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### 166 Can noninvasive imaging tools potentially predict the risk of ulceration in invasive melanomas showing blue and black colors?

Longo C, Farnetani F, Moscarella E, de Pace B, Ciardo S, Ponti G, Piana S, Cesinaro AM, Cota C, Argenziano G, Rosendahl C, Pellacani G, Zalaudek I.; *Melanoma Res.* 2013 Apr;23(2):125-31. doi: 10.1097/CMR.0b013e32835d90b8.

#### ABSTRACT

The aim of this study was to evaluate the reflectance microscopy and histopathologic correlates of dermoscopic blue and black color (BB) in a series of melanomas. We searched our database for dermoscopic images of histopathologically diagnosed pigmented nodular melanomas (pNM), superficial spreading melanomas with a nodular component (SSM+Nod), and melanoma metastasis (METs). All cases were assessed for the presence of dermoscopic BB. Confocal microscopy findings were then compared with those of histopathology. A total of 17 BB-positive tumors including eight pNMs, five SSM+Nod, and four METs were included in the study. We identified two different dermoscopic patterns associated with black color, namely, large black blotches and irregular black dots/globules, which corresponded to two different confocal and histopathologic findings. Black blotches resulted from a total filling of the epidermis by an upward migration of melanocyte nests and pagetoid melanocytes as single cells and clusters, whereas black dots/globules also corresponded to the upward migration of melanocyte nests in the epidermis and pagetoid spread, but with sparing of intervening areas of epidermis. Interestingly, two pNM and two METs showing black color lacked any epidermal involvement and, instead, they were characterized by upward-bulging dermal masses of atypical melanocytes covered by an highly attenuated epidermis. In both cases, black color corresponded to pigment-containing melanocytes in close proximity to the surface of the skin. Our study suggests that black color results not only from epidermal melanin but also from a dense dermal proliferation of pigmented melanocytes under a thinned epidermis. It seems reasonable to suggest that a bulging proliferation of dermal melanocytes beneath a thin epidermal layer could precede ulceration. As ulceration is a very significant prognostic factor, speculation arising from this study that dermoscopic black color may in some cases indicate incipient ulceration is worthy of further study.