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Noninvasive RCM for Differentiation of Melanotic Macules From Melanocytic Lesions-Blinded Evaluation of a Series of 42 Pigmented Macules.

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ABSTRACT

BACKGROUND: Differentiation of melanotic macules from melanocytic lesions, most importantly of melanoma, is a common problem on clinical-dermoscopic examination. **OBJECTIVE:** To assess the value of noninvasive reflectance confocal microscopy (RCM) in the differential diagnosis of melanotic macules and melanocytic lesions. **PATIENTS AND METHODS:** Reflectance confocal microscopy images of 42 pigmented macules on mucocutaneous junctions of genitalia and lips, including 31 melanotic macules, 6 nevi, and 5 melanomas, were retrospectively and independently assessed in a blinded manner by one expert observer and 2 less experienced observers together. **RESULTS:** The authors differentiated 3 subtypes of melanotic macules; 2 subtypes ("solar lentigo type" and regular subtype of "dendritic type" melanotic macules) could be classified with confidence as benign by all RCM investigators, comprising 64% of melanotic macules. The third subtype (irregular subtype of "dendritic type" melanotic macules; 36%) displaying RCM features overlapping with melanoma was difficult to differentiate and should be biopsied not to miss a melanoma. The RCM differentiation between melanotic macules and nevi was easily performed. **CONCLUSION:** RCM has the potential to increase the diagnostic accuracy in the noninvasive differentiation of pigmented macules on mucocutaneous junctions. PMID:28430732 DOI:10.1097/DSS.0000000000001110