Modern non-invasive diagnostic techniques in the detection of early cutaneous melanoma.


ABSTRACT
Over the past few years melanoma has grown into a disease of socio-economic importance due to the increasing incidence and persistently high mortality rates. Melanoma is a malignant tumor with a high tendency to metastasize. Therefore, an extremely important part of the therapeutic process is to identify the disease at an early stage: in situ or stage I. Many tools for early diagnosis of melanoma are available today, including dermoscopy, videodermoscopy and in vivo reflectance confocal microscopy. Other methods such as high frequency ultrasound, optical coherence tomography and electrical impedance spectroscopy may serve as additional diagnostic aids. Modern imaging techniques also allow the monitoring of melanocytic skin lesions over months or years to detect the moment of malignant transformation. This review summarizes the current knowledge about modern diagnostic techniques, which may aid early diagnosis of melanoma.