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ORAL PRESENTATIONS

Free communications: Confocal and OCT

FC1-1

IN VIVO CONFOCAL MICROSCOPES DEDICATED TO THE SKIN FOR THE EXPLORATION OF THE OCULAR SURFACE: A NEW PERSPECTIVE FOR DERMATOLOGISTS

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Background: In *vivo* confocal microscopy is an imaging technique that has been applied to the study of the ocular surface. However, confocal microscopes dedicated to eye examination are routinely adopted only in ophthalmology reference centres and do not allow an examination of peri-ocular tissue, nor a fluorescence examination.

Methods: We applied for the first time the two *in vivo* confocal microscopes commonly used in dermatology (VivaScope ® 1500 and 3000, CALIBER, distributed in Europe by Mavig GmbH, Munich, Germany) to observe the cornea, the bulbar and tarsal conjunctiva, the eyelid margin, the lacrimal punctum and the palpebral skin of healthy volunteers. Tumoral, inflammatory and infectious diseases of the ocular mucosa and periocular skin from more than 200 patients were observed under the same microscopes. Both microscopes have a reflectance mode. VivaScope® 1500 allows an additional fluorescent examination and its placement on the ocular surface was made possible by the creation of a special interface between the microscope and the ocular apparatus.

Results: Thanks to its compact and flexible configuration, the handheld camera VivaScope® 3000 allowed to access more easily to the ocular and periocular tissues. Diagnosis of benign and malignant tumors (melanoma, squamous cell carcinoma and basal cell carcinoma), as well as infectious and genetic disease (storage diseases), could be evocated. The detection of parasites (Demodex folliculorum) on eyelids was possible. Confocal images correlated well with conventional histopathology. The fluorescence examination of corneal squamous cell carcinoma by VivaScope 1500 was characterized by extravasation of fluorescein after intravenous injection.

Conclusions: Confocal microscopes dedicated to the skin offer new perspectives for the diagnosis, optimization of treatments, and follow-up of the ocular diseases. They will allow dermatologists to examine conjunctival and eyelid tumors, as it is for skin or genital mucosa. In addition, thanks to some adaptations of the dermatological device VivaScope® 1500, it is possible for the first time to perform a fluorsecnte examination of the ocular and peri-ocular tissue, opening a new era in the clinical imaging of the ocular surface. A new semiology remains to be learned.

FC1-2

PINK PLAQUES ON THE LEGS. THE ROLE OF REFLECTANCE CONFOCAL MICROSCOPY

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Introduction and Objectives: Pink plaques on the legs in elderly often represent a challenge for clinicians because of the broad differential diagnosis. There is a great diagnostic variety of either tumoral and inflammatory diseases. The diagnosis is complicated by the paucity of clinical and dermoscopic morphological clues and the existence of varying degrees of xerosis, sun damage and venous stasis dermatitis. In addition, dermoscopic algorithms routinely used for pigmented lesions are not very helpful in the diagnosis of pink plaques. Reflectance confocal microscopy (RCM) is a useful non-invasive complementary tool in the diagnosis of malignancy. The aim of our study was to describe the utility of RCM in pink plaques on the legs in photodamaged skin and to correlate the findings with histopathology.

Materials and Methods: Prospective study of 47 pink plaques on the legs from 36 patients (10 males, 26 females, mean age: 72 years (44-91)). A 4mm punch biopsy was performed in all cases. Clinical, dermoscopic and RCM images were stored and blindly evaluated for clinical, dermoscopic and RCM diagnosis. Analysis of dermoscopic and RCM criteria described in the literature and subsequent correlation with histopathology were also performed.

Results: 13 benign lesions (8 stasis dermatitis, 1 lichen planus, 1 viral wart, 1 scar, 1 neurofibroma, 1 lichen planus-like keratosis) and 34 malignant neoplasms (20 basal cell carcinoma (BCC), 14 Bowen's disease) were analysed. A correct clinical diagnosis was established in only 38% of cases (18/47). Dermoscopy following clinical assessment achieved 49% (23/47) of correct diagnosis, whereas RCM evaluation after clinical and dermoscopic evaluation rendered a correct diagnosis in 72% of cases (35/47).

Conclusions: Dermoscopic criteria of pink plaques on the legs are frequently not enough to set a proper diagnosis, due to lack of specific features. RCM may improve our diagnostic accuracy as a secondary evaluation after dermoscopy.

FC1-3

DOES PHOTOTHERAPY INDUCE MELANOMA SIMULATORS? ROLE OF CONFOCAL MICROSCOPY IN THE EVALUATION OF NEVI UNDERGOING NBUVB IRRADIATION

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Background: Previous studies (1) have shown that UVR can be responsible for inducing dynamic changes in nevi. However, further characterization of these likely dynamic and transient events are required. Reflectance Confocal Microscopy (RCM) is a non-invasive in vivo imaging technique which allows the evaluation over time of the same lesion obtaining high sensitivity and specificity in cutaneous lesion diagnosis (2). With this valuable tool, we could better recognize the role of sunscreens in the prevention of these changes on nevi.

Objectives and Method: To make a comparative description of the same nevi with and without sunscreen application over time, during narrow band UVB therapy, by means of dermoscopy and RCM. Patients who were programmed to receive nbUVB phototherapy for their underlying dermatosis were included and submitted to the same irradiated nevi protocol designed by Carrera et al (1). The selected nevi were divided into two halves, one with and the other without sunscreen before nbUVB sub-erythematogenic repeated dose exposure. By means of dermoscopy and RCM, lesions were evaluated at 4 different moments up to the end of phototherapy.

Results: Dermoscopy showed regression phenomena (with loss of structures such as network and dots/globules) and inflammatory features (such as dotted and fine telangiectasic vessels and diffuse erythema). On RCM, predominantly at the middle and end of protocol, the appearance of large dendritic cells within epidermis was observed, like real melanoma simulators. Immunohistopathology confirmed the presence of activated melanocytes that could correspond to the images seen on RCM. The presence of regression, melanophages and perivascular lymphocytic inflammatory infiltrate also corroborates the dermoscopy findings. Regarding the sunscreen protection role, we could verify nbUVB effects on both unprotected and protected halves, but more obviously demonstrated on the unprotected halves.

Conclusions: Benign melanocytic nevi can show features resembling melanoma on RCM images when they are evaluated after repeated nbUVB sub-erythematogenic doses. This means that we have to be aware of RCM pitfalls, especially in the context of recent UVR exposure, since these lesions can simulate melanomas.

FC1-4

IN VIVO REFLECTANCE CONFOCAL MICROSCOPY (RCM) OF MELANOTIC MACULES—KEY FEATURES AND IMPACT OF RCM ON NON-INVASIVE DIAGNOSIS AND TREATMENT

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Background: The distinction of melanotic macules and melanoma is momentous but poses a major challenge in the daily routine due to overlapping clinical and dermoscopic features. Repeated biopsies and lifelong follow-up may be necessary to rule out malignancy. RCM can assist ascertain the diagnosis, by allowing visualization of the skin at nearly histological resolution.

Objectives: The validity and reproducibility of RCM criteria for melanotic macules of mucocutaneous junctions (MCJ) is tested in order to evaluate the diagnostic value of RCM for these lesions. Further the impact of RCM on lowering the excision rate of melanotic macules compared to clinical and dermoscopic evaluation alone is investigated.

Methods: A retrospective RCM image analysis of 39 pigmented macules (31 melanotic macules, 2 banal nevi, 4 atypical nevi, 2 in situ melanomas) on genital (23) and labial (16) MCJ was done by two groups of investigators blinded to diagnoses, novices vs. expert. Both groups had to opt for a differential diagnosis (melanotic macule or benign/atypical melanocytic skin lesion) and for a therapy (no treatment/follow-up or biopsy) based on RCM image evaluation. The

procedures actually taken after dermoscopic evaluation and decisions based on blinded RCM evaluation were compared.

Results: Melanotic macules displaying features of solar lentigines on non-glabrous skin (19%) were easily diagnosed with RCM, whereas melanotic macules presenting dendritic cells at basal layer (81%) were sometimes impossible to distinguish from melanoma. In sum, 77% (RCM group 1) and 87% (RCM group 2) of melanotic macules were correctly identified, with biopsy rates of 23% (group 1) and 13% (group 2), respectively. Clinical-dermoscopic evaluation yielded a correct diagnosis of melanotic macules in 39% of cases and a biopsy rate of 61%.

Conclusion: RCM criteria applied for melanotic macules are reliable and reproducible in a blinded evaluation, reflected by the high conformity of investigators in this study. Non-invasive RCM, as subsidiary diagnostic technique to dermoscopy, is conducive to diagnose melanotic macules on MCJ, since a significantly higher number of melanotic macules were correctly classified with RCM compared to clinical-dermoscopic evaluation alone resulting in a lower biopsy rate.

FC1-6

SCLEROSING NEVUS WITH PSEUDOMELANOMATOUS FEATURES VERSUS MELANOMA WITH REGRESSION: THE ADDED VALUE OF REFLECTANCE CONFOCAL MICROSCOPY

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Benign melanocytic skin lesions may be difficult to differentiate from melanoma both clinically and dermoscopically. One of the most confounding dermoscopic features, commonly seen in melanoma but also in melanocytic naevi, is represented by regression. 'Sclerosing nevi with pseudomelanomatous features' (SNPF) are a recently described clinicopathologic entity, which can closely simulate regressing melanoma. Those lesions are clinically characterized by a whitish area and localized preferentially in the convex region of the back, in young-adults individuals and are probably due to unnoticed trauma(s) on preexisting nevi. Dermoscopically SNPF display features of regression such as white scar-like areas and blue peppering-like areas. From a histopathological point of view, SNPF are characterized by a trizonal pattern: (i) an atypical junctional proliferation associated with some pagetoid spreading, (ii) significant area(s) of dermal fibrosis/sclerosis containing architecturally atypical melanocytic nests and (iii) residual nevus tissue (often with congenital-like features) around and deep into the sclerotic tissue. The differential diagnosis between SNPF and regressing melanoma is based mainly on histopathological ground, while clinico-dermoscopically criteria often are not sufficient for accurate discrimination. In the recent years, several studies demonstrated that in vivo reflectance confocal microscopy (RCM) can improve diagnostic accuracy for melanoma and it seems particularly useful for second level examination of clinically and dermoscopically equivocal lesions. We reported our experience in the use of RCM in differentiating suspicious melanocytic lesions characterized by clinical and dermoscopic features of regression, in parallel with histology. Our findings confirmed that RCM, although the specific limitations of the technique, could be considered an adjunctive diagnostic tool for second level examination of clinically and dermoscopically equivocal lesions with features of regression, in particular for the differentiation of SNPF from melanoma.

FC1-7

HANDHELD REFLECTANCE CONFOCAL MICROSCOPY AS A NON-INVASIVE DIAGNOSTIC TOOL IN VESICOBULLOUS DERMATOSES

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Vesicobullous dermatoses are characterized by intraepidermal or subepidermal blistering resulting from different mechanisms. The diagnosis is generally based on clinical examination and semi-invasive/invasive procedures such as cytology and histopathology. Reflectance confocal microscopy (RCM) is a non-invasive technique for high-resolution, in vivo imaging of the epidermis and upper dermis that is mainly employed in the diagnosis of skin tumors. More recently, it has been reported as a useful tool for in vivo assessment of some inflammatory diseases. Our purpose was to establish the usefulness of RCM in the differential diagnosis of vesicobullous disorders. For this reason, a series of patients affected by blistering diseases, such as herpes simplex, herpes zoster, seborrheic pemphigus, Hailey-Hailey disease, bullous pemphigoid and porphyria cutanea tarda were evaluated using the handheld RCM device Vivascope® 3000 and the results were compared with conventional histopathology. At the end of the study, a good correlation between RCM and histopathology was observed. RCM allowed in all cases an easy identification of the blister spaces and of the split levels and in some cases specific features were detected, such as multinucleated giant keratinocytes in herpes infections and acantholytic cells in seborrheic pemphigus and Hailey-Hailey disease. In conclusion, although additional studies are needed, our preliminary results show that RCM may play an important role in the differential diagnosis of vesicobullous diseases. The handheld device, which allows a rapid examination of several skin lesions in real time, appears to be particularly suitable for such evaluations.

FC1-8

EX VIVO FLUORESCENCE MICROSCOPY IN MOHS SURGERY

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Background: Fluorescence confocal microscopy (FCM) is an emerging technology for rapid imaging of excised tissue, without the need for frozen or fixed section processing. Basal cell carcinomas (BCCs) and Squamous cell carcinomas (SCC) can be detected in Mohs excisions although few studies have described the major BCC and SCC-findings as seen upon FCM and its diagnostic accuracy.

Objectives: To describe the major BCC and SCC-findings of excised tissue during Mohs surgery and to correlate them with histopathology and to assess diagnostic accuracy of FCM compared to frozen sections.

Methods: Eighty BCCs and 12 SCCs were prospectively collected at our Skin Cancer Unit during Mohs surgery. Central section and 4 margins were scanned by ex vivo FCM (I° staging). In case of persistence of the tumor, a further staging (II° staging) was performed. Each mosaic (corresponding to 1 margin) is assessed for the presence or absence of BCC/SCC. After FCM imaging, all tissues were processed following the standard procedure for frozen sections. Sensitivity and specificity of detecting residual BCC by means of FCM was analyzed. A side-by-side comparison between FCM images and histologic stained sections was performed.

Results: The majority of BCC belong to infiltrative subtype (87%). Distinct BCC types appeared unique in term of shape and size of tumor islands (bigger in nodular, smaller and rounded in micronodular and tiny cords for infiltrative ones) and for the presence of clefting, palisading and increased nucleus/cytoplasm ratio. An excellent correlation was found between FCM and histologic findings (Cohen's Kappa statistics = 0. 9). The sensitivity and specificity of detecting residual BCC was 89% and 96%, respectively. False negative (10 cases) on FCM examination were found in sclerosing BCCs. False positive (5 cases) were due to the presence of sebaceous glands and adnexal structures that were misdiagnosed as BCC islands. Twelve SCCs were collected belonging to the poorly differentiated subtypes.

Conclusions: FCM is a fast and new imaging technique that allows an excellent visualization of skin structures and BCC and SCC-findings during Mohs surgery with a diagnostic accuracy that is similar to the "golden standard" of frozen sections. Larger studies are needed to explore the diagnostic accuracy for SCCs.

FC1-9

REFLECTANCE CONFOCAL MICROSCOPY IN THE DIAGNOSIS OF MAMMARY PAGET'S DISEASE

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Background: Mammary Paget's disease (MPD) is an intraepidermal adenocarcinoma of the nipple and/or areola of the breast. Pigmented MPD is a rare variant which is very difficult to distinguish from melanoma. Although inflammatory or infectious diseases correspond to the majority of chronic skin lesions of the nipple/areola, biopsies are usually performed in order to exclude a neoplastic process. Reflectance confocal microscopy (RCM) has gained increased relevance as a non-invasive, *in vivo* aid in such diagnostic challenges of both inflammatory and tumoral skin diseases.

Objective: The aim of our study was to describe the RCM features of MPP.

Methods: A total of 5 lesions from 5 women (age range: 49-83 years) with histopathologically proven MPD were evaluated by means of dermoscopy and RCM.

Results: Four of the lesions presented as long-standing, itching, erosive, scaly, well-defined erythematous patches and plaques on the mammilla. Dermoscopy showed pink structureless areas with diffuse glomerular, linear-looped and comma-like vessels within. The fifth patient, a 58-year old woman, presented with a fast-growing, partially pigmented pink nodule on the left mammilla. Dermoscopy revealed polymorphous vessels, milky-red areas and multiple irregularly distributed brown-grey dots and globules. In all cases, RCM examination at the epidermal level enabled the visualization of multiple, large atypical cells spreading in a pagetoid fashion, separated from the surrounding structures by a black hollow, with loss of normal architecture. Histopathology revealed nested or single atypical cells scattered throughout the epidermis. Immunohistochemical analysis showed that these cells were positive for CK7, CEA and CAM 5. 2 favoring the diagnosis of MPD. Further studies showed an association with intra-ductal carcinoma, except in the pigmented MPD case where an invasive carcinoma was found.

Conclusion: RCM enables a fast and non-invasive examination of skin lesions in sensitive anatomical areas like the nipple and areola. Although the definitive diagnosis was obtained by histopathology in all cases, RCM allowed an *in vivo* differentiation from inflammatory skin diseases and in the management decision. The exception was pigmented MPD. RCM features of this rare variant were described, supporting its known diagnostic difficulties also due to close resemblance with melanoma presentation.

FC1-10

DISTINCTION BETWEEN NON-MELANOMA SKIN CANCER TYPES BY IN VIVO REFLECTANCE CONFOCAL MICROSCOPY

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In vivo reflectance confocal microscopy (RCM) is a non-invasive imaging technique, which enables imaging of the skin at a cellular resolution. Currently, RCM is mainly used for diagnosis of melanoma and non-melanoma skin cancer

(NMSC). However, studies that focus on the distinction between (sub) types of NMSC are not performed. Therefore the purpose of this study was to establish RCM features for the subtypes of basal cell carcinoma (BCC), actinic keratosis (AK) and squamous cell carcinoma (SCC) in order to allow prospective diagnosis of NMSC types.

Methods: 43 BCCs, 6 SCCs and 24 AKs were selected for RCM imaging. For histological evaluation, a 3-mm punch biopsy was obtained and stained with hematoxylin-eosin.

Results: For the subtypes of BCC, it was demonstrated that size and shape of the tumor nests, peripheral palisading, branch-like structures, fibrotic septa and increase of vascular diameter were characteristic RCM features for nodular BCC and micro-nodular BCC. Size and shape of the tumor nests allows further distinction between nodular BCC and micro-nodular BCC. Solar elastosis and the location of the tumor nest just below or in connection with the basal cell layer characterizes superficial BCC. Architectural disarray in the stratum granulosum, architectural disarray in the spinous layer and nest-like structures in the dermis were RCM features that were helpful distinction between SCC and AK.

Conclusion: This study presents distinctive RCM features for AK, SCC, nodular, micro-nodular and superficial BCC, which might allow *in vivo* diagnosis between NMSC types.

FC1-11

DISCRIMINATION OF ACTINIC KERATOSIS FROM SQUAMOUS CELL CARCINOMA AND NORMAL SKIN BY HIGH-DEFINITION OPTICAL COHERENCE TOMOGRAPHY

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Introduction: Actinic keratoses (AKs) are common epidermal pre-neoplastic lesions that develop on chronically sun-damaged skin. Visible lesions are often associated with subclinical lesions on surrounding skin, which gives rise to field cancerization. While visual examination may fail to detect subclinical or early invasive lesions, the realization of multiple biopsies would not be feasible. Thus, there is an increasing interest in non-invasive diagnostic tools, such as reflectance confocal microscopy (RCM) and high-definition optical coherence tomography (HD-OCT). In a previous study, we developed a HD-OCT based diagnostic algorithm for the discrimination of AK from SCC and normal skin. (1) The aim of this study was to test the applicability of HD-OCT for non-invasive discrimination of AK from squamous cell carcinoma (SCC) and normal skin using this algorithm.

Material and Methods: Three-dimensional (3D) HD-OCT images of histopathologically proven AKs and SCCs, along with 3D HD-OCT images of clinically normal skin were collected. All 3D HD-OCT images were shown in a random sequence to 3 independent observers, blinded to the clinical and histopathological data and with different experience with HD-OCT. Observers classified each image as AK, SCC or normal skin based on the diagnostic algorithm.

Results: A total of 106 (38 AKs, 16 SCCs and 52 normal skin sites) 3D HD-OCT images from 71 patients were included. Sensitivity and specificity were 81.6 % and 92.6% for AK diagnosis, and 93.8% and 98.9% for SCC diagnosis. A moderate inter-observer agreement was demonstrated.

Conclusion: HD-OCT represents a promising technology for the non-invasive diagnosis of AKs. Thanks to its high potential in discriminating SCC from AK, HD-OCT could be used as a relevant tool for second level examination, thus increasing diagnostic confidence and sparing patients unnecessary excisions. Combining the higher resolution of RCM with the higher penetration depth and 3D imaging of HD-OCT could further increase the diagnostic accuracy in the setting of field cancerization.

FC1-12

OPTICAL COHERENCE TOMOGRAPHY AND DERMOSCOPY IMAGES OF NAIL TREATED WITH FRACTIONAL CO2 LASER

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Background: Fractional laser is widely applied in skin resurfacing by creating hundreds of microscopic wounds that extend into dermis without injuring surrounding tissue, thereby allowing rapid healing. Recently, many studies have been focusing on the improvement of drug delivery and the utilization of fractional laser is seemingly promising. However, the treatment outcome relies on several parameters such as the penetration depth, the spot size of the optical beams and the incident density of laser spots, which were hard to obtain instantaneously and noninvasively in clinical practice. Optical coherence tomography (OCT) system provides real-time, high-resolution images that acts as a solution for the investigation of photothermolysis induced by fractional CO_2 laser.

Objectives: The purpose of this study is to investigate the depth of penetration, density and water diffusion process of microscopic ablation spots by using OCT system and dermoscopy.

Material and Methods: In this study, we used fractional CO_2 laser to induce microscopic ablation spots on the nail. OCT was implemented for quantitative evaluation of induced microscopic ablation spots. To further study the feasibility of drug delivery, normal saline was dripped on the exposure area of fingernail and the speckle variance OCT signal was used to evaluate water diffusion process.

Results: The fingernails were exposed to fractional CO_2 laser with various exposure energies of 20, 30, 40, and 50 mJ and the nails were examined under dermoscope, which shows clearly demarcated cylindrical holes extending into the nail plate. The nails were sequentially scanned with OCT system

and the estimated depth in response to the aforementioned exposure energy was 248µm, 290µm, 320µm, and 368µm, respectively. The penetration depth is proportionate to the exposure energy. Subsequently, all treated nails were clipped and underwent histologic examination. Results have found no difference between the depths of penetration obtained by OCT versus histology section (p<0. 05), validating OCT as an acceptable methodology for fractional CO_2 laser depth evaluation.

Conclusions: This study illustrates the correlation of nail morphology after fractional laser therapy through the utilization of OCT. OCT proved to be an effective tool in determining the optimal laser treatment energy setting and water/drug delivery process.

FC1-13

VALIDATION OF A NEW HIGH-DEFINTION OPTICAL COHERENCE TOMOGRAPHY ALGORITHM FOR BASAL CELL CARCINOMA DIAGNOSIS AND SUBTYPE CLASSIFICATION

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In a previous study we provided a thorough description of three-dimensional (3-D) High-Definition Optical Coherence Tomography (HD-OCT) features that can permit discrimination of basal cell carcinoma (BCC) from clinical imitators and differentiation of BCC subtypes (superficial, nodular, and infiltrative). Based on these features a diagnostic algorithm was proposed. The aim of the present study is to validate the afore-mentioned HD-OCT algorithm for BCC diagnosis and subtype classification. To this purpose, 3D HD-OCT images of histopathologically proven superficial BCCs (sBCCs), nodular BCCs (nBCCs) and infiltrative BCCs (iBCCs) were collected, along with 3D HD-OCT images of clinical BCC imitators including actinic keratoses, compound and intradermal nevi, amelanotic melanomas, sebaceous hyperplasias and small haemangiomas. All 3D HD-OCT images were shown in a random sequence to 3 independent observers, blinded to the clinical and histopathological data and with different experience with HD-OCT. Based on the diagnostic algorithm proposed; observers firstly classified each image as "BCC" or "BCC imitator." Secondly, observers provided a more detailed diagnosis for each of the two categories (for BCCs: sBCC, nBCC, iBCC; for BCC imitators: actinic keratosis, compound nevus, intradermal nevus, amelanotic melanoma, sebaceous hyperplasia, haemangioma). Herein we present the results of this study, including sensitivity, specificity, positive predictive value, negative predictive value, and inter-observer agreement by means of Cohen's kappa for our HD-OCT diagnostic algorithm for BCC. HD-OCT represents a promising technology for the non-invasive diagnosis of BCC. Thanks to its high potential in detecting BCC and in discriminating between BCC subtypes, HD-OCT could be used as a relevant tool for second level examination, thus increasing diagnostic confidence and sparing patients unnecessary surgery.

FC1-14

DIAGNOSTIC ACCURACY OF OPTICAL COHERENCE TOMOGRAPHY IN DIAGNOSIS OF SUPERFICIAL BASAL CELL CARCINOMA

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Non-melanoma skin cancers (NMSC) are the commonest cancer worldwide and incidence continues to rise in Australia. Basal cell carcinomas form the majority of NMSCs, and in the last decade noninvasive therapies have significantly reduced excision rates. Non-invasive techniques are increasingly important for the diagnosis of superficial BCC which can be safely treated topically. The use of optical coherence tomography has previously been used to diagnose BCC. The aim of this study was to investigate the diagnostic accuracy of optical coherence tomography (OCT) in the diagnosis of superficial subtype of BCC in a clinical setting. Lesions which were suspicious for superficial BCC were consecutively recruited in this prospective study. Clinical confidence based on clinical and dermoscopic assessment was recorded. Clinical and dermoscopic images were taken. OCT images of lesions and adjacent normal skin were acquired at baseline visit. A 2mm punch biopsy of the lesion was taken. Interpretations of the OCT images were performed by 2 investigators blinded to the biopsy results. Statistical analysis for the study is pending. So far, 130 lesions were recruited, 52.3% of the lesions were superficial BCC. Remaining lesions consisted mainly of other subtypes of BCC (25.2%) and actinic keratosis (8%). Sensitivity, specificity, positive predictive value, and negative predictive value for diagnosis of superficial BCC as well as other BCC, improvement of clinical confidence with OCT and interobserver agreement of OCT will be calculated. (Recruitment is ongoing till end 2014.)

FC1-15

HIGH-DEFINTION OPTICAL COHERENCE TOMOGRAPHY ALGORITHM FOR DISCRIMINATION OF BASAL CELL CARCINOMA FROM CLINICAL IMITATORS AND DIFFERENTIATION BETWEEN COMMON SUBTYPES

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Background: Preliminary studies have described morphological features of basal cell carcinoma (BCC) imaged by High-Definition Optical Coherence Tomography (HD-OCT) and suggested that this technique may aid in its diagnosis and management. However, systematic studies evaluating the accuracy of HD-OCT for the diagnosis of BCC are lacking.

Objective: The aim of this study is to identify three-dimensional (3-D) HD-OCT features able i) to distinguish BCC from clinical BCC imitators and ii) to discriminate between the most common BCC subtypes. Based on these particular features a diagnostic algorithm will be suggested.

Methods: A total of 50 histopathologically confirmed BCCs (18 superficial, 19 nodular, 13 infiltrative) were imaged by HD-OCT at the centre of the lesion prior to standard surgical excision and subsequent histopathological analysis. Fifty images of clinical BCC imitators were also retrieved as a "pitfalls" group.

Results: The simultaneous presence of grey/dark subepidermal (hemi-spherical) or intradermal lobulated structure(s) presenting a typical cocarde feature in both HD-OCT modes was a significant feature for BCC diagnosis. Features discriminating between BCC subtypes were location of the roof of BCC lobules, vascular pattern of the papillary plexus and stretching effect on the stroma. Clinical BCC imitators such as actinic keratosis, compound and intradermal nevi, amelanotic melanoma, sebaceous hyperplasia and small haemangioma could be differentiated from BCC by means of HD-OCT.

Conclusion: This study provides a thorough description of 3-D HD-OCT features that can permit discrimination of BCC from clinical BCC imitators and differentiation of BCC subtypes. Based on these features a diagnostic algorithm is proposed which requires additional validation, but enhances current understanding of the morphological correlates of HD-OCT images in skin.

FC1-16

IN VIVO REAL-TIME CONFOCAL AND MULTIPHOTON MICROSCOPY OF HUMAN SKIN IN THE VERTICAL PLANE

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Background: Reflectance confocal microscopy (RCM) and multiphoton microscopy (MPM) are non-invasive methods of acquiring morphological images of the skin *in vivo*. Most research in this area focuses on instruments that are configured for 2-D imaging in a horizontal plane parallel to the skin surface. In contrast, conventional histopathologic evaluation of the skin is based on vertical tissue sections that show microscopic features and their interrelationships according to their depth within the skin. The ability to similarly depict the skin in the vertical plane during *in vivo* microscopic imaging poses several significant challenges with respect to scanning speed and resolution.

Objective: To develop a laser scanning multimodal microscopy system which combines RCM and MPM, and has the ability to achieve high resolution vertical "optical sectioning" of *in vivo* human skin at real-time. RCM and MPM images can be obtained simultaneously thereby providing complementary morphological information.

Methods: The light source was a femtosecond laser with pulse width of 130 fs. A resonant mirror was used for rapid X-axis horizontal scanning and a piezoelectric actuator was used for Z-axis vertical scanning. An acoustic optical modulator was integrated into the system to match the desired laser power at different imaging depths in real-time.

Results: Vertical section RCM and MPM microscopic images of normal human skin *in vivo* were obtained at half video rates (15 frames / second). Keratinocytes with dark-appearing nuclei, the dermal-epidermal junction, the dermal collagen and elastic fibers, and dynamic intracapillary blood flow were readily seen. The imaging depth is about 200 μm, and the best axial resolution of the system is measured to be 1. 1μm.

Conclusions: This real-time laser scanning multimodal microscope could achieve high resolution vertical sectioning of human skin *in vivo*. It provides a new potential tool to non-invasively assess the skin in health and disease.

FC1-17

IN VIVO IMAGING OF SARCOPTES SCABIEI BY REFLECTANCE CONFOCAL MICROSCOPY AND HIGH DEFINITION-OPTICAL COHERENCE TOMOGRAPHY

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Scabies is a contagious skin infection caused by the mite *Sarcoptes scabiei*. The characteristic symptom is intensive pruritus particularly at night induced by a delayed type hypersensitivity response to the body, excretion, exuvia of the mite. In clinical routine, scabies is diagnosed based on patient's symptoms, clinical history and identification of mites or eggs by clinical examination and microscopy. Dermoscopy has been suggested as a useful tool in diagnosing scabies *in vivo*. More recently, Reflectance Confocal Microscopy (RCM) and High-Definition Optical Coherence Tomography (HD-OCT) are used as non-invasive, real-time *in vivo* imaging techniques. RCM provides images of horizontal skin sections with a 1-μm lateral resolution and a maximum depth of 250 μm. HD-OCT allows the 3-dimensional imaging of the skin

by combining *en face* and cross sectional images with a 3-µm resolution in both lateral and axial direction and a maximum depth of 570 µm. Both RCM and HD-OCT can detect Sarcoptes scabiei *in vivo* and can therefore be useful to diagnose and follow up scabies as well as to describe in real time skin morphology within parasitized lesions where biopsy is rarely performed. Herein we present the results of a study comparing images of Sarcoptes scabiei acquired through a dermoscopic digital device (Dermlite® DL III with Pigment Boost), RCM (Vivascope®3000, MAVIG GmbH, Munich, Germany) and HD-OCT (Skintell®, Agfa Healthcare).

FC1-18

HYPERSPECTRAL IMAGING IN DETECTING BASAL MEMBRANE INVASION IN LENTIGO MALIGNA MELANOMA

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Background: Lentigo maligna melanoma (LMM) represents the development of dermal invasion within a lentigo maligna (LM), the most prevalent melanoma *in situ*. LM and LMM form the most common melanocytic malignancies of the head and neck regions. Clinically, *in situ* LM and invasive LMM are difficult to distinguish. Preoperative tumor staging is crucial for determining the accurate treatment, i.e., resection margins and possible need for sentinel lymph node biopsy.

Objectives: To determine the accuracy of the hyperspectral imaging system (HIS) in the detection of dermal invasion in LMMs.

Methods: We used a novel HIS prototype developed by the VTT Technical Research Centre of Finland. The device detects the diffuse reflectance of visible and infrared light within a large 12 cm^2 field rapidly, in seconds. Automated computational analysis techniques provide abundance maps representing the end-members of healthy skin and tumor area. Altogether 25 lesions on the head area clinically suspected as LM or LMM were included, imaged *in vivo* and biopsied before surgical excision. Histopathology served as the gold standard for the diagnosis.

Results: Of the 25 lesions 18 were histologically confirmed as LMs and seven invasive LMMs. The diffuse reflectance spectra of LM and invasive LMM differed. The dermal invasion was seen as a separate clear white area in abundance images in 6/7 of the LMMs (true positives). In 1/7 of the LMMs, in which the dermal invasion was only 0.5mm in Breslow thickness, the HIS did not reveal the invasion (false negative). In 17 of 18 LMs HIS showed no suspicion for invasion (true negatives). In 1/18 cases HIS showed an area suspect for invasion which was not in concordance with histological findings (false positive). Thus, HIS achieved the positive predictive value of 85.7% and negative predictive value of 94.4%.

Conclusions: HIS offers a promising non-invasive tool for the detection of the dermal invasion in LMMs, and thus facilitates preoperative tumor staging.

Free communications: Dermatoscopy 1

FC2-1

EARLY DERMOSCOPIC CRITERIA OF MALIGNANCY IN A BOY SUFFERING FROM XERODERMA PIGMENTOSUM

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Objective: A Libyan boy suffering from xeroderma pigmentosum since early childhood was 6 years old when he attended our practice for the first time. Within the following 14 years, he developed multiple skin tumors: angiosarcoma, keratoacanthoma, lentigo maligna, superficial spreading and desmoplastic melanomas, squamous cell carcinomas, basal cell carcinomas, and a probable leiomyosarcoma. Demoscopy resp. epiluminescence microscopy led to early diagnosis and successful therapy every time. First clinical aspect: Mottled skin with dense hyper- and hypopigmented spots, freckle-like lesions, telangiectases mainly in face, neck, arms and hands.

Method and Results: Within a course of 4 years, we observed tumor progression utilizing a retrospective follow-up of photographs and within 1 year a prospective follow-up of dermoscopy resp. epiluminescence microscopy. The progression of an initially unsuspicious grayish papule of 2.0mm on the left cheek was of special interest: Within 12 months, this lesion grew up to 3. 5 mm. Dermoscopic examination raised the suspicion of a melanoma. Following excision, histology revealed a desmoplastic melanoma of 1. 65mm Breslow thickness. Further small diameter tumors were detected on the basis of typical pattern modification with time by dermoscopy: a melanoma of 1.3 mm diameter with 0.34 mm Breslow thickness, an angiosarcoma of 2.6 mm diameter and 2 basal cell carcinomas of 1.5 mm diameter.

Conclusion: Dermoscopic resp. epiluminescence microscopic follow-up of small diameter skin lesions in patients with xeroderma pigmentosum is suitable for the early detection of developing malignant tumors and may contribute to a better prognosis.

FC2-2

NEW DERMOSCOPY FEATURES OF MELANOCYTIC NEVI IN PATIENTS WITH VITILIGO

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Vitiligo is one of autoimmune disease that is often associated with another autoimmune disorders like diabetes or autoimmune thyroiditis, and in pathogenesis of which there is an autoimmune reaction against melanocytes. The disease is characterized by depigmented patches, localized segmentally or non-segmentally. However, there are not only depigmented patches, but also depigmented hair. Halo nevi are strongly associated with vitiligo, as well as multiple halo nevi are common in patients with vitiligo. The aim of the study was to characterize dermoscopy features of melanocytic nevi in patients with vitiligo. In our research we have noticed another features of melanocytic nevi in vitiligo-patients. Among all patients with vitiligo the most common were acquired dermal and combined nevi that were located on the body and extremities. Also halo nevi, multiple halo nevi, middle-sized congenital nevi have been observed. Dermoscopy characteristics of which were structureless hypopigmented areas, globules and circles. The most interesting thing was that circles were originally the globules, central part of which were depigmented with time. In addition, depigmentation as dermoscopy feature was present in all melanocytic nevi in patients with vitiligo and moreover it was also seen in combined nevi. In these combined nevi also it was noticed that pigment network was fragmented and this network at the periphery was seen like radial lines or pseudopods. In conclusion, important to notice that depigmentation in patients with vitiligo can be observed not only as skin patches, but also as dermoscopy feature in melanocytic nevi, that is not any pathology nor any sign of dysplasia, but only the sign of the autoimmune reaction against pigment.

FC2-3

NEVUS ASSOCIATED VERSUS DE NOVO MELANOMAS

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Aims: The aim of this study was to compare de novo melanomas and melanomas in association with a nevus with regard to morphology and prognosis.

Material and Methods: We included a consecutive series of 357 histologically verified melanomas, diagnosed between January 1, 2005 and December 31, 2007. All histopathologic specimens were reexamined and searched for remnants of associated nevi.

Results: We found that 31 (8.7%) melanomas were associated with a nevus, 284 (79.5%) melanomas developed de novo, and in 42 (11.8%) a preexisting nevus could not be excluded although the alternative explanation that the entire lesion represents a melanoma was also possible. The preexisting nevus had a congenital pattern in 27 cases (87%) and the pattern of a Clark's nevus in 4 cases (13%). In 149 (41.7%) cases clinical and/or dermatoscopic images were also available. We found that in 16 (51.6%) melanomas that developed in association with a nevus, the nevus was also visible clinically or dermatoscopically. In general preexisting nevi did not show signs of atypia clinically and/or dermatoscopically. The median invasion thickness of . . . de novo melanomas was 0.80mm in comparison to 0.85mm in melanomas in a preexisting nevus (p=0. 98). The frequency of in situ melanomas was higher in . . . de novo group (n=114, 40. 1% versus n=5, 16. 1%, p=0. 009). Patients with a melanoma in association with a nevus were younger (mean age=54. 9 years, SD:16.3) than patients with . . . de novo" melanomas (mean age=68. 3 years, SD:14. 8 p<. 0001). There were no significant differences between the two groups with regard to the frequencies among males and females and anatomic site. The median overall survival for patients with de novo melanomas was 7.6 years compared to 8. 9 years in the other group (p= 0. 016). In multivariate survival analysis tumor thickness and age were significant independent predictors of survival.

Conclusion: The majority of melanomas arise de novo. Melanomas occur more often in association with a superficial and deep" congenital nevus than with a Clark's nevus. Survival rate of patients with nevi associated melanomas is higher because patients are younger but probably also because pathologists tend to overestimate the tumor thickness of melanomas in association with a nevus.

FC2-4

DERMOSCOPIC FEATURES OF ACRAL MELANOMAS IN A REFERRAL CENTER IN BARCELONA. PROGNOSTIC ROLE OF HISTOPATHOLOGIC SUBTYPE

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Introduction: Acral melanoma (AM) in our population is still one of the most severe forms of melanoma, and is poorly characterized. Its prognosis is mainly affected by delay in diagnosis, in part due to the fact that it can affect non-visible areas on elderly people, but also because it is usually misdiagnosed in early stages.

Method: Retrospective clinical-prognostic, dermoscopic and histopathologic review of AM in a referral unit from 1986 to 2010.

Results: 75 cases were dermoscopically characterized within a total series of 275 melanomas on hands and feet whose outcome was reviewed (61% women; mean age of 56y, range 12-96). The most frequent location was on feet (83%), 60% were ulcerated 20% achromic. Within the whole series, histopathologically they consisted of acral lentiginous melanoma (ALM) 57%, superficial spreading (SSM) 30%, and nodular (NM) 6%. 24% were *in situ* melanomas whereas the mean Breslow thickness of invasive cases was 3. 02mm. At the time of consultation in our Unit all tumors showed dermoscopic features of malignancy. Dermoscopically multicomponent global pattern was the most frequent (35%), parallel ridge pattern could be identified in up to 50% of cases. More than 40% presented blue-whitish veil and streaks. All the achromic tumors presented milky-red areas, and 70% dotted vessels (50% multiple atypical vessels), 40% remnants of pigment, and 40% chrysalides (shiny white streaks). Milky red areas, chrysalides and/or non-specific pattern were associated to non-SMM subtype and higher Breslow (p<0. 01), with a negative predictive value of 97%. In the whole series, after a mean follow-up of 55, 16 months prognostic factors by multivariate analysis were age at diagnosis, Breslow, and histopathologic subtype. ALM and NM presented a poorer outcome than SSM (OR 10. 95, p0. 02).

Conclusions: In our complete series of 275 AM, subtypes of ALM and NM presented a poorer prognosis after been adjusted by age and Breslow. Dermoscopy could help not only to identify incipient and achromic tumors, but it could predict the histological subtype and Breslow, and therefore the prognosis.

FC2-5

THE ROLE OF MORPHOLOGY AND COLOR IN DERMOSCOPIC DIAGNOSIS

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Background: Expert dermoscopists largely rely on pattern analysis to make diagnoses. Novices may place more emphasis on color than on pattern, which can lead to incorrect diagnosis. We wanted to explore whether the use of gray-scale dermoscopic images would help to make patterns more conspicuous leading to improved diagnostic accuracy.

Objective: To evaluate diagnostic accuracy and confidence level for common melanocytic and non-melanocytic lesions in gray-scale dermoscopic images.

Methods: Forty dermoscopic color images [8 nevi, 8 seborrheic keratoses (SKs), 7 basal cell carcinomas (BCCs), 7 melanomas, 4 hemangiomas, 4 dermatofibromas (DFs), 2 squamous cell carcinomas (SCCs)] were selected from a convenience sample of photographed lesions. The study took place during a dermoscopy course at Memorial Sloan Kettering Cancer Center. In a timed session, 20 images were shown (10 in gray-scale and 10 in color), for which participants blinded to the study objective rendered a diagnosis and associated confidence level per image. An additional subset of 20 lesions was shown twice, in both gray-scale and color to gleam insight into if there were particular lesions in which color may help or hinder the diagnosis.

Results: There were 158 participants. In a parallel study design, participants correctly identified a higher proportion of lesions viewed in gray-scale as compared to color (72.5% vs. 57.9% correct answers, respectively), with an equivalent mean confidence level in gray-scale and color images (p=.50). The paired images showed that there were particular instances in which color either dramatically added to or diverted from the correct diagnosis. For example, when SKs with a blue-white veil, and DFs with multiple colors were shown in color, they were incorrectly classified as melanoma, whereas the percentage that rendered a correct diagnosis nearly doubled in gray-scale. On the other hand, "pink lesions" such as SCCs were difficult to diagnose in gray-scale.

Conclusion: The results indicate that for certain common cutaneous neoplasms, gray-scale dermoscopic images may make pattern more conspicuous leading to improved diagnostic accuracy. Notable exceptions do exist including "pink lesions" and vascular lesions. The place for gray-scale images in either teaching versus in formal dermoscopic evaluation should be investigated further.

FC2-6

THE THOUSAND FACES OF SPITZ/REED NEVI

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Dermoscopy is a noninvasive and valuable method for improving the diagnosis of Spitz and Reed nevi, also called spindle and/or epithelioid cell nevi, which are a special group of melanocytic lesions with specific clinical and pathological treats. A recent study, including 349 excised Spitz/Reed nevi, only 18% were correctly clinically diagnosed. The objective of this study is to collect and evaluate a large series of histopathologically proven cases of Spitz and Reed nevi (more than 1000!), to describe their dermoscopic structures

and patterns and to determine the diagnostic accuracy in our cases. The results of this study reveal that: a) the pigment variant is much more frequent than the classical or non-pigmented one, b) the starburst and atypical patterns are the most common patterns associated with Spit/Reed nevi, c) although there are 6 main dermoscopic patterns associated with these lesions (starburst, globular, reticular, homogeneous, vascular and atypical patterns), we have found that Spitz/Reed nevi can show a very wide range of dermoscopic presentations, d) the diagnostic accuracy of the Spitz/Reed nevi in our study was 75%. The conclusion of this study reaffirms that Spitz/Reed nevi are complex lesions with a wide range of dermoscopic presentations.

FC2-7

THE EFFECTS OF BIOLOGICAL AGENTS ON MELANOCYTIC NEVI

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Background: The aim of our study was to evaluate the changes of the melanocytic nevi during the biological agent therapy.

Methods: For this purpose, 40 index nevi of 25 adult patients who were treated with infliximab, adalimumab, etanercept or rituximab for different diseases were included in the study. In addition, 11 patients who did not have any nevi were also included for the observation of new nevi formation. All of the patients underwent clinical and dermoscopic evaluation before, 6 months and 1 year after the beginning of the treatment. Among dermoscopic examination methods, pattern analysis, ABCD score system and three-point checklist were performed.

Results: In terms of the diameter of the nevi, there was no statistically significant difference between the first examination and that of the sixth month, but between the first examination and that of the twelfth month. There was also no statistically significant difference in total dermoscopy scores calculated by ABCD score system application on 31 nevi at the times of assessment. At the end of the study, we detected 24 new nevi formation in 7 patients (10 were in one patient), whom all of were over 35 years of age, however no eruptive nevi or melanoma formation were observed.

Conclusion: An increase in the diameters of the present nevi and formation of new nevi can be seen with biological agent therapy in 1-year-follow-up. We did not observe any differentiation in the structural components of the nevi.

FC2-8

DERMATOSCOPIC CHARACTERISTICS OF MELANOMA ACCORDING TO THE CRITERIA "ULCERATION" AND "MITOTIC RATE" OF THE AJCC 2009 STAGING SYSTEM FOR MELANOMA

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Objective: The present study was conducted to identify dermatoscopic patterns of melanoma, that are associated with a histopathologically reported ulceration or a mitotic rate > 1/mm^2. Furthermore we examined, to what extent a clincal or dermatoscopic ulceration coexists with a histological ulceration.

Methods: Digital dermatoscopic images of histopathologically proven melanoma, collected between 2008 and 2013 at the Department of Dermatology Graz, were retrospectively analyzed for defined dermatoscopic criteria. For all cases, patients' demographics, tumor location and histopathological characteristics were collected.

Results: A total of 550 patients (278 men; 50.54%) with 559 melanomas were included in this study. The average age of patients was 64. 5 years. Of these 96 were melanoma in situ, 266 stage IA, 73 stage IB, 25 stage IIA, 19 stage IIB, 15 stage IIC, 12 stage IIIA, 14 stage IIB, 6 stage IIIC and 29 stage IV. For 4 cases showing almost complete regression, the tumor stage could not be defined.

For 74 (13.2%) and 121 (21.6%) cases, histopathology reported the presence of ulceration and a mitotic rate > 1/mm^2, retrospectively. Of all cases with ulceration histologically, dermoscopy revealed blue-white veil in 38 (50 7%) of cases and milky red areas in 39 (55%) of cases.

Moreover, 48 (39 7%) and 76 (62.8%) of melanomas with a mitotic rate > 1/mm^2 showed milky red areas and blue-white veil, respectively. Of note, we found a poor correlation between clinical and dermatoscopic ulceration and histopathological presence of ulceration. While clinical or dermatoscopic analysis considered ulceration to be present in 120 (21.5%) and 117 (20.9%) of all lesions, respectively, histopathology reported ulceration in only 74 cases (13.2%).

Discussion: The most striking result of our study was a poor correlation between clinical, dermatoscopical and histopathological assessment of ulceration. As ulceration is an important criterion in the AJCC 2009 classification system, the question of whether this might be a result of under-reporting in histopathology or over-estimation in a clinical setting requires further study.

Moreover, our study proves a significant correlation between the dermatoscopic patterns . . . blue white veil "and . . . milky-red areas" and the histological findings . . . ulceration "and . . . mitotic rate > 1/mm^2."

FC2-9

CLINICAL AND DERMOSCOPIC FEATURES OF MELANOCYTIC LESIONS IN CHILDHOOD AND ADOLESCENCE

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Introduction: Melanocytic lesions are common in children and teenagers, most of them being benign, and they can be divided into three distinct classes: congenital nevi, acquired nevi and melanoma.

Objectives: The aim of this review is to present clinical and dermoscopic features of a large spectrum of melanocytic lesions which occur in childhood and adolescence, focusing on problematic lesions.

Results and Discussions: We noticed from our experience that some melanocytic lesions appeared in young people can pose significant diagnostic and therapeutic challenges. Congenital melanocytic nevi (CMN) are generally present at birth. This type of birthmark, usually larger in diameter, occurs in an estimated 1-2% of infants worldwide. Regarding CMN, the risk of melanoma development depends on nevus size, being particularly high in giant CMN, in children younger than 10 years. Nevus spilus and segmental speckled-lentiginous nevus are also considered CMN. Acquired melanocytic nevi (AMN) can develop at any age but most often develop after the age of two years and increase in number during childhood and adolescence. The nevus pattern is significantly influenced by a person's age. In children most nevi present a globular pattern, while nevi developing during adolescence often reveal a central reticular-homogeneous pattern surrounded by a rim of small brown globules (sign of nevus growth). Melanocytic nevi, such as common nevi, atypical nevi, blue nevi, halo nevi and Spitz nevi, are classified as AMN. Spitzoid lesions tend to share clinical, dermoscopic and even histopathologic features with melanoma, making differential diagnosis very difficult even for expert clinicians. Although childhood melanoma is rare (1% to 4% of all cases of melanoma and 1% to 3% of all pediatric malignancies), there is evidence that its incidence is increasing. Congenital melanocytic nevi, Spitzoid lesions, atypical nevi and large numbers of common acquired nevi may indicate an increased risk of malignant melanoma.

Conclusions: Even most melanocytic lesions in children and adolescents are considered 'nonproblematic' it is important for dermatologists to know the natural history and clinical spectrum of melanocytic lesions in childhood and adolescence to prevent the occurrence of melanoma among them.

FC2-10

LOBULATED STRUCTURE SUGGESTS CHRONOLOGICAL CHANGE OF PYOGENIC GRANULOMA

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Pyogenic granuloma (PG), which can occur after small trauma, is one of the common benign vascular lesions of the skin. However, it is often difficult to differentiate from skin malignant tumors. Zaballos et al collected 122 cases of PG and 140 cases of other skin disorders and reported the characteristic findings of dermatoscopy in PG. During 8 years since 2007, we had experienced 32 cases suspected to be PG by clinical observation. Out of these 32 cases, 25 cases were confirmed as PG histopathologically (positive diagnostic value of 78.8%). The period from onset to the medical examination in these 25 cases ranged from 2 weeks to more than 2 years. In this study, we compared the dermatoscopic structures between 25 PG cases versus 7 non-PG cases. Zaballos et al reported that the surrounding white collarette, which we termed white line around the lesion (WLAL), was demonstrated to be the most specific structure for PG when compared with non-PG lesions (91%). However, the specificity of WLAL in our cases was only 42.9%, because WLAL was seen substantially (4 cases out of 7 non-PG). They also reported two other characteristic structures of PG: reddish homogenous area, which we termed reddish structureless area (RSA) and white rail lines, which we termed white parting lines (WPL). The specificity and sensitivity of these structures were reported to be 37: 1%, 96.7% and 81.4%, 45.1%, respectively. In contrast, in our cases, the specificity and sensitivity of RSA and WPL were 0%, 100% and 42: 9%, 72.0%, respectively. However, when we used the combination of these 3 dermatoscopic findings, WLAL, RSA, and WPL were detected in 9 out of 25 PG cases. It showed 100% specificity, although the sensitivity was 36%. Thus, the combination of WLAL, RSA, and WPL is considered to be the most useful in the diagnosis of PG with dermatoscopy, as suggested in Zaballos' report. Regarding vascular findings (VS), linear-irregular vessels (serpentine vessels) were the most popular findings in PG, while VS alone seemed to be nonspecific and frequently observed in other skin tumors. Interestingly, in our evaluation, we found the average period from the onset was 0. 9 months in 5 cases of PG without WAL and lobulation. Similarly, the period was 2. 5 and 3 months in 6 and 11 cases of PG which had WAL without/with lobulation, respectively. In this way, as the time from the onset is longer, PG is more likely to be lobulated.

FC2-11

DERMOSCOPY FINDINGS OF NAIL FOLD CAPILLARIES IN CONNECTIVE TISSUE DISEASES

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Introduction: Dermoscopy is a non-invasive tool for the detection of nail fold capillary abnormalities. It can replace the capillaroscopy. We describe the capillary nail fold morphological changes for 44 patients followed for various systemic diseases.

Materials and Methods: We used for the evaluation a photoFinder dermoscope which was connected to a 4S I phone.

Results: The average age of our sample was 38 years, including 42 women and 2 men. 7 patients had systemic scleroderma; nail fold dermoscopy revealed heterogeneous distribution in 4patients, a number of capillaries per mm decreased to 8, in 5 cases megacapillaries, tortuous vessels in 6 cases, hemorrhages in all cases and avascular zones in 2 cases. 16 patients had lupus, in the dermoscopic examination we noted a heterogeneous distribution in 3 patients, a number of capillary decreased to 6/mm, megacapillaries in 5 cases, tortuous vessels in 6 patients and hemorrhages in 3 cases. 9 patients had dermatomyositis, dermoscopy showed heterogeneous pattern in 6 patients, the number of capillaries per mm was 9, megacapillaries in 6 cases, tortuous vessels in all cases, hemorrhages in 5 cases and avascular areas in 1 case. We also collected 3 cases of Sjogren syndrome with no specific pattern and 8 cases of mixed connective with scleroderma pattern in 5 cases.

Discussion: Through the use of dermoscopy, we present a panoramic view of the semiology of nail fold microcirculation during systemic diseases. Dermoscopy aims to evaluate quantitatively and qualitatively dermal capillaries and their organization. It allows distinguishing easily between a normal capillaroscopic pattern during a primary Raynaud's phenomenon, from Scleroderma pattern showing a specific organic microangiopathy like in scleroderma, dermatomyositis and mixed connective. Knowledge of the semiology of nail fold dermoscopy is not complicated and allows the dermatologist to comfort his diagnosis if he suspects a systemic disease, to reassure his patient ahead a primary Raynaud phenomenon, and to have an idea about the prognosis.

Conclusion: Dermoscope collects the same information of capillaroscopy with being reproducible and non-invasive.

FC2-12

DERMOSCOPY OF BOWEN´S DISEASE

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Background: Dermoscopy improves the diagnostic accuracy in skin tumours as Bowen´s disease (BD). Dermoscopic features of the same tumour could be different between populations since higher phototypes can reveal more pigmentation, as it occurs on basal cell carcinoma.

Objective: To describe the dermoscopic features in a series of BD in Mexican immunocompetent patients.

Methods: 18 images of clinical and dermoscopic histopathologically proven BD were evaluated for the presence of various dermoscopic features including pigmentation.

Results: The patients were Fitzpatrick phototype II (17.6%), III (58.8%) and IV (23.5%). 64. 7% of lesions were located on limbs, 29.4% on trunk and 5. 9% on face. The most frequently occurring dermoscopic features found were: scaly surface (94.1%), glomerular vessels (76. 5%), dotted vessels (29.4%), focal hypopigmentation (58.8%), microhaemorrhages (35.3%), irregular diffuse brown pigmentation (58.8%) and gray dots (5.9%).

Conclusions: Vascular structures, particularly glomerular vessels on an erythematous scaly plaque were common dermoscopic findings of BD. The presence of mild or slight pigmentation does not affect the view of the vessels. We found a higher percentage of pigmented BD in Mexican population compered to previous reports in Caucasians.

Keywords: Bowen´s disease, pigmented Bowen´s disease, dermoscopy, glomerular vessels

FC2-13

DERMOSCOPIC VARIABILITY OF BASAL CELL CARCINOMA ACCORDING TO CLINICAL TYPE AND ANATOMIC LOCATION

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Background: Correctly diagnosing basal cell carcinoma (BCC) clinical type is crucial for the therapeutic management. A systematic description of the variability of all reported BCC dermoscopic features according to clinical type and anatomic location is lacking.

Objectives: To describe the dermoscopic variability of BCC according to clinical type and anatomic location, and to test the hypothesis of a clinical/dermoscopic continuum across superficial BCCs (sBCCs) with increasing palpability.

Methods: Clinical/dermoscopic images of nodular BCCs (nBCCs) and sBCCs with different degrees of palpability were retrospectively evaluated for the presence of dermoscopic criteria including degree of pigmentation, BCC-asso-

ciated patterns, diverse vascular patterns, melanocytic patterns, and polarized light patterns.

Results: We examined 501 histopathologically proven BCCs (66.9% sBCCs; 33.1% nBCCs), mainly located on trunk (46.7%; mostly sBCCs) and face (30. 5%; mostly nBCCs). Short fine telangiectasias, leaf-like areas, spoke-wheel areas, small erosions, and concentric structures were significantly associated with sBCC, whereas arborizing telangiectasias, blue-white veil-like structures, white shiny areas, and rainbow pattern with nBCCs. Short fine telangiectasia, spoke-wheel areas, and small erosions were independently associated with trunk location, whereas arborizing telangiectasias with facial location. Scalp BCCs had significantly more pigmentation and melanocytic criteria than BCCs located elsewhere. Multiple clinical/dermoscopic parameters displayed a significant linear trend across increasingly palpable sBCCs.

Conclusions: Particular dermoscopic criteria are independently associated with clinical type and anatomic location of BCC. Heavily pigmented, scalp BCCs are the most challenging to diagnose. A clinical/dermoscopic continuum across increasingly palpable sBCCs was detected and could be potentially important for the non-surgical management of the disease.

FC2-14

HYPERTROPHIC LICHEN PLANUS VERSUS PRURIGO NODULARIS: DERMOSCOPY AS A DIAGNOSTIC AIDE

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Background: Hypertrophic lichen planus (LP) is a chronic pruritic condition presents as lichenified plaques on legs and forearms. Prurigo nodularis (PN) is an itchy condition with hypertrophied plaques and excoriations on extremities. Histopathology of HLP and PN demonstrate epidermal hyperplasia, hypergranulosis and compact hyperkeratosis. Dermis shows vertically arranged collagen fibers. Basal cell degeneration is confined to tips of rete ridges and band like infiltration is conspicuously absent in HLP. Both conditions mimic clinically and histopathologically. Hence, there is a need for diagnostic technique to differentiate both conditions.

Aims: Study was conducted to evaluate dermoscopic patterns in HLP and PN which could be utilized as diagnostic tool to differentiate these two conditions.

Methods: This study was conducted in S Nijalingappa Medical College, India. It was a case series study. Ten patients with HLP (5 patients) and PN (5 patients) lesions were evaluated. Polarized dermoscope was employed. Histopathology confirmed clinical diagnosis. Data tabulated and presented in proportions and percentages.

Results: Out of 5 HLP, 4 male and 1female patients were present. Dermoscopy demonstrated pearly white areas and peripheral striations (100%); gray-blue globules (60%), comedo-like openings (30%), milium-like cysts (10%),red globules (40%),brownish black globules (30%); yellow structures (90%) corresponding to compact orthokeratosis and acanthosis; dermal melanophages, hypergranulosis of dilated infundibulum, intraepidermal keratin, tortuous capillaries, epidermal melanocytes; spongiosis and vacuolar degeneration of basal cell respectively in histopathology. PN was observed in 3 female and 2 male patients. Histopathology of PN showed orthohyperkeratosis and irregular acanthosis; dilated capillaries, focal hemorrhages with dermoscopy showing corresponding patterns such as pearly white areas and peripheral striations (90%); red globules (70%), red areas (60%) respectively. In global view, "starburst" and 'rippled' patterns were observed in HLP and PN respectively.

Conclusion: HLP and PN demonstrate specific dermoscopic patterns. Gray-blue globules, CLO, milia-like cysts, yellow structures and brownish-black globules were specific to HLP and red areas were specific to PN. Hence, authors propose these patterns were hallmark of each condition.

FC2-15

DERMOSCOPIC FEATURES FOR PIGMENTED NODULAR MELANOMA

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Nodular Melanoma (NM) represents 10 % to 30% of all melanomas and nearly 50% of all melanomas thicker than 2 mm, playing a major role in the global mortality related to this cancer. On dermoscopy, in a study of 11 thin NM,

most lesions had a homogeneous disorganized asymmetric pattern or a featureless pattern; although many dermoscopic features seen in SSM were frequently absent, some features such as a blue-white veil, structureless areas, atypical vessels and pink veil were often identified. In a large series of NM, Menzies et al found that pigmented NM, compared with invasive non-NM, had a more frequent symmetrical pigmentation pattern, large-diameter vessels, areas of homogeneous blue pigmentation, symmetrical shape, predominant peripheral vessels, blue-white veil, pink color, black color, and milky red/pink areas. In our study, 457 pigmented skin lesions, including 75 NM, were evaluated dermoscopically to examine the predictive value of dermoscopic features of NM using multivariate analysis. Digitized images of 457 pigmented skin lesions from patients with histopathological diagnosis of NM (75), invasive non-nodular melanoma (NNM) (93), and nodular non-melanoma (289), (39 basal cell carcinomas, 85 seborrheic keratosis, 81 blue naevi and 84 compound/dermal naevi) were retrospectively collected and evaluated by three blinded observers to assess the presence or absence of global patterns and dermoscopic criteria in NM, NNM, and in nodular non-melanoma. The multivariate analysis showed ulceration, homogeneous disorganized pattern and homogeneous blue pigmented structureless areas to be significant independent prognostic factors for–NM-vs NNM. The multivariate analysis of NM vs-nodular-non-melanoma showed that the correlating features for a significantly increased risk of NM were asymmetric pigmentation (OR, 6.70), blue-black pigmented areas (OR, 7.15), homogeneous disorganized pattern (OR, 9.62), polymorphous vessels combined with milky red globules/areas (OR, 23.65) and polymorphous vessels combined with red homogeneous areas (OR, 33.88). According to our results, NM exhibits features (homogeneous blue pigmented structureless areas, blue-black pigmented areas, polymorphous vessels) associated with deep tumor extension, supporting the hypothesis that NM derives from dermal stem cells.

FC2-16

DERMOSCOPY OF ATYPICAL SPITZ TUMORS

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Background: Atypical Spitz tumors are defined as spitzoid melanocytic proliferations with intermediate histopathologic features between Spitz nevi and spitzoid melanoma, carrying uncertain malignant potential. Despite the numerous histopathologic studies, only few have described the clinical and dermoscopic features of these lesions.

Study aim: We conducted a multicenter, case-control study analyzing clinical and dermoscopic characteristics of 55 Atypical Spitz Tumors and 110 Spitz nevi that were excised and histopathologically diagnosed. Clinical and dermoscopic images of Atypical Spitz Tumors were collected from the databases of 7 pigmented lesions clinics in Italy and Spain.

Results: In all, 165 patients (65 males and 100 females) were included. Mean age was 28.4 ± 13.5 for females and 26.4 ± 13.9 years for males. Mean age was 20.8 ± 13. 8 in the Atypical Spitz Tumors group, and 31.0 ± 12.3 in the Spitz nevi group (Student's t-test, p<0. 0001). Univariate analysis showed palpability, ulceration, global pattern, pigmentation, vessels type, regular streaks and white lines to be significantly associated with the dichotomous variable. In details, nodularity, ulceration, linear and polymorphic vessels were associated with Atypical Spitz Tumors, whereas pigmentation, streaks and white lines were associated with Spitz nevi. After adjustment for all variables in the model, nodularity and streaks were found significant and robust predictors of Atypical Spitz Tumors and Spitz nevi, respectively. To analyze the global dermoscopic pattern more specifically, we used univariate logistic regression with categorical variable coding, to examine its influence on the final diagnosis. It appears that in any lesion in our sample, typical spitzoid is associated with a 77% reduced risk for Atypical Spitz Tumors (4-fold less odds) as compared to multicomponent. Eleven of the 55 Atypical Spitz Tumors were judged to have a typical spitzoid pattern, of these the great majority were amelanotic (9), exhibiting dotted vessels and white lines, all were nodular lesions.

Conclusion: In conclusion, Atypical Spitz Tumors are highly polymorphic melanocytic lesions, appearing as nodular lesions clinically, more often exhibiting a multicomponent pattern under dermoscopy. Of note, a typical spitzoid pattern can be detected in amelanotic lesions.

FC2-17

ROLE OF CONFOCAL MICROSCOPY IN THE MANAGEMENT OF EQUIVOCAL MELANOCYTIC LESIONS DETECTED BY DIGITAL DERMOSCOPY FOLLOW-UP

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Background: Digital follow-up is a useful method for the detection of melanoma in atypical mole syndrome patients. The combination of digital follow-up and reflectance confocal microscopy (RCM) could be useful to increase the accuracy in the classification of equivocal lesions in atypical mole syndrome patients.

Methods: retrospective study with dermoscopy and reflectance confocal microscopy of consecutive equivocal atypical melanocytic lesions exhibiting changes in digital dermoscopy in a referral center.

Results: Sixty-four lesions from 51 patients were included. Thirteen changing lesions (20.3%) corresponded to eight melanomas in situ and five invasive melanomas with Breslow less than 1 mm. Fifty-one lesions corresponded to melanocytic nevus with variable atypia. Total dermoscopy scores

were not different between nevus and melanoma neither in the baseline (median 5,1 and 5,3; p=0,6) nor in the follow-up dermoscopic control (median 5,5 and 5,5; p=0,8). Focal change in dermoscopic structure was significantly associated with the diagnosis of melanoma (p=0. 049; OR=2. 57; CI 0. 99-6. 67). The confocal microscopy evaluation (by means both the Modena and Barcelona methods) showed a sensitivity and specificity for the diagnosis of melanoma of 100% and 69% respectively. Based on our experience, the combination of RCM and digital follow-up could have avoided 35 out of 51 nevi excised.

Conclusions: RCM evaluation of equivocal lesions detected by digital follow-up improved the accuracy in the detection of melanoma. The combination of dermoscopy, digital follow-up and confocal microscopy in equivocal lesions can be useful to dramatically reduce the number of excisions of benign lesions in atypical mole syndrome patients.

Free communications: Dermatoscopy 2

FC3-1

DERMOSCOPIC PATTERNS OF MALIGNANT MELANOMAS ON THE TRUNK AND EXTREMITIES IN KOREANS

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Background: Compared to Caucasians populations, the incidence of melanoma in East Asia is low and the common histopathologic subtype is different as acral lentiginous melanoma is the most common type. Although dermoscopic features of melanomas on the acral skin have been sufficiently reported in East Asians, reports of dermoscopic patterns of melanomas on the truncal area have been scarce.

Objective: To investigate dermoscopic patterns and evaluate diagnostic algorithmic approach in Korean patients with melanomas on the trunk and extremities

Methods: Dermoscopic patterns of histopathologically confirmed melanomas and benign melanocytic lesions diagnosed at 2 university hospitals in Korea from 2007 to 2014 were retrospectively evaluated. Dermoscopic scores were evaluated using various dermoscopic algorithmic methods.

Results: Sixteen primary melanomas from 16 patients, 15 metastatic melanomas from 5 patients, and 100 benign melanocytic lesions from 82 patients were included. In primary melanomas, melanoma-associated dermoscopic features such as asymmetry, blue-white veil, multicolor patterns, blotches, atypical dots/globules, ulcer, atypical pigment network, irregular peripheral streaks, and atypical vessels were commonly observed. In metastatic melanomas, the majority of aforementioned features lacked except blue-white veil (60%) and vascular patterns (20%). All melanoma-associated patterns were statistically more common in melanomas than in benign lesions except regression structure. Mean scores of 7-point checklist, revised 7-point checklist, 3-point checklist, ABCD rule, and CASH algorithm were 5.5, 3. 6, 2.3, 7.2, and 9.9 in primary melanomas, and 1.7, 0.9, 0.8, 2, and 2 in metastatic melanomas.

Conclusions: The results of our study reveal that dermoscopy can be useful in diagnosing malignant melanomas on the trunk and extremities in Koreans. Dermoscopic algorithmic methods are useful in detecting primary melanomas; however, they may not be accurate in identifying metastatic melanomas.

FC3-2

FREQUENCY, DISTRIBUTION AND DERMOSCOPY PATTERN OF MELANOCYTIC NAEVI IN CHINESE

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Objectives: It's well known the low incidence of melanoma in Asians, including Chinese. Few studies have examined the incidence and characteristics of naevi on the whole body in Chinese. We attempt to preliminarily assess the number, distribution and dermoscopic pattern of naevi on the body in a Chinese population in China.

Methods: The naevus profile was examined in a Chinese cohort of 2-73 years subjects who have been living in Guiyang, Southwest China. 101 individuals (65 females) were examined the number and dermatoscopic images of naevi on the whole body.

Results: There was a wide range of naevi (1–137) and a median total body count of 30. Male (median 37. 5) had more naevi compared with female (median 28) (p<0. 05). Male had more naevi on the face (median 18.5) and chest (median 4. 47) than female (p<0. 05). The different of melanocytic naevi in various age groups was observed (p<0. 05), (0-10 years group (median 12), 11-20 years group (median 29), 21-30 years group (median 35), 31-40 years group (median 40. 6), 41-50 years group (median 31.5), >50 years group (median 13. 5)). The count of naevi on the face (median 13.5) are more than other site (p<0. 05). Analysis of 3513 naevi revealed that the globular pattern and uniform pigmentation predominated in the youngest age group. By contrast, the reticular and\or mixed patterns were increasingly exhibited in naevi from older individuals (adolescence and midlife). In late adulthood the structureless and\or the mixed pattern with hypopigmentation were more commonly observed (p<0. 05).

Conclusion: Frequency and distribution pattern of melanocytic naevi and the predominance of dermoscopic types of melanocytic naevi vary according to the different individual's age and gender in Chinese. Male had more naevi compared with female. The different of melanocytic naevi in

various ages was observed. The count of total body naevi has increased from youth to middle age while declining in old age. On dermoscopy nevi that appear before puberty exhibit a globular pattern. Most nevi in adults are the reticular pattern and the mixed pattern. And nevi in late adulthood show typically the structureless pattern or the mixed pattern.

FC3-3

DERMOSCOPIC CHARACTERIZATION OF PIGMENTED PURPURIC DERMATOSES—A CASE SERIES

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Introduction: Pigmented purpuric dermatoses (PPD) have been classified into five major types—Schamberg disease, lichen aureus, eczematoid purpura of Doucas and Kapetenakis (EPDK), Purpura annularis telangiectoides of Majocchi (PATM), and lichenoid PPD of Gougerot-Blum (LPGB). The typical bright red purpuric lesions of PPD are interspersed with dusky red, faint and dark brown maculopapules. stasis pigmentation, leukocytoclastic vasculitis, senile purpura and mycosis fungoides need to be ruled out. There is paucity of published literature on dermoscopic identification and patterns of PPD. Moreover, differentiation between subtypes of PPD and their correlation with histopathology and dermoscopy is lacking.

Objective: To evaluate the dermoscopic patterns of patients presenting with typical clinical features of PPD, and analyze the significance of dermoscopy in establishing the diagnosis of PPD and the subtype, by histopathological correlation.

Method: Seventeen consecutive patients presenting with purpuric lesions over the lower limbs, suspected of PPD were evaluated dermoscopically (magnification 250×) from visibly fresh lesions and followed up with confirmation of diagnosis by histopathology. The dermoscopic patterns were defined and categorized, furthered by an attempt to correlate with the clinical diagnosis, which was confirmed on histopathology.

Results: Seventeen patients with suspected PPD were enrolled. Clinicohistopathological diagnosis was confirmed to be Schamberg's disease in 11 (64.7%), lichen aureus is 2 (11.7%), PATC in 1 (5.9%), EPDK in 2 (11.7%) and LPGB in 1 patient (5.9%). Dermoscopic findings observed in the patients were: (1) Coppery-red to light brown colored diffuse homogenous background in all patients (100%); (2) Round to oval globules in 15 patients (88.2%); (3) red dots and patches in all patients (100%), with brighter red color from a more proximal lesion; and (4) Grey dots and network of brownish-grey interconnecting lines in 4 patients (23.5%). Additionally, few novel findings were noted: prominent perifollicular and interfollicular scaling, and focal crusts in EPDK, and a violaceous background with interfollicular scaling in LPGB.

Conclusion: Although this study had a small sample size, the results suggest that dermoscopy may be a valuable tool in non-invasive diagnosis as well as sub-classification of PPD.

FC3-4

PRACTICE GAPS IN THE MANAGEMENT OF ATYPICAL NEVI: A SURVEY OF US DERMATOLOGY CHIEF RESIDENTS AND MEMBERS OF THE INTERNATIONAL DERMOSCOPY SOCIETY

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Introduction: The clinical significance of atypical nevi (AN) and their relation to melanoma is controversial. Dermatologists demonstrate substantial variation in their approach to and management of AN.

Objective: To assess practice gaps between published evidence and survey responses of newly trained dermatologists and pigmented lesion experts with respect to their management of AN.

Methods: An online survey was sent to 139 US chief residents and 295 members of the International Dermoscopy Society (IDS)

Results: Gap 1 Dermoscopy: Numerous studies have established dermoscopy's role in optimizing the management of patients with pigmented lesions. Only 39% of chief residents believe they perform fewer biopsies with dermoscopy compared to 88% of IDS members (p<0. 01), and 61% of chief residents believe dermoscopy helps differentiate melanomas from benign pigmented lesions compared to 99% of IDS members (p<0. 01). Gap 2 Diagnosis of AN: Published studies demonstrate that AN are a risk marker for melanoma and biopsy is not required for this risk assessment. The majority of both chief residents (90%) and IDS members (73%), however, make the diagnosis of AN based on a "combination of clinical and histological features." Gap 3 Initial biopsy of AN: Most chief residents (68%) use narrow margins of < 1mm, in contrast to most IDS members (60%) who use > 2mm margins. Gap 4 Re-excision of AN: A recent consensus statement published after the survey was conducted recommends re-excision of severely AN, but suggests that re-excision of mildly to moderately AN may not be necessary. Both chief residents and IDS members, however, followed different practices. For biopsies yielding positive margins, most chief residents (71%) would re-excise based on the degree of histological atypia. 2% of chief residents would always re-excise regardless of the degree of atypia compared to 47% of IDS members. For biopsies with free margins, 67% of chief residents would re-excise the site depending on the degree of atypia compared to 11% of IDS members.

Conclusion: There are notable practice gaps in the management of AN. Educational efforts and guidelines can close these gaps and help align the practice of expert and novice dermatologists with the evidence in the literature.

FC3-5

IS IT PRACTICAL TO PERFORM DERMOSCOPY OF ALL PIGMENTED LESIONS IN PATIENTS WITH DYSPLASTIC NEVUS SYNDROME?

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Background: Dermoscopy is a noninvasive imaging technique used to evaluate skin lesions *in vivo*. Dermoscopy is known to decrease the biopsy rate of benign lesions, and improves the malignant to benign ratio of excised lesions. Though widely incorporated in European and Australian practice, dermoscopy use remains comparatively lower in the United States. Increased time needed to examine lesions with dermoscopy is cited as one of the principle reasons limiting its use.

Patients with numerous atypical nevi pose a particular challenge. Current practice guidelines advocate for the use of dermoscopy to evaluate new and atypical lesions. This preselection of only atypical appearing lesions may fail to detect early melanomas or melanoma lacking typical clinical characteristics. Here, we propose dermoscopy of all pigmented lesions and prove that this potentially life-saving diagnostic approach can also be time efficient.

Methods: Ten patients, each with over 150 atypical nevi, underwent dermoscopy of all pigmented lesions by a senior dermatologist using the ASAP approach. Therefore, lesions were classified as either: biopsy necessary, no biopsy necessary, or indeterminate. Indeterminate lesions were immediately reexamined with dermoscopy to determine if biopsy was indicated.

Results: On average, over 150 pigmented lesions in 12 minutes were examined using dermoscopy per patient. Each pigmented lesion required an average of 2.7 seconds to examine. To further evaluate the feasibility of dermoscopy we present an example of a patient with numerous atypical pigmented lesions. In this patient, 258 lesions in 13 minutes and 27 seconds were evaluated by dermoscopy. Using the ASAP approach, biopsy was not necessary for 251 lesions. One lesion required biopsy. Six lesions were initially indeterminate, requiring repeat examination. On reexamination, 3 required biopsy and 3 did not. It took 14. 5 seconds to reexamine each indeterminate lesion.

Conclusion: Using the ASAP approach, we demonstrate that total body dermoscopy is a time efficient and powerful diagnostic tool, requiring 13 minutes for examination of over 150 lesions in a patient with Dysplastic Nevus Syndrome.

FC3-6

DERMOSCOPY OF NAIL LESION: A RETROSPECTIVE STUDY

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Background: The presence of nail lesions is an occasional feature both in young and adults. The diagnosis is often challenging due to the overlap of morphologic and clinical features with benign or malignant conditions. Non-invasive diagnostic methods, such as dermoscopy, can assist in the differential diagnosis.

Objectives: The aim of this study is to show the differences between benign and malignant features of nail lesions and identify their different pattern, increasing the knowledge of the morphologic and dermoscopic characteristics of those among the scientific community.

Methods: A retrospective study on 86 patients selected from the database of the university clinic of dermatology in Vienna (AKH). These patients came for a dermatological examination to check out the presence of nail lesions, both for the first time and for checkups. All the lesions were analysed clinically and with dermoscopy. After an accurate anamnesis, we studied the dermoscopic feature of each lesion, evaluating the colour, the structure, the pattern, the presence of the Hutchinson or pseudo-Hutchinson sign, the presence of nail dystrophy or clods. Sometimes more than one nail was involved. The suspicious lesions were biopsied.

Results: Among the 86 patients we examined, we detected patients with subungual bleeding (47,7%), melanonychia striata/nevus (27,9%), inflammatory hyperpigmentation (8,14%), ALM (5,81%), onychomycosis (5,81%), lentigo (2,32%), onychotillomania (2,32%). A pattern of clods is associated with subungual bleeding; gray pigmentation is associated with inflammatory hyperpigmentation, lentigo, ethnic hyperpigmentation, drug induced hyperpigmentation or a traumatic hyperpigmentation; brown or black lines are attributable to a nevus or a melanoma.

Limitations: The study describes only the lesions that have been analysed, but, since the follow-ups were not carried out by all the patients, many lesions have not been studied. So we estimate a underdiagnose of the cases.

Conclusions: Useful study for an accurate diagnosis of nail lesions. Accuracy in the study was improved thanks to the use of new diagnostic techniques such as dermoscopy, which provides valuable information for the diagnosis of nail lesions.

Keywords: nail lesion, dermoscopy, ALM, onychomycosis, melanonychia striata, subungual bleeding.

FC3-7

APPLICABILITY OF DERMATOSCOPY FOR THE TREATMENT EVALUATION AND MONITORING OF ACTINIC KERATOSIS

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Background and Aim: Actinic keratosis (AK) is the first stage in the progression of malignant neoplasms of epidermal keratinocytes and serves as a risk marker for skin cancer. It is considered to be a precancerous lesion or the earliest form of squamous cell carcinoma (SCC) in situ. Given the risk for potential evolution into an invasive SCC it should be treated as early and effective as possible. There is a wide range of treatment modalities, which can be divided into lesion- and field-directed. Taking into account the concept of "field cancerization" and the locally recurrent nature of the disease, dermatoscopy aids in the treatment monitoring by enhancing the often subclinical patterns of complete and partial response or recurrence. We aimed to assess the value of dermatoscopy in evaluation of the outcome and monitoring of AKs after nonablative or lesion directed destructive therapies.

Patients and Methods: One hundred and fourteen patients with AKs, treated either with cryotherapy, photodynamic therapy (PDT) or imiquimod, were clinically and dermoscopically evaluated and digitally documented, prior to and 3 months after treatment and followed-up every 6 months for a period of 12 months. The following previously described dermoscopic criteria for the diagnosis of AK were recorded: erythema, red pseudonetwork, wide follicular openings, strawberry pattern, red starburst, targetoid hair follicles, scale and microerosions. If any of the above features was present after discontinuation of treatment, a biopsy was performed to confirm the presence of residual disease. Lesions with fine telangiectases and whitish structureless areas, or lacking any dermoscopic criterion were monitored for 12 months.

Results: Certain dermoscopic criteria, namely wide follicular openings, a pale strawberry pattern and scale predicted the presence of residual disease, which was confirmed by histology. The reappearance of surface scale and enlarged follicular openings during follow up was a helpful indicator of disease recurrence.

Conclusion: Dermatoscopy, as a non-invasive diagnostic tool, may be safely used not only for the diagnosis, but also for treatment monitoring of AKs.

FC3-8

DERMATOSCOPY OF BASOSQUAMOUS CARCINOMA

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Background: Basosquamous carcinoma (BSC) is a rare aggressive tumor with specific histological features and metastatic potential. Clinically and histopathologically it shows features of both basal cell carcinoma (BCC) and squamous cell carcinoma (SCC). Dermatoscopic criterion of BSC is not well-established in the literature.

Objectives: To describe the dermatoscopic features of BSC and simplify the recognition of BSC dermatoscopically.

Methods: This was a retrospective evaluation of clinical and dermatoscopic images of histopathologically proven BSC, collected from one center in Turkey (Ankara University, Skin Cancer Unit).

Results: Eleven tumors were included in the study. Ten lesions were located on the head whereas 1 tumor was located on the leg. Overall, dermoscopic criteria of both BCC and invasive SCC were commonly detected. The most frequently observed findings were: vascular structures (90.9%), ulceration (90.9%), white structureless (72.2%), white clods (63.6%), blood crusts (54.5%) blood spots in keratin masses (54.5%), superficial scale (54.5%), white circles (45. 5%), blue-gray structureless (27.2%), gray clods (27.2%) and segmental lines converging to a common base (27.2%). The dermatoscopic characteristics of the blood vessels were mainly as unfocused serpentine vessels (54.5%), focused branching vessels (45%), unfocused branching vessels (36.3%), coiled vessels (27%) and focused serpentine vessels (9.09%) with decreasing frequency. These vascular patterns were generally observed in combination and were preferentially located at the periphery of the tumours.

Conclusions: Our results demonstrate that although BSC appears to have overlapping dermatoscopic features of BCC along with invasive SCC, dermatoscopic findings that are more specific to SCC dominate over BCC. Further research on dermatoscopic characteristics is important in order to improve diagnosis of these clinically challenging cases.

FC3-9

PITFALLS IN THE DERMOSCOPIC DIAGNOSIS OF SCABIES

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Background: The specific dermoscopic sign for diagnosis of scabies using the handheld dermoscope (x10 magnification)

is the gray delta structure. However, during actual practice, similar yet nonspecific dermoscopic findings may cause confusion.

Aim: To identify dermoscopic findings in scabietic patients which may confuse a novice dermoscopist leading to a mistaken diagnosis of a scabietic mite.

Method: Fifty patients clinically diagnosed as scabies were dermoscopically examined. All lesions with confusing dermoscopic features were documented and histopathologically examined. In order to verify the exact nature of these confusing structures, twenty non-scabietic patients with pruritus and secondary cutaneous manifestations of itching served as controls. Their manifestations were dermoscopically and histopathologically examined.

Results: Two peculiar dermoscopic features caused confusion as a scabietic mite in 16 (32%) patients in the scabietic group. They included: an oval shaped structure with a very well defined dark brown double border and a lighter colored center and another oval structure with incomplete single brown border at one pole and a central light brown color simulating the triangle sign previously described as ô for scabietic mite. Both structures existed in variable sizes within the same patient and were also detected in 9 (45%) of the control group. Histopathological examination of the corresponding lesions demonstrated scale or scale crust formation in the stratum corneum and non specific epidermal and dermal changes with no evidence of scabietic parts upon serial sectioning.

Conclusion: Oval structures with complete dark brown double border or incomplete single brown border at one pole with light brown center are pitfalls in the diagnosis of a scabietic mite. They represent non-specific manifestations of itching. Being variable in size in the same patient should draw the attention of the dermoscopist to this pitfall.

FC3-10

CLINICAL AND DERMOSCOPIC CHARACTERISTICS OF MELANOMAS ON NON-FACIAL CHRONICALLY SUN-DAMAGED SKIN

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Background: Melanomas on chronically sun-damaged skin (CSDS) can be difficult to identify and often manifest morphologic features that overlap with benign lesions.

Objective: To describe and analyze the clinical and dermoscopic characteristics of melanomas on non-facial CSDS.

Methods: Cases of melanoma on non-facial CSDS were retrospectively identified from the biopsy logs of six melanoma clinics. Clinical and dermoscopic images were combined into one database. Demographics, clinical, dermoscopic and histopathologic information were analyzed. Descriptive frequencies were calculated.

Results: 186 cases met the inclusion criteria: 142 melanomas in situ (76%) and 39 invasive (21%, mean thickness: 0.49mm). Lentigo maligna was the most common histopathological subtype (n=76; 40,9%). The most frequent dermoscopic structures were granularity (n=126; 67,7%), and angulated lines (n=82,44%). Vascular structures were more frequent in invasive melanomas (56% vs. 12% of in situ melanomas). Most melanomas manifested one of three dermoscopic patterns: "patchy peripheral pigmented islands," angulated lines, and tan structureless with granularity pattern.

Limitations: Retrospective study. Evaluators were not blinded to the diagnosis. Inter-observer concordance, sensitivity and specificity for dermoscopic structures were not evaluated.

Conclusion: Lesions manifesting dermoscopic structures such as granularity, angulated lines or vessels; and any of the three described dermoscopic patterns should raise suspicion for melanoma.

FC3-11

VISUALIZING VASCULAR AND PIGMENT STRUCTURES USING DERMOSCOPY AND TARGETED LUMINANCE ADJUSTMENTS

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Vascular and pigmentary characteristics of cutaneous lesions can be accentuated when luminance adjustments are made to digital RAW dermatoscopic images. Luminance adjustments can be applied to the red and orange channels to strengthen the contrast of color using digital photography software. A 14-bit RAW image file contains 16,384 tones, which are crucial for the image adjustment process to successfully reveal contrasting color elements of the pigmentary and vascular structures. A JPEG image will not have all of the color depth needed to appreciate color variations of substructures. For this technique, only two adjustments must be made to the image to reveal vascularity or to highlight pigment networks. When both vascular and pigmented structures are present, this technique can help to differentiate between the two. To highlight vascularity within a lesion, the luminance level of the red channel should be completely reduced to 0. The luminance level of the orange channel is then raised to the maximum value. By reducing the red and increasing the orange luminance, we effectively draw out the contrast between the vessels and the surrounding skin. Since orange and red are

the major color components of hemoglobin, reducing their luminance down to zero is akin to placing a filter over the image to block that particular color, or to reduce the lightness of the color to black. To accentuate the pigment network the opposite settings can be applied. By reducing the orange luminance level and increasing the red luminance level, pigment contrast is strengthened and appears more clearly.

This straightforward technique is particularly useful when attempting to identify morphological structures as a diagnostic adjunct in real time, such as in a busy outpatient clinical setting. With the aid of accessible computer software, a digital camera, and a dermatoscope, we can dramatically enhance the clinical evaluation of a variety of diagnostically challenging skin lesions, including Spitz nevi and other melanocytic lesions, vascular tumors, and their clinical mimics.

FC3-12

DERMOSCOPY TRAINING OF PHYSICIANS INCREASES DIAGNOSTIC ACCURACY OF PIGMENTED SKIN LESIONS

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Background: There is a general agreement that dermoscopic training improves accuracy of clinical diagnosis of pigmented skin lesions.

Objectives: To determine the contribution of dermoscopic training by comparing the accuracy of diagnosis before and after.

Method: During the past 12 years, Serbian Dermoscopy Association and Balkan Dermoscopy Society organized 16 dermoscopy courses (basic and advanced) with 679 participants. Participants were physicians of different profiles from Serbia, Bosnian Federation, Republic of Srpska, BaH and FYR of Macedonia. Evaluation forms on clinical images (before the course) and clinical and dermoscopical images (after the course) were correctly fulfilled by 506 participants.

Results: Physicians achieved following diagnostic accuracy for melanocytic and non-melanocytic lesions before training: 281 dermatologists (60%), 78 dermatology residents (57%), 36 plastic surgeons (53%), 14 plastic surgery residents (51%), 64 general practitioners (46%), 33 participants of other profiles (43%) with overall accuracy of 56% for all physicians. After the training, diagnostic accuracy increased in all groups: dermatologists (80%, increase 20%), dermatology residents (82%, increase 25%), plastic surgeons (77%, increase 25%), plastic surgery residents (73%, increase 22%), general practitioners (71%, increase 25%), others (63%, increase 20%). Overall diagnostic accuracy after the training was 78% (noted increase of 22%).

Conclusion: Dermoscopy training significantly improves pigmented skin lesions diagnostic accuracy in all categories: specialists, residents and general practitioners.

FC3-13

COMPARISON OF EX VIVO AND IN VIVO DERMOSCOPY IN 102 CONSECUTIVE TUMORAL SKIN: BROADLY SIMILAR BUT CLEARLY DIFFERENT: MORE BLUE, WHITE AND LESS RED

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In this study the in vivo and ex vivo dermoscopy images of 101 consecutively excised pigmented skin lesions were scored independently by 4 observers (3 dermatologists experienced in dermoscopy and 1 dermatopathologist with experience in ex vivo dermoscopy) for a series of dermoscopic characteristics. Observers were blinded for the histopathological diagnosis. Analysis mainly focused on similarities and dissimilarities between the in vivo and ex vivo technique for at least 2 observers (McNemar test). On the whole most structures and colors observed on in vivo dermoscopy (IVD) can also be recognized on ex vivo dermoscopy (EVD). The most important differences between IVD and EVD pertain to the colors. Red color disappears completely on EVD in 69.4% of the cases. In accordance with these findings, most vessel structures are no longer discernible on EVD or are visible as light brown straight or curved lines. In contrast to the red color almost completely disappearing on EVD, the blue and white color can be more frequently observed, with an increase in 31.9% and 24. % of the cases respectively. In addition to increased number of cases where blue can be seen on EVD, blue present on IVD is also more prominent on EVD. In basal cell carcinomas crystalline structures are seen in 54% of EVD cases, an increase of 16. 1% compared to the in vivo image. Other structural elements that can show variation include squamae/crusts which tend to disappear on EVD in respectively 13.7% and 10.5% of the lesions. Ex vivo dermoscopy is definitely a new tool in the diagnostic process of skin lesion: it can direct sectioning of tissue specimen, allows a better margin evaluation and can allow a more accurate and clinically correlated diagnosis (possibly in combination with the dermdotting technique we described in the past) of pigmented skin lesions.

FC3-14

KERATOSIS PILARIS—REVISITED: DERMOSCOPIC-HISTOPATHOLOGIC OBSERVATIONS

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Background: Keratosis pilaris is characterized by keratinous plugs in the follicular orifices and varying degrees of perifollicular erythema. We noticed multiple cross sections of hair within infundibular keratinous plugs on histopathology. This prompted us to hypothesise that the coiled hair within the follicular plugs were related to the pathogenesis of keratosis pilaris.

Objectives: To test this hypothesis, we correlated the dermoscopic and histological findings in 20 patients.

Methods: Twenty consecutive patients with KP were included in the study. A clinical and dermoscopic evaluation followed by a skin biopsy was performed. The dermoscopic and histological findings were compared.

Results: The age of the patients ranged from 6-38 years. 16 patients had history of atopy. 9 had concomitant ichthyosis vulgaris. All patients were found to have coiled hair shafts within the affected follicular infundibula. Perifollicular erythema was seen in 11 patients; perifollicular scaling in 9.

Histologically, infundibular plugging, such plugs within dilated infundibula were found only in 3 (15%) cases. In majority (15,75%) of the cases, the involved follicle only showed mild fibrosing perifolliculitis. In 2 (10%) cases, there were no histological abnormalities seen.

Conclusion: From our observations we infer that KP may not be a keratinisation disorder of keratinisation, but caused by the circular hair shaft which ruptures the follicular epithelium leading to inflammation and abnormal follicular keratinisation.

Free communication: Screening and early recognition

FC4-1

A SHORT DERMOSCOPY TRAINING INCREASES DIAGNOSTIC PERFORMANCE IN BOTH INEXPERIENCED AND EXPERIENCED DERMATOLOGISTS

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Background: Dermoscopy is a clinical tool known to improve the early detection of melanoma and other malignancies of the skin, but only for experienced users. Lack of training remains an important constraining factor and demand for training is high.

Objective: Evaluation of the effect of short (3h) dermoscopy training sessions on diagnostic performance of both residents and practicing dermatologists.

Methods: A two-stage dermoscopy training course (2x3h) was organized for residents and practicing dermatologists, with picture-based tests before and after each course. Test scores, sensitivity and specificity for diagnosis of skin neoplasms were calculated. The effect of training was measured.

Results: Short dermoscopy training improved diagnostic performance for both melanocytic and nonmelanocytic neoplasms of the skin. The observed effect was the highest for residents but was also significant for more experienced, practicing dermatologists. Repeated training leads to more sustainable results. After training, sensitivity for diagnosis of melanoma and non-melanoma skin cancer was significantly higher, without diminishing the specificity.

Limitations: Our study is a validation of a teaching method and our results on sensitivity and specificity of dermoscopy can thus not be extrapolated to general practice.

Conclusion: Our data confirm that repeated short training courses improve diagnostic performance of both experienced and inexperienced dermatologists.

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FC4-2

DERMSOCIAL: DERMOSCOPY MADE SOCIAL

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Background: New opportunities are arising to use mobile dermoscopy for tele-health, especially for using automated analysis of dermoscopy images to screen for melanoma. However, the lack of ground truth and standard labeled data is one of the major problems in validation of the algorithms developed. The active and successful dermoscopy forums such as the "Dermatoscopy" Group on Facebook with more than 5000 members offers an opportunity to develop an interactive learning environment to make diagnoses through consensus using social media in medicine. However, to be useful for training, the shared knowledge in such a forum needs to be organised for subsequent retrieval.

Objective: The objective of this project is to provide curated social media resources for dermoscopy research and training for dermatologists, medical professionals and students using social media tools. The mobile and web tool can also be used for reliable, secure and standard data collection in global studies.

Method: We developed DermSocial as a free cross-platform application that makes dermoscopy image sharing simple. We used the social media sharing features in the application,

which already provide user-friendly and reliable platforms. We added security and compliance with HIPAA standards and rules to protect patient data privacy, making a seamless professional dermoscopy tool. Users can label an image with tags, and share it with just one touch. Also, users can add an annotation pointing to the specific areas of the image which are related to a certain label. Not only does this application provide a seamless tool for archiving, organizing and presenting the dermoscopy images for teaching purposes, but also the collected data can build a Big Data platform to be used in computer-aided diagnosis of skin diseases.

Result: We show how DermSocial can be used to annotate the pictures on the Dermatoscopy Facebook page for all users to read and visualise the comments.

Conclusion: This novel tool would make a database of dermoscopy images with verified labels for education and research use that allows sorting of images according to specific labelling, and provides a strong search tool with consensus information about the labels.

FC4-3

ACCURACY OF A COMPUTER VIDEO SYSTEM IN SKIN CANCER SCREENING IN GERMANY. CAN A SYSTEM LIKE THIS BE A SUPPORT FOR A GENERAL PRACTITIONER?

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In July 2008 skin cancer screening was initiated in Germany. The program is carried out by a general practitioner or a specialized dermatologist. For general practitioners there might be experience lacking for the secure judgment of findings, thus it is requested that he refers to a dermatologist. So using a computer assisted diagnosis system, well established on the market, could give a second opinion for judgment. In the study we analyzed the usefulness of a commercial computer system to support accuracy in melanoma recognition, when applied to screening patients in a private dermatology office in a suburban setting. All skin lesions potentially representing skin cancer were excised over a period of 9 months and included in the study with a diagnosis verified by histology results. The skin lesion parameters of the computer system result in a score in the range of -5 to +5. There is no clear cut-off, the higher this score the more likely it is the lesion to be a melanoma. 1064 patients were enrolled from 1st of March till 31st December 2013 and of 535 patients 887 lesions were selected and biopsied. The majority (696) are melanocytic naevi, 22 malignant melanomas, 15 melanomas in situ, 83 seborrheic keratoses and 71 basal cell carcinomas. Information for each case was recorded, including the score provided by the equipment. The data reveal that the system was unable to get both the sensitivity and the specificity above 70% for the task of discriminating between malignant and benign lesions. A sensitivity of 85% is obtained only if sacrificing specificity down to 40%. Before it is recommendable to use such a computer assisted diagnosis system to support an inexperienced doctor further studies are necessary to develop more accurate systems.

FC4-4

DIGITAL DERMOSCOPY ANALYSIS: A STUDY TO DETERMINE A DIAGNOSTIC METHOD, BASED ON A SOFTWARE FOR DIGITAL IMAGE PROCESSING, INDEPENDENT OF IMAGE RESOLUTION VARIATIONS

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Digital Dermoscopy Analysis software frequently combined with an image acquisition system, unlike the dermatologists, works within defined conditions and only with a specific kind of image. The present study has, therefore, the aim of defining a diagnostic method, based on digital image processing software, able to follow the evolution of digital camera in providing images with higher and higher resolution. In this study we used 204 pigmented skin lesions (66 melanomas and 138 nevi) with various resolutions (from 4 Mpixel to 14 Mpixel). Images have been segmented and analyzed to determine 43 parameters and evaluate their discriminating capability with respect to histological diagnosis. A selection of the most significant parameters has been used to train an artificial neural network for images classification. A preliminary result, as the study is in progress at the present time, showed an accuracy of about 85% that is a good confirmation about the approach we are following. Therefore, it is reasonable to obtain results comparable with those of many studies based on ELM but with the addition of a remarkable level of flexibility due to the independence from the resolution.

FC4-5

DERMASCANNER PLUS: HALF AUTOMATIC COMPUTER ASSISTED FULL BODY SKIN IMAGING SYSTEM FOR DERMATOLOGY

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Prevention is an essential prerequisite to overcome the global burden of cancer. Skin cancer is a prevailing problem for societies. Dermatologists are the only group of specialist doc-

tors appropriately trained for skin cancer detection. With the naked eye already most of melanocytic and non-melanocytic skin cancers can be detected. Further security and enhancement of detection rate is assisted by dermoscopy and in addition video dermoscopy. Patients having a large amount of melanocytic nevi and those suffering from nevus dysplastic syndrome need regular follow-up associated with a complete documentation by hand written methods, drawings and/or single or multi lesion photography. There is an increasing need to develop computer assisted full body skin imaging to support doctors and to reduce workload. It was the aim of our interdisciplinary group of dermatologists, specialists in computer visualistics, medical device manufacturer and automation system specialists to develop a physician assisting half automated full body scanning imaging system. Furthermore, a doctor's working place for reviewing the online and offline produced pictures including data files of case history, dermpath and surgery records and procedures and decisions steps recording was developed. The automatic recognition of pigmented lesions is classified in three categories a. suspicious b. not suspicious, and, c. doubtful/no decison. The classification is based on a thesaurus of classified lesions by independent experienced dermatologists and stabilized by dermatopathological support of all types of lesions. The device is based on a scanner cabin in which according to the construction type the patient is stepwise rotating and more than 30 different imaging fields of the body surface are documented by high power cameras. A specific computer visualistic software has been developed to reproduce the data files of the actual situation and to compare with preexisting data files. A clinical trial for validation of the system is running.

FC4-6

TELEDERMOSCOPY APPLIED FOLLOWING PATIENT SELECTION BY GENERAL PRACTITIONER IN DAILY PRACTICE IMPROVES EFFICIENCY AND QUALITY OF CARE.

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Introduction: Telemedicine helps to improve the efficiency, quality and accessibility of care: better, faster care close to the patient at a lower cost. A proven telemedicine service in dermatology is teledermatology. Teledermoscopy consultation (TDsc), the combination of teledermatology and dermatoscopy, offers opportunities to apply dermatoscopy in general practice under the supervision of a dermatologist.

Methods: In this study, GPs sent TDsc to the regional dermatologist (DL), to whom they would physically refer their patients. Five quality indicators (QI) were defined to assess quality of care with the use of TDsc: I. Prevented physical referrals, II. Extra referrals after advice from DL, III. Response time of the DL, IV. Usefulness, and V. learning effect. Based on the first two quality indicators 2 groups could be identified. Group I consisted of patients whom the GP would physically refer the patient in case teledermatology were not available, group II consisted of the TDCs in which the GP would have refered the patient if teledermatology would not be available.

Results: TDcs concerned 1.777 male and 2.855 female, average age 47 years. Participating GPs (504) and DLs (77) were mostly situated in urban areas. In Group I (n=2. 792), a reduction of physical referrals of 69. 8 % (n=1.950) was accomplished. In group II (n=1. 230), 15. 7 % of the cases (n=193) resulted in a referral to a dermatologist. Overall (n=4. 022) 62.9% referrals were prevented. The mean response time was 6. 5 hours with a median of 3. 0 hours. In 97% of the TDsc, the GP indicated that the answer provided by the DL was (very) helpful and in 95% of the cases the GP indicated he had learned (a lot) from the TDsc.

Discussion: The results in this study show TDsc to be highly effective in increasing the quality of care in a GP selected patient group. The Dutch National Technical Agreement on Telemedicine (1) defines quality aspects at the level of care provision. Teledermoscopy matches most of these aspects: the patient is receiving proper care (QI I through IV), in good time (QI-III), at the best location (QI-I & QI-II) and from the proper actor (QI-I & QI-II).

FC4-7

DIGITAL DERMOSCOPIC FOLLOW-UP OF 402 MELANOCYTIC LESIONS IN 44 PATIENTS TREATED WITH SELECTIVE BRAF AND MEK INHIBITORS

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Background: Cutaneous side effects including non-melanoma skin cancers, exacerbation of new melanocytic lesions and new primary melanomas have been published recently in advanced melanoma patients during treatment of BRAF inhibitors. Besides these reports, the evaluation of the dermoscopic changes in pre-existing and new melanocytic lesions is not well known.

Objectives: To observe and evaluate the frequency and character of dermoscopic changes in new and pre-existing melanocytic lesions according to total body photography and digital dermoscopy in patients under class 1 BRAF inhibitors treatment.

Methods: Single-center, retrospective study monitoring selected melanocytic lesions of 44 patients under class 1 BRAF inhibitor treatments. The monitoring was performed at time 0 (before starting the treatment) at 1, 2 and 3 months and every other 3 months during follow-up. Dermoscopy images were evaluated by pattern analyses. The ABCD total dermoscopy score (TDS) was calculated for each image and follow-up images were searched for changes in size and color.

Results: 8 new primary melanomas were diagnosed during 183. 82 mean days of follow up in 5 patients (11.4%). TDS≥ 2 at pre-treatment and more than two feature changes was associated with the diagnosis of melanoma.

Conclusions: During class 1 BRAF inhibitor treatment, personal history of atypical mole syndrome, pre-existing melanocytic lesions with total dermoscopy score ≥ 2, more than two feature changes and existence of negative network during drug use can lead prediction for new primary melanomas.

FC4-8

SKIN CANCER SCREENING: PARTICIPATION RATE, EFFECTIVENESS AND COST OF STANDARD TOTAL SKIN EXAMINATION VERSUS A LESION-DIRECTED SCREENING

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Background: Skin cancer is at present the most frequent cancer type. The question remains if and how screening programs can be organized in a cost-effective manner, in that early detection could lead to better cure rates and more cost-effective treatment.

Objective: We compared 2 different skin cancer screening strategies (systematic whole body screening and lesion-directed screening) as to their participation rate, effectiveness, negative effects and costs.

Methods: Two population-based cross-sectional skin cancer screenings were organized in 2 socio-demographically similar regions in East-Flanders, Belgium. The first population received a personal invitation for a standard total body skin examination (TBE), in the second population people were invited for a lesion-directed screening (LDS) if they had a lesion meeting one or more of the criteria listed: ABCD rule, ugly duckling sign, new lesion since more than 4 weeks, red non-healing lesions. In the LDS group a total body examination was added after evaluation of the specific lesion in order to evaluate whether suspicious lesions had been missed by these diagnoses. Participation rates, yield in skin cancers, time needed for the screening and total cost of the screening were compared between the 2 groups. Anxiety before and after screening was scored using a visual analogue scale (VAS).

Results: In total 1982 persons were screened and 47 (2.4%) skin cancers were confirmed histologically (0.45 % melanoma, 1.9 % BCC, 0. 05 % SCC or Bowen). The positive predictive value for all suspicious lesions was 56. 6%. Participation rate was higher in the TBE group compared to the LDS group (17.9% versus 3. 3%, P = < 0. 01). Skin cancer yield did not differ significantly between the 2 groups (2.3% TBE versus 3.2% LDS, P = 0.40). Participants in the LDS group had a significant higher baseline anxiety compared to the TBE group (3.7 versus 3.3 points, P < 0. 01). In screenees without a suspicious lesion anxiety significantly dropped after screening whereas in those were a suspicious lesion was detected anxiety only slightly increased. LDS was 5. 6 times less time consuming than TBE and the cost per skin cancer detected was half of that in TBE.

Conclusion: A lesion-directed approach is less time consuming and adds up in a skin cancer yield that is as high than standard TBE.

FC4-9

EARLY AND DELAYED DETECTION OF MELANOMA IN BOSNIA & HERZEGOVINA

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Background: Despite all of the advances in melanoma diagnosis, timely recognition, detection, and rapid treatment of melanoma remain critical. This cancer has the potential to be diagnosed through noninvasive approaches because of its cutaneous location. Early diagnosis of melanoma is crucial. In Bosnia and Herzegovina we still have problems with diagnosis of melanomas because of: low public awareness, luck of knowledge by general doctors, luck of dermatoscopy knowledge and use, we need more teamwork in fight against melanomas.

Aim: increase public awareness for self-examination and a visit to a dermatologist that could detect melanoma at an early stage rather than late. Increase knowledge of public health doctor.

Methods and Materials: We have demonstrated clinical-dermoscopic cases of histopathological verified melanoma, some in early stage, and also delayed diagnosis. We analyzed gender, age, anatomic localization, dermoscopic structures and histopathological parameters, especially in terms of prognostic factors.

Results: Early detection of malignant melanoma remains the key factor in lowering mortality from this cancer. The dermoscopic appearance is very helpful in the diagnosis of early melanoma. Performing full skin exams is important because melanoma can occur anywhere on the cutaneous surface. The major component of delay is due to the patient and the most important cause of it was lack of concern.

Conclusion: Patient self-exams are an important part of early diagnosis. In order to recognize early stage melanoma total

body skin examination (TBSE) needs to be performed, detailed family and personal anamnesis needs to be obtained, the clinical ABCDE acronym is to be followed and the classical algorithm, so called pattern analysis, should be applied in dermoscopic analysis of a suspicious lesion.

FC4-10

EXOGENOUS NAIL PIGMENTATION SECONDARY TO PECAN NUTS (CARYA ILLINOINENSIS)

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Nail pigmentation is a very common dermatologic entity, usually benign in origin. Benign causes include melanocytic activation or hyperplasia of the nail matrix, invasion by melanin-producing fungi or bacteria, trauma, drugs, and exogenous substances. Linear nail pigmentation due to exogenous agents should always be ruled out when evaluating a patient with nail dyschromia. We report the case of a 72 year-old man with previous diagnosis of vitiligo who presented to our service for his regular follow-up visit. During dermatologic examination of vitiligo lesions on the tips of his fingers, an irregular nail pigmentation involving all fingernail plates was incidentally noted. He referred a long-time history of repetitive, seasonal, brown pigmentation of all fingernail plates with a peculiar and similar pattern. His occupational history included planting, culturing, peeling and selling of pecan nut trees. Dermoscopic examination of fingernails revealed the presence of brown pigmentation starting at the distal portion of the lunula, up to the distal nail plate, with a very peculiar pattern. A linear, dark-brown, homogeneous pigmentation was noted at both lateral aspects of the nail plate. A heterogeneous light-brown and dark-brown pigmentation, forming dots in some areas, as well as well-defined oval wave-like structures were observed in the central portions of the nail plate. There was no involvement of the proximal, distal, or lateral nailfolds. By scraping off the nail plate with a 15-blade, the pigment came off. Nail dyschromia is a very ambiguous clinical finding. When clinical suspicion exists, it is crucial to rule out malignancy; though, most cases are benign in origin. Many exogenous substances can produce nail pigmentation, which usually locates on top of the nail plate and follows the shape of the proximal nail fold. In these cases, pigment grows out with the nail plate, and sometimes it can be scraped off. Among causes of brown pigmentation, dirt, tobacco, iodine, iron, potassium permanganate, henna and hydroquinone are the most common. Recently, a case of exogenous skin pigmentation mimicking acral melanoma, secondary to black nuts (Junglans nigra) was reported. Even though, to our knowledge, no evidence exists in the literature of discoloration of the nail plates secondary to exogenous exposure to pecan nuts from the tree Carya illinoinensis.

FC4-11

MANAGING MELANOCYTIC LESIONS IN THE PREGNANT WOMAN

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Pregnant women presenting with equivocal melanocytic lesions present a challenge for the clinician. As nevi morphology can be influenced by physical factors such as stretching of the skin, lesions may appear darkened and expanded. Hormonal factors are thought to cause enlargement and darkening of nevi as well. Consequently, unique dermoscopic features can be detected in nevi of a pregnant woman. Not infrequently it is difficult to differentiate clinically and dermoscopically between benign and malignant features in this setting. Management of a pregnant patient presenting with atypical nevi or melanoma is further complicated by issues of safety of anesthesia, surgery and sentinel lymph node biopsy. When a woman with a prior melanoma wishes to get pregnant, issues of pregnancy timing and recurrence rate should be considered. In this lecture I will discuss the challenging diagnostic and therapeutic approach to changing melanoctyic lesions and melanoma in the pregnant patient, with regard to the issues mentioned above. Based on the experience of the Pigmented Lesion Clinic at Tel-Aviv Sourasky Medical Center, dermoscopy features of melanoctyic lesions and their changes throughout pregnancy will be reviewed. Different scenarios of pregnant women presenting with problematic melanocytic lesions will be discussed, including patients with multiple atypical or changing nevi, patients diagnosed with melanoma during pregnancy and patients with prior melanoma wishing to get pregnant.

FC4-12

LEARNING FROM MISTAKES: ERRORS IN MELANOMA APPROACH

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Tracking and identifying errors in melanoma detection and follow-up are important because of the huge potential to increase awareness about the most vulnerable aspects of diagnosis and treatment and from a health care economics perspective. Our aim was to identify where errors occur and to propose a minimum set of rules for the routine guidance of any specialist in melanoma management. This report describes evaluation of a unique series of 33 cases

with detected errors covering many steps related to melanoma diagnosis and treatment. Cases were collected at two centers in Romania, one public and one private, as part of a patient-requested second opinion. A total of 166 errors were identified for the 33 patients, most of whom had experienced post-operative management errors. The errors fell into six categories: clinical diagnostic errors (36 errors among 30 patients), primary surgical errors (31 errors among 16 patients), pathology report errors (24 errors among 17 patients), sentinel lymph node biopsy errors (13 errors among 13 patients), staging errors (17 errors among 13 patients), and post-operative management errors (45 errors among 33 patients). Based on our results, we propose that in countries lacking national guidelines, clinicians should adhere to international evidence-based guidelines in the diagnosis and treatment of melanoma.

FC4-13

A MULTICENTRE OBSERVATION OF A COHORT WHO ARE AT HIGH RISK FOR THE DEVELOPMENT OF PRIMARY MELANOMA OF THE SKIN

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Introduction: Australia has the highest worldwide melanoma incidence, with certain subpopulations at extreme risk. Early primary melanoma detection in this vulnerable cohort is critical to reduce morbidity and mortality from the disease. Both sequential digital dermoscopy imaging (SDDI) and total body photography (TBP) assist with early diagnosis of primary cutaneous melanoma, however further research to define their role in extreme risk individuals and regions of intense ultraviolet exposure such as Australia is crucial.

Pilot study: A 5-year prospective observational pilot study of 311 extreme risk melanoma individuals with at least 6-monthly screening using TBP and both short term (~3 months) and long-term (≥6 months) SDDI as clinically indicated was conducted from February 2006 to February 2011 at the Sydney Melanoma Diagnostic Centre (SMDC). Inclusion criteria for the pilot study were ≥1 of: (1) CDKN2A or CDK4 gene mutation; (2) ≥2 previous invasive melanomas; (3) ≥1 previous invasive melanoma with Dysplastic Naevus Syndrome (≥100 naevi including ≥6 dysplastic); (4) ≥1 previous invasive melanoma with ≥3 first or second-degree relatives with prior melanoma.

75 primary melanomas were detected and of the 61 identified after the first clinic attendance, 38% were with TBP and 39% with SDDI.

Multicentre study: In order to evaluate reproducibility of the results and further define the role of SDDI and TBP in extreme risk melanoma detection, a multicenter prospective observational study was initiated from February 2011 with the same inclusion criteria as the pilot study. New individuals were recruited at the original SMDC site in addition to those previously enrolled in the pilot study. Three additional sites were commenced in Sydney and one in Newcastle, with a further Sydney site added from July 2014. 328 individuals were screened at the SMDC site between February 2011 and December 2014, of which 74 were new and 236 were enrolled at the other sites. 47 primary melanomas were detected at the SMDC site and 25 at the other sites. Overall, 56.9% of non-first visit melanomas were detected by SDDI and 36.1% by TBP Median Breslow thickness was in situ.

Conclusions: Use of TBP and SDDI assists with early diagnosis of melanoma in individuals at extreme risk, so reducing associated morbidity and mortality.

FC4-14

SCAN YOUR SKIN—EARLY DETECTION CAMPAIGN

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Scan Your Skin—Early Detection Campaign. Australia has the highest incidence of skin cancer in the world yet there is no early detection campaign. The Skin Cancer College Australasia has been working with the Queensland Institute of Medical Research (QIMR) and Melanoma Patients Australia (MPA) to develop a proposed public early detection campaign. This includes: Advice regarding the principle types of skin cancer, a risk stratification tool to create patient awareness of risk factors generally, and of their individual risk, Recommendations for action based on the above risk, a self-assessment tool. The risk stratification tool, with recommended actions, is intended to improve early detection rates for skin cancers in the high risk group, and reduce the economic burden of the low risk group by advising them to self-assess rather than have routine skin checks. The self-assessment "SCAN" tool is not a diagnostic tool; rather it is a tool to help patients identify lesions that may be of concern and that need to be assessed by a doctor for dermatoscopic and/or histologic evaluation. SCAN is an acronym for:

S—Sore
C—Changing
A—Abnormal
N—New

These features are explained in a handout given to patients which advises that the more of the above SCAN features a spot or mole has the more concerning it may be—e. g. a New mole that is Changing in appearance and that is Abnormal (looks different to others) is one that should be checked urgently, preferably by someone experienced in dermoscopy.

It is anticipated that patients empowered to identify lesions of concern will seek the advice of their doctor who will in turn be motivated to improve their diagnostic/dermatoscopic skills. The Early Detection (secondary prevention) Campaign is intended to complement Australia's Slip, Slop, Slap (primary prevention) campaign, i.e., a "Slip. Slop, Slap and SCAN," and raise community awareness via promotion in a multimedia format—i.e., brochure, web, and broadcast media (TV). "SCAN Your Skin" has been presented to the Australian Government enquiry into skin cancer. The "SCAN Your Skin" website is www.scanyourskin.org.

Recent advances in dermatoscopy and skin imaging

RA1-1

INVASIVE SQUAMOUS CELL CARCINOMA: DERMATOSCOPY FEATURES AS A GUIDE TO THE GRADE OF DIFFERENTIATION

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Background: Invasive squamous cell carcinoma (SCC) presents with varying histopathologic grades of differentiation. This variation in grade of differentiation may result in SCC displaying variable dermoscopy features.

Objective: To investigate if specific clinical and dermoscopic features correlate with either well, moderate or poorly differentiated SCC.

Materials and Methods: Both clinical and dermoscopy images of 143 SCC cases were reviewed retrospectively. Cases came from a centre each in Australia, Italy and Chile.

Results: The 143 SCC cases were compromised of well (n=48, 33.6%), moderate (n=45, 31.5%) and poorly differentiated (n=50, 35.0%) tumors. Flat tumours had a fourfold increased probability of being poorly differentiated. The presence of a predominantly red color posed a 13-fold increased possibility for poor differentiation. Predominantly white and white-yellow color decreased the odds of poorly differentiated SCC by 97% each. Vessels covering more than 50% of the tumor surface, diffuse distribution of vessels and bleeding were significantly associated with poor differentiation. Keratin/white scale was a potent predictor of well and moderately differentiated tumours.

Conclusion: The clinical and dermoscopy features of SCC vary with the grade of differentiation. Identifying these features *in vivo* can provide pre-operative clues to the grade of differentiation in SCC. The pre-operative correct identification of the grade of differentiation in SCC may optimize appropriate management.

RA1-2

EX-VIVO DERMATOSCOPY FOR PATHOLOGISTS

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Background: Nowadays, few clinicians evaluate histological slides created by pathology laboratory. Pathologists rarely, if ever, see the clinical lesions. Gross specimen evaluation and sectioning is often performed by pathology technicians. Thus, pathologist evaluates only the final processed slide, which represents only the 2% of the entire lesion. In cases of skin cancer with discordance between clinical, dermatoscopic and histopathologic findings, sampling errors in the pathology laboratory, are possible. This is very important in pigmented skin lesions and collision tumours. Diagnostic discordance may have serious medico legal implications as in cases of skin cancer. For instance, patients with mistakenly given a diagnosis of benign nevus: deprived for optimal treatment (wide excision, regional nodal sampling, adjuvant therapy).

Results: *Ex-vivo* dermatoscopy provides horizontal view of entire lesion in addition to standard, vertical histological sections. This is especially useful in large lesions and where adequate clinical information is absent. Melanocytic pigmented skin lesions are presented with reticular, globular, homogenous, multicomponent and starburst pattern. In *ex-vivo* dermatoscopy, there is no information on tiny blood vessels which means that diagnosis is based on pigmented structures, their distribution and larger blood vessels. All colors except red could be seen. Sometimes, gray colors dominate over brown colors.

Conclusion: Dermatoscopy can be applied to fixed tissues of melanocytic and non-melanocytic pigmented skin lesions with findings comparable to *in-vivo* dermatoscopy. Easy to learn, *ex-vivo* dermatoscopy might become a powerful tool in the hands of dermatopathologists. Also, *ex-vivo* dermatoscopy may serve to guide biobank-oriented sampling of melanoma for fresh tissue biobanking.

RA1-3

DERMATOSCOPY OF HALO NEVI

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Introduction: Halo nevus (HN) is a rare dermatologic entity characterized by a typical whitish rim encircling the existing melanocytic nevus resembling a halo. The clinical picture is suggesting its diagnosis, but so far only several dermatoscopic descriptions of halo nevus have existed in the PubMed database.

Aim: To present the clinical and dermoscopic characteristics of halo nevus observed in dermatoscopy.

Material and methods: Fifteen patients were diagnosed clinically and dermatoscopically with halo nevus during planned routine dermatoscopic examinations of all melanocytic lesions in 2007–2013. All digital images stored in the computer database were analyzed retrospectively according to the procedure described in the study. The clinical and dermatoscopic parameters such as the dermatoscopic pattern, color of nevus, special features and description of the surrounding halo were analyzed statistically.

Results: We analyzed 22 halo nevi (9 in females, 13 in males) in 15 patients (7 females, 8 males) diagnosed during the dermatoscopic examination. The mean age of patients during dermatoscopic examinations was 18.2 years. Mean patients' age at HN onset was 15.7 years. Halo nevi occurred the most often as a solitary lesion. The ratio of multiple halo nevi to solitary halo nevus was 5:10. In 68.2% of HN cases, the surrounding rim (halo) was characterized by its homogenous, whitish color.

Conclusions: Dermatoscopic patterns such as uniform globular and structureless constituted one-third each of them in all analyzed patterns.

POSTER PRESENTATIONS

P1-1

DERMOSCOPIC FOLLOW-UP OF 16 CASES OF REGRESSING SPITZ NEVI

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Spitz nevus is an uncommon benign nevus which shows pink (classic) or black (pigmented) dome-shaped lesion. It is often difficult to distinguish from melanoma clinically, but dermoscopic examination can be a key to the correct diagnosis. Dermoscopic image of Spitz nevus presents either globular, starburst, reticular, or homogeneous patterns, which is clearly different from melanoma. Although it fades away in a few years time, patients usually have concerns because of the rapid growth resembling melanoma. Therefore, clear understanding of the natural history of the disease is crucial during the clinical follow-up. In order to describe the nature of its unique regression manner, we analyzed dermoscopic images of sixteen lesions with one or more years of follow-up period. The images were photographed along with clinical images, and digital modification was performed to match position and brightness throughout the follow-up. Our analysis indicated a natural history of Spitz nevi that, it appears with globular pattern, followed by a transition to pseudopods. Then the regression stage starts with the thinning of pseudopods to starburst pattern. Further thinning of streaks and decrease in melanin in the epidermis results into reticular pattern, and ends with homogeneous blue pattern or diffuse hypopigmentation. We suspect this final stage gradually fades out for complete disappearance. Our presentation includes such images and the relation of dermoscopic patterns to the histological features is discussed.

P1-2

DERMOSCOPIC FINDINGS IN CIRCUMSCRIBED PATCH OF HAIR LOSS

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Background: Various kinds of alopecia can show small hairless patch so diagnosis of this hairless patch is often a matter of considerable debate among dermatologists. Dermoscopy could be a simple and noninvasive tool for making a correct diagnosis and viewing of structures not discovered by the naked eye.

Objective: The aim of this study is to investigate clinical usefulness of dermoscopy for diseases with small hairless patch on the scalp.

Patients and Methods: Dermoscopic examination was performed for 95 patients with small hairless patch using DermLite IIPro. There were 62 had alopecia areata, 18 had end stage cicatricial alopecia, 6 had congenital triangular alopecia, 4 had nevus sebaceous, 3 had tinea capitis and 2 had lichen planopilaris.

Results: Our obtained results reported that, Vellus hairs, yellow dots, black dots, broken hairs, white hairs, exclamation mark like hairs, tapering hairs are the diagnostic dermoscopic features of alopecia areata that were found in 77%, 67.7%, 66%, 50%, 27%, 19% &17.7% of patients respectively.

In cicatricial alopecia, diffuse white erythematous patches (55.5%), absent follicular ostia (50%) or reduced ones (44%) were the most common findings, while yellow crustations, white macules were seen in 16.6%, white structurless areas, small pigmented reticular area in 11% of cases. The dermoscopic features of the congenital triangular alopecia showed vellus hairs, reduced follicular ostia in all patients and diffuse erythema in (66.6%). In the nevus sebaceous patients, lobules of comedo like structure was found in all patients (100%), with sparse and thin hairs (75%) were observed. Zigzag hairs & broken hairs were seen in all tinea capitis patients, cork-screw hairs & white scales in 66.6% and black dots, coma shaped hairs, pig tails and monilthrix like hairs were observed in 33% of cases. In lichen planopilaris patients there were perifollicular casts in 100% of patients, and broken hairs, thin hairs, red dots, perifollicular hyper pigmentation, and white structurless area in 50% of the cases.

Conclusion: Dermoscopy can be used as a noninvasive tool for diagnosis of small hairless patch and showing the characteristic findings for each disease. Based on these results, we

propose dermoscopic algorithm for small hairless patch on the scalp.

P1-3

SMALL CONGENITAL NEVI WITH SATELLITOSIS IN ADULTHOOD SIMULATING A MELANOMA: A CASE SERIES

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Content: Small congenital size nevi represent the most common variant of congenital melanocytic nevi (CMN) occurring in 1 in every 100 newborns. It is estimated that the risk of the malignization of these lesions is minimal, similar to that of acquired melanocytic nevi. Melanomas, by contrast, when associated to these lesions, tend to appear after puberty, and are quite rare in children. While during childhood the small CMN represent a common reason for a medical appointment, as the parents are generally anxious and scared about the possibility of malignization, in adulthood, CMN are rarely the main reason to seek for medical care and tend to be more commonly identified through clinical exams. Not rarely, a small CMN takes on an atypical clinical aspect, clinically simulating a melanoma with asymmetry, border and surface irregularities, as well as variations in colour. When clinical aspect rises the suspicion of a malignant lesion, the medical history of a stable birthmark becomes essential in order to reach a proper diagnosis. By contrast, as we know that a patient's medical history is not always completely reliable, especially in adults, a dermatoscopic exam therefore becomes quite useful. The identification of classic dermatoscopic patterns of CMN, such as the reticular, with a diffuse or patch network; the globular, comprised of globules of varying sizes; the reticular-globular, with central globules and a peripheral network; and the diffuse homogeneous brown pigmentations, favour the diagnosis of a CMN lesion rather than a melanoma. The present study will report a series of six adult patients with small CMN, identified through a routine dermatological exam and with a clinical aspect that simulates a melanoma, due to its black pigmentation, border irregularity, and the presence of satellitosis. Although the lesions were reported to be congenital and stable, the finding of a globular dermatoscopic cobblestone-like pattern was essential in the diagnosis of these small CMN.

P1-4

CLINICAL AND DERMATOSCOPIC EVALUATION OF DESMOPLASTIC GIANT CONGENITAL MELANOCYTIC NEVI

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Background: Spontaneous regression rarely occurs in pigmented lesions such as melanocytic nevi as well as melanomas. There are, however, few reports of melanocytic nevi, including some giant nevi, which have involuted without an associated halo or vitiligo.

Case report: An 8-year-old Caucasian girl consulted for a giant congenital melanocytic nevus (GCMN) of 30 cm in diameter involving her left shoulder and lateral aspect of her left arm. For one year there had been a marked depigmentation of the lesion, accompanied by pruritus and small erythematous papules on the itchy area. Histology evidenced an epithelioid-cell dermal nevus associated to desmoplasia. During seven years of follow-up, she referred recurrent itching episodes and continuing depigmentation of the nevus. Eight years later, the lesion was less pigmented and dermoscopically we evidenced a predominantly brown network with a few globules, mostly distributed in perifollicular areas surrounded by hypopigmented areas. An erythematous background as well as dotted and linear vessels was also present in some areas.

Discussion: Congenital melanocytic nevi (CMN) are found in 1% to 6% of newborns and are usually classified according to their size. GCMN are defined as melanocytic nevi that are greater than 20 cm in largest dimension, occurring in approximately 1 in 20000 live births. Spontaneous regression of a CMN is rare, usually associated with a halo phenomenon or vitiligo. In 2003, "desmoplastic hairless hypopigmented nevus," a particular variant of GCMN was described, usually presenting with hard, ligneous, progressively hypopigmented, hairless lesions. Spontaneous resolution of this variant of GCMNs may represent a vigorous host response against an aberrant clone of melanocytes. Histologically, dermal fibrosis consistent with desmoplasia is a predominant feature. It has been postulated that the reduction in number of melanocytes could reduce the risk of developing a melanoma. Only 8 cases of GCMN with desmoplasia are described, all presenting spontaneous regression or pigment reduction of the lesion and hairless. Four cases presented pruritus. Our patient presented a GCMN with desmoplasia, pruritus and reduction of pigmentation, however non-alopecic. To our knowledge, this is the first report that demonstrates clinical follow-up and dermatoscopic findings of a GCMN associated with desmoplasia.

P1-5

MICROMETASTASES OF CUTANEOUS MELANOMA: CONTRIBUTION OF DERMOSCOPY

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Locoregional metastasis affects approximately 42% to 57% of all patients diagnosed with cutaneous melanoma metastasis, and its occurrence depends on tumor thickness, presence of ulcers and anatomic location of the primary tumor. Cutaneous metastases may present in distinct clinical forms and differential diagnosis includes melanocytic nevus, hemangioma, blue nevus and primary melanoma. The present clinical case illustrates the contribution of dermoscopy in the diagnosis of cutaneous melanoma metastasis. We present a 50 year old female patient diagnosed with a non-ulcerated primary cutaneous melanoma located at the neck, with a Breslow thickness of 1.45mm. Eleven months after the initial diagnosis, the patient appeared with several pigmented and small papules and macules (< 1mm) on the trunk and limbs. Dermoscopy showed a dark homogeneous colour and a light brown halo. The histopathological exam confirmed the hypothesis of cutaneous micrometastasis. Cutaneous metastases are generally small, numerous and symmetrically distributed, and can appear early on or many years after the primary tumor. Such characteristics often make it difficult and even delay the clinical diagnosis of the lesions. Cutaneous metastases appear in a homogeneous form in dermoscopy, distinctly from primary tumor, basal cell carcinoma and hemangiomas, whose patterns are typically polymorphic and rich in structures. Nine types of dermoscopic patterns are described in literature: homogeneous, saccular, amelanotic, polymorphic pattern, perilesional erythema, vascular pattern, colour (pink-red, brown-grey, dark, blue), pigmentary halo, and peripheral grey spots. In the case reported, dermoscopy showed a homogeneous pattern with a pigmentary halo. Although the histopathological exam is the gold standard for the diagnosis of cutaneous metastases, dermoscopy contributes to improvements in clinical suspicion, rendering the dermatologist's role essential to patient follow-up.

P1-6

THE HALO PHENOMENON IN NON-MELANOCYTIC LESIONS: A REPORT OF FIVE CASES

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The halo phenomenon is characterized by perilesional depigmentation normally occurring in the outer areas of the acquired melanocytic nevi. The halo nevus is also called Sutton nevus or *leukoderma acquisitum centrifugum* and is estimated to occur in approximately 1% of the adult Caucasian population. Although this phenomenon is well-known and has been well-documented when associated with acquired melanocytic nevi, the halo phenomenon can, though more rarely, occur in congenital melanocytic nevus, blue nevus, Spitz nevus, melanomas, and even non-melanocytic lesions, the last of which is even rarer, with a scarcity of reports in the literature. Five halo phenomenon cases occurring in non-melanocytic lesions will be described: in two patients, the perilesional hypopigmentation surrounded seborrheic keratosis; other two cases, the depigmentation appeared around the outer areas of a cherry angioma, and in one case around a dermatofibroma. The lesions were photographed in their clinical and dermatoscopic aspects, and all presented a typical dermatoscopic appearance. No patient had associated vitiligo. Although the pathogenesis of the halo phenomenon is rather unknown, in the halo nevus cases, it is believed that melanocytes are destroyed by T CD8+lymphocytes. The local proliferation of T cytotoxic cell clones, activated by antigens that are commonly found in melanocytes, has been previously described in the literature. Perinevic depigmentation can lead to the disappearance of the initial lesion and may well be associated with the presence of vitiligo (despite being different entities and exhibiting mechanisms of distinct pathogeneses). In the case of non-melanocytic lesions, a similar autoimmune reaction may also occur. However, further studies are warranted in an attempt to properly define the histopathological and immuno-histochemical findings of this phenomenon, and thus contribute favorably to current knowledge concerning its pathogenesis.

P1-7

CLINICALLY SIMILAR LESIONS: A CONTRIBUTION OF DERMATOSCOPY

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During dermatological clinical exams, it is quite common to come across lesions that appeared to be clinically similar, be it in size, shape, or colour distribution, yet present completely different etiologies. To the naked eye, the clinical differentiation of these lesions can be challenging, given that these lesions, be they melanocytic or non-melanocytic, pigmented or non-pigmented, benign or malignant, can share an incredible similarity, making the correct diagnosis quite difficult. In this situation, dermatoscopy serves as an extremely useful tool, as it allows for the viewing of structures that would normally be invisible in conventional clinical exams. Dermatoscopic criteria of benign and malignant melanocytic lesions, basal cell carcinomas, seborrheic keratosis, dermatofibroma, angioma, angiokeratoma, actinic keratosis, pyogenic granuloma, among others, have been described. The identification of these specific dermatoscopic criteria allows, in most cases, for the differentiation among lesions with similar clinical aspects, in turn facilitating the diagnosis and contributing to the proper treatment of the lesion. This study presents a series of eight groups, made up of two lesions each, from distinct skin disorders, but morphologically similar, highlighting where the dermatoscopy was key in reaching the correct diagnosis. In this light, dermatoscopy emerges as a highly useful tool in these circumstances of clinical similarity among cutaneous lesions, as it contributes not only to shed light on the diagnosis, but also to aid in identifying the proper treatment through the selection of cases that were suitable to

perform a biopsy and in reducing the number of unnecessary procedures.

P1-8

THE CLONAL MELANOCYTIC NEVI

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Clonal nevi are melanocytic, compound or intradermal nevi in which an area of phenotypically different, pigmented melanocytes arises within the dermal component. They belong to the larger group of combined nevi. Clonal nevi arise mostly in children and young adults but can arise at any age. The specific clonus of melanocytes manifests itself clinically by the darker brown or black area within the nevus. Dermoscopically appears as structureless area of blue, gray-blue, blue-black or dark brown colours. The colour depends on the amount of melanin in the clonus of melanocytes, the depth of its location and character of the overlying epidermis. Histologically this darker area correlates with sharply demarcated group of larger epitelioid melanocytes with melanophages within the dermal part of the nevus. The significance of clonal nevi is in their differentiation from melanoma. Because the atypical (clonal) part of nevus is situated within the dermis, the dermoscopical picture is not diagnostic. There is no secure definite way to differentiate it from pigmented variants of combined nevi (the combination with deep penetrating nevus, blue nevus and melanocytoma) or secondary melanoma developing within the intradermal part of preexisting nevus. The diagnosis is based on histology. Some of the clonal nevi may be difficult to differentiate from melanoma even histologically and may belong to the larger group of atypical melanocytic lesions with uncertain biological significance. We demonstrate the clonal nevi, dermoscopically and histologically, in a group of five cases.

P1-9

CUTANEOUS LARVA MIGRATES AN INCIDENTAL FINDING

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Introduction: Cutaneous larva migrans (CLM) is a skin disease caused by animal hookworms.

In humans contact usually occurs on the beach, where soil polluted with animal excreta. Nematodes larvae penetrate the epidermis but are incapable of transgressing the dermal-epidermal junction and penetrating deeper, without giving rise to systemic complications. Skin findings are due to a hypersensitivity reaction to the worms and by their products.

Case report: A 32-year-old white man sought for medical attention with complaints to a rash on the skin of the left leg and intense itching predominantly at night.

Anamnesis: The patient had been on holiday at a Miami Beach. One week after returning to Russia he started itching on the left foot. The patient was treated for a week by himself with antifungal agents without any effect. The 1 day of appeal on his left leg there were just infiltrated lesions and erythematic with indistinct borders. Dermoscopy findings: breach of skin structure, longitudinal structureless cavity along the ridges of the skin, without sweat gland coil. 2 days after negative result of testing for pathogenic fungi patient came with other manifestations, such as raised inflammatory extending serpiginous line ending in a extremely itchy papule with hyperemia at the periphery of disease sites, vesicles with serous fluid—a condition known as larva migrans. Dermoscopy of CLM reveals translucent brownish structureless areas in a segmental arrangement, corresponding to the body of the larva, violation of the skin pattern or parallel pattern and absence of sweat duct openings.

Our patients have been efficiently treated with 400 mg/day albendazole for 3 days. After therapy dermatoscopy findings include pinky-yellow clods and yellow scales, this shows the success of therapy of albendazole and death of larva migrans.

Discussion: Basically you do not see too much and the diagnosis is based on the clinical rather than the dermoscopic features. But if you do not see any moves and features of the CLM you must know that dermoscopy aid in diagnosis in vivo skin infections and infestations and we presented one of those cases. Our report illustrated a case with clinical finding of CLM in which shows the necessity of dynamic dermoscopy during therapy and dermoscopy survey for the differential diagnosis a number of skin dermatoses.

P1-10

TIME TRENDS IN THE FOLLOW-UP OF PATIENTS WITH MULTIPLE NEVI SELECTED FOR DIGITAL DERMATOSCOPY MONITORING

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Background and Objectives: The aim of this study is to show trends in the frequency of visits, the proportion of melanomas detected, and the number of excisions in patients selected for digital dermatoscopy monitoring (DD) over the last 16 years at the Department of Dermatology in Vienna.

Patients and Methods: Patients selected for DD with at least one follow-up visit between 1998 and 2014 were included. We calculated the frequency of visits and analysed the proportions of monitored and excised lesions according to histopathologic diagnosis.

Results: In the time period (1998-2014) 10,053 patients had at least one DD (54.7% women, n=5,501). The mean age of the patients was 37.3 (SD:+-18.6) years. In the same time period 3,905 patients had at least one follow-up visit (54.6% women, n=2,132). Their mean age was 36.7 (SD:+-16.8) years. The number of patients starting with DD per year decreased constantly from 574 in the year 1998 to 63 in 2013. The median number of follow-up visits per patient was 3 (range:2-31). The mean number of monitored lesions per patient increased from 6 in 1998 to 16 in 2007 and dropped to 7 in 2014. Of 3,905 patients, 1,409 had at least one excision. In sum 3,318 lesions were excised of which 950 (350 nevi, 166 melanomas) were excised at baseline and 2,368 (1,423 nevi and 178 melanomas) during follow-up. Of the 178 melanomas that were excised during follow up, 80 were in situ. The median invasion thickness of the invasive melanomas was 0.48 mm. Patients with excisions were older (mean: 42.7 years, SD: ±19.4) than patient without excisions (mean: 34.8 years, SD:±16.4). The mean age of patients with melanoma was 51.6 (SD: ±16.0), the mean age of patients with excised nevi was 36.0 (SD: ±15.3). The ratio of nevi excisions to melanoma excisions during follow-up decreased from 13:1 in 2001 to 3:1 in 2014.

Discussion: DD is effective in patients with multiple nevi and detects melanomas in an early stage that are otherwise inconspicuous. The proportion of excised nevi decreased during the study period but the number of detected melanomas remained constant.

P1-11

DERMOSCOPY OF SISTER MARY JOSEPH NODULE

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Background: Dermoscopy is widely used diagnostic tool in diagnosing numerous skin tumors. However, there are only few studies regarding the use of dermoscopy in detecting skin metastases from visceral malignancies. Sister Mary Joseph nodule (SMJN) refers to a palpable nodule bulging into the umbilicus as a result of metastasis of a malignant cancer in the pelvis or abdomen. Proposed mechanisms for the spread of cancer cells to the umbilicus include direct transperitoneal spread, via the lymphatics which run alongside the obliterated umbilical vein, hematogenous spread, or via remnant structures such as a remnant of the vitelline duct. SMJN is usually associated with multiple peritoneal metastases and a poor prognosis.

Case Report: A 51-year old woman was referred to dermatological clinic due to asymptomatic erythematous, irregularly shaped nodule which developed couple of weeks ago. Two years earlier the patient was diagnosed with diffuse type of adenocarcinoma of the gastric antrum and she underwent radical surgical procedure due to metastatic involvement of the liver, pancreas and ovaries (Krukenberg's tumor). She also received 6 cycles of adjuvant chemotherapy according to FAP (5-FU, adriamycin, cisplatin) protocol. The patient stayed in regular oncology controls and for two years was free of disease. Dermoscopic examination of the nodule revealed diffuse glomerular and dotted vessels, milky-red structurless areas and white lines (due to papillomatous surface of the lesion). Due to polymorphous vascular pattern, which is considered an important clue for malignancy, an excisional biopsy was performed and histopathological examination revealed metastatic adenocarcinoma. PET/CT showed metastatic nodular deposits in the tegmentum of the abdomen, as well in the hepatal flexure and in the subtegmental mesenterium. The patient was referred to further oncological treatment.

Conclusion: To our knowledge, only one case of dermoscopy of SMJN has been published until now. In this case, polymorphous vascular pattern was also described, although consisted of linear serpentine and linear curved vessels. In conclusion, if an umbilical lesion with recent onset reveals polymorphous vascular pattern upon dermoscopy, one should consider a metastatic tumor in differential diagnosis. In case of SMJN, this may be the first sign of primary visceral cancer or the sign of the recurrence or further visceral spread of the disease.

P1-12

A STUDY ON DERMOSCOPIC FEATURES OF PRIMARY LOCALIZED CUTANEOUS AMYLOIDOSIS

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Background: Macular and lichen amyloidosis are common variants of primary localized cutaneous amyloidosis (PLCA) in which clinical features of pruritus and skin scratching are associated with histological findings of deposits of amyloid staining on keratinous debris in the papillary dermis. Though often diagnosed clinically, biopsy is sought in atypical cases. As most of lesions are hyperpigmented with pathology occurring in epidermis and dermal papillae, dermoscopy might be helpful in making a diagnosis without a need to perform an invasive procedure.

Objectives: To describe the dermoscopic features observed in a series of patients with PLCA attending dermatology department.

Material and Methods: Cases clinically conforming to either macular or lichen amyloidosis were enrolled for study. Dermoscopic examination was performed by both polarized and non-polarized handheld dermoscope with a 10-fold magnification.

Results: A total of 45 patients of PLCA were enrolled. Twenty-seven patients had macular amyloidosis and eighteen had lichen amyloidosis. Both type of amyloidosis showed few characteristic dermoscopic features. A central white hub surrounded by pigmentation in varying shapes was most common finding in macular amyloidosis whereas scar-like spot surrounded by collaret of brown dots was common in lichen amyloidosis.

Conclusion: The present study describes dermoscopic features of PLCA, which may assist in making diagnosis accurately.

P1-13

THE CORRELATION OF SKIN COLOUR WITH DERMOSCOPIC NEVUS PATTERNS IN A QUEENSLAND HIGH RISK MELANOMA COHORT

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In the risk stratification process, the intrinsic link between the rising incidence of cutaneous melanoma and constitutive skin colour is considered. There are established pigmentation and nevogenic gene polymorphisms responsible for the production of pheomelanin/eumelanin pigment, the tanning response, and increased risk of melanocytic nevi formation. The aim of this study was to examine the relationship between counts of nevi of the three major dermoscopic nevi patterns (globular, reticular, nonspecific) and the individual's signature nevus pattern with constitutive and facultative skin colour measured by skin reflectance on non-exposed and sun-exposed body sites. In this study, skin reflectance was determined using a handheld spectrophotometer, and a device for standard and dermoscopic sequential imaging was utilised for total body photography and dermoscopic image capture of nevi. Skin colour and freckling were scored from total body images. Our results established significant differences between constitutive skin reflectance with signature nevus patterns (Kruskal Wallis test, $p<0.001$). There were higher counts of non-specific nevi as constitutional skin reflectance increased correlating with lighter skin colour. This relationship was observed in accordance with MC1R genotype determining constitutional skin reflectance. There was also considerable variation between nevus pattern counts and freckling score ($p<0.001$). This study may aid in melanoma risk stratification, whilst exemplifying the influence of genetics on phenotype.

P1-14

ATYPICAL ACRAL MELANOCYTIC LESIONS: REPORT OF 5 CASES

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Atypical acral melanocytic lesions refer to lesions that we do not expect or seldom see in patients, but may be of high importance since they are often related to acral melanoma. Acral lentiginous melanoma (ALM) as a distinct melanoma subtype was first reported by Reed in 1976, defined as a melanoma with a predilection to acral regions, especially palms, soles and subungual skin, exhibiting a specific radial or lentiginous growth phase. Unlike most of melanomas, occurrence of ALM is not connected to exposure to ultraviolet radiation and its etiology remains unknown. ALM prognosis unfortunately depends on usually poor awareness and knowledge of both patients and doctors in means of failing to perform a complete skin examination or misinterpreting ALM as some of other nonmalignant diseases. We report five cases of seldom seen melanocytic acral lesions, arranged according to the level of dysplasia: low grade plantar dysplastic nevus in a 29-year old pregnant woman, high grade plantar dysplastic nevus in a 57-year old woman, palmar ALM in a 75-year old woman with palmoplantar keratoderma, subungual ALM in a 72-year old woman, and metastatic amelanotic melanoma of the foot in 72-year old woman. There were local recurrences following excisions in three of these cases, which is not rare in acral melanocytic lesions due to a specific growth pattern and concerns to which extent to be radical in surgical treatment.

P1-15

PERIPHERAL GLOBULES IN PIGMENTED LESIONS

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Brown globules are small oval or circular spots representing pigment nests of melanocytes in the junctional dermoepidermal zone or in the papillary dermis. In benign lesions, these globules display uniform size, shape, colour and distribution. In dysplastic nevi and malignant melanoma, they are irregular in size, shape, colour and distribution. If peripheral globules form a border at the edge, it usually means benign growth activity of the nevus. Dots (representing individual melanocytes or grains of pigment) and globules along the periphery indicate a changing active lesion, they may appear in banal nevi, dysplastic nevi and melanoma. It is a physi-

ological phenomenon in common nevi in children. Developing nevi with peripheral globules at the edge are common in puberty and early adulthood, they are also more frequent in pregnancy. During observation, the nevi are symetrically spreading until the globules disappear, which indicates growth stabilisation. Peripheral globules are also a good gauge of nevi growth and their changes in time—disappearing peripheral globules mean decreasing of growth activity. In patients over 30 years of age, observation of these lesions is recommended. In patients over 50 years of age, peripheral globules are rare and should be assessed very carefully. These globules are often connected with brown stripes. In a similar way, the pseudopods are completely symmetrical in pigmented Spitz-Reed nevi. This symmetry is never found in melanoma. Incidence of growing nevi is inversely related to age of patient. In adults, especially if other marks of atypical lesions occur, the lesions are necessary to be excised.

P1-16

THIS IS THE CHALLENGE THAT WILL KEEP YOU THINKING FOR A WHILE

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Nevoid melanoma is an uncommon subtype of malignant melanoma, which can be misdiagnosed even by the most skilled experts, because of its similarities to a common benign melanocytic nevus, on clinical and histological evaluation. These nevoid melanomas appear as verrucous nodules, frequently affecting the trunk or proximal limbs; they have no predilection for gender and can occur at any age. Confusing clinic and pathologic features can be really challenging and sometimes, as it unfortunately happened to our patient, they can even lead us to a terrible misdiagnosis. We present the case of a 74-year-old woman with a medical history of lentigo malignant melanoma on the right cheek, treated surgically with a complete excision in 2001. Seven years later she presented to a regular follow-up visit with a repigmentation on the scar, so reexcision was performed, confirming melanoma infiltration. After a disease-free period of 2 years she suffered another relapse but this time the histologic examination revealed an "in situ" melanoma, so we decided to treat the lesion using topical imiquimod, with complete response. It has been seen that patients with cutaneous melanoma have an increased risk of developing second primary melanomas; so follow-up visits were scheduled periodically. During one of the visits we observed a newly emerging papilomatous lesion on the right ankle; under dermoscopic evaluation the lesion presented asymmetry and focal presence of pigment network and grey colour. The presence of suspicion in a palpable lesion made us perform an excisional biopsy. Histopathological examination of the lesion was compatible with an intradermal nevus with certain degree of proliferation. With this diagnosis, follow-up visits were scheduled as usual, but after 5 months, the patient presented to our department with the recent appearance of multiple cutaneous nodules surrounding the previous scar. The lesions presented two different dermoscopy patterns of cutaneous metastases, blue nevus like pattern and vascular pattern. Both types of lesions were byopsed confirming melanoma metastasis. The patient developed lymph node metastases and died few months later due to systemic progression of melanoma. We present this unfortunate clinical case to emphasize how challenging and discouraging can be the diagnosis of nevoid melanoma.

P1-17

FOLLOW UP OF MELANOCYTIC LESIONS BY DIGITAL DERMOSCOPY IN METASTATIC MELANOMA PATIENT TREATED WITH VEMURAFENIB

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Introduction: Vemurafenib is a selective inhibitor of the mutated BRAF kinase approved for the treatment of unresectable or metastatic melanoma. This mutation is present in approximately 50% of melanomas and even more frequently in nevi. Changes in preexisting nevi, regression or darkening of pigmented lesions, the appearance of new nevi and the occurrence of second primary melanomas have been recently described. We present a patient with dynamic changes of melanocytic nevi well documented by sequential digital dermoscopy during vemurafenib therapy.

Case report: A 41 year old woman was treated with vemurafenib for a melanoma with nodal, bone and brain metastases. In digital dermoscopy we could observe the appearance of multiple small, dark to brown nevi with globules and grey dots. The histopathologic analyses of the most atypical pigmented lesion revealed junctional nevi. Most preexisting compound nevi showed homogeneous decrease in pigmentacion with small gray dots. One of these nevi was excised with histopathological diagnosis of incontinence of pigment without residual melanocytic lesion.

Conclusions: The development of second primary melanomas has not been observed in our patient; however, we have observed the onset of some nevi with atypical clinical and dermoscopic features. In addition some preexisting nevi have changed and in some cases have disappeared. We believe that follow up with digital dermoscopy is necessary during vemurafenib therapy.

P1-18

WHEN SHOULD A RIM OF GLOBULES ALERT US?

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The presence of a peripheral rim of globules has been shown to be a sign of symmetrical nevus growth. Reticular nevi have a dynamic life cycle, increasing steadily in number from puberty until the fourth decade of life and decreasing in number later in life. A high number of nevi with a peripheral rim of globules is found on patients under the age of 20. On the other hand, this rim is very infrequent in people over the age of 50. The final disappearance of peripheral globules indicates stabilization of growth. We present two dysplastic nevus in which the presence of globules in periphery was the clue to their extirpation; either by their focal onset, unexpected, or by the patient's age. Reflectance confocal microscopy helped us in the management of these suspicious lesions. The first case, a 42-year-old woman is being followed-up with digital epiluminiscence. A melanocytic lesion located on her back showed symmetric enlargement with a peripheral rim of globules without substancial structural modifications along 3 years. Finally, as it was expected, stabilization of the lesion with loss of globules was observed. In the last visit, this nevus showed unexpected focal growth with an increase of globules in the upper pole. The second case is about a 64-year-old man with a melanocytic lesion located on his abdomen, showing a crown of globules, with absence of other melanoma specific criteria. In both cases, confocal microscopic examination revealed nonedged papillae and atypical cells in the dermoepidermal junction, as well as dense nests at the periphery. The management of lesions with a peripheral rim of globules is age dependent. Enlarging common nevi in older age groups deserve more attention than in children or adolescents. In patients over 30, in the absence of other melanoma specific criteria, close digital dermoscopic monitoring of lesions with a peripheral rim of globules is recommended, to monitor the symmetric enlargement. Lesions with a peripheral rim of globules in persons over 50 should raise the suspicion of an otherwise featureless melanoma. Reflectance confocal microscopy is an add-on tool to dermatoscopy that is able to increase specificity and improve diagnostic accuracy.

P1-19

TRICHOBLASTOMA: IS A CLINICAL OR DERMOSCOPIC DIAGNOSIS POSSIBLE?

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The trichoblastoma (TB) is a rare benign tumor of the skin caused by a proliferation of follicular germ cells. The clinical appearance of TB can range from a skin coloured papule to a well-circumscribed, solitary, slow-growing nodule, localized mainly on the face and scalp; often it arises in the context of a sebaceous nevus. From the histogenetically point of view, TB is similar to basal cell carcinoma and can be considered as the benign counterpart of basal cell carcinoma (BCC). The aim of the study was to identify clinical and / or dermoscopic clues that can help clinicians to diagnose a TB when it develops outside of a sebaceous nevus and avoid large ablations with intent of radicality as in the case of BCC. Clinical and dermoscopic pictures of 16 skin lesions with histological diagnosis of isolated TB were examined and compared with 16 pictures of skin lesions observed in the same period with histological diagnosis of BCC with trichoblastic differentiation. All cases underwent surgery for the removal of a suspicious BCC. The image review showed that the clinical diagnosis of TB is impossible. The clinical and dermoscopic features of TB are in fact comparable to those of basal cell carcinoma. Clinicians can simply suspect a clinical diagnosis of TB facing a papule or a small skin-coloured nodule, usually localized on the face or scalp. However, excision of the lesion is mandatory in order to exclude a BCC. In conclusion, the diagnosis of TB remain possible only with histology.

P1-20

ATYPICAL DERMATOFIBROMAS DERMOSCOPICALLY MIMICKING MELANOMA

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Dermatofibroma, also known as fibrous histiocytoma is one of the most common cutaneous soft-tissue lesions. If the classical clinical features are present the diagnosis is usually not so difficult.However, in the presence of the variants of the classical dermatofibroma, the diagnosis can be challenging. In addition to common fibrous histiocytoma, other variants described include: aneurysmal, hemosiderotic, cellular, epithelioid, atypical, lipidized, clear cell, palisading, atrophic, keloidal, granular cell, myxoid, lichenoid, balloon cell and signet-ring cell variants. The correct identification of these different kinds of dermatofibroma is important to avoid misdiagnosis of a possibly aggressive lesion.(1)Dermoscopy is a non invasive tool that can help to either confirm a clinical diagnosis or show features that disprove a diagnosis made on clinical grounds.The most common dermoscopic pattern of a dermatofibroma is a peripheral pigment network and central scar-like white patch, but we can also find an atypical pattern consisting of atypical pigment network, atypical scar-like patch or white network ,atypical homogeneous pigmentation, or irregular distribution of these structures.(2-3)We report cases that seemed to be similar with the dermoscopic diagnosis of melanoma skin cancers but with the final histologic diagnosis of dermatofibromas. Infact in our patient's dermatofibromas showed an atypical pigment network, an asymmetrical distribution of globules, areas suggestive of regression, and chrysalis structures; all these dermoscopic features are strongly associated with melanoma.

P1-21

PROPOSAL OF A CLASSIFICATION OF BRAF INHIBITOR–ASSOCIATED VERRUCOUS KERATOSES BY DERMOSCOPY

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A proper adverse-event knowledge is important in guaranteeing optimal therapeutic management in patients in treatment with BRAF inhibitors therapies (BRAFi). One of the main drawback is the development of keratotic lesions, in particular the BRAFi–associated verrucal keratosis (BAVK) and cutaneous squamous cell carcinomas (SCC). BAVK clinically cannot be easily differentiated from warty but also from SCC. The aim of this study was to assess a clinical and dermoscopic evaluation of hyperkeratotic lesions observed in patients treated with the new-generation BRAFi, in order to reduce the number of excisions of benign BAVK. All patients treated with the BRAFi inhibitors or combination BRAFi and mitogen-activated protein kinase kinase (MEK) inhibitor therapy at the University Hospital Spedali Civili of Brescia, Italy, underwent baseline assessment prior to beginning of therapy and every 4-8 weeks for the duration of therapy. We examined the BAVK recorded in order to describe their clinical and dermoscopic features.The most common dermoscopic finding was the presence of light brown area with demarcated borders and milia-like cysts. Until now, we haven't observed glomerular vessels, arborizing teleangiectasia or scaly surface, which are more frequently described in SSC. Furthermore, in many cases we have recognized that BAVK undergo spontaneous regression without any treatment. We propose to classify BAVK basing on clinical and dermoscopic features. Whether BAVK exhibit a pseudo-cysts cornea pattern by dermoscopy, we suggest to follow-up the patient. On the contrary, in presence of vascular pattern we recommend to biopsy for histopathologic examination. In conclusion, patients in treatment with BRAFi need to have regular dermatological follow-up Collaborations between Dermatologists and Oncologists will facilitate recognition and timely diagnosis of early cutaneous neoplastic lesions.

P1-22

NODULAR LESION IN A CHILD: A CONTROVERSIAL CASE. CLINICAL, DERMOSCOPIC AND HISTHOLOGIC ASPECTS

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The authors report a case of a 11 year old girl with a ipopigmented lesion of the lower right corner of about 1x0.8 cm. centered by a ulcerated papule on the skin of 0.7x 0.6 detected with sharp margins. The lesion was treated with a Keratolitic cream for mistaken for a com mon wart. This therapy has resulted in atypical aspect that has confused the clinical suspicion, the dermatoscopic and histological diagnosis. The authors discuss the complexity of the case. Furthermore, the authors discuss dermoscopic aspects and histological features of this lesion. Dermoscopic structures showed irregular shape/structure scar-like depigmentation and irregular vascularity. Peripheralblack dots multiple colours. Focal sharply cut-off border. A small amount of focal and irregular pigmentation on the periphery of the lesion. Atypical vascularity may be a clue, with linear, dotted, corkscrew or polymorphous vessels. Too much pressure by the dermoscopy instrument may be oscure the vascular pattern. The histological findings showed dome-shape lesion brownish and constituted by epithelioid and shaped melanocytes in the papillary dermis and deep reticular dermis with atypical nuclei, prominent nucleoli and large eosinophilic cytoplasm. There are ulceration and moderate mitotic activity. These aspects addressed some pathologists to diagnose melanoma, other MELTUMP and other even of atypical spitz Nevus. The patient has performed the surgical SCAR and radicalisation is not a sentinel lymph node biopsy considered the young age.

P1-23

SPITZ NEVUS/AMELANOTIC MELANOMA MIMICKING DERMATOFIBROMA DERMOSCOPICALLY

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Background: Dermoscopy represents a very useful, non-invasive technique for in-vivo observation and preoperative diagnosis of pigmented skin lesions. Dermic benign fibrous histiocytoma (dermatofibroma, DF) represents a dermal, benign tumour mainly composed by spindle histiocytes entrapping collagen, which can extend into the subcutaneous fat. Dermoscopic features of DF may mimic amelanotic malignant melanoma, and viceversa. Thus, clinical and dermoscopical correlations are required, and surgical excision recommended in the aim to achieve the correct diagnosis with histology.

Case Report: We report on a case of a 10-year-old female presented with a pink-purple skin nodule on the posterior surface of her left thigh. Dermoscopically, this pink lesion presented as an irregular, round, bony-milky-white area in the center of the lesion, surrounded by numerous dotted vessels with a subtle pigment network at the peripehery. Differential diagnosis included Spitz nevus vs amelanotic malignant melanoma. Histological examination of the lesion, revealed a dermic benign fibrous histiocytoma (dermatofibroma).

Conclusion: Dermoscopic features of DF are often subtle, and an atypical pigment network, doted vessels and areas suggestive of regression, even if described in at least 6% of DF,

should be carefully evaluated and surgical excision is mandatory in the aim to differentiate DF from melanoma (or a Spitz nevus, in childhood) when clinical and dermoscopic correlation is doubtful.

P1-24

DISSEMINATED JUVENILE XANTHOGRANULOMA: DIFFERENTIAL DIAGNOSIS BASED ON DERMOSCOPY

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A 2-year-old boy presented with multiple flesh coloured to yellowish papules on the neck, upper part of the back, on the genital area and on the face. The first lesions were present the last three months and new lesions kept occuring on different sites. Clinical differential diagnosis included juvenile xanthogranuloma or a granulomatous disease, such as granuloma annulare. On dermoscopy, there was an orange—yellow homogeneous background colouration with clouds ("xanthomatous clouds") of ill-defined yellow deposits, appearing like globules or setting sun appearance, all dermoscopic findings reported in juvenile xanthogranuloma. In addition, erythematous border and fine linear telangiectatic vessels were observed in the periphery and between the" xanthomatous clouds." Some whitish linear streaks in between the clouds of paler yellow and a subtle pigment network were also present. Dermoscopy was not in favor of granuloma annulare as, findings like peripheral structureless orange-reddish borders and isolated unfoccused small vessels were not present. Histology was typical of juvenile xanthogranuloma and the little patient has now undergone the essential panel of laboratory and imaging exams to exclude internal involvement. Dermoscopy may provide some useful diagnostic clues in the differential diagnosis of diseases in the spectrum of xanthogranuloma.

P1-25

MULTIPLE HALO NEVI OF THE HEAD ASSOCIATED WITH POLIOSIS CIRCUMSCRIPTA OF THE SCALP

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Introduction: Halo nevus is a melanocytic nevus surrounded by a depigmented zone or halo. The melanocytic nevus, which often undergoes spontaneous involution, may be a common acquired or congenital nevus. Poliosis is a localized patch of white hair that can involve any hairy area of the body. Poliosis is commonly associated with various genetic syndromes but it is also described in the setting of several acquired conditions such as melanocytic lesions. Dermoscopy is the gold standard technique for the evaluation of pigmented lesions and is also used for the examination of hair disorders.

Case Report: We report the case of a 15-year-old Caucasian male who presented with four depigmented patches of 6-months duration; one on the face and three on the scalp respectively. The patches developed simultaneously and were asymptomatic. There was no history of hypopigmentation disorders or any other halo nevi. Physical examination of the face revealed a white zone surrounding a nevus in the outer aspect of the left eyebrow. Dermoscopy showed a small light brown, globular nevus encircled by a white rim. Eyebrow hairs were not affected by the halo phenomenon. The patient mentioned that the nevus was present for more than 5 years. On the scalp three well-defined patches of white hair were seen; one patch on the vertex area and the other two on the lateral part of the occiput. Dermoscopy of the one patch of the occipital area revealed white terminal hairs and a light brown homogenous macule on the skin probably reminiscent of an involuting halo nevus. Dermoscopical examination of the other two patches showed white coarse hairs intermingled with hairs of normal pigmentation without any pigment alterations of the skin surface. The patient could not recall any nevi on the area of the white hairs.

Discussion: In the literature very few cases of poliosis circumscripta associated with halo nevi have been reported. Our case is interesting as it is the first one reporting the simultaneous occurence of poliosis circumscripta of the scalp with halo nevus of the face. In this context, trichoscopy may be a useful diagnostic tool for the evaluation of disorders of hypopigmentation of the scalp.

P1-26

CASE REPORT: COLLISION OF DERMATOFIBROMA AND NEVUS SEBACEOUS; DERMATOSCOPIC AND DERMATOPATHOLOGICAL FINDINGS

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Nevus sebaceous, is a congenital cutaneous hamartoma, comprised of epidermal, follicular, sebaceous and apocrine structures. It may present at birth. It most commonly presents as a round, oval, or linear; smooth; yellowish-orange plaque on the head, neck, and scalp; rarely seen on the body. At puberty, the lesion becomes verrucous. Various types of appendegeal tumors, malignant and benign tumors, such as basal cell carcinoma, syringocystadenoma papilliferum, trichoblastoma may develop secondarily within lesions of nevus sebaseous. Dermatofibroma is a common tumor of the skin clinically, appearing as a firm, single or multipl hard papules, plaques or nodules that are variable in size. They can develop anywhere on the body; with a predilection of lower extremities. Dermatofibroma most commonly affects young or middle-aged adults. Histopathologically many

variants of dermatofibromas are described. Dermatoscopically, most dermatofibromas have a typical pattern with a central white scar like patch and peripheral pigment network but they have many various presentations. Here in, we report a case of 56 year-old man with yellowish papule on his back; histopathologically showing collision of dermatofibroma and nevus sebaceous. Dermatoscopic examination showed peripheral thin brown reticular lines and central thick white lines together with large yellow clods. This is the first reported case of collision of dermatofibroma and nevus sebaceous with its dermatoscopic findings.

P1-27

BROWNISH ERYTHEMATOUS PATCH AROUND COMPOUND NEVI: IS IT MEYERSON PHENOMENON OR NOT?

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Introduction: Meyerson phenomenon (MP) or halo dermatitis is an eczematous eruption encircling a melanocytic or non-melanocytic lesions such as seborrheic keratosis, dermatofibroma, squamous cell carcinoma, histiocytofibroma. We present a unique case of a melanocytic nevus with surrounding pruritic brownish halo.

Case Report: 30-year old otherwise healthy male patient admitted us with pruritic rash since 2 months, around preexisting nevi localized on his abdomen skin. His medical history was normal. He did not recall any family history of melanoma or dysplastic nevus. Physical examination showed dark brown nevus centered in a symmetrical brownish patch halo. The patient did not present any other complaints except intense itching on peripheral of nevus. The lesion was firstly examined by dermatoscopy. Dermatoscopic examination revealed asymmetry in both of axes, irregularly distributed peripheral brown dots and globules and amorphous areas. Peripheral itchy patch was not identified on dermoscopic examination. Excisional biopsy of nevus was carried out. Histopathological evaluation showed features of compound nevus. Patient was treated with topical corticosteroid for pruritic halo after excision.

Conclusion: MP is a well-established phenomenon that usually appears in young males as in our patient. However our patient showed unique clinical presentation differently from previous reports. The present report suggests that this term may refer clinical subtypes of eczematous response that differs from one unknown aetiology to another.

P1-28

DERMOSCOPIC FEATURES OF FACIAL POROCARCINOMA

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A 74-year old man presented with an asymptomatic solitary pink fleshy, 11-mm sized nodule on his right temple. The lesion had a history of 4 months and had recently been showing some oozing and crusting areas. With (x50) magnification field examination, the main vascular structures observed were mostly long linear vessels with glomeruloid endings, mimicking a tadpole. The lesion was totally excised and the histopathological evaluation with hematoxyline eosine (HE) stain showed a tumoral lesion that composed of anastomosing broad cords and papillary structures extending into the dermis. The lesional cells stained positive for epithelial membrane antigen (EMA). The diagnosis of porocarcinoma was made. Polymorphous vascular structures detected by dermoscopy due to neoangiogenesis is seen in both malignant and rapidly growing benign tumors. Glomeruloid or coiled vascular structures are usually observed in tumors of adnexal origin. Applying high magnification field dermoscopy can provide better visualization of the vascular structures and this can aid in improving diagnostic sensitivity of non-pigmented skin tumors.

P1-29

DERMOSCOPIC AND CLINICAL FEATURES OF TRUNK MELANOMAS

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Background and Design: Malignant melanomas account for 5% of all skin cancer and usually have fatal clinic. Additionally, the incidence of melanoma increases more rapidly than any other cancer, and this has been attributed to the development of highly sensitive diagnostic techniques-mainly dermoscopy, which allowed the detection of early diagnosis.

Objectives: The phenotypic manifestations of gene/environment interactions, environmental factor and genetic factors may determine subtypes and anatomic localization of melanoma. Histopathologic subtypes, risk factors, and thickness of the skin are different in trunk melanomas. The objective was to determine the frequency of dermatoscopic features in trunk melanomas. This study also investigates dermoscopic features according to the diameter of lesions.

Materials and Methods: Seventy-one trunk melanomas were included. Their dermoscopic and clinical images, histopathological and clinical data were assessed. The relations between diameter, Breslow thisckness and dermoscopic characteristics were evaluated.

Results: The most common dermoscopic findings of trunk melanomas were multicomponent pattern (55 patients, 77.5%), asymmetry (62 patients; 87.3%), blue-gray veil (59 patients, 83.1%), colour variety (56 patients, 78.8%). When dermoscopic findings were compared, multicomponent pattern (p= 0.03), milky-red areas (p= 0.001), blue-gray veils (p=0.023), regression structures (p= 0.037) were more common in large melanomas than small melanomas.

Conclusions: The most common dermoscopic findings of trunk melanomas were multicomponent pattern, asymmetry

and blue-gray veil, colour variety. Multicomponent pattern, milky-red areas, blue-gray veils, regression structures were statistically significant dermoscopic features in the group of large diameter melanomas, compared to small melanomas.

P1-30

DESMOPLASTIC MELANOMA: REPORT OF THREE CASES WITH DERMATOSCOPIC FINDINGS

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Desmoplastic melanoma is a rare histopathological variant of cutaneous melanoma characterized by spindle-shaped malignant melanocytes and dense dermal collagenous stroma, representing less than 5% of all melanomas. Dermatoscopic findings of desmoplastic melanoma include mostly areas of white scar-like depigmentation, peppering images and four or more multiple colours. Three patients with ages of 76, 43 and 83 years, histopathologically diagnosed as desmoplastic melanoma were presented. A 76-year-old male was admitted with atypical pigmented lesion on the right temporal region. Dermatoscopy revealed atypical pigment network, annular granular pattern and whitish veil at two peripheral areas. Other patient was a 43-year-old female, presented with a slightly brown and centrally pinkish plaque on the left shoulder. On dermatoscopic examination, peripheral atypical pigment network, scattered atypical vessels, and central scar-like depigmentation surrounded with atypical vessels were observed. The last patient was an 83-year-old female, with atypical pigmented lesion on the left cheek. The lesion was darker and elevated on the centre. Dermatoscopy revealed atypical pigment network peripherally, whitish veil on a black background centrally surrounded by brown dots and globules. Another area of scar-like depigmentation surrounded with irregular vessels next to this veil was observed. It may be suggested that, even in the absence of clear-cut dermatoscopic criteria for a melanocytic lesion, careful focus on regression features and melanoma-related vascular patterns such as linear-irregular vessels can be often considered as dermoscopic criterion in favour of desmoplastic melanoma.

P1-31

CLINICAL AND DERMOSCOPIC FEATURES OF NEVI IN PSORIASIS

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Introduction: There are few reports about relationship between inflamatory disease and melanocytic nevi. In this pilot study, we aimed to investigate characteristics of nevi in psoriasis.

Material and Method: 50 patients with psoriasis and 50 healthy individuals for control group were enrolled to the study. Total number of common nevi bigger than 2mm and congenital melanocytic nevi stated and examined by dermoscopy.

Results: Total 50 patients with psoriasis and 50 control group evaluated in respect of total number of common and dysplastic nevi. Mean count of common melanocytic nevi was 14.7 in psoriasis group and 29 in control group. Total number of common melanocytic nevi was significantly lower than control group ($p<0,0001$). Mean count of dysplastic nevi was 3.4 in psoriasis group and 0.8 in control group. The number of dysplastic nevi was also significantly lower than control group statistically ($p<0,00001$).

Conclusion: Some of the cytokines involved in the pathogenesis of psoriasis also have a role in melanogenesis IL-1, IL-6, TNFα and TGF-β1 have inhibitory effects on tyrosinase activity and also involved in keratinocyte proliferation. Balato et al suggested that patients with psoriasis had fewer melanocytic nevi including atypical ones. Swope et al pointed out that those cytokines have cytostatic but not cytotoxic effects on the tyrosinase activity. It is well established that an intact immune system limits the devolopment of benign melanocytic lesions. This fact is well clarified in the phenomenon of eruptive nevi in immunosuppressed patients. It is possible that proinflammatory cytokines play a role in inhibition of melanocytes and melanocyte growth and results lower nevi in psoriasis. In conclusion, we can suggest that further studies are needed to determine the relationship. This is a preliminary report of an ongoing study.

P1-32

DERMOSCOPY OF A HISTOPATHOLOGICALLY CONFIRMED TRIO; PYOGENIC GRANULOMA AND HIDRADENOMA PAPILLIFERUM OVER A NEVUS SEBACEOUS LESION

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Nevus sebaceous is a non-neoplastic malformation including follicular, sebaceous and apocrine elements. (1) Secondary adnexal neoplasms, either benign or malign, can develop on the fertile field of nevus sebaceous lesions. Now, according to latest studies, it is believed that trichoblastoma is the most common secondary proliferation over a nevus sebaceous lesion. (2) Hidradenoma papilliferum is an apocrine adenoma, which usually presents as a smooth dermal or subcutaneous nodule. (3) It is completely a benign lesion. Pyogenic granuloma is a misnomer, whose clinical features are suggestive of

reactive neovascularization. (4) In our case, we histopathologically confirmed that these three lesions were together. The appearance of this complex represented a malign lesion rather than a benign condition as if a non-melanoma skin cancer. But, dermoscopic examination revealed specific findings of nevus sebaceous and pyogenic granuloma, which are totally benign lesions. Verrucous and filiform projections were also detected on dermoscopic examination. Histopathology confirmed that these projections are related with a hidradenoma papilliferum lesion, settled beneath a pyogenic granuloma and over a nevus sebaceous lesion. It is well known that dermoscopy is a very useful diagnostic technique for malignant lesions especially for BCC and melanoma. (5) By presenting such a rare case, we aimed to show that dermoscopy is also a useful technique for also benign lesions. Further studies regarding dermoscopic examinations for such benign lesions, will be helpful for the generation of a useful nomenclature.

P1-33

DETECTION OF DEMODEX MITES: DERMOSCOPY VERSUS STANDARDIZED SKIN SURFACE BIOPSY

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Background: The most common diagnostic approach for demodicosis is standardized skin surface biopsy (SSSB), which is semi-invasive, time consuming and may cause discomfort for the patient. A recent study has suggested dermoscopy as a valuable diagnostic tool for demodicosis.

Aim: The aim of this preliminary study was to compare the value of dermoscopy with SSSB for the detection of Demodex folliculorum (Dd) in patients with clinically suspected demodicosis

Material and Methods: Eleven patients with facial skin lesions suggesting demodicosis were examinated for the detection of Dd by SSSB and dermoscopically by a polarized-light handheld dermatoscope with a 10-fold magnification. The most clinically suspicious 2 areas were investigated by both SSSB and dermoscopy. For SSSB, Dd was counted in an area of 1 cm2, and intrepreted as positive when Dd >5 mites/cm2. After real-time dermoscopic evaluation, dermoscopic images were obtained by a digital camera and assessed blindly for the signs of Dd namely "demodex tails" which appeared as whitish spiky projections protruding from the follicular openings.

Results: Of the 22 SSSB samples, 16 were defined as positive (SSSB+), and of these 16, 12 of them were dermoscopically positive (D+) as well. These 12 samples positive by each method were found to be obtained from the subjects with noninflammatory demodicosis lesions such as pityriasis follicularum, while the remaining 4 SSSB+, D- samples were taken from the patients with inflammatory lesions like pustular folliculitis. There were 2 samples with SSSB- and D+ results which were visualized by dermoscopy beyond the 1 cm2 target area examined via SSSB.

Conclusion: Dermoscopy seems to be a practical and useful aid regarding the diagnosis of demodicosis cases with non-inflammatory lesions. However, patients with inflammatory lesions should also be examined with SSSB.

P1-34

DERMOSCOPIC FINDINGS OF NODULAR KAPOSI'S SARCOMA LESIONS

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Histologically, Kaposi's sarcoma (KS) is characterized by a proliferation of spindle cells and endothelial cells forming closely arranged slit-like vascular spaces. Definitive diagnosis of KS is based on histopathological examination. Dermatoscopic findings of KS have been described recently in several publications. The most frequent dermoscopic features in KS were reported bluish-reddish colouration, the 'rainbow patern' and scaly surface. Cheng et al were the first to define the multicoloured, polychromatic lines in some KS lesions as rainbow pattern and to describe this dermoscopic feature as specific but not sensitive for the diagnosis of KS . The patient presented here is a 66- year's old man referred to our clinic for the evaulation of slow growing, itchy, reddish or skin coloured multipl papular or nodular lesions on his forearms for 3-4 months. He had a history of bladder cancer which had been treated with BCG and in remission for 2 years. Dermatoscopic findings of the nodular lesions revealed linear and serpentine vessels on a pink-white structureless background. Histopathology was consistent with KS. Satta et al reported that macular lesions showed a homogeneous dermoscopic pattern which is varying in colour from pink to mauve with no rainbow pattern and only nodular or papular type lesions had multicoloured areas with rainbow patterns of varying intensity and dimensions. In our case the patient had ten nodular or papular lesions on forearms and we found that KS lesions are characterized by linear and serpentine vessels on a pink-white structureless background with no rainbow pattern. Our results show that linear and serpentine vessels on a pink-white structureless background is the most frequent dermoscopic findings on nodular lesions and this dermoscopic feature has not been reported before.

P1-35

THE RELATION BETWEEN DERMOSCOPY AND HISTOPATHOLOGY OF BASAL CELL CARCINOMA

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Objectives: Basal cell carcinoma (BCC) is the most frequent cancer in fair-skinned populations and dermoscopy is an important, non-invasive technique that aids in the diagnosis of BCC. The aim of this study was to evaluate the relationship between histopathological subtypes and dermoscopic features of BCC.

Materials and Methods: This study included 98 patients with clinically and histopathologically confirmed BCCs. The dermoscopic features of the lesions from each patient were analyzed before the histopathological findings were evaluated.

Results: Dermoscopic structures were observed in all 98 patients with irregular vascularity observed in 78 patients (79.6%). The most common vascular pattern was the presence of arborizing vessels (42 patients, 42.9%) followed by arborizing microvessels (21 patients, 21.4%) and short fine telangiectasias (SFTs; 15 patients, 15.3%). White streaks (38 patients, 38.8%), translucency (31 patients, 31.6%), a milky-pink to red background (42 patients, 42.9%), and erosion/ulceration (29 patients, 29.6%) were also observed. Pigmented islands were seen as blue-gray globules (7 patients, 7.1%) and blue-gray ovoid nests (42 patients, 42.9%). The pigment distribution pattern was maple-leaf-like areas in 9 patients (9.2 %) and spoke-wheel-like areas in 6 patients (6.1%).

Conclusions: BCCs show a wide spectrum of dermoscopic features. Arborizing vessels were the most common dermoscopic findings in BCCs, while superficial BCCs displayed mainly milky-pink to red areas, arborizing microvessels. The most common dermoscopic features of pigmented types were islands of pigment (blue-gray globules, blue-gray ovoid nests). In conclusion dermoscopy can be used as a valuable tool for the diagnosis of BCCs and prediction of their histopathological subtypes.

P1-36

DERMOSCOPY IN UNUSUAL INFECTIONS OF LEG ULCERS

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Leg ulcers, though not life-threatening, are nevertheless a major burden both for the patient and for the society. They generally heal slowly, and their worsening is not a rare event. One of the causes of such an evolution is infection. By "infection" one generally means microbial infection, yet other rare etiologies may be seen. In our clinic, we started observing the mycotic infections of the leg ulcers after an unexpected diagnosis of a candidial infection in a first such case in December 2013. During the last year we have found mycotic infections in the leg ulcers of 13 patients, 7 women and 6 men. In 12 patients the fungus was identified as Candida albicans and in the last case as Mycosporum gypseum. The diagnosis was made by mycological exam, by cultures on Sabouraud's medium and in one case by histopathology. By adding dermoscopy to the routine diagnostic tools, in some of the cases we were able to select some common features of the "mycotic" ulcers: on the ulcerated area of the lesions we detected delicate whitish networks, more or less regular, and in other cases crysalid-like structures or white dots, globules or clods in the candidial infection; in the mycosporum infection we found whitish networks overlying a crumpled black veil. The dilemma between fungal infection and fungal contamination was solved by observing the favourable effect of the topical antifungal therapy. Even if it does not certify a mycotic etiology, dermoscopy is a cheap and available tool which offers suggestive clues for this diagnostic.

P1-37

DERMATOSCOPY AS A USEFUL TOOL IN SETTING AND VERIFYING PARAMETERS FOR TREATMENT OF VASCULAR LESIONS WITH ND: YAG LASER

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Dermatoscopy may be a valuable aid to accompany laser therapy of vascular lesions. It can be used used to confirm the clinical diagnosis of a vascular lesion prior to therapy. Dermatoscopy is essential in dark vascular lesions which may not be easily distinguished macroscopically from pigmented lesions. Nd: YAG laser is widely regarded as the golden standard for therapy of benign cutaneous vascular lesions. Setting the right parameters is important to maximize the effect of treatment and to minimize thermal damage to the surrounding tissue. The size and depth of the target should be determined as precisely as possible in order to set the optimal laser spot size, pulse width and fluence. Dermatoscopy may be of valuable help, particularly in assessing the depth of the vascular target. In clinical practice, general laser settings for various kinds of vascular lesions are well known and widely used. However, dermatoscopy enables us to finely tune the settings and achieve even better results. Immediately after laser therapy, the effect is apparent as a change in colour of the lesion. As with any other skin lesions, these changes may be dermatoscopically appreciated in much greater detail than with the naked eye. Dermatoscopy may be used to confirm the desired treatment effect (eg. disappearance of a vessel, change in colour of a vascular lesion from bright/red/violet to dark/brown/black), as well as to identify lack of effect or, in case of larger lesions, to locate the parts that were inadverently skipped. In the authors' experience, dermatoscopy is of great value before, during and after laser therapy of vascular lesions.

P1-38

DERMATOSCOPIC DIAGNOSIS OF BASAL CELL SKIN CANCER

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Dermatoscopic diagnosis of basal cell skin cancer Fedoseev A.S. Clinical Sanatorium "Barviha" of the property management Department of the President of the Russian Federation Basal cell skin cancer (RCSC) in several countries—Basal Cell Carcinoma, among tumors of the skinin, according to some authors, took 2-3 place, depending on the region. Average annual growth rate of 3-4%. Despite the extremely rare metastasis, has mastroianni and restrukturisasi growth. It is only natural that most of the patients concerned about the availability of education in the skin, primarily turn to Dermatologists. According to the dermatological reception at our facility to 75.3%. Therefore, cancer awareness dermatologist should be a priority. The aim of our work was to determine the effectiveness of detection of tumors of the skin, including RCSC by dermatoscopy. Also, the development of optimization criteria for differentiation of tumor with the non-malignant skin formations (e.g., with seborrheic keratome). The data were analyzed 187 patients suspected of RCSC in 2012 to 2014, to assess the compatibility of the applied methods of discrete analysis (for example, Pareto and Ishikawa diagrams, etc.). Screening dermatoscopy was done using dermatoskana "Beauty Scope BS-2000" (France) with 50-fold magnification. Expert diagnostic phase consisted of cytological study material of the poison on the tumor lesion. Consent to cytological verification was obtained by 86 patients. Match dermatoscopic and cytological studies amounted to 83.7%. Rather high incidence correlated with the age of the patients group 60-75 years old accounted for 64.7% of the total number of applicants. The diagnosis RCSC confirmed cytologically based dermatoscopic installed at screening, is set at 72 (83.7%) and patients; pockets of Seborrheic Keratosis from 11 (12.8%) have 3 (3.5%) and other education skin (papilloma, dermal cyst, dermatofibromy). Patients with verified diagnosis, recommended treatment to the oncologist for permanent attachment to the treatment chosen by the specialist. Thus, to optimize Diagnostics you can recommend the application of dermatoscopy of RCSC as the conformity of the non-invasive detection of tumors. Proven highly informative, specifically authorizing the exploration.

P1-39

DERMOSCOPY FEATURES OF LARGE MELANOCYTIC NEVI IN PATIENTS WITH PSORIASIS

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Introduction: Atypical or dysplastic nevi can be melanoma predictors or can mimicrine melanoma. The aim of the study was to research clinical and dermoscopic pattern of large melanocytic nevi in patients with psoriasis.

Methods: The study included 32 patients with psoriasis 16 to 68 years old, 21 male and 11 female with the average age of 37,4 years old. Complete questionnaire and full body photometric skin examination, dermatoscopy examination on the dermatoscope HEINE MINI 10X with 70% ethyl alcohol immersion, skin type identification according to the Fitzpatrick classification, and nevi assessment according to ABCD and ABC rules were obtained for the recruited.

Results: 69% patients suffering psoriasis had MN >5 mm in diameter (10 women and 12 men), there were 68 large nevi in this group. The average amount of nevi per person was 3. 59% of large melanocytic nevi was on the back and thorax. Dermatoscopic picture of psoriasis patient's nevi was symmetrical within the colour (76,5%), boundary (69,1%) and structure (72,1%). No one of the lesions had sharp pigment border. 82, 4% of psoriasis patient's nevi combined the light and dark-brown pigmentation and 69% had a globular structure of pigment location. Patients suffering psoriasis had 32% cases of MN corresponding to Pehamberger dysplastic nevi, and only one case had the ABC and ABCD malignant symptoms.

Conclusions: 32% nevi had dermoscopic characteristic of dysplastic nevi by Pehamberger pattern analysis. Thus, patients with psoriasis should be dynamically observed by dermoscopy to recognize early changes in nevi and to prevent melanoma early.

P1-40

CLINICAL AND DERMOSCOPIC FEATURES OF CONGENITAL MELANOCYTIC NEVI IN CHILDREN AND TEENAGERS

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Introduction: Congenital melanocytic naevi (CMN) are proliferations of benign melanocytes that are present at birth or develop shortly after birth. This type of nevus occurs in 1-2% of infants worldwide. CMN are known as precursor lesions of melanoma, the reported risk ranging from 5% to 10%.

Objectives: to assess the clinical and dermoscopic features of CMN on a group of children and young people.

Material and Methods: The study group was formed by 27 children and teenagers, most of them males (55,5%), with age ranged from 1 month to 19 years, each of them presenting one CMN. All these nevi were examined clinically and dermoscopically.

Results: A total of 27 lesions were diagnosed as CMN. 74,1% of the lesions were medium-sized (1,5- 20 cm), 22,2% nevi

were smaller than 1,5cm and 3,7% of CMN were larger then 20 cm in diameter. The most common localization was the trunk (48,1%), followed by head and neck (25,9%), extremities (22,2%), and acral region (3,7%). Most of lesions had reticuloglobular pattern (29,6%), globular-cobblestone pattern (25,9%), globular pattern (18,5%) and reticular pattern (18,5%). Dark brown was the most frequently colour seen in 62,9% of CMN. The most common dermoscopic findings of CMN were: hair follicles (70,4%), dots and perifollicular hypopigmentation (48,1%), milia-like cysts (37%), blue-white weil (14,8%) and vessel structures (11,1%). One child presented CMN with stable multiple proliferative nodules.

Conclusions: Our study describes the frequent clinical and dermoscopic features of CMN in children and teenagers. Being familiar with the common characteristics of CMN will help us to determine whether a CMN is suspicious or not, especially if there is a CMN with proliferative nodules. These nodules typically are benign and may regress, although atypical features of them cause greater concern because can mimic a malignant melanoma and must be biopsied.

P1-41

USEFULNESS OF NAIL DERMOSCOPY OF ONYCHOMYCOSIS FOR DIFFERENTIAL DIAGNOSIS FROM OTHER ONYCHOPATHIES

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Background: Onychomycosis can be confused with other onychopathies clinically. Nail dermoscopy (onychoscopy) could be helpful in the differential diagnosis between onychomycosis and other onychopathies, but well-designed comparative case-control study has not been reported yet.

Objectives: The aim of this study is to evaluate the usefulness of the nail dermoscopy for the diagnosis of onychomycosis in comparison with other onychopathies and identify new additional diagnostic dermoscopic features of onychomycosis which were not ever known.

Methods: Two hundreds seventy patients with mycologically proven onychomycosis and 100 patients with other onychopathies as the control group were enrolled in the study. Dermoscopic examination was performed with handheld dermoscope with liquid medium and retrospective image analysis was done.

Results: Chromonychia of nail plate (78.5%), longitudinal striae (55.9%), thickening of nail plate (43.3%), jagged edge with spike (38.9%), subungual keratosis (38.9%), ruin aspect (31.1%) and mushroom cloud sign (18.1%) was more common in onychomycosis compared as other onychopathies, with statistically significant difference ($p<0.001$). Among those features, jagged edge with spike and mushroom cloud sign were observed in solely onychomycosis, which were regarded as the most specific features of the distal lateral subungual onychomycosis.

Conclusions: The distinct dermscopic features described herein can help clinicians to facilitate diagnosis of onychomycosis distinguishing from other onychopathies.

P1-42

TRICHISCOPIC FEATURES OF HAIR LOSS AFTER CRANIAL IRRADIATION

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Background: Trichoscopy is non-invasive, easy to perform, widely used tool for diagnosis and follow-up of hair and scalp disorders. Current knowledge provides dermoscopic hints in all types of telogen hair loss, inflammatory, infectious and genetic scalp disorders. According to the literature there is no trichoscopic pattern of anagen effluvium in patients after irradiation.

Objective: To present a trichoscopic findings in patients after cranial irradiation.

Patients and Method: We performed trichoscopy of irradiated scalp areas in 3 patients after radiotherapy different types of head and neck cancers. Total number of 122 images taken with a use of videodermoscope FotoFinder II were analyzed with a MoleAnalyzer software. Hair and perifollicular areas were evaluated.

Results: In patients after cranial irradiation partial and total hair loss areas were seen. Mean hair thickness was 0,039±0,019 mm. The most commonly seen hairs were medium-sized hairs (58,1%). In one patient multiple vellus and medium-sized hairs were observed in the same area. Usually one hair shaft (mean 1,21±0,53) was present in hair unit. Mean number of yellow dots in one field of vision was 10,66±13,79 and usually represented empty hair follicles. Evaluation of perifollicular and interfollicular skin surface showed mild diffuse scaling, white and pink areas. Vascular structures included: thin arborizing vessels, thick arborizing vessels and vascular network surrounding hair follicles. Furthermore pigtail hair shafts were occasionally seen in irradiated scalp areas.

Conclusions: Trichoscopic findings in anagen effluvium after chemo- and radiotherapy differs. In irradiated scalp areas dominate medium-sized hair shafts, yellow dots corresponding with empty hair follicles and both types of arborizing vessels. Additional trichoscopic features were vellus hairs and pig tail hairs.

P1-43

MELANOCYTIC NEVI ON THE PALMS AND SOLES IN POLISH POPULATION

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Introduction: Dermoscopy is a non-invasive diagnostic technique used to perform differential diagnosis between benign melanocytic nevi and malignant melanoma. 20-100x magnification is used to analyse patterns, structure, density, specific location and arrangement of melanin pigmentation. Unique anatomical characteristics of acral volar skin determine the dermoscopic patterns of acral melanocytic lesions.

Materials and Methods: The study included all melanocytic lesions located on the palms and soles of Polish patients examined at the Department of Dermatology at the Jagiellonian University, Cracow, Poland. Melanocytic lesions were studied by means of standard clinical examination and dermoscopy. Statistical analysis was performed.

Results: The types of patterns present in melanocytic lesions located on the palms and the soles, the frequency of their occurrence and distribution on the skin were analysed. The lattice-like pattern and the parallel furrow pattern were the most common dermoscopic patterns observed in melanocytic lesions located on the palms, reticular pattern and "peas in a pod" pattern were also present, whereas fibrillar pattern was not observed. Among melanocytic nevi on the soles, the most common patterns were: the lattice-like pattern, the fibrillar pattern and the parallel furrow pattern. The fibrillar pattern was mostly observed in melanocytic lesions located in areas directly pressed by body weight, while the lattice-like pattern in the arch area and the parallel furrow pattern in other areas of the soles of the feet.

Conclusion: In Polish population, the vast majority of dermoscopic images showed patterns describing benign melanocytic lesions. The analysis showed differences in distribution of melanocytic nevi between anatomical sites of the palms and soles. Even though malignant melanoma of hands and feet is relatively rare in European population, its mortality rate is high due to delay in diagnosis. To improve the prognosis the most important are accurate diagnosis and adquate treatment in early curable stages of acral melanoma.

P1-44

SIMULTANEOUS DEVELOPMENT OF THREE SKIN CANCERS WITH MINIMAL DERMOSCOPIC MANIFESTATION IN A 44-YEAR-OLD WOMAN

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Simultaneous development of three skin cancers with minimal dermoscopic manifestation in a 44-year-old woman. Katarzyna Żórawicz, Marta Sar- Pomian, Joanna Czuwara, Lidia Rudnicka

A forty- four year old female patient, phototype II (according to the Fitzpatrick phototyping scale), with no history of chronic diseases, immunosuppressive therapy or massive exposure to the ultraviolet radiation, was admitted to the clinic to perform screening of melanocytic nevi. Patient also reported three pink coloured plaques on the trunk, which appeared simultaneously, about two years ago, without apparent reason. These lesions were initially described as papules (with the diameter of 2 millimeters each), evolving over months to pink coloured plaques. Those were initially treated with topical glucocorticoids with no effect. Clinically these lesions did not occur to be oncologically suspicious. The dermoscopy examination showed white structureless area and minimal, thin arborizing vessels in one lesion and white structureless areas with more a slightly prominent network of arborized vessels in the two other lesions which may could have been also attributed to the potent glucocorticosteroid therapy). Histopathology of the first lesion revealed squamous cell carcinoma in situ (Bowen's disease), and basal cell carcinoma in the two other lesions. In conclusion, we present a case of three cancerous lesions with minimal clinical and dermoscopic manifestation in the same patient.

P1-45

DERMOSCOPY OF STEROID INDUCED FACIAL DERMATITIS

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Background: Abuse of topical steroids on the face for long periods of time is a condition that needs time to cure and also methods to better observe the clinical features and for the follow up.

Aims: The aims of this study were to investigate if the skin alterations after prolonged use of steroids are highlited by dermoscopy

Methods: Patients with Steroid Induced Rosacea (SIR) after prolonged use of topical steroids—more than six months minimum twice weekly were examined clinically and by Dermoscopy.

Results: All patients showed on dermoscopy linear, tortuous and polygonal vessels.80% of the patients had dermoscopic features for Demodex -follicular plugs ans tails. The white hairs derived from hypertrichosis as a distinctive feature for SIR were observed at 15% with the naked eye and at 45% by dermoscopy. The atrophy was clinically visible at 2 patients as skin thinning but dermoscopy revealed it at 4 as white structureles areas or patches between vessels.

Conclusions: Dermoscopy is a valuable tool for early detection of the features of SIR: polygonal vessels, scales, depressible erythema,pustules,white hairs, keratin plugs and tails. The dermoscopic particularity of steroid induced rosacea is the association of white intervascular structureles patches as a sign of the atrophy and the early detection of hypertrichosis.

P1-46

ABNORMAL PIGMENTED NETWORK—CLUE TO MELANOMA DIAGNOSIS

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Introduction and Objectives: Pigmented network is considered a dermoscopic indicator of melanocytic nature of pigmented mucocutaneous lesion. A pigmented network is considered atypical, irregular, abnormal when it has lines of different thicknesses, holes of variable shape and size, with sharp borders possibly ending in pseudopods or branched streams.

Materials and Methods: This work presents two cases of early melanomas in which dermoscopic identification of the atypical pigmented network played a major role in the diagnosis.

Case 1: A 65 years old female patient came with a pale-brown, slightly scaly, bizarre shaped skin lesion that had occurred six months before. The dermoscopic image showed a prevalent altered pigmented network with thin pale-brown lines looking like pseudolines in seborrheic keratosis. The lesion had also two very subtle dermoscopic features namely: a reduced number of dark-brown dots and in some areas the network holes had a pale-pink hue. The clinical and dermoscopic findings, recent development, involving dorsal aspect of the left lower leg, raised the following possible diagnoses: Bowen disease, flat seborrheic keratosis and melanoma. An excisional biopsy was made and the histopathological exam revealed 0.2 mm thick melanoma.

Case 2: A 26 years old female patient came with a recent skin lesion on upper right knee. Its clinical aspect mimicked a dermatofibroma. The dermoscopic exam also showed features somewhat similar to a dermatofibroma (central white spot and peripheral pigmented network). Despite all that, the pigmented network was that which raised suspicion of malignancy as it was too clear to be for a dermatofibroma. A surgical excision was made and the histopathological exam identified a 1,2 mm thick melanoma.

Conclusion: In melanomas the presence of just one abnormal pigmented network can permit the diagnosis.

P1-47

CUTANEOUS T-CELL LYMPHOMA (CTCL) ON THE FACE

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Background: Cutaneous T-cell lymphoma (CTCL) is a malignant disease that clinically and histologically resembles inflammatory skin disease, which complicates correct diagnosis.

CTCL clinically may appear as pink, papular lesions. Pink lesions are the arlequin of skin lesions making it difficult differentiating benign from malignant due to absence of pigment network. Blood vessels are one of the main clue to distinguish the right diagnosis and nature of the lesion.

Dermatoscopy helps to specify types of vessels reducing suspicion of malignancy and unwanted excisions. Differential diagnosis of pink lesions is challenging and includes amelanotic melanoma, basal cell carcinoma, actinic keratosis, hemangioma, dermatofibroma, seborrheic keratosis, melanocytic lesions, cutaneous metastases, moluscum contagiosum, sebaceous hyperplasia, warts, hidradenoma and lymphoma. Suspicious pink lesions, especially nodular ones, should never be left for follow up. The aim of this report is to emphasize the importance of dermoscopy identifying different types of pink lesions.

Patient's description: we describe two patients both with pink lesions, that otherwise have no subjective complaints other than cosmetic and the fact that the lesion did not heal. During careful examination we found pink papular lesion, moderately indurated that clinically resembled benign inflammatory skin disease. On dermatoscopic examination we found characteristics like: sharply focused, arborizing blood vessels that started from the center of the lesion, chrysalis structures, visible follicular openings. It is higly necessary to examine the lesion with polarized light, ultrasound gel, to specify the vessels and other structures, since the pigment network is absent. Lesions were biosied and the preliminary diagnosis of CTCL was confirmed with immunohistochemistry.

Conclusions: Pink lesions vary from benign to malignant and further studies are necessary to specify their characteristics in all age groups. Dermatoscopic examination of pink lesions is the gold standard to start the right diagnosis.

P1-48

SPITZ NEVUS- DIFFERENT FACES

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Introduction: In 1948 *Sophie Spitz* described a series of "malanomas of childhood" as lesions fulfilling the biologic as well as the histopathologic critera of malignancy. It is pink-red; however tan, brown and even black-pigmented Spitz nevi (PSN) are common. Deeply pigmented lesion Reed et al, described it almost in young adults. Classic Spitz nevus is a junctional, compound menalnocytic neoplasm with epidermal hyperkeratosis and a little deposition of pigment. Pigmented Spitz Nevus is a junctional or compound neoplasm, composed of heavy pigmented spindle/ epithelioid melanocytes parallel or perpendicular to skin surface with nests of melanocytes. *Reed nevus* almost junctional neoplasm, with heavy pigment, monomorphic with small spindle melanocytes arranged parallel to skin surface. *Atypical Spitz nevus* a junctional or compound lesion, has at least 1 histopathological criterion: asymmetry, poor lateral circumscription, predominance of single melanocytes over nests, ulceration,

lack of maturation in dermis, mitotic figures, involvement of the subcutis. *Pigmented Spitz-Reed nevus*- this category included lesions that had been diagnosed as either PSN or RN by each histopathologist but without unanimous agreement. *Spitz* nevus could be also non- pigmented. Classical dermoscopic patterns are: central grey or bluish pigment surrounded by large peripheral globules, starburst, reticular pattern, with superficial dark network. The purpose of the study to demonstrate a variety of clinical manifestations, as well as, provide options for dangerous *Spitz nevi*.

Results: In Spitz nevus, the most common dermoscopic finding is a starburst-like pattern, followed by globular and atypical patterns. Histopathologically mitosis in the deepest parts of the dermis, as well as, granulas cytoplasm with thickening of nuclear membrane was observed. A large proportion of melanocytes with hyperchromatic nuclei were also revealed.

Conclusions: In recent years dermoscopy has become the conceptual link between clinical and histological dermatopathology, which allow to us avoid unnecessary desisions and protect, long-term evaluate patient neoplastic lesion. Spitz nevus clinically looks like melanoma, and only in addition to non-invasive investigations can help differentiate. In adolescence Spitz nevus is self- limiting. Excision and histopathological diagnosis continue to be imperative in some cases with atypical clinical features of Spitz nevi.

P1-49

POLARIZED VS. NONPOLARIZED LIGHT DERMOSCOPY IN DAILY PRACTICE

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Dermoscopy is an important noninvasive diagnostic tool in dermatology that magnifies skin and reduces skin surface light reflection thus allowing diagnosis of skin lesions with a great accuracy. Until recently nonpolarized light dermoscopy was the far most frequently used method while now, with the technological improvement and increasing expert knowledge, the application of polarized light dermoscopy is rising. The two methods might seem to produce very similar pictures, but the differences have proven to have a diagnostic and therapeutic importance. It is known that nonpolarized light offers a better view of more superficial structures while polarized light allows the visualization of deeper ones. The aim of this study was to look for differences in skin lesions according to the usage of polarized or nonpolarized light contact dermoscopy. To achieve the aim polarized and nonpolarized light dermoscopy pictures of 21 skin lesions were taken—13 melanocytic lesions, 4 seborrheic keratoses and 4 cherry angiomas. Pictures were taken with DermLite DL3 dermoscope and Sony Cyber Shot DSCW55 camera. The lesions were randomly chosen and do not represent the lesion incidence in general Latvian population.

In this study we noticed clear differences between polarized and nonpolarized light contact dermoscopy—all melanocytic lesions looked more brown in polarized and more blue in nonpolarized light dermoscopy. In case of a traumatised nevus crystalline structures were seen in polarized, but not in nonpolarized light dermoscopy, while peppering appeared to be more brown in polarized and more grey in nonpolarized light dermoscopy. In case of seborrheic keratoses milia-like cysts were seen better in nonpolarized light dermoscopy as well as comedo-like openings, that were particularly well distinguished. Cherry angiomas looked more red while their sclerosed parts more white in polarized light dermoscopy and more blue when nonpolarized light dermoscopy was used. We conclude that the differences between polarized and nonpolarized light dermoscopy has to be known to obtain an accurate diagnosis and that the additional features seen when polarized light dermoscopy is used helps in daily decision making.

P1-50

INTRAMEATAL VIRAL WARTS: DERMOSCOPIC CLUES IN A DIFFICULT LOCATION

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Human Papilloma Viruses (HPV) belongs to the family Papillomaviridae. They are strictly epitheliotrophic viruses. More than 230 virus types exist, from which, more than 100 can affect the skin or mucous membranes in humans. Genital viral warts occupy the first place in frequency among all sexually transmitted diseases. Acuminated condylomas present as skin-coloured or hyperchromic lobulated, vegetating papules measuring 2 to 5 millimeters. In men, they usually affect the penis or perianal area. In most cases, diagnosis is simple, though some diagnostic tools and complementary tests such as the acetic acid test and dermoscopy evaluation may be needed. A small percentage of patients can present intraurethral lesions and manifest symptoms such as hematuria, decreased force and caliber of the urinary stream, and urethrorrhagia. Even though these cases are infrequent, evaluation of a patient with intrameatal (urethral) lesions may be difficult for the dermatologist, and, in these atypical cases, dermoscopy can be very useful. We present two cases of patients with history of acuminated condylomas previously treated with cryotherapy, who manifested symptoms suggestive of intrameatal warts: urethrorrhagia, dysuria, and decreased force of the urinary stream. Dermoscopy was performed using a transparent gel and a transparent plastic layer. Findings were predominantly vascular structures, looped vessels, straight and tortuous vessels running across the entire length of the filiform verrucous lesion. Although uncommon, intrameatal warts can be correctly characterized

with a hand-held dermoscope, a simple, non-invasive, and highly effective tool.

P1-51

ENTOMODERMOSCOPY. FROM LITERATURE TO CLINICAL PRACTICE

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Keywords: entomodermoscopy, dermoscopy, infections, infestations

Although dermoscopy has been primarily designed for aiding the in vivo diagnosis of skin tumors (melanoma, basal cell carcinoma, squamous cell carcinoma etc.) and nevi, recent advances indicate it is also useful in the diagnosis and monitoring of common skin infections and infestations. Dermoscopy used in the field of infection diseases and parasitic infestation is called entomodermoscopy—it connects the research fields of dermatology, dermoscopy and entomology.

Objective: An overview of literature and presentation of our own experience on the current applications of entodermoscopy.

Methods: English literature review in Medline, books, atlases, abstracts of conferences and present our own entomodermoscopy. Examination was performed with the videodermoscope Fotofinder 2 and the clinical picture was made with the camera Canon G8.

Results: Videodermoscopic patterns have been described for viral warts, molluscum contagiosum, impetigo contagiosa, tinea cutis, scabies, pediculosis, ticks and reactions to spider and bug bites and other. Besides the diagnostic role of entomodermoscopy, there is increasing evidence that it can also help in the monitoring of treatment efficacy for some of these diseases.

Conclusion: Although most of the current available literature is based on single observations and small case studies rather than controlled trials, an increasing interest in this field can be observed.

P1-52

TRICHOSCOPY (DERMOSCOPY OF THE SCALP)—NON-INVASIVE DIAGNOSTIC TOOL IN DIFFERENTIAL DIAGNOSIS OF ALOPECIA AREATA AND TRICHOTILLOMANIA LIMITED TO EYELASHES AND EYEBROWS

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Trichotillomania is an impulse disorder in which patients chronically pull out hair from any part of the body resulting in noticeable hair los. Alopecia areata is a common, non-scarring dermatologic condition characterized by hair loss on the scalp and body. Alopecia areata and trichotillomania in rare cases may affect only eyebrows and eyelashes. Differential diagnosis of isolated eyebrows and eyelashes loss may be difficult in clinical practice. Thichoscopy is a novel, simple and non-invasive diagnostic method that can be used as a tool for diagnosing common hair and scalp disorders. Trichoscopy (hair and scalp dermoscopy) may effectively supports differential diagnosis of these two conditions. The aim of this study was to assess the usefulness of trichoscopy in diagnosing trichotillomania and alopecia areata limited to eyebrows and eyelashes. The study included 5 with trichotillomania and 7 with alopecia areata affecting only periorbital region. In all patients trichoscopy was performed using Fotofinder 2 videodermoscope. In alopecia areata trichoscopy showed yellow dots, black dots and broken hairs. In trichotillomania we observed irregullary broken hairs, flame hairs and black dots. In conclusion trichoscopy may be applied in quick, non-invasive, in-office differential diagnosis of trichotillomania and alopecia areta isolated to periorbital region.

P1-53

THIN MELANOMA WITH REGRESSION IN A TEENAGE GIRL, A CASE REPORT

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Introduction: Pediatric melanoma, although rare, is becoming more common, especially in teenage girls. Its clinical and histopathologic features, especially in pre-pubertal patients, are understudied, and therefore poorly characterized. Melanomas arising in teenagers more have characteristics of adult melanoma. Because of a low index of suspicion as well as pediatric melanoma's propensity to present atypically, there is a diagnostic delay. The aim of this paper is to describe clinical, dermoscopical and histopathological features as a single institution experience with pubertal melanoma.

Case Report: A 13-year-old girl was referred to the dermatologist because of parental concern about one Unna nevus on the back. Due to dysplastic nevus phenotype, regular dermoscopic follow-up was suggested. Others melanoma risk factors were not found. Clinically, macular ovoid lesion of brown colour, measuring 13x11 mm, with relatively regular borders was noticed epigastrically. Parents claimed that this lesion is mole which appeared in the age of 3. Dermoscopically, there was combination of unspecific and globular global structure with asymmetrically distributed colour and structure with grey reticular structure, small white area of depigmentation and peripheral rims of globules. Follow up examination after six months showed slight enlargement of scar-like depigmentation but was misinterpreted as scar

in traumatisated nevus. Afterwards, patient was lost from follow up for two and half years. In spite of nonalarming clinical appearance of lesion, dermoscopically lesion became asymmetrical in colour and structure with unspecific global structure, with multiple and confluenting scar-like depigmentations, grey blotch and grey reticular structure, and at periphery multiple light brown dots. Complete excision was done. Patohistology revealed melanoma 0.4 mm in thickness with area of late regression. There were no additional adverse prognostic factors. Wide reexcision was done without finding additional tumor tissue. The patient is under follow up with dermatologist and oncologist.

Conclusion: In this case, the most sensitive indicator of melanoma was a striking change in the evolving lesion clearly pointed by dermoscopy. Physician's hesitance to suspect melanoma in child's age, despite unambiguous initial findings, resulted in delay of correct diagnosis.

P1-54

REPORT OF 5 INTRIGATING CASES SIMULATING CUTANEUS MELANOMA THROUGH THE EYES OF NOVICE DERMOSCOPIST

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Introduction: Many pigmented lesions we often deal with in everyday practise can be clinically and dermoscopically confused with melanoma. We present five cases in Caucasions of cutaneous melanoma-simulating lesions, each one showing at least one dermoscopic feature that is overlapping with melanoma diagnostic criteria.

Case 1: A 27-year-old male presented with pigmented dark brown asymmetrical lesion on the lower abdomen, completely different from all the other lesions on the skin. Dermoscopy revealed central blue white veil, dark brown blotches and erosiones, peripheral fat fingers and asimetrically distributed dark brown globules, dots, streaks and pseudopod like structures. Histhopathology: pigmented seborrheic keratosis.

Case 2: An 81-year-old male presenting with recently developed papular black lesion on the right lower leg. Dermoscopy showed structurless homogenous grey-black area with some scaling on the suface. Biopsy was performed to rule out nodular melanoma. Histopathology: old hemorrhage.

Case 3: A 39-year-old female presented with sharply demarcated violet-grey lesion on the right shoulder which became darker in past few months. Dermoscopy showed structurless area, blue-white veil, polymorphous blood vessels in the center, multiple asymmetrically distributed globules and erosions together with radial streaks at the periphery of the lesion. Histopathology: nodular type of pigmented basal cell carcinoma.

Case 4: A 21-year-old male presented with pink lesion on the right upper arm which appeared 6 years ago; but is slowly enlarging and changing colour. Dermoscopy showed structureless area and asymmetrical pigment distribution. Excision was performed to rule out atypical dermatofibroma, desmoplastic melanoma and Spitz naevus. Histopathology: desmoplastic nevus.

Case 5: A 52-year-old male sailor presented with pigmented lesion in the lumbar region. Dermoscopy showed striking asymmetry in colour and structure: large structureless area and multiple blotches through the lesion, irregulary distributed dots and atypical pigment network with clear cutoff at the periphery. Our differential diagnosis was thin melanoma and melanoma in situ. Histopathology: composite dysplastic nevus.

Conclusion: Herein we emphasize the importance of dermoscopy in evaluating (non) pigmented lesions and differential diagnosis in order to avoid missing cutaneous melanoma.

P1-55

SPECTRUM OF DERMOSCOPY IMAGES OF EARLY MELANOMA

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Background: Early melanoma includes melanoma in situ and thin invasive melanomas less than or equal to 1 mm in depth. An increasing proportion of early melanomas are found in the pool of all diagnosed melanomas and this trend is also observed in our Department. Early recognition and excision of the earliest stages of melanoma is the most important factor for improving patient survival. However, the frequency of clinically evident melanomas, and therefore thick ones, is still high. Objective: Evaluation of dermoscopic features of 12 early de novo melanomas including melanoma in situ (MIS), early melanomas and early melanomas developing in a nevus situated on the trunk and limbs.

Materials and Methods: Dermoscopic images were taken with Heine Delta 20 Dermatoscope with Nikon E 8400 camera, Dermlite Pro HR dermatoscope with Mobile camera of smart phones or Panasonic camera. The study included records of the dermoscopic images of 12 thin melanomas in 12 adults, collected in the Department of Dermatovenerology during the current year, that were analyzed by the authors.

Results: Pattern analyses of dermoscopic images was used: global features (globular, reticular, cobblestone, homogeneous, multicomponent and unspecific) and focal features (typical and atypical network, regular and irregular globu-

lar structures, streaks, pseudopods, blotches, blue-white veil, hypopigmented areas, atypical vessels, milky red area, dermoscopic island, peppering, scar-like area). Analysis of the presence or absence of significant melanoma-specific criteria was done. We analyzed which of the dermoscopic feature is the most important and which one can be determined as discriminator and reliable predictor of MIS and early melanoma. Light brown areas and irregular atypical grey network that abruptly stops, involving more than half of the lesion are important dermoscopic indicators for MIS. Early melanoma smaller or equal to 1mm included finding of regression structures (milky red area, grey blue areas of regression).

Conclusion: Nowadays, melanomas in our Department are diagnosed in earlier stages. The reasons are increased public awareness of the disease, regular mole check-ups, and improved diagnostic skills which combine both clinical and dermoscopic criteria. Dermoscopy helps to achieve diagnostic accuracy for early melanoma, since dermoscopic criteria of melanoma appear earlier than the clinical characteristics.

P1-56

PIGMENTED PURPURIC DERMATOSES IN BROWN SKIN-DERMOSCOPIC EVALUATION AND HISTOLOGICAL CO-RELATION: A CASE SERIES STUDY

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Background:-PPD is a group of chronic and relapsing disorders characterized by petechiae and pigmentation.There is paucity of reports in literature regarding use of dermoscopy in PPD and its role has not been well studied and established. There are no dermoscopic studies done in Indian patients having PPD. AIM-1) To evaluate dermoscopic patterns with evolution of lesions and their histopathologic correlation in PPD of brown skin.

Materials and Methods: It was a case series study.10 patients with PPD were dermoscopically evaluated and Histopathology confirmed clinical diagnosis.

Results: There were 10 patients 7 males and 3 females. 30% (3/10) patients with early lesion showed bright red-brownish to red coppery background with a few red dots and globules. H/P lymphohistiocytic infiltration around superficial small blood vessels in the papillary dermis. In 20% (2/10) patients same background along with same pattern were more prominent suggesting active inflammation. Histologically they corelated to perivascular infiltrate of lymphocytes and macrophages around superficial blood vessels which were dilated with extravasation of rbc's. 30% (3/10) patients showed a more brownish and coppery background and reduced reddish tinge. Central red globules with dark brown pigment deposits were seen which we believe indicates hemosiderin deposits. Gray dots with a network of brownish to gray interconnected lines was the additional pattern we observed these patients. It probably represents the resolving lesions. H/P showed sparse mononuclear cell infiltrate along with extravasated rbc's, hemosiderin laden macrophages. Lesser infiltration of lymphocytes reflects the reduction in the reddish tinge. 10% (1/10) patients showed absence of red dots and globules with pronounced reticular pigmentation. 10% (1/10) patients showed central red dots and globules but with a homogenous bluish gray background. Glomerular vessels were also seen. H/P revealed features of stasis dermatitis.

Conclusion: Dermoscopic patterns of PPD and the subtle variations in these novel findings with the progression of PPD was established. Its benefit in differentiating the dermoscopic patterns of PPD from those of other inflammatory purpura like stasis dermatitis, lp, angioma serpiginosum, urticarial vasulitis etc is invaluable.

P1-57

TRICHOSCOPIC EVALUATION OF MALE PATTERN HAIR LOSS: A CASE SERIES STUDY.

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Introduction: AGA is most common form of hair loss affecting 80% men and 50% women. Trichoscopy is a noninvasive diagnostic tool used in evaluation of patients with hair fall .It reveals specific patterns in AGA and can be utilized to diagnose AGA. Objective was to evaluate and determine trichoscopic findings, its potential benefit in MPHL and monitor disease progression.

Materials and Methods: It was a case series study.50 patients with clinically diagnosed MPHL were evaluated. Dermlite 3 dermoscope was employed.

Results: Trichoscopy was done. More than 20% HDD which is an early sign of AGA corresponds histologically to follicle miniaturization was observed in the affected area of all cases (50/50). Peripilar sign corresponds to perifollicular fibrosis was Seen in 66% (33/50) of the subjects. Yellow dots were observed in 26% (13/50) of the study group. Follicular ostia with predominance of single hair were seen in 42% (21/50) cases. Empty follicular ostia were seen in all cases of advanced AGA (14/50).Honey comb like pigment network was evident in(14/14) cases of advanced AGA and (16/36) remaining cases and none of the early AGA cases.

Discussion: HDD OF >20% is diagnostic of AGA and histologically corresponds to follicle miniaturization. Follicular ostia in AGA show predominance of single hair with empty follicular ostia. They express the kenogen phase of hair cycle. Peripilar sign is presence of a brown halo, at the follicular ostia which correlate to superficial perifollicular lymphocytic infiltrates. It's a feature of early AGA in patients with high hair density. Yellow dots are feature of advanced AGA representing distension of the affected follicular infundibulum with keratinous material and sebum. Honeycomb like pigment network is found in sun exposed areas of scalp with progression of Baldness.

Conclusion: HDD is important feature to consider as accurate clinical sign reflecting follicle Miniaturization and features of HDD, peripilar sign and empty follicles were commonly or seen solely In AGA. We conclude that trichoscopy is a tool of substantial help for Diagnosis and management of AGA, also providing insights into pathogenesis. It helps to differentiate from other causes of hair like alopecia areata, telogen effluvium or hair shaft disorders like monolethrix providing an excellent first line Method of assessment in clinics obviating the need for hair specimens.

P1-58

PITYRIASIS LICHENOIDES: A DERMOSCOPIC PERSPECTIVE

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Background: Pityriasis Lichenoides (PL) is characterized by multiple crusted, scaly papules. It includes three variants namely pityriasis lichenoides et varioliformis acuta (PLEVA), pityriasis lichenoides chronica (PLC) and febrile ulceronecrotic PLEVA. PLEVA presents as erythematous papule with adherent mica-like scale. Later, centre of papules becomes filled with blood and pus which appears as necrotic crust. Patients experience burning sensation and itching. PLC appears as tiny erythematous papule initially that turns into brown colour. PL can mimic chicken pox, guttate psoriasis, Gianotti-Crosti syndrome, lichen planus and pityriasis rosea. Histopathology is gold standard in diagnosis with clinical background. Authors evaluated importance of dermoscopy in differentiating PL from these conditions.

Objectives: Aim of our study was to evaluate dermoscopic patterns in PL which would help in clinical diagnosis ofPL.

Methods: Study was conducted in S. Nijalingappa Medical College, India. Ten patients of PL were evaluated. It was an observational study. Informed consent and ethical clearance was obtained. Polarized dermoscopy was used. Histopathology was done to confirm diagnosis. Data analyzed and described in frequencies and percentages.

Results: There were 10 patients with 8 males and 2 females. Three patients had PLEVA and 7 had PLC. Dermoscopy of PLEVA demonstrated white chrysalis strands, peripheral hairpin shaped vessels, brownish globules, rim of white structures at periphery in 30% patients corresponding to acanthosis and spongiosis, dilatation of blood vessels, epidermal melanocytes and hyperkeratosis in histopathology respectively. PLC demonstrated brownish areas and globules in the centre with rim of white structures at periphery corresponding necrotic keratinocytes and melanocytes in the epidermis and hyperkeratosis and in histopathology respectively.

Conclusion: Dermoscopy demonstrates specific patterns in PLEVA and PLC which were correlating with histopathological changes. Hence, dermoscopy can be used as a diagnostic technique in the diagnosis of PL. Since this was a preliminary observation, authors recommend further studies involving large number of patients.

P1-59

PREVALENCE OF DERMOSCOPIC FINDINGS IN EGYPTIAN LICHEN PLANUS PATIENTS

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Introduction: Lichen planus (LP) is a chronic inflammatory disease that affects the skin and mucous membranes. Cutaneous LP most commonly involves the flexor surfaces of extremities and presents as itchy flat-topped violaceous papules in middle aged adults. Dermoscopy is a non-invasive technique allowing magnified invivo observation of the skin to view morphologic features not seen by naked eye. Dermoscopic features of LP include white stria, grey-blue dots, comedo, milia like cysts and vascular structures.

Patients and Methods: This study was performed over 18 Egyptian patients suffering from LP. Clinical, dermoscopic examination and imaging was done for representative lesions using polarized contact dermlite II HR dermoscope aided by 3x optical zoom Samsung S4 Zoom camera after history and informed consent were taken.

Results: Of the 18 patients,13 were suffering from classic LP, 4 from actinic LP and 1 from palmoplantar LP and their dermoscopic findings were: In the 13 classic LP patients, the most common finding was the presence of reticular Wickham's stria (76.9%) followed by violaceous brown macules (53.9%) and violaceous papules and plaques (46.2%). Other findings were diffuse brown pigmentation (38.5%), linear vessels (23.1%), milia like cysts (15.4%), pseudonetwork like pigmentation (7.7%), comedo like cysts (7.7%), dotted blood vessels (7.7%), homogenous violaceous brown patches (7.7%) and blue grey dots (7.7%). Among the 4 patients suffering from actinic LP, the most common finding was the presence of pseudonetwork like brown pigmentation (75%), brown or violaceous brown macules (50%), other findings were diffuse brown pigmentation (25%), brown peppering (25%), linear vessels (25%) and comedo like cysts (25%). The single patient suffering from palmoplantar LP only showed diffuse violaceous colour with exaggerated skin markings.

Conclusion: The most sensitive dermoscopic charecteristics for the diagnosis of classic LP are the presence of Wickham's stria followed by the presence of violaceous brown macules and violaceous papules and plaques, however in the case of the actinic type the presence of pseudonetwork like pigmentation prevails.

P1-60

DERMOSCOPY CAN DIFFERENTIATE MORPHEA FROM NECROBIOSIS LIPOIDICA

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Morphea (localized scleroderma) is a disorder of excessive collagen deposition. It is characterized by smooth, shiny, ivory indurated plaque with lilac border. The lesions occur usually on trunk or extremities. Necrobiosis lipoidica (NL) is a chronic granulomatous condition of unknown etiology. The condition is more common in females and it is frequently associated with diabetes. It usually presents as a well circumscribed single plaque on lower extremities. We present 2 patients having indurated plaques on extremities. The first patient was a 25 years old male. He had indurated hyperpigmented plaques on both upper and lower limbs of 4 years' duration. Dermoscopic examination revealed increase fibrotic beams and linear whitish bands. A skin biopsy showed thickening and homogenization of dermal collagen with superficial and mid dermal lympho-histiocytic infiltrate. This confirmed the diagnosis of morphea. The second patient was a 20 years old male presented with annular atrophic yellowish plaques on both upper and lower limbs. The lesions were slightly indurated. His condition started 10 years ago. The patient had insulin dependent diabetes mellitus for which he received subcutaneous insulin injections. Dermoscopic examination of the centre of the plaques revealed yellowish-orange background, arborizing vessels, whitish areas and patchy pigmented reticulum. The edge of the plaques showed well-defined violaceous border. A skin biopsy of one of the lesions revealed atrophic epidermis, swollen degenerated collagen, lymphohistiocytic infiltrate and many plasma cells were seen. This confirmed the diagnosis of NL. Dermoscope is a useful tool for differentiating morphea from NL.

P1-61

DERMOSCOPIC FINDINGS OF PHOTOAGING IN EGYPTIAN PATIENTS

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Introduction: Dermoscopy is noninvasive optical surface microscopy useful for diagnosis of photoaging. Dermoscopic photoaging scale (DPAS) evaluation criteria include yellowish discolouration, white linear areas of scarring, lentigo, hypopigmented-hyperpigmented macules, telangiectases, actinic keratosis, seborriehic keratosis, senile comedones, deep, superficial and criss-cross wrinkles.

Patients and Methods: Thirty two individuals were evaluated for photoaging by clinical, dermoscopic examination and digital imaging of their facial sun exposed areas as forehead, right cheek, left cheek and chin to detect the prevalence of different dermoscopic findings in their lesions using the polarized contact dermlite II HR dermoscope aided by Samsung K Zoom camera and scored by the help of (DPAS).

Results: Thirty-two individuals, 7 individuals were grade 2 Glogou, 19 individuals were grade 3 Glogou and 6 patients were grade 4 Glogou. The grade 2 Glogou individuals were examined and scored with mean DPAS of 10.28, grade 3 Glogou individuals scored with mean DPAS of 12 while the grade 4 Glogou individuals scored with mean DPAS of 18.33. Photoaging of forehead scored with mean DPAS of 2.8, in right cheek scored with mean of 4.15, in left cheek scored with mean of 4.15 and in chin scored with mean of 1.68.

Conclusion: Dermoscopic photoaging scale (DPAS) is reliable in assessing photoaging in Egyptian patients of skin phototype III & IV. Glogou 4 individuals achieved the highest prevalence DPAS score which was higher than Glogou 2 and 3. In addition to that the cheeks scored higher mean DPAS than forehead and chin denoting that there was severe photoaging which may be explained by high prevalence of veiled females (partialy covered) among Egyptian females.

P1-62

HAIR LOSS IN CHILDREN: CLINICAL AND DERMOSCOPIC STUDY IN EGYPT

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Background: Hair loss in children is commonly encountered in the dermatological practice. It plays an important role in the child psychological stability. More than a decade ago, the diagnosis of hair and scalp disorders was based on clinical examination, pull test, KOH, culture and other methods for hair loss assessment. In 1980, the dermoscopy era has started. Since then, Dermoscopy has been used as a new fast, noninvasive, and cost efficient technique for easy in-office diagnosis of skin, hair and scalp disorders.

Objective: To statistically analyze the most common causes of hair loss among Egyptian children clinically and dermoscopically.

Methods: A total of 2250 children were examined at the Dermatology outpatient clinic in Misr University for Science & Technology (MUST) Hospital during the period from April 2013 to April 2014 complaining of various clinical dermatological symptoms. Of these patients, 255 children were complaining of hair loss and scalp disorders. Patient's age ranges from 2 to 15 years, belonging to both sexes. Each child was examined clinically and dermoscopically.

Results: Study of different causes of hair loss among the 255 patients revealed that tinea capitis had the highest percentage (29.8%), followed by traction alopecia (16.9%), and toxic alopecia secondary to pediculosis was the third in order (15.3%) while (13.3%) were diagnosed as alopecia areata, seborrhic dermatitis and scarring alopecia was (6.7%) and

trichotillomania (3.1%). Other causes of hair loss observed in this study included psoriasis; pitryasis amenteacea; hair loss due to hair relaxers; androgenic alopecia; short anagen syndrome, folliculitis decalvans and ectodermal dysplasia. Acne keloidalis and sebaceous nevus showed the least percentage (0.4%). Each case underwent interpretation to different dermoscopic features which was statistically analyzed.

Conclusion: Hair loss is a common problem among Egyptian children where tinea capitis showed the highest percentage. Few studies concerning the use of dermoscopy in the study of hair disease done exclusively on children were found. None of these studies were done in Egypt. Our study concluded that the routine use of dermoscopy in the clinical evaluation of scalp and hair disorders in children improves diagnostic capability beyond simple clinical inspection and reveals novel features of disease, which may extend clinical and pathogenetic understanding.

P1-63

DERMOSCOPIC FINDINGS IN DIFFERENT TYPES OF PSORIASIS IN EGYPTIAN PATIENTS

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Dermoscopy of PP reveals white scales and regularly distributed dotted vessels on a light red background. Detection of other morphological types of vessel should raise doubts about the diagnosis of PP. The purpose of this study to review dermoscopic findings in different types of psoriasis and to investigate their incidence in the Egyptian community.

Method: Dermoscopic examination of 35 patients with the preliminary clinical diagnosis of psoriasis. For all lesions macroscopic clinical photographs and documentation of the dermoscopic findings were performed using the polarized contact dermlite II HR dermoscope aided by a 3x optical zoom Samsung S4 Zoom camera.

Results: Of the 35 patients who were enrolled in the study 26 suffered from PP, 5 from the palmo-planter type, 3 had pustular psoriasis and only 1 was erythrodermic. Their dermoscopic findings were as follows. In the 26 patients suffering from plaque psoriasis, 76.9% had dotted blood vessels, 53.8% had light red background, 46% showed dull red background, 23.0% had combined dotted and linear blood vessels, 69.2% were arranged in rings, 7.6% regularly arranged or found peripherally and 15.3% arranged in clusters. 84.6% of the patients had white scales, 11.5% with white and yellow scales, 3.8% with yellow scales, scales distribution was as follows 34.6% centrally, 30.7% patchy, 19.2% diffuse and 15.3% peripherally. In the 5 patients suffering from palmo-planter psoriasis light red background was present in 60%, while the other 40% showed yellowish background, with 80% dotted blood vessels, 20% linear blood vessels arranged as 60% in clusters, and 20% regularly and peripherally arranged with 80% white and yellow scales, 20% with white scales, which 100% diffusely distributed. In the 3 pustular psoriasis patients 66.6% had dull red background, 33.3% had yellowish background, with 100% dotted blood vessels, arranged 33.3% in clusters, peripherally and in rings, with 66.6% with white and yellow scales, 33.3% with white scales, distributed as 66.6% peripherally and 33.3% centrally. The single patient who suffered from erythrodermic psoriasis showed dull red background, pinpoint blood vessels arranged peripherally, with extensive white scales diffusely distributed.

Conclusion: In our study Dermoscopy proved itself as a useful diagnostic tool to differentiate between types of psoriasis, through specific findings which cannot be elucidated clinically.

P1-64

CLINICAL AND DERMOSCOPIC CHARACTERISTICS OF CONGENITAL MELANOCYTIC NEVI AMONG EGYPTIANS

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Congenital Melanocytic Nevus (CMN) found in infants at or shortly after birth. It occurs in 1% of infants.They are divided into: (1) Small: diameter less than 2 cm. Meduim: diameter more than 2 cm but less than 20 cm. Giant.(2,3,4). Dermoscopy is used for diagnosis of pigmented skin lesions and their differentiation from other pigmented neoplasms.

Aim of the Work: is to assess by dermoscopy with 10-fold magnification the morphological features of CMN among Egyptians and to detect the incidence of atypical melanocytic nevi among them.

Patients and Methods: Eighty-two Egyptian patients having CMN were enrolled in the study with sum of 130 lesions. They were subjected to family history, stressing on the incidence of familial CMN & skin cancers followed by clinical examination, photography & dermoscopic examination using the polarized contact Dermlite II HR dermoscope aided by a 3x optical zoom Samsung K camera.

Results: The lesions of head and neck represented 45%. By dermoscopy, the pseudonetwork pattern was present in 54.2% of lesions, the homogenous pigmentation in 27%, the reticular pattern in 20.4%, hypertrichiosis in 8.5%, the globular pattern in 3.4%, cobblestone pattern in 1.6% where each of the perifollicular hyperpigmentation, milia like cyst, regression white structures and atypical pattern was seen in 5% and only 1.6% of the lesions showed irregular blood vessels. The lesions of the body represented 53% of the total lesion count. By dermoscopy, the reticular pattern was seen in 49.3% of patients, homogenous pattern in 33.3%, globular pattern in 14.5%, milia like cyst in 13%, perifollicular hyperpigmentation was 10%, regression white structures were 4.3%, atypical pattern was 1.4% where cobblestone and pseudonetwork patterns were 5.8% each and 1.4% of the lesions showed dotted blood vessels.Thepalmoplanter

lesions represented 2.5%. Clinically, they were small sized showing parallel furrow pattern.

P1-65

DERMOSCOPIC FINDINGS IN DIFFERENT NAIL DISORDERS AMONG EGYPTIAN PATIENTS

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Introduction: Dermoscopy is a non-invasive technique that allows a rapid and magnified *in vivo* observation of the skin with the visualization of morphologic features invisible to the naked eye. It is becoming widely accepted and used in the medical community. The application of dermoscopy in the evaluation of nail disorders is still new. The white superficial onychomychosis shows irregular, white-to-yellowish patches in the nail plate. Melanocytic nevus shows brown longitudinal parallel lines that are regular in colouration, spacing and thickness throughout the whole lesion. Brown to black longitudinal lines, irregular in colouration, spacing and thickness disrupting the normal parallel pattern are seen in melanoma.

Objectives: To describe and evaluate dermoscopic patterns associated with different nail diseases.

Patients and Methods: This study was performed over 13 Egyptian patients suffering from different nail disorders. Clinical as well as dermoscopic examination & imaging was done for their nails using the polarized contact Dermlite II HR dermoscope aided by a 3x optical zoom Samsung S4 Zoom camera, after history and informed consent were taken.

Results: Of the 13 studied patients, 6 had nevi, 3 had subungual hematoma, 2 had lichen planus of the nails, 1 had onychomycosis and 1 suffered from melanoma. The 6 patients who had nevi all showed regular longitudinal pigment bands, all patients had one affected nail, 83.3% of them had a single band, while 16.7% had multiple bands, 66.7% had brown colour, while 33.3% showed black colour and only one patient (16.7%) showed pseudo Hutchinson sign. Regarding the subungual hematoma patients all showed dark red subungual affection, its pattern was macular (droplets) in 33.3% and patchy in 33.3% and combined in 33.3%. The lichen planus patients (100%) showed peripheral splitting, while 50% showed longitudinal ridging. The onychomycosis patient showed diffuse green black discolouration of the nail associated with longitudinal striations and peripheral splitting. The melanoma patient suffered from irregular black bands and micro Hutchinson sign was evident as well.

Conclusion: Dermoscopy is a very useful tool to diagnose different nail disorders by easily demonstrated signs that are not visible clinically and can save time and effort and spare patient invasive diagnostic techniques as biopsy.

P1-66

DERMATOSCOPY AND TINEA NIGRA: A CASE REPORT

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Tinea nigra is an asymptomatic fungal infection of the horny layer of the skin that rarely affects the palms and soles. It was first described in 1891 in Brazil by Alexandre Cerqueira as keratomycosis nigra palmaris. It is caused by the dematiaceous filamentous fungus called *Hortaea werneckii* that mainly occurs in tropical and subtropical regions. The clinical appearance of tinea nigra is most commonly a brown to greenish-gray, well-defined, unique, pigmented macular patch. It tends to affect the palms, but also occurs in soles, neck and trunk. It is generally asymptomatic and can resemble a melanocytic acral nevus or even a melanoma. Dermoscopy has being used as an important tool to aid in the diagnosis of innumerable skin conditions, including infectious diseases and infestations (entodermoscopy). The typical dermatoscopic patterns of tinea nigra were first described by Gupta et al. (1997) as characteristic pigmented spicules found in nearly every lesion, not respecting the dermatogliphics lines of the skin. Tinea nigra is commonly confused clinically with the acral nevus and especial with melanomas due to the frequent report of recent appearances, highlighting the importance of dermatoscopy as an adjuvant technique in the differentiation of this fungal disease and melanocytic lesions, in turn avoiding unnecessary biopsies. The present study describes the case of a 28-year-old woman who reported a pigmented lesion on the right sole of her foot which she had for about two months. This lesion was asymptomatic, and dermatoscopy showed fine, wispy, light brown strands which form a reticular-like patch, with a uniform brown colour that does not follow the furrows and ridges in the skin.

P1-67

ECCRINE HIDROCYSTOMA: DERMATOSCOPIC FEATURES

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Eccrine hidrocystomas are thought to develop from cystic dilatation of eccrine ducts due to retention of eccrine secretions, while apocrine hidrocystomas are thought to represent adenomas of apocrine sweat gland coils. Hydrocistomas are classified as solitary (Smith type) and multiple (Robinson type). Eccrine hidrocystomas are mostly located on the periorbital areas, but lesions may be found on other areas of the face, head and trunk. They are cystic, small (1-3mm in diameter), often blue in colour and occur mainly in middle-aged woman. They can enlarge with heat exposure or during

the summer and regress with cooler temperatures. In the few cases reported of eccrine hidrocystoma, dermatoscopy pattern exhibits structureless skin-coloured/yellowish to bluish areas and linear vessels. We report a 62-year-old female patient with an asymptomatic pigmented macule on her right ala of the nose. The lesion had been present for two months with increase in size. Physical examination showed a 2x2 mm, non-translucid, bluish pigmented lesion and the patient reported no triggering factors. Dermoscopy revealed a bluish homogeneous pattern. Surgical removal was chosen based on the late onset character of the lesion and its history of recent growth. Histopathological examination confirmed eccrine hydrocistoma (decapitation secretion in the cells of the inner layer was not present). Nasal location, as in this patient, is rather unusual. We describe an uncommon skin tumor with few dermatoscopic studies reported in the literature.

P1-68

THE BLUE HUE IN DERMATOSCOPY: A DIAGNOSTIC CHALLENGE

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The analysis of colours as well as dermatoscopic structures plays an important role in the evaluation of pigmented skin lesions. Among the most commonly identified hues (light and dark brown, black, red, blue, yellow and white), the blue hue is of utmost importance, as it highlights the possibility of diagnosing a melanoma. In these tumors, blue can appear as a bluish-white veil, as well as a relatively homogeneous blue pattern. However, although it deserves special attention due to its signaling of a melanoma, the detection of the blue hue through a dermatoscopic exam can also occur within the realm of other malignant lesions, such as basal-cell carcinoma, as well as in benign lesions, including the melanocytic nevus (acquired and congenital), the blue nevus, and vascular lesions (angioma, angiokeratoma, and hematoma). Melanoma metastasis also frequently presents the blue hue. Although in the majority of cases it is common to identify other criteria that aid in reaching a specific diagnosis, such as melanomas (irregular pigment network, streaks, pseudopods, blue-white veil, regression), basal-cell carcinoma (arboriform telangiectasias, leaf-like areas, ovoid nests, gray-blue globules, spoke-wheel-areas) angiomas and angiokeratomas (red-blue lacunes), there are also situations that present challenging diagnoses. The present study seeks to show a series of different types of lesions (angioma, pigmented basal-cell carcinoma, blue nevus, nodular melanoma, and melanoma metastasis) with similar dermatoscopic aspects, emphasizing the caution that the analysis of these lesions demands, as well as the importance of the patient's clinical history, especially if it is a growing new lesion.

P1-69

PIGMENTED BASAL CELL CARCINOMA MIMICKING MELANOMA

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Basal cell carcinoma is the most common cutaneous neoplasia and is frequently related with white skin and intermitente exposure to ultraviolet radiation. The pigmented variation represents 6% of the all basal cell carcinomas and can be shown as superficial, nodular, micronodular, noduloulcerative and multicentric subtypes. Depending on the distribution of the melanina into the tumor, it can simulate melanoma, seborrheic keratosis, bowen's disease and other tumors. A 75 year old female patient, fototype 4 reffered a lesion with 30 years of evolution on the lower back that has been encreasing at the last 3 years. Clinically, it was a 2cm blue-dark dome, with ceratotic surface. Dermoscopy showed a blue-gray homogeneous área, with a dark blotch and typical maple leaf-like structures at the periphery that highly suggested the diagnosis. Excisional biopsy confirmed the diagnosis of nodular pigmented basal cell carcinoma. Pigmented basal cell carcinoma is usual in photoexposed areas in fair skin patients. However, photoprotected areas and skin of colour patients should also be carefully examined because of the possibility of these neoplasias. In all photypes, pigmented basal cell carcinomas and seborrheic keratosis are common clinical diferential diagnosis of melanoma. Dermoscopy is a strong tool to guide the diagnosis. The dermocopic criteria to diagnose pigmented nodular basal cell carcinoma are: arborizing vessels, ulceration, short white streaks, blue-grey ovoid nests, multiple blue-grey dots, in-focus dots, maple leaf-like areas, spoke wheel areas and concentric structures.

P1-70

A BASAL CELL CARCINOMA WITH BLUE-WHITE VEIL PATTERN ON DERMOSCOPY

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Background: Blue-white veil (BWV) pattern is one of the criteria in algorithms used to make diagnosis of melanoma, or for laypersons the diagnosis of malignancy. It is seen rarely in basal cell carcinoma (BCC). Case: 55 year old male patient had a seven mm, black papule on his nose that had been present for more than 5 years. Dermoscopy revealed maple-leaf like areas, large blue-gray ovoid nests, multiple blue-gray globules, arborizing vessels and blue-white veil. The BWV occupied in between the nests and globules in a lattice-like configuration and cast a light shadow on entire surface of

the lesion. Histopathologically the tumor was a nodular type BCC with no hypergranulosis or hyperkeratosis. Fibrosis in the stroma was prominent. We believe this fibrosis between the tumor islands could be the counterpart of BWV image on dermoscopy. Conclusion: BWV is not among the classical dermoscopy criteria of pigmented BCC. This pattern was recognized in 1.8-57.5% of BCC's in studies from Mexico, Turkey, Italy, Australia and the highest frequency was reported from Turkey. The tumor in our case was heavily pigmented, relatively large in diameter and had a long duration, with the unusual BWV pattern on dermoscopy. As in our case, BWV and other features of melanocytic lesions have been reported more frequently in heavily-pigmented BCC, making it difficult to differentiate these lesions from melanomas or other melanocytic lesions. Histopathological type and degree of pigmentation are known to affect dermoscopic patterns of BCC's. Whether the duration of the lesion or ethnicity could make a difference in dermoscopy of the BCC is yet to be investigatied in the future.

P1-71

DERMOSCOPIC OBSERVATIONS IN ACANTHOSIS NIGRICANS

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Background: Acanthosis nigricans is common disorder characterized by hyperpigmented, velvety, hyperkeratotic lesions involving predominantly intertriginous areas and neck. It is usually diagnosed clinically but diagnosis is difficult in early stage. Dermoscopy is a new non-invasive diagnostic tool in clinical practice, which can magnify pigment and structures in epidermis and dermis. Aanthosis nigricans shows hyperpigmentation, hyperkeratosis and papillomatosis on histopathology. So dermoscopy can provide valuable information about early diagnosis of acanthosis nigricans.

Objective: To describe dermoscopic patterns in varying severity of Acanthosis Nigricans.

Methods: Cases with typical clinical presentation of Acanthosis Nigricans were included in study. All of them were evaluated by a complex video-dermoscope (Dermaindia TLS Ultracam).

Results: We observed dermoscopic findings in 25 cases with varying severity of acanthosis nigricans. In all cases, we found pebbled, criss-cross to cribriform surface with hyperpigmented dots and globules. With polarized light, we also noticed hyperpigmented dashes, arches, comedo like openings, reticulated and arboriform patterns. It correlates with hyperkeratosis, papillomatosis and basal layer hyperpigmentation histopathologically.

Conclusions: To conclude, dermoscopy is a non-invasive diagnostic tool in clinical practice. It may prove to be useful for early diagnosis and differentiation which can increase diagnostic efficacy in acanthosis nigricans.

P1-72

QUANTIFICATION OF SKIN XEROSIS USING AN ULTRA-HIGH DEFINITION VIDEODERMATOSCOPE ON A COHORT OF 149 HEALTHY SUBJECTS

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Introduction: Different methods have been used to study skin xerosis and they are more used in dermatology or cosmetic research laboratories than in the daily practice. Skin xerosis is visible under dermatoscopy as the presence of microscales. We described the use of a ultra-high definition videodermatoscope for xerosis quantification.

Materials and Methods: We examined 149 healthy volunteers from the PROOF (PROgnostic indicator OF cardiovascular and cerebrovascular events) cohort, a large representative community of older adults who were recruited from the town of Saint-Étienne (France) and aged 65 years at the inclusion date. All subjects were aged 74-81 years at the time of this dermatological study and did not use any cosmetics for the 2 days preceding the investigation. They were examined in a standardized procedure with an ultra-high definition videodermatoscope (C-Cube, Pixscience, Toulouse, France). Lateral photo-exposed surface of the forearm, medial photoprotected surface of the arm, and malar region were examined. 80 subjects were evaluated in June 2013 (group 1) and 73 other subjects in November 2013 (group 2). 149 images were obtained for the two areas of the upper limbs and 148 for the face. Images were analyzed using the CIELab repository to identify scale density and using index colour algorithms. Statistical analysis was performed by ANOVA test.

Results: Scale density was higher in group 2 than in group 1 (P = 1,58x 10-7). Scale density of zone 1 (photoexposed surface of the forearm) was significantly higher than zone 2 (non-exposed area of the arm) and zone 3 (face) (P = 0) in both groups.

In contrast, the non-exposed arm and face had statistically similar scale density in group 1 (P = 0.849) and group 2 (P = 0.4909). In group 2 scale density was higher in photoexposed forearm than in group 1.

Discussion: Only the photoexposed forearm presented a difference in scale density over time. There is a seasonal effect which tends to increase the dryness of this body site in November compared to June. Moreover scale density of this area was higher than in the other two body sites for both the examination in June and November.

Conclusion: It is possible to quantify the density of skin scales using a videodermatoscope and image analysis software. The efficacy of different emollients can be easily evaluated.

P1-73

CLINICAL AND DERMOSCOPIC FEATURES OF DESMOPLASTIC TRICHOEPITHELIOMA

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Desmoplastic trichoepithelioma (DT) is a rare benign adnexal tumor with follicular differentiation. It usually appears as asymptomatic, firm, annular papules frequently on the face of young women. The diagnosis of DT is based on clinical and histological features which can be similar, in some cases, to the morpheaform basal cell carcinoma. Clinically, DT can mimic a several skin tumors such: intradermal nevus, sebaceous hyperplasia and basal cell carcinoma. There is a small subset of DT that does not have the classic features and can be clinically and histologically confused with morpheaform basal cell carcinomas and microcystic adnexal carcinomas. We present a 33-year-old woman with asymptomatic, slow-growing papules located on her left cheek and forehad. The physical examination demonstrated a firm, whitish coloured papules, 5 mm in maximum diameter, and slightly depressed in the center. Dermoscopy revealed fine arborizing vessels at the periphery, on a white-ivory background. A several white clods probably corresponding to horn cysts were also observed. Leaf-like structures and ovoid nests were not seen. Histopathological examination confirmed the diagnosis of DT.

P1-74

YELLOW AND ORANGE IN CUTANEOUS LESIONS: CLINICAL AND DERMOSCOPIC STUDY

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Introduction: colour of the lesions is considered as a diagnostic criterium for some cutaneous pathologies. Nevertheless, while red, brown and blue have taken important role in dermoscopic descriptions, other colours like yellow and orange have been given much less importance. Thus, orange colour has been described in the granulomatous lesions and the yellow one has only been related to the lipid-rich lesions.

Objectives and Methods: This study aims to review those lesions in which the yellow and orange colours have been considered constitutive or essential for diagnosis, and on the other hand to describe a wide range of tumor and inflammatory skin diseases, which may appear these colours and are not well reflected in the literature. To do this, we have made a review of the dermatological classic books, texts of dermoscopy and PUBMED looking for information about these colours in clinical and dermoscopic context. Also, we have searched those lesions in which appeared in these two colours, in the photographic archive of the Departments of Dermatology of the Hospital General Universitario de Alicante and the Hospital of Santa Tecla of Tarragona.

Results: Orange and yellows colours are found in much more lesions than could be thought

Conclusions: we think orange and yellow colours have more importance in the dermoscopic diagnostic, and their presence in some lesions should not exclude determinate diagnostics

P1-75

DERMOSCOPY OF ECCRINE POROMA MIMICKING MALIGNANT MELANOMA

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Acrospiroma eccrine, better known as eccrine poroma, is a benign anexial neoplasm of the skin. Its clinical aspect can masquerade as some other nodular lesions. The lesions commonly occur on the sole of the foot, the hands, and occasionally on the nose, eyelids, neck, and chest.

We report a case of a woman fifteen years old, with a asymptomatic single nodule, located on the right arm a few years ago, which caused an equivocal pigmented skin lesion both clinically and dermoscopically. In our case, we found a homogeneous black pattern linked to this kind of anexial neoplasm, clinically masquerading as a nodular malignant melanoma. No other dermoscopyc features were present. Dermoscopy improves the clinical diagnosis of many pigmented and non-pigmented skin tumors, but is not always easy distingueshed them. Acrospiroma eccrine may clinically mimic a number of benign and malignant skin tumors. It has typical histopathological features; it has a propensity toward varied clinical presentations. Hence, such atypical nodules require a biopsy for confirmation of diagnosis and further management. Eccrine poroma arises within the lower portion of the epidermis and extends downward into the dermis. When eccrine poromas are located within the dermis, they consist of tumor islands of various shapes with ductal lumina; these are described as 'dermal duct tumors "as our case. Our case confirms the great difficulty in formulating a clinically and dermoscopically correct diagnosis, and points to the possibility of this histopathological diagnosis after excision of a lesion with a black homogeneous dermoscopic finding.

P1-76

SEBORRHEIC KERATOSIS MIMICKING MELANOMA

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Seborrheic keratosis is a benign epidermic tumour very common in adulthood, without sexual predilection. It frequently develops on the trunk, neck, face and arms and rarely on the mucous membranes. The etiology of the seborrheic keratosis is unknown but heredity, sunlight and human papilloma virus have been related as risk factors. Clinically seborrheic keratosis is very easy to diagnose because it often appears as an exophytic coin shape lesion with sharp borders and a rough and verrocous surface. When we have some problems to diagnose clinically a seborrheic keratosis, dermoscopy is a very useful tool. Seborrheic keratosis can show an irregular structure and multiple colours (dark brown, black, skin coloured, pink, yellow). The typical dermoscopic features include: milia-like cysts, comedolike openings, irregular crypts, fissures, ridges, blue grey globules, moth eaten and sharply demarcated borders, light brown fingerprint-like parallel structures and harpin vassels. So seborrheic keratosis frequently reveals dermoscopic features that are fairly specific for the diagnosis. However the distinction between a seborrheic keratosis and a malignant lesion is not always possible and it may be necessary to excise some clinically atypical but histologically benign lesions.We report a case of a patient presenting a lesion mimicking on clinical and dermoscopical ground a melanoma skin cancer but with a final histological diagnosis of a benign seborrheic keratosis.

P1-77

MULTIPLE RECURRENT MELANOCYTIC NEVI AFTER CARBON DIOXIDE LASER TREATMENT: DERMOSCOPIC FEATURES AND CONSIDERATIONS

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Laser treatment, as a method for nevi excision, is preferred by many de rmatologists, plastic surgeons or general practitioners. Subsequent recurrence of nevi has been a matter of discussion for decades.

A healthy 35 years-old Caucasian male presented with multiple, irregularly pigmented and asymmetric nevi, during a routine clinical examination. Six months ago, he was treated with Carbon Dioxide Laser, by a General Practitioner, for nevi removal. This modality resulted not only in incomplete removal of melanocytic nevi but additionally, in the recurrence of almost all of them.

Identified recurrent melanocytic nevus is diagnostically challenging, because of its resembling appearance with melanoma. Our dermoscopic findings included an atypical pigment network with irregular streaks and a centrifugal growth pattern. Furthermore, laser treatment seems to have also caused the formation of white scar-like areas. Four of the nevi were surgically excised for histopathological examination to rule out melanoma. In all our cases, histology was consistent with recurrent combined melanocytic nevi. Laser treatment for melanocytic nevi for cosmetic reasons is still controversial, as the limitation of non-histopathological examination prior to therapy exists. Thus, through laser treatment, there is a potential induction of recurrent melanocytic nevi or a potential masking of a developing malignancy. This is supported by several publications. Dermoscopy may be a helpful tool in providing evaluation on recurrent melanocytic nevi and melanomas. It has been shown that pigmentation beyond the scar's edge is the strongest dermoscopic clue for melanoma.

P1-78

MELANOMA ON PREEXISTING DERMAL MELANOCYTIC NEVUS

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A 54-year-old woman was presented with a pigmented lesion on the right leg for several years. She has no personal or family history of melanoma. She was otherwise healthy. On dermatologic examination, a 10x15mm heterogenously pigmented and centrally elevated macule was observed. Dermatoscopy revealed atypical pigment network and pseudopots, shiny white streaks and whitish veil on the center surrounded with dotted vessels on a pinkish background. The lesion was totally excised. Histopathological diagnosis was melanoma in situ (Breslow thickness < 0.5 mm, AJCC 2009: T1a) on preexisting dermal melanocytic nevus. There have been a few reports of melanoma arising in a nevus, recently. One of them was a man with a black nodule with satellites located in the upper region of umbilicus which was clinically suspicious for melanoma (1). The other case was a man with a nodule on the scalp diagnosed as malignant melanoma derived from cerebriform intradermal nevus (2). The third case was a patient with albinism with a pinkish, firm, dome-shaped tumor over the pubic area (3). The clinical nature and location of the lesion was different and less suspicious for melanoma in our case comparing with the previous cases. Moreover, none of the recent reports included dermatoscopic images of the lesions. The occurrence of multipl dermatoscopic findings of an atypical lesion led us for suspicion of melanoma in this case. Therefore, the importance of dermatoscopy for early diagnosis of melanoma was emphasized by the agency of the presented case.

P1-79

CLINICAL AND DERMOSCOPIC CHARACTERISTICS OF CONGENITAL MELANOCYTIC NEVI IN CHILDHOOD

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Congenital melanocytic nevi are present at birth or develop during the first year of life. They derived from neural crest melanoblasts and present in 1-6% of newborn infants. Besides the fact that congenital melanocytic nevi may be aesthetically displeasing, they also increase the risk for developing cutaneous melanoma and neurocutaneous melanocytosis. In this study, we evaluate 150 pediatric patiens with congenital melanocytic nevi who were admitted to our dermoscopy clinic. We investigate the congenital nevi for the number, localization, colour, shape and structural features. Also, we asked patient parents for the additional disease, family history and melanoma history of patients' family. There are some non-scientific opinions about the formation of congenital nevi in Turkish population. Some of the people believe that when something just like the shape of the nevi touch to the mothers body when she was pregnant, then the nevi occur on the same place of the baby's body with the same shape or colour of the suspicious matter. We also asked the mothers opinion for the formation of nevi. This study considers the clinical and dermoscopic characteristics of congenital melanocytic nevi in childhood and define a paramedical aspect for the formation of nevi according to some Turkish families.

P1-80

A PEDIATRIC CASE OF SYSTEMIC LUPUS ERYTHEMATOSUS: CLINICAL AND DERMOSCOPIC FINDINGS

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Introduction & Objectives: Cutaneous Lupus Erythematosus is uncommon in pediatric age. The risk of SLE in children with discoid lupus erythematous (DLE) has been found to be higher than in adults. Herein, a pediatric case of SLE and the dermoscopic findings of the skin lesions are described.

Case: A 14 year old girl applied to our clinic with complaint of facial erythematous plaques of two years duration. Photosensitivity was positive. She had erythematous scarring scaly plaques on the face; cicatricial alopecia on the scalp; eroded areas on the palate; and periungual telangiectatic erythema. Dermoscopic examination of facial lesions revealed follicular keratotic plugs, perifollicular whitish halo, polymorphous telengiectatic vessels, white scales, and structureless whitish areas. Irregularly dilated capillaries and tortuous, ramified/bushy capillaries were determined in periungual region. Histopathologic and direct immunofluorescence examination findings were consistent with DLE. Antinuclear antibodies, anti-dsDNA antibodies and, anti-sm antibodies were positive. Serum C3 and C4 levels were decreased. According to the clinical, dermoscopical, histopatological and serological findings the patient was diagnosed with SLE.

Discussion: Perifollicular whitish halo, follicular keratotic plugs, polymorphous telengiectatic vessels, white scales, pigmentation, structureless whitish areas and, follicular red dots are the dermoscopic findings reported in DLE. We observed all those findings other than follicular red dots and pigmentation, which are relatively uncommon, in our patient. Nail fold dermoscopy findings were consistent with connective tissue disease. DLE in conjunction with SLE was suggested. Histopathological and serological findings confirmed the diagnosis.

Conclusion: Pediatric DLE should not be overlooked because of the high risk of SLE. Dermoscopy seems to be a useful tool in the diagnosis of DLE.

P1-81

UNEXPCTED DIAGNOSIS REVEALED BY DERMOSCOPY

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Dermatology never stops surprising us either with new diseases or syndromes, or with unexpected presentations of the already known diseases. We describe the case of a 58 years old woman who developed during the last two weeks a linear eruption on the lateral thorax, along the ribs. At the moment of the physical examination, the lesions were purple-red and slightly elevated, also slightly pruriginous. The patient was not sure about the presence of vesicles in the beginning of the eruption. At the first glance, the lesions resembled to herpes zoster, though there was no history of pain and the lesions were not typically grouped; another option might have been endogenous eczema, because of the slight pruritus, but the colour was too purplish, there were no notable scales, the shape was unusually linear and the history of vesicles was debatable. A linear nevus was highly improbable because of the very late onset and clinical aspect. The eruption was also too wide for larva migrans, in spite of the serpiginous traject. In this equivocal case, dermoscopy instantly showed changes pathognomonic of lichen planus: a polymorphic pearly whitish structure (corresponding to the Wickham striae—WS). The aspect of WS was annular or arboriform, with spiky border projections intermingled with dotted or radial vessels. The histological exam confirmed the diagnosis. Our case demonstrates the indescribable usefulness of dermos-

copy in the rapid—sometimes instantaneous—diagnosis of equivocal lesions.

P1-82

THE USE OF DERMOSCOPY IN THE DIAGNOSIS OF ORAL PAPILLOMA MIMICKING OTHER ORAL MUCOSAL LESIONS

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Papilloma (squamous papilloma) is a benign epithelial enlargement that is caused by human papilloma virus infection. Benign epithelial tumors of oral mucosa are benign tumors of squamous epithelium. They are fixed to the surface mucosa. Mucosal papilloma is firm, non-painful, and pedunculated, and has a rough white cauliflower or warty surface with numerous fingerlike processes. It arises from the surface stratified squamous epithelium, is exophytic, and it does not invade underlying tissue. Excisional biopsy including the base of the lesion is the treatment. Recurrence is unlikely. It may mimick some other oral mucosal lesions. Dermoscopy can be useful in the differential diagnosis of these mucosal lesions. Here, we report the case of a 26-year-old woman who had a solitary papular white lesion on her upper lip mucosa, which appeared 3 months ago. Dermoscopic examination revealed a white central snake-teeth-like keratotic lesion surrounded with linear and fish-scale like vascular structures. The background colour was pinkish-red. No other pigmentation was detected. We treated this case by performing an excisional biopsy including the base of the lesion, and sent the specimen for pathologic examination. Histopathologic study demonstrated the typical histopathological findings of verruca vulgaris. We present this case to draw attention not only to the dermoscopic findings of mucosal papilloma, but also its differential diagnosis, as it can be mistaken clinically for a variety of other oral mucosal lesions.

P1-83

FACTORS INFLUENCING ON CLINICAL AND DERMOSCOPIC FEATURES OF LENTIGO MALIGNA

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Background: Little is known about the frequency of clinical and dermoscopic patterns of lentigo maligna (LM) in relation to specific anatomic sub-sites and patients characteristics.

Objective: To assess the frequency of clinical and dermoscopic features of LM and to correlate them to specific anatomic sub-sites, patients' age and gender.

Methods: Retrospective analysis of clinical and dermoscopic images of a series of consecutive, histopathologically diagnosed, facial and extra-facial LM.

Results: A total of 201 cases from 200 patients (mean age 69.19 ±12.54 years) including 120 women were collected. Most cases were located on the face (n=192, 95.5%). In 102 cases, LM presented as clinically solitary facial macule (s/LM), whereas it was associated with multiple surrounding freckles in the remaining cases. sLMs were significantly smaller (<10 mm vs. >10 mm; p=0.020) and associated with younger age compared with LM associated with multiple surrounding freckles (mean age 67.73±12.68 years versus 71.34±11.59 years, respectively; p=0.036). Dermoscopically, gray colour irrespective of a specific pattern was the most prevalent finding seen in 178 (88.6%) cases.

Limitations: This was retrospective study.

Conclusions: The knowledge about the age, gender and site-related clinical features of LM associated with gray colour upon dermoscopy may enhance the clinical recognition of LM.

P1-84

DERMATOFIBROMA DERMATOSCOPYC SIMULATING MELANOMA

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Dermatofibroma (DF) is a very frequent nonmelanocytic skin tumor that can have dermoscopic features of melanocytic neoplasms. In the literature we found the description of the cases of a melanoma with the classic clinical features of DF. In our clinical observation we report about the patients with tumor with clinical and dermatoscopic signs of atypia, which was eventually dermatofibroma.

Case presentation: A 52-year-old man presented with a 7-year history of a lesion on his back. He had numerous episodes of sunburn in anamnesis. On physical examination, in the right scapular region was observed irregular pigmented tumor to 2 cm in diameter, thick consistency, with a nodular component positioned eccentrically. "Fitzpatrick's" sign was suspicious. Based on these clinical findings, the initial clinical impression was of a DF, state after traumatization. Under immersion dermoscopic examination was seen asymmetry of the structure, polychromia, atypical pigment network, foci resembling the structure of regression, white and blue structureless areas. Because of the medical history, clinical

examination, atypical dermoscopic picture was performed extended excisional biopsy followed by histopathological examination to exclude melanoma. At histopathologica examination: in the central part of the biopsy unevenly thickened epidermis. Hyperpigmentation keratinocytes of the basal layer of the epidermis. In thicker dermis detected node without clear boundaries, consisting of thickened connective tissue bundles oriented in different directions. In the course of beams—a dense histiocytic infiltration. A marked vascular congestion, localized between collagen bundles, focal extravasation with the deposition of hemosiderin. Conclusion: The identified changes are consistent with the structure of dermatofibroma. Dermatofibroma may have some dermatoscopic signs of malignant melanocytic tumors. A study of the correlation of clinical signs and dermatoscopy is necessary not only for the differential diagnosis of tumors but also to avoid unnecessary extended surgical procedures. In case of failure of clinical and dermatoscopic signs we can use more subtle methods of non-invasive diagnostics, such as *in vivo* confocal microscopy. For tumors with typical clinical picture dermatofibromas we recommend dynamic monitoring, in case of doubt—a biopsy followed by histological examination.

P1-85

THE ROLE OF DERMOSCOPY IN THE TREATMENT OF SKIN LESIONS

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Background: Seborrheic kerathosis (SK) are common benign lesion of the skin. Have distinct clinical features and dermatoscopic sign. The treatment may be cryo-destruction or laser excision-without a trace. But external factors (trauma, sun exposure, etc.) clinical picture changes and SK becomes difficult to verification. Which method of therapy in this case? A excision, considering of principles of surgical oncology. As a result of the operation, will be a scar on the face.

Case presentation: A 45 year-old woman presented with a 2-year history of a lesion on her cheek. She had periodically insolation and abrasion of clothing in anamnesis. Notes tumor growth. Subjective sensations and wound discharge lately.

On physical examination: On the skin of the left cheek was observed irregular pigmented tumor to 19 mm. in diameter and 4mm. height. Marked heterogeneity of structure: Sector on the rear edge of the lesion is a dark brown, almost black colour, with a bluish, gray shades. The upper and lower zones of the formation covered with hemorrhage crusts. Visible area formed by red papules (lacunas). In the front, do not suffer from trauma, edge area with a rough brown warty surface, the accumulation of horny layers. Infiltration of the base. The naked eye cannot exclude the melanoma.

Immersion dermoscopy: Signs of melanocytic lesions (pigment network, dots, streaks, sticks, globules and other features) not found. Black and blue colours were formed hemorrhagic crust, not pigment. In the area, free from hemorrhages, visible lacunar structure of Tissues. Abnormal blood vessels are absent, thus eliminating the BCC suspicion. A small area in front presented clear signs of SK (milia-like cysts, comedo-like opening, horny masses).

Result: Seborrheic kerathosis. Signs of long-term injury.

Treatment: Diagnosis SK and no signs of deep inflammation, allows gentle method of treatment. For example laser tangential excision with followed by histopathological examination This is done with a very thin beam of CO2 laser around it (Power 3 Watts. SuperPuls mode). Wound healing in 15 days. In the area of excision flat spot with erythema.

At Histopathologica examination: Seborrheic keratosis: Irritated type.

Conclusion: The method of dermoscopy has make the preoperative diagnosis is correct and select optimal method of neoplasm excision with the possibility of histological examination and an excellent aesthetic result.

P1-86

CONFUSING SIMPTOMS AND DERMOSCOPY IN A 48 YEARS OLD MAN

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We present the case of a 48 year old man who was seeking advice and cure for very confusing symptoms which he was presenting for about 3 weeks, every spring of the last 5-6 years. He came to us at the very beginning of his 2014 episode: the onset was with distal nail apparatus pain in all of his fingers (in dermoscopy, we noted a purplish colour of the fingernails with pale longitudinal striae and loops on the distal half of the nails; during the next day, the center of some striae became pink-purple, while subjectively the pain was increasing. In the following days some of the striae became purpuric and the pain started to diminish until it completely disappeared. Simultaneously, we noted progressive desquamation of the hyponichium and a peculiar kind of onycholysis, which firstly started along the previous striae and then evolved to the confluence of these longitudinal onycholytic areas. We observed remnants of the longitudinal hemorrhages both inside the nail edges and into the hyponichium. Slowly, with the nail regrowth, the symptoms disappeared. We thoroughly investigated the case, including blood tests for immune disorders and colagenoses, cryoglobulins, X-rays, Doppler ultrasonography and even distal nail biopsy. No one of these investigations was able to give us a clue for the cause of this disease or for its diagnosis, though we suspect some occlusive pathology of the distal nail apparatus microcirculation. Interestingly, our patient had an amputation of half of one of his fingers and, in this finger, we did not notice any change at all (in the others, actually, only the distal part

was involved, which was missing in the amputated finger). We gave our patient a treatment aiming to support his blood flow (Sulodexidum, Diosmine) and fight inflammation, but this did not seem to improve the course of the disease. We still do not have a diagnosis or explanation of the disease and we welcome any help.

P1-87

SIMILAR DERMOSCOPIC PATTERNS IN LOWER LIMB MELANOMA

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Dermoscopy is a valid, noninvasive and cost–efficient technique to screen different morphological structures within different types of skin lesions. Melanoma, the most feared skin cancer, due to it's fast potential of metastasis, is a malignant tumor of melanocytes, whose incidence has been increasing all over the world. In clinical practice, dermoscopy enhances diagnosis accuracy of melanoma, although most authors believe that there is still no specific diagnostic criterion which might lead to an unambiguous clinical diagnosis of this tumor. So far, there are several site specific features described in melanoma of the face and acral regions like the parallel ridge pattern or hyperpigmented follicular openings, annular-granular pattern and pigmented rhomboidal structures. We aimed to present three cases of lower limb melanoma with similar dermoscopic features and depict on possible regional specific characteristics of melanomas located in this anatomical site. The main morphological features revealed by dermoscopy in the evaluated lesions were: shiny, bright white, parallel, intersecting or disordered linear streaks suggestive of crystalline structures, associated with milky red areas and dotted and irregular scattered vessels. In the tumor periphery, there were irregular subtle brown dots and globules and remnats of an atypical pigment network, which oriented the diagnosis versus melanocytic lesions. All three tumors were hypomelanotic, as brown pigmentation was identifiable in less than 10% of the lesions surface. Hypomelanotic skin lesions represent a diagnostic challenge, and even dermoscopic analysis is often ambiguous in determining whether a lesion is benign or malignant. Our study revealed that the presence of associated morphological features such as crystalline structures and irregular dot-like vessels, on a background of milky red areas in lesions located in the lower limb region, even in the absence of pigment network, may be a significant dermoscopic finding for establishing the diagnosis of melanoma in this clinical setting and initializing a prompt treatment.

P1-88

EARLY IMAGES OF PLANTAR WARTS BY FURROW INK TEST

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Background: Hair follicles and eccrine ducts were suggested as reservoirs for certain human papilloma viruses (HPVs) based on in situ hybridization results. These findings may also be important regarding the location of epidermal stem cells. The furrow ink test is used to visualize skin furrows and eccrine pores by whiteboard marker. A whiteboard marker pen contains colourants, alcohol, and binder resin. Once this combination is transferred to a whiteboard, the alcohol evaporates, leaving the binder resin and colourant combination as a friable film loosely adhering to the board. This combination can be easily removed from the smooth surface, but it adheres to any scratches on the surface. This characteristic is appropriate to stain only the furrows of the skin, which helps distinguish the pigmented lesions on acral volar skin. This method could be an additional tool for the dermoscopic diagnosis of skin disorders that involve changes in skin texture such as porokeratosis.

Objectives: We examined the relationship between the early stage of plantar warts and eccrine pores, using the furrow ink test.

Methods: Furrow ink test: The skin surface is moisturized with a wet towel. The lesion is marked with a whiteboard marker pen, and the skin surface is then wiped with a dry paper towel. We examined the periphery and outside of clinically obvious viral warts to search for subtle changes of skin texture in the early-stage warts of two individuals.

Results: In Case 1 with large and multiple warts, the whiteboard ink marked multiple small circles in the periphery of the lesion. They were on one side of the ridge and partially touched the furrow. In another area, some small keratotic papules were observed at the center of the furrows rather than the ridges. In Case 2, small keratotic papules were observed in a wide ridge pushing other ridges aside. The findings seemed to be the initial changes of the skin textures in the development of the warts in this case.

Conclusions: The skin textures suggesting an initial stage of small plantar warts were varied. Further study is needed to clarify the relationship between the early stage of plantar warts and eccrine pores, as the number of cases examined here is small.

P1-89

PIGMENTED BASAL CELL CARCINOMA OR MELANOMA? A CASE REPORT

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Introduction and Objectives: Pigmented basal cell carcinoma (BCC) represents approximately 7% of all basal cell carcinomas. Main dermatoscopic features favouring pigmented BCC include: ulceration, large blue-grey ovoid nests, multiple blue-grey globules, maple leaf-like areas, spoke wheel areas and arborizing (tree-like) telangiectasia as well as absence of pigment network. Although dermatoscopic method for diagnosing pigmented BCC exists, it is not always easy to differentiate pigmented BCC from melanoma. Pigmented BCC often displays clinical features mimicking melanoma.

We are presenting the case of 51-years old patient who was referred to our Department due to slow-growing dark lesion on his back, suspected on melanoma.

Materials & Methods: An otherwise healthy 51 year old Caucasian man presented with an asymptomatic dark lesion on his back. Clinical examination revealed a solitary, heavily pigmented asymmetrical tumor localized on the left side of his back, measuring 24x18mm. Incidental findings were outstanding number of nevi of which some showed atypia. On dermatoscopy, lesion had darker border with arborizing vessels and blue-white veil. It was the finding of arborizing vessels that invoked the suspicion of pigmented BCC. Patient was referred to the surgeon for complete excision and histopathological analysis.

Results: The lesion was completely removed. On histopathological examination, the hemtaoxylin-eosin stained slides showed tumor composed of clusters of atypical basaloid epithelial cells with peripheral palisading. The diagnosis of basal cell carcinoma was established.

Conclusions: Pigmented skin lesions continue to pose a diagnostic challenge to even the most experienced physicians. However, it is our duty to improve our skills and employ all the equipement available in order to establish the correct diagnosis. Confocal scanning laser microscopy (CSLM) seems very promising in solving difficult cases and might be the way to improve diagnostic accuracy of pigmented skin lesions, by using only non-invasive techniques.

P1-90

DERMOSCOPY OF BASAL CELL CARCINOMA IN BROWN SKIN: AN INDIAN EXPERIENCE

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Introduction: Basal cell carcinoma (BCC) is the most common skin cancer. It tends to be locally invasive but rarely metastasizes. Incidence of BCC in India is 2-4%. In 6.7% to 8.5% of the cases it presents as a pigmented lesion. Dermoscopy is an *in vivo*, noninvasive diagnostic technique that permits a magnified view of the components of the epidermis and superficial dermis. There is limited data on dermoscopic features of basal cell carcinomas especially in Indian subcontinent.

Aim: Study was conducted to evaluate dermoscopy in the diagnosis of different subtypes of BCCs.

Materials and Methods: This study was carried in S. Nijalingappa Medical College, India. It was a case series study. In patients with BCC lesions were evaluated. Polarized dermoscope was employed. Histopathology was done to confirm the diagnosis. Data were tabulated in Microsoft excel sheet and described frequencies and percentages.

Results: There were 10 patients with 6 females and 4 males. Clinically, 7 pigmented, 2 nodular and 1 superficial BCC were observed. Dermoscopy showed arborizing and atypical red vessels with white structureless areas were demonstrated in 30%. Leaf-like areas in 40%, spoke wheel areas in 40%, blue-gray ovoid nests in70%, ulceration in 60% of patients.

Conclusion: Dermoscopy demonstrates specific patterns in BCC. Different patterns were observed in different subtypes of BCC. These patterns help clinician to differentiate from other pigmented tumors. Hence, dermoscopy can be a non-invasive diagnostic technique in the diagnosis of BCC. Authors recommend further studies involving large sample size and dermoscopic patterns correlating histopathological changes.

P1-91

FOUR QUIZ CASES OF 2014!

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Background: Dermoscopy is a valuable aid in diagnosing pigmented and not pigmented skin lesions. We report four difficult cases from our clinic. In those cases dermoscopy was a clue for diagnosis.

Methods: Cases are reported with a short clinical description, dermoscopy image and a histological picture if available. We propose a differential diagnosis by multiple choice options. Final diagnosis and a short discussion is shown at the end of the poster.

Case Description: Case 1. A 28 year old female patient with a melanocytic lesion of the left abdomen that changed in the last months by appearing less pigmented. Dermoscopy showed characteristics of regression with irregular dots and vessels asymmetrically distributed. Case 2. A 33 year old female patient with a melanocytic lesion in the center of abdo-

men that has shown regression of pigmentation in the last months. Dermoscopy showed hypopigmented area in the periphery with partially destroyed pigmented network and irregular dots. Case 3. A young girl with a worrisome, rapidly changed nevus on her leg without previous traumatism. Dermoscopy showed a peripheral vascular ring with a dermal nevus in the center. After some weeks, the nevus became to its normal appearance. Case 4. A 49 year old female patient is already known for hysterectomy for adenocarcinoma of endometrium in 2009. Her sister was operated in 2011 for neoplasia of colon and endometrium. The patient shows a nodular erythematous skin lesion on the left chest and lateral right trunk. Dermoscopy shows a non-melanocytic lesion with yellow lobularlike and vascular structures.

P1-92

NODULAR MELANOMA IN A YOUNG PATIENT WITH HODGKIN LYMPHOMA—CASE REPORT

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Nodular melanoma: accounts for almost 15-30% of all melanomas and is more frequently for this type of melanoma to begin de novo than to arise from a preexisting nevus. Histologically is characterized by extensive vertical growth into the dermis with a minimal or absent radial component.

We present a case of a 33-year-old female, who presented to our department for an ulcerated, nodular tumor located on the posterior back. At the clinical exam the lesion had a diameter of 4—4,5 cm, an irregular surface and multiple colours (black, blue, red, pink, brown). The preexistent lesion was a naevus that started to itch a year ago then it became nodular and started to bleed. From the personal antecedent of our patient we found that she was diagnosed in 2009 with Hodgkin lymphoma, treated with chemotherapy and radiotherapy. During the clinical exam we discovered numerous pigmented lesions, located on the trunk and on the arms. The dermoscopic image of the tumoral lesion shows an ulcerated area, with large blue-white structures and polymorphous colours. We also performed dermoscopy for some of the pigmented lesions. The hystopathological exam confirmed the diagnosis of invasive nodular melanoma. Our patient in this case has more factors for poor prognosis: a nodular melanoma, located on trunk, ulcerated and immunosupresia. The particularity of the case is a young patient with a nodular melanoma arised on a preexistent nevus and association with Hodgkin lymphoma.

P1-93

A PIGMENTED BALLOON CELL MELANOMA WITH BALLOON CELLS AT THE DERMO EPIDERMAL JUNCTION—A CASE REPORT WITH DERMATOSCOPY AND HISTOPATHOLOGY

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A case of balloon cell melanoma (BCM) encountered in a primary care skin cancer clinic in Melbourne, Australia is presented. The presenting lesion was on the posterior upper arm of a 66 year old man, measured 8 mm in diameter and was pigmented. Histopathology was reported as a balloon cell melanoma, Clark level 4, Breslow thickness 0.95 mm with a mitotic index of 3 per square mm. BCM is considered an extremely rare melanoma subtype. Only two previous dermatoscopic images of this tumour have been published. Neither were pigmented and a search of the literature has not discovered any previously published case report of a pigmented BCM. This case is also the first to describe unequivocal balloon cells at the dermo epidermal junction. This would appear to challenge the previous hypothesis that BCM is a vertical growth phase melanoma of dermal origin. Two separate BCM have now been detected by the same clinician in the same small primary care skin cancer clinic within a 12 month period. This suggests BCM may not be as rare as previously perceived.

P1-94

AGE AND ANATOMICAL PREVALENCE OF ACRAL ACQUIRED MELANOCYTIC NEVUS SHOWING UNCLASSIFIED DERMOSCOPIC PATTERN

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Background: Dermoscopy is a powerful tool when making a diagnosis of acral melanocytic lesions. If the pigmentation is dominant on the furrows, the lesion is possibly a nevus. In contrast, band-like pigmentation on the ridges is highly suggestive of melanoma. However, 5%—17% of acral acquired melanocytic nevus (AMN) lesions cannot be classified into these typical dermoscopic patterns.

Purpose: To clarify the clinical characteristics of acral AMN showing the unclassified (UC) pattern by dermoscopy.

Material and Method: The clinical findings were compared retrospectively between acral AMN with or without the following dermoscopic findings: PFP, LLP, FP, PRP, globular, reticular, globulostreak-like, homogenous or crista-dotted. The patients were grouped according to age as follows: 0—15 y.o., 16—59 y.o., > 60 y.o. . We divided the cases showing the UC pattern into three clinical groups according to the following definitions: hyperpigmented, black or dark brown

lesion with ill-defined ridge/furrow; hypopigmented, light brown or grey-blue lesion without clear demarcation; and elevated, lesion with dilation of the furrow line. The number of cases was calculated by age and clinical group. The anatomical distribution was examined by plotting the centre of each lesion.

Result: A total of 464 acral AMN were collected and 97 (21%) were included in this study. The numbers of cases per age group were as follows: 10 (10% of 96 acral AMN in total) in the 0—15 y.o. age group, 71 (22% of 319) in the 16—59 y.o. age group, 16 (33% of 49) in the > 60 y.o. age group. Hypopigmented lesions were most frequently observed (n = 51, 53%), followed by hyperpigmented (n = 35, 36%) and elevated lesions (11, 11%). All lesions in the 0—15 y.o. age group were hyperpigmented. In contrast, 81% (13/16) of lesions in the > 60 y.o. age group showed hypopigmentation. Ten of 11 elevated lesions were in the 16—59 y.o. age group. Eighty-six lesions were located on the sole of the foot other than the weight-bearing area.

Conclusion: Acral ALM showing the UC pattern could have clinical characteristics, including age and anatomical prevalence. The UC pattern seems to be unrelated to weight load. Our study suggests that acral AMN in older patients is more frequently difficult to diagnose by dermoscopy than in younger patients mostly due to the decrease of pigmentation.

P1-95

DERMOSCOPY AS AN IMPORTANT TOOL IN THE DIAGNOSIS OF SOLITARY ANGIOKERATOMA

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Angiokeratoma is a rare benign vascular malformation most commonly found on the lower extremities as an asymptomatic solitary dark, red-brown papule or plaque. It is often mistaken for a melanocytic lesion. The cause of angiokeratomas is unknown. Several causal factors, such as congenital development, pregnancy, trauma, subcutaneous hematomas, and tissue asphyxia, have all been proposed. Solitary angiokeratoma is thought to be related to a previous trauma. We report the case of a 22 year-old pregnant female, referred by a dermatologist for excision of a lesion suspected to be a malign melanoma. The patient, 32 weeks pregnant, presented with an asymptomatic lesion that she noticed 10 days before. The lesion was located on the posterior aspect of the left thigh. It was characterized by a dark red-blue papule of 5 mm diameter, surrounded by an erythematous halo that the patient reported to be created during last days. Dermoscopic examination revealed red and dark blue lacunae and whitish veil. Diagnosis of solitary Angiokeratoma was made. Patient was followed-up in 2, 6 and 12 weeks. The erythematous halo regresed while the papule persisted without changes in colour and structure. Angiokeratomas should be differentiated from melanocytic nevi, Spitz nevi, malignant melanomas, pigmented basal cell carcinomas, seborrheic keratoses. Dermoscopicaly, a pattern characterized by red and dark lacunae, whitish veil with/without covering scale is characteristic for angiokeratoma. The dermoscopic examination is a crucial method in the diagnosis of angiokeratoma.

P1-96

SYPHILIDES: IS THERE A DERMOSCOPIC SIGN?

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Introduction: Syphilis is caused by infection with the spirochetal bacterium Treponema subspecies pallidum.

Observation: We related the case of Mr Karim aged 30 years, married without significant pathological antecedents, who presented with 8 months of a non-itchy erythematous rash on the hands palms operating in a context of apyrexia and conservation of the General Clinical examination found papular erythematous lesions and scaly on the palms. The Dermoscopy objective a rather orange colour, a target appearance, scaling either as collar or whitish scaling grid predominant in grooves or combination of a collarette and a linear groove parallel to the peeling. All these signs appear on an orange background. Syphilis serology was positive. The patient was treated with Penicillin G benzathine, 2.4 million units IM as a single dose. The evolution was favorable.

Discussion: Syphilis is endemic throughout the developing world. The timing of onset of the secondary stage of syphilis is highly variable. Many patients do not recall a history of a primary lesion. Secondary syphilis typically presents with rash, fever, headache, pharyngitis, and lymphadenopathy. The cutaneous manifestations of secondary syphilis are diverse. The rash can also be papular, annular, or pustular, and can have a fine overlying scale. The diverse manifestations of secondary syphilis earn it the name "the great imitator."

Conclusion: To our knowledge, we related the first dermoscopic description of syphilides.

P1-97

SCOPING THE SCALP FOR SCARRING ALOPECIAS

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Introduction: Scarring or cicatricial alopecias are classified into primary, where hair follicle is the main target of destruction; and secondary, where follicular destruction is not the primary pathologic event. The objective of this study was to describe dermatoscopic findings in patients of scarring alopecias.

Material and Methods: 15 patients with scarring alopecia based on clinical and histopathological diagnosis were evaluated using the E-Scope (magnification 10 x to 200x). The underlying cause was lichen planopilaris (LPP) in five, frontal

fibrosing alopecia (FFA) in two and discoid lupus erythematosus (DLE) in eight patients.

Conclusion: Scalp Dermatoscopy may facilitate diagnosis of early and focal cicatricial alopecia, selection of biopsy site for histopathological confirmation and in patients reluctant for biopsy.

P1-98

THE EFFECT OF CHRONIC STRESSES ON THE STRUCTURE OF SKIN

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Objectives: The scientist study of the psychic stresses effects on the destruction and premature senility in the structure of skin cells directly and indirectly.

Method: During the fetal period skin and nerves have a common origin causing by the fetal texture called ectoderm and this closeness causes that many diseases of the skin and nerve are related. Considering the nerves and skin (dermal) diseases, one of the most important points can be the relationship Stress influences the skin from several aspects. These effects can be as follows.

1. Directly: contraction of the face skin muscles upon the nervous disorders and in long-term the spasmodic. Contractions create some lines around the eyes. In the stressful conditions, the people resort to some materials like alcohol and cigarette for comforting them from the emotional and psychic problems which these toxic materials are the main source of free radicals. The negative effect of these toxic materials on the skin cells has been proved for several years. 2. Indirectly: In this stressful state, the biologic factors cause the most damage on the skin. For example when the body lies in the stressful conditions, a material called cortisol is released in the body. Increasing the plasma level of this material is concordant with: a) Catabolism of the face muscles, collagen and of the skin and consequently the thinness, wrinkles and subsidence of the skin. b) Upon increasing the cortisole plasma level, the inflammatory like prostaglandins increase in the skin and then skin capillaries are destroyed and the rate of receiving oxygen is reduced. c) The recent studies indicate that the enhancement of the cortical is concordant with the cell telomere. This reduction then reduced the cell division and the rate of cell density in the skin textures. Clearly there is a relationship between the beginning of the dermal diseases like psoriasis, eczema and albinism mostly in the stressful situation. All of the three mentioned diseases are the autoimmune deceases caused mostly by the negative function of the body immune system. There is a close relationship between the negative function of the body immune system and the secretion of cortisole. **Key words:** stress, skin, hormones, inflammation.

P1-99

DIFFERENT DERMOSCOPIC PATTERNS OF CUTANEOUS METASTATIC MELANOMA IN THE SAME PATIENT

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Melanoma is a malignant neoplasia of melanocytes, potentially fatal, that can metastastize to skin, limph nodes or any organ. 2-8% of the patients have metastases as the first sign of malignancy. Skin is one of the most common sites of metastatic melanoma and the incidence ranges from 2 to 20% of in transit, regional or distant recurrence. Cutaneous and subcutaneous metastases may appear clinically with different aspects that can simulate other benign and malignant neoplasms or even infectious and inflammatory skin diseases. Dermoscopy has been shown as an important tool to distinguish these lesions. A male 43 years old patient, fototype 3 had a nodular melanoma with 5mm breslow and 1 mitosis/mm2 on the right thigh. After 5 months of the diagnosis, he presented inguinal limph node and in transit metastasis on the right thigh. Despite of chemotherapy, ipilimumab and vemurafenib, lesions increased and spread to pelvis, belly and trunk. Clinically and dermoscopically, the majority were very similar to melanocytic nevi, blue nevus and basal cell carcinoma. Furthermore, he also had ulcerated, nodular and ceratoacantoma-like metastatic lesions. Costa e cols studied 130 cutaneous metastasis of melanoma in 32 patients and described 5 dermoscopic patterns: naevus-like, blue nevus-like, basal cell carcinoma-like, angioma-like and inespecific pattern and also suggested that dermoscopy may have a high sensitivity and specificity to recognize and distinguish cutaneous metastatic melanomas from other skin lesions. Thereby, a thorough clinical exam with dermoscopy can increase the early diagnosis of cutaneous metastasis and improve the survival rates.

P1-101

SMALL DIAMETER MELANOMA AND SUPERFICIAL ATYPICAL MELANOCYTIC PROFERATIONS: REPORT OF 8 PATIENTS

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Introduction: Dermoscopy increases the diagnostic accuracy of pigmented lesions, even in small diameter pigmented lesions, but in some cases subjective history or evidence of change on dermoscopic follow-up is as important. These cases point out for the integrated approach to clinical-dermosopic-histopathological diagnosis of small diameter melanocytic lesions. We present 5 cases of small diameter melanoma (SDM) and 3 superficial atypical melanocytic proliferations of unknown significance (SAMPUS), less then 5 mm in diameter.

Materials and Methods: Dermoscopic database of three outpatient dermatology clinics were reviewed in the last 5 years, and 8 cases were found. Results: The diameter of the lesions ranged from 2-4 mm. In 2 patients, SDM was found as a second melanoma, and one patient had positive family history. Dermoscopic clues for suspect melanocytic lesion were radial pseudopodes and spitzoid features in 3 adult patients with diagnosis of of SAMPUS in 2 and high-grade dysplastic nevus in one patient, warranting second pathological review. In 5 patients, diagnostic clues were blue white veil in 2 patients, milky red areas, prominent fibrotic features, irregular streaks at the periphery, peppering and negative pigment network in one patient each. In 3 patients the additional criteria for removal of lesion was ugly duckling sign and dermosopic change on short-term follow-up. Histopathological analysis of these 5 lesions were melanoma in situ in 1 patient, invasive melanoma with Breslow thickness of less then 1 mm in 3 patients, and in one patient Breslow thikness was found to be 2.2 mm. Conclusion: SDM and SAMPUS in majority of cases do present with characteristic dermoscopic features, but in some cases history of change and ugly duckling sign on clinical examination are important as well.

P1-102

DERMOSCOPY OF TUMOURS ARISING IN NEVUS SEBACEUS: A MORPHOLOGICAL STUDY OF 58 CASES

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Nevus sebaceous is considered a complex hamartoma involving not only the pilosebaceous follicle and other adnexal structures but also the epidermis and the dermis. We consider it worthwhile to communicate the dermoscopic features of a large series of neoplasms arising in nevus sebaceous that could improve the clinical diagnostic accuracy of them. Dermoscopic images of 58 histopathologically proven cases of cutaneous benign or malignant tumours arising in nevus sebaceus, collected at 10 Hospitals in Spain, France, Italy and Austria were evaluated for the presence of dermoscopic features. The 58 lesions collected for the study comprised: 23 trichoblastomas (39.6%), 12 basal cell carcinomas (20.7%), 9 syringocystadenomas papilliferum (15.6%), 5 cases of apocrine hidrocystomas or cystadenomas (8.6%), 3 sebaceomas (5.3%): 2 hidradenomas (3.4%), one poroma, one pilomatricoma, one seborrheic keratosis and 1 keratoacanthoma (1.7% each). The most common benign neoplasm occurring in the nevus sebaceous of our study was trichoblastoma (39.6% of cases; 23/58). Dermoscopically, the results of our study reveals that the pattern composed of a symmetric total large blue-gray ovoid nest, arborizing telangiectasias and white structures are characteristic of well-established trichoblastomas and the presence of an isolated symmetric total large blue-gray ovoid nest is characteristic of incipient trichoblastomas. These patterns could be identified in 61% of our cases (14 out of the 23 lesions). In the study, the second most common tumour and the most common malignant neoplasm occurring in nevus sebaceous was basal cell carcinoma (20.7% of cases 12/58). The most common dermoscopic pattern associated with our BCCs was the presence of asymmetrical large blue-gray ovoid nests and arborizing telangiectasias (or small fine telangiectasias in more incipient lesions) found in 50% of cases. In the study, the second most common benign neoplasm occurring in nevus sebaceous was syringocystadenoma papilliferum (SCAP) (15.6% of cases 9/58). The most common dermoscopic pattern associated with SCAP is a symmetric, erythematous lesion with exophytic papillary structures, ulceration and vessels. In conclusion, dermoscopy is a very useful tool that clarifies the structures and patterns in tumours arising in nevus sebaceous, facilitating an accurate diagnosis and appropriate treatment.

P1-103

AN OFFICE-BASED DERMOSCOPIC EVALUATION OF FACIAL PIGMENTED ACTINIC KERATOSES

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Aim: To evaluate the diagnostic significance of the dermatoscopic features of Pigmented Actinic Keratoses (PAK), compared to other flat facial pigmented lesions in every-day Practice.

Materials and Methods: Thirty-two PAK, 22 Seborrheic Keratoses/Lentigo Senilis (SK/LS), 7 Basal cell Carcinomas (BCC), 4 Lichen Planus like Keratoses (LPLK) and 3 Lentigo Maligna (LM) histologically confirmed, were recruited from a series of 50 consecutively examined patients during a three-year period (July 2011-June 2014) and were evaluated with a non-polarized contact dermatoscope at an Office-Based Dermatology Setting.

Results: The salient dermatoscopic picture of PAK was the combination of dilated hair follicle openings (dhfo) and sharply demarcated broken-up margins of the lesions, with

a Sensitivity (Se) 94% (30/32) and Specificity (Sp) 89% (32/36). Interestingly, this feature was also present only in SK/LS (4/22, 18%). Four—white dotted appearance of follicular openings, were disclosed in 5/32 (Se 16%) PAK with a Sp of 100% (36/36)! Incomplete circles were apparent in 21/32 (66%) PAK, 1/18 SK/LS, 2/3 LM. Rhomboids were present in 4/32 PAK, 1/18 SK/LS, 1/4 LPLK and 3/3 LM. Grey structures were noted in 5/32 PAK, 5/12 BCC, 1/4 LPLK and 1/3 LM. Brownish diffuse dotted pattern was present in all cases of LPLK and clods in all BCCs

Discussion: LM and PAK exhibit similar dermatoscopy pattern in most cases except in late stages of the latter. With the drawback of small number of LM in this series of patients, the dermatoscopic differential diagnosis of the two entities was sufficiently feasible, because dhfo and sharply demarcated borders were not identified in any case of LM.

Conclusion: Although dhfo and "clear-cut" broken up borders, each as a single diagnostic clue, offer a high Se for PAK, their Sp is low. Only their concurrence is a highly Sensitive and Specific dermatoscopic criterion and may be used in every-day practice for the identification of PAK. Incomplete circles was of no significance for the differentiation from LM in this series of patients.

P1-104

IN TRANSIT METASTASIS IN A NON-TREATED MELANOMA

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Introduction: Cutaneous melanoma is a potentially fatal tumor and its incidence continues to increase in white populations worldwide. Early diagnosis is the most important factor for effective management of melanoma. The diagnosis of primary melanoma is based on clinical and dermoscopic criteria and it is confirmed by histopathologic examination. For the staging of melanoma, the AJCC classification of 2009 is used.

Case Presentation: A 58-year old woman originated from Central Europe was admitted to the oncology unit of 'Anderas Sygros' hospital with reddish and dark nodules partly ulcerated on her left lower extremity, with palpable popliteal and inguinal lymph nodes. The nodules first appeared 4 years ago and recently the patient noticed reddish nodules around the primary lesion. The dermatoscopy of the primary melanocytic lesion showed irregular border, blotches, grey-blue velvet and polymorphic vessels. Complete excision of one lesion showed melanoma in vertical development with mitotic rate 7/mm^2, ulceration, Clark level of invasion IV, Breslow tumor thickness 3,4 mm, no regression, mild lymphocytic invasion. A second wide excision was performed, as well as, sentinels lymph node biopsy. According to the 7th edition of AJCC the melanoma stage was III and additional therapy with IFN-was performed.

Discussion: Breslow tumor thickness, mitotic rate, and presence or absence of ulceration are currently the most important prognostic and staging factors. Independent predictors that are not currently in the AJCC staging system include the age and sex of the patient and the anatomic location of the primary tumor. These factors, combined with the histopathological features of melanoma, could predict an individual patient's prognosis more precisely. Sentinel lymph node biopsy identifies melanoma patients with nodal micrometastases, enabling clinicians to identify patients with occult nodal metastases that would otherwise take months or years to become clinically palpable. The number of nodal is the most significant predictor of survival among all patients with stage III disease.

P1-105

ACRAL MELANOMA IN A RARE LOCATION

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Introduction: Acral melanoma occurs in the volar surface of the hands, feet, fingers, toes and subungual sites. Recently it has been recognized as a distinct entity. The delay in diagnosis leads to large neglected tumours and advanced stage of the disease at presentation. The median age of the patients with subungual melanoma is 59 years and the most common site is the great toe. The treatment is mainly surgical. In patients with advanced disease chemotherapy is added.

Case Presentation: We report a case of a female patient of 45 years old who presented a melanocytic subungual lesion at the fifth finger of the right hand. The patient had no family history of melanoma or other type of cancer. For 18 months the patient was noticing significant changes of the nail colour and confluent periungual pigmentation. The dermoscopy revealed total melanonychia and dark—brown macules around the fingernail-positive Hutchinson 's sign and nail dystrophy. The lesion was totally excised and the histology diagnosed primary acral lentiginous melanoma with a radial growth phase component, Breslow thickness of 0,6 mm, moderate (non brisk) tumour infiltrating lymphocytes, 1 mitoses/mm^2, ulceration, Clark's level II, stage IIIc. Regression was also present. Lymph node dissection of two lymph nodes of the right armpit was performed and tumour cells were found in one of them. After two months distal phalanx amputation and full lymph node dissection were performed. No regional metastases were found. The patient received interferon therapy.

Discussion: Acral lentiginous melanoma is rare, representing approximately 1% of malignant melanomas. Overall 5-year survival is disproportionately poor compared to other histological subtypes. This has been attributed to diagnostic

delay. Subungual presentation in the fingers is uncommon, reported in 1-13% of all acral lentiginous melanomas. We report a diagnostically challenging case.

P1-106

SCALP AND HAIR APPROACH: THE ROLE OF DERMATOSCOPY

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Hair-shaft examination is diagnostically useful in a range of adult and paediatric conditions. Dermatoscopy provides an excellent first-line method of assessment in clinics. We describe findings that all dermatologists should have in mind.

Androgenetic alopecia: hair diameter diversity (terminal, indeterminate, and miniaturized hairs), peripilar signs (brown haloes at the follicular ostium due to a superficial perifollicular lymphocytic infiltratee) and yellow dots (degenerated follicular keratinocytes plugged with sebum material);

Alopecia areata: yellow dots (dilated follicular openings), dystrophic hair shaft (exclamation-mark and cadaverized hair), and hypopigmented vellus shorter than 10 mm (characteristic of remitting disease);

Lichen planopilaris: reduction of orifices, hyperkeratotic perifollicular scales and erythema. White pale or blue-gray dots in dark-skinned individuals can be observed;

Discoid lupus erythematous: diffuse whitish area. Tortuous vessels are observed over the lesion. Bright to deep red dots around follicular openings and hyperkeratotic perifollicular white scales may be detected;

Folliculitis decalvans: diffuse perifollicular erythema and reduction of the follicular ostia. Severe scaling and crusting are detectable along with capillary abnormalities such as interfollicular red loops;

Trichostasis spinulosa: brownish "hair tuft" (multiple hair emerging from the follicle);

Trichotillomania: broken hair (frayed aspect) at variable lengths;

Monilethrix: small oval nodes of normal thickness separated by irregular dystrophic constrictions ("regularly bended ribbon sign");

Pili torti: flat twisted shafts associate with genetic disorder as Menkes and Bjornstad syndrome or finding in normal scalp as well;

Pili trianguli and canaliculi: hair shafts appear triangular, with atypical longitudinal grooving (uncombable hair);

Pili annulati: light and dark bands in hair shaft;

Trichorrhexis nodosa: diffuse white knots and brush-pattern (due to the susceptibility to fracture consequent to the hair fragility);

Trichorrhexis invaginata: multiple ball-shaped nodes along the shaft ("bamboo" appearance). Associated with Netherton Syndrome.

P1-107

DERMOSCOPIC AND CLINICAL FEATURES OF HEAD AND NECK MELANOMA

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Objectives: The dermoscopic criteria of extrafacial melanomas are well known. The objective was to determine the frequency of dermatoscopic findings in head and neck melanomas and to assess the distinguishing dermoscopic criteria of facial and extrafacial melanoma.

Materials and Methods: This observational study includes 108 patients with head and neck melanoma (63% male, mean age 64 years). Participants received individual dermoscopic imaging of clinically melanoma. All the lesions were excised, and histopathological examination was performed on all specimens.

Results: Lentigo maligna melanoma or lentigo maligna were diagnosed in 60, superficial spreading melanoma in 18, nodular in 10, desmoplastic in 8, superficial spreading melanoma in situ in 12 lesions, histopathologically. The most frequent location for head and neck melanoma was the cheek (60 patients, 55.6%). Eight prominent dermatoscopic features were observed in facial melanoma: annular-granular pattern (18%); rhomboidal structures (29%); pseudonetwork (29%); asymmetrical pigmented follicular openings (51%); obliterated hair follicles (8%); red rhomboidal structures (18%); increased density of the vascular network (32%); scar-like depigmentation (59%).

Conclusions: HNM has specific dermoscopic features, and classical extrafacial dermoscopic rules are less useful for diagnosis of facial melanoma. In our study, further characteristic dermatoscopic findings were detected in facial melanoma such as low frequencies of irregular dots, two or fewer colours in lesion, the presence of pseudonetwork, increased density of the vascular network, red rhomboidal structures, in addition to dermatoscopic findings of extrafacial melanoma. Therefore, it is concluded that the prediction and identification of HNM may be evident with the help of these signs.

P1-108

DERMOSCOPIC AND CLINICAL FEATURES OF PIGMENTED SKIN LESIONS OF GENITAL AREA

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Background: The dermoscopic features of vulvar melanosis lesions are well known. To our knowledge, there are only a few case reports about dermoscopic features of pigmented genital lesions of male patients.

Objectives: To evaluate dermoscopic and clinical characteristics of benign lesions of genital area in both males and females and to assess the distinguishing dermoscopic criteria of vulvar melanosis and atypical melanocytic nevi of the genital type.

Materials and Methods: 68 patients with pigmented genital lesions were included in this observational study (28 male and 40 female). A 4 mm punch biopsy was taken from all pigmented lesions and histopathological examination was performed on all specimens. The relations between gender, type of lesions and dermoscopic characteristics were evaluated.

Results: Genital melanosis was diagnosed in 40, atypical melanocytic nevi of the genital type in 15, melanocytic nevi in 9, seborrheic keratosis in 4 lesions, histopathologically.

The most frequent locations were glans penis (19 patients, 67.9%) in males and labia minora (19 patients, 47.5%) in females. The mean age of patients with atypical nevi (28,6 ± 11,36) was significantly lower than the mean age of patients with genital melanosis (47,07 ± 15,33). Additionally, there is a positive correlation between the variety of colours and female gender ($p< 0.001$, $r= 0.461$). There is a negative correlation between the presence of ring-like pattern and female gender ($p< 0.001$, $r= -0.505$).

Conclusions: Parallel pattern is prominent in genital melanosis as well as ring-like pattern is only observed in genital melanosis. The great majority of the pigmented lesions on genital area are solitary. Blue-white veil and irregular dots are only observed in AMNGT. According to these results, we should propose that histopathological examination may be required especially if blue-white veil and irregular dots are found by dermoscopy.

P1-109

DERMOSCOPIC FEATURES OF ECCRINE HYDROCYSTOMA IN 2 ADULT AND 2 CHILD CASES: COULD THEY HELP US ESTABLISH THE DIAGNOSIS AND AVOID BIOPSY?

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Eccrine hidrocystomas are benign tumors of the sweat glands that arise from cystic dilatation of the excretory sweat duct. They typically present as multiple skin coloured to bluish cystic papules in the centrofacial area in middle-aged women. They have been rarely described in children. Number of publications about dermoscopic features of these lesions is however limited in literature. Herein we aim to present dermoscopic features in 4 patients, 2 adult and 2 childhood cases with multiple lesions on the face consistent with eccrine hydrocystomas. Two female patients (63 years old and 64 years old) presented with similar multiple facial papules that had been present for 10 years and 1 month respectively. Dermatological examination revealed multiple cystic bluish-skin coloured papules on bilateral cheeks. Histopathological examination was consistent with the diagnosis of eccrine hydrocystoma. A 4-year-old boy and an 11-year-old girl presented with asymptomatic papules on the nose, which were present for 1 year and 2 years respectively. Dermatological examination revealed 3 cystic bluish-skin coloured papules on the nose in each case. Considering the patients' ages and the families' concern and unwillingness in both cases, biopsy was not performed. Diagnosis was based on clinical and dermoscopic features. Dermoscopic examination of all the presented lesions showed homogeneous bluish-purplish central area surrounded by pale halo. This feature can help differentiating eccrine hydrocystoma from other clinically similar lesions located on face. Diagnosing the typical form of multiple eccrine hydrocystomas based on history and clinical findings is usually not difficult; however, accurate diagnosis of the atypical cases without typical history can be difficult and warrant a biopsy. Typical localisation being the central face and typical patient an adult female, scarring might be a concern. Although rare, eccrine hidrocystomas can be seen in children as well, as in 2 of our cases, age of the patient could then be another drawback for biopsy. In conclusion, dermoscopy can play an important role in establishing the diagnosis of eccrine hydrocystoma and avoiding a biopsy. Further investigations are necessary to define and confirm the characteristic findings in eccrine hidrocystomas.

P1-110

VIDEODERMOSCOPY ENHANCES THE DIAGNOSTIC CAPABILITY OF KAPOSI'S SARCOMA VIA REVEALING ITS VASCULAR STRUCTURES

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Bluish-reddish colouration, the "rainbow pattern," scaly surface and small brown globules are the dermoscopic features frequently identified in Kaposi's sarcoma (KS). However, no prominent vascular pattern has been reported in this vascular tumor by a few studies that were performed by a handheld dermatoscope. Herein, we report a 64-year-old female patient who presented with numerous histologically proven KS lesions 2 months after renal transplantation. Dermatological examination disclosed many violaceous macules, papules, nodules and indurated plaques located on her forearms but especially on the lower limbs. Dermoscopic examination was performed by a computerized polarized light videodermatoscope (FotoFinder Dermoscope; TeachScreen Software GmbH, Bad Birnbach, Germany), having lenses with magnification factors of X20to X70 at X10 increments. And more than 100 clinical and dermatoscopic images were obtained from almost 50 lesions. Dotted vessels

on either a pinkish purple or a whitish purple background, and reticular vascular network were noted on several images as vascular structures in addition to shiny white streaks (chrysalis structures) and previously described dermoscopic features of KS such as bluish-reddish colouration, "rainbow pattern" and scaly surfaces. Furthermore, crusted nodular lesions presented very striking colour changes from yellow, red, green and purple resembling the colours of a "rainbow" in a different view.

No dermoscopic vascular patterns were demonstrated by earlier three studies carried out by a handheld dermatoscope regarding the dermoscopic findings of KS. We have observed a reticular vascular network pattern in macular lesions and dotted vessels in indurated plaques by videodermoscopy. Chrysalis structures and "rainbow pattern" like appearance on crusted nodules were not reported previously in KS as well. Therefore, we suggest that videodermatoscope having much higher magnifications than a handheld one may aid the dermoscopic diagnosis of KS via revealing its vascular structures namely dotted vessels and reticular network pattern.

P1-111

THE INVESTIGATION OF THE USEFULNESS OF DERMOSCOPY IN THE EXAMINATION OF OCULAR PIGMENTATIONS

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Introduction and Objectives: To investigate the usefulness of dermoscopy in the examination of ocular pigmentations (OPs).

Materials and Methods: Dermoscopic images of OPs of 20 consecutive patients were recorded. Impression cytology (IC) was performed. The lesions with grade 1 or 2 atypia on IC samples were regarded as benign and with grade 3 or 4 atypia as suspicious. Dermoscopic images were evaluated for specific dermoscopic structures and patterns unknowingly the cytologic examination result.

Results: Clinical diagnosis was primary acquired melanosis in 6, Ota nevus in one, melanocytic nevus in 12 and melanoma in one lesion. Three lesions showed grade 3 atypia; however the patients did not accept biopsy. Homogeneous and globular patterns were the dominant dermoscopic patterns in both benign and suspicious lesions. These patterns were coexisting in most of the lesions (65%). One pattern was found in 6 (all benign), 2 patterns in 13 (11 benign, 2 suspicious) and 3 patterns in one lesion (suspicious). We found 4 lesions with single colour (all benign), 11 (10 benign, 1 suspicious) with 2 colours, 1 (benign) with 3 colours, and 4 (2 benign, 2 malign) with 4 colours. The most frequent colour was light brown (15 benign, 3 suspicious lesions). Much more part of the suspicious lesions were with four colours compared to benign lesions (66.7% vs. 11.8%, p>0.05). This was also determined for blue-gray (66.7% vs. 11.8%, p>0.05) and white (66.7% vs. 17.7%, p>0.05) colours.

The most prevalent dermoscopic structure was structureless area observed in 17 lesions (14 benign, 3 suspicious). Only one dermoscopic structure was found in 1 (benign), 2 structures in 9 (all benign), 3 structures in 8 (7 benign, 1 suspicious), 4 structures in 1 (suspicious), and 5 structures in 1 lesions (suspicious). ³3 structures were observed in all suspicious, but in 41.2% of the benign lesions (p>0.05). Besides, 2 of 3 suspicious lesions had ³4 structures, but none of the benign lesions (p=0.016). Asymmetry was observed in all but 2 benign lesions (90%). Most part of the benign lesions showed asymmetry in one axis (93.3%), whereas all suspicious lesions showed in two axes (p<0.01).

Conclusions: According to our results, dermoscopy seems to be useful in the examination of OPs. Particular attention should be paid to the lesions with ³4 structures and/or asymmetry in two axes.

P1-112

HALO NEVUS: THE DERMOSCOPIC ADVENTURE OF NEVUS'S DISAPPEARANCE

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Halo nevus is the name of the lesion which is characterized with hypo or depigmented halo around nevus. The incidence in the population is estimated to be 1%. Halo nevus is not uncommon and is usually seen in children or young adults of either sex. The trigger or cause of spontaneous pigment loss in a halo nevus is not known; however, pigment loss is the result of an immunologic process in which melanocytes are destroyed. It may be unique or numerous. If it is numerous, the lesions are usually in various stages. At initial stage there is a sudden appearance of the white halo around the mole. In the following months the central nevus disappears. Dermascope is like a dermatologist's stethoscope. Dermatoscopic examination is generally used to differentiate nevus from melanoma. But the findings of halo nevus at various stages are not completely defined dermatoscopically.

The aim of this poster is to evaluate nevus disappearance in terms of dermatoscopic findings.

Case: A 24 year old male case applied with multiple Halo nevi. Halo nevi were observed at various stages on dermatologic examination: From very few halo observed nevi to little disappearance, moderately disappearance and completely disappearance nevus form. Halo nevi were photographed both macroscopically and dermatocospically. Disappearance features were discussed in terms of dermatoscopic findings.

Result: The findings of our case are important since they contain halo nevus from initial stage to disappearance at various stages.

P1-113

WHICH DERMATOSCOPIC METHOD IS BEST SUITED FOR MEDICAL STUDENTS TO USE—A COMPARISON OF TWO ESTABLISHED DERMATOSCOPIC ALGORITHMS FOR CUTANEOUS MALIGNANT MELANOMA DIAGNOSIS

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Background: The rising incidence of cutaneous malignant melanoma (CMM) warrants expanded efforts to discover it in early stages when the prognosis is better. Dermoscopy is a useful tool for this, and ought to be taught to physicians in several non-dermatological care settings. It should also be taught to medical students so all future physicians easily could diagnose a CMM, irrespective of medical specialization.

Purpose: To compare clinical and dermatoscopic diagnostic accuracy in a non-expert setting of medical students before and after a lesson teaching two dermatoscopy algorithms.

Method: Twenty-two forth year medical students without any clinical dermatological or dermatoscopic experience were asked to participate as volunteers in the study. Forty clinical cases (20 CMM and 20 nevi) presented as macroscopic and dermatoscopic photos were selected for the study. In a 1-h lesson the students were taught two dermatoscopic algorithms—the ABCD rule and the 3-point checklist. Their diagnostic accuracy was tested before (pretest/baseline) and after (post-test) the lesson. In the post-test the dermatoscopic evaluation was based on a randomly chosen order of the two algorithms. Sensitivity, specificity and individual change in performance were measured.

Results: Dermatoscopic diagnostic accuracy improved significantly only by using the ABCD rule, not for using the 3-point checklist. Compared to the pretest, the clinical assessment in post-test showed an increased sensitivity but a decreased specificity. For the algorithms, there was no significant change of sensitivity between pre-and post-test, however in the post-test the specificity increased for the ABCD rule but decreased for the 3-point checklist.

Conclusion: After training, medical students showed significant improvement in dermatoscopic evaluation of melanocytic lesion using the ABCD rule. The results also indicate that a single lesson in dermatoscopy allows non-experts in dermatology to more correctly diagnose CMM in patients. As this study should be considered a pilot study, a more extensive study is needed to test the results and to determine what type of instruction is the most effective to teach to non-experts to minimize the number of CMM missed when these are encountered in everyday clinical situations.

P1-114

"THE PINK UNIVERSE IN ALBINISM": DERMOSCOPIC VESSEL PATTERN AS A CLUE TO RECOGNIZE INCIPIENT MELANOMAS.

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Background: Patients with oculo-cutaneous albinism (OCA) have an increased sensitivity to sunlight and show a greater risk of developing melanoma and non-melanoma skin cancer at a younger age. Detection of melanoma can be challenging in albinos due to the impairment in synthetizing melanin. To date, there has not been any well-characterized dermoscopic description of melanoma in albinos.

Cases: We report a case series of 5 patients with personal history of OCA and dysplastic nevi syndrome (3 patients), family history of OCA (3 patients), and parental consanguinity (1 patient). The tumors reviewed here included: 7 primary melanomas, 2 basal cell carcinomas (BCC), more than 30 melanocytic nevi and multiple actinic keratosis. All tumors, except one melanoma, were hypo- or non-pigmented (pink lesions). One of the melanomas was referred to us because of the suspicion of an invasive tumor developed in a congenital nevus (Breslow 2.5mm, ulcerated). The remaining 6 cases were detected either by dermoscopy (at the first examination) or during digital follow-up (DFU) in our Department, and all were incipient melanomas (2 *in situ* and 4 Breslow index <1mm). In contrast to the only pigmented melanoma case, dermoscopy of all pink tumors in our series showed no classic melanoma features. The presence of dotted and linear irregular vessels was the main clue to differentiate melanoma from nevi and other non-melanocytic tumors.

Discussion: In the literature approximately 65% of reported melanomas in albinos were amelanotic, with 45.9% of total cases presenting as locoregional or systemic compromise. In fact, there are few reports of incipient melanoma in albinos and only 1 describes the dermoscopic features. In our experience, dermoscopy and DFU in these patients should be mandatory for early detection of skin cancer, despite the lack of classic features. The recognition of vascular structures such as dotted vessels (in melanoma), coma vessels (in nevi), or kinky vessels (in BCC) was the clue to differentiate between benign and malignant pink lesions.

P1-115

DIGITAL DERMOSCOPIC FOLLOW UP OF ACQUIRED MELANOCYTIC NEVI IN YOUNG ADULT: AN OBSERVATIONAL STUDY OF 143 CASES

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Background: It is now acceptet that age of the patient influences the predominant nevus pattern observed in individuals with multiple acquired melanocytic nevi, but longitudinal studies regarding natural history of nevi are only few.

Objective: Our aim was to report dermoscopic modifications over time observed in young adult with multiple acquired melanocytic nevi.

Method: The individuals were selected retrospectiv between patients who are in observation at our dermatology outpatient for pigmented lesions (periodical control at intervals between 3 and 12 months). We introduced in the study nevi with at least small asymmetry at dermoscopy. Nevi were clasiffied according to classification system proposed by Argentiano et al and were compared at based and after a mean follow-up of 24.9 months (3 to 48 months). We calculated the percentages of nevi that had modifications in dimension and/or pigmentation and/or structure.

Results: A total of 143 digitized images of nevi from 46 patients (18—31 years, mean age 25.06 years; 73.33% female patients) were included in the analysis. Based on dermoscopic type 49.65% of them had predominant reticular patern, 39.16% predominant globular patern, 8.38% site related patern, 2 Reed nevi and 1 blue nevus. At follow-up 90,21% of nevi showed simetrical modifications in dimension and/or pigmentation, 7,69% were unchanged and 2,09% showed asimetrical modifications (both Reed naevi, and one compound naevus). Structural changes were found at 74,53% nevi, the most frequent were decrease in the number or disappearance of brown globules at perifery and disappearance and replacement of parts of the pigment network. If we report at two variable (dimension and pigmentation) the most frecvent concomitent modification was increase in size and depigmentation: 31,46%. Nine lesions were excised and referred to histopathologic examination (eight compound benign melanocytic proliferation, one dysplastic nevus, and one Reed nevus).

Conclusion: In young adult, the majority of acquired melanocytic nevi suffered dinamic changes, wich were simetricaly. The most frecvent of them were increase in size, depigmentation, and disappearance of brown globules at perifery.

P1-116

TRICHOSCOPY IN RARE CONGENITAL DISORDERS

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Objective: Trichoscopy became the new "gold standard' in trichological diagnosis but still there are rare congenital hair disorders which are not fully described.

Patients and Methods: Trichoscopy was performed in 16 patients with confirmed diagnosis of ectodermal dysplasia, 2 patients with aplasia cutis congenita, 25 with loose anagen hair syndrome, 38 with different hair shafts congenital abnormalities (6 with monilethrix, 19 with pili torti, 4 with pili annulati, 1 with Netherton syndrome, 2 with tricho-rhino-phalangeal syndrome, 6 with trichothiodystrophy).

Results: Trichoscopy in patients with ectodermal dysplasia revealed abnormalities of hair shaft pigmentation (gray hair with single dark hair sign in 56%). Aplasia cutis congenita was shown as focal alopecia with hair bulbs arranged radially visible through the semitranslucent epidermis. The central parts of the lesions didn't revealed any follicular openings. Black dots with granular structure and basked weave pattern was seen in 57% patients with loose anagen hair syndrome. Hair shafts in tricho-rhino-phalangeal syndrome were seen in majority as short upright regrowing hairs single in follicular units. In pili torti hair shafts bending at different angels at irregular intervals was observed. Moniletrix was seen as hair shaft narrowings at regular intervals. Pili annulati- hair shafts with alternating white and dark bands were observed. Trichothiodystrophy was shown as trichoschisis and nonhomogenous structure of hair shafts.

Conculsion: Trichoscopy in cases of rare hair disorders can be helpful in non-invasive diagnosis.

P1-117

DIFFERENCES IN DERMOSCOPY OF PSORIATIC LESIONS DEPENDING ON THE LOCALIZATION PRELIMINARY DATA

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Psoriasis is one of the diseases where dermoscopy can be applied. The aim of the study was to evaluate whether dermoscopy features of psoriasis differ depending on the location of skin lesions. We performed dermoscopy in 12 patients with moderate-to-severe psoriasis. Three body sides were chosen to investigate: scalp, trunk and lower legs. Dermoscopy of the scalp (trichoscopy), trunk and lower legs was performed with FotoFinder II videodermoscope. A 20-fold and a 70-fold magnification were used. White scaling was observed in

all locations. Globular rings and lines were present in 7/12 (58,3%) patients in the scalp area, in 8/12 (66,6%) of patients on the trunk and in 11/12 (91,6%) cases on the lower legs at the 20-fold magnification. The glomerular pattern was observed in high magnification dermoscopy in 41,6%, 58,3% and 83,3% of cases respectively. Other than these typical blood vessels, lace-like vessels were observed in the scalp area and elongated vessels in the trunk lesions. The background colour was pinkish on the scalp, reddish on the trunk and intense red on the lower legs. The characteristic vascular pattern was best visible on the border of cutaneous lesions, while white or silver-white scales were usually covering the mid-part of the psoriatic patch. In conclusion, we find that in patients with widespread inflammatory lesions the lower leg is the best area to perform dermoscopy for diagnostic purposes.

P1-118

CHARACTERISTIC FEATURES OF VERRUCIFORM XANTHOMA IN DERMOSCOPIC FINDINGS: REPORT OF THREE CASES

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Verruciform xanthoma (VX) is a rare lesion first described by Shafer in 1971. It usually appears as a mulberry-like area consisting of small papillae most commonly presenting on the anogenital region and the oral mucosa. The lesions often are described as pale yellow to pink verrucous papules or plaques. Although VX has been clinically and histologically well characterized, the dermoscopic features of VX have not been reported. We show three VXes observed by dermoscopy and they showed characteristic findings. Case 1 is 70 year old man with a chief complaint of 20mm tumor, Case 2 is 73 year old man with a chief complain of 30mm tumor and Case 3 is 74 year old man with a chief complain of 6mm tumor, respectively. All tumors located in the scrotum. All cases were diagnosed histologically. It shows typical features include acanthosis without atypia. The papillary dermis was filled with large histiocytes with foamy cytoplasm. In dermoscopic findings, each papillary form were portioned by a whitish rim and contained in hairpin or glomerular vessels it. The distribution were regular. These structures are thought to correspond to acanthotic epidermis and dilated vessels in stroma, respectively. In addition, yellow plaques were interstitially observed in mulberry-like areas. It seemed to correspond to foamy histiocytes with lipid-laden. We conclude that above two dermoscopic findings are characteristic findings in VX. The constitution of the blood vessel was similar to eccrine poroma or Bowen's disease, but it was a point of the differentiation that there were yellow plaques.

P1-119

DIAGNOSTIC ACCURACY OF DERMOSCOPY OF NON-MELANOCYTIC SKIN TUMORS

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Background: Dermoscopy, a non-invasive technique for the microscopic examination of skin lesions, has the potential to improve the diagnostic accuracy. However, there is no systematic analysis of the diagnostic accuracy of a dermoscopy in various non-melanocytic skin tumors.

Objective: To investigate the diagnostic accuracy of dermoscopy for various non-melanocytic skin tumors.

Methods: Total 865 patients with 18 different types of non-melanocytic skin tumors, which can be differentiated by a distinct dermoscopic pattern, were included in this study. Clinical diagnosis with the unaided eye and dermoscopic diagnosis were performed, and these diagnostic classifications were reviewed together with the histological findings for the individual lesions. The diagnostic accuracy for each examination consistented with the pathologic diagnosis was analyzed.

Results: The overall accuracy of the dermoscopic diagnosis compared to the clinical diagnosis was significantly increased from 53.5% to 75.1%. Morever, the pathologic agreement with the dermoscopic diagnosis in actinic keratosis (AK), basal cell carcinoma (BCC), squamous cell carcinoma (SCC), seborrheic keratosis (SK), nevus sebaceous (NS), dermatofibroma (DF) and granuloma pyogenicum (GP) was significantly higher than the clinical diagnosis with unaided eye. The sensitivity for the diagnosis of AK, BCC, SCC, SK, NS, DF, GP and pilomatricoma and the specificity of all disease groups other than dermatofibrosarcoma significantly increased after dermoscopy (p<0.05).

Conclusion: Dermoscopy can improve the accuracy of diagnosis and facilitate appropriate decision for management in non-melanocytic skin tumors. However, dermoscopy requires sufficient training and a consensus diagnosis involving two or more experts is recommended to yield the highest possible diagnostic accuracy.

P1-120

SENSITIVITY AND SPECIFICITY OF DERMOSCOPIC SIGNS OF ALOPECIA AREATA

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The trichoscopy is currently an important non-invasive tool for the diagnosis and the assessment of prognosis of alopecia areata (AA). Objective of the study: to identify the

dermoscopic signs significantly associated with AA and calculate the sensitivity and specificity of these signs. It was a prospective, descriptive and analytical study of patients treated for AA in the hospital of Hassan II of Fez between 2013 and 2014.

Results: Our serie includes 70 patients with AA. The average age of patients was 24.5 years and 19.3% of patients had severe AA. The trichoscopic signs significantly associated with the disease were short vellus hair (p = 0.002), cadaveric hairs (p = 0.02) and anagen hairs (p = 0.05). The black dots were significantly associated with young age of patients, while anagen hairs and bent hairs were present in the early phase of the disease and during flares (p = 0.019) and (p = 0.041). Yellow dots were significantly associated with disease severity (p = 0.04) and the short vellus hairs were associated with both activity and severity of the disease (p = 0.001). The Sensitive and specific dermoscopic signs of AA were: cadaveric hairs, anagen hairs, and vellus hairs while less sensitive but specific signs were exclamation mark, bent hairs, yellow dots and black dots. The dystrophic hairs, circular hairs, comma Hairs, split ends were not sensitive neither specific signs of AA.

Discussion and Conclusion: In our study, we identified sensitive and specific signs of AA and significant signs associated with the activity and the severity of this disease and our results confirm those of other studies with some differences: the anagen hairs and bent hairs were specific and sensitive signs of alopecia areata and are significantly present in the early phase of the disease. In addition, the yellow dots were the only sign significantly related to the severity of the disease, with involvement of vellus hairs in both the activity and the severity of the AA.

P1-122

ASSESSMENTS OF ACRAL MELANOMA BY USING SATURATION ANALYSIS AND THREE-DIMENSIONAL IMAGING

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Background: We have shown advantages of saturation analysis in the depth assessment of melanin pigment and have successfully constructed three-dimensional (3-D) dermoscopic images.

Objective: To evaluate acral melanoma in comparison with acral junctional nevus and acral compound nevus by using saturation analysis and 3-D imaging.

Method: Dermoscopic images of 2 acral melanomas, 2 acral junctional nevi and 2 acral compound nevi taken by a self-made contact non-polarized dermoscopy under surgical light illumination were used. We constructed saturation images by using GIMP2 and 3-D images by using image J.

Result: In the saturation images, the parallel ridge pattern (PRP) of acral melanoma and the parallel furrow pattern (PFP) of acral junctional nevus were saturated, however the PRP of acral compound nevus was unsaturated. In the 3-D images, the saturated PRP of acral melanoma was displayed as undulated mounds unrelated to the direction of sulcus, the saturated PFP of acral junctional nevus as regularly arranged protruding structures along the sulcus, and the unsaturated PRP of acral compound nevus as depressed areas.

Conclusion: The saturated PRP of acral melanoma is assumed to consist of melanin pigment located mainly in the cornified layer and partially in the epidermis of ridges, and histopathologically the saturated PRP corresponds to melanin particles or ascending melanoma cells in the cornified layer or epidermis. The notable geomorphological difference between acral melanoma and acral junctional nevus in the 3-D images is that acral melanoma takes a form like natural landscape such as mountains or hills, whereas acral junctional nevus takes a form like artificial objects such as geometric design. Saturation analysis and three-dimensional imaging are novel and powerful tools for assessments of dermoscopic images of melanocytic lesions.

P1-123

ATYPICAL NEVI IN A PATIENT AFTER TOXIC EPIDERMAL NECROLYSIS

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Background: There is sparse literature data about nevi in patients who have survived toxic epidermal necrolysis (TEN) and recommendations for follow up and potential risk. Only few references report eruptive melanocytic nevi (MN), a rare phenomenon characterized by the simultaneous, abrupt onset of hundreds of MN, often in a grouped distribution, in patients who have survived toxic epidermal necrolysis (TEN).

Objective: We report a case of a patient with an anamnesis of toxic epidermal necrolysis (TEN) with an atypical (bizarre) appearance of nevi.

Materials and Methods: A 17-year-old male was sent to our clinic due to atypical nevi (both clinically and dermoscopically). He survived a severe case of TEN two years prior, probably due to valproic acid and diclofenac. He was taking valproic acid for epilepsy for many years. The patient presented with scars, scattered pigmentation, ophthalmologic complications, symblepharon, and few to moderate number of nevi. Most of the nevi appeared after TEN and some of them had an atypical appearance. During the first visit in 2009, clinical and dermoscopical photodocumenation was done. Excision of the most bizarre looking atypical nevus was suggested and a pathohistological diagnosis of dysplas-

tic nevus was made, respectively. From 2009 until 2014, the patient was lost from follow-up. In 2014, comparative photodocumentation was made.

Conclusion: Only few referrences are available on nevi after TEN. Eruptive MN may develop several years after TEN. Some authors postulate that the etiology and natural course of eruptive MN may differ between the two main populations of patients at risk for eruptive MN, with MN arising after bullous disorders being more likely to remain benign compared with those in patients with ongoing immunosuppression. This hypothesis has yet to be proven and long-term surveillance of individuals who have developed eruptive MN to determine its merit is required. Since our patient does not have many nevi, he does not fit into this category. Due to the atypical appearance of his nevi, regular visits with long-term follow-up was recommended or earlier in the case of any observed change.

P1-124

CLINICAL AND DERMOSCOPIC CHARACTERISTIC OF ACQUIRED MELANOCYTIC NEVI IN INDONESIAN POPULATION

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Background: Acquired melanocytic nevi (MN) is one of melanocytic pigmentation disorder, which can be a potential precursor of melanoma. Fair skin type has been known as one of the risk factor for melanoma. The dermoscopic pattern of MN in white population is different among the skin types (type I—IV) according to Fitzpatrick's classification. The difference in dermoscopic pattern of MN among the skin types of Indonesian people, which commonly dark brown with types IV and V, has not been reported. It is important to know the clinical characteristics and dermoscopic pattern of MN in Indonesian people skin types, which includes the skin types of III, IV and V.

Method: We performed a cross sectional study in 96 adult patients (18-60 years old), distributed equally for each skin type III, IV and V, at the Dermatovenereology outpatient clinic Dr Cipto Mangunkusumo hospital Jakarta. Each subject was examined for clinical and dermoscopic pattern. Clinical characteristic include clinical morfology and colour.

Result: The study found that the most frequent clinical characteristics of MN were planar lesion (88.44 %), dark brown colour (53.43%), with median size 2 mm. The most frequent dermoscopic pattern in all MN lesions was reticular (33.40 %). There was increasing proportion and odds within reticular pattern with the increase of skin's darkness of Indonesian people (skin type IV to type III with OR 1.4 (95% CI 0.5-4.0); skin type V to type III with OR 1.7 (95% CI 0.6-4.8), respectively.

Conclusion: Clinical characteristics (clinical morphology and colour) were not significantly different among the skin types of Indonesian people. There was difference on dermoscopic pattern within the reticular type, showing an increase of its proportion in accordance with the darker skin types.

P1-125

PROGNOSTIC VALUE OF TRICHOSCOPY IN ALOPECIA AREATA

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Alopecia areata is a common disorder causing considerable mental trauma and poor quality of life. The prognosis and treatment outcomes are unpredictable. Dermatoscopy/ Trichoscopy by hand held dermatoscope definitely gives additional clues to dermatologist in diagnosing the disease. We planned a study to see if the dermatoscope can assist in the clinical outcome of the disease after therapy at certain specified interval. We did a dermatoscopic evaluation for presence of characteristic signs, and evaluated them at the end of 1 month of therapy. We judged the patients view of status, clinical status assessed by the dermatologist and photographic evidence and compared the dermatoscopic pictures. The presence or absence and number of "exclamation-point hair',' "cadaveric hair" (black dots), and "yellow dots" gave information for active and progressive disease or remission of disease. The number is compared at centre and at the periphery of the patch. On the other hand, though clinically may not be very evident but the presence of thin and unpigmented "vellus hair" within the patch, and evidence of transformation of vellus into terminal hair, appearing as increased proximal shaft thickness and pigmentation,(reverse exclamation mark hair) are characteristic of remitting disease, indicative of a response to treatment. Abscence of these and an area with reticular pigmentation may be of poorer prognosis.

Conclusion: The dermatoscope/trichoscope may be used prognostically in cases of alopecia areata, helping to reduce anxiety in patients.

P1-126

DERMOSCOPIC PATTERNS IN PSORIASIS AND OTHER PAPULOSQUAMOUS DISORDERS

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Background: Dermoscopic criteria for diagnosis and differentiation of papulosquamous disorders like plaque psoriasis (PP) lichen planus (LP), pityriasis rosea (PR), scalp psoriasis

(SP) and seborrheic dermatitis (SD) remain poorly evaluated and analyzed.

Aims and Objectives: To assess the dermoscopic patterns in various papulosquamous disorders and to identify dermoscopic features that help in differentiating scalp psoriasis from seborrheic dermatitis.

Methods: This was a hospital based single blinded cross-sectional study done on 166 patients with papulosquamous disorders. These patients were divided into two groups. Group A included PP (28), LP (50) and PR(46); Group B- included SP(24) and SD(18). Patients were randomized and dermoscopic features were evaluated by two observers using the HEINE DELTA 20 dermoscope.

Results: Dermoscopic features such as *dotted* vessels under low magnification (10X), *corkscrew* and *hairpin* vessels under high magnification (100X) in a *regular* distribution over *light red* background and *diffusely* arranged *whitish* scales were highly predictive of PP. *Linear* vessels arranged *peripherally* over *light blue* background and *Wickham striae* were the hallmarks of LP. Out of the various patterns of Wickham striae, *reticular* was the most common, followed by *radiating streaks, leaf venation, circular* and *white dots*. *Brown dots* and *globule* over *brownish* background with *peripherally* arranged *white* scales characterized the lesions of PR. The dermoscopic features of SP were similar to those of PP. In contrast, seborrheic dermatitis was characterized by the presence of *linear* vessels (under low power), *arborizing lines* (under high power) over *yellow* background and *patchily arranged white-yellow* scales.

What is New? Presence of brown dots and globules are the consistent dermoscopic features of PR, which have not been described so far. These may represent the extravasated RBC's. However, further studies are needed to validate these findings.

Conclusion: The combination of dermoscopic features had more predictive value than a single feautre in isolation. Vascular features dominate in PP and SD, whereas nonvascular features dominate in LP and PR.

Limitations: There was no assessment of the interobserver-intraobserver validity and reproducibility of these criteria.

P1-127

DERMOSCOPY IN NON-PIGMENTED LESIONS: HOW MUCH DOES IT CONTRIBUTE TO DIAGNOSIS IN COMMON CASES?

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Introduction and Objectives: While dermoscopy is an established method for the diagnosis of pigmented lesions, its use in non-pigmented lesions has only started to increase recently. We attempted to see if present knowledge of dermoscopic patterns in common non-pigmented lesions made a significant difference in the diagnosis of such conditions.

Methods: 100 consecutive cases seen in a dermatology outpatient set-up were examined both clinically and dermoscopically. Both clinical and dermoscopic images were recorded. All melanocytic lesions were excluded from the study. The dermoscopic findings were graded into 4 grades a. strongly corroborated primary diagnosis b. Partly consistent with primary diagnosis c. Led to alternate diagnosis d. Did not contribute significantly to diagnosis.

Results: In 76 cases, dermoscopy either corroborated or was partly consistent with the primary diagnosis. In the rest of the cases dermoscopic features were not specific enough to contribute significantly to a single specific diagnosis. In none of the cases did dermoscopy alone lead to an alternate diagnosis. Corroboration was high for conditions like vascular lesions, acne, viral warts and hair disorders. Corroboration was poorest for eczematous conditions.

Conclusion: Dermoscopy can be a definite adjuvant to corroborate clinical diagnosis in non-pigmented lesions, present knowledge and experience however is probably not enough to significantly help in making diagnosis based on dermoscopy alone. More extensive studies are needed and dermatologists need to get really used to dermoscopic patterns for really utilizing the potential of dermoscopy as a diagnostic tool in non-pigmented lesions.

P1-128

PREVALENCE OF DERMOSCOPIC CHARACTERISTICS OF BASAL CELL CARCINOMA IN EGYPTIAN PATIENTS

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Introduction: Dermoscopy is a noninvasive optical surface microscopy useful for diagnostic purposes in a number of skin conditions including basal cell carcinoma (BCC) which is the most common skin cancer. The dermoscopic criteria for BCC include the lack of a pigment network and the presence of at least one positive feature for BCC, such as large blue-gray ovoid nests, micro-ulcerations, leaf like areas, spoke wheel areas and arborizing blood vessels. The aim of this study is to evaluate the prevalence of dermoscopic criteria of BCC in Egyptian patients.

Patients and Methods: Sixty-one patients suffering from BCC were evaluated by clinical, dermoscopic examination and digital imaging using the polarized contact dermliteII HR dermoscope aided by a 3x optical zoom Samsung S4 Zoom camera.

Results: Of a total number of 61 patients, 32 had nodulo-ulcerative BCCs, 26 had pigmented BCCs and 3 had the superficial type. The 32 nodulo-ulcerative BCCs were examined and 93.75% of which showed micro-ulcerations, 90.62% showed arborizing blood vessels and blue-grey globules, 75% showed white structureless areas, 50% showed maple leaf-like lesions, 34.37% showed blue-grey nests and pepper dots, 25% showed spoke wheel like structures and

9.37% showed diffuse pigmentation. Of the 26 pigmented lesions, 80.76% showed arborizing vessels, 65.38% showed micro-ulcerations, 61.53% showed blue-grey globules, 50% showed maple-leaf like structures, 46.15% showed white structureless areas, 30.76% showed diffuse pigmentation, 23.07% showed blue-grey nests, 19.23% showed pepper dots, 7.69% showed spoke wheel and pigment network and only 3.84% showed brown black dots. Of the 3 superficial BCCs, 66.66% showed each of the blue grey globules, maple leaf-like lesions, micro-ulceration and pepper dots, while only 33.33% showed each of the spoke wheel sign, diffuse pigmentation and white structureless areas.

Conclusion: Dermoscopy is a very useful tool for diagnosis of BCC. The most prevalent criterion in all the patients enrolled in our study (n=61) was the arborizing blood vessels found in 50 patients (81.96%), followed by the micro-ulcerations seen in 49 patients (80.32%).

P1-129

DERMOSCOPY AS A DIAGNOSTIC TOOL IN CUTANEOUS INFESTATION BY TICKS

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Dermatoscopy, also known as surface microscopy, dermoscopy, or epiluminescence microscopy is a non-invasive, low cost, and *in vivo* diagnostic procedure. Its relevance in the evaluation of pigmented skin lesion has been unequivocally demonstrated. A growing number of literature reports have expanded the application of dermoscopy to other skin disorders such as benign neoplasias, inflammatory dermatoses, and cutaneous infections and infestations. The latter group may manifest with nonspecific clinical picture with delayed diagnosis precluding early treatment. Tick infestation, or ixodiasis, is a fairly common condition in rural areas of Brazil. *Amblyomma cajennense*, the prevalent species in the southeastern region of the country, characteriscally requires three hosts to complete its life cycle. Eggs laid on the ground by adult females successively turn into a six-legged larva, an eight-legged nymph and an eight-legged adult. Man can be a host of any of the three developmental stages. Accurate diagnosis requires visual detection of the arthropod, which is not always readily possible with naked eye examination. This is particularly true with small-sized larva or nympha infestation. Patients may seek medical assistance due to either the bothersome pruritus or to the presence of previously unnoticed dark spot on the skin. We report three cases in which dermoscopy played a major role in the diagnosis of ixodiasis. Two of these patients had a personal history of melanoma and were concerned about the detection of a new "pigmented" lesion.

P1-130

DERMOSCOPY OF CUTANEOUS METASTASIS OF INTERNAL MALIGNANCIES—AN ANALYSIS OF 54 LESIONS

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Background: There have been numerous studies on the dermoscopic patterns of cutaneous melanoma metastases, however reports of other cutaneous metastases of internal malignancies have been less explored.

Methods: We included all patients with non-melanoma histology confirmed skin metastases observed at the Dermatology Department of the Hospital de Clinicas de Porto Alegre, from 2011 to 2014.

Results: A total of 7 patients were included. Primary tumors included breast carcinoma (3 cases), rhabdomyosarcoma, undifferentiated sarcoma, colon and pulmonary adenocarcinoma. The number of cutaneous metastases per patient ranged from 1 to 16, which allowed us to analyze a total of 54 lesions. All lesions demonstrated a vascular pattern on dermoscopy. In 4 patients we observed an atypical and polymorphic pattern: linear irregular and hairpin vessels in the first case; presence of linear irregular and fine microarborizing vessels radiating toward the periphery in the second case; linear irregular vessels associated with large arborizing vessels in a third case and dotted and glomerular vessels in the forth case. Dermoscopy of the fifth case presented with arborizing telangiectasias and erythema at the periphery of the lesions and the sixth case showed arborizing telangiectasias diffusely distributed. The last case presented only with prominent linear irregular vessels. Despite the inclusion of three cases of breast cancer metastasis, which can be pigmented, in this sample none of the lesions showed pigmentation.

Discussion: Our report confirms previous studies that have associated an atypical and polymorphic vascular pattern and irregular telangiectasias on the periphery of lesion as the most evocative elements of non-melanoma skin metastases. These vascular patterns, although not exclusive to this condition, appear to be related to local tumor-induced neoangiogenesis, which is a well-documented process in the development and progression of most tumors, including metastases.

Conclusion: Cutaneous metastases represent a major diagnostic challenge for the dermatologist because of its nonspecific clinical presentation. The dermoscopic presence of an atypical/polymorphic vascular pattern may suggest the diagnosis of cutaneous metastasis. Therefore, this report emphasizes the importance of dermoscopy, increasing the index of suspicion required for the recognition of this diagnosis.

P1-131

THE ROLE OF DERMOSCOPY USING A TRIPLE LIGHT SOURCE IN THE DIAGNOSIS OF PITYRIASIS ROSEA

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Introduction: Pityriasis rosea (PR) is a common dermatological disorder. Due to its varied and commonly atypical presentation, it can occasionally be misdiagnosed as guttate psoriasis, patch stage mycosis fungoides etc. The classical "hanging curtain scale" may not be apparent in all cases on examination of the lesions with the naked eye. This study evaluated the role of dermoscopy in the diagnosis of PR.

Materials and Methods: We examined 10 consecutive cases of biopsy proven PR that presented to our clinic using a dermoscope. A clinical history was obtained and examination and dermoscopic evaluation were performed on the lesions. The dermoscope used was a triple light source, non-contact, videodermoscope and patients were evaluated using white light, polarizing light and ultraviolet light. Still images of the lesions were shot and later analyzed and correlated with clinical features.

Results: Of the 10 cases included in the study, 6 showed the typical hanging curtain sign on examination with white light. Under polarised light, the underlying vascular pattern was clearly visualised; four cases of established PR showing patchy globular dilatation of the dermal vessels and two cases with early lesions demonstration punctuate vascular dilatation. No abnormalities in pigmentation were noted. The hanging curtain scale could clearly be demonstrated in all cases when examined with ultraviolet light.

Conclusion: Dermoscopic evaluation using a triple light source dermoscope is a useful non-invasive accurate tool for the diagnosis of PR.

P1-132

SCREENING FOR SQUAMOUS CELL CARCINOMA (SCC) IN PATIENTS WITH ACTINIC KERATOSIS (AK): CLINICAL, DERMOSCOPIC AND HISTOLOGICAL STUDY IN 33 CASES

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Introduction: The risk of progression of AK to SCC is rare, but the majority of them occur on actinic keratosis. Our serie reports results of clinical, dermoscopic and histological in 33 patients consulting for AK.

Materials and Methods: Using data from April to August 2014 we performed a prospective study of patients diagnosed with AK.

Results: The study included 33 patients [23 AK (14 pigmented AK) and 10 SCC (03 pigmented)]. 6 patients (60%) have a clear phototype and the significant sun exposure is reported in 7 patients (70%) in the SCC group. The personal history of skin cancer is found in 6 patients (26%) in AK group, and in 4 patients (40%) in SCC group. The familial history of skin cancer is found in 00patients in AK group, and in 05patients (50%) in SCC groupe. A number of AK over 10 is observed in 7 patients (23%) in the AK group, and in 5 patients (50%) in the SCC group. For dermoscopic criteria, we found: The red or black pseudonetwork was found in 23 patients (100%) in the AK group (14 black pseudonetwork) and in 5 patients (1 black pseudonetwork) in the SCC group. The red or black starburst is observed in 2 (20%) in the SCC group, but it is not observed in the AK group. Hairpin vessels are found in 3 patients (30%) in the SCC group and no patients in the AK group. Yellow-white opaque scale is observed in 2patients (3%) in AK group and in 3 patients (30%) in SCC group. The uceration is found in 1 patient in AK group and in 6 patients in the SCC group.

Discussion: The results of our study suggest that predictive clinical criteria of neoplasia of AK are: clear phototype, the high solar exposure, personal and familial history of skin cancer, a number of AK over 10, and the predictive dermoscopic criteria are: red / black starburst, hairpin vessel vessels, yellow-white opaque scale, ulceration. Our results are the same as littérature. The value of dermoscopy was suggested by Zalaudek et al to distinguish between AK and SCC the number of patients is insufficient to draw definitive conclusions in our series. Our work is still going.

Conclusion: Dermoscopy allows for a screening of SCC in patients who have an AK.

P1-133

DERMOSCOPY OF NODULAR HIDRADENOMAS A MORPHOLOGICAL STUDY OF 14 CASES

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Hidradenomas are rare benign adnexal neoplasms which usually presents as a solitary, slowly growing, solid or cystic nodule that generally occurs on the head, neck or limbs. The overlying skin may be flesh coloured, erythematous or blue. As a consequence, there is a great likelihood of being mistaken for other primary and metastatic tumors. Dermoscopy has demonstrated to increase the diagnostic accuracy of many pigmented and non-pigmented skin tumors. This study aims to document the dermoscopic spectrum of a series of 14 nodular hidradenomas collected at 6 Hospitals in Spain, France, Italy and Turkey. 50% of our hidradenomas were pigmented and 50%, non-pigmented. The most com-

mon dermoscopic structures found in our cases were arborizing telangiectasias (80%) and large blue-gray ovoid nests (50%). Other less frequent structures were multiple blue-gray globules, brown globules, white structures (including chrysalis), yellowish structures and other vascular structures (hairpin vessels, polymorphous atypical vessels). After evaluating these cases, our conclusion is that hidradenoma shows a wide range of different dermoscopic patterns and is a mimicker of other tumours, mainly basal cell carcinoma.

P1-134

USEFULNESS OF DERMOSCOPY IN IDENTIFYING FULLY REGRESSED MELANOMA

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Case Report: A 52 year old male presented with metastatic melanoma with an unknown primary source. The patient was admitted to the hospital after experiencing a seizure and progressive photophobia. Radiological studies revealed multiple enhancing brain lesions. During his evaluation, a large palpable left inguinal lymph node was noted. Excisional biopsy revealed melanoma and follow-on PET scan revealed multiple additional metastatic foci. The patient had no history of skin cancer and was referred to Dermatology for a skin evaluation. During his skin exam, an approximately one centimetre white circular patch with a poorly demarcated grey-brown area confined to the central portion of the lesion was observed on his left lateral thigh. Dermoscopy revealed scar-like white depigmentation surrounding what appeared to be the remnants of a brown pigment network with scattered gray and brown peppering; all features concerning for a regressed melanoma. An excisional biopsy of the lesion was performed. No melanoma cells were found; however other features associated with late stages of melanoma regression were observed: 1) prominent fibrosis 2) inflammatory infiltrate 3) abundant melanophages 4) neovascularization 5) prominent epidermal flattening. The patient was suffering from neurological sequelae at the time of exam and was unable to recall if he had ever had other skin lesions in this area. However, hIs wife stated she had observed an "ugly raised dark mole" in this location approximately two years earlier and had asked him to have it examined by a physician. She noted the lesion eventually resolved without intervention. Review of the patient's outside medical records revealed the patient addressed the lesion with his primary care provider approximately 1.5 years earlier and a clinical diagnosis of a seborrheic keratosis had been rendered. No photographs of the lesion were taken. The patient died three months after his admission to the hospital. This unfortunate case highlights the challenges of identifying a primary melanoma in a patient who presents with advanced metastatic disease. Dermoscopy can be a very helpful tool in identifying fully regressed melanoma.

P1-135

CLINICAL AND DERMOSCOPIC FINDINGS IN BROOKE-SPIEGLER SYNDROME—REPORT OF TWO CASES

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The Brooke-Spiegler syndrome is a rare, inherited autosomal dominant disorder which consists of multiple trichoepitheliomas, cylindromas and spiradenomas. Mutations in the CYLD gene, a tumour suppressor gene, are responsible for the manifestations of the disease. The onset of disease is usually in early adult life, but may be in childhood or adolescence. While solitary cylindroma are sporadic and not inherited, multiple cylindromas occur in Brook-Spiegler syndrome. We present two sisters, 43 and 37 years old ,with multiple adnexal tumors on the face and scalp. First lesions appeared in fourth decade in both sisters (in 38 in older and in 34 in younger sister). The tumors were neither pruritic nor tender. Their mother also has multiple tumors on the head. Dermoscopy revealed arborizing vessels on a white-ivory or pink background resembling in some lesions dermoscopic features of basal cell carcinoma. The arborizing vessels were more pronounced at the periphery of the lesions. In some tumors blue dots and globules were seen. Histopathological analysis revealed features of cylindroma. We also confirm that cylindromas should be on the list of adnexal tumors mimicking basal cell carcinoma.

P1-136

RAINBOW PATTERN IN MALIGNANT SKIN LESIONS OTHER THAN KAPOSI SARCOMA: CASE SERIES REPORT

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Rainbow pattern in dermoscopy was first reported by Hu and Cheng et al in 2009, in two studies of 7 patients with 141 Kaposi sarcoma (KS) lesions. It was described as many different colours juxtaposed next to each other and it had been proven that rainbow pattern can be seen only with polarized dermoscopy. Since then, there were few reports of individual cases of similar findings in non-KS lesions such as melanoma, stasis dermatitis, lichen planus and basal cell

carcinoma (BCC), but also some objections that those cases were not convincing enough. Histologic correlates of rainbow pattern in dermoscopy are not yet known, but it had been postulated that it may represent an optical effect secondary to the interaction of light with the multiple closely packed narrow spaces formed by different tissue structures with variable refractive indices. We report a case series of three BCCs and a case of melanoma exhibiting a rainbow pattern in more than a half of the lesions surface, but due to technical reasons we were not able to perform a precise histologic correlation of the observed structures. Our experience with lesions other than Kaposi sarcoma is that sort of rainbow phenomenon caused by light diffraction within the lesions is not rare but is usually quite discrete and therefore neglected, so it is debatable if such findings should be referred to as the rainbow pattern. In the case series presented, however, rainbow phenomenon is apparent, dominating the overall dermoscopic findings.

P1-137

DERMATOSCOPY OF COMBINED NEVI

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Backround: Combined nevus is a term used to indicate a combination of a blue nevus with another melanocytic nevus. Combined nevi are uncommon and represent less than 1% of biopsied nevi. It often shows a multicomponent pattern and may mimic melanoma.

Objective: The aim was to describe the dermatoscopy of combined nevi.

Material and Methods: Retrospective analysis of a series of 14 combined nevi.

Results: This series included 14 patients, five females and nine males, mean age 36 years (range: 4-57 years). The anatomic sites were trunk (12 patients) and arm (2 patients). On dermatoscopy 8 lesions (57.1%) had a multicomponent pattern. The arrangement of patterns was symmetric in 10 cases (71,4%) and chaotic in 3 (21,4%) cases. Blue or grey structureless area was noted in all cases. In 10 lesions, (71.4%) the structureless area was eccentric and in four lesions (28.5%) centrally located. In 12 (85.7%) of lesions the structureless blue-grey area did not touch the edge of the lesion and in 13 (92.8%) the blue-grey area was well circumscribed. White lines were absent in all but one case.

Conclusion: The absence of white lines, good circumscription of the blue-grey area, and the fact that the blue-grey area does not touch the edge of the lesion may help to differentiate combined nevi from melanomas with similar features by dermatoscopy.

P1-138

HUNTING FOR IMPORTANT SKIN PIGMENTED MICRO-LESIONS (DIAMETER ≤3 MM) THE ROLE OF MENZIES CRITERIA IN A PROSPECTIVE STUDY

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A prospective study was done on a series of 102 pigmented micro-lesions (diameter ≤ 3 mm), consecutively seen over a 2-year span in one of the examination rooms of our unit. The size of the lesion ranged from 1 to 3 mm in maximum linear extent. These lesions were selected for surgery on the basis of non-structured clinical and/or dermoscopic criteria. All the lesions had a dermoscopic documentation by photography. The istopatological diagnosis included 70 common naevi, 15 dysplastic naevi, 2 naevi with severe dysplasia, 3 SAMPUS, and 12 melanomas (4 in situ and 8 invasive lesions). For the pourpose of our study we considered "important lesions": naevi with severe dysplasia, SAMPUS and melanomas for a total of 17 lesions. Ratio between important lesions and all pigmented removed lesion was 1:6. Three experienced clinicians analysed every image in the light of the positive features of the Menzies method[1] (Blue-white veil, multiple brown dots, pseudopods, radial streaming, scar light depigmentation, peripheral black dots/globules, multiple colours, multiple blue-grey dots, broadened network), comparing them with the histologic diagnosis. A total agreement on the presence of the various dermoscopic criteria was reached in 92 cases, while one clinician disagreed in 10 cases (in these cases we considered appropriate for our study the opinion of the majority). Considering the presence of one criteria at least for the diagnosis of a given important lesion , sensitivity was 100% and specificity was 38%. Considering the presence of at least two criteria the values were 82% and 52% respectively. Above data confirm that Menzies method is useful and workable in the detection of important micro-lesions of the skin[2].

P1-139

LARGE BROWN CIRCLES IN VERRUCOUS EPIDERMAL NEVUS

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Epidermal nevus is a hamartomatous proliferation of epithelium and it can involve keratinocytes, sebaceous glands, pilosebaceous unit, eccrine or apocrine glands. It occurs in 1 of 1000 live births and the most common type is the ver-

rucous one. We analyzed the dermoscopic aspect of verrucous epidermal nevus, which had never been described. A dermoscopic analysis on eight different verrucous epidermal nevi has been conducted, each lesion was excised and the diagnosis was histopathologically confirmed. In all the epidermal nevi analyzed we observed a new dermoscopic feature called "large brown circles." A large brown circle is an oval or round exophytic epidermal structure characterized by a hyperchromic brown edge surrounding a hypochromic area. In most of cases, they occur neighboring, of variable dimensions, either localized at the periphery or in the middle of the lesion. The histopathological examination has shown hyperkeratosis, acanthosis, papillomatosis and elongation of rete ridges, confirming the diagnosis of verrucous epidermal nevi.

In our study, based on a short series of 8 cases of verrucous epidermal nevus, we aimed to describe the dermoscopic appearance of this lesion. In our series, the clinical appearance and the presence of the dermoscopic feature called large brown circles allowed us to make diagnosis of verrucous epidermal nevus, then histopathologically confirmed. Large brown circles observed on dermoscopy could correlate histologically with the characteristic arrangement of pigmented keratinocytes, surrounding the dermal papillae. An accurate clinical examination and the recognition of this new feature—large brown circles—in dermoscopy, in association with nonmelanocytic lesion criteria such as the absence of pigment network and the presence of comedo-like openings, result better resolutive and lead to an easier interpretation for the diagnosis of verrucous epidermal nevus, compared to the histopathological examination which might be less explicative and clarifying, thus avoiding unnecessary exeresis of benign lesions.

P1-140

DERMOSCOPIC FEATURES OF VULVAR LICHEN SCLEROSUS: NEW INSIGHTS FOR DIAGNOSIS

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Vulvar lichen sclerosus (VLS) is a chronic inflammatory disease with considerable impact on health-related quality of life. Patients with VLS complain mainly of itching, burning, pain, dyspareunia and sexual dysfunction. Dermoscopy has become an integrative part in the clinical evaluation of pigmented lesions and skin tumors by improving diagnostic accuracy. This technique may also be of value for the assessment of vascular and pigmented structures not clinically visible. In this context, the applicability of dermoscopy has recently been extended to non-pigmented tumours and inflammatory skin disorders. The present morphologic study was designed to describe dermoscopic features of a large series of VLS cases. Both vascular and non-vascular dermoscopic findings were observed in VLS lesions. Our observations indicate that a whitish background together with patchy structureless areas white, white-yellowish, milky-pinkish or lilac-whitish in colour represent the prevalent dermoscopic feature of VLS, observable also in the case of absence of pallor at clinical evaluation. A marked decrease in vessel concentration in the context of VLS lesions when compared with not affected vulvar surfaces is the other dermoscopic hallmark of the disease. In detail, very sparse linear vessels were seen in almost all the study cases, while hairpin and dotted vessels were seen in less than half patients. It is worthy of note that presence of dotted vessels seems to depend from duration of VLS since they occurred mostly in the early stage of the disease.

P1-141

DERMOSCOPIC PATTERNS OF MELANOCYTIC NEVI AND THEIR CHANGES IN VERY YOUNG CHILDREN

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Infancy and early childhood are important periods for the evolution of melanocytic nevi, with the development of new ones and the modification of others. However follow up studies in children of this age are few up to now. The aim of the study was to investigate dermoscopic patterns of nevi in children younger than 4 years old and their changes on follow-up. Images were acquired using a computerized polarized-light videodermoscopy system (FotoFinderdermoscope, Teachscreen Software, Bad Birnbach, Germany) with a water interface solution at magnifications of x20-40. Patterns were defined according at the 2003 Consensus Conference. A pattern was defined as "changed" in the presence of any change from a defined dermoscopic pattern observed at baseline into a different dermoscopic pattern observed at subsequent visits. 149 nevi were analyzed. At the first visit we observed 57 globular nevi (38,3%), 26 reticular nevi (17,4%), 21 globular-reticular nevi (14,1%), 16 compound nevi (10,7%), 11 cobblestone nevi (7,4%), 4 homogeneous nevi (2,7%), 5 globular-homogeneous nevi (3,4%), 6 reticular-homogeneous nevi (4,0%), 1 globular-cobblestone nevus (0,7%) and 2 reticular-cobblestone nevi (1,3%). Follow-up was possible for 92 nevi out of 149 (61,7%). Dermoscopic pattern changes were observed in 28 nevi out of 92 (30,4%). The main changes in our population of nevi were from globular to globular-reticular (7 nevi, 25,0%), from globular-reticular to reticular (5 nevi, 17,9%) and from globular to reticular (3 nevi, 10,7%). No changes were observed in reticular nevi.

P1-142

PIGMENTED PAGET'S DISEASE: A CLINICAL AND DERMOSCOPIC CHALLENGE

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Background and Aim: Pigmented Paget's disease (PPD) of the breast nipple and areola complex represents a diagnostic challenge, since it can closely mimic melanoma both, clinically and dermoscopically. Presence of melanin within the Paget cells in histology may further complicate final diagnosis. Apropos of two PPD cases, we aim to highlight these difficulties.

Patients and Methods: Two females, 62 and 65 years of age respectively, were referred from the breast surgery department to the outpatient dermatology clinic for evaluation of a recently developed pigmented macule of the nipple. Clinical examination of the first patient revealed a 1-cm irregularly pigmented patch involving exclusively the nipple, the lesion of the second patient was a slightly elevated pigmented velvety plaque, involving the nipple and partially the areola. The lesions were not associated with nipple drainage, excoriation or retraction, dermal ulceration, or a palpable mass of the breast or axillae. In dermoscopy, the first lesion was characterized by the presence of atypical pigment network, with asymmetric peripheral projections mimicking pseudopods, and areas of structureless hypopigmentation. In the second case, dermoscopy revealed an irregular structureless pigmented plaque, with patchy distribution of brown granules and fine whitish scales. In both cases, breast ultrasonography and mammography were negative. In the differential diagnosis we included melanoma, PPD and seborrheic keratosis.

Results: Histologic and immunohistochemical examination of tissue samples from incisional biopsies confirmed the diagnosis of PPD. The final pathology after mastectomy revealed a small focus of ductal carcinoma in situ of the breast associated with the areola changes, in both individuals.

Conclusions: Our cases highlight the difficulty to clinically differentiate PMPD from other pigmented cutaneous tumors. Dermoscopic features may closely mimic those of melanoma, especially in the presence of atypical pigment network. Histopathologic examination with the assistance of immunohistochemistry is highly recommended in all the cases of pigmented lesions of the nipple.

P1-143

BOWENOID PAPULOSIS. ARE THERE REPRODUCIBLE DERMATOSCOPIC FEATURES?

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Introduction: Bowenoid Papulosisis (BP) is a multifocal intraepithelial neoplasia located in the anogenital region. Differential diagnosis mainly includes genital warts (GW) and seborrheic Keratoses (SK). Clinical distinction is often not possible. Dermatoscopy has disclosed diverse patterns. We herein describe a pattern that has been reported recently in two other literature cases and correspond to Bowen's disease.

Case Report: A 47 year old man presented with an asymptomatic, 12 months' duration, grayish-brown rhomboid plaque, 1,2 X 0,8 cm in diameter, on the left inguinal fold and manifesting a smoothly papillomatous surface. Clinical diagnosis was SK, Melanoma on a nevus or GW. Dermatoscopy disclosed a pattern, more suggestive of Bowen's disease: The most striking feature was a central round area with scattered grayish-dark clods that were covered by a bluish veil. This area was surrounded by brown symmetric digitiform configurations. Grayish-dark clods and dots were extended in a linear arrangement from the central area outwards at one location, to make a distinctive projection. We could not detect any vessel abnormality. Histology was interpreted as a Bowen disease in a preexisting GW: Loss of nuclear orientation and atypia was present in full thickness epidermis. Basal membrane was intact. Melanophages and lymphohistiocytes covered most of the dermis. Hybridazisation disclosed HPV 54.

Discussion: Of the 6 cases of BP Dermatoscopy collected from the literature, two patients manifested a picture similar to ours. Three of the remaining cases presented an unspecific pattern and one an exophytic papillary structure with central glomerular and hairpin vessels. The latter pattern however is also seen in SK, as we had the opportunity to examine recently and present in this poster. The solitary presence of the lesion and the full thickness of nuclear atypia, are in favor of Bowen disease, but the presence of HPV is usually a BP finding.

Conclusion: It seems that the pattern described for BP in our patient is the most characteristic and only in these cases dermoscopists may identify the diagnosis. The discrepancy of the patterns described by other authors may reflect different stages of BP, since the latter is a dynamic neoplasm

P1-144

GIANT CLONAL SEBORRHEIC KERATOSIS OR BASAL CELL CARCINOMA? A DIAGNOSTIC CHALLENGE FOR DERMOSCOPY

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Introduction: The Clonal subtype is a relatively rare variant of seborrheic keratosis (SK). Although its histologic characteristics have already been sufficiently studied the dermoscopic ones have been described only in a small case series (9 cases) and two sporadic case reports. In the light that its differential diagnosis includes malignant entities such as melanoma and pigmented basal cell carcinoma, it is impor-

tant to make an accurate diagnosis in order to select the best treatment modality (i.e surgical excision or destruction with cryotherapy or curettage).

Case Report: We report the case of a 45-year-old male patient who was referred to our pigmented lesions clinic exhibiting a 10 cm lesion on his right arm. According to the patient the lesion had slowly grown over a period of 10 years. Clinically, it was characterized by an elevated, sharply demarcated brown-blue outline while in the centre there were four hyperkeratotic asymptomatic nodules in a red-purple background. Differential diagnosis was challenging as the clinical features were neither characteristic nor representative. The lesions and patient history alluded to Kaposi's syndrome lesions, seborrheic keratosis or Basal Cell Carcinoma (BCC). Dermoscopy was performed next, revealing the presence of blue-gray ovoid globules, few leaf-like areas and a sharply demarcated border with mouth-eaten appearance at some points. Mylia-like cysts and comedo-like openings were absent. Although an initial biopsy was carried out with the possible diagnosis of a pigmented BCC, the histopathologic examination established the diagnosis of clonal SK. Upon the request of the patient the lesion was excised with grafts.

Discussion: Dermoscopic criteria for the dianosis of clonal SK have recently been described. They include the presence of blue globules (corresponding to the intraepithelial nests of basaloid cells) and milia-like cysts in the context of a sharply demarcated lesion. However, in the absence of the later criterion (i.e milia-like cysts or comedo-like openings) dermoscopy cannot be very helpful in the diagnostic procedure and it is the histopathologic report that establishes the definite diagnosis.

P1-145

DERMOSCOPIC FEATURES OF ACTINIC KERATOSIS AND DERMOSCOPIC FOLLOW UP FOR THE EVALUATION OF TOPICAL THERAPY EFFECTIVENESS AND EARLY RECOGNITION OF RECURRENT DISEASE

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Actinic keratosis (AK) is a well-known precursor for squamous cell carcinoma, especially on the sun-exposed areas of the skin. Different presentations of AK and presence of subclinical areas make clinical diagnosis difficult with the naked eye. Introduction of field-directed treatment modalities, such as imiquimod, ingenol mebutate and photodynamic therapy increased the need in non-invasive methods to investigate larger areas of the skin. Several non-invasive techniques have been developed to improve diagnostic accuracy and investigation of AK lesions. We describe dermoscopic diagnostic features that are frequently seen in AK lesions and have to be followed up during and after treatment. Dermoscopic features such as "strawberry" pattern, scales, targetoid-like appearance, slate-gray and dark-brown dots and globules in the perifollicular area were assessed before and after topical treatment with the imiquimod creme (3.75% for field-targeted and 5% for lesion-targeted approach). Recognizing specific dermoscopic features of the AK is useful to assess the clearance of the individual lesions, provide differential diagnosis of AK with non-pigmented and melanocytic skin lesions and early recognize possible recurrences of the disease. Skin biopsy and further hystopathologic examination should be performed in the doubtful cases.

P1-146

TRICHOSCOPY IN NON-CICATRICIAL ALOPECIA

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Introduction: Trichoscopy is dermatoscopy or videodermatoscopy of hair and scalp. In the last decade, it is suggested that trichoscopy can be used to enhance the clinical and diagnostic accuracy of alopecia and scalp disorders. Diagnosis of alopecia just by clinical examination can lead to diagnostic errors.

Objectives and Methods: The aim of this study was to identify and compare the trichoscopic findings of alopecia areata, androgenetic alopecia and telogen effluvium diseases which are commonly diagnosed by clinical examination. Seventyfive non-cicatricial alopecia patients (alopecia areata, androgenetic alopecia, telogen effluvium) were included in our study. For the evaluation of the patients, computerized polarized light videodermatoscope is used. At least three different images were taken from the affected area. The dermatoscopic images were then evaluated by two different dermatologists and the findings were recorded.

Results: Yellow dots (58,6%), tapering hairs (exclamation mark hair) (65%), broken hairs (65,5%), and black dots (69%) were identified in alopecia areata patients (n=29) at a higher rate and these findings were sensitive to alopecia areata. Hair diameter diversity (92,3%), yellow dots (23,1%) and white dots (38,5%) were the major dermatoscopic findings for the androgenetic alopecia patients (n=26). Perifollicular hyperkeratosis (70%), epidermal scale (75%), yellow dots (50%), peripilar sign (30%) and the absence of hair diameter diversity were the major dermatoscopic findings for the telogen effluvium patients (n=20).

Discussion: Trichoscopy is a valuable method in the differential diagnosis of hair and scalp disorders. To avoid the diagnostic errors as a result of clinical examination, we suggest the routine trichoscopic examination of the alopecia patients.

P1-147

RETICULOHISTIOCYTOMA WITH ARBORIZING VESSELS: A NEW MIMICKER OF BASAL CELL CARCINOMA

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Reticulohistiocytoma also known as solitary cutaneous reticulohistiocytosis is a form of non-Langerhans cell histiocytosis that usually presents as a yellow to redish brown, smooth surfaced, firm nodule that favors the trunk and extremities. Herein, we present a 53-year-old male who presented with a 1-month history of a slightly enlarging nodule. Dermatologic examination revealed a well-defined, firm, pinkish nodule with telangiectasias of 1 cm located on the left preauricular area, while dermoscopy disclosed several arborizing vessels on a yellowish pink background. A diagnosis of reticulohistiocytoma was made after the histopathologic examination with immunochemistry. Branched arborizing vessels have been accepted as the dermoscopic hallmark of nodular, cystic, and sclerodermiform basal cell carcinoma. However, 3 other skin tumors namely hydradenoma, intraepidermal poroma and neurothekeoma have also been reported as having arborizing vessels on dermoscopy. There are 4 reports in literature regarding the dermoscopic findings of reticulohistiocytoma, which all describe different features from each other such as central yellow area, light brown globules and dots, central white-grayish area and streaks at the periphery. Yet, no vascular structures were observed in any of the recent cases. Hence, we present the first dermoscopic observation of arborizing vessels in reticulohistiocytoma, thereby adding it to the list of entities that mimics basal cell carcinoma both clinically and dermoscopically.

P1-148

THE NUMBER, SIZE AND AFFECTING RISK FACTORS OF ACCUIRED MELANOCYTIC NEVI IN THE CASES WHO APPLIED TO DERMATOLOGY CLINIC

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Knowing the AMN distribution of countries is important. Studies generally belong to childhood period. Our aim was to identify possible risk factors on the number and size of AMN by examining combination of number of factors in all age groups. 10.047 nevi were detected in a total of 412 patients. The median number of nevi was 17 (0-179). Nevi were observed more frequently in third decade; a decrease parallel with age was observed in the following years. The percentage of 5mm and below nevi in third decade and 5mm and above nevi in fourth decade were observed more frequently. In the evaluation of all patients, the presence of AMN in patients over age of 16 years were higher than below age of 16 years. Similarly, for both female and male gender, presence of nevi over age of 16 years was statistically higher than presence of nevi under age of 16 years. In 89,9% of the cases, the number of nevi was equal to or lower than 50; in 10,1% of the cases, there were more than 50 nevi. 98,3% of total 10.047 AMN was 5 mm or less, 1,7% of total 10.047 AMN was over 5 mm. The diameter of nevi was equal to or above 5 mm in 18.4 % of 412 cases. There is only one nevi above 5 mm in 61.9 % of cases and more than one in 38.1% of cases. The nevi above 5 mm were observed more frequently on trunk. With increasing age, the number of nevi was significantly increasing on scalp and behind the body. High number of nevi under 5mm were found for the patients with sun burns, face-to-body sunbathe habit and alcohol users. The general chemical exposure and smoking were observed to increase both the number of nevi below and over 5 mm. 99,8% of nevi had under 4,75 TDS, 0.1% of nevi had from 4,75 to 5,45 TDS and 0.1% of nevi had above 5,45 TDS. TDS was between 4.75 to 5.45 in cases who had nevi over 50 and who exposed to multiple chemical and alcohol. There was no statistical correlation between TDS and other factors. Histopathologic examination was performed in 17 nevi. There was no evidence of melanoma in any of nevi.

P1-149

MEASURING THE PRACTICE OF DERMOSCOPY AMONG DERMATOLOGISTS OF RUSSIA

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Since 2013, it is mandatory for all Russian dermatology offices to have a dermoscopy handpiece, and for larger dermatology clinics to have a videodermatoscope. Thus, one may estimate that about 5000 public dermatology offices in Russia should have been equipped with at least one dermatoscope today. Yet dermoscopy is not a part of existing dermatological residency programmes or obligatory postgraduate courses. The existing training programmes are not funded from the state and are voluntary. The problem of dermoscopy use among Russian dermatologists is complicated with existence of separate public oncology service that traditionally is entitled with diagnostic and treatment tasks for skin cancers. To examine the demand for dermoscopy among dermatologic community in Russia, we have examined the pool of clinicians registered at national dermatology network, dermatology.ru. We have constructed several online questionnaires and used the queries to the database to obtain statistic since 2012. From 424 certified clinicians asked on what dermoscopy device do they use, 163 (38)% chose Heine Dermatoskop, 34 (8%)—Dermlite models, 3 (1%)—Dermgenius, 55 (13%)—other hand piece models, 39 (9%) chose unspecified videodermatoscope. Most (88 or 41%) of 215 dermatologists surveyed next prefer ABCD rule as main

diagnostic algorithm, with 22 (10%) selected 7-point checklist, 11 (5%)—Menzies method, 36 (17%)—pattern analysis, and 55 (26%) reported of not using algorithms at all. When asked if they use dermatoscope for diagnosing non-cancer skin disease, 85 (28% of 304 clinicians surveyed) answered 'frequently,' 64 (21%)—'usually,' 44 (14%)—'infrequently,' others reported 'no' or 'I don't have a device.' When asked about the reasons to use dermoscopy in diagnosing skin and hair disease, 142 (57% of 250 surveyed) answered they 'know specific signs of the disease,' 105 (42%) told they use dermoscopic examination as a 'control tool' and 103 (41%) as a tool for evaluate treatment. Of 302 clinicians surveyed on 'how informative is dermoscopy as a diagnostic tool for a dermatologist,' 123 (41%) gave 75% confidence, 114 (38%)—50%, 21 (7%) reported 100%, 19 (6%)—25% and just 25 (8%) found confidence only in diagnostic biopsy with histological examination.

P1-150

UNUSUAL PRESENTATIONS OF MOLLUSCUM CONTAGIOSUM

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Introduction: Molluscum contagiosum (MC) is a common viral skin infection caused by various types of the poxvirus, molluscum contagiosum virus (MCV)-1 to -4, with MCV-1 being the most common. Although easily diagnosed, MC may present as a single lesion or as several small, inflamed lesions, or unusual localization of lesions could be difficult diagnosed.

Case Report: A 13-year-old white girl presented with inflamed lesions, redness on her right foot, with intense itching. This abnormality lesions appeared 1 month ago and they were treated 2 weeks as contact dermatitis by general practitioner with three-cream without effect. Dermatoscopic characteristics: all lesions with an orifice at the center reveal a similar tipical pattern—polylobular, white-yellow, amorphous structure in the center with a surrounding crown, radial (crown and radial vascular pattern) or punctiform pattern (punctiform vascular pattern) vessels that do not cross the centers of the lobules. One lesion had haemorrhagic crust and peripheric inflammation with punctiform vessels as a consequence of scratching. The lesion had hemorrhagic marks, showing the association between punctiform vessels and inflammation. We advice to the patient a cryotherapy with liquid nitrogen as quick and effective method, but the mother of the girl agreed only on handing destruction and not other interventions. Destruction of each lesion was conducted by pricking with a large needle and removal of the core with a comedone extractor as a visual method.

Discussion: The diagnosis of MC is typically clinical, but for challenging cases, and unusual localizations of this condition the use of a dermatoscope may aid in diagnosis by allowing the clinician to visualize the characteristic white-yellow clods and surrounding vessels. This dermoscopy pattern is caused by inverted lobules of hyperplastic squamous epithelium that expands into the underlying dermis separated by fine septae of compressed dermis and by vessels in this dermis. So, dermoscopy performed on MC lesions proved superior to dermatological examination even in cases in which clinical diagnosis was difficult.

P1-151

TRICHOSCOPY IN THE ELDERLY

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Trichoscopy in the elderly people is specific and difficult. A slow, but steady, physiological decrease in hair density is associated with ageing and decreases by 50% by the age of 70, especially in the frontal and occipital area. The perception of individuals having gray hair may result from simultaneous presence of non-pigmented (white) and pigmented (dark) scalp hairs. Presence of gray hair increases the difficulty of the trichoscopic analysis of other hair changes. Among hair loss types in the elderly the most common is androgenetic alopecia. Male androgenetic alopecia and female androgenetic alopecia share similar trichoscopy features, such as: hair shaft thickness heterogeneity, thin hairs, yellow dots, perifollicular discolouration (peripilar sign), an increased proportion of vellus hairs and high number of follicular units with one hair shaft. Thin, wavy hair and honeycomb hyperpigmentation often coexist as additional, non-specific features. Trichoscopic analysis of coexisting androgenetic, senescent and telogen effluvium alopecia cases could be difficult. The most characteristic trichoscopic features of senescent alopecia are diffuse hair thinning over the whole scalp, reduced hair diameter with the presence of hair follicle miniaturization. Our trichoscopy experience shows that senescent alopecia shares with androgenetic alopecia the predominance of follicular units with only one hair and decreased hair shaft density (honeycomb pattern pigmentation). The tendency to form brown perifollicular discolouration (peripilar sign) is less common compared to typical androgenetic alopecia. Telogen effluvium alopecia which can coexist occurs with typical trichoscopic features like empty hair follicles, predominance of follicular units with only 1 hair, perifollicular discolouration (peripilar sign) and upright regrowing hairs typically in the frontal area. Trichoscopy is also relevant in case of cicatricial alopecia in the elderly. In the recent years the prevalence of lichen planopilaris and fibrosing alopecia in pattern distribution has been increased. Fibrosing alopecia in pattern distribution develops in patients with underlying androgenetic alopecia and shares features of androgenetic alopecia with features of lichen planopilaris. Summarizing trichoscopy in the elderly is a perfect noninvasive tool for diagnosing different types of nonscarring and scarring alopecia patients, thus, it could be difficult.

P1-152

A BENIGN ACRAL LESION AGAINST ALL DERMOSCOPIC ODDS

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A benign acral lesion against all dermoscopic odds. A 78-year-old male patient with no history of chronic diseases was admitted to the clinic for regular skin cancer screening. In 2011 the patient was diagnosed with basall cell carcinoma in the chest area, which was surgically excised with no signs of recurrence in dermoscopy follow up. Detailed examination revealed a suspicious, dark brown 8 mm lesion located on the dorsal surface of the III right toe, presenting asymmetry of shape and colour in the naked eye examination. Another, smaller, dark brown lesion was located symmetrically on the IV toe of the same foot. According to anamnesis the lesion had a short history; however the patient was not aware of details. Dermoscopy showed an asymmetric lesion with a multicomponent pattern, including, an atypical pigmented network, irregular black globules, whitish homogeneous area and scalling. Diffuse pigmentation of different shades of brown colour not respecting furrows or ridges was observed. The lesion ended abruptly without transition towards normal skin. The dermoscopy findings were highly indicative of melanoma. The lesion was surgically excised. Histopathology performed by two independent pathologists showed a benign lesion with the final report indicating pigmeted acral lentiginous nevus with features of mechanical irritation. We present the case of patient with clinical and dermoscopical features of melanoma which was found to be histopathologically benign. In conclusion, it may be considered to what extend the mechanical irritation of this lesion may have led to the malignant appearance in dermoscopy.

P1-153

DERMOSCOPY OF BENIGN MIGRATORY GLOSSITIS

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Geographic tongue is a relatively common condition usually presenting on the dorsal tongue as erythematous areas surrounded by yellowish-white, circinate linear borders reminiscent of land masses and oceans on a map. It is also referred to by a variety of terms such as: benign migratory glossitis, erythema migrans, annulus migrans, or wandering rash of the tongue. Here we present the clinical and dermatoscopic features of geographic tongue. A 46-year-old Hispanic woman was referred by a family physician to the Dermatology Department for evaluation of map-like erythematous patches with circinate whitish borders, localized on the dorsum and left side of tongue. The patient had noticed these changes in the last 8 months, and referred occasional mild burning sensation. Dermoscopic examination revealed the presence of smoothed, erythematous patches where filiform papillae were flattened or absent. In the whitish borders surrounding these erythematous patches, the presence of filiform papillae was noted. Taking into consideration both clinical and dermoscopic findings, a diagnosis of benign migratory glossitis (BMG) was made. The patient was informed about the benign nature of this disease, and after that, she was discharged. Also named as geographic tongue, benign migratory glossitis is a benign, asymptomatic disease of the tongue. Its etiology remains unknown; however, congenital and hereditary factors, as well as an association with systemic and psychological conditions like psoriasis, diabetes, atopy, and emotional stress have been proposed. Clinical features include multifocal, circinate, irregular erythematous patches bounded by a slightly elevated, white or cream-coloured keratotic band or line. Periods or remission and exacerbation are characteristic, with recurring lesions occurring in new locations. Some patients complain of burning sensation. Histopathology typically shows loss of filiform papillae with a flattened mucosal surface; however histological confirmation is rarely needed. In this patient, dermoscopy was a very useful tool because areas lacking filiform papillae were easily identified, making it possible to establish an accurate and quick diagnosis.

P1-154

DERMOSCOPY ANALYSIS OF CUTANEOUS MICROVESSEL PATTERNS IN DERMATOMYOSITIS

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Background: In pathogenesis of dermatomyositis microvessel changes are underlined. Dermoscopy examination may be used in evaluation of microvessels in skin lesions in patients with dermatomyositis. Several studies support the role of dermoscopy in nail-fold capillary abnormality detection in dermatomyositis. Specific capillaries on the scalp in patients with dermatomyositis were described in trichoscopy.

Objective: The aim of the study was to assess microvessel patterns in dermoscopy in skin lesions of patients with dermatomyositis according to the stage of the disease and site of the lesion.

Methods: Videodermoscopy was performed in 3 patients with dermatomyositis. Images of nail-fold capillaries, microvessels of the scalp, Gottron's papules and erythematous lesions in other sites were observed in 20 and 70 fold magnifications.

Results: In nail- fold areas thickened looped vessels (megacapillaries), microhemorrhages, twisted vessels and arborizing/bushy vessels were seen what is consistent with results of previous studies. Nail-fold capillary changes were more

prominent in the patient with late stage disease compared to a patient with recently diagnosed disease.

The patient with advanced disease has presented thickened, linear irregular, arborizing, meandering capillaries and extravasations on the scalp. In **a** patient with early stage of the disease vessel abnormalities on the scalp were absent. In the Gottron's papules randomly arranged coiled vessels were observed. Thickened, dark red to violaceous in colour, irregular linear and arborizing vessels on the pink background were seen in erythematous lesions of other involved areas.

Conclusions: Our preliminary data indicate that dermoscopy reveals several microvessel patterns of skin changes in dermatomyositis. Disease activity, duration and site of examination may influence the results of dermoscopy examination in dermatomyositis.

P1-155

TRICHOSCOPY IN PATIENTS WITH PARATHYROID GLANDS DISORDERS—PRELIMINARY RESULTS

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Trichoscopy allows for differential diagnosis of various hair diseases including non-cicatricial alopecia, such as telogen effluvium. The aim of the study was to perform trichoscopy and evaluate hair changes associated with parathyroid-related disorders. Trichoscopy was performed with Fotofinder II videodermoscope. Groups of adult female patients with different parathyroid-related disorders: 20 patients with hyperparathyroidism and 7 patients with hypoparathyroidism have been assessed. Results have been compared to healthy persons of similar age and gender. In case of parathyroid disorders trichoscopy revealed subclinical features of non-cicatricial alopecia. In patients with hypoparathyroidism the most common abnormalities were characteristic of telogen effluvium features (observed 75% of patients) whereas in patients with hyperparathyroidism androgenetic and senile alopecia were present in 80% of patients. Telogen effluvium associated with hypoparathyroidism presented with typical trichoscopic features, such as empty hair follicles, predominance of follicular units with only 1 hair, perifollicular discolouration (peripilar sign) and upright regrowing hairs which were most prominent in the frontal area. In contrast, in the group of patients with hyperparathyroidism, which consisted mostly of postmenopausal women, androgenetic alopecia and senescent alopecia was observed most frequently. The most frequent trichoscopy findings in this group were: hair shaft thickness heterogeneity, multiple vellus hairs, and also follicular units with only one hair. Summarizing patients with parathyroid gland disorders show common trichoscopy abnormalities with features of telogen effluvium being most frequent in patients with hypoparathyroidism and features of androgenetic alopecia / senescent alopecia in patients with hyperparathyroidism.

P1-156

PIGMENTED LESIONS OF THE SCALP—DIFFERENTIAL DIAGNOSTIC PROBLEMS

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Background: Pigmented as well as non-pigmented lesions growing on the scalp usually remain hidden, until recognition years can elapse. Lesions located on the scalp differ from lesions found on other sites of the body due to the unique structure and their special anatomical location. Therefore they constitute differential diagnostic problem.

Objective: The aim of the present study was to assess the dermoscopic pattern of different type of pigmented lesions on the scalp. The authors wanted to emphasize the significance of physical examination of the scalp and the distinctive dermoscopic patterns through six clinical cases.

Methods: Between 2012.01.01-2013.12.31 six cases were selected retrospectively, which had caused a differential diagnostic problem.

Results: Macroscopically all lesions were suspicious for malignant melanoma. 2 out of 6 cases were suspicious for malignant melanoma, one for seborrhoic keratosis, one for pigmented basal cell carcinoma, one for actinic keratoses and one for epidermal naevus according to dermoscopic examination. Histopathology supported the suggested diagnoses by dermoscopy in all of the cases.

Conclusions: Dermoscopy could increase the diagnostic accuracy in clinically puzzling cases. Histopathology could confirm the diagnosis indicated by dermoscopy.

P1-157

MELANOMA WITH COMMEDO-LIKE OPENINGS, A RARE DERMOSCOPIC FINDING

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Introduction: Commedo-like openings, predominantly found in seborrhoic keratoses and less frequently in Unna nevi, are rarely seen in melanoma. Histopathologically, they correlate with keratin plugs within dilatated follicular openings. We present a case of uncommon dermoscopic finding characterized by several commedo-like openings distributed in asymmetric clusters noticed in the patient with third primary melanoma.

Case report: A 65-year-old woman with a history of previously removed two primary melanomas (Clark IV, Breslow IV, in 1999 and 2002, respectively) located on her back and right shoulder, was reffered to our Department for a regular periodic skin examination. On the back, a few centimeters from the surgical scar, a suspicious pigmented lesion accompanied with pruritus was noticed. Clinically, the lesion was asymmetrical, nonulcerated, 5 mm in diameter, slightly elevated with three different colours (dark brown, light brown and grey) and presented as ugly-duckling sign. Dermoscopy showed striking asymmetry in shape, colour and structure, with grey-brown blotches, large light brown to pinky structurless area and unevenly distributed and sharply defined brown globules of varying size and shape grouped in asymmetric clusters which resembeled as commedo-like openinigs. Differential diagnosis was de novo melanoma, melanoma metastasis or less likely seborrheic keratosis or pigmented basal cell carcinoma. Complete excision was performed and histopathology revealed cytologic atypia and melanocytic proliferation with a nested pattern in the dermis with focal epidermotropism, smaller nests of atypical melanocytes within hair folicules whose ostia were filled with keratotic plugs. The invasion depth was 1 mm with no sign of perineural or intravascular invasion.The patient had no evidence of metastatic disease.

Conclusion: Since commedo-like openings represent typical feature of seborrhoic keratosis they might misslead clinician to a wrong diagnosis. Becauseof high level index of suspicion in the patient with two previous primary melanomas and since we found enough specific criteria for melanocytic malignant lesion, this melanoma was surgically removed in the early phase and it turned out to be of small diameter and thickness. This case serves as an example for distinction of melanoma imitating seborrhoic keratosis from collision lesion consisting of melanoma and seborrhoic keratosis.

P1-158

TRICHOSCOPY-INDIAN EXPERIENCE IN 100 PATIENTS COMPLAINING OF HAIR LOSS

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Trichoscopy is a rapid in-office technique, which has become a standard procedure in differential diagnosis of hair loss. Hand held dermatoscope (reflected lightdermatoscopy (Dermlite II Pro HR; 3GEN LLC, San Juan Capistrano, CA, USA). can be used as trichoscope.it does give information on scalp and hairs.we have used dermatoscope on scalp on patients with alopacea localized or generalized. There may be some difference in Indian scenario we present our experience in last 100 patients with hair loss on scalp 71 females and 29males Ages ranged from 5 yrs to 75 yrs. Cases ranged from alopecia areata, male and female patterned loss, telogen effluvium, scarring alopecia, trichotillomania, t capitis, with some cases of hair shaft disorders such as wooly hair, trichorrhexis nododsa etc. Trichoscopy abnormalities identified in the evaluated patient groups included: broken hairs, coiled hairs, short hairs with trichoptilosis, upright re-growing hairs, exclamation mark hairs, tapered hairs, flame hairs, tulip hairs, v-sign, hair powder, hook hairs, amorphous hair residues, black dots, yellow dots, yellow dots with black peppering, re-growing pigtail hairs (circular or oval), hypopigmented vellus hairs, comma hairs, corkscrew hairs, zig-zag hairs, no hairs in field of view, Pohl-Pinkus constrictions and monilethrixlike hairs, etc. Yellow dots are not that common in alopacea areata I our findings Conclusion: dermatoscopy does give additional clues in alopecia and it is a useful tool in dermatologists armamentarium. It may aid in diagnosis and. In some instances it may obviate the need for obtaining hair specimens, scalp biopsies.

P1-159

A CASE OF PALMOPLANTAR POROKERATOSIS DIAGNOSED BY DERMOSCOPIC FINDINGS AND CONFIRMED BY HISTOPATHOLOGY

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Porokeratosis is a dyskeratotic disorder of the skin. Usually presents by hyperkeratotic papule or plaque with an annular appearance and usually diagnosed easily, both histopathologically and clinically. Clinically it presents as annular plaque with advancing raised border, which shows characteristic longitudinal furrow. Punctate porokeratosis is difficult to diagnose because of its tiny size.it appears usually in early adulthood. it presents as small seed like keratotic papule on palms and soles.it has to be differentiated from punctate keratoderma,darrier's disease,cowden's diasease and arsenical keratosis. Dermoscopy is a noninvasive diagnostic technique that many a times clinches the diagnosis and represents a link between and obviates neccesity of macroscopic clinical dermatology and microscopic dermatopathology. We present a case of palmoplantar punctate porokeratosis variant which presented with asymptomatic tiny spine like excrescences present over many years.patient was not bothered about it was noticed during routine examination.the lesion was d clinically difficult to diagnose as the characteristic features were not easily seen.on dermatoscopic examination there was a tiny brown border suggesting us the diagnosis of porokeratosis, a histopathology was performed which showed classic parakeratotic column called coronoid lamella,abscent granular layer.

P1-160

DERMOSCOPY: "MARK THE SPOT"

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Objective: Dermoscopy is a non-invasive method that enables clinicians to evaluate numerous morphological features, colours and microstructures of the epidermis, the dermoepi-

dermal junction, and the papillary dermis of various dermatological conditions which are not visible to the naked eye.

This method improves diagnostic accuracy by 20-30% compared with simple clinical observation. Primarily used for only pigmented skin lesions it has extended its application to various dermatological disorders. Recently, computer-aided dermoscopy with the help of image enhancement software has revolutionized dermatology.

Method: Using the Scalar dermatoscope with polarised function and various magnifications up to 200 X digital images of dermatological pathologies were taken. Incorporating Computer Aided Image Enhancement Digital Scale software with various features like geometric correction, duplication, grey scaling, inversion, pseudo colour, spatial filters, arithmetic operations, background fitting, histogram, colour selection, binarization, shape analysis, calibration, geometrical and manual measurement, and detailed colour information, the image visualization and interpretation aided to a qualitative clinical judgement. Differentiation of various pigmentary disorders including malignancies by dermoscopy is a helpful tool for diagnosis.

Results: Out of total 15,000 dermoscopic images only Basal Cell Carcinoma were selected. Specific features were noted and serial imaging helped in diagnosis, prognosis and therapeutic response.

Conclusion: We are beginning to move away from clinicpathologic diagnosis into an era of clinic-imaging diagnosis. Digital techniques permitting analysis of computer images generated by sophisticated software's have opened new horizons in this field. However, digital systems will always be limited by the extreme complexity of biological systems compared to physical ones. Dermoscopy should not be the final diagnostic tool without histopathological examination of clinically suspicious lesion.

P1-161

DERMOSCOPY: "HAIR AND NAIL"

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Objective: Dermoscopy is a non-invasive method that enables clinicians to evaluate numerous morphological features, colours and microstructures of the epidermis, the dermoepidermal junction, and the papillary dermis of various dermatological conditions which are not visible to the naked eye.

This method improves diagnostic accuracy by 20-30% compared with simple clinical observation. Primarily used for only pigmented skin lesions it has extended its application to various dermatological disorders. Recently, computer-aided dermoscopy with the help of image enhancement software has revolutionized dermatology.

Method: Using the Scalar dermatoscope with polarised function and various magnifications up to 200 X digital images of dermatological pathologies were taken. Incorporating Computer Aided Image Enhancement Digital Scale software with various features like geometric correction, duplication, grey scaling, inversion, pseudo colour, spatial filters, arithmetic operations, background fitting, histogram, colour selection, binarization, shape analysis, calibration, geometrical and manual measurement, and detailed colour information, the image visualization and interpretation aided to a qualitative clinical judgement. Differentiation of various pigmentary disorders including malignancies by dermoscopy is a helpful tool for diagnosis.

Results: Out of total 15,000 dermoscopic images of common and uncommon dermatological conditions, selected hair and nail conditions were studied. Specific features were noted and serial imaging helped in diagnosis, prognosis and therapeutic response.

Conclusion: We are beginning to move away from clinicpathologic diagnosis into an era of clinic-imaging diagnosis. Dermoscopy presents an attractive addition to the dermatologic diagnostic armamentarium which adds to the confidence, elegance, and enjoyment of clinical diagnosis by visualizing the primary morphology of the disease. Digital techniques permitting analysis of computer images generated by sophisticated software's have opened new horizons in this field. However, digital systems will always be limited by the extreme complexity of biological systems compared to physical ones. Dermoscopy should not be the final diagnostic tool with-out histopathological examination of clinically suspicious lesion. Computerized digital dermoscopy with image enhancement software can be extremely useful for diagnostic and therapeutic purposes.

P1-162

HYPOPYON-LIKE STRUCTURES IN DERMOSCOPYOF CUTANEOUS LYMPHANGIOMA CIRCUMSCRIPTUM: A CASE SERIES

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Background: Cutaneous lymphangioma circumscriptum is a lymphatic malformation characterized by clusters of translucent small vesicles, with colour varying from clear and pink to dark red or blue depending on the amount of blood invading lymphatic channels. Few lesions may display verrucous hyperkeratotic surface following frequent infections. Dermoscopically, cutaneous lymphangioma circumscriptum exhibit characteristic hypopyon-like structures.

Observations: Dermoscopic examination was done in three patients (Age 7-10 years) with cutaneous lymphangioma circumscriptum. First two patients had typical presentation—clusters of clear translucent vesicles and dark vesicles over the lateral trunk. Third patient presented with a circumscribed plaque of multiple confluent verrucous hyperkeratotic papules, nodules and few translucent vesicles. On dermoscopic examination, clear vesicles showed yellowish white lacunae surrounded by pale septa. Dark vesicles showed pink lacunae, with most of them showing blood in

the lowermost part imparting a characteristic hyopyon-like appearance. Histopathological examination showed dilated spaces with lymphatic fluid admixed with RBC'S confirming the diagnosis of cutaneous lymphangioma circumscriptum in all the three cases.

Conclusion: The diagnosis of cutaneous lymphangioma circumscriptum is straight forward in most of the cases. However, those presenting with verrucous hyperkeratotic surface can be confused with angiokeratoma circumscriptum or verrucous hemangioma. In such cases, dermoscopy can play a useful role, obviating the need for skin biopsies.

P1-163

CAN HAIR CAST BE A HELPFUL DERMOSCOPIC DIAGNOSTIC CLUE IN DIAGNOSING TELOGEN EFFLUVIUM?

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Background: Female androgenic alopecia, choronic telogen effluvium and diffuse alopecia areata are the main differential diagnoses in a patient with diffuse alopecia. Trichoscopy can be helpfull in differentiating these entities. To the best of our knowledge, telogen effluvium doesn't have a special diagnostic criteria and the diagnosis is by exclusion.

Objective: We sought to find a helpful dermatoscopic feature in diagnosing telogen effluvium.

Methods: Images (Í30 magnification) with trichoscopy were obtained from 100 patients with non-cicatricial alopecia and 100 unaffected control subjects.

Results: The diagnosis of our patients was categorized into alopecia areata (46), andrognic alopecia (41), telogen effluvium (10) and traction alopecia (3). Dermatoscopic features of these conditions (e.g, yellow dots in alopecia areata or peripilar sign in androgenic alopecia) were reported seperately. We found hair cast much more in telogen effluvium patients (80%) in comparison with other non-cicatricial alopecias (12.2% in androgenic alopecia and 33.3% in tractional alopecia) and control group (1%). P-value was calculated <0.001 with SPSS, 17 software.

Limitations: The number of telogen effluvium cases were limited.

Conclusion: As noted above dermatoscopy can help in differentiating causes of diffuse hair loss. Telogen effluvium is diagnosed by exclusion of androgenic alopecia and diffuse alopecia areata. Although there is no sensitive and specific dermatoscopic finding for the diagnosis of telogen effluvium, hair cast can be a characteristic feature of this condition.

Keywords: telogen effluvium, alopecia, dermatoscopy, trichoscopy, hair cast

P1-164

PREVALENCE OF DERMOSCOPIC FEATURES OF SEBORRHEIC KERATOSIS IN EGYPTIAN PATIENTS

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Introduction: Dermoscopy is a noninvasive, in vivo technique primarily used for the examination of pigmented skin lesions; however, it can also assist clinicians in assessing many amelanotic lesions.

Seborrheic keratoses (SK) are common benign pigmented lesions most commonly located on the light-exposed skin in white races. The classic dermoscopic criteria for seborrheic keratosis include milia-like cysts and comedo-like openings, sharp demarcation, pigment pattern (including network, dots/globules, pseudonetwork, negative network, and homogenous structureless pigmentation), and vascular patterns (including coma shaped vessels, hairpin vessels, arborizing vessels, crown vessels, linear vessels, branched vessels, lacunae, glomerular vessels, and dotted vessels).

Patients and Methods: Forty eight patients suffering from seborrheic keraotses were evaluated by clinical, dermoscopic examination and digital imaging of their lesions by using the polarized contact dermlite II HR dermoscope aided by a 3x optical zoom Samsung S4 Zoom camera.

Results: The most common dermoscopic finding was the presence of sharp border demarcation (85.4%) followed by the comedo-like openings (60.4%). The homogenous diffuse pigmentation came next (43.8%) followed by the crypts and milia like cysts (36.7% & 35.4% respectively). Other dermoscopic findings included the cerebriform pattern (33.3%), the vascular structures were seen in 18.8% of lesions (the commonest was the hairpin pattern 10.4%, the linear ones 6.3% and the dotted ones 2.1%), the moth eaten border and the mammillated surface (each 14.6%), the pseudonetwork like pigmentation (12.5%), the least seen findings were the peripheral pigment network that was seen in only 2.1% of lesions which was the same percentage for the peppering.

Conclusion: The most sensitive dermoscopic characteristics' for the diagnosis of Seborrheic Keratoses are the presence of sharp border demarcation, followed by the comedo-like openings and the homogenous diffuse pigmentation.

P2-1

INTEREST OF NEW DERMATOLOGICAL IMAGING TOOLS FOR THE DIAGNOSIS OF NETHERTON SYNDROME

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Netherton syndrome is a rare autosomal recessive genodermatosis due to a mutation in the SPINK5 gene encoding the serine protease inhibitor called LEKT1. LEKT1 deficiency causes increased hydrolytic activity of proteins such as trypsin in the horny layer leading to premature desquamation and a severe impairment of the skin barrier. A clue for the diagnosis is the identification of the bamboo hair under optical microscopy. Histology of skin lesions is not very specific and the definitive diagnosis based on the presence of the specific mutation. We described for the first time the reflectance confocal microscopy (RCM) and High Definition Optical Coherence Tomography (HD-OCT) features of the skin and hairs in one patient affected by this genodermatosis.

Observation: We investigated by RCM and HD-OCT the skin and the hair of an 8-year-old child, suffering from Netherton syndrome confirmed by SPINK5 mutation. The child had a history of erythroderma, growth's retardation, allergy to cow's milk protein and eggs, hypernatremic dehydration and repeated infections during the first 2 years of life. Moreover, he presented with a significant parietal and occipital scarring alopecia secondary to repeated episodes of scalp folliculitis. Skin examination of erythrodermic skin by RCM showed acanthosis, hyperkeratosis, parakeratotic scales, and telangiectasias in the superficial dermis. The examination of hairs showed invaginations characteristic of bamboo hairs described under conventional optical microscopy. HD-OCT found the same features of the skin and hairs.

Discussion: This is the first description of skin lesions and bamboo hair in a patient Netherton syndrome by RCM and HD-OCT. Our patient had all the hallmarks of a classic Netherton's syndrome: congenital erythroderma, hair dysplasia, atopic dermatitis with food allergies and electrolyte disorders and infectious episodes. The originality of this observation is the persistence of erythroderma, and the presence of repeated episodes of folliculitis leading to extensive scarring alopecia. RCM and HD-OCT are two non-invasive imaging techniques that allow to identify the histological signs of this disease without skin biopsy and to detect bamboo hair without collecting hair shafts. These findings could help the diagnosis before the genetic confirmation. These techniques have the advantages of being non-invasive and giving an immediate result.

P2-2

IN AND EX VIVO REFLECTANCE CONFOCAL MICROSCOPY EXAMINATION OF XANTHOGRANULOMAS FROM 5 PATIENTS

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Introduction: Xanthogranuloma (XG) is a normolipemic non-Langerhans cell histiocytosis, which is rare in adults and may simulate malignant tumors such as amelanotic melanoma and basal cell carcinoma. In children is frequent and can mimic Spitz nevus. There is only one report about the use of in vivo reflectance confocal microscopy (RCM) for a case of xanthogranuloma. We report a series of XG examined by in vivo and ex vivo confocal microscopy.

Observartion: A 69-year-old and a 43-year-old patient presented with yellow nodules of the trunk for 1 year and 6 months respectively. Dermatoscopic examination carried on ten nodules showed symmetrical homogeneous yellowish or pinkish nodules with peripheral linear vessels. A 23 year-old-man had a yellow tumor of the scalp. Dermatoscopy found a homogeneous yellow backgroud with normal hair follicle within it and glomerular vessels at the periphery. A 9 year-old child had an erythematous nodule of the nose. Dermatoscopy showed a homogeneous pink background with peripheral linear telangiectasias and erosions. A 23 month-old child had a recurrence of a XG of the shoulder treated by curettage. Dermatoscopy found a yellowish background with glomerular vessels at the periphery. In and ex vivo RCM of all the observed skin lesions showed a normal epidermis and dermal epidermal-junction, and the presence of an infiltrate of hyper-reflective cells of different sizes in the superficial dermis, sometimes large and multinucleated, suggestive of foamy histiocytes cells (large oval cells), lymphocytes (small and roundish cells) and interspersed Touton cells (multinucleated large cells) of XG. In some cases large dilated horizontalised vessels were also present. Histopathology confirmed these findings.

Discussion: RCM can help the diagnosis of XG. Foamy histiocytes are spontaneously hyper-reflective under RCM and Touton cells can be identified. Histiocytes of XG have a more grainy aspect than cells of nevi and melanoma and not organized in nests. RCM can be a useful tool for the diagnosis of XG.

P2-3

FEATURES OF MELANOMA IN REFLECTANCE MODE CONFOCAL MICROSCOPY EXAMINATION DEPEND ON THICKNESS ACCORDING TO BRESLOW SCALE

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In vivo reflectance mode confocal microscopy (RCM) is an established method in the diagnosis of melanoma. An algorithm has been developed for the diagnosis of melanoma based on a reflectance confocal microscopy imaging, which is based on the presence of: irregularity in shape and distribution, nonedged contours of dermal papillae and cellular atypia, mild or marked at the dermoepidermal junction (major criteria) and the presence of pagetoid cells (large roundish nucleated cells with refractive cytoplasm and dark nucleus) within superficial layers of the epidermis or widespread, pagetoid infiltration thorough the lesion, cerebriform clusters in the papillary dermis and nucleated cells within der-

mal papilla (minor criteria). The aim of this study was to evaluate whether reflectance confocal microscopy may allow differentiation between thin (≤ 1 mm according Breslow scale) and thick (> 1 mm) melanomas. In the analysis of 30 cases of melanoma (15 patients with melanoma of ≤1mm according to Breslow scale and 15 patients with melanoma >1mm) epidermal disarray was found in 66,7% of "thin" melanomas and 93,3% of "thick" melanomas (p=0,068). The most characteristic feature of the "thick" melanomas was the presence of atypical round cells (33,3% of "thin" melanomas and 100% of "thick" melanomas, p=0,001). A further difference was noted in the number of atypical cells visible in a single visual field. More than 5 atypical cells/field of view were found in (20% and 53,3% respectively). At the dermoepidermal junction the most characteristic features for melanoma were non-edged papillae which were visible in 60% of "thin" and 100% of the "thick" melanomas (p=0,006). Edged papillae were considered as a protective factor (these were found in 26,7% of "thin" and none of the "thick" melanomas, p=0,032). In conclusion, our results indicate that reflectance confocal microscopy allows to differentiate between melanomas of ≤ 1 mm according Breslow scale versus > 1 mm melanomas.

P2-4

REFLECTANCE CONFOCAL MICROSCOPY OF A MAMMARY PAGET DISEASE

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Intraepidermal adenocarcinoma of the nipple area, mammary Paget disease, is sometimes hard to differentiate from the eczema of the nipple. Reflectance confocal microscopy (RCM), which is useful for the invivo skin tumor diagnosis is an alternative to a biopsy, which may be invasive for the nipple area. In this report, we aimed to evaluate the RCM findings of a non-pigmented mammary Paget disease. A 65 year-old woman was admitted with a one year history of an erythematous, slowly enlarging plaque on the left nipple area 4.0x2.6 cm in diameter. The lesion was suggestive for Paget's disease clinically. Widespread erythema (vascular blush) together with some linear and comma-like vessels seen on dermoscopy was not diagnostic. The lesion was evaluated by RCM (Vivascope, Lucid Inc, Rochester, NY, USA). The superficial epidermal layers were characterized by partially spared honeycomb pattern with bright reflective particles (inflammatory cell groups) and nests like dark silhouettes embracing mildly reflective large, round atypical cells. In addition in focal areas there were some scattered single tumor cells within the epidermis. At the dermoepidermal junction, besides the large tumor nests, numerous bright dendritic cells were also seen. At the papillary dermis, increased vascularity with rapid blood flow and some perivascular inflammatory cells were seen.

Histopathological findings together with immunohistochemical findings were diagnostic for Paget disease. Radiologic examination of the breast showed no pathology on mammography and ultrasonography. The patient went through breast surgery and the pathology showed the Paget disease without any associated malignancy of the breast. RCM findings of Paget disease are limited in the literature. Most of the reported cases are extramammarian type. To our knowledge, RCM findings of mammarian Paget disease were reported only in two cases. These were one pigmented and one non-pigmented. Comparing with the literature, we have observed that RCM findings of non-pigmented Paget disease were identical with RCM findings of the extramammarian counterpart. The characteristic appearance of Paget cells helped us in the differential diagnosis. Thus, RCM is a useful tool in this special area.

P2-5

THE VALUE OF REFLECTANCE CONFOCAL MICROSCOPY IN DIAGNOSIS OF FLAT PIGMENTED FACIAL LESIONS

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The dermatoscopic and clinical diagnosis of lesions on the face may be challenging as facial skin has a particular histologic architecture and pigmented lesions on this body site (such as lentigo maligna, actinic keratosis, seborrheic keratosis and basal cell carcinoma) sometimes display overlapping features. Reflectance confocal microscopy is ideally suited for diagnosis of flat, pigmented lesions, thus avoiding surgical procedure that may cause scarring and unsatisfactory cosmetic results. Diagnostic features of lentigo maligna and lentigo maligna melanoma have been previously described in numerous publications. However, thorough examination of the true diagnostic accuracy of reflectance confocal microscopy in a 'real life setting' in diagnosis of facial lesions has not been examined so far. In the presented study, we aim to test the diagnostic value of reflectance confocal microscopy in comparison to clinical and dermatoscopic diagnosis (and histopathologic diagnosis, when available), in flat pigmented facial lesions. Patients of the outpatient service and inpatients of the Department of Dermatology, Medical University of Vienna, Vienna, Austria with flat pigmented lesions of the face were evaluated in a face-to-face (FTF) clinical

examination with dermatoscopy. Patients were then either scheduled for excision or a 3 and 12-monthly follow-up. In all lesions, reflectance confocal microscopy was performed (Vivascope 1500, Lucid Inc, Rochester, NY). The RCM images were then sent to seven confocal readers with expertise in reflectance confocal microscopy in clinical centres around the world. They were blinded to the clinical and dermatoscopic appearance of the lesion and the diagnosis of the FTF-dermatologist. In those lesions that were biopsied / excised, histopathologic diagnosis and images were obtained. The main outcome measure is improvement of diagnostic accuracy by RCM-aided diagnosis as compared to FTF diagnosis (clinical examination with dermatoscopy) alone.

P2-6

REFLECTANCE CONFOCAL MICROSCOPY FOR THE VASCULAR FLOW ANALYSIS: A NEW FIELD OF EXPLORATION

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Introduction: In vivo reflectance confocal microscopy (RCM) is mainly used for the diagnosis of cutaneous tumors and to a lesser extent for the diagnosis of inflammatory dermatoses and skin infections. RCM also allows the visualization and analysis of the superficial blood flow of the normal and pathological skin. We studied the capillary blood flow in a series of vascular lesions.

Materials and Methods: We studied 8 angiokeratomas of Mibelli of the feet from 1 patient, 4 cherry angiomas of the chest from 2 patients, 1 labial venous lake (explored in 4 areas), 1 pyogenic granuloma of a finger, 12 (4 of the fingers, 4 of the lip and 4 of the tongue) telangiectasias from 2 patients with Osler-Weber-Rendu disease (OWRD) and 4 labial telangiectasias from 2 patients with systemic scleroderma (SS). We characterized the type of blood flow with a semiquantitative scale: no spontaneous flow (vascular stasis), slow flow, fast flow and extremely high speed flow at the limit of the recording capabilities of the camera.

Results: We found: 1) Vascular stasis, with a blood flow only visible when modulating the pressure of the camera in all angiokeratomas of Mibelli and the venous lake. 2) Slow flow with back and forth motion following the breathing in all the cherry angiomas and in the pyogenic granuloma. 3) Fast flow in all telangiectasias from patients with SS. 4) Extremely high speed flow in all the telangiectasias from the patients with OWRD.

Discussion: Our study demonstrated that is possible to analyze the blood flow of vascular lesions by RCM. In particular, one can easily differentiate telangiectasias of the OWRD, with an extremely high speed flow, from telangiectasias of SS that have a slower flow. Moreover, the analysis of the blood flow could be applied to the diagnosis of malignant tumors. In fact, microcirculation is a key element of malignant tumors and the opportunity to explore the tumoral vascular component by RCM, defining shape, size, position and flow of the capillaries, will probably open a new semiotics.

P2-7

FABRY'S DISEASE AND REFLECTANCE CONFOCAL MICROSCOPY: AN OPTICAL DIAGNOSIS OF A METABOLIC DISEASE

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Introduction: Fabry's disease (FD) a X-linked, multisystemic lysosomal storage disease characterized by alpha-galactosidase A deficiency and consequent accumulation of globotriaosylceramide in the central nervous system, skin, heart, kidneys, auditory system and eyes. Main dermatological manifestations are angiokeratomas and hypohidrosis. The detection of these skin signs is important to suspect FD, that should be later confirmed by the alpha-galactosidase A dosage in plasma and/or the detection of the mutations in the gene encoding alpha-galactosidase A. Early diagnosis and treatment with enzyme replacement therapy is extremely import to prevent late complications reducing morbidity and mortality. Reflectance confocal microscopy (RCM) can be a new tool to help the early diagnosis of FD by dermatologists.

Observation: We observed under dermatoscopy and reflectance confocal microscopy (RCM) angiokeratomas from one adult male patient affected by FD and one women not affected by FD. For both subjects dermatoscopy showed red lacunae associated with an overlying whitish veil characteristic of angiokeratomas, while RCM examination showed dark lacunae containing hyper-reflective roundish cells corresponding to blood cells, confirming the vascular nature of these lesions. A RCM examination of the cornea of the patient affected by FD was performed with the same device (VivaScope ® 3000, CALIBER, distributed in Europe by Mavig GmbH, Munich, Germany) and showed the presence of hyper-reflective intracellular inclusions in basal epithelial cells and hyper-reflective particles in the superficial part of the stroma. The corneal examination of the woman was normal. Blood alpha-galactosidase a dosage excluded the diagnosis of FD in the latter patient.

Discussion: RCM is a new diagnostic tool that could assist dermatologists to diagnose FD. RCM can help to confirm the clinical diagnosis of angiokeratomas. Moreover, in suspicion of FD, RCM can be used to search globotriaosylceramide deposits in the cornea. The aspect we found under RCM in the cornea of the patient affected by FD is similar to that described with reflectance confocal microscopes dedicated to the eye and not to the skin and is a clue to an early diagnosis of FD.

P2-8

HPV16-INDUCED BOWENOID PAPULOSIS SIMULATING MELANOMA: THE ROLE OF REFLECTANCE CONFOCAL MICROSCOPY AND HPV GENOTYPING USING LINEAR ARRAY TECHNIQUE FOR THE DIAGNOSIS OF EXTRAGENITAL DISEASE.

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Background: Bowenoid papulosis (BP) is an uncommon disease, which usually affects the genital area and is frequently associated with high-risk strains of human papilloma virus (HPV). The purpose of this study was to describe features on reflectance confocal microscopy (RCM) observed in this type of pigmented disease, and the role of immunohistochemistry (IHC) as an auxiliary tool for diagnosis.

Methods: Five cases of suspicious extragenital pigmented lesions were submitted to conventional histopathological analysis (H&E) and had BP diagnosis. The lesions underwent RCM prior to excision. IHC for p16 and CD1a was performed. HPV infection was tested by linear array technique.

Results: On dermoscopy, the lesions presented features also seen in melanoma: irregularly distributed brown dots/globules, grey to brown asymmetrical pigmentation, peripheral irregular streaks. On RCM, all lesions presented atypical honeycomb pattern of the epidermis and scale. Two lesions presented features suggestive of pigmented squamous cell carcinoma: multiple small bright edged papillae at the dermo-epidermal junction (DEJ) and vessels within the superficial dermis.Three cases showed numerous epidermal dendritic cells. Bright nucleated cells were observed surrounding the papillae. Plump bright cells and small particles were detected in the dermis. Histopathology analysis was characterized by epithelial lesions with loss of the normal epidermal maturation pattern. Atypical keratinocytes with large nuclei and clear halos were noted, compatible with HPV-related disease. Numerous atypical mitosis figures were seen in the epidermis and apoptotic bodies. IHC for p16 showed positive immunoexpression, with adjacent non-lesional epidermis negativity. CD1a revealed increased number of Langerhans cells. Four lesions were submitted to HPV testing and were positive for HPV-16. These findings confirmed the diagnosis of BP. Diffuse hyperpigmentation was observed within the epidermis and papillary dermis revealed numerous melanophages.

Conclusion: The authors present cases of BP in which the use of RCM played an important role in differentiating those difficult-to-diagnose lesions for a better decision making process. IHC was of critical value for elucidating the origin of bright dendritc cells observed on RCM.

P2-9

DERMOSCOPY AND REFLECTANCE CONFOCAL MICROSCOPY IN SKIN RE-PIGMENTATION AFTER SCALDING WITH HOT WATER

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Background: There is evidence that the hair follicle is a stem-cell niche for melanocytes.

Case: Herein we report the reflectance confocal microscopy (RCM) findings of 52 year old woman with a skintype VI, who developed re-pigmentation and re-epithelialization starting from the hair follicles approximately 5 to 10 days after a grad II scalding due to hot water injury on her thigh and buttock. At time of the RCM examination, 12 days after the injury, the skin showed clinically superficial ulcerations, crusts and freshly re-epithelized skin. The re-pigmentation was visible as brown dots on rose background. Dermoscopically brown blotches surrounding the follicular openings which tended to coalesce were seen; in between dotted vessels were visible. RCM was performed using the Vivascope 1500®. The epidermis showed typical honeycomb pattern with sparse dendritic cells in the granular layer. In the spinous layer and dermo-epidermal junction (DEJ) numerous plump bright dendritic cells without visible nucleus arising out of the follicular epithelium were observed, they seemed to correspond building a close network. In between these follicles, there was typical honeycomb pattern without dendritic cells.

Discussion: Our observation suggests that re-pigmentation and re-epithelialization starts from the hair follicle and not from the interfollicular skin. This observation supports the concept, that hair follicles are niches of melanocytic stem cells. As reported by Nishimura et al., a portion of amplifying stem-cell progeny can migrate out from the niche and retain sufficient self-renewing capability to function as stem cells after repopulation into vacant niches. The niche may have a dominant role in the fate determination of melanocyte stem-cell progeny.

P2-10

EX VIVO CONFOCAL SCANNING MICROSCOPY OF THE SKIN—MAIN MORPHOLOGICAL FEATURES AND HISTOLOGICAL CORRELATES

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Ex vivo confocal scanning laser microscopy (ex vivo CSLM) offers an innovative diagnostic approach in dermatology. In contrast to the in vivo CSLM it allows vertical view of the skin and gives an opportunity to examine all skin layers in the traditional way that can be easily compared to histology. Exact diagnosis of skin lesions is usually connected to time- and costs-consuming histological procedures. Ex vivo CSLM offers faster and easier way to get similar and in some ways even more detailed information of the examined specimen. Various stainings have been already developed and more are to come. The specimen seen in ex vivo CSLM can be reexamined via traditional histology including immunohistochemistry. This allows exact comparison of the identical piece of examined tissue from the point of histological as well as confocal view. The aim of our study was to determine reliable ex vivo CSLM correlates to histological features used to describe the anatomy of the skin and its appandages. We examined 50 samples of healthy skin from following donor sites: head and neck (n = 25), trunk (n = 10), upper extremities (n = 10), lower extremities (n = 5). We could identify different layers of the epidermis, differentiate keratinocytes from melanocytes, describe in detail hair follicle and its anatomy, sebaceous and sweat glands, as well as structures in dermis and subcutis, like fatty tissue, collagen fibres and vessels. We described and compared skin samples from various body parts in patients of different age groups and different skin types. In order to be able to diagnose pathological skin lesions the knowledge of normal skin features is essential. Our study offers an overview of the main ex vivo CSLM skin characteristics in comparison to the standard histological examination.

P2-11

MONITORING OF SPITZ/REED NEVI BY MEANS OF DERMOSCOPY AND CONFOCAL MICROSCOPY: NEW INSIGHTS ON THEIR EVOLUTION

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The natural evolution of Spitz/Reed nevi comprises two distinct pathways: involution of the nevus or stabilization of the lesion that morphologically looks like a common acquired nevus. Dermoscopy has shown the many faces of Spitz/Reed nevi as well as the changes occurring over time. However, no data are available on the histologic changes of Spitz/Reed nevi during the evolution of these lesions. Confocal microscopy is an imaging tool that offers the possibility to assess the histologic aspects of a given lesion in a noninvasive manner. In our study we imaged lesions revealing typical pattern of Spitz/Reed nevi by means of dermoscopy and confocal microscopy at baseline and over time. Clinical data and pigmentation of the lesions were assessed. Classic dermoscopic features (globular, starburst, inverse network, white network, reticular, homogeneous pattern) were analyzed as well as a list of confocal features (symmetry, sharp lateral demarcation, cytology of melanocytes, pagetoid spread, confluence of nests, architecture). A total of 30 lesions were included. No significant differences were found between growing and involving lesions in terms of patient age and sex and the location and palpability of lesions. The great majority of growing lesions were pigmented or partially pigmented. The presence of nesting and marked pagetoid spread are found typically in lesions that grows and become morphologically undistinguishable from common nevi clinically and dermoscopically, Of note, spindled cells can be detected also in these lesions, underling that cytologically they are different from common nevi. Our study sheds new lights into the fascinating evolution of Spitz/Reed nevi that represent a distinct entity in the group of nevi. Further studies with more cases and long-term follow up are needed to better clarify the biology of Spitz/Reed nevi.

P2-12

VIDEODERMOSCOPY AND IN VIVO REFLECTANCE MODE CONFOCAL MICROSCOPY OF FAST-GROWING MELANOMA DEVELOPING IN MELANOCYTIC NEVUS DURING PREGNANCY

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Melanoma is a malignant tumor derived from melanocytes growing "*de novo*" in the skin or developing within melanocytic nevus. The main risk factors of melanoma are genetic predisposition and exposure to ultraviolet radiation. To other factors include, among others, age, gender, location or influence of sex hormones, including the period of pregnancy and hormone therapy. The aim of this study was to present the case of a 32-year- old woman with the diagnosis of melanoma developing within a melanocytic nevus during pregnancy. The medical history showed that the woman had a

flat melanocytic lesion on her left lower leg for at least several years. About 2,5 year before diagnosing of melanoma she received hormonal treatment for infertility. During the first pregnancy two years ago, according to the patient's opinion, the lesion in the left lower leg has not changed in any way. Rapid progression involving the enlargement of the change, the presence of pseudopodia and nodular components was approximately 1.5 years later, during the second pregnancy. The patient came to the clinic of dermatology at 37 weeks of gestation and had made non-invasive diagnostic (videodermoscopy with reflectance confocal microscopy—RCM) and surgical excision of melanoma immediately. Videodermoscopy examination revealed the presence of pseudopodia, the presence of a nodule in part of melanocytic lesion, pinky-red areas and atypical blood vessels. RCM examination revealed such features of advanced melanoma as numerous roundish atypical cells in epidermis, numerous atypical cells in dermo-epidermal junction, non-edged papillae, atypical nests in upper dermis and atypical cells within dermal papillae. Histopathological examination showed Breslow thickness 2,5mm. The patient was referred to the oncology center to perform sentinel node biopsy and additional oncological examination. The influence of female hormones and pregnancy on the development of melanoma is controversial. There are many publications, indicating the existence of such relationship, as well as many exclusive. The presented case report shows the dynamic development of melanoma in pregnant patient.

P2-13

VASCULAR FEATURES OF ACTINIC KERATOSIS AND NON-MELANOMA SKIN CANCERS ON VIDEODERMOSCOPY AND IN VIVO REFLECTANCE CONFOCAL MICROSCOPY.

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Background: Actinic keratosis (AK) and non-melanoma skin cancers (NMSC), including basal cell carcinoma (BCC) and squamous cell carcinoma (SCC), are very common lesions on sun damaged skin. Although the gold standard of diagnosis for these lesions is invasive biopsy followed by histopathological evaluation, minimally invasive diagnostic tools have obtained increased attention. Videodermoscopy and in vivo reflectance confocal microscopy (RCM) are a non-invasive diagnostic tools that improve the clinical diagnosis of AK and NMSC by allowing the visualization of specific vascular structures.

Objective: The purpose of the study was to evaluate, whether videodermoscopy and in vivo reflectance confocal microscopy may be useful in differential diagnosis of vascular structures of actinic keratosis and non-melanoma skin cancers.

Methods: A total of 30 patients with AK, 29 with BCC and 16 with SCC were included in the study and evaluated clinically, dermoscopically and with RCM followed by biopsy. Videodermoscopy was performed with the use Fotofinder Medicam 800HD and RCM was performed with the use of Vivascope 1500.

Results: Videodermoscopy images demonstrated the presence of dotted vessels (in 12.9 % AK, 6.66 % BCC, 23.53 % SCC), coiled vessels (in 12.9 % AK, 10 % BCC, 35.29 % SCC), glomerular vessels (in non AK, 3,33 % BCC, 58.82 % SCC), linear-irregular vessels (in non AK, 23.3 % BCC, 11.76 % SCC). Arborizing vessels and short fine telangiectasias pattern were observed in 43.3 % BCC and in non AK and SCC. Clustered vascular pattern was seen in 41.17 % SCC and non-AK and BCC.

The RCM images revealed the presence of linear telangiectasia (56.6% AK, 72,4% BCC, 31.2% SCC), convoluted glomerular-like vessel (in non AK, 3.45% BCC, 81,2% SCC) and round vessels (in 43.3% AK, 17.2% BCC, 93.7% SCC).

Conclusion: In conclusion, videodermoscopy and reflectance confocal microscopy allow to the visualization and identification of vessels with a characteristic morphology which may be helpful in differentiating actinic keratosis from non-melanoma skin cancers.

P2-14

REFLECTANCE CONFOCAL MICROSCOPY AND DERMOSCOPY OF PSORIASIS, LICHEN SCLEROSUS AND ZOON´S BALANITIS IN MALE GENITAL SKIN

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Objective: We report the clinical, dermoscopical and confocal features of histopathologically confirmed genital psoriasis, lichen sclerosus and Zoon´s balanitis. Reflectance confocal microscopy (RCM) was performed by Vivascope 1500®.

Results: Psoriasis showed clustered, erythematous, non-scaly plaques. In dermoscopy the plaques showed dotted and linear vessels on a reddish homogeneous background. In RCM these islands presented as hyperreflective round to polygonal structures composed of single bright cells from the level of stratum corneum to the dermo-epidermal junction. Upper dermis disclosed dilated vessels. Intra- and perivascular inflammatory cells within papillae and on a dark background were seen.

Lichen sclerosus (LS) showed ill-defined hypopigmented, partially atrophic macules with a perilesional hyperpigmentation. Numerous teleangiectatic vessels and superficial haemorrhage were observed. Dermoscopy showed whitish areas, dotted, lacunar and tortuous vessels as well as tiny grey dots. RCM revealed typical and atypical honeycomb pattern with epidermal hyperplasia. The dermis showed hyperreflective large nucleated cells, hyperreflective inhomogeneous thick-

ened plump fibers and dilated papillae. Tortuous and buttonhole vessels were surrounded by increased perivascular tissue. Zoon´s balanitis showed sharply demarcated, occasionally eroded patches with a glossy surface and reddish-brown colour. In dermoscopy longitudinal vessels of different size on a red to orange background were observed. In RCM we described nucleated honeycomb pattern and scattered small bright cells as well as vermicular and round vessels.

Conclusion: Some inflammatory genital disorders can be diagnosed by typical clinical findings. In many cases histopathological examination is needed to rule out malignancy. Genital skin is qualified for RCM-imaging because of its morphological attributes. We demonstrated that in RCM the differentiation between inflammatory disorders can be done easily. Moreover it is possible to detect malignant transformation from an early stage.

P2-15

IN VIVO OBSERVATION OF PERIPHERAL CLEFTING IN MELANOCYTIC LESIONS

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Cleft formation is thought to be a retraction artifact observed in histopathology due to the formalin fixation-dehydration. However, it is observed on histopathology only in a quote of nevi and melanomas as an empty space that outlines the nests and neatly separates the epidermis from dermis. The introduction of reflectance confocal microscopy (RCM) for the assessment of melanocytic tumors permit to evaluate in vivo and without any staining or fixation procedure a given lesion in its native state and environment with a nearly histologic resolution. Ulrich et al in 2011 demonstrated the presence of peritumoral cleft-like spaces in basal cell carcinomas on RCM imaging and correlate this finding to mucin-rich areas seen on histological sections. In our clinical practice we noticed the presence of peripheral clefting on confocal images in melanocytic lesions as a well-defined hyporeflective band that neatly outlines the lesion from the surrounding healthy skin. To investigate this finding, we analyzed a dermoscopically-defined subset of melanocytic lesions typified by the presence of globules. Our study population included a total of 15 histopathologically-proven cases comprising 10 acquired melanocytic naevi, 2 Spitz naevi and 3 melanomas in as many patients. Cleft-like spaces have long been considered as a retraction artifact, furthermore the presence of peritumoral clefts on RCM images in vivo supports the hypothesis that these clefts are not due to tissue processing for routine pathology. Further studies are needed to explore the topic and to identify the histopathological correlate.

P2-16

UNCONVENTIONAL APPLICATIONS OF REFLECTANCE AND FLUORESCENCE CONFOCAL MICROSCOPY

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Up to date confocal microscopy was mainly used for the diagnosis of skin tumors. Our presentation will discuss the use of reflectance and fluorescence confocal microscopy for unusual indications. First we will present the exploration of unusual body sites such as the ocular surface, and the vulvar, vaginal, penile and anal mucosa by the handheld camera dedicated to the skin (VivaScope ® 3000, CALIBER, distributed in Europe by Mavig GmbH, Munich, Germany). These body sites are easily accessible to the handheld camera and this new device allows early diagnosis of tumors in these sensitive locations, where biopsies are often performed in an advanced stage. Moreover, reflectance confocal microscopy can be used for monitoring medical therapies of in situ squamous cell carcinoma in these locations. Secondly, we will discuss some unusual applications of confocal microscopy such as the use of in vivo reflectance confocal microscopy (VivaScope ® 1500 and 3000, CALIBER, distributed in Europe by Mavig GmbH, Munich, Germany) for the study of microcirculation and the identification of Langerhans cells in Langerhans Cell Histiocytosis, the use of ex vivo confocal fluorescence microscopy (VivaScope ® 2500, CALIBER, distributed in Europe by Mavig GmbH, Munich, Germany) for the diagnosis of herpes simplex virus and deep fungal infections and the use of ex vivo confocal reflectance microscopy for the diagnosis of hair dermatophytosis and the identification of fillers.

P2-17

PIGMENTED PAGET'S DISEASE OF THE NIPPLE AND AREOLA: PECULIAR REFLECTANCE CONFOCAL MICROSCOPY FEATURES

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Background: Pigmented Paget Disease (PPD) is a variant of Mammary PD. Its multicomponent macroscopic picture makes the differential diagnosis with melanoma mandatory. We present a PPD with dermoscopic features mimicking melanoma and reflectance confocal microscopy (RCM) features suggesting PPD.

Case Report: Patient: 60-yo, 18 m of slow growing lesion on medial aspect of the left nipple and areola. There was an irregularly pigmented lesion of 2 x 6 cm. On dermoscopy, lesion had irregular distributed brown and black dots, structureless pink, brown, black and greyish areas, milky red areas and a doubtful morphology resembling a pigmented network.

RCM: epidermal disarranged honeycomb pattern at stratum corneum and granulosum was noted. At stratum spinosum and deeper strata one could find large roundish cells with dark cytoplasm and mildly bright nuclei surrounded by numerous reflective dendritic cells with long dendrites mainly located around tumor nests and occasionally on the overlying epidermis at the dermoepidermal junction, small to medium-sized papillae without distinct edges were clearly observable.

Histological Findings: large atypical cells with abundant and clear cytoplasm and atypical nuclei and prominent nucleoli distributed on all levels of epidermis, isolated or forming duct-like structures (H-E). On Immunohistochemistry (IHC), keratinocytes immunoexpressed positive with AE1/AE3. Dendritic melanocytes immunoexpressed positive with HMB45, S100 and Melan-A, intermingled with negative expressed tumor cells. Large atypical cells immunoexpressed positive on BRST2, CEA and CK7 and negative for S100 protein, HMB45 and Melan-A.

Comments: The authors present a case of PPD in which the use of RCM played an important role in differentiating those difficult-to-diagnose lesion for a better decision-making process. IHC was of critical value for elucidating the origin of bright dendritic cells observed on RCM. The IHC-RCM correlation of the dendritic melanocytes surrounding the atypical Paget's cells was not yet demonstrated on literature up to this date.

P2-18

REFLECTANCE CONFOCAL MICROSCOPY OF CUTANEOUS LEISHMANIASIS- A CASE REPORT

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Background: Leishmaniasis is an intracellular parasitic infection, which can present in two major forms, visceral and cutaneous. Cutaneous leishmaniasis (CL) usually presents as a redish asymptomatic mostly ulcerated papule, often located on the face. The diagnosis is confirmed by histopathology and immunohistochemistry. Reflectance Confocal Microscopy (RCM) is a technique which allows in vivo visualization of skin structures at a nearly histologic resolution.

Methods: We present a 32-year old woman with a 5-mm red asymptomatic papule with the yellowish hue on her left cheek, lasting for two years. The patient's personal medical history was unremarkable. Two weeks before the lesion appeared, the patient was in Mallorca and two months earlier she was in Croatia. On dermoscopy, diffuse red to yellowish homogeneous area with pinkish halo and sharp teleangiectasia at the periphery, and central yellowish globules ("yellow tears") were observed. RCM examination revealed mostly typical honeycomb pattern in the epidermis as well as focally and sparsely distributed scattered small bright cells and dense infiltrate of dentritic cells within basal layer. The polymorphic inflammatory infiltrate was also observed in the upper dermis. Also, granulomas which looked similar to hairfollicles but smaller and disconnected from the skin surface, were observed. The most striking feature seen at dermal level were hyperreflecting interwoven fibers forming roundish structures resembling "bird nests." Within "bird nests," follicles and granulomas appeared as round and oval bright structures, giving the appearance of an "egg in a bird nest." There were also some dillated longitudinal and curved vessels within the upper dermis, as well as focally distributed multinucleated giant cells. Histopathological examination revealed mixed dense infiltrate of lymphocytes, plasma cells and histiocytes with small epithelioid granulomas and multinucleated giant cells. "Donovan bodies" within some histiocytes were observed. Immunohistochemical analysis confirmed the diagnosis of CL.

Conclusion: RCM as a non-invasive technique may be useful in diagnosing infectious skin lesions such as CL. While our case confirms earlier observations with regard to RCM features of an intradermal polymorphic infiltrate, curved to longitudinal vessels and few multinucleated giant cells, it adds an additional feature of "eggs in a bird nest."

P2-19

IMPROVING DIAGNOSIS OF DERMOSCOPICALLY EQUIVOCAL NON-PIGMENTED (PINK) SKIN LESIONS WITH REFLECTANCE CONFOCAL MICROSCOPY IN PATIENTS AT RISK FOR SKIN CANCER

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Non-pigmented (pink) skin lesions may present clinicians with diagnostic difficulty in daily practice. The differential diagnosis for pink lesions is broad, ranging from benign nevi or inflammatory lesions to malignant neoplasms. Therefore, due to their nondescript features detected by the traditional naked eye examination confidence in discriminating this subset of lesions is lower than their melanocytic counterparts. The application of dermoscopy has been shown to increase accuracy when differentiating pink lesions by improving visualization of structures undetectable by the naked eye with specific criteria applicable to different diagnoses. While

dermoscopy provides a significant improvement in differentiating pink lesions, compared to naked eye examination, it still has limitations. The addition of reflectance confocal microscopy (RCM) can further improve clinical confidence in equivocal lesions and decrease unnecessary excisions due to the ability of this technology to provide a near-histologic resolution at the cellular level. A retrospective study of over 250 cases will be presented comparing individual digital dermoscopy evaluation with the combination of digital dermoscopy and reflectance confocal microscopy evaluation which showed a significant improvement in the sensitivity and specificity in differentiating this subset of dermoscopically equivocal lesions.

P2-20

AGMINATED BLUE NEVI OF THE PENIS

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Introduction: Blue nevi are ectopic collections of dermal melanocytes present as solitary lesions, but multiple lesions may occur. They are grouped in a circumscribed area or, in rare cases, disseminated. Multiple blue nevi may present a diagnostic challenge and metastatic melanoma must be ruled out.

Case 1: A 65-year-old Caucasian man with personal history of in situ melanoma on the trunk 8 years ago, was referred to evaluate multiple, agminated, dark brown macules adjacent to the balano-prepucial sulcus and glans present for 10 years. Dermoscopy on the dorsum revealed multiple lesions of homogeneous dark brown colour with periferic reticular pattern. On the glans, central brown homogeneous lesions and periferic isolated lesions. Reflectance confocal microscopy (RCM) presented bright round and dendritic cells on superficial dermis, bright epithelial cords on dermo-epidermal junction and multiple melanocytes at dermis. Histopathology showed dendritic, epithelioid and heavily pigmented melanocytes in the mid-papillary dermis characteristic of epithelioid blue nevi.

Case 2: A 15-year-old Caucasian male with no history of melanoma, showed numerous asymptomatic bluish pigmented lesions on the penis. The first lesion had developed 18 months before and excised by urologist without pathology. Later, several new lesions arose next to the initial lesion. Examination revealed polychromic grouped lesions on the dorsum of the penis, several small brown macules clustered around ill-defined subcutaneous papules. Dermoscopy revealed areas with homogeneous blue pigmentation, brown reticulo-globular pattern and inverse network in a few areas. On RCM multiple bright round and dendritic cells were present on the dermo-epidermal junction with multiple bright, dendritic cells on the basal layer. Histopathologic reported multiple fusiform and pigmented cells in dermis consistent with cellular blue nevi.

Discussion: Clinical and dermoscopy examinations are not sufficient to guarantee benignity of multiple blue lesions, as the dermoscopic finding of homogeneous blue colour is suggestive of blue nevi, but also of melanoma metastasis. Histopathologic examination remains the gold standard for diagnosis, however RCM may be a complimentary tool when extensive or multiple lesions are present and it is not possible to biopsy the complete area. These are the first two cases of agminated blue nevi reported on the penis studied by dermoscopy and confocal microscopy.

P2-21

TIPS AND TRICKS TO OBTAIN GOOD IMAGING WITH THE WIDE-PROBE REFLECTANCE CONFOCAL MICROSCOPE

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Reflectance confocal microscopy (RCM) is a non-invasive technique that enables the in vivo imaging of human skin, making a real time nearly histologic diagnosis of skin lesions. In confocal microscopy, a beam of incoming light (the excitation beam) is focused through the microscope objective on a small spot *inside* the tissue. Confocal microscopy uses a small pinhole aperture in a screen that allows only the light emitting from the desired focal spot to pass through. Any light outside of the focal plane (the scattered light) is blocked by the screen. In optical terms, the pinhole is placed in a conjugate focal plane as the tissue specimen (hence the designation "confocal"). In gray- scale confocal images, structures that appear bright (white) have components with high refractive index compared with their surroundings and are similar in size to the wavelength of light. Highly reflective skin components include melanin, collagen and keratin. The confocal scanning with wide probe RCM (Vivascope 1500) produces high-resolution black and white horizontal images (0.5x0.5 mm) with a lateral resolution of 1.0 µm and axial resolution of 3-5 µm. A sequence of full-resolution individual images at a given depth is acquired and "stitched" together to create a mosaic ranging in size from 2x2 mm to 8x8 mm. A vertical VivaStack® can be imaged. It consists of single high-resolution images acquired from the top skin surface up to 200 µm, corresponding to the papillary dermis, to obtain a sort of "optic biopsy."

As per any imaging techniques, the quality of the image can affect the correct interpretation of a given lesion and thus result in a wrong diagnosis or useless data. Several factors can affect the quality of images. However, artifacts can be grouped as: 1) artifacts related to the lesion's characteristics, 2) artifacts related to the skin of the patients and 3) artifacts to the inappropriate/not experienced acquisition of the technician. We aim to describe the main artifacts that may occur in clinical practice and some tricks to minimize them and obtain an imaging of sufficient quality to be interpreted by Clinicians.

P2-22

HOW TO USE REFLECTANCE CONFOCAL MICROSCOPE MOVIES FOR MOLE EVALUATION AND DISTANT CONSULTATION: OVERTAKING THE "SINGLE SPOT" ISSUE.

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Malignant skin tumor diagnosis and treatment course can be challenging especially in patients with multiple dermoscopically equivocal nevi. Reflectance confocal microscopy (RCM) can improve the early detection of malignant skin tumors through its ability to provide the dermatologist with a near-histologic cellular view. Typically dermatologists use the Vivascope® 1500 (VS1500) which permits sequential image registration and objective mapping of skin lesions: mosaic-maps. The imaging procedure with the VS1500 typically takes 7 to 10 minutes per lesion and while it can be particularly useful in single lesion evaluation, it has limitations in time-restrained clinical settings especially in situations where patients present with multiple dermoscopically equivocal nevi. With the recent introduction of the handheld Vivascope® 3000 (VS3000) we sought to evaluate if its application can save time for RCM evaluation in patients with multiple dermoscopically equivocal nevi while maintaining improved sensitivity and specificity. In order to overcome the "single spot issue" that occurs when using this device in a live view/capture image mode the VS3000 application was tested by taking 2 vertical stacks and a star-shaped pattern 20-30 second RCM movie at the various skin levels. Adjustment of the skin level from the epidermis down to the dermo-epidermal junction was accomplished by modulating the pressure of the tool application to the skin while tracking the skin lesion in the movie mode. The VS3000 stacks and movies were compared to VS1500 control images to test the accuracy of this new method.

P2-23

IMPROVING REFLECTANCE CONFOCAL MICROSCOPY SENSITIVITY AND SPECIFICITY THROUGH DOUBLE READER EVALUATION

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Skin cancer incidence is rising and there is a need for new technologies that can enhance both screening and diagnosis of skin tumors. There is a body of evidence showing that reflectance confocal microscopy (RCM) can improve the diagnosis of dermoscopically equivocal skin lesions and significantly reduce the number of unnecessary excisions in different settings. Recently the reliability of teleconsultation with RCM images has been tested in an observational retrospective setting, showing the capability of an accurate diagnosis, but with risk of mismanagement. Moreover, diagnostic accuracy also depends on the level of expertise. Because this technology has only recently been adopted the availability of expert readers in this field of medicine is limited. We aimed to test the diagnostic accuracy of reflectance confocal microscopy readers who were trained following a dedicated teaching program and determine whether the application of double reading could improve the diagnostic accuracy of RCM image evaluation. 1000 consecutive cases were evaluated in blind by 10 readers who received the same training program for a one-year period. Cases were randomized in order that each case was evaluated in blind by two different readers. The overall sensitivity for single reader evaluation was improved with the application of double reader evaluation enough to show a statistically significant enhancement of melanoma detection and risk reduction of mismanagement and consequent liability.

P2-24

BRAFV600 MUTATED AND WILD TYPE MELANOMAS: DERMOSCOPY AND REFLECTANCE CONFOCAL MICROSCOPY CHARACTERIZATION

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The advent of modern molecular approaches was of crucial importance for the identification of melanoma genetic signatures, opening new horizons in the treatment of metastatic disease with molecular targeted therapies. Similarly the melanoma diagnosis is aided by reflectance confocal microscopy (RCM): a promising technique that allows non-invasive imaging from the skin surface to the upper dermis

with quasi-histologic resolution. The most common melanoma mutation involves the gene *BRAF* and it is represented by the *BRAF*V600E, however, V600K, V600R and V600D mutations are also known. Because different genetic aberrations categorize melanoma subtypes with distinct clinical characteristics, it is reasonable to hypothesize that a distinctive molecular signature corresponds to specific morphologic patterns. A comparison between the dermoscopic patterns of *BRAF* p.V600E, *BRAF* p.V600K and wild-type *BRAF* primary melanomas was assessed from a collection of 12 lesions (4 primary melanomas per each *BRAF*V600 mutated status and 4 wt). In 9 cases the RCM images were available and the frequency of the RCM descriptors was examined. The RCM analysis showed that the presence of plump bright cells, collagen bundles and inflammatory cells in the dermis were frequently observed even when dermoscopy showed no regression features. Our study showed that regression phenomena and the associated dermoscopic and RCM descriptors could help the clinician to discriminate between the different *BRAF* mutated *status*, providing key information for patient screening, management and follow-up.

P2-25

REFLECTANCE CONFOCAL MICROSCOPY FEATURES IN A GIANT CONGENITAL NEVUS: A CASE REPORT

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Reflectance confocal microscopy (RCM) is a non-invasive technique useful in the evaluation of melanocytic lesions. Characteristics of congenital nevi (CN) have been described in children and adulthood, mainly in small and medium size lesions. No previous description of RCM features of giant CN have been provided at first weeks of life. A 15 days old female patient was sent for evaluation of a giant congenital nevus. She presented a homogeneous black plaque in the upper and middle back, with irregular shape and 14 cm in the biggest diameter (G1, C0, R0, N0, H0, S1 according to the new classification). Under dermoscopy it exhibited dark brown to bluish homogenous area with few black dots and white delicate hair follicles. RCM (Vivascope 3000, Lucid Inc, Henrietta, NY) revealed: epidermis with typical honeycomb and absence of melanocytes; spinous layer with typical cobblestone pattern; DEJ with dense nests of different shapes (round, elongated and fusiform) with diameters from 70 to 150 µm. Dermal papillae were not distinguished. In between the nests, bright rounded cells (25 to 40 µm) with visible nuclei in some cases appeared in combination with less number of large dendritic cells. At mid dermis the nests were smaller and densely packed. This pattern was consistently found in different areas of the same lesion. Previous RCM descriptions have not included large CN in the first birth weeks. The shape of the nests, the absence of dermal papillae and epidermal cysts typically seen in CMN at later stages suggest immature tumour nesting. RCM was useful to explore in vivo a giant congenital nevus at early stages with the observation of nesting not observed in dermoscopy. Future studies with RCM can help to understand their anatomical characteristics and dynamic changes in these lesions.

P2-26

DERMOSCOPY, REFLECTANCE CONFOCAL MICROSCOPY AND IMMUNOHISTOCHEMICAL ANALYSIS IN MELANOCYTIC LESIONS WITH MEYERSON'S PHENOMENON

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Introduction: Rare Meyerson's phenomenon is characterized by a symmetrical halo of erythema and scale around central, mostly melanocytic lesions. Histopathologically, it is characterized by a spongiotic inflammatory reaction, with variable epidermal spongiosis, vesiculation, lymphocytic exocytosis, acanthosis and parakeratosis, and a perivascular lympho-histiocytic inflammatory infiltrate with occasional eosinophils in the superficial dermis. These changes are seen in contact with the melanocytic lesion.

Objective: Our aim was to describe the dermoscopic and reflectance confocal microscopy (RCM) features of melanocytic tumours less frequently associated with Meyerson's phenomenon, with histopathology and immunohistochemistry correlation.

Methods: Clinical, dermoscopic and RCM images of 4 histopathologically confirmed melanocytic tumours associated with Meyerson's phenomenon (3 dysplastic compound nevi and 1 malignant melanoma) were retrospectively collected, with additional immunohistochemical analysis.

Results: RCM showed *in vivo* features of both melanocytic and spongiotic nature of the lesion associated with Meyerson's phenomenon, even in cases with absent halo dermatitis. Our study also supported the involvement of immune mediated CD4+ T-lymphocytes mechanisms and Langerhans' cells (LCs). RCM features with dermoscopic correlation of rare Meyerson's melanoma were also described for the first time.

Conclusion: Meyerson's phenomenon can involve all types of melanocytic tumours including melanoma. RCM showed excellent correlation with both histopathological and immunohistochemical findings. These aspects confirm its importance in the evaluation of inflammatory and neoplastic skin diseases.

P2-27

FACIAL SPINULOSIS WITH FOLLICULAR INFLAMATION AND ENLARGEMENT AND INCREASED NUMBER OF DEMODEX FOLLICULORUM DEMONSTRATED BY CONFOCAL MICROSCOPY

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The mite *Demodex folliculorum* is usually present in the pilosebaceous unit as a commensal organism. It has been involved in the pathogenic of several skin diseases. A 43-year-old healthy woman presented to our dermatology unit with a 2-year history of a pruriginous area on her face with progressive enlargement. On physical examination an ill-defined 3 cm erythematous area with multiple tiny follicular hyperkeratotic spicules was observed. She had no other facial lesions. Confocal microscopy revealed keratin plugs occupying the hair follicles, and multiple mites inside the follicles all over the lesion compatible with *Demodex folliculorum*. There was also enlargement of the hair follicles with inflammatory infiltrate surrounding them. The diagnosis of spinulosis caused by *Demodex folliculorum* was made. A blood test was performed and the blood count, the renal and liver function, immunoglobulins and B2microglobulin were normal. Serologies for human immunodeficiency virus, hepatitis B virus and hepatits C virus were all negative. She was treated with 2% permethrin cream once a day for two weeks, with resolution of the lesion. *Demodex folliculorum* can contribute to the development of skin conditions affecting the pilosebaceous unit like rosacea, perioral dermatitis or folliculitis. Facial spinulosis is a rare skin disease characterized by the presence of follicular hyperkeratotic spicules. It is usually located on the face, and it can be idiopathic or related to several diseases, mainly hematologic cancers. The presence of a large amount of *Demodex folliculorum* has been found. The visualization of *Demodex folliculorum* by confocal microscopy has been previously reported. It allows us to see the mites, follicular enlargement and inflammation, so it can help us to reach a better diagnosis accuracy avoiding unnecessary biopsies in pathologies involving the face.

P2-28

HOMOGENOUS-GLOBULAR MELANOCYTIC LESION ON AN ATYPICAL NEVI SYNDROME PATIENT

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A 36-year-old woman with a history of atypical nevi syndrome was followed in the digital dermoscopy unit. She had a pigmented flat lesion on her left buttock with homogeneous-globular pattern and uniform pigmentation. Globules were monomorphous (size, shape and colour) but had a non-homogeneous distribution through the lesion. 3 months later lesion had changed and a confocal microscopy examination revealed the presence of some roundish pagetoid cells and different diameter nests most of them dense but with some atypical cells. Histopathologic examination revealed a 0.57 Breslow superficial spreading melanoma. Globular melanocytic nevi are more frequent in cephalic areas (neck, shoulders, upper trunk) and less frequent in buttocks and legs in atypical nevi syndrome patients. Shape and size variation of globules and un-even distribution of globules have been related with malignancy in globular melanocytic lesions. It is important to diagnose melanoma with large and numerous epidermal nests (globular melanoma) because those melanomas have showed to have a more rapid growth than reticular melanomas. Location of the melanocytic lesion, un-even distribution of globules (although size and shape were homogenous), short-term changes in digital dermoscopy and confocal microscopy features were the clue for the diagnosis of melanoma.

P2-29

THE COMPLEX DIAGNOSIS OF EQUIVOCAL SKIN LESIONS: DERMOSCOPY, CONFOCAL MICROSCOPY AND HISTOPATHOLOGY

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Background: Apart from clinical examination and dermoscopy there are new imaging possibilities to establish the diagnosis of equivocal skin lesions. Among them reflectance mode in vivo confocal microscopy enables making more precise clinical diagnoses and helps to decide the management of these lesions. The diagnosis can be even more difficult if a lesion contains different components, if it clinically mimics melanocytic ones or if a melanocytic lesion shows atypical structures.

Objectives: In order to utilize the help of confocal microscopy the correlation of the dermoscopic, confocal and histopathological structures must be known. Collecting and analyzing lesions with these methods and correlating the elements and characteristics of these different images are essential.

Methods: The diagnosis of a coexisting pigmented basal cell cancer and melanocytic lesion can be challenging on clinical and dermoscopical examination but confocal microscopy can reveal the dual origin of the lesion and histopathology will give the precise parameters and characteristics.

If the epidermis of a non-melanocytic lesion contains melanin it might be also misleading. Confocal features and structures can highlight the epidermal components which can be verified by histology.

Changing nevus due to halo phenomenon or fibrosis with atypical dermoscopic and confocal features could raise the possibility of a melanoma but histopathology can reveal the true nature of the altered structure.

Conclusion: Analyzing clinically equivocal lesions and correlating the clinical, dermoscopic, confocal and histopathological images can help to define the characteristics of these unusual lesions.

FC1-5

SKIN CANCER DIAGNOSIS WITH REFLECTANCE CONFOCAL MICROSCOPY: REPRODUCIBILITY OF FEATURE RECOGNITION AND ACCURACY OF DIAGNOSIS

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A large number of reflectance confocal microscopy (RCM) studies have been performed to identify reproducible diagnostic clues for skin neoplasms. The use of RCM is still limited by the need of standardized reproducible criteria and clinical specialized training. The aim of the study is to test the reproducibility of the RCM patterns and diagnostic accuracy among evaluators with different experience. Dermoscopic and RCM images from100 lesions that were excised because of equivocal clinical and\or dermoscopy feautures corresponding to 20 melanomas, 55 melanocytic nevi, 7 solar lentigines/seborrheic keratosis, 3 actinic keratoses and 15 basal cell carcinomas. All cases were evaluated in blind from the histopathologic diagnosis by 9 evaluators from different Countries, 6 with long term experience in the use of RCM and 3 recent RCM users. Several RCM features showed a fair to good reproducibility. Between these, 6 RCM features independently associated with malignancy (namely, pagetoid cells, atypical cells and irregular epidermal architecture correlated with melanoma, and aspecific junctional pattern, basaloid cords and ulceration correlated with basal cell carcinoma), and 2 RCM features independently associated with benign lesions (ringed junctional pattern and dermal nests) were identified by discriminant analysis. A mean diagnostic accuracy of 82.7% (range 76-89%), with a mean sensitivity of 88.9% (range 82.9-100%) and specificity of 79.3% (range 69.2-90.8%) was achieved, with a higher sensitivity for experienced observer, but a similar specificity, compared with recent RCM users. This study highlights the key RCM diagnostic criteria of melanoma and basal cell carcinoma that are reproducibly recognized among RCM users. Our findings also suggest that while the average diagnostic performance of individual RCM users is quite high, there is intrinsically more diagnostic information in RCM images than is currently utilized by the individual evaluators.

P3-1

IMAGING WITH NOVEL SPECKLED-VARIANCE OPTICAL COHERENCE TOMOGRAPHY OF MELANOMA AND BASAL CELL CARCINOMA: DIFFERENT VASCULAR PATTERNS AND INFLUENCE OF TUMOR BURDEN

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Speckled-variance optical coherence tomography (SV-OCT) is a novel approach that allows studying the vascular patterns of the skin in en face and transversal OCT section. Besides diagnostic classification, understanding tumor pattern of growth and biology is relevant in order to identify potential prognostic factors and treatment indication. Our study consists in the evaluation of 70 lesions that had been evaluated upon SV-OCT after dermoscopic and confocal microscopic diagnosis of melanoma or basal cell carcinoma, histopathologically confirmed later. Vascular pattern s have been described and correlated with tumor thickness. Melanomas were classified into 5 groups, in situ, microinvasive (<0,75mm), invasive intermediate (0,75—1,5mm), invasive advanced (1,5—3,0mm) and very thick (>3,0mm) according to the Breslow thickness; BCCs were classified following the same thickness as per melanoma categories. In melanoma a progressive change in the vasculature, starting from a diffused pointed vascular pattern in en face section, evolving to progressively more linear, large and irregular vasculature was observable with increment of Breslow thickness. On the other hand, basal cell carcinoma showed a slightly increased vasculature, compared with normal skin, in the superficial type with progressive elongation of perpendicular columns in transversal section and increment of caliber of vessels according with tumor depth, always organized in a reticulated architecture in enface sections in lesions involving the dermis. This new non-invasive approach may find application in tumor aggressiveness determination and treatment effectiveness.

P3-2

REFLECTANCE CONFOCAL MICROSCOPY AND OPTICAL COHERENT TOMOGRAPHY TO DIFFERENTIATE GOUTY TOPHUS FROM CALCINOSIS

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Introduction: Gouty tophus and calcinosis are deposit disorders whose reflectance confocal microscopy (RCM) and HD-OCT appearance has never been reported. Although, clinical examination and medical history are generally sufficient to make the diagnosis, biopsies and histological analyses are sometimes required. We investigated whether we could observe an evocative aspect of the deposits of uric acid and calcium under RCM and HD-OCT.

Material and Method: An 85 year-old woman with a history of hyperuricemia had whitish nodules of the second finger of the right hand. Dermatoscopy found a homogeneous yellowish background with central whitish ovoid structures. RMC found in the superficial dermis homogeneous, high-reflecting, 200µm in diameter ovoid structures with jagged edges. HD-OCT found grainy high-reflecting ovoid structures extending from the superficial to deep dermis. Histological examination showed amorphous pink areas. A 62 year-old woman suffering from dermatomyositis showed eryhematous nodules of the right elbow. Dermoscopy found a homogeneous slightly erythematous background with a central homogeneous white round structure. RMC found in the superficial dermis roundish hyper-reflecting confluent structures of around 20-50 µm. OCT HD found the same roundish hyper-reflecting confluent structures s all other the dermis. Histological examination showed small calcium deposits.

Discussion: This is the first description of gouty tophi and calcinosis under RCM and HD-OCT. Although RMC is more suitable for the investigation of the epidermis and dermal-epidermal junction than the dermis, it can identify uric acid and calcium deposits in the dermis as shown by our 2 cases. HD-OCT allowed a better examination of the deposits due to a deeper exploration. Under both RCM and HD-OCT, uric acid deposits and calcium deposits were hyper-reflective and uric acid deposits were larger and more homogeneous than calcium deposits.

P3-3

PRE-OPERATIVE ASSESSMENT OF THE BASAL CELL CARCINOMA THICKNESS: INTEGRATION OF DERMOSCOPY, CONFOCAL MICROSCOPY AND NEW SPECKLE-VARIANCE OPTICAL COHERENCE TOMOGRAPHY

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Evaluation of the invasiveness of a basal cell carcinoma (BCC) at a pre-surgical stage could represent a great step-forward in saving time and economical resources in the clinical daily practice, since non-surgical therapies are suitable for superficial lesions (e.g. PDT efficacy reaches 1 mm-thick BCCs). A non invasive diagnosis of BCC is possible by dermoscopy and confocal microscopy. Several dermoscopic parameters showed a high diagnostic accuracy in the diagnosis of this very common tumoral entity, as well as confocal features showed to be discriminant in the distinction of different histopathological subtypes of BCC. However tumor thickness is guesstimated on the tumor nature but not precisely correlated with any dermoscopy or confocal parameter. Optical Coeherence Tomography (OCT) is an imaging technique allowing excellent visualization of individual structures within the skin on transversal sections achieving up to 2 mm penetration depth, thus enabling to detect tumor proliferation and to determine their anatomical location and depth. SV (Speckle-variance) OCT is a new approach enabling the identification of skin vascular network through the detection of moving particles. In the current study, we sought to evaluate diagnostic accuracy and tumor thickness measurement on 50 histologically proven consecutive BCCs. Images were retrospectively analyzed for their dermoscopic and confocal parameters, whereas on OCT and SV-OCT images tumor thickness has been measured in mm and compared with histopathologic measure. Dermoscopy and confocal microscopy used together showed an excellent diagnostic accuracy. Different confocal and histopathological features were correlated to the OCT newly described aspects. Tumor depth showed good correlation with histopathology, in particular for the determination of the invasion over the 1-mm threshold. The use of SV-OCT allowed a more precise assessment of the thickness for BCCs compared to OCT, since the deeper border of the tumor island in deep lesions is better outlined by the highlighted vascular contour. *The project has been partially co-funded by the European Union CIP-ICT PSP PROGRAMME GA N. 621015 ADVANCE*

P3-4

OPTICAL COHERENCE TOMOGRAPHY IN MELANOCYTIC LESIONS: A TUTORIAL WITH THE DESCRIPTION OF NEW FEATURES IN NEVI AND MELANOMA

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Background: Optical coherence tomography (OCT) is an emerging technology that is rapidly growing in dermatology. Easy to perform and fast in execution, it has been applied mainly to evaluate inflammatory diseases and non-melanocytic tumors on the skin. The use of this diagnostic tool in melanocytic lesions is still under development, with few reports on the morphology of nevi and melanoma.

Methods: 99 melanocytic lesions (12 melanomas with Breslow thickness less than 1mm and 8 *in situ* melanomas, 25 junctional nevi and 54 compound nevi) were analysed through OCT (Vivosight OCT scanner, Michelson diagnostics, Orpington, England) by two experienced dermatologists in skin imaging and one experienced radiologist trained to evaluate skin imaging. Structures not previously described were observed. Lesions were excised either due to malignancy suspicion or to patient willingness and submitted to histopathological analysis.

Results: The features described were seen on dermal-epidermal junction (different characteristics of rete ridges and loss of the dermal-epidermal index) and dermis (collagen aspect, vessels, hyporreflexive band, shadow and attenuation areas). From these new findings, a tutorial to describe those findings was developed.

Conclusion: The description of specific OCT patterns on melanocytic lesions is the first step to standardize clinician assessment using this new tool. Future studies will address the reliability of OCT in the diagnosis and differentiation of melanocytic lesions.

P3-5

SEBORRHEIC KERATOSES—DIFFERENTIAL DIAGNOSIS OF THE FLAT PIGMENTED LESIONS USING HIGH-DEFINITION OPTICAL COHERENCE TOMOGRAPHY WITH CORELATION TO DERMOSCOPY AND HISTOLOGY

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High-definition optical coherence tomography (Hd-OCT) is non-invasive imaging technology of the recent years (Skintell® Agfa Healthcare). With the resolution of 3µm in lateral and axial direction, it offers visualization of the individual cells in their microanatomical relation. The tissue penetration depth is up to 570µm and the field of view is 1,5 x 1,8 mm in en-face mode. Acquirement of the 3D image enables exact orientation in the visualized tissue. Seborrheic keratoses are the most common benign skin tumours affecting every individual during the adult life. The lesions are various in their clinical appearance and can sometimes cause problems in differentiation from other benign but also malignant neoplasma. Especially, flat lesions localized in sun exposed regions of the skin can present exceptional challenge for the dermatologist. The flat pigmented lesions in the sun exposed skin regions are investigated using dermoscopy and subsequently by high-definition optical coherence tomography. The images are compared in order to find the characteristic features of the seborrhoic keratoses in slice and en-face mode of the Hd-OCT image. Afterwards, the shave biopsy is performed and the Hd-OCT slice image is corelated to the histological one. The objective of this study is to find the defining patterns of the seborrheic keratoses in context of the differential diagnosis of the flat pigmented lessions of the sun exposed skin.

P3-6

IMAGING OF BASAL CELL CARCINOMA VASCULATURE USING SPECKLE VARIANCE OPTICAL COHERENCE TOMOGRAPHY

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Introduction: Neovascularisation is often a prominent aspect of neoplasia. In dermoscopy, the appearance of arborizing telangiectasias are recognized as a diagnostic hallmark of Basal Cell Carcinoma (BCC), but the resolution, magnification and depth of imaging does not allow a more detailed description of the vessels. Recently the development of Speckle Variance Optical Coherence Tomography (SV-OCT) has introduced a method that allows functional and anatomical imaging of blood-vessels with a resolution of 7,5 micrometers lateral and 5 micrometers axial to a depth of <2 mm.

Objective: To qualitatively describe the vascular pattern of BCC lesions imaged by SV-OCT and to compare it to SV-OCT images of vasculature in normal skin.

Methods: In this pilot study we investigated the SV-OCT morphology of BCC lesions identified clinically and verified by histopathology in 10 patients (5 men, 5 women, mean age 65 years). Images were acquired using the VivoSight OCT-scanner (Michelson Diagnostics, UK). Analysis was done qualitatively comparing en face images of lesions with adjacent normal skin, describing the general vascular pattern of lesions and the relation between vessels and tumors as defined by OCT.

Results: In normal skin, evenly-calibred blood vessels were found to be arranged in a well-defined, evenly spaced, regular reticulate pattern throughout the images. In BCC lesions the calibre of the blood vessels showed great variance, ranging from dilated, larger-than-normal vessels to the smallest detectable vessels. In addition, the vessels were arranged in a disorganized way with a multitude of minute vessels, loosing the regularity seen in the un-involved skin. The vessels were generally centered on the lesions, and appeared to be infiltrating the edges of the tumor islands.

Conclusion: SV-OCT allows identification of blood vessels in both normal skin and BCC's, and the preliminary data suggests that both the appearance of individual vessels as well as the overall pattern of distribution differ significantly in BCC's. The appearance of a multitude of very small vessels in the BCC's is interpreted as representing the associated neovascularisation.

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P3-7

COMBINED EVALUATION OF MELANOCYTIC LESIONS USING DERMOSCOPY AND OPTICAL COHERENCE TOMOGRAPHY

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Optical coherence tomography (OCT) is an emergent technique of medical imaging diagnosis, which uses the interference of infrared radiation (900-1500nm) with living tissues. Up to present however, there are no definitive morphologic diagnostic criteria for OCT in skin pathology and intensive research efforts are dedicated to correlate the cutaneous morphology from OCT with the histopathological aspects and with the morphological features obtained with other validated or developing imaging methods, like dermoscopy or confocal laser microscopy. In this context we aimed to investigate the diagnosing potential of OCT in melanocytic nevi (moles), in comparison with dermoscopy, which is established as the standard optical in vivo imaging technique for skin, especially for melanocytic lesions. Results showed that OCT could clearly identify important diagnosis elements for melanocytic skin lesions, including the margins, the changes in epidermis and the presence and location of the nests of melanocytic cells that make up these lesions. Our study has particular relevance for the medical practice, since benign moles are frequent and their prompt differentiation from an emerging malignant lesion—the deadly melanoma—is a crucial and difficult task for the dermatologist, with important consequences for the patient, therefore the development of non-invasive techniques that would further help this differentiation is highly needed.

P3-8

DESMOPLASTIC MELANOMA: FIRST CASE DIAGNOSED BY HIGH- DEFINITION OPTICAL COHERENT TOMOGRAPHY

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Introduction: Desmoplastic melanoma is a rare variant of melanoma characterized by fusiform melanocytes in a fibrotic dermis. Its clinical aspect is not well defined and the exact diagnosis remains histological. There are no descriptions of this tumor under reflectance confocal microscopy (RCM) and high-definition optical coherent tomography (HD-OCT), nor series describing its dermatoscopical features. We report the usefulness of HD-OCT for the identification of this subtype of melanoma.

Observation: An 80-year-old patient presented with a multifocal lesion of the left cheek extending on an area of 6 x 7 cm and gradually increasing in size for about one year. The central part was bluish and papular, whereas the periphery was macular. Dermatoscopy found a whitish background with bluish hair follicle openings. Under RCM the epidermis was normal with a honeycomb pattern, the dermal-epidermal junction was not detectable and the dermis was fibrotic as in a scar. No atypical cells were found. HD-OCT examination showed in the vertical sections a bright linear band under the epidermis corresponding to dense dermis, and in the horizontal sections large and elongated bright cells interspersed in the collagen, forming focal nests. We therefore raised the hypothesis of a desmoplastic melanoma and the histological examination confirmed the diagnosis.

Discussion: We assumed that the lesion was located in the deep dermis because of the whitish and bluish colours under dermatoscopy and the lack of cellular proliferation in the epidermis and upper dermis under RCM. A fibrous reaction in the superficial dermis determined a scar-like appearance under RCM and a linear bright band under HD-OCT. The presence of a dermal proliferation of hyper-reflective large cells in the dermis in a context of an enlarging lesion constituted a strong argument for a malignant deep melanocytic lesion such as malignant blue nevus or desmoplastic melanoma. The fibrosis was in favour of the second diagnosis. HD-OCT seems to be the complement of dermatoscopy and RCM for the examination of dermal tumors. HD-OCT has a lower (3 µm) lateral resolution than RCM (<2 µm), but has the advantage of being able to explore deeper dermal lesions thanks to its better penetration ability (500 µm vs 250 µm).

P3-9

HIGH DEFINITION OPTICAL COHERENCE TOMOGRAPHY IN THE DIFFERENTIAL DIAGNOSIS OF SMALL LIGHT PAPULES ON THE FACE, NECK AND UPPER TRUNK

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The high definition optical coherence tomography (Hd-OCT) is new imaging technology, which allows us non invasive diagnostics of the skin lesions. The method offers us in vivo real time examination. We acquire vertical (en/face mode), horizontal (slice mode) and additional three dimensional images. The field of view is 1.5x1.8mm, lateral and axial resolution are 3µm and depth of view is up to 570µm.

Diagnostics of an unpigmented small papular lesion on the upper part of the body is sometimes quite difficult. It is necessary to distinguish between benign and malignant

lesions. Differential diagnosis is quite broad and the dermoscopy of unpigmented lesions might be nonspecific. In these cases is possible to use other imaging technologies? Authors present differences of Hd-OCT images (slice mode, en-face mode) in several basic groups of skin lesions—basal cell carcinoma, intradermal nevi, adnexal tumors (syringoma), benign sebaceous hyperplasia and seborrheic keratosis. They compare Hd-OCT images of these lesions with healthy skin and classical histological pictures. Results are presented as a series of case reports. Lesions were examinated by one observer clinically, using dermoscopy, Hd-OCT and than evaluated histological as a gold standard. Hd-OCT has it is limitations—because of the probe design it's not possible to use this method for examination of convex and concave spaces on the face (around eyes and nose) etc. But Hd-OCT offers additional information to dermoscopy and clinical information. Combination of these methods improves differential diagnostic process of small light papules on the face, neck and upper trunk.

P4-1

TRICHOSCOPY IN SYSTEMIC SCLEROSIS

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Systemic sclerosis is a connective tissue disease, that affects mostly females, with an onset age mean 30 to 50 years. SSc is characterized by fibrosing of the skin and/or internal organs, presence of specific antibodies and vascular involvement. Trichoscopy is a rapid, non—invasive and low -cost technique, which has become a standard procedure in differential diagnosis of hair loss. The observed structures are hair shafts, hair follicle openings, the perifollicular epidermis, and types of blood vessels. Other measurable parameters are hair thickness and pilosebaceous units. Those components can help to differentiate between various hair disorders. The study included 17 patients with systemic sclerosis, and 31 healthy patients, with no symptoms of hair or scalp diseases in anamnesis. Our study revealed, that what differs systemic sclerosis patients from control group is vessel types in forehead area. As described previously, common finding in forehead region of healthy population are pinpoint vessels and single loop vessels. In forehead area in SSc group polymorphic vessels were observed. This included arborizing vessels, spider vessels and capillary loops. Vessels of various morfology are typical both for occipital and temporal region of healthy population, whereas in frontal region uniform pattern of vessels is considered as normal. Ivory—whitish discolouration of the scalp which we report in patients with SSc was also previously described in frontal fibrosing alopecia. It corresponds with fibrosis of the skin and like in frontal fibrosing alopecia is a sign of irreversible changes. Another finding in trichoscopy of patients with SSc were capillary loops and coma vessels oriented parallely. They were found in every examined localization without prevalence to specific region. In conclusion, the results of our work show that although there are some specific for systemic sclerosis phenomenon, the disease cannot be distinguish from other autoimmune disorders, affecting scalp, only by trichoscopy.

P4-2

IMMEDIATE MICROVASCULAR CHANGES DURING ILOPROST ADMINISTRATION ASSESSED BY NAILFOLD VIDEOCAPILLAROSCOPY: A PILOT PROJECT

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Introduction: Iloprost, a synthetic prostanoid analogon, is used in the treatment of peripheral arterial disease (PAD) and severe Raynaud's syndrome (RS), particularly in systemic sclerosis (SS). Besides vasodilatation and inhibition of platelet aggregation iloprost has been described to reduce vascular permeability and to increase capillary density after repeated infusion. Videocapillaroscopy allows direct observation of nailfold capillaries and is routinely used in diagnosis and clinical monitoring of autoimmune connective tissue disorders. The aim of this pilot project was to investigate whether during infusion iloprost has an immediate and measurable effect on nailfold capillaries.

Methods: 5 patients (3f, 2m, age: 45-70a, median 56a) receiving iloprost for RS/SS (n=3), PAD (n=1), and RS/SS/PAD (n=1) were included in the study. Nailfold videocapillaroscopy at 200-fold magnification was performed on the 4th digit of the non-dominant hand at four different time-points: immediately before iloprost administration, during infusion (15 and 60 minutes after initiation) and 60 minutes after cessation. Images were recorded digitally and capillary density and width were measured.

Results: Capillary density increased in 4 of 5 patients. Median increases were: 1/mm (range 0-2) after 15 minutes, 2/mm (0-9) after 60 minutes, and 2/mm (0-6) after the end of iloprost infusion. The largest increase was observed in the patient suffering of PAD and no change was found in the patient with RS/SS/PAD. Capillary widths remained unchanged in all patients.

Discussion: This pilot project demonstrates for the first time that immediate effects of vasoactive therapy can be visualized with nailfold videocapillaroscopy. The observed increase in capillary density is most likely explained by the treatment-induced manifestation of pre-existing vessels. These initial results provide the basis for further research in a larger population to investigate whether and in which conditions the observed capillaroscopic changes might be predictive for outcome.

P4-3

CORRELATION BETWEEN DERMOSCOPY AND HIGH-FREQUENCY ULTRASOUND FOR THE TREATMENT OF BASAL CELL CARCINOMA

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Basal cell carcinoma is the most common type of malignant skin tumor. In the last years, the early diagnosis of basal cell carcinoma has been made easier by the use of dermoscopy; recently, high-frequency ultrasound (HFUS) has proved to be a valuable diagnostic aid for skin cancer. Both dermoscopy and HFUS are non-invasive diagnostic techniques **that allow** to observe in vivo skin lesions; the first uses polarized light, the second one exploits the emission of ultrasonic pulses at high frequency (> 10 MHz). The aim of the study was to evaluate the possibility of integrating the clinical and dermoscopic dermatological diagnostic pathway with high-resolution ultrasound, in order to assess, before surgery, the thickness of basal cell carcinomas, for prognostic purposes and the planning of the best treatment. Then, the histological thickness of the tumors was compared with the one measured by ultrasound and the eventual presence of dermoscopic criteria predictive of BCC with high thickness was evaluated. 86 basal cell carcinomas were examined. For each lesion dermoscopy and HFUS were performed before surgical excision. After surgery, all the lesions were evaluated by histological examination, performed blinded to the ultrasound examination. It provided information about nature of the lesion, grade of differentiation and number of cellular atypia, growth mode, measurement of thickness. Among the 86 lesions evaluated in the study, histology has shown 34 superficial BCC and 52 nodular BCC. Sonographically, 25 lesions presented a linear pattern and 61 lesions showed an ellipse pattern. Bland-Altman plot method showed a good correlation between the thickness values obtained using the two methods of measurement, HFUS and histology.

Moreover, the presence, in the context of lesion, of specific dermoscopic structures, such as blue ovoid nests (P=0.0039) and large arborizing telangiectasia (P<0.0001), resulted statistically correlated with high tumor thickness. In the analysis of BCC, combining clinical and dermoscopic evaluation with ultrasonography, a valuable aid can be obtained for proper preoperative discrimination between superficial and nodular types. In the future, these findings will allow the specialist to be able to choose the best therapeutic approach: less invasive for the superficial type and surgical one for more infiltrative lesions.

P4-4

ANALOGIC PHOTOTRICHOGRAM AND LONG TERM FOLLOW UP: A FEASIBLE AND CHEAP AND WAY OF EVALUATING MALE PATTERN HAIR LOSS

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Background: Phototrichogram (PTG) is a method described more than 40 years ago. The method was described to be berformed with naked eye. Nowadays digital system can perform trichoscopic evaluation, hair count and follow up of hair treatments. However these systems are costly.

Methods: The authors present a series of male patients with male pattern hair loss (MPHL) that underwent PTG for follow up evaluation of a treatment modality in1997. Norwood-Hamilton scale (NHS) was used to asses MPHL. Patients did not shampooed for 24 hour prior to exam. A two-points tatoo was performed do provide an edge of the frame and a vertex to assure the same area is pictures every session. Hair shave of a 1sq cm was done and a picture at 0 and 72 hour were taken. Hair count was then performed on the naked eye for density, terminal and vellus and telogen hair count. Agreement between hair count and macroscopic NHS was performed. Some cases had a 17-year follow up exam done in the same way in order to track scalp changes as time passed.

Results: Hair density on PTG correlated well with macroscopic and NHS. Long-term follow up will be presented illustrating the comparability of scalp site.

Comments: Analogic phototrichogram (naked eye PTG) is a low cost and acurate mean of evaluating MPHL, despite being a time consuming procedure. The tatto method presented here is not described on the literature up to now and can assure the the frame is always the same even after long follow up time frames.

P4-5

TRICHOSCOPY—HISTOPATHOLOGY CORRELATION IN ANDROGENETIC ALOPECIA (AGA)

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Androgenetic alopecia (AGA) is very common cause of hair loss. It is estimated that by age 50, 50% of men and 40% of women are affected. In women, the AGA has the adjective female, what gives the name FAGA. The typical clinical finding of FAGA is hair thinning throughout the frontoparietal scalp. It is important to differentiate FAGA with telogen effluvium, diffuse alopecia areata, trichotillomania, noncicatricial alopecia in systemic lupus erythematosus and lichen planopilaris

at remission. The useful tool in hair and scalp disease analysis is trichoscopy. Thanks to trichoscopy the following criteria of FAGA hair loss were established: hair shaft thickness heterogeneity, increased number of vellus hairs, and decreased number of hair per follicular unit, peripilar sign and yellow dots especially in the frontal or vertex part of the scalp. Trichoscopy guided biopsy was taken from patients suspected for FAGA and processed either in vertical or horizontal position for pathological analysis. The study shows that heterogeneity of hair shafts thickness corresponded with miniaturization of hair follicles with hair shafts and increased number of vellus hairs. The number of telogen hairs and follicular stellae was increased. Peripilar sign corresponded with mild to moderate perifollicular lymphohistiocytic inflammatory infiltrate. Whilst yellow dots presented as small keratotic plugs and empty hair follicles. Sebaceous glands were preserved. The correlation between clinical, dermoscopical and histopathological pictures is very helpful for the proper diagnosis, better understanding of the cause of hair loss and its stage and to monitor therapy effectiveness.

P4-6

NANO-FORMULATION OF NOVEL OLEIC ACID CONJUGATE SUPPRESS MOUSE SKIN TUMORS BY REGULATING P53WT/MUT EXPRESSION

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Novel ester conjugate of oleic acid, 2,6-Diisopropylphenol-oleic acid (2,6P-OLA), has been observed as potent anticancer agent against panel of cancer cell lines (Khan et al., 2012). The present study describes development of a Nano-liposome-based approach for topical delivery of 2,6P-OLA on skin cancer in mice. The conjugate entrapped in liposomes were of 100-130 nm size and showed slow and sustained release pattern of the entrapped conjugate in the surrounding milieu. The nano-formulation showed visible therapeutic effect on skin tumor progression in experimental mice. The nano-formulation markedly reduced the surface nodule expression, an important parameter involved in cancer metastasis that is highly expressed in skin cancer. Histopathological studies also revealed positive recovery of general architecture and killing of cancerous cells by necrosis and apoptosis in skin tumor. The in-house nano-formulation was successful in significantly up-regulating of p53wt and down-regulating of p53mut eventually helping in better survival of cancer treated mice. Conclusively, the data demonstrates better efficacy of localized delivery of 2,6P-OLA entrapped in liposomes in the treatment of skin cancer in experimental murine model. The developed nano-formulation was found to possess necessary properties as revealed by size, zeta-potential and release pattern. The nano-formulation demonstrated strong inhibition of skin cancer in experimental mice. The conjugate entrapped in liposome showed therapeutic effect and was able to inhibit p53wt and p53mut factors that play a regulatory role in induction and progression of cancer. The site specific delivery of 2,6P-OLA entrapped in liposomes was highly useful with respect to safety as well as efficacy. The novel formulation is an effective means for the treatment of skin cancer and can pave the way for treatment of other forms of cancer.

P4-7

LUMINESCENT DUAL SENSORS REVEAL PH-GRADIENTS AND HYPOXIA ON CHRONIC WOUNDS

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Wound repair is a dormant algorithm to repair barriers in multicellular organisms upon injury. In chronic wounds, however, this program prematurely stalls. It is known that patterns of extracellular signals within the wound fluid are crucial to healing. Extracellular pH (pHe) is precisely regulated and potentially important in signaling within wounds due to its diverse cellular effects. Additionally, sufficient oxygenation is a prerequisite for cell proliferation and protein synthesis during tissue repair.

We present luminescent biocompatible dual sensors for imaging of pHe and oxygenation in vivo. To visualize pHe and oxygen, we used time- domain dual lifetime referencing (tdDLR) and luminescence lifetime imaging (LLI), respectively. With these dual sensors, we discovered centripetally increasing pHe-gradients on human chronic wound surfaces. We show that the pHe-gradients found in chronic wounds are crucial governors of cell proliferation and migration, and we demonstrate that these pHe-gradients disrupt epidermal barrier repair, thus wound closure. Parallel oxygen imaging revealed marked hypoxia, albeit with no correlating oxygen partial pressure (pO2)-gradient. This highlights the role of pHe-gradients in perturbed healing. We also found that the pHe-gradients on chronic wounds of humans are predomi-

nantly generated via spatial differences in the expression of pHe-regulatory Na+/H+ exchanger-1 (NHE1). We show that the modification of pHe on chronic wound surfaces poses a promising strategy to improve healing. The study also has broad implications for cell science where spatial pHe-variations play key roles, e.g. in tumor growth and metabolism. Furthermore, the novel dual sensors presented can be used to visualize pHe and oxygenation in other biomedical fields.

P4-8

HYPERSPECTRAL IMAGING IN DELINEATING THE BORDERS OF INFILTRATIVE BASAL CELL CARCINOMAS

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Background: Basal cell carcinoma (BCC) is the most common cancer in fair-skinned populations worldwide. Evaluation of the borders of the infiltrative subtype is clinically challenging because of the unclear margins and possible subclinical extension, which often cause multiple re-excisions.

Objectives: To assess the feasibility of a novel Hyperspectral imaging system (HIS) prototype in delineating the borders of infiltrative BCCs.

Methods: Inclusion criteria for the study were a clinically ill-defined and histologically confirmed BCC on the face or scalp. The borders of the lesions were evaluated clinically by eye, and marked on the skin. Digital and dermatoscopic photographs were taken. Hyperspectral images (field of view 12 cm^2) were taken *in vivo* before any surgical operations and a near real-time computational analysis based on skins optical model was carried out. The lesions were biopsied and excised at the clinical border, and the 2-mm marginal border was excised as a separate circumferential strip. This procedure allowed for the comparison of the clinically evaluated borders with HIS images and histopathology.

Results: By November 2014, the histopathology of the final excision was available in 7 cases. In all cases the borders deduced from the information by HIS were more accurate than the clinically evaluated borders. In 3/7 cases the HIS-delineated lesion was wider and showed the subclinical extension, and in 4/7 cases the HIS-delineated lesion was smaller. All the results were confirmed by histopathology. No HIS false positives or negatives were found.

Conclusions: HIS is capable of delineating the borders of infiltrative BCC more accurately than the clinical evaluation by eye and thus may help in avoiding multiple re-excisions in the treatment.

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P4-9

EFFICACY OF A COSMETIC PRODUCT FOR STRETCH MARKS BY INSTRUMENTAL TECHNIQUES AND IMAGE ANALYSIS

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Striae distensae (SD) is defined by secondary skin lesions to stretching. It is caused by the rupture of connective tissue framework. Its development takes place in an acute stage (striae rubra) and chronic stage (striae alba). The aim of this study was to evaluate the efficacy of a cosmetic product for the SD treatment by instrumental techniques and image analysis. In this study 70 female volunteers were included, aged from 20 to 58 years and following the ethical requirements of good clinical practice. Methodology was based on the measurements by volume and texture parameters (PRIMOS-GFM®); evaluation of firmness and elasticity by Cutometer (Courage + Khazaka®); colourimetric assessment by the CIElab scale (CM-500—Minolta®) and length and width measurement by image analysis (Image Pro Plus 6—Mediacybernetics®). Affected regions were evaluated before and after 30, 60 and 90 days of product use. Results were compared to initial condition, considering each type of stretch mark. Statistical analysis was performed by ANOVA ($p < 0.05$). Results showed that the volume evaluation had a significant difference in all time periods: white stretch marks had a reduction of 4.8% and red stretch marks had a reduction of 14.4% after 90 days of treatment. Regarding skin texture, significant improvement was observed in all time periods; after 90 days the Rp parameter showed a 3.2% reduction and the Rv parameter a 2.1% reduction for both types of stretch marks. For Cutometer analysis, it was observed a significant increase in the elasticity of 7.5%, with no difference between the types of and evaluation of firmness pointed out a significant increase of 25% only for white stretch marks after 90 days of treatment. Colourimetric analysis did not show significant difference for the L * and b * parameters, although a significant reduction of the parameter a* was observed for red stretch marks after 60 days of treatment. Image analysis showed a significant reduction of 10% in the length and width of stretch marks from 30 days of use of the product until the end of treatment. Thus, the evaluated product efficacy was demonstrated by instrumental techniques employed, showing that the combination of different methodologies is indicated for the SD treatment monitoring.

P4-10

METHOD OF SPECTROPHOTOMETRIC INTRADERMAL ANALYSIS FOR THE DIAGNOSIS OF SKIN NEOPLASMS

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SIAscopy—spectrophotometric method for multispectral intradermal scanning, which allows to obtain images of the distribution in the thickness of the epidermis and dermis absorbing chromatophores light. The aim of the study was to develop a program of computer-aided colourimetric SIAscanning analyses to improve the accuracy of melanoma diagnosis.

P5-1

AUTOMATIC CLASSIFICATION OF VASCULAR STRUCTURES SEEN IN DERMOSCOPY BASED ON THEIR MORPHOLOGY AND ARCHITECTURAL ARRANGEMENT: A DERMOSCOPIC DIAGNOSTIC CLUE

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Introduction: Vascular structures are important dermoscopic features. Their presence, pattern and clinical appearance in skin lesions are significant diagnostic factors with high specificity in differentiating skin tumors. Hence, recognition of distinctive vascular structures provides critical information for accurate diagnosis. So far, there has been no comprehensive study on automated vascular analysis. In this work, we developed a novel framework for automated classification of dermoscopic vascular structures.

Objective: To develop an automated algorithm for classification of blood vessels based on morphology and clinical appearance into four categories of dotted, arborizing, linear and polymorphous.

Method: Our method is composed of three parts. First we introduce a new systematic approach to build a colour model of vessels. To do so, under the supervision of an expert, we outlined vascular structures in a set of images, derived frequency histogram and colour membership function of each channel in Lab space. These functions model the probability of vessel colours. Next, we apply Frangi filters to get dotted and linear structures in each image and obtain a vesselness probability by combining colour functions of the previous step. By applying a suitable experimental threshold of 0.7, we were able to get candidate vessels for training. Finally, we extract a set of global and local textural, geometrical and chromatic features form candidate vessels. We also introduce a new set of clinically meaningful features capturing the width, density, degree of branching and orientation of vessels. All features are then fed into a SimpleLogistic classifier for pattern recognition.

Results: We implemented our method on a set of 100 labeled dermoscopy images from different resources. Although images were acquired under different illumination conditions and were occasionally hairy, oily and low-contrast, we were able to distinguish four classes of vessel patterns in a variety of skin disorders. After five-fold cross-validation an accuracy of 75% and a weighted average sensitivity of 78% was achieved.

Conclusion: We successfully developed a novel approach for dermoscopic vascular pattern classification. Our method is the first in the field capable of distinguishing four major vascular categories under various imaging conditions.

P5-2

AUTOMATED BLOOD VESSEL DETECTION IN DERMOSCOPY IMAGES

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Background: Basal cell carcinoma (BCC) is the most common skin cancer which rarely kills but is still considered malignant due to its significant destruction by invading surrounding tissues. One of the most important features of BCC is the presence of branching blood vessels. Therefore it is important to identify the existence and pattern of blood vessels seen in dermoscopy images.

Objective: Automated detection, segmentation and visualization of arborizing blood vessels in dermoscopy images for computer-aided diagnosis of BCC lesions.

Methods: 127 dermoscopy images (700*500 px) labelled by experts with arborizing blood vessels absent (82 images) / present (45 images), were analyzed using our image processing and computer-aided analysis techniques. As a preprocessing step, the images were contrast-enhanced. A hybrid HSV and RGB colour space filtration was used to remove unwanted regions such as bubbles, hairs and pigment networks. For multiscale analysis, Gaussian filters with different window sizes (3,5,7) pixels were used to extract structural features and for segmentation of the blood vessels in the lesion. This procedure was performed on different red, green and blue colour channels in order to get the best result for classification. Furthermore, in order to increase the performance and flexibility of our algorithm, thresholds of the HSV and RGB colour space filters were chosen automatically according to the histogram of each colour channel.

Results: Window sizes of 3,5, and 7 provided accuracy of 80.8%, 81.1% and 80.3% accuracy for classification of blood vessels present/absent, using a logistic classifier for the data set of 127 images. It was found that the green chan-

nel would lead us to an optimum result for detecting vessels rather than other channels. Moreover, the optimum window size of the Gaussian filter was found to be 5 pixels which is directly related to the blood vessels thickness in the images.

Conclusion: This study shows that blood vessels, as a very important feature for BCC diagnosis, can be detected and segmented automatically. Our analysis shows that the result is not sensitive to the size of the window in the Gaussian filter in segmenting blood vessels and the optimum size of the window can be easily learned for different imaging resolutions.

P5-3

DERMOSCOPIC STRUCTURES ASSESSMENT METHODOLOGY FOR SKIN IMAGE ANALYSIS

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Skin cancers constitute nowadays the most common malignancies in the Caucasian population, with incidences that are reaching epidemic proportions. Although Malignant Melanoma (MM) accounts for only a small percentage of skin cancer, it is far more dangerous than other skin cancers and causes most skin cancer deaths. Prevention is essential to confront the previously stated facts, thus many efforts have been made to design accurate computer-aided diagnosis systems capable of automatically analyze skin lesions, being most of them designed for dermoscopic images. The risk assessment of skin lesions in primary care centers is often conducted by looking at changes in the ABCD rule of dermatoscopy, by Stolz 94, which addresses quantitatively the issue of whether a lesion is benign, suspicious or highly suspicious of MM. The ABCD rule proposes the identification of five Dermoscopic Structures (DS) in skin lesion dermoscopic images considered highly relevant for melanoma diagnosis: presence of network, streaks, dots, globules and homogeneous areas.

In this work, a methodology based on image processing techniques to automatically assess the DS score of a skin lesion image, as proposed by the ABCD rule, is presented. The suggested methodology starts by extracting 667 features that translate the skin lesion characteristics, such as mean colours, compactness, entropy or co-occurrences metrics, to name a few; then feature selection methods, based on correlation or wrappers, and machine learning classification algorithms, as Naïve Bayes or K-nearest neighbors, are applied to maximize the methodology performance in terms of correctly identifying the presence of each structure in the image. In order to validate the proposed methodology, the EDRA dataset was used, composed by dermoscopic images annotated by specialists. The method was trained with 169 images, and later tested with 129 images, achieving sensitivity rates of 73.8% for dots, 71.9% for globules, 97% for network, 73.2% for streaks and 73.5% for homogeneous areas. By summing the classification scores obtained for each DS separately, an overall accuracy of 81.4% for the ABCD rule DS score estimation was achieved, considering a 1-class margin error. In conclusion, in addition to the good performance results for the detection of each DS separately, the estimated ABCD rule DS score results obtained through this approach proved to be very encouraging.

P5-4

USE OF MACHINE VISION IN THE DERMOSCOPIC DIAGNOSIS OF MELANOMA

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Mistakes in establishment of diagnosis for cutaneous melanoma are not uncommon, often leading to unnecessary excisions. The value of computing devices for the improvement of melanoma diagnosis was already well recognized since 1980s. International researchers were offered a range of computer-aided algorithms for digital management and evaluation of dermoscopic images. The Russian digital dermoscopy system RDS-1 and the PKAD automated system for diagnosis of melanocytic lesions are used in Russia and CIS states since 2010. The objective of our study was evaluation of the capabilities of the RDS-1/PKAD complex in comparison with regular diagnosis of melanoma performed in the conditions of a polyclinic (dermatology or GP office) and a specialized oncological dispensary. The data obtained from primary medical documentation were analyzed. Along with the routine examinations, Heine Delta 20 device, RDS-1 digital dermoscopy, the evaluation of condition with the aid of the Argenziano 7-point algorithm and PKAD automatic analysis were carried out in the oncological dispensary. Overall, 46 patients with melanoma and 204 patients with various benign nevi were observed and then treated surgically with obligatory histological examination. The clinical diagnosis sensitivity rate made up to 52%, the specificity—68%. In the specialized oncological dispensary routine examination yielded an 80% sensitivity and 82% specificity. The diagnosis sensitivity of Heine Delta 20 dermatoscopy combined with the Argenziano 7-point checklist proved to be 97% sensitive and 84% specific. The automatic RDS-1/PKAD system analysis resulted in a 94% sensitivity and 80% specificity. The mean time spent on the examination of one melanoma-suspicious nevus by the PKAD was estimated as 16 seconds, the same value for Argenziano was 5.3 seconds. The diagnostic accuracy for melanoma in dermatology office can be improved by 42% if the RDS-1/PKAD system is used. The accuracy of automated diagnosis provided allows for the exploitation of the system in specialized oncological dispensaries as a source of an alternative view (second opinion) while establishing the provisional diagnosis in patients with clinical suspicion for melanoma.

P5-5

EVALUATION OF METHODS TO QUANTIFY COLOUR NON-UNIFORMITY IN DERMOSCOPIC IMAGES

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Background: colour irregularity in an important feature in the dermoscopic lesion images that is strongly related to the underlying diagnosis. In computational image analysis, multiple methods exist to quantify colour heterogeneity. Computer-aided diagnosis could benefit from using the optimal method for colour heterogeneity assessment.

Objective: 1) to compare various methods of colour heterogeneity measurement, in terms of their ability to discriminate between different lesion groups and colour patterns; 2) find the optimal representation of the colour data.

Methods: the study employed 669 dermoscopic images that included malignant (N=132) and non-malignant (N=537) lesions. Several heterogeneity metrics were investigated: 1) textural features, such as entropy and contrast; 2) regional variance and range of colour values; 3) solidity (SOL), compactness (CMP), and number of components (COM) in the colour clusters; 4) spatial colour variance (J1) and kurtosis (J2), evaluated using Hu's moments [1]; and others. With each metric, the ability to discriminate between the two image groups was evaluated, using the two-sample t-test and z-score. In addition, the classification accuracy of the corresponding logistic classifier was evaluated.

Results: the images were differentiated well by the spatial moments of colour distribution. The t-score was -10.5 for J1 and -10.2 for J2 ($p < 0.01$ in all cases). Logistic regression resulted in sensitivity (specificity) of 0.22(0.97) with J1, 0.22(0.98) with J2, and 0.23(0.97) with J2/J1. A moderate differentiation was obtained with SOL metric (z score = 7.79). On the other hand, COM, CMP and textural features measured no significant differences. Using a multi-feature classifier resulted in sensitivity 0.34 and specificity 0.94. The best results were achieved with "blue" and "saturation" colour channels.

Conclusions: colour irregularity was captured using several different descriptors. In general, the descriptors were not correlated, which shows that they captured different aspects of the colour pattern. Thus, multiple descriptors may be necessary to fully quantify colour non-uniformity. Combining the descriptors in multi-parameter models that focus exclusively on colour could be beneficial for computer-aided characterization of the lesion's appearance.

P5-6

A DERMATOLOGICAL ASSISTANCE SYSTEM FOR THE COMPUTER-AIDED IMAGE ANALYSIS OF NEVI

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To support dermatologists in assessing nevi and their development over time, an image-based assistance system was developed within a close collaboration of companies as well as scientific and dermatological facilities. While the images are acquired and preprocessed using a dermatological whole body scanner, this abstract focuses on the related medical assistance system. This software system supports the dermatologist during the complete oncological diagnosis and treatment process including anamnesis, examinations, diagnosis, treatment, histological confirmation and follow-ups. Therefore, a comprehensive analysis of the clinical workflow in dermatological oncology and an analysis of technical requirements have been performed. The interactive visualizations for high-resolution body images and close-up views of individual nevi enable the user to assess suspicious lesions thoroughly multiple examinations. The dermatologist is supported by intelligent image processing and machine learning algorithms, which automatically detect, segment and evaluate the individual lesions according to dermatological criteria. The automated lesion evaluation is based on a database of image data annotated by dermatological experts and serves for highlighting lesions with suspicious characteristics. Due to the optimized acquisition conditions, the dermatological full body scanner generates spatially registered, colour-calibrated and thus standardized body images which are enriched with additional 3D information. This allows for a faithful and accurate evaluation of lesion size and colour for the first time. The automated registration of nevi from multiple follow-up images enables an objective assessment and monitoring of the specific changes over time and simplifies the user-driven evaluation. The intelligent and intuitive user interface provides several forms whose contents are filled automatically and which are optimized for fast and safe editing. Any visualization functionality is optimized for large image data. Individual reports can be generated to further support the information exchange within the clinical workflow. Together with the dermatological full body scanner, the image processing and enhancement modules, the software system represents a convenient assistance system for the computer-aided image analysis, communication and documentation of the skin and treatment state of risk patients.

P5-7

A NEW EFFICIENT METHOD FOR DIGITAL HAIR REMOVAL BY DENSE THRESHOLD ANALYSIS

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We present a new automatic method for digital hair removal (DHR) from pigmented skin lesions. In contrast to existing methods, we detect potential hairs at all possible luminance levels present in the input dermoscopy image. This delivers a conservative set of all potential hairs found in the image, which captures thin and low-contrast hairs better than existing DHR methods. From this set, we next select true-positive hairs by analyzing the morphological properties of the medial axis, or skeleton, of the detected potential hairs. Skeletons enable us to perform a robust and efficient detection of thin-and-elongated structures even in the presence of multiple hair crossings and/or highly curved hairs. True-positive hairs are finally removed by using an efficient automatic image inpainting algorithm. A parallel implementation of our method on consumer graphics processors allows us to reach speeds comparable to existing DHR methods (seconds per input image). We qualitatively compared our method with six state-of-the-art DHR techniques: DullRazor (Lee *et al.*, Comput. Biol. Med. 1997), VirtualShave (Fiorese *et al.*, Proc. EMBS 2011), E-shaver (Kiani *et al.*, Comput. Biol. Med. 2011), Abbas *et al.* (Biom. Sig. Proc. Contr. 2011), Huang *et al.* (Proc. EMBS 2013) and Xie *et al.* (Comp. Med. Imag. Graph. 2009) on a set of over 300 dermoscopic images acquired with several imaging modalities and showing a wide range of hair-and-skin morphologies. The comparison shows that our method can better detect and remove complex hairs (*e.g.*, thin, low-contrast, highly curled, or of high density) than the evaluated methods. In the same time, our method does not affect non-hair structures in the image, thereby preserving details which are relevant for subsequent analyses. Visual inspection, by two dermatologists, of the processed images confirmed our DHR method does not influence the images in ways which would affect their medical assessment. To our knowledge, our comparison is the broadest comparison of DHR methods published up to date. Our DHR method is fully automatic, and can be easily integrated in existing skin-imaging analysis pipelines. Its full implementation and sample results are openly available at http://www.cs.rug.nl/svcg/Shapes/HairRemoval.

P5-8

IMPROVED DETECTION OF DERMOSCOPIC VESSEL MORPHOLOGY BY HIGH DYNAMIC RANGE IMAGE CONVERSION

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Objective: To facilitate for new dermoscopy trainees to identify vessels on dermoscopy using image conversion.

Design: Observational study.

Setting: Dermatology clinic.

Materials: Dermoscopy images of each one case of psoriasis, Bowen's disease, senile angioma, keratoacanthoma, seborrheic keratosis, melanocytic nevus, basal cell carcinoma, telangiectasia.

Intervention: Comparative analysis of original dermoscopic images and that with high dynamic range (HDR) image conversion (CASIO COMPUTER CO., Ltd).

Main outcome measures: Visibility for disease-specific dermoscopic types of vessel and types of arrangements, namely dots and distributed in psoriasis; dots/coiled and clustered in Bowen's disease; clods and non-specific in senile angioma; looped/dots and radial in keratoacanthoma; looped and centered in seborrheic keratosis; curved and non-specific in melanocytic nevus; serpentine and branched in basal cell carcinoma; helical and reticular in telangiectasia.

Results: The use of HDR images conversion improved visibility for vessels with clear contrast even in pinkish white structureless areas. However, the conversion could make it difficult to differentiate between "distributed" and "clustered."

Conclusion: The results suggest that HDR image conversion might facilitate for new dermoscopy trainees to identify vessels on dermoscoy.

P5-9

AUTOMATED IMAGE REGISTRATION AND COLOUR CALIBRATION OF DERMOSCOPY IMAGES DURING THE CLINICAL FOLLOW-UP

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Colour information in the dermoscopy images is crucial in the clinical diagnosis as well as in computer-aided diagnosis. Dermoscopy images therefore should be taken under uniform condition, but unfortunately this is not always achieved

in practice and images obtained during the clinical follow-up often show considerable differences in magnification, angle or lighting conditions. Device calibration to compensate for various imaging conditions is crucial for the development of a reliable automated screening system. Therefore, we have addressed this issue using a software-based approach. In this study, we proposed a fully automated image registration and colour calibration method to obtain images during dermoscopy follow-up. The image registration process starts with the estimation of parameters for geometrical correction such as colour offset, lesion size fitting, and rotation angle by the scale-invariant feature transform (SIFT) and the bi-weight method. Then, registration was finalized by the similarity transform. In the colour calibration process, colour calibration of the dermoscopy images is needed with the careful consideration to match the actual variation of tumor colour. This process is based on the idea that an area with few appearance changes during the follow-up should originally have an almost the same colour. We determined such stable areas as the basis regions by the results of SIFT and the cumulative brightness transfer function (CBTF) were calculated to perform colour calibration. In this study, dermoscopy images were obtained from 18 patients at Tokyo Women's Medical University Medical Center East. A total of 36 images were used for the analysis. All the lesions were diagnosed as nevi (benign). Our registration algorithm achieved a precision of 98.3±2.5% and a recall of 91.6±7.8%, on condition that the manual alignment using the Exif data (collection of several representative images) as a reliable reference to define the gold standard. Our colour calibration method considerably reduced the colour difference between the images, DE from 10.9±5.6 to 3.9±1.7. These results showed that the proposed method was plausible to compensate both geometrical and chronological changes during dermoscopy follow-up.

P6-1

HIGH RESOLUTION CROSS POLARISED TOTAL BODY PHOTOGRAPHY

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The principle of cross polarisation of light to eliminate reflection has been effective with dermoscopy. The same principle can be applied to total body photography but there are certain challenges that need to be addressed for this to be successful. A good camera and lens combination. A lens polarising filter. Application of polarising gel to the light source. Due to the light filtering/dimming effect of the polarising materials there needs to be extra compensatory light source, i.e., soft box flash units. A series of photographs covering the entire body. There are a number of other standard photography techniques also required that combine to get the best images e.g. white balance, a neutral grey background, the optimal aperture, shutter speed and relatively low ISO, all to get the highest resolution possible. Copies of the photographs are kept by the doctor for future reference when performing skin checks. Personal experience has found this to be helpful when routinely reviewing a patients skin e.g. to see if a lesion is new (if patient is unable to report it as such), or to help when examining patients with multiple dysplastic naevi to see if there has been any change to the individual lesion. The high resolution of the HRCPTBP images allows, to an extent, the ability to zoom in on a lesion to assess this. Whilst the resolution is obviously not as detailed as a dermoscopy image, there is no limitation to the selection of which naevi to photograph e.g. with sequential dermoscopy imaging. All the skin lesions on the body have a photographic record. A copy of the photographs is also given to the patient on a USB stick to enable the patient to more closely monitor their own skin in conjunction with advice on what to look for. Whilst portrait "glamour" photography generally tries to hide any cosmetic skin imperfections, this technique actually highlights skin imperfections i.e. "anti-glamour" photography.

P6-2

DERMASCANNER PLUS: METHODS OF HIGH-PRECISION OPTICAL METROLOGY LAY THE FOUNDATIONS FOR A CONSTANT REPRODUCIBLE QUALITY IN COMPUTER-AIDED SKIN CANCER SCREENING

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An interdisciplinary group of dermatologists, specialists in optics, high-precision metrology, image processing, computer visualistics and medical engineering has developed a dermatologist assistance system, the DermaScanner Plus. It consists of a fully automatic whole-body-skin-scanner and a dermatological assistance system for the computer-aided image analysis of nevi. A kinematics moves different high-resolution colour cameras, combined with specially adapted daylight illumination, and 3d sensing devices around the body of the patient. The captured images as well as the 3d point cloud of the patient's skin surface have to be free of measurement errors. If it is failed to do so, there is a risk that nevi could be just overlooked or measured to small by the dermatological assistance system for the skin data analysis. In order to prevent this, the whole-body-skin-scanner has been calibrated geometrically and in colour. The necessary basic technologies were laid in the field of high-precision industrial metrology. A method of the intrinsic calibration of cameras and their optics enables an optimal imaging performance. To determine the position and orientation of all sensors (colour camera and 3d sensing devices) as well as their movement kinematics incl. motion behavior, a new approach of extrinsic calibration has been developed. On this basis we calculate an exact reconstruction of the human body in colour and in space. The required sensor data fusion of multi-

modal image data and 3d point clouds based on the results of exact intrinsic and extrinsic calibration procedures. Correctness and high quality data is achieved without estimation or approximation procedures. As a result of all these measures, the whole-body-skin-scanner generates spatially registered, colour-calibrated and thus standardized body images which are enriched with additional 3d information. They lay the foundations for a constant reproducible quality in computer-aided skin cancer screening. This is a prerequisite to ensure the comparability of skin cancer screening with different devices, at different places and at varying times. A regular and reliable follow-up is for the first time possible.

P6-3

INITIAL MELANOMA DETECTED THROUGH FOLLOW-UP

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Although melanomas correspond to less than 5% of all the cutaneous neoplasias, they are also responsible for more than 75% of all deaths caused by skin cancer. The early diagnosis of melanomas has an immediate impact on the reduction in mortality rates. The full dermatological exam increases the chances of reaching a diagnosis by six fold when compared to a partial skin exam, in addition to detecting the recurrence or metastatic diseases. Medical advice, like self-examinations, should be encouraged, but these can present limitations, especially since the patient can underestimate flat or non-pigmented lesions. Small lesions still represent a diagnostic challenge, even for melanoma specialists. The association of dermatoscopy, an *in vivo*, non-invasive method, to total body photography of the skin increases the diagnostic accuracy during follow-up, especially among patients who present a high risk for melanoma, such as those with fair skin, blue or green eyes, and red or blond hair; a prior personal or family history of melanomas; as well as a high number of atypical and common nevi (>100 common nevi). This exam is performed in two steps—dermatoscopy and total body photography. Comparing the images taken with those taken previously has proven to be a highly effective approach, given that 94% of the dermatoscopic changes precede clinical changes, in turn reducing the number of unnecessary biopsies and allowing for an early diagnosis. This study presents the case of two male patients with initial melanomas (<3mm), diagnosed with the aid of photographic documentation and dermatoscopic aspects, which led to the detection in one patient of two metachronic melanomas. Dermatoscopy, together with total body photography, has brought about advances in melanoma diagnoses, allowing for an ever-earlier diagnosis of the tumor in stages that still do not clinically present the characteristics of a melanoma.

P6-4

MULTIPLE LENTIGINES SYNDROME IN A 38 YEAR-OLD MAN—CASE REPORT

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Introduction: Lentigines are pigmented lesions, mostly prevalent among people with a light skin and bright eyes, typically appearing in the upper part of trunk and limbs. They are accompanied by many freckles and other pigment complications following sunburns. Lentigines prevalence increases the risk of melanoma, meaning that each patient with it should be under long-term dermoscopic monitoring.

Purpose: The aim of this study was to describe one case of multiple lentigines in a young man.

Material and Methods: Patient's hospital records and medical literature review.

Results: A 38 year-old man arrived in our clinic for the first time in February 2008. He was then examined by the dermoscope delta 20. The patient had many pigmented lesions, most common lentigines and freckles on the upper part of the trunk and limbs. According to the patient's report, the first lesions appeared in his childhood. In 2010 one pigmented lesion was removed from the patient's neck due to the rapid growth of the lesion. The histopathology evaluation found the lentigo simplex. Currently, the patient is examined by the dermoscopy delta 20 instruments and videodermoscopy twice a year.

Conclusions: Each patient with multiple lentigines should be examined regularly by dermoscopy to pick up lesions, which may lead to melanoma.

Keywords: melanoma, lentigines, dermoscopy, skin lesions.

P7-01

THE MANAGEMENT AND OUTCOMES OF DERMTEST SERVICE IN ESTONIA: A DATA REVIEW.

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Background: Estonian incidence and 5-year survival rates of melanoma are lower than the European average and indicate a need for earlier detection. To address this, Dermato-oncology Clinic introduced Dermtest—a store-and-forward teledermatoscopy solution. The aim is to provide patients with specialist diagnosis of pigmented skin lesions without the need of a face-to-face visit to a dermatology specialist. This empowers primary care workers to take action in preventing, detecting and treating skin cancer.

Objective: To summarize and assess Dermtest service usage from two remote primary care practices in Estonia.

Method: We analysed the aggregated data of patients referred for teledermoscopy diagnosis in period of February 8, 2013 until November 23, 2014 from Pärnu Primary Care Practice and Primary Care Practice of Tartu University Hospital. A total of 515 case referrals came from 5 GPs.

Results: The number of lesions assessed per appointment ranged from 1 to 6 with mean of 1,8 and mode of 2. The time from image referral until diagnosis varied from 0 to 13 workdays, with mean of 2,3 and mode of 1. Consultations were provided by 6 dermatoscopists from Dermato-oncology Clinic in Tallinn. 11 different diagnose groups were present. 58% of cases were diagnosed as melanocytic naevi. Melanoma and other malignant neoplasms were diagnosed in 19 (3%) cases. In terms of clinical management: 28% of cases did not need further action, 47% were kept for follow-up and 25% were referred to surgery. 2 cases did not include a conclusion. The follow-up periods were 1 month (5%), 3 months (6%), 6 months (16%) and 1 year (73%). Of the 127 cases referred to surgery, pathology confirmed diagnosis data was available for 22 and 77% of teledermoscopy diagnosis were confirmed by pathology report.

Conclusions: Dermtest solution is an effective way for lesion triage. Compared to face-to-face appointments it enables the diagnosis of non-urgent and non-malignant cases in reduced time and in larger quantities. As a result, Dermtest reduces waiting times and frees up specialist expertise for relevant cases. However, the lack of pathology data availability to specialists after lesion referrals shows that there is a need to include surgeons and pathologists to the process. This could provide an opportunity for an e-learning platform. The current study should be extended to include analysis on qualitative referral data.

P7-02

RUSSIAN EXPERIENCE IN TELEDERMOSCOPY AND BUILDING AN INSTANT CLOUD DIAGNOSTIC SERVICE

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Digital dermoscopy as well as any kinds of dermatoscopic images provide the physician an opportunity to have an alternative view, to hold a consilium with colleagues, related professionals and, in some cases, specialists in a particular area. The value of such an opportunity appears even greater when such factors as the generally low quality and lack of standardization in the field of histopathological diagnosis of nevi in a range of healthcare systems, the disunity of dermatologists and oncologists in their views on the principles of early diagnosis of skin cancer as well as the introduction of dermoscopy as the standard diagnosis method for non-tumorous skin conditions are taken into account. The major objectives of the Russian Society of Dermoscopy and Optical Diagnosis of Skin include wide introduction of any digital systems that are capable of making standardized dermoscopic images and establishment of an image exchange system for the purpose of remote consulting. The technical solutions to these issues were generally found in the course of the Society's innovation programme in 2009-2012, when both the original videodermoscopic complex and devices that extend the capabilities of regular dermatoscopes were introduced in Russia. Currently, all Russian RDS-1 digital dermatoscopes are interconnected inside PKAD automated remote diagnostic network. This diagnostic service is able to automatically evaluate the diameter and area of the lesions on the images obtained even from the simplest handheld dermoscopes, excluding the necessity of visual comparison of the image dynamics. The biggest platform for remote discussion of dermoscopic images and thus the largest teledermoscopic server up to date is the section of the International Society of Dermatoscopy on telederm.org, where an archive of 4552 observations (by December 2013) is being maintained since 2006. Another prominent discussion platform is the server of the Russian Society of Dermatoscopy, where 1342 dermatoscopic observations have been posted in 2009-2013. Up to today, 1635 participants from Russia and the CIS are members of the online community of the Russian Society of Dermatoscopy; 71 of them are active publishers of dermatoscopic observations. We hope that with the aid of new systems and techniques digital dermoscopy will become a vital tool in routine clinical practice of any dermatovenerologist in Russia.

P7-03

IMPROVING ACCESS TO EXPERT CONSULTATION WITH TELE-DERMOSCOPY AND TELE-CONFOCAL: AN INTRODUCTION TO CLOUD BASED COMMUNICATION SYSTEMS

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Skin tumors are the most frequent cancer in the general population with a rising trend. Dermoscopy enables more accurate diagnosis than traditional naked-eye examination and has been shown to be improved by information provided by reflectance confocal microscopy (RCM). Teledermatology has traditionally allowed for the exchange of medical information across the internet and the advent of new technology enables nearly immediate access to expert consultation without the limitation of distance based on store-and-forward (SAF) technology with the upload, download, and review of digital dermoscopy images. With the advancement of cloud based telemedicine systems, developed in the United States and Germany, and high speed internet connection data can now be streamed instantaneously allowing for the transmission of larger size file formats that can be used in various applications. We now have the ability to efficiently add reflectance confocal microscopy into a telemedicine platform including the supervision of a dermatology department skin cancer screening workflow from one computer workstation

and to have potentially immediate access to experts at any location via simultaneous upload and streaming. A new model of high technology skin cancer screening will be presented integrating the diagnostic workflow applied at the University of Modena and Reggio Emilia with Vivanet®

P7-04

MULTIDISCIPLINARY TELEDERMATOSCOPY—REDEFINING THE MELANOMA CARE PROCESS

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Background: Sweden, with a population of 9,6 million, has one of the highest incidence rates of melanoma. More than 75% of the melanomas are excised or referred by primary care clinicians. Over 150.000 excisions of melanocytic lesion are performed on 100.000 individuals each year to identify 3.500 invasive melanomas and 1.500 in situ melanomas. Specialist skills in dermatoscopy should therefore be in reach for the general practitioner (GP) at patient's first consultation.

Aim: To initiate a novel work process through a structured management of melanoma patients, with opportunities for diagnostic support and priorities in all steps.

Methods: Introducing an educational program and certification of *First Line Clinicians* (GPs) and *Digital Dermatoscopy Analyzers* (Specialists). Using teledermatoscopy in a consensus diagnosis setting involving two or more specialists to yield optimal diagnostic accuracy. By *Revised Pattern Analysis* (Chaos and Clues) develop a standardized *Digital Dermatoscopic Diagnose Report* including recommendation on diagnostic excision by the GP or external surgeon / plastic surgeon depending on size and location. Within a teledermatoscopic digital service provide all specialists (GP, dermatologist, surgeon and pathologist) with the collected data throughout the whole melanoma referral process.

Results: Specialist skills transfer through digital services (teledermatoscopy) to primary care will ultimately provide a better selection of suspicious lesions, thereby reducing referrals of benign skin tumors. This results in fewer unnecessary excisions and associated reduced load on pathology laboratories with improved response times to win for all parties. In addition, the patient gets accurate information continuously during the care process.

Conclusion: Multidisciplinary teledermatoscopy increases the diagnostic certainty, promotes cooperation between different health care providers, raises the level of knowledge and provides a faster and more accurate processing of melanoma.

P7-05

DERMOSCOPY AND TELEDERMOSCOPY IMPLEMENTATION IN UKRAINE

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We conducted a survey among practicing dermatologists in Ukraine to evaluate current usage of dermoscopy, teledermoscopy and possible future implementation of telemedicine in their daily practice. An online questionnaire was prepared for members of Ukrainian Academy of Dermatovenereology. Five hundred eighty nine dermatologists completed the study. The majority of respondents already conducted store-and-forward teledermatology consultations, but in the most cases it was email-based teleconsultations. The biggest problems that were stressed—limited access to telecommunication services in the rural areas, low quality of the obtained clinical images, limited knowledge of the modern possibilities of telemedicine and others. The most active group of dermatologists who lead teleconsultations were those, who use dermoscopy routinely. The majority of dermatologists agreed that teledermatology, especially in the field of teledermoscopy and follow-up teleconsultations, holds great potential for future usage in everyday practice. As it is highly dependent on the quality of the provided images, staff should be properly trained on the proper image acquisition technique. Mobile teledermoscopy is promising for patient-performed surveillance of selected lesions and further patient triage via teleconsulation. Nevertheless, many problems are still unsolved, we believe that implementation of teledermatology in the routine practice is crucial for better patient care and for better management of outpatient referrals while providing a better, quicker and more convenient service.

P8-01

CONJUNCTIVAL AND CUTANEOUS MELANOMA: CASUAL ASSOCIATION?

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Conjunctival melanoma is the second most common cancer of the conjunctiva and corresponds to only 1.6% of all non-cutaneous melanomas. It shares the same embryological origin of cutaneous melanoma, but differs in treatment and prognosis. Male patient, fototype 3, 87 years old, had an exophytic dark lesion on the left eyelid conjunctiva. The complete skin examination revealed a pigmented asymmetric lesion, 2 cm of diameter on the left arm. Dermoscopy was highly suggestive of melanoma. Both lesions were underwent excisional biopsy that confirmed the diagnoses of melanomas: the eye, an invasive (breslow 16mm) cutaneous nodular and the cutaneous, a superficial spreading in situ, both

primary. The conjunctival melanoma is extremely rare and only a small part of them stems from the palpebral conjunctiva. Affects especially caucasians, with an incidence that is increasing in males and above 60 years. It is very aggressive with high rates of metastasis and mortality. The assigned risk factors for conjunctival melanoma are: age, caucasians and greater exposure to ultraviolet rays. The assessment by experienced ophthalmologists and dermatologists and multidisciplinary team are key in the success of the management of these patients. Many studies show an increased risk of developing cutaneous melanoma in patients with conjunctival melanoma, but the opposite does not occur. More studies are necessary to determine if there is any relation between this lesions. This case demonstrates two primary melanomas on the same patient, emphasizing the importance of a thorough skin examination in the diagnosis of cutaneous neoplasms.

P8-02

MULTIPLE PRIMARY MELANOMA INCLUDING LENTIGO MALIGNA, MUCOSAL AND AMELANOTIC MELANOMA ASSOCIATED TO 2 RED HAIR POLYMORPHISMS IN MC1R GENE, WILD TYPE FOR CDKN2A AND MITF

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Introduction: Multiple Primary Melanoma (MPM) accounts for up to 8% of malignant cutaneous melanoma. Several risk factors are associated, including family history of MPM and personal history of dysplasic nevi. In patients with MPM, *CDKN2A* and *MITF* mutations have been described; *MC1R* gene red hair polymorphisms (RHP) has also been described in patients with mucosal melanoma.

Case Report: A 61 years old red hair female patient with MPM and antecedents of sunburns during childhood and intense photo-damage, carrier of 2 RHP in *MC1R* (p.R151C, p.D294H), *CDKN2A* and *MITF* wild type that in February 2010, at age of 57, was diagnosed of Lentigo Maligna Melanoma (LMM, Breslow 0.24mm, Clark II, with follicular extension) on the left cheek and treated with wide excision; eight months later, melanoma recurred in the same place and was treated with wide excision guided by in vivo confocal microscopy. In July 2010, a lilaceous lesion developed over the clitoris; genital mucosa biopsy of another hospital reveled "chronic inflammation," but in December 2011, a lilaceous ill-defined macula appeared over the biopsy´s scar and histopathological diagnosis of melanoma in situ was made; two months later melanoma recurred, wide excision was performed again but 7 months later a pigmented spot appeared on vulva with diagnosis of melanoma Breslow 0.72mm. Management included partial resection of the vulva and sentinel lymph node biopsy; No metastasis were diagnosed. Imiquimod and follow up with confocal microscopy were indicated as one surgical margins was close to the lesion. In November 2014, a pink lesion appeared on the left elbow. Confocal microscopy revealed: thickened, hiporefractile honeycomb pattern with impossibility to reach the dermo-epidermal junction. Histopathology was consistent with fusocellular amelanotic superficial spreading melanoma (FASSM), 1mm Breslow thickness.

Discussion: Our main interest is reporting the case of a patient with MPM, infrequent different subtypes of cutaneous melanoma (LMM, FASSM) and genital mucosal melanoma associated to 2 RHP in MC1R gene, being *CDKN2A* and *MITF* wild type. Genetic susceptibility factors are probably shared by these subtypes of melanoma and these are, at least partly, associated with RHP in *MC1R* gene and independent of *CDKN2A* and *MITF*.

P8-03

MELANONYCHIA: SINGLE CENTRE EXPERIENCE IN KOREA

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Background: Melanonychia is well-known predisposing condition of acral lentiginous melanoma. Furthermore, many patients with melanochia is visiting dermatologic department due to publicity activities for this risk by mass media. But, the basic clinical data for Korean melanonychia is lacking.

Objective: To identify basic clinical data for Korean melanonychia.

Methods: From January 2002 to August 2014, total 288 patients with melanonchia in PNUH and PNUYH were included in this study. We reviewed the medical records, clinical photos, dermoscopic photos, and histopathologic results. In clinical findings, duration of disease, the number and the location of affected nail, and possible causing factors were identified.

Results: Average duration of melanonychia from onset to visiting was 29.4 months. One hundred and fifty-nine (55.2%) patients have melanonychia on a single nail and thumb is the most frequently affected nail. Thirty-six of them were underwent skin biopsy. Seventeen (5.9%) patients were diagnosed with malignant melanoma, and the rest of them were diagnosed with benign conditions. Among them, 82 (28.5%) patients had subungual hemorrhage, 25 (8.7%) patients had

ethnic type pigmentation, and 47 (16.3%) patients were related to extrinsic causes such as minor trauma or occupation.

Conclusion: This study could be used as basic data of Korean melanonychia for dermatologists and public information and additionally for the further large-scale studies.

Keywords: Ethnic type pigmentation, Melanonychia, Subungual haemorrhage.

P8-04

MELAPRED: FIRST SUSCEPTIBILITY TEST TO SPORADIC MELANOMA IN DAILY DERMATOLOGICAL PRACTICE

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Introduction: Melanoma has a dramatically poor prognosis in case of late diagnosis, emphasizing the critical role of early detection and prevention. We have developed a predictive algorithm calculating an individualized melanoma risk by combining clinical and genetic factors (test Melapred). We evaluated the acceptability of this test in a pilot study of patients seen in dermatology at hospital or in liberal exercise.

Material and Methods: The Melapred test allows the custom calculation of a personnalized melanoma risk score using an algorithm incorporating clinical risk factors and genetic melanoma risk factors. From April to October 2014, 188 patients were proposed to have the Melapred test, and results were given during a second clinical consultation, with explanations provided on the impact of the test result on clinical management and behaviour towards UV exposure. A questionnaire was given to the patients, evaluating the service and potential impact of the Melapred test result. A questionnaire to physicians was also performed evaluating the usefulness of Melapred for high-risk melanoma patients in their daily exercise. An agreement of the local ethic committee has been obtained. Clinical data were collected on data sheet, and salivary DNA was obtained by Oragene kit after information, signature and informed consent.

Results: The Melapred test classified 33% of patients at high risk, 53% of patients at intermediate risk and 12% at low risk. The questionnaire for the first 110 patients showed a positive evaluation with perception of its usefulness (90%), a clear desire to follow the recommendations of the physicians and to adapte their UV exposition to their melanoma score, a lack of anxiety generated by pending the result of the test. The physicians also had a very good evaluation of the test in terms of easy logistic, and help to survey and monitoring their patients.

Discussion: In this pilot study, the Melapred test is very well received and considered useful by patients and physicians, and is not cause of concern. Furthermore, the result of the test is likely to influence the photoprotection and screening and increases adherence to physician's recommandations.

Conclusion: Melapred test is well accepted and perceived by patients and physicians. Indications are the identification of high-risk patients and improved screening.

P8-05

MELANOMA MAYDAY—DERMOSCOPY CAMPAIGNE

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Melanoma MayDay Association is dedicated to achieve the highest level of performance in skin cancer screening by conducting free dermoscopic examination. It is a non-profit association, founded in September 2013, with the aim to detect melanoma by free screening with one of the most modern equipments available internationally, a digital dermoscope. Melanoma MayDay promotes the prevention of skin cancer through a nationwide campaign. Mobile Medical Unit for dermoscopy facilitates access to skin cancer SCREENING for people who require mole evaluation. We were alarmed by the rising incidence of melanoma in our country. Each year, we attended more and more patients with dysplastic nevi or with various forms of skin cancer. Thus, knowing that melanoma is curable 100 % if diagnosed in "situ" or in the early stages, we considered that the MMD program, by early detection of skin cancer, would be of great benefit to those who resort to this method of screening. Working with a modern technology we have had until now the best results in preventing skin cancer. Screening aims to identify a disease in an early stage of progression and is performed on individuals in an apparently good health status, without any signs or symptoms of concern. By detecting early changes one might prevent disease progression and, in particular cases, even death. Screening tests, such as dermoscopy, lack side effects and identify specific pathological signs without aim-

ing to be diagnostic. Screening tests is performed in a mobile medical unit, equipped with the latest Digital Dermoscope, with the most advanced software and HD resolution camera. The mobile unit has all the facilities of a medical clinic, a place where patients will have the opportunity to pursue educational audiovisual materials to clarify their questions and doubts related to melanoma. The medical device is used by doctors and nurses trained in this area. Dermatologists recommend at least one annual mole evaluation, regardless of skin phototype (lighter or darker skin), age or sex. Dermoscopy—technique with high sensitivity and specificity in diagnosing skin cancers, recommended for this purpose by the latest dermatological diagnostic guidelines. Sadly, not infrequently, the access to dermoscopic evaluation is limited due to material considerations or due to the unavailability of professional equipment near home.

P8-06

EFFICACY AND ACCURACY OF MELANOMA DIAGNOSIS IN A GENERAL DERMATOLOGY PRACTICE IN SALZBURG

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Background: There are only limited data with regard to the efficacy and accuracy of melanoma diagnosis outside academic institutions and specialised centers. The aim of this study was to assess the accuracy of melanoma diagnosis and to calculate the benign to malignant ratio.

Methods: Retrospective analysis of excisions or biopsies and correlation of clinical with histopathologic diagnosis.

Results: During a period of 2 years (2010-2011) 36255 patients visited the practice; 2913 individuals came for skin cancer screening only. In this period 3311 excisions or biopsies were performed in 2947 patients (1691 males, 1620 females, mean age: 53,2 years). In 745 cases (22,5%) the histopathologic report turned out to be a malignant neoplasm (395 basal cell carcinomas, 259 squamous cell carcinomas, 75 melanomas, 5 basosquamous carcinomas and 11 other malignant neoplasms). In 512 of the 3311 excisions (15,5%) the clinical and/or dermatoscopic differential diagnosis included the possibility of a melanoma. Of the 512 conspicuous pigmented lesions that were excised for diagnostic reasons 69 turned out to be a melanoma histopathologically resulting in a benign to malignant ratio of 7,4 : 1. In 6 melanomas the diagnosis was not suspected clinically.

Summary: The report documents efficient and accurate melanoma diagnosis in a general dermatology practice. Due to the use of dermatoscopy and digital dermatoscopy for monitoring of pigmented lesions as an adjunct to the clinical examination the benign to malignant ratio is comparable to specialized centers.

P8-07

MELAFIND® DEVICE IN A REAL-LIFE CLINICAL SETTING: DIAGNOSTIC PERFORMANCE AND NUMBER NEEDED TO EXCISE

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Background: MelaFind® is intended for use on clinically atypical pigmented skin lesions (PSL) with one or more clinical or historical characteristics of melanoma. It is a non-invasive, automated multi-spectral computer vision system that conducts an analysis with proprietary algorithms of the multi-spectral lesion information. In this study, the sensitivity, specificity, and number needed to excise (NNE) of the MelaFind® device in detection of melanoma were evaluated using histopathology results as the reference standard.

Methods: We analyzed 360 PSL in 111 patients (46.8% male, 53.2% female) with MelaFind® in the setting of a dermatology outpatient practice. A total of 147 PSL (40.8%) were rated suspicious for melanoma (MelaFind® score ≥2) and 26 of these were not excised but followed-up due to the physician's decision. In contrast, 6 PSL were excised despite a low rating by MelaFind® (score <2). A small number of PSL with a score ≥2 (n=14) were biopsied elsewhere and histology reports were not available for analysis. Thus, MelaFind® scores of 113 histologically assessed PSL and 233 non-excised PSL were considered for the final analysis.

Results: Most excised PSL with a MelaFind® score ≥2 (n=107) were benign nevi (85/107, 79.4%), with 34.6% being dysplastic compound nevi, 23.4% compound nevi and 13.1% dysplastic junctional nevi. Only 3 of the 107 PSL (2.8%) were melanomas. The two-sided T-test showed a significant difference between the scores of melanomas and most other histological entities (except scores of junctional nevi or a mixed basket of "other" benign non-melanocytic skin neoplasms). Due to available follow-up data for most cases it may be assumed, that none of the non-excised PSL (n=233) progressed to melanoma. Therefore, the sensitivity for melanoma detection in this study may be as high as 100%. Taking into account the physician's decision not to excise 26 benign PSL with a score ≥2, the specificity was improved from 62.1% to 75.4%. Despite this improvement, MelaFind® still triggered a very high NNE of 35.7 excised PSL for detecting one melanoma.

Conclusion: In this "real life" setting MelaFind® achieved a high sensitivity and acceptable specificity compared with earlier studies. However, the device should be used by experienced dermatologists to avoid missing melanoma not detectable by MelaFind® and/or exceedingly high excision rates of benign lesions.

P8-08

FOLLOW-UP OF MELANOMA PATIENTS IN A DERMATOLOGICAL PRACTICE DURING 15 YEARS: RESULTS AND COST-EFFECTIVENESS

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Introduction: Follow-up of melanoma (MM) patients is barely reported from dermatological practice in Germany. We evaluated 312 patients during 15 years, collecting data for further malignancies, adherence to follow-up visits and made cost estimates for the entire procedure as well as for MM detected during the observation time.

Methods: All patients with any type of MM were included. Follow-up procedures followed German guidelines. Evaluation included data concerning gender, age, travel distance to the practice and status of insurance. A figure for measuring adherence to the follow-up program was developed (Index of Adherence = IA).

Results: 312 patients were included into the study. During 15 years they were seen for 2926 follow-up visits. Median time for participation in the program was 5 years. 70% of all MM were in situ or of stage I. 352 MM were recorded, 40 of MM detected during follow-up were seen in 32 patients. 24 patients developed just one further MM, 5 patients had two more MM, and 3 ones had even 3 new MM. 44 % of female patients were younger than 40 years. 25% of all further MM were seen in patients who had had just an in-situ MM as a primary MM. Interval for occurence of a further MM was 4.4 years, 21,9 % of all further MM were detected after the fifth year of follow-up. Adherence to the time schedule was variable, 167 patients showed up for more than 50 % of all scheduled visits. Mean index of adherence (IA) was 61,0 %, drop-out rate 30,4 %. Adherence was better with patients included in social security systems rather than with private insurers. The index of adherence permits to compare effectiveness in keeping patients to take part in post-MM care programs. Average total costs for follow-up were 212,37 € for patients in German social security system and 345,06 € for patients in private insurance systems. Cost for any further MM detected during follow-up in average were 1625,99 € for patients in our social security system and 2889,90 € for patients in private insurance systems.

Conclusion: In dermatological practice second or even further MM are the most important problem, recurrence of MM occurs less frequently. It is important to keep patients with in-situ MM in follow-up programs and to give younger female patients better care. Costs for follow-up are low in comparison to other countries.

P8-09

MELANOMA SCREENING: A PROPOSITION OF WORK

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Epidemiological data about melanoma, generally emphasize an increase in diagnosis in spite of a constant, and in some reports, increase of deaths. These clues invites to reflect: the prevention campaigns so far established and the increased ability to recognize melanoma, even the early one, by dermatologists- using dermoscopy, has led to a satisfactory state; but, nevertheless, we are not able to counteract incisively against this terrible tumor. We have to adapt to new advances in research and refine our clinical-educational attendance. Two types of melanoma exist: the slow one and the fast one. So the first one allows a more calm management, that permits long waiting list, some delay between clinic suspicion and surgery and so on; that's the institutional Italian, and perhaps not only Italian, health organization reality. Conversely fast melanoma requires a ready intervention, and we must find the best way to face this problem. Some ideas will be proposed: melanoma prevention campagnies must promote "self skin examination" and point out the importance of "Evolution" that's best summarized in "fast changing" of the pigmented lesion, increasing sensibility of general practitioners on this clue. It's also essential in our clinics to cut out a time dedicated to emergencies, which, in part, are selected directly by the patient and /or by his general practitioner. I think that today a good prevention is to streamline waiting lists to make room for more appropriate and aware warnings from our patients and their family doctors.

P8-10

CLINIC AND DEMOGRAPHIC FEATURES OF MELANOMA PATIENTS IN THE SOUTH EAST MARMARA REGION OF TURKEY

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Background and Aims: Melanoma is an aggressive skin cancer arises from melanocytes. Although more than %95 of tumors found in skin it may originate from neural crest derived tissues such as eye, leptomeninges, mucosa. The insidence of melanoma has been increasing worldwide last decades and become increasing public health problem. Thin primary cutaneus melanoma is characterized with high cure rates. There have been few studies about epidemiology of melanoma in our country. The aim of the study was to describe the epidemiologic and demographic features of patients diagnosed with melanoma in our region.

Methods: We analysed retrospectively the demographic features and follow-up data of patients, who were diagnosed as primer cutaneous melanoma (n=200) follow-up in our clinic. The recorded parameters including age, gender, family history, country, eye colour, hair colour, skin type, fototype, sunburn history, UV exposure, use of sunscreen, primary location of the lesion, histopatologic features and compared with literature.

Results: A Total of 200 patients, 112 were male and 88 were female. The mean age at diagnosis was 53.04 ± 16:15 (7-93) in male and, 51.10 ± 15.92 (16-85) in female was detected. Superficial spreading melanoma in 65 cases; Nodular melanoma in 53 cases; lentigo MM in 22 patients; acral lentiginous melanoma in 15 cases; subungual melanoma in 5 cases, primary cutaneous metastatic melanoma in 19 cases; clear cell sarcoma in 3 patients; Spitzoid melanoma in 4 cases; and one desmoplastic melanoma were detected.

Conclusion: We present our cases clinic and demographic features with the regarding of the current literature. Our study may benefit for the determine of risk group in our region.

P8-11

NON-SELECTIVE SCREENING FOR MM YIELDS TUMORS NOT MATCHING CONVENTIONAL PERCEPTION OF MELANOMA

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Introduction: Most dermatologists select lesions for dermoscopy or any other diagnostic procedure with the eye using criteria given by recommendations such as ABCD (E) rule. As this rule applies only to pigmented lesions and most of these features develop time dependent there is an inherent tendency to select lesions with intense melanin content and in an advanced stage of growth. We wish to demonstrate results of non-selective screening for MM, i.e. lesions are not selected by the a.m. clinical criteria but if possible alle lesions were inspected with a dermoscope.

Materials and Methods: All dermoscopic images of melanoma seen in our dermatological practice during 10 years were evaluated for presence of ABCDE criteria, diameter and symmetry, and intensity of pigmentation. We analyzed 137 MM, photographic coverage was 98 %, i.e. almost no MM had escaped documentation.

Results: Of all MM detected during this period 51 = 37,2 % MM matched the conventional description according to asymmetry, border irregularity, heterogeneity of colours, diameter > 5 mm and elevation. A smaller fraction of 15 MM = 10,9 % appeared less atypical but differed from the normal shape of the patient's nevi. 25 = 18,3 % MM had a diameter < 5 mm, most oft them were quite symmetric. 40 MM = 29,2 % were hypomelanotic, i.e. of a light brown or brownreddish colour or only certained smaller sectors which were visibly pigmented. Absolutely amelanotic (even under the dermoscope) were 6 = 4,4 % of all MM. Examples of these lesions are presented.

Discussion: The results suggest that there must be a higher proportion of small, symmetric or poorly pigmented MM as conveyed in dermatological textbooks. Of course, intensely pigmented lesions atract our attention but this may result in a selection bias towards this type of MM. Hypopigmented, small and / or symmetric MM escape early detection if not inspected with a dermoscope. It appears important to include more clinical and dermoscopic images of these lesions into educational programs in order to foster dermoscopic detection of clinically insignificant lesions.

P8-12

MELANOMA EARLY DETECTION IN GEORGIA—REALITY AND PERSPECTIVES

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Introduction: Melanoma incidence showed a rapid increase in the past decades. However, there is a tendency to diagnose the early stages of the disease. It seemed to be correlated with particular efforts made for primary and secondary preventions in some countries.

Georgia represents region of high insolation. Significant numbers of citizens are outdoor workers; in addition, solariums become very popular among Georgian young population. Therefore there are high risks of skin cancer appearance in country.

Aim of our study was to analyze statistical data concerning MM and to identify reasons of delay diagnoses early detection in Georgia.

Materials and Methods: It was retrospectively investigated all reported cases of MM in the period 2008 and 2012 based on the data of National Center for Disease Control of Georgia, and results of Euromelanoma Campaign in the period 2012-2014. These data were compared with Western Europe countries' ones. 120 dermatologists were questioned for identifying the role of dermatologist in the diagnostics of skin cancer.

Results: We revealed extremely low incidence of Melanoma (1,1), which is 3-5 fold less than in Mediterranean countries, with similar risks of melanoma occurrence. The dramatically tendency of increasing of cases in the stages III and IV of melanoma was found (from 48% in 2008 to 79% in 2012). In situ melanoma was not reported in this period. Based on data of questioned dermatologists—patients with suspected skin cancer amount to 5% of the total number of dermatological primary consultations. In controversy to European dates, where the percentage of the melanoma diagnoses done by dermatologists is more than 70% of cases. In the frames of three Euromelanoma large informative campaigns and workshops for dermatologists were organized. Comparing data of Euromelanoma 2012 and 2014 a significant reduction in the number of wrong diagnoses has been achieved.

Conclusion: The delayed diagnosis of MM in Georgia has certain reasons: low awareness of population concerning the skin cancer risks; vacuum in early primary diagnosis. For change of present situation, it is necessary to conduct anti skin cancer campaigns and increase the role of dermatologist in the diagnosis of melanoma.

P9-1

MICROSAMPLING AND GENOTYPING OF A MULTICOMPONENT MELANOCYTIC LESION

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Microsampling is a minimally invasive technique with the potential of obtaining cells from the viable epidermis and superficial dermis for genotyping of melanocytic lesions in vivo. We describe our experience in using this molecular profiling strategy in a 5mm x 3mm multicomponent melanocytic lesion. There was a normal reticular pattern on the left side of the lesion, confluent subtle blue areas at the centre of the lesion, and an atypical pigment network with a few irregular streaks within a 1mm x 1mm well-circumscribed area on the right side of the lesion. A diagnostic shave excision was performed as the lesion met melanoma-specific dermoscopic criteria. Multiple specimens for molecular sequencing were taken from the 3 distinct dermoscopic areas across the lesion. Sanger sequencing was then carried out on extracted DNA samples for *BRAF* and *NRAS* mutation. Histopathology revealed a melanoma in situ corresponding to the 1mm x 1mm well circumscribed area on the right side of the lesion, arising in a dysplastic naevus corresponding to the left side and centre of the lesion. Molecular profiling revealed both *BRAF* wildtype and $BRAF^{V600E}$ mutations in the dysplastic naevus, although on the contrary, no $BRAF^{V600E}$ mutation was detected in the melanoma in situ. $BRAF^{V600E}$ mutation detection was confirmed using a MALDI-TOF mass spectrometry assay. Sequencing in all DNA samples was *NRAS* wildtype. We illustrate the paradoxical findings in this case, citing the value of microsampling to further investigate the molecular landscape of multicomponent melanocytic lesions.

P9-2

SUPERRESOLUTION MICROSCOPY

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Methods based on a modified form of total internal reflection fluorescence (TIRF) microscopy have brought nanoscale imaging below the diffraction limit of the light into reach. This has facilitated the spatial analysis of two close molecules, as long as they are recorded sequentially. SR-SIM uses Superresolution Structured Illumination to give resolutions almost twice as high as the diffraction limit would allow. The sections and cell structures close to the lower membrane can be analyzed with ELYRA P.1®. The superresolution is achieved through the combination of three technologies: TIRF illumination beam path together with high performance lasers and electron multiplying charge-coupled device technology (EMCCD). The analysis of the dynamic processes is statistically possible with time-resolved localization microscopy, obtaining subcellular localization data even from diffraction-limited structures such as dendritic spines or bacteria. Offering a high resolution requires also some specific conditions to avoid the pre- and post-histology artifacts; this includes a particular cover glass and a highly specific labeling. Comparing to immunohistochemistry and usual fluorescence, ELYRA P.1® technique give a detailed image of the analyzed structure. Using this technique in a melanoma specimen stained for HMB 45 and S100, cell individuality is easily observed even predicting if the outlying cell is migrating, while classical immunohistochemistry shows only the nest of melanocytes. By staining a blood vessel with SMA, it could precisely been visualized how the wall network is cleaved by the individual tumor cell. Presenting multicolour images with molecular specificity and 3D evaluation of cell structures emphasize the impressive capacity of this method for biological imaging at the nanoscopic range. Therefore, we strongly suggest further exploit these techniques to better depict disease biology on the subcellular level and identify relevant treatment options.

P9-3

SPITZ/REED NEVI: CLINICAL-DERMOSCOPIC-HISTOLOGICAL CORRELATION

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Background: Spitz nevi are benign melanocytic lesions and Reed nevus is considered to be the pigmented counterpart of Spitz nevus, being both frequently known by the unifying term "Spitz/Reed nevi." Their clinical appearance often mimics melanoma, which led to the search of distinctive dermoscopic patterns. Management strategies of these lesions remain controversial.

Methods: Clinical, dermoscopic and histological features of Spitz/Reed nevi diagnosed in the Department of Dermatology of a Portuguese University Hospital from 2008 to 2014

were reviewed in order to seek a clinical-dermoscopic-histological correlation. Clinical data included patients demographics and lesions' features, then classified according to 5 dermoscopic patterns, namely homogeneous, globular, reticular (inverse white and superficial black), starburst, and atypical/multicomponent. Histopathological features such as the presence of a junctional component, spindle cells and atypia were further analyzed.

Results: The 47 enrolled patients encompassed 80.9% (38/47) females and displayed a median age of 15 years (range 69; 3-72 years). The prevailing dermoscopic patterns were the starburst and the atypical/multicomponent (57.4%). Homogeneous pattern was more frequently found among adults (median age 22 years), although the difference was not statistically significant compared to other patterns (P=0.785, Kruskal-Wallis test). Among histopathological atypical lesions (n=16), all dermoscopic patterns were represented, although the atypical/multicomponent predominated (56.3%). Two out of 11 dermoscopically atypical lesions did not show histopathological counterpart. In pediatric cases (59.6%), the suspected Spitz/Reed nevi by dermoscopy were confirmed by histopathology. Six additional pediatric patients with lesions clinical and dermoscopically suggestive of Spitz/Reed nevi were monitored with follow-up visits: 4 showed involution and 2 exhibited a growing or stable pattern along 6 to 24 months.

Conclusions: Spitz/Reed nevi with distinct dermoscopic patterns display overlapping histopathological features. Our results support excision of these lesions in adults given the inability to predict with accuracy those with histopathological atypia that may raise concern about aggressive behavior/ malignancy. In children an observational approach is a valuable option given the likelihood of involution and the unlikely occurrence of melanoma.

P9-4

SKIN MELANOCYTIC TUMORS IN CHILDREN AND ADOLESCENTS—OUR EXPERIENCE

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Objective: Patient's age plays an important role in clinical management and histopathological assessment of skin tumors. At a young age, skin tumors are usually benign (including those of melanocytic origin), but if they are malignant they are most often presented as melanoma. Optimal and reliable histological evaluation of melanocytic tumors often requires its complete excision.

Material and Methods: Skin biopsies database at Institute of Pathology in Belgrade was evaluated for 14-year period. Children (up to 10 years old) and adolescents (11-18 years old) with the diagnosis of melanocytic tumor were included in the study. Clinical (age, gender, localization, symptoms, clinical diagnosis) and histological characteristics (histopathologicaldiagnosis, surgical margins status) were analyzed.

Results: A total of 801 patients were found (46.7% female, 53.3% male). The majority of patients were adolescents (77.7%). Excised tumors were usually localized on the trunk (56.7%), head (13.5%), and leg (12.9%). Tumors were commonly excised due to esthetic reasons (58.9%), tumor growth, (14.2%) and trauma (13.9%). On histology, common and congenital melanocytic nevi were usually diagnosed (73.9% and 10%), followed by Spitz and Reed nevi (5.4%), special site nevi (2.7%), and blue nevi (1.1%). Fourteen children (1.7%) had giant congenital nevus, of which one girl had proliferative nodules and a small cell melanoma developed in such nevus. In 18 patients (2.2%), 13 adolescents and 5 children, melanoma was diagnosed. Melanomas were most often present on leg (44.4%) and trunk (33.3%), and they were generally asymptomatic. They were thin (≤1 mm) in five patients (29.4%) and thick (>4 mm) in four patients (23.5%). The surgical margins weren't appropriate (defined as <1 mm or positive) in 38.4% of Spitz tumors, 15.6% of tumors removed from head and 19.2% from hand or foot. Asymptomatic tumors were more often adequately excised than those presenting as a growing mass or with the change of colour.

Conclusion: More attention should be put on asymptomatic skin tumors in children and adolescents, because melanoma can occur in this age. The main issue is more accurate recognition of lesions that both clinically and dermatoscopically show the clues for Spitz nevi and melanoma. Appropriate excision is not always possible on the head, hand or foot because of the esthetic reasons or demanding surgical technique.

P9-5

GIANT MELANOMA: A CASE REPORT

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Giant melanoma is a rare presentation of cutaneous melanomas and has particularly poor prognosis. A 54-year-old woman presented with a 4-month history of extensive dark coloured lesions on her scalp. The patient believed those lesions had been developed from a small pigmented lesion which had been present on her scalp since her childhood. A previous lesion biopsied on her scalp by a general surgery one year ago had been reported as congenital melanositic nevus histologically. Physical examination showed confluent blue-grey, dark brown macules, papules and nodules covering most of the left parietofrontotemporal scalp. There were three pigmented plaques on anterior trunk of various sizes and one pigmented lesion on her oral mucosa. Dermoscopic analysis revealed asymmetry of colour and structure, multicomponent global pattern, irregular dots and globules and

bluish-white colour. Histopathologic examination of three 4-mm punch biopsies taken from the patient's scalp were reported as atypic melanocytic lesions, and did not have sufficient findings to confirm melanoma. Total excision of the scalp lesion was not approved by plastic surgery. The pigmented lesion biopsied on her anterior trunk was referred to another pathologist. Pathology of the excisional biopsy on anterior trunk revealed superficial spreading melanoma, Breslow thickness of 1 mm, Clark level 3 and mitotic rate 2/mm². In addition, there were multiple nodular lesions in pulmonary with PET/CT. The patient was consulted to medical oncology and vemurafenib treatment started. Punch biopsy method might not be helpful at diagnosis of some giant melanomas probably due to sampling errors. This case was accepted as metastatic malign melanoma originated from the scalp lesions with poor prognosis.

P9-6

HOW OFTEN WE THINK ABOUT COLLISION LESIONS?

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In clinical practice collision lesions are not rare. There are many possibilites between pigmented and non pigmented collision lesions, pigmented lesions alone and non- pigmented lesions alone.

Usually, we see two types of lesions connected one to another but also one beneath another.

In our investigation we have often found collision lesions between pigmented lesions as nevi dysplastici and compound nevi with other tumors as well as between haemangioma and BCC with other tumors. There are also possibilty of triple collision lesions, as well as very rare tumor in tumor position. We compared 29 collision lesions, one of which was a triple colision. In 10,71% we made correct diagnosis of the collision lesions, in 28,57% we missdiagnosed and in 60,71% we found partially just one tumor of collision lesions. Our results sugest that more attention is needed in diagnosing possible tumor collision lesions.

P10-1

MISDIAGNOSIS OF MELANOMA: A 7-YEAR SINGLE-CENTER ANALYSIS

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Background: Despite implementation of dermoscopy, the accuracy of diagnosing melanoma remains a problem. The aim of this study was to analyze cases of misdiagnosis of melanoma over the course of 7 years.

Methods: The authors performed a retrospective analysis of incorrectly diagnosed melanomas referred to the F.D. Roosevelt Hospital between 2008 and 2014. We evaluated the histological characteristics of misdiagnosed cases, localization of the lesion, and specialty of the physician who made the incorrect diagnosis.

Results: From a total of 936 melanomas, 150 (13.8 %) were diagnosed incorrectly. Of the correctly diagnosed melanomas, 26 (17,3%) were melanoma in situ. The average value of the Clark´s level of true melanomas was 3.49, with an average Breslow thickness of 3.09 mm. 60 of the melanomas developed on the trunk and 55 on the extremities. Incorrectly diagnosed lesions included nevi in 80 cases, basal-cell carcinoma in 32, non-specific tumor in 16, pyogenic granuloma in 5, squamous-cell carcinoma in 5, haemangioma in 5, seborreic keratosis in 4, histiocytoma in 1, keratoacanthoma in 1 and cornu cutaneum in 1 case. In 85 cases the incorrect diagnosis was made by a dermatologist, in 38 cases by a surgeon and in 2 cases by a general practitioner. We were unable to identify the physician who made the wrong diagnosis in the remaining 25 cases.

Conclusion: Our analysis revealed a high proportion of misdiagnosed melanomas, the majority of which were thick. A high proportion of melanoma excisions were performed without a dermatology exam. The outcome of this study points to a need for better education in the field of oncodermatology for dermatologists, surgeons and primary care physicians. In addition, there is a need for periodic evaluation of diagnostic accuracy of dermatology centers using various tools (e.g. Melanoma Diagnostic Index).

P10-2

CONSIDERATIONS ON VULVAR AND VAGINAL MELANOMAS

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Melanoma of female genital tract (vulvo-vaginal melanoma) is a very rare tumor; our knowledge about risc factors and pathogenesis are limited by reduced frecquency, so actually there is no consensus regarding the management. The therapeutical approach is based on recommandations regarding genital cancers with extrapolation to cutaneous melanoma, although the particular evolution and rarity seems to differentiate vulvo-vaginal melanoma from cutaneous tumors. The main treatment is surgical, conservative in general, because radical approach doesn't improve survival. Discovered in the late stages because of the occult site and unspecific signs, melanoma is revealed by bleeding, black nodules,vulvar mass, pruritus or pain; compared with other locations, mucosal melanoma has a poor response to the treatment , poor prognosis and the lowest rate of five-years survival. Because we don't know the risc factors, improvement of prevention could means education, self-examinations and complete dermatoscopic evaluation (including genital area)l for diagnosis in early stages. All pigmented lesion on mucosal surface or muco-cutaneous junctions must be evaluated. Are the new immunotherapeutical, targeted agents and testing of the c-kit and BRAF useful for this patient? Could they bring new promising data and new perspective for the treatment? The

purpose of this review is to identify practical and useful informations in the published data for early diagnosis and optimum management of vulvo-vaginal melanoma.

P10-3

UK SKIN CANCER CAMPAIGNS AND MELANOCYTIC LESION SIZE AT DIAGNOSIS: RESULTS OF A SERVICE EVALUATION CONDUCTED IN NORWICH

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Introduction: Mortality rates for malignant melanoma are increasing in the UK. Previous studies have assessed patient satisfaction of screening programmes, but the impact of public awareness campaigns on the size of melanocytic lesions at presentation is unclear. We assessed the effectiveness of current UK skin cancer campaigns by analysing lesion size at time of biopsy.

Method: 150 patients were randomly selected from those who had excision biopsies of melanocytic lesions, either before or after the introduction of current public awareness campaigns; 75 patients in 1998 and 75 in 2008. Lesion sizes were compared following histological evaluation.

Results: 89 samples met the inclusion criteria** (36 from 1998; 53 from 2008). A higher frequency of lesions <0.5cm diameter (n=13; 36%) were identified in the 2008 group compared to those from 1998 (n=10; 19%). 9% (n=5) of lesions >2cm width were present in 1998, compared to none in 2008. The mean width of lesions in 1998 (1.020cm; SD 0.439) compared to 2008 (0.715cm; SD 0.344) was statistically significant (P=0.0005).

Discussion: Our data suggest that current campaigns have promoted public awareness towards the early identification of melanocytic lesions. This may reduce the number of late presentations of large and potentially advanced skin tumours.

Mortality rates malignant melanoma are increasing in the UK. Previous studies have assessed patient satisfaction of screening programmes, but the impact of public awareness campaigns on the size of melanocytic lesions at presentation is unclear. 150 patients were randomly selected from those who had excision biopsies of melanocytic lesions, before and after the introduction of current public awareness campaigns; in 1998 and 2008. Lesion sizes were compared following histological evaluation. A higher frequency of lesions <0.5cm diameter (n=13; 36%) were identified in the 2008 group compared to those from 1998 (n=10; 19%). The mean width of lesions in 1998 (1.020cm; SD 0.439) compared to 2008 (0.715cm; SD 0.344) was statistically significant (P=0.0005). Our data suggests that current campaigns have promoted public awareness towards the early identification of melanocytic lesions. This may reduce the number of late presentations of large and potentially advanced skin tumours.

P10-4

INGENOL MEBUTATE IN THE TREATMENT OF ACTINIC KERATOSES RESISTANT TO PHOTODYNAMIC THERAPY: CLINICAL, DERMATOSCOPIC AND CONFOCAL MICROSCOPY EVALUATION

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Dermatoscopy and reflectance confocal microscopy (RCM) have been shown to be useful non-invasive tools for the diagnosis and treatment monitoring of non melanoma skin cancers, including actinic keratoses (AKs). Ingenol mebutate (IM) gel is a new drug recently approved for the topical treatment of AKs. The aim of our study was to evaluate the efficacy of IM in the treatment of face/scalp AKs resistant to photodynamic therapy (PDT) using clinical, dermatoscopic and RCM evaluation. Twelve patients (8 men, 4 women) observed in a 6-month period in our Clinic were enrolled. Inclusion criteria were age >18 years; multiple, visible, not hyperkeratotic, not hypertrophic, face and scalp AKs; previous treatment (at least 2 sessions) with PDT. Patients were treated with IM 0.015% gel applied for 3 consecutive days on a predefined area of 25 cm^2. Clinical and instrumental evaluations were performed at baseline and after 2 months. Therapeutic response was assessed by: 1) a clinical evaluation of the whole treated area based on a Physician Global Assessment (PGA) including the degree of erythema, scaling and number of lesions and 2) a clinical, dermatoscopic (Dermlite® hybrid) and RCM (VivaScope® 3000) evaluation of one selected target AK lesion for each patient. At the end of the study the PGA of the whole treated area showed a complete response in 3/12 cases and a partial response in 6/12 cases. As regards the therapeutic outcome of the target lesions, a complete clinical clearance was observed in 4/12 lesions and a partial response in 2/12 AKs, whereas dermatoscopy and RCM imaging showed complete clearance of 2/12 lesions and partial response of 7/12 lesions. Interestingly, dermatoscopy and RCM evaluation detected remnants of subclinical disease in 2 clinically healed lesions and, conversely, signs of initial and/or partial response in 4 AKs that clinically did not showed any change. In conclusion, IM demonstrated to be effective in the treatment of AKs resistant to PDT. Dermatoscopy and RCM confirm to be useful in the treatment monitoring of AKs, being superior to clinical evaluation in the fine detection of disease signs, thus helping the clinician in further therapeutic decision.

P10-5

DERMATOSCOPY-AIDED BIOBANKING OF EQUIVOCAL MELANOCYTIC TUMOURS— THE SWEDISH BIOMEL PROJECT

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Background: In Sweden melanoma incidence is rising fast. Biobanking is an important tool for translational and clinical medicine. Identifying biomarkers for biological aggressiveness in atypical nevi and thin melanomas as well as identifying biological "kindness" in thick melanomas would offer a more tailored follow-up and/or treatment for these patients. A unique, multidisciplinary project, which includes biobanking of all suspicious melanocytic tumours, including melanoma as well as melanoma metastases, has recently started in Sweden– the BioMEL project (www.BioMEL.org). The Ethics committee has approved the project.

Purpose: We will describe one part of BioMEL– a prospective project including dermatoscopy-aided biosampling of fresh tissue from clinically atypical nevi, melanoma insitu and primary melanoma, without jeopardizing the histopathological diagnosis.

Method: In two Dermatology departments in Sweden (Helsingborg and Lund) consecutive patients, 18 years or older and selected for primary surgery due to equivocal nevi and tumours clinically suspicious for melanoma, are included in the BioMEL project. Macroscopic and dermatoscopic photos are taken pre-operatively as well as non-invasive harvesting of epidermal cells (sampling by tape). During primary excision a dermatoscopy-aided tissue sampling is performed, using a 1 mm punch for biopsying the tumour and a 2 mm punch for biopsying the adjacent skin. Biopsies are stored in -80C°. Photos, patient and tumour data are stored in a database for later research.

Results: So far 86 patients' primary patients have been included. All histopathological slides have been reviewed and to date no biopsy has interfered with the final histopathological diagnosis. No dermatoscopy-aided biopsies have beeen taken where tumours were thickest[1]. Enough DNA and RNA are sampled to be useful in analyses searching for prognostic and predictive biomarkers.

Conclusion: As many equivocal melanocytic tumours as possible should be biosampled for molecular research to help us understand the biology of both nevi and melanoma and to drive the translational research forward. In the Swedish BioMEL project a microbiopsy of 1 mm has been found very useful for this purpose. As long as the biopsy is taken according to the latest dermatoscopic research this is a safe method which does not interfer with the histopathologic diagnosis.

P10-6

DERMOSCOPIC CHANGES IN LENTIGO MALIGNA DURING RADIOTHERAPY

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Radiotherapy using soft X-rays has been shown to be an efficient and safe treatment option for lentigo maligna. It is used especially in elderly patients, when surgery cannot be performed. Dermoscopy has been shown to be valuable in early diagnosis of this malignancy. In the present study we investigated clinical and dermoscopic changes during and after radiotherapy of lentigo maligna. Six patients (4 men and 2 women; mean age 77 years, range 49-89 years) were recruited at the Department of Dermatology, Medical University of Graz, Austria. All patients presented with macular pigmented lesions clinically suspicious for lentigo maligna. In dermoscopy pseudo-network (6/6 patients), asymmetrically pigmented follicular openings (6/6), slate-grey dots (5/6), annular/granular structures (4/6), and dark streaks (2/6) were observed before therapy. All lesions were located on the face except one lesion which was located on the scalp. A biopsy was taken of all lesions to confirm the diagnosis by histopathology. Radiotherapy was performed using soft X-rays (Dermopan 2, Siemens, Vienna, Austria) with an X-ray current intensity of 25 mAmpere. Voltage was 29 kV using an aluminium filter between the X-ray tube and the patient. Patients were treated for 6 times (20 Grey each session) Dermoscopy was performed before, during (third and fifth session) and after radiotherapy. With increasing doses of radiotherapy pigmentation became more and more blurred and vessels became more prominent. A typical "strawberry pattern" appeared, characterized by a deep red pseudonetwork consisting of large vessels located between the prominent hair follicles associated with prominent follicular openings surrounded by a white halo.The typical dermoscopic signs of lentigo maligna disappeared almost completely before treatment ended. Crusts and ulceration were also visible in dermoscopy. In the follow-up period (1 two 5 months after RT) a homogeneous light brown pigmentation interrupted by regular follicular openings appeared.

In conclusion dermoscopy is a useful method to visualize changes during radiotherapy. It might be helpful in monitoring treatment success by indicating disappearance of atypical pigmentation and increase of vascularization. Lack of disappearance of patterns associated with lentigo maligna or unsatisfactory vascularization could lead us to change the therapeutic doses of soft-X ray radiotherapy.

P10-7

THE ROLE OF DIGITAL FOLLOW UP IN AN XP-C PATIENT WITH A NEW DESCRIBED MISSENSE MUTATION LEADING TO UNUSUAL CLINICAL PREASENTATION

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A case of Xeroderma Pigmentosum (XP) with a novel mutation in the *XPC* gene was diagnosed in a patient aged 42 after the diagnosis of multiple primary melanomas and no cutaneous carcinoma.

XP is a rare genodermatosis caused by abnormal DNA-repair. XP complementation group C (XPC) is the most frequent type in Mediterranean countries. Early marked photoaging and non-melanoma skin cancers are the common clinical presentation from childhood. A phototype III otherwise healthy Caucasian male patient was referred to our Unit with a sporadic melanoma. Initially another 4 melanomas were detected. Molecular studies did not identify mutations in *CDKN2A, CDK4* or *MITF* genes. Two mutations in the *XPC* gene were detected: a c.2287delC (p.Leu763Cysfs*4) frameshift and a c.2212A>G (p.Thr738Ala) missense mutations. *After* digital follow-up, another 5 additional primary melanomas were diagnosed. Regression features on dermoscopy on the sun-damaged skin were the only relevant finding. The p.Thr738Ala missense mutation has not been previously described. It may be the case that missense mutations in the *XPC* gene allow a partial functionality that could explain this unusual late onset XP.

P10-8

VERY SMALL PIGMENTED BASAL CELL CARCINOMA

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Of the malignant cutaneous tumors that appear in humans, the basal cell carcinoma is the most common, and is responsible for nearly 2/3 of all cases. It presents a clinical aspect that is quite heterogeneous and that can resemble a number of malignant tumors, including melanoma, squamous cell carcinoma, and Bowen's disease, as well as benign lesions, such as melanocytic nevus, seborrheic keratosis, dermatofibroma, etc. Dermatoscopy consists of a non-invasive technique that contributes to the enhancement of the basal cell carcinoma diagnostic accuracy and can be highly useful if one considers the increasing growth in the incidence and vast differential diagnoses of these tumors. The dermatoscopic criteria for basal cell carcinoma include the absence of a pigment network and the presence of at least one of the following structures: arborizing vessels, large blue-gray ovoid nests, leaf-like areas, multiple blue-gray globules, spoke-wheel areas, and ulceration. More recently, others criterias were also added to this list of dermatoscopic standards, including non-arborizing vascular structures, chrysalis structures, concentric structures, and shiny white-red structureless areas. The recognition of dermatoscopic structures that indicate basal cell carcinoma facilitate the early diagnosis of the tumor even when its clinical aspect is still unsuspected, favoring the treatment in the initial stages of the illness and with minimal morbidity. Although the presence of a pigment aids in the diagnosis, only 7% of the basal cell carcinomas have more than 75% of their surface pigmented, while two-thirds of the pigmented basal cell carcinomas have less than 50% of their tumor surface pigmented. This study presents a series of 12 cases of early pigmented basal cell carcinoma, of less than 3mm in diameter, where the identification of the blue-gray areas contributed to the early diagnosis of these tumors. This case series illustrates how dermatoscopy can improve a clinician's accuracy in diagnosing basal cell carcinoma and the importance of closely examining both the small lesions as well as those with an unsuspected clinical aspect.

P10-9

PELIMINARY RESULTS OF PRIMARY PREVENTION CAMPAIGN IN EARLY CHILDHOOD IN PÉCS, HUNGARY

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Solar and artificial UV exposure are the main risk factors for the development of melanoma and non-melanoma skin cancers. UV exposure in childhood and adolescence elevates the individual's lifetime risk of developing skin cancer more than exposure in adulthood. Therefore, primary prevention in this age is especially important. No organized primary prevention program for melanoma exists in Hungary. The goal of our study was to evaluate sun protection knowledge and behavior in Hungarian kindergartens and day-care centers. Caregivers (n=156) from sixteen kindergartens (children between 3-7 years) and five day-care centers (children between 6 months-3 years) in the city of Pécs (Southern Hungary) participated in the program. A questionnaire was filled out by the participants. The first part of the questionnaire evaluated the caregivers' knowledge on basic sun protection information. The other part assessed the sun protection practices of the kindergarten or day-care center (e.g. between what time frame children are taken outside during the summer, availability of shaded areas). We found that approximately half of the caregivers had difficulties to determine the different skin types, and most of them lacked appropriate knowledge on proper sunscreen use. It was striking that even with a good personal knowledge on sun protection, primary preventive interventions were not implemented. According to

our results, the lack of interventions were mainly due to the absence of shaded areas in many centers, and to the high price of good quality sunscreens. In conclusion, sun protection knowledge is required, but in itself is not sufficient for the successful implementation of proper sun-protection behavior in kindergartens and day-care centers.

P10-10

CLINICAL AND DERMATOSCOPIC FEATURES OF BRACHYTHERAPY INDUCED ANGIOSARCOMA

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Hemangiosarcomas are rare malignancies derived from blood vessel endothelium. As far as skin is concerned, thre are four clinical variants: sporadic angiosarcoma on facial skin and scalp, lymphoedema associated hemangiosarcoma, radiotheraphy induced angiosarcoma and recently described agressive epithelioid suptype. Due to the clinical presentation, as purple to red slow growing patches or nodules at time with ulceration, they are usually diagnosed late.

We present a case of a 77 year old famale patient with extensive angiosarcoma in the atypical location of lower abdomen. The lesion was treated with topical medications over 5 months as an erytomatous spots of unknown origin. The patient history revealed brachytherapy due to endometrial cancer. The patient underwent a histopathological examination in an outpatient clinic in March 2014 which revealed that the skin had numerous smaller blood vessels below the epidermis and within the dermis. The endothelium showed features of stimulation. At the time of admission to our Depertment standard laboratory test, chest X ray, abdominal ultrasound and dermoscopy was performed. Dermoscopic image revealed structureless red, purple-blue areas, white lines and structureless pinkish white areas and no solid patern. Topical therapy slightly relieved patient reported pruritic ailments. Second histopathological evaluation confirmed initial diagnosis—angiosarcoma. Patient was disqualified for surgical treatment and referred to the Institute of Oncology for follow up treatment.

The present case relates to a female patient with extensive angiosarcoma in the atypical location of lower abdomen, which was treated locally over a long period of time, due to poor pathological evaluation. Unfortunately, our patient's prognosis is poor.

P10-11

VIDEODERMOSCOPY IN THE DIAGNOSIS OF BASAL CELL CARCINOMA

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The basal cell carcinoma (BCC) is the most frequently diagnosed dermato-oncological condition. One of the recent screening campaigns in Russia revealed the mean age for BCC around 61 years, with 90% of a single lesions located on face or head in 84% of the patients, which indicates the relative ease of early detection on the first retirement checkups. The introduction of videodermoscopy methods that allow early diagnosis of such lesions is of key importance in the formation of high-risk groups for oncological conditions. Up to today, the Russian RDS-1 dermatoscope system with polarized and ultraviolet (UV) lighting blocks has been introduced as a means of BCC diagnosis with conventional dermoscopic resolution. Unlike available on the market "photodynamic" diagnostic solutions, diagnosis with UV-enhanced system allows evaluating native immunofluorescence without photosensitizer and building a local spectroscopic plot. Recently, we have observed a group of 35 patients with BCC aged 52 to 84 years. We have found the presence of typical for BCC angiogenic factors and small nodules («pearly papules»), which cannot be seen by the human eye and can only be revealed under high magnification, is a major criterion for the videodermoscopic BCC diagnosis. Apart from that, new clinico-cytological symptoms characteristic of BCC have recently been discovered. Specific incorporations which we have named the «semolina symptom» can be observed after performing a skin scrape test and placing the obtained material onto a glass microscope slide. Among a shapeless mass of erythrocytes further videoscopic examination of the scrape clearly reveals round or elongated irregularly shaped semi-opaque granules surrounded by a pinkish halo formed by erythrocytes. Some of the incorporations had honeycomb structure, which signified the presence of cystic forms of BCC, verified with cytological examination of the scrapes. Thus, apart from providing the clinical characteristics, the new method of videodermoscopic analysis of cytological material allows for immediate approval of the diagnosis of BCC during medical examination and storage of obtained images that can be sent to cytologist. The introduction of the videodermoscopy method in vivo and also in cytological scrape analysis improves the early diagnosis of the lesions, clinically suspicious for BCC.

P10-12

ACTINIC KERATOSIS AND SQUAMOUS CELL CARCINOMA

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Actinic keratosis or solar keratosis is a common skin lesion caused by sun damage that progresses to squamous cell carcinoma. It has been suggested that actinic keratosis is in fact SCC in situ.

Objective: This literature review was conducted to investigate the differences between actinic keratosis and squamous cell carcinoma and whether actinic keratosis should

in fact be managed as squamous cell carcinoma. A literature review was conducted to assess the differences between actinic keratosis and squamous cell carcinoma. Weconducted searches of Pubmed, Cochrane and Medline for articles published between January 1, 2000, and April 30, 2014, using the following search terms: actinic keratosis, solar keratosis, skin cancer, squamous cell carcinoma, dermoscopy, sun exposure, ultraviolet radiation, and dysplasia. Studies published in English were selected for inclusion in this review as were additional articles identified from bibliographies. It is difficult to distinguish between both actinic keratosis and squamous cell carcinoma. Perhaps a classification system for actinic keratosis including early in situ SCC type AK1, early in situ SCC type AK2 and in situ SCC type actinic keratosis is needed.

Conclusion: Actinic keratosis invades the basement membrane and as such may progress into invasive SCC. Superficially actinic keratoses are not distinguishable from a superficial SCC and as such may go unrecognized or inaccurately diagnosed.

P10-13

FAMILIAR OCCURRENCE OF MELANOMA IN SITU

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Two sisters with no known increased risk factors for melanoma were examined: In 20 year old, suspicious lesion 3 mm in diameter was found and hystopathological (HP) diagnose was melanoma in situ. Her sister, 22 years old also had 4mm suspicious lesion and HP showed Dysplastic junctional nevus, high grade with progression in melanoma. The necessity of examination of their parents was explained to them. Mother had no suspicious or malignant lesions. One black lesion 2,5 cm in diameter which lasted almost 2 years, was found in right pectoral region of the father. HP showed—melanoma in situ. Father himself was Fitzpatrick type III, less than 20 moles, no history of sunburn and no melanoma or non pigmented skin cancer in family. Two members of the family with melanoma in situ and one with dysplastic nevus with progression in melanoma showed obvious hereditary susceptibility, but also lack of other risk factors for melanoma which implies further investigations.

Identification of individuals who may have a hereditary susceptibility for the development of melanoma is essential to provide an opportunity for primary prevention, and to target high-risk groups for early diagnosis and treatment.

P10-14

TOTAL BODY PHOTOGRAPHY AND SEQUENTIAL DIGITAL DERMOSCOPIC IMAGING TO DETECT PRIMARY MELANOMA IN INDIVIDUALS AT EXTREME RISK: A CASE SERIES AND REVIEW

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Introduction: Early detection of primary cutaneous melanoma in individuals at extreme risk is crucial to avoid unnecessary morbidity and mortality. The combined use of total body photography (TBP) and sequential digital dermoscopy imaging (SDDI) has been shown to assist with early melanoma diagnosis, especially in featureless melanoma, as well as in reducing unnecessary benign melanocytic excisions. Widespread use of these techniques however remains suboptimal. Education and promotion of TBP and SDDI, especially for individuals at extreme melanoma risk, is therefore essential.

Case Series: A challenging melanoma case series from individuals at extreme risk diagnosed with the assistance of TBP and SDDI is presented from a 328 patient cohort managed at the Sydney Melanoma Diagnostic Centre a 93 patient cohort at Melanoma Institute Australia, Sydney, and a 112 patient cohort at Newcastle Skin Check in Australia. Inclusion criteria were ≥1 of: (1) CDKN2A / CDK4 gene mutation; (2) ;≥1 previous invasive melanoma with Dysplastic Naevus Syndrome (≥100 naevi including ≥6 dysplastic); (3) ≥1 primary invasive melanoma ≥3 first or second degree relatives with prior melanoma (4) ≥2 primary invasive melanomas. Classic dermoscopic melanoma criteria were absent when change was noted from TBP and only subtle differences were observed after SDDI monitoring in the melanomas presented, so demonstrating the significant challenges in detecting featureless melanomas in extreme subgroups.

Conclusions: Timely melanoma detection, especially in those at extreme risk, is vital, though frequently delayed due to the absence of classic dermoscopic features. Promotion of the important role of TBP and SDDI in the identification of challenging melanomas is therefore esssential to ensure optimal outcomes in individuals at extreme melanoma risk.

P11-1

MELANOMAS DETECTED BY DIGITAL DERMATOSCOPY FOLLOW-UP: DO THEY ALREADY DIFFER FROM NEVI OF THE SAME PATIENT AT BASELINE?

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Background: Sequential digital dermatoscopy is commonly used to monitor pigmented lesions in patients with multiple nevi. It would be important to know if melanomas that were not excised at the first visit but during subsequent follow-up of the patient could be differentiated from nevi in retrospect.

Methods: We presented 60 sets of baseline images of 4 melanocytic lesions from 60 different patients to 26 dermatologists who had different levels of experience. All 4 lesions were selected for monitoring by sequential dermatoscopy but only one turned out to be a melanoma during follow-up. Dermatologists were asked to select the most "atypical" lesion and to grade dermatoscopic "atypia" (ranging from 1 to 5) of all 4 lesions without being able to view follow-up images.

Results: On average the dermatologists singled out the melanoma correctly in 24 of the 60 patients (range: 11 to 37). The mean frequency of incorrect melanoma selection was 59%. (range: 38-82%). The mean number of correct diagnoses was higher for more experienced dermatologists (28±4 versus 23±7; mean±SD) but this difference was statistically not significant (p=0.07). In 2 of the 60 sets the melanoma was never picked correctly by any of the 26 dermatologists. The mean grade of dermatoscopic "atypia" was 2.5 (95% CI: 2.4-2.6) for nevi and 3.0 (2.9-3.1) for melanomas (p<0.001).

Conclusion: Melanomas that were detected only because of dermatoscopic changes over time cannot be reliably differentiated from nevi at baseline. Less atypical lesions at baseline turned out to be melanoma after follow-up in a significant proportion of cases.

P11-2

THE RETROSPECTIVE ANALYSIS OF MALIGNANT MELANOMAS IDENTIFIED BY THE SEQUENTIAL DIGITAL DERMATOSCOPIC FOLLOW-UP

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We have retrospectively analysed malignant melanomas excised at our department on the basis of results of the sequential digital dermatoscopic follow-up. This group consists of 39 malignant melanomas excised in 37 patients with multiple melanocytic nevi. The histopathologic examination confirmed 34 in situ and 5 invasive tumours (Breslow thickness 0.2 to 0.5 mm). For comparison, our melanoma unit recorded 771 new cases of malignant melanomas (190 in situ and 581 invasive tumours; Breslow thickness 0.1 to 12.0 mm, mean 1.60 mm) in the years 2009—2013. The mean dermatoscopic follow-up duration before excision was 16 months (5 to 59 months). The lesion was excised after the first dermatoscopic follow-up examination in 24 cases. Only 7 melanomas increased in size by more than 2 mm in diameter (8 other lesions by less than 2 mm) and only 11 melanomas changed in shape (focal enlargement in 8 cases). The change of the arrangement of pigment network was observed in 29 melanomas—network was focally more atypical in 21 cases (more prominent, irregular, forming streaks or pseudopods), network was partially replaced by structureless areas in 15 cases and network expanded in 11 cases. We found dermatoscopic signs of regression in 23 tumours before excision (peppering, scar-like depigmentation, blue-gray areas). The hyperpigmented "island" of different colour/structure was a part of 15 images. We identified a new dermatoscopic colour in 18 melanomas (blue/gray was the most frequent one). The excised melanoma was "the single changing monitored lesion" at the time of excision in 31 of 37 patients.

Conclusion: The sequential digital dermatoscopic follow-up helps to identify thin malignant melanomas (primarily in situ tumours) even in the group of high-risk patients. The change of the arrangement of pigment network, the identification of regression structures and new colour were the most frequent dermatoscopic findings observed in our group. The "single changing lesion" phenomenon seems to be very important factor, in the same way as "Ugly Duckling" and "Little Red Riding Hood" signs are described.

P11-3

CASE REPORT: EARLY DETECTION OF MELANOMA WITH SEQUENTIAL DIGITAL DERMOSCOPY IN A HIGH RISK PATIENT

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We present a woman born in 1970, who was referred to the specialized pigmented lesions clinic at Odense University Hospital in 2008 for follow-up with whole body photography and sequential digital dermoscopy after the concomitant removal of two superficial spreading melanomas (SSM), one localized on the right leg with Breslow thickness 0,48mm, the other on the left leg with Breslow thickness 1,63mm and negative sentinel node biopsy. The patient had blue eyes, blond hair, Fitzpatrick skin type II, multiple atypical nevi, no family history of melanoma and enjoyed sun seeking behavior. After two years of regular follow-up, a SSM in situ

was diagnosed and excised on the right upper arm. This led to referral for genetic testing for mutations in CDKN2A and CDK4 with no findings of mutations in the CDK4 gene. However, in the CDKN2A gene two alterations were found: a six base-pair deletion in the promoter region of P14ARF and a missense mutation in Exon 2, both of undetermined pathogenesis. During the thorough investigations of the patient's and close relatives' prior pathology reports, it was discovered that the patient had previously had another SSM with Breslow thickness 0,45mm localized on the left thigh removed by her general practitioner in 2005. This had never been reexcised, and we opted to have this done, although seven years had passed. In 2014 another SSM with Brelow thickness 0,20mm localized on the right thigh was diagnosed and treated. Sequential dermoscopic photos of this lesion will be included in this presentation. The patient and some of her first degree relatives are seen regularly at our pigmented lesions clinic.