

Medical > In Vivo > Melanoma & Pigmented Lesion Research

112

Strategies for the noninvasive diagnosis of melanoma. [Article in German]

Fink C, Haenssle HA. *Hautarzt*. 2016 May 19.

ABSTRACT

The diagnosis of advanced cutaneous melanoma may easily be made by the unaided eye, followed by excisional biopsy and histopathological examination. However, in the setting of melanoma screening examinations in high-risk patients with many nevi, dermatologists are challenged with the differentiation of atypical but benign nevi and early invasive or in situ melanomas. In this situation, there is a real need for additional, noninvasive examination techniques that may serve as an aide to decide for or against an excisional biopsy. Conventional dermoscopy is a well-established examination procedure and an increase in sensitivity was confirmed by two independent meta-analyses. Moreover, dynamic changes or newly developed pigmented lesions may be detected by sequential digital dermoscopy or (automated) total body photography, respectively. Over the past years, a number of medicinal products gained market access after licensing by American and European agencies for the noninvasive diagnosis of cutaneous neoplasms. These devices are based on technologies including in vivo reflectance confocal microscopy, multispectral analysis, electrical impedance spectroscopy, or Raman spectroscopy. Other technologies are still on the verge of becoming less experimental but more clinically applicable for diagnosing melanoma (in vivo multiphoton tomography, stepwise two-photon laser spectroscopy, infrared thermal image analysis, epidermal genetic information retrieval). This review provides a concise overview of general principles and sheds light on indication and added value for dermatologists. **KEYWORDS:** Cancer screening; Dermoscopy; Early detection of cancer; Examination techniques; Nevus PMID:27193101