MAYO CLINIC LABORATORIES

NEW TEST

Notification Date: November 12, 2021
Effective Date: December 13, 2021

B-Cell Acute Lymphoblastic Leukemia/Lymphoma (ALL), Specified FISH, Varies

Test ID: BALMF

Useful for:

Detecting a neoplastic clone associated with the common chromosome abnormalities and classic rearrangements seen in patients with B-cell acute lymphoblastic leukemia/lymphoma (B-ALL/LBL) using client specified probes.

An adjunct to conventional chromosome studies in patients with B-ALL/LBL.

Evaluating specimens in which standard cytogenetic analysis is unsuccessful.

Testing Algorithm:
This test includes a charge for the probe application, analysis, and professional interpretation of results for 1 probe set (2 individual fluorescence in situ hybridization [FISH] probes or 3 individual FISH probes). Additional charges will be incurred for all reflex or additional probe sets performed.

If the patient is being treated for known abnormalities, indicate the abnormality and which probes should be used.

When specified, any of the following probes will be performed:
1q25 rearrangement, ABL2 break-apart
5q33 rearrangement, PDGFRB break-apart
7p-, IKZF1/CEP7
9p24.1 rearrangement, JAK2 break-apart
+9/9p-, CDKN2A/D9Z1
t(9;22) BCR/ABL1
9q34 rearrangement, ABL1 break-apart
11q23 rearrangement, MLL (KMT2A) break-apart
t(4;11)(q21;q23), AFF1/MLL
t(6;11)(q27;q23), MLLT4(AFDN)/MLL
t(9;11)(p22;q23), MLLT3/MLL
t(10;11)(p13;q23), MLLT10/MLL
t(11;19)(q23;p13.1), MLL/ELL
t(11;19)(q23;p13.3), MLL/MLLT1
-17/17p-, TP53/D17Z1

t(1;19)(q23;p13), PBX1/TCF3
Hyperdiploidy, +4,+10,+17: D4Z1/D10Z1/D17Z1
t(12;21)(p13;q22), ETV6/RUNX1 & iAMP21
12p13 rearrangement, ETV6 break-apart
14q32 rearrangement, IGH break-apart
t(Xp22.33;var) or t(Yp11.32;var), P2RY8 rearrangement
t(Xp22.33;var) or t(Yp11.32;var), CRLF2 rearrangement
t(X;14)(p22.33;q32) or t(Y;14)(p11.32;q32)
8q24.1 rearrangement, MYC break-apart

Reflex Tests:

Test ID	Reporting Name	Available Separately	Always Performed
BALMB	Probe, Each Additional (BALMF)	No (Bill Only)	No
BAL3B	Probe, Tri-Color (BAL)	No (Bill Only)	No

Methods:
Fluorescence In Situ Hybridization (FISH)

Reference Values:
An interpretive report will be provided.

Specimen Requirements:

Preferred Specimen Type: Bone marrow

Preferred Container/Tube: Yellow top (ACD)

Acceptable Container/Tube: Green top (heparin) or lavender top (EDTA)

Specimen Volume: 2-3 mL

Minimum Volume: 1 mL

Collection Instructions:

1. It is preferable to send the first aspirate from the bone marrow collection.
2. Invert several times to mix bone marrow.

Acceptable Specimen Type: Blood

Preferred Container/Tube: Yellow top (ACD)

Acceptable Container/Tube: Green top (heparin) or lavender top (EDTA)

Specimen Volume: 6 mL

Minimum Volume: 2 mL

Collection Instructions:

1. Invert several times to mix blood.

Note:

1. A list of probes requested for analysis is required. Probes available for this test are listed in the Testing Algorithm section.

2. A reason for testing and a flow cytometry and/or a bone marrow pathology report should be submitted with each specimen. The laboratory will not reject testing if this information is not provided, however appropriate testing and/or interpretation may be compromised or delayed in some instances. If this information is not provided, an appropriate indication for testing may be entered by Mayo Clinic Laboratories.

Specimen Stability Information:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

Cautions:

This test is not approved by the US Food and Drug Administration, and it is best used as an adjunct to existing clinical and pathologic information.

Bone marrow is the preferred specimen type for this fluorescence in situ hybridization test. If bone marrow is not available, a blood specimen may be used if there are malignant cells in the blood specimen (as verified by a hematopathologist).

CPT Code:

88271 x2, 88275 x1, 88291 x1- FISH Probe, Analysis, Interpretation; 1 probe sets
88271 x2, 88275 x1 - FISH Probe, Analysis; each additional probe set (if appropriate)
88271 x1 –-FISH Probe; coverage for sets containing 3 probes (if appropriate)

Day(s) Performed: Monday through Friday **Report Available:** 7 to 10 days

Questions

Contact Joshua Couchene Laboratory Technologist Resource Coordinator at 800-533-1710.