HENRY FORD HEALTH
CENTER FOR PRECISION DIAGNOSTICS

Customized Hereditary Cancer Risk Testing

This gene list targets genes that are identified as inherited risks for hereditary cancers across several major organ systems including cancers of breast, ovary, uterus, gastrointestinal system (colorectal, gastric, pancreatic), thyroid, kidney, urinary tract, prostate, brain and nervous system, skin, sarcoma and hematologic cancers using genomic DNA. The genes included are in concordance with (but not limited to) NCCN guideline for high-risk assessment for cancers and ACMG variant classification guidelines

Testing Method and Background

This test utilizes **Next Generation Sequencing (NGS) technology,** which provides coverage of all coding exons and noncoding DNA in exon flanking regions (on average 50 bp) enriched using hybrid capture methodology. This assay can detect >99% of described mutations in the included genes, when present, including single nucleotide variants (point mutations), small insertions/deletions (1-25 bp), larger deletions and duplication (<100 bp), complex insertions/deletions, splice site mutations, whole-gene deletions/duplications and exon-level intragenic deletions/insertions in each gene targeted for analysis. All reportable copy number variants are confirmed by independent methodology.

Highlights of Customized Hereditary Cancer Risk Testing

Targeted Region

Gene Options: ABRAXAS1, AIP, ALK, ANKRD26, APC, ATM, AXIN2, BAP1, BARD1, BRCA1, BRCA2, BLM, BMPR1A, BRIP1, BUB1B, CDC73, CDH1, CDK4, CDKN1B, CDKN1C, CDKN2A, CEBPA, CHEK2, CTNNA1, CYLD, DICER1, DIS3L2, EGFR, EGLN1, EPCAM, ETV6, EXT1, EXT2, FAN1, FANCA, FANCC, FANCM, FH, FLCN, GALNT12, GATA2, GPC3, GREM1, HOXB13, HRAS, KIF1B, KIT, LZTR1, MAX, MEN1, MET, MITF, MLH1, MLH3, MRE11, MSH2, MSH3, MSH6, MUTYH, NBN, NF1, NF2, NTHL1, PALB2, PALLD, PDGFRA, PHOX2B, PIK3CA, PMS2, POLD1, POT1, PRKAR1A, PTCH1, PTCH2, PTEN, RAD50, RAD51C, RAD51D, RB1, RECQL4, RET, RNF43, RUNX1, SAMD9, SDHA, SDHAF2, SDHB, SDHC, SDHD, SMAD4, SMARCA4, SMARCB1, SMARCE1, SRP72, STK11, SUFU, TERC, TERT, TMEM127, TP53, TRIP13, TSC1, TSC2, VHL, WRN, WT1, XRCC2

- **Wide-ranging Coverage of Variants**
  Detects and provides coverage of all coding exons and noncoding DNA in exon flanking regions.
- **Accurate Results Using Clinically Validated Computational Data Analysis**
  A variety of mutation types (point, indels and duplications) are confirmed using computational data analysis for sequence variant calling, filtering and annotation.

Ordering Information

Get started (non-HFHS): Print a Hereditary Cancer Panels requisition form online at www.HenryFord.com/HFCPD

Get started (HFHS): Order through Epic using test " Customized Hereditary Cancer Risk Testing" (DNA2100026)

Specimen requirements:

- Peripheral Blood - 1-3ml in lavender top tube (EDTA) **Specimen stability: Ambient - 72 hours; Refrigerated - 1 week**
- Extracted DNA - from a CLIA-certified Laboratory

Cause for Rejection: Clotted, hemolyzed, or frozen specimens, improper anticoagulant, tubes not labeled with dual patient identification, non-dedicated tubes.

TAT: 10 -14 business days (after Prior Authorization obtained)

Mail test material to:
Henry Ford Center for Precision Diagnostics
Pathology and Laboratory Medicine
Clinic Building, K6, Core Lab, E-655
2799 W. Grand Blvd., Detroit, MI 48202

CPT Codes: 81455, G0452 (may vary based on genes selected)

Contact us: Client Services, Account and Billing Set-up, and connect with a Molecular Pathologist at (313) 916-4DNA (4362)

For more information on Comprehensive Molecular Services, visit our website www.HenryFord.com/HFCPD

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