

A statistical analysis of the characteristics of pigmented skin lesions using epiluminescence microscopy (Article)

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Abstract

Due to the fact that not all pigmented skin lesions (PSL) can be diagnosed solely by their clinical appearance, additional criteria are required to optimize the clinical diagnosis of atypical nevus and melanoma. Epiluminescence microscopy is a non-invasive in vivo examination that often helps to improved the accuracy of clinical diagnosis of such lesions. Years of experience have indicated some differential epiluminescent patterns for benign and malignant PSI, but there is some controversy about certain borderline lesions for which histological examination is always necessary. In our study we performed a statistical analysis of data concerning 183 PSI, to determine characteristics significantly associated with these lesions allowing identification of epiluminescent criteria suggestive of atypical nevus and malignant melanoma. Using he chi-quadro test and stepwise regression logistic model, we identified the following epiluminescent pattern as a risk factor for atypical nevus and malignant melanoma: irregular pigment network, presence of capillaries, irregular and abrupt ending of overall pigmentation, irregular brown globules and irregular shape and size of black dots.