

Medical > In Vivo > Melanoma & Pigmented Lesion Research

162 | Small-diameter melanocytic lesions: morphological analysis by means of in vivo confocal microscopy.

Pupelli G, Longo C, Veneziano L, Cesinaro AM, Ferrara G, Piana S, Moscarella E, Ricci C, Zalaudek I, Seidenari S, Argenziano G, Pellacani G.; *Br J Dermatol.* 2013 May;168(5):1027-33. doi: 10.1111/bjd.12212.

ABSTRACT

Background: Small-diameter melanocytic lesions represent a diagnostic challenge for clinicians, as they do not follow the ABCD rule for diagnosis and do not always display reliable histopathological criteria.

Objectives: To analyse the confocal features of small-diameter lesions (naevi and melanomas with diameter ≤ 5 mm) to determine whether they show specific morphological criteria. **Methods:** Twenty-four melanomas and 72 naevi were subjected to dermoscopic and confocal evaluation along with histopathology. Significant dermoscopic and confocal differences between melanomas and naevi were evaluated by means of the Pearson χ^2 test. Odds ratios and 95% confidence intervals were calculated for each parameter. Binary logistic regression was performed to identify the reflectance confocal microscopy (RCM) independently significant features for melanoma diagnosis. **Results:** The seven-point checklist dermoscopic score was ≥ 3 in 22 melanomas and in 33 naevi. The combination of cells' pleomorphism and architectural disorder (i.e. nonspecific pattern or irregular junctional nests upon confocal examination) are the most striking criteria for consistent diagnosis of small melanoma. The presence of atypical cells, more than five atypical cells per mm^2 , and roundish atypical cells at the dermoepidermal junction showed the highest odds ratios. From logistic regression, the presence of at least five pagetoid cells per mm^2 , tangled lines within the epidermis, and atypical roundish cells at the dermoepidermal junction resulted in the three independent confocal parameters that characterized small melanomas.

Conclusions: Small melanomas frequently reveal specific dermoscopic and confocal features. Moreover, the combination of dermoscopy and RCM can lead to a correct diagnosis of a number of naevi that share some morphological aspects with melanomas.