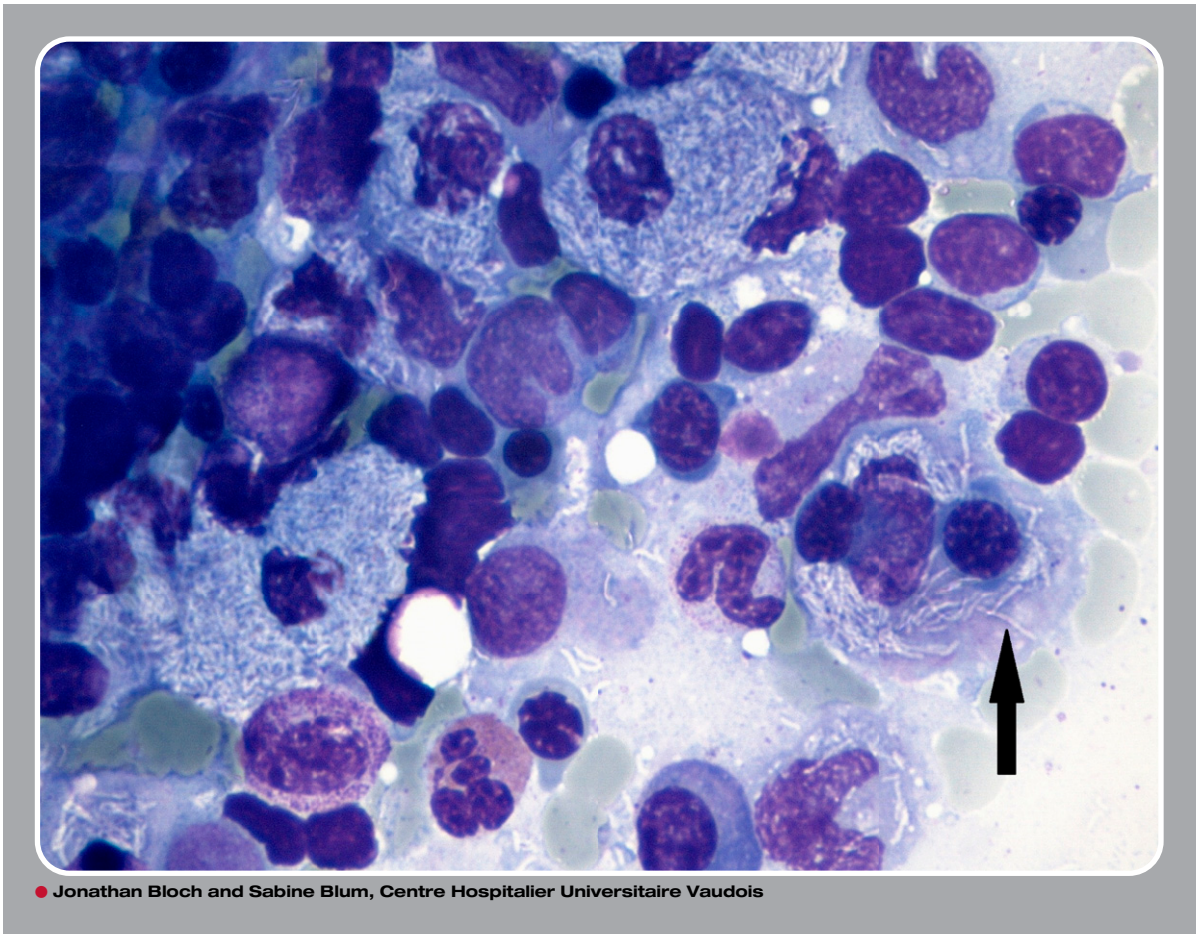
blood work
IMAGES IN HEMATOLOGY

"Atypical" macrophages



Jonathan Bloch and Sabine Blum, Centre Hospitalier Universitaire Vaudois

A 72-year-old woman presented with a 1-month history of weakness. Medical history included a smoldering myeloma diagnosed 2 years before, an autoimmune pancytopenia treated with prednisone for the past year, and an episode of pulmonary nocardiosis successfully treated with co-trimoxazole 6 months before. Notably, the bronchoalveolar lavage that helped diagnose the nocardiosis also revealed *Mycobacterium avium* that was considered an innocent bystander. On admission, the patient suffered from pancytopenia (hemoglobin, 112 g/L; leukocytes, 2.0×10^9/L; platelets, 33×10^9/L; neutrophils, 1.29×10^9/L) with 6 $CD4^+$ T cells/mm^3. May-Grünwald-Giemsa coloration of the bone marrow aspirate showed an infiltration with numerous pseudo-Gaucher cells containing cell debris and rod-like elements that did not absorb the colorant (arrow). Periodic acid–Schiff staining confirmed that they were mycobacteria (not shown). The patient was started on antimycobacterial antibiotics, but discontinued therapy and died shortly after.

Pseudo-Gaucher cells consist of macrophages whose cytoplasm has a "watered silk" appearance as they are loaded with cellular debris. Pseudo-Gaucher cells have sometimes been described in mycobacterium- and HIV-infected patients. In this case, the patient had a low $CD4^+$ count due to immune pancytopenia and long-term steroid therapy that allowed the atypical mycobacterial infection to develop.