

<b>DATE:</b>	9 June 2025
<b>TO:</b>	Hematology and Hematopathology, Provincial
<b>FROM:</b>	Molecular Pathology, Alberta Precision Laboratories
<b>RE:</b>	NPM1 Quantitative Testing Update

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### Key Message

- Quantitative testing for NPM1 type A, B, and D mutations will now be performed in the Edmonton Molecular Pathology laboratory for the purposes of minimal residual disease (MRD) evaluation. Send out testing to Mayo Clinic will no longer be offered as of June 10, 2025.

### Background

- NPM1 quantitative testing is used to determine the presence of MRD in patients with type A, B, or D mutations after systemic therapy. This test requires higher sensitivity than the qualitative assay used at diagnosis. Currently, this test is sent to Mayo Clinic for patients with NPM1-positive acute myeloid leukemia (AML) after therapy for those that have type A, B, or D mutations. Molecular pathology has recently completed validation of an in-house quantitative NPM1 assay that also tests for these mutations. Starting June 10, this in-house assay will replace the send out to Mayo Clinic.

### How this will impact you

- For patients in South Sector Alberta, NPM1 quantitative testing from blood or bone marrow will be drawn in EDTA tubes and sent to the Molecular Hematology laboratory in Calgary for extraction and transport to Edmonton. For patients in North Sector Alberta, NPM1 quantitative testing from blood or bone marrow will be drawn in PaxGene tubes and sent to the Molecular Pathology laboratory in Edmonton. Testing will be completed in Edmonton and reported as NPM1 transcripts per 10,000 copies of ABL1.

### Action Required

- When ordering NPM1 quantitative testing from South Sector, draw EDTA tubes for RNA extraction and send immediately to Molecular Hematology in Calgary. When ordering from North sector, draw PaxGene tubes for RNA extraction and send immediately to Molecular Pathology, North.

**Effective**      **June 10, 2025**

### Questions/Concerns

- South Sector: Dr. Adrian Box ([Adrian.Box@albertaprecisionlaboratories.ca](mailto:Adrian.Box@albertaprecisionlaboratories.ca))
- North Sector: Dr. Cheryl Mather ([Cheryl.Mather@albertaprecisionlabs.ca](mailto:Cheryl.Mather@albertaprecisionlabs.ca))

### Approved by

- Dr. Adrian Box, Medical/Scientific Director, Molecular Pathology Program
- Mark Douesnard, Operations Director, Genetics & Genomics / Molecular Pathology
- Dr. Carolyn O'Hara, Chief Medical Laboratory Officer (Interim), Alberta Precision Laboratories