# 3. HEREDITARY CANCER SYNDROME

3.1 Inherit-Gene Cancer Test 200+

3.2 Inherit-Gene Cancer Test 39

+ 200 GENES

# 3.1 Inherit-Gene Cancer Test 200+

Our panel offers average coverage >100X for more than 200 genes related to hereditary cancer syndromes.

**Our panel includes:**

- Genes recognized by the **CDC** (Center for Disease Control and Prevention) as important for public health.
- **BRCA2, BRCA1, PALB2, TP53, CDH1, STK11, PTEN**, and those in which pathogenic genetic variants have been identified that are associated with risks that we consider high; therefore, these genes are commonly referred to as High Penetrance Genes.
- Genes whose pathogenic variants are associated with a multitude of cancer types, such as **PTEN and TP53.**

**COMPLETE LIST OF GENES:**

*ABRAXAS1, ACD, ACVRL1, AIP, ALK, ANKRD26, APC, AR, ARAF, ATM, ATR, ATRIP, AXIN2, BARD1, BLM, BMPR1A, BRAF, BRCA1, BRCA2, BRIP1, BUB1B, CBL, CD70, CD82, CDC73, CDH1, CDK4, CDKN1B, CDKN1C, CDKN2A, CDKN2C, CEBPA, CEP57, CFTR, CHEK2, CTC, CTNNA1, CTRC, CYLD, DDB1, DDB2, DDX41, DICER1, DIS3L2, DKC1, DLEC1, DLST, DOCK8, EFL1, EGFR, ELAC2, ELANE, ENG, EPCAM, ERCC1, ERCC2, ERCC3, ERCC4, ERCC5, ERCC6, ERCC8, ETV6, EXO1, EXT1, EXT2, EZH2, FAM111B, FANCA, FANCB, FANCC, FANCD2, FANCE, FANCF, FANCG, FANCI, FANCL, FANCM, FAS, FH, FLCN, GALNT12, GATA1, GATA2, GBA1, GEN1, GDNF, GPC3, GREM1, HABP2, HAX1, HNF1A, HOXB13, HRAS, IKZF1, ITK, KIF1B, KIT, KLLN, KITLG, KRAS, LIG4, LYST, LZTR1, MAD2L2, MAP2K1, MAP2K2, MAX, MBD4, MCIR, MDH2, MEN1, MET, MITF, MLH1, MLH3, MN1, MNX1, MRE11A, MSH2, MSH3, MSH6, MSR1, MUTYH, MXI1, NAF1, NBN, NF1, NF2, NHP2, NOP10, NRAS, NSD1, NSUN2, NTHL1, PALB2, PRNA, PAX5, PDGFB, PDGFRA, PHOX2B, PIK3CA, PMS1, PMS2, POLD1, POLE, POLH, POT1, PPM1D, PRF1, PRKAR1A, PRSS1, PRSS2, PTCH1, PTCH2, PTEN, PTPN11, RAD50, RAD51, RAD51B, RAD51C, RAD51D, RAF1, RASA1, RASA2, RB1, RECQL, RECQL2, RECQL4, REST, RET, RHBDF2, RIT1, RNASEL, RNF43, RPL11, RPL15, RPL23, RPL26, RPL27, RPL31, RPL35A, RPL36, RPL5, RPS10, RPS15, RPS17, RPS19, RPS20, RPS24, RPS26, RPS27, RPS27A, RPS28, RPS29, RPS7, RRAS, RTEL, RUNX1, SAMD9, SAMD9L, SBDS, SDHA, SDHAF2,SDHB, SDHC,SDHD, SH2B3,SH2D1A, SHOC2, SLC25A11, SLX4, SMAD4, SMARCA4, MARCB1, SMARCE1, SOS1, SOS2, SPINK1, SPRED1, SRP72, STAT3, STK11, STN1,SUFU, TERC,TERF2,TERT, TGFBR2,TINF2, TMEM127, TP53, TSC1, TSC2, TSHR, TSR2, UBE2T, VHL, WAS, WRAP53, WRN, WT1, XPA,XPC,XRCC2, XRCC*

39 GENES

# 3.2 Inherit-Gene Cancer Test 39

Our panel offers average coverage >**100X for 39 genes related to hereditary cancer syndromes.**

**Our panel includes:**

Genes recognized by the **CDC** (Center for Disease Control and Prevention) as important for public health.

**BRCA2, BRCA1, PALB2, TP53, CDH1, STK11, PTEN,** and those in which pathogenic genetic variants have been identified that are associated with risks that we consider high; therefore, these genes are commonly referred to as High Penetrance Genes.

Genes whose pathogenic variants are associated with a multitude of cancer types, such as **PTEN and TP53.**

**COMPLETE LIST OF GENES:**
APC, ATM, AXIN2, BMPR1A, BRCA1, BRCA2, BRIP1, CDH1, CDK4, CDKN2A (p16INK4a), CDKN2A (P14arf), CHEK2, DICER1, EPCAM, GREM1, GALNT12, HOXB13, MEN1, MITF, MLH1, MSH2, MSH6, MSH3, MUTYH, NBN, NTHL1, PALB2, PMS2, POLD1, POLE, PTEN, RAD51C, RAD51D, RNF43, SMAD4, SMARCA4, STK11, TP53, VHL.