

# Firm Abdominal Papule

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A 53-year-old woman with a history of melanoma on the right thigh, stage II Hodgkin lymphoma, and stage IIIB gastric adenocarcinoma treated with a distal gastrectomy presented with an asymptomatic but persistent skin lesion on the abdomen of 2 months' duration. The lesion arose spontaneously 6 months prior and had increased in size during that time. Physical examination revealed a 6-mm, solitary, firm, erythematous papule on the skin of the right upper quadrant of the abdomen. The patient was otherwise healthy, and a review of systems did not reveal any abnormalities. A punch biopsy was submitted for histopathologic review.

## WHAT'S THE DIAGNOSIS?

- amelanotic melanoma
- cutaneous B-cell lymphoma
- cutaneous metastatic gastric carcinoma
- dermatofibrosarcoma protuberans
- neurothekeoma

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The authors report no conflict of interest.

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## THE DIAGNOSIS:

## Cutaneous Metastatic Gastric Carcinoma

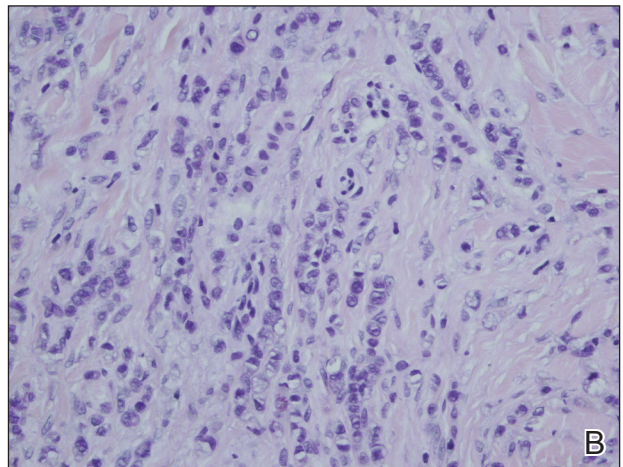
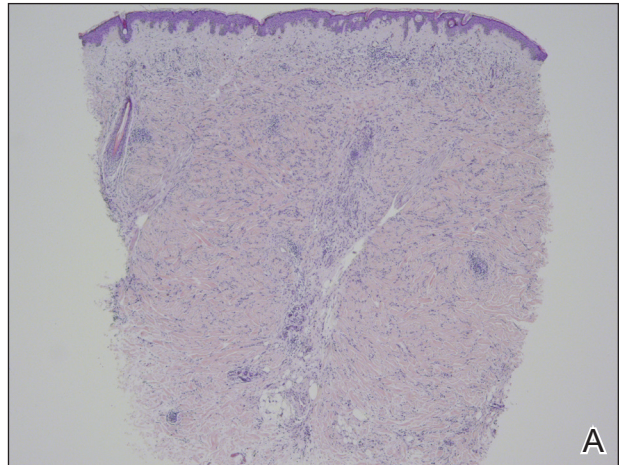
Cutaneous metastasis of primary gastric carcinoma is a rare occurrence, with the more common metastatic sites being the lymph nodes, liver, and peritoneal cavity. The incidence of visceral neoplasm metastasis to the skin ranges from 0.7% to 9% and is less than 1% for upper digestive tract carcinomas.<sup>1</sup> Cutaneous metastases make up 2% of all tumors of the skin and commonly are located near the site of the primary tumor.<sup>2</sup> The most common cutaneous metastasis sites for gastric carcinoma include the neck, chest, and head.<sup>3</sup> One of the more typical sites of cutaneous metastasis from gastric cancer is the umbilicus (ie, Sister Mary Joseph nodule). Cutaneous metastases from gastric carcinoma commonly present as asymptomatic hyperpigmented nodules.<sup>1,3</sup>

In our patient, histopathologic sections showed diffuse infiltration of the dermis by atypical polygonal/round cells arranged in cords and small aggregates. Some of the neoplastic cells had signet ring morphology (Figure). Tumor cells demonstrated positive immunostaining for CDX2, villin, CAM 5.2, and epithelial membrane antigen; they were negative for S-100, MART-1 (melanoma-associated antigen recognized by T cells 1), leukocyte common antigen, gross cystic disease fluid protein 15, estrogen and progesterone receptor, and HER2/neu (human epidermal growth factor receptor 2).

Our patient's presentation was rare in that she developed an asymptomatic erythematous papule on the skin of the abdomen. However, her history of stage IIIB gastric adenocarcinoma in conjunction with the clinical picture and microscopic findings were most consistent with metastatic carcinoma of gastrointestinal origin. The histologic hallmarks of cutaneous metastatic gastric carcinoma include aggregates of neoplastic cells arranged in cords, sometimes forming glands, embedded in a fibrous stroma. Tumor cells may demonstrate signet ring morphology. These unique histologic findings, as well as positive immunostaining for CDX2, villin, CAM 5.2, and epithelial membrane antigen, rule out other potential diagnoses for an asymptomatic solitary papule.

Dermatofibrosarcoma protuberans presents as an asymptomatic, slow-growing, indurated papule or plaque that develops into a red or brownish nodule. Histologically, dermatofibrosarcoma protuberans is characterized by spindle cells, few mitotic figures, infiltration of the subcutaneous tissue in a honeycomblike pattern, and obliteration of the adnexal structures.<sup>4</sup>

Cutaneous B-cell lymphoma (CBCL) can present as single or multiple red papules or nodules located on the trunk, face, or extremities. Histologically, CBCL would show a nodular or diffuse infiltrate throughout the



A, Scanning magnification of the punch biopsy showed diffuse infiltration of the dermis by neoplastic cells (H&E, original magnification  $\times 4$ ). B, Higher magnification demonstrated polygonal/round cells; some of the neoplastic cells showed signet ring morphology (H&E, original magnification  $\times 40$ ).

dermis, frequently with accentuation in the deep reticular dermis, sparing of the epidermis, and the presence of a grenz zone. The infiltrate in CBCL consists of CD20<sup>+</sup>, CD19<sup>+</sup>, and CD79a<sup>+</sup> B cells. Identification of a monoclonal B-cell population either by immunohistochemistry or polymerase chain reaction would further support a diagnosis of CBCL.<sup>4</sup> These specific histologic findings and the immunohistochemical staining pattern helped rule out CBCL as the diagnosis in our patient.

Amelanotic melanomas present as flesh-colored to light pink papules, making them especially challenging to diagnose clinically. Asymmetrical, poorly circumscribed nests of atypical melanocytes as well as single melanocytes within

the epidermis and dermis are seen histologically; mitotic figures are common. Immunohistochemical staining for melanoma includes S-100, human melanoma black 45, MART-1/Melan-A, tyrosinase, and microphthalmia-associated transcription factor 1.<sup>4</sup>

Neurothekeomas can present as asymptomatic, solitary, flesh-colored papules located on the head, neck, and upper trunk. Histologically, neurothekeomas have a distinct appearance consisting of a well-defined mass composed of variable-sized lobules of spindled and epithelioid cells dispersed in a myxoid stroma within the reticular dermis.<sup>4</sup> These specific histologic findings helped rule out neurothekeoma in our patient.

Following the diagnosis of cutaneous metastatic gastric carcinoma in our patient, positron emission tomography and computed tomography of the chest,

abdomen, and pelvis were unremarkable for distant disease. Subsequently, the patient underwent surgical excision of the papule with clear margins, followed by a short course of radiation therapy. She currently is under close monitoring but remains in remission with no new cutaneous manifestations of the gastric carcinoma.

#### REFERENCES

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