



Description	# of Genes	Genes	ICD-10 Suggestions*
PAN CANCER			
Common / High Risk Panel			
Includes the genes associated with the most common forms of hereditary cancer, including breast, ovarian, and colon cancers, specifically those genes that confer the highest cancer risks.	32	APC ATM BAP1 BARD1 BMPR1A BRCA1 BRCA2 BRIP1 CDH1 CDK4 CDKN2A CHEK2 EPCAM GREM1 MITF MLH1 MSH2 MSH6 MUTYH NBN PALB2 PMS2 POLD1 POLE PTEN RAD50 RAD51C RAD51D SMAD4 STK11 TP53 VHL	C71.9 Malignant neoplasm of brain, unspecified Z80.0 Family history of malignant neoplasm of digestive organs Z80.3 Family history of malignant neoplasm of breast Z80.41 Family history of malignant neoplasm of ovary Z80.51 Family history of malignant neoplasm of kidney Z80.59 Family history of malignant neoplasm of urinary tract organ Z80.9 Family history of malignant neoplasm of skin Z80.42 Family history of malignant neoplasm of prostate Z83.71 Family history of colonic polyps Z84.81 Family history of carrier of genetic disease Z85.3 Personal history of malignant neoplasm of breast Z85.00 Personal history of malignant neoplasm of unspecified digestive organs Z85.07 Personal history of malignant neoplasm of pancreas Z85.028 Personal history of malignant neoplasm of stomach C61 Malignant neoplasm of prostate Z85.42 Personal history of malignant neoplasm of other parts of uterus Z85.43 Personal history of malignant neoplasm of ovary Z85.528 Personal history of other malignant neoplasm of kidney Z85.828 Personal history of malignant melanoma of skin Z85.850 Personal history of malignant neoplasm of thyroid Z85.858 Personal history of malignant neoplasm of other endocrine glands Z86.010 Personal history of colonic polyps
Pan Cancer Panel			
Includes the genes associated with a variety of cancers, including breast, ovarian, uterine, colorectal, pancreatic, thyroid, and prostate cancers.	83	AIP ALK APC ATM AXIN2 BAP1 BARD1 BLM BMPR1A BRCA1 BRCA2 BRIP1 CASR CDC73 CDH1 CDK4 CDKN1B CDKN1C CDKN2A CEBPA CHEK2 DICER1 DIS3L2 EGFR EPCAM FANCC FH FLCN GATA2 GPC3 GREM1 HOXB13 HRAS KIT MAX MEN1 MET MITF MLH1 MSH2 MSH6 MUTYH NBN NF1 NF2 PALB2 PDGFRA PHOX2B PMS2 POLD1 POLE POT1 PRKAR1A PTCH1 PTEN RAD50 RAD51C RAD51D RB1 RECQL4 RET RUNX1 SDHA SDHAF2 SDHB SDHC SDHD SMAD4 SMARCA4 SMARCB1 SMARCE1 STK11 SUFU TERC TERT TMEM127 TP53 TSC1 TSC2 VHL WRN WT1 XRCC2	
Emerging Evidence Genes			
Add-on genes for which there is initial evidence that mutations in these genes may be related to a variety of cancers, including breast, ovarian, uterine, colorectal, pancreatic, thyroid, and prostate cancers.	31	AKT1 BUB1B CEP57 CFTR CTRC DKC1 ENG ERCC4 EZH2 FAM175A FANCA FANCB FANCD2 FANCE FANCF FANCG FANCI FANCL FANCM GALNT12 KIF1B MLH3 MRE11A PALLD PIK3CA PRSS1 PTCH2 RINT1 SLX4 SPINK1 TINF2	
Pediatric Cancers			
Includes the genes most commonly associated with pediatric cancers.	53	ALK APC ATM AXIN2 BAP1 BLM BMPR1A CDC73 CDKN1C CEBPA DICER1 DIS3L2 EPCAM EZH2 FH GATA2 GPC3 HRAS MAX MEN1 MLH1 MSH2 MSH6 NBN NF1 NF2 PHOX2B PMS2 PRKAR1A PTCH1 PTEN RB1 RECQL4 RET RUNX1 SDHA SDHAF2 SDHB SDHC SDHD SMAD4 SMARCB1 STK11 SUFU TERC TERT TMEM127 TP53 TSC1 TSC2 VHL WRN WT1	C71.9 Malignant neoplasm of brain, unspecified Z80.0 Family history of malignant neoplasm of digestive organs Z80.41 Family history of malignant neoplasm of ovary Z80.51 Family history of malignant neoplasm of kidney Z80.59 Family history of malignant neoplasm of urinary tract organ Z80.9 Family history of malignant neoplasm of skin Z83.71 Family history of colonic polyps Z84.81 Family history of carrier of genetic disease Z85.00 Personal history of malignant neoplasm of unspecified digestive organs Z85.028 Personal history of malignant neoplasm of stomach Z85.07 Personal history of malignant neoplasm of pancreas Z85.43 Personal history of malignant neoplasm of ovary Z85.528 Personal history of other malignant neoplasm of kidney Z85.828 Personal history of malignant melanoma of skin Z85.850 Personal history of malignant neoplasm of thyroid Z85.858 Personal history of malignant neoplasm of other endocrine glands Z86.010 Personal history of colonic polyps

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CANCER PANELS BY ORGAN SYSTEM			
Breast Cancer			
Includes the genes most commonly associated with hereditary breast cancer.	15	ATM BARD1 BRCA1 BRCA2 BRIP1 CDH1 CHEK2 NBN NF1 PALB2 PTEN STK11 TP53 RAD51C RAD51D	Z80.3 Family history of malignant neoplasm of breast Z84.81 Family history of carrier of genetic disease Z85.3 Personal history of malignant neoplasm of breast
Emerging Evidence Genes			
Add-on genes for which there is initial evidence that mutations in these genes may be related to hereditary breast cancer.	12	AKT1 FAM175A FANCC MRE11A MUTYH PIK3CA POLD1 RAD50 RINT1 SDHB SDHD XRCC2	
Colorectal Cancer			
Includes the genes most commonly associated with hereditary colon cancer, including both polyposis syndromes and non-polyposis syndromes.	18	APC AXIN2 BMPR1A CDH1 CHEK2 EPCAM GREM1 MLH1 MSH2 MSH6 MUTYH PMS2 POLD1 POLE PTEN SMAD4 STK11 TP53	C18.9 Malignant neoplasm of the colon, unspecified Z80.0 Family history of malignant neoplasm of digestive organs Z83.71 Family history of colonic polyps Z84.81 Family history of carrier of genetic disease Z85.00 Personal history of malignant neoplasm of unspecified digestive organs Z86.010 Personal history of colonic polyps
Emerging Evidence Genes			
Add-on genes for which there is initial evidence that mutations in these genes may be related to hereditary colorectal cancer.	7	ATM BLM BUB1B ENG FLCN GALNT12 MLH3	
Ovarian/Uterine Cancer			
Includes the genes most commonly associated with hereditary ovarian and uterine cancer.	15	BRCA1 BRCA2 BRIP1 DICER1 EPCAM MLH1 MSH2 MSH6 PMS2 PALB2 PTEN RAD51C RAD51D SMARCA4 TP53	C48.2 Malignant neoplasm of peritoneum, unspecified C57.00 Malignant neoplasm of unspecified fallopian tube Z80.41 Family history of malignant neoplasm of ovary Z84.81 Family history of carrier of genetic disease Z85.42 Personal history of malignant neoplasm of other parts of uterus Z85.43 Personal history of malignant neoplasm of ovary
Emerging Evidence Genes			
Add-on genes for which there is initial evidence that mutations in these genes may be related to hereditary ovarian/uterine cancer.	3	ANKRD1 CTNNA3 PDLIM3	
Leukemia			
Includes the genes most commonly associated with hereditary leukemia.	18	ATM BLM CEBPA DKC1 EPCAM GATA2 HRAS MLH1 MSH2 MSH6 NBN NF1 PMS2 RUNX1 TERC TERT TINF2 TP53	Z80.6 Family history of leukemia Z84.81 Family history of carrier of genetic disease Z85.6 Personal history of leukemia
Emerging Evidence Genes			
Add-on genes for which there is initial evidence that mutations in these genes may be related to hereditary leukemia.	5	BRCA1 BRCA2 BRIP1 CHEK2 PALB2	
Fanconi Anemia Genes			
Add-on genes related to Fanconi Anemia, which can lead to myelodysplastic syndrome and hematologic malignancy.	17	BRCA2 BRIP1 ERCC4 FANCA FANCB FANCC FANCD2 FANCE FANCF FANCG FANCI FANCL FANCM PALB2 RAD51C SLX4 XRCC2	

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CANCER PANELS BY ORGAN SYSTEM			
Pancreatic Cancer			
Includes the genes most commonly associated with hereditary pancreatic cancer.	20	APC ATM BMPR1A BRCA1 BRCA2 CDKN2A EPCAM MEN1 MLH1 MSH2 MSH6 NF1 PALB2 PMS2 SMAD4 STK11 TP53 TSC1 TSC2 VHL	Z83.41 Family history of multiple endocrine neoplasia (MEN) syndrome Z84.81 Family history of carrier of genetic disease Z85.07 Personal history of malignant neoplasm of pancreas
Emerging Evidence Genes			
Add-on genes for which there is initial evidence that mutations in these genes may be related to hereditary pancreatic cancer.	2	CDK4 FANCC PALLD	
Chronic Pancreatitis Genes			
Add-on genes related to chronic pancreatitis, which can caused increased risks for pancreatitis cancer in affected individuals.	5	CASR CFTR CTSC PRSS1 SPINK1	
Brain and Nervous System Cancers			
Includes the genes most commonly associated with hereditary brain and nervous system cancers.	35	AIP ALK APC CDKN1B DICER1 EPCAM HRAS MAX MEN1 MLH1 MSH2 MSH6 NF1 NF2 PHOX2B PMS2 PRKAR1A PTCH1 PTEN RB1 RET SDHA SDHAF2 SDHB SDHC SDHD SMARCA4 SMARCB1 SMARCE1 SUFU TMEM127 TP53 TSC1 TSC2 VHL	C71.9 Malignant neoplasm of brain, unspecified Z84.81 Family history of carrier of genetic disease
Emerging Evidence Genes			
Add-on genes for which there is initial evidence that mutations in these genes may be related to hereditary brain and nervous system cancers.	7	BAP1 BARD1 EZH2 GPC3 KIF1B POT1 PTCH2	
Renal Cancer			
Includes the genes most commonly associated with hereditary renal cancer.	27	BAP1 CDC73 CDKN1C DICER1 DIS3L2 EPCAM FH FLCN GPC3 MET MITF MLH1 MSH2 MSH6 PMS2 PTEN SDHA SDHB SDHC SDHD SMARCA4 SMARCB1 TP53 TSC1 TSC2 VHL WT1	C68.9 Malignant neoplasm of urinary organ, unspecified Z80.51 Family history of malignant neoplasm of kidney Z80.59 Family history of malignant neoplasm of urinary tract organ Z84.81 Family history of carrier of genetic disease Z85.528 Personal history of other malignant neoplasm of kidney
Emerging Evidence Genes			
Add-on genes for which there is initial evidence that mutations in these genes may be related to hereditary renal cancer.	3	BUB1B CEP57 PALB2	
Prostate Cancer			
Includes the genes most commonly associated with hereditary prostate cancer.	13	ATM BRCA1 BRCA2 CHEK2 EPCAM HOXB13 MLH1 MSH2 MSH6 NBN PMS2 RAD51D TP53	C61 Malignant neoplasm of prostate Z80.42 Family history of malignant neoplasm of prostate Z84.81 Family history of carrier of genetic disease
Emerging Evidence Genes			
Add-on genes for which there is initial evidence that mutations in these genes may be related to hereditary prostate cancer.	1	PALB2	

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CANCER PANELS BY ORGAN SYSTEM

Thyroid Cancer

Includes the genes most commonly associated with hereditary thyroid cancer.	7	APC, CHEK2, DICER1, PRKAR1A, PTEN, RET, TP53	E31.21 Multiple endocrine neoplasia (MEN) type 1 E31.22 Multiple endocrine neoplasia (MEN) type 2A E31.23 Multiple endocrine neoplasia (MEN) type 2B Z84.81 Family history of carrier of genetic disease
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Emerging Evidence Genes

Add-on genes for which there is initial evidence that mutations in these genes may be related to hereditary thyroid cancer.	4	MEN1, SDHB, SDHD, WRN	Z85.850 Personal history of malignant neoplasm of thyroid Z85.858 Personal history of malignant neoplasm of other endocrine glands
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Melanoma

Includes the genes most commonly associated with hereditary melanoma.	9	BAP1, BRCA2, CDK4, CDKN2A, MITF, POT1, PTEN, RB1, TP53	Z80.9 Family history of malignant neoplasm of skin Z84.81 Family history of carrier of genetic disease Z85.828 Personal history of malignant melanoma of skin
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Emerging Evidence Genes

Add-on genes for which there is initial evidence that mutations in these genes may be related to hereditary melanoma.	2	BRCA1, TERT
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