

Hematopathology/Cytogenetics Test List

Provider Name

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Patient Information (required)

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Birth Date (Month DD, YYYY) ICD-10 Diagnosis Code

Hematopathology Consultation †

- PATHC Pathology Consultation (submit stained slides and block)
- HPWET Hematopathology Consultation, MML Embed (submit core biopsy, clot section and bone marrow aspirate)
- HPCUT Hematopathology Consultation, Client Embed (submit bone marrow aspirate and embedded core biopsy and clot section)

Hematologic Disorders Hold Service

- HOLDC Chromosome Hold
- HOLDF FISH Hold
- HLLFH Leukemia/Lymphoma Flow Hold*
- EXHD DNA Extract and Hold
- EXHR DNA and RNA Extract and Hold

Flow Cytometry

- Leukemia/Lymphoma Immunophenotyping
- LCMS Blood/Bone marrow*
 - LLPT Tissue
 - LLTOF Technical Only
 - MYEFL Myelodysplastic Syndrome by Flow Cytometry, Bone Marrow
 - PLINK PNH, PI-Linked Antigen, Blood
 - SZDIA Sezary Diagnostic Flow Cytometry, Blood
 - SZMON Sezary Monitoring Flow Cytometry, Blood
 - TAE Therapeutic Antibody by Flow Cytometry
Indicate antibody:
 CD20 CD49d CD52

Chromosome Analysis

- CHRBM Bone Marrow
- CHRHB Hematologic Blood
- CHRNL Lymphoid Tissue
- CHRBF Body Fluid
- BLOOM Sister Chromatid Exchange (SCE) for Bloom Syndrome
- CRAT Rearrangement in Ataxia Telangiectasia, Blood

Next-Generation Sequencing (NGS)

- NGAML NGS, Acute Myeloid Leukemia, 8-Gene Panel
- NGSHM OncoHeme NGS Hematologic Neoplasms
- NGSMM NGS, Multiple Myeloma

Chromosomal Microarray

- CMAH Chromosomal Microarray, Hematologic Disorders

Mate Pair Targeted Rearrangement

- MTRBM Blood/Bone Marrow
- MTRTI Fresh Tissue

ACUTE MYELOID LEUKEMIA (AML)/ MYELOYDYSPLASTIC SYNDROME (MDS)

Acute Myeloid Leukemia (AML)

- PMLR PML/RARA Quantitative, PCR
- CEBPA CEBPA Mutations, Gene Sequencing
- FLT FLT3 Mutation Analysis, Varies
- NPM1 Nucleophosmin (NPM1) Mutation Analysis
- KITE KIT Mutation Exons 8-11 and 17, Hematologic Neoplasms, Sequencing

AMLF Acute Myeloid Leukemia (AML), FISH

Must select probes listed below or entire panel

- RUNX1T1/RUNX1 t(8;21)(q22;q22)
reflex: MECOM/RUNX1 t(3;21)(q26.2;q22)
- PML/RARA t(15;17)(q24.1;q21.2)
- MYH11/CBFB inv(16)(p13q22) or t(16;16)
- DEK/NUP214 t(6;9)(p23;q34)
- KAT6A/CREBBP t(8;16)(p11.2;p13.3)
- MLL (KMT2A) BAP 11q23 rearrangement
reflex: AFF1/MLL t(4;11)(q21;q23)
reflex: MLLT4/MLL t(6;11)(q27;q23)
reflex: MLLT3/MLL t(9;11)(p22;q23)
reflex: MLLT10/MLL t(10;11)(p13;q23)
reflex: MLL/CREBBP t(11;16)(q23;p13.3)
reflex: MLL/MLLT1 t(11;19)(q23;p13.3)
reflex: MLL/ELL t(11;19)(q23;p13.1)

Probe list continued in next column

- BCR/ABL1 t(9;22)(q34;q11.2)
- MLF1/NPM1 t(3;5)(q25;q34)
- RBM15/MKL1 t(1;22)(p13.3;q13.1)
- RPN1/MECOM inv(3)(q21.3q26.2) or t(3;3)
reflex: PRDM16/RPN1 t(1;3)(p36.3;q21.3)
reflex: MECOM/RUNX1 t(3;21)(q26.2;q22)
- D5S630/EGR1 -5/5q deletion
- D7Z1/D7S486 -7/7q deletion
- D8Z2/MYC +8
- D13S319/LAMP1 13q deletion
- TP53/D17Z1 -17/17p deletion
- D20S108/20qter 20q deletion/ider(20q)

Perform entire panel

Myelodysplasia Syndromes (MDS)

- MYEFL Myelodysplastic Syndrome by Flow Cytometry, Bone Marrow
- PLINK PNH, PI-Linked Antigen, Blood

MDSF Myelodysplastic Syndrome (MDS), FISH

Must select probes listed below or entire panel

- RPN1/MECOM inv(3) or t(3;3)
reflex: MECOM/RUNX1 t(3;21)(q26.2;q22)
reflex: PRDM16/RPN1 t(1;3)(p36.3;q21.3)
- D5S630/EGR1 -5/5q deletion
- D7Z1/D7S486 -7/7q deletion
- D8Z2/MYC +8
- D13S319/LAMP1 13q deletion
- TP53/D17Z1 -17/17p deletion
- D20S108/20qter 20q deletion/ider(20q)
- MLL (KMT2A) BAP 11q23 rearrangement
reflex: AFF1/MLL t(4;11)(q21;q23)
reflex: MLLT4/MLL t(6;11)(q27;q23)
reflex: MLLT3/MLL t(9;11)(p22;q23)
reflex: MLLT10/MLL t(10;11)(p13;q23)
reflex: MLL/CREBBP t(11;16)(q23;p13.3)
reflex: MLL/MLLT1 t(11;19)(q23;p13.3)
reflex: MLL/ELL t(11;19)(q23;p13.1)

Perform entire panel

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MSTF Myeloid Sarcoma, FISH, Tissue

Must select probes listed below or entire panel

RUNX1T1/RUNX1 t(8;21)(q22;q22)

BCR/ABL1 t(9;22)(q34;q11.2)

MLL (KMT2A) BAP 11q23 rearrangement

PML/RARA t(15;17)(q24.1;q21.2)

MYH11/CBFB inv(16)(p13q22) or t(16;16)

Perform entire panel

IMRGF Imatinib Mesylate Responsive Genes, FISH

Must select probes listed below or entire panel

ABL2 BAP 1q25 rearrangement

FIP1L1/CHIC2/ PDGFRA 4q12 deletion/ rearrangement

PDGFRB BAP 5q33 rearrangement

ABL1 BAP 9q34 rearrangement

Perform entire panel

MYELOPROLIFERATIVE NEOPLASM (MPN)

BCR/ABL1 testing

BCRFX Qualitative Diagnostic with Reflex to p210 or p190 Quantitative

BADX mRNA Detection, RT-PCR, Qualitative Diagnostic*

BCRAB p210 Quantitative Monitoring, CML

BA190 p190 Qualitative Monitoring

BAKDM Tyrosine Kinase Inhibitor Resistance, Kinase Domain Mutation Screen

922F BCR/ABL1 t(9;22), FISH

JAK2-CALR-MPL-JAK2V617F testing

MPNR Myeloproliferative Neoplasm (MPN), JAK2 V617F with reflex to CALR and MPL

JAK2 V617F Mutation Detection

JAK2B Blood*

JAK2M Bone Marrow*

JAK2V Varies

CALR CALR Mutation Analysis, Myeloproliferative Neoplasm (MPN)*

MPL Exon 10 Mutation Detection

MPLB Blood*

MPLM Bone Marrow*

MPLVA Varies

MPNCM Myeloproliferative Neoplasm (MPN), CALR with Reflex to MPL

JAK2 Exon 12 and Other Non-V617F Mutation

JAKXB Blood*

JAKXM Varies

PVJAK Polycythemia Vera, JAK2 V617F with Reflex to JAK2 Exon 12-15, Sequencing for Erythrocytosis

CSF3R CSF3R Exon 14 and 17 Mutation Detection by Sanger Sequencing

CHICF CHIC2 (4q12) Deletion (FIP1L1 and PDGFRA Fusion), FISH

512F PDGFRB/TEL t(5;12) for Chronic Myelomonocytic Leukemia (CMML), FISH

FGFRF FGFR1 (8p11.2) Rearrangement, FISH

IMRGF Imatinib Mesylate Responsive Genes, FISH

Must select probes listed below or entire panel

ABL2 BAP 1q25 rearrangement

FIP1L1/CHIC2/PDGFRB 4q12 deletion/ rearrangement

PDGFRB BAP 5q33 rearrangement

ABL1 BAP 9q34 rearrangement

Perform entire panel

KIT Mutation testing

KIT Asp816Val Mutation Analysis

KITB Blood

KITBM Bone Marrow

KITAS Varies

KITE KIT Mutation Exons 8-11 and 17, Hematologic Neoplasms, Sequencing

T-Cell Receptor Gene Rearrangement, PCR

TCGR Blood

TCGBM Bone Marrow*

TCGRV Varies

MUR Lysozyme (Muramidase), Plasma

SZDIA Sezary Diagnostic Flow Cytometry, Blood

SZMON Sezary Monitoring Flow Cytometry, Blood

LYMPHOID DISORDERS

B-Cell

ALLM B-ALL Monitoring, MRD Detection, Bone Marrow

Immunoglobulin Gene Rearrangement

BCGR Blood

BCGBM Bone Marrow

BCGRV Varies

MYD88 MYD88, L265P, Somatic Gene Mutation, DNA Allele-Specific PCR

VISCS Viscosity, Serum

BALLF B-Cell Acute Lymphoblastic Leukemia (B-ALL), FISH

Must select EITHER Individual Probes desired or -Diagnostic B-ALL Panel or -BCR-ABL1(Ph)-like ALL Panel or -BOTH Diagnostic and BCR-ABL(Ph)-like panels

Diagnostic Panel

PBX1/TCF3 t(1;19)(q23;p13.3)

ETV6/RUNX1 t(12;21)(p13;q22)

BCR/ABL1 t(9;22) (q34;q11.2)

MLL (KMT2A) BAP 11q23 rearrangement

reflex: AFF1/MLL t(4;11)(q21;q23)

reflex: MLLT4/MLL t(6;11)(q27;q23)

reflex: MLLT3/MLL t(9;11)(p22;q23)

reflex: MLLT10/MLL t(10;11)(p13;q23)

reflex: MLL/MLLT1 t(11;19)(q23;p13.3)

reflex: MLL/ELL t(11;19)(q23;p13.1)

CDKN2A/D9Z1 -9/9p deletion or +9

D4Z1/D10Z1/D17Z1 +4,+10,+17, hyper- or hypodiploidy

TP53/D17Z1 -17/17p deletion

IGH BAP 14q32 rearrangement

reflex: CRLF2/IGH t(X;14) or t(Y;14)

P2RY8 BAP t(Xp22.3;var) or t(Yp11.32;var)

Perform entire diagnostic panel

BCR-ABL1(Ph)-like Panel

ABL2 BAP 1q25rearrangement

PDGFRB BAP 5q33 rearrangement

JAK2 BAP 9p24.1 rearrangement

ABL1 BAP 9q34 rearrangement

CRLF2/IGH t(X;14) or t(Y;14)

P2RY8 BAP t(Xp22.3;var) or t(Yp11.32;var)

Perform entire BCR-ABL1(Ph)-like panel

Diagnostic+BCR-ABL1(Ph)-like Panels (includes probes listed above; reflex probes and ABL1 as needed)

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BLPF B-Cell Lymphoma, FISH, Blood or Bone Marrow (includes fresh tissue)

BLYMF B-Cell Lymphoma, FISH, Tissue

Must select lymphoma subtype

Burkitt (pediatric)

Must select probes listed below or entire panel

MYC BAP 8q24.1 rearrangement

IGK/MYC t(2;8)(p12;q24.1)

MYC/IGH t(8;14)(q24.1;q32)

MYC/IGL t(8;22)(q24.1;q11.2)

BCL6 BAP 3q27 rearrangement

BCL2 BAP 18q21 rearrangement

Perform entire Burkitt panel

Diffuse large B-cell, Burkitt-like "double-hit"

Must select probes listed below or entire panel

MYC BAP 8q24.1 rearrangement

reflex: IGK/MYC t(2;8)(p12;q24.1)

reflex: MYC/IGH t(8;14)(q24.1;q32)

reflex: MYC/IGL t(8;22)(q24.1;q11.2)

reflex: BCL6 BAP 3q27 rearrangement

reflex: BCL2 BAP 18q21 rearrangement

Perform entire panel (MYC BAP, BCL6 and BCL2)

Follicular

Must select probes listed below or entire panel

BCL2 BAP 18q21 rearrangement

BCL6 BAP 3q27 rearrangement

Perform entire follicular panel

Mantle cell

Must select probes listed below or entire panel

CCND1/IGH t(11;14)(q13;q32)

CCND1 BAP reflex: 11q13 rearrangement

TP53/D17Z1 Blastoid subtype only: deletion of 17p

MYC BAP Blastoid subtype only: 8q24.1 rearrangement

Perform entire mantle cell panel

Mucosa-associated lymphoid tissue (MALT)

MALT1 BAP 18q21 rearrangement

Splenic marginal zone lymphoma (SMZL)

Must select probes listed below or entire panel

D7Z1/7q32 deletion 7q

TP53/D17Z1 deletion 17p

Perform entire SMZL panel

Chronic Lymphocytic Leukemia (CLL)

CLLMV CLL Monitoring, MRD Detection, Varies

BCLL IGH for B-Cell Chronic Lymphocytic Leukemia (B-CLL), Somatic Hypermutation Analysis

P53CA Hematologic Neoplasms, TP53 Somatic Mutation, DNA Sequencing Exons 4-9

CLLF Chronic Lymphocytic Leukemia (CLL), FISH

SLLF Small Lymphocytic Lymphoma, FISH, Tissue

Must select probes listed below or entire panel

D6Z1/MYB -6/6q deletion

D11Z1/ATM -11/11q deletion

D12Z3/MDM2 +12

D13S319/LAMP1 -13/13q deletion

TP53/D17Z1 -17/17p deletion

CCND1/IGH t(11;14)(q13;q32)

reflex: IGH/BCL2 t(14;18)(q32;q21)

reflex: IGH/BCL3 t(14;19)(q32;q13)

Perform entire panel

IRF4F Cutaneous Anaplastic Large Cell Lymphoma, 6p25.3 (DUSP22 or IRF4) Rearrangement, FISH, Tissue

T-Cell

T-Cell Receptor Gene Rearrangement

TCGR PCR, Blood

TCGBM Bone Marrow*

TCGRV Varies

TP63F Peripheral T-Cell Lymphoma (PTCL), TP63 (3q28) Rearrangement, FISH, Tissue

TALLF T-Cell Acute Lymphoblastic Leukemia (T-ALL), FISH

Must select probes listed below or entire panel

BCR/ABL1 t(9;22) and ABL1 amplification

MLL (KMT2A) BAP 11q23 rearrangement

reflex: AFF1/MLL t(4;11)(q21;q23)

reflex: MLLT4/MLL t(6;11)(q27;q23)

reflex: MLLT3/MLL t(9;11)(p22;q23)

reflex: MLLT10/MLL t(10;11)(p13;q23)

reflex: MLL/MLLT1 t(11;19)(q23;p13.3)

reflex: MLL/ELL t(11;19)(q23;p13.1)

Probe list continued in next column

T-ALL FISH probes (cont.)

CDKN2A/D9Z1 -9/9p deletion or +9

STIL/TAL1 1p33 rearrangement

TLX3/BCL11B t(5;14)(q35;q32)

TRB BAP 7q34 rearrangement

reflex: MYB/TRB t(6;7)(q23;q34)

reflex: TRB/TLX1 t(7;10)(q34;q24)

reflex: TRB/LMO1 t(7;11)(q34;p15)

reflex: TRB/LMO2 t(7;11)(q34;p13)

MLLT10/PICALM t(10;11)(p12;q14)

TRAD BAP 14q11.2 rearrangement

reflex: MYC/TRAD t(8;14)(q24.1;q11.2)

reflex: TLX1/TRAD t(10;14)(q24;q11.2)

reflex: LMO1/TRAD t(11;14)(p15;q11.2)

reflex: LMO2/TRAD t(11;14)(p13;q11.2)

Perform entire panel

TLPF T-Cell Lymphoma, FISH, Blood or Bone Marrow

TLYMF T-Cell Lymphoma, FISH, Tissue

Must select probes listed or entire panel

TCL1A BAP 14q32 rearrangement

D7Z1/D7S486 and D8Z2/MYC -7/iso(7q) and +8

ALK BAP (tissue only) 2p23 rearrangement

Perform entire panel

MYELOMA, AMYLOIDOSIS & DYSPROTEINEMIA

Amyloid

FABP Amyloid Beta-Protein

AMPIP Amyloid Protein Identification, Paraffin, LC-MS/MS

ATTRZ TTR Gene, Full Gene Analysis

FMFT Familial Mutation, Targeted Testing

TTRX Amyloidosis, Transthyretin-Associated Familial, Reflex, Blood

FATAS Subcutaneous Fat Aspirate

Myeloma

Is patient on CD38 Therapy? Yes No

MSMRT Mayo Algorithmic Approach for Stratification of Myeloma and Risk-Adapted Therapy Report (mSMART)

PBLI Plasma Cell Assessment, Blood

PCPRO Plasma Cell DNA Content and Proliferation, Bone Marrow

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- PCPDF Plasma Cell Proliferative Disorder (PCPD), FISH (bone marrow)
- MFCF Myeloma, FISH, Fixed Cells (fixed cell pellet only)
- PLASF Plasma Cell Proliferative Disorder, FISH, Tissue

Must select probes listed below or entire panel

- CCND1/IGH t(11;14)(q13;q32)+11
- IGH BAP 14q32 rearrangement
- reflex: IGH/MAF t(14;16)(q32;q23)
- reflex: IGH/MAFB t(14;20)(q32;q12)
- reflex: FGFR3/IGH t(4;14)(p16.3;q32)
- reflex: CCND3/IGH t(6;14)(p21;q32)
- RB1/LAMP1 -13/13q deletion
- D3Z1/D7Z1 +3 and +7
- D9Z1/D15Z4 +9 and +15
- TP53/D17Z1 -17/17p deletion/+17
- TP73/1q22 1q gain
- MYC BAP 8q24 rearrangement

Perform entire panel

MISCELLANEOUS

- ETVBF ETV6 (12p13.2) Rearrangement, FISH
- JAK2F JAK2 (9p24.1) Rearrangement for Hematologic Disorders, FISH

ADDITIONAL TESTS (INDICATE TEST CODE AND NAME)

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BONE MARROW TRANSPLANT

- ALLM B-ALL Monitoring, MRD Detection, Bone Marrow
- CHIDB Chimerism-Donor
- CHRGB Chimerism-Recipient Germline (Pre)
- CHIMU Chimerism Transplant No Cell Sort
- CHIMS Chimerism Transplant Sorted Cells
- CLLMV CLL Monitoring, MRD Detection, Varies
- DISI HLA Class I Molecular Typing Disease Association
- DIS2 HLA Class II Molecular Typing Disease Association
- BMTF XX/XY in Opposite Sex Bone Marrow Transplantation, FISH

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