



GENE(S)	ASSOCIATED RISKS
APC*	Colorectal (up to 100%), small bowel, stomach, pancreatic, medulloblastoma, other
ATM*	Female breast (2-4 fold), pancreatic, prostate
BARD1	Breast, possibly ovarian
BRCA1*	Female breast (57-87%), ovarian (39-40%), pancreatic, prostate, male breast
BRCA2*	Female breast (45-84%), ovarian (11-18%), pancreatic, melanoma, prostate (15%), male breast (>6%)
BRIP1*	Ovarian (up to 9%), breast
BMPR1A*	Colorectal (40-50%), stomach (up to 21%)
CDH1*	Diffuse gastric (67-83%), female lobular breast, (39-52%), colorectal
CDK4	Melanoma (up to 74% by age 50)
CDKN2A	Melanoma (28-67%), pancreatic (17-25%), astrocytoma
CHEK2*	Female breast (2 fold), colorectal, prostate, other
EPCAM*	Colorectal (up to 82%), uterine (up to 60%), stomach (6-13%), ovarian (4-12%), small intestine, hepatobiliary tract, upper urinary tract (5-6%), gliomas, pancreatic, sebaceous, prostate
DICER1	Pleuropulmonary blastoma (childhood), cystic nephroma, ovarian sex-cord tumors (most often Sertoli-Leydig cell tumors), brain, other
GREM1*	Colorectal
HOXB13	Prostate
MLH1*	Colorectal (up to 82%), uterine (up to 60%), stomach (6-13%), ovarian (4-12%), small intestine, hepatobiliary tract, upper urinary tract (5-6%), gliomas, pancreatic, sebaceous, prostate
MRE11A	Breast, possibly ovarian
MSH2, MSH6*	Colorectal (up to 82%), uterine (up to 60%), stomach (6-13%), ovarian (4-12%), small intestine, hepatobiliary tract, upper urinary tract (5-6%), gliomas, pancreatic, sebaceous, prostate
MUTYH*	Biallelic mutations: colorectal (up to 80%), stomach, duodenal, uterine, breast Monoallelic mutations: female breast (up to 1.5 fold), colorectal (up to 2 fold)
NBN*	Breast, possibly ovarian, medulloblastoma, ganglioglioma, prostate
NF1*	Female breast (3-5 fold), malignant nerve sheath tumors (8-13%), optic glioma, astrocytoma, GIST, leukemia, PGL/PCC (up to 7%)
PALB2*	Female breast (33-58%), pancreatic, ovarian, possibly prostate, male breast
PMS2*	Colorectal (up to 82%), uterine (up to 60%), stomach (6-13%), ovarian (4-12%), small intestine, hepatobiliary tract, upper urinary tract (5-6%), gliomas, pancreatic, sebaceous, prostate
POLD1, POLE*	Colorectal
PTEN*	Breast (25-85%), thyroid (10-35%), uterine (5-28%), colorectal (9%), kidney (34%), melanoma (up to 6%)
RAD50	Breast, possibly ovarian
RADS1C*	Ovarian (5-9%), female breast
RADS1D*	Ovarian (10-12%), female breast, prostate
SMAD4*	Colorectal (40-50%), stomach (up to 21%)
SMARCA4	Ovarian (small cell carcinoma, hypercalcemic type), brain, other
STK11*	GI cancers (up to 57%), breast (up to 45%), pancreatic, other
TP53*	Breast, sarcoma, brain, adrenocortical, leukemia, other

CancerNext
CancerNext-Expanded

* NCCN® management guidelines available, excludes MUTYH monoallelic mutations

GENE(S)	ASSOCIATED RISKS
AIP	Pituitary adenoma (>50%)
ALK	Neuroblastoma, ganglioneuroblastoma, ganglioneuroma, possibly medulloblastoma
BAP1	Kidney, melanoma, mesothelioma
BLM	Breast, colorectal
CDKN1B	Hyperparathyroidism (nearly 100%), pituitary adenoma, neuroendocrine tumors
FANCC	Breast, possibly pancreatic
FH	Papillary type II kidney (up to 20%), PGL/PCC
FLCN	Kidney (20-34%)
GALNT12	Colorectal
MAX	Malignant PCC (paternal inheritance), possibly extra-adrenal PGLs
MEN1	Parathyroid (>90%), GEP tumors (30-70%), pituitary (30-60%), adrenal (15-50%), carcinoid (up to 10%), PCC
MET	Papillary type I kidney (nearly 100%)
MITF	Kidney (up to 5 fold), melanoma (2-8 fold)
NF2	Vestibular schwannomas (>90%), other cranial nerve schwannomas (24-51%), intracranial meningiomas (45-58%), spinal tumors (63-90%)
PHOX2B	Neuroblastoma, ganglioneuroblastoma, ganglioneuroma, other
POT1	Gliomas
PRKAR1A	Primary pigmented nodular adrenocortical disease (26-60%), pituitary adenoma (10-12%), myxomas (up to 53%), thyroid nodules (25%), large cell calcifying Sertoli cell tumor (33-41%), psammomatous melanotic schwannomas (8-10%), other
PTCH1	Basal cell carcinoma, medulloblastoma, sarcoma, other
RET	Medullary thyroid (95-100%), PCC (up to 50%), hyperparathyroidism (up to 30%)
RB1	Retinoblastoma (childhood), melanoma, sarcoma
SDHA	PGL/PCC (low malignant potential), kidney, GIST
SDHAF2	PGL/PCC (up to 100%, paternal inheritance, low malignant potential)
SDHB	PGL/PCC (both 77-100%), kidney (up to 14%), GIST
SDHC	PGL/PCC (low malignant potential)
SDHD	PGL/PCC (86-90%, paternal inheritance), kidney, GIST
SMARCB1	Atypical teratoid/rhabdoid tumors, schwannomatosis, possibly medulloblastoma, meningioma, other
SMARCE1	Meningioma
SUFU	Basal cell carcinomas, jaw keratocysts, medulloblastoma, possibly meningioma, other
TMEM127	PGL/PCC (<5% malignant potential)
TSC1/TSC2	Kidney (2-5%), brain and spine, skin, liver, lung, heart
VHL	Kidney (25-70%), PCCs (10-26%, <5% malignant potential), hemangioblastomas (brain and spine)
XRCC2	Female breast, male breast

CancerNext-Expanded

GIST: gastrointestinal stromal tumor

GEP tumors: gastro-entero-pancreatic tumors. These include gastrinomas, insulinomas, vasoactive intestinal peptide-secreting tumors (VIPomas), and glucagonomas.

PGL/PCC: paraganglioma/pheochromocytoma



CustomNext-Cancer allows you to choose your own combination of up to 68 genes, including all genes on CancerNext-Expanded and *NTHL1*.