

## Supplementary Online Content

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**eTable.** Definition of RCM Features and Their Histopathologic Correlates

This supplementary material has been provided by the authors to give readers additional information about their work.

**eTable.** Definition of RCM Features and Their Histopathologic Correlates

<b>Anatomic Level</b>	<b>RCM features</b>	<b>Description</b>	<b>Histopathological correlates</b>
Suprabasal epidermis	Regular epidermal architecture	-Regular honeycomb pattern – bright polygonal outlines that are even in thickness, brightness, size and shape -Regular cobblestone pattern – closely set bright round cells, even in size and spacing, separated by a less refractive polygonal outline	- Normal pattern of keratinocytes of the granular and spinous layers (non-pigmented in honeycomb pattern, pigmented in cobblestone pattern)
	Irregular epidermal architecture	-Irregular honeycomb pattern – polygonal outlines that vary in thickness, brightness, size and shape -Irregular cobblestone pattern – closely set bright round cells that vary in size and spacing and display disarray -Disarranged epidermis – lack of recognizable honeycomb or cobblestone patterns	- Atypical keratinocytes that vary in size, shape, and display crowding of nuclei and disarrayed orientation
	Cells in Pagetoid pattern	-Presence of bright round or dendritic nucleated cells at suprabasal layers of the epidermis	- Presence of melanocytes in suprabasal layers of the epidermis
	Ulceration	-Disruption in the bright skin surface and in the underlying layers of the epidermis, seen as a dark area with or without bright amorphous or fibrillar debris.	- Discontinuity of skin exhibiting focus of complete loss of the epidermis
Basal layer / Dermal-epidermal junction	Ringed DEJ pattern	-A low-magnification pattern composed of bright thin rim of cells surrounding dark dermal papillae, seen when there is predominance of 'edged papillae' at the DEJ	- Mostly observed in nevi with histopathologically-identified lentiginous or small-nested junctional proliferation of melanocytes
	Meshwork DEJ pattern	-A low-magnification pattern composed of interconnecting bright	- Mostly observed in nevi with predominantly-nested junctional proliferation of

		thickened elongated structures. At higher magnification there is enlargement of the inter-papillary spaces (rete ridges) by bright cell aggregates; outline of individual cells is often indiscernible.	melanocytes
	Aspecific DEJ pattern	Lack of recognizable pattern at low-magnification mosaic view of the DEJ (i.e., absence of ringed, meshwork or clod pattern). Usually associated with abrupt or vague epidermal-dermal transition	- Mostly flattened DEJ or marked attenuation in the undulating DEJ pattern
	Cellular atypia	Presence of bright round or dendritic nucleated cells that are abnormally large in size (at least twice the size of basal keratinocytes(>50 μm), display unusual contour (eg, triangular, star-shaped) or have large and eccentric nuclei	- Atypical melanocytes
	Non-edged papillae	Dermal papillae without a demarcating bright rim at the DEJ, but separated by a series of large reflecting cells	- Disarrangement of rete-ridge by a disorderly proliferation of melanocytes not confined to the sides and tips of the rete ridges
	Disarrayed or non-visible papillary contour	Loss of DEJ pattern	- Flattening of the DEJ and often associated with disorderly proliferation of melanocytes
	Junctional nests	- Well-demarcated cell clusters at the level of the basal layer of the epidermis, that often buldge into dermal papillae	- Junctional nests of melanocytes
Superficial dermis	Clod pattern	-A low-magnification pattern composed of predominance of dense compact nests / clusters of melanocytes within the	- Mostly observed in nevi with predominantly-dermal, large nested proliferation of melanocytes

		superficial dermis.	
	Basaloid cord-like structures	-Well defined bright tubular/cord like structures with peripheral palisading of nuclei	- Neoplastic aggregates of basaloid cells (seen in basal cell carcinoma)
	Dermal nests	-Well-demarcated oval to round dermal aggregate of compactly clustered large bright cells	- Nest of melanocytes in the dermis
	Cerebriform nests	-Confluent aggregates of low reflecting polygonal or elongated structures separated by a low reflecting rim, resulting in a cerebriform appearance, in which cellular nuclei and contour cannot be usually distinguished	- Solid aggregates of atypical melanocytes in the dermis, mostly seen primary melanoma with nodules or in skin metastasis of melanoma
	Plump-bright cells	-Large (>20 μm), irregularly-shaped bright cells with ill-defined borders and usually no visible nucleus	- Melanophages
	Irregular vessels	-Blood vessels appear as dark tubular structures in the dermis in which movement of bright round cells (white blood cells) is seen. Irregular vessels refer to blood vessels with abnormal diameter, density, or orientation compared to normal skin	- Blood vessels that are abnormal in dilatation of density at the superficial dermis
	Collagen bundles	-Bright elongated fibrillar structures, with diameter of 5-25 μm, distributed side by side throughout the dermis, lacking cellular component/ visible nucleus / and visible movement,.	- Thickened collagen fibers in the superficial dermis