BRCANext™

Patient Guide

A Guide To Genetic Testing For
Hereditary Breast and Gynecologic Cancers

Ambry Genetics®

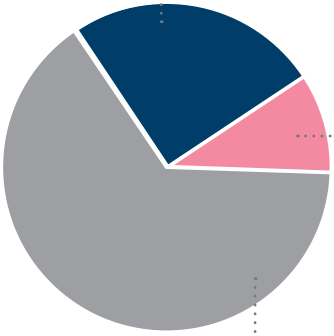
In partnership with
LifeStrands
Empowering lives with Genomics

Understanding The Basics

About 1 in 32 (3.1%) women will be diagnosed with uterine cancer in their lifetime[1]

About 1 in 90 (1.1%)
women will get ovarian cancer in their lifetime[2]

CANCER FALLS INTO 1 OF 3 CATEGORIES



FAMILIAL CANCER

A pattern of the same or related types of cancer within a family that may be due to genes and/or other shared factors, such as environment and lifestyle

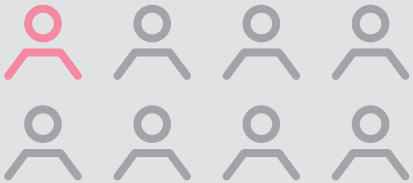
HEREDITARY CANCER

A pattern of the same or related types of cancer within a family due to inherited gene changes (called mutations), that can be passed from parent to child

SPORADIC CANCER

Cancers that occur by chance in one or two family members that are not due to an inherited gene mutation. Approximately 80% of all cancers are sporadic.[3]

Breast cancer occurs in **about 1 in 8 (12.9%)** women in their lifetime[4]



About half of the people diagnosed with uterine, ovarian and breast cancer are around[1,2,4]

63
YEARS
OR OLDER

ABOUT HEREDITARY CANCER

Many people have a **family history of cancer,** but only 10% of uterine and breast cancer, and up to 25% of ovarian cancer is hereditary[5,6,7]

People who have these gene mutations **are born with them** – they do not develop over time.

Learning if you have an **inherited mutation** can help you know more about your cancer risks.

People with a higher chance of developing cancer may need screening, like mammograms, starting at a **younger age and more frequently.**

Should You Have Genetic Testing?

IF YOU ANSWER "YES" TO ANY OF THE QUESTIONS BELOW,

genetic testing may be something for you and/or your family members to consider.

1. Have you/your family members* been diagnosed with early onset breast cancer (<45 years old) or triple negative(ER-/PR-/HER2/neu-) breast cancer <60 years old?
2. Have you/your family members* been diagnosed with more than one cancer, such breast, uterine, and/or colorectal cancer?
3. Have you/your family members* been diagnosed with rare cancers, such as male breast or ovarian cancer?
4. Have you/your family members* been diagnosed with uterine cancer at less than 50 years old?
5. Have multiple people on the same side of your family had ovarian, uterine, breast, and or/other cancers?
6. Have any of your family members* been found to have a cancer gene mutation?

Your healthcare provider may identify other reasons why you could consider genetic testing.

**"Family members" refers to blood relatives, such as brothers/sisters/parents/grandparents/aunts/uncles/cousins*

Genes and Associated Cancers

BRCANext includes 18 genes that are linked to an increased lifetime risk for one or more cancers such as breast, ovarian, and/or uterine. The check marks below indicate the associated cancer types for each gene.

GENE(S)	BREAST	OVARIAN	COLORECTAL	UTERINE	PANCREATIC	PROSTATE	STOMACH	MELANOMA	OTHER
ATM	✓				✓	✓			
BRCA1	✓	✓			✓	✓			
BRCA2	✓	✓			✓	✓		✓	
BRIP1	✓	✓							
CDH1	✓						✓		
CHEK2	✓		✓			✓			✓
EPCAM		✓	✓	✓	✓	✓	✓		✓
MLH1		✓	✓	✓	✓	✓	✓		✓
MSH2		✓	✓	✓	✓	✓	✓		✓
MSH6		✓	✓	✓	✓	✓	✓		✓
NBN									✓
NF1	✓								✓
PALB2	✓	✓			✓	✓			
PMS2		✓	✓	✓	✓	✓	✓		✓
PTEN	✓		✓	✓				✓	✓
RAD51C	✓	✓							
RAD51D	✓	✓				✓			
TP53	✓	✓	✓	✓	✓	✓	✓	✓	✓

How Genetic Testing Can Impact You and Your Family

FOR YOU:

Your test results may help your healthcare provider fine-tune your cancer screening plan, including the type, timing (age) of your initial screening, and its frequency.

Examples of cancer screening include mammogram, breast MRI, colonoscopy, prostate exam, dermatology (skin) exam, or other screenings indicated for your specific cancer risk.

Based on your results, your healthcare provider may review possible cancer prevention options with you, such as preventive, or prophylactic, surgery that can reduce the risk for certain cancers.

Examples include prophylactic mastectomy (removing one or both breasts before a cancer occurs) or prophylactic oophorectomy (removing the ovaries and Fallopian tubes before a cancer occurs)

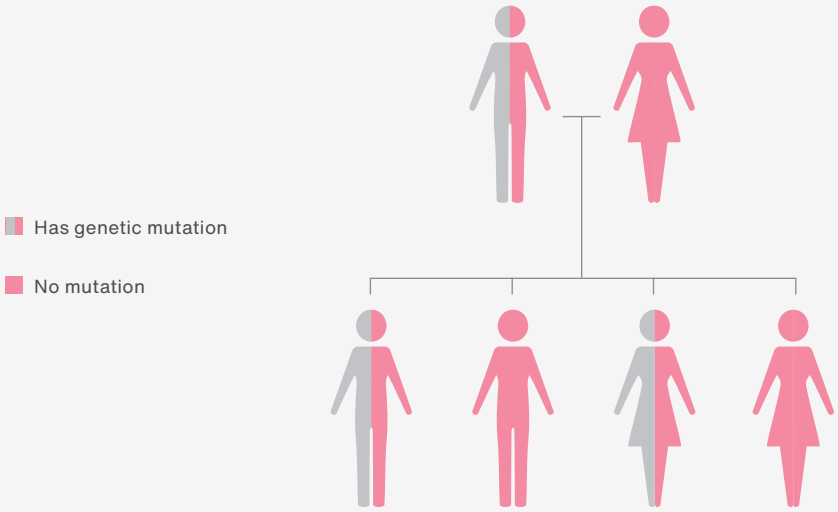
Your doctor can also identify and discuss other personalized medical management options that might be appropriate based on your genetic test results.

AMBRY GENETICS OFFERS NO-COST TESTING TO CLOSE RELATIVES

This is available for the specific genetic mutation identified in the first family member tested at Ambry within 90 days of the original report date.

FOR YOUR FAMILY MEMBERS:

If you test positive for a genetic mutation, your close family members (like your parents, brothers, sisters and children) have a 50/50 random chance of also having the same mutation.



- Men and women have the same chance of inheriting a mutation, but their chance of developing cancer may be different.

Possible Genetic Test Results

+ POSITIVE

A mutation was found in at least one of your genes tested

Detection of a cancer-related gene mutation could explain that your cancer diagnosis is hereditary or be a warning that you are at increased risk compared to others.

Based on your results, genetic testing for certain family members may be recommended.

− NEGATIVE

No genetic mutations were found in any of your genes tested

While your genetic test results were negative, personal and family history may also be a strong indicator of cancer risk(s) and may inform your medical management.

Talk to your healthcare provider to find out if genetic testing should be considered for your family members.

? VARIANT OF UNKNOWN SIGNIFICANCE (VUS)

At least one genetic change was found, but it is unclear if this change causes an increased risk for cancer

While your genetic test results were inconclusive and do not change your medical management, personal and family history may also be a strong indicator of cancer risk(s) and may inform your care.

Talk to your healthcare provider to find out if genetic testing should be considered for your family members.

It is possible to have a combination of positive and VUS results, since multiple genes are tested.

Resources For You

Ambry Genetics' Patient Education Website

ambrygen.com/patient

Foundation for Women's Cancer

foundationforwomenscancer.org

American Cancer Society

cancer.org

Breast Cancer Foundation

bcf.org.sg

American Society of Clinical Oncology

cancer.net

National Cancer Institute

cancer.gov

CancerCare

cancercare.org

Young Survival Coalition

ovarian.org

National Health Service (NHS)

nhs.uk

Sharsheret

sharsheret.org

Frequently Asked Questions

1 HOW IS GENETIC TESTING PERFORMED AND HOW LONG DOES IT TAKE?

Genetic testing requires a blood or saliva sample, which is collected using a special kit that is shipped overnight to Ambry Genetics by your healthcare provider. The testing, which looks for mutations that cause an increased risk for cancer, takes less than three weeks to complete, and results are sent to your healthcare provider.

2 WHAT WILL HAPPEN WHEN MY RESULTS ARE READY?

Your healthcare provider will receive your results; they will not be sent directly to you. Every healthcare provider may have a different method and time frame for reviewing your results with you, so it is important to discuss this process with them when your test is performed. Your healthcare provider will discuss recommended next steps based on your test results.

3 HOW WILL MY TEST RESULTS BE PROTECTED?

We are required by law to maintain the confidentiality of your protected health information in accordance with the Health Insurance Portability and Accountability Act (HIPAA). Visit HHS.gov to learn more.

4 SHOULD I TELL MY FAMILY MEMBERS ABOUT MY GENETIC TEST RESULTS?

It is important to share your results with your family members, because they may provide additional information about their own cancer risks and management options. If you feel unsure about how to approach the subject, your healthcare provider may be able to offer some advice.

STILL HAVE QUESTIONS?

Talk to your healthcare provider or contact LifeStrands at enquiry@lifestrandsgx.com

References

1. “Cancer of the Endometrium - Cancer Stat Facts.” SEER, https://seer.cancer.gov/statfacts/html/corp.html.

2. “Cancer of the Ovary - Cancer Stat Facts.” SEER, https://seer.cancer.gov/statfacts/html/ovary.html.

3. (n.d.). Review of Cancer Genetics. Retrieved May 10, 2022, from https://www.cooperhealth.org/sites/default/files/pdfs/Review_of_Cancer_Genetics.pdf

4. “Cancer of the Breast (Female) - Cancer Stat Facts.” SEER, https://seer.cancer.gov/statfacts/html/breast.html.

5. Anon, Risk factors for uterine cancer. Cancer Treatment Centers of America. Available at: https://www.cancercenter.com/cancer-types/uterine-cancer/risk-factors [Accessed March 21, 2022].

6. Anon, Breast Cancer Risk Factors You Cannot Change. American Cancer Society. Available at: https://www.cancer.org/cancer/breast-cancer/risk-and-prevention/breast-cancer-risk-factors-you-cannot-change.html [Accessed March 21, 2022].

7. Anon, Causes, Risk Factors, and Prevention. American Cancer Society. Available at: https://www.cancer.org/cancer/ovarian-cancer/causes-risks-prevention/risk-factors.html [Accessed March 21, 2022].