Dermatology 2008;217:359

DOI: [10.1159/000156086](https://doi.org/10.1159/000156086)**Reply**Masayuki Kimoto^{a,b}, Michiie Sakamoto^c, Hitoshi Iyatomi^d, Masaru Tanaka^b^aKisarazu Toho Hospital, Kisarazu; ^bDepartment of Dermatology, Tokyo Women's Medical University Medical Center East, ^cDepartment of Pathology, Keio University School of Medicine, and ^dDepartment of Electronic Informatics, Hosei University Faculty of Engineering, Tokyo, Japan**Key Words**

Acral melanocytic naevus · Dermoscopy, parallel-furrow pattern · Horny layer melanin

Many thanks for referring to our previous article of three-dimensional melanin distribution. We have recently reported that melanin columns in the horny layer mainly contribute to the dermoscopic pattern of acral melanocytic naevi (AMN). However, as Palleschi et al. point out, there are no rules without exception. Certainly, we sometimes experience atypical cases lacking obvious melanin columns, although their dermoscopic presentation shows the parallel-furrow pattern. It is quite interesting to analyse those atypical lesions. In such cases, parallel lines are usually obscure, and the dermoscopic pattern seems globular rather than presenting the typical parallel furrows. These lesions seem to have naevus cells mainly in the dermis and to a lower extent in the dermal-epidermal junction comprising the compound type of melanocytic naevus pathologically; they are more or less elevated clinically as in the case of Palleschi et al. In their case, the parallel lines are thick and dull; in other words, blue-grey globules form two rows on dermoscopy, in contrast to the typical cases of parallel-furrow pattern which show thin and sharp lines, because typical AMN usually shows clinically flat and pathologically junctional lesions. In the histology of a horizontal (transverse) section, there

are some melanin granules in the horny layer around the eccrine ducts (fig. 2c and d in Palleschi et al.), which seem to derive from intra-epidermal naevus cells (fig. 2g and h in Palleschi et al.). A high density of melanin granules is observed in the papillary dermis in their figure 2e shown by somewhat globular masses, which seem to correspond to the dermoscopic image of their figure 2b. The reason for the blurred blue-grey globules on dermoscopy is thus explained; namely, in this compound naevus, the horny layer is not very thick, and dermoscopy could show the dermal pigment blocks.

There might be several issues to overcome in this study. First, histology of the upper portion of the horny layer was not shown. The presence of melanin granules in the horny layer should not be ignored when considering the dermoscopic image of AMN. We imagine that the melanin granules are less prominent in the horny layer in this case because of fewer nests of naevus cells in the epidermis. Second, only haematoxylin-eosin staining was used in this study. As we described, with haematoxylin-eosin staining, the epidermis and horny layer are so darkly stained that the melanin granules cannot be distinguished clearly from the surrounding tissue. In order to evaluate melanin granules in the epidermis or horny layer precisely, our modified Fontana-Masson stain would be a solution. Third, this study was based on two-dimensional images, and there are only a few horizontal sections shown; therefore, it cannot be fully clarified which levels of melanin granules mostly contribute to the dermoscopic image in the horny layer, the basal layer and the papillary dermis. In addition, the spatial positional relation between the histological structure and the dermoscopic one is difficult to determine from a two-dimensional image. Therefore, we think that more three-dimensional studies are needed for a thorough understanding of dermoscopic images.

Masayuki Kimoto
Department of Dermatology
Tokyo Women's Medical University Medical Center East
2-1-10 Nishi-Oku, Arakawa-ku, Tokyo 116-8567 (Japan)
Tel. +81 3 3810 1111, Fax +81 3 3894 1441
E-Mail kimotoma@1998.jukuin.keio.ac.jp