Department of Clinical Laboratory Genetics
Genome Diagnostics & Cancer Cytogenetics
Somatic Testing

Toronto General Hospital
Eaton Wing 11-444, 200 Elizabeth Street
Toronto, Ontario M5G 2C4
Head: Tracy Stockley, PhD, FCCMG, FACMG
Phone: (416) 340-4800 x5739
Fax: (416) 340-3596
Email: Genomediagnostics@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):

Gender:

Health Card #:

Hospital #:

Instructions:
THIS REQ IS FOR SOMATIC TESTING ONLY – see link at bottom of page for HEREDITARY REQ

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).

❑ **Fresh/Fixed Cytology fluid:** as much as possible

Solid Tumour: Keep shipped PE material below 30°C

❑ **Tissue block** (**PREFERRED**)
-Recut H&E slide (slide will not be returned) and copy of the pathology report is required
-note that a 3mm punch biopsy will be taken from block

❑ **Unstained slides** (**only if BLOCK is not available**)
- Cut **8 unstained sections** @ 7µm thickness on uncoated slides
- **Air dry (not in oven)** unstained sections at room temperature.
- For all tissues we require **2 H&E** stained sections, one cut before cutting slides from block and one cut after.

❑ **Cell Block or Paraffin Embedded Tissue (curls)** 5x10µm sections in a sterile Eppendorf tube
For Cytology specimens: Please provide ALL fixatives used:
_____

❑ **Fresh tissue**: 5mm^3 frozen or in 10 ml sterile medium at room temperature

Specimen Requirements - Cytogenetics:

❑**Bone marrow aspirate**
1.5-2 ml in **sodium heparin**

❑**Peripheral blood**
7 ml in **sodium heparin**

❑**Tissue biopsy** (5-10mm^3 in **sterile** medium/saline)

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

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

See page 5 for Cytogenetics testing

Please ensure that you are using an updated copy of this requisition available at:
http://www.uhn.ca/LMP/Health_Professionals/Documents/CytogeneticsandMolecularDiagnosticstests.pdf

UHN Toronto General Toronto Western Princess Margaret Toronto Rehab

Department of Clinical Laboratory Genetics
Genome Diagnostics & Cancer Cytogenetics - Somatic Testing
Toronto General Hospital
Eaton Wing 11-444, 200 Elizabeth Street
Toronto, Ontario M5G 2C4
Head: Tracy Stockley, PhD, FCCMG, FACMG
Phone: (416) 340-4800 x5739 FAX: (416) 340-3596
Email: Genomediagnostics@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):
Gender:
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: Single Gene testing

- ❑ ^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 (new AML diagnosis)
- ❑ CLL IGHV Somatic Hypermutation **(for patients requiring treatment only)**

Malignant Hematology NGS panel - Acute Myeloid Leukemia (Funded by MOH for New Diagnosis only)

❑ **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	

***Please provide a karyotype report if analysis was not done at UHN**

Lymphoma: please attach corresponding pathology report

- ❑ ^B-cell Clonality
- ❑ ^T-cell Clonality
- ❑ ^MYD88

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) (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.

Version 7.2 Aug 2021

UHN Toronto General Toronto Western Princess Margaret Toronto Rehab

Department of Clinical Laboratory Genetics
Genome Diagnostics & Cancer Cytogenetics - Somatic Testing
Toronto General Hospital
Eaton Wing 11-444, 200 Elizabeth Street
Toronto, Ontario M5G 2C4
Head: Tracy Stockley, PhD, FCCMG, FACMG
Phone: (416) 340-4800 x5739 FAX: (416) 340-3596
Email: Genomediagnostics@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):

Gender:

Health Card #:

Hospital #:

***Note**: Please send requisitions to specimen holding facility to ensure that block/slides accompany requisitions when sent to testing lab*

Genome Diagnostics Tests – Solid Tumour

Adenocarcinoma of the Lung

- ❑ Comprehensive Sequencing (NGS) (ALK, BRAF, CTNNB1, EGFR, ERBB2, FGFR1, KRAS, MET, NRG1, NTRK1, NTRK2, NTRK3, PIK3CA, RB1, RET, ROS1, SMARCA4, STK11, TP53)

Note - all requests for Lung Comprehensive Sequencing will also have PD-L1 by IHC performed.

If PD-L1 testing has already been performed and/or is not required – please indicate by checking here ____.

- ❑ EGFR – p.T790M mutation only (solid tumour/cell block or cytology fluid)
- ❑ **^***EGFR – p.T790M mutation only (Circulating tumour DNA in blood) ***peripheral blood in STRECK tube required (see pg. 1 for specimen requirements)**

Colorectal and Small Bowel Carcinoma

- ❑ Comprehensive Sequencing (NGS) (BRAF, KRAS, NRAS, PIK3CA)
- ❑ MLH1 Promoter Methylation - funded by CCO for Lynch Syndrome (CRC only) **(Please include IHC MMR results if completed)**
- ❑ ^MSI - Only performed for cases with equivocal IHC MMR results -requires normal reference (normal tissue or blood)

Invasive Endometrial Carcinoma

- ❑ Comprehensive Sequencing (NGS) (KRAS, PIK3CA, POLE, PTEN)
- ❑ MLH1 Promotor Methylation **(Please include IHC MMR results if completed)**
- ❑ ^MSI – Only performed for cases with equivocal IHC MMR results - requires normal reference (normal tissue or peripheral blood)

Gastrointestinal Stromal Tumour

- ❑ ^Comprehensive Sequencing (NGS) (KIT, PDGFRA)

Glioma

- ❑ ^MGMT Promotor Methylation
- ❑ ^IDH1/IDH2 Sequencing

Melanoma

- ❑ **Cutaneous** - Comprehensive Sequencing (NGS) (BRAF, KIT, GNAQ, GNA11, NRAS)
- ❑ **Uveal** - Comprehensive Sequencing (NGS) (BAP1, BRAF, CDK4, CDK6, CDKN2A, EIF1AX, GNA11, GNAQ, HRAS, KIT, NRAS, SF3B1)

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

Toronto General
Toronto Western
Princess Margaret
Toronto Rehab

Department of Clinical Laboratory Genetics
Genome Diagnostics & Cancer Cytogenetics - Somatic Testing
Toronto General Hospital
Eaton Wing 11-444, 200 Elizabeth Street
Toronto, Ontario M5G 2C4
Head: Tracy Stockley, PhD, FCCMG, FACMG
Phone: (416) 340-4800 x5739 FAX: (416) 340-3596
Email: Genomediagnostics@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):

Gender:

Health Card #:

Hospital #:

***Note**: Please send requisitions to specimen holding facility to ensure that block/slides accompany requisitions when sent to testing lab*

Genome Diagnostics Tests – Solid Tumour

Ovarian Carcinoma

- ❑ **Sex-Cord Stromal Tumour -** Comprehensive Sequencing (NGS) (APC, DICER1, FOXL2, STK11, VHL)
- ❑ **Small cell Carcinoma (Hypercalcemic type (SCCOHT) -** Comprehensive Sequencing (NGS) (SMARCA4)
- ❑ **High Grade Serous Carcinoma** – please see page 5 for requirements

Polymorphous Low Grade Adenocarcinoma (PLGA) Salivary gland

- ❑ ^PRKD1 Sequencing

Thyroid Carcinoma

- ❑ **Anaplastic High Grade** - Comprehensive Sequencing (NGS) (BRAF, HRAS, KRAS, NRAS, NTRK3, PPARG, RET)
- ❑ **^Papillary** - Comprehensive Sequencing (NGS) BRAF (p.V600E/K only)

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

UHN Toronto General Toronto Western Princess Margaret Toronto Rehab

Department of Clinical Laboratory Genetics
Genome Diagnostics & Cancer Cytogenetics - Somatic Testing
Toronto General Hospital
Eaton Wing 11-444, 200 Elizabeth Street
Toronto, Ontario M5G 2C4
Head: Tracy Stockley, PhD, FCCMG, FACMG
Phone: (416) 340-4800 x5739 FAX: (416) 340-3596
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):

Gender:

Health Card #:

Hospital #:

***Note**: Please send requisitions to specimen holding facility to ensure that block/slides accompany requisitions when sent to testing lab*

Genome Diagnostics Tests – Solid Tumour

Important - EXTERNAL pathology review required prior to sending material for these assays.

REQUIRED - Tumour Cellularity within circled area_____%

For Solid Tumour: Circled H&E slide required prior to sending block. (Please send a recut as slide will be retained by UHN). Tumour cellularity must be a minimum of 20% tumour within circled area. Please circle a ~3mm area to be cored from block. If a block cannot be sent, please send sections (see page 1).

For Cytology Specimens (BRCA1 and BRCA2 only): Tumour cellularity must be a minimum of 10% tumour. Please see page 1 for specimen requirements.

Serous Carcinoma – High Grade (Ovarian/Tubal/Peritoneal)

❑ Comprehensive Sequencing (NGS) - BRCA1, BRCA2

Urothelial Carcinoma - Testing is now fee for service

❑ ^Comprehensive Sequencing (NGS) - FGFR1, FGFR2, FGFR3, FGFR4

Breast Cancer – Advanced/Metastatic (HR+/HER2- patients only)

– For additional eligibility requirements – see PIK3CA information sheet
https://www.uhn.ca/Labs/Documents/PIK3CA-Genetic-Testing.pdf

❑ Comprehensive Sequencing (NGS) - PIK3CA

Solid Tumour NGS Panel (Oncomine Comprehensive v3)

❑ ^Comprehensive Sequencing (NGS) – For a complete list of genes available on this panel – please see link

https://assets.thermofisher.com/TFS-Assets/LSG/brochures/oncomine-comprehensive-assay-v3-flyer.pdf

Disease site:_____ Gene(s) Requested_____

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

UHN Toronto General Toronto Western Princess Margaret Toronto Rehab

Department of Clinical Laboratory Genetics
Genome Diagnostics & Cancer Cytogenetics - Somatic Testing
Toronto General Hospital
Eaton Wing 11-444, 200 Elizabeth Street
Toronto, Ontario M5G 2C4
Head: Tracy Stockley, PhD, FCCMG, FACMG
Phone: (416) 340-4800 x5739 FAX: (416) 340-3596
Email: Genomediagnostics@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):

Gender:

Health Card #:

Hospital #:

A Pathology / Hematology report must accompany or be sent (fax/email) for all bone marrow samples and solid tumour testing. Samples will be banked and testing delayed until this information is received.

Clinical Diagnosis/Reason for Referral:

- ❑ **Diagnosis:** _____
- ❑ **Monitoring:** (follow-up sample)
  Treatment (specify type) _____
  (date of last treatment) _____
- ❑ **Other:** _____

**proper interpretation of post-transplant karyotyping requires information about transplant type*

- ❑ Pre-transplant monitoring
- ❑ Post-transplant monitoring
  Type of transplant □ auto □ allo □ sex-mismatch
  Date of transplant (mm/yy):_____

Conventional Cytogenetics Tests

❑ ^G-banded karyotyping on bone marrow

❑ ^G-banded Karyotyping on peripheral blood
(Only to confirm a constitutional abnormality detected on bone marrow karyotype)

FISH for Hematologic Disorders

Chronic Lymphocytic Leukemia
❑ ^CLL FISH Panel (11q del, trisomy 12, 13q del, 17p del)
□ diagnostic
□ follow-up (justify): _____

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

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.)
❑ ^Multiple Myeloma Panel
❑ ^Amyloidosis Panel

Eosinophilia FISH Panel
❑ ^PDGFRA / PDGFRB / FGFR1

MDS/AML Panel
(ordered automatically for failed karyotypes)
❑ ^Del(5q)/-5 and Del(7q)/-7
❑ ^KMT2A Break-apart
❑ ^MECOM 3q26 rearrangement

Lymphoid Disorders:

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

Burkitt Lymphoma
❑ ^MYC ONLY

Follicular lymphoma / Diffuse Large B-Cell Lymphoma
❑ ^IGH/BCL2 *t(14;18)(q32;q21)*
❑ ^BCL6

Anaplastic large cell lymphoma
❑ ^ALK

MALT lymphoma
❑ ^MALT1

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

Solid Tumour *:

***tests are performed on FFPE tissue only, see specimen requirements. For cytology specimens please contact the lab to inquire if test is validated.**

Breast cancer
❑ HER2 Amplification

Brain Cancer: Gliomas
❑ ^1p/19q Co-deletion FISH

Sarcoma and Carcinoma FISH
❑ ^EWSR1 - EWS-Family Tumours
❑ ^FUS – Low Grade Fibromyxoid Sarcoma
❑ ^SS18 – Synovial Sarcoma
❑ ^MAML2 – Mucoepidermoid Carcinoma
❑ ^ETV6 – Secretory Carcinoma
❑ ^CDKN2A (p16) – Malignant Mesothelioma