Reporting Title: Adult AML, FISH
Performing Location: Rochester

Ordering Guidance:

This test is only performed on specimens from patients with acute myeloid leukemia (AML) who are 31 years of age or older.

This test should NOT be used to screen for residual acute myeloid leukemia (AML).

Minimal residual disease (MRD) monitoring in patients with AML known to have either t(15;17) with PML::RARA fusion, inv(16) or t(16;16) with MYH11::CBFB fusion, t(8;21) with RUNX1T1::RUNX1 fusion, or t(9;22) with BCR::ABL1 fusion should be performed by quantitative reverse transcriptase polymerase chain reaction and NOT by FISH testing.

It is recommended that MRD monitoring in AML patients be performed by AML-MRD Flow cytometry rather than FISH testing using individual FISH probe sets. This is particularly true for the deletion/monosomy probe sets (5, 7, 17) which have cutoffs that exceed 10% of nuclei.

If limited AML FISH probes are preferred, order AMLMF / Acute Myeloid Leukemia (AML), Specified FISH, Varies and request specific probes for targeted abnormalities.

This test is intended for instances when the entire AML fluorescence in situ hybridization (FISH) panel is needed for an adult patient.

If this test is ordered on a patient 30 years of age or younger, this test will be canceled and automatically reordered by the laboratory as AMLPF / Acute Myeloid Leukemia (AML), FISH, Pediatric, 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 COGMF / Acute Myeloid Leukemia (AML), Children's Oncology Group Enrollment Testing, FISH, Varies.

If either (or both) BALAF / B-Cell Acute Lymphoblastic Leukemia/Lymphoma (ALL), FISH, Adult, Varies; or TALAF / T-Cell Acute Lymphoblastic Leukemia/Lymphoma (ALL), Adult, FISH, Varies, is ordered concurrently with this test, the laboratory may cancel this test and automatically reorder as AMLMF / Acute Myeloid Leukemia (AML), Specified FISH, Varies with the following FISH probes: RUNX1T1/RUNX1, PML/RARA, MYH11/CBFB, RPN1/MECOM, DEK/NUP214, D5S630/EGFR1, D7Z1/D7S486, TP53/D17Z1. If an abnormality is identified that would result in reflex testing in this test, the same reflex testing will be performed in the AMLMF. This cancellation is necessary to avoid duplicate testing. The break-apart MLL probe set will still be performed as part of either the adult B-ALL or T-ALL FISH panel.

For testing paraffin-embedded tissue samples from patients with AML/myeloid sarcoma, order MSTF / Myeloid Sarcoma, FISH, Tissue.

Shipping Instructions:

Advise Express Mail or equivalent if not on courier service.

Necessary Information:

A reason for testing and a flow cytometry and/or a bone marrow pathology report are requested 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.

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 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 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
AMLAF	GC059	Reason for Referral	Plain Text	Yes
AMLAF	GC060	Specimen: • Whole blood ACD • Bone marrow ACD • Whole blood Na Hep • Bone marrow Na Hep • Whole blood EDTA • Bone marrow EDTA	Answer List	Yes

Result Codes:

Result ID	Reporting Name	Type	Unit	LOINC®
609518	Result Summary	Alphanumeric		50397-9
609519	Interpretation	Alphanumeric		69965-2
609520	Result Table	Alphanumeric		93356-4
609521	Result	Alphanumeric		62356-1
GC059	Reason for Referral	Alphanumeric		42349-1
GC060	Specimen	Alphanumeric		31208-2
609522	Source	Alphanumeric		31208-2
609523	Method	Alphanumeric		85069-3
609524	Additional Information	Alphanumeric		48767-8
609525	Disclaimer	Alphanumeric		62364-5
609526	Released By	Alphanumeric		18771-6

LOINC and CPT codes are provided by the performing laboratory.

Supplemental Report:
No

CPT Code Information:

88271x8, 88275x4, 88291x1-FISH Probe, Analysis, Interpretation; 4 probe sets
88271x2, 88275x1-FISH Probe, Analysis; each additional probe set (if appropriate)

Reflex Tests:

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

Reference Values:

An interpretive report will be provided.