



**Reporting Title:** Pediatric ALL (B-cell), FISH

**Performing Location:** Rochester

**Ordering Guidance:**

This test is only performed on specimens from patients with B-cell acute lymphoblastic leukemia/lymphoma (B-ALL/LBL) who are 30 years of age or younger.

This test is intended to be ordered when the entire B-ALL fluorescence in situ hybridization (FISH) panel is needed for a pediatric patient.

This test should NOT be used to screen for residual B-cell acute lymphoblastic leukemia/lymphoma (B-ALL/LBL).

If using FISH to monitor B-ALL patients, it is recommended to use individual (or limited) FISH probe sets.

If limited B-cell ALL FISH probes are preferred, order BALMF / B-Cell Acute Lymphoblastic Leukemia/Lymphoma (ALL), Specified FISH, Varies, and request specific probes for targeted abnormalities.

If the patient clinically relapses, a conventional chromosome study may be useful to identify cytogenetic changes in the neoplastic clone or the possible emergence of a new therapy-related myeloid clone.

If this test is ordered on a patient 31 years of age or older, this test will be canceled and automatically reordered by the laboratory as BALAF / B-Cell Acute Lymphoblastic Leukemia/Lymphoma (ALL), Adult, FISH, Varies.

If this test is ordered and the laboratory is informed that the patient is 30 years of age or younger AND is on a Children's Oncology Group protocol, this test will be canceled and automatically reordered by the laboratory as COGBF / B-Cell Acute Lymphoblastic Leukemia/Lymphoma (ALL), Children's Oncology Group Enrollment Testing, FISH, Pediatric, Varies.

If either (or both) AMLPF / Acute Myeloid Leukemia (AML), Specified FISH, Varies; or TALPF / T-Cell Acute Lymphoblastic Leukemia/Lymphoma (ALL), Pediatric, FISH, Varies, is (are) ordered concurrently with this test, the laboratory may cancel this test and automatically reorder as BALMF / B-Cell Acute Lymphoblastic Leukemia/Lymphoma (ALL), Specified FISH, Varies with the following FISH probes: ETV6/RUNX1, PBX1/TCF3, 4/10/17, break-apart IGH, break-apart CRLF2, break-apart P2RY8, break-apart MYC, break-apart ABL2, break-apart PDGFRB, break-apart JAK2, break-apart ABL1, and IKZF1/cep7. If an abnormality is identified that would result in reflex testing in BALPF, the same reflex testing will be performed in the BALMF. This cancellation is necessary to avoid duplicate testing. Probes for CDKN2A/D9Z1, ABL1/BCR, break-apart MLL, TP53/D17Z1 will still be performed as part of the pediatric T-ALL FISH panel.

If PHLDF / Philadelphia Chromosome-like Acute Lymphoblastic Leukemia (Ph-like ALL), Diagnostic FISH, Varies, is ordered concurrently with this test, PHLDF testing will be canceled. This cancellation is necessary to avoid duplicate testing as PHLDF probes are included within this test, when appropriate.

For patients with B-cell lymphoma, order BLPMF / B-Cell Lymphoma, Specified FISH, Varies.

For testing paraffin-embedded tissue samples from patients with B-cell acute lymphoblastic lymphoma, order BLBLF / B-Cell Lymphoblastic Leukemia/Lymphoma, FISH, Tissue. If a paraffin-embedded tissue sample is submitted for this test, it will be canceled and BLBLF will be added and performed as the appropriate test.



**Additional Testing Requirements:**

At diagnosis, conventional cytogenetic studies (CHRBM / Chromosome Analysis, Hematologic Disorders, Bone Marrow) and this test should both be performed. If there is limited specimen available, this test only will be performed.

**Shipping Instructions:**

Advise Express Mail or equivalent if not on courier service.

**Necessary Information:**

1. 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 not provided, an appropriate indication for testing may be entered by Mayo Clinic Laboratories.
2. If the patient has received an opposite sex bone marrow transplant, note this information on the request.

**Specimen Requirements:**

Submit only 1 of the following specimens:

**Preferred**

Specimen Type: Bone marrow

Container/Tube:

Preferred: Yellow top (ACD)

Acceptable: Green top (heparin) or lavender top (EDTA)

Specimen Volume: 2 to 3 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.
3. Send bone marrow specimen in original tube. Do not aliquot.

**Acceptable**

Specimen Type: Whole blood

Container/Tube:

Preferred: Yellow top (ACD)

Acceptable: Green top (heparin) or lavender top (EDTA)

Specimen Volume: 6 mL

Collection Instructions:

1. Invert several times to mix blood.
2. Send whole blood specimen in original tube. Do not aliquot.

**Specimen Minimum Volume:**

Whole blood: 2 mL; Bone marrow: 1 mL

**Forms:**

If not ordering electronically, complete, print, and send a Hematopathology/Cytogenetics Test Request (T726) with the specimen.

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

**Ask at Order Entry (AOE) Questions:**

Test ID	Question ID	Description	Type	Reportable
BALPF	GC068	Reason for Referral	Plain Text	Yes
BALPF	GC069	Specimen: <ul style="list-style-type: none"><li>• Whole blood ACD</li><li>• Bone marrow ACD</li><li>• Whole blood Na Hep</li><li>• Bone marrow Na Hep</li><li>• Whole blood EDTA</li><li>• Bone marrow EDTA</li></ul>	Answer List	Yes

**Result Codes:**

Result ID	Reporting Name	Type	Unit	LOINC®
609548	Result Summary	Alphanumeric		50397-9
609549	Interpretation	Alphanumeric		69965-2
609550	Result Table	Alphanumeric		93356-4
609551	Result	Alphanumeric		62356-1
GC068	Reason for Referral	Alphanumeric		42349-1
GC069	Specimen	Alphanumeric		31208-2
609552	Source	Alphanumeric		31208-2
609553	Method	Alphanumeric		85069-3
609554	Additional Information	Alphanumeric		48767-8
609555	Disclaimer	Alphanumeric		62364-5
609556	Released By	Alphanumeric		18771-6

LOINC and CPT codes are provided by the performing laboratory.



**Supplemental Report:**

No

**CPT Code Information:**

88271 x 23, 88275 x 11, 88291 x 1-FISH Probe, Analysis, Interpretation; 11 probe sets  
88271 x 2, 88275 x 1-FISH Probe, Analysis; each additional probe set (if appropriate)

**Reflex Tests:**

Test ID	Reporting Name	CPT Units	CPT Code	Always Performed	Orderable Separately
BALPB	Probe, Each Additional (BALPF)			No	No (Bill Only)

**Reference Values:**

An interpretive report will be provided.