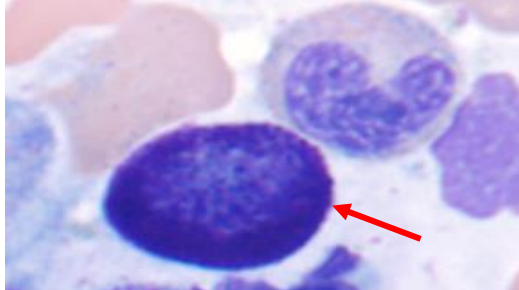

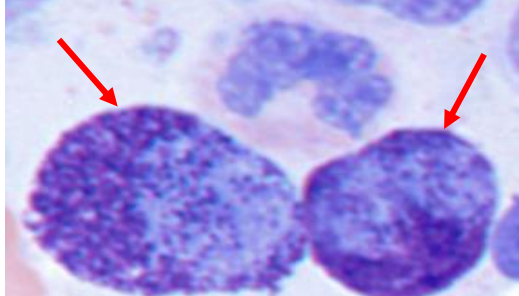
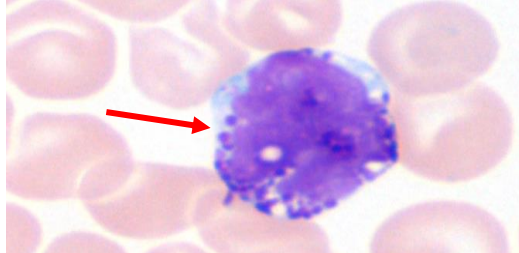


CYTOLOGY OF MAST CELLS¹

By Tracy I. George, MD

Mast cell types	Morphology		Types of disease
Normal/reactive	Round, well-granulated, with granules that fill the cytoplasm and obscure the nucleus; round to oval nucleus		Normal marrow, mast cell hyperplasia, well differentiated SM
Atypical type I (spindle shaped)	Hypogranular, enlarged, with cytoplasmic projections		Indolent SM, ASM, SM-AHN
Atypical type II (promastocyte)	Enlarged and round, hypogranular; indented bilobed nuclei		Mast cell leukemia, myelomastocytic leukemia
Metachromatic blast (immature)	Hypogranular with a few large metachromatic granules; high nuclear-to-cytoplasm ratio; smooth chromatin in nuclei		Mast cell leukemia, myelomastocytic leukemia

SM: Systemic mastocytosis

ASM: Aggressive systemic mastocytosis

SM-AHN: Systemic mastocytosis with an associated hematologic neoplasm [previously referred to as SM-AHNMD (systemic mastocytosis with an associated (clonal) hematologic non-mast cell lineage disease)]

Reference

1. George TI, Horny HP. Systemic mastocytosis. *Hematol Oncol Clin North Am.* 2011 Oct;25(5):1067-83, vii.