



**Abstract N°: 641**

**Comparing the Performance of Claude 3 Opus and GPT4-Vision in Skin Lesion Image Analysis and Melanoma Diagnosis: Exploring the Application Potential of Different Large Language Models in Dermatology**

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**Introduction & Objectives:**

Recent advancements in artificial intelligence (AI) and large language models (LLMs) have shown promising potential in various medical fields, including dermatology. LLMs, such as ChatGPT, have demonstrated their ability to generate human-like responses to text-based prompts and assist in clinical decision-making. With the introduction of image analysis capabilities in LLMs, such as ChatGPT Vision, the application of these models in dermatological diagnostics has garnered significant interest. However, the emergence of other LLMs, such as Claude 3 Opus, warrants investigation. We compared the diagnostic performance of Claude 3 Opus and GPT4-Vision to provide insights into their strengths and weaknesses and guide the selection and optimization of AI-assisted diagnostic tools in dermatology.

**Materials & Methods:**

We randomly selected 100 histopathologically confirmed dermatoscope images (50 malignant, 50 benign) from the International Skin Imaging Collaboration (ISIC) Archive database. Each model provided top 3 differential diagnoses for each image. We assessed primary diagnosis accuracy, top 3 differential diagnoses accuracy, and malignancy discrimination ability. McNemar's test determined statistical significance ( $\alpha=0.05$ ).

**Results:**

For primary diagnosis accuracy, Claude 3 Opus achieved 54.90% sensitivity, 57.14% specificity, and 56.00% accuracy, while GPT4-Vision demonstrated 56.86% sensitivity, 38.78% specificity, and 48.00% accuracy ( $p=0.170$ ). For top 3 differential diagnoses accuracy, Claude 3 Opus and GPT4-Vision included the correct diagnosis in 76.00% and 78.00% of cases, respectively ( $p=0.564$ ). For malignancy discrimination, Claude 3 Opus outperformed GPT4-Vision with 47.06% sensitivity, 81.63% specificity, and 64.00% accuracy compared to 45.10%, 42.86%, and 44.00%, respectively ( $p=0.001$ ).

To further quantify the difference in malignancy discrimination ability, we calculated odds ratios (ORs) and 95% confidence intervals (CIs). Claude 3 Opus had an OR of 3.951 (95% CI: 1.685-9.263), indicating a stronger association between its predictions and actual malignancy compared to GPT4-Vision's OR of 0.616 (95% CI: 0.297-1.278).

**Conclusion:**

While both models demonstrated similar performance in primary diagnosis and top 3 differential diagnoses accuracy, Claude 3 Opus showed a statistically significant advantage in malignancy discrimination. This suggests that Claude 3 Opus's architecture and training data may be better suited for distinguishing between malignant and benign skin lesions, potentially impacting clinical decision-making.

However, these results should be interpreted cautiously due to the small sample size and limited range of skin

lesion types, which may limit generalizability. Future research should validate these findings using larger, diverse datasets with a wider variety of skin lesions and control for image quality factors. Our study highlights the potential of LLMs in assisting dermatologists and emphasizes the importance of developing robust, transparent, and clinically validated models through collaborative efforts between AI researchers, dermatologists, and other healthcare professionals to improve patient care and outcomes.

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**Abstract N°: 651**

**Comparing the Performance of Claude 3 Opus and GPT4-Vision in Dermatoscope images Analysis and Melanoma Diagnosis: Exploring the Application Potential of Different Large Language Models in Dermatology**

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<sup>1</sup>West China Hospital, Sichuan University, Chengdu, People's Republic of China

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datasets with a wider variety of skin lesions and control for image quality factors. Our study highlights the potential of LLMs in assisting dermatologists and emphasizes the importance of developing robust, transparent, and clinically validated models through collaborative efforts between AI researchers, dermatologists, and other healthcare professionals to improve patient care and outcomes.

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**Abstract N°: 783****Dermoscopy for vulval Herpes simplex in pediatric age group**Sweta Rambhia<sup>1, 2</sup><sup>1</sup>Just Care Dental and Skin Clinic, Mumbai, India, <sup>2</sup>Dermatology**Introduction & Objectives:**

Herpes Simplex is a prevalent dermatological condition often encountered in outpatient departments. The utilization of a Dermoscope is becoming increasingly recognized as a crucial non-invasive diagnostic tool for Herpes Simplex infections. Despite its common occurrence, the Dermoscopic characteristics of vulval Herpes Simplex have not been extensively studied. This case report aims to highlight the Dermoscopic features of vulval Herpes Simplex, shedding light on its diagnostic potential in cases with delayed and ambiguous presentations.

**Materials & Methods:**

A 12-year-old female patient presented with numerous painless, pruritic, raised lesions on her vulva, accompanied by a history of burning sensation and itching for 1-2 days. No history of trauma, insect bites, or the use of topical medication was reported, and there were no prior occurrences of similar lesions. The patient's mother denied any history of sexual intercourse or sexual abuse. Cutaneous examination revealed multiple vesiculopapules and erosions on the vulva. Blood tests were conducted, revealing negative results for VDRL and Elisa for HIV, while serology for IgG HSV was positive. Dermoscopy was performed using the Dermlite DL4, and the findings were recorded.

**Results:**

Dermoscopic examination revealed distinct features of vulval Herpes Simplex. White globules were observed along with a 3-zone pattern: the first zone was predominantly red to brown, the second zone was central and white, surrounded by the third zone, which appeared erythematous. To the best of our knowledge, this is the first case report detailing the Dermoscopic features of vulval Herpes Simplex.

**Conclusion:**

In conclusion, Dermoscopic examination serves as a valuable diagnostic tool in cases of vulval Herpes Simplex, especially when traditional diagnostic methods such as Tzanck smears or antibody titre tests are unavailable or time-consuming. Recognition of the characteristic Dermoscopic features, including the presence of white globules and the 3-zone pattern, can aid clinicians in prompt and accurate diagnosis, leading to timely initiation of antiviral therapy and improved patient outcomes. This case underscores the importance of incorporating Dermoscopy into the diagnostic armamentarium for dermatological conditions, particularly in cases with atypical presentations.



**Abstract N°: 814****Homogeneous blue dermoscopy pattern: not always blue nevus**

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**Introduction & Objectives:**

Intravascular papillary endothelial hyperplasia (IPEH), also known as Masson's tumour, is a common reactive histopathologic pattern that represents an exuberant endothelial cell proliferation in an organizing thrombus. Three types of IPEH have been described: a primary intravascular form that may arise in a thrombosed normal blood vessel; a secondary intravascular form that appears as an incidental finding in other vascular proliferations, such as vascular malformations, haemangiomas and pyogenic granulomas and; an extravascular form. Clinically, IPEH often presents as an asymptomatic, solitary, firm nodule with reddish colour of the skin or mucosa, with slow growth. The most common locations are the head, neck and hands, but it may involve all areas of the body. On histopathology, IPEH appears as a well-circumscribed nodule and is usually limited to a small vein, in the primary form, or a pre-existing vascular lesion, in the secondary form. It is characterized by multiple papillary structures lined by a single layer of endothelial cells within pre-existing vascular lumina. These endothelial cells show no atypia and low mitotic rate. Although, the definitive diagnosis of IPEH is based on histopathology, we suggest that dermoscopy may play a role as well.

**Materials & Methods:**

A 78-year-old woman presented with a 6-month history of an asymptomatic skin lesion on her left ear. She reported slow growth of the lesion and denied any preceding trauma. Physical examination revealed a bluish-coloured, dome-shape nodule, 7 mm in diameter, on her left tragus. She had been diagnosed with chronic lymphatic leukemia some years previously and she was under no treatment. Dermoscopy showed a homogeneous blue pattern with a few thin linear vessels at the lower pole of the lesion. Neither red, blue or black lacunes nor melanocytic dermoscopic structures, such as pigment network, dots/globules, streaks, pseudopods, blue-whitish veil and regression structures, were observed.

**Results:**

The lesion was completely excised and histopathological examination revealed a well-circumscribed nodule, limited to a vein and composed by vascular channels with prominent intraluminal papillary projections and a thrombus formation. The papillary structures were lined by a single layer of flattened endothelial cells and supported by fibrous stroma. Necrosis, cell pleomorphism or mitotic figures were not observed. Therefore, the diagnosis of IPEH was made.

**Conclusion:**

The diagnosis of IPEH is challenging and it is almost impossible to make a definitive diagnosis just by inspecting the lesion. IPEH may resemble a wide variety of benign and malignant vascular and non-vascular proliferative disorders, including pyogenic granuloma, haemangioma, Kaposi's sarcoma, angiosarcoma, hemangiopericytoma, angioendothelioma, lipoma, angiolipoma, fibrolipoma, cyst, mucocele, melanoma and others. We suggest that

dermoscopy may be a useful tool to improve the suspicion diagnosis of IPEH and, maybe, future cases might reveal the same dermoscopic features that we have described in our patient, which could ultimately serve to distinguish this entity.

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**Abstract N°: 953****Use of ultraviolet fluorescent dermoscopy and fluorescent dyes to determine the location of pigmented lesions in relation to papillar lines of the skin**

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<sup>1</sup>Ivano-Frankivsk National Medical University, Dermatology and venereology, Ivano-Frankivsk, Ukraine

**Introduction & Objectives:**

Examination of the papillary pattern with a dermatoscope is important for the differential diagnosis of benign and malignant acral lesions. If necessary, the skin surface is stained with a dye, which facilitates the localisation of ridges and furrows. At the same time, recent models of dermoscopes are additionally equipped with ultraviolet radiation sources, which allows expanding the functionality of the device. Our goal was to study the possibility of staining papillary patterns with fluorescent dyes visualised by ultraviolet fluorescence dermoscopy (UVFD).

**Materials & Methods:**

A group of healthy volunteers, a DermLite DL5 dermatoscope, a set of fluorescent dyes (UV markers of different colours), a personal computer, and an iPhone 14 Pro Max camera.

**Results:**

The skin of acral areas was stained in 30 volunteers: 22 women (73.3%) and 8 men (26.7%). Among the dyes used, only one showed the ability to penetrate the skin thickness and stain the papillary pattern in the vast majority of cases – 23 out of 30 cases (76.7%). When it was possible to stain, the pattern of parallel combs prevailed – 16 (69.6%). In the remaining cases, staining was not informative – 7 (30.4%).

The dye that gave the most stable results was selected for further use. In the examined volunteers, 6 acral nevi were detected, which were consistently stained with the classical and fluorescent test. In 4 of the 6 cases, the areas of the combs were stained, and in 2 cases, diffuse staining occurred.

**Conclusion:**

To establish the stability, reliability, and safety of the results of acral fluorescent dye staining, a study on a larger group of volunteers and the selection of a standardised dye is required. UVFD dermoscopy combined with fluorescent staining of the skin surface can be used for the differential diagnosis of acral pigmented lesions.



**Abstract N°: 1026****Baseline Dermoscopic Patterns Predict Long-Term Changes in Nevus Diameter and in Dermoscopic Features**

Ofer Reiter Agar<sup>1</sup>, Tomer Mimoun<sup>2</sup>, Alon Scope<sup>3</sup>, Nicholas Kurtansky<sup>1</sup>, Larissa Pastore<sup>1</sup>, Allan C. Halpern<sup>1</sup>, Ashfaq Marghoob<sup>1</sup>

<sup>1</sup>Memorial Sloan Kettering Cancer Center New York - Main Hospital, New York, United States,<sup>2</sup>Tel Aviv University, Tel Aviv-Yafo, Israel, <sup>3</sup>Sheba, Ramat Gan, Israel

**Introduction & Objectives:** When monitoring melanocytic neoplasms, the pattern of change may distinguish nevi from melanoma. Anticipating the growth dynamics of nevi based on their dermoscopic pattern is important to make this distinction. The primary aim was to examine the association between nevus dermoscopic pattern at baseline and diameter change during long-term monitoring. The secondary aim was to examine the association between nevus dermoscopic pattern at baseline and changes in both dermoscopic pattern and color during long-term monitoring.

**Materials & Methods:** The study included high-risk adult patients that underwent  $\geq 2$  total-body photography (TBP) sessions, with at least 14 years' time gap between first and last sessions. Nevi on the torso, with available dermoscopic images, were included. New and disappearing nevi were defined as nevi not appearing on the first and last TBP, respectively. Nevus diameter and color were assessed on clinical images of first and last TBP images. Dermoscopic images were analyzed for dermoscopic patterns and structures at baseline and follow-up.

**Results:** 877 nevi from 101 patients were included. Mean follow-up time between TBPs and between dermoscopic images was 16.7 and 11.5 years, respectively. Most nevi were reticular or structureless at baseline, but new nevi had a higher frequency of peripheral globules and smudgy patterns. Peripheral globules and diffuse negative network patterns as well as regression structures were associated with nevus diameter growth. 30% and 15% of new and existing nevi, respectively, demonstrated dermoscopic pattern change, mainly transforming into reticular and structureless patterns.

**Conclusion:** Among high-risk patients, nevi showing peripheral globules or negative network are more likely to grow in diameter during long-term monitoring. Most nevi retain their overall dermoscopic pattern and those that change, mostly transform into reticular or structureless patterns.



**Abstract N°: 1111****dermoscopy of Kaposi's disease botriomycoma like**

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<sup>1</sup>Cheikh Khalifa Bin Zayed Al Nahyan Hospital, Casablanca, Morocco,<sup>2</sup>CHU Ibn Rochd, Casablanca, Morocco

**Introduction & Objectives:**

Botriomycome-like kaposi disease is a rare clinical and pathological variant of kaposi disease.

It is a difficult entity to diagnose, as its clinical and histological features encompass those of both botriomycoma and kaposi disease.

We report a case of botriomycome-like kaposi disease that is quite unusual in terms of its localization and unique site.

**Materials & Methods:**

A 70-year-old female patient from Morocco, with a history of goitre on Levothyrox since 2014, consulted for a single ulcerating nodular lesion measuring 1.5 cm on the tongue that had been evolving for 1 month.

The patient reported a progressive increase in lesion volume.

Examination with an immersion dermoscope revealed milky areas crossed by linear vessels and haemorrhagic spots and surrounded by a peripheral whitish collar, suggesting botriomycoma in the first instance.

Exeresis biopsy with immunohistochemistry was consistent with Kaposi's disease.

The patient received a paraclinical evaluation, which did not reveal any other localization.

**Results:**

Botriomycome-like kaposi disease is a rare clinical and pathological variant of kaposi disease, a proliferative disease with a dual vascular and fibroblastic component induced by the eighth human herpes virus HHV-8. In its classic or Mediterranean form, it generally manifests as angiomatous papulo-nodules on the lower limbs of subjects over 60 years of age, in a lymphoedematous background. The unusual cephalic localization in this form, especially as the botriomycome-like

**Conclusion:**

Kaposi's disease can clinically and histologically mimic botriomycoma, representing a diagnostic pitfall. Botriomycome-like kaposi disease is very rare, which increases the diagnostic difficulty of this entity, and the location on the face increases the diagnostic challenge. Immunohistochemical study remains the gold standard for establishing the diagnosis.



**Abstract N°: 1166****Dermoscopy of basal cell carcinoma in association with other skin tumors**

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<sup>1</sup>Gregorio Marañón General University Hospital, Dermatology, Madrid, Spain, <sup>2</sup>Instituto de Investigación Sanitaria Gregorio Marañón, Madrid, Spain, <sup>3</sup>University of Cagliari, Medical Sciences and Public Health, Cagliari, Italy

**Introduction & Objectives:**

Tumor collision occurs when two or more neoplasms occur simultaneously in the same temporal and spatial area. This uncommon phenomenon sometimes complicates the detection of malignant lesions. The clinical diagnosis of these lesions is complex, but dermoscopy can improve the diagnostic accuracy.

**Materials & Methods:**

We describe four case reports of basal cell carcinomas colliding with other tumors in four patients treated at our hospital.

**Results:**

Case 1: A 55-year-old male presented with recent changes in a long-standing melanocytic lesion on the back. Dermoscopy revealed a typical cobblestone pattern of congenital melanocytic nevi and a bluish area with characteristic arborizing vessels of basal cell carcinoma.

Case 2: A 65-year-old female presented with the appearance of a lesion on the scalp. Dermoscopy showed a pinkish nodule with arborizing telangiectasias adjacent to a brown lesion without criteria for melanocytic lesion, with horn cysts and milia-like cysts. Histology confirmed a collision of seborrheic keratosis and basal cell carcinoma.

Case 3: A 20-year-old female presented with a nodule within a congenital lesion on the scalp. Dermoscopy revealed a greyish-blue nodule with fine vessels at its periphery on a white-yellowish papillomatous pattern, suggesting basal cell carcinoma on sebaceous nevus.

Case 4: A 75-year-old male was referred due to changes in a pigmented lesion on the forehead. Dermoscopy showed an annular-granular pattern, rhomboidal structures, and a brown pigment spot. In addition, a bluish-gray ovoid nest with leaf-like structures was observed in the same lesion. Histology confirmed a collision of lentigo maligna melanoma and basal cell carcinoma.

**Conclusion:**

Tumor collisions are unusual events and difficult to explain from an etiopathogenic perspective. Several hypotheses are proposed, such as tumors arising in the same spatiotemporal location by chance, possibly exacerbated by risk factors such as chronic light exposure and the development of mutations in cells of different histologic lineages that may interact epidermally and stromally. The presence of a color area other than brown in benign lesions should alert us to the potential development of melanoma or other malignant tumors.

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**Abstract N°: 1197****Dermoscopic features of pigmented fungiform papillae of the tongue**İlknur Aşgın Erkuran<sup>1</sup>, Gulsen Akoglu\*<sup>1</sup><sup>1</sup>University of Health Sciences, Gulhane Training and Research Hospital, Dermatovenereology, Ankara, Türkiye

**Introduction & Objectives:** Pigmented fungiform papillae (PFP) is among the differential diagnosis of pigmentation disorders of the oral mucosa and can be easily differentiated by clinical and dermoscopic examination. The PFP have three different pigmentation patterns: The fungiform papillae with well-circumscribed localized pigmented patches are Type 1, a group of 3-7 papillae randomly pigmented are Type 2, and the hyperpigmentation of almost all of the fungiform papillae on the dorsum of the tongue is Type 3.

**Materials & Methods:** A 50-year-old female with a skin phototype of five was presented to the outpatient clinic with hyperpigmentation on the fungiform papillae, mainly overlying the lateral parts and tongue tip, lasting for two years. The otherwise dermatological examinations of the body, genital and conjunctival mucosal regions, palmoplantar regions, and nails did not reveal pathological findings. The patient was an ex-smoker for almost ten years and denied chewing food or material that may irritate or trigger inflammation and pigmentation. The family and personal medical history were unremarkable.

**Results:** Dermoscopic examination of the pigmented regions of the tongue showed 'cobblestone-like pattern' (circumscribed brownish polygonal globular appearance of the papillae) and 'rose petal pattern' (brownish projections with pigmented borders and dichotomized vessels originating from the papillae's base) of Type 3 PFP.

**Conclusion:** Dermoscopic examination quickly reveals the characteristic 'cobblestone-like pattern' and 'rose petal pattern' seen in PFP, reducing the need for diagnostic biopsy.

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**Abstract N°: 1234**

## **Comparative Clinico-dermoscopic Evaluation of Ageing Between Men and Women**

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### **Introduction & Objectives:**

Aging is a multifaceted process influenced by intrinsic factors like genetics, hormonal shifts, and extrinsic factors such as ultraviolet exposure and lifestyle habits. Facial aging, particularly, poses clinical and histological challenges due to its intricate nature. Despite numerous studies, there's a significant gap in understanding gender-specific clinicodermoscopic features of facial aging, often due to reliance on subjective assessments. This study aims to comprehensively evaluate and compare clinical and dermoscopic features associated with facial aging in males and females. Utilizing advancements in dermoscopic technology, including the Dermoscopy Photoaging Scale (DPAS), we aim to provide a more objective assessment of facial aging. By identifying gender-specific patterns and markers, our study aims to not only address existing research gaps but also lay the groundwork for personalized anti-aging interventions, enhancing treatment efficacy and patient outcomes.

Objectives of this study are:

- \1. To assess clinical and dermoscopic features associated with facial aging.
- \2. To compare gender-specific manifestations of facial aging.

### **Materials & Methods:**

**SOURCE OF DATA:** This study is hospital-based, and informed consent was obtained from all participants.

**STUDY DESIGN:** Cross-sectional study.

**SAMPLE SIZE:** A total of 82 participants were included, with 41 in each gender group.

**SAMPLING TECHNIQUE:** Convenient sampling.

**STUDY DURATION:** The study spanned one month.

### **INCLUSION CRITERIA:**

- \1. Both males and females attending Dermatology OPD.
- \2. Age between 25 and 55 years.
- \3. Willingness to provide consent.

### **EXCLUSION CRITERIA:**

- \1. Presence of severe dermatological diseases, recent facial procedures, pregnancy, or unwillingness to participate.

\2. Patients with metabolic syndrome or with endocrine disorders.

### **PROCEDURES AND PROTOCOLS:**

Participants underwent clinical examination and dermoscopic assessment. DPAS scores were calculated for various aging features, including wrinkles, pigmentary changes, and vascular patterns. Statistical analysis was performed using SPSS 20.0, with significance set at  $p < 0.05$ .

### **Results:**

The study comprised 82 participants, evenly distributed between males and females, within the age range of 25 to 75 years. Significant differences in DPAS scores were observed between genders, with females exhibiting more signs of photoaging. Dermoscopic assessment revealed gender-specific aging patterns, with females showing more fine wrinkles and pigmentary changes, while males displayed deeper wrinkles. Lifestyle factors such as smoking correlated with aging severity, irrespective of gender. Additionally, a positive correlation was noted between age and DPAS scores within each gender.

### **Conclusion:**

This study emphasizes the importance of recognizing gender-specific aging patterns to tailor personalized anti-aging interventions effectively. Further research exploring hormonal, genetic, and environmental factors contributing to these differences is warranted. Embracing a gender-specific approach in dermatology and anti-aging medicine promises improved patient satisfaction and better aesthetic outcomes, underscoring the need for a nuanced understanding of aging across genders.

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**Abstract N°: 1471****Dermoscopic evaluation of the efficacy of topical Trichloroacetic acid 70% versus methoxsalen 0.2 % paint in acral vitiligo**Ahmed Elshahid<sup>1</sup>, Amr Ammar<sup>1</sup>, Abdalla Mamdoh<sup>1</sup><sup>1</sup>Al-Azhar University, Egypt**Introduction & Objectives:**

Vitiligo is essentially a clinical diagnosis, and dermoscopy may aid in noninvasive confirmation of diagnosis by excluding other clinically simulating hypopigmentary conditions. More importantly, dermoscopy is rapidly gaining ground as an important adjunct tool to evaluate disease activity. Few clinical trials have investigated the use of TCA (Trichloroacetic acid) to induce repigmentation in stable vitiligo. Objectives: to evaluate dermoscopically the efficacy of topical Trichloroacetic acid 70% versus methoxsalen 0.2 % paint in acral vitiligo, a comparative cross-sectional study.

**Materials & Methods:**

This comparative cross-sectional study evaluated dermoscopically the efficacy of topical Trichloroacetic acid (TCA) 70% versus methoxsalen 0.2 % paint in stable acral vitiligo. This study included 50 patients suffering from stable acral vitiligo divided into 2 equal groups: Group A (n=25) received topical methoxsalen 0.2 % every other day for 3 months, with a dermoscopic follow-up every 2 weeks. Group B (n=25) received topical TCA 70% application at the clinic every two weeks for 3 months with dermoscopic follow-up. Repigmentation Assessment was done by clinical and dermoscopic evaluation. Clinical evaluation: Response to the treatment was determined according to the quartile grading scale. Treatment outcome was blindly evaluated by two independent dermatologists for each site according to repigmentation percentage with a scale ranging from 0 to 4. Dermoscopic evaluation: Response to the treatment was determined by marginal pigmentation appearance of the reticular network, marginal pigmentation, perifollicular pigmentation, and mixed re-pigmentation patterns.

**Results:**

Trichloroacetic acid (TCA) demonstrates a notably better response and higher patient satisfaction compared to methoxsalen. As regards clinical evaluation, there is a significant difference between the studied groups, with no improvement (p-value < 0.05) as 76% of patients who received TCA had shown no improvement compared to 96% of patients who received methoxsalen. While (16%, 4% & 4%) of patients who received TCA had shown mild, moderate, and good improvement compared to (4%, 0, 0) in patients who received methoxsalen and this difference was statistically non-significant (p-value > 0.05). On dermoscopic evaluation, There is a significant difference between the studied groups regarding no re-pigmentation (p-value < 0.05) as 76% of patients who received TCA had shown no re-pigmentation compared to 96% in patients who received methoxsalen. While (12%, 4% & 8%) of patients who received TCA had pigmentation either marginal, perifollicular or mixed compared to (4%, 0, 0) in patients who received methoxsalen and this difference was statistically non-significant (p-value > 0.05).

**Conclusion:**

Trichloroacetic acid (TCA) demonstrates a notably better response and higher patient satisfaction compared to methoxsalen. Consequently, TCA 70% emerges as a preferable recommendation for acral vitiligo treatment over methoxsalen. TCA 70% had a lower effective rate (6 cases only improved of a total of 25 cases) in this study so

we recommend trial of a high concentration or microneedling before the application of TCA to achieve a better response.\*\* Dermoscopic examination is helpful to notice early re-pigmentation and early improvement during the treatment of vitiligo in addition to use in the assessment of vitiligo activity.

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**Abstract N°: 1474****Multiple Eruptive Meyerson Naevi in Elderly Patient**Zorana Zlatanovic<sup>1</sup>, Andrija Jovic<sup>1</sup>, Danijela Popovic<sup>1</sup>, Sladjana Cekic<sup>1</sup>, Milica Radic<sup>1</sup>, Aleksandar Popovic<sup>1</sup>, Danica Tiodorovic<sup>1</sup><sup>1</sup>University Clinical Center Nis**Introduction & Objectives:**

Meyerson phenomenon (MP) or halo dermatitis is uncommon condition characterized by erythema and scaling encircling skin lesion often associated with pruritis. Occurrence of MP has been described both in melanocytic and nonmelanocytic lesions. Melanocytic nevi associated with MP are generally known as Meyerson naevi. Meyerson naevi are most commonly reported in healthy young males, typically affecting one or several naevi. Here in, we report an elderly female patient with multiple Meyerson naevi occurring simultaneously.

**Results:**

A 67-year-old female patient presented with two weeks' history of erythema occurring simultaneously around multiple preexisting melanocytic naevi. Her medical and family history excluded atopy, neither she was taking any medication related to chronic diseases. Clinical examination revealed symmetrical erythema with yellowish scales over seven melanocytic naevi accompanied by severe itch. On dermoscopy, all lesions displayed repetitive pattern composed of perilesional dotted vessels distributed randomly over red background, yellowish scales and serocrust, as well as presence of central structureless brownish pigmentation typical for melanocytic naevi. Based on anamnestic information, clinical and dermoscopic features, diagnosis of multiple eruptive Meyerson naevi was conducted. Topical hydrocortisone/oxytetracycline ointment twice daily for seven days was prescribed. On the follow-up visits over 3 months, erythema completely regressed and dermoscopy revealed no atypical features on preexisting naevi.

**Conclusion:**

The etiology and pathogenesis of MP is still not well elucidated. Although MP is benign and transient condition, occurrence MP in both melanoma in situ and invasive melanoma has been described. Therefore, dermoscopic examination should be performed in all lesions in order to exclude possible malignancy, especially in case of unusual clinical presentation.



**Abstract N°: 1540****Trichoscopic Characteristics of Decalvans Folliculitis: A Prospective Study in 20 Patients**Zineb Loubaris<sup>1</sup>, Kenza Khachani<sup>1</sup>, Meriam Meziane<sup>1</sup><sup>1</sup>chu avicenne rabat, dermatology, RABAT, Morocco**Introduction & Objectives:**

Decalvans folliculitis is a rare and chronic condition that affects the hair follicles of the scalp, characterized by symptoms such as patches with follicular pustules and crusts. Its exact origin remains unclear, although research suggests a role of the follicular microbiota in its development. It tends to predominantly affect men and is more frequently observed in individuals with darker skin types. Histopathology of decalvans folliculitis often shows the presence of a neutrophilic infiltrate, which can aid in diagnosis. We demonstrate the contribution of trichoscopy to the diagnosis of decalvans folliculitis through a prospective study involving 20 cases.

**Materials & Methods:**

An analytical prospective study from 2020 to April 2024 included patients with lesions of scarring alopecia of the scalp. They underwent examination using the DermLite DL4\* dermoscope, as well as histological examination.

**Results:**

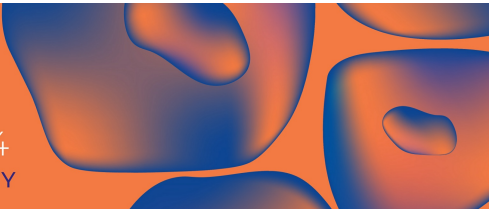
We included 20 patients, 55% male and 45% female, with a mean age of 36 years and an average duration of illness of 5 years. Fifty percent of the patients had phototype 4. Trichoscopic signs observed were as follows: raspberry-red peripilar erythema (95%), follicular orifice rarefaction (95%), peripilar casts (88.9%), tufted hairs (94.7%), perifollicular hyperkeratosis (95%), pustules (60%), white dots (30%), and red dots (10%).

The diagnostic efficacy of trichoscopy in identifying scarring alopecias is undeniable. The findings of our study closely align with those reported in the literature. In the study conducted by Francisco et al., the observations revealed the following characteristics: tufted hairs present in 95.3% of cases, perifollicular erythema in 86% of cases, follicular hyperkeratosis in 69.8% of cases, and white dots in 15% of cases. Trichoscopic signs such as peripilar erythema, peripilar casts, and pustules are significantly associated with decalvans folliculitis.

**Conclusion:**

The utility of trichoscopy in diagnosing decalvans folliculitis is undeniable, particularly with specific indicators such as perifollicular erythema, peripilar casts, and pustules. The frequent presence of tufted hairs further supports this diagnosis.





**Abstract N°: 1770**

**Dermoscopy of non-infective granulomas in skin phototypes III, IV and V.**

Rashmi Mittal (Jindal)\*<sup>1</sup>

<sup>1</sup>himalayan institute of medical sciences, dermatology, de, India

**Introduction & Objectives:** Dermoscopy is widely used for diagnosing various inflammatory, infective, and pigmentary dermatoses in addition to cutaneous malignancies. This retrospective study was planned to characterize dermoscopic features of non-infective granulomatous diseases in Indian patients with skin phototypes III, IV, and V.

**Materials & Methods:** All clinically suspected and histopathologically confirmed cases of non-infective granulomas seen from January 2023 through December 2023 were retrospectively recruited. Two investigators independently reviewed the dermoscopic characteristics of these cases.

**Results:** Twenty-six patients comprised of 16 women and 10 men met the inclusion criteria. Sarcoidosis (9) was seen in the highest number of patients followed by granuloma annulare (6), necrobiosis lipoidica (3), and juvenile xanthogranuloma (3). Yellow-orange to orange-brown structureless areas representing underlying granulomas were a common dermoscopy finding seen in sarcoidosis, juvenile xanthogranuloma, and necrobiosis lipoidica (Table 1). Only one-third of cases of granuloma annular had yellow-orange structureless area remaining had a diffuse pink background. White structureless areas and streaks representing dermal fibrosis were also predominant findings seen in sarcoidosis and necrobiosis lipoidica. A significant dermoscopy finding seen in skin phototypes III, IV, and V was an exaggerated pigment network either in the periphery of the lesion or around the follicles. The most striking dermoscopy was encountered in necrobiosis lipoidica with predominant yellow structureless areas in the center and orange-brown structureless areas in the periphery with sharp serpentine linear branching vessels.

**Table 1: Demographic, clinical and Dermoscopy characteristics of non-infective granulomas**

| Diagnosis (number) | Age range (years) | Men: women | Dermoscopy findings (%)                 | Skin Phototype-number |
|--------------------|-------------------|------------|---|-----------------------|
| Sarcoidosis (9)    | 32-62             | 2:7        | Diffuse Orange yellow-brown SLA (66.7%) | III-3<br>IV-5<br>V-1  |
|                    |                   |            | Focal orange-yellow- brown SLA (33.3%)  |                       |
|                    |                   |            | Linear branching vessels (100%)         |                       |
|                    |                   |            | Arborizing (55.5%)                      |                       |
|                    |                   |            | White streaks & SLA (66.7%)             |                       |



| <b>Diagnosis (number)</b>                           | <b>Age range (years)</b> | <b>Men: women</b> | <b>Dermoscopy Brown network findings (%) (77.8%)</b>  | <b>Skin Phototype-number</b>              |
|---|--------------------------|-------------------|---|---|
| <b>Granuloma annulare (6)</b>                       | <b>42-60</b>             | <b>0:6</b>        | <b>Pink background (66.7%)</b><br><b>Focal orange-yellow SLA (33.3%)</b><br><b>Focal dot vessels (66.7)</b><br><b>White dots/globules (66.7%)</b><br><b>Brown network (50%)</b> | <b>III-3</b><br><b>IV-2</b><br><b>V-1</b> |
| <b>Necrobiosis lipoidica (3)</b>                    | <b>30-65</b>             | <b>1:2</b>        | <b>Focal orange-yellow SLA (100%)</b><br><b>Sharp linear serpentine (100%)</b>  | <b>III-1</b><br><b>IV-2</b>               |
| <b>Juvenile xanthogranuloma (3)</b>                 | <b>9 months-1 year</b>   | <b>3:0</b>        | <b>Diffuse Orange yellow-brown SLA (100%)</b><br><b>Brown network (66.7%)</b>   | <b>III-2</b><br><b>V-1</b>                |
| <b>Annular elastolytic giant cell granuloma (2)</b> | <b>28-55</b>             | <b>1:1</b>        | <b>Yellow-pink background (100%)</b>  | <b>IV-1</b><br><b>V-1</b>                 |
| <b>Lupus miliaris disseminates faciei (1)</b>       | <b>32</b>                | <b>1:0</b>        | <b>Perifollicular yellow-orange SLA (100%)</b>  | <b>IV-1</b>                               |
| <b>Granulomatous rosacea (2)</b>                    | <b>45-52</b>             | <b>2:0</b>        | <b>Yellow-pink background (100%)</b><br><b>Arborizing vessels (100%)</b><br><b>Follicular plugs &amp; four dots (100%)</b><br><b>Brown pigment network (100%)</b>               | <b>IV-1</b><br><b>V-1</b>                 |

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**SLA: structureless areas**

**Conclusion: The dermoscopy findings in non-infective granulomas appear specific and depend on the skin phototype. In dark skin phototypes, the typical yellow-orange structureless areas considered specific for an underlying granuloma may look orange-brown. The presence of an exaggerated peri-lesional or peri-follicular pigment network is more common in dark-skin phototypes.**

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**Abstract N°: 1779**

**Microscopic Diascopic Dermoscopy; an International Ultra-Budget Alternative to Traditional Dermoscopy**

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**Introduction & Objectives:**

Diascopy is an old-fashioned bedside examination technique for assessing the blanchability of vascular and other skin lesions. The application of diascopy with a fluid immersion interface removes surface light scatter, as in contact dermoscopy. Powerful small hand microscopes are cheaply and widely available and can be twinned with fluid immersion diascopy to produce dermoscopic like examination and imaging. We propose a technique, named microscopic diascopic dermoscopy (MDD) as an ultra-budget alternative to traditional dermoscopy, for use in resource poor settings and by non-dermatologists.

Objectives:

1. To identify whether non-specialists' confidence in MDD is comparable to traditional dermoscopy.
2. To identify whether teaching non-specialists dermoscopy influences their decision **not** to refer common benign lesions, and whether this decision differs with MDD vs. dermoscopy.

**Materials & Methods:**

A 6-minute video was created to educate study participants on the key dermoscopic findings in seborrheic keratosis and vascular lesions. Participants then completed a survey which included a macroscopic, MDD and dermoscopic image of 10 benign lesions which were a mixture of seborrheic keratosis and vascular lesions. Participants were asked to rate how confident they felt interpreting each image, and whether they would refer the lesion to a specialist or not. Exclusion criteria for completion of the survey included specialist trainees in Dermatology, and Dermatology consultants.

**Results:**

189 responses from the survey were received, spanning across 14 countries. Most responses originated from the UK, Pakistan, and Taiwan. 52.4% of respondents were medical students, followed by 36.5% being junior

doctors/residents, 5.8% being non dermatology consultants, 2.1% being in General Practice and 3.2% were doctors whose role was not specified.

**Conclusion:**

MDD performs equally to traditional dermoscopy when used to identify common benign lesions such as seborrheic keratosis and vascular lesions. This validates MDD as a reliable international and ultra-budget tool for resource poor settings and non-specialists which is accessible on a global scale. Teaching dermoscopy to non-specialists did not influence their decision not to refer benign lesions, despite having more information to confirm their suspicion. It is unclear why this was the case, but hypotheses include a lack of experience amongst junior respondents who are less familiar with dermoscopy, and differing referral pathways across countries. Further education prior to testing, as well as testing with more of the same lesions, as well as other benign lesions will help validate the generalisability of this data in future studies.

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**Abstract N°: 1785****Storiform collagenoma, emphasizing dermatoscopy: a case report.**

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**Introduction & Objectives:**

Storiform collagenoma is an uncommon, benign nodular tumor, typically normochromic, with well-defined borders and slow growth. It exhibits a fibrotic consistency and preferentially arises on the face, limbs, nail bed, trunk, and oral mucosa. It affects both genders, primarily young adults with a mean age of 40. Its etiopathogenesis remains unclear but is associated with terminal stage or involution of previous lesions such as dermatofibromas, angiofibromas, neurofibromas, collagenoma, erythema elevatum diutinum, fibromas of tendon sheath, melanocytic nevi, and folliculitis. Histopathologically, it manifests as an acellular or hypocellular nodule with well-defined dermal delimitation, exhibiting thick bands of hyalinized collagen in a storiform pattern with prominent clefts resembling plywood. Immunohistochemically, it stains positively for vimentin and CD34. Dermatoscopic findings reported minimally in the literature include a homogenous white background and arboriform vessels at the periphery. This report aims to present a case, focusing on dermatoscopic findings, and compare them with limited existing descriptions while reviewing current literature.

**Materials & Methods:**

We present the case of a 36-year-old female with a lesion on her right leg. The lesion is an indurated papule measuring 0.9 mm in diameter, displaying an orange-pink hue. The patient presented the lesion over eight years without accompanying symptoms. Dermoscopy showed peripheral yellowish brown pigmentation, peripheral white area without structure, with presence of dotted and linear peripheral vessels.

**Results:**

Excisional biopsy confirmed the diagnosis of storiform collagenoma. Histopathology revealed dense collagen, well circumscribed and hyalinized, and mucin in the cracks.

The benign nature of the lesion was elucidated, warranting no further intervention.

**Conclusion:**

-The solitary occurrence of storiform collagenoma effectively excludes Cowden syndrome. Its classification as either a fibrohistiocytic neoplasm or a fibrous tissue hamartoma remains inconclusive. Despite recent advances, the dermatologic features unique to this condition are still emerging, necessitating further investigation for comprehensive characterization, particularly noting a distinct vascular pattern observed in our study.

-In the presence of a lesion without pigment or hypopigmented and even if there is a high clinical suspicion of benignity, it is essential to rely dermoscopically on the presence or absence of: ulceration, white areas without structure and pattern of vessels, to minimize the risk of missing a malignant lesion of amelanotic characteristics. It is also essential to assess the clinical presentation of the patients, alerting the age, phototype, amount of sun exposure, and history of skin cancer.

-The treatment is not imperative, given the benign nature and gradual clinical progression of the lesion. However, surgical excision may be warranted for larger lesions causing discomfort or significant aesthetic concerns. This approach ensures optimal management tailored to individual patient needs and preferences.

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**Abstract N°: 1928**

**Small-diameter melanomas – clinical and dermoscopy features in a case series of 5 patients with early invasive melanoma from Sweden.**

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**Introduction:**

Melanoma incidence continues to rise, and Sweden is among the countries in the world with the highest incidence rates of melanoma. With improvement detection methods such as dermoscopy (now standard of care in skin cancer diagnosis) and increasing awareness melanoma can be detected at an early stage. Though, small diameter melanomas (SDM) fail to be detected by classical strategies as ABCDE rule. Moreover, diagnosis is difficult because dermoscopy features of SDM has been reported infrequently. However even SDM poses dermoscopy clues that might allow diagnosis.

**Presented cases:**

We present a case series of 5 patients with early invasive melanomas with very small clinical diameter  $\leq 4$  mm, measured on dermoscopy. Patients visited dermatology clinic either because they had planned skin checks based on history or because a skin lesion has arisen/changed. Patients age was between 49 and 69 years. Colour of the lesions varied from a black-brown spot to pink and brown combination and lesions were non palpable, localization on the upper body and limbs. Dermoscopy in our case series showed pseudopods or globules at the periphery (starburst pattern) in two patients, shiny white lines in one patient, atypical vascular pattern in two patients, more than one color in three patients. Histopathology showed median Breslow thickness of 0,42 mm.

**Discussion:**

Based on the case series reported here, dermatologists must be actively aware of these tiny melanomas to further examine them with dermatoscope, as small size does not exclude invasion. Once dermatoscope is on place, there are several dermoscopy clues which will further guide biopsy.

Patients should be instructed on self-examination (a significant proportions of melanomas are detected by patients themselves) and to have the possibility of easy and rapid appointment to specialist in case of changing and/or new lesions regardless of size.





Abstract N°: 1979

### Dermatoscopic findings suggestive of high-grade dysplasia in atypical nevi un a mestizo-mexicano population

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### DERMATOSCOPIC FINDINGS SUGGESTIVE OF HIGH-GRADE DYSPLASIA IN ATYPICAL NEVI IN A MESTIZO-MEXICAN POPULATION

#### Introduction & Objectives:

Atypical nevi are melanocytic lesions with a potential risk of developing melanoma. This risk is related to the degree of histological dysplasia, but performing a biopsy is not always within reach, so it is important to have non-invasive tools, such as dermoscopy, to help the clinician identify those atypical nevi with higher risk and implement the most appropriate treatment.

Objective: Describe dermatoscopic findings of atypical nevi and the relation with histological dysplasia degree.

**Material and methods:** Retrospective study. Thirty atypical nevi removed with excisional technique in mestizo-Mexican persons from Western Mexico are included. Dermoscopic images were taken with polarized light and evaluated by an expert dermatoscopist. Three dermatopathologists blindly determined histological dysplasia and classified it into low and high grades. Fisher's exact test and Student's t-test were obtained, and  $p < 0.05$  was considered significant.

**Results:** Low-grade dysplasia corresponded to 25 (83%) people and high-grade dysplasia to five (17%). The findings suggestive of high-grade dysplasia were: size  $> 5$  mm ( $p = 0.04$ ), multi-component or greater number of dermatoscopic findings in the same lesion ( $p < 0.01$ ), areas of regression (white blue veil, 80%), reticular diffuse (67%), unstructured zone or peripheral or asymmetrical inkblot (60%), reticular with central hyperpigmentation (47%), brown globules with irregular distribution (40%), irregular pigment network ending abruptly (37%), reticular patchy (37%), and multiple colors (37%).

**Conclusions:** This is the first study in a mestizo-Mexican population that relates the dermatoscopic findings of atypical nevi with their degree of dysplasia. Our results can support the clinician in making the best therapeutic decisions. Studies with a larger sample size are required.







**Abstract N°: 2249**

### **Validating a 3D Printed Dermatoscope for Enhanced Accessibility into Dermoscopy**

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#### **Introduction & Objectives:**

Dermoscopy can significantly boost a clinician's confidence in the diagnosis of skin lesions. Traditional dermatoscopes remain expensive and therefore inaccessible in resource poor settings globally, as well as in the non-specialist setting. To reduce this health inequality, we have developed a 3D printed Dermatoscope which has an estimated total cost of £5-20. 3D printers are becoming cheaper and more widespread, and hence they may be more accessible to healthcare professionals than dermatoscopes in some settings. With access to a 3D printer, doctors can simply print their own dermatoscope for a fraction of the price and benefit from the additional information it provides.

Our objective is to determine whether dermoscopic images produced by a 3D printed dermatoscope improve confidence when making a diagnosis of a benign lesion, compared to macroscopic images alone and traditional dermoscopic images.

**Materials & Methods:** Two 3D printed dermatoscopes were developed, a handheld and a phone attachment device. All components of both 3D printed dermatoscopes are globally available, and straightforward to assemble with limited technical ability required. All 3D printed components are optimised e.g support-free printing. As components are required to be globally available, standard off the shelf products such as jewellery magnifiers were sourced. Due to slight fluctuations in the dimensions of these parts, flexible sections were then incorporated into the device design to accommodate tolerance differences. The development spanned several months, with each prototype iteration undergoing a process of quality improvement.\*\* The 3D printable file for the dermatoscopes will be freely available online and can be used by anyone to print the device components. Step by step instructions to build the device can then be followed and the 3D-printed dermatoscope can be used in the same way as traditional contact non-polarised dermoscopy.

An online survey containing six benign lesions was generated. Each lesion had a macroscopic, dermoscopic and 3D-printed dermoscopic image to view. Doctors of any level with some experience of dermoscopy were asked to rate their confidence in making a diagnosis of a benign lesion with a) macroscopic image alone, b) addition of a traditional dermoscopic image, and c) addition of 3D printed dermoscopic image.

#### **Results:**

12 responses to the survey were received. Diagnostic confidence significantly increased by an average of 1.91 out of 10 when given the images taken with the 3D printed device ( $P < 0.00001$ , CI 1.11 to 2.72). Diagnostic confidence significantly increases by an average of 2.47 when given the images taken with the 3gen Dermlite DL4 ( $P < 0.00000001$ , CI 1.71 to 3.23). The difference in confidence between the 3D printed device and a professional dermatoscope was only 0.56 and this was not a statistically significant difference ( $P = 0.13$ , CI -0.17 to 1.28).

#### **Conclusion:**

The addition of dermoscopy, whether via a traditional or a 3D printed device significantly improves confidence in diagnosis of benign lesions. With no significant difference between traditional and 3D printed dermoscopy demonstrated, the use of our 3D printed device is validated as a reliable tool for diagnosing benign lesions which is equal to traditional dermoscopy on the lesions tested. 3D printed dermatoscopes have the exciting potential to significantly improve access to dermoscopy where it is currently limited due to financial or other constraints.

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**Abstract N°: 2355**

**Dermoscopy of cutaneous leishmaniasis: 57 lesions**

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**Introduction & Objectives:** The clinical appearance of cutaneous leishmaniasis can sometimes **be confused** with **some** infectious or tumoral pathologies. Dermoscopy allows additional elements to be quickly provided for the diagnosis. We report a dermoscopic study.

**Materials & Methods:** This is a prospective study including 17 patients with 57 lesions of cutaneous leishmaniasis, who were diagnosed over a period from November 2022 to March 2023. Dermoscopic examination was performed in all patients.

**Results:** In our study, the M/F sex ratio was 12/5. The average age was 36 years. The average consultation time was 58 days, with extremes between 25 and 90 days. 51 (89%) of the lesions were located on the limbs and 6 lesions on the face. Clinically, 44 lesions (77%) were infiltrated, while ulceration was found in 36 lesions (63%). A dermoscopic study revealed that erythema is present in 80% of lesions (46). Hyperkeratosis (yellowish and/or whitish scales) was also present in 80% lesions (46). Ulceration (or erosion) was noted in 39 lesions (68,48%). Yellow tears were present in 19 lesions (33%). white starburst-like pattern at the periphery was present in 31 (54,38 %) of the lesions. The most frequent vascular structures were the dotted and glomerulous vessels in 30 (52,63%) of the lesions, followed by the irregular linear vessels in 35% (20) of the cases then by the hairpin vessels in 28 % (16) of lesions. Comma vessels were present in 12,28% of cases (7).

**Discussion:** Dermoscopy currently makes it possible to facilitate the diagnosis of cutaneous leishmaniasis. In our study, the teardrop appearance was present in 33% of cases. Our low rate of this dermoscopic sign is correlated with the age of the lesion, in fact the yellow tear is rather found in recent lesions. The white starburst-like pattern, a dermoscopic criterion which has great specificity in the dermoscopic diagnosis of cutaneous leishmaniasis, was observed in 54,38% of cases. Several non-specific vascular structures were observed in our study, particularly the dot and glomerular vessels which have diagnostic value in the presence of other criteria already mentioned.

**Conclusion:** Dermoscopy facilitates the diagnosis of cutaneous leishmaniasis, it is a rapid and non-invasive method.



**Abstract N°: 2526****Pathologist consensus is crucial for the development of Artificial Intelligence training data in Dermatology.**

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**Introduction & Objectives:**

Differentiating dysplastic naevi from malignant melanoma represents a formidable challenge in the clinic and histopathology, complicated by concerns of melanoma overdiagnosis. Convolutional neural networks (CNNs) hold great promise to assist clinicians with this task. However, their implementation is fraught with challenges, and this begins with high quality training. Here we assess the implication of Pathologist consensus for labelling of artificial intelligence training data.

**Materials & Methods:**

210 lesions suspected of melanoma were imaged and biopsied from an Australian General Practice Clinic. Ground truth diagnosis was established by histopathological consensus of five independent Dermatopathologists. Probability weighted diagnoses were assigned by two dermoscopic CNNs that were trained on data from the 2018 International Skin Imaging Collaboration Challenge; one was pre-trained on generic ImageNet data (CNN-1) and the other on images from Australian teledermatology clinics (SMARTI).

**Results:**

CNN-1 yielded an area under the receiver-operator curve of 0.682 while SMARTI yielded 0.725. CNN-1 had a specificity of 0.35 (95% confidence interval (95% CI) 0.27-0.45) and sensitivity of 0.91 (95% CI 0.84-0.96). Whereas SMARTI demonstrated a specificity of 0.26 (95% CI 0.19-0.35) at a sensitivity of 0.95 (CI 0.88-0.98). We observed higher inter-rater agreement among pathologists for lesions correctly classified by SMARTI (Fleiss' Kappa 0.788) relative to lesions misclassified by SMARTI (Fleiss' Kappa 0.406). So, lesions misclassified by the AI model were also divisive for pathologists.

**Conclusion:**

Our finding that CNNs struggle with the same lesions as Pathologists highlights the importance of consensus diagnosis for labelling of training data considering the difficulty for Dermoscopists and Pathologists alike with melanomas. Future directions should explore the integration of comprehensive histopathological data and multi-modal learning approaches to refine AI's diagnostic precision.





**Abstract N°: 2698**

**Dermoscopic findings of primary cutaneous cryptococcosis in an immunosuppressed patient: a case report**

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**Introduction & Objectives:**

Primary cutaneous cryptococcosis is a fungal infection caused by pathogenic encapsulated yeasts in the genus *Cryptococcus*. The varieties *grubii* and *neoformans* are associated with immunocompromised or immunocompetent hosts and bird excreta habitats, while variety *gatti* is associated with immunocompetent hosts and vegetal remains in tropical and subtropical areas. Statistical data is scarce in Latin America, and in Brazil, reports of infections caused by *C. var. neoformans* occur in all regions, with *C. var. gatti* responsible for infections in the North and Northeast. We present a case of primary cutaneous cryptococcosis due to direct inoculation in an immunocompromised patient. Due to the clinical and dermoscopic variability, it is a differential diagnosis of many inflammatory, neoplastic, and infectious diseases. We also report the dermoscopic findings of the lesion based on the information found in our literature review.

**Materials & Methods:**

A comprehensive review of the literature was carried out for this case.

**Results:**

A 42-year-old male patient, untreated HIV carrier, complains of a nodular lesion on the frontal region for two months, asymptomatic, after a pigeon infestation in his residence. On dermatological examination, he presented a yellowish papulo-nodular lesion with a pearly white center measuring 1.5 mm x 0.6mm, located in the central hairline. Dermoscopy revealed a pigment network at the periphery with a white area lacking structure, yellow areas in the lower segment, polymorphic vessels, and central microulceration. Surgical excision of the lesion and primary closure were performed. Histopathological examination described granulomatous dermatitis on hematoxylin and eosin staining, and on Grocott staining, showed numerous fungal organisms arranged within giant cells stained dark brown to black. Culture results were positive for *Cryptococcus neoformans*. Treatment consisted of ART, and directed towards cryptococcosis with liposomal amphotericin B and intravenous itraconazole. The patient's evolution is favorable under the treatment.

**Conclusion:**

Publications on dermoscopy in cryptococcosis are scarce. The reported description includes white areas lacking structure, irregular and branched vessels surrounded by a yellowish halo, corresponding to the granulomatous component, and white areas representing fibrosis. Histopathologically, an inflammatory infiltrate with lymphocytes, histiocytes, macrophages, and giant cells was observed. Diagnosis is made by observing the microorganism in culture, direct and histopathological examination. The treatment of choice in AIDS patients is amphotericin B with or without 5-flucytosine for 2-3 weeks, followed by fluconazole therapy for 10-12 weeks, and maintenance with fluconazole or itraconazole for life. Cutaneous manifestations may precede disease dissemination. Early diagnosis is important for the initiation of appropriate treatment, thus avoiding fatal complications.

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**Abstract N°: 2759**

### **Artificial Intelligence for Diagnosing Skin Cancer Using Dermoscopy: Promise and Real World Challenges**

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#### **Introduction & Objectives:**

Artificial intelligence (AI) in dermoscopy holds huge promise as images are standardized and magnified. Most successful models focus on diagnosing melanoma while equivalent models for other skin cancers like Basal Cell Carcinoma (BCC) and Squamous Cell Carcinoma (SCC) are less common. This gap is significant in Asia where melanoma is rare but other skin cancers prevail. As first point of contact, general practitioners (GP) may struggle in differentiating benign from malignant lesions, leading to misdiagnoses or unnecessary referrals. We aim to develop a binary classification AI model to help GP with dermoscopic images and assess the malignancy risk, improving early detection and referral accuracy.

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

We obtained training dermoscopic images from publicly available database, which had various diagnoses made by dermatologists or biopsy confirmed. 1-4 We reclassified the labels to either suspicious (melanoma, atypical melanotic proliferation, SCC, actinic keratosis, BCC) or benign. Images were preprocessed by augmentation techniques like rotation and blurring to enhance the training. EfficientnetV2L pre-trained on ImageNet, 5 was used as feature extractor, followed by a binary classification layer. (Fig 1) For the initial 25 epochs, we trained the binary classifier only by freezing all layers of EfficientnetV2L. (Intermediate model) Then we unfroze the last block of the EfficientnetV2L and trained for another 25 epochs. (Final model) 4-fold cross-validations were used to ensure consistency. We evaluated the model using a proprietary dataset of 52 dermoscopic photos (10 suspicious, 42 benign). The model was evaluated by area under the curve (AUC), recall, precision, and accuracy (ACC). (Fig 2)

#### **Results:**

The training set comprised 57,964 labeled dermoscopic images. The intermediate model achieved an AUC of 0.85, with recall, precision, and ACC of 0.97, 0.92, and 0.90. The final model achieved an AUC, recall, precision, and ACC of 0.95, 0.97, 0.95, and 0.93. When tested against our proprietary dataset, the intermediate model showed an AUC of 0.84, with recall, precision, and ACC of 0.47, 0.95, and 0.55. The final model displayed an AUC of 0.88, with recall, precision, and ACC of 0.93, 0.91, and 0.87. (Fig 3)

#### **Conclusion:**

Our model showed robust performance in training sets, the sequential unfreezing of the last few layers improved the AI by reducing overfitting. However, the performance of the model was reduced in real-world scenarios, possibly due to variations in photo quality and demographic differences between training and testing datasets. Additional research is needed to optimize the model for practical, everyday clinical use, and improve its adaptability in diverse real-world conditions.

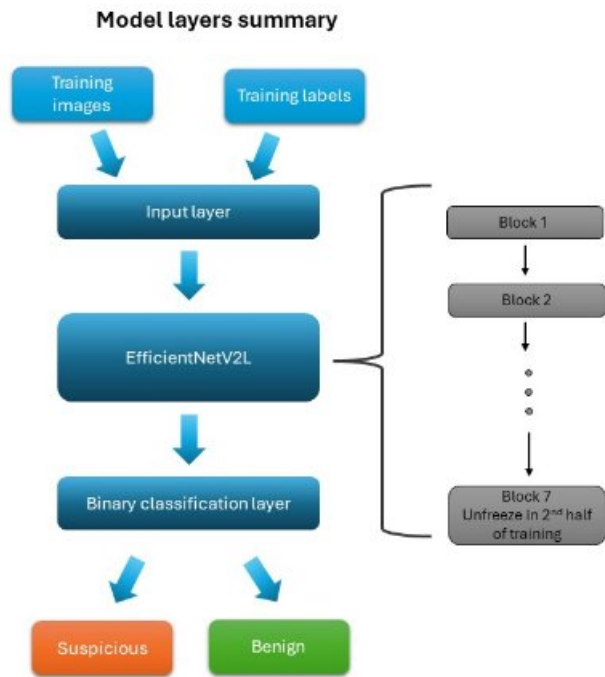


Fig. 1

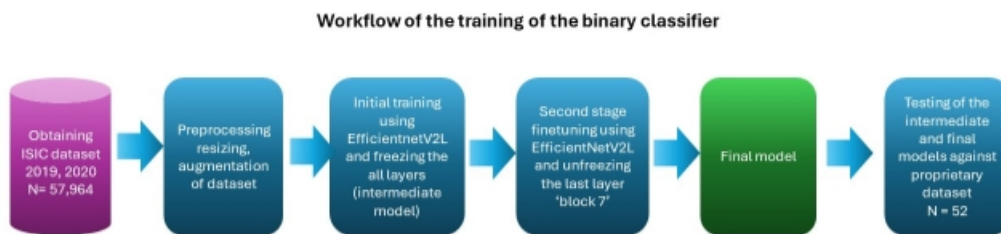


Fig. 2

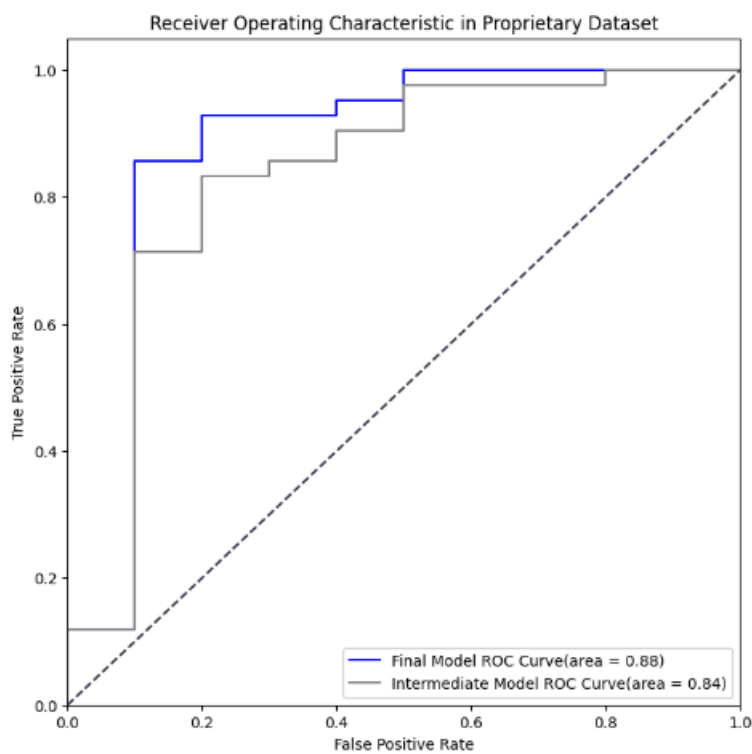


Fig. 3



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**Abstract N°: 2772**

**Reflectance Confocal Microscopy Can Help Differentiate Adult Xanthogranulomatous Disease from Xanthelasma - a case report**

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**Introduction & Objectives:**

Adult xanthogranulomatous disease (AXD) is a rare non-Langerhans histiocytic disorder that can be associated with potentially lethal systemic manifestations, while xanthelasma palpebrarum (XP) is the most commonly encountered form of cutaneous xanthoma. Distinguishing between these two conditions can be challenging. Reflectance confocal microscopy (RCM) is a novel technique for noninvasive tissue imaging with resolution comparable to histology. Developing noninvasive diagnostic tools that decrease the necessity for eyelid biopsy would be beneficial.

**Materials & Methods:**

A 71-year-old woman presented with a 3-year history of progressively enlarging nodules on her upper and lower eyelids. No other associated symptoms or relevant familial history were reported. Upon examination, the lesions appeared yellowish, firm, immobile, and non-tender. The large, indurated nodules were accompanied by smaller, yellow, soft, plaque-like lesions located in the inner canthus. MRI of the orbit, biopsy, and RCM were conducted. The MRI scan showed no intraorbital infiltration. RCM of the inner canthal nodules displayed a normal epidermis, with round cells rich in lipids and a hyper-reflective cytoplasm corresponding to foamy histiocytes, approximately 28-33 micrometers ( $\mu\text{m}$ ) in size. RCM of the firm lesions revealed a typical honeycomb pattern, multiple cells in the dermis, and large round cells with hyper-refractile peripheral rings mimicking multinucleated giant cells, known as "Touton cells" when seen on histology, approximately 70-80  $\mu\text{m}$  in size. Fibrosis was also noted. Biopsies of the smaller and larger nodules from the inner canthus of the upper eyelid confirmed XP and XG, respectively. Histologically, the foamy histiocytes measured approximately 30  $\mu\text{m}$  in diameter, and Touton cells ranged from 40 to 86  $\mu\text{m}$ . The lesions were surgically excised, and further histological study with H&E staining was consistent with the biopsy results.

**Results:**

This case study utilized RCM for imaging xanthogranuloma and xanthelasma in the periocular region. RCM demonstrated the presence of Touton cells, foamy histiocytes, and fibrosis.

**Conclusion:**

To the best of our knowledge, this is the first report on the differential diagnosis of xanthogranuloma and xanthelasma using RCM.

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**Abstract N°: 2874**

### **Use of 3-dimensional total body photography and digital dermoscopy with artificial intelligence algorithms for early melanoma detection in high-risk patients**

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#### **Introduction & Objectives:**

Timely melanoma detection is crucial for enhancing prognosis. Total body photography with sequential digital dermoscopy imaging improves early melanoma diagnosis in high-risk individuals. Three-dimensional total body photography (3D-TBP) enhances skin visualization and decreases image acquisition times. These devices include research-oriented 'machine learning' (ML) algorithms which provide lesion and nevi counts, automatic change detection and individual malignancy risk scores in digital dermoscopy (DD). The aim is to describe our experience with 3D-TBP and DD for early melanoma detection in high-risk patients, and to describe ML algorithm outcomes.

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

Retrospective inclusion of high-risk melanoma patients on whom 3D-TBP and DD was performed between July 2021 and December 2023 in a tertiary center. Descriptive analysis of clinical, phenotypical, imaging and histological characteristics of excised lesions and ML results.

#### **Results:**

A total of 3,691 3D-TBP maps were generated from 1274 patients (2.9 maps/patient); their mean age at first map was 52.6 (SD 14.6) years and 672 (52.7%) were women. The total number of lesions under DD follow-up was 15,341 (12.3/patient). Four hundred and fifty-two lesions were excised from 322 (25.3%) patients, 145 (32.1%) after the first 3D map (99 with previous 2D follow-up), and 307 (67.9%) after further maps. In total, 97 (21.5%) melanomas were excised, 67 during follow-up with 3D-TBP. The remaining excisions corresponded to 171 (37.8%) nevus, 105 (23.2%) basal cell carcinomas, 17 (3.8%) squamous cell carcinomas, 15 (3.3%) solar lentigos and 47 (10.4%) other lesions. Of the melanomas diagnosed during follow-up, 46 (68.7%) were in situ, and the invasive melanomas (21, 31.3%) had a median Breslow index of 0.5 mm. Number needed to biopsy for lesions under follow-up was 2.91 melanocytic lesions to find 1 melanoma, and the benign:malign ratio was 2.52. Mean number of automatically segmented lesions was 737.96 (SD 875.73) and mean nevus count 253.51 (SD 188.46) per patient. A correlation was observed between nevus counts and a personal history of atypical mole syndrome. Mean DD malignancy score was 4.85 (in a scale from 0 to 10) for melanomas and 2.64 for nevi ( $p < 0.001$ ), excised during follow-up. Nevus confidence was significantly lower for melanomas compared to nevus (60.6 vs 81.7,  $p = 0.001$ ). No differences were observed in malignancy risk score between in situ and invasive melanomas ( $p > 0.05$ ).

#### **Conclusion:**

The combination of 3D-TBP and DD increases early melanoma detection in high-risk patients. Associated machine learning tools promise to be useful for patient phenotyping, new lesion and growth detection, and might improve diagnostic accuracy. These algorithms must be validated in prospective clinical trials prior to their implementation

in daily practice.

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**Abstract N°: 3048**

### **Dermatoscopy in the Diagnostics of pigmented Incontinentia Pigmenti Skin Lesions**

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**Introduction & Objectives:** Incontinentia pigmenti (IP; Bloch-Sulzberger syndrome) is a rare X-linked genetic disorder with an estimated prevalence of 1.2/100.000. It appears almost exclusively in females and is usually lethal in males. It is caused by a mutation of the *IKBKG* gene localized on the X chromosome locus Xq28, which is the only gene known to be associated with IP. Skin changes in IP occur along the lines of Blaschko throughout four stages: vesiculobullous (I), verrucous (II), hyperpigmented (III), and atrophic or hypopigmented (IV).

To examine the dermatoscopic characteristics of pigmented stage of IP in probands with genetic testing and histology done and to compare the findings with the literature data on IP mimickers.

**Materials & Methods:** Three IP females with pigmented IP stage, aged 9 months, 18 months and 31 month were dermatoscopically examined.

**Results:** Linear gray-to gray-brown dots on the light pigmented background were observed. The line of the dots followed the Blaschko lines. The pigmentations were intermingled with normal skin and perifollicular depigmentation. Histopathological findings of this IP stage in our study also correspond to the literature data and dermatoscopy findings. Large deposits of free or intra-macrophagic melanin in the papillary dermis correspond to the gray-brown dots found on dermoscopy which is suggestive for pigment incontinence.

**Conclusion:** In our previous study, we have shown that unlike the other stages, the stage III of IP has very close clinical, histological and dermatoscopic mimickers and this stage needs to be carefully examined with obligatory genetic testing. In this study, we have shown that dermatoscopic characteristics of pigmented IP differ from dermatoscopic characteristics of IP mimickers (Linear and whorled nevoid hypermelanosis, Lichen planus pigmentosus and Lichen planus pigmentosus with Blaschkoid presentation) and that dermatoscopy could be used as an useful adjunct to clinical diagnosis.





**Abstract N°: 3136**

**Tele-Dermatology-Dermoscopy Services for Skin Cancer Triage between Primary Care and Specialists in Singapore: A Pilot Study**

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**Introduction & Objectives:**

Skin cancer is the 6th most common cancer in Singapore. The incidence is expected to rise due to Singapore's ageing population. (1) In addition, skin cancers have varied clinical appearances which makes the diagnosis of skin cancer by non-specialists difficult. This contributes to the number of referrals and long waiting times to tertiary clinics for consultation. (2) To ease this healthcare burden, we aim to improve skin cancer detection using teledermatology, and teledermoscopy. Collaborating with primary care physicians, we established a Teledermatology clinic for skin cancer triaging between primary care and specialists.

This study aims to evaluate and triage the skin lesions encountered in primary care, as well as patient satisfaction with this pilot service.

**Materials & Methods:**

We conducted a prospective observational study at a primary care clinic in Singapore. Patients assessed by a primary care physician with skin lesions suspicious of cancer are included. The participants are referred to a teledermatology clinic at the primary care clinic where an assigned primary care physician performs dermoscopic imaging of the skin lesions. The images are then shared electronically with a dermatologist at a tertiary centre and the skin lesions are triaged to be either benign or malignant (store and forward method).

Participants with lesions that are likely benign are given a routine dermatology appointment (within 3-4 months) if they wish to see a dermatologist, while participants with lesions that are likely malignant are given an early dermatology appointment within 4 weeks. Patients are evaluated using a five-point Likert scale regarding their acceptance and satisfaction with this teledermatology service.

**Results:**

A total of 80 participants with 112 skin lesions were included. The mean age was 65 years (22-92 years). 37 participants (46%) were female and 75 (94%) were of Chinese ethnicity. The mean wait time to be assessed in the teledermatology clinic and specialist dermatology clinic from the date of the referral by the primary care physician was 21 days (1-75 days) and 17 days (3-52 days) respectively.

90 skin lesions (80%) referred by primary care physicians were evaluated as likely benign by the teledermatologist. The most frequent diagnosis by the teledermatologist was seborrheic keratosis (45%). 4 skin lesions (4%) were diagnosed clinically/dermoscopically as malignant, of which 2 were confirmed on histology.

38 out of 80 participants completed a post-consultation survey after the teledermatology clinic. The majority (89%) of the participants prefer to have their skin conditions managed by this teledermatology service, rather than waiting for a few months to see a dermatologist. All participants (100%) were satisfied with the teledermatology service.

**Conclusion:**

Tele dermatology allows for more efficient management of patients referred from primary care as most of the skin lesions referred are benign, while suspicious lesions were evaluated promptly, without the traditional longer wait times. In addition, our patients are satisfied with this model of care. The tele dermatology clinic has the added benefit of hands-on training for primary care physicians which increases confidence in triaging and diagnosing skin lesions. Future studies can address the cost-effectiveness of such a model of care.

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**Abstract N°: 3422**

**onychomycosis : correlation between dermoscopy and fungal culture ( about 92 cases )**

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**Introduction & Objectives:**

Onychomycoses, fungal infections affecting nails, constitute the primary cause of nail pathologies. This study aims to correlate common dermoscopic aspects with various fungal species detected through culture.

**Materials & Methods:**

A prospective, descriptive study spanning 15 months from April 2022 to June 2023 involved 92 patients with confirmed onychomycosis based on fungal culture.

The study included 92 patients (53.2% females, 46.7% males) with an average age of 41.3 years. Distolateral subungual onychomycosis was the most prevalent form (43%), followed by total dystrophic onychomycosis in 33.6%, proximal subungual onychomycosis in 18.4%, and superficial white onychomycosis in 4.3%.

Dermoscopic features included longitudinal ridges in 88%, subungual hyperkeratosis in a ruin-like appearance in 69.5%, distal onycholysis with a serrated border in 63%, jagged and irregular distal edge in 53%, chromonychia in 40 cases (21 yellow, 11 white, 5 brown, 3 green), transverse white streaks in 31.5%, and linear hemorrhages in 6.5%.

Dermoscopic features predominant in dermatophytic onychomycosis were longitudinal ridges (91.58%), followed by onycholysis with jagged or serrated borders (72.4%). In *Candida* onychomycosis, ruin-like appearance (81%), longitudinal ridges (78%), and chromonychia (55%) were prominent.

**Results:**

**The predominance of females and the mean age (41.3) in our study align with several findings in the literature. Dermatophytes were predominant in our study, unlike others where *Aspergillus* was more common, probably due to climatic, geographical and genetic factors.**

**Unlike most studies comparing dermoscopy to the type of nail involvement, our study establishes a unique correlation between dermoscopy and fungal culture. For dermatophytes, longitudinal ridges and onycholysis with jagged borders were most common . For candida infections, ruin like appearance, longitudinal ridges and chromonychia were predominant.**

**Conclusion:**

Dermoscopy of onychomycosis is a simple, non-invasive tool, available in the practice, which can be useful in orienting and guiding the practitioner. However, sampling and culture remain essential before starting a long, complicated and fairly expensive treatment for a large category of the North African population.





**Abstract N°: 3439**

**Dermoscopic findings in patients with cutaneous granulomatous disorders**

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**Introduction & Objectives:**

**Cutaneous granulomatous disorders are a group of diseases with the common denominator of having underlying granulomas seen on histology. Though histology is the hallmark for diagnosis, dermoscopy has proven to be valuable in adding the diagnosis. On dermoscopy structureless orangish yellow diffuse or focal areas of granulomas, linear or branching vessels, and less commonly whitish areas, milia like cysts, scaling, follicular plugs and pigmentation can be seen**

**To study the dermoscopic features of Infectious and non-infectious Cutaneous Granulomatous Diseases**

**Materials & Methods:**

**A cross-sectional and observational study was conducted over 18 patients who fulfilled the inclusion criteria in a Tertiary care hospital in North India.**

**Results:**

A total of 18 patients of cutaneous granulomatous disorders were evaluated ( 11 male and 7 female ,of age range 18-64 years ),out of which there were 2 patients each of leishmaniasis,sarcoidosis,necrobiosis lipoidica,1 lupus vulgaris,annular elastolytic giant cell granuloma, granuloma annulare,2 sarcoidosis,2 necrobiosis lipoidica and 9 Hansen's disease.White structureless areas were seen in 11 patients(61%),peri eccrine pigmentation in 7(38.9%),brown globules in 6(33.4%),whitish scales in 4(22.3%),orange yellow areas, telangiectasias and branching vessels in 3 (16%),red violaceous areas, linear irregular vessels, orange brown, brownish red areas in 2 (11%) and yellow tear, follicular plugging, unfocussed vessels, white dots,hemorrhagic crusts in 1 patient(5.6%)

**Conclusion:**

**Specific dermoscopic features of different Cutaneous granulomatous disorders will help in improving the diagnostic accuracy and may reduce the need of histopathology in the future.**

Conflict of interest : There is no conflict of interest





**Abstract N°: 3463**

**Primary follicular mucinosis of the eyebrow: dermoscopic findings**

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**Introduction & Objectives:**

Follicular mucinosis (FM) is a rare idiopathic disorder of unclear etiology defined by mucin deposition in the pilosebaceous unit. It is classified as idiopathic or primary follicular mucinosis (PFM), which is not associated with other cutaneous or extracutaneous diseases, and as secondary follicular mucinosis, which is associated mostly with mycosis fungoides or Sézary syndrome. PFM is characterized by erythematous or hypopigmented, slightly infiltrated plaques, with occasional follicular prominence or alopecic patches. There are few reports that describe dermoscopy of this entity. We present the findings observed in our case.

**Materials & Methods/Clinical case:**

A 44-year-old woman with no relevant medical history, presented with an asymptomatic lesion on her right eyebrow for the past two months. On physical examination, a 6 x 3 cm oval, reddish, indurated plaque with partial alopecia was observed. A dermoscopic examination showed white gelatinous material along the hair shafts of the eyebrow. Histopathology revealed abundant mucin deposits within the hair follicles and perifollicular and perivascular lympho-histiocytic infiltrate in the dermis. The rest of the physical examination of the skin and annexes and the laboratory tests were normal.

Based on the clinical and histopathological findings, a diagnosis of PFM was established.

The patient was treated with topical tacrolimus 0.1% and minocycline 100 mg daily for three months, with partial response to the date.

**Results:**

In this case, dermoscopy showed white gelatinous material along the hair shafts, which was consistent with mucin. This feature highlights the utility of dermoscopy when considering the diagnosis of FM.

**Conclusion:**

There are only two articles that describe dermoscopy of this pathology. With this case we want to contribute to the knowledge of FM so that dermatologists can easily recognize it.





**Abstract N°: 3468**

### **Dermoscopic Characteristics of Melanoma in Albino Patients: A Report of Four Cases**

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#### **Introduction:**

While individuals with albinism are known to have an increased risk for nonmelanoma skin cancers, occurrences of melanomas in this population are relatively rare, perhaps due to misdiagnosis. Approximately 65% of melanomas in albino patients present as amelanotic lesions, with the remaining 35% exhibiting pigmentation.

#### **Case 1:**

A 60-year-old male with Hermansky-Pudlak syndrome, characterized by oculo-cutaneous albinism, presented with two new lesions. The first was a 20 x 15 mm erythematous plaque on the right shoulder, exhibiting milky-red areas, polymorphous and irregular linear vessels, and a subtle central light brown zone on dermoscopy, excised revealing superficial spreading melanoma (Breslow thickness: 0.8 mm). The second lesion, a 10 x 10 mm erythematous-brownish macule on the dorsal region, with pinpoint vessels, and two areas of light brown pigment at the bottom, was diagnosed as melanoma in situ upon excision.

#### **Case 2:**

A 54-year-old male with oculo-cutaneous albinism, marginal zone lymphoma, and Erdheim-Chester histiocytosis presented with a 15 x 23 mm erythematous plaque on his left thigh, with polymorphous vessels and shiny white structures on dermoscopy. Excision revealed superficial spreading melanoma, 0.6 mm thick. Two years later, he presented with a 17 x 12 mm pigmented verrucous tumor on his right leg, showing fissures and ridges, as well as an eccentric pigmented homogeneous blotch on dermoscopy, excised and diagnosed as ulcerated verrucous melanoma, 1.5 mm thick.

#### **Discussion:**

Melanomas in albino patients exhibit distinctive characteristics compared to the rest of the population. Truly amelanotic lesions pose diagnostic challenges and are often diagnosed at advanced stages<sup>3</sup>. Dermoscopically, they only exhibit a vascular pattern, commonly presenting polymorphous vessels, linear irregular vessels, dotted vessels, hairpoint vessels and milky red areas. Hypomelanotic and pigmented lesions may also exhibit features such as irregular pigment, dots and globules, regression structures, and a blue-whitish veil.

#### **Conclusion:**

Regular follow-ups are essential for albino patients, and melanoma should be considered for any new skin lesion, whether pigmented or not. Amelanotic lesions require careful attention to the vascular pattern for a correct diagnosis.

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**Abstract N°: 3488****Dermoscopy in rosacea and demodicidosis**

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<sup>1</sup>Hedi Chaker University Hospital, Dermatology

**Introduction & Objectives:**

Rosacea is a common chronic facial dermatosis occurring mostly in fair-skinned patients. Demodicosis should be considered in its differential diagnosis. We study their dermoscopic aspects.

**Materials & Methods:**

A prospective study was conducted in the dermatology department of Hedi Chaker Hospital between April 2021 and September 2022. We included patients with rosacea and/or demodicidosis. For each patient, dermoscopic images were taken using Dermlite DL4. Demodex was detected through microscopic examination.

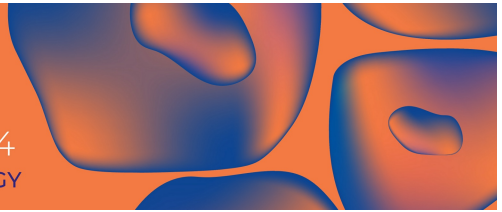
**Results:**

Seventy patients were enrolled: 47 women and 23 men with a mean age of 54 years. The phenotypes were erythematotelangiectatic (ETR) in 77%, papulopustular (PPR) in 14%, phymatous in 2.9%, and ocular in 1.4%. Microscopic examination was performed for 75.7% of the patients with positive results in 49%. Dermoscopic vascular structures were: linear (97.1%), comma vessels (10%), looped and pointed both in 1.4%. Their distribution was polygonal (62.9%), arborescent (30%), irregular (5.7%), and homogenous (1.4%). White scales were present in 51.4%. Among the follicular findings: pustules were present in 22.9%, follicular plugs in 50%, Demodex tail in 48.6%, and Demodex follicular openings in 30%. Linear vessels were significantly correlated with ETR ( $p=0.038$ ). Polygonal and arborescent vessels were not significantly correlated to ETR nor PPR. Scales and follicular plugs were mostly detected in PPR cases, 85.7% and 87.6% respectively ( $p<0.01$  and  $p=0.03$ ). Demodex tails were more observed in demodex-positive patients (100%) than in demodex-negative patients (18.5%) ( $p<0.01$ ). Demodex follicular openings were also significantly correlated with Demodex mite infestation ( $p<0.01$ ).

**Conclusion:**

Our results are in line with other previous studies. Linear vessels are the most common dermoscopic finding. However, our series showed a higher rate of arborizing vessels (30% versus 13%). Demodex-specific dermoscopic signs were correlated with a positive parasitologic test.





**Abstract N°: 3523**

**Telangiectatic melasma: Detection of telangiectasia in melasma lesions only by dermoscope**

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**Introduction & Objectives:**

Melasma is an acquired disorder of hyper pigmentation presenting over the sun-exposed skin. Females in their reproductive age group are commonly affected with cheek, nose, upper lip, and forehead being the predominant areas of involvement. However, it can occur in men and also over areas other than the face. In normal pathogenesis of melasma the hyperactive state of melanin synthesis are continuous maintained for long period of time, Vascular dilatation and endothelia cells proliferation results in telangiectasia which is common finding in long standing melasma. The objective of using dermoscope is to prove presence of telangiectasia in melasma lesions and to exclude its presence in non-melasma areas, so we can direct the treatment of melasma not only toward melanin and hyper pigmentation but also toward vascular component and telangiectasia in melasma to decrease relapse and recurrence.

**Materials & Methods:**

In this single blind, controlled study, 301 patients with stable melasma enrolled from the Dermatology outpatient department of Beni-suif university Hospital. The protocol included information about the patients identification, onset of dermatosis, familial history, hormonal changes related to pregnancy, menopause and oral contraceptive pills, use of oral or topical medication , sun exposure, classification by clinical examination , and data were stored in the software access. Patient were evaluated by manual dermoscope (**DermLite II PRO HR**)x10 was independently performed by experienced examiner in this method .

**Results:**

From the 301 patients 158 showed telangiectasia in melasma lesions (52.5%). 225 (74.8%) patients reported appearance of lesions after prolonged sun exposure, 105 (34.9%) patients reported occurrence after pregnancy and 43 (14.3%) patients reported occurrence of melasma after using oral contraceptive pills.

**Conclusion:**

The presence of telangiectasia in melasma lesions only may indicate the direct vascular pathogenesis in resistant and recurrent cases and not a sequelae of persistent melanogenesis.







**Abstract N°: 4044**

**Clinical and dermoscopic features of small-sized basal cell carcinoma: a bicentric series of 329 patients.**

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**Introduction & Objectives:**

The classic dermoscopic findings of basal cell carcinoma (BCC) were proposed by Menzies and colleagues in 2000. These criteria may not be present in small recently developed lesions. The aim of this study was to describe the clinical and dermoscopic features of BCC  $\leq 3$ mm, to compare them with larger BCCs between 4 and 9mm, and to evaluate the healthcare context in which the decision to remove the lesion was made.

**Materials & Methods:**

Observational, retrospective, bicentric study. Patients with BCC up to 9mm diagnosed in the dermatology departments of La Princesa Hospital and the *Clinica Dermatologica Internacioa*/between January 2019 and December 2020 were included. Data were obtained from clinical and dermoscopic images taken with a camera and dermatoscope or Molemax. Statistical analysis was performed using Chi-square or Fisher's tests. Values with  $p < 0.05$  were considered statistically significant

**Results:**

A total of 329 BCC cases were included, 56.2% of BCCs were found in women with a mean age of 66 years. The most common Fitzpatrick phototype was II (55.9%). BCCs  $\leq 3$  mm represented 16.7% of the lesions (55/329) and those sized 4-9 mm (274/329) represented 83.3%. In BCCs  $\leq 3$  mm, the most common location was the face (74.5%), and 89.1% of lesions presented as papules. Global pigmentation was more common in BCCs  $\leq 3$  mm. Classic Menzies criteria were not identified in 14.9% of patients with BCCs  $\leq 3$  mm. In BCCs  $\leq 3$  mm, the most frequent findings in dermoscopy were blue-gray dots (33.3%), short non-branching fine telangiectasias (23%), comma vessels (20%), isolated blue-gray globules (29.6%), and a semi-translucent appearance (27.8%). BCCs  $\leq 3$ mm showed a lower proportion of dermoscopic structures compared to BCCs sized 4-9mm ( $p < 0.05$ ). We found no differences in the healthcare context in which the lesion was detected based on size.

**Conclusion:**

We present a series of 329 patients with BCCs ranging from 1 to 9mm. The identification of structures such as blue-gray dots, short fine telangiectasias, and a semi-translucent appearance in dermoscopy could aid in identifying a BCC when evaluating lesions  $\leq 3$  mm.







**Abstract N°: 4203**

**Advancing Dermatological Diagnoses: UV Dermoscopy in Everyday Practice**

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**Introduction & Objectives:**

UV dermoscopy stands as a promising advancement in dermatological diagnostic practices. While Wood's light has been utilized for years, UV dermoscopy offers enhanced capabilities in diagnosing various dermatoses by combining methods of standard dermoscopy and Wood's light. This study aims to elucidate the utility of UV dermoscopy in everyday dermatology practice through case studies and highlight its potential benefits.

**Materials & Methods:**

In this study, we employed UV dermoscopy to examine six cases presenting with different dermatological conditions. The cases included scabies, fungal skin disease, erythrasma, eczema, demodicosis of the face and pityriasis versicolor. UV dermoscopy was utilized to observe fluorescence patterns associated with each condition.

**Results:**

UV dermoscopy revealed distinct fluorescence patterns for each dermatosis studied. In scabies, female mites fluoresced green under UV light, while fungal skin diseases exhibited green fluorescence. Erythrasma manifested coral-red fluorescence, and eczema presented with yellow crusts fluorescing blue-to-yellowish/greenish color. Demodicosis of the face showcased Demodex mite tails and hyperkeratosis, with bright bluish fluorescence observed under UV light. Pityriasis versicolor exhibited light green fluorescence, aiding in its diagnosis.

**Conclusion:**

The findings from our study demonstrate the efficacy of UV dermoscopy as a valuable tool in everyday dermatology practice. Its ability to reveal specific fluorescence patterns associated with various dermatoses enhances diagnostic accuracy. The cases presented underscore the utility of UV dermoscopy in diagnosing conditions such as scabies, fungal skin diseases, erythrasma, eczema, demodicosis and pityriasis versicolor. Furthermore, recent publications support the widening usage of UV dermoscopy, indicating its potential to revolutionize dermatological diagnostics. As such, UV dermoscopy should be integrated into routine dermatological examinations, offering clinicians a powerful tool to improve patient care and outcomes.



**Abstract N°: 4387****Dermatoscopic Patterns in Mycosis Fungoides and Sézary Syndrome: Our Retrospective Data and a Comparison with Established Medical Literature**Corrado Zengarini<sup>1, 2</sup>, Federica Tugnoli<sup>2</sup>, Martina Mussi<sup>1, 2</sup>, Bianca Piraccini<sup>1, 2</sup>, Alessandro Pileri<sup>1, 2</sup><sup>1</sup>IRCCS Azienda Ospedaliero-Universitaria di Bologna, Dermatology Unit, Bologna, Italy, <sup>2</sup>University of Bologna, Department of Medical and Surgical Sciences, Bologna, Italy**Introduction & Objectives:**

Cutaneous T-cell lymphomas (CTCL), including Mycosis Fungoides (MF) and Sézary Syndrome (SS), present a challenge due to their diverse clinical manifestations. Traditional diagnostic methods, while effective, can sometimes delay accurate detection and treatment. This study delves into the potential of dermatoscopy, a non-invasive diagnostic tool, to identify MF and SS. It also explores whether specific dermatoscopic patterns can reliably differentiate these diseases from other inflammatory skin disorders, sparking curiosity about the potential of this technique.

**Materials & Methods:**

This observational, monocentric, retrospective study was conducted on patients with histologically confirmed MF or SS at a specialised cutaneous lymphoma clinic. Data were collected from clinical and dermatoscopic images taken during 2019. Dermatoscopic features analysed included pigment presence, vessel patterns, and scaling. Data were processed using standardised dermatoscopic terminology and analysed through regression to correlate dermatoscopic findings with disease stages according to the TNMB classification.

**Results:**

The study included 30 patients with a balanced early-stage and advanced CTCL representation. Dermatoscopy showed vascular patterns such as dotted and clod vessels across different CTCL stages. Notably, dermatoscopic features did not correlate significantly with the TNMB stage or other clinical indicators. Specific patterns such as clustered dots and certain background colours were frequently observed without significantly correlating to the disease progression.

**Conclusion:**

While dermatoscopy seems to provide valuable visual clues that may aid in the suspicion of CTCL, our sample did not show any particular characteristics or patterns that could be potentially useful for us to diagnose MF or SS without histological confirmation solely. While the technique's utility lies in supporting clinical assessments and guiding biopsies rather than replacing traditional diagnostic methods, the data reported in the literature remains very heterogeneous, even more so when compared to ours.



**Abstract N°: 4443****«Scabies in an immunosuppressed patient. The role of Dermoscopy»**

Theano Christina Georgiadou<sup>1</sup>, Giorgos Xaidemenos<sup>1</sup>, Konstantinos Efthimiadis<sup>1</sup>, Stella Arampatzi<sup>1</sup>, Theodoros Sidiropoulos<sup>1</sup>

<sup>1</sup>Venereal and Skin Diseases Hospital of Thessaloniki, Thessaloniki, Greece

**Introduction & Objectives:**

Scabies is a highly contagious human-specific infestation caused by the mite *Sarcoptes scabiei var hominis* that affects all ages, ethnic groups and socioeconomic classes. The most common clinical finding of classic scabies is pruritus, especially at night time and in warm environment. Typical cutaneous lesions are small, often excoriated, papules, but also vesicles, pustules and rarely bullae and nodules may be present. The severity of the clinical features varies depending on the patient's immune status. The diagnosis of scabies is based on the clinical picture in combination with dermoscopy (x10 magnification) and conventional microscopy (x20 to x40 magnification). We here in report a case of scabies whose diagnosis arose exclusively from dermoscopy.

**Materials & Methods:**

A 68-years old woman presented in our Department of Dermatology with intense generalized pruritus for the last month and large papules and nodules with central hemorrhage and crusting on the lower back for the last 10 days. There were not any systemic symptoms such as fever, night sweats or weight loss. In terms of her regular medications, she was on Upadacitinib 15mg once daily for the last 2 years due to rheumatoid arthritis. Baseline investigations were unremarkable. Lymphomatoid papulosis was included in the differential diagnosis based on the history and clinical findings. However, polarized dermoscopy showed the pathognomonic mite burrows inside some of the lesions that confirmed the diagnosis of scabies.

**Conclusion:**

In immunosuppressed patients the diagnosis of scabies can be challenging as the mite infestation may resemble other skin conditions. Dermoscopy in scabies is the primary tool in the hands of dermatologists that reveals the diagnosis.





Abstract N°: 4565

## Development of an Artificial Intelligence-Based Diagnostic System Using Dermoscopic Images and Evaluation of the Diagnostic System's Place in Dermatology Residency

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**Introduction & Objectives:** Artificial intelligence has rapidly developed image processing capabilities. There are studies on the analysis of dermoscopic images with artificial intelligence. In some studies, artificial intelligence has been found to be more successful than experienced specialist doctors in diagnosing dermoscopic images. However, our literature search to date has not found a study evaluating the position of artificial intelligence's successful diagnostic capability, especially in dermatology specialist training. The aim of this study is to demonstrate the contribution of an artificial intelligence trained with dermoscopic images reflecting the characteristics of our own patient group to the existing skills of residents in dermatology residency.

**Materials & Methods:** Dermoscopic photos taken for diagnosis and follow-up purposes at our hospital between 2013-2023 were evaluated. A dataset consisting of 4,220 images diagnosed with basal cell carcinoma, squamous cell carcinoma, melanoma, dysplastic nevus, melanocytic nevus, benign keratoses, actinic keratosis, dermatofibroma, and vascular lesions was prepared. The ISIC 19 dataset was added to our dataset. An image processing artificial intelligence algorithm was developed. The dataset obtained was used for the training and testing of the algorithm. A web application was designed to investigate the effect of artificial intelligence on the diagnostic accuracy of residents. The study included n=17 residents who had received at least one year of dermoscopy training in our unit's academic training schedule and had at least one year of clinical experience in dermoscopy. Participants were asked a total of n=54 dermoscopic image diagnosis questions through the our application, first answering themselves and then with the support of artificial intelligence. The interaction between dermatology residents and artificial intelligence was analyzed.

**Results:** The dataset was created using n=24,731 (85%) dermoscopic photos from ISIC19 and n=4,220 (15%) dermoscopic photos from patients at Hacettepe University (HU), totaling n=28,951 photos. The artificial intelligence was tested with n=5,910 photos. It was found that the artificial intelligence achieved a diagnostic accuracy of 91% and the F1 score was 0.80. According to a 54-question participant evaluation test prepared from the test set, the increase in accuracy rates of the participants with artificial intelligence support was calculated as 0.13 ( $p < 0.001$ ). The highest improvement in sensitivity was observed in basal cell carcinoma with 0.24 ( $p = 0.001$ ). This was followed by melanocytic nevus with 0.20 ( $p = 0.001$ ) and squamous cell carcinoma with 0.19 ( $p = 0.002$ ). The lowest improvement in sensitivity value was calculated as 0.01 ( $p = 0.773$ ) for the diagnosis of dysplastic nevus. In the subgroup analysis according to experience, first-year residents had the highest change in accuracy rates with artificial intelligence support, increasing by 0.18 ( $p = 0.068$ ).

**Conclusion:** Our study has shown that artificial intelligence using dermoscopic images increased the diagnostic accuracy of dermatology residents. This outcome was interpreted as 'AI can be used in dermatology residency via gamification methods' within the framework of our web application. No significant relationship was found between the increase in accuracy with artificial intelligence support and the resident's years of experience.



**Abstract N°: 4666****Parallel reticulum in lentiginous melanomas: insights from in vivo reflectance confocal microscopy**

Joseph Griffiths Acha<sup>1</sup>, Diego de la Vega Ruiz<sup>1</sup>, Giulia Greta Dradi<sup>1</sup>, Marta Menéndez<sup>1</sup>, Gemma Jumilla Martinez<sup>1</sup>, Lucía Martínez Rozas<sup>1</sup>, Sara De Benito Mendieta<sup>1</sup>, Alejandra Méndez Valdés<sup>1</sup>, Reyes Gamo Villegas<sup>1</sup>, José Luis López Esteban<sup>1</sup>

<sup>1</sup>Hospital Universitario Fundación Alcorcón, Dermatology, Alcorcón, Spain

**Introduction & Objectives:**

Lentigo maligna (LM) presents a diagnostic challenge due to its resemblance to benign lesions in both clinical and dermatoscopic evaluations, often resulting in delayed diagnoses. This study aims to highlight focal disruptions of the reticulum, manifesting as parallel lines, as one of the earliest detectable signs of LM.

**Materials & Methods:**

We analyzed a series of 22 histologically confirmed cases of LM that exhibited a focal parallel distribution of the reticulum in dermatoscopy. Reflectance confocal microscopy (RCM) images for each case were meticulously analyzed to further characterize and elucidate these structures.

**Results:**

The mean age of patients in this study was 73 years, with an average lesion size of 8mm, which is smaller than reported in previous studies. The predominant lesion location was extrafacial (trunk, 50%). The parallel reticulum was most frequently observed alongside other early-stage signs of the progression model, such as blurred focal areas, perifollicular radial projections, and asymmetric follicular pigmentation. RCM revealed that the parallelization of the reticulum corresponded to atypical junctional thickenings at the dermoepidermal junction, mirroring observations in dermatoscopy. Mitochondrial structures were also frequently identified. In more advanced cases of LM and LMM, the parallel reticulum predominantly appeared on the periphery, with or without other specific LM signs, aiding significantly in the identification of the melanocytic nature of the lesion.

**Conclusion:**

We propose the presence of a parallel reticulum as a potential dermatoscopic sign associated with LM, particularly in its early stages. Disruption of the reticulum may manifest as parallel lines, significantly aiding in the early detection and treatment of LM. This sign was more frequently observed in extrafacial LM and tended to occur in smaller lesions with subtle dermatoscopic features. Characteristic findings on RCM, such as parallel atypical junctional thickenings and mitochondrial structures, accompanied this finding and are also associated with early stages of LM. Further validation of this sign in larger studies is necessary.



**Abstract N°: 4677****Dermoscopic characteristics of eccrine porocarcinoma**Dimitra Koumaki<sup>\*1</sup>, George Evangelou<sup>1</sup>, Eleni Lappa<sup>2</sup>, Konstantinos Krasagakis<sup>1</sup><sup>1</sup>University Hospital of Heraklion, Dermatology Department, Heraklion, Greece,<sup>2</sup>University Hospital of Heraklion, Pathology Department, Heraklion, Greece**Introduction & Objectives:**

Eccrine porocarcinoma (EPC) is an uncommon cancerous growth on the skin believed to originate from the ductal part within sweat glands. Sometimes, EPC can resemble other skin conditions like eccrine poroma (EP), seborrheic keratosis (SK), basal cell carcinoma (BCC), pyogenic granuloma (PG), and amelanotic melanoma, often appearing as a pink nodule. Dermoscopy is a valuable tool for diagnosing skin tumors. However, there have been few documented instances of EPC diagnosed through dermoscopic images, and these cases haven't been thoroughly analyzed.

**Materials & Methods:**

A 78-year-old female presented with a painless, long-standing erythematous dome-shaped nodule on her left cheek. The growth had been noticeable for a few years and had gradually increased in size. From her past medical history, she had a history of lentigo maligna on the right cheek previously surgically excised, polycythemia vera, and rheumatoid arthritis, and she was on regular treatment with hydroxyurea 500mg twice daily and prednisolone 5 mg daily.

**Results:**

Dermoscopic examination revealed clusters of variously shaped vessels (mostly globular, linear irregular, and hairpin) against a pinkish backdrop, with intersecting whitish areas lacking structure.

The tumor was surgically removed.\*\* Histopathology of the lesion showed\*\* intraepidermal proliferation of clear and squamoid cells with a broad pushing lower border and an invasive intradermal component. Intracytoplasmic lumen formation, focal squamous cell differentiation, nuclear pleomorphism, numerous mitoses, and apoptotic bodies were observed. Neoplastic cells were positive for EMA and negative for BerEP4, while CEA highlighted ductal structures. Based on histology-immunohistochemistry, the diagnosis of eccrine porocarcinoma was made.

**Conclusion:**

Eccrine porocarcinoma (EPC) is a rare, aggressive tumor that originates from the intraepidermal ducts of eccrine glands that can either remain intraepidermal (in situ) or demonstrate an invasive dermal component. It is characterized by being highly invasive, with lymph nodes and lungs being common sites of metastasis that typically presents in the extremities and head and neck region in elderly people. Dermoscopy of EPC often reveals a combination of atypical vascular patterns and milky-red globules.\*\* Recognizing dermoscopic features of EPC may aid in the differential diagnosis of pink nodules.





**Abstract N°: 4849****Dermoscopic features of eccrine poroma and its pigmented variant: A two-case report and review of the literature.**

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**Introduction & Objectives:** Eccrine poromas (EP) are uncommon benign cutaneous sweat gland tumours that are challenging to identify and mimic other neoplasms. EP typically arise on palms and soles, although they can affect other locations. The clinical characteristics vary widely: small pink colored papules, large verrucous plaques or exophytic nodules. A pigmented variant has been described that corresponds to 17% of cases. Their dermoscopic features are not well established and variability is significant.

The aim of this work is to present two cases of EP, as well as to highlight their dermoscopic findings and review the relevant literature. The first case is a non-pigmented EP on an acral- site (left heel), while the other is a pigmented EP one on a non-acral location (right buttocks).

**Materials & Methods:** We describe the dermoscopic features of two cases of histopathologically proven EP, a non-pigmented and a pigmented variant. We summarize their dermoscopic findings with what was published regarding the topic.

**Results:** The dermoscopic findings of our two patients and previously reported cases are listed in Table 1 and Table 2.

**Conclusion:** We have identified the dermoscopic features that are described as specific to the diagnosis of EP of our cases and we have compared them to what is described in literature. The main characteristic of EP is their significant clinical and dermoscopic variability. Awareness of dermoscopic aspects of eccrine poromas and specially its pigmented variant is relevant in order to improve the diagnostic accuracy as they mimic cutaneous malignancies.

Table I: Dermoscopic findings of non-pigmented eccrine poroma

| <b>Authors</b>                | <b>Cases</b>                 | <b>Dermoscopic findings</b>   |
|-------------------------------|------------------------------|---|
| Altamura et al (2005)         | 1 EP                         | -polymorphous vascular pattern<br>-ulceration   |
| Nicolino et al (2007)         | 1 EP                         | -polymorphous vascular pattern<br>-surface scales   |
| Avilés-Izquierdo et al (2009) | 2 EP                         | -polymorphous vascular pattern  |
| Marchetti et al (2018)        | 113 EP (85,8% non pigmented) | -poorly visualized vessels<br>-branched vessels with rounded endings (“cherry blossom or chalice-like vessels”)<br>-white interlacing areas around vessels<br>-yellow structureless areas<br>-milky red globules  |
| Case 1                        | 1 EP                         | -polymorphous vascular pattern<br>-poorly visualized vessels<br>-branched vessels with rounded endings<br>-white interlacing areas around vessels<br>-yellow structureless areas<br>-milky red globules and areas |

Table II: Dermoscopic findings of pigmented eccrine poroma (PEP)



| <b>Authors</b>         | <b>Cases</b>          | <b>Dermoscopic findings</b>  |
|------------------------|-----------------------|--|
| Minagawa et al (2010)  | 12 PEP                | <ul style="list-style-type: none"> <li>-polymorphous vascular pattern</li> <li>-globule-like structures</li> <li>-comedo-like openings</li> </ul>  |
| Marchetti et al (2018) | 113 EP<br>(14,2% PEP) | <ul style="list-style-type: none"> <li>-hairpin vessels</li> <li>-blood spots</li> <li>-keratin / scale</li> </ul>   |
| Venturi et al (2024)   | 61 PEP                | <ul style="list-style-type: none"> <li>-atypical vessels</li> <li>-glomerular vessels</li> <li>-dotted vessels</li> <li>-irregular borders</li> <li>-milia-like cysts</li> <li>-brown pseudo-network</li> <li>-cerebriform pattern</li> <li>-comedo-like openings</li> <li>-fingerprint-like perifollicular structures</li> <li>-dots</li> </ul>   |
| Case 2                 | 1 PEP                 | <ul style="list-style-type: none"> <li>-polymorphous vascular pattern</li> <li>-poorly visualized vessels</li> <li>-branched vessels with rounded endings</li> <li>-white interlacing areas around vessels</li> <li>-milky red areas</li> <li>-keratin / scale</li> <li>-blue, gray and brown ovoid nests</li> <li>-cerebriform pattern</li> </ul> |





**Abstract N°: 4964**

### **Dermoscopy of digital mucous cyst**

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#### **Introduction & Objectives:**

Digital mucous cysts are benign lesions in adults, mainly located on the dorsal surface of the last phalanges of the fingers.

We report a case, demonstrating the value of dermoscopy in this pathology.

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

A 70-year-old hypertensive man presented with a lesion on the distal phalanx of the third finger of the right hand.

Clinical examination revealed a single translucent nodular lesion, slightly crusted on the surface, located on the dorsal surface of the distal phalanx.

Dermoscopic examination revealed a translucent appearance, with linear telangiectatic vessels running from the periphery to the center, and superficial white scales.

A biopsy was performed, confirming the diagnosis of digital mucous cysts.

#### **Results:**

The digital mucous cyst is a benign lesion of the fingers or toes. It is usually a single lesion, located on the lateral edge of the dorsal surface of a distal interphalangeal joint, or on the proximal part of the nail bed, and can thus cause nail dystrophy. The discharge of a clear, viscous liquid is characteristic. In most cases, no treatment is required, as the lesions are asymptomatic. Diagnosis is essentially clinical, but digital mucous cysts can mimic other tumoral lesions of the extremities, especially in irritated forms, making diagnosis difficult at times, which is why dermoscopy is so useful.

#### **Conclusion:**

Dermoscopy of non-pigmented tumors is increasingly described. It can confirm the dermatologist's diagnosis of a digital mucous cyst, avoiding the need for finger or nail biopsies.





**Abstract N°: 4988**

**gorlin syndrome and the role of Dermoscopy in early diagnosis and treatment**

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**Introduction & Objectives:**

Gorlin syndrome, also called Gorlin-Goltz syndrome, basal cell nevus syndrome (BCNS) is an inherited, autosomal dominant familial rare genetic disorder. It is characterized by numerous basal cell carcinomas (BCCs), along with skeletal, ophthalmologic, and neurologic abnormalities. Multiple neoplasms arise starting in childhood. The etiology is attributed to the mutations in the PTCH1 gene located on chromosome 9 are the main cause of Gorlin Syndrome. Diagnosis of BCNS requires the presence of two major or one major and two minor clinical criteria.

**Materials & Methods:**

Herein, we report 2 cases diagnosed with Gorlin syndrome.

Case number one:

A 74 year old patient presented to the clinic with multiple lesions on her face, neck and body.

The patient developed multiple facial nevi during early childhood that increased in size and progressed to malignant lesions late in her second decade of life. Her sister and her mother had developed similar lesions during their lifetime. On physical examination, there were notable multiple hyperpigmented exophytic nodular facial lesions of different sizes on the face, neck and upper body. Echymosis was present.

On dermoscopy there were clear criteria of basal cell carcinomas. The biopsy from 3 different lesions showed a typical nodular-type BCC with nests of basaloid cells in the dermis. The patient was referred to the oncology department for radiation therapy but refused treatment and didn't come back for follow up.

Case number 2:

A 51 year old patient presented to the clinic with some lesions on her body present for many years which grew up progressively. She had family history for the same lesions (her aunt). She underwent a surgical excision 2 years ago after being told she had melanoma leaving her with a huge scar. No dermoscopy examination was performed before the surgery. The result from the histopathology came back as basal cell carcinoma. On physical examination she had multiple ulcerative lesions and a big scar on her left chest with partial resection of the left breast. On dermoscopy there was evidence of multiple BCCs. Surgical excision was performed on 4 lesions and histopathology confirmed the diagnosis of BCC of both lesions.

**Results:** The patients were diagnosed as Gorlin syndrome according to the criteria. They both had a history of basal cell carcinomas before the age of 20, and had a first-degree relative with nevoid basal cell carcinomas. On dermoscopy there were clear criteria of basal cell carcinomas and this helped a lot in deciding the method of treatment. The nodular melanomas were surgically excised and the small, superficial melanomas were treated with 5-fluorouracil. Genetic testing was advised by the oncology consult, but the patients were unable to proceed with it due to the cost of such a procedure. Dermoscopy is considered to be an essential method for the differential diagnosis of skin lesions and is also helpful when selecting the area to be biopsied. This is important because Gorlin syndrome affects young people; therefore, dermoscopy not only restricts the number of biopsies but also

prevents unnecessary surgical procedures.

**Conclusion:** A multidisciplinary approach is required to manage patients with Gorlin syndrome. Patients with multiple skin lesions need to have regular assessments by their dermatologist, with dermoscopy serving as an important preventive measure.

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**Abstract N°: 5151****Eruptive sebaceous hyperplasia induced by oral tacrolimus in a kidney transplant recipient – clinical, dermoscopic and reflectance confocal microscopy features**Jakub Żółkiewicz<sup>\*1</sup>, Urszula Maińska<sup>1</sup>, Michał Sobjanek<sup>1</sup>, Martyna Sławińska<sup>1</sup><sup>1</sup>Medical University of Gdańsk, Department of Dermatology, Venereology and Allergology, Gdańsk, Poland**Introduction & Objectives:**

Sebaceous hyperplasia (SH) is a benign proliferation of sebaceous glands. It most commonly occurs in middle age or elderly individuals. Enlargement of sebaceous glands produces yellowish or flesh-colored papules which are most commonly located on the face and upper trunk. SH lesions may be associated with immunosuppressive therapy, genetic syndromes (in particular Muir-Torre syndrome) and hormonal abnormalities, among others. Herein, we report a case of a renal transplant recipient who developed eruptive sebaceous hyperplasia (ESH) followed by initiation of oral tacrolimus.

**Case presentation:**

A 61-year-old male was consulted due to multiple asymptomatic skin papules located on the face. The patient has been diagnosed with renal failure secondary to cryoglobulinemic vasculitis and following kidney transplantation, multimodality immunosuppressive regimen encompassing tacrolimus, mycophenolate mofetil and methylprednisolone has been introduced. Soon after initiation of oral immunosuppressive agents, the patient noticed sudden onset of multiple yellowish papules scattered over the forehead and the cheeks. On dermoscopy facial lesions presented with peripheral crown vessels and centrally located yellow globules. Reflectance confocal microscopy (RCM) examination revealed clusters of round cells with bright speckled cytoplasm and dark round nuclei (morulae-shaped sebaceous lobules) along with dilated follicular infundibulum in the center. Clinical, dermoscopic and RCM presentation led to the diagnosis of ESH.

**Conclusion:**

In the literature less than 20 cases of ESH has been reported, mostly concerning organ transplant recipients. The majority of cases were patients receiving cyclosporine after renal transplantation, while only single cases describe the association of ESH with introduction of oral tacrolimus. Interestingly, there are no reports on ESH in women, what suggests underlying genetic predisposition and distinctive structural features of sebaceous glands in males. Dermoscopy and RCM features of tacrolimus-induced ESH seem to be within the spectrum of classical SH.



**Abstract N°: 5152****Unilateral spontaneously regressing clear cell acanthomas of the lower limb**Jakub Żółkiewicz<sup>\*1</sup>, Urszula Maińska<sup>1</sup>, Michał Sobjanek<sup>1</sup>, Martyna Sławińska<sup>1</sup><sup>1</sup>Medical University of Gdańsk, Department of Dermatology, Venereology and Allergology, Gdańsk, Poland**Introduction & Objectives:**

Clear cell acanthoma (CCA) is a benign skin tumor of unknown etiology. It usually manifests as a solitary well-demarcated pink to light brown papule or nodule, most frequently encountered on the lower extremities. Herein, we report a case of a patient with unilateral spontaneously regressing CCAs of the lower limb.

**Case presentation:**

A 74-year-old male presented to the outpatient clinic with a complaint of asymptomatic pink skin nodules that continued to appear within the previous year on the right lower extremity and spontaneously regressed with residual hyperpigmentation. The patient had a history of prediabetes and hypercholesterolemia treated with metformin and rosuvastatin, respectively. Clinical examination revealed two pink nodules on the affected limb along with the areas of hyperpigmentation. Pink lesions on dermoscopy displayed linearly arranged glomerular vessels over pinkish background along with white lines and a collarette scale. Diagnostic excision of one of the lesions was performed and histopathological examination indicated a diagnosis of CCA. During the following months the patient reported occurrence and regression of similar lesions in the same anatomical area. Due to the oncological anxiety of the patient, another lesion was excised and histopathological evaluation confirmed the diagnosis of CCA as well.

**Conclusion:**

Unilateral spontaneously regressing clear cell acanthomas is a rare entity that should be considered in differential diagnosis of pink lesions and hyperpigmented macules limited to the one anatomical region.



**Abstract N°: 5290****Different faces of dermoscopy of limb melanoma. Case series.**

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**Introduction & Objectives:**

Only few studies have examined melanoma specific features on the limbs with focus on lower limbs. Dermoscopic features of thick melanomas do not differ from well-known melanoma features. Thin melanomas present prominent or delicate network, wider skin markings, polygons/angulated lines, regression and dermoscopic islands.

**Materials & Methods:**

We report case series of 5 patients with limb melanoma, 3 on the lower limb and 2 on the upper limb. All of these melanomas are different from each other both clinically and dermoscopically. All lesions were excised and melanoma was confirmed by pathohistology.

**Results:**

- \1. 58-years-old female patient, was referred to us because of the changing pigmented lesion 3 mm in size on her right hand. Lesion was clinically inconspicuous. However, dermoscopy showed asymmetry in colour and structure with irregular globules at periphery of the lesion. Pathohistology confirmed invasive melanoma pT1a (Breslow 0.35mm).
- \2. During the regular check-up of a 69-years-old male patient with medical history of renal transplantation and multiple non-melanoma skin cancers and dysplastic mole syndrome on immunosuppressive therapy, clinically dark lesion on his right lower leg was noticed. The lesion was newly developed. Dermoscopy showed asymmetry in colour and structure. On pathohistology, melanoma in situ was confirmed.
- \3. 80-years-old female patient presented with yellowish-brown lesion 14x16mm in size that clinically resembled solar lentigo. On dermoscopy grey angular structures were seen all over the lesion. Pathohistology confirmed the diagnosis of melanoma in situ.
- \4. 59-years-old female patient was referred to the clinic due to light-brown, pigmented, partly nodular lesion on her left arm that showed signs of fast growing. Dermoscopically irregular peripheral globules in nodular part of the lesion, and white spikes were seen. The lesion was pathohistologically diagnosed as melanoma pT2a (Breslow 1.4mm). SLNB was performed and showed negative result.
- \5. 61-years-old female patient with medical history of breast cancer receiving chemotherapy, noticed changes in nevus on her right arm. Clinically, pigmented lesion, 6x5 mm in size, with asymmetry in colour was observed. On dermoscopy one part of the lesion showed regular light brown network, while on the other part of the lesion dermoscopic island with grey dots, peripheral streaks and slight bluish veil was seen. Pathohistological examination confirmed the diagnosis of melanoma in situ.

**Conclusion:**

Melanoma morphology is directly related with anatomical localization of the lesion. Angular structures are one of the most common signs of melanoma on lower limbs. Other specific signs are hyperlinear structures, atypical network, regression or peppering, polymorphic blood vessels and dermoscopic islands. We present five cases of limb melanomas with different clinical and dermoscopic appearance. A large number of melanomas on the limbs are clinically discrete, even in high- risk patients. For a correct diagnosis sometimes digital dermoscopy monitoring is necessary.

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**Abstract N°: 5397****The Role of Dermoscopy In the Assessment of Nailfold Capillary Abnormalities in Collagen Vascular Disorders**

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**Introduction & Objectives:**

Collagen vascular disorders, such as systemic sclerosis, dermatomyositis, systemic lupus erythematosus, and mixed connective tissue disorder, often manifest microangiopathic abnormalities in the nail folds. While nail fold capillaroscopy (NVC) is the established method for studying microvascular changes, its accessibility may be limited. This study investigates the potential of nail fold dermoscopy as a rapid screening tool for vascular changes in these disorders before referring patients for further capillaroscopy evaluation.

**Materials & Methods:**

Ten patients diagnosed with systemic scleroderma, dermatomyositis, generalized morphea, and cutaneous lupus erythematosus underwent both dermoscopy and NVC. Images were obtained from all 10 nail beds, capturing a range of capillary abnormalities. Initial dermoscopy was conducted using a handheld device attached to a phone. Lesions were graded on a severity scale from 0 to 2: normal (0), abnormal (1), definitely abnormal (2). Subsequently, NVC was performed, and the results were compared.

**Results:**

Dermoscopic evaluation revealed various abnormalities including dilated capillaries, capillary dropouts, avascular areas, hemorrhages, discoloration, and hyperkeratosis of the proximal nailfold. Among the patients, anomalies were observed in 7 cases, while no modifications were noted in the remaining 3. Notably, in one patient with multiple autoimmune diseases and a prior negative capillaroscopy, dermoscopy revealed dilated capillaries and splinter hemorrhages, which were later confirmed with a new NVC.

**Conclusion:**

The inclusion of nailfold capillaroscopy in the 2013 combined ACR European League Against Rheumatism (EULAR) classification criteria for systemic sclerosis highlights its significance in identifying abnormal nailfold capillaries. Additionally, modifications in capillary architecture may predict the development of Systemic Sclerosis and Systemic Lupus Erythematosus in patients with Raynaud phenomenon. However, access to capillaroscopy remains limited for some rheumatologists. Dermoscopy emerges as a valuable diagnostic and prognostic tool, offering insights into disease activity and systemic involvement in collagen vascular disorders.



**Abstract N°: 5702****The diagnostic accuracy of teledermatology in identifying benign and malignant skin lesions**

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**Introduction & Objectives:** Teledermatology involves utilising communication technologies to remotely evaluate and treat skin lesions in patients. Its practice has grown rapidly in popularity over the past few years. In this study, we aimed to compare the accuracy of teledermatology to face-to-face interviews in identifying benign and malignant skin lesions. Additionally, we compared the diagnostic accuracy of two tools: the Fotofinder® device and the handheld dermatoscope.

**Materials & Methods:**

The study involved 57 patients who had either benign or malignant skin lesions confirmed by histopathological examination. Photos of 27 patients were taken using Fotofinder® device, while lesions in 30 patients were photographed using a telephone camera and handheld dermatoscope. The images were reviewed by six teledermatologists. The provisional diagnoses of them were then compared to those made by physician who saw the patients in person, as well as histopathologic definitive diagnoses. The results were analysed statistically.

**Results:**

The study involved a total of 24 different skin lesions, with basal cell carcinoma being the most prevalent (31.6%). The correct diagnosis was regarded as the initial differential diagnosis in 84.2% of the patients during face-to-face interviews based on visual inspection and dermatoscopic evaluation. Upon utilising macro and microphotographs to examine the same lesions, teledermatologists maintained a 70.8% rate of considering the correct diagnosis first in the differential diagnosis. This rate stayed at 63.7% when the teledermatology evaluation focused solely on macrophotos. Although teledermatology demonstrated a lower diagnostic accuracy in comparison to face-to-face interviews, the difference did not reach statistical significance (84.2% vs 70.8, 84.2% vs 63.7%,  $p > 0.05$  for both). In teledermatology, the accurate diagnosis rate increased when microphotographs were utilised in evaluation rather than macrophotographs alone (70.8% vs 63.7%,  $p = 0.004$ ). Using a telephone camera or a Fotofinder device to take macro and microphotos did not affect the diagnostic accuracy rates of teledermatology (60.5% vs 66.7%, 67.9% vs 73.3%,  $p > 0.05$  for both). The interrater reliability was found to be moderate (ICC: 0.696). The length of professional experience and diagnostic accuracy rates were found to be weakly correlated ( $Rho = 0.128$ ,  $p = 0.018$ ).

**Conclusion:**

This study showed that teledermatology can be as effective as face-to-face interviews in diagnosing benign and malignant skin lesions. The addition of dermatoscopic images to macroscopic images of lesions increased the diagnostic accuracy. The diagnostic accuracy rates remained unaffected by the photographic devices employed.



**Abstract N°: 5855**

**Through the looking-glass: dermoscopy in skin cancer patients**

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**Introduction & Objectives:** Dermoscopy plays a pivotal role in guiding clinical decisions when evaluating patients with pigmented skin lesions, facilitating the detection of smaller skin cancers and aiding in the precise selection of lesions for excision. By enabling clinicians to discern benign from malignant lesions based on specific dermoscopic features, it enhances diagnostic accuracy. However, despite its evident value, many clinicians lack adequate training in dermoscopy. This audit aims to evaluate the quality of clinical practice and the confidence level of doctors in utilizing dermoscopy in a large British hospital.

**Materials & Methods:** The quality of clinical practice was evaluated through retrospective analysis of the clinical records of 109 two-week wait patients with pigmented skin lesions, gathered from June to August 2021. Data including demographics, diagnoses, documentation of dermoscopy, clinician expertise, and examination methods were collected. The confidence level of healthcare professionals was assessed via an online questionnaire distributed among them.

**Results:** Of the patients, 53% were diagnosed with benign lesions, 3% with melanoma, and 21% with undefined lesions. Remarkably, dermoscopy documentation was absent in 68% of cases. Plastics Registrars and Associate Specialists demonstrated a 100% documentation rate, followed by Dermatology Registrars (60%), Plastics Consultants (56%), Dermatology Consultants (25%), and Associate Specialists (11%). Additionally, 21% of patients underwent remote telephone consultations instead of face-to-face appointments. Among questionnaire participants, 66.7% reported always utilizing and documenting dermoscopy, yet only 45.8% expressed moderate confidence in their skills, while 29.2% felt very confident. Face-to-face courses and in-clinic training sessions were the preferred methods for 37.5% of respondents, followed by online courses and webinars (both 12.5%).

**Conclusion:** A notable disparity exists between the survey responses and the data extracted from patient notes regarding the use of dermoscopy, suggesting a lack of appreciation for proper documentation. Despite the predominance of benign lesions, the significant proportion of uncertain diagnoses underscores the potential benefits of more consistent dermoscopy utilization. Variability in clinician training and confidence levels underscores the necessity for structured educational initiatives. The substantial prevalence of remote consultations, largely conducted by Dermatologists, correlates with decreased dermoscopy utilization, emphasizing the impact of the COVID-19 pandemic. Adequate education on the importance of dermoscopy and accessible face-to-face training courses are imperative for future practice improvement.



**Abstract N°: 5960****Dermoscopy of early stage of mycosis fungoides**Olga Artamonova<sup>1</sup>, Arfenya Karamova<sup>1</sup>, Kseniya Aulova<sup>1</sup>, Alexey Kubanov<sup>2</sup>

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**Introduction & Objectives:**

Mycosis fungoides is the most common type of cutaneous T-cell lymphoma. Differential diagnosis of this disease, especially in the early stages, is difficult and challenging. Dermoscopy is a cheap, non-invasive and simple method for assessing skin tumors. In recent years, the possibility of using the dermoscopy for the differential diagnosis of chronic dermatoses, including mycosis fungoides, has been actively studied. The aim of the study is to describe the dermoscopic pattern of early stage mycosis fungoides and compare it with the dermoscopic features observed in chronic dermatitis (psoriasis).

**Materials & Methods:**

An open, prospective study was conducted. The study included 7 patients with stage IIA mycosis fungoides and 10 patients with plaque psoriasis. Diagnosis had been histopathologically and immunohistochemically (for mycosis fungoides) confirmed in all cases. The lesions were inspected using a polarized manual dermoscope (HEINE DELTA 20 ). The dermoscopic findings of each lesion were evaluated for background color, type and distribution of vessels, color and distribution of scales, and other additional findings.

**Results:**

Characteristic dermoscopic pattern consisting of geometric white scales (clinically: cigarette paper-like wrinkly scales), fine short linear vessels and vascular structures resembling spermatozoa was found in all 7 (100%) patients with mycosis fungoides. Orange-yellowish patchy areas were found in 2 (28%) patients with mycosis fungoides. Dermoscopic pattern of all 10 (100%) patients with plaque psoriasis consisted of dotted vessels.

**Conclusion:**

Early stage mycosis fungoides exhibits specific dermoscopic pattern which is different from plaque psoriasis and might be useful in clinical diagnosis.



**Abstract N°: 5965****Dermoscopy for the detection of anogenital warts malignant transformation in immunocompromised patients**

Marouane Ben Kahla<sup>\*1</sup>, Lina Bessaad<sup>1</sup>, Nadia Ben Lasfar<sup>2</sup>, Nadia Ghariani<sup>1</sup>, Maha Lahouel<sup>1</sup>, Zeineb Nfikha<sup>3</sup>, Dorra Chiba<sup>3</sup>, Sarra Saad<sup>1</sup>, Mohamed Ben Rejeb<sup>1</sup>, Jacem Rouatbi<sup>1</sup>, Haifa Mkhini<sup>1</sup>, Badreddine Sriha<sup>1, 3</sup>, Sana Mokni<sup>1</sup>, Aounallah Amina<sup>1</sup>, Ghariani Nejet<sup>1</sup>, Denguezli Mohamed<sup>1</sup>

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**Introduction & Objectives:**

Anogenital warts (AGW) are the most common sexually transmitted infection caused by well defined serotypes of human papilloma viruses. Some serotypes represent a high risk of squamous cell carcinoma especially in immunocompromised patients. We report a case of cutaneous squamous cell carcinoma arising from perianal warts detected with dermoscopy in a HIV patient.

**Result:**

A 31-year-old man with HIV infection consulted in our department of dermatology for perianal tumors evolving for 5 months with a history of unprotected anal intercourse. The clinical examination revealed multiple vegetant tumors with a keratotic surface measuring 2 to 4 cm diameter in the perianal area. The diagnostic of AGW was made clinically and confirmed with biopsy. Dermoscopy showed digitiform pattern and the patient was treated with cryotherapy. After two months of follow-up, the lesions become confluent all around the anus: The dermoscopy mentioned in the 5 o'clock position of the anus, whitish structureless area with yellowish keratin area and polymorphous vessels. We suspected squamous cell carcinoma and a second biopsy guided by dermoscopy confirmed our suspicion. Thoraco-abdomino-pelvic computed tomography scan and rectocoloscopy did not show secondary localizations and the patient was referred to surgical department for exeresis.

**Conclusion:**

AGW are much more frequent in HIV-positive patients compared to HIV-negative individuals. HPV and HIV coinfection favour progression to dysplasia and cancer by modifying local and tissue immunity.

Anogenital cancers and cutaneous carcinomas such as squamous cell carcinomas are especially prevalent in HIV-positive men who have sex with men. As those lesions are more extensive and more risky for malignant transformation, multiple biopsies are recommended for immunocompromised patients with AGW. Dermoscopy provides a significant contribution to guide the biopsy and diagnose early the malignant transformation. Therefore, it allows a more conservative treatment in this compromising anatomic area. We recommend a clinical and dermoscopic control in the follow-up of HIV-positive patients presenting AGW and a dermoscopy guided biopsies in case of any suspicious sign.



**Abstract N°: 6019****Dermoscopy in cutaneous metastases from solid tumors: a case series**

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**Introduction & Objectives:**

Dermoscopy is a useful tool for diagnosing skin metastases, enabling early management. Limited data exist on the dermoscopic findings in cutaneous metastases (CM).

**Materials & Methods:**

We describe the dermoscopic features of CM from solid tumors in four patients.

**Results:**

## Case 1 :

A 60-year-old woman, with no notable pathological history, presented with a four-year history of a painless subcutaneous mass in her left axilla with a progressive extension. Skin examination revealed a painless subcutaneous tumor measuring 7 centimeters in long axis, of stony consistency, with an erythematous surface, and ulcerated surface that adhered to the overlying skin. Dermoscopic examination showed a central hemorrhagic ulceration, shiny linear structures, irregular linear vessels, and milky red areas. Histopathological examination of the skin tumor concluded with an infiltrating ductal carcinoma of the breast (IDCB) in an ectopic breast with positive lymph nodes.

## Case 2 :

A 62-year-old man, with a familial history of breast cancer in an aunt, consulted for a budding ulcer tumor of the left nipple, evolving for 3 years. Cutaneous examination revealed a 2 x 2 cm pigmented tumor with irregular borders, centered by a thick mass of keratin, adhering to the deep plane, destroying the left nipple. Dermoscopic examination showed hemorrhagic central ulceration surrounded by multiple bright white lines and blue-gray structureless areas associated with polymorphic vascular structures, composed of irregular linear, curved, dotted, and arborizing vessels, as well as milky red areas. Skin biopsy and IHC study confirmed the diagnosis of breast carcinoma cutaneous metastases.

## Case 3 :

A 67-year-old patient, with a history of chronic obstructive pulmonary disease, underwent surgery in January 2023 for squamous cell carcinoma of the lung and consulted for a nodular budding tumor on the right parietal region of the scalp, which has been evolving for 1 month. Physical examination revealed a 4 cm long, bleeding, ulcerated tumour with a rounded center. Dermoscopic examination showed (Linear, irregular, arborizing, and polymorphic vessels and, white structureless areas). Skin biopsy showed a diffuse dermal pattern of metastases from pulmonary squamous cell carcinoma.

## Case 4 :

A 69-year-old man, operated on in October 2023 for a bladder tumour, consulted for a nodular skin tumor that

had been evolving for 2 months. Physical examination revealed an erythematous globular hemispherical tumor with central ulceration measuring 4 cm in diameter, located opposite the right sternoclavicular joint. Dermoscopic examination showed polymorphic vessels, structureless yellow areas, white structureless areas, and milky red areas. Skin biopsy of the tumor and IHC study concluded CM of urothelial carcinoma.

**Conclusion:**

CM accounts for 2% of all skin tumors, with an incidence of 0.7% to 9%. The most common primary tumors seen with cutaneous metastases are breast cancer in women and lung cancer in men. The most dermoscopic pattern of CM is the vascular pattern (linear irregular vessels, arborizing vessels, dotted vessels, red clods, and erythematous structureless areas). These data are like those observed in our patients. These vascular structures observed in cutaneous metastases may suggest a role for angiogenesis in their pathogenesis. The use of dermoscopy facilitates the detection of lesions suspected of malignancy in patients with cancer.

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**Abstract N°: 6127****New insight in dermoscopy of lentigo maligna/lentigo maligna melanoma**

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**Introduction & Objectives:**

Lentigo maligna (LM) and lentigo maligna melanoma (LMM) are slow growing tumors located on the face, that may be very difficult to diagnosis with naked eye. Dermoscopic features of LM have been described more than 20 years ago and in our daily practice we've observed that part of our current cases doesn't fulfill those criteria previously described. Therefore, we reviewed the cohort of lentigo maligna cases of two tertiary hospitals in Spain with the aim to describe the dermoscopic characteristics of LM/LMM of real-life current cases over the last 10 years.

**Materials & Methods:**

This retrospective study collected consecutive patients of 153 histologically proven lentigo maligna diagnosed between January 2011 and March 2023, from two tertiary referral centers in Spain.

We've collected patient baseline data (sex, phenotype, age, tumor location), histopathological characteristics, clinical and dermoscopic images.

**Results:**

In total 153 patients were included, 86 (56.2%) men and 67 (43.8%) women, mean age 72 years (range 31-97). Overall, there were 112 (73.2%) LM and 41 (26.8%) LMM, with median and mean Breslow thickness of 0.7mm and 2.1mm, respectively (range 0.2-25mm).

Analysing all clinical images, we identified at least 4 different clinical types of LM/LMM (Figure 1). The first type fulfilled all the classical criteria of LM: a large macule, with multiple colours and ill-defined borders. The second appeared as solar lentigo/ seborrheic keratosis-like, with brown homogeneous colour and very well-defined border. The third mimicked pigmented actinic keratosis and lichen planus-like keratosis appearing as grey macules. The fourth were small well-defined dark pigmented lesions, clinically nevus-like. Finally, the fifth presented as amelanotic/hypomelanotic type, lesions that could be easily confused with actinic keratosis or Bowen disease. Many of those lesions were misdiagnosed by different dermatologists for many years and treatments like cryotherapy and lasers were performed on these supposed benign lesions.

The most common dermoscopic findings were pseudonetwork irregularly distributed (129; 84.3%) and dots (119; 77.8%). Among classical LM criteria, hyperpigmented follicular opening was the most frequent feature (103; 67.3%), followed by short streaks (91; 59.5%), pigmented rhomboidal structures (72; 47.1%), annular-granular pattern (54; 35.3%) and obliterated hair follicles (43; 28.1%).

**Conclusion:** our cohort of 153 LM/LMM cases revealed that the most frequently dermoscopy features were pseudonetwork and dots, which are not specific malignant criteria. We also demonstrated that LM/LMM may clinically and dermoscopically mimic benign lesions. Being aware of this challenge is crucial to avoid mistreatment



and late diagnosis that can lead to patient morbidity and radical surgical treatments.

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**Abstract N°: 6457****Lentigo Maligna in Optical Super-High Magnification Dermoscopy**Joanna Pogorzelska-Dyrbuś<sup>1</sup><sup>1</sup>“Estevita” Specialist Medical Practice, Tychy**Introduction & Objectives:**

Lentigo maligna (LM) is characterized by an atypical proliferation of melanocytes within the epidermis. Although in advanced stages, its diagnosis based on established dermoscopic criteria is not challenging, it may be more difficult in the early stages of its development [1]. Optical super-high magnification dermoscopy (OSHMD) owing to the possibility of visualization of the lesion in magnification up to 400x allows the finding of novel diagnostic features [2] and might allow for earlier diagnosis of skin lesions.

**Materials & Methods:**

A 72-year-old man with a 14-mm flat-dark pigmented lesion of the nose presented for dermoscopy. Standard dermoscopy, OSHMD and biopsy were performed.

**Results:**

Standard dermoscopy revealed dark brown homogenous pigmentation, in the predominant area with maintained adnexal openings. In the central part of the lesion, complete obliteration of the adnexa was present. OSHMD revealed the presence of numerous round structures probably corresponding to melanocytes infiltrating hair follicles. According to the available literature, LM is characterized by the proliferation of atypical melanocytes in the epidermis with a melanocyte invasion of the hair follicle which is responsible for asymmetric pigmented follicular openings and in more advanced cases, for a complete obliteration of adnexa visible in standard dermoscopy [2,3]. Histopathological examination of biopsy specimens confirmed the diagnosis of LM.

**Conclusion:**

In addition to standard dermoscopy, OSHMD might be useful in the diagnostic process of LM. Moreover, it can be assumed that this method can be particularly useful in the diagnosis of lesions located on the face, where it is important to avoid unnecessary surgical interventions

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**Abstract N°: 6581****Dermoscopic features of rosacea: a comparative study between dark and light phototypes**

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**Introduction & Objectives:**

Rosacea is a multifactorial chronic inflammatory disorder that has rarely been described in patients with dark phototype.

This study aimed to describe dermoscopic features of rosacea in dark phototypes and compare them to those of light phototypes. We will emphasize through this study the major role of the dermoscope in increasing diagnostic accuracy of rosacea in dark skin patients.

**Materials & Methods:**

It's a cross-sectional descriptive and analytic study of 206 patients with rosacea, confirmed or not by histology, seen in the Dermatology Department of Ibn Sina University Hospital of Rabat, from December 2020 to March 2024. We used dermoscopes, a standardized form, Excel software and Jamovi version 2.3. A significant p is <0.05.

**Results:**

The average age was 45.8 years and sex ratio (F/M) was 6.63. More than two third of the studied population 68.4% (141) had a dark phototype (IV and V). There was a significant association between the phototype and the rosacea subtype. In dark phototypes, 83.7% of patients had erythematotelangiectatic subtype while in light phototypes 52%. However, 12.1% of dark phototypes had a papulopustular subtype and up to 44.6% of light phototypes. Furthermore, 75% of patients with skin of color had phyma and only 25% of light phototypes.

Concerning dermoscopy, we found a statistically significant association between the phototype and pigmented areas ( $p=0.003$ ). 54.6% of dark skin patients had pigmented areas and only 32.3% of patients with light phototype. Another significant association between phototype and orange structureless areas ( $p=0.027$ ) which were described in 3.5% of dark phototypes and 12.3% of light ones. Crusts are also significantly associated with phototype ( $p=0.035$ ) and found in 0.7% of dark skin patients and 6.2% of light phototypes. We did not find a statistically significant association between the phototype and vascular features, dilated follicles, erythematous background, white scales, pustules, perifollicular orange color, yellow clods and demodex tails.

In the erythematotelangiectatic subtype of patients with dark skin color, polygonal vessels were the predominant feature (68,9%) with an erythema (96,5%) and pigmented areas (62,6%). In patients with light phototype, vascular patterns were similar with less pigmented areas(40%). In the papulopustular subtype, similar features were found in both phototypes with a predominance of pustules (52%) and red clods (32%). In dark phototypes, 15.7% presented pustules non-visible clinically and only 6% in light phototypes. The granulomatous subtypes were characterized by structureless orange areas with similar vascular patterns, scales and erythema. Demodex tails were found in only 5.7% of cases in patients with dark phototype. In the phymatous subtype, we found yellow clods, dilated follicles and rosettes.

**Conclusion:**

Rosacea is uncommonly reported in patients with skin of color. This study highlights the dermoscopic patterns in patients with dark phototype comparing them to those found in patients with light phototype.

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**Abstract N°: 6586**

**Implication of Dermoscopy and histopathological correlation in facial pigmentary disorders in skin of color**

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**Introduction & Objectives:**

Hyperpigmentation disorders are commonly seen in clinical settings and make up a substantial portion of dermatology consultations. These conditions, especially when they manifest on the face, can have a huge influence on an individual's psychologically and socially. Clinical evaluation is the main method for diagnosing hyperpigmentation disorders, as histopathology is invasive and patients are often hesitant to undergo facial biopsies. Dermoscopy, a noninvasive diagnostic tool, has become increasingly popular. It enables repeated examinations over time and provides valuable insights in the diagnosis of various hyperpigmentation disorders.

This study was conducted to determine whether there is a correlation between the dermoscopic and histopathological characteristics of Facial Acquired Dermal Macular Hyperpigmentation.

**Materials & Methods:**

This diagnostic descriptive study involved the evaluation of 10 patients with facial hyperpigmentation. Dermoscopy was conducted on all participants, and dermoscopy guided biopsy was obtained from the suspected lesions.

**Results:**

Dermatocopic evaluation was done in 10 cases. The dermoscopic structures observed were: A-pigmented dots and globules (100%) that distributed irregularly (60%), wave like or annular (20%), B- reticular patterns (90%) as psudoreticular (60%), perifollicular accentuation (60%), and perifollicular annular accentuation (30%), C- fine scales (20%), D- telangiectasia(10%), and E-perifollicular whitish halo (20%).

**Conclusion:**

In summary, our study suggests that dermoscopy can be a helpful diagnostic tool for facial hyperpigmentation, providing valuable clues. However, we can't name a specific diagnosis but rather to categorize it under umbrella of ADMH. it is crucial to acknowledge the limitations of our study, such as the small sample size and single-center design. Therefore, it is important to interpret our findings cautiously, and further research incorporating dermoscopic-histological analyses is necessary to confirm the validity of our results.





**Abstract N°: 6648**

## **Applications of Dermoscopy in Laser and Aesthetic Medicine: Diagnostic and Therapeutic Insights**

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Applications of Dermoscopy in Laser and Aesthetic Medicine: Diagnostic and Therapeutic Insights

Abstract:

Introduction & Objectives:

Dermoscopy is an invaluable non-invasive imaging tool that has expanded beyond traditional dermatological diagnostics to find significant utility in laser and aesthetic medicine. This study aims to comprehensively review the diverse applications of dermoscopy in this field, emphasizing its role in diagnosis, treatment planning, procedural monitoring, and patient education.

Materials & Methods:

A systematic review of clinical studies and case reports was conducted to identify and evaluate the use of dermoscopy in laser and aesthetic practices. The studies reviewed encompassed the diagnosis of pigmented and vascular lesions, pre-procedural assessment, treatment planning, and monitoring. Information was gathered on specific lesion types, treatment modalities, procedural monitoring techniques, and patient outcomes.

Results:

The analysis identified several key areas where dermoscopy significantly contributes to laser and aesthetic medicine:

Diagnosis and Assessment:

Pigmented Lesions:

Dermoscopy enhances the diagnosis of pigmented lesions such as lentigines, nevi, and seborrheic keratosis.

By revealing characteristic patterns and structures, it differentiates benign lesions from potential melanomas, reducing unnecessary excisions and guiding appropriate laser treatments.

Vascular Lesions:

Dermoscopy aids in identifying vascular structures like telangiectasia, cherry angiomas, and hemangiomas.

It allows clinicians to determine lesion size, depth, and vessel characteristics, leading to tailored laser settings and improved outcomes.

Treatment Planning:

Laser Parameter Optimization:

Dermoscopy enables a detailed evaluation of lesion characteristics, such as pigmentation and vascularity, leading to better selection of wavelength, fluence, and pulse duration for laser treatments.

Procedural Monitoring and Evaluation:

Intra-Procedural Monitoring:

Dermoscopy provides immediate feedback during procedures, allowing practitioners to adjust parameters based on the degree of lesion clearance or improvement in vascular patterns.

Follow-Up Monitoring:

Post-procedural dermoscopic imaging tracks healing and reveals subtle changes in pigmentation, vascularity, or other skin features, ensuring accurate assessment of treatment efficacy and reducing the risk of recurrence.

Education and Documentation:

Training Tool:

High-resolution dermoscopic images serve as educational resources for training practitioners in lesion identification and procedural monitoring.

Conclusions:

Dermoscopy plays a crucial role in laser and aesthetic medicine by providing enhanced diagnostic capabilities, optimizing treatment parameters, and offering immediate procedural feedback. It also fosters patient education and helps monitor long-term outcomes. Incorporating dermoscopy into routine practice can improve intervention accuracy and patient satisfaction. Further research should aim to standardize dermoscopic protocols for various aesthetic procedures and explore the integration of dermoscopy with other imaging technologies.

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**Abstract N°: 6649****The predictive dermoscopic features for Breslow thickness  $\geq 0.8\text{mm}$  in acral melanoma**□ □\*<sup>1</sup><sup>1</sup>Department of Dermatology, Xijing Hospital, Fourth Military Medical University, Xian, China**Introduction & Objectives:**

Breslow thickness  $\geq 0.8\text{mm}$  predicts a significantly worse prognosis for melanoma patients and accordingly determines the subsequent therapeutic decision-making. Albeit the accurate thickness depends on histopathology examination, dermoscopy can offer valuable clues to avoid underestimating the invasion depth before resection. However, data on dermoscopic features predicting Breslow thickness for acral melanoma are limited. To identify the dermoscopic characteristics associated with a Breslow depth  $\geq 0.8\text{mm}$  of melanoma located in acral volar skin and nail unit.

**Materials & Methods:**

Dermoscopy images and matched pathological data of 224 primary lesions of acral melanoma diagnosed in the Dermatology Department of Xijing Hospital from July 2017 to August 2023 were reviewed. The correlation between dermoscopic features and Breslow depth was analyzed.

**Results:**

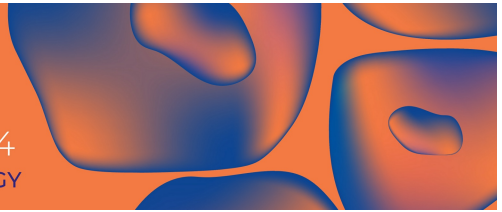
We found blue-white veil, off-center blotch and atypical vascular pattern were three independent risk factors of Breslow depth  $> 0.8\text{mm}$  for melanoma in volar skin. In nail unit melanoma, the risk factors were the destruction of the nail plate and Hutchinson's sign.

**Conclusion:**

Dermoscopy can provide useful information for predicting Breslow depth in acral melanoma.







**Abstract N°: 6683**

**Non-Polarized and Parallel Polarized Dermoscopy: An Alternative Tool for Diagnosing Acral Melanocytic Lesions Using the Furrow Ink Test**

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**Introduction & Objectives:**

Dermoscopy allows for a detailed examination of the skin's surface and serves as a valuable diagnostic tool for pigmented lesions. Diagnosing melanocytic lesions in acral sites can be challenging due to their subtle distinctions. While analyzing the skin markings provides useful insights, distinguishing pigmentation between ridges and furrows remains difficult. The widely used furrow ink test has drawbacks, such as staining the skin, ink failing to settle in the furrow, staining the ridge, and uneven staining of the eccrine ducts. The blur caused by the transferable liquid ink can affect precision. We describe a technique that can help isolate surface ridges and assist in diagnosing acral melanocytic lesions without using the furrow ink test. An acral nevus typically exhibits a parallel furrow pattern with linear pigmentation along the sulci of skin markings. Acral lentiginous melanoma, in contrast, shows a parallel ridge pattern involving the surface ridges, which contain the superficial openings of eccrine glands.

**Materials & Methods:**

To demonstrate this new approach, we used a Dermlite DL5 dermoscope. The lesion was first cleaned with an alcohol swab. The dermoscope was set to polarized mode, and the lesion was examined, followed by observations in non-polarized and parallel polarized modes. The entire observation process was recorded on video.

**Results:**

The video shows that non-polarized and parallel polarized dermoscopy can highlight prominent furrows and eccrine openings. Narrow white lines represent furrows, while white circles between these lines represent the eccrine ducts on the ridge, demonstrating the distinct patterns of furrows and ridges.

**Conclusion:**

Non-polarized and parallel polarized dermoscopy enhances the visibility of acrosyringial apertures and furrows on acral surface ridges. This method can assist clinicians in differentiating between benign and malignant melanocytic lesions, offering a useful alternative to the furrow ink test.



**Abstract N°: 6773****Through the lens: Morphological Psoriasiform Dermatitis**Uffra Shaikh<sup>\*1</sup>, Ratnakar Kamath<sup>1</sup><sup>1</sup>Grant Government Medical College, Dermatology Venereology and Leprosy, Mumbai, India

Through the lens: Morphological Psoriasiform Dermatitis

**Introduction & Objectives:** Psoriasiform dermatoses refer to a group of disorders, which clinically and or histologically, simulate psoriasis. The similar clinical pattern has been described in many unrelated disorders in literature. To the diagnostic armamentarium has been added a comparatively new technique called Dermoscopy.

**Materials & Methods:** A cross-sectional study was conducted in 172 patients presenting with psoriasiform plaques diagnosed clinically. The dermoscopic findings of representative lesion was performed and recorded as per five standardized parameters of inflamoscopy (background color, type, and distribution of vessels, color and distribution of scales, follicular findings, and additional findings)

**Results:** The encountered psoriasiform dermatosis included 13 disorders namely psoriasis vulgaris (PV) in 59.3%, pityriasis rosea (PR) in 8.7%, eczema and seborrheic dermatitis (SD) in 7.6%, pityriasis lichenoides chronica (PLC) in 3.5%, leprosy in 2.9%, lupus vulgaris (LV) and secondary syphilis (SS) in 2.3%, lupus erythematosus (LE) and eczematoid pigmented purpuric dermatosis (PPD) in 1.7%, reactive arthritis (ReA) and pemphigus foliaceus (PF) in 1.2% and tinea incognito in 0.5%. Male gender was more affected than female gender with the male: female ratio of 2.37:1. Although psoriasiform skin lesions are seen in all age groups, majority of study population in our study cohort are middle aged (31-40 years). The presenting complaints were red raised lesions in 100% and itching in 91.28%. The clinical examination revealed erythematous plaques (89.5%) were the most common morphology, along with adherent scale in 32.5% patients. The most common distribution was extensor seen in 39.5% however trunk was involved in majority 69.8%.

| Disorder | Vascular Pattern  | Scale pattern                               |
|----------|---|---|
| PV       | Uniform red dots (100%)                                     | Diffuse white scales (99%)                  |
| PR       | Clustered (46.66%)<br>Unspecific (40%)<br>Red dots (86.67%) | Peripheral white scales (50%)               |
| Eczema   | Red dots (84.6%)<br>Clustered (76.92%)                      | Yellow white 30.76%<br>Brown-white (23.08%) |
| SD       | Red dots (75%)<br>Unspecific(50%)<br>Clustered (41.67%)     | Diffuse (41.67%)<br>Brown white (33.33%)    |
| PLC      | Red dots 83.3%<br>Unspecific 50%,                           | White (66.67%)<br>Central (33.33%)          |

The salient features in other disorders seen were, linear vessel with varied morphology 100% in leprosy, yellow dots with linear vessels in LV, peripheral scaling (75%) in SS, follicular plug and perifollicular pigmentation (33.3%) in LE and clustered brown dots (100%) in PPD. ReA had similar features of PV. PF showed non uniform red dots with patchy white scales (75%). Tinea incognito revealed diffuse white scales.

**Conclusion:** The study identified various conditions that may present with psoriasiform skin lesions. As good clinical acumen is essential to differentiate between them. The specific dermoscopic findings can help differentiate it from its different morphological mimickers with good degree of certainty.





**Abstract N°: 6788**

## **Clinico-dermoscopic insights into non-melanocytic skin tumours: A cross-sectional exploration**

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### **Title: Clinico-dermoscopic insights into non-melanocytic skin tumours: A cross-sectional exploration**

#### **Introduction & Objectives:**

Dermoscopy, a noninvasive technique, reveals skin's hidden colors and structures. It aids in diagnosing skin tumors by enhancing clarity. Skin tumors are classified as melanocytic (pigmented) or non-melanocytic (color from keratin or hemoglobin). Dermoscopy

is a scar-free alternative to biopsy, especially effective for non-melanocytic tumors, using vascular analysis. In India, dermoscopy studies on non-melanocytic tumors are limited. This study aims to showcase its diagnostic prowess.

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

A cross-sectional study of patients of all ages and of either sex attending the outpatient department of Dermatology, Venereology and Leprology clinically diagnosed with non-melanocytic benign and malignant cutaneous tumours for 2 years from Sept 2020 to Aug 2022.

#### **Results:**

Out of 159 patients enrolled in the study, majority of them belonged to the age group of 41-50 years (n = 47, 29.55%). The mean age of presentation was found to be  $42.16 \pm 17.18$  years. Among all the cases 47.16% were males (n=75) and 52.84% were female (n=84). Most common type of skin tumour found in our study was keratinocytic tumour (n=64, 40.26%). Amongst all benign tumours encountered seborrheic keratosis (n=47, 31.97%) was the commonest followed by pyogenic granuloma 28(19.04%). Among the clinical types of seborrheic keratosis majority were DPN (n=19, 40.43%) followed by common SK (n=9, 19.15%). Most of the patients with seborrheic keratosis belonged to the age group of 41-50 years (n=23, 48.93%) followed by 61-70 years and >70 years with (n=6, 12.77%) each. Sharp demarcation (n=45, 95.74%) was the most common dermoscopic finding in SK. Among the patients with pyogenic granuloma, majority belonged to the age group of 21-30 years (n = 10, 35.72%). Reddish homogenous area (n=28, 100%) is the commonest dermoscopic feature. Amongst all the malignant tumours, 83.34% (n= 10) were BCC and 16.66% (n=2) were SCC. Most of the patients with malignant tumours were from the age group of 41-50 years and 51-60 years (n=4, 33.34%). Among the patients with malignant tumours, 66.66% (n=8) were males and 33.34% (n=4) were females. Among the dermoscopic features of squamous cell carcinoma, 100% (n=2) were hair pin and linear irregular vessels, keratin clods and ulcer and (n=2). Most common dermoscopic features of BCC included arborising vessels (100%) followed by blue/grey globules(90%).

#### **Conclusion:**

Dermoscopy enhances the accuracy of diagnosing non-melanocytic skin tumors, bridging macroscopic and microscopic views.. Our study underscores dermoscopy's role in identifying specific features of skin-colored nodules like neurofibroma, dermatofibroma, and acrochordon. It's particularly valuable in diagnosing BCC, SCC, and SK. Our research even unveils new dermoscopic features for acrochordon. As dermoscopy evolves with new

findings, it remains a key tool in dermatology.

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**Abstract N°: 6843**

**Dermoscopic features of pigmented melanoma and cutaneous nevi of a patient with oculocutaneous albinism**

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**Introduction & Objectives:** Although patients with oculocutaneous albinism (OCA) are highly prone to develop nonmelanoma skin cancers, melanoma with OCA is rarely reported. Pigmented melanoma has multiple dermoscopic clues for diagnosis; however, differentiating hypopigmented or nonpigmented cutaneous nevi from melanoma is usually challenging. Herein, we report the histopathological and dermoscopic features of cutaneous nevi and pigmented melanoma of a patient with OCA. \*\*

**Materials & Methods:** A 50-year-old male with OCA presented with multiple rough elevations on his face and hands, which were diagnosed as multiple actinic keratosis. When the whole body skin was examined, multiple pigmented macules and hypo/nonpigmented papules were observed on the face, neck, trunk, and extremities. The patient had a severe sunburn in his teenage years and stated irregular sun protection and sunblock use.\*\*

\*\*

**Results:** Dermoscopic examination of skin colored papules revealed nonpigmented or homogeneous slightly brown-yellowish pattern associated with comma-like vessels and/or dotted vessels that were regularly or irregularly distributed. Of them, six papules were excised and histopathologically diagnosed as intradermal nevi. Five pigmented macules were excised. Three of them had reticular pattern and diagnosed as lentiginous nevi. One had a peripheral reticular pattern with central hypopigmentation and was diagnosed as a compound nevus. A pigmented macule with about 1.5 cm in diameter and irregular borders demonstrated asymmetry in two axes, four colors, irregular thick streaks, and milky red areas, which was diagnosed as superficial spreading melanoma with a Breslow index of 0.25 mm.\*\* \*\*

**Conclusion:** Regular whole-body skin examinations with dermatoscopy are necessary for patients with OCA.





**Abstract N°: 6885**

### **Onychoscopy: Diagnostic Tool for Nail Disorders**

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#### **Introduction & Objectives:**

Nail disorders covers significant spectrum of all dermatological condition. Being a small and concealed unit, it always poses challenges to have right diagnosis clinically. Dermoscopy have shown to provides an addition aid in diagnosis of nail disorders. It alleviates the need of time consuming and invasive investigations such as culture and biopsy.

The objective of the study was to study the prevalence of nail disease and to study their dermoscopic patterns.

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

An open, observational and cross-sectional study of 132 patients was conducted. All patients underwent the clinical examination, followed by dermoscopic examination of the affected nails using DermLite DL4(10X). The nail plate, nail bed and nail fold changes were noted with extra emphasis on nail fold capillaroscopy in case of psoriasis and connective tissue disorder. The onychoscopic patterns were identified and recorded.

#### **Results:**

The study included 132 patients with following diagnosis: 48 onychomycosis, 33 psoriasis, 17 lichen planus, 16 connective tissue disease, 5 longitudinal melanonychia, 4 onychophagia, 4 lichen striatus, 3 sub-ungual verrucae, 1 glomus tumor and Darier disease. The most common finding were onycholysis with jagged and spike pattern, subungual hyperkeratosis and "aurora-borealis" pattern in onychomycosis. The finding in nail psoriasis were onycholysis, pits and dilated nail fold capillaries. Onychoscopic features of lichen planus were nail fragmentation and longitudinal streaks whereas lichen stratus showed distal nail plate splitting with nail bed erythema. Connective tissue disease depicted multiple nail fold capillary changes depicting enlarged capillaries and hemorrhages, bushy and twisted capillaries as well as avascular area depending on the severity of the disease.

The limitation of the study was that it was only observational and lack comparison with biopsy and other possible investigations.

#### **Conclusion:**

There is a potential to include dermoscope as a important diagnostic tool for evaluating nail disorders. It facilitates quick and painless evaluation of nail disorders. Nevertheless, it can serve as a major prognostic tool over the course of disease.



**Abstract N°: 6980****Dermoscopic Analysis of Collision Tumors: Basal Cell Carcinoma Co-occurring with Dermatofibroma**Amal Makansi<sup>1</sup>, Sandra Jerkovic Gulin<sup>2</sup>, Charlotta Enerbäck<sup>3</sup>

<sup>1</sup>Department of Dermatology, Linköping University Hospital, Linköping, Sweden, <sup>2</sup>Division of Cell Biology, Department of Biomedical and Clinical Sciences, The Faculty of Medicine and Health Sciences Linköping University, Linköping, Sweden, Department of Dermatology and Venereology, Ryhov County Hospital, Jönköping, Sweden, <sup>3</sup>Division of Cell Biology, Department of Biomedical and Clinical Sciences, The Faculty of Medicine and Health Sciences Linköping University, Linköping, Sweden, Department of Dermatology, Linköping University Hospital, Linköping, Sweden

**Introduction & Objectives:**

Dermatofibromas (DFs) are common benign fibrohistiocytic tumors, typically solitary in presentation. Although they often exhibit recognizable clinical and histological features, atypical manifestations frequently challenge accurate diagnosis. The coexistence of DFs with basal cell carcinomas (BCCs) complicates diagnostic and therapeutic approaches due to overlapping yet distinctive characteristics.

**Case Presentation:**

This report documents two instances of collision tumors featuring both DFs and BCCs.

CASE 1: A 72-year-old female presented with a lesion on her leg displaying mixed characteristics initially suggestive of DF but exhibiting dermoscopic indications of BCC as well. Dermoscopic examination revealed a central white patch surrounded by a fine light brown pigmented network, consistent with DF, alongside aberrant gray/blue pigmented areas, arborizing vessels, and microulceration indicative of BCC. Subsequent histopathological analysis post-surgical excision confirmed this diagnosis.

CASE 2: A 61-year-old female presented with a chronic wound-like lesion on her shin, exhibiting dermoscopic features including a central white structureless patch encircled by a light brown reticulated network with peripheral glomerular vessels transitioning to loop vessels centrally. Histopathological assessment post-excision revealed a collision tumor involving both DF and infiltrative BCC. These cases underscore the importance of meticulous histopathological examination and precise surgical management.

**Conclusion:**

The presented cases highlight the diagnostic challenges posed by collision tumors comprising DF and BCC, emphasizing the pivotal role of dermoscopy in discerning between benign and malignant features. The favorable outcomes underscore the significance of recognizing such complexities in diagnosis and implementing comprehensive management strategies to mitigate recurrence and ensure optimal patient outcomes.







**Abstract N°: 7079**

**Topical 10% tranexamic acid for recalcitrant total steroid damaged face: a series of fifteen patients**

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<sup>1</sup>Government Doon Medical College, Dermatology, Dehradun, India

**Introduction & Objectives:**

Topical steroid abuse is an alarming issue commonly prevalent in India due to easy availability of steroid containing products over the counter. Face is the most common site undergoing steroid damage. Management is difficult with recalcitrant episodes affecting patient's quality of life. Objective is to assess efficacy of topical 10% tranexamic acid in the management of recalcitrant topical steroid damaged face.

**Materials & Methods:**

This prospective study included fifteen patients of topical steroid damaged face with erythema, extensive telangiectasia and thinning of skin. Treatment was started with topical 10 % tranexamic acid (prepared from 100mg/ml tranexamic acid injection, water as base) twice daily along with sunscreen and moisturizer. Treatment was continued for two months after which it was stopped and patient was asked to continue on sunscreen and moisturiser. The assessment was done with the help of clinical photographs, dermoscopic evaluation at every visit and questionnaire for patient at the end of study. Results were evaluated at the end of two and four months.

**Results:**

There was significant improvement in the erythema and burning sensation associated with steroid abuse. There was no relapse of symptoms for 8 weeks after stopping the therapy. Erythema was assessed with clinical erythema assessment scale with an improvement of two grade. Dermoscopic evaluation showed significant reduction in the degree of telangiectasia.

**Conclusion:**

Treatment of topical steroid damaged face with 10 % tranexamic acid application gives promising results. Treatment leads to less relapse and thereby improving the patient's quality of life.





Abstract N°: 7141

## A Comparison of The Dermoscopic Features of Blue Nevi and Melanomas: A Single Center Retrospective Study

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### Introduction & Objectives:

Distinguishing blue nevi from melanoma is a challenge. Current literature on dermoscopy is insufficient to differentiate these two entities. As blue nevi can be seen in different morphologies, may occur in patients with previous skin cancer and are in the differential diagnosis of melanoma and its cutaneous metastases, we aimed to compare the dermoscopy of these lesions.

### Materials & Methods:

Patients with a histopathologic diagnosis of blue nevus or melanoma between 2017-2024 were included. Lesions were captured using FotoFinder® Medicam 800HD. Unfocused photos and images failing to represent the entire lesion were excluded. Gender and age of the patients as well as the diameter, location, and dermoscopic features of the lesions were noted. The dermoscopic features were assessed by two dermatologists, and final decisions were made after a joint review. Statistical analyses were performed using IBM® SPSS Statistics 28.

### Results:

82 lesions from 79 patients were included. Clinical data are depicted in Table 1. Among patients with blue nevi, 3 had a history of basal cell carcinoma and 1 of melanoma. Lesions diagnosed as melanoma were significantly larger ( $p < 0,001$ ).

Table 1. Clinical characteristics.

|                               | Melanoma     | Blue Nevus  | P value           |
|-------------------------------|--------------|-------------|-------------------|
| <b>Gender</b>                 |              |             |                   |
| Male                          | 22 (%44,9)   | 13 (%43.3)  | NS                |
| Female                        | 27 (%55,1)   | 17 (%56.7)  |                   |
| <b>Lesion Characteristics</b> |              |             |                   |
| Skin-level                    | 32 (%62,7)   | 8 (%25.8)   | <b>0,003*</b>     |
| Raised                        | 19 (%37,3)   | 23 (%74.2)  |                   |
| <b>Location</b>               |              |             |                   |
| Head and neck                 | 22 (%43,1)   | 13 (%41.9)  | NS                |
| Trunk                         | 13 (%25,5)   | 6 (%19.4)   |                   |
| Extremities                   | 16 (%38,7)   | 12 (%38.7)  |                   |
| <b>Lesion size (mean)</b>     | 1,70x1,22 cm | 0,62x0,5 cm | <b>&lt;0,001*</b> |

NS: not significant

The dermoscopic patterns of melanoma vs. blue nevus are shown in Table 2. Among lesions containing vascular structures, melanomas were more likely to exhibit polymorphous vessels whereas blue nevi more frequently involved irregular vascular structures. Most blue nevi (N=6, 85.7%) exhibited focal vessel distribution, while melanomas had a more variable distribution of vascular structures (focal 41.2%, N=7, diffuse 41.2%, N=7).

Table 2. Dermoscopic features

|   | Melanoma   | Blue Nevus | P value           |
|---|------------|------------|-------------------|
| <b>Rate of blue colored surface</b>     |            |            |                   |
| 0                                       | 43 (%84,3) | 4 (%12,9)  | <b>&lt;0,001*</b> |
| <%50                                    | 5 (%9,8)   | 7 (%22,6)  |                   |
| >%50                                    | 3 (%5,9)   | 20 (%64,4) |                   |
| <b>Blue color border</b>                |            |            |                   |
| Regular                                 | 1 (%12,5)  | 16 (%61,5) | <b>0,03*</b>      |
| Irregular                               | 7 (%87,5)  | 10 (%38,5) |                   |
| <b>Blue lesion localization</b>         |            |            |                   |
| Central-diffuse                         | 3 (%37,5)  | 16 (%61,5) | NS                |
| Peripheral-eccentric                    | 5 (%62,5)  | 10 (%38,5) |                   |
| <b>Blue lesion peripheral extension</b> |            |            |                   |
| Reaches the border                      | 3 (%37,5)  | 25 (%96,2) | <b>&lt;0,001*</b> |
| Does not reach the border               | 5 (%62,5)  | 1 (%3,8)   |                   |
| <b>Dominant color</b>                   |            |            |                   |
| Blue                                    | 4 (%7,8)   | 20 (%64,5) | <b>&lt;0,001*</b> |
| Non-blue                                | 47 (%92,2) | 11 (%35,5) |                   |
| <b>Vascular findings</b>                |            |            |                   |
| Present                                 | 17 (%33,3) | 7 (%22,6)  | NS                |
| Absent                                  | 34 (%66,7) | 24 (%77,4) |                   |
| <b>More than three color</b>            |            |            |                   |
| Present                                 | 11 (%21,6) | 6 (%19,4)  | NS                |
| Absent                                  | 40 (%78,4) | 25 (%80,6) |                   |
| <b>Atypical peripheral globule</b>      |            |            |                   |
| Present                                 | 23 (%25,1) | 2 (%6,5)   | <b>&lt;0,001*</b> |
| Absent                                  | 28 (%54,9) | 29 (%93,5) |                   |
| <b>White structureless areas</b>        |            |            |                   |
| Present                                 | 13 (%25,5) | 6 (%19,4)  | NS                |
| Absent                                  | 38 (%74,5) | 25 (%80,6) |                   |
| <b>Blue-gray structureless areas</b>    |            |            |                   |
| Present                                 | 27 (%47,1) | 21 (%67,7) | NS                |
| Absent                                  | 24 (%52,9) | 10 (%32,3) |                   |
| <b>Atypical network</b>                 |            |            |                   |
| Absent                                  | 16 (%31,4) | 30 (%96,8) | <b>&lt;0,001*</b> |
| Atypical network structure              | 21 (%41,2) | 1 (%3,2)   |                   |
| Atypical ring structure                 | 14 (%27,5) | -          |                   |
| <b>Pseudopod-radial linearization</b>   |            |            |                   |
| Present                                 | 13 (%25,5) | 1 (%3,2)   | <b>0,022*</b>     |
| Absent                                  | 38 (%74,5) | 30 (%96,8) |                   |
| <b>Homogenous milky-red areas</b>       |            |            |                   |
| Present                                 | 11 (%21,6) | -          | <b>0,005*</b>     |
| Absent                                  | 40 (%78,4) | 31 (%100)  |                   |

NS: not significant

## Conclusion:

Blue nevi may clinically, dermoscopically, and histologically mimic melanoma and dysplastic nevi. Dermoscopic recognition of blue nevi may help prevent unnecessary surgery in patients with a previous diagnosis of skin cancer who have a high risk of subsequent skin cancers. In this cohort, we had patients with “blue” nevi that were completely brown or which exhibited regression areas. Our study shows the frequency of blue-grey and white structureless areas, commonly attributed to thick melanomas, are seen in comparable frequency in blue nevi. However, melanomas were more likely to involve irregularly distributed blue color that did not reach the lesion periphery. This finding may be helpful for the dermoscopic differential diagnosis of these two entities. Atypical reticular pigmentation and atypical peripheral globules were more common in melanoma, which may be another dermoscopic feature distinguishing these lesions. Homogenous milky-red areas are a finding that may favor melanoma. The presence of vascular structures and different vascular patterns exhibited no statistically significant difference, therefore, blood vessels may not be of help for diagnosis. Our study emphasizes the hardship of differentiating melanoma from blue nevus dermoscopically. We believe the most accurate diagnosis is possible through a detailed patient history and a careful dermoscopic evaluation.



**Abstract N°: 7192****Rare case of purely cutaneous Rosai-Dorfman disease with dermoscopic study**Karama Sboui<sup>1</sup>, Soumaya Gara<sup>1</sup>, Litaïem Noureddine<sup>1</sup>, Meriem Jones<sup>1</sup>, Rammeh Soumaya<sup>1</sup>, Faten Zeglaoui<sup>1</sup><sup>1</sup>Charles Nicolle Hospital, Dermatology**Introduction & Objectives:**

Rosai dorfman disease (RDD) is a rare non-Langheransian histiocytosis that most often manifests as systemic involvement of lymph nodes and other deep organs in children, but may be exclusively cutaneous in adults.

**Materials & Methods:****Results:**

A 51-year-old woman presented with an erythematous-violaceous plaque of the face that had been evolving for 9 months and was progressively increasing in size. Examination revealed an infiltrated plaque of 4 cm in diameter, with multiple yellowish areas. Dermoscopy revealed homogeneous yellow areas surrounded by large telangiectatic vessels, all resting on a red-orange background. Biopsy showed a contingent of abundantly cytoplasmic histiocytic cells that appeared to encompass intact lymphocytes in the dermis. These histiocytic cells expressed PS-100 and CD-68 but were negative for CD-1a. No hematological, lymph node or organ abnormalities were detected. The patient was treated with topical steroids followed by intra-lesional triamcinolone with modest improvement.

**Conclusion:**

RDD generally manifests with cervical lymphadenopathy, accompanied by fever, neutrophilia and polyclonal hypergammaglobulinemia. The skin is the most frequently affected organ, but purely cutaneous forms are rare. Cutaneous lesions may be solitary or multiple, and may mimic sarcoidosis, granuloma annulare and other histiocytoses. Histology and immunohistochemistry represent the gold-standard for the diagnosis of RDD. The most characteristic presentation is the presence of large histiocytes whose cytoplasm contains intact leukocytes, usually lymphocytes (emperipolesis). Typically, these histiocytes are positive for PS-100 and negative for CD1a, and may be positive or negative for CD68. Dermoscopic signs such as yellowish areas and branching telangiectatic vessels surrounding them have been reported. Histologically, the yellowish areas without structure correspond to a high density of histiocytes. The branching vessels surrounding these yellowish areas on dermoscopy would represent a hypervascularization primordial to the proliferation of these same histiocytes. Although RDD has a benign course, regular follow-up is imperative to detect the onset of associated systemic damage. There are several treatment options, including surgical excision, corticosteroids, dapsone, thalidomide and radiotherapy. The efficacy of these treatments can vary, and some recalcitrant cases have been reported. The purely cutaneous form of RDD is extremely rare and often associated with long periods of diagnostic delay. Dermoscopy can facilitate diagnosis.





**Abstract N°: 7239**

**dermoscopy assessment of photoaging facial skin: about 173 cases**

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<sup>1</sup>CHU Mohammed VI TANGIER, dermatology , TANGIER, Morocco

**Introduction & Objectives:**

There is few standards for assessing the degree of skin damage caused by various factors, such as ageing and prolonged exposure to the sun ; for this, dermoscopy may be a non-invasive diagnostic technique used to detect photoaging (1) and to provide more precise informations compared to only clinic sign. The purpose of our study is to the determine dermoscopic features of facial photoaging and to relate them among men and women, the various decades in either gender, and clinical criteria such as skin type, sun exposure and smoking.

**Materials & Methods:**

This was a descriptive cross-sectional study included 173 subjects living in north of morrocco divided into two groups; 88 females and 85 males. Each group was classified into four subgroups according to age over 30 years old with sun exposure equal or more than 1 hours daily. The dermoscopic features were reported according to dermoscopy photoaging scale criteria (DPAS) and were related to significant Physical examination

**Results:**

A total of 173 subjects were included in this study. In women, hyper-hypopigmented macules, deep wrinkles and telangiectasias were the most prominent DPAS features. In men, the most prominent DPAS features were yellowish macules, hypo-hyperpigmented macules, telangiectasias, deep wrinkles and cross wrinkles. Comparison between subgroups regarding dermoscopic features there was a significant difference between DPAS score and age. In addition, sun exposure and smoking were detected early in skin phototypes II and III.

**Conclusion:**

We analyzed dermoscopic features and their age-related patterns of change; We found a significant difference in various dermoscopic features in males compared to age matched females. Dermoscopy might help evaluate skin photoaging, aids to correctly select the various targeted treatment modalities and can even be useful in the performance evaluation of certain skin care products.





**Abstract N°: 7344**

**Dermoscopy of Melanotic Macule of the Lip: Case Report and Literature Review**

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**Introduction & Objectives:**

Labial melanotic macule (LMM) is a clinically and histologically distinct entity, corresponding to a benign pigmented lesion. It is a common condition in practice, yet sparsely described in the literature. Its clinical appearance can be confused with melanoma and other pigmented lip lesions, hence the importance of dermoscopy. Here, we describe a case of a labial melanotic macule in which dermoscopy guided a watchful approach.

**Observation:**

We report the case of a 25-year-old female, with no significant medical history, presenting with an asymptomatic pigmented lip lesion, evolving for 6 months, with stable evolution. Clinical examination revealed a brown pigmented macule at the free border of the vermilion of the lower lip, slightly lateralized to the right from the midline, oval in shape, well-defined, approximately 4 mm in greatest diameter. Dermoscopic examination showed a brown background with organized lines in a regular parallel pattern. Given the reassuring dermoscopic appearance, our approach was watchful, with clinical and dermoscopic follow-up consultations.

**Discussion:**

Labial melanotic macule is a benign, asymptomatic, well-defined pigmented lesion, less than 1 cm in diameter, typically located on the vermilion of the lower lip in a young adult female. The pathophysiological mechanism has not been clearly elucidated but is likely related to a reactive or physiological process. It is a nosological entity sparsely described in the literature, historically posing a problem of proper terminology, initially termed physiological melanoplakia or solitary labial lentigo. Dermoscopy has become an indispensable diagnostic tool for pigmented lip lesions. However, the literature review in this regard reveals limited data describing dermoscopy of LMM compared to the richness and precision of description of characteristic aspects of other pigmented lesions, despite its frequency in routine practice. Nevertheless, a recent study suggests a dermoscopic pattern called "Landscape Painting" as a key diagnostic criterion for LMM.

**Conclusion:**

LMM is a diagnosis to consider for a solitary pigmented lesion of the lip, a common condition in routine practice but sparsely described in the literature. Therefore, it is important to report dermoscopic descriptions of this entity on larger samples to confirm the accuracy of this diagnostic tool regarding this entity, thus avoiding biopsy of this sensitive area.







**Abstract N°: 7367**

**Pilomatricoma: dermoscopic characteristics in patients with skin of color: study of 15 cases**

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**Introduction & Objectives:**

The pilomatricoma or calcified epithelioma of Malherbe is a benign adnexal tumor arising from the hair follicle matrix. It is one of the most common follicular tumors. It presents two incidence peaks: during the first two decades of life and another during the sixth decade. There is a clear female predominance. The evolution of the tumor is slow. The aim of this study is to report the different dermoscopic characteristics observed in patients with dark skin types.

**Materials & Methods:**

This is a descriptive study of all cases of pilomatricoma followed up in the dermatology department of the Avicenne University Hospital in Rabat between August 2023 and March 2024. The diagnosis of pilomatricoma was confirmed by histological analysis of the surgical specimen. For each patient, we specified the sex, age, site, and the various dermoscopic signs.

**Results:**

Fifteen cases were collected, with an average age of 43.03 years (range 9 to 65 years) and a predominance of females (sex ratio 0.6 men to 1 woman). Cervico-facial localization accounted for 86.7% of cases. The other sites were the upper limbs in 13.3% of cases. One patient had multiple locations. in terms of phototype: 73,3 % had phototype 4, 20% had phototype 5 and only one patient had phototype 3. The average size was 10,2 mm ( range 2mm to 4cm ) . ##### The typical clinical appearance was in the form of subcutaneous nodules, with a hard, painless consistency and fixed in relation to the deep plane, with normal skin opposite. The skin fold sign was present in 80% of patients. ##### Dermoscopy showed the presence of: yellow-whitish structures in 76.9% of cases, white striae in 66.7%, structureless gray-blue area in 73.3%. For vascular structures: reddish homogeneous areas in 77.8%, linear irregular vessels in 55.6%, Atypical vessels in 55.6% , No patient had dotted or hairpin vessels . ##### The rainbow pattern very characteristic of Pilomatricoma was present in 80% of patients. The diagnosis was confirmed by histological study. ##### The results of our study reveal that structureless gray-blue area and the rainbow pattern are the most frequent dermoscopic finding in pilomatricomas in our skin type of color.

**Conclusion:**

In conclusion, the presence of gray-blue area and the rainbow pattern was the most frequent dermoscopic pattern in well-established pilomatricomas (80% of cases).

However, dermoscopy cannot guarantee 100% diagnostic accuracy, and pilomatricomas may sometimes pose a challenge, especially in elderly patients, as they can be difficult to differentiate from other lesions such as melanoma or basal cell carcinoma. Therefore, histopathologic examination should be conducted in these uncertain cases.



**Abstract N°: 7394**

### **The Role of Dermoscopy in the Differential Diagnosis of Keratinocytic Tumors**

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#### **Introduction & Objectives:**

The dermoscopy may be helpful in the differential diagnosis of keratinocytic skin tumors. The aim of this study is to compare the dermoscopic structures in 4 different kinds of keratinocytic tumors, namely actinic keratosis (AK), keratoacanthoma (KA), in situ (isSCC) and invasive cutaneous squamous cell carcinoma (iSCC), as well as to evaluate the diagnostic accuracy of these dermoscopic structures.

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

Patients with a histopathologic diagnosis of AK, KA, isSCC and iSCC between 2017 and 2024 were included in this retrospective study. Unfocused photos and images failing to represent the entire lesion were excluded. Gender, age, lesion localization, and dermoscopic features (colour, keratinization characteristics, and vascular structures) were recorded. Statistical analysis was performed on IBM® SPSS Statistics Package 28.

#### **Results:**

184 lesions (74 AK, 7 KA, 71 iSCC, 32 isSCC) of 162 (68 female, 94 male) patients were evaluated. AKs were more likely to be flat (macules and plaques) compared to KAs (mostly nodules) and iSCC (mostly tumors) ( $p < 0.0001$ ).

Data on dermoscopic patterns are shown in Table 1. isSCCs were more likely to bear glomerular vessels, whereas KAs had a tendency to exhibit hairpin-like vessels. KAs were also more likely to have hairpin-like vessels compared to iSCC (invasive and in situ) ( $p < 0.0001$ ). Vessels were mostly linear irregular and polymorphous ( $p > 0.05$ ) in iSCC, which showed a decreased ratio of hairpin-like and glomerular vessels ( $p = 0,005, 0,003$ ). Blood vessels exhibited peripheral distribution in all KAs ( $N=7$ ) ( $p = 0,88$ ).

The most frequent keratinization pattern was keratinous plugs in KA ( $N=7, 100\%$ ), and scales in isSCC ( $N=15, 50\%$ ) (Table 1).

Ulceration was more frequent in iSCC ( $N=41, 57.7\%$ ) ( $p < 0.001$ ). AKs had a higher frequency of pigmentation and were less likely to exhibit pink color ( $p = 0.0009$ ) and ulceration ( $p < 0,001$ ).



Table 1. Dermoscopic features

|                                      | Actinic keratosis (AK) | Keratoacanthoma (KA) | in situ SCC (iSCC) | Invasive SCC (N=71) | AK vs others (p value) | KA vs others (p value) | iSCC vs others (p value) | SCC vs others (p value) |
|--------------------------------------|------------------------|----------------------|--------------------|---------------------|------------------------|------------------------|--------------------------|-------------------------|
| <b>Vascular structures</b>           | N=15                   | N=5                  | N=25               | N=54                |                        |                        |                          |                         |
| <b>Hairpin-like</b>                  | N=19 (%22,6)           | N=5 (%100)           | N=6 (%24)          | N=8 (%14,8)         | NS                     | <b>0,0001*</b>         | NS                       | <b>0,005*</b>           |
| <b>Glomerular</b>                    | N=12 (%14,3)           | N=0 (%0)             | N=9 (%36)          | N=3 (%5,6)          | NS                     | NS                     | <b>0,0006*</b>           | <b>0,003*</b>           |
| <b>Linear irregular</b>              | N=26 (%31)             | N=0 (%0)             | N=4 (%16)          | N=22 (%40,7)        | NS                     | NS                     | NS                       | NS                      |
| <b>Polymorphous</b>                  | N=27 (%32,1)           | N=0 (%0)             | N=6 (%24)          | N=21 (%38,9)        | NS                     | NS                     | NS                       | NS                      |
| <b>Vascular arrangement</b>          | N=15                   | N=5                  | N=25               | N=54                |                        |                        |                          |                         |
| <b>Diffuse</b>                       | N=9 (%50)              | N=0 (%0)             | N=13 (%48,1)       | N=22 (%40,7)        | NS                     | NS                     | NS                       | NS                      |
| <b>Clustered</b>                     | N=1 (%5,6)             | N=0 (%0)             | N=4 (%14,8)        | N=1 (%1,9)          | NS                     | NS                     | NS                       | NS                      |
| <b>Peripheral</b>                    | N=8 (%44,4)            | N=5 (%100)           | N=10 (%37)         | N=31 (%57,4)        | NS                     | NS                     | NS                       | NS                      |
| <b>Features of keratinization</b>    | N=73                   | N=7                  | N=30               | N=67                |                        |                        |                          |                         |
| <b>Scales</b>                        | N=16 (%21,9)           | N=0 (%0)             | N=15 (%50)         | N=10 (%14,9)        | NS                     | NS                     | <b>0,0001*</b>           | NS                      |
| <b>Keratin clods</b>                 | N=9 (%12,3)            | N=0 (%0)             | N=3 (%10)          | N=7 (%10,4)         | NS                     | NS                     | NS                       | NS                      |
| <b>Keratin clods + White circles</b> | N=25 (%34,2)           | N=0 (%0)             | N=3 (%10)          | N=22 (%32,8)        | NS                     | NS                     | NS                       | NS                      |
| <b>Central keratin plug</b>          | N=15 (%20,5)           | N=7 (%100)           | N=6 (%20)          | N=22 (%32,8)        | NS                     | <b>&lt;0,0001*</b>     | NS                       | NS                      |
| <b>Keratin clods + scales</b>        | N=8 (%11)              | N=0 (%0)             | N=3 (%10)          | N=6 (%9)            | NS                     | NS                     | NS                       | NS                      |

N: Number, NS: Not significant

**Conclusion:**

There are few studies on dermoscopic patterns for the differential diagnosis of keratinocytic tumors. Similarly to previous studies, our study correlates glomerular vascular structures and scales with iSCC, and central keratinous plugs with KA. However, we did not observe a significant difference between the vascular distribution of different keratinocytic tumors. A striking finding was that hairpin-like vessels were more frequent in KAs compared to iSCC, and we believe this may be helpful in differentiating these two entities, which are a diagnostic challenge histopathologically. While linear irregular and polymorphous vessels were the most common vascular patterns in iSCC, this finding did not exhibit statistical significance compared to other lesions. Ulceration may be helpful in the diagnosis of iSCC. Additionally, the presence of pink color may help rule out AK, thus may prompt an excision instead of cryosurgery. Our study, evaluating numerous lesions, may enlighten the dermoscopic differences between keratinocytic tumors and help the dermatologist with the decision about the fate of a lesion in doubt.



**Abstract N°: 7408****Dermoscopic features of amelanotic cutaneous melanoma metastases**

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**Introduction & Objectives:**

Cutaneous metastases of Malignant Melanoma (MM) are relatively frequent. Typically, they appear in the context of a MM follow-up; anyway, they may also represent the first clinical manifestation of the disease.

The literature has described a many clinical presentations, including Amelanotic Cutaneous Melanoma Metastases (ACMMs).

A precise pattern has not yet been identified. Indeed, only a few case reports have been published and more structured studies have not distinguished between melanotic and amelanotic lesions.

**Materials & Methods:**

We report three cases of ACMMs; we show dermoscopy features acquired with classical 20x dermoscopy. We also report a mini review of the literature.

**Results:**

Case 1:

A 63-year-old woman came for the onset of multiple asymptomatic small reddish palpable lesions on the right leg for about 5 months.

We found erosions, polymorphous vessels (glomerular, hairpin, linear, serpentine, corkscrew), crystalline structures and milky red areas

Case 2:

A 52-year-old woman with a history of MM localized on the right cheek, treated four years before the onset, developed multiple translucent pink papules on the right cheek.

We found polymorphous vessels (linear, serpentine, corkscrew, lacunar, hairpin) and crystalline structures.

Case 3

A 38-year-old woman with recent history of MM localized on left leg developed multiple translucent pink papules on the left thigh.

We found polymorphous vessels with linear, serpentine, corkscrew, hairpin vessels, and erosions.

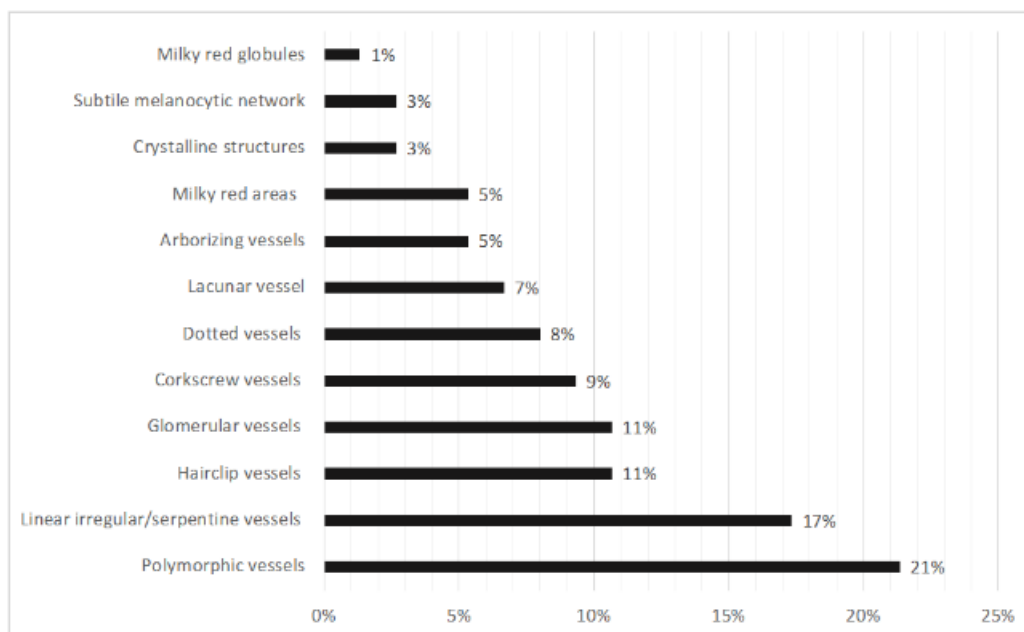
**Conclusion:**

Despite several papers attempted to describe the different patterns of cutaneous MM metastases, ACMMs remain poorly characterized. Bono et al. first described dermoscopic features and underlined the importance of vascular structures, as we found in our cases of ACMMs.

By inspecting all the literature findings and including ours, we estimated the relative frequency of each dermoscopic feature of ACMMs as shown in Table 1.

Our cases revealed peculiar insights. First, two cases showed clearly distinguishable crystalline structures. Notably, all reported cases did not describe this feature. Second, our first case of ACMMs reports a first clinical manifestation of MM. Indeed, all previous case studies reported ACMM lesions discovered during MM follow-up, while larger dermoscopic studies did not specify whether ACMMs were detected before or after the MM diagnosis. However, the dermoscopic features we retrieved in our patient did not differ from the most frequent aspects reported for other ACMMs.

Our observation underlines the importance dermoscopic features of ACMMs to facilitate an early diagnosis even in those cases wherein previous clinical manifestations of MM are not retrieved.



Tab. 1: Frequency of dermoscopy feature of ACMM cases combining data from the literature and the two cases reported in the present paper. Data from James at al. have been converted at the patient level by assuming an average number of lesions for each case.



**Abstract N°: 7413****Pigmented dermatoses of the lower limbs: one clinical appearance, three diagnoses.**

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**Introduction & Objectives:** Pigmented dermatoses of the lower limbs can have a similar clinical appearance, but dermoscopy and histology help distinguish between diagnoses.

**Materials & Methods:** We report 3 cases of hyperpigmented patches on the lower limbs with different diagnoses.

**Results: Case 1:** A 31-year-old man, with no past medical history, presented with bilateral hyperpigmented patches on the lower limbs evolving asymptotically for 3 years. Dermoscopy showed a pigmented network, brown dots and globules, peppered pigmented areas, and homogeneous erythematous areas. Histology revealed hyperacanthotic epidermis with vacuolated basal layer, congested fibrous dermis with lichenoid lymphocytic infiltrate, and deep pigmentary incontinence without vasculitis. The diagnosis was lichen pigmentosus. Treatment consisted of dermocorticoids with good progress. **Case 2:** An 18-year-old man without past medical history presented with unilateral pigmented patches on the left lower limb evolving asymptotically for several months. Dermoscopy showed a reticular pigmented network and purpuric dots. Histology indicated regular preserved epidermis, perivascular lymphocytic infiltrate in the superficial dermis with extravasation of red blood cells and hemosiderin deposits without leukocytoclasia. The diagnosis was lichen aureus, treated with dermocorticoids and vitamin C with good progress. **Case 3:** A 12-year-old girl without past medical history presented with pigmented patches on both lower limbs evolving asymptotically for one month. Dermoscopy showed grouped brown dots and globules with purpuric dots and violaceous dotted vessels. Histology revealed pseudo-papillomatous orthokeratotic epidermis, perivascular and periadnexal dermal infiltrate rich in lymphoplasmacytes with neutrophils and lesions of leukocytoclasia and very localized fibrinoid necrosis. Leukocytoclastic vasculitis was suspected, but the patient was lost to follow-up.

**Conclusion:** These reported dermatoses share a very similar clinical presentation. Vigilance is required, and dermoscopic appearance helps in diagnosis, which needs confirmation by histology.



**Abstract N°: 7511****Subcutaneous Lipoma Mimicking Squamous Cell Carcinoma**

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**Introduction & Objective:**

Subcutaneous lipomas are prevalent benign soft tissue tumors often recognizable by typical features. Nevertheless, atypical presentations can mimic malignant lesions, requiring excision biopsy. Dermoscopy aids in evaluating morphological and vascular characteristics, yet descriptions of lipomas in literature are limited. We report a compelling case of a subcutaneous lipoma masquerading both clinically and dermoscopically as squamous cell carcinoma.

**Case report:**

A 60-year-old woman presented with a progressively enlarging, asymptomatic nodule on her right thigh, over 7 months. The lesion measured 20×10 mm, was dome-shaped, well-circumscribed, and mildly tender, with an erosive surface. Dermoscopy revealed structureless white areas and hairpin vessels placed in a parallel orientation distributed throughout the periphery of the erosion, raising the suspicion towards keratoacanthoma. Pending biopsy, a healing cream was prescribed. On biopsy day, the surface had completely healed, transitioning the nodule from eroded to epithelialized. Dermoscopic findings shifted from hairpin vessels to telangiectasias with the remain of the structurless white areas. Histopathological analysis yielded unexpected features consistent with a subcutaneous lipoma.

**Discussion:**

Subcutaneous lipomas are usually located deep in the superficial fascia, adjacent to mobile adipofascial layers near fixed or less mobile structures and they are accompanied by neurovascular perforators. Characterized by their slow-growing, painless nature and well-defined borders, they are relatively straightforward to diagnose. However, atypical presentations pose diagnostic challenges. They lack specific dermoscopic features, such as pigment network or vascular structures, but may exhibit subtle findings such as yellowish structures representing adipocyte clusters, a whitish scar-like appearance due to fibrous septa, and possible vessels at the periphery.

The hairpin vessels identified in our patient are reported in various malignant and benign conditions, including basal cell carcinoma, keratoacanthoma, and inflamed epidermal cysts. Our case underscores the diagnostic dilemma posed by subcutaneous lipomas with atypical clinical and dermoscopic features, and highlights the intriguing presence of hairpin vessels not being specific in eroded and ulcerated lesions, emphasizing the importance of correlating clinical and dermoscopic findings with disease progression and histopathological analysis.

**Conclusion:**

Dermoscopy is valuable in assessing cutaneous lesions, but interpretation must be cautious due to varied differential diagnoses and potential feature overlap. This case highlights the necessity of a multidisciplinary approach with histopathological confirmation to prevent misdiagnosis and ensure proper patient care.

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**Abstract N°: 7523**

**Nodules in a tattoo: Rainbow phenomenon in dermoscopic analysis**

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**Introduction & Objectives:**

Cutaneous adverse reactions associated with tattoos include nodules which can have diverse etiologies. These include not only granulomatous and lichenoid reaction to foreign body, keloid, sarcoidosis, pseudolymphoma, lichen planus and cutaneous neoplasms, but also underlying systemic conditions such as rheumatoid arthritis and systemic lupus erythematosus. The rainbow phenomenon in dermoscopy, typically associated with various dermatological diseases such as Kaposi sarcoma, melanoma, basal cell carcinoma, haemangioma and lichen planus, presents a diagnostic challenge. The objectives include exploring the clinical manifestations of nodules in tattoo, the importance of the rainbow phenomenon in dermoscopy and the role of biopsy in definitive diagnosis through a case report.

**Materials & Methods:**

A 41-year-old male patient presented with nodules on his tattooed upper right arm, noticed two months prior with slight pain. The tattoo had been present for years. Clinical examination revealed eight blue nodules on the tattooed skin. Dermoscopy was performed to examine the lesions for characteristic features. A 6 mm punch biopsy of one nodule was performed for histopathological examination.

**Results:**

Dermoscopy revealed the presence of the rainbow phenomenon within the nodules, a distinctive feature suggestive of various dermatological diseases. Histopathological examination confirmed the diagnosis, showing foreign body granulomas within the dermis. The histopathological differential diagnosis included sarcoidosis in the scar, warranting further investigations such as chest X-ray and serum ACE levels, which were proposed but unfortunately not pursued due to the patient being lost to follow-up.

**Conclusion:**

Accurate identification of nodules within tattoos is imperative for discerning potential underlying dermatological issues. The rainbow phenomenon observed through dermoscopy emerges as a valuable clue to the presence of various dermatological diseases. This case underscores the importance of integrating non-invasive modalities like dermoscopy with confirmatory measures such as biopsy to ensure diagnostic precision. Additionally, the relevance of histopathological examination cannot be overstated, as it provides crucial insights into the underlying pathology and guides appropriate management strategies. Dermatologists should remain vigilant for such phenomena and utilize a multidisciplinary approach to ensure precision in diagnosis and facilitate optimal patient outcomes.





**Abstract N°: 7558**

**clinical and Dermoscopic features of pyogenic granuloma in skin of color**

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**Introduction & Objectives:**

Pyogenic granuloma is a common, benign, vascular lesion of the skin and mucous membranes

There are common benign and malignant tumours that may be clinically confused with pyogenic granuloma. The main differential diagnosis is with amelanotic melanoma.

The aim of this study is to determine the principale clinical and dermoscopic features in skin-colored patients.

**Materials & Methods:**

This is a single-center cross-sectional study, over a nine-month period from August 2023 to April 2024. Were included all patients with pyogenic granuloma with a diagnosis confirmed histologically. Dermoscopic images were taken either with a Dermlite DL4 manual hand-held dermoscope or DL5.

**Results:**

A total of 17 patients were recruited with a sex ratio (M/F=1,42), with a median age was 41,52. As for risk factors Tobacco

As for risk factors Tobacco use was present in 12,5% of our patients and important sun exposure in 6,3%. As for comorbidities, diabetes and hypertension were both present in 12.5% of cases. One patient had a neoplasm and nephropathy. Regarding favorizing factors; trauma was present in 21.4% of patients and no treatment was used in 69.2% of our patients. Regarding the phototype of our patients 56.3% were phototype IV, 37.5% phototype II and 6.3% V. The Pyogenic granuloma was located the skin in 68.8% and mucosa 31.3%, bleeding on contact was present in 75%of our cases. No recurrence was reported in all our patients. As for Dermoscopic features the collarette was present in 86, 2% Reddish homogeneous area was present in all patients, white rails in 94.1% and vascularization in 81.3% (linear in 50% tortuous 25% punctiform 25%). We found a rainbow pattern in 23.5%.

**Conclusion:**

Pyogenic granuloma is a benign tumor, the principale diagnosis is amelanotic melanoma.

We report the principal clinical and dermoscopic features of our patients.







Abstract N°: 7582

**Clinico-epidemiological study of Hypopigmentary Disorders in Children with Dermatoscopic evaluation in tertiary care hospital**

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**Introduction & Objectives:** Pigmentary disorders in children is a concern amongst parents mainly because of the social stigma associated with these conditions. It is difficult to diagnose pigmentary disorders only by clinical examination and skin biopsy for histopathological examination is not feasible for every patient. In order to bridge the gap between clinical and histopathological finding dermatoscopy serves as a non-invasive technique. The goal of the study was to assess the magnitude of various hypopigmentary disorders in children and to correlate dermoscopic findings of different pigmentary disorders with clinical diagnosis.

**Materials & Methods:** A hospital based observational, cross- sectional study was conducted over in the dermatology outpatient department between September 2020 and January 2023. After obtaining parental consent, 215 patients under the age of eighteen who presented with hypopigmentary disorder were chosen for dermatoscopy evaluation. A pre-made proforma was used to record a detailed medical history including the onset of the lesion, duration of the lesion, type of lesion, any changes in size and color of the lesion, site of the lesion, whether the lesions were symmetrical in distribution, past medical conditions, similar type of lesions seen in any other family members, whether any prior treatments were received. A handheld dermatoscope was used to observe lesions and they were observed in both polarized and non-polarized mode.

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**Conclusion:** Pigmentary disorders in children of color is a cause of anxiety amongst the parents because of the social stigma associated with these disorders. Dermoscopy assists in diagnosing various pigmentary disorders non-invasively and with advanced accuracy. Thus helping differentiate between different hypopigmentary disorders which are difficult to distinguish clinically through the naked eye.





Abstract N°: 7597

### Multiple patterns of cutaneous metastases of malignant melanoma in a single patient

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**Introduction & Objectives:** Melanoma has the potential to metastasize to any organ and the route and pattern of metastatic disease is unpredictable. Skin metastases (cutaneous and/or subcutaneous) represent a relatively frequent event in the natural history of melanoma. Cutaneous metastases of malignant melanoma (CMMM) may appear as the only manifestation of disseminated disease. Dermoscopy is a non-invasive technique that could be a useful tool in distinguishing CMMM.

**Materials & Methods:** A 53-year-old woman with a history of atypical mole syndrome and stage IV melanoma, who had been disease-free for 6 years after the surgical excision of thyroidal and subcutaneous metastases, as well as after one year of adjuvant treatment with nivolumab (Clinical Trial CA209-238), presented for a follow-up visit. During the physical examination, a nodular erythematous lesion measuring 7 mm was observed on her left knee. Dermoscopy revealed multiple shiny white lines and homogeneous pigmentation, resembling a dermatofibroma, along with numerous linear and glomerular vessels. Confocal microscopy showed atypical discohesive and cerebriform nests in the dermis. The lesion was surgically excised, and histology confirmed the diagnosis of melanoma metastasis. Five months after this surgery, two new subcutaneous metastases were discovered. She started treatment with pembrolizumab, but after 5 cycles, she experienced disease progression with the presence of a left peri-renal mass. Concurrently, a new 3 mm pigmented lesion, showing a homogeneous pattern with some globules on dermoscopy, was found on her right shoulder and surgically removed, diagnosed as CMMM.\*\* The patient underwent a second line of treatment with ipilimumab plus nivolumab, which was discontinued after 3 cycles due to elevated creatinine levels. Subsequently, she was enrolled in a clinical trial with anti-PDL1 plus 4-1BB agonists. During the last follow-up visit, three suspicious lesions were observed: a new pigmented lesion of 10 mm, asymmetric, located on the right jaw, exhibiting areas with abrupt borders, perifollicular pigmentation, irregularly distributed grey points, and globules on dermoscopy; a newly appeared lesion on the right pectoral region, a 4 mm brown papule with a homogeneous pattern and a few globules; and a 6mm lesion on the right scapular region, showing marked growth since the last body map, with irregular blue-black globules (pseudo lacunas). Examination with reflectance confocal microscopy revealed nests with a cerebriform appearance, numerous pleomorphic cells, and visible vessels in all three lesions, suggesting CMMM, a diagnosis that was confirmed by histopathology.

**Results:** We present a patient with a history of metastatic melanoma who developed multiple forms of melanoma metastases during the evolution of the disease. Considering the patterns described by Costa et al., this patient had three nevus-like metastases, one angioma-like metastasis, and one metastasis with unspecific pattern ("dermatofibroma-like"). Most of the lesions were small, and not all of them were easily recognized as metastases.

**Conclusion:** Dermoscopic findings of CMMM can be challenging to interpret, particularly in patients with multiple atypical nevi. Dermoscopy should always be included as a mandatory step in the follow-up schedule of melanoma patients, allowing for the early diagnosis of CMMM that could change their treatment and prognosis.

