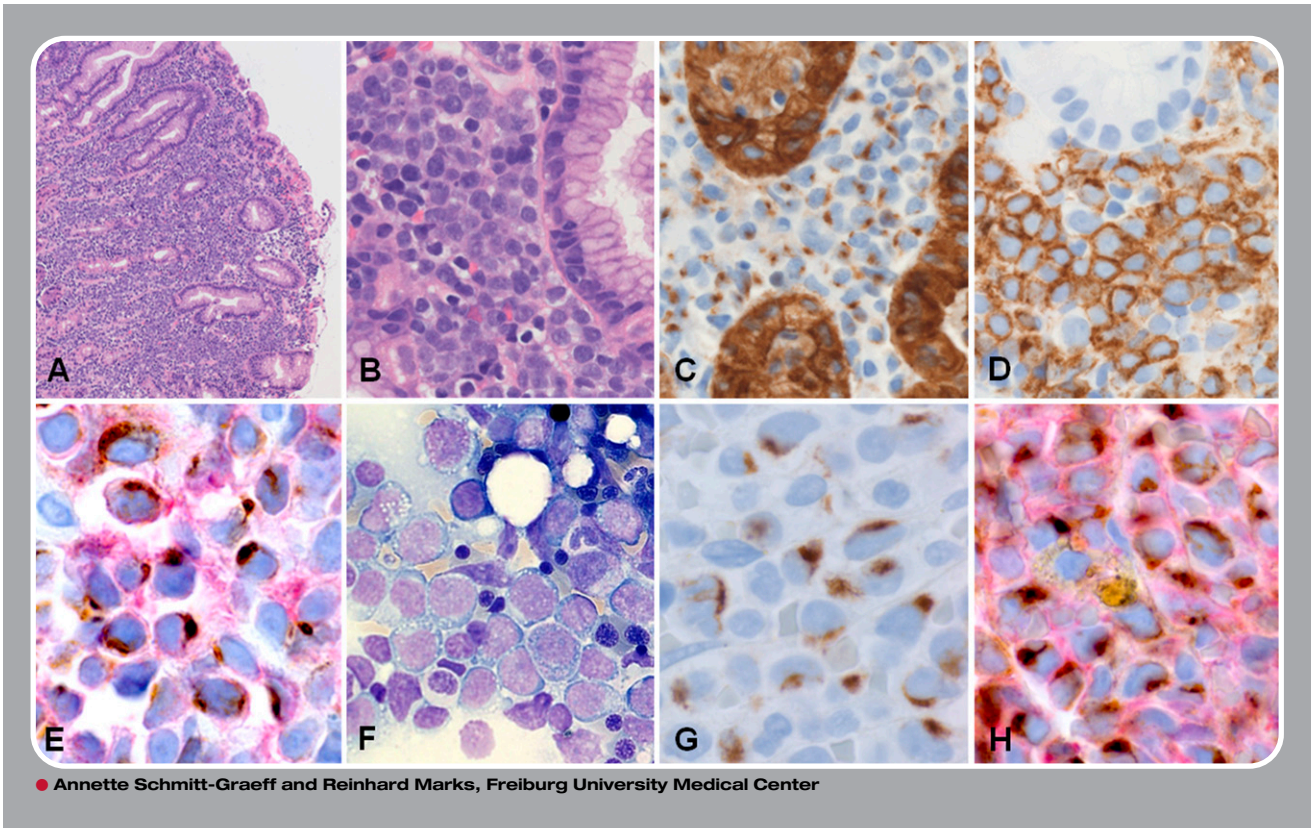
blood work
IMAGES IN HEMATOLOGY

Cytokeratin-type intermediate filaments in a gastric myeloid sarcoma: a diagnostic pitfall



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A 73-year-old man presented with abdominal pain 4 months after allogeneic hematopoietic cell transplantation for complex karyotype acute myeloid leukemia (AML). Endoscopy revealed a polypoid mass lesion in the gastric body. Neoplastic cells distorted mucosa and submucosa (hematoxylin and eosin) (panels A-B) and were immunoreactive for simple epithelial cytokeratin (CK) 8 and for CK antibodies AE1/AE3 (panel C), suggestive of a small cell neuroendocrine carcinoma. In the absence of neuroendocrine markers, a strong positivity for CD34 (panel D) and a coexpression of CK 18 (panel E, brown) with CD33 (panel E, red) in identical cells (panel E) could be demonstrated consistent with a CK^+ myeloid sarcoma. Simultaneous bone marrow (BM) aspirate smear (panel F) and biopsy contained blasts positive for CK (panels G-H; brown) in coexpression with CD33 (panel H, red). Retrospectively, an identical CK^+ blast phenotype was detected in the BM at initial diagnosis. Original magnifications: panel A, ×5; panels B-C, ×40; panels D,F, ×63; panels E,G-H, ×100.

It seems important to note that CK filaments that are considered as a hallmark of epithelial differentiation may aberrantly be expressed not only in malignant lymphomas, but exceptionally in BM and extramedullary AML infiltrates, as described in the skin [*Pathology*. 2000;32(2):98-101].

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