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
Phone: (416) 340-4800 x5739
Fax: (416) 340-3596 Cancer Cytogenetics
Fax: (416) 340-4473 Genome Diagnostics
Email: Genome.diagnostics@uhn.ca
cancercytogenetics@uhn.ca
Hours of Operation (Mon-Fri) 8:30AM-4:30PM
CAP: 7175217 CLIA: 99D1106115 ACD: 4204-site 0141

Patient Information or Hospital Stamp Here
Last Name:

First Name:

Date of Birth (DD/MMM/YYYY):

Sex assigned at birth:

Health Card #:

Hospital #:

Instructions:
THIS REQ IS FOR MALIGNANT HEMATOLOGY TESTING ONLY – SOLID TUMOUR and HEREDITARY requisitions can be found at:
https://www.uhn.ca/Labs/services_clinicians#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:
CPSO #:
Hospital/Address:

Phone:
Fax:

Physician Signature:_____

Copy Report To (include full name and Fax #):

_____

Specimen Requirements – Genome Diagnostics:

❑ **Peripheral blood**
For leukemia/lymphoma - 20 mL in **EDTA**
For all other testing - 5ml in **EDTA**

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

❑ **Extracted DNA or RNA (>4µg)** (please circle nucleic acid)

Tissue Source _____

Concentration: _____ Volume:_____

Extracted nucleic acid will only be accepted from an appropriately accredited laboratory (ex. ACD 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 (12mm)
-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. Decalcified specimens are not accepted for testing.

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

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Clinical Diagnosis/Reason for Referral:

❑ **Diagnosis:** _____

❑ **Other:** _____

❑ **Diagnostic sample:** (First sample at Diagnosis)

❑ **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
- ❑ 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 – IGHV Somatic Hypermutation/BTK,PLCG2,TP53 **(for patients requiring treatment only)**
- ❑ CLL – BTK,PLCG2,TP53 **(for patients that have progressed on or after first line therapy)**

Malignant Hematology NGS panel:

Funded for AML, MPN, MDS, and MDS/MPN.

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

ABL1	CUX1	IDH1	MYD88	RAD21	TERT
ANKRD26	DDX41	IDH2	NF1	RUNX1	TET2
ASXL1	DNMT3A	IKZF1	NFE2	SETBP1	TP53
BCOR	ETNK1	IRF1	NOTCH1	SF3B1	TYK2
BCORL1	ETV6	JAK1	NPM1	SH2B3	U2AF1
BRAF	EZH2	JAK2	NRAS	SRSF2	UBA1
CALR	FBXW7	JAK3	PAX5	STAG2	WT1
CBL	FLT3	KIT	PHF6	STAT3	ZRSR2
CEBPA	GATA2	KMT2A	PPM1D	STAT5a	
CSF3R	GNAS	KRAS	PRPF8	STAT5b	
CTNNA1	GNB1	MPL	PTPN11	TERC	

Lymphoma: please attach corresponding pathology report

- ❑ ^B-cell Clonality
- ❑ ^T-cell Clonality
- ❑ ^MYD88
- ❑ ^Mantle cell (BTK,PLCG2,TP53)

Stem cell transplant monitoring :

- ❑ ^15 STRs and amelogenin XY loci

Please specify:

- ❑ Donor
- ❑ Recipient Pre-SCT
- ❑ Recipient Post-SCT (Split Chimerism – Blood only)
- ❑ Recipient Post-SCT (Unfractionated)

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.

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 Myeloid Disorders

Eosinophilia FISH Panel (B/M)
❑ ^PDGFRA / PDGFRB / FGFR1

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