

## Oncology Studies

The following section contains oncology testing information regarding chromosome and FISH studies.

### **ONCOLOGY CHROMOSOME STUDIES:**

Collection requirements are specimen dependent and same as chromosome study requirements. See chromosome study requirements for details.

<b>BILLING CODE / NAME</b>	<b>SPECIMEN TYPE</b>	<b>COLLECTION</b>	<b>TAT</b>	<b>CPT CODING</b>	<b>CODING DESCRIPTION</b>
CSBM / Bone Marrow Chromosome Study	Bone Marrow	2-5 cc bone marrow Draw in sterile sodium heparin syringe. Cap the syringe or transfer to a sterile tube. Send at room temperature. 10mm bone marrow core. Place in sterile culture medium or saline Send at room temperature.	1-12 days	88237 88262	Culture – bone marrow Count 20 cells, 2 karyograms
CSLB / Leukemic Blood Chromosome Study	Leukemic Blood	5 cc drawn in sterile sodium heparin whole blood tube. Send at room temperature.	1-12 days	88237 88262	Culture – leukemic blood Count 20 cells, 2 karyograms
CSLN / Lymph Node Chromosome Study	Lymph Node	5 mm <sup>3</sup> involved tissue in sterile culture medium or saline. Send at room temperature.	1-12 days	88239 88262	Culture – solid tumor Count 20 cells, 2 karyograms
CSMT / Malignant Tissue Chromosome Study	Malignant Tissue	5 mm <sup>3</sup> involved tissue (solid tumor or other) in sterile culture medium or saline. Send at room temperature.	1-12 days	88239 88262	Culture – solid tumor Count 20 cells, 2 karyograms

*A STAT TAT service is provided for diagnostic acute leukemia specimens.*

**Bone Marrow Chromosome Study:** A minimum of twenty G-banded metaphases studied with two karyograms prepared per clonal cell-line. If CLL is suspected, a leukemic peripheral blood specimen is preferred.

**Leukemic Blood Chromosome Study:** A minimum of twenty G-banded metaphases studied with two karyograms prepared per clonal cell-line.

**Lymph Node Chromosome Study:** A minimum of twenty G-banded metaphases studied with two karyograms prepared per clonal cell-line.

**Malignant Tissue Chromosome Study:** A minimum of twenty G-banded metaphases studied with two karyograms prepared per clonal cell-line. Please indicate tissue types sent.

**ONCOLOGY STATISTICAL (NON-MORPHOLOGICAL) FISH STUDIES:**

These tests can to be performed on non-paraffin tissue only and do not require a pathologists interpretation. If the study is required on a paraffin specimen, a general morphometric (GENM) FISH test will be charged instead of a named test below.

<b>BILLING CODE</b>	<b>TEST NAME</b>	<b>DESCRIPTION</b>	<b>CPT CODING</b>	<b>CODING DESCRIPTION</b>
5Q-	5q31-/-5 study	Deletion of 5q31 or aneuploidy of chromosome 5 by interphase	88271x2 88275	FISH probe Interphase analysis 100-300 cells
6Q-	6q21- study	Deletion of 6q21 by interphase	88271x2 88275	FISH probe Interphase analysis 100-300 cells
7Q-	7q31-/-7 study	Deletion of 7q31 or aneuploidy of chromosome 7 by interphase	88271x2 88275	FISH probe Interphase analysis 100-300 cells
13Q-	13q14 deletion study	Deletion of 13q14 by interphase	88271x2 88275	FISH probe Interphase analysis 100-300 cells
20Q-	20q12 deletion study	Deletion of 20q12 by interphase	88271x2 88275	FISH probe Interphase analysis 100-300 cells
ALKF	ALK t(2;5) study	Rearrangement involving ALK (2p23) by interphase	88271x2 88275	FISH probe Interphase analysis 100-300 cells
ATM	11q22.3- study	Deletion of 11q22.3 interphase study	88271x2 88275	FISH probe Interphase analysis 100-300 cells
BC2	IGH@/BCL2 t(14;18) study	Rearrangement involving IGH@ (14q32.3) and BCL2 (18q22) by interphase	88271x2 88275	FISH probe Interphase analysis 100-300 cells
BC6	BCL6 t(3;?) study	Rearrangement involving BCL6 (3q27) by interphase	88271x2 88275	FISH probe Interphase analysis 100-300 cells
BCR	BCR/ABL1 t(9;22) study	Rearrangement involving BCR (9q34) and ABL1 (22q11.2) by interphase	88271x2 88275	FISH probe Interphase analysis 100-300 cells
CBFB	CBFB inv(16) or t(16;16) study	Rearrangement involving CBFB (16q22) by interphase	88271x2 88275	FISH probe Interphase analysis 100-300 cells
CHIC	CHIC2 4q12 study	Rearrangement involving CHIC2 (4q12) by interphase	88271x2 88275	FISH probe Interphase analysis 100-300 cells
CD1	IGH@/CCND1 t(11;14) study	Rearrangement involving IGH@ (14q32.3) and CCND1 (11q13) by interphase	88271x2 88275	FISH probe Interphase analysis 100-300 cells

<b>BILLING CODE</b>	<b>TEST NAME</b>	<b>DESCRIPTION</b>	<b>CPT CODING</b>	<b>CODING DESCRIPTION</b>
CDKN	CDKN2A (P16) 9p21	Deletion of 9p21 by interphase	88271x2 88275	FISH probe Interphase analysis 100-300 cells
ETV6	ETV6/RUNX1 (TEL/AML1) t(12;21) study	Rearrangement involving ETV6/TEL (12p13) and RUNX1/AML1 (21q22) by interphase	88271x2 88275	FISH probe Interphase analysis 100-300 cells
FGFR	FGFR3/IGH@ t(4;14) study	Rearrangement involving IGH@ (14q32.3) and FGFR3 (4p16) by interphase	88271x2 88275	FISH probe Interphase analysis 100-300 cells
GOI	General Oncology Interphase study	Other or unlisted oncology probe or by interphase	88271x2 88275	FISH probe Interphase analysis 100-300 cells
IGH	Break apart IGH@ probe study	Rearrangement involving IGH@ (14q32.3) by interphase	88271x2 88275	FISH probe Interphase analysis 100-300 cells
MAF	IGH@/MAF t(14;16) study	Rearrangement involving IGH@ (14q32.3) and MAF (16q23) by interphase	88271x2 88275	FISH probe Interphase analysis 100-300 cells
MALT	MALT t(18;?) study	Rearrangement involving MALT (18q21) by interphase	88271x2 88275	FISH probe Interphase analysis 100-300 cells
MLL	MLL study t(11;?) study	Rearrangement involving MLL (11q23) by interphase	88271x2 88275	FISH probe Interphase analysis 100-300 cells
MYC	IGH@/MYC t(8;14) study	Rearrangement involving IGH@ (14q32.3) and MYC (8q24) by interphase	88271x2 88275	FISH probe Interphase analysis 100-300 cells
MYPL	Chromosomes 5, 9 15 enumeration study	Detection of aneuploidy of chromosomes 5, 9 and 15 in myeloma by interphase	88271x3 88275	FISH probe Interphase analysis 100-300 cells
NMYC	2p24 amplification study	Detection of amplification of 2p24 by interphase	88271x2 88275	FISH probe Interphase analysis 100-300 cells
PML	PML/RARA t(15;17) study	Rearrangement involving PML (15q22) and RARA (17q21.1) by interphase	88271x2 88275	FISH probe Interphase analysis 100-300 cells
PTEN	10q23 deletion study	Deletion of 10q23 by interphase	88271x2 88275	FISH probe Interphase analysis 100-300 cells

<b>BILLING CODE</b>	<b>TEST NAME</b>	<b>DESCRIPTION</b>	<b>CPT CODING</b>	<b>CODING DESCRIPTION</b>
RUNX	RUNX1T1/RUNX1 (AML1/ETO) t(8;21) study	Rearrangement involving AML1 (21q22) and ETO (8q22) by interphase	88271x2 88275	FISH probe Interphase analysis 100-300 cells
TCR	TCR alpha break apart study	Rearrangement involving TCR alpha (14q11) by interphase	88271x2 88275	FISH probe Interphase analysis 100-300 cells
TP53	P53 deletion study	Deletion of 17p13.1 by interphase	88271x2 88275	FISH probe Interphase analysis 100-300 cells
TR8	Trisomy 8 study	Detection of trisomy 8 by interphase	88271x2 88275	FISH probe Interphase analysis 100-300 cells
TR12	Trisomy 12 study	Detection of trisomy 12 by interphase	88271x2 88275	FISH probe Interphase analysis 100-300 cells

**Oncology Statistical FISH (Non-morphometric) Studies:** The above mentioned FISH studies are performed without morphologic interpretation. Statistical normal ranges are established and reported.

Results can usually be obtained within 24 hours upon request. It is recommended that these results be used in conjunction with a chromosome study whenever possible. All PML/RARA diagnosis suspected rearrangement specimens will be performed STAT. If the sample is received before noon, a same day result will be attempted.

The AML Cytogenetics lab utilizes FDA approved protocols when available and uses standardized protocols established in the AML Cytogenetics lab when FDA protocols are not available. Controls are incorporated for all probes used and may include: internal control probes, positive / negative interphase control slides run in parallel, and normal metaphase control slides run in parallel. Normal ranges for interphase analysis have been established when appropriate.

**ONCOLOGY PANEL FISH STUDIES:**

<b>BILLING CODE</b>	<b>TEST NAME</b>	<b>DESCRIPTION</b>	<b>CPT CODING</b>	<b>CODING DESCRIPTION</b>
ALLP	Acute Lymphocytic Leukemia Panel	BCR, ETV6, MYC, MLL, CDKN and GOI (aneuploidy of 4/10/17) tests by interphase	88271x10 88275x5	FISH probe Interphase analysis 100-300 cells
AMLP	Acute Myeloid Leukemia Panel	5Q-, 7Q-, TR8, RUNX, MLL, CBFB, 20Q-, PML, BCR tests by interphase	88271x10 88275x5	FISH probe Interphase analysis 100-300 cells
CLLP	Chronic Lymphocytic Leukemia Panel	6Q-, TR12, ATM, TP53, 13Q-, CD1, MYC tests by interphase	88271x14 88275x7	FISH probe Interphase analysis 100-300 cells
NHPL	Non-Hodgkins Lymphoma Panel	ALKF, BC6, MYC, CD1, MALT, BC2, TP53 tests by interphase	88271x14 88275x7	FISH probe Interphase analysis 100-300 cells
MDSP	Myelodyslastic Syndrome Panel	5Q-, 7Q-, TR8, MLL, 20Q- tests by interphase	88271x10 88275x5	FISH probe Interphase analysis 100-300 cells
MMP	Myeloma Panel	MYPL, IGH, 13Q-, MAF, FGFR, TP53 tests by interphase	88271x11 88275x5	FISH probe Interphase analysis 100-300 cells

**Oncology Panel FISH testing:** Panel testing can be performed upon request. An MDS panel is not recommended if a chromosome study is available.