Central Zone

Pathology and Laboratory Medicine Memorandum

To: Nova Scotia Healthcare Providers and Referring Laboratories

From: Dr. Tanya Gillan, Clinical Director, Molecular Diagnostics Laboratory
Dr. David Conrad, Hematopathologist, Molecular Diagnostics Laboratory
Randy Veinotte, Manager Esoteric Laboratories

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Subject: Testing for JAK2 V617F mutation and *BCR-ABL1* gene fusion

Peripheral blood testing for the JAK2 V617F mutation and *BCR-ABL1* gene rearrangement can support a diagnosis of a myeloproliferative neoplasm (e.g., Essential Thrombocythemia, Primary Myelofibrosis, Polycythemia Vera, and Chronic Myeloid Leukemia), but only in the setting of appropriate laboratory data. As of March 31, 2022, **all requests** for JAK2 V617F and *BCR-ABL1* will be **triaged** based on Complete Blood Count (CBC) results.

Testing for the JAK2 V617F mutation will only be done if at least one of the following CBC criteria are met:

- White blood cell count ≥11 x 10^9/L, for at least 1 month
- Hemoglobin concentration ≥160 g/L, for at least 1 month
- Platelet count ≥450 x 10^9/L, for at least 1 month

Unless Chronic Myeloid Leukemia or *BCR-ABL1*+ Acute Leukemia have already been diagnosed, testing for *BCR-ABL1* will only be done if the CBC shows either:

- White blood cell count ≥20 x 10^9/L
- White blood cell count 11-20 x 10^9/L, for at least 1 month

A copy of the most recent CBC results **MUST** accompany all JAK2 V617F and *BCR-ABL1* requests before testing will proceed for all new suspected diagnoses.

Questions can be directed to Dr. Tanya Gillan at tanya.gillan@nshealth.ca or Dr. David Conrad at david.conrad@nshealth.ca.