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145 Distinct melanoma types based on reflectance confocal microscopy.

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ABSTRACT

Distinct melanoma types exist in relation to patient characteristics, tumor morphology, histopathologic aspects and genetic background. A new diagnostic imaging tool, reflectance confocal microscopy (RCM), allows in vivo analysis of a given lesion with nearly histologic resolution while offering a dynamic view of the tissue in its 'natural' environment. The aim of this study was to analyse cell morphology of consecutive melanomas as they appear on RCM and to correlate morphology with tumor and patient characteristics. One hundred melanomas were visualized by RCM before excision. Clinical data, confocal features and histologic criteria were analysed. Four types of melanomas were identified as follows: (i) Melanomas with a predominantly dendritic cell population ('dendritic-cell melanomas') typically were thin by Breslow index; (ii) Melanomas typified by roundish melanocytes were smaller in size than dendritic cell MMs, but thicker by Breslow index, and predominantly occurred in patients with a high nevus count; (iii) Melanomas characterized by dermal nesting proliferation usually were thick by Breslow index at the time of diagnosis, although frequently smaller in size compared with the other types; and (iv) combined type melanomas may represent an evolution of dendritic cell and/or round cell types. Integration of confocal microscopy with clinical and histologic aspects may help in identifying and managing distinct tumors.