

---

**Reporting Title:** AML, Specified FISH**Performing Location:** Rochester**Ordering Guidance:**

This test is intended for instances when limited acute myeloid leukemia (AML) fluorescence in situ hybridization (FISH) probes are needed based on specific abnormalities or abnormalities identified in the diagnostic sample. If targeted FISH probes are not included with this test order, test processing will be delayed and the test may be canceled and automatically reordered by the laboratory as either AMLAF / Acute Myeloid Leukemia (AML), FISH, Adult, Varies or AMLPF / Acute Myeloid Leukemia (AML), FISH, Pediatric, Varies depending on the age of the patient.

If the entire AML FISH panel is preferred for an adult patient, order AMLAF / Acute Myeloid Leukemia (AML), FISH, Adult, Varies.

If the entire AML FISH panel is preferred for a pediatric patient, order AMLPF / Acute Myeloid Leukemia (AML), FISH, Pediatric, Varies.

At diagnosis, conventional cytogenetic studies (CHRBM / Chromosome Analysis, Hematologic Disorders, Bone Marrow) and a complete AML FISH panel (either AMLAF or AMLPF) should be performed.

Minimal residual disease (MRD) monitoring in patients with acute myeloid leukemia (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 (RT-PCR) 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 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.

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

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: 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:**

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
AMLMF	GC097	Reason for Referral	Plain Text	Yes
AMLMF	GC098	Probes Requested	Plain Text	Yes
AMLMF	GC099	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®
614204	Result Summary	Alphanumeric		50397-9
614205	Interpretation	Alphanumeric		69965-2
614206	Result Table	Alphanumeric		93356-4
614207	Result	Alphanumeric		62356-1
GC097	Reason for Referral	Alphanumeric		42349-1
GC098	Probes Requested	Alphanumeric		78040-3
GC099	Specimen	Alphanumeric		31208-2
614208	Source	Alphanumeric		31208-2
614209	Method	Alphanumeric		85069-3
614210	Additional Information	Alphanumeric		48767-8
614211	Disclaimer	Alphanumeric		62364-5
614212	Released By	Alphanumeric		18771-6

LOINC and CPT codes are provided by the performing laboratory.

## Supplemental Report:

No

## CPT Code Information:

88271x2, 88275x1, 88291x1- FISH Probe, Analysis, Interpretation; 1 probe set  
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
AMLMB	Probe, Each Additional (AMLMF)			No	No (Bill Only)

**Reference Values:**

An interpretive report will be provided.