

PRINCIPLES OF LIGHTMICROSCOPY and it's USE in DERMATOLOGY

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This instrument is an epiluminescence microscope with 10 times magnification. When it is applied directly on skin lesions with the use of oil, it can be a great help to make a more accurate diagnosis, especially in the early diagnosis of malignant melanoma, than clinical examination.

The dermatoscopic criteria is based on these points of view.

1. Color

yellow	normal epidermis
yellow-brown	acanthosis
white-yellow	hyperkeratosis and pseudohornocytes
gray-brown,gray-black	basal cell carcinoma based on location of melanin.
black	melanin in horny layer
light or dark brown	melanin in the epidermo-dermal junction zone
blue	melanin in the deeper dermis

2. Structural Elements:

- pigment network
- structureless areas
- brown globuli
- black and brown dots
- radial extensions
- pseudohornocytes
- pseudofollicular vessels
- maple leaf structures
- steal blue areas

With a special algorithm, we are able to make a differential diagnosis of pigmented skin lesions, but in fact there are a lot of skin lesions, which it is not easy to make a correct diagnosis. In melanocytic skin disorder, by using ABCD-rule and its score we can decide for the benign and malignant nature of lesion. To have a better concept, all the above mentioned items, will be presented with a series of appropriate diagrams.