

CANCER GENETICS AND GENOMICS LABORATORY

MYELOID TESTING



BC CANCER 604-877-6000 EXT 67-2094
 DEPT. OF PATHOLOGY AND LABORATORY MEDICINE FAX: 604-877-6294
 ROOM 3307 - 600 WEST 10TH AVENUE MON-FRI 8:30AM-4:30PM
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CANCER GENETICS LAB
 SHIRE LABEL USE ONLY

| PATIENT INFORMATION | | | | | REQUESTING PHYSICIAN | | |
|--|------------------------------|----------------------------------|--|--|--|------------|--|
| Last Name | | First and Middle Names | | | Last Name | First Name | MSP |
| Date of Birth (dd/mmm/yyyy) | | Gender Male Female X Unknown | | | Phone | | Fax |
| PHN | | BC Cancer ID | | Cerner MRN | | | Address |
| SPECIMEN | | | | | NOTE: PHYSICIAN SIGNATURE REQUIRED (BELOW) | | |
| Specimen Type PB BM Aspirate MAA (PB BM) Other _____ | | Originating Hospital | | Collection Date (dd/mmm/yyyy) and Time | | | COPY PHYSICIANS (ALL INFORMATION IS NECESSARY) |
| | | Referring Lab/Hospital Sample ID | | Important: Myeloid Panel may detect variants associated with hereditary conditions | | | Last Name First Name MSP |
| REASON FOR TESTING / DIAGNOSIS / CLINICAL HISTORY (REQUIRED FOR TEST TO PROCEED) | | | | | Address | | |
| | | | | | Last Name First Name MSP | | |
| | | | | | Address | | |
| SEE PAGE 2 FOR ACCEPTED SAMPLE TYPES | | CYTOGENETICS (FISH, KARYOTYPE) | | MOLECULAR | | | |
| MYELOID | Acute Myeloid Leukemia | | 2 BM specimens required: Karyotype (BM in media) / OGM (BM in EDTA) FISH (specify probes): _____ | | New Diagnosis | | All 3 specimens required prior to initiation of therapy: Myeloid Panel / Rapid AML Mutation Panel (BM in EDTA for DNA) MRD Baseline (BM in EDTA for RNA) MRD Baseline (PB in EDTA for RNA) |
| | Acute Promyelocytic Leukemia | | <i>PML::RARA</i> t(15;17) FISH 2 BM specimens required: Karyotype (BM in media) / OGM (BM in EDTA) | | MRD Monitoring | | t(8;21) inv(16)/t(16;16) <i>NPM1</i> **Restricted to patients being treated with intensive chemo and/or eligible for HSCT ** |
| | Chronic Myeloid Leukemia | | <i>BCR::ABL1</i> t(9;22) FISH 2 BM specimens required: Karyotype (BM in media) / OGM (BM in EDTA) | | Relapsed / Refractory | | <i>FLT3</i> ITD & TKD |
| | Mast cell disease | | | | | | <i>KIT</i> D816V/F |
| | Myelodysplastic Syndrome | | 2 BM specimens required: Karyotype (BM in media) / OGM (BM in EDTA) | | Myeloid Panel (BM only) See CGL website for eligibility criteria BM and cytogenetic report required to activate myeloid panel | | |
| | Myeloproliferative Neoplasm | | <i>BCR::ABL1</i> t(9;22) FISH 2 BM specimens required: (MF, CMML only) Karyotype (BM in media) / OGM (BM in EDTA) | | Single-Gene | | query <i>JAK2</i> V617F MPN |
| | Myeloproliferative Neoplasm | | | | Myeloid panel (BM only) BM report required to activate myeloid panel | | query <i>JAK2</i> V617F negative MPN query <i>JAK2</i> V617F positive MF (LEUK/BMT Physicians only) |
| VEXAS Syndrome | | | | <i>UBA1</i> mutation screen (restricted to hematology and rheumatology) | | | |
| OTHER | Chimerism | | | | Pre-transplant: Donor Recipient Post-transplant Transplant Date: _____ | | |
| | Neoplasm with Eosinophilia | | FISH Panel | | | | |
| | Multiple Myeloma | | FISH Panel (BM in media) | | Clonotype determination (new diagnosis of Transplant Eligible Multiple Myeloma only) | | |
| PHYSICIAN SIGNATURE (REQUIRED) | | | | | DATE | | |
| LAB USE ONLY | PB NaHEP | PB EDTA | BM EDTA | BM Media | Other | | |

ACCEPTED SAMPLE TYPES FOR EACH TEST REQUEST

- Additional information and shipping information found on the Cancer Genetics and Genomics Laboratory website: <https://cancer geneticslab.ca/guidelines/specimens/>
- Separate tubes are required for each test requested with different extraction methods (e.g. If FLT3 (DNA), MRD baseline (RNA) and cytogenetics are requested; three tubes of each sample should be collected)

| <h2 style="margin: 0;">CYTOGENETICS</h2> <p style="margin: 0;">(FISH, KARYOTYPE)</p> | | | PB | BM | | MAA |
|--|------------------------------|-------------|-------|------------|------|---------|
| | | | NAHEP | MEDIA TUBE | EDTA | PB / BM |
| MYELOID | Acute Myeloid Leukemia | FISH | 6ml | 2 x 1ml | 1ml | ✓ |
| | Acute Promyelocytic Leukemia | Karyotype * | | 2 x 1ml | | ✓ |
| | Chronic Myelogenous Leukemia | | | | | |
| Myeloproliferative Neoplasm | OGM (Optical Genome Mapping) | | | 1ml | | |
| OTHER | Myelodysplastic Syndrome | | | | | |
| | Neoplasm with Eosinophilia | FISH panel | 6ml | 2 x 1ml | 1ml | ✓ |
| | Multiple Myeloma | FISH Panel | | 2 x 1ml | | |

*Karyotype analysis will be performed as a second- tier test in the event OGM fails or a BM in EDTA is not received for OGM

| <h2 style="margin: 0;">MOLECULAR</h2> <p style="margin: 0;">(DNA, RNA)</p> | | | | EXTRACTION | PB | BM | MAA |
|--|-------------------------------------|------------------------------|--|-----------------------|----------------------------|-------|---------|
| | | | | | EDTA | EDTA | PB / BM |
| MYELOID | Acute Myeloid Leukemia | New Diagnosis (all required) | Myeloid Panel AND Rapid Mutation Panel | DNA | | 0.5ml | ✓ |
| | | | MRD Baseline - BM | RNA | | 0.5ml | ✓ |
| | | | MRD Baseline - PB | RNA | 20ml | | ✓ |
| | MRD Monitoring | | t(8;21) inv(16)/t(16;16) <i>NPM1</i> | RNA | 20ml | 0.5ml | ✓ |
| | | | Relapsed/Refractory | <i>FLT3</i> ITD & TKD | DNA | 6ml | 0.5ml |
| | Acute Promyelocytic Leukemia | | MRD Baseline / Monitor | RNA | 20ml | 0.5ml | ✓ |
| | Chronic Myelogenous Leukemia | | MRD Baseline / Monitor Kinase Domain | RNA | 20ml | 0.5ml | ✓ |
| | Mast Cell Disease | | <i>KIT</i> D816V/F | DNA | 6ml | 0.5ml | ✓ |
| | Myelodysplastic Syndrome | | Myeloid Panel | DNA | | 0.5ml | |
| | Myeloproliferative Neoplasm | | Single-gene testing query <i>JAK2</i> V617F MPN | DNA | 6ml | 0.5ml | ✓ |
| VEXAS | | UBA1 mutation screen | DNA | 6ml | 0.5ml | | |
| OTHER | Chimerism | | Pre-transplant assessment | DNA | 6ml | | |
| | | | Post-transplant assessment (sample processed at Stem Cell Lab) | DNA | 20 mL NaHeP @Stem Cell Lab | | |
| | Multiple Myeloma | | Clonotype determination | DNA | | 2ml | |