Case of the Quarter: Q2-2017

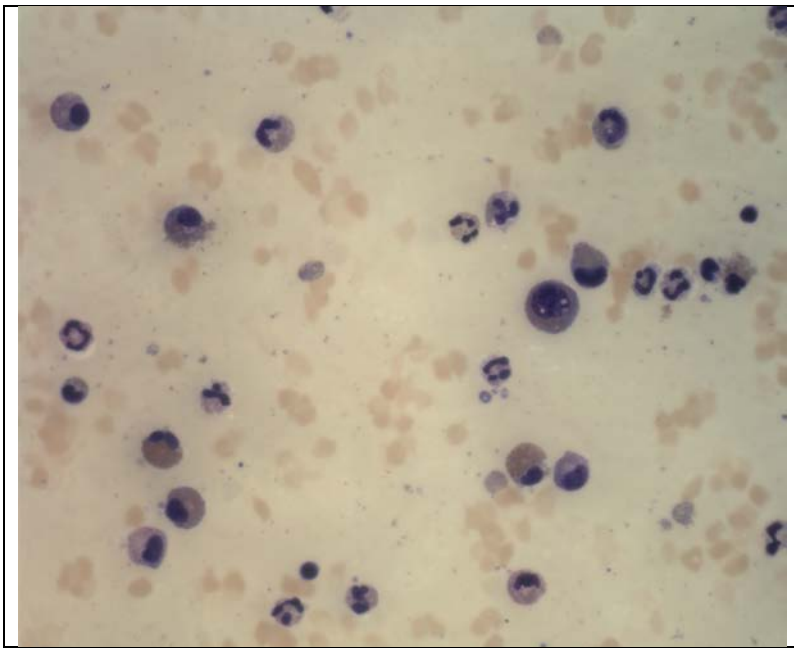
I: Clinical History

45-year-old man has leukocytosis and splenomegaly. A recent FISH study of PB was negative for t(9;22).

CBC: Hb 9.4 g/dL, MCV 98.3 fL, MCHC 30.5 g/dL, WBC 31,200/uL (N35, L11, M6, E12, B2), platelet 178k/uL.

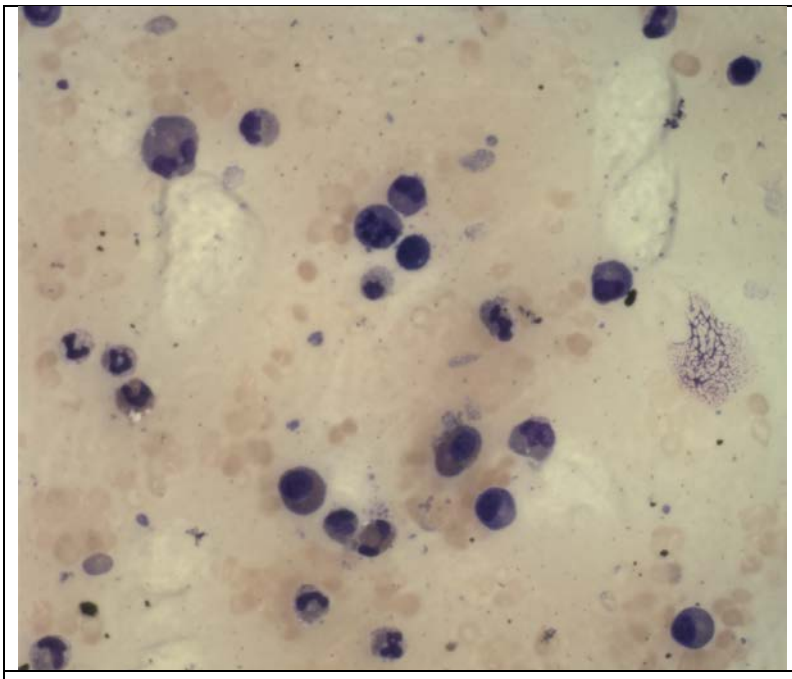
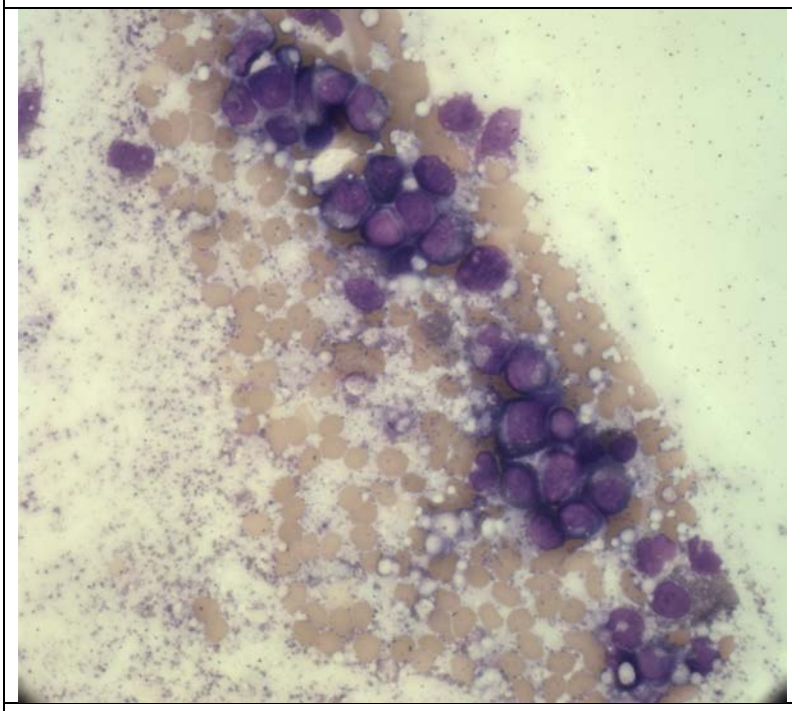
II: Gross Findings - N/A

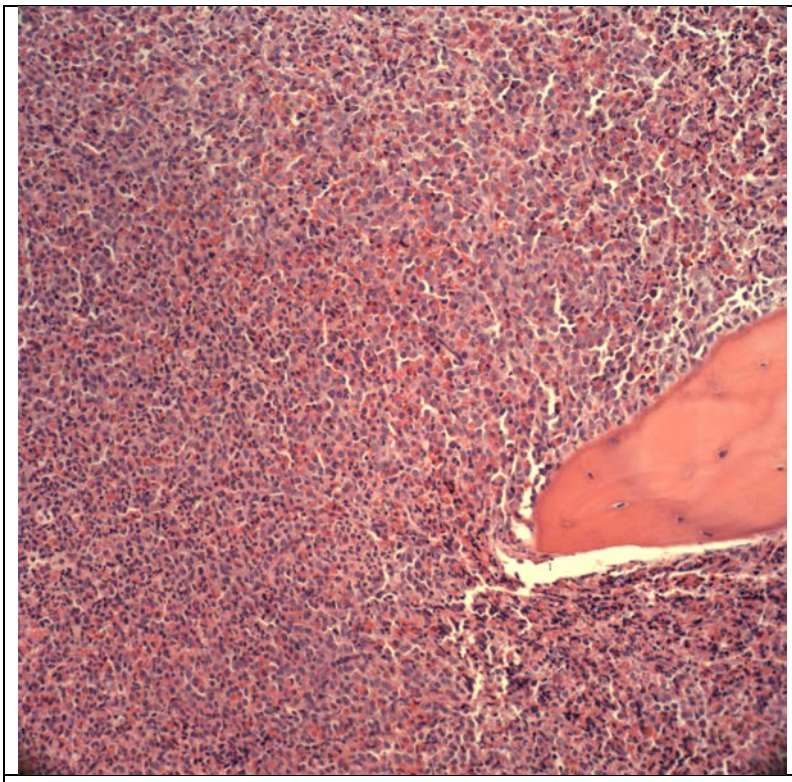
III: Microscopic Findings



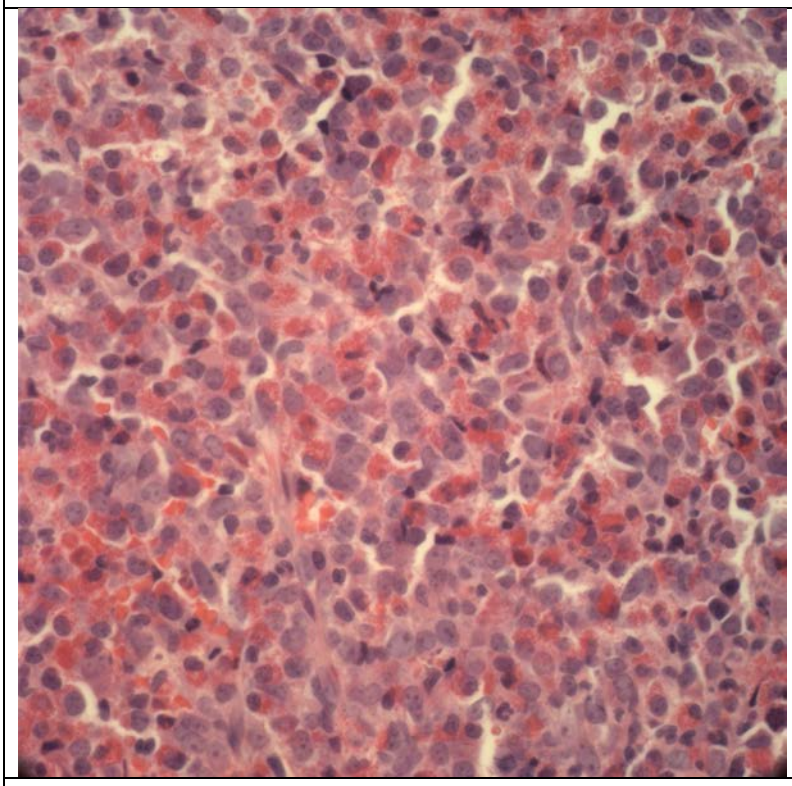
Aspirate: aparticulate with left-shifted myeloid maturation;

3% blasts,
11% promyelocytes,
26% myelocytes,
3% eosinophils

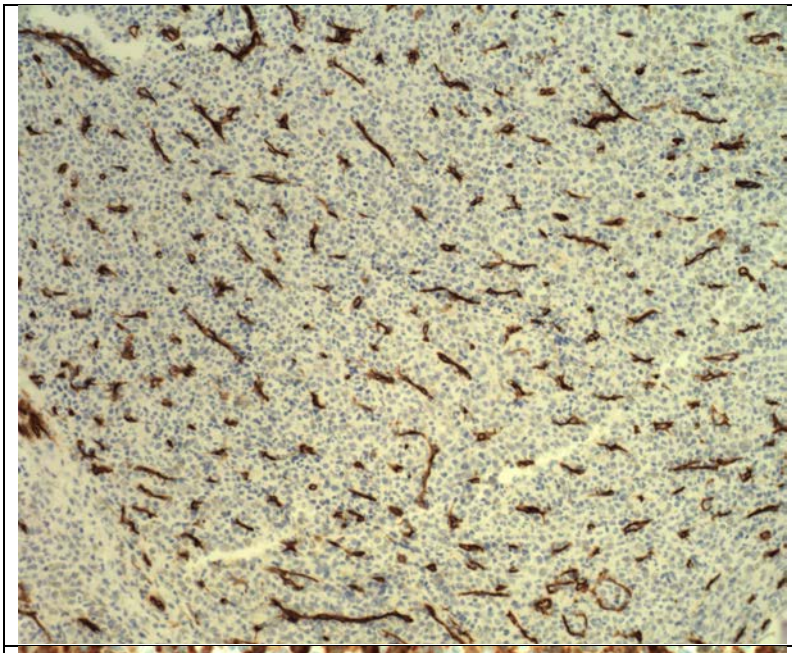
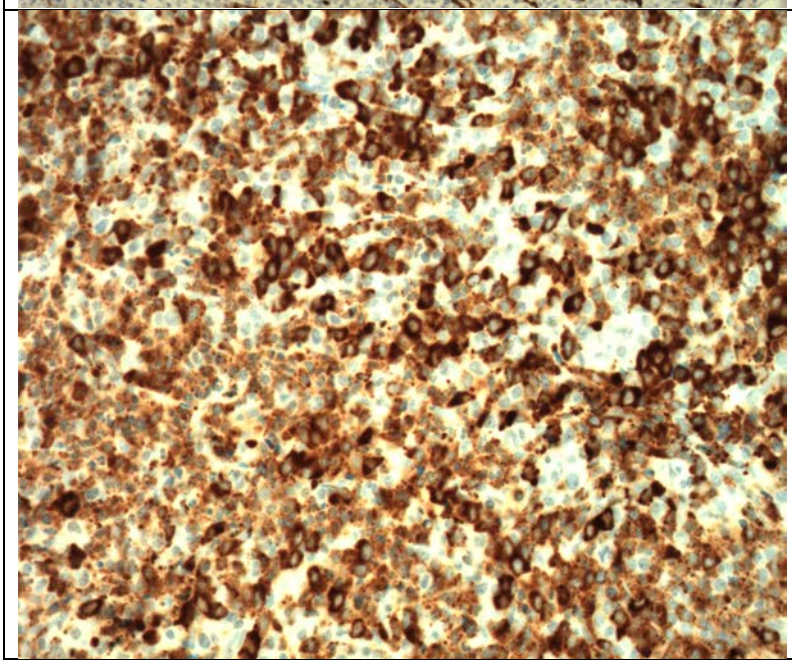
	
	**Touch Prep**

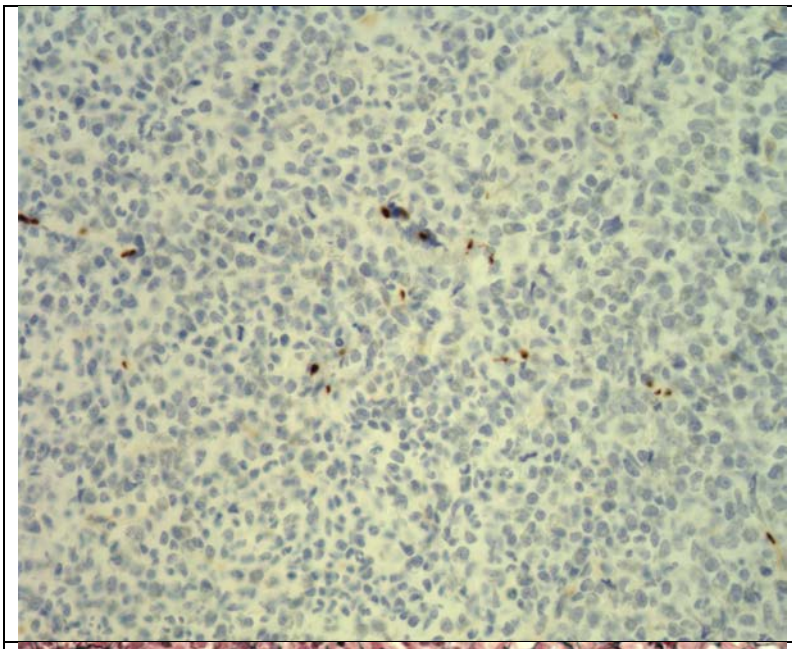
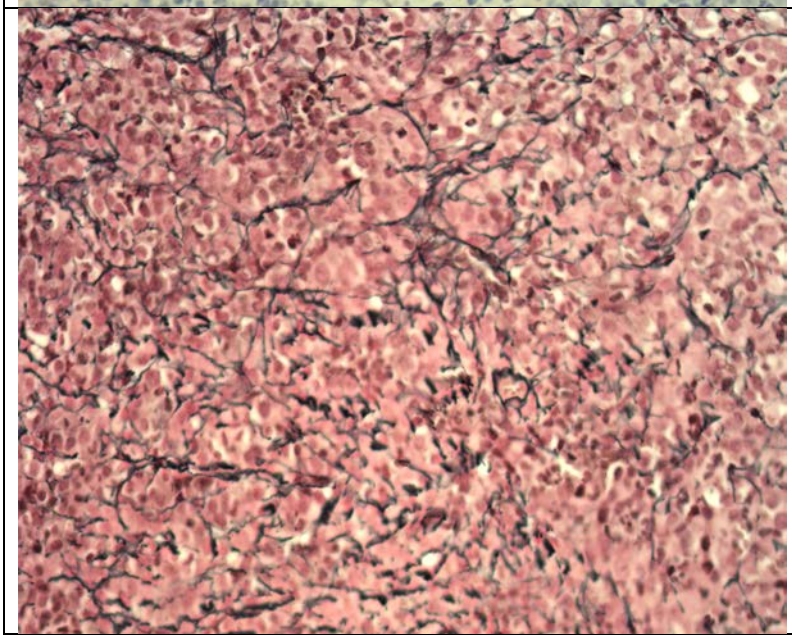


BM biopsy



IV: Immunohistochemistry & Special stain

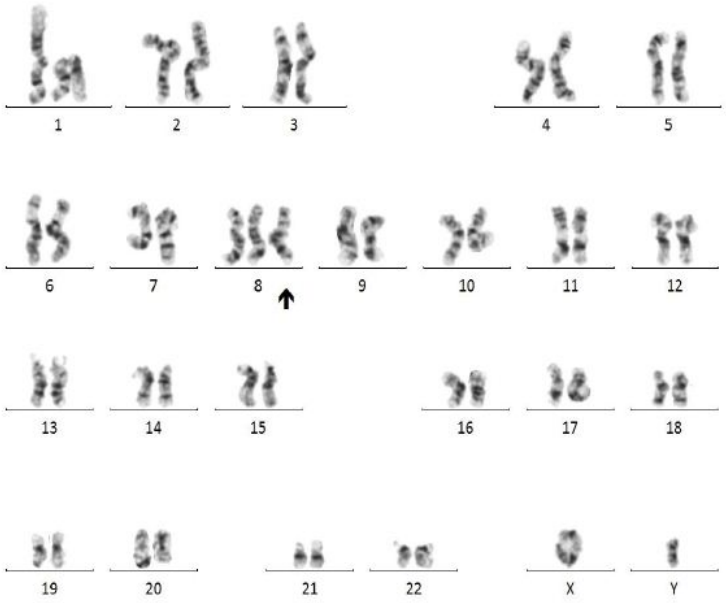
		**CD34:** increased vasculature
		**MPO:** reveals myeloid hyperplasia

	**CD61:** megakaryocytic hypoplasia
	**Reticulin:** reticulin fibrosis

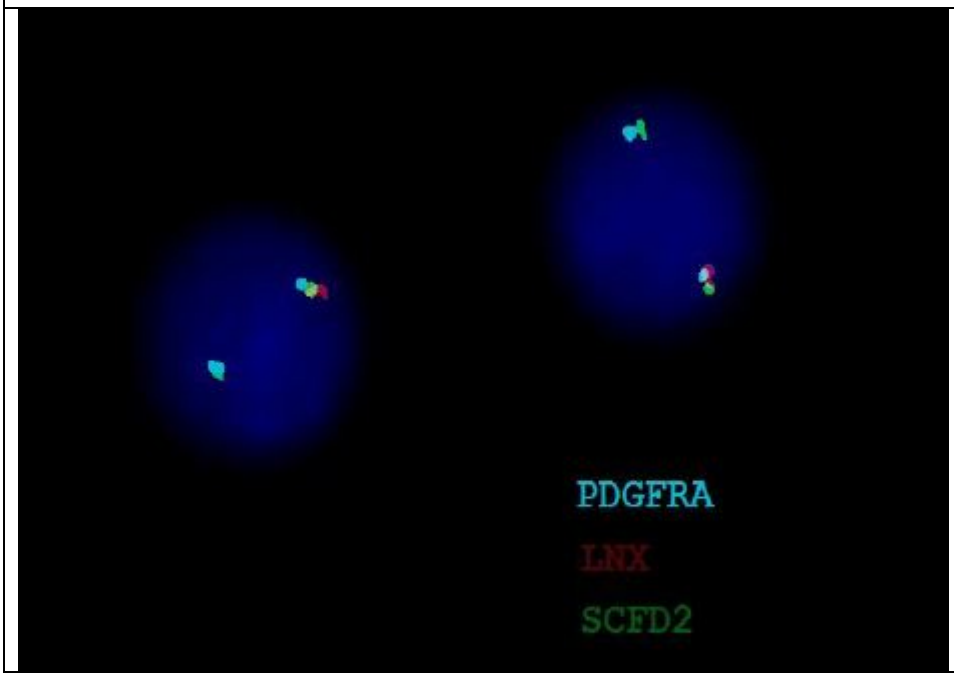
V: Flow cytometry:

Myeloid hyperplasia with left - shifted maturation and increased promyelocytes.

VI: Cytogenetics/Molecular Studies



Karyotyping
47;XY,+8[4]/46;XY[16]



FISH
trisomy 8 (26%);
FIP1L1-PDGFRA fusion

(FIP1L1-PDGFRA fusion is indicated by the isolated deletion of LNX with retention of the flanking SCFD2 and PDGFRA probes.)

Other results: No JAK-2 mutation (V617F, exon 12, or exon 13); No CALR mutation