Individuals with Elevated WBC Count and Cell Morphology Suggestive of CML

**Comprehensive Hematopathology Report [17734(X)]**
Includes blood and bone marrow morphology evaluation, chromosome analysis [14600(X)] and **BCR-ABL1** analysis by quantitative PCR [91065]. May also include **BCR-ABL1** FISH test [12070(X)] when chromosome analysis and PCR results are negative. CBC results are submitted with specimens.

**BCR-ABL1 Positive and/or Ph Positive**
CML diagnosed

**BCR-ABL1 Negative and Ph Negative**
CML not diagnosed; evaluate for other MPNs

**Chronic Phase**
All of the following:
- <10% PB or BM blasts (typical is <2% for PB and <5% for BM)
- <20% PB basophils
- No clonal evolution
- No ↑ WBC or enlarged spleen with therapy
- No thrombocytosis or thrombocytopenia with therapy

**Accelerated Phase**
Any of the following:
- 10-19% PB or BM blasts
- ≥20% PB basophils
- Clonal evolution: +8, +19, isochromosome 17q, 2nd Ph
- ↑ WBC or enlarged spleen despite therapy
- Thrombocytosis despite therapy
- Thrombocytopenia unrelated to therapy

**Blast Phase**
Any of the following:
- ≥20% PB or BM blasts
- Extramedullary blast proliferation
- Large foci of blasts in BM

**Figure 1. Use of Laboratory Testing to Diagnose and Classify CML**

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This algorithm is intended as a guide for using Quest Diagnostics laboratory tests to diagnose and classify CML. The algorithm is based on the World Health Organization and the National Comprehensive Cancer Network guidelines.\(^1,2\) It is provided for informational purposes only and is not intended as medical advice. A physician’s test selection and interpretation, diagnosis, and patient management decisions should be based on his/her education, clinical expertise, and assessment of the patient.

Most patients with accelerated- or blast-phase CML have chromosome abnormalities in addition to Ph. CML indicates chronic myelogenous leukemia; WBC, white blood cell; PCR, polymerase chain reaction; FISH, fluorescence in situ hybridization; CBC, complete blood count; Ph, Philadelphia chromosome; MPNs, myeloproliferative neoplasms; PB, peripheral blood; and BM, bone marrow.