Cincinnati Children's
changing the outcome together

LABORATORY OF GENETICS AND GENOMICS
For local courier service and/or inquiries, please contact 513-636-4474 • Fax: 513-636-4373
www.cincinnatichildrens.org/diagnosticlabs • Email: LabGeneticCounselors@cchmc.org

Mailing Address:
3333 Burnet Avenue, Room R1042
Cincinnati, OH 45229

ONCOLOGY GENETIC TESTING REQUISITION

All Information Must Be Completed Before Sample Can Be Processed

PATIENT INFORMATION

Patient Name: _____, _____, _____
Last First MI

Address: _____

Home Phone: _____ MR#: _____

Date of Birth: _____/ _____/ _____ Gender: ☐ Male ☐ Female

INDICATIONS/DIAGNOSIS/ICD-9 CODE

- ☐ Acute Myelogenous Leukemia
- ☐ Acute Promyelocytic Leukemia
- ☐ Adenopathy
- ☐ Anemia
- ☐ Burkitt Lymphoma
- ☐ Chronic Myelogenous Leukemia
- ☐ Chronic Lymphocytic Leukemia
- ☐ Colorectal cancer
- ☐ Ewing sarcoma
- ☐ Glioma
- ☐ Hodgkin lymphoma
- ☐ Leukocytosis
- ☐ Leukopenia
- ☐ Leukemia
- ☐ Lung cancer
- ☐ Lymphoma
- ☐ Lymphocytosis
- ☐ Lymphoproliferative disorder
- ☐ Langerhans cell histiocytosis (LCH)
- ☐ Malignant melanoma
- ☐ Medulloblastoma
- ☐ Monoclonal gammopathy
- ☐ Multiple Myeloma
- ☐ Myelodysplastic syndrome or disease (MDS)
- ☐ Myeloproliferative disease (MPS or MPD)
- ☐ Neutropenia
- ☐ Non-Hodgkin Lymphoma (NHL)
- ☐ Pancytopenia
- ☐ Polycythemia Vera (PV)
- ☐ Sarcoma
- ☐ Thrombocytopenia
- ☐ Thrombocytosis
- ☐ Wilms tumor
- ☐ Other _____

BILLING INFORMATION (Choose ONE method of payment)

☐ REFERRING INSTITUTION

Institution: _____

Address: _____

City/State/Zip: _____

Accounts Payable Contact Name: _____

Phone: _____

Fax: _____

Email: _____

☐ COMMERCIAL INSURANCE*

Insurance can only be billed if requested at the time of service.

Policy Holder Name: _____

Gender: _____ Date of Birth _____/ _____/ _____

Authorization Number: _____

Insurance ID Number: _____

Insurance Name: _____

Insurance Address: _____

City/State/Zip: _____

Insurance Phone Number: _____

ETHNIC/RACIAL BACKGROUND (Choose All)

- ☐ European American (White)
- ☐ African-American (Black)
- ☐ Native American or Alaskan
- ☐ Asian-American
- ☐ Pacific Islander
- ☐ Ashkenazi Jewish ancestry
- ☐ Latino-Hispanic _____
(specify country/region of origin)
- ☐ Other _____
(specify country/region of origin)

REFERRING PHYSICIAN

Physician Name (print): _____

Address: _____

Phone: (_____) _____ Fax: (_____) _____

Email: _____

Genetic Counselor/Lab Contact Name: _____

Phone: (_____) _____ Fax: (_____) _____

Email: _____

_____ Date: ____/ _____/ _____
Referring Physician Signature (REQUIRED)

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Patient Name: _____ Date of Birth: _____

SAMPLE/SPECIMEN INFORMATION

Has patient received a bone marrow transplant? ☐ Yes ☐ No

If yes, date of bone marrow transplant _____

Percent engraftment _____

Note: For post-transplant patients, we accept pre-transplant samples or post-transplant skin fibroblasts **ONLY** (blood, saliva, and cytobrushes are not accepted). Culturing of skin fibroblasts is done at an additional charge.

Specimen Date: _____ **Time:** _____

DRAWN BY: _____

***Phlebotomist must initial tube of specimen to confirm sample identity**

DISEASE STATUS:

☐ New diagnosis ☐ Remission ☐ Relapse ☐ E(COG) study ☐ COG patient

SPECIMEN TYPE — SEE PAGE 3 FOR SPECIMEN REQUIREMENTS

☐ Bone marrow ☐ Oncology blood ☐ Lymph node

☐ Formalin fixed paraffin embedded tissue ☐ Touch prep ☐ Smear

Estimated percent of tumor in sample: _____

☐ Solid tumor (specify): _____ ☐ If in media, type: _____

Estimated percent of tumor in sample: _____

Other: _____ WBC _____% Blasts _____

TEST(S) REQUESTED

SEE PAGE 3 FOR SPECIMEN AND TEST DETAILS

Cytogenetic Chromosome and Microarray Analysis

☐ Oncology Chromosome Analysis

☐ Constitutional (blood) Chromosome Analysis

☐ Oncology Microarray
[Additional 3 mL blood or bone marrow (NaHep) if ordered without chromosomes] — **% Tumor:** _____

Medulloblastoma Methylation Array (Microarray SNP)

Fresh tumor preferred, FFPE optional

☐ Medulloblastoma Subgrouping & CNV Analysis**

☐ Medulloblastoma Subgrouping ONLY

☐ Medulloblastoma CNV Analysis ONLY**

FISH

(Additional FISH probes available. See page 3 for details.)

☐ t(9;22) *[BCR/ABL1]*
☐ 11q23 *[KMT2A]*
☐ *X/Y* [Opposite sex BMT]
☐ t(15;17) *[PML/RARα]*
☐ Other (please call lab) _____

Hematologic FISH Panels

(All probes available individually. Please see page 3 for panel descriptions)

☐ ALL Hyperdiploid
☐ ALL Risk Stratification
☐ Ph-like ALL
☐ AML
☐ APL
☐ Burkitt Lymphoma
☐ CLL
☐ Double Hit Lymphoma
☐ Eosinophilia
☐ Fanconi anemia
☐ Multiple myeloma
☐ MDS
☐ MPD
☐ SDS
☐ Large cell NHL
☐ Small cell NHL
☐ Combined NHL
☐ T-Cell Lymphoma/Leukemia

Molecular Genetic Analysis (RNA assays)

Samples must be received within 24 hours of collection.

☐ *BCR/ABL*- QUANTITATIVE (p210)

☐ *BCR/ABL*- QUANTITATIVE (p190)

☐ *BCR/ABL* - RT-PCR (QUALITATIVE)

☐ *PML/RARα* - RT-PCR

Molecular Genetic Analysis (DNA assays)

Samples must be received within 48 hours of collection.

☐ *JAK2* QUANTITATIVE (V617F)

☐ *PTEN* sequencing

☐ Bone marrow engraftment (BME) by STR (Same sex donor & recipient)

- ☐ Pre-transplant host sample
- ☐ Post transplant sample
- ☐ Donor sample

☐ WBC sub-populations engraftment study*

- ☐ STR (same sex)
- ☐ *X/Y* FISH (opposite sex)

☐ Cell Separation (for non-engraftment testing)*

***You MUST call the GENETICS LAB at 513-636-4474 to schedule this test prior to sample submission.**

Non-Hematologic Genetic Analysis

☐ *BRAF* (7q34) **FISH** — (Glioma) — include 2 FFPE slides and 1 marked H & E slides

☐ *BRAF* full gene sequence analysis (Glioma, colon lung, melanoma) — **%Tumor:** _____

☐ *BRAF* V600E by real-time PCR **(FFPE NOT ACCEPTED)** (colon, lung, melanoma) — **% Tumor:** _____

☐ *BRAF* (V600E) mutation only (Langerhans cell histocystosis, colon, lung, melanoma) — **% Tumor:** _____

☐ *MAP2K1* full gene sequence analysis (Langerhans cell histocystosis, colon, lung, melanoma) — **% Tumor:** _____

Non-Hematologic FISH Panels

Fresh tumor or FFPE slides (must include 1 marked H & E slide with FFPE)

☐ Ependymoma FISH Panel

☐ High-Grade Glioma FISH Panel

☐ Low-Grade Glioma FISH Panel

☐ Lung Cancer FISH Panel

☐ Medulloblastoma FISH Panel

☐ Melanocytic Tumor FISH Panel

☐ Pilocytic Astrocytoma FISH Panel

ADDITIONAL INFORMATION

SPECIMEN REQUIREMENTS

Cytogenetic Analysis (Chromosome, FISH, and Microarray analysis):

3 mL blood or bone marrow (NaHep)
Chromosome analysis
Cell culture only
FISH probes and FISH panels

3 mL blood or bone marrow (EDTA)
Oncology microarray

Fresh Tumor or Lymph Nodes (1cm³ in sterile saline or sterile transport media)
Chromosome analysis
Cell culture
FISH probes and FISH panels

Molecular Genetic Analysis (RNA Assays): 5-10 mL blood or 3–5 mL bone marrow (EDTA) — Samples must be received within 24 hours of collection.
BCR/ABL — Quantitative (p210), *BCR/ABL* — Quantitative (p190), *BCR/ABL* — Qualitative, *PML/RARα* — Quantitative

Molecular Genetics Analysis (DNA Assays): 3 mL bone marrow or blood (EDTA) — Samples must be received within 48 hours of collection.
JAK2 Quantitative (V617F), *PTEN* Seq, Bone marrow engraftment by STR, WBC sorted sub-populations engraftment study (by STR or FISH)

Non-Hematologic Genetic Analysis:

***BRAF* full gene sequencing, *BRAF* (V600E) mutation only analysis and *MAP2K1* full gene sequencing:**
3 mL blood or bone marrow (EDTA), 1 cm3 fresh tumor or 10 formalin fixed paraffin embedded (FFPE) tissue scrolls. Please send additional scrolls (if possible) for extremely small tissue samples.

***BRAF* (V600E) by real-time PCR gene sequencing:**
3 mL blood or bone marrow (EDTA) or 1 cm3 fresh tumor. FFPE is NOT an acceptable sample type for real-time PCR gene sequencing of *BRAF.*

FISH (Fluorescence In Situ Hybridization)

***NOTE:** All FISH probes are available for individual testing*

Hematologic FISH Panels — 3 mL blood or bone marrow (NaHep)

- ALL Hyperdiploid: trisomy 4, 10, 17
- ALL Risk Stratification: 4, 10, 17, t(1;19), t(12;21), t(9;22), *KMT2A*
- Ph-like ALL: *CRLF2, ABL2, PDGFRB, CSF1R, JAK2, ABL1, EPOR*
- AML: t(8;21), *KMT2A,* inv(16)
- APL: t(15;17), *RARα*
- Burkitt Lymphoma: t(8;14), MYC
- CLL: 13q14.3, 13q34, 12 centromere, *ATM,* TP53
- Double Hit Lymphoma: *BCL6, MYC,* t(8;14), t(14;18)
- Eosinophilia: 4q12, *PDGFRB, FGFR1, CBFB*
- Fanconi Anemia: 1q25, 3q27, mono 7 / del(7q)
- Multiple Myeloma (CD138+): 1p32.3/1q21, t(4;14), t(11;14), monosomy 13/del 13q, t(14;16), t(14;20), TP53
- MDS: mono 5/del 5q, mono 7/del 7q, tri 8, del (20q)
- MPD: 4q12, *PDGFRB, FGFR1, BCR/ABL1*
- SDS: mono 7/del 7q, tri 8, del (20q)
- Large cell NHL: t(11;14), t(14;18), TP53, *BCL6, ALK*
- Small B-cell NHL: t(11;14), t(14;18), 18q21 *(MALT1),* CLL Panel
- Combined NHL: (large and small cell panels)
- T-Cell Lymphoma: *TRA/TRD, TRB; TRG, BCR/ABL1, KMT2A*

Non-Hematologic FISH Panels — 4-8 FFPE slides cut to 4 micron thickness and 1 marked H & E slide†* — Fresh Tumor (1cm³)

- Ependymoma: *ABL2, CDKN2A, C11orf95, RELA*
- High-Grade Glioma: *PDGFRA, CDKN2A, NTRK2, MYCN*
- Low-Grade Glioma: *TP73/ABL2, FGFR1, MYB, BRAF, MYBL1*
- Lung Cancer: *ALK, ROS1, MET, RET*
- Medulloblastoma : *MYB, LIS1/RARα, MYC, MYCN*
- Melanocytic Tumor: *RREB1, MYC, CDKN2A, CCND1*
- Pilocytic Astrocytoma: *BRAF, CDKN2A**

†For each probe ordered, send 2 unstained slides with one section cut to 4 micron thickness and mounted on a charged slide. Blocks are also accepted for processing.

**Pilocytic Astrocytoma FISH Panel only needs 2-4 FFPE slides and 1 marked H&E slide*

Methylation Array Specimen Options:

1. Fresh Tumor Tissue (Preferred Specimen Type): Send 10–25 mg (1cm³) of STERILE tumor tissue in STERILE saline or transport medium (RPMI)
   a. Unacceptable Fresh Tumor Conditions: Specimen placed in formalin or non-sterile container.
   b. Store at room temperature (if storing overnight, please **REFRIGERATE**). Use overnight shipping (protect from temperature extremes, no ice)
2. Formalin Fixed Paraffin Embedded Tissue (FFPE) (Optional)**: A representative FFPE block or 10 unstained FFPE slides and 4 scrolls (2 eppendorf tubes with 2 scrolls each) with a tumor surface area of up to 250mm².
   a. If a pathology evaluation has already been performed on the sample, send a copy of the pathology report and include any additional IHC or molecular testing that might have been performed.
3. DNA (Optional):** If DNA sample is available, please send 1ug DNA (max volume 90uL). DNA must have been extracted in a CLIA certified laboratory.

***ONLY MYC-N (2p24.3) amplification, GLI2 (2q14.2) amplification, Monosomy 6, MYC (8q24.21) amplification, 10q loss, Monosomy 11, 17p loss, 17q gain and isochromosome 17q will be reported for CNV Analysis performed on Formalin Fixed Paraffin Embedded (FFPE) tissue or DNA that was originally extracted from a FFPE sample.*

For any questions about specimen requirements, please call our laboratory at (513) 636-4474.

ADDITIONAL INFORMATION, CONTINUED

For Chromosome Breakage Study for Fanconi Anemia - Please see Fanconi Anemia requisition (www.cincinnatichildrens.org/cytogenetics or call 513-636-4474)

SHIPPING INFORMATION

Local courier is available; please call 513-636-4474 for information.

Shipping:

For samples that arrive **Monday–Saturday:**

Cincinnati Children's
Cytogenetic and Molecular Laboratories
3333 Burnet Ave.
TCHRF 1042
DOCK 5
Cincinnati, OH 45229-3039

BILLING INFORMATION

*** PLEASE NOTE:**

- We will not bill Medicaid, Medicaid HMO, or Medicare except for the following: CCHMC Patients, CCHMC Providers, or Designated Regional Counties.
- If you have questions, please call 1-866-450-4198 for complete details.

☐ **Patient signed completed ABN**

Medical Necessity Regulations: At the government's request, the Molecular Genetics Laboratories would like to remind all physicians that when ordering tests that will be paid under federal health care programs, including Medicare and Medicaid programs, that these programs will pay only for those tests the relevant program deems to be (1) included as covered services, (2) reasonable, (3) medically necessary for the treatment and diagnosis of the patient, and (4) not for screening purposes.