Children's Hospital of Philadelphia℠

LAB-1513
Rev. 1/25

LAST NAME | FIRST NAME

MR# | DOB

PLACE PATIENT LABEL HERE *OR* COMPLETE ABOVE

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# Division of Genomic Diagnostics
# CANCER GENOMIC TEST REQUISITION



SHIP TO: Children's Hospital of Philadelphia, Genomic Diagnostic Laboratory, 3615 Civic Center Blvd., Abramson Research Center, 714J, Philadelphia, PA 19104-4302 - Phone: (267) 426-1447

## PATIENT INFORMATION

Patient Name (Last, First, Middle):

Ordering Facility MRN:

☐ Fetus of above patient (Check if prenatal sample)

Sex: ☐ Male ☐ Female ☐ Unknown ☐ Other: _____

Date of Birth (Month/Day/Year): _____

Street Address: _____

City/State: _____

Zip/Country: _____

Phone Number: (_____)_____

Race/Ethnicity:

☐ Amish ☐ Asian ☐ Black/African-American

☐ Caucasian ☐ East Indian ☐ French Canadian

☐ Hispanic ☐ Jewish-Ashkenazi ☐ Jewish-Sephardic

☐ Mediterranean ☐ Native American

☐ Other: _____

## SAMPLE INFORMATION

What is the surgical pathology identification number?: _____

Collection Date (Month/Day/Year): _____

Did the patient previously have a bone marrow transplant? ☐ Yes ☐ No

Does the sample contain tumor/blasts? ☐ Yes ☐ No

If yes, please include the pathology report and indicate the percentage of tumor or blast nuclei in the sample:

☐ <10% (unacceptable) ☐ 10-29% ☐ 30-50% ☐ >50%

Is a pathology report available (Attach a copy)? ☐ Yes ☐ No

**Sample Type (please see sample requirements on page 4):**

☐ Bone Marrow Aspirate
- ☐ Purple Top Tube (EDTA)
- ☐ Green Top Tube (Sodium Heparin)

☐ Bone Marrow Biopsy

☐ Blood
- ☐ Purple Top Tube (EDTA)
- ☐ Green Top Tube (Sodium Heparin)

☐ Cerebral Spinal Fluid

☐ *Cultured CVS Cells ☐ *Cultured Amniotic Fluid

☐ *Cheek Brush ☐ *Saliva

**For the sample types listed below, please specify tissue of origin (required):** _____

☐ Frozen Tissue ☐ OCT ☐ Snap or Flash Frozen

☐ ***Formalin Fixed Paraffin Embedded Tumor ☐ Block ☐ Scrolls

Request return of tumor block ☐ Yes ☐ No

☐ Fresh Tissue in RPMI media ☐ Cultured Fibroblasts

☐ **cDNA: ☐ **DNA: ☐ **RNA

☐ Other (Specify): _____

* Please contact the lab if sending this sample type

** Were the nucleic acids (DNA or RNA) extracted from a CAP or CLIA certified laboratory (as required)? ☐ Yes ☐ No

*** NOTE: Please reach out to the GDL to confirm the testing schedule if sending cut formalin-fixed, paraffin embedded (FFPE) scrolls or slides.

## ORDERING PROVIDER

Name (Last, First, Degree)

(_____) _____
Phone

(_____) _____
Fax

Institution

Street Address

City State

Zip Country

Email

## ORDERING LABORATORY

Name (Last, First, Degree)

(_____) _____
Phone

(_____) _____
Fax

Institution

Street Address

City State

Zip Country

Email

## OTHER ORDERING PROVIDER / GENETIC COUNSELOR

Name (Last, First, Degree)

(_____) _____
Phone

(_____) _____
Fax

Email

For Lab Use Only

Type of billing: ☐ Institutional ☐ CHOP ☐ Self-pay ☐ Institution called

Comments:

Received by: Received Date: Received Time: Sample:

**Phone: (267) 426-1447; Fax: (215) 590-3514; Email: dgdgeneticcounselor@chop.edu; Website: http://www.chop.edu/centers-programs/division-genomic-diagnostics**

*Testing will not be initiated until all necessary samples and clinical information are submitted to the laboratory.

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## Division of Genomic Diagnostics
## CANCER GENOMIC TEST REQUISITION



### INDICATION FOR TESTING

**Reason for Testing** (please include pertinent history and findings, including pathology report): _____

_____

_____

**Family History** (Attach Pedigree if available): _____

_____

_____

**Previous Relevant Genetic Testing:**

Previous Relevant Genetic Testing Performed (Attach a copy): ☐ Yes ☐ No

If yes, sample type: ☐ Cultured cells from Chorionic Villus ☐ Cultured Amniocytes ☐ Blood ☐ Bone Marrow

☐ Tissue ☐ Other: _____

Results: _____

**Known Genetic Abnormality/Familial Testing:**

Is the current patient who is being tested similarly affected to proband (person originally tested)? ☐ Yes ☐ No

If yes, please describe:_____

***Attach proband (originally tested family member) report if available.***

Gene/Transcript/Region: _____ Alteration (c., p., and/or g.): _____

Proband (originally tested family member) Name (Last, First): _____

Proband (originally tested family member) Date of Birth (Month/Day/Year):_____

Current patient's relationship to the proband (originally tested family member): _____

**Please Note:** If family member samples are submitted for testing to clarify the interpretation of a variant of uncertain significance for a proband, the family member(s) results will be reported as an addendum on the proband's report. In the case that the provider for the family member is not the same as for the proband, a CHOP HIPAA release is required for release of the results.

CHOP HIPAA release included? ☐ Yes ☐ No

**Please contact the laboratory to request expedited testing.*

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# Division of Genomic Diagnostics
# CANCER GENOMIC TEST REQUISITION



## TEST MENU
**Please add instructions for reflex/sequential testing on previous page.**

*Please see pages 4 & 5 for a list of the genes included within each panel*

## DNA/RNA Extraction

☐ DNA Extraction
☐ RNA Extraction

## Somatic Cancer Testing

**Panel Testing:**
- ☐ Comprehensive Solid Tumor Panel (Solid + Fusion)
- ☐ Solid Tumor Panel
- ☐ Comprehensive Hematologic Cancer Panel (Heme + Fusion)
- ☐ Hematologic Cancer Panel
- ☐ Cancer Gene-Fusion Panel

**Panel Testing: Tumor/Normal Pair**
- ☐ Solid tumor Panel Tumor/Normal Pair*
- ☐ Comprehensive Solid Tumor Panel Tumor/Normal Pair*
- ☐ Hematologic Cancer Panel Tumor/Normal Pair*
- ☐ Comprehensive Hematologic Cancer Panel Tumor/Normal Pair*

**These tests require both a tumor and non-tumor sample, clearly labeled (with 2 patient identifiers for each sample)*

Tumor Sample:

ID _____ Specimen Type _____ Collection Date _____

Non-tumor Sample:

ID _____ Specimen Type _____ Collection Date _____

**Cancer Transcriptome Analysis (RNA sequencing):**
- ☐ RNA Sequencing*

*This test is not intended to be a first line diagnostic test. It should be considered following normal or inconclusive fusion analysis.

**Chromosomal Microarray Analysis (not suitable for Paraffin Embedded Tumor):**
- ☐ Cancer SNP Array

**Chromosome Analysis:**
- ☐ Karyotype

**Fluorescence In Situ Hybridization (FISH): Panel Testing**
- ☐ AML FISH Panel (*CSF1R* with D5S23/D5S721, *CEP7*, *RUNX1T1*/*RUNX1*, *KMT2A* (*MLL*), *PML*/*RARA*, and *CBFB*)
- ☐ B-ALL FISH Panel (4cen/10cen, *ABL1*/*BCR, KMT2A (MLL), ETV6*/*RUNX1, MYC*/*IGH, CRLF2)*
- ☐ High Risk B-ALL FISH Panel (4cen/10cen, *ABL1*/*BCR*, *KMT2A* (*MLL*), *ETV6*/*RUNX1*, *MYC*/*IGH1*, *CRLF2*, *ABL1*, *ABL2*, *PDGFRB*)
- ☐ Fanconi Anemia FISH Panel (1p36, *BCL6, EGR1,* 7q31, *RUNX1,* telomere of chromosome 20q, *KMT2A (MLL)*)
- ☐ T-ALL Plus FISH Panel (4cen/10cen, *ABL1*/*BCR*, *KMT2A* (*MLL*), *ETV6*/*RUNX1*, *MYC*/*IGH1*, *CRLF2*, *RANBP17*, *TLX3*)

**Fluorescence In Situ Hybridization (FISH): Targeted Probe Analysis**
- ☐ *ABL1*/*BCR DF* (9q34/22q11.2)
- ☐ *CBFB* (Inversion 16q22.1)
- ☐ *CDKN2A* (9p21)
- ☐ *CSF1R* (5q33q34)
- ☐ Deletion 7
- ☐ DXZ1/DYZ3
- ☐ *ETV6* (12p13)
- ☐ *ETV6*/*RUNX1* (12p13/21q22)
- ☐ *EWSR1* (22q12)
- ☐ *EVI1* (Inversion 3)
- ☐ *FOXO1* (13q14)
- ☐ *IGH* (14q32) BAP
- ☐ *IGH*/*MYC* (8q24/14q32)
- ☐ *KMT2A(MLL)* (11q23)
- ☐ *MEGF6, TP73*/*ANGPTL, ABL2* (1p36/1q25)
- ☐ *MYC* (8q24)
- ☐ *MYCN* (2p24)
- ☐ *NUP98* (11p15)

## Somatic Cancer Testing (cont'd)

- ☐ *PAX3* (2q35)
- ☐ *PAX7* (1p36)
- ☐ *PBX1*/*TCF3* (1q23/19p13.3)
- ☐ *PDGFRA* (4q12)
- ☐ *PDGFRB* (5q33.2)
- ☐ *PML*/*RARA* (15q22/17q21.1)
- ☐ *PTCH1* (9q22.3)
- ☐ *PTEN* (10cen/10q23)
- ☐ *RUNX1* (21q22)
- ☐ *RUNX1T1*/*RUNX1 DF* (8q21.3/21q22)
- ☐ *SS18* (18q11.2)
- ☐ *TCR* (alpha/delta) (14q11.2)
- ☐ 4cen/10cen
- ☐ 10/19q Codeletion (1p36/1q25; 19p13/19q13)
- ☐ Other (specify) _____

**Cancer Related BRAF Testing:**
- ☐ *BRAF* Sequence Analysis of Exon 15

**Neuroblastoma (Somatic Analysis - For germline testing, see Germline Cancer Testing below):**
- ☐ *ALK* Sequence Analysis
- ☐ *ALK*/*PHOX2B* Panel (Sequencing and Deletion/Duplication Analysis of both *ALK* and *PHOX2B*)

***SMARCB1* Testing:**
- ☐ *SMARCB1* Deletion/Duplication Analysis
- ☐ *SMARCB1* Sequence Analysis (typically ordered if deletion/duplication analysis is not fully diagnostic)

***VHL* Testing:**
- ☐ *VHL* Sequence Analysis
- ☐ *VHL* Deletion/Duplication Analysis

## Germline Cancer Testing
**Leukemic blood/bone marrow, buccal swabs, and tumors are not appropriate for germline testing.**

**Panel Testing:**
- ☐ Comprehensive Hereditary Cancer Panel
- ☐ *ALK*/*PHOX2B* Germline Analysis (Hereditary Neuroblastoma)
- ☐ Bone Marrow Failure Panel
- ☐ Fanconi Anemia NGS Panel
- ☐ Inherited Red Blood Cell Disorder Panel
- ☐ Platelet Disorder Panel
- ☐ Telomere Disorder Panel

**Birt-Hogg-Dubé Syndrome:**
- ☐ *FLCN* Sequence Analysis
- ☐ *FLCN* Deletion/Duplication Analysis

**Brooke Spiegler Syndrome/Familial Cylindromatosus:**
- ☐ *CYLD* Sequence Analysis

**Hereditary Leiomyomatosis and Renal Cell Carcinoma:**
- ☐ *FH* Sequence Analysis
- ☐ *FH* Deletion/Duplication Analysis

**Li Fraumeni:**
- ☐ *TP53* Sequence Analysis
- ☐ *TP53* Deletion/Duplication Analysis

**Multiple Endocrine Neoplasia, Type 2:**
- ☐ *RET* Sequence Analysis

**Neuroblastoma (Germline Analysis-For somatic testing, see Somatic Cancer Testing section above):**
- ☐ *ALK*/*PHOX2B* Panel (Sequencing of *ALK* and *PHOX2B* and Deletion/Duplication Analysis of *PHOX2B)*
- ☐ *ALK* Sequence Analysis
- ☐ *PHOX2B* Sequence Analysis

***NUDT15* Testing:**
- ☐ *NUDT15* Sequence Analysis

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## Germline Cancer Testing (cont'd)

***PMS2* Testing:**
- ☐ *PMS2* sequencing and del/dup analysis via long range PCR (LR-PCR) + NGS

***PTEN* Hamartoma Tumor Syndrome:**
- ☐ *PTEN* Sequence Analysis
- ☐ *PTEN* Deletion/Duplication Analysis

***SMARCB1* Testing:**
- ☐ *SMARCB1* Sequence Analysis
- ☐ *SMARCB1* Deletion/Duplication Analysis

**Swachman-Diamond Syndrome:**
- ☐ *SBDS* sequencing and del/dup analysis via long range PCR (LR-PCR) + NGS

***TPMT* Testing:**
- ☐ *TPMT* Sequence Analysis

**Von Hippel Lindau:**
- ☐ *VHL* Sequence Analysis
- ☐ *VHL* Deletion/Duplication Analysis

## Known Variant Testing

*Please fill out the known genetic abnormality section on page 2*

**Sequencing Variant***
- ☐ Sequence Variant

**Copy Number Variant***
- ☐ Copy Number Variant

*Please check if any of the following apply:
☐ Lab Requested ☐ Research ☐ Positive Control

## Pharmacogenomic Testing

**Mercaptopurine Intolerance:**
- ☐ *NUDT15* Sequence Analysis
- ☐ *TPMT* Sequence Analysis

*NUDT15 and TPMT genotyping are performed as part of the analysis for the Solid Tumor Panel and the Hematologic Cancer Panel*

## PANEL TESTING: GENE CONTENT

The following panels include both sequence and copy number analysis, unless otherwise indicated. * Designates panels/genes with analysis by sequencing only; ** Designates genes with copy number analysis only. For CPT codes and turnaround times, please visit our website at https://www.testmenu.com/chop.

| **Somatic Tumor Panel Testing** | |
|---|---|
| **Comprehensive Hematologic Cancer Panel (CHOP Somatic Heme Panel + CHOP Cancer Fusion Panel)** | Includes sequence and copy number analysis of the genes on the CHOP Hematologic Cancer Panel and fusion analysis of the genes on the CHOP Fusion Panel. |
| **CHOP Hematologic Cancer Panel (V2.4)** | *ABL1, ASXL1, ASXL2, ATRX, BCL11B, BCL6, BCOR, BCORL1, BRAF, BRINP3, CALR, CBL, CCND3, CD79A, CD79B, CDC25C, CDKN2A, CDKN2B, CEBPA, CREBBP, CRLF2, CSF1R, CSF3R, CTCF, DDX41, DNM2, DNMT1, DNMT3A, DOT1L, EBF1, EED, ELANE, EP300, EPOR, ERG, ESR1, ETNK1, ETS1, ETV6, EZH2, FBXW7, FLT3, GATA1, GATA2, GATA3, HNRNPK, HRAS, IDH1, IDH2, IKZF1, IKZF3, IL7R, JAK1, JAK2, JAK3, KDM6A, KIT, KMT2A, KMT2C, KMT2D, KRAS, LEF1, LYL1, MAP2K1, MEN1, MPL, MSH2, MSH6, MYB, MYD88, NF1, NOTCH1, NPM1, NRAS, NSD1, NSD2 (WHSC1), NT5C2, PAX5, PDGFRA, PHF6, PIK3R1, PRPF40B, PRPF8, PTEN, PTPN11, RAD21, RB1, RELN, RPL10, RTEL1, RUNX1, SETBP1, SETD2, SF1, SF3A1, SF3B1, SH2B3, SMC1A, SMC3, SRSF2, STAG2, STAT3, SUZ12, TAL1, TCF3, TERT, TET2, TINF2, TLX1, TLX3, TP53, U2AF1, U2AF2, UBA2, USH2A, USP7, WT1, ZRSR2; and two cancer-associated pharmacogenomics genes: NUDT15 and TPMT* |
| **Comprehensive Solid Tumor Panel (CHOP Solid Tumors Panel + CHOP Cancer Fusion Panel)** | Includes sequence and copy number analysis of the genes on the CHOP Solid Tumor Panel and fusion analysis of the genes on the CHOP Fusion Panel. |
| **CHOP Solid Tumors Panel (V2.2)** | *ABL1, ACVR1, AKT1, AKT2, AKT3, ALK, APC, AR, ARAF, ARID1A, ARID1B, ARID2, ASXL1, ATM, ATR, ATRX, AURKA, AURKB, AXIN1, AXL, B2M, BAP1, BARD1, BCL2, BCL6, BCOR, BCORL1, BLM, BRAF, BRCA1, BRCA2, BRD4, BRIP1, CARD11, CBFB, CBL, CCND1, CCND2, CCND3, CCNE1, CD274, CD79B, CDC73, CDH1‡, CDK12, CDK4, CDK6, CDK8, CDKN1B, CDKN2A, CDKN2B, CDKN2C, CHEK1, CHEK2, CIC, CREBBP, CRKL, CRLF2, CSF1R, CTCF, CTNNB1, DAXX, DDR2, DICER1, DNMT3A, DOT1L, EED, EGFR, EP300, EPHA3, EPHA5, EPHB1, ERBB2, ERBB3, ERBB4, ERG, ESR1, ETV6, EZH2, FANCA, FANCC, FBXW7, FGF19, FGF3, FGF4, FGFR1, FGFR2, FGFR3, FGFR4, FLCN, FLT1, FLT3, FLT4, FOXL2, FOXP1, FUBP1, GATA1, GATA2, GATA3, GNA11, GNAQ, GNAS, GRIN2A, GSK3B, H3-3A, HGF, H1-2, H3C2, HNF1A, HRAS, IDH1, IDH2, IGF1R, IKBKE, IKZF1, IL7R, INPP4B, IRF4, IRS2, JAK1, JAK2, JAK3, JMJD1C, JUN, KDM5A, KDM5C, KDM6A, KDR, KEAP1, KIT, KMT2A, KMT2C, KRAS, MAP2K1, MAP2K2, MAP2K4, MAP3K1, MAPK1, MCL1, MDM2, MDM4, MED12, MEF2B, MEN1, MET, MITF, MLH1, MPL, MRE11 (MRE11A), MSH2, MSH6, MTOR, MUTYH, MYB, MYC, MYCN, MYD88, MYOD1, NF1, NF2, NFE2L2, NKX2-1, NOTCH1, NOTCH2, NPM1, NRAS, NSD2 (WHSC1), NTRK1, NTRK2, NTRK3, PALB2, PAX5, PBRM1, PDCD1, PDGFRA, PDGFRB, PHOX2B, PIK3CA, PIK3CG, PIK3R1, PIK3R2, PIM1, PPM1D, PPP2R1A, PRDM1, PRKAR1A, PTCH1, PTEN, PTPN11, RAD50, RAD51, RAF1, RARA, RB1, RET, RHOA, RICTOR, RNF43, ROS1, RPTOR, RUNX1, SDHA, SDHB, SDHC, SDHD, SETD2, SF3B1, SMAD2, SMAD4, SMARCA4, SMARCB1, SMARCE1, SMO, SOCS1, SOX2, SPEN, SPOP, SRC, STAG2, STK11, SUFU, SUZ12, TENT5C (FAM46C), TERT, TET2, TGFBR2, TNFAIP3, TNFRSF14, TOP1, TP53, TP63, TSC1, TSC2, TSHR, U2AF1, VHL, WT1, AMER1, XPO1; and two cancer-associated pharmacogenomics genes: NUDT15 and TPMT.*<br>‡Please note, *CDH1* is not analyzed as part of tumor/normal paired testing. |
| **CHOP Cancer Fusion Panel (V3)** | Fusion analysis is performed for the following genes: *ABL1, ABL2, AKT3, ALK, ARHGAP26, AXL, BCL2, BCL6, BCR, BRAF, BRD3, BRD4, CAMTA1, CBFA2T3, CBFB, CCNB3, CCND1, CIC, CREBBP, CRFL2, CSF1R, DNAJB1, DUSP22, EGFR, EPC1, EPOR, ERG, ESR1, ESRRA, ETV1, ETV4, ETV5, ETV6, EWSR1, FGFR1, FGFR2, FGFR3, FGR, FOXO1, FUS, GLI1, GLIS2, HMGA2, IL2RB, IL3, IL3RA, INSR, JAK2, JAZF1, KAT6A, KMT2A, MALT1, MAML2, MAST1, MAST2, MEAF6, MECOM, MET, MRTFA, MRTFB, MSMB, MUSK, MYB, MYC, NCOA2, NOTCH1, NOTCH2, NRG1, NTRK1, NTRK2, NTRK3, NUMBL, NUP214, NUP98, NUTM1, PAX5, PAX8, PDGFB, PDGFRA, PDGFRB, PICALM, PIK3CA, PKN1, PLAG1, PPARG, PRKACA, PRKCA, PRKCB, PTK2B, RAF1, RARA, RBM15, RELA, RET, ROS1, RSPO2, RSPO3, RUNX1, RUNX1T1, SS18, STAT6, TAF15, TAL1, TCF12, TCF3, TERT, TFE3, TFEB, TFG, THADA, TLX3, TMPRSS2, TSLP, TYK2, USP6, VGLL2, YWHAE* |

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## PANEL TESTING: GENE CONTENT

The following panels include both sequence and copy number analysis, unless otherwise indicated. * Designates panels/genes with analysis by sequencing only; ** Designates genes with copy number analysis only. For CPT codes and turnaround times, please visit our website at https://www.testmenu.com/chop.

| | |
|---|---|
| **Cancer (Germline) Panel Testing: Comprehensive Hereditary Cancer Testing** | |
| **Comprehensive Hereditary Cancer Panel** | Gene list V2: *ABCB11, AIP, ALK*, APC‡, ARID5B, ATM, AXIN2, BAP1, BARD1, BLM, BMPR1A, BRCA1, BRCA2, BRIP1, BUB1B, CBL*, CDC73, CDH1, CDK4*, CDKN1B, CDKN1C, CDKN2A, CEBPA, CEBPE, CHEK2, COL7A1, CTNNA1, CYLD, DDB2, DDX41, DICER1, DIS3L2, DKC1, DOCK8, EGFR, ELANE, EPCAM**, ERCC2, ERCC3, ERCC4, ERCC5, ETV6, EXT1, EXT2, FAH, FANCA, FANCC, FANCG, FAS, FH, FLCN, G6PC3, GATA2‡, GBA, GPC3, GREM1, HABP2, HAX1, HFE, HMBS, HRAS*, IKZF1, ITK, KIT*, KRAS*, LZTR1, MAX, MEN1, MET*, MLH1, MLH3, MPL, MSH2, MSH3, MSH6, MTAP, MUTYH, NBN, NF1, NF2, NTHL1, PALB2, PAX5, PDGFRA*, PHOX2B, PMS2, POLD1*, POLE*, POLH, POT1, PRKAR1A, PRSS1*, PTCH1, PTEN, PTPN11*, RAD50, RAD51C, RAD51D, RB1, RECQL4, RET*, RHBDF2, RMRP‡, RNF43, RUNX1, SBDS, SDHA, SDHAF2, SDHB, SDHC, SDHD, SERPINA1, SH2B3, SH2D1A, SLC25A13, SMAD4, SMARCA4, SMARCB1, SMARCE1, SOS1*, STAT3, STK11, SUFU, TERC‡, TERT, TGFBR1, TINF2, TMEM127, TP53, TRIM37, TSC1, TSC2, UROD, VHL, WAS, WRN, WT1, XPA, XPC*<br><br>‡The ROI includes promoter and/or non-coding regions of *APC* (promoter and non-coding regions for SNV/CNV analysis), *GATA2* (non-coding region for SNV analysis), *RMRP* (promoter region and noncoding region for SNV analysis), and *TERC* (promoter and non-coding regions for SNV/CNV analysis). |
| **Hereditary Cancer Panels: Bone Marrow Failure/Myelodysplastic Syndrome/Leukemia Testing** | |
| **Bone Marrow Failure Panel** | Gene list V2: *ABCB7, ABCG5, ABCG8, ACD, ACTN1*, ADA2, AK2, ALAS2, ANKRD26*‡, AP3B1, ATM, ATR, BLM, BRCA1, BRCA2, BRIP1, CARD11, CBL*, CDAN1, CDIN1, CDKN2A, CEBPA, CHEK2, CLPB, CSF3R, CTC1, CXCR2, CXCR4*, CYCS, DBF4, DDX11, DDX41, DKC1, DNAJC21, DNMT3A, EFL1, EIF2AK3, ELANE, EPCAM**, ERCC4, ERCC6L2, ESCO2, ETV6, FANCA, FANCB, FANCC, FANCD2, FANCE, FANCF, FANCG, FANCI, FANCL, FANCM, G6PC3, GATA1, GATA2‡, GFI1*, GLRX5, GP1BA, GP1BB, GP9, HAX1, HEATR3, HOXA11, IKZF1, ITGA2B, ITGB3, JAGN1, KCNN4, KIF23, KLF1, KRAS*, LAMTOR2, LIG4, LYST, MAD2L2, MECOM, MLH1, MPL, MSH2, MSH6, MYH9, MYSM1, NAF1, NBN, NF1, NHEJ1, NHP2, NOP10, PALB2, PARN, PAX5, PMS2, POT1, PTPN11*, RAB27A, RAC2, RAD51, RAD51C, RBM8A, RMRP‡, RPA1*, RPL11, RPL15, RPL19, RPL26, RPL27, RPL31, RPL35, RPL35A, RPL4, RPL5, RPL9, RPS10, RPS15A, RPS17, RPS19, RPS20, RPS24, RPS26, RPS27, RPS28, RPS29, RPS7, RTEL1, RUNX1, SAMD9, SAMD9L, SASH3, SBDS, SEC23B, SEC61A1, SH2B3, SH2D1A, SLC25A38, SLC37A4, SLX4, SOS1*, SRP19, SRP54, SRP68, SRP72, SRPRA, STAT3, STIM1, STK4, STN1, TAFAZZIN, TCIRG1, TERC‡, TERT, THPO, TINF2, TP53, TSR2, TUBB1, UBE2T, USB1, VPS13B, VPS45, WAS, WIPF1, WRAP53, XRCC2, ZCCHC8*<br><br>‡The ROI also includes promoter and/or non-coding regions of *ANKRD26* (non-coding region for SNV analysis), *GATA2* (non-coding region for SNV analysis), *RMRP* (promoter and non-coding region for SNV analysis), and *TERC* (promoter and noncoding regions for SNV/CNV analysis). |
| **Fanconi Anemia NGS Panel** | Gene list V2: *ATM, BLM, BRCA1, BRCA2, BRIP1, DDX11, ERCC4, ESCO2, FANCA, FANCB, FANCC, FANCD2, FANCE, FANCF, FANCG, FANCI, FANCL, FANCM, LIG4, MAD2L2, NBN, NHEJ1, PALB2, RAD51, RAD51C, SLX4, UBE2T, XRCC2* |
| **Inherited Red Blood Cell Disorder Panel** | Gene list V2: *ABCB7, ABCG5, ABCG8, AK1, ALAS2, ALDOA, ANK1, CDAN1, CDIN1, COL4A1, EPB41, EPB42, G6PD, GATA1, GCLC, GLRX5, GPI, GPX1, GSR, GSS, HEATR3, HK1, KCNN4, KIF23, KLF1, MYSM1, NT5C3A, PFKM, PGK1, PIEZO1, PKLR, RHAG, RPL11, RPL15, RPL19, RPL26, RPL27, RPL31, RPL35, RPL35A, RPL4, RPL5, RPL9, RPS10, RPS15A, RPS17, RPS19, RPS20, RPS24, RPS26, RPS27, RPS28, RPS29, RPS7, SEC23B, SLC25A38, SLC2A1, SLC4A1, SPTA1, SPTB, TPI1, TSR2, XK* |
| **Platelet Disorder Panel** | *ABCG5, ABCG8, ACTN1*, ADA2, ADAMTS13, ANKRD26*‡, ANO6, AP3B1, AP3D1, ARPC1B, BLOC1S3, BLOC1S6, C3, CARD11, CASP10, CD46, CDC42, CFB, CFH, CFHR1, CFHR3, CFHR4, CFI, COL4A1, CTLA4, CYCS, DGKE, DIAPH1, DTNBP1, ETV6, FADD, FAS, FASLG, FERMT3, FLI1, FLNA, FYB1, GATA1, GATA2‡, GFI1B, GNE, GP1BA, GP1BB, GP6, GP9, HOXA11, HPS1, HPS3, HPS4, HPS5, HPS6, IKZF1, IKZF5, ITGA2, ITGA2B, ITGB3, ITK, KDSR, KRAS*, LIG4, LRBA, LYST, MAGT1, MECOM, MPIG6B, MPL, MYH9, MYO5A, NBEAL2, P2RY12, PLA2G4A, PLAU, PLG, PRKACG, PRKCD, PTGS1, PTPN11*, PTPRJ, RAB27A, RASGRP2, RBM8A, RUNX1, SH2D1A, SLC4A1, SLFN14, SRC*, SRP72, STAT3, STIM1, STX11, STXBP2, TBXA2R, TBXAS1, TCN2, THBD, THPO, TPM4, TRPM7, TUBB1, UNC13D‡, VIPAS39, VPS33B, WAS, WIPF1, XIAP*<br><br>‡The ROI also includes non-coding regions of *ANKRD26* and *GATA2* for SNV analysis, as well as the pathogenic recurrent 253kb inversion variant in *UNC13D* [PMID: 21931115]. |
| **Telomere Disorder Panel** | Gene list V2: *ACD, CTC1, DKC1, NAF1, NHP2, NOP10, PARN, POT1, RPA1*, RTEL1, STN1, TERC‡, TERT, TINF2, USB1, WRAP53, ZCCHC8*<br><br>‡The ROI also includes the promoter and non-coding regions of *TERC*. |

**Division of Genomic Diagnostics**
**CANCER GENOMIC TEST REQUISITION**



## Sample Requirements

**Blood –** The panel testing, single gene tests, and cancer SNP array analysis require 3-5mL in an EDTA (purple top) tube. FISH and karyotype analysis require 3-5mL in a sodium heparin (green top) tube.

**Bone Marrow Aspirate –** For testing on a bone marrow aspirate, 3-5mL is the preferred minimum. Please contact the lab for exceptions. Sample should be sent in an EDTA (purple top) tube if ordering panel testing, array, and/or targeted gene testing; sample should be sent in an NaHep (green top) tube if ordering chromosome analysis or FISH testing. Please include a pathology report that indicates percentage blasts in the aspirate specimen.

**DNA –** Most tests require 5-10ug of DNA with a minimum concentration of 50ng/uL. Panel testing requires 8ug of DNA. Please refer to the divisional website for specific amounts of DNA required for each test.

**Cultured CVS Cells or Cultured Amniotic Fluid –** This sample type requires 2 nearly confluent T-25 flasks. Please contact the laboratory if ordering prenatal testing.

**Fresh or Frozen Tumor Tissue –** For Cancer Testing, 0.5cm$^3$ of tissue is needed. Please indicate percentage tumor nuclei in sample on Page 1 in the Sample Information section. Also include a pathology report.

**FFPE Sample –** The lab prefers to receive tumor block but can also receive 4-6 scrolls cut 50 microns thick. Slides alone cannot be used for testing, but are useful to determine tumor percentage if scrolls are sent. If sending an FFPE block that needs to be returned please provide the FedEx or UPS account number to use for return shipment along with the return address. Please reach out to the GDL to confirm the testing schedule if sending cut formalin-fixed, paraffin embedded (FFPE) scrolls or slides.

## Shipping Instructions

Samples should be shipped by overnight carrier to arrive Monday – Friday (9am-5pm) only.

Most samples should be sent at room temperature. Frozen tumor samples should be sent on dry ice.

**Shipping address –**

Children's Hospital of Philadelphia
Genomic Diagnostic Laboratory
3615 Civic Center Blvd.
Abramson Research Center, 714J
Philadelphia, PA 19104-4302
Phone: (267) 426-1447

## Necessary Documents

Each sample should be sent with a completed **Test Requisition Form**, including billing information, and **Consent Form** (if applicable).

**Pathology Reports –** Please include pathology reports including tumor percentage if sending tumor samples.

**Previous Family Reports –** Please include family member test reports if ordering known genetic abnormality/familial testing.

**Results from Prior Testing –** Please include results from prior genetic testing or other related reports (such as hemoglobin electrophoresis for thalassemia testing, pathology reports for any testing on tumors, or other testing that may provide necessary clinical information for genetic testing).

**Pedigree –** Please include a copy of the patient's family pedigree, especially if other family members are similarly affected. The pedigree should include genotype and phenotype information for all tested family members.

Children's Hospital of Philadelphia℠

LAB-1513
Rev. 1/25

LAST NAME | FIRST NAME

MR# | DOB

PLACE PATIENT LABEL HERE *OR* COMPLETE ABOVE

DO NOT HANDWRITE PATIENT INFORMATION HERE

## Division of Genomic Diagnostics
## CANCER GENOMIC TEST REQUISITION



Please note: we do not bill patient insurance directly.

### Billing Options (For Non-CHOP patients only)

***By using and sending this Requisition Form to CHOP Outreach Lab for laboratory testing, you, the sender, acknowledge and agree that you have read and agree to the CHOP Terms and Conditions posted at www.chop.edu/labs and agree to pay CHOP the rates in CHOP's fee schedule in effect on the date the specimen is received.**

### Institutional Billing Option

ICD-10 Diagnosis Codes for Billing: _____

Bill to Institution/Department: _____

Address: _____

_____

Billing Contact: _____

Phone: _____ Fax: _____

Email: _____

Please provide FedEx number to use for return shipment if requested: _____

### Self Pay Option

Total Cost Approved: _____ Credit Card: ☐ Visa ☐ American Express ☐ Discover ☐ MC

Name on Card: _____

Cardholder Date of Birth: _____
Month/Day/Year

Card Number: _____

Expiration Date: _____ CCV (security # on back): _____
Month/Year

Billing Address: _____

_____

Phone: _____ Email: _____

_____
Cardholder Signature | Printed Name | Date (Month/Day/Year) | Time

*Cardholders signature indicates authorization to bill Credit Card