HEREDITARY CANCER Requisition

Ship to:
Genetics Diagnostic Laboratory
Regional Genetics Program
401 Smyth Road, Rm w3401
Ottawa, ON, K1H 8L1
Tel: (613) 738-3230 Fax: (613) 738-4814
http://www.cheo.on.ca/en/clinics-services-programs/genetics-diagnostic-laboratory.aspx

ALL SECTIONS MUST BE COMPLETED

Collection Date: _____ Time: _____
Collection Centre: _____

STAMP

Patient Name: _____
Last First Initial
Health Card Number: _____
DOB: (yy/mm/dd) _____
Address: _____
_____
Telephone: _____

Sex (circle one): ☐ Male ☐ Female

PRINT

Priority of testing

☐ **Routine** *(approximately 8 week turnaround time)*

☐ **STAT** *(only for orders where surgical or medical management will change if results are received in a 4 week turnaround time)*

Sample Requirements

☐ 2x6 mL EDTA peripheral blood *(room temperature)*

For any other sample types, please contact the laboratory directly.

Health Care Provider(s) Requesting Test

Note: this test can only be ordered by a CHEO Regional Genetics Program health care provider (Geneticist/Genetic Counsellor).

Name: _____
Registration Number: _____
Address: _____
Telephone: _____
FAX: _____

Copy to: _____
Registration Number: _____
Address: _____
Telephone: _____
FAX: _____

Test Requested (see next page for test details information)

☐ *BRCA1/BRCA2* Ashkenazi Jewish mutations *(targeted testing for Ashkenazi Jewish 3 pathogenic founder variants)*

☐ Hereditary Breast/ Ovarian/ Prostate Cancer panel *(19 genes)*

☐ Hereditary Pancreatic Cancer panel *(12 genes)*

☐ Store DNA for future testing *(DNA will be stored for 2 years then discarded)*

☐ Hereditary cancer familial variant specific test *(Include a copy of the family member's genetic test report. A positive control is recommended if testing was performed in a different lab.)*

CHEO pedigree number: _____
Proband (name and D.O.B): _____
Relationship to Proband: _____
Gene(s): _____
Variant(s): _____
_____

Clinical (Cancer Care Ontario) Criteria

Note: Please select all applicable criteria, at least one required. See next page for more clinical criteria options and family history.

Breast/ Ovarian Cancer:

☐ (BO1) Breast cancer ≤ 45 years

☐ (BO2) Breast cancer ≤ 50 years with limited family structure

☐ (BO3) Breast cancer ≤ 50 years + 2nd primary breast cancer

☐ (BO4) Triple negative breast cancer ≤ 60 years

☐ (BO5) Male breast cancer

☐ (BO6) Epithelial ovarian cancer

☐ (BO7) Breast or ovarian cancer + family history of breast, ovarian, prostate, or pancreatic cancer

Prostate Cancer:

☐ (PR1) Metastatic prostate cancer

☐ (PR2) High risk, locally advanced prostate cancer

☐ (PR3) Prostate cancer + ≥ 1 relative(s) with high risk or metastatic prostate cancer

☐ (PR4) Prostate cancer + ≥ 2 relatives with breast or prostate cancer

Pancreatic Cancer:

☐ (PA1) Pancreatic adenocarcinoma

For lab use only
Lab #

Clinical (Cancer Care Ontario) Criteria *(continued)*

General Criteria (all disease sites):

☐ (GD1) ≥ 5% likelihood of Pathogenic/Likely Pathogenic variant in affected or unaffected individual

☐ (GD2) Relative with Pathogenic/Likely Pathogenic variant

☐ (GD3) Systemic therapy planning

☐ (GD4) Updated testing

☐ (GD5) Partner testing/reproductive risk

☐ (GD6) Confirmation of germline status based on variants in tumour/biopsy specimen

☐ (GD7) Confirmation of germline status based on non-MMR IHC deficiency

☐ (GD8) Clinical judgement

☐ Other *(specify below)*:

_____

Positive Family History:

☐ Yes (specify below) ☐ No ☐ Unknown

_____

_____

Hereditary Cancer Test Details

Methodology of genetic testing

1) Sequencing: analysis of coding sequences of the relevant genes, +/- 20 base pairs immediately adjacent to each exon, and certain known likely pathogenic or pathogenic variants outside these regions are included in the analysis. This test is performed by oligonucleotide-based target capture (HyperPlus Target Enrichment, KAPA Biosystems, and Kapa HyperPlus Custom Library, Roche) followed by next generation sequencing (NGS) using the MiSeq instrument (Illumina).
2) Detection of large genomic deletions and duplications (CNVs) is performed by NGS and by multiplex ligation-dependent probe amplification (MLPA) for select genes.

BRCA1/BRCA2 Ashkenazi Jewish mutations panel

Targeted Sanger sequencing analysis for three *BRCA1/BRCA2* pathogenic founder variants: *BRCA1* c.68_69delAG, *BRCA1* c.5266dupC, and *BRCA2* c.5946delT

Hereditary Breast/ Ovarian/ Prostate Cancer panel

Analysis includes sequencing and CNV calling as described above. Genes included in panel: *ATM, BARD1, BRCA1, BRCA2, BRIP1, CDH1, CHEK2, EPCAM†, HOXB13* (c.251G>A (p.Gly84Glu) variant only)*, MLH1, MSH2, MSH6, PALB2, PMS2, PTEN, RAD51C, RAD51D, STK11,* and *TP53.*

Hereditary Pancreatic Cancer panel

Analysis includes sequencing and CNV calling as described above. Genes included in panel: *ATM, BRCA1, BRCA2, CDKN2A, EPCAM†, MLH1, MSH2, MSH6, PALB2, PMS2, STK11,* and *TP53.*

† Only deletions in *EPCAM* will be reported (full sequencing not performed).