Myeloproliferative Neoplasm: A Diagnostic Approach to Peripheral Blood Evaluation

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 OR 922F / BCR/ABL1, Translocation (9;22), FISH

**In the appropriate clinicopathologic setting**

Clinical suspicion of myeloproliferative neoplasm

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

**POSITIVE for BCR/ABL**
- Chronic Myeloid Leukemia Algorithm

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

**POSITIVE**
- Clinical suspicion for myeloproliferative neoplasm (MPN)
  - HIGH
    - MPNCM / Myeloproliferative Neoplasm (MPN), CALR with Reflex to MPL
  - LOW
    - REVE / Erythrocytosis Evaluation

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

**POSITIVE**
- Perform bone marrow study
  - HIGH
    - MPNCM / Myeloproliferative Neoplasm (MPN), CALR with Reflex to MPL
  - LOW
    - REVE / Erythrocytosis Evaluation

**NEGATIVE**
- Clinical suspicion for MPN
  - HIGH
    - Perform bone marrow study
  - LOW
    - STOP No further testing**

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