

November 26, 2020

## IMMUNOLOGY

# CD20 B-Cell Enumeration

Date effective: November 23, 2020

### Background Information:

The Immunology laboratory at Health Sciences Centre strives to provide efficient, reliable, and high-quality services that contribute to enhanced patient care. In the past, monitoring B Cell depletion during anti-CD20 therapy has utilized Lymphocyte Enumeration testing by flow cytometry. This new quantitative flow cytometry assay will assess the percentage and absolute count of CD19+ B-cells and CD20+ B-cells and is intended to be a more cost-effective assay when T and NK cell quantitation are not clinically required.

All results will be provided with age-appropriate reference ranges which have been established in-house or adopted and verified to be appropriate for our population.

### Change in Test Procedure:

- Test Code: PB20
- Sample Type: EDTA Peripheral Blood
- Sample Volume: 4.0ml (adult); 0.5ml (pediatric)
- Referral: Send specimens in original tube (do not aliquot) at ambient temperature. Specimens are required to be received in the laboratory weekdays and by 4 p.m. on Friday. It is recommended that specimen be received in laboratory within 24 hours. Samples arriving on the weekend may be cancelled.
- Requisition: Flow Cytometry Laboratory Requisition R250-10-82 V01 (Record under Miscellaneous)
- Availability: Weekdays (Hours of Operation: Mon-Fri, 0700-1700, excluding holidays)
- TAT: 2 days
- Reference Range:

Age [Years]	%CD19+ [% Lymph]	CD19+ cells [cells/mm <sup>3</sup> ]	%CD19+CD20+ [% Lymph]	CD19+CD20+ cells [cells/mm <sup>3</sup> ]
0 - 2	1 - 34	24 - 2149	1 - 33	24 - 2086
3 - 17	6 - 33	110 - 1400	5 - 32	92 - 1357
≥18	4 - 25	79 - 574	3 - 24	59 - 551

- Rejection: Samples will be rejected if received frozen, greater than 48 hours old, clotted or hemolyzed. Results for absolute counts cannot be reported if a CBC is not provided or performed within 24 hours of collection.

### References/Resources:

Test: [Laboratory Information Manual https://apps.sbgq.mb.ca/labmanual/test/view?seedId=38328](https://apps.sbgq.mb.ca/labmanual/test/view?seedId=38328)

Requisition: <https://apps.sbgq.mb.ca/labmanual/test/loadDocumentPdf?documentId=2104>

### Patient Impact:

- Sensitivity and accuracy are equivalent to Lymphocyte Enumeration (PBLs)
- If T and NK cell quantitation are also clinically required, order ONLY Lymphocyte Enumeration (PBLs).

### System Improvements:

- Improved sustainability
- Decreased operating costs

### Contact Information:

- Dr. Ping Sun, Hematopathologist, Medical Director Hematology & Immunology, Shared Health Manitoba, (phone: 204-787-4682) psun@sharedhealthmb.ca
- Jason Warren, Immunology Technical Manager, Shared Health Manitoba, (phone: 204-787-3407) jwarren3@sharedhealthmb.ca