

DATE:	8 June 2026
TO:	All Zones - Hematopathologists and Hematologists/Oncologists
FROM:	Cancer Cytogenetics Laboratory, Genetics & Genomics South, Alberta Precision Laboratories
RE:	IRF4/DUSP22 FISH Testing for Suspected Large B-cell Lymphoma with IRF4 Gene Rearrangement

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Key Message

- Effective immediately, fluorescent in situ hybridization (FISH) analysis using a break-apart probe designed to identify rearrangements involving the IRF4/DUSP22 loci is available.

Background

- The *IRF4/DUSP22* locus at chromosome 6p25 is rearranged in a newly recognized WHO subtype of non-Hodgkin lymphoma, Large B-cell lymphoma with *IRF4* rearrangement.
- Large B-cell lymphoma with *IRF4* rearrangement is uncommon, accounting for <1% of all non-Hodgkin B-cell lymphomas overall. It is more frequent in children and young adults with a median age at presentation of 12 years.
- These lymphomas are clinically distinct from morphologically similar lymphomas, including diffuse large B-cell lymphoma, high-grade follicular lymphoma, and pediatric-type follicular lymphoma.
- Patients with large B-cell lymphoma with IRF4 rearrangement typically have a favorable outcome after treatment.

How this will impact you

- Hematopathologists, hematologists and oncologists can now directly order IRF4/DUSP22 FISH testing on FFPE specimens for patients who meet the following criteria:
 - Lymphomas exhibiting specific morphological and immunophenotypic features suggestive of Large B-cell lymphoma with IRF4 rearrangement, in particular, medium- to large-sized B-cells, often with a follicular or diffuse growth pattern, that show strong expression of IRF4/MUM1 and CD10 (often BCL6+, BCL2 variable, and CD5±).
 - A minimum of 10% tumor cellularity and at least 200 nuclei are typically required for FISH analysis. Marking the region of interest on the slide may be helpful

Action Required

- Pathologists ordering FISH in Case Builder can use the “Other” task protocol and add a comment about the probe required until the DUSP22/IRF4 task protocol has been built.
- IRF4 FISH testing for qualifying specimens may also be ordered by messaging requests through the EPIC InBasket at the following address: P Cgy Accc Cancer Cytogenetics Laboratory

Effective Immediately



Questions/Concerns

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