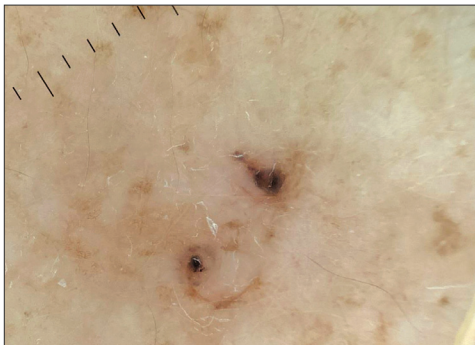


Pigmented Lesion on the Left Shoulder in an Older Woman

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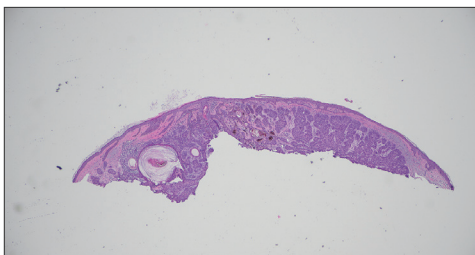
A 92-year-old woman presented to dermatology as a new patient for a full-body skin examination. She had a history of sarcoidosis and a liposarcoma that had been excised more than 20 years prior. She had no history of skin cancer; however, her granddaughter recently was diagnosed with melanoma. Physical examination revealed a 5-mm, irregular, dark brown papule on the left shoulder (top) that was evaluated by dermoscopy (middle). A tangential biopsy was performed for histopathologic analysis (bottom).



WHAT'S YOUR DIAGNOSIS?

- cellular blue nevus
- deep penetrating nevus
- lentigo maligna melanoma
- nodular melanoma
- pigmented nodular basal cell carcinoma

Original magnification $\times 10$.



H&E, original magnification $\times 4$.

PLEASE TURN TO **PAGE 25** FOR THE DIAGNOSIS

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The authors report no conflict of interest.

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THE DIAGNOSIS:

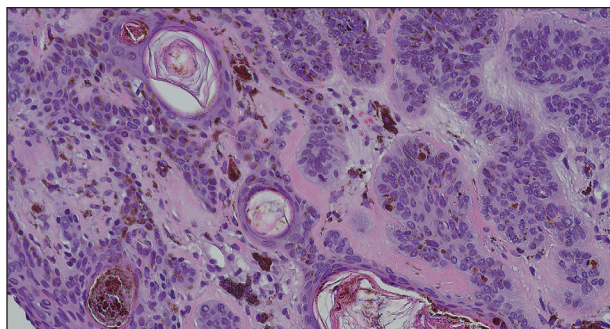
Pigmented Nodular Basal Cell Carcinoma

Dermoscopy of our patient's irregular dark brown papule revealed large blue clustered clods and radial lines converging to a central dot (middle quiz image). Histopathology revealed nests of basaloid cells with peripheral palisading, small horn pseudocysts, and deposits of melanin extending into the dermis (Figure). These findings were consistent with a diagnosis of pigmented nodular basal cell carcinoma (BCC).

Nodular BCC represents 60% to 80% of all BCC cases; pigmented BCC represents 6% of BCC cases.¹ Basal cell carcinomas frequently manifest as pearly papules with areas of pigment, surface telangiectases, and foci of ulceration. Dermoscopic features include fine arborizing vessels, blue-gray ovoid nests, spoke wheel-like structures, leaflike structures, and focal ulceration.¹ Histopathology shows well-defined dermal nodules comprising basaloid epithelial cells with peripheral palisading, mucinous stroma, focal melanin deposits, and surrounding clefting.² Arborizing vessels correspond to dilated vessels in the dermis.³ Blue-gray ovoid nests are well-circumscribed ovoid or elongated structures that correspond histologically to well-defined large tumor nests with melanin aggregates invading the dermis. Spoke wheel-like structures are well-circumscribed radial projections connected to a pigmented central axis that correspond histologically to tumor nests near the epidermis and that appear as fingerlike projections with centrally located melanin deposits.³

The differential diagnosis of our patient's lesion included nodular melanoma, lentigo maligna melanoma, deep penetrating nevus, and cellular blue nevus. Nodular melanoma is an invasive melanoma that lacks a radial growth phase. Dermoscopically, the more common features are a blue-white veil, atypical vascular pattern, asymmetric pigmentation, atypical pigment network, and peripheral black globules.⁴ Histopathology reveals atypical melanocytes and architectural disorder.² Pigmented nodular BCC also can display dark globules on dermoscopy but typically has smaller and more arborizing blood vessels and does not have a pigmented network. Furthermore, BCC would not have atypical melanocytes on histopathology.^{4,5}

Dermoscopy of lentigo maligna melanoma displays hyperpigmented follicular openings, an annular-granular pattern, pigmented rhomboidal structures, and obliterated hair follicles.⁶ Histopathology demonstrates epidermal atrophy, increased pigmentation in basal keratinocytes, prominent solar elastosis, and an increased number of melanocytes that extend beyond the epidermis.⁷ Pigmented nodular BCC can be distinguished from lentigo maligna melanoma dermoscopically by the presence of arborizing vessels, blue-gray ovoid nests, and lack of a pigment network.



Histopathology of a pigmented nodular basal cell carcinoma revealed basaloid nests with peripheral palisading and focal deposits of melanin as well as small horn pseudocysts (H&E, original magnification $\times 40$).

Deep penetrating nevus is a darkly pigmented melanocytic lesion that infiltrates deeply into the reticular dermis.⁸ Specific dermoscopic features have not been well established; however, a uniformly dark blue or black pattern is common. Histologically, this type of nevus is symmetric and wedge shaped with a broad base extending to the deep dermis and subcutaneous fat.⁸ Melanocytes do not exhibit atypia or bizarre mitoses. Although pigmented nodular BCC can appear similar to deep penetrating nevus, histologically there will be atypical basaloid epithelial cells in BCC.

Blue nevi clinically appear as a smooth blue-gray lesion with a steel blue ground-glass pattern on dermoscopy. Histopathology shows spindle-shaped melanocytes in the dermis, which distinguishes this lesion from BCC.⁹

Consider pigmented BCC when a patient presents with a pigmented lesion. Dermoscopy can help appreciate a pigmented BCC by looking for features such as a spoke wheel-like pattern, blue ovoid nests, arborizing blood vessels, and lack of a pigment network. Because pigmented BCC constitutes a small fraction of all BCCs, it is important to be familiar with its presentation and dermoscopic features.

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