Myeloproliferative Neoplasm: A Diagnostic Approach to Peripheral Blood Evaluation

Peripheral blood testing begins with:
- Complete blood count (CBC)
- EPO / Erythropoietin (EPO), Serum
- JAK2B / JAK2 V617F Mutation Detection, Blood*
- BADX / BCR/ABL1, Qualitative, Diagnostic Assay OR 922F / BCR/ABL1, Translocation (9;22), FISH

If reflexive testing of JAK2 V617F, CALR, and MPL is desired, consider ordering MPNR / Myeloproliferative Neoplasm (MPN), JAK2 V617F with Reflex to CALR and MPL

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PV=Polycythemia vera
ET=Essential thrombocythemia
PMF=Primary myelofibrosis
MPN=Myeloproliferative neoplasm

PV possible
- Bone marrow study indicated
- JAKXB / JAK2 Exon 12 and Other Non-V617F Mutation Detection, Blood

POSITIVE
- CBC
- EPO
- Clinical findings

NEGATIVE OR EQUIVOCAL
- CBC
- EPO
- Clinical findings

PV
- Not supportive of PV

Bone marrow study indicated
- JAK2 V617F Mutation

POSSITIVE

NEGATIVE OR EQUIVOCAL

Bone marrow study indicated
- JAK2 V617F Mutation

POSITIVE

NEGATIVE

HIGH

LOW

STOP

No further testing

CALR / CALR Mutation Analysis, Myeloproliferative Neoplasm (MPN)*

PV possible
- Bone marrow study indicated

POSITIVE

NEGATIVE

Bone marrow study indicated
- JAK2 V617F Mutation

POSSITIVE

NEGATIVE

Bone marrow study indicated
- JAK2 V617F Mutation

POSITIVE

NEGATIVE

Bone marrow study indicated
- ET
- PMF
- MPN, not otherwise specified (ET or PMF)