

Fig. S1. Clinical (*insets*), dermoscopy and confocal images from 5 cases. (A–C) Case 1 – upper arm. (A) Dermoscopy: irregularly distributed brown dots/globules and grey-to-brown asymmetrical pigmentation. (B) Individual reflectance confocal microscopy (RCM) image (0.5×0.5 mm): dendritic cells at the level of spinous-granular layer (*arrows*). (C) RCM mosaic image (1.5×1.5 mm) in the dermo-epidermal junction (DEJ): bright atypical keratinocytes surrounding polycyclic papillae (*arrows*). (D–F) Case 2 – inguinal area. (D) Dermoscopy: irregularly distributed brown dots/globules, grey-to-brown asymmetrical pigmentation, peripheral irregular streaks and scale. (E) Individual RCM image (0.5×0.5 mm): numerous dendritic cells at the level of spinous-granular layer (*arrows*). (F) RCM mosaic image (1.5×1.5 mm) on DEJ: multiple small bright-edged papillae (*arrows*) and vessels within superficial dermis. (G–I) Case 3 – cheek. (G) Dermoscopy: annular-granular pattern, grey-to-brown asymmetrical pigmentation, peripheral irregular streaks and scale. (H) Individual RCM image (0.5×0.5 mm): dendritic cells at the level of spinous layer (*arrows*). (I) Individual RCM image (0.5×0.5 mm) on DEJ: bright atypical keratinocytes surrounding polycyclic papillae (*arrows*). (J, K and L) Case 4 – cervical area. (J) Dermoscopy: irregularly distributed brown globules and grey-to-brown asymmetrical pigmentation. (K) Individual RCM image (0.5×0.5mm): dendritic cells at the level of spinous-granular layer (*arrows*). (L) RCM mosaic image (1.0×1.0 mm) at the DEJ: bright atypical keratinocytes surrounding polycyclic papillae (*arrows*). (M, N and O) Case 5 – eyebrow. (M) Dermoscopy: grey-to-brown asymmetrical pigmentation. (N) Individual RCM image (0.5×0.5mm): dendritic cells around the follicle at the level of spinous layer (*arrows*). (O) RCM mosaic image (0.75×0.75 mm) at the DEJ: bright atypical keratinocytes surrounding polycyclic papillae (*arrows*).

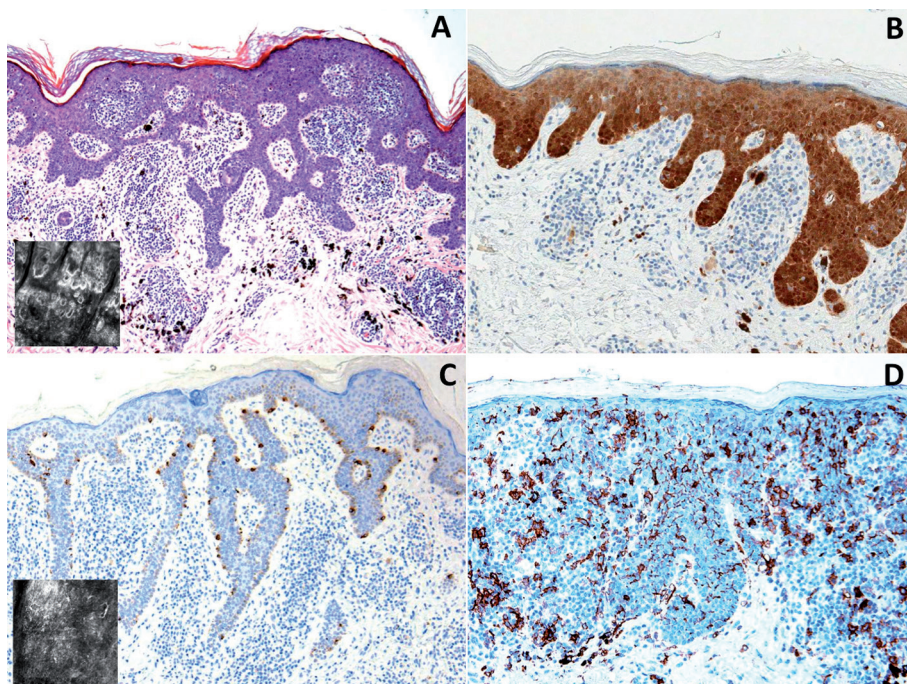


Fig. S2. Histopathology and immunohistochemistry sections from Case 1. (A) Haematoxylin and eosin (H&E). Papillomatous proliferation with atypical keratinocytes occupying the entire thickness of the epidermis. *Inset:* confocal image at the dermo-epidermal junction (DEJ) revealing bright atypical keratinocytes surrounding the papillae. (B) p16 showing strong and diffuse immunoreactivity. (C) Melan-A exhibiting normal population of melanocytes, in contrast to what is seen in confocal microscopy (*inset*), where the epidermis is showing a large population of dendritic cells. (D) CD1a revealing an increased number of Langerhans cells. (Original magnification $\times 100$).

Table SI. Clinical, dermoscopic, reflectance confocal microscopy (RCM) and histopathological findings

Pat. No.	Age, years/ Sex	Phototype	Anatomical location	Size/clinical description	Dermoscopic description
1	36/M	V	Neck	12-mm/variegate shades of dark brown plaque with gently papillated surface	Irregularly distributed grey-brown dots and grey-brown-black asymmetrical pigmentation
2	58/F	III	Inguinal area	10-mm/brown and black plaque with verrucous surface	Irregularly distributed brown dots and globules, grey-to-brown asymmetrical pigmentation, irregular peripheral streaks, and scale
3	70/F	IV	Eye-brow	15-mm/grey and light-brown pigmented plaque with verrucous surface	Grey-to-brown asymmetrical structureless pigmentation
4	58/F	V	Upper arm	8-mm/brown pigmented plaque with smooth surface	Irregularly distributed brown dots and globules and grey-to-brown asymmetrical pigmentation
5	93/F	IV, Asian	Cheek	15-mm/grey and light-brown scaly plaque	Grey-to-brown asymmetrical structureless pigmentation, focal granularity, irregular peripheral streaks, and scale