

March 10th, 2020

Re: New *MYD88* L265P test at BC Cancer CGL

Dear all,

This letter is to update you on the Cancer Genetics and Genomics Laboratory's (CGL's) new test interrogating the *MYD88* gene. This test is specifically designed to detect the L265P mutation. *MYD88* L265P is identified in approximately 90% of confirmed lymphoplasmacytic lymphoma (LPL) cases and therefore increases the likelihood of a *MYD88* related LPL diagnosis (1). However, the *MYD88* L265P mutation has also been identified in subsets (5-15%) of other small B-cell neoplasms, including nodal/splenic marginal zone lymphoma (MZL), mucosa-associated lymphoid tissue (MALT) lymphoma and chronic lymphocytic leukemia (CLL) and therefore is not exclusively specific to LPL (2).

CGL's lymphoid testing requisition will be amended to include this test. All current CGL requisitions may be found at the following: <http://cancer geneticslab.ca/requisition-forms/>



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How is the *MYD88* L265P mutation detected?

The test is a quantitative PCR (qPCR) based assay that uses an allele-specific primer to detect the nucleotide transition c.794T>C in the *MYD88* gene that is associated with the p.L265P mutation. It has been validated to have a reliable LOD of 0.1%.

What specimens are accepted for testing?

The *MYD88* L265P assay can be used to test DNA from the following sample types:

1. Formalin Fixed Paraffin Embedded (FFPE) tissue or cell block, including decalcified specimens
2. Fresh tissue specimens
3. Fresh bone marrow aspirate
4. Methanol acetic acid (MAA) fixed specimen from bone marrow aspirate

Note: Tumour content is required to initiate testing

What will the common results be?

Positive – A *MYD88* L265P mutation was detected in the DNA from the specimen.

Negative – A *MYD88* L265P mutation was NOT detected in the DNA from the specimen.

Fail – The quantity and/or quality of DNA was insufficient to obtain a result from the test.

References:

- (1) Swerdlow, S.H. et al (2017). Lymphoplasmacytic lymphoma. In Swerdlow, S.H. et al. (Eds.), WHO Classification of Tumour of Haematopoietic and Lymphoid Tissues (pp. 232-235). Lyon, France, IARC.
- (2) Swerdlow, S.H., Kuzu, I., Dogan, A. et al. The many faces of small B cell lymphomas with plasmacytic differentiation and the contribution of *MYD88* testing. *Virchows Arch* 468, 259–275 (2016).