HEMATOPATHOLOGY
PERIPHERAL BLOOD AND/OR BONE MARROW REQUISITION

Intermountain Laboratory Services
5252 South Intermountain Drive
Salt Lake City, Utah 84157

Pathology phone: (801) 507-2210
Pathology fax (801) 507-7996
Client Services: (801) 507-2110

Sending Laboratory Use Only CL7001-F1 (4/2017)

Encounter/billing number (hospital patient):
Collecting/routing lab: □ AF □ CA □ DX □ IMC □ LD □ LO □ MK □ UV □ Other_____
If sending to CL: For PB Eval only, order **PATHR** and selected tests. For BM Eval,order **BMTRK** and transport in BM kit.

Patient Information (affix label, patient stamp or complete Info):
Patient Name:
Patient Date of Birth:
Medical Record Number or SSN:
If non-hospital patient, provide demographic sheet (or complete following info)
Patient's Address:_____ Phone #: _____
Insurance Name: _____ Policy #: _____
Insurance Policy holder's name: _____

Physician:	Collection Date:	
Coordinator (if applicable):	□ STAT (Same day pathologist review) Physician pager/cell (required):	
Clinic/Facility:	Phone:	Fax: Additional Fax:

Clinical History/Diagnosis:

Recent chemotherapy? □ Yes □ No Type and day: _____
Recent growth factors? □ Yes □ No Type and last dose:_____
Post BMT? □ Yes □ No BMT Date: _____ Sex of donor: □ M □ F

□ **Peripheral Blood Evaluation**. Pathologist review of PB only and ancillary tests as selected.

□ **Bone Marrow Evaluation**. Pathologist review of PB and BM and ancillary tests as selected and/or as added by pathologist for diagnosis/prognosis.

□ **Ancillary Testing Only**. Pathologist review previously completed.

Physician Signature: _____ **Date:**_____ **Time**:_____

Specimens submitted by collecting personnel:

Peripheral Blood: Slides_____ NaHep_____ LavEDTA_____
Submit: 2 PB slides and CBC or LavEDTA for CBC/auto diff testing

Bone Marrow: Site: □ RPIC □ LPIC □ Patient ID and procedure site verified
Asp slides____ Touch slides____ Clot____ Core ____ NaHep____LavEDTA ____ Other____

Submit:
Aspirate smear slides (4-6)
Aspirate clot (1 mL) in AZF or formalin
Aspirates in NaHep (2 tubes, 3 mL each)
Aspirate in LavEDTA (1 tube, 3 mL)
Touch imprint slides (2-4)
Core (≥1.5 cm) in AZF or formalin
If dry tap, 2 extra cores in saline
If acute leukemia suspected, extra aspirate LavEDTA (3 mL)

FLOW CYTOMETRY TESTING (NaHep [preferred] or LavEDTA, unless indicated):
- □ Hold for Leukemia/Lymphoma Phenotyping (FLOWSP), 1-2 mL PB or BM
- □ Leukemia/lymphoma Phenotyping (FLOWLL), 1-2 mL PB or BM
- □ PNH, High sensitivity, RBC and WBC - (PNHWBC) - PB Only
- □ PNH, High sensitivity, WBC - (PNHWBC) - PB Only
- □ T-Cell Clonality by Flow Cytometry Analysis of TCR V-Beta (ARUP 0093199) NaHep -PB Only
- □ ZAP-70 Analysis by Flow Cytometry (ARUP 0092392) LavEDTA, LiHep, or NaHep - PB Only

MICROBIOLOGY TESTING, BM Aspirate (1-5 mL in sterile tube)
□ Blood Culture (BCX) □ Fungal Culture (FBCX) □ AFB Culture (AFBBLX)

CYTOGENETIC TESTING (5 mL PB or 3 mL BM, Na Hep):
- □ Chromosome Analysis □ BM (**CRANBM**) □ PB (**CALB**) [□ High Priority]
- □ Chromosome Analysis with Reflex to Genomic Microarray □ BM (**ARUP 2007130**) □ PB (**ARUP 2007131**)
- □ Cytogenetics Grow, Process and Hold □ BM (**CGPBM**) □ PB (**CGPPB**)
- □ Cytogenomic SNP Microarray-Oncology (**ARUP 2006325)**
- □ Multiple Myeloma Process and HOLD (**MMPHA**)

FISH Testing: □ Upfront □ Reflex (perform only if chromosome analysis is normal)
- □ Acute Myeloid Leukemia Panel (**FSHAML**)
- □ Chromosome, FISH -Interphase (**FISHI**) Specify probe(s): _____ [□ STAT, avail for t(9;22)]
- □ Chronic Lymphocytic Leukemia Panel (**FISHCL**)
- □ Eosinophilia Panel (**ARUP 2002378)**
- □ Lymphoma (Aggressive) Panel (**AGGLYM**)
- □ MDS Panel (**MDSPAN**)
- □ Multiple Myeloma Panel (**MMF**)
- □ Myeloproliferative Disorders Panel (**ARUP 2002360**)
- □ PML RARa Translocation by FISH (**FISHP**) [□ STAT]

MOLECULAR TESTING (5 mL PB or 3 mL BM, LavEDTA):

AML:
- □ CBFB-MYH11 inv (16) Quant (**INV16**)
- □ CEBPA Mutation Detection (**CEBPA**)
- □ FLT3 Mutation Detection by PCR (**FLT3A**)
- □ FLT3 Signal Ratio Mutation Detection by PCR (**FLT3SR**)
- □ KIT Mutations in AML by Fragment Analysis and Sequencing (**KMAML**)
- □ NPM1 Mutation by PCR and Fragment Analysis, Fluid (**NPM1A**)
- □ PML/RARA Translocation, t(15;17)(**PMLAT**)
- □ RUNX1-RUNX1T1(AML1-ETO) t(8;21) Detection, Quant (**RUNX1**)

LPD:
- □ B-cell Clonality Screening (IgH and IgK) by PCR (**BCCHK**)
- □ BRAF V600E Mutation in Hairy Cell Leukemia by Real-Time PCR, Quant (**ARUP 2007132**)
- □ IGHV Mutation Analysis by Sequencing (**ARUP 0040227**)
- □ Mantle Cell Lymphoma, bcl-1/JH (11;14), Real-time PCR, Cell-based [Quant] **(Quest #14991)**
- □ MYD88 L265P Mutation Detection by PCR, Quant (**ARUP 2009318**)
- □ T-cell Clonality Screening by PCR (**TCPCRR**)
- □ T-cell Clonality Screening by NGS (**TCCSPC**)

MPN:
- □ BCR ABL1 Major (p210) Quant (**BCRMAJ**)
- □ BCR ABL1 Minor (p190) Quant (**BCRMIN**)
- □ BCR-ABL1 Mutation Analysis by NGS (**ARUP 2008420**)
- □ BCR ABL1, Qualitative Reflex to Quant (**BCRA**)
- □ CALR (Calreticulin) Exon 9 Mutation Analysis by PCR (**CALR**)
- □ JAK2 Gene, V617F Mutation, Qual (**JAK2**)
- □ JAK2 Gene, V617F Mutation, Quant (**ARUP 0040168**) - PB Only
- □ JAK2 Exon 12 Mutation Analysis by PCR (**ARUP 2002357**)
- □ JAK2 (V617F) Mutation with Reflex to CALR Exon 9 with Reflex to MPL515 (**ARUP 2012084**)
- □ KIT (D816V) Mutation [Mastocytosis] (**ARUP 0040137**)
- □ MPL 515 Mutation, Quantitative (**ARUP 2005545**)

Viral:
- □ Cytomegalovirus (CMV) **(CMVPCR)**
- □ Epstein-Barr Virus (EBV), Qual **(EBVPCR)**
- □ Parvovirus B 19, by PCR, Bone Marrow (**ARUP 0060028**)

Other:
- □ Chimerism Post Transplant **(CHIMP)**
- □ DNA Extraction and Storage (**DNAEXS**)
- □ Myeloid Malignancies Mutation Panel by NGS (**ARUP 2011117**)
- □ Myeloid Malignancies Somatic Mutation and Copy Number Analysis Panel (**ARUP 2012182**)
- □ Ph-like B-ALL Multiplex RT-PCR (**ChildLab MOL74**)
- □ RNA Extraction and Storage (**RNAEXS**)

OTHER TESTING:
□ Specify lab, test name and test code: _____
□ Study protocol: _____

Indication		Probe Target	Gene(s)/Unique Sequence
Acute Lymphocytic Leukemia Panel (ALL)	Adult **ARUP 2002647**	8q24	MYC
		t(9;22) (q34;q11.2)	BCR-ABL1
		11q23	KMT2A (MLL)
		14q32	IGH
		19p13	TCF3 (E2A)
	Pediatric **ARUP 2002719**	+4, +10	CEP4, CEP10
		t(9;22)(q34;q11.2)	BCR-ABL1
		11q23	KMT2A (MLL)
		t(12;21)(p13;q22)	ETV6-RUNX1 (TEL-AML1)
Acute Myelogenous Leukemia Panel (AML): **FSHAML**		t(15;17)(q24;q21)	PML-RARA
		t(8;21)(q22;q22)	RUNX1T1-RUNX1 (ETO-AML1)
		inv(16)(p13.3q22)	CBFB
		11q23	KMT2A (MLL)
		inv(3) or t(3;3)	RPN1/MECOM (EVI1)
		del(5)(q31)	EGR1
		del(7)(q31)/-7	D7S486
Acute Myelogenous Leukemia with Myelodysplastic Syndrome or Therapy-Related AML Panel **ARUP 2002653**		del(5)(q31)	EGR1
		del(7)(q31)/-7	D7S486
		11q23	KMT2A (MLL)
Chronic Lymphocytic Leukemia Panel (CLL) **FISHCL**		del(11)(q22.3)	ATM
		+12	D12Z3
		del(13)(q14.3)	D13S319
		del(17)(p13.1)	TP53(p53)
Chronic Myelogenous Leukemia Panel (CML): **FISHI**		t(9;22)(q34;q11.2)	BCR-ABL1,ASS1
Eosinophilia Panel **ARUP 2002378**		4q12	PDGFRA-CHIC2-FIP1L1
		5q33.1	PDGFRB
		8p12	FGFR1
		inv(16)	CBFB
Lymphoma (Aggressive) Panel **AGGLYM**		3q27	BCL6
		8q24	MYC
		t(14;18)(q32;q21)	IGH-BCL2
Lymphoma **FISHI**	Burkitt	8q24	MYC
	Diffuse large cell	3q27	BCL6
	Follicular	t(14;18)(q32;q21)	IGH-BDL2
	IgH rearrangement	14q32	IGH
	Mantle cell	t(11;14)(q13;q32)	IGH-CCND1
	MALT	18q21	MALT1

Indication	Probe Target	Gene(s)/Unique Sequence
Multiple Myeloma Panel **MMF**	1q21	CKS1B
	+9	ASS1
	t(11;14)(q13;q32)	IGH-CCND1
	14q32	IGH rearrangement
	+15	PML
	del(17)(p13.1)	TP53(p53)
	NOTE: If IGH is positive, additional testing include:	
	t(4;14)(p16;q32)	IGH-FGFR3
	t(14;16)(q32;q23.1)	IGH-MAF
Myelodysplastic Syndrome Panel (MPS) **MDSPAN**	del(5)(q31)	EGR1
	del(7)(q31)/-7	D7S486
	+8	CEP8
	del(20)(q12)	D20S108
Myeloproliferative Disorder Panel (MPD) **ARUP 2002360**	4q12	PDGFRA-CHIC2-FIP1L1
	5q33.1	PDGFRB
	8p12	FGFR1
	T99;22)(q34;q11.2)	BCR-AB;1