

# 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

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

## 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)

- |  |  |
|--|--|
| <input type="checkbox"/> European American (White)                                   | <input type="checkbox"/> African-American (Black)  |
| <input type="checkbox"/> Native American or Alaskan                                  | <input type="checkbox"/> Asian-American            |
| <input type="checkbox"/> Pacific Islander  | <input type="checkbox"/> Ashkenazi Jewish ancestry |
| <input type="checkbox"/> Latino-Hispanic _____<br>(specify country/region of origin) |  |
| <input type="checkbox"/> Other _____<br>(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)**

**SAMPLE/SPECIMEN INFORMATION**

Has patient received a bone marrow transplant?  Yes  No

If yes, date of bone marrow transplant \_\_\_\_\_

Percent engraftment \_\_\_\_\_

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: \_\_\_\_\_

**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

Fanconi anemia

ALL Risk Stratification

Multiple myeloma

Ph-like ALL

MDS

AML

MPD

APL

SDS

Burkitt Lymphoma

Large cell NHL

CLL

Small cell NHL

Double Hit Lymphoma

Combined NHL

Eosinophilia

T-Cell Lymphoma/Leukemia

**Non-Hematologic FISH**

Fresh tumor or 2 FFPE slides (must include 1 marked H & E slide with FFPE)

*BRAF* (7q34) FISH

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

**Medulloblastoma Methylation Array (Microarray SNP)**

Fresh tumor preferred, FFPE optional

Medulloblastoma Subgrouping & CNV Analysis\*\*

Medulloblastoma Subgrouping ONLY

Medulloblastoma CNV Analysis ONLY\*\*

**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**

*MAP2K1* full gene sequence analysis (Langerhans cell histiocytosis, colon, lung, melanoma) — % Tumor: \_\_\_\_\_

## 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 (1cm<sup>3</sup> 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/RAR $\alpha$*  — 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:

##### MAP2K1 full gene sequencing:

3 mL blood or bone marrow (EDTA), 1 cm<sup>3</sup> fresh tumor or 10 formalin fixed paraffin embedded (FFPE) tissue scrolls. Please send additional scrolls (if possible) for extremely small tissue samples.

### 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(6;9), t(8;21), *NUP98*, *KMT2A*, inv(16)
- APL: t(15;17), *RAR $\alpha$*
- 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, *TP53*, 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 (1cm<sup>3</sup>)

- 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/RAR $\alpha$* , *MYC*, *MYCN*
- Melanocytic Tumor: *RREB1*, *MYC*, *CDKN2A*, *CCND1*
- Pilocytic Astrocytoma: *BRAF*, *CDKN2A\**

<sup>†</sup>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.

<sup>\*</sup>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 (1cm<sup>3</sup>) 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 250mm<sup>2</sup>.
  - 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.

## ADDITIONAL INFORMATION, CONTINUED

For Chromosome Breakage Study for Fanconi Anemia - Please see Fanconi Anemia requisition  
([www.cincinnatichildrens.org/cytogenetics](http://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.