

NEXT-GENERATION SEQUENCING (NGS) PANELS & INTENDED USE

Please order **only one** NGS panel at a time. For a full list of interrogated genes, please refer to the Test Directory on [clevelandcliniclabs.com](#).

Panel Name	Order Code, (Specimen Type)	Intended Use	Gene Number (Variants Type)	Variants Detected
Acute Leukemia	HD MNGS (M) HD PNGS (PB) HD ONGS (O)	Known or suspected Acute Leukemias (e.g. Acute Lymphoblastic Leukemia – ALL, Acute Myeloid Leukemia – AML, Acute Promyelocytic Leukemia – APL)	63 (DNA) 107 (RNA)	DNA: SNVs, Insertions, Deletions RNA: Gene fusions, Structural Variants
SUBPANELS				
Chronic Myeloid	MY NGSM (M) MY NGSP (PB) MY NGSO (O)	Known or suspected Chronic Myeloid Neoplasms (e.g. MPNs, MDS)	56 (DNA)	DNA: SNVs, Insertions, Deletions
Chronic LPD	LP MNGS (M) LP PNGS (PB) LP ONGS (O)	Known or suspected Chronic Lymphoproliferative Disorders (LPDs)	7 (DNA)	DNA: SNVs, Insertions, Deletions
MPN	MP NM (M) MP NP (PB)	Known or suspected Myeloproliferative Neoplasms (MPNs) – includes <i>JAK2</i> , <i>CALR</i> , <i>MPL</i>	3 (DNA)	DNA: SNVs, Insertions, Deletions
Hematologic Neoplasm Fusion	HF MNGS (M) HF PNGS (PB) HF ONGS (O)	Fusion-Only Targeted Analysis (e.g. myeloid and lymphoid neoplasms with eosinophilia and abnormalities of <i>PDGFRA</i> , <i>PDGFRB</i> or <i>FGFR1</i> ; <i>BCR-ABL1</i> -negative CML); or, ALLs with insufficient specimen for combined DNA & RNA NGS testing	107 (RNA)	RNA: Gene fusions, Structural Variants

(M) = Marrow (PB) = Peripheral Blood (O) = Other: FFPE, Clot sections
SNV = Single Nucleotide Variant(s)

FLUORESCENCE *IN SITU* HYBRIDIZATION (FISH) PANELS

Panel Name	Probes	Blood Order Code	Bone Marrow Order Code	Tissue Order Code
FISH for Acute Myeloid Leukemia	t(15;17), t(8;21), inv(16), KMT2A (MLL)	FAMLPN	FAMLPM	
FISH for Aggressive B-Cell Lymphoma	BCL2 (18q21), BCL6 (3q27), c-MYC (8q24) and (8;14)(q24;q32)	FABCFP	FABCBM	FABCEL
FISH for B Lymphoblastic Leukemia (B-ALL)	t(9;22), KMT2A (MLL), t(12;21), 4/10 cen, <i>CRLF2</i> , <i>CRLF2/IGH</i>	FSHBLL	FSBLLM	
FISH for Chronic Lymphocytic Leukemia	17p13 (TP53), 11q22 (ATM), 12 cen, 13q34 (D13S319, LAMP1), 11;14 (IgH/CCND1)	CLLFSH	CLLFSM	
FISH for Myelodysplastic Syndrome	5q31 (EGR1), 7q31 (D7S486), 8 cen, 20q12 (D20S108)	FSHMDS	FSMDSM	
FISH for Myeloma*	13q, 17p, 1p/1q, CEP9/CEP15, IgH, IgH/CCND1 (11;14) <i>If an IgH translocation is present that is not IgH/CCND1, then will reflex to IgH/MMSET (4;14) and IgH/MAF (14;16).</i>		FSHPCM	
FISH for Myeloproliferative Neoplasms	t(9;22), 4q12 (PDGFRA), 5q33 (PDGFRB), 8p12 (FGFR1)	MPNFSH	MPNFSM	

*Plasma cells only

FISH PROBES (For a full list of FISH probes, please refer to the Test Directory on [clevelandcliniclabs.com](#))

Test Name	Gene(s)	Location	Blood Order Code	Bone Marrow Order Code	Tissue Order Code
FISH for BCL2	<i>BCL2</i>	18q21	BCL2FH	BCL2FM	BCL2FT
FISH for BCL6	<i>BCL6</i>	3q27	BCL6FH	BCL6FM	BCL6FT
FISH for BCR/ABL1	<i>BCR/ABL1</i>	t(9;22)	BCRFSH	BCRFSM	
FISH for BIRC3/MALT1	<i>BIRC3/MALT1 (API2/MALT1)</i>	t(11;18)			T1118
FISH for CBFB/MYH11	<i>CBFB</i>	inv(16)	INV16F	INV16M	
FISH for CCND1	<i>CCND1</i>	11q13	CCND1F	CCND1M	CCND1T
FISH for del (5q)	<i>EGR1</i>	5q31	5QFSH	5QFSBM	
FISH for del (7q)	<i>D7S486</i>	7q31	FISH7Q	FSH7QM	
FISH for DUSP22/IRF4	<i>DUSP22/IRF4</i>	6p25.3			DUIRFH
FISH for ETV6/RUNX1	<i>ETV6/RUNX1 (TEL/AML1)</i>	t(12;21)	1221FH	1221FM	
FISH for FGFR1	<i>FGFR1</i>	8p12	FGFR1F	FGFR1M	
FISH for IGH/BCL2	<i>IGH/BCL2</i>	t(14;18)	FSHFCL	FSFCLM	T1418
FISH for IGH/CCND1	<i>IGH/CCND1</i>	t(11;14)	FSHMCL	FSMCLM	T1114
FISH for IGH/MYC/CEP8	<i>IGH/MYC</i>	t(8;14)	814FSH	814FSM	T814
FISH for MALT1	<i>MALT1</i>	18q21			MALT1
FISH for MLL	<i>MLL</i>	11q23	MLLFSH	MLLFBM	
FISH for MYC(8q24)	<i>MYC</i>	8q24	MYCFSH	MYCFSM	MYC
FISH for PDGFRA	<i>PDGFRA</i>	4q12	PDGFRA	PGFRAM	
FISH for PDGRRB	<i>PDGRRB</i>	5q33	PDGFRB	PDGFBM	
FISH for PML/RARA	<i>PML/RARA</i>	t(15;17)	APLFSH	APLFBM	
FISH for RARA	<i>RARA</i>	17q21	RARFSH	RARFSM	
FISH for 8;21 Translocation for AML	<i>RUNX1/RUNX1T1 (AML1/ETO)</i>	t(8;21)	AMLFSH	AMLFBM	
FISH for Trisomy 4, 10	Trisomy 4/10	4 cen, 10 cen	FHT410	FT410M	
FISH for Trisomy 8, del(20q)	Trisomy 8/D20S108	8 cen, 20q12	20Q8FH	20Q8BM	
FISH for TP63	<i>TP63</i>	3q28			TP63FH