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Master Thesis

Dermoscopic–Histopathologic Correlation of Skin Cancers
A Retrospective Study in a Private Dermatology Clinic

submitted by

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Under the supervision of

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DECLARATION

I hereby declare that I have authored this Master's thesis independently and without unauthorized assistance. No sources other than those cited have been used. All passages taken from published or unpublished sources, either literally or in content, have been clearly identified as such.

Graz, 2026, Sandu Alin Constantin M.D

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1. Introduction

Skin cancer is one of the most common forms of cancer in the world, with an incidence that has continued to grow throughout the decades, with support from screening programs and public awareness.

The largest and most comprehensive recent date study on skin cancer incidence is GLOBOCAN 2022. It estimated 330,000 new melanoma cases around the world with approximately 60.000 related deaths. Moreover, non-melanoma skin cancers (NMSC) accounted for another 1,2 million new cases, being the 5th most frequent cancer worldwide. Data from European epidemiological studies confirm the high burden of skin cancers with NMSC being the most frequently diagnosed cancer in Europe. (1) (2)

Skin cancers have a significant public health burden due to incidence and related treatment, which justifies the attention needed in general and for the paper at hand. One way to lower the burden is by early detection and screening programs. Although clinical naked eye observation of skin lesions is free and can be used by patients and doctors, early and very early skin cancer diagnosis that can be healed through a simple and small excision **can only be done by dermoscopy**. Early detection is the most important factor in improving outcomes, particularly in melanoma, where the Breslow index is of utmost importance for survival prognosis.

The same is true for **squamous cell carcinoma** (cSCC), where outcomes are generally favorable with early treatment and diagnosis. The survival prognosis changes for the worse with recurrent and advanced disease. **Basal cell carcinoma (BCC)** rarely leads to death, but early treatment and diagnosis will avoid large surgery that has higher costs and associated morbidity. Nowadays, aesthetic results are also demanded for skin cancer surgeries, and these can be better achieved by a timely diagnosis and treatment. (3) (4) (5) (6)

These facts taken into account, dermoscopy is a non-invasive, cheap, small, fast, and handy modern tool that has become the dermatologist's preferred method of examination for skin lesions. It improves diagnosis, aids with planning procedures (biopsy locations, appointment prioritization) by anticipating with high accuracy the histopathological

diagnosis. It helps the dermatologist by revealing structures within the skin that are not visible with the unaided eye. Learning the patterns allows the dermatologist to confidently set the treatment course for the patient. From my personal perspective, confidence is one of the best advantages that dermoscopy can give a clinician.

Although dermoscopy is now widespread and used around the globe, biopsy and histopathological examination of skin lesions remain the gold standard for diagnosis because it provides observation of cellular morphology with a definitive verdict of benign or malignant. The relation between dermoscopy and histopathology is of high importance because they validate one another and create new knowledge, particularly by observing stored dermoscopy pictures with a valid histopathological report.

Correlation studies between dermoscopy and histopathology help improve algorithms and patterns, and allow one to learn in a safe and controlled environment. Knowledge henceforth improves diagnostic accuracy and reduces unneeded surgery. In clinical practice, decisions based on dermoscopy are made on a daily basis.

Most available data on dermoscopic–histopathologic correlations come from academic or tertiary referral centers. However, a substantial proportion of skin cancer diagnoses occur in private dermatology practices. Data coming from such practices helps in understanding the true incidence and clinical spectrum of skin lesions, validated by histopathology.

Aim of study

The aim of this study is to evaluate the correlation between dermoscopic features and histopathologic diagnoses of skin tumors in a retrospective cohort of patients from a private dermatology clinic.

2. Materials and Methods

Study Design, Setting and Population

This study was conducted in Romania, in the town of Câmpina, Prahova County, at Considine Dermatology Clinic, a private dermatology practice providing both clinical and surgical dermatology services. The clinic allows comprehensive clinical, dermoscopic, and

histopathologic documentation of skin lesions, ensuring the availability of all data required for this study.

The study cohort was retrospectively assembled from cases collected between January 2022 and December 2025. A total of 104 skin lesions were included in the analysis.

This study was designed as a **retrospective, observational, monocentric study**.

Exclusion Criteria

Cases were excluded from the study if one or more of the following criteria were met:

- **Incomplete clinical or dermoscopic documentation**, including the absence of dermoscopic images;
- **Lack of a histopathologic report** confirming the final diagnosis;
- **Poor-quality dermoscopic images** that did not allow reliable evaluation of dermoscopic structures;
- **Duplicate records** or repeated entries of the same lesion.

Dermoscopic Evaluation

Lesions were evaluated dermoscopically in the operating room prior to surgical excision using a **handheld dermoscope (DermLite DL4/DL5)**. Dermoscopic images were acquired using a **smartphone camera (Samsung Galaxy S25/A51)** and stored for subsequent analysis.

Histopathologic Spectrum

Malignant lesions included 20 melanomas, 32 basal cell carcinomas, 13 squamous cell carcinomas, and 1 Kaposi sarcoma.

Benign lesions comprised a broad spectrum of melanocytic and non-melanocytic entities. Benign melanocytic lesions included 5 Spitz nevi, 3 melanocytic nevi, 1 blue nevus, 1 recurrent nevus, 1 melanocytic macule, and 1 melanocytoma. Benign non-melanocytic lesions included 10 seborrheic keratoses, 2 pigmented actinic keratoses, 1 case of solar elastosis, 2 dermatofibromas, 2 hemangiomas, 4 pyogenic granulomas, 1

angiokeratoma, 1 sebaceoma, 1 lichen planus–like keratosis, 1 clear cell acanthoma, and 1 wart.

All lesions were evaluated by board-certified histopathologists trained in dermatopathology, with histopathologic assessment performed at specialized centers, including a high-expertise dermatopathology center (Dr. Leventer Centre, Bucharest).

Data Collection and Variables

The following data were extracted from the dataset: patient age, sex, tumor location, dermoscopic images, histopathologic diagnosis, and classification as malignant or benign. Additional variables included the median age of patients with malignant lesions, the male-to-female ratio among malignant cases, and the most frequently observed dermoscopic structures. Dermoscopic features were further analyzed for melanomas stratified by Breslow thickness (in situ, 0.1–0.8 mm, 0.9–2.0 mm, and >2.0 mm), as well as for cutaneous squamous cell carcinoma (cSCC) and basal cell carcinoma (BCC).

Ethical Considerations

The study was conducted in accordance with Good Scientific Practice guidelines. All data were retrospectively collected, fully anonymized, and derived from routine clinical practice; therefore, ethical approval and informed consent were not required.

3. Results

Study Population Characteristics

The total number of cases included in the analysis was 104. The median age of the study population was 63.5 years, with an age range from 14 to 91 years. Sex distribution was equal, with 52 male and 52 female patients.

Distribution of lesions

The malignant-to-benign ratio was 1.74:1, with malignant lesions accounting for 63.5% of the study cohort (Tables 1 and 2). Among malignant lesions, 20 were melanomas

(19.2%), 32 were basal cell carcinomas (30.8%), 13 were cutaneous squamous cell carcinomas (12.5%), and 1 was Kaposi sarcoma (1.0%) (Table 3).

Benign lesions accounted for 36.5% of the total cohort (38 cases), with the histopathologic distribution and relative frequencies detailed in Table 4.

Dermoscopic Features of Malignant Lesions

To better assess the distribution of dermoscopic features in melanoma, the 20 melanoma cases were stratified according to Breslow thickness into four categories: in situ (2 lesions), 0.1–0.8 mm (9 lesions), 0.9–2.0 mm (3 lesions), and >2.0 mm (6 lesions).

The most common dermoscopic features observed in melanoma were structureless areas of various colors (brown, brown–black, blue–black, brown–gray, pink, and pink–red), an atypical pigment network composed of reticular lines of variable thickness, the presence of multiple colors (light brown, dark brown, black, pink, red, white, gray, and yellow), dots and clods (brown or black), and dotted or linear irregular vessels.

Structureless areas of different colors were observed across all Breslow categories and were present in 14 of 20 melanoma cases. An atypical pigment network was identified in 8 of 20 lesions, with a maximum Breslow thickness of 0.9 mm among these cases. Dots and clods were present in 6 lesions, with a maximum Breslow thickness of 0.5 mm.

The most frequently observed colors in melanoma were light brown and dark brown, and 9 of 20 melanomas exhibited three or more colors. Vascular structures were predominantly observed in melanomas with a Breslow thickness >2.0 mm, where polymorphous vascular patterns were identified, including dotted, glomerular (linear coiled), comma-shaped (linear curved), linear serpentine, and linear straight vessels. Overall, polymorphous vessels were observed in 3 of 20 melanoma cases. One melanoma with a Breslow thickness of 0.3 mm exhibited only dotted vessels, while no vascular structures were observed in the remaining 16 melanomas.

Overall, dermoscopic complexity increased with increasing Breslow thickness. In situ melanomas typically showed a simple atypical pigment network, structureless brown areas, and brown dots or clods. As Breslow thickness increased into the 0.1–0.8 mm and 0.9–2.0 mm categories, a greater variety of colors (gray, white, pink, and red) and additional dermoscopic structures were observed, including gray–black peppering, negative pigment

network, blue–white veil over raised areas, and short white lines. Ulceration was observed exclusively in melanomas with a Breslow thickness >2.0 mm.

Among the 20 melanoma cases, three lesions presented as diagnostic mimickers, two of which were particularly challenging. One melanoma mimicked a pyogenic granuloma, one mimicked a basal cell carcinoma and was ultimately diagnosed as a Breslow 6.8 mm melanoma, and one melanoma mimicked a seborrheic keratosis, exhibiting white dots resembling milia-like cysts.

For cutaneous squamous cell carcinoma (cSCC), the most common dermoscopic features were ulceration, central keratin masses, linear irregular vessels, white structureless areas, and white circles (pearls). Vascular structures were predominantly observed as looped vessels in well-differentiated tumors, while more polymorphous vascular patterns were noted in moderately differentiated lesions. Glomerular vessels were observed in clusters in one cSCC arising from actinic keratosis and were diffusely distributed across the lesion in one case of in situ cSCC. Overall, vascular structures were present in 7 of 13 cSCC cases, including 5 cases with linear looped vessels and 2 cases with glomerular (linear coiled) vessels. Central keratin masses were observed in 5 cases, ulceration in 4 cases, white structureless areas in 4 cases, and white circles in 5 cases. No pigmented cSCC lesions were identified.

In basal cell carcinoma (BCC), the most frequently observed dermoscopic features included arborizing and fine short telangiectasias (linear straight or serpentine vessels), blue–gray dots and clods, and ulceration. Arborizing telangiectasias were present in 18 lesions, fine arborizing telangiectasias in 7 lesions, blue–gray dots and clods in 11 lesions, and ulceration in 18 lesions. Shiny white to red structureless areas were observed in 2 cases, while spoke-wheel–like structures (radial lines converging toward a central dot or clod) were identified in 1 lesion.

Two BCC cases presented as diagnostic mimickers. One BCC arose within a large seborrheic keratosis, and another developed on the nasal area and was heavily pigmented, both exhibiting the blue–black rule without classical dermoscopic criteria of BCC. Overall, 4 of 32 BCCs were pigmented variants.

Within the malignant category, one case of Kaposi sarcoma was identified, located on the auricular region. Dermoscopic examination revealed linear and linear looped vessels, a characteristic rainbow pattern, and white shiny structures (chrysalis/crystalline structures).

Dermoscopic Features of Benign Lesions

To facilitate the analysis of benign lesions, cases were grouped according to histopathologic lineage and clinical behavior into the following categories: **benign melanocytic lesions** (melanocytic nevi, Spitz nevi, melanocytoma, blue nevus, and recurrent nevus); **benign keratinocytic lesions** (warts, clear cell acanthoma, and pigmented actinic keratosis); **basal cell carcinoma mimickers** (sebaceoma); **seborrheic keratosis and related lesions**; vascular lesions (pyogenic granulomas, hemangiomas, and angiokeratomas); and dermatofibromas.

Benign Melanocytic Lesions

Melanocytic nevi exhibited dermoscopic features including a central structureless brown area, brown dots and clods located peripherally or scattered throughout the lesion, and the presence of two colors—light brown and dark brown.

Spitz nevi most commonly displayed white lines, appearing either as a negative pigment network or as shiny white structures (chrysalis), frequently associated with an atypical pigment network composed of reticular lines with uneven color and thickness, as well as brown or black clods.

The recurrent nevus showed a central structureless brown area confined within a scar, without additional dermoscopic criteria.

Blue nevus presented as a structureless area with blue–brown coloration, without other dermoscopic features.

Melanocytoma, a rare and heavily pigmented variant of a melanocytic nevus that can clinically and dermoscopically mimic melanoma, demonstrated the blue–black rule, characterized by a central structureless black area within a surrounding blue structureless area.

Benign Keratinocytic Lesions

Pigmented actinic keratosis presented dermoscopically with white dots arranged within follicular openings (rosettes), an annular-granular pattern (pseudonetwork), and gray dots.

The wart showed a verrucous surface with papillae, black dots corresponding to thrombosed capillaries, whitish keratin, and hyperkeratosis, with coloration ranging from white to yellow.

Clear cell acanthoma presented with dotted and glomerular vessels arranged linearly, forming a characteristic pattern within a pink structureless background.

Basal Cell Carcinoma Mimickers – Sebaceoma

Within our cohort, sebaceoma demonstrated dermoscopic features including yellow clods, a structureless blue area, and arborizing as well as fine short telangiectasias (linear straight or serpentine vessels).

Seborrheic Keratosis and Related Lesions

In **seborrheic keratosis**, the most frequent dermoscopic criteria were thick curved lines (“fat fingers”) with a cerebriform appearance (observed in 3 of 10 lesions) and brown to orange clods corresponding to comedo-like openings (6 of 10 lesions). As most excised lesions were inflamed or traumatized, linear coiled (glomerular) vessels were also observed in 3 of 10 lesions.

The melanotic macule presented as a structureless brown area with well-defined margins, without additional dermoscopic criteria.

With regard to **lichen planus–like keratosis (LPLK),** dermoscopy was not particularly suggestive for the diagnosis. The lesion displayed white lines (chrysalis) and was solitary; histopathologic examination supported the diagnosis of lichen planus–like keratosis.

Solar elastosis, which was biopsied due to suspicion of lentigo maligna, presented dermoscopically with an annular-granular pattern, black dots, wide follicular openings, and brown structureless areas. The presence of black dots was explained histopathologically by melanin incontinence.

Vascular Lesions

Pyogenic granulomas exhibited dermoscopic features including intersecting white lines, red structureless areas, ulceration, and a white keratin collarette.

Hemangiomas showed linear curved vessels, red clods corresponding to lacunae, and a subtle rainbow pattern, likely related to inflammation. One hemangioma was excised due to the presence of a structureless blue area without additional dermoscopic criteria, mimicking a blue nevus or melanoma.

Angiokeratoma presented dermoscopically with a hemorrhagic crust, black and red clods, and a whitish veil.

Dermatofibromas

The two excised dermatofibromas demonstrated dotted vessels, central white lines, and a peripheral brown structureless area.

Representative Dermoscopic Images

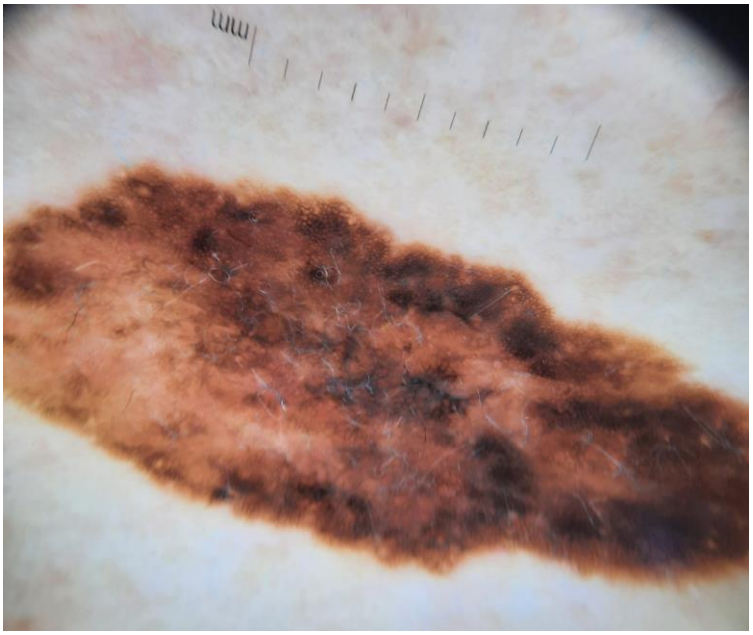

Figure 1 – Dermoscopic image of superficial spreading melanoma – Breslow thickness in situ

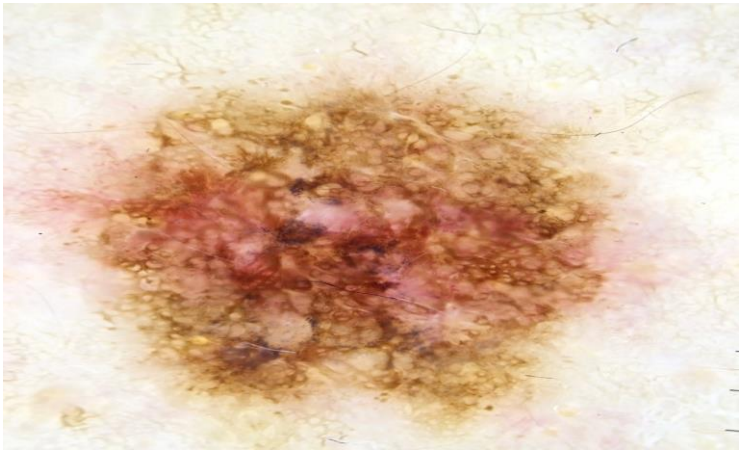

Figure 2 – Dermoscopic image of superficial spreading melanoma – Breslow thickness 0,5 mm

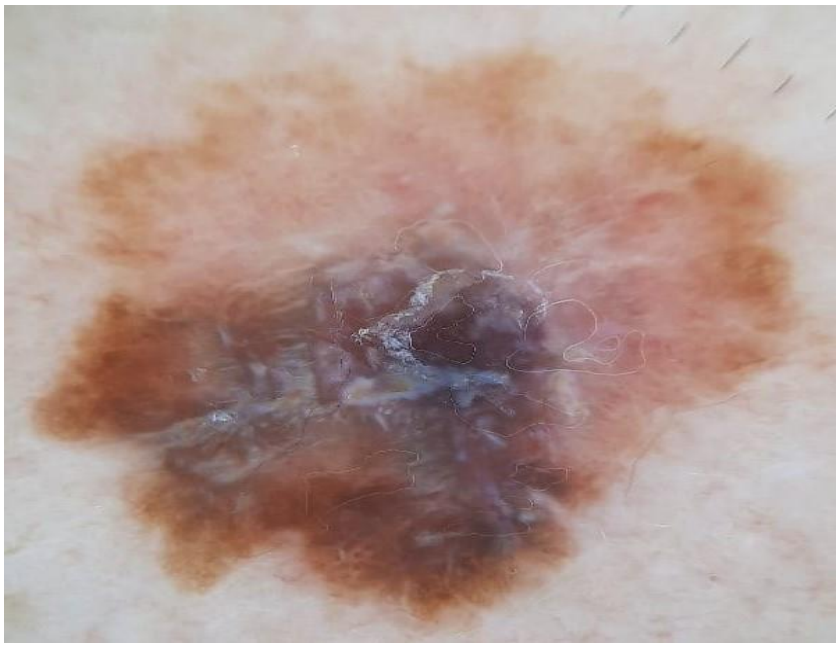

Figure 3 – Dermoscopic image of superficial spreading melanoma – Breslow thickness 1,2 mm

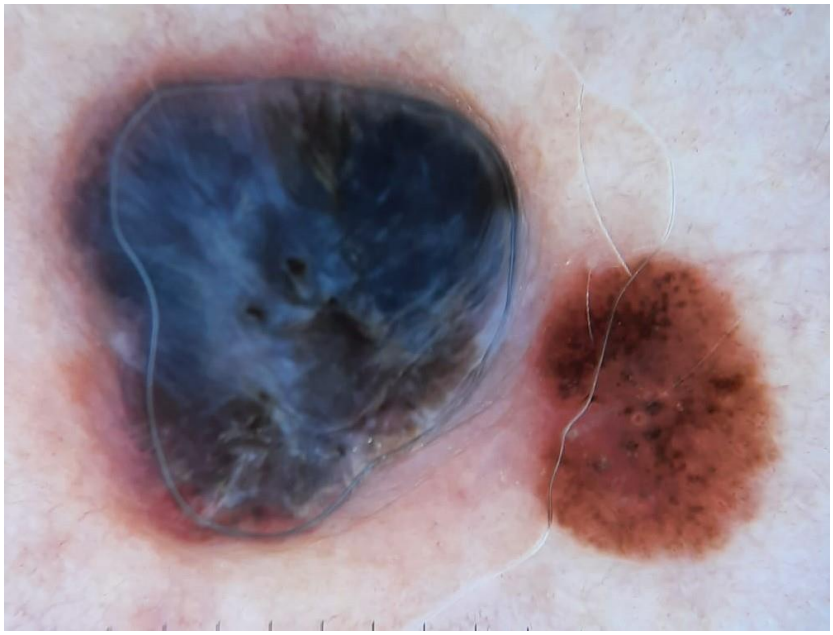

Figure 4 – Dermoscopic image of superficial spreading melanoma – Breslow thickness 2.8 mm

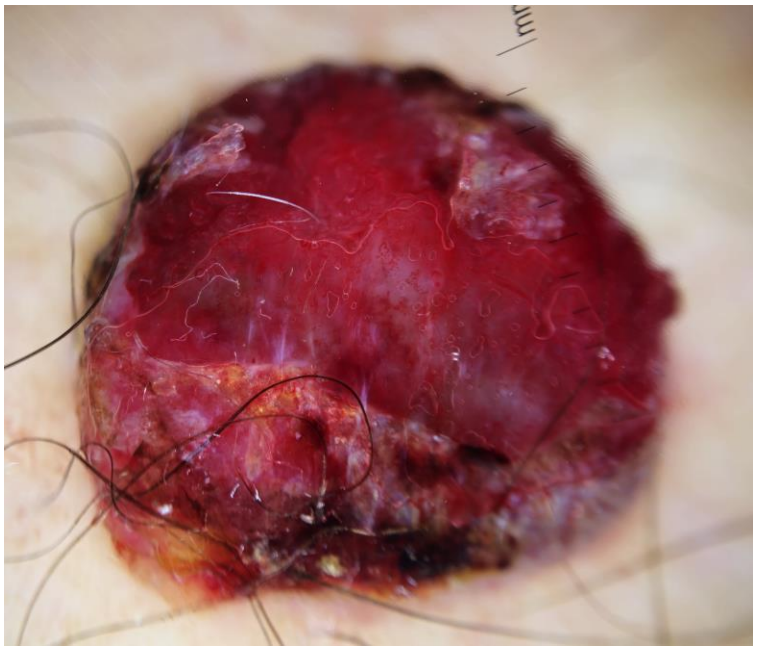

Figure 5 – Dermoscopic image of superficial spreading melanoma – Breslow thickness 5.1 mm

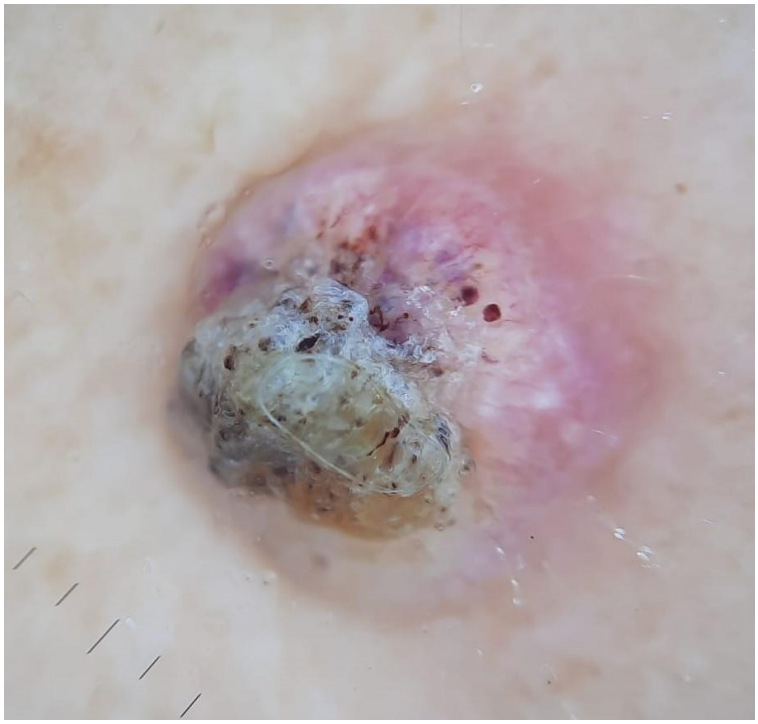

Figure 6 – Dermoscopic image of an Invasive well-differentiated squamous cell carcinoma, keratoacanthoma-like type

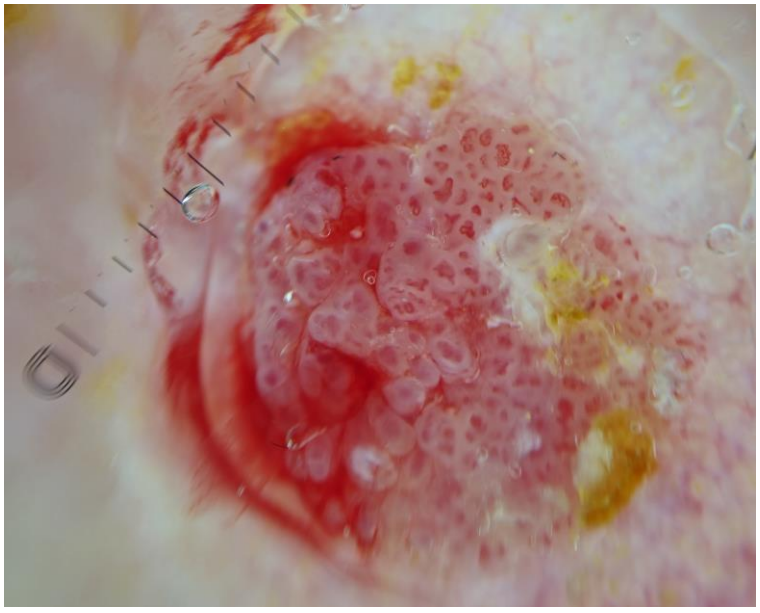

Figure 7 – Dermoscopic image of a Squamous cell carcinoma in situ, Bowenoid type.

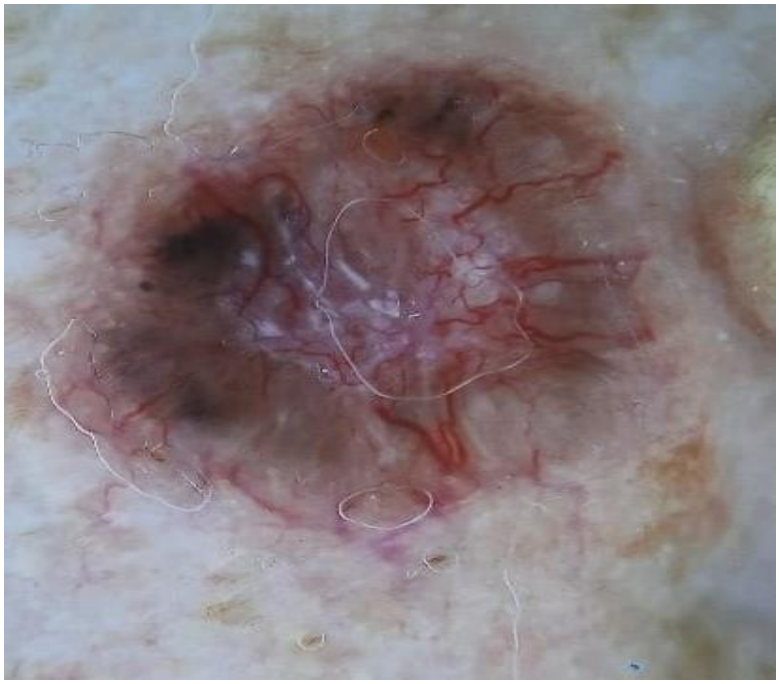

Figure 8 – Dermoscopic image of Nodulocystic Basal Cell Carcinoma

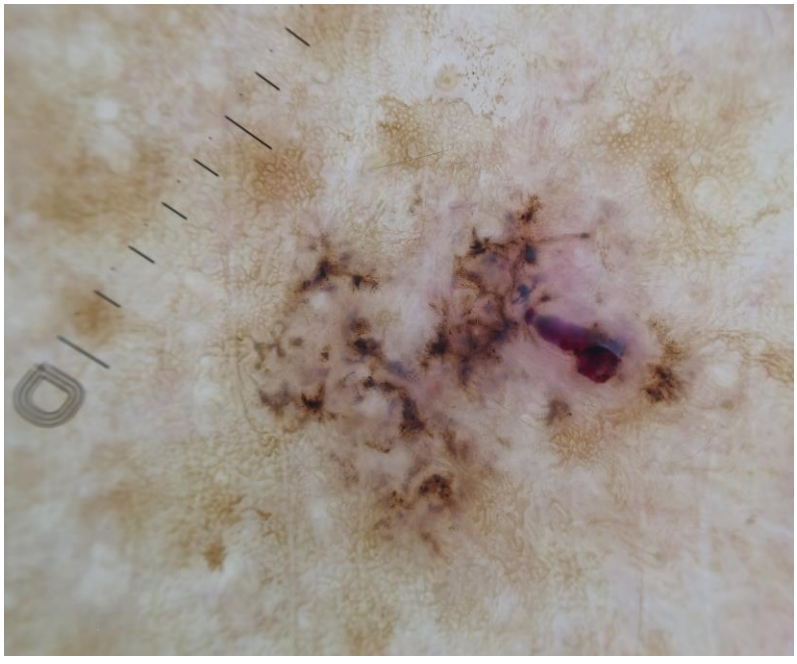

Figure 9 – Dermoscopic image of Superficial basal cell carcinoma with nodular component

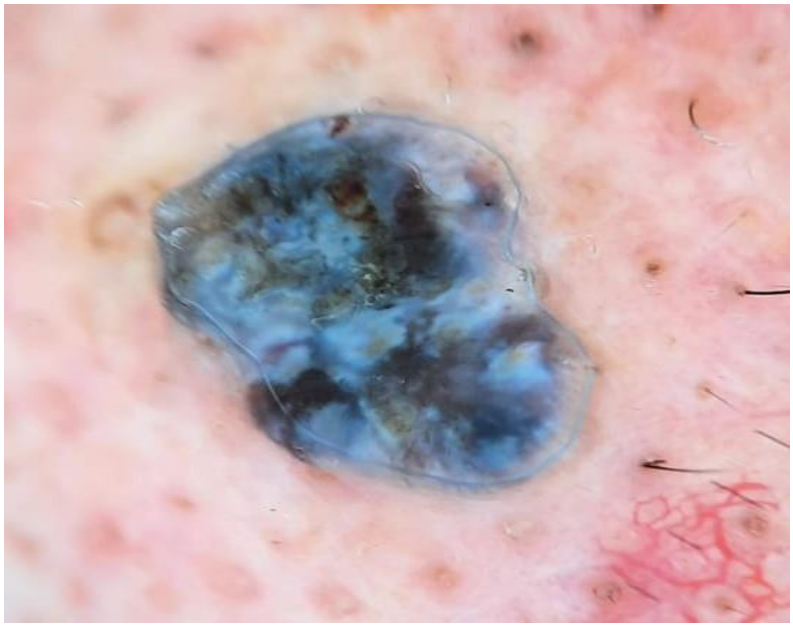

Figure 10 – Dermoscopic image of Pigmented nodular basal cell carcinoma.

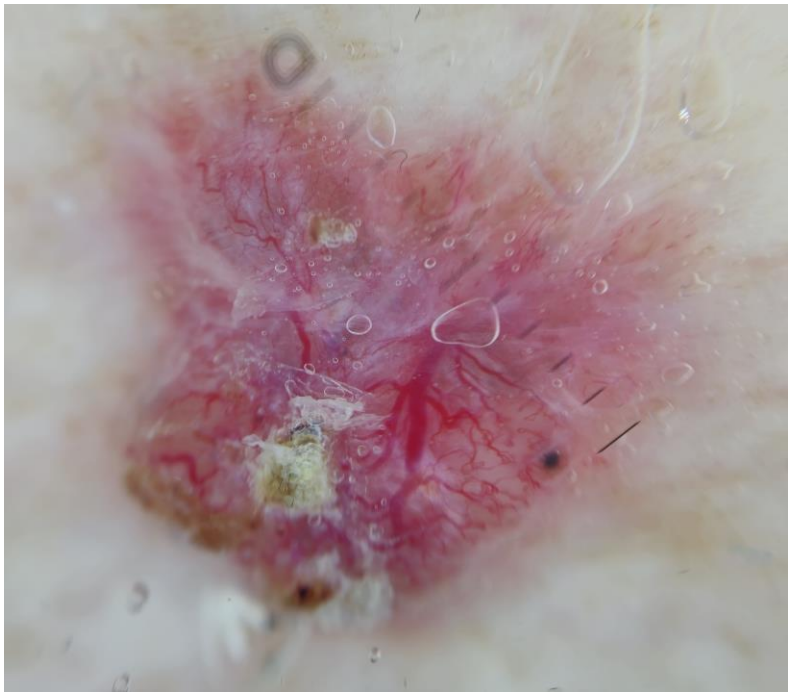

Figure 11 – Dermoscopic image of Nodular basal cell carcinoma

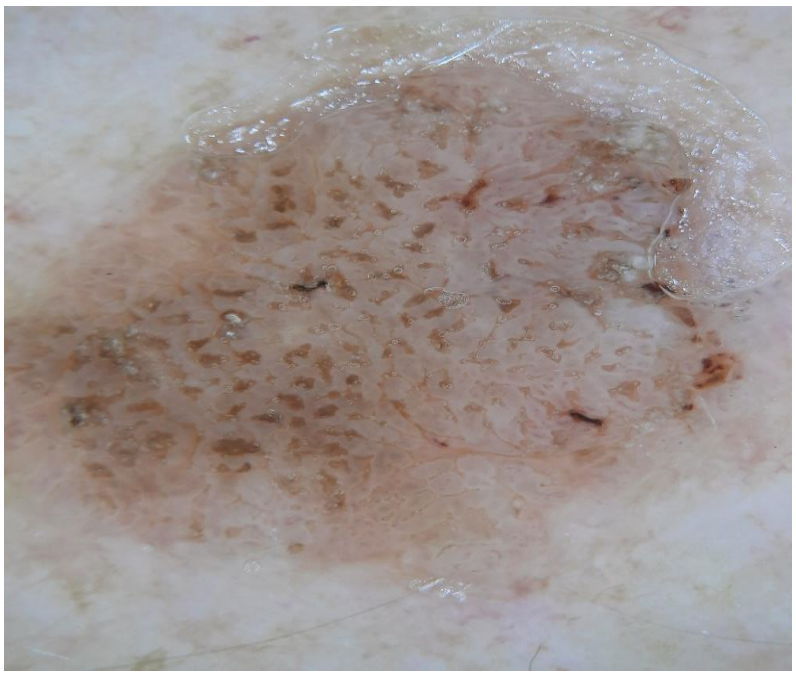

Figure 12 – Dermoscopic image of Hyperkeratotic seborrheic keratosis.

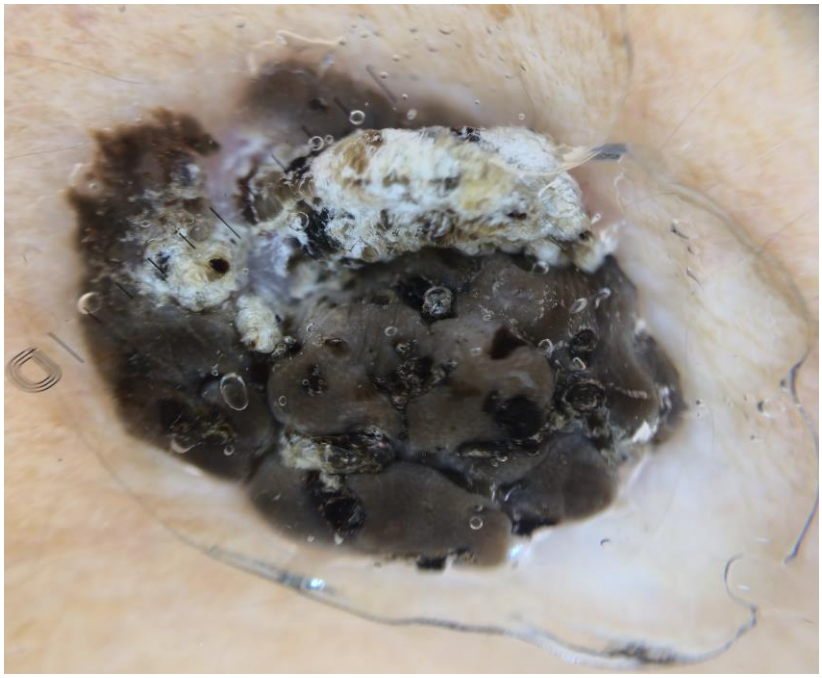

Figure 13 – Dermoscopic image of Seborrheic keratosis

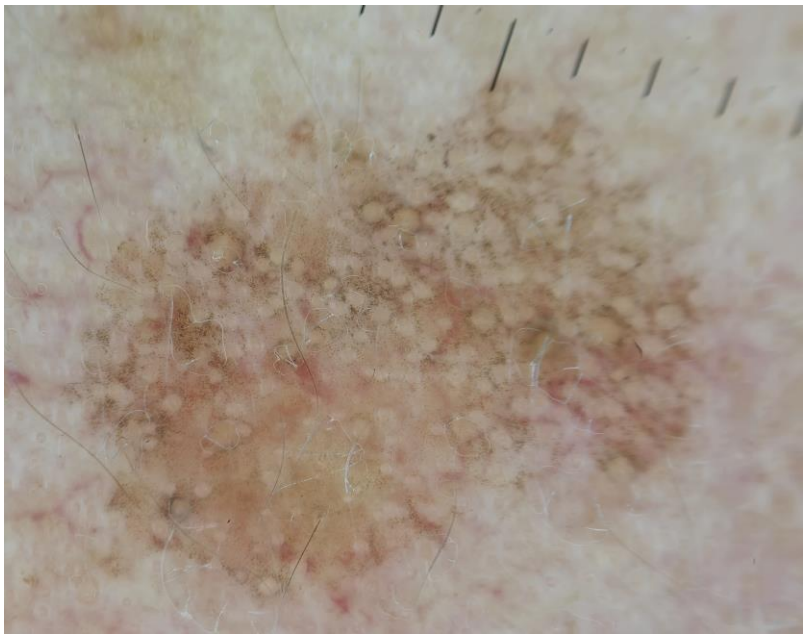

Figure 14 – Dermoscopic image of Solar elastosis and melanin incontinence

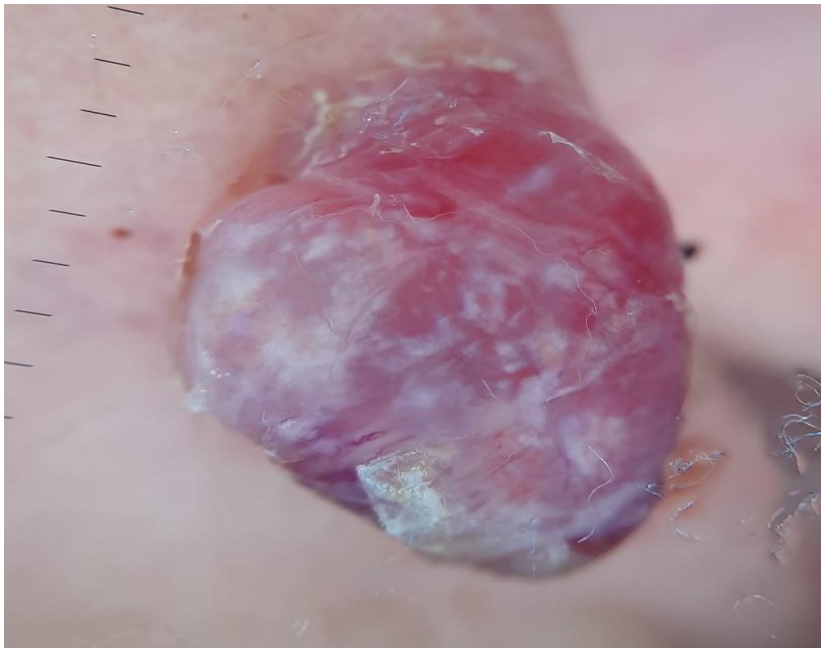

Figure 15 – Dermoscopic image of Kaposi sarcoma, nodular stage.

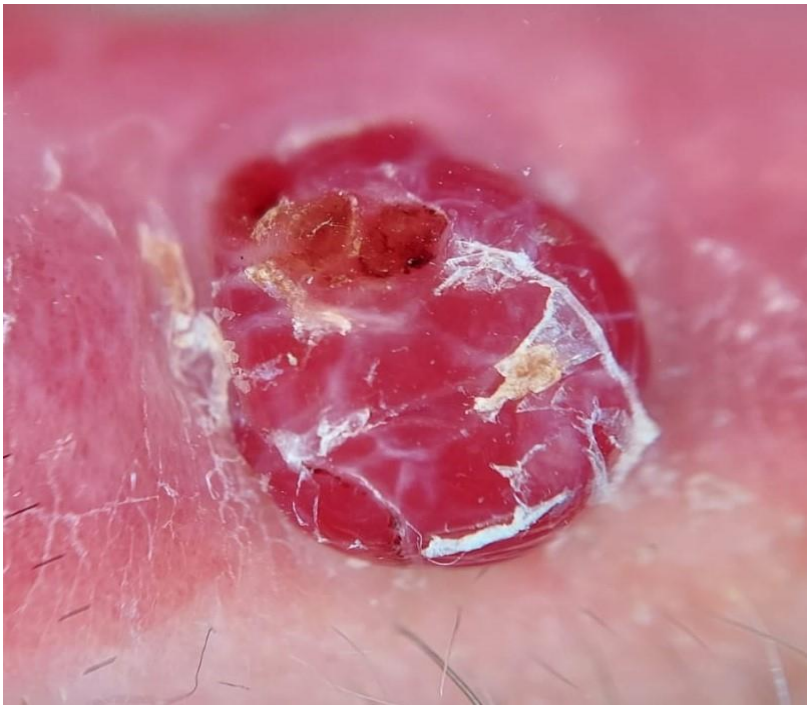

Figure 16 – Dermoscopic image of pyogenic granuloma.

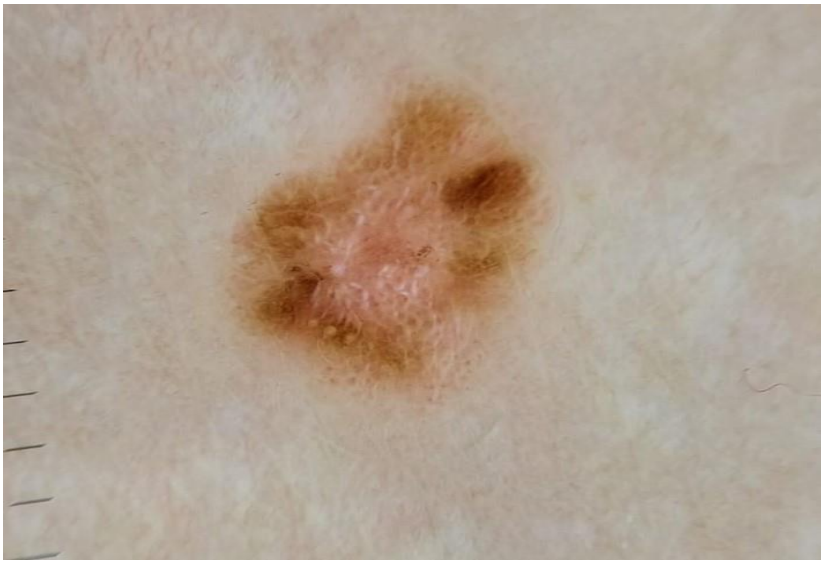

Figure 17 – Dermoscopic image of Compound Spitz nevus.

4. Discussion

4.1. Principal Findings

Evaluation of skin lesions within the cohort was consistent with current dermoscopy knowledge. Dermoscopy proved good and consistent correlation with histopathological reports obtained for most lesions.

Dermoscopic criteria known for the diagnosis of skin tumors were found in every lesion evaluated in the study, including diagnostically challenging cases. For melanomas, dermoscopic complexity grew with Breslow index (more colors/vessels), whereas non-melanoma skin cancers displayed characteristic patterns in line with current knowledge.

Several malignant lesions presented as mimickers, either benign or malignant, but thanks to dermoscopy, management did not change the decision of excising, highlighting the importance of careful dermoscopic assessment in daily clinical decision-making.

4.2. Dermoscopic-Histopathologic Correlation.

The dermoscopic features observed in this study showed a consistent correlation with the corresponding histopathologic diagnoses across both malignant and benign skin lesions.

In **benign melanocytic tumors**, dermoscopic structures reflected pigment depth through color variation, explained by the Tyndall effect. These lesions commonly displayed atypical pigment networks with reticular lines of varying thickness, structureless areas, brown or black dots and clods, white lines, and blue–black hues, depending on the level of melanin deposition.

In **melanoma**, increasing histopathologic tumor thickness was accompanied by a progressive increase in dermoscopic complexity. Early lesions were typically characterized by simpler patterns, such as atypical pigment networks and limited color variation, whereas thicker melanomas more frequently exhibited structureless areas, marked polychromia, vascular structures, and ulceration.

From a clinical perspective, dermoscopic evaluation of lesions suspicious for melanoma allows not only diagnostic confirmation but also an indirect estimation of tumor

aggressiveness. This information can be valuable in modern clinical workflows, where early decisions regarding excision, re-excision, sentinel lymph node biopsy scheduling, and prioritization of histopathologic reporting are often made at the first patient encounter, potentially reducing delays in management.

Several large studies have demonstrated that dermoscopic features correlate with melanoma thickness, allowing an indirect estimation of the Breslow index rather than an exact prediction. (7) (8)

Regarding non-melanoma skin cancers, particularly cutaneous squamous cell carcinoma, dermoscopic features such as central keratin masses, white structureless areas, white circles, ulceration, and polymorphous vascular patterns reflected invasive tumor growth, whereas glomerular vessels were more commonly associated with earlier stages of invasion.

In a large clinicopathologic correlation study, Li et al. reported that advanced and invasive squamous cell carcinomas more frequently displayed ulceration, white structureless areas, and polymorphous vascular patterns, while earlier lesions predominantly showed looped or hairpin vessels and less complex dermoscopic architecture. (9)

Basal cell carcinomas in our cohort exhibited dermoscopic features consistent with those well described in the literature, including arborizing telangiectasias, blue–gray dots and clods, and ulceration, which correspond histopathologically to basaloid tumor nests, increased vascularity, and stromal alterations.

Similarly, vascular tumors demonstrated lacunar or structureless red areas corresponding to dilated vascular spaces, while fibrohistiocytic lesions showed white lines and peripheral pigmentation, reflecting underlying dermal fibrosis.

Seborrheic keratoses usually showed classic dermoscopic patterns; nevertheless, inflammation or trauma occasionally altered their appearance, creating diagnostic uncertainty and emphasizing the importance of dermoscopy in context. As for these benign of cutaneous lesions, known patterns offer clinicians reasurence that it can be “left” or triggers a biopsy when patterns goes out of line, reducing the number of unnecessary biopsies and making us clinicians more effective.

Overall, these observations confirm that dermoscopy serves as a reliable, non-invasive diagnostic tool that mirrors underlying histopathologic structures and enhances diagnostic accuracy in routine clinical practice.

4.3. Diagnostic Pitfalls and Mimickers

A notable aspect of this study was the identification of malignant lesions that dermoscopically mimicked benign entities. Several melanomas displayed features suggestive of seborrheic keratosis, pyogenic granuloma, or basal cell carcinoma, representing relevant diagnostic pitfalls in daily practice.

One case, involving a 79-year-old male, showed white lines, a structureless pink–red area, and ulceration, findings that initially suggested basal cell carcinoma. Histopathologic examination, however, revealed a primary cutaneous melanoma, ulcerated, with a Breslow thickness of 6.8 mm (pT4b) and Clark level IV.

Another case, in a 53-year-old male, clinically and dermoscopically suggested a classical pyogenic granuloma, but histopathology demonstrated an ulcerated primary cutaneous melanoma of nodular subtype, with a Breslow thickness of 5.1 mm (pT4b), Clark level IV, and a high dermal mitotic rate of 25 mitoses/mm². Pyogenic granuloma represents a frequent mimicker of malignant lesions, and these findings reinforce the concept that biopsy or excision is warranted regardless of patient age, lesion location, or dermoscopic appearance.

We also encountered a superficial spreading melanoma of 0.3 mm Breslow thickness in a 41-year-old male that presented milia-like cysts and suggested a seborrheic keratosis, but also had dotted vessels, peripheral reticular lines, an atypical network, black clods, and structureless brown areas.

One basal cell carcinoma-like lesion is the sebaceoma. We also had a case in a 72-year-old male in the occipital region of the scalp. We excised the lesion as a basal cell carcinoma and were not surprised by the histopathology report, given the extensive yellow clods and structureless areas present on dermoscopy.

These cases highlight the limitations of relying on isolated dermoscopic criteria and reinforce the importance of global pattern analysis, clinical context, and maintaining a high index of suspicion. In this setting, dermoscopy proved valuable in detecting subtle atypical

features that prompted histopathologic confirmation, thereby reducing the risk of delayed or missed diagnoses.

4.4. Relevance to Daily Clinical Practice

The findings of this study have clear and direct relevance to **routine dermatologic practice**, particularly in **non-university and private clinical settings**, where clinicians are required to make timely decisions in the absence of multidisciplinary tumor boards or immediate histopathologic feedback. In this context, dermoscopy proved to be a **practical, accessible, and non-invasive tool** that effectively supported clinical decision-making regarding lesion excision, biopsy, and prioritization of cases.

In a real-world clinical environment, characterized by a **broad and heterogeneous spectrum of benign and malignant skin lesions**, dermoscopy contributed to increased diagnostic confidence and facilitated more appropriate management strategies. Its ability to highlight subtle atypical features, even in lesions with otherwise benign appearances, was particularly valuable in identifying diagnostically challenging cases and malignant mimickers.

Furthermore, dermoscopy allowed for a more structured and informed clinical approach, helping to reduce uncertainty and supporting early intervention when warranted. The capacity to recognize both classical dermoscopic patterns and atypical presentations reinforces dermoscopy as an **essential component of daily dermatologic care**, especially in settings where efficiency, accuracy, and patient safety must be balanced in routine practice.

4.5. Comparison with Existing Literature

Overall, the results of this study are consistent with existing literature on dermoscopic features of melanocytic and non-melanocytic skin tumors. The observed dermoscopic patterns in melanoma, basal cell carcinoma, and squamous cell carcinoma align with previously published criteria and consensus guidelines.

Differences in the frequency and presentation of certain features may be attributed to the real-world nature of the cohort, the monocentric design, and differences in case selection compared to larger multicentric or population-based studies. These variations

further emphasize the value of real-life clinical data in complementing controlled study findings.

4.6. Limitations of the Study

Several limitations of this study should be acknowledged.

First, the **retrospective design** offers biases related to case selection and data availability. The analysis relied on existing clinical records and archived images. In addition, the **monocentric nature** of the study, conducted within a single private dermatology clinic, may limit correlation of the findings to other clinical settings or populations.

A further limitation is the presence of **selection bias**, as many lesions that were clinically and dermoscopically assessed as benign were managed conservatively or treated for cosmetic reasons without histopathologic confirmation and were therefore not included in the analysis. This is why our malignant to benign ratio is (M:B - 1,74:1). This also shows that our selection of cases for biopsy and excision is on the right side of clinical judgement.

Moreover, **histopathologic images were not available** for review, which limited direct visual correlation between dermoscopic features and microscopic findings. While final histopathologic diagnoses were available for all included cases, the absence of histologic images restricted a more detailed, side-by-side dermoscopic–histopathologic comparison.

4.7. Strengths of the Study

Despite these limitations, this study has notable strengths.

It is based on a real-world clinical cohort that reflects everyday dermatologic practice rather than a highly selected population. All included lesions underwent systematic dermoscopic evaluation and histopathologic confirmation, ensuring diagnostic accuracy.

The broad spectrum of analyzed lesions and the structured dermoscopic–histopathologic correlation is another good point for the study.

5. Conclusion

In summary, our findings support dermoscopy as a highly effective method for the evaluation of skin lesions, providing valuable information for clinical diagnosis and indirect histopathologic assessment. Its routine use in daily practice, regardless of the clinical setting, contributes to more informed and confident clinical decisions for patient management.

Histopathology serves as the gold standard for definitive diagnosis, but dermoscopy has also gained significant importance as a gateway procedure for establishing a possible diagnosis before histopathologic examination.

6. Refferences

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7. Tables and figures

Table 1. Distribution of lesions and malignant/benign ratio (n = 104)

Category	Number of lesions	Malignant/Benign Ratio
Malignant lesions	66	63.5
Benign lesions	38	36,5
Total	104	100

Table 2. Malignant to benign ratio

Ratio	Value
Malignant:Benign	66:38
Numeric ratio	1,74:1

Table 3. Malignant percentages/numbers by histopatology.

Diagnosis	Number (Percentage)
Melanoma	20 (19.2%)
cSCC	13 (12.5%)
BCC	32 (30,8%)
Kaposi Sarcoma	1 (1%)

Table 4. Benign percentages/numbers by histopatology.

Diagnosis	Percentage/Number
Seborrheic keratosis	10 (9.6%)
Spitz nevus	5 (4.8%)
Pyogenic granuloma	4 (3.8%)
Melanocytic nevus	3 (2.9%)
Pigmented actinic keratosis	2 (1.9%)
Dermatofibroma	2 (1.9%)
Hemangioma	2 (1.9%)

Blue nevus	1 (1.0%)
Melanotic macule	1 (1.0%)
Recurrent nevus	1 (1.0%)
Clear cell acanthoma	1 (1.0%)
Sebaceoma	1 (1.0%)
Angiokeratoma	1 (1.0%)
Lichen planus–like keratosis	1 (1.0%)
Solar elastosis	1 (1.0%)
Wart	1 (1.0%)
Melanocytoma	1 (1.0%)
Total benigne: 36.5%	**38 (36.5%)**