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# Yellow color upon dermatoscopy does not exclude melanoma!

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In this issue, Rosendahl and colleagues report a case of non-choroidal melanoma that shows a strikingly unusual dermatoscopic aspect, namely, structureless yellow color. The authors correlate the yellow color to the presence of lipofuscin using tissue staining with Sudan Black.

Upon dermatoscopy, colors are important because they allow the estimation of different types of chromophores located at different levels of the skin. The most important chromophore in melanocytic tumors is melanin, which gives rise to black, brown, gray or blue color depending on its location in the skin. Hemoglobin is the major source of colors in vascular tumors and appears dermoscopically either ink black, bright red, purple or blue.

Instead, yellow color has been linked to keratin or lipids, and accordingly, it is commonly seen in keratinizing tumors including seborrheic keratosis and squamous cell carcinoma or in tumors with sebaceous differentiation, but also in juvenile xanthogranuloma or granulomatous skin diseases [1].

It is more surprising that recent dermatoscopic observations report on yellow color in both melanocytic nevi and melanoma [2,3]. Herein we would like to add an additional observation of melanoma dermatoscopically characterized by yellow color.

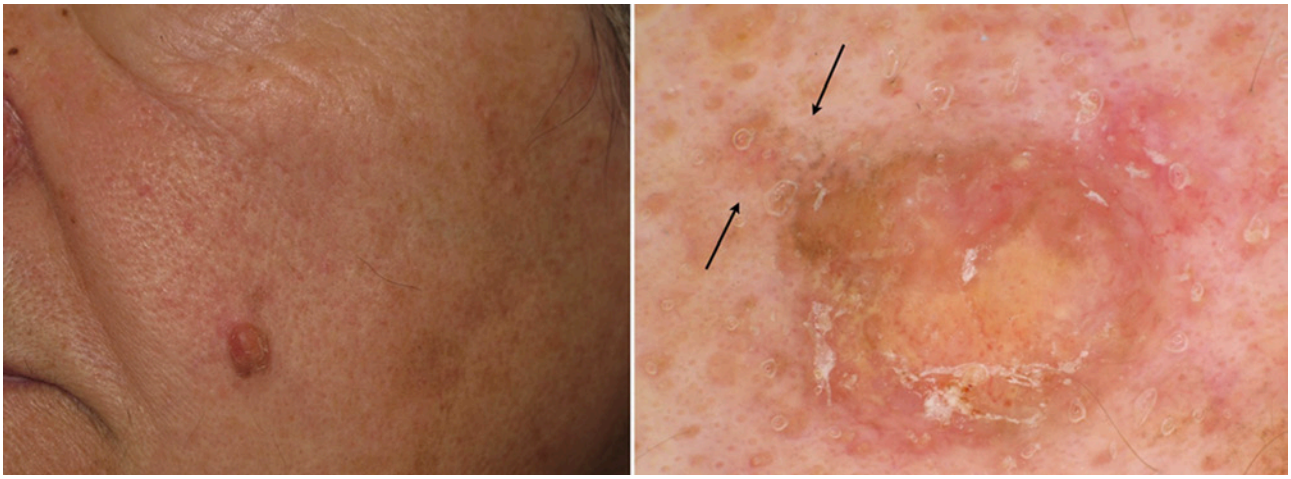

**Figure 1.** (A) Clinical picture of a solid hypopigmented nodule located on the left cheek of a 76-year-old woman. (B) Dermatoscopy reveals the presence of a central structureless yellow-pink area expanding to the edge of the lesion, and a gray colored area (arrow). [Copyright: ©2014 Longo et al.]

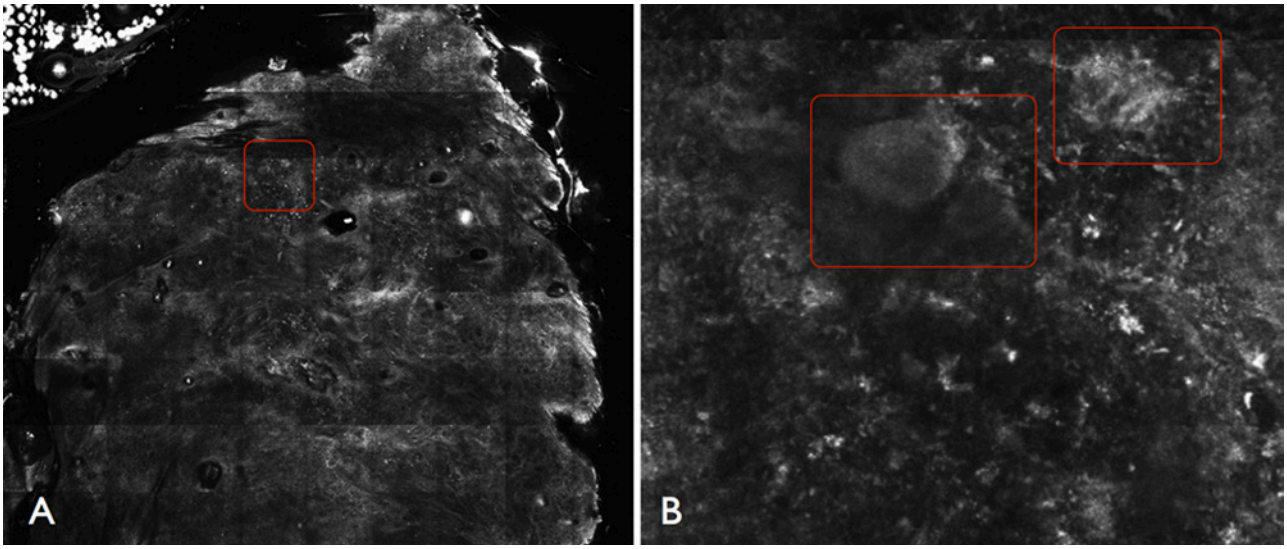


**Figure 2.** (A) Reflectance confocal microscopy portrays the presence of a nodular proliferation. (B) High magnification image shows the presence of atypical melanocytic nests (red square). [Copyright: ©2014 Longo et al.]

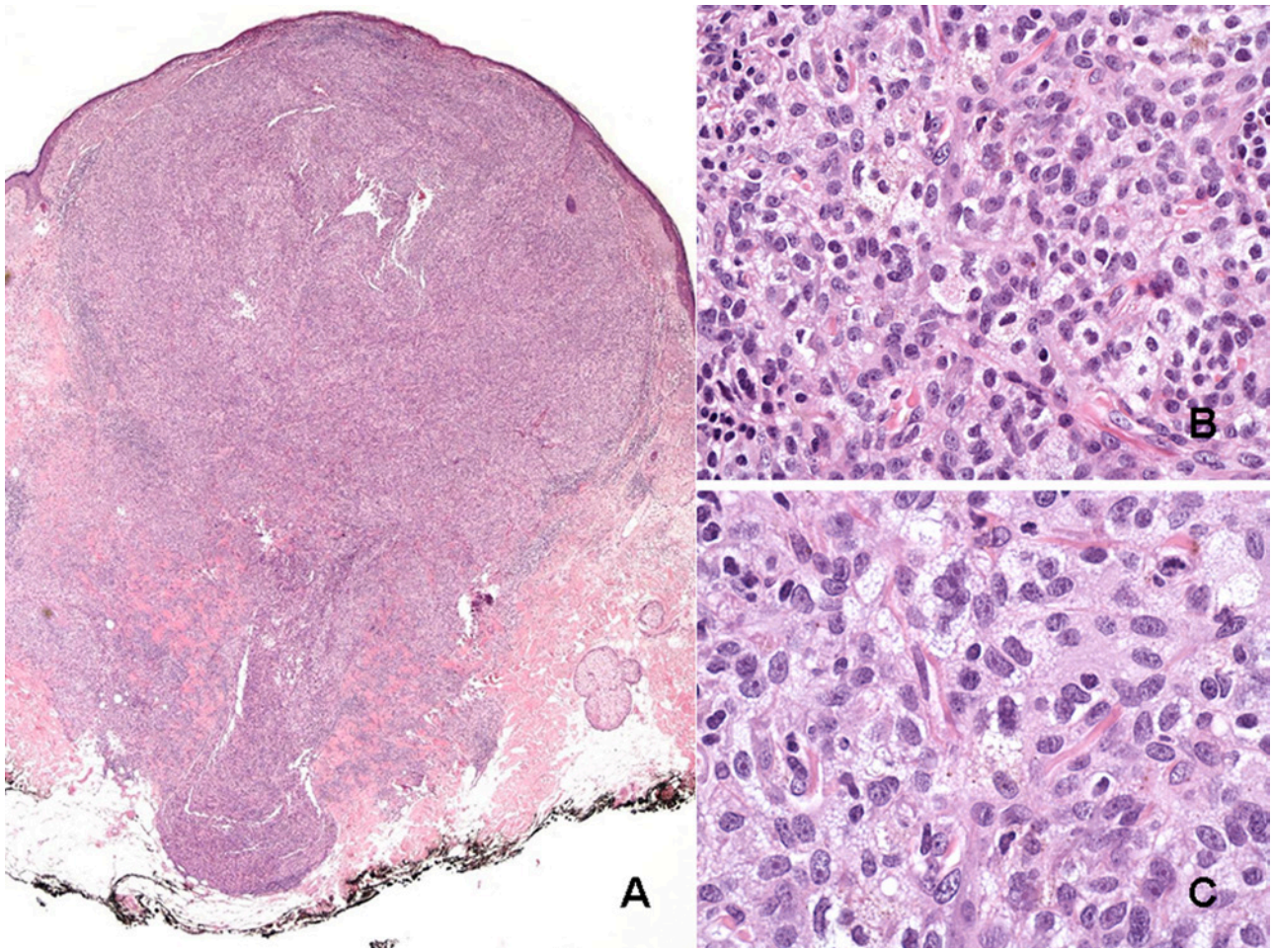


**Figure 3.** (A) On histology, the melanoma is nodular and extends to the subcutaneous adipose tissue. (B, C) At higher magnification, discrete areas composed of large epithelioid melanocytes, with abundant foamy cytoplasm, are evident. [Copyright: ©2014 Longo et al.]

A 76-year-old woman was referred to our Skin Cancer Unit because of the presence of a recently developed and growing nodule located on her left cheek. Clinically, the lesion appeared as a dome-shaped yellow to reddish nodule with well-defined borders that was surrounded by a collarette-like scale (Figure 1A). The nodule was firm on palpation. Based on the clinical appearance, the differential diagnosis included an epidermal cyst or a sebaceous tumor. The dermatoscopic examination revealed mainly structureless yellow to pink areas and some dotted vessels. However, at the base and the

periphery of the nodule, additional gray color in the form of small dots was observed, which has been recently suggested to represent an important dermatoscopic clue for the diagnosis of lentigo maligna (Figure 1B) [4]. To further assess whether the nodule was a melanocytic tumor, we performed reflectance confocal microscopy, which revealed a nodular proliferation with atypical melanocytic nests (Figure 2). Based on these features, a suspect of melanoma was raised and the nodule was immediately excised. Histopathologic examination showed an amelanotic nodular melanoma infiltrating the subcutaneous adipose tissue, with a 5 mm Breslow thickness, 8 mitosis per square millimeter and no ulceration (Figure 3). The neoplastic cells were mostly spindle shaped; focally, discrete areas composed of large epithelioid melanocytes, with abundant foamy cytoplasm, were noted (Figure 3B, C). Both the populations were diffusely immunoreactive with S100 and MART-1, confirming their melanocytic origin. However, the origin of the yellow color in our case remains speculative, as we did not observe intracellular material as described by Rosendahl and colleagues in their article in this issue.

## Comment

The widespread use of dermatoscopy opens new insights into the microscopic world of skin lesion and allows not only for significant improvements in the diagnosis of melanoma but also permits the identification of peculiar characteristics among distinct histiogenetic melanoma subtypes. It is remarkable that after nearly three decades of dermatoscopy, new details are still being discovered. Until further research provides novel knowledge on the frequency and histopathological correlates of colors and structures in dermatoscopy, we like to conclude that yellow color upon dermatoscopy should not lead clinicians to exclude a diagnosis of melanoma.

## References


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