the diagnosis of dermatomyositis in 3 cases, was concurrent with dermatomyositis in 3 cases, and followed the diagnosis of dermatomyositis in 2 cases (25%). The median time between cancer diagnosis and dermatomyositis was 3 months [15 days, 47 months].

Erythroderma represented 20% of cases (23 cases), with a cancer diagnosis confirmed in 2 male patients with a mean age of 56 years (+/- 8). The cancers represented in our series were cutaneous T-cell lymphoma and Sézary syndrome. The diagnosis of erythroderma preceded the cancer diagnosis in both cases. The median time between cancer diagnosis and erythroderma was 44 months [4 months, 7 years].

Leser-Trélat syndrome represented 5% of cases (6 cases). A cancer diagnosis was confirmed in 5 patients. The mean age was 65 years (+/- 7), and all patients were male. The cancers represented in our series were undifferentiated pleomorphic sarcoma, sclerosing basal cell carcinoma, infiltrating breast carcinoma, gastrointestinal stromal tumor with hepatic metastasis, and metastatic non-small cell lung carcinoma of adenocarcinoma type. The cancer diagnosis preceded Leser-Trélat syndrome diagnosis in 1 case (20%), was concurrent with Leser-Trélat syndrome in 1 case (20%), and followed Leser-Trélat syndrome diagnosis in 3 cases (60%). The median time between cancer diagnosis and Leser-Trélat syndrome was 14 months (+/- 13) [8 months, 3 years].

## **Conclusion:**

Paraneoplastic dermatoses can be a suggestive sign of an unknown cancer or a sign of recurrence of a known and treated cancer, highlighting the importance of a good understanding of these dermatoses.



# Addictive behavior and diseases in patients with chronic skin diseases: preliminary findings of a cross-sectional study in Europe

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**Introduction & Objectives:** Skin diseases affect nearly one-third of the global population, ranking as the fourth most common human disease. This prevalence is linked to considerable morbidity, contributing significantly to the global disease burden. While studies suggest higher rates of addictive disorders among individuals with psoriasis or atopic dermatitis (AD), research on other chronic skin conditions is lacking. Thus, this study aims to investigate the prevalence of addictive disorders among European patients with chronic skin diseases.

Materials & Methods: Within the framework of a project sponsored by the EADV, patients with alopecia areata, AD, hidradenitis suppurativa (HS), psoriasis, urticaria, and vitiligo are invited to participate in an anonymized cross-sectional web- or paper-based questionnaire survey in dermatological clinics. This survey collects demographic and disease-related data, as well as the Dermatology Life Quality Index (DLQI) and happiness score (range 0-10(extremely happy)). Additionally, it was screened for alcohol, drug, gambling, eating, internet, and smoking addiction using validated screening tools in the respective national languages. For languages where validated screening tools were not available, the English version of these tools was initially translated into the respective national language using artificial intelligence and subsequently validated by the participating centers. The questionnaire survey began on 1 July 2023 and is expected to end on 30 June 2024. This preliminary analysis is based on descriptive statistics.

**Results:** In this preliminary analysis, 1,456 patients were enrolled, with a median age of 42.0 years [interquartile range: 30.0; 55.0] and 50.3% being women. The majority of patients were diagnosed with psoriasis (43.1%), followed by AD (25.4%), urticaria (11.1%), HS (10.4%), alopecia areata (5.1%), and vitiligo (4.9%). These conditions moderately impacted the patients' quality of life, with a median DLQI of 6.0 [2.0; 12.0] and a median happiness score of 7.0 [5.0; 8.0]. A majority of patients (52.3%) displayed at least one risk or addictive behavior, with men being more affected than women (57.5% vs. 47.1%, p <.001). Additionally, patients with AD and HS showed a higher prevalence compared to other diseases reviewed. The most prevalent addiction was smoking (24.9%), followed by mild internet addiction (22.5%) and severe internet addiction (6.3%). Harmful or hazardous drinking was identified in 10% of patients, with 2.5% indicating alcohol dependence. Drug-related problems were reported in 5.2% of patients, and 0.3% exhibited drug dependence. Gambling was reported in 3% of patients, while 1.7% were screened for eating disorders.

**Conclusion:** The preliminary findings highlight a notable elevation in addiction prevalence among the studied patient cohort compared to the general population, except for eating disorders. Particularly, individuals with AD and HS, alongside men, exhibit a disproportionate susceptibility to these behaviors. Our further data will provide more precise insights, enabling differentiation among European regions and identifying potential risk factors. These results emphasize the urgent need for targeted interventions and enhanced awareness within healthcare settings to address the unique challenges faced by individuals with chronic skin conditions and concurrent addictive tendencies.

# Prevalence of Chronic Hand Eczema in adults: A cross-sectional multi-national study of over 60,000 respondents in the general population

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**Introduction & Objectives:** Literature on the prevalence of Chronic Hand Eczema (CHE) includes only small, single-country studies. To our knowledge, this is the first-ever, multi-national, prevalence study of CHE in the general adult population. The objective of this study was to estimate the prevalence of CHE among adults aged 18 to 69 in the general population, overall and according to key socio-demographic characteristics.

Material & Methods: CHECK (Chronic Hand Eczema epidemiology, Care, and Knowledge of real-life burden) recruited participants via online panels in Canada, Germany, France, Italy, Spain, and the UK. Participants were representative of the general population regarding sex, age, region, employment status, urban/rural setting, and for the UK ethnicity. A weighting was applied to reflect the country sizes. CHE was defined as self-reported eczema on the hand(s)/wrist(s) in the past 12 months, persisting for ≥3 months or with ≥2 flares. Information on self-reported physician diagnosis of CHE was collected. Prevalence estimates with 95% confidence intervals (CIs) are reported.

**Results:** Among 60,131 participants, life-time prevalence of hand eczema was 8.9% (8.7%-9.2%).5.6% (5.4%-5.7%) reported CHE, of these the majority (59.4%) fulfilled both criteria defining CHE; 8.0% reported only eczema persisting  $\geq$ 3 months; and 32.6% reported only  $\geq$ 2 flares.

Overall, 4.7% (4.6%-4.9%) reported physician-diagnosed CHE, suggesting that most individuals (85.3%) received a formal diagnosis. Prevalence was higher among females vs. males (5.6% [5.4%-5.9%] vs. 3.8% [3.6%-4.1%]), higher among employed vs. non-employed, (5.3% [5.1%-5.6%] vs. 3.3%, [3.1%-3.6%]) and higher among inhabitants in urban vs. rural areas (5.0% [4.8%-5.2%] vs. 3.7% [3.4%-4.1%]). Prevalence was highest in participants aged 30-39 (6.5% [6.0%-7.0%]) and lowest in those aged 60-69 (2.6% [2.3%-3.0%]).

**Conclusion:** Results from this large multi-national study show that CHE is a common skin disease, with higher prevalence among females, the employed and individuals in their thirties.

# Epidemiological data of melanoma patients in a general university hospital over a period of 15years (2008-2022)

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# **Introduction & Objectives:**

Melanoma is a malignant melanocytic tumor. Although the incidence of melanoma globally is constantly rising, in Greece there is a lack of recent and accurate recordings. The aim is to record the epidemiological characteristics of the cases of melanoma in a tertiary university hospital in Greece over a 15 year period.

## **Materials & Methods:**

Data of the patients diagnosed with melanoma from 01/01/2008 to 31/12/2022 were collected from the archives of the dermatology clinic of a general university hospital in Greece. Those were the sex and age of patients, the date of diagnosis and the histological type, anatomical site, Breslow, ulceration and diameter of the tumor.

## **Results:**

184 patients, 100 men (54.35%) and 84 women (45.65%), were diagnosed with 191 melanomas between the years 2008 and 2022. The mean age of diagnosis in men was 64 and in women 63 years. Records showed 20 diagnoses in 2008-2010 and 46 in 2020-2022, with a maximum number of melanoma patients per triennium in 2017-2019, when there were 53. The most frequent location in men was the trunk (40.57%), and in women the lower limbs and trunk (24.71% equally). In ages  $\leq$ 40 (47.7%) and 41-60 years (45.31%), melanoma developed most frequently on the trunk and in ages  $\geq$ 61 years the face appeared to be the most frequent site of melanoma (26.85%). The superficial spreading melanoma (SSM) was the most frequent histological diagnosis (45.55%). In the age groups  $\leq$ 40y and 41-60y, SSM was found in the majority of the cases (78.95% and 67.19% respectively). Regarding the patients  $\geq$ 61y, lentigo maligna melanoma (LMM) was the most frequent histological type (37.94%). Ulceration was present in 46.48% of cases. 22.51% were in situ, of which 59.52% were female and 76.74% were SSM and the mean age of them was 56.55 years.

Variables		1-40 y.o.	41-60 y.o.	≥61 y.o.	p- value	Men	Women	p- value
		N (%)	N (%)	N (%)		N (%)	N (%)	
Sex	Men	6 (6)	37 (37)	57 (57)				
	Women	12 (14,29)	26 (30,95)	46 (54,76)	0,158			
Anatomical site	Face	1 (5,26)	5 (7,81)	29 (26,85)		15 (14,15)	20 (23,53)	
	Scalp	0	1 (1,56)	13 (12,04)		11 (10,38)	3 (3,53)	
	Neck	1 (5,26)	2 (3,13)	4 (3,7)		5 (4,72)	2 (2,35)	
	Trunk	9 (47,37)	29 (45,31)	26 (24,07)		43 (40,57)	21 (24,71)	
	Upper limbs	6 (31,58)	11 (17,19)	14 (12,96)		14 (13,21)	17 (20)	
	Lower limbs	2 (10,53)	15 (23,44)	22 (20,37)		18 (16,98)	21 (24,71)	
	Oral cavity	0	1 (1,56)	0	0,002	0	1 (1,18)	0,028
Histological type	Superficial spreading melanoma	15 (78,95)	43 (67,19)	29 (26,85)		46 (43,4)	41 (48,24)	
	Nodular	3 (15,79)	8 (12,5)	19 (17,59)		19 (17,92)	11 (12,94)	
	Lentigo maligna melanoma	0	4 (6,25)	40 (37,04)		23 (21,7)	21 (24,71)	
	Acral	0	2 (3,13)	11 (10,19)		8 (7,55)	5 (5,88)	
	Other type	1 (5,26)	5 (7,81)	8 (7,41)		8 (7,55)	6 (7,06)	
	Mucosal	0	1 (1,56)	0		0	1 (1,18)	
	Nevoid	0	1 (1,56)	0		1 (0,94)	0	
	Desmoplastic	0	0	1 (0,93)	<0,001	1 (0,94)	0	0,88

# **Conclusion:**

During the period 2008-2022, the incidence of melanoma in a general hospital in Greece increased significantly. Comparing the first and last triennium, we observed a more than two times rise in the number of new cases of melanoma. The face appeared to be the most frequent site for those  $\geq$ 61 years of age, compared to the trunk in the younger patients and males. In females, the lower limbs and trunk predominated equally. The most frequent histological type was found to be the SSM with an exception in the  $\geq$ 61y age group, where LMM was the most common histological type. In the majority of melanoma in situ cases, the patients were women, whereas men predominated in the invasive type of melanomas.

# Impact of Hormonal Factors in 20,000 Women in a worldwide study: analysis of Four Skin Diseases in European women as compared to the rest of the world

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# **Introduction & Objectives:**

Hormonal changes significantly influence the health and state of women's skin, especially concerning the regularity of their menstrual cycles. In individuals with consistent cycles, hormonal shifts occur predictably, cyclically influencing moisture levels, sebum production, and skin sensitivity. Conversely, irregular cycles can result in more pronounced disturbances, leading to various effects on the skin, including heightened sensitivity, imbalanced hydration, and increased vulnerability to inflammation and breakouts. This dynamic interaction between hormones and skin health underscores the necessity for a meticulous, personalized approach to dermatological care, wherein menstrual regularity is regarded as a pivotal factor in comprehending and addressing each woman's unique skin issues.

This study aimed to explore variations in self-reported skin characteristics and issues among European women with regular and irregular menstrual [IM] cycles versus women from the rest of the world [RoW], aiming to gain insights into the influence of hormonal fluctuations on skin health.

## **Materials & Methods:**

Between 03 and 03/2023, we conducted online interviews utilizing the Ipsos Access Panel, employing a quota sampling method based on age, occupation, and region. A total of 20,001 interviews were conducted across 20 countries spanning five continents, targeting representative samples of women aged 18 to 55 years. Our analysis primarily focused on European women from France, Germany, Greece, Italy, Poland, Spain and Turkey, comparing them with women from RoW

## **Results:**

7,501 European and 12,000 non-European women with menstrual cycles were classified in 2 groups: Regular Menstruation [RM] & Irregular Menstruation [IM]. Regardless of the region, skin diseases such as acne, rosacea, seborrheic dermatitis [SD] or melasma were significantly more common in the IM group. Among European women, the observed to expected ratios [acne: 1.13 p < 0.02; rosacea: 1.27 p < 0.0003; seborrheic dermatitis: 1.17 p < 0.02; melasma: 1.33 p < 0.0001] indicate that the prevalence of each dermatosis is higher in the IM group than would be expected if there were no association between menstrual type and skin disease. A similar result was observed in the rest of the world with ratios ranging from 1.1 for acne to 1.3 for rosacea or melasma. Acne was more common (p < 0.00001) than rosacea (p < 0.00001), SD (p < 0.0001) & melasma (p < 0.00001) in European women with IM. Moreover, acne (p < 0.00001) & melasma (p < 0.00001) exhibited statistically significant differences in prevalence between European women and the RoW, with very low p-values indicating that these

differences are unlikely to be random ones. On the other hand, for SD (p = 0.06), the difference was not statistically significant, with a relatively high p value. Rosacea, (p < 0.0005), showed a significant difference, but less pronounced than acne and melasma.

## **Conclusion:**

Hormonal fluctuations have a considerable impact on the occurrence of skin conditions in women, as evidenced by variations between groups with RM & IM. Our findings underscore noteworthy distinctions in the prevalence of skin ailments among European women compared to those elsewhere globally, underscoring the necessity for region-specific medical approaches. The correlation between IM and skin disorders, such as acne and melasma underscores the necessity for personalized dermatological care that integrates the management of hormonal changes.

## Pregnancy dermatoses: Comparison between primigravida and multigravida in Libyan pregnant women

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**Introduction & Objectives:** Pregnancy is associated with numerous skin changes as a result of the profound immunologic, metabolic, endocrine, and vascular changes that occur during pregnancy. Though the majority of these are physiological in nature, changes in pre-existing skin diseases or the development of new pregnancy-specific dermatoses can cause distress to the pregnant female and may influence the fetal outcome.

This study aimed to evaluate the prevalence of physiological and pathological skin changes in pregnancy. and correlate the prevalence of these cutaneous changes and diseases in relation to gravidity.

**Materials & Methods:** An observational cross-sectional study was conducted over a period of six months. A total of 500 pregnant Libyan women attending the gynecology and obstetrics OPD were enrolled in the study. A detailed history, a general systemic examination, and a complete dermatologic examination were carried out on all patients. Appropriate investigations were done if required to confirm the diagnosis.

**Results:** A total of 500 pregnant Libyan women were studied. 60%. Physiological changes and diseases were observed in (99%); and pregnancy-related dermatoses were observed in (3%). Pigmentary changes were the most common physiological changes in both primigravida and multigravida, with (83.3%) and (82.2%), respectively. The specific dermatoses of pregnancy were seen in (3%). The most common conditions were atopic eruption of pregnancy. Infection and infestation were seen in (34.4%). The most common infections and infestations were vulvovaginal candidiasis.

**Conclusion:** The most common skin diseases seen in pregnancy are physiological skin changes. Pigmentary changes were the most common physiological changes in both primigravidas and multigravidas. The specific dermatoses of pregnancy were seen in only (3%) cases.

## Mapping eczema: Global prevalence in a worldwide study: ALL Project

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# **Introduction & Objectives:**

Atopic dermatitis, 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 epidemiological 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 [Brazil, Mexico; n=6501], Asia [China, India, South Korea; n=10500], North America [Canada, USA; n= 7500 ); Middle East [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. 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 atopic dermatitis/eczema in Europe is  $8.9\% \pm 0.4\%$ . In Asia and Latin America, the prevalence of atopic dermatitis is  $13.2\% \pm 0.6\%$  and  $10.2\% \pm 0.8\%$ , respectively. These two regions stand out statistically with significantly higher prevalences than in Europe ( $\chi^2 < 0.001$ ). In Africa, North America and Australasia, the prevalences are significantly lower, with respective values of  $6.1\% \pm 1.1\%$  for the first,  $7.5\% \pm 0.6\%$  for the second and 8. The prevalence in the Middle East is comparable to that observed in Europe, with a prevalence of  $8.9\% \pm 1.334\%$ . There is no significant difference between the prevalence rates of males and females. The prevalence rates for women are higher than those for men in Europe (10.4% vs 7.3%), Latin America (12.7% vs 7.7%), and Australia (10.5% vs 6.6%). In Asia, the gender difference is more balanced, with a prevalence rate of 13.4% for women compared to 13% for men (P-value 0.58).

A significant difference was observed globally, with a prevalence of 10.7% in urban areas, 7.5% in rural areas, and 8.6% in semi-urban areas. Additionally, there was no significant difference between fair skin (9.6%) and dark skin (9.9%) at the global level.

# **Conclusion:**

The ALL PROJECT study underscores variances in atopic dermatitis prevalence, noting elevated rates in Asia and Latin America compared to Europe, and lower rates in Africa and North America. These regional distinctions hint at potential impacts from environmental or genetic factors.

## Living with atopic dermatitis: An international comparative burden analysis

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## **Introduction & Objectives:**

Atopic dermatitis [AD] extends beyond mere skin affliction, significantly impacting the quality of life for patients across the globe. This examination underscores the significance of patient-focused care and anticipates the deep-seated effects of the condition on daily life and interpersonal connections.

#### **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]

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, thus providing a global and diversified perspective of the subjects studied. Patients reporting only AD as confirmed by a healthcare professional, were identified to avoid attributing effects to another skin condition. The results were compared using chi-squared 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:**

A total of 991 patients were identified with AD as their sole dermatological condition. The impact of AD on **personal life** [PL]is significant. In Europe, 27.2% of patients with AD experience a negative impact on their PL. This rate is higher in Asia, where 48.3% of patients suffer from it, and slightly higher in NA at 28.6%. In Africa (46.6%) and the ME (37.9%), the rates are similarly high.

**Feeling of fatigue**: In Europe, 39.9% of patients report feeling fatigued, compared with 50% in LA and 43.7% in Asia. In Africa, 43.1% of patients reported feeling tired due to their AD. This result is consistent with the finding that **difficulties in finding sleep** due to their eczema were reported by 39.3% of patients in Europe, 46% in and 38.3% in NA. **Sexuality:** A significant proportion of European patients (17.8%) reported that their sexuality was affected by their AD. This figure was similar in Africa (15.5%) and NA (15.5%), but higher in Asia (22%). **Discouragement:** A notable proportion of European patients (31.0%) reported feeling discouraged. This figure was similar to that observed in NA (31.0%), but lower in Asia (28.4%). In Africa, 43.1% of patients report feelings of discouragement. **Feelings of rejection** and **disgust** are experienced by 12.1% of Europeans, a figure that is lower than that observed in NA (21.4%). In Africa, this feeling is significantly higher, at 25.9%. A total of 10.9% of

European patients report feelings of disgust, rising to 17.7% in NA and 24.1% in Africa.

# **Conclusion:**

Our study highlights the diverse burden of AD , which extends beyond geographical borders but reveals notable regional disparities. Differences in emotional toll, interference with daily routines, financial strains, sleep disturbances, and intimate relationships underscore the necessity for tailored treatment approaches. Moreover, the data indicate the need to adjust interventions to both the socio-economic and medical environments to achieve optimal effectiveness.

# Mapping Psoriasis: Prevalence on a worldwide scale: Results of the ALL project

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# **Introduction & Objectives:**

Psoriasis, characterized by inflammatory skin lesions known as erythematosquamous plaques, impacts millions of individuals globally. Similar to atopic dermatitis, psoriasis exhibits a widespread presence worldwide, yet differences in prevalence and triggers illustrate the diverse nature of various regions and cultures.

#### **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]

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, thus providing a global and diversified perspective of the subjects studied. The results were compared using chi-squared 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 psoriasis varies from region to region. In Europe the prevalence is 4.6% [4.3%; 4.9%]. Asia has a higher prevalence of 5.7% [5.2% to 6.1% p-value <0.001], while Latin America has a prevalence of 3.1% [2.7% to 3.5% p-value <0.001]. These rates are statistically different from those observed in Europe. Conversely, the prevalence of psoriasis is lower in Africa and North America at 1.7% [1.1% to 2.2% p-value <0.001] and 3.7% [3% to 4.4%, p-value <0.002] respectively. Australia and the Middle East show similar prevalences to Europe at 4.6% (CI 3.7% to 5.5% P-value=0.97) and 4.9% [3.9% to 5.8% p-value=0.64] respectively, with no statistically significant difference.

In terms of gender distribution, the data show conflicting results, with women generally having a higher prevalence than men [But only the difference observed in Africa is significant.], such as in Australia, where the prevalence in women is 4.9% vs 4.3% [p=0.56], and the Middle East, where it is 5.3% vs 4.5% [p=0.45]. In NA [3.4% vs 4.1%, p=0.09], Asia [5.5% vs 5.9%, p=0.43], Europe [4.4% vs 4.8%, p=0.21]; LA [3.2% vs 3.1%, p=0.05] and Africa [1% vs 2.4%, p<0.001]. In Europe, there is no significant difference between individuals with fair skin (4.6%) and those with dark skin (4.4%) (p = 0.63).In Europe, there is no difference between rural, semi-urban and urban areas. (4.4%, 4.6% and 4.7% respectively).

## **Conclusion:**

The fluctuating occurrence of psoriasis worldwide underscores the necessity for tailored treatments that consider regional disparities and gender-specific factors.

These insights prompt a global reevaluation of approaches to enhance the care of psoriasis patients on an international scale.

## Mapping Hidradenitis suppurativa: Prevalence on a worldwide scale: Results of the ALL project

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## **Introduction & Objectives:**

Hydradenitis suppurativa (HS) is a chronic skin disorder characterized by enduringly painful nodules and recurrent abcesses. It deeply impacts patients' wellbeing, causing discomfort, pain, and potentially significant psychological and social difficulties. Assessing its influence across diverse populations could facilitate the development of more effective treatment approaches and customized support interventions.

### **Materials & Methods:**

The ALL PROJECT is a large-scale study of individuals representative of the adult population in 20 countries on 5 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]

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, thus providing a global and diversified perspective of the subjects studied.

#### **Results:**

The prevalence of HS disease in Europe is 1% (0.84% to 1.11%). In Asia and the Middle East, the prevalence is 2.0% (1.71% to 2.25%) and 3.3% (2.48% to 4.15%), respectively. These two regions stand out statistically, with significantly higher prevalences than in Europe. In, North America, Africa and Australia, the prevalence is significantly lower, with respective values of 0.7% [0.51% to 0.88%] for the first, 0.5% [0.17% to 0.83%] for the second and 0.4% [0.12% to 0.68%] for the third. The prevalence of AL was also lower, at 0.8% [0.57% to 1.00%]. There was no significant difference observed between the prevalence rates for men and women. In Europe, the prevalence rates for men were higher than for women (1.2% vs. 0.7%), as were the rates in North America (0.8% vs. 0.6%), Australia (0.6% vs. 0.2%) and Latin America [0.9% vs 0.7%].. In Asia, the difference between the sexes is reversed, with a prevalence rate of 2.6% for women compared with 1.4% for men. The same is true in ME [3.5% vs 3.2%]. Overall, a significant difference [<0.001] was observed, with a prevalence of 1.5% in urban areas, 0.7% in rural areas and 0.7% in semi-urban areas. Furthermore, no significant difference was observed between fair skin (1.2%) and dark skin (1.1%) overall.[P-value =0.33]

#### **Conclusion:**

For the first time, our study provides a global view of the prevalence of HS. The results are consistent with multiple

published studies, but provide robust information because a single methodology is used. The differences in results between continents indicate mutual challenges and the potential for collaborative solutions. These results underline the need for increased commitment to international research, greater awareness and standardised treatment methods.



Pigmentation disorders in NORTH ASIA: Results of the International Survey on Pigmentation-disorders Observational Tracking [I'SPOT] study. Description and prevalence compared with the SOUTHEAST ASIAN PACIFIC.

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# **Introduction & Objectives:**

Pigmentation disorders [PD] rank among the most common dermatological conditions, but their prevalence and impact remain poorly defined worldwide. This pioneering study aims to shed light on the self-reported prevalence of various PDs, including melasma [M], post-inflammatory hyperpigmentation [PIH], solar lentigo [SL], vitiligo [V], as well as periorbital [POH] and axillary hyperpigmentation [AH];

# **Materials & Methods:**

Project I'SPOT, which involved 48,000 individuals from 34 countries across all continents between 12/22 & 02/23, was designed to ensure demographic representativeness (gender, age, employment, region) using the quota method. The self-administered online questionnaire collected demographic data, self-reported pigmentation status based on descriptions and images, as well as other information related to the PD.

We specifically present the data for the 3 North Asia [NA] countries [China, Japan, South Korea] and compare them with the 4 Southeast Asian Pacific [SAP] countries [Singapore, Malaysia, Thailand, Indonesia].

#### **Results:**

In this study, 54.7% of individuals in NA expressed at least one PD, compared with 64.7% in SAP, a statistically significant difference (P-value < 0.0001). In 2 regions, the sex ratio favoured women, with 56.5% in NA compared with 55.9% elsewhere. With regard to the average number of PD per individual, the figures are more or less the

same in NA  $(2.1\pm1.4)$  as in SAP  $(2.1\pm1.3)$ , (Pvalue =0.8).

The prevalence of the various PD in NA reveals rates of 30.8% for SL, AH: 26.7%, PIH: 23.0%; POH:28.3%, Melasma: 14.8 %, and Vitiligo: 10.4%. Except for vitiligo, these PD mainly affect women, with rates ranging from 53.1% for PIH to 61.8 % for melasma, and average ages ranging from 27.9 to 41 years. Conversely, in the SAP, prevalences and age averages differ, with 24.7% for SL and lower rates for AH [16%], PIH [17.8%], , vitiligo [10.2%] or POH [17.6%], and higher rate for melasma [19%], and also showing a tendency to affect more women; For the remainder of the description, we identified individuals reporting a single PD. Around a third of people with PD reported having received a previous dermatological diagnosis, with a lower proportion in NA (26.5 %vs 41.4%, P-value <0.01). Patients with vitiligo in NA were the most likely to consult a dermatologist [Dg] (41.2%), a higher rate than their counterparts in SAP (39%). For the other PDs, between 16.7% & 31.2% of patients in NA & between 35.2 % & 52.7% in SAP reported being followed by a Dg. Interestingly, patients with a dermatological diagnosis are twice as likely to be followed by a Dg, with an average of 65.7 % for patients in NA and 76.6 % for those in the SAP [P-value < 0.01], underlining the importance of early diagnosis and specialist follow-up in the management of PD.

## **Conclusion:**

This study, Project I'SPOT, unveiled regional disparities in PD prevalence between NA & SAP countries, with NA showing slightly lower rates. Notably, PDs disproportionately affect women across all regions, except for Vitiligo, underscoring the necessity for gender-specific management strategies. Despite similarities in the average number of PDs per person, the findings stress the critical role of early diagnosis and specialist care, especially given the higher follow-up rates among diagnosed patients. These insights highlight the need for increased PD awareness and access to specialized care, particularly in areas with lower consultation rates, suggesting a global call to action to address PD management gaps

C1 - Internal use

C1 - Internal use

# Mapping vitiligo: Prevalence on a worldwide scale: Results of the ALL project

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# **Introduction & Objectives:**

Vitiligo, a chronic inflammatory skin disease characterized by the loss of pigmentation, impacts millions of individuals globally. This study aims to investigate regional differences in vitiligo prevalence, examining disparities between continents and the effects of environmental factors and living conditions on the course of the disease.

## **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] 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, thus providing a global and diversified perspective of the subjects studied. The results were compared using chi-squared 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 in Europe is 1.3% [0.76% to 1.21%]. In Asia, the Middle East and Africa, the prevalence is 2.5% [2.24% to 2.84%], 3.2% [2.38% to 4.02%] and 1.7% [1.08 to 2.26], respectively.

Only the first two regions stand out statistically, with significantly higher prevalences than in Europe [P value <0.001; 0.016]. Prevalence is lower in Latin America and North America, with values of 0.9% [0.66% to 1.12%; P value 0.016] for the former and 1.0% [0.76% to 1.21%; P value <0.058] for the latter. Prevalence was also lower in Australia, at 1.0% [0.56% to 1.44%].

Prevalence rates for men and women differ by region.

Prevalence rates for men are higher than for women in Europe (1.6% vs 1.0%), NA(1.4% vs 0.6%) and Africa (1.8% vs 1.5%). In Asia, the gender difference is reversed, with a prevalence rate of 2.9% for women compared with 2.2% for men. The situation is similar in Latin America [1.0% for women vs 0.8% for men].

Overall, a significant difference [<0.0001] was observed, with a prevalence of 1.8% in urban areas, 1.0% in rural areas and 1.2% in semi-urban areas. In addition, no significant difference was observed between fair skin (0.9%)

and dark skin (1.4%) overall.

To avoid any potential bias, we identified patients who did not report any skin disease other than Vitiligo's disease to describe their treatment history [n=179]. In 50.8% of cases, patients reported having consulted a doctor about their Vitiligo disease in the previous 12 months. The proportion of patients who consulted a physician ranged from 47% in Europe to 62.5% in the Middle East, 70.3% in Asia and 61.5% in Latin America. The majority of these consultations were with dermatologists (63.7%). In Europe, 61.5% of consultations were with dermatologists.

## **Conclusion:**

The findings reveal fluctuating prevalence rates of vitiligo across regions, with heightened occurrences noted in Asia and the Middle East as opposed to Europe and the Americas. These differences could stem from variations in genetic predispositions, environmental conditions, or disparities in healthcare access and utilization.

# A study on 12,000 women reveals that irregular menstrual cycles are responsible for a higher reported prevalence of sensitive skin

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## **Introduction & Objectives:**

Sensitive skin is a multifaceted dermatological condition characterized by sensations like tightness, unusual stinging, burning, tingling, pain, and itching. Research conducted over the past two decades in the general population indicates a greater prevalence of sensitive skin among women compared to men. Nonetheless, there is a paucity of studies specifically targeting women of childbearing age.

The aim of our study was to evaluate the prevalence of sensitive skin among women in childbearing age and in perimenopause.

# Materials & Methods:

Between January and February 2023, online interviews were carried out using the Ipsos Access Panel, employing a quota method based on age, occupation, and region. A total of 20,001 interviews were conducted across 20 countries spanning five continents, involving representative samples of women aged 18 to 55. Our focus was primarily on European women, including those from France, Germany, Greece, Italy, Poland, Spain and Turkey. These women were compared to those from North America (Canada and Canada) and Latin America (Argentina, Brazil, Chile and Mexico).

#### **Results:**

Our populations included 7,501 European women, 1,200 North American women and 3,500 women from Latin America.

The reported prevalence of sensitive skin in Europe was  $54.1\% \pm 1.1\%$  vs  $44.3\% \pm 2.0\%$  in North America and  $48.0\% \pm 1.6\%$  in Latin America (p <0.001). The reported prevalence of sensitive skin decreased with age.

In women of childbearing age or peri-menopausal women, the reported prevalence of sensitive skin was significantly higher in women claiming irregular periods than in women claiming regular periods (Europe: 60.2% vs 53.1%; North America: 51.9% vs 41.9%; Latin America: 52.7 vs 41.0%).

The degree of skin sensitivity reported according to the menstrual cycle phase could not be evaluated given the declarative data collection method.

On the other hand, we found that, whatever the geographic region and whether menstruation was regular or irregular, women who did not report sensitive skin were more likely to feel well (WEMWBS). (Europe: 61.6% vs

54.2%; North America: 54.3% vs 47.0%; Latin America: 61.6% vs 47.0%).

# **DISCUSSION**

Our research unveiled a significant occurrence of sensitive skin among European women, displaying a discernible variance based on age and its correlation with overall wellness. Within Europe, over half of women acknowledge experiencing sensitive skin, surpassing the rates observed in North and Latin America. This sensitivity tends to diminish with advancing age, indicating the influence of hormonal fluctuations and aging on skin health. Furthermore, women not reporting sensitive skin exhibit higher levels of well-being, irrespective of geographical region. These revelations underscore the necessity for a tailored approach to managing sensitive skin in Europe, considering age-related variables and overall well-being.

## Parity and pregnancy outcomes in systemic sclerosis: a mono-centric case-control study

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## **Introduction & Objectives:**

Systemic sclerosis (SSc) is a rare connective-tissue disease characterized by the triad of autoimmunity, vasculopathy and fibrogenesis of the skin and internal organs. Considering the rarity of the disease itself and its typical onset timing (peak of onset in the fifth decade of life), pregnancy in SSc is a relatively uncommon event. However, with more women delaying motherhood, the likelihood of patients becoming pregnant after disease onset is increasing. The available literature suggests that female SSc patients can have normal pregnancies, although they have a higher risk compared to the general population. Disease activity generally remains stable during pregnancy, and a well-timed pregnancy with careful monitoring can increase the likelihood of a successful outcome.

The objective of this study was to enhance our understanding of pregnancy outcomes in individuals with SSc in comparison to the broader obstetric population. To achieve this, we implemented a case-control trial with a comprehensive questionnaire on obstetric history.

#### Materials & Methods:

As part of a community based case-control study in Belgium, we used a self-reported questionnaire to assess reproductive health in patients with SSc compared to the broader population. The survey encompassed general demographics and obstetric history. Chi-square tests compared categorical variables, and multivariate logistic regression estimated odds ratios (OR) with 95% confidence intervals (CI).

## **Results:**

A total of 110 patients with SSc and 220 age and gender matched controls participated, including 113 (34.2%) males and 217 (65.8%) females. Mean age was 60.37 years (range 24-89 years). Although SSc patients displayed higher rates of preterm deliveries (34.2% vs. 19.1%), low birth weight (8.6% vs. 5.2%), and miscarriages (26.4% vs. 11.4%), these differences were not statistically significant. Infertility treatments were significantly more common in the case group (10.9% vs. 5%). Maternal age at first delivery, number of children, and time to conceive were similar between groups. Only 5 patients were pregnant after disease onset. Patients had lower education levels (26.4% vs. 50.5%, p<0.05) and a higher smoking history (51.8% vs. 43.6%, p=0.163). Multivariable analysis identified education level as associated with the disease (OR 0.258, 95% CI 0.145-0.458).

#### **Conclusion:**

Our findings align with existing literature, indicating acceptable pregnancy outcomes for women with SSc compared to the general population. Our study, the first of its kind in Belgium, underscores the importance of addressing socioeconomic determinants in further SSc research.

# Systemic sclerosis and exposure to solvents in hair dyes: a monocentric case-control study

Anne-Catherine Dens<sup>1</sup>, Sterre Liesens<sup>1</sup>, Canan Guvenc<sup>1</sup>, Ellen De Langhe<sup>1</sup>

<sup>1</sup>Herestraat, Leuven, Belgium

# **Introduction & Objectives:**

Systemic sclerosis (SSc) is a complex autoimmune disease with the highest mortality rate among rheumatic diseases. Multiple case-control studies have linked solvent exposure to SSc development, raising public health concerns due to its common use in hair dyes.

This study assessed the relationship between SSc and occupational exposure to solvents in hair dyes by hairdressers and non-professional exposure in individuals who get their hair dyed. Our hypothesis states that exposure to solvents in hair dyes contributes to the development of SSc in hairdressers.

#### **Materials & Methods:**

We conducted a monocentric community based case-control study, including 110 patients with systemic sclerosis and 220 controls. All data were collected between June 2022 and September 2023. For each patient with systemic sclerosis, two age- and gender matched controls were selected. All participants completed a questionnaire on exposure regarding their professional history and leisure activities, such as the frequency of getting a hair coloring and whether they practiced the profession of hairdressing. Descriptive statistics were used to describe the general characteristics of both groups.

## **Results:**

We observed no difference in the number of hairdressers between cases (n=3) and controls (n=6). The frequency of hair dye usage among the hairdressers and the hair coloring frequencies between both groups did not differ. Socioeconomic status significantly varied (p < 0.001) between patients and controls, with 26% (29/110) of patients and 51% (111/220) of controls having completed higher education.

# **Conclusion:**

We found no difference in the number of hairdressers between both groups. However, our monocentric case-control study is limited by a small sample size.

## Breast implants and systemic sclerosis: a monocentric case-control study

Anne-Catherine Dens<sup>1</sup>, Birthe Van Loock<sup>1</sup>, Canan Guvenc<sup>1</sup>, Ellen De Langhe<sup>1</sup>

<sup>1</sup>KU Leuven, Leuven, Belgium

# **Introduction & Objectives:**

The aetiology of systemic sclerosis (SSc), a rare autoimmune connective tissue disease, remains unclear, but is accepted to be linked to an interaction between genetic susceptibility and environmental factors, such as silica exposure. The introduction of silicone breast implants (SBIs) and a simultaneous increase in case reports of SSc developing in women with SBIs led to further investigations and conflicting results concerning their contribution. This study aimed to assess the presence of silicone breast prostheses in the Belgian SSc population, compared to a control population.

#### **Materials & Methods:**

In this monocentric case-control study, female SSc patients, aged 18 years or older, fulfilling the ACREULAR 2013 systemic sclerosis criteria or LeRoy and Medsger classification criteria for early systemic

Sclerosis, in active follow-up at our centre were included. For each patient, 2 age and gender matched controls were recruited. Personal and clinical data were collected using a self-administered questionnaire. Statistical analysis was performed using SPSS statistical software. The strength of each association was expressed as odds ratios (OR) with a 95% confidence interval (CI).

## **Results:**

We included 73 female SSc cases and 144 controls, with both a mean age of 59 years (± 11 years). Among controls, 13.2% reported having at least one autoimmune disease (RA, myositis, SSc, SLE, Behçet's disease, psoriasis,...etc.). Both SSc patients (58.9% vs 41.1%, p = 0.375) and controls (65.3% vs 34.7%, p = 0.375) had a higher proportion of never-smokers. Controls were statistically significantly higher educated than cases, with 54.2% of the control group possessing a bachelor's or master's degree compared to 34.2% in the patient group (p-value = 0.005). In the entire study cohort, three cases and one control had SBIs. In this implant group, only the control individual, with no other autoimmune disease reported, had a history of smoking. Patients had their prostheses placed later than the control (2010 and 2022 vs 2003). One patient developed SSc after SBI placement, while the other one developed it before. There were no ruptures reported.

#### **Conclusion:**

We found an interesting numerical ratio concerning breast implants, with 3 out of 73 patients versus 1 out of 144 controls. However, with our limited monocentric data, it was not possible to make a clear statement about the

potential association between SBIs and SSc. Further research is needed.

# The Influence of Hormonal Variations on skin sensitivity and other self-reported skin complaints: A Comparative Study of Fair and Dark Phototypes

Thierry Passeron<sup>1</sup>, Claire Deloche<sup>2</sup>, Stéphanie Lerclerc-Mercier<sup>2</sup>, Charles Taieb<sup>3</sup>, Charbel Skayem<sup>4</sup>, Beatriz Santanna<sup>5</sup>

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# **Introduction & Objectives:**

Fluctuations in hormones, particularly influenced by the consistency of the menstrual cycle, have a substantial impact on the well-being and appearance of women's skin. Consistent cycles coincide with predictable hormonal shifts that cyclically influence skin hydration, sebum production, and sensitivity. In contrast, irregular cycles often result in more noticeable disruptions, such as heightened sensitivity, fluctuations in moisture levels, and greater susceptibility to inflammation and skin irritations. We aim to investigate whether skin phototype, whether light or dark, serves as a distinguishing factor in skin sensitivity and other self-reported skin complaints.

# **Materials & Methods:**

To understand the impact of hormonal fluctuations on skin health, the aim of this study was to investigate differences in in skin sensitivity and other self-reported skin complaints in women with regular and irregular menstrual cycles. A sensitivity analysis was carried out according to phototype, i.e. fair skin (FS) for phototypes I to III and dark skin (DS) for phototypes IV to VI. Between January and February 2023, the Ipsos Access Panel was used to conduct 20,001 online interviews in 20 countries using quota sampling. A DS group (n=4889) and a FS group (n=14961) were identified. 151 women refused to answer the phototype question. To assess the relative influence of hormonal variations skin sensitivity and self-reported skin complaints according to skin phototype, we quantified the influence of irregular menstrual cycles in light-skinned and dark-skinned women by calculating the absolute difference between the prevalence ratios for regular and irregular cycles.

#### **Results:**

The prevalence of sensitive skin in light-skinned women was 48.6%, while in dark-skinned women it was 42.1%. Statistical analysis revealed that irregular menstrual cycles were associated with an increase in the prevalence of sensitive skin, with an absolute difference in ratio of 0.114 in fair-skinned women and 0.087 in dark-skinned women, indicating a less pronounced impact of irregular cycles on sensitive skin in this group. With regard to pore dilation, we observed an absolute difference in the ratio of 0.077 in fair-skinned women, compared with 0.053 in dark-skinned women. Loss of elasticity shows a ratio difference of 0.077 in fair-skinned women and 0.085 in dark-skinned women. For fair-skinned women, thin skin was reported with an absolute ratio difference of 0.109, while for dark-skinned women, the difference is 0.103. As for wrinkles, the absolute ratio difference is 0.038 for fair-skinned women and 0.056 for dark-skinned women. For dark circles under the eyes, an absolute ratio difference of 0.063 was noted for fair-skinned women. No significant difference was found in dark-skinned women, with a p-value of 0.106.

#### Conclusion:

Our results underscore the notable influence of hormonal disruptions, especially when irregular menstrual cycles exacerbate them, on various self-reported skin complaints . In individuals with lighter skin tones, sensitive skin and enlarged pores are notably impacted, whereas concerns like thin skin and wrinkles are prevalent across both light and dark phototypes. These results emphasize the necessity of factoring in both phototype and menstrual cycle regularity when tailoring treatments for skin conditions, highlighting the pivotal role of hormonal elements in maintaining skin health.

A crossover worldwide study on the impact of hormonal factors in dark vs fair -skinned women in major skin conditions: result of women centricity project

Thierry Passeron<sup>1</sup>, Claire Deloche<sup>2</sup>, Stéphanie Lerclerc-Mercier<sup>2</sup>, Charles Taieb<sup>3</sup>, Charbel Skayem<sup>4</sup>, Beatriz Santanna<sup>5</sup>

<sup>1</sup>Côte d'Azur University, Nice University Hospital Center, Department of Dermatology, Nice, France, <sup>2</sup>Laboratoires Vichy, Scientific Communication, Levallois Perret, France, <sup>3</sup>European Market Maintenance Assessment, Patients Priority, Paris, France, <sup>4</sup>APHP - Hopital Ambroise Paré, Department of Dermatology, Boulogne Billancourt, France, <sup>5</sup>Laboratoires Vichy, Scientific Communication Director, Levallois Perret, France

# **Introduction & Objectives:**

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# **Materials & Methods:**

To understand the impact of hormonal fluctuations on skin health, the aim of this study was to investigate differences in in skin sensitivity and other self-reported skin complaints in women with regular and irregular menstrual cycles. A sensitivity analysis was carried out according to phototype, i.e. fair skin (FS) for phototypes I to III and dark skin (DS) for phototypes IV to VI. Between January and February 2023, the Ipsos Access Panel was used to conduct 20,001 online interviews in 20 countries using quota sampling. A DS group (n=4889) and a FS group (n=14961) were identified. 151 women refused to answer the phototype question. To assess the relative influence of hormonal variations skin sensitivity and self-reported skin complaints according to skin phototype, we quantified the influence of irregular menstrual cycles in light-skinned and dark-skinned women by calculating the absolute difference between the prevalence ratios for regular and irregular cycles.

#### **Results:**

The prevalence of sensitive skin in light-skinned women was 48.6%, while in dark-skinned women it was 42.1%. Statistical analysis revealed that irregular menstrual cycles were associated with an increase in the prevalence of sensitive skin, with an absolute difference in ratio of 0.114 in fair-skinned women and 0.087 in dark-skinned women, indicating a less pronounced impact of irregular cycles on sensitive skin in this group. With regard to pore dilation, we observed an absolute difference in the ratio of 0.077 in fair-skinned women, compared with 0.053 in dark-skinned women. Loss of elasticity shows a ratio difference of 0.077 in fair-skinned women and 0.085 in dark-skinned women. For fair-skinned women, thin skin was reported with an absolute ratio difference of 0.109, while for dark-skinned women, the difference is 0.103. As for wrinkles, the absolute ratio difference is 0.038 for fair-skinned women and 0.056 for dark-skinned women. For dark circles under the eyes, an absolute ratio difference of 0.063 was noted for fair-skinned women. No significant difference was found in dark-skinned women, with a p-value of 0.106.

#### Conclusion:

Our results underscore the notable influence of hormonal disruptions, especially when irregular menstrual cycles exacerbate them, on various self-reported skin complaints . In individuals with lighter skin tones, sensitive skin and enlarged pores are notably impacted, whereas concerns like thin skin and wrinkles are prevalent across both light and dark phototypes. These results emphasize the necessity of factoring in both phototype and menstrual cycle regularity when tailoring treatments for skin conditions, highlighting the pivotal role of hormonal elements in maintaining skin health.

Risk factors of diagnostic errors and diagnostic wandering in patients with hidradenitis suppurativa: a nationwide French study on over 1000 patients Result of the VHS project

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# **Introduction & Objectives:**

The frequent wandering diagnosis [WD] of hidradenitis suppurativa (HS) is an issue, causing notable delays in addressing and treating this persistent skin condition. HS Patients frequently report enduring several years before receiving an accurate diagnosis. This prolonged period of medical ambiguity can worsen symptoms and substantially affect patients' well-being.

## **Materials & Methods:**

A digital questionnaire was administered to French patients with confirmed HS. Respondents were recruited by the project's partner patient associations and by dermatologists in the HS-France group, a task force group of the French Dermatology Society. The project has received a favorable opinion from an ethics committee. The questionnaire, co-constructed with experts from the HS France group and patient associations, explores a series of themes relating to the experience of patients with HS. The objective of our study included questions to identify the factors that contribute to the delay of the diagnosis and the care of HS disease. Multivariate logistic regression was used to assess the relationship between WD and the explanatory variables: gender, location (rural [R]vs. urban [U] or semi-urban [SU] ), length of time since diagnosis (less or more than 3 years), level of income (more or less than the French median wage, i.e. 1,500 € per month).

#### **Results:**

A total of 1055 responses were deemed evaluable, with a female-to-male ratio of 76.78% vs 23.22%. The mean age of respondents was  $38.7\pm11.5$ . Men [M] were found to be significantly older than women [W] [40.7 vs  $38\pm1$ . P<0.001]. The mean age of onset the HS reported was 12.61 years ( $\pm11.15$ ); In terms of income, 48.53% (n=518) of participants had an income below the median.

With regard to the time taken to obtain a diagnosis of the HS, 69.10% (n=726) of participants reported WD, with 72.15% (n=583) in W and 57.89% (n=143) in M. (p < 0.001). In multivariate analysis factors associated WD were as follow: income below the median (OR: 1.65 [1.17; 2.32], p = 0.004). Additionally, having had the HS for 3 years or more (OR: 1.71 [1.1;2.1],p=0.01] and being a woman (OR: 1.97, [1.36; 2.86], p = 0.0004). Similarly, the lack of a degree [OR=2.07, [1.12; 3.82], p = 0.01] was also found to be associated with the experience of WD. Conversely,

there was no significant association between living in an urban or rural area [OR: 1.02, [0.72; 1.46], p = 0.8964] and variations in having experienced WD

#### **Conclusion:**

The results reveal notable disparities between M & W concerning WD, duration of disease presence, geographic location, and income levels, underscoring crucial considerations for enhancing the management and treatment of HS; Regarding WD, the efforts by academic societies over the past five years to disseminate information to health authorities, the media, other physicians than dermatologists and the general public appear to have yielded positive outcomes. It is heartening to observe a reduction in WD in recent years. However, we must not overlook the reality that individuals most affected by WD are often those who are most vulnerable, typically low-income and lacking in educational qualifications. The finding that residing in either R or U areas does not influence WD should not be interpreted as a cause for celebration but rather indicative of inadequate healthcare access in various parts of the country. These findings suggest that targeted interventions in patient education and medical training could mitigate these diagnostic disparities.

## descriptive study of the characteristics of admissions in dermatology

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<sup>1</sup>Military hospital of Tunis, dermatology

# **Introduction & Objectives:**

The current economic pressure worldwide has been pushing to reduce bed capacities particularly in certain specialties such as dermatology. The aim of this study was to investigate the characteristics of hospital admissions in dermatology and identify factors associated with prolonged hospital stays.

#### **Materials & Methods:**

We conducted a retrospective study of all patients admitted to the dermatology department of the Military hospital of Tunis during a period of five years (2018-2022). Data were obtained from patients' medical records.

#### **Results:**

We collected 1014 hospitalized patients with an average age of 30 years and a sex ratio of 5.9. Infectious dermatoses accounted for 47.92% of admissions, dominated by erysipelas (n=131) and cutaneous leishmaniasis (n=90). Hypersensitivity conditions ranked second (11,93%) primarily manifesting as eczema, dyshidrosis and drug reactions. Inflammatory dermatoses (9.86%) were led by psoriasis (n=80). Other dermatoses included neoplasms (5.32%), burns, diabetic foot and post operative wounds (4.73%), vascular diseases (4.04%) and systemic diseases (3.74%). Main reasons for hospitalization were clinical severity (42.8%) and the need for inpatient treatment (22.6%). The average hospital stay was six days. Of all patients, 84.2% have clinically improved. Only 10% were readmitted for the same disease. A statistically significant association was found between the duration of hospital stay and the following factors: age (p=0.001, OR=1.01), necessity of inpatient treatment (p=0,001, OR=1.87), investigations (p=0.045, OR=2.2), hypersensitivity conditions (p=0,01, OR=0.6), burns diabetic foot and post operative wounds (p=0.009, OR=2.2), and annex's disease (p=0.001, OR=0.08).

# **Conclusion:**

Admissions in dermatology were dominated by infectious dermatosis. This result joins other studies conducted in developing countries with precarious socioeconomic conditions. In developed countries such as France, the first cause of admission was tumor diseases and leg ulcers. Clinical severity emerged as the primary reason for hospitalization which was also reported by Munro et al. in a study conducted in England. The favorable outcome and low readmission rate in our study have proved the benefit of inpatient treatment. There is always a demand and a need for a hospital dermatology service. This could even facilitate the subsequent outpatient management and thereby improving their quality of life.

# Incidence and characterization of skin cancer in a Spanish Mediterranean area: a prospective population-based observational cohort study

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## **Introduction & Objectives:**

Skin cancer, including malignant melanoma (MM), basal cell carcinoma (BCC) and squamous cell carcinoma (SCC), has shown a rising incidence worldwide. Non-melanoma skin cancer is often excluded from the reporting of cancer statistics, and specifically for BCC, the literature referring to its epidemiology in Spain is scarce. This is due to the methodological difficulties in describing the incidence of a tumor with such low mortality rates, often multiple, and in many cases not surgically treated. The Bages and Moianes regions from Catalonia, Spain (195,301 inhabitants) present circumstances that make them particularly favorable for extracting such data: a single hospital is the reference for the entire region, dermatologists have full access to information from private centers, a established teledermatology circuit allows a rapid identification of patients with high suspicion of skin cancer, and the distance to larger cities makes it less likely for patients to initially seek medical attention out of the region. The main objective of this study was to estimate the crude and sex- and age-adjusted incidence of skin cancer in the population of the Bages and Moianes regions, and in the European and global levels. The secondary objective was to characterize the three most common types of skin cancer (BCC, SCC, and MM) clinically and histopathologically and to compare main epidemiological features among them.

## **Materials & Methods:**

From May 1, 2022, to April 30, 2023, all diagnosed skin cancers of residents of these regions were included in a prospective longitudinal population-based observational cohort study. All dermatologists working in the area, both those who work in public and private healthcare, agreed to participate in the study. Clinical and/or histological diagnosed BCC and histological-confirmed other types of skin cancer during the study period were included. Metastatic tumors of non-cutaneous or unknown primary origin, recurrent tumors and tumors diagnosed in patients with a diagnosis of a genetic disorder predisposing to skin cancer were excluded. The demographic characteristics of the patients and the clinical and histological characteristics of each tumor were recorded, as well as the treatment received. Multiple tumors in different sites were counted and registered individually. Incidence rates were calculated by sex and age, standardized to the World and European Standard Population. Statistical analysis was conducted using the SPSS statistical software version 26.0 for Windows (SPSS Inc., Chicago, IL, USA).

## **Results:**

Among the 2053 tumors registered, 1642 were BCC, 334 were SCC and 63 were MM. The crude incidence rates per 100,000 person-years were 840.75 for BCC, 171.02 for SCC and 32.26 for MM. European population standardized rates were 760.92, 147.16 and 29.47 per 100,000 person-years for BCC, SCC and MM, respectively. In contrast, the

rates standardized to the World population were 303.26 for BCC, 44.16 for SCC and 15.41 for MM per 100,000 person-years. The age-adjusted incidence rates in non-melanoma skin cancer showed a substantial increase after the age of 65 while MM had a highest incidence between 60-64y.

# **Conclusion:**

We consider that our study provides a good estimate of the real incidence of non-melanoma skin cancer in the studied region. Our study reveals higher incidence rates of skin cancer than previously reported in Spain and Europe.

## Impact of social media on the training of dermatology residents in Morocco

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<sup>1</sup>university hospital souss massa, dermatology venerology

**Introduction & Objectives:** The use of the Internet and social media has profoundly transformed many fields. This study aims to explore its impact on the training of dermatology residents in Morocco by discussing the advantages and concerns associated with this technological evolution.

**Materials & Methods:** We conducted a study based on an anonymous questionnaire dedicated to dermatology residents in Morocco. The descriptive study was conducted using Google Forms and Excel.

Results: We collected a total of 42 responses. The average age was 27 years, and the male-to-female ratio of 0.1, with 38 women and 4 men. First-year residents were the most numerous respondents (42.9%). All respondents had easy access to the internet and predominantly used social media on their mobile phones (83.3%), explaining the increased usage rate during working hours (88.1%) with an average of 2 to 5 hours spent on social media per day, of which 47.6% spent between 1 and 2 hours for professional skill improvement purposes. The most exploited platforms for learning purposes were YouTube, Instagram, and WhatsApp. Snapchat and Twitter were the least exploited (less than 3%). Within the following lists of our respondents on social media, 88.1% had only few dermatologists or dermatology learning pages. Regarding the aims of exploitation, sharing studies and scientific articles ranked first (52.4%), followed by educational videos and interpretation of dermoscopic images (42.8%). Among respondents from faculties equipped with university platforms, 53.8% claimed never to have used it, with the most cited limitations being the lack of mastery of the tool and the difficulty of accessibility to the platform. On the other hand, the diversity of communication means, the richness of content, accessibility, and the large community of healthcare professionals were the main advantages of social media compared to the traditional platform. The main limitations were that these tools presented a significant distraction (83.3%) and the lack of reliability of information (73.8%). In total, 92% of participants agreed that social media can improve the quality of their training. Most studies reported in the literature on the use of social media by medical professionals in their training covered all specialties and included specialists and students. The usage rates were similar to our results, but the most used platforms were Twitter and Facebook. To our knowledge, no study has addressed this impact on dermatology residents specifically. Further studies would be desirable to be able to compare the results.

**Conclusion:** social media could be beneficial for the training of residents in different specialties in general if well explored. Teaching methods should increasingly focus on this aspect, as nowadays people tend to spend more time on their phones than on books.

# Epidemiological and clinical profile of dermatological pathology identified during medical caravans in our region

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<sup>1</sup>CHU SOUSS-MASSA, DERMATOLOGY, Agadir, Morocco

# **Introduction & Objectives:**

The dermatological pathology poses a public health challenge in developing countries, often observed during general medical consultations as well as during medical caravan missions. Given the limited epidemiological data on dermatoses in our region, this study aims to present the epidemiological and clinical profile of observed skin conditions, following the earthquake, during 4 medical caravans conducted in different rural areas in our region, located in the south of our country where access to dermatologists is limited.

#### Materials & Methods:

It is a descriptive retrospective study involving all individuals who presented for free dermatology consultations during medical caravans organized in different rural areas surrounding our city, at different times, from October 2023 to April 2024.

# Results:

In total, 200 patients were examined, including 89 females (44.5%), 53 males (26.5%), 30 girls (15%) and 28 boys (14%). The age of the patients ranged from 1 year to 91 years, with a mean age of 31.20 years. The most represented age group was 18 to 34 years. Among the documented dermatoses, infectious dermatoses ranked first in children, accounting for 50% of cases, with impetigo being the most common infectious pathology at 27.58%. In adults, inflammatory dermatoses ranked first in 52.81% of cases, with more than half reporting exacerbation of their condition after the earthquake. Acne was the most frequent inflammatory dermatosis at 29.33%. In children, inflammatory dermatoses ranked second at 46.55%, with acne being the most common at 40.47%. Infectious dermatoses ranked second in adults at 15.49%, with interdigital intertrigo predominating at 50%. Tumoral pathology ranked third in adults at 9.85% of cases, dominated by basal cell carcinoma (28.57%), while pigmentary disorders ranked fourth, representing 6.33% of cases, with melasma predominating at 88.88%. Androgenetic alopecia was observed in 3.52% of cases, while autoimmune pathology accounted for 2.82% of cases. Xerosis cutis was found in 4 patients.

# **Conclusion:**

Medical caravans, essential humanitarian actions, provide assistance to underserved populations, often located far from healthcare facilities, and offer an opportunity to assess the epidemiological and clinical status of skin health in these regions. However, to provide a complete picture of these conditions on a national scale, additional studies are required in different regions of the country.