CustomNext-Cancer GENE DECISION GUIDE*

With CustomNext-Cancer, you can choose from up to 81 hereditary cancer genes to create your own panel that best fits your patient’s needs. Below is a list of genes organized by common cancer types. Genes may be listed under more than one cancer type. Mix and match from the list to create your panel.

**BREAST**
Highest risk: BRCA1, BRCA2, CDH1, PALB2, PTEN, TP53
Elevated risk: ATM, BARD1, BLM, BRIP1, CHEK2, FANCC, MRE11A, MUTYH, NBN, NF1, RAD50, RAD51C, RAD51D, STK11, XRCC2

**PARAGANGLIOMA/ PHEOCHROMOCYTOMA**
Highest risk: RET, SDHAF2, SDHB, SDHD, VHL
Elevated risk: FH, MAX, MEN1, NF1, SDHA, SDHC, TMEM127

**BRAIN**
Highest risk: MEN1, MLH1, MSH2, MSH6, NF1, NF2, PTPH1, PMS2, TP53, TSC1, TSC2, VHL
Elevated risk: AIP, ALK, APC, CDKN1B, CDKN2A, DICER1, NBN, PHOX2B, POT1, PRKAR1A, PTEN, SMARCA4, SMARCB1, SMARCE1, SUFU

**PANCREATIC**
Highest risk: ATM, BRCA1, BRCA2, CDKN2A, STK11
Elevated risk: APC, EPCAM, FANCC, MEN1, MLH1, MSH2, MSH6, PALB2, PMS2, TP53
Pancreatitits: CASR, CFTR, CPA1, CTRC, PRSS1, SPINK1

**PROSTATE**
Highest risk: ATM, BRCA1, BRCA2, CHEK2, HOXB13
Elevated risk: EPCAM, MLH1, MSH2, MSH6, NBN, PALB2, PMS2, RAD51D, TP53

**OTHER**
Elevated risk: CDC73, EGFR, KIT, PDGFRB

**OVARIAN**
Highest risk: BRCA1, BRCA2, BRIP1, EPCAM, MLH1, MSH2, MSH6, PALB2, PMS2, RAD51C, RAD51D
Elevated risk: BARD1, CHEK2, Dicer1, Mre11a, NBN, RAD50, SMARCA4, STK11, TP53

**UTERINE**
Highest risk: EPCAM, MLH1, MSH2, MSH6, PMS2, PTEN
Elevated risk: MUTYH, TP53

**MELANOMA**
Highest risk: CDK4, CDKN2A
Elevated risk: BAP1, BRCA2, MITF, PTEN, RB1, TP53

**STOMACH**
Highest risk: BMPRIA1, CDH1, EPCAM, MLH1, MSH2, MSH6, PMS2, SMAD4
Elevated risk: APC, CTNNB1, MEN1, MUTYH, NF1, STK11, TP53

**KIDNEY**
Highest risk: FH, FLCN, MET, PTEN, SDHB, VHL
Elevated risk: BAP1, EPCAM, MITF, MLH1, MSH2, MSH6, PMS2, SDHA, SDHC, SDHD, TP53, TSC1, TSC2

**COLORECTAL**
Highest risk: APC, BMPRIA1, EPCAM, MLH1, MSH2, MSH6, MUTYH, PMS2, SMAD4, STK11
Elevated risk: AXIN2, BLM, CDH1, CHEK2, GALNT12, GREM1, MSH3, NTHL1, PTEN, POLD1, POLE, TP53

Gene options on this panel include: AIP, ALK, APC, ATM, AXIN2, BAP1, BARD1, BLM, BRCA1, BRCA2, BRIP1, BMPRIA1, CASR, CDC73, CDH1, CDK4, CDKN1B, CDKN2A, CFTR, CHEK2, CPA1, CTNNB1, CTRC, DICER1, EGFR, EPCAM, FANCC, FH, FLCN, GALNT12, GREM1, HOXB13, KIT, MAX, MEN1, MET, MITF, MLH1, MRE11A, MSH2, MSH3, MSH6, MUTYH, NBN, NF1, NF2, NTHL1, PALB2, PDGFRB, PHOX2B, POT1, PMS2, POLD1, POLE, PRKAR1A, PRSS1, PTCH1, PTEN, RAD50, RAD51C, RAD51D, RB1, RET, SDHA, SDHAF2, SDHB, SDHC, SDHD, SMAD4, SMARCA4, SMARCB1, SMARCE1, SPINK1, STK11, SUFU, TMEM127, TP53, TSC1, TSC2, VHL, XRCC2

*The figure depicts primary cancer risks and does not include all gene-specific associated cancers.*