

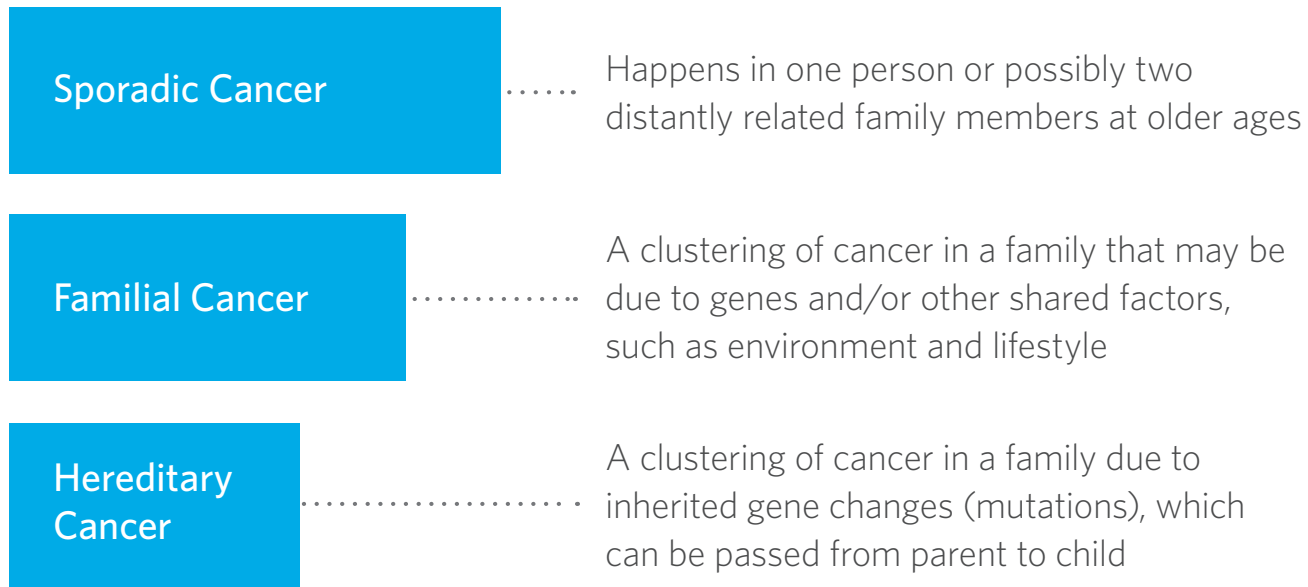
# CancerNext

---

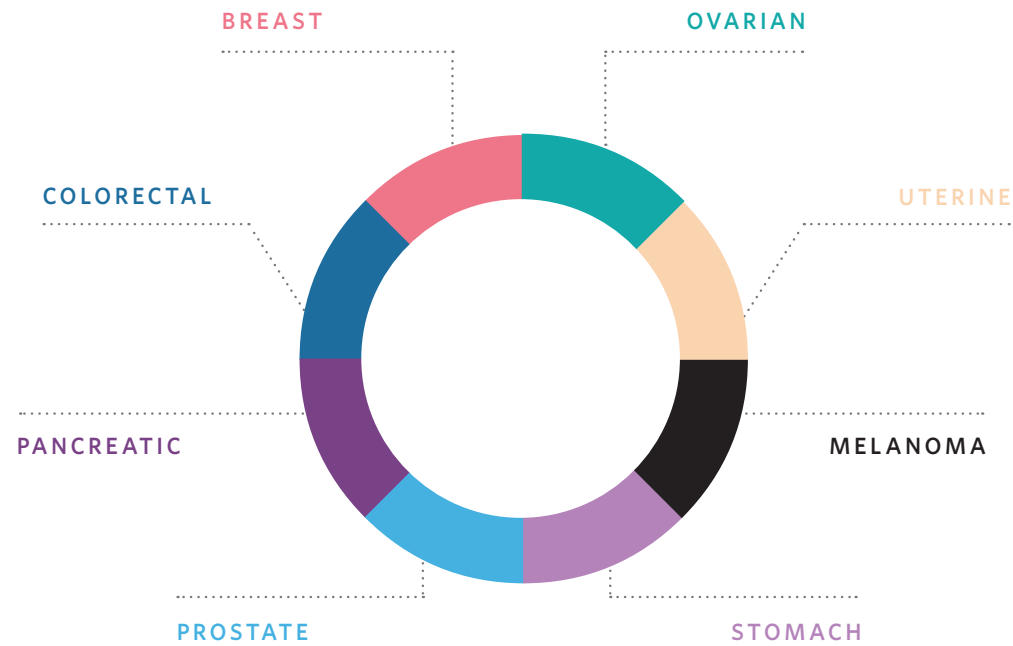
GENETIC TESTING FOR HEREDITARY CANCER



# What Are the Causes of Hereditary Cancer?

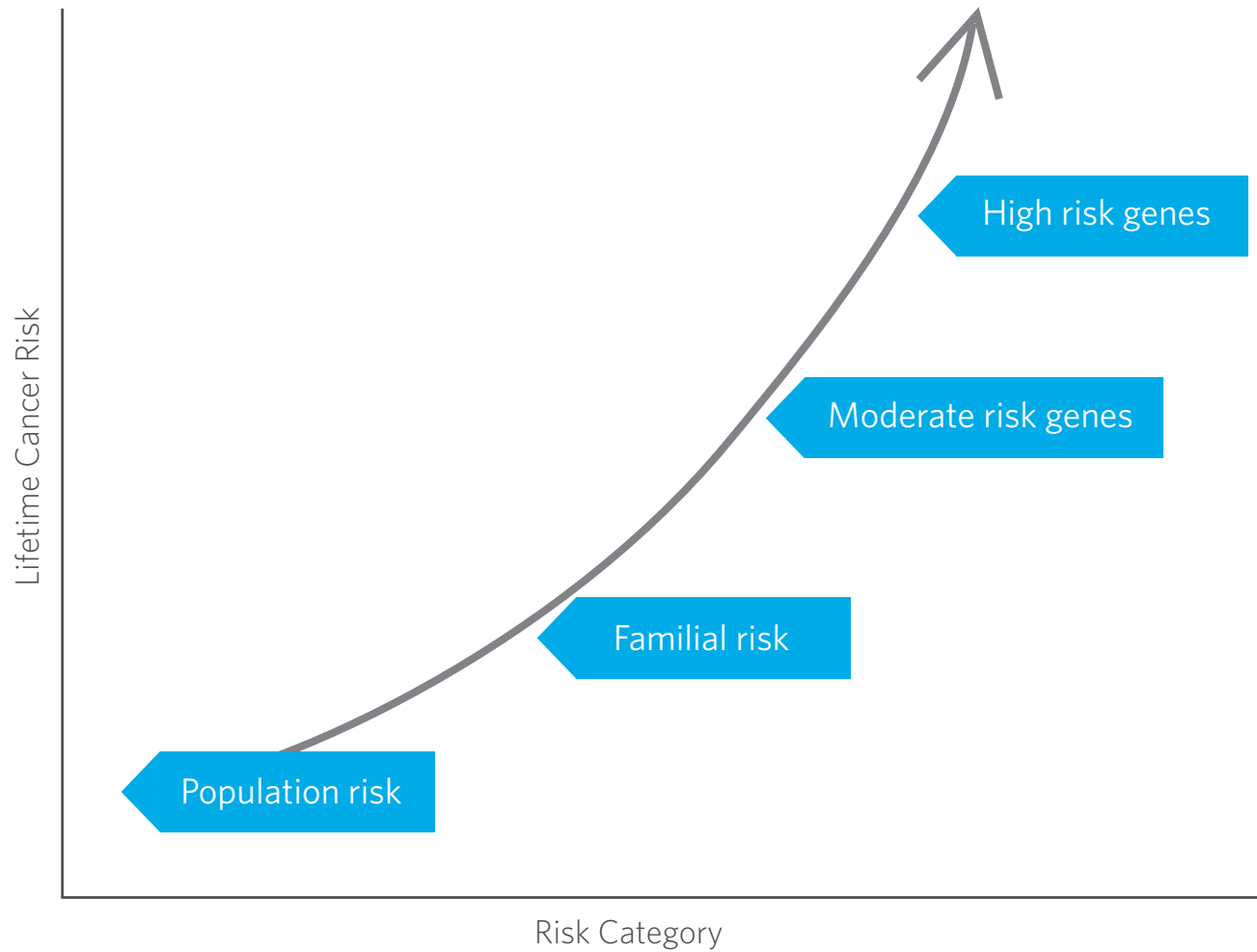


# What Types of Cancer Can Be Hereditary\*?



*\*These are the most common types of cancer that can be hereditary and is not a comprehensive list.*

# What Are the Cancer Risks by Gene Type?



# What Do the Cancer Gene Risk Levels Mean?

## High Risk Genes

- Have published recommendations for cancer screening and/or prevention

## Moderate Risk Genes

- May have newer recommendations for screening and/or prevention
- If no recommendations are available, screening may be based on family history and/or other risk factors

## Newly Described Genes

- Are associated with an increased lifetime risk of developing certain types of cancer, but the risk is not well-defined
- Recommendations may be based on family history and/or other risk factors

# What Are Signs of Hereditary Cancer?

Multiple Cancers	In you or close family members
Young Cancers	Such as breast cancer or colorectal cancer diagnosed under 50 years old
Rare Cancers	Such as male breast cancer or ovarian cancer
Ancestry	Ashkenazi Jewish

# CancerNext: High Risk Genes and Associated Cancers

GENES	BREAST	OVARIAN	COLORECTAL	UTERINE	PANCREATIC	PROSTATE	STOMACH	MELANOMA	OTHERS
APC			✓		✓				✓
BMPR1A			✓				✓		
BRCA1	✓	✓			✓	✓			✓
BRCA2	✓	✓			✓	✓		✓	✓
CDH1	✓						✓		✓
CDKN2A					✓			✓	✓
CDK4								✓	✓
EPCAM		✓	✓	✓	✓	✓	✓		✓
MLH1		✓	✓	✓	✓	✓	✓		✓
MSH2		✓	✓	✓	✓	✓	✓		✓
MSH6		✓	✓	✓	✓	✓	✓		✓
MUTYH biallelic	✓		✓	✓					
PMS2		✓	✓	✓	✓	✓	✓		✓
PTEN	✓		✓	✓				✓	✓
SMAD4			✓				✓		
STK11	✓	✓	✓		✓				✓
TP53	✓	✓	✓	✓	✓	✓	✓	✓	✓

# CancerNext: Moderate Risk Genes and Associated Cancers

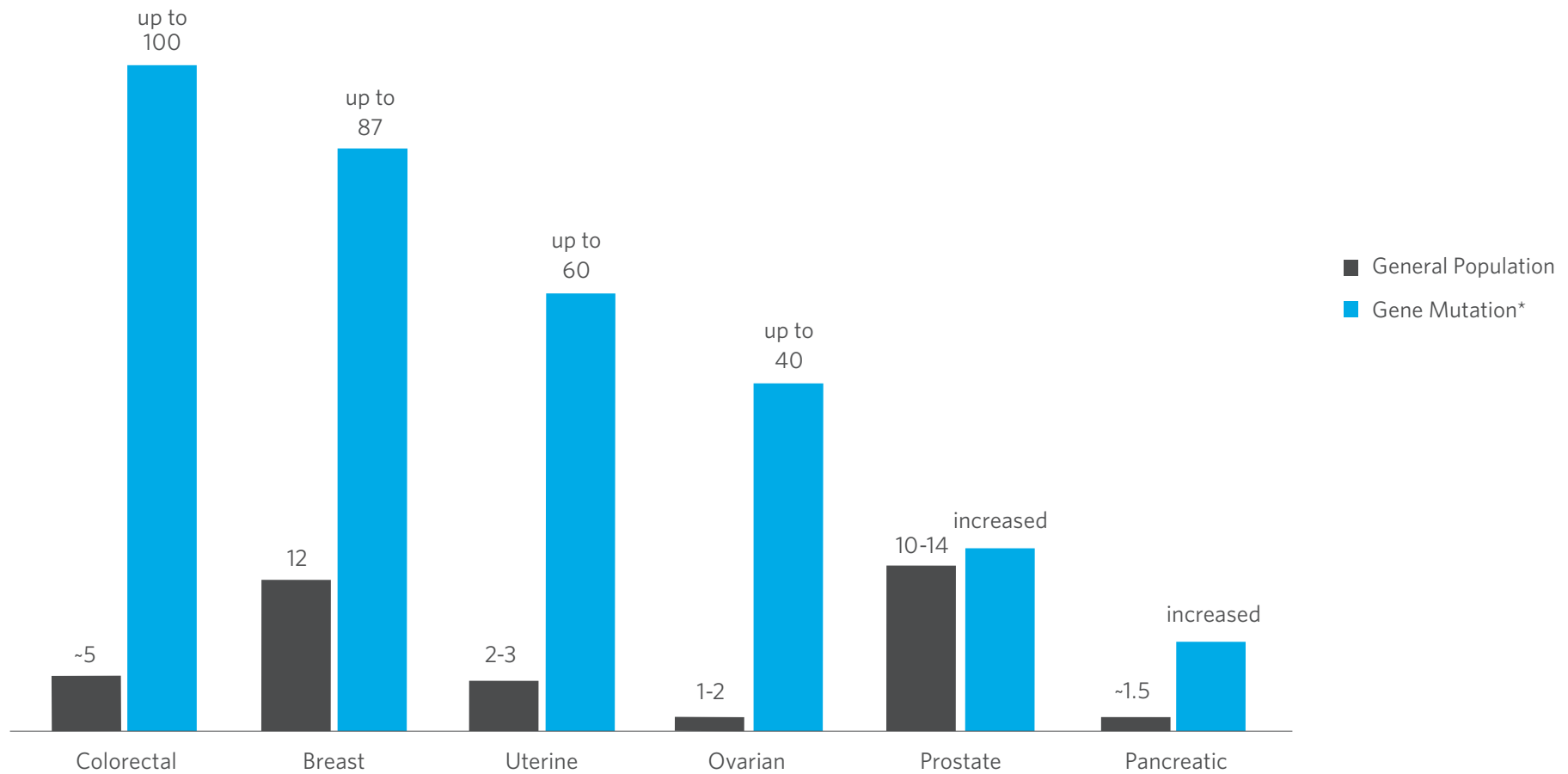
GENES	BREAST	OVARIAN	COLORECTAL	UTERINE	PANCREATIC	PROSTATE	STOMACH	MELANOMA	OTHERS
ATM	✓				✓	✓			
BRIP1	✓	✓							
CHEK2	✓	✓	✓			✓			✓
GREM1			✓						
NF1	✓								✓
PALB2	✓	✓			✓	✓			
POLD1			✓						
POLE			✓						
RAD51C	✓	✓							
RAD51D	✓	✓				✓			
TP53	✓	✓	✓	✓	✓	✓	✓	✓	✓



# CancerNext: Newly Described Genes and Associated Cancers

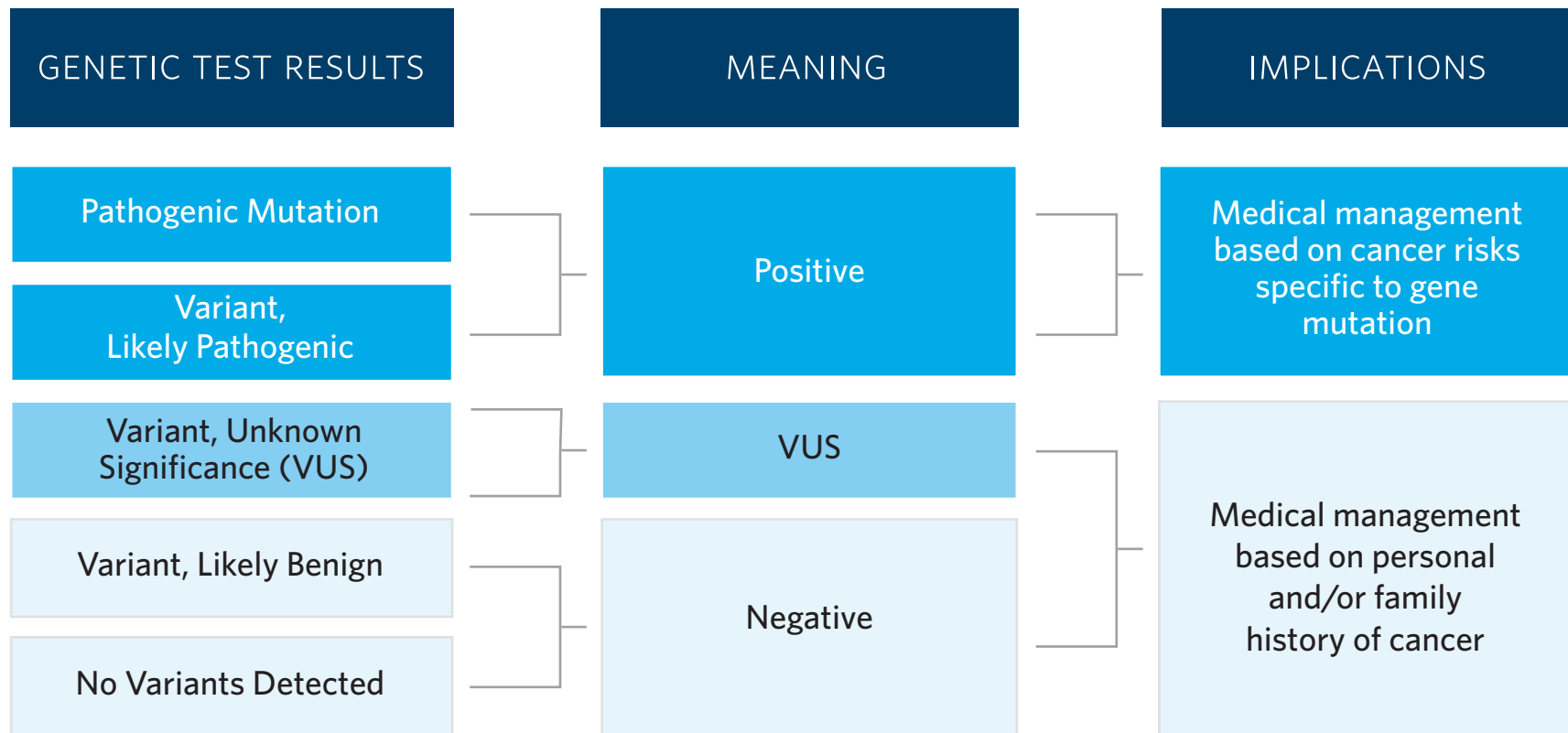
GENES	BREAST	OVARIAN	COLORECTAL	UTERINE	PANCREATIC	PROSTATE	STOMACH	MELANOMA	OTHERS
<i>BARD1</i>	✓								
<i>DICER1</i>		✓							✓
<i>HOXB13</i>						✓			
<i>MRE11A</i>	✓								
<i>MUTYH Carrier</i>	✓		✓						
<i>NBN</i>	✓					✓			✓
<i>RAD50</i>	✓								
<i>SMARCA4</i>		✓							✓

# Lifetime Cancer Risks with CancerNext Gene Mutations (%)



*\*Mutations in most CancerNext genes lead to an increased risk for some cancers in this graph, but not all. This graph represents the highest risks associated with some CancerNext genes.*

# What Do My Test Results Mean?



# Positive Test Results

	HIGH RISK GENE	MODERATE RISK OR NEWLY DESCRIBED GENE
Result	A mutation was found	A mutation was found
Cancer Risks	High risk (for certain types of cancer)	Moderate risk: Moderately increased risk (for certain types of cancer) Newly described: Increased risk (for certain types of cancer), but exact risk is not yet defined
Cancer Screening and Prevention	Recommendations based on genetic test result	Recommendations based on genetic test results and/or family history
Genetic Testing For Family Members	Recommend genetic counseling and consideration of genetic testing	Recommend genetic counseling and consideration of genetic testing

# Negative Test Results

## Result

No mutations were found

## Cancer Risks

Based on personal and/or family history

## Cancer Screening and Prevention

Recommendations based on personal and/or family history

## Genetic Testing For Family Members

May be considered in certain situations

# Variant of Unknown Significance Test Results

## Result

A genetic change was found but it is unclear whether or not it causes increased risk for cancer

## Cancer Risks

Based on personal and/or family history

## Cancer Screening and Prevention

Recommendations based on personal and/or family history

## Genetic Testing For Family Members

May be considered in certain situations

