

# MEMORANDUM

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Date: July 09, 2025

To: All BC Cancer Staff and/or hematologists

From: Stephen Yip, M.D., Ph.D., FRCPC  
Medical Director – Cancer Genetics & Genomics Laboratory  
Medical Director – Centre for Clinical Genomics

**RE: New CLL NGS Panel**

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This letter is to inform you that effective **July 21<sup>st</sup>, 2025**, the Cancer Genetics and Genomics Laboratory (CGL) at BC Cancer - Vancouver has designed and validated a custom small gene panel to interrogates genes relevant in the clinical management of patients with chronic lymphocytic leukemia (CLL)/small lymphocytic lymphoma (SLL).

## What is detected by the CLL/SLL NGS Panel?

This panel includes the sequence analysis of selected coding regions of the following genes: TP53, BCL2, PLCG2, BTK, SF3B1, NOTCH1, BIRC3 and MYD88. This Next Generation Sequencing (NGS) panel does not detect copy number or structural variants, so FISH analysis is still necessary for the clinical work-up of a CLL patient.

## Who qualifies for testing?

Any patient with a new diagnosis of CLL/SLL or with relapsed/refractory CLL/SLL requiring treatment qualifies for testing with NGS analysis to identify sequence variants in the above genes, as well as the current FISH panel to identify copy number changes of 17p (TP53), 11q (ATM), 13q and chromosome 12.

## How is the test ordered?

NGS and FISH analysis can be ordered using the CGL Lymphoid Requisition ([link](#)).

## What sample is required?

The sample collection tubes for NGS and FISH are different, so the following collection tubes are necessary.

For peripheral blood (*preferred specimen*):

- Peripheral blood (cytogenetics): 1 x 6ml NaHep (FISH)

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- o For CST Cerner: Order 'CLL/SLL Genetic Prognostic Panel'
- Peripheral blood (DNA): 1 x 6ml EDTA (NGS Panel)
  - o For CST Cerner: Order 'LAB-Miscellaneous Test (Blood)' → indicate "CLL NGS Panel-EDTA" in the 'Name of the Lab test' field
  - o For non-CST Cerner: Patients can bring printed requisition to any phlebotomy laboratory for blood sample collection.

For bone marrow:

- Bone marrow (cytogenetics): 2 x 1.0ml in transport media tube (FISH)
- Bone marrow (DNA): 1 x 0.5ml in EDTA tube (NGS Panel)

For FFPE Tissue Block (NGS Panel ONLY)

- Testing on FFPE should only be ordered when there is no peripheral involvement
- Fax the completed requisition to the hospital that has the FFPE block
- FFPE tissue block: will be sectioned
  - Specimen must not be de-calcified
  - Minimum tumour content is 20%

## Where and how does the sample get sent?

Further information: <https://cancer geneticslab.ca/guidelines/specimens/#Shipping>

### Hematological and Tissue Specimens:

Cancer Genetics and Genomics Laboratory  
BC Cancer - Vancouver  
Room #3307 – 600 West 10th Avenue  
Vancouver, BC  
V5Z 4E6

Ship at room temperature – do not freeze.

Maximum transit time from collection: 3 days (FISH) or 7 days (NGS Panel).

## How will the test be reported?

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Variants identified by NGS at a variant allele frequency (VAF) of 5% or higher will be interpreted and categorized based on their clinical impact using AMP/ASCO/CAP guidelines (PMID: 27993330)<sup>1</sup> as follows:

- Tier I: variants with strong clinical significance (level A and B evidence)
- Tier II: variants with potential clinical significance (level C and D evidence)
- Tier IIIA: variant with uncertain clinical significance
- Tier IIIB: variants with uncertain function

FISH analysis reporting will not change.

## What is the expected turn-around-time (TAT) for results?

The anticipated TAT for the NGS CLL Panel testing is 21 days from receipt of the sample in CGL and the CLL FISH panel will remain at 14 days.

## How can I access the clinical report results for my patient?

The clinical report will be:

- Generated using the CGL SHIRE platform which is used for all CGL reporting
- Uploaded electronically to CAIS, CST Cerner and CareConnect
  - For CareConnect information on how to view the report or to request access, [click here](#)
- Mailed as a paper copy via Canada Post unless previously opted out
  - To discontinue receipt of the mailed paper copy, [complete this form](#)

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## Questions

Email: [cancergeneticslab@bccancer.bc.ca](mailto:cancergeneticslab@bccancer.bc.ca)

Website: [cancergeneticslab.ca](http://cancergeneticslab.ca)

## References

1. Li MM, Datto M, Duncavage EJ, Kulkarni S, Lindeman NI, Roy S, Tsimberidou AM, Vnencak-Jones CL, Wolff DJ, Younes A, Nikiforova MN. Standards and Guidelines for the Interpretation and Reporting of Sequence Variants in Cancer: A Joint Consensus Recommendation of the Association for Molecular Pathology, American Society of Clinical Oncology, and College of American Pathologists. *J Mol Diagn.* 2017 Jan;19(1):4-23. doi: 10.1016/j.jmoldx.2016.10.002. PMID: 27993330; PMCID: PMC5707196.