



		GENE(S)	ASSOCIATED CANCERS AND RISKS
Hereditary breast and ovarian cancer	BRCAplus	<i>BRCA1</i> *	Female breast (57-87%), ovarian (39-40%), pancreatic, melanoma, prostate, male breast
		<i>BRCA2</i> *	Female breast (45-84%), ovarian (11-18%), pancreatic, melanoma, prostate (15%), male breast (>6%)
		<i>ATM</i> *	Breast (2-4 fold), pancreatic, prostate
		<i>CDH1</i> *	Diffuse gastric (67-83%), female lobular breast (39-52%), colorectal
		<i>CHEK2</i> *	Breast (2 fold), colorectal, prostate, other
		<i>PALB2</i> *	Breast (33-58%), pancreatic, ovarian, possibly prostate, male breast
		<i>PTEN</i> *	Breast (25-85%), thyroid (10-35%), uterine (5-28%), melanoma (up to 6%), other
		<i>TP53</i> *	Breast, sarcoma, brain, adrenocortical, leukemia, other
		<i>BARD1</i>	Breast, possibly ovarian
		<i>BRIP1</i> *	Ovarian (up to 9%), breast
		<i>NBN</i> *	Breast, possibly ovarian, brain, prostate
		<i>NF1</i> *	Female breast (3-5 fold), malignant nerve sheath tumors (8-13%), PGL/PCC (up to 7%), brain, other
		<i>MRE11A</i>	Breast, possibly ovarian
		<i>MUTYH</i> *	Biallelic mutations: colorectal (up to 80%), stomach, duodenal, uterine, breast/Monoallelic mutations: breast, colorectal (up to 2 fold)
		BreastNext	CancerNext
<i>RAD51C</i> *	Ovarian (5-9%), breast		
<i>RAD51D</i> *	Ovarian (10-12%), breast, prostate		
<i>APC</i> *	Colorectal (up to 100%), small bowel, stomach, pancreatic, thyroid, brain, other		
<i>BMPR1A/SMAD4</i> *	Colorectal (40-50%), stomach (up to 21%)		
<i>CDK4</i>	Melanoma (up to 74% by age 50)		
<i>CDKN2A</i>	Melanoma (28-67%), pancreatic (17-25%), brain		
<i>DICER1</i>	Pleuropulmonary blastoma, cystic nephroma, ovarian sex-cord tumors, brain, other		
<i>EPCAM</i> *	Colorectal (52-82%), uterine (12-55%), possibly prostate, other		
<i>HOXB13</i>	Prostate		
<i>MLH1</i> *	Colorectal (52-82%), uterine (25-60%), stomach (6-13%), ovarian (4-12%), prostate (2 fold), other		
<i>MSH2</i> *	Colorectal (52-82%), uterine (25-60%), stomach (6-13%), ovarian (4-12%), prostate (2 fold), other		
<i>MSH6</i> *	Colorectal (20-44%), uterine (up to 44%), prostate (2 fold), other		
<i>PMS2</i> *	Colorectal (15-20%), uterine (15%), possibly prostate, other		
<i>STK11</i> *	GI cancers (up to 57%) breast (up to 45%), pancreatic, other		
<i>GREM1</i> *	Colorectal		
<i>POLD1/POLE</i> *	Colorectal		
<i>SMARCA4</i>	Ovarian (small cell carcinoma, hypercalcemic type), brain, other		

\*NCCN® management guidelines available, excludes *MUTYH* monoallelic mutations

PGL: Paraganglioma

PCC: Pheochromocytoma