Department of Clinical Laboratory Genetics
Genome Diagnostics & Cancer Cytogenetics
Malignant Hematology Testing

Toronto General Hospital
Eaton Wing 11-444, 200 Elizabeth Street
Toronto, Ontario M5G 2C4
Head: Tracy Stockley, PhD, FCCMG, FACMG
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cancercytogenetics@uhn.ca
Hours of Operation (Mon-Fri) 8:30AM-4:30PM
CAP: 7175217 CLIA: 99D1106115 IQMH: 4204-site 0141

Patient Information or Hospital Stamp Here
Last Name:

First Name:

Date of Birth (MM/DD/YYYY):

Sex assigned at birth:

Health Card #:

Hospital #:

Instructions:
THIS REQ IS FOR MALIGNANT HEMATOLOGY TESTNG ONLY – see link at bottom of page for SOLID TUMOUR and HEREDITARY requisitions.

1.Complete all information as requested
2.Send requisition with specimen to address above – **DO NOT COME TO TORONTO GENERAL FOR BLOOD DRAW**
3.Keep specimen at room temperature unless frozen
4.If shipping, send same day or next day delivery
5.Specimen labelling: **Name, DOB, MRN#, Date Taken**

Information For Reporting:
Full Name of Referring Physician
Physician Billing #
Hospital/Address:

Phone:
Fax:

Physician Signature:_____

Copy Report To:_____

Specimen Requirements – Genome Diagnostics:

❑ **Peripheral blood**
For leukemia/lymphoma - 20 mL in **EDTA**
For circulating tumour (cell free DNA) - 18 ml in **STRECK** tubes
For all other testing - 5ml in **EDTA**

❑ **Bone marrow aspirate**
1-2 ml in **EDTA**

❑ **Extracted DNA or RNA (>1µg)** (please circle nucleic acid)

Tissue Source _____

Concentration: _____ Volume:_____

Extracted nucleic acid will only be accepted from an appropriately accredited laboratory (ex.IQMH or equivalent).

Specimen Requirements – Cytogenetics (Page 3):

❑**Bone marrow aspirate**
>1.5 ml in **sodium heparin**

❑**Peripheral blood**
5-10 ml in **sodium heparin**

❑**Paraffin Embedded Tissue (FISH)**
-include circled H&E
-2 x 4µm sections/probe on positively charged slides, air dried

❑**Cytology preparation (FISH)**
-Air-dried smear/touch prep (1-2 per test)
-Cytospin slide (1-2 per test)

N.B. Currently, decalcified specimens cannot be reported clinically.

Please ensure that you are using an updated copy of this requisition available at:
www.uhn.ca/UHNReferrals/Malignant-Hematology-Testing.pdf

UHN Toronto General Toronto Western Princess Margaret Toronto Rehab

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Sex:
Health Card #:
Hospital #:

Clinical Diagnosis/Reason for Referral:

❑ **Diagnosis:** _____

❑ **Other:** _____

❑ **Monitoring:** (for follow-up samples)
Treatment (specify type) _____

Date of last treatment _____

Genome Diagnostics Tests - Hematological

Leukemia:

- ❑ ^BCR::ABL1 t(9;22)
  Please indicate if known – CML or ALL
- ❑ ^ABL1 kinase domain mutation –
  Please indicate breakpoint if known – p210 or p190
- ❑ RUNX1::RUNX1T1 (AML/ETO) t(8;21)
- ❑ CBFB::MYH11 Inv(16) or t(16;16)
- ❑ PML::RARA t(15;17)
- ❑ FLT3/NPM1 (newly diagnosed AML)
- ❑ FLT3 only (relapsed/refractory AML)
- ❑ NPM1 MRD (4bp insertion between nucleotide 863 and 864 only)
- ❑ CLL/SLL - IGHV Somatic Hypermutation/TP53
  (for patients requiring treatment only)

Malignant Hematology NGS panel:

Funded for AML, MPN, MDS, and MDS/MPN. **Please provide supporting documentation for testing.** If molecular profiling was previously performed at another institution, please provide molecular results.

❑ **Comprehensive Sequencing (NGS)**, includes:

ASXL1	CUX1	GNAS	KRAS	PTPN11	TP53
BCOR	DDX41	IDH1	MPL	RAD21	U2AF1
BCORL1	DNMT3A	IDH2	MYD88	RUNX1	WT1
BRAF	ETNK1	IKZF1	NOTCH1	SETBP1	ZRSR2
CALR	ETV6	IRF1	NPM1	SF3B1	
CBL	EZH2	JAK1	NRAS	SH2B3	
CEBPA	FBXW7	JAK2	PAX5	SRSF2	
CSF3R	FLT3	KIT	PHF6	STAG2	
CTNNA1	GATA2	KMT2A	PPM1D	TET2	

Lymphoma: please attach corresponding pathology report

- ❑ ^B-cell Clonality
- ❑ ^T-cell Clonality
- ❑ ^MYD88
- ❑ ^Mantle cell (TP53 sequencing only)

Bone marrow/Stem cell transplant monitoring :

- ❑ ^15 STRs and amelogenin XY loci

Please specify:

- ❑ Donor
- ❑ Recipient Pre-SCT
- ❑ Recipient Post-SCT (Split Chimerism)

Other:

- ❑ ^BRAF (p.V600E/K only) (please select: Hairy cell leukemia, Langerhans cell histiocytosis, Erdheim-Chester)
- ❑ ^KIT (Mastocytosis - BM or involved tissue preferred)
- ❑ ^JAK2 (Exon 12 + Exon 14 p.V617F) / CALR (MPD)

Identity Testing (15 STRs and amelogenin XY loci):

- ❑ ^Specimen matching (Please provide control specimen, specimen in question and details)

^Indicates a test that will be billed to the referring hospital, laboratory, physician or medical group.

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Cancer Cytogenetics – Malignant Hematology

Clinical Diagnosis/Reason for Referral:

❑ **Diagnosis:** _____

❑ **Monitoring:** _____

A bone marrow report must accompany or be sent by fax/email for all bone marrow samples.
All samples will be banked and testing delayed until this information is received.

G-Banded Karyotyping

Bone Marrow or Peripheral Blood for Oncology (marrow: ≥1.5mL NaHep, blood: 5-10mL NaHep).
❑ G-banded karyotype analysis.

Peripheral blood for CONSTITUTIONAL ANALYSIS (5-10 mL NaHep).
❑ G-banded karyotyping to confirm a constitutional abnormality detected on bone marrow karyotype. We do not accept samples for constitutional analysis other than to rule out an abnormality detected by karyotype or OGM .

Optical Genome Mapping (OGM)

Eosinophilia Panel (B/M) – Peripheral Blood or Bone Marrow with Elevated Eosinophils (≥ 10% nucleated cells)
❑ PDGFRA / PDGFRB / FGFR1 / PCM1 / JAK2 / ABL1 / ETV6 / FLT3 (***expanded gene panel***)

Acute Myeloid Leukemia (B/M) – Bone Marrow (PREFERRED) or Blood (>10% blasts) (NaHep or EDTA)
❑ Whole Genome Analysis (CURRENTLY ONLY AVAILBLE FOR AML, PLEASE INDICATE BLAST PERCENTAGE ASAP BY FOLLOW UP EMAIL TO CANCERCYTOGENETICS@UHN.CA).

Fluorescence *in situ* Hybridization (FISH)

Chronic Myelogenous Leukemia (B/M)
❑ ^BCR::ABL1 (only for molecular negative)

FISH for Plasma Cell Neoplasms

Plasma Cell Neoplasms with CD138 Cell Enrichment
(Magnetic separation requires ≥ 1mL marrow aspirate. If other tests are requested, e.g. karyotype, please submit an additional 1.5-2mL of aspirate in a separate tube.) **(M)**
❑ ^Multiple Myeloma Panel (or Amyloidosis)

FISH for Lymphoid Disorders

Chronic Lymphocytic Leukemia (B/M)
❑ ^CLL FISH Panel (WBC > $5x10^9$ cells/mL)
□ diagnostic
□ follow up

FISH for Lymphoid Disorders (continued)

Large B-Cell Lymphoma Panel (B/M/C/P)
❑ ^Reflex Panel (BCL2 and BCL6 only when MYC Positive)

Burkitt Lymphoma (B/M/C/P)
❑ ^MYC ONLY

Follicular lymphoma / DLBCL (B/M/C/P)
❑ ^IGH/BCL2 *t(14;18)(q32;q21)*
❑ ^BCL6

Anaplastic large cell lymphoma (B/M/P)
❑ ^ALK

MALT lymphoma (B/M/C/P)
❑ ^MALT1

Mantle cell lymphoma (B/M/C/P)
❑ ^CCND1/IGH t(11;14)(q13;q32)

Indicates FISH validation status by sample type: **B** = Blood, **M** = Marrow, **P** = Paraffin (surgical or cytology slides), **C** = Cytospin

^ indicates a test that will be billed to the referring hospital, laboratory, physician or medical group.

For all cytogenetics inquiries please contact cancercytogenetics@uhn.ca