

Dermoscopy features of melanomas with a diameter up to 5 mm (micromelanomas): A retrospective study



To the Editor: Melanomas of <5 mm in diameter (micromelanomas) are often overlooked because they fail to fulfill the D criterion of the ABCD rule. Elucidation of the dermoscopic morphology of micromelanomas can enhance earlier diagnosis. In this study, we analyzed the dermoscopic features of micromelanomas.

For the aims of the study, we retrospectively reviewed the records of 350 melanomas consecutively diagnosed from January 1, 2016, to December 31, 2018 in a dermatology unit in Greece and detected 26 micromelanomas (<5 mm diameter). Routinely, all pigmented lesions biopsied are clinically and dermoscopically photographed. Two independent physicians evaluated the presence of predefined dermoscopic criteria (Table I).¹ Absolute frequencies and percentages were calculated. These 26 patients (15 men, 11 women) had a mean age of 56 years, and 14 (53.8%) had phototype II, 6 (23.1%) had phototype I, and 6 (23.1%) had phototype III. The most frequent location was the leg (10/26, 38.4%), followed by the upper back (5/26, 19.2%), face (4/26, 15.4%), and thorax (3/26, 11.5%). The mean diameter was 3.5 mm, ranging from 2 mm to 5 mm. Seven out of 26 (27%) were invasive (maximum Breslow thickness, 0.6 mm), and 19 (63%) were in situ. Of 26 melanomas, 18 were diagnosed at the first visit, and 8 were based on digital monitoring.

As shown in Table I, the most common global dermoscopic patterns were reticular and structureless. The predominance of reticular and structureless dermoscopic patterns differs from the pre-existing data on melanomas of all sizes, which usually display a multicomponent pattern.² The most prevalent dermoscopic features were atypical dots/globules and irregular hyperpigmented areas. The latter are hyperpigmented areas of irregular shape, recently suggested to predict in situ melanoma (Fig 1).¹ Contrariwise, shiny white streaks, blue-white veil, regression, and atypical vessels were scarcely seen. This aligns with previous studies, because the latter features are consistent with more advanced melanomas.³

There are few published studies evaluating the dermoscopic features of micromelanomas. In 2018, Drugge et al⁴ reported 28 cases of melanomas of 3 mm in diameter or less, identified with time-lapse total body photography and dermoscopy. The criteria they used are not fully defined, but clods,

Table I. Dermoscopic evaluation of 26 micromelanomas

Dermoscopic criteria	n (%)
Global dermoscopic pattern	
Globular	0
Reticular	15 (57.7)
Starburst	1 (3.8)
Structureless	7 (26.9)
Mixed (globular + reticular)	3 (11.5)
Multicomponent	0
Classic melanoma-specific criteria	
Atypical network	11 (42.3)
Irregular dots/globules	23 (88.4)
Irregular blotch	10 (38.4)
Irregular streaks/pseudopods	9 (34.6)
Regression structures	2 (7.6)
Blue-white veil	1 (3.8)
Atypical vessels	1 (3.8)
Negative network	3 (11.5)
Shiny white streaks	1 (3.8)
New melanoma criteria	
Irregular hyperpigmented areas	23 (88.4)
Polygons/angularized lines	12 (46.2)
Prominent skin markings	3 (11.5)

chaos, and unstructured areas found in all lesions may match the atypical dots/globules and irregular hyperpigmented areas found in our study. In another study,³ irregular pigmentation and atypical network were significantly more frequent in micromelanomas than in larger melanomas.

In our series, 27% of melanomas were microinvasive, which highlights that tiny melanomas may already invade the dermis. Although previous studies have shown significant positive correlation between Breslow thickness and melanoma diameter, our results underline that small size does not exclude invasion.⁵

Limitations of the current study include small sample size, retrospective design, and lack of controls. The utility of our findings for the differential diagnosis among lesions less than 5 mm diameter and different skin phenotypes requires further investigation.

Our study suggests that irregular hyperpigmented areas, atypical dots/globules, and atypical network, within a reticular or structureless global pattern, raise the possibility of malignancy, even in small lesions.

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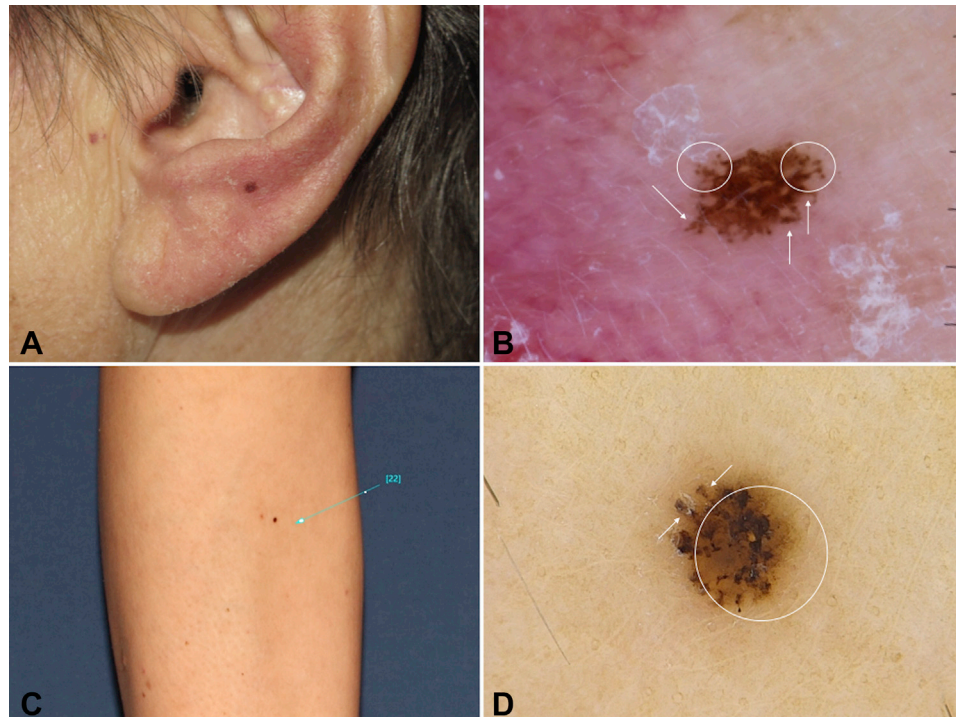


Fig 1. **A**, Melanoma in situ. Clinical aspect of a 2-mm-diameter melanoma in situ on the ear of an 85-year-old woman. **B**, In dermoscopy, it shows a structureless pattern, irregular pseudopods/radial streaks (arrows), and irregular dots/globules (circles). **C**, Melanoma in situ. Clinical aspect of a 2-mm melanoma in situ on the leg of a 28-year-old woman. **D**, The dermoscopic image depicts a structureless pattern, irregular pseudopods/radial streaks (arrows), and irregular hyperpigmented areas (circle).

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Re-evaluating the ABCD criteria using a consecutive series of melanomas



To the Editor: The ABCD mnemonic describes clinical features of melanoma including asymmetry, border irregularity, color variation, and diameter of more than 6 mm.¹ Prior validation studies used lesion photographs taken because of a clinician's suspicion for melanoma, possibly excluding clinically subtle lesions, including amelanotic melanomas. These criteria were defined before the widespread use of