Myeloproliferative Neoplasm: 
A Diagnostic Approach to Peripheral Blood Evaluation

Clinical suspicion of myeloproliferative neoplasm

Peripheral blood testing begins with:
- Complete blood count (CBC)
- EPO / Erythropoietin (EPO), Serum*
- BCRFX / BCR/ABL1, Qualitative, Diagnostic Assay with Reflex to BCR/ABL1 p190 Quantitative Assay or BCR/ABL1 p210 Quantitative Assay, Varies

Positive for BCR/ABL1
- Chronic Myeloid Leukemia Algorithm

NEGATIVE for BCR/ABL1 fusion
- Suspicious for polycythemia vera (PV)

PVJAK / Polycythemia Vera, JAK2 V617F with Reflex to JAK2 Exon 12-15, Sequencing for Erythrocytosis, Varies

POSITIVE
- Clinical suspicion for myeloproliferative neoplasm (MPN)

NEGATIVE
- MPN / Myeloproliferative Neoplasm (MPN), JAK2 V617F with Reflex to CALR and MPL, Varies

POSITIVE
- Perform bone marrow study

NEGATIVE
- Clinical suspicion for MPN

HIGH
- MPNCM / Myeloproliferative Neoplasm (MPN), CALR with Reflex to MPL, Varies

LOW
- REVE / Erythrocytosis Evaluation

STOP
- No further testing**

* A minor criterion for PV
** In the appropriate clinicopathologic setting