Neuberg DIAGNOSTICS

● India ● UAE ● South Africa ● USA

New INSIGHTS

Neuberg DIAGNOSTICS CENTER FOR GENOMIC MEDICINE

OncoCEPT HAEM+

Haemato Oncology

Serial number : 032 Edition : 1. 2024

OncoCEPT - HAEM+

- Sample Type:- Blood or Bone Marrow
- Next Generation Sequencing
- TAT:- 10 working days*

GENES COVERED	Myeloid	Lymphoid
DNA Target genes	100+	150+
Fusion Driver genes (RNA)	50	54

List of Genes in Panel

DNA

SNVs/Small Indels (Mutations) For Myeloid Malignancies

ABL1	CEBPA	ETV6	JAK3	NCOR2	RAD21	SRSF2
ANKRD26	CREBBP	EZH2	KANSL1	NF1	RB1	STAG2
ARID1A	CSF1R	FANCL	KDM5A	NFE2	RIT1	STAT5B
ASXL1	CSF3R	FBXW7	KDM6A	NOTCH1	RRAS	TCF3
ASXL2	CTCF	FLT3	KIT	NPM1	RRAS2	TET2
ATM	CTNNA1	GATA1	KMT2A	NRAS	RUNX1	TP53
ATRX	CUX1	GATA2	KMT2D	PAX5	SAMD9	U2AF1
BCOR	DCLRE1C	GNAS	KRAS	PDGFRA	SAMD9L	U2AF2
BCORL1	DDX41	GNB1	LAMB4	PHF6	SETBP1	USP9X
BCR	DHX15	GPRC5A	LUC7L2	PIGA	SF1	WT1
BRAF	DNMT3A	IDH1	MECOM	PLCG2	SF3A1	ZBTB7A
BRCC3	EED	IDH2	MLLT3	PPM1D	SF3B1	ZRSR2
CALR	HRAS	IKZF1	MPL	PRPF40B	SH2B3	
CBL	Ep300	IRF1	MYC	PTEN	SMC1A	
CDKN2A	ETNK1	JAK2	MYD88	PTPN11	SMC3	

RNA

Fusion Driver Genes For Myeloid Malignancies

ABL1	CRBN	FLT3	KMT2A	MNX1	NUP98	RARG
ALK	CREBBP	FUS	LMO2	MRTFA	PDGFRA	RET
BCL11A	ERG	GATA1	LYN	MYB	PDGFRB	ROS1
BCL11B	ETV6	GLIS2	MECOM	MYH11	PICALM	RUNX1
BCR	FGFR1	JAK2	MLF1	NPM1	PML	RUNX1T1
CBFA2T3	FGFR2	KAT6A	MLLT10	NTRK3	RARA	STAT5B
CBFB	FIP1L1	KDM5A	MLLT3	NUP214	RARB	ZMYM2
						ZNF384

TAT mentioned is for working days for > 90% samples*

DNA

SNVs/small indels (Mutations) For Lymphoid Malignancies

ADA2	CD274	EPHA7	JAK2	NSD2	RUNX1T1	TNFRSF14
ARID1A	CD28	ERBB4	JAK3	P2RY8	S1PR1	TNFRSF21
ARID2	CD58	EZH2	JUNB	PAX5	S1PR2	TNFRSF9
ATM	CD70	FADD	KLF2	PDGFRB	SETD2	TNIP3
ATP6AP1	CD79B	FAS	KLHL14	PIK3CD	SETD5	TP53
ATP6V1B2	CD83	FASLG	KLHL6	PIK3R1	SF3B1	TRRAP
B2M	CDH2	FBXW10	KMT2D	PIM1	SGK1	U2AF1
BCL11B	CDKN1B	FLT3	KRAS	PLCG1	SH2B3	UBR5
BCL2	CDKN2A	FOXO1	LAPTM5	PLCG2	SMARCA2	VAV1
BCL6	CHD2	GNA13	LRBA	POT1	SMARCA4	XIAP
BCOR	CIC	HAVCR2	MAGT1	POU2F2	SOCS1	XPO1
BIRC3	CREBBP	HDAC2	MAP2K1	PRDM1	SOCS3	YY1
BRAF	CSF2RB	HRAS	MAP3K14	PRKCB	SPEN	ZFP36L1
BRCA1	CSNK2B	HVCN1	MEF2B	PRKCD	STAT1	ZNF292
BRCA2	CTLA4	ID3	MFHAS1	PTEN	STAT5B	
BTG1	CTSS	IDH2	MGA	PTPN1	STAT6	
BTG2	CXCR4	IKBKB	MTOR	PTPN23	STK4	
BTK	DAPK1	IL12RB1	MYC	PTPN6	SUSD2	
CARD11	DDX3X	IL2RA	MYD88	PTPRD	SYK	
CASP10	DEF6	IL2RB	NFKBIA	RASGRP1	TBL1XR1	
CASP8	DNMT3A	IL2RG	NFKBIE	RB1	TCF3	
CCND1	DTX1	INO80	NOTCH1	REL	TCL1A	
CCR4	EGR2	IRF8	NOTCH2	RHOA	TET2	
CCR6	EOMES	ITK	NOTCH4	RHOH	TET3	
CCR7	EP300	JAK1	NRAS	RRAGC	TNFAIP3	

RNA

Fusion Genes For Lymphoid Malignancies

ABL1	CRLF2	IKZF1	MTCP1	PDGFRA	TP53
ABL2	CSF1R	IKZF3	MYB	PDGFRB	TP63
ALK	CTLA4	ITK	MYC	PTK2B	TYK2
BCL2	DUSP22	JAK2	NPM1	ROS1	ZNF384
BCL6	EPOR	KMT2A	NTRK3	RUNX1	
BIRC3	ERG	LMO2	NUP214	SYK	
CCND1	ETV6	LYN	NUP98	TAL1	
CD28	FGFR1	MALT1	NUTM1	TCF3	
CEBPE	FLI1	MEF2D	P2RY8	TCL1A	
CIITA	FLT3	MLLT10	PAX5	TFG	

Diseases Covered

Disorder wise:

1. Myeloid precursor lesions
a. Clonal haematopoiesis
b. Clonal cytopenias of undetermined significance

2. Myeloproliferative neoplasms
a. Chronic myeloid leukaemia
b. Chronic neutrophilic leukaemia
c. Chronic eosinophilic leukaemia
d. Polycythaemia vera
e. Essential thrombocythaemia
f. Primary myelofibrosis
g. Juvenile myelomonocytic leukaemia
h. Myeloproliferative neoplasm, NOS

3. Mastocytosis
a. Cutaneous mastocytosis
b. Systemic mastocytosis
c. Mast cell sarcoma

4. Myelodysplastic neoplasms
MDN with defining genetic abnormalities
a. MDN with low blasts and 5q deletion
b. MDN with low blasts and SF3B1 mutation
c. MDN with biallelic TP53 inactivation

MDN morphologically defined
a. MDN with low blasts
b. MDN hypoplastic
c. MDN with increased blasts

MDN of childhood
a. Childhood MDN with low blasts
b. Childhood MDN with increased blasts

5. Myelodysplastic/ myeloproliferative neoplasms
a. Chronic myelomonocytic leukaemia (CMML)
b. Myelodysplastic/myeloproliferative neoplasm with neutrophilia
c. Myelodysplastic/myeloproliferative neoplasm with SF3B1 mutation and thrombocytosis
d. Myelodysplastic/myeloproliferative neoplasm, NOS

6. Acute myeloid leukaemia
AML with defining genetic abnormalities
a. Acute promyelocytic leukaemia with PML::RARA fusion
b. AML with RUNX1::RUNX1T1 fusion
c. AML with CBFB::MYH11 fusion
d. AML with DEK::NUP214 fusion
e. AML with RBM15::MRTFA fusion
f. AML with BCR::ABL1 fusion
g. AML with KMT2A rearrangement
h. AML with MECOM rearrangement
I. AML with NUP98 rearrangement
j. AML with NPM1 mutation
k. AML with CEBPA mutation
l. AML myelodysplasia-related
m. AML with other defined genetic alterations

AML defined by differentiation
a. AML with minimal differentiation
b. AML without maturation
c. AML with maturation
d. Acute basophilic leukaemia
e. Acute myelomonocytic leukaemia
f. Acute monocytic leukaemia
g. Acute erythroid leukaemia
h. Acute megakaryoblastic leukaemia

Myeloid sarcoma
a. Myeloid sarcoma

7. Myeloid neoplasms, secondary
Myeloid neoplasms and proliferations associated with antecedent or predisposing conditions
a. Myeloid neoplasm post cytotoxic therapy
b. Myeloid neoplasms associated with germline predisposition
c. Myeloid proliferations associated with Down syndrome

8. Myeloid/lymphoid neoplasms with eosinophilia and defining gene rearrangement
a. Myeloid/lymphoid neoplasm with PDGFRA rearrangement
b. Myeloid/lymphoid neoplasm with PDGFRB rearrangement
c. Myeloid/lymphoid neoplasm with FGFR1 rearrangement
d. Myeloid/lymphoid neoplasm with JAK2 rearrangement
e. Myeloid/lymphoid neoplasm with FLT3 rearrangement
f. Myeloid/lymphoid neoplasm with ETV6::ABL1 fusion
g. Myeloid/lymphoid neoplasms with other tyrosine kinase gene fusions

9. Acute leukaemias of mixed or ambiguous lineage

Acute leukaemia of ambiguous lineage with defining genetic abnormalities

a. Mixed-phenotype acute leukaemia with BCR::ABL1 fusion
b. Mixed-phenotype acute leukaemia with KMT2A rearrangement
c. Acute leukaemia of ambiguous lineage with other defined genetic alterations

Acute leukaemia of ambiguous lineage, immunophenotypically defined

a. Mixed-phenotype acute leukaemia, B/myeloid
b. Mixed-phenotype acute leukaemia, T/myeloid
c. Mixed-phenotype acute leukaemia, rare types
d. Acute leukaemia of ambiguous lineage, NOS
e. Acute undifferentiated leukaemia

10. Histiocytic/Dendritic cell neoplasms

Plasmacytoid dendritic cell neoplasms

a. Mature plasmacytoid dendritic cell proliferation associated with myeloid neoplasm
b. Blastic plasmacytoid dendritic cell neoplasm

Langerhans cell and other dendritic cell neoplasms

a. Langerhans cells neoplasms
b. Langerhans cell histiocytosis
c. Langerhans cell sarcoma

Other dendritic cell neoplasms

a. Indeterminate dendritic cell tumour
b. Interdigitating dendritic cell sarcoma

11. Histiocyte/macrophage neoplasms

Histiocytic neoplasms

a. Juvenile xanthogranuloma
b. Erdheim-Chester disease
c. Rosai-Dorfman Disease
d. ALK-positive histiocytosis
e. Histiocytic sarcoma

12. Precursor B-cell neoplasms

a. B-lymphoblastic leukaemia/ lymphoma with high hyperdiploidy
b. B-lymphoblastic leukaemia/ lymphoma with hypodiploidy
c. B-lymphoblastic leukaemia/lymphoma with iAMP21
d. B-lymphoblastic leukaemia/lymphoma with cancer is BCR::ABL1 fusion
e. B-lymphoblastic leukaemia/lymphoma with BCR::ABL1-like features
f. B lymphoblastic leukaemia/lymphoma with KMT2A rearrangement
g. B lymphoblastic leukaemia/lymphoma with ETV6::RUNX1 fusion
h. B-lymphoblastic leukaemia/lymphoma with ETV6::RUNX1-like features
i. B lymphoblastic leukaemia/lymphoma with TCF3::PBX1 fusion
j. B lymphoblastic leukaemia/lymphoma with IGH::IL3 fusion
k. B lymphoblastic leukaemia/lymphoma with TCF3::HLF fusion
l. B-lymphoblastic leukaemia/lymphoma with other defined genetic alterations
m. B-lymphoblastic leukaemia/lymphoma, NOS

13. Mature B-cell neoplasms

Pre-neoplastic and neoplastic small lymphocytic proliferations

a. Monoclonal B-cell lymphocytosis
b. Chronic lymphocytic leukaemia/ small lymphocytic lymphoma

Splenic B-cell lymphomas and leukaemias

a. Hairy cell leukaemia
b. Splenic marginal zone lymphoma
c. Splenic diffuse red pulp small B-cell lymphoma
d. Splenic B-cell lymphoma/leukaemia with prominent nucleoli

Lymphoplasmacytic lymphoma

a. Lymphoplasmacytic lymphoma

Marginal zone lymphoma

a. Extranodal marginal zone lymphoma of mucosa-associated lymphoid tissue
b. Primary cutaneous marginal zone lymphoma
c. Nodal marginal zone lymphoma
d. Paediatric nodal marginal zone lymphoma

Follicular lymphoma

a. In situ follicular B-cell neoplasm
b. Follicular lymphoma
c. Paediatric-type follicular lymphoma
d. Duodenal-type follicular lymphoma

Cutaneous follicle centre lymphoma

a. Primary cutaneous follicle centre lymphoma

Mantle cell lymphoma

a. In situ mantle cell neoplasm
b. Mantle cell lymphoma
c. Leukaemic non-nodal mantle cell lymphoma

14. Precursor T-cell neoplasms

T-lymphoblastic leukaemia/ lymphoma

a. T-lymphoblastic leukaemia/ lymphoma, NOS
b. Early T-precursor lymphoblastic leukaemia / lymphoma
c. Mature T-cell and NK-cell neoplasms

15. Mature T-cell and NK-cell leukaemias

a. T-prolymphocytic leukaemia
b. T-large granular lymphocytic leukaemia
c. NK-large granular lymphocytic leukaemia
d. Adult T-cell leukaemia/lymphoma
f. Sezary syndrome
g. Aggressive NK-cell leukaemia

Primary cutaneous T-cell lymphoid proliferations and lymphomas

a. Primary cutaneous CD4-positive small or medium T-cell lymphoproliferative disorder
b. Primary cutaneous acral CD8-positive T-cell lymphoproliferative disorder
c. Mycosis fungoides
d. Primary cutaneous CD30-positive T-cell lymphoproliferative disorder: Lymphomatoid papulosis
e. Primary cutaneous CD30-positive T-cell lymphoproliferative disorder: Primary cutaneous anaplastic large cell lymphoma
f. Subcutaneous panniculitis-like T-cell lymphoma
g. Primary cutaneous gamma/delta T-cell lymphoma
h. Primary cutaneous CD8-positive aggressive epidermotropic cytotoxic T-cell lymphoma
i. Primary cutaneous peripheral T-cell lymphoma, NOS

Hepatosplenic T-cell lymphoma

Hepatosplenic T-cell lymphoma

Anaplastic large cell lymphoma

a. ALK-positive anaplastic large cell lymphoma
b. ALK-negative anaplastic large cell lymphoma
c. Breast implant-associated anaplastic large cell lymphoma

Nodal T-follicular helper (TFH) cell lymphoma

a. Nodal TFH cell lymphoma, angioimmunoblastic-type
b. Nodal TFH cell lymphoma, follicular-type
c. Nodal TFH cell lymphoma, NOS

Other peripheral T-cell lymphomas

a. Peripheral T-cell lymphoma, NOS

EBV-positive NK-cell and T-cell lymphomas

a. EBV-positive nodal T- and NK-cell lymphoma
b. Extranodal NK/T-cell lymphoma

Please Note : For disorders, in which diagnosis is based on other recommended techniques such as IHC, FISH, etc, appropriate tests with other respective techniques are recommended in addition to Oncohaem Plus

Oncohaem
(DNA+RNA) By NGS - **MH004**

Oncohaem
DNA only by NGS
T4516

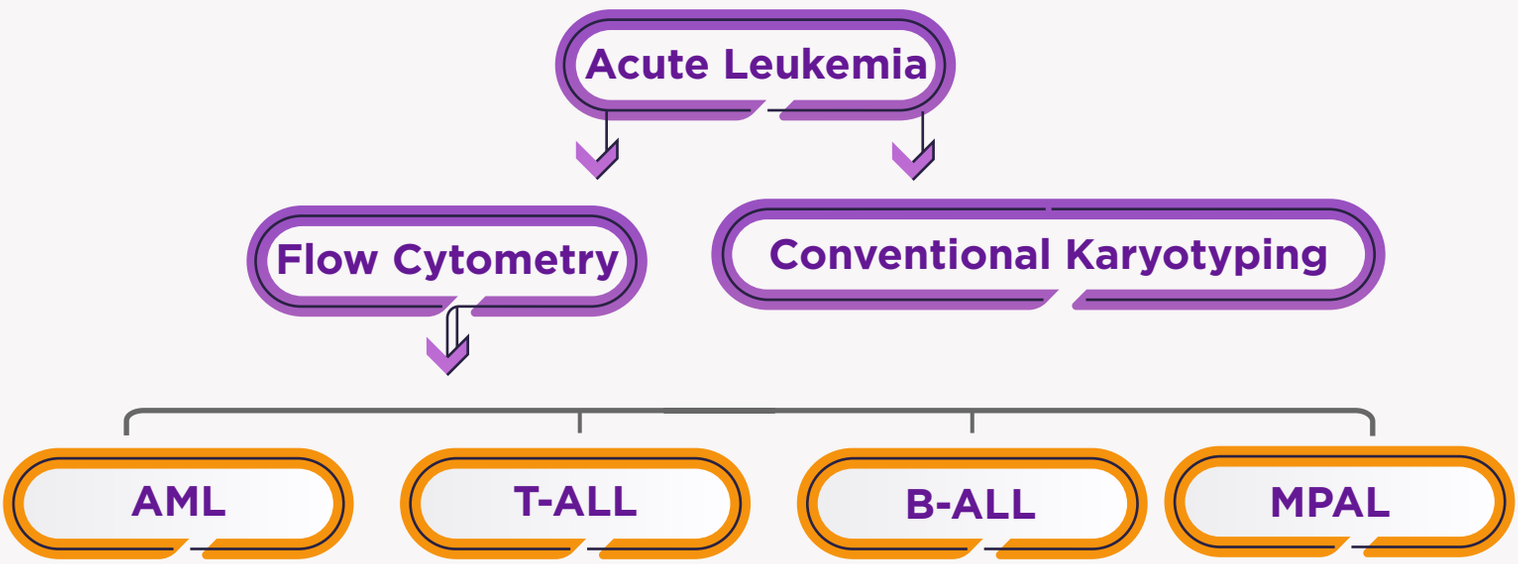
Oncohaem
RNA only by NGS
T4517

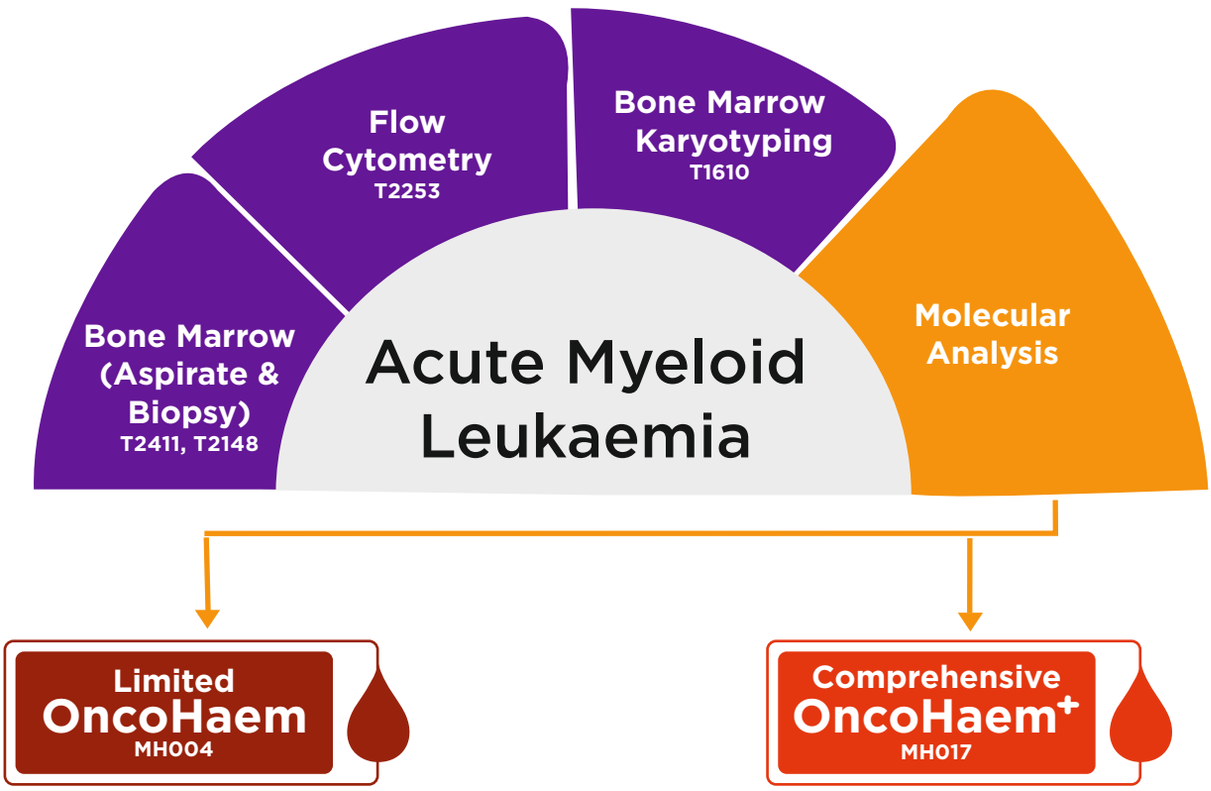
Oncohaem PLUS
panel by NGS:
(SNVs/small indels + Fusions) - **MH017**

Oncohaem PLUS
panel by NGS:
SNVs/small indels ONLY - **MH018**

Oncohaem PLUS
panel by NGS:
Fusions ONLY - **MH019**

Bone Marrow Examination Is Must for All Suspected Myeloid Neoplasms & Most Lymphoid Neoplasms





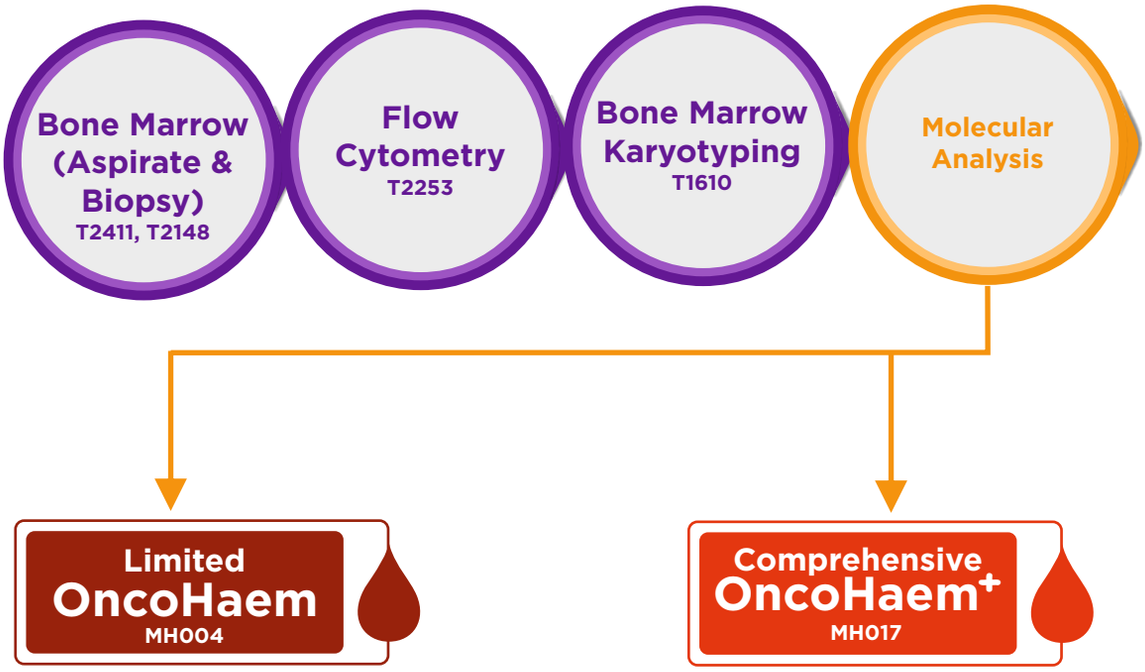
Genes Covered (DNA)						Onco Haem	Onco+ Haem
ABL1	ETV6	Il3	MYD88	PHF6	SH2B3	✓	✓
ASXL1	EZH2	JAK2	MYH11	PRPF8	SRSF2		
BCOR	FGFR1	KIT	NF1	PTPN11	STAG2		
BRAF	FLT3	KMT2A	NPM1	RARA	TCF3		
CALR	GATA2	KRAS	NRAS	RB1	TET2		
CBL	HRAS	MECOM	NUP214	RBM15	TP53		
CEBPA	IDH1	MLLT10	NUP98	RUNX1	U2AF1		
CSF3R	IDH2	MLLT3	PDGFRA	SETBP1	WT1		
DNMT3A	IKZF1	MPL	PDGFRB	SF3B1	ZRSR2		
SETD2	SAMD9L	EED	KANSL1	PLCG2	SF1	✗	✓
KMT2D	CDKN2A	EP300	KDM5A	PAX5	SF3A1		
ANKRD26	CREBBP	ETNK1	KDM6A	PTEN	SH2B3		
ARID1A	CSF1R	FANCL	LAMB4	RAD21	SMC1A		
ASXL2	CTCF	FBXW7	IRF1	PPM1D	SMC3		
ATM	CTNNA1	GATA1	LUC7L2	PRPF40B	STAT5B		
ATRX	CUX1	GNAS	MYC	RIT1	U2AF2		
BCORL1	DCLRE1C	GNB1	NFE2	RRAS	USP9X		
BCR	DDX41	GPRC5A	NOTCH1	RRAS2	ZBTB7A		
BRCC3	DHX15	JAK3	PIGA	SAMD9			

For Suspected Cases Of APML, FISH/RTPCR for PML::RARA & variant RARA may be considered for early diagnosis

Genes Covered (RNA)				Onco Haem	Onco+ Haem
ABL1	FGFR1	MYH11	Wt1	✓	✓
BRAF	FLT3	NPM1	NUP214		
CALR	GATA2	NUP98	MLLT10		
CBL	IDH1	PDGFRA	ZRSR2		
RUNX1	IDH2	PDGFRB	STAG2		
CSF3R	II3	RARA	SF3B1		
DNMT3A	JAK2	SRSF2	SETBP1		
MECOM	KIT	TCF3	TET2		
ETV6	MLLT3	Tp53	BCOR		
EZH2	KMT2A	U2AF1	RBM15		
ALK	FUS	MLLT10	RET	✗	✓
BCL11A	FGFR2	MNX1	ROS1		
BCL11B	FIP1L1	MRTFA	RUNX1T1		
BCR	GATA1	MYB	STAT5B		
CBFA2T3	GLIS2	NTRK3	ZMYM2		
CBFB	KAT6A	NUP214	ZNF384		
CRBN	KDM5A	PICALM			
CREBBP	LMO2	PML			
ERG	LYN	RARB			
ETV6	MLF1	RARG			

AML in WHO 2022	OncoHaem panel by NGS	Onco+ Haem
Acute promyelocytic leukaemia with PML::RARA fusion	+	+
Acute myeloid leukaemia with RUNX1::RUNX1T1 fusion	+	+
Acute myeloid leukaemia with CBFB::MYH11 fusion	+	+
Acute myeloid leukaemia with DEK::NUP214 fusion	+	+
Acute myeloid leukaemia with RBM15::MRTFA fusion	+	+
Acute myeloid leukaemia with KMT2A rearrangement	+	+
Acute myeloid leukaemia with MECOM rearrangement	+	+
Acute myeloid leukaemia with NUP98 rearrangement	+	+
Acute myeloid leukaemia with NPM1 mutation	+	+
Acute myeloid leukaemia with CEBPA mutation	+	+
Acute myeloid leukaemia, myelodysplasia-related	+	+
AML with RUNX1T3(CBFA2T3)::GLIS2	+	+
AML with MNX1::ETV6	+	+
AML with NPM1::MLF1	+	+
AML with KAT6A::CREBBP	-	+
AML with FUS::ERG	-	+

MPN and Eosinophilia



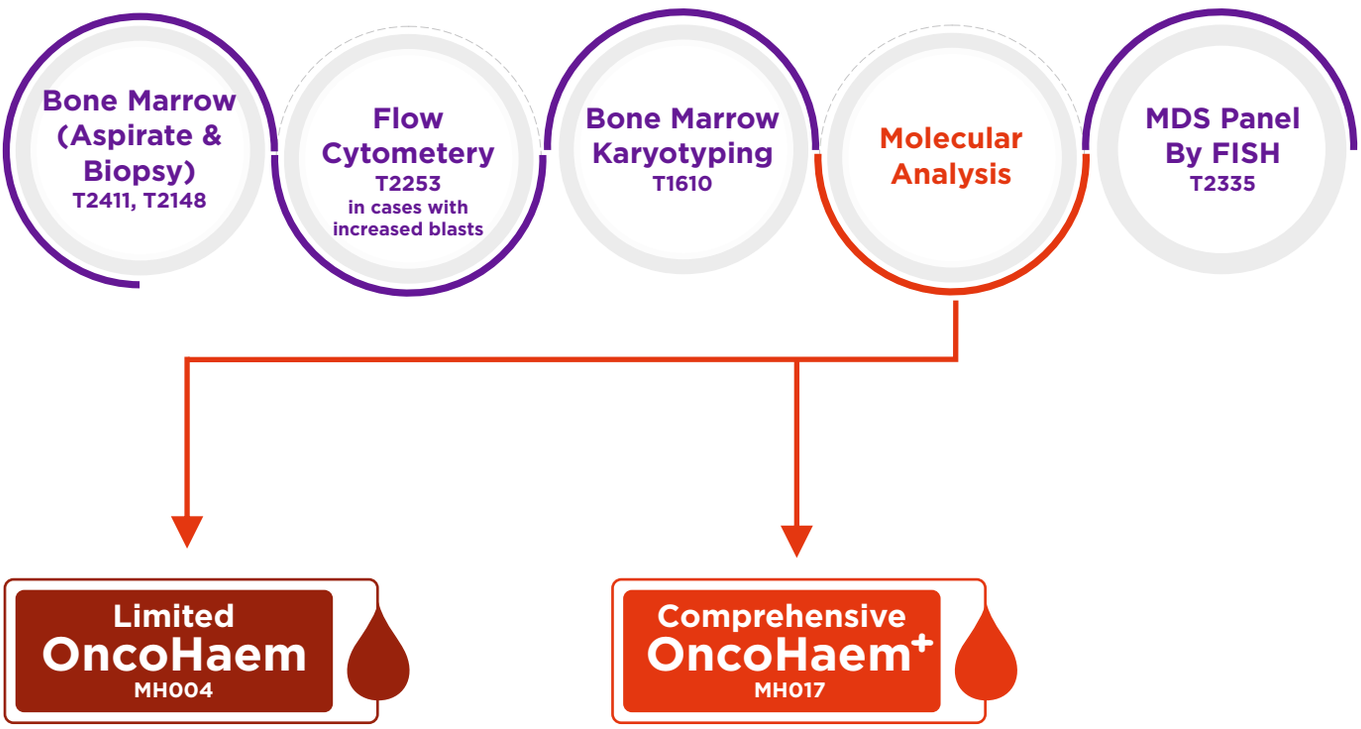
For suspected cases of CML, one can opt for RTPCR (Reverse Transcriptase PCR) for BCR::ABL1 (qualitative) if only information regarding BCR::ABL1 fusion status is required.

Genes Covered (DNA)						Onco Haem	Onco+ Haem
ABL1	EZH2	KIT	NPM1	RB1	TP53	✓	✓
ASXL1	FGFR1	KMT2A	NRAS	RBM15	U2AF1		
BCOR	FLT3	KRAS	NUP214	RUNX1	WT1		
BRAF	GATA2	MECOM	NUP98	SETBP1	ZRSR2		
CALR	HRAS	MLLT10	PDGFRA	SF3B1			
CBL	IDH1	MLLT3	PDGFRB	SH2B3			
CEBPA	IDH2	MPL	PHF6	SRSF2			
CSF3R	IKZF1	MYD88	PRPF8	STAG2			
DNMT3A	Il3	MYH11	PTPN11	TCF3			
ETV6	JAK2	NF1	RARA	TET2			
SETD2	SAMD9L	EED	KANSL1	PLCG2	SF1	✗	✓
KMT2D	CDKN2A	EP300	KDM5A	PAX5	SF3A1		
ANKRD26	CREBBP	ETNK1	KDM6A	PTEN	SH2B3		
ARID1A	CSF1R	FANCL	LAMB4	RAD21	SMC1A		
ASXL2	CTCF	FBXW7	IRF1	PPM1D	SMC3		
ATM	CTNNA1	GATA1	LUC7L2	PRPF40B	STAT5B		
ATRX	CUX1	GNAS	MYC	RIT1	U2AF2		
BCORL1	DCLRE1C	GNB1	NFE2	RRAS	USP9X		
BCR	DDX41	GPRC5A	NOTCH1	RRAS2	ZBTB7A		
BRCC3	DHX15	JAK3	PIGA	SAMD9			

**T4517 Oncohaem RNA only by NGS OR MH019 Oncohaem Plus (fusions only) for Eosinophilia may be considered if information for only RNA sequencing is required

Genes Covered (RNA)				Onco Haem	Onco+ Haem
ABL1	FGFR1	MYH11	Wt1	✓	✓
BRAF	FLT3	NPM1	NUP214		
CALR	GATA2	NUP98	MLLT10		
CBL	IDH1	PDGFRA	ZRSR2		
RUNX1	IDH2	PDGFRB	STAG2		
CSF3R	Il3	RARA	SF3B1		
DNMT3A	JAK2	SRSF2	SETBP1		
MECOM	KIT	TCF3	TET2		
ETV6	MLLT3	Tp53	BCOR		
EZH2	KMT2A	U2AF1	RBM15		
ALK	FUS	MLF1	RARB	✗	✓
BCL11A	FGFR2	MLLT10	RARG		
BCL11B	FIP1L1	MNX1	RET		
BCR	GATA1	MRTFA	ROS1		
CBFA2T3	GLIS2	MYB	RUNX1T1		
CBFB	KAT6A	NTRK3	STAT5B		
CRBN	KDM5A	NUP214	ZMYM2		
CREBBP	LMO2	PICALM	ZNF384		
ERG	LYN	PML			

MDN and MDN/MPN



Genes Covered (DNA)						Onco Haem	Onco+ Haem
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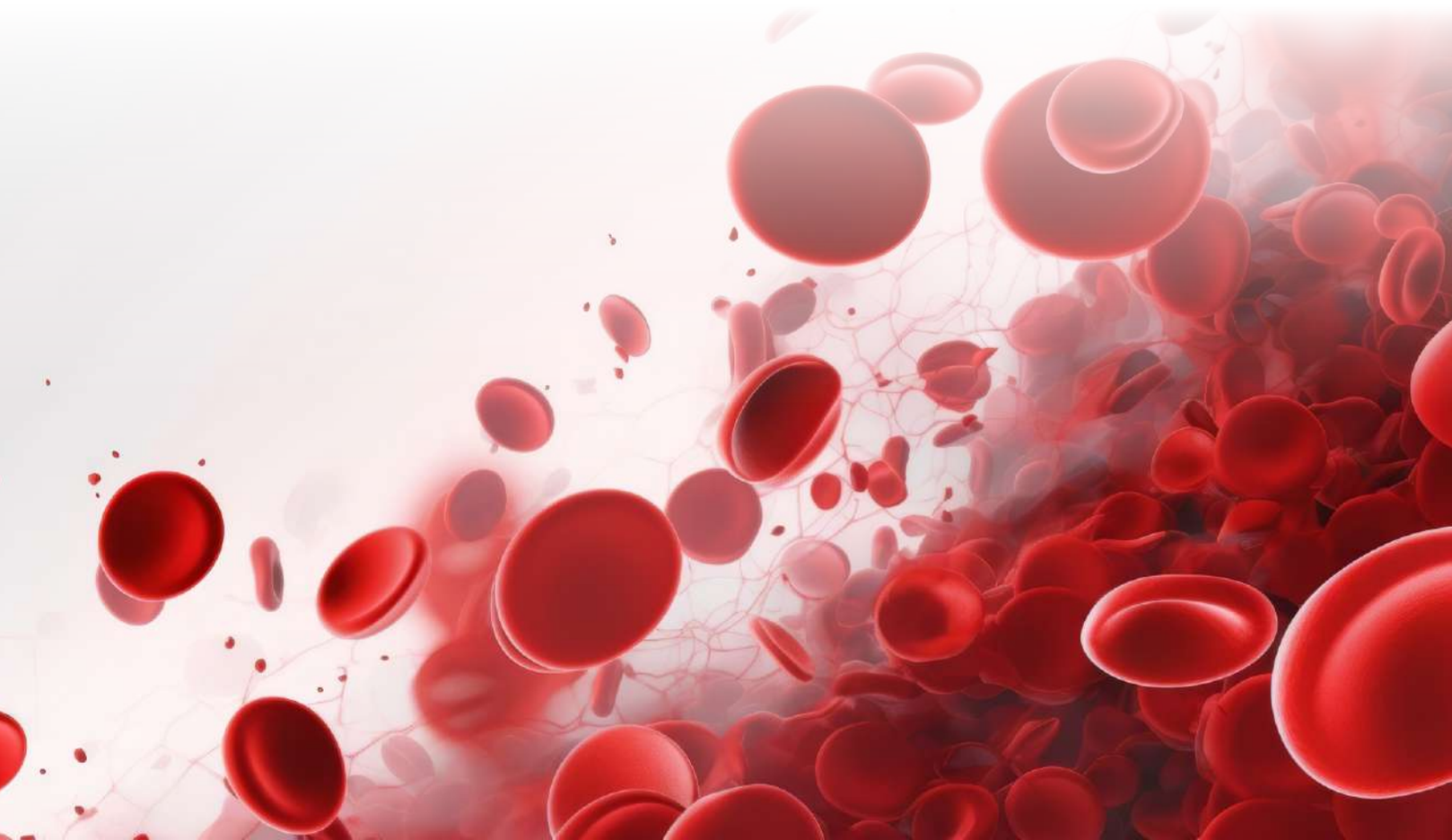
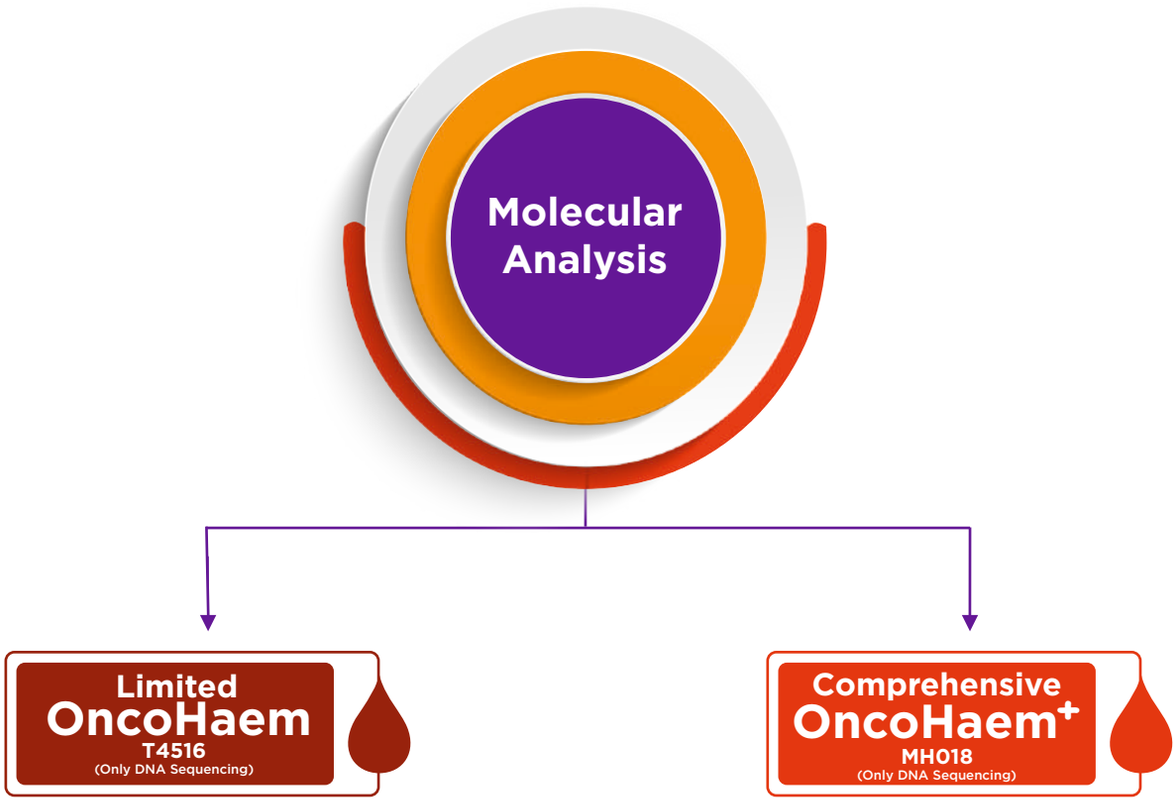
ASXL1	FGFR1	KMT2A	NRAS	RBM15	U2AF1		
BCOR	FLT3	KRAS	NUP214	RUNX1	WT1		
BRAF	GATA2	MECOM	NUP98	SETBP1	ZRSR2		
CALR	HRAS	MLLT10	PDGFRA	SF3B1			
CBL	IDH1	MLLT3	PDGFRB	SH2B3			
CEBPA	IDH2	MPL	PHF6	SRSF2			
CSF3R	IKZF1	MYD88	PRPF8	STAG2			
DNMT3A	Il3	MYH11	PTPN11	TCF3			
ETV6	JAK2	NF1	RARA	TET2			
SETD2	SAMD9L	EED	KANSL1	PLCG2	SF1	✗	✓
KMT2D	CDKN2A	EP300	KDM5A	PAX5	SF3A1		
ANKRD26	CREBBP	ETNK1	KDM6A	PTEN	SH2B3		
ARID1A	CSF1R	FANCL	LAMB4	RAD21	SMC1A		
ASXL2	CTCF	FBXW7	IRF1	PPM1D	SMC3		
ATM	CTNNA1	GATA1	LUC7L2	PRPF40B	STAT5B		
ATRX	CUX1	GNAS	MYC	RIT1	U2AF2		
BCORL1	DCLRE1C	GNB1	NFE2	RRAS	USP9X		
BCR	DDX41	GPRC5A	NOTCH1	RRAS2	ZBTB7A		
BRCC3	DHX15	JAK3	PIGA	SAMD9			

Genes Covered (RNA)				Onco Haem	Onco+ Haem
ABL1	FGFR1	MYH11	WT1	✓	✓
BRAF	FLT3	NPM1	NUP214		
CALR	GATA2	NUP98	MLLT10		
CBL	IDH1	PDGFRA	ZRSR2		
RUNX1	IDH2	PDGFRB	STAG2		
CSF3R	Il3	RARA	SF3B1		
DNMT3A	JAK2	SRSF2	SETBP1		
MECOM	KIT	TCF3	TET2		
ETV6	MLLT3	TP53	BCOR		
EZH2	KMT2A	U2AF1	RBM15		
ALK	FUS	MLF1	PML	✗	✓
BCL11A	FGFR2	MLLT10	RARB		
BCL11B	FIP1L1	MNX1	RET		
BCR	GATA1	MRTFA	ROS1		
CBFA2T3	GLIS2	MYB	RUNX1T1		
CBFB	KAT6A	NTRK3	STAT5B		
CRBN	KDM5A	NUP214	ZMYM2		
CREBBP	LMO2	PICALM	ZNF384		
ERG	LYN	RARG			

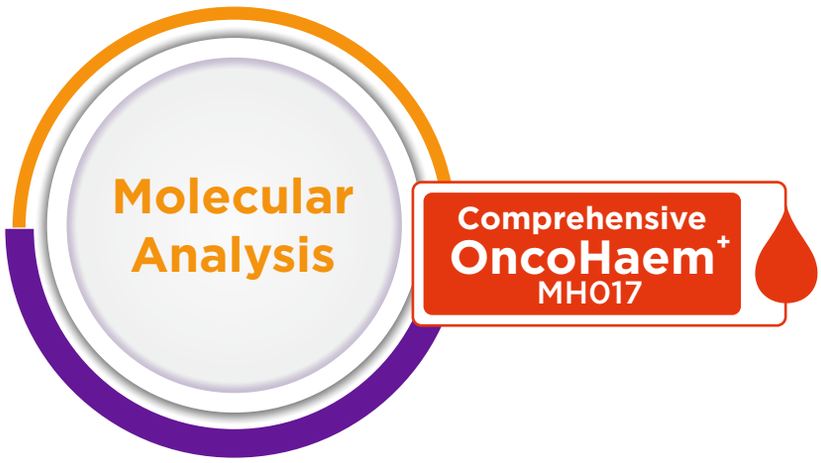


Myeloid Neoplasms with Germline Predisposition



Genes Covered (DNA)						Onco Haem	Onco+ Haem
ABL1	EZH2	KIT	NPM1	RB1	TP53	✓	✓
ASXL1	FGFR1	KMT2A	NRAS	RBM15	U2AF1		
BCOR	FLT3	KRAS	NUP214	RUNX1	WT1		
BRAF	GATA2	MECOM	NUP98	SETBP1	ZRSR2		
CALR	HRAS	MLLT10	PDGFRA	SF3B1			
CBL	IDH1	MLLT3	PDGFRB	SH2B3			
CEBPA	IDH2	MPL	PHF6	SRSF2			
CSF3R	IKZF1	MYD88	PRPF8	STAG2			
DNMT3A	Il3	MYH11	PTPN11	TCF3			
ETV6	JAK2	NF1	RARA	TET2			
ANKRD26	DKC1	HAX1	NOP10	SRP72	WRAP53	✗	✓
BLM	ELANE	MBD4	PARN	TERT			
CHEK2	ERCC6L2	MDM4	RBBP6	TINF2			
CSF3R	GATA1	MLH1	SAMD9	VPS45			
DDX41	GFI1	NHP2	SAMD9L	WAS			

B-NHL & T-NHL



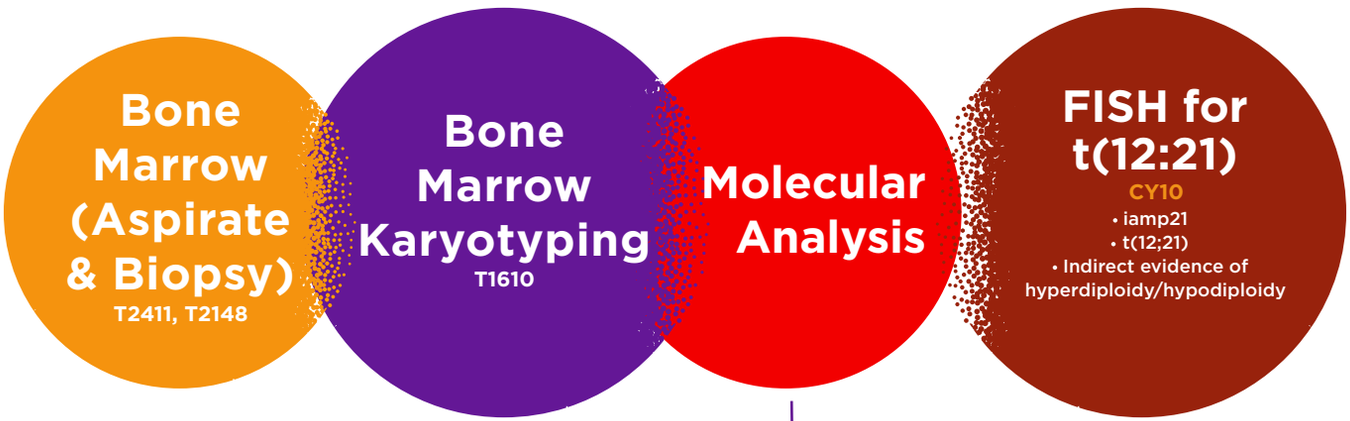
Genes Covered (DNA)

ADA2	CARD11	CREBBP	FAS	IRF8	MGA	SH2B3	TNFRSF14
ARID1A	CASP10	CSF2RB	FASLG	ITK	MTOR	SMARCA2	TNFRSF21
ARID2	CASP8	CSNK2B	FBXW10	JAK1	MYC	SMARCA4	TNFRSF9
ATM	CCND1	CTLA4	FLT3	JAK2	MYD88	SOCS1	TNIP3
ATP6AP1	CCR4	CTSS	FOXO1	JAK3	PRKCD	SOCS3	TP53
ATP6V1B2	CCR6	CXCR4	GNA13	JUNB	RASGRP1	SPEN	TRRAP
B2M	CCR7	DAPK1	HAVCR2	KLF2	RB1	STAT1	U2AF1
BCL11B	CD274	DDX3X	HDAC2	KLHL14	REL	STAT5B	UBR5
BCL2	CD28	DEF6	HRAS	KLHL6	RHOA	STAT6	VAV1
BCL6	CD58	DNMT3A	HVCN1	KMT2D	RHOH	STK4	XIAP
BCOR	CD70	DTX1	ID3	KRAS	RRAGC	SUSD2	XPO1
BIRC3	CD79B	EGR2	IDH2	LAPTM5	RUNX1T1	SYK	YY1
BRAF	CD83	EOMES	IKBKB	LRBA	S1PR1	TBL1XR1	ZFP36L1
BRCA1	CDH2	EP300	IL12RB1	MAGT1	S1PR2	TCF3	ZNF292
BRCA2	CDKN1B	EPHA7	IL2RA	MAP2K1	SETD2	TCL1A	
BTG1	CDKN2A	ERBB4	IL2RB	MAP3K14	SETD5	TET2	
BTG2	CHD2	EZH2	IL2RG	MEF2B	SF3B1	TET3	
BTK	CIC	FADD	INO80	MFHAS1	SGK1	TNFAIP3	

Genes Covered (RNA)

ABL1	CRLF2	IKZF1	MTCP1	PDGFRA	TP53
ABL2	CSF1R	IKZF3	MYB	PDGFRB	TP63
ALK	CTLA4	ITK	MYC	PTK2B	TYK2
BCL2	DUSP22	JAK2	NPM1	ROS1	ZNF384
BCL6	EPOR	KMT2A	NTRK3	RUNX1	S1PR1
BIRC3	ERG	LMO2	NUP214	SYK	S1PR2
CCND1	ETV6	LYN	NUP98	TAL1	SETD2
Cd28	FGFR1	MALT1	NUTM1	TCF3	SETD5
CEBPE	FLI1	MEF2D	P2RY8	TCL1A	SF3B1
CIITA	FLT3	MLLT10	PAX5	TFG	SGK1

B-ALL & T-ALL

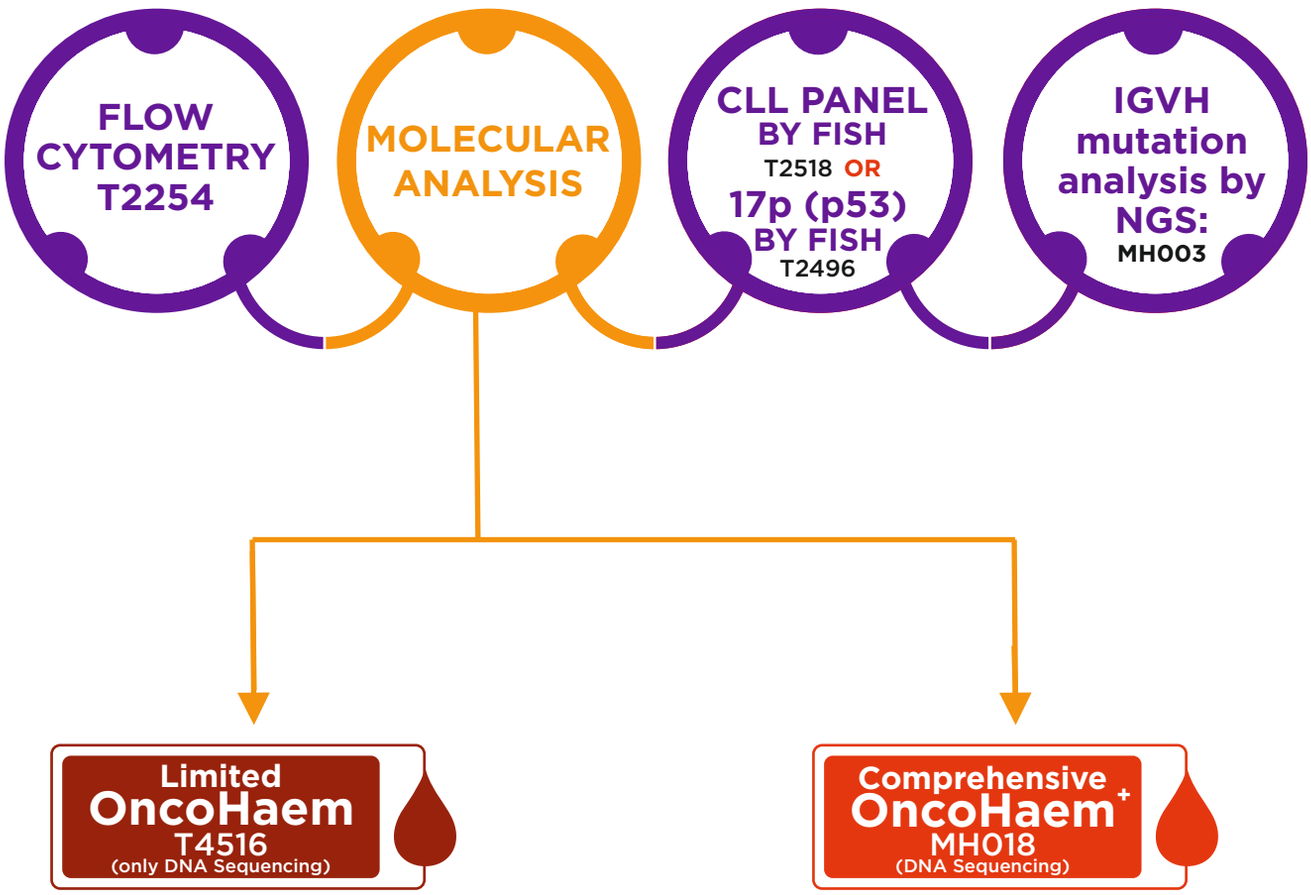


Genes Covered (DNA)						Onco Haem	Onco+ Haem
ABL1	EZH2	KIT	NPM1	RB1	TP53	✓	✓
ASXL1	FGFR1	KMT2A	NRAS	RBM15	U2AF1		
BCOR	FLT3	KRAS	NUP214	RUNX1	WT1		
BRAF	GATA2	MECOM	NUP98	SETBP1	ZRSR2		
CALR	HRAS	MLLT10	PDGFRA	SF3B1			
CBL	IDH1	MLLT3	PDGFRB	SH2B3			
CEBPA	IDH2	MPL	PHF6	SRSF2			
CSF3R	IKZF1	MYD88	PRPF8	STAG2			
DNMT3A	Il3	MYH11	PTPN11	TCF3			
ETV6	JAK2	NF1	RARA	TET2			
ARID5B	BCORL1	DHX15	KDM6A	PTEN	SUZ12	✗	✓
AKT1	BTG1	EED	KMT2D	PTPN2	TBL1XR1		
AKT2	CDKN1B	EP300	IKZF1	RAD21	TCL1A		
ARPP21	CDKN2A	EPOR	IKZF3	RPL10	TYK2		
ASH1L	CDKN2B	ERG	LEF1	RPL5	USP7		
ASXL2	CEBPE	FBXW7	IL2RB	SETD1B	USP9X		
ATM	CREBBP	GATA1	IL7R	SETD2	ZEB2		
ATRX	CRLF2	GATA3	MYB	SMARCA4	VPREB1		
BCL11B	CTCF	GNAS	NOTCH1	SMC1A			
BCL2	CUX1	JAK1	PIK3CA	SMC3			
BCL6	DDX3X	JAK3	PAX5	STAT5B			

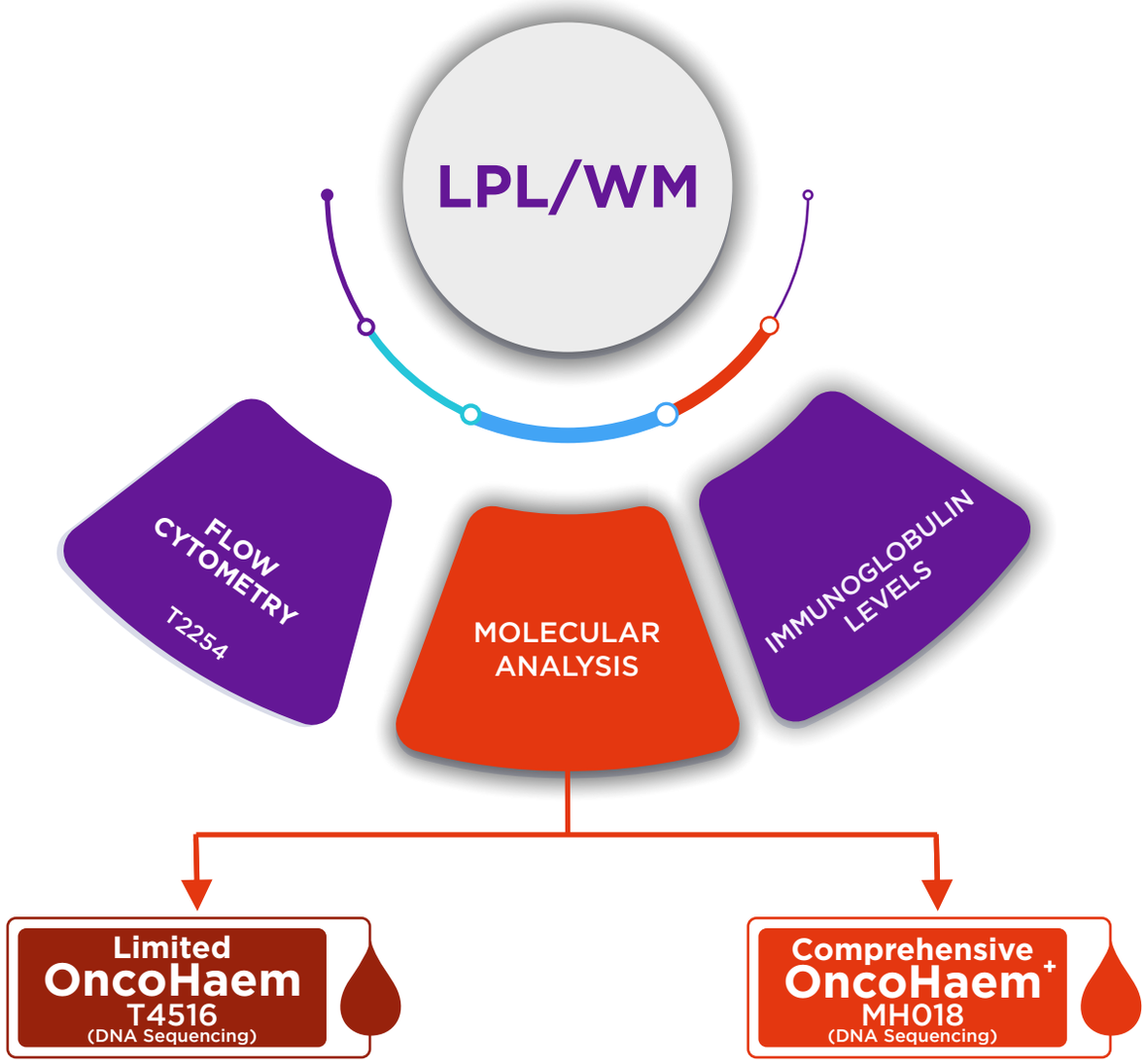
Genes Covered (RNA)				Onco Haem	Onco + Haem
ABL1	FGFR1	MYH11	WT1	✓	✓
BRAF	FLT3	NPM1	NUP214		
CALR	GATA2	NUP98	MLLT10		
CBL	IDH1	PDGFRA	ZRSR2		
RUNX1	IDH2	PDGFRB	STAG2		
CSF3R	Il3	RARA	SF3B1		
DNMT3A	JAK2	SRSF2	SETBP1		
MECOM	KIT	TCF3	TET2		
ETV6	MLLT3	TP53	BCOR		
EZH2	KMT2A	U2AF1	RBM15		
ABL2	CSF1R	LYN	PAX5	✗	✓
ALK	CTLA4	MALT1	PTK2B		
CCND1	DUSP22	MEF2D	ROS1		
BCL2	EPOR	MTCP1	SYK		
BCL6	ERG	MYB	TAL1		
BIRC3	FLI1	MYC	TCL 1A		
CD28	IKZF1	NTRK3	TF4		
CEBPE	IKZF3	NUP214	TP63		
CRLF2	ITK	NUTM1	T4K2		
CIITA	LMO2	P2RY8	ZNF384		

B- ALL	OncoHaem panel by NGS (DNA+ RNA)	OncoHaem+ by NGS
B-lymphoblastic leukaemia/lymphoma with cancer is BCR::ABL1 fusion	✓	✓
B-lymphoblastic leukaemia/lymphoma with KMT2A rearrangement	✓	✓
B-lymphoblastic leukaemia/lymphoma with ETV6::RUNX1 fusion	✓	✓
B lymphoblastic leukaemia/lymphoma with TCF3::PBX1 fusion	✓	✓
B lymphoblastic leukaemia/lymphoma with IGH::Il3 fusion	✓	✓
B lymphoblastic leukaemia/lymphoma with TCF3::HLF fusion	✓	✓
B-lymphoblastic leukaemia/lymphoma with BCR::ABL1-like features(fusions)	✗	✓
B lymphoblastic leukaemia with DUX4 rearrangement	✗	✓
B lymphoblastic leukaemia with MEF2D rearrangement	✗	✓
B lymphoblastic leukaemia with ZNF384 rearrangement	✗	✓
B lymphoblastic leukaemia with PAX5alt	✗	✓
B lymphoblastic leukaemia with PAX5 p.P80R	✗	✓
B lymphoblastic leukaemia with NUTM1 rearrangement	✗	✓
B lymphoblastic leukaemia with MYC rearrangement	✗	✓

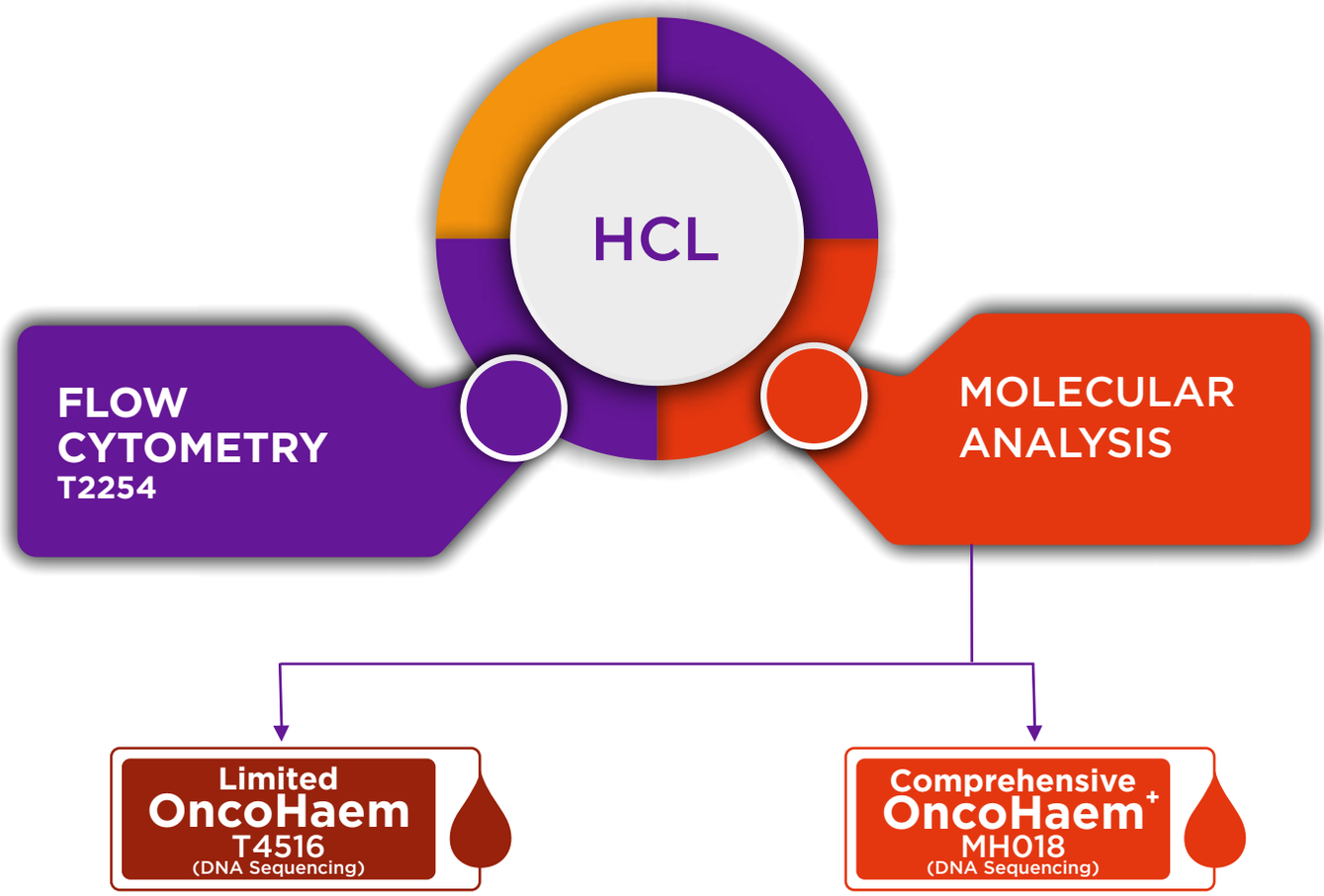
CLL



Genes Covered (DNA)			OncoHaem	OncoHaem+
KRAS			✓	✓
MYD88				
SF3B1				
TP53				
BCL2	EGR2	POT1	✗	✓
ATM	FBXW7	XPO1		
BIRC3	NFKBIE			
BTK	NOTCH1			
CXCR4	PLCG2			



Genes Covered (DNA)	OncoHaem	OncoHaem+
MYD88	✓	✓
TP53		
ARID1A	✗	✓
CD79B		
CXCR4		
MT2D		
PTPN13		
TBL1XR1		



Genes Covered (DNA)			OncoHaem	OncoHaem+
BCOR	MYD88	U2AF1	✓	✓
BRAF	TP53	-		
ARID1A	KLF2	SYK	✗	✓
BIRC3	MAP2K1	TNFAIP3		
CCND3	MAP3K14	TRAF2		
CDKN1B	NOTCH1	TRAF3		
IKBKB	NOTCH2			

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