

Date: January 21, 2016
To: Edmonton Zone Clinicians
From: AHS Laboratory Services
Re: Changes to B, T, & NK -Cell Flow Cytometric Enumeration

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Key Messages:

- Effective **Feb, 1, 2016** The B, T, NK cell flow panel (test code: BTNK) will enumerate the numbers of B-cells, T-cells and NK-cells, only. If enumeration of T-Helper (CD4+) and T-Cytotoxic (CD8+) subsets or the CD4/8 ratio is required please order T-Cell Subsets (test code: TLYM).
- B-cell enumeration (test code: BCELL) will no longer be offered. Please order a BTNK assay instead for B-cell enumeration.
- B-cells will be enumerated on the basis of CD19 expression only. CD20 expression will no longer be tested.

Why this is important:

- Previously the BTNK test included enumeration of B-cells, T-cells and NK-cells as well as enumeration of T-cell CD4+ and CD8+ subsets. However, the T-cell subsets are also available as a stand-alone assay. Many patients who require BTNK enumeration do not require simultaneous T-cell subset analysis. By limiting the number of antibodies used in the BTNK assay we can reduce costs. Of course those patients who do require both BTNK and T-cell subset enumeration can still get it if the physician orders both the BTNK test and the T-Cell Subset test (TLYM). The elimination of the BCELL assay removes redundancy from the test menu, as this assay is effectively just as expensive to perform as the full BTNK assay.
- Traditionally CD19 and CD20 co-expressing cells have been used to quantify B-cells. However with the advent of rituximab, a humanized monoclonal anti-CD20 therapeutic antibody, mature B cells can lose CD20 expression. This is known to occur in patients post-rituximab therapy and is not of clinical significance. In order to avoid generating conflicting results as well as to achieve cost savings we are discontinuing CD20 based B-cell testing and relying exclusively on CD19 expression to identify peripheral blood B-cells.

Action Required:

- If CD4 and CD8 T-cell counts are also needed when ordering B, T, & NK -Cell counts (test code: BTNK), please also order T-Cell subsets (test code: TLYM).

Inquiries and feedback may be directed to:

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This bulletin has been reviewed and approved by:

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