

Table 1. General population lifetime cancer risks where lifetime may be up to 70 or 80 years.

General population lifetime cancer risk				
Assigned female at birth (AFAB)		Assigned male at birth (AMAB)		AFAB/AMAB
Breast	Ovary	Breast	Prostate	Pancreas
12%	1-2%	0.1%	12%+	1%

Table 2. Approximate lifetime (70-80 years) cancer risks associated with pathogenic/likely pathogenic variants in the gene listed.

Gene	Gene-associated lifetime cancer risk					
	Assigned female at birth (AFAB)		Assigned male at birth (AMAB)		Other AFAB/AMAB	
	Breast	Ovary	Breast	Prostate	Pancreas AFAB/AMAB	Other:
<i>BRCA1</i>	60-70%	40-60%	0.4-1%	Inconsistently reported. Comprehensive assessment of risk found no increased risk. ¹⁵	2-5%	Stomach, gall bladder
<i>BRCA2</i>	45-70%	10-30%	4-7%	30-60%	2-5%	Stomach, melanoma
<i>CHEK2</i>	25-40%					Possibly colorectal
Genomic interpretation of the variant is important in determining cancer risk associated with <i>CHEK2</i> likely pathogenic variants as some variants are associated with less risk.						
<i>PALB2</i>	40-60%	3-5%	1%		2-3%	
<i>ATM</i>	20-40%	2-3%*		associated	5%	Colon, gastric
*The <i>ATM</i> gene is associated with the childhood onset, autosomal recessive condition ataxia-telangiectasia , when an individual inherits pathogenic variant in both copies of their <i>ATM</i> genes.						
<i>RAD51C</i>	20%	11%				
These risks are estimated to be higher if there is a family history of these cancers in one or more first degree relatives						
<i>RAD51D</i>	20%	13%				
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<i>BRIP1</i>		5-10%				
<i>BARD1</i>	20%					

The genes below are often included on a hereditary breast/ovarian cancer gene panels. These are associated with genetic conditions where the primary feature of the condition is not breast/ovarian cancer. However, because of the clinical overlap in presentation, they are often included in testing. Screening and management recommendations are specific to the genetic condition.						
Gene	Assigned female at birth (AFAB)		Assigned male at birth (AMAB)		Other AFAB/AMAB	
	Breast	Ovary	Breast	Prostate	Pancreas AFAB/AMAB	Other:
Hereditary diffuse gastric cancer						
<i>CDH1</i>	40% Lobular carcinoma					Diffuse gastric
Li-Fraumeni syndrome						
<i>TP53</i>	40-50%				associated	Soft tissue sarcoma, osteosarcoma, glioma, neuroblastoma, others
Cowden syndrome						
<i>PTEN</i>	>40%					Thyroid, colorectal, uterine, renal
Neurofibromatosis type 1						
<i>NF1</i>	20-40%					Nerve sheath, central nervous system
Peutz-Jeghers syndrome						
<i>STK11</i>	40%				10-30%	Colorectal, sex cord tumor, gastric
Lynch syndrome						
<i>MLH1</i>		10%				Colorectal Uterine Pancreas others
<i>MSH2/EPCAM</i>		20%				
<i>MSH6</i>		10%				
<i>PMS2</i>		3%				

