

A PATIENT'S GUIDE TO HEREDITARY CANCER

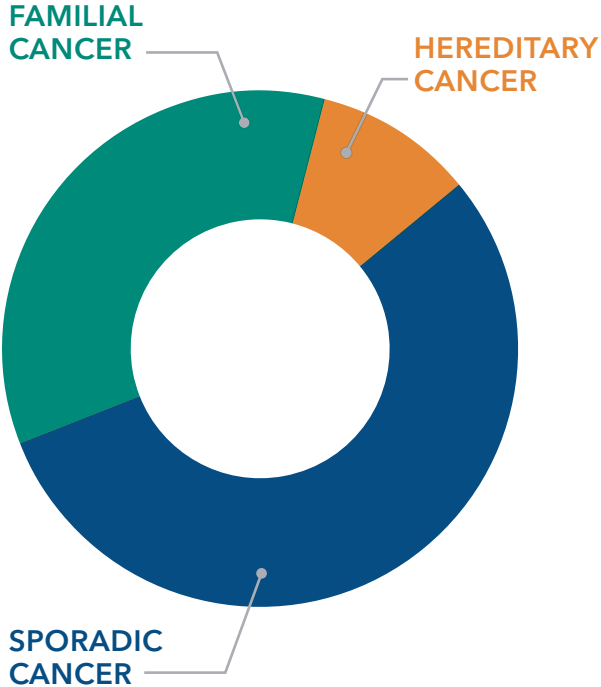
Is Germline Testing
Right For You?



 myriad® UROLOGY

WHAT IS HEREDITARY CANCER?

Most cancers occur in people who do not have a strong family history of that cancer. This is often called "sporadic cancer". In some families, we see more of the same kind, or related kinds, of cancer than we would expect to see when compared to the general population. This is often called "familial" or "hereditary cancer". In those families with hereditary cancer, that cancer risk is passed down through generations by inheriting altered genes (in other words, genes with mutations) which increase the risk to develop cancer. Determining which of these families have cancer related to an inherited gene mutation is important, as the cancer risks in hereditary cancer families are much higher than the general population.



TYPES OF CANCER



HEREDITARY

Occurs when a gene mutation is passed down in the family from parent to child. People with hereditary cancer are more likely to have relatives with the same type or other related types of cancer. They may develop more than one cancer and their cancer often occurs at an earlier than average age. Germline testing is a genetic test conducted on blood or saliva to determine if a patient's cancer is hereditary.



FAMILIAL

Likely caused by a combination of genetic and environmental factors. People with familial cancer may have one or more relatives with the same type of cancer; however, there does not appear to be a specific pattern of inheritance (i.e., the cancer risk is not clearly passed from parent to child).



SPORADIC

Occurs by chance. People with sporadic cancer typically do not have relatives with the same type of cancer.



BOTH MEN AND WOMEN CAN INHERIT AND PASS DOWN GENETIC MUTATIONS. MEN WITH A FAMILY HISTORY OF CANCER, INCLUDING BREAST AND OVARIAN, SHOULD CONSIDER GERMLINE TESTING.

ASSESSING YOUR RISK

About 1 in 9 American men receive a diagnosis of prostate cancer in their lifetime. It is the second leading cause of cancer deaths among men in the United States.¹ However, most prostate cancers are slow-growing and the majority of men with prostate cancer do not die from it.

WHAT IS HEREDITARY PROSTATE CANCER?

Some cancers are passed down through families. **Up to 17% of all prostate cancer is hereditary.**² Gene mutations can be inherited from the maternal or paternal side of the family. Individuals with hereditary cancer are more likely to have relatives with the same type or related types of cancer. They may develop more than one cancer. Many of these cancers can occur at earlier ages.



RED FLAGS FOR HEREDITARY PROSTATE CANCER (CHECK ALL THAT APPLY IN YOU OR A FAMILY MEMBER)

- Metastatic prostate cancer diagnosed at any age
- Prostate cancer AND relatives with breast, ovarian, prostate, or pancreatic cancers
- Ovarian cancer diagnosed at any age
- Breast cancer diagnosed at age 50 or younger
- Male breast cancer diagnosed at any age
- Colon or endometrial cancer diagnosed before age 50 or any two Lynch syndrome-associated cancers* diagnosed at any age
- Ashkenazi-Jewish ancestry
- A previously identified mutation in the family

WHO IS AT RISK?

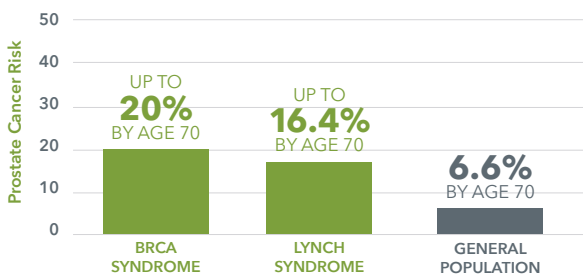
If any of the red flags above apply to you or a family member, you could have an inherited risk for prostate cancer and may be appropriate for germline (hereditary cancer) testing. Please discuss these red flags with your healthcare provider.

*Lynch associated cancers include: colorectal, endometrial (uterine), gastric, ovarian, pancreas, prostate, ureter, renal pelvis, biliary tract, brain, and small intestinal cancers

Learn more at
[TheProstateCancerQuiz.com](https://www.theprostatecancerquiz.com)

WHAT ARE THE RISKS?

All men have some risk of developing prostate cancer. The average man's risk of developing prostate cancer by age 70 is 6.6%. However, men with certain genetic mutations can have up to a 20% chance of developing prostate cancer by age 70. Men with hereditary prostate cancer are also at increased risk for developing a second cancer.



OVERVIEW OF PROSTATE CANCER SYNDROMES

BRCA-RELATED CANCER SYNDROME. A majority of hereditary prostate cancers are caused by mutations in the *BRCA1* and *BRCA2* genes. Men with a BRCA mutation have an increased risk for male breast cancer and prostate cancer. Women with a BRCA mutation have a greatly increased risk for both breast and ovarian cancer. Both men and women have an increased risk for pancreatic cancer and melanoma.

LYNCH SYNDROME. Hereditary Non-polyposis Colorectal Cancer (HNPCC) is also known as Lynch syndrome. It is the most common cause of hereditary colorectal cancer and also puts people at increased risk for developing other cancers including prostate, endometrial, ovarian, gastric, and many other types of cancer. Lynch syndrome is caused by a mutation in one of five genes: *MLH1*, *MSH2*, *MSH6*, *PMS2*, and *EPCAM*.

MUTATIONS IN GENES like *CHEK2*, *ATM*, *HOXB13*, and others are also associated with hereditary prostate cancer.

Learn more at prolaris.com/hereditary-cancer-patient-central

POSSIBLE MYRIAD GERMLINE TEST RESULTS FOR MEN

POSITIVE

- A genetic mutation was found in 1 or more of the genes tested
- You are at increased risk for cancer
- A summary of medical management guidelines will be provided specific to your gene mutation(s)

ELEVATED

- No genetic mutation was found in the genes tested
- You are at elevated risk for cancer based on an analysis of additional genetic markers, personal clinical risk factors, and/or your family's history of cancer
- A summary of medical management guidelines will be provided based on your elevated risk

NEGATIVE

- No genetic mutation was found in the genes tested
- The common causes of hereditary cancer have been ruled out, but depending on family history of cancer, increased risks could still remain
- Depending on your family history, medical management is usually based on general population screening guidelines; however, you should talk with your healthcare provider to determine if there are any changes in medical management that are right for you

VARIANT OF UNCERTAIN SIGNIFICANCE

- A change in a gene has been identified
- It is not yet known if the change is associated with increased cancer risk
- Medical management based on personal and family history of cancer until more is understood about this specific change

MANAGING HEREDITARY CANCER

Individuals with familial or hereditary cancer risk have a much greater chance of developing cancer during their lifetime. Knowing if you are at increased risk for cancer empowers you to make life-saving decisions. You and your physician can work together to create a personalized plan to prevent cancer, identify cancer at an earlier, more treatable stage or prevent secondary cancers. Your personalized prevention or treatment plan may include the following:



TREATMENT OPTIONS

If you have been diagnosed with cancer, your test results may help determine appropriate treatment options



TARGETED THERAPY

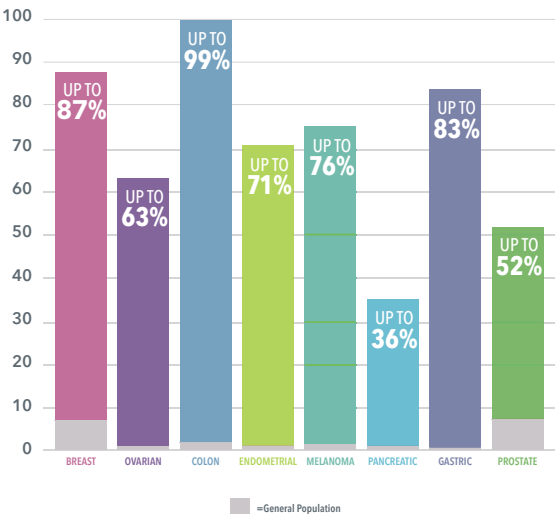
If you have a gene mutation and a diagnosis of cancer, targeted therapies may be available for certain tumor types (e.g., platinum chemotherapy, PARP-inhibitors)



INCREASED SURVEILLANCE

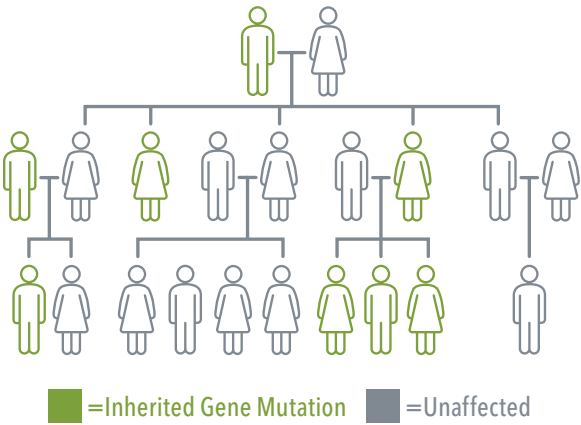
Increased surveillance may identify a cancer at its earliest, most treatable stage

Lifetime Cancer Risk for People with an Identified Hereditary Cancer Risk³



IT'S A FAMILY AFFAIR

- If you have a gene mutation, your parents, children and brothers and sisters have a 50% chance of having the same gene mutation
- Other relatives such as aunts, uncles and cousins may also be at risk to carry the same gene mutation
- Germline testing is the only way to identify inherited gene mutations which could impact your medical management
- Remember, you can inherit a gene mutation from either your mother or your father, so it is important to look at both sides of your family



DISCUSSING RESULTS WITH YOUR FAMILY

It's important to discuss your results with your family. Knowing whether or not they carry a gene mutation can allow family members to make more informed decisions on their cancer prevention strategies. For those who test negative, the results can bring peace of mind.⁴⁻¹⁰

PRIVACY

HIPAA created federal privacy protections that apply to all health information created or maintained by healthcare providers and insurance plans. Myriad Genetic Laboratories complies with HIPAA practices. For more information on specific privacy practices, please visit: www.myriad.com.

QUESTIONS YOU MAY HAVE...

WHO IS MYRIAD?

Myriad is the established leader in the field of hereditary cancer genetic testing with nearly 30 years of experience and approximately 5 million patients tested. Our passion for patients drives everything we do. We are committed to providing healthcare professionals and patients with affordable and accurate information they can rely upon when decisions matter most.


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CAN MY HEALTH INSURANCE COVERAGE BE IMPACTED BY THE RESULTS?


The Genetic Information Non-discrimination Act (GINA) and laws in most states prohibit discrimination regarding employment eligibility, health benefits, or health insurance premiums solely on the basis of genetic information. For information about Myriad's privacy policy, visit www.myriad.com/patients-families/the-myriad-difference/your-privacy.

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WILL MY HEALTH INSURANCE PAY FOR MY TESTING?

 **97% of private insurance companies have coverage for hereditary cancer testing**

 **3 out of 4 patients pay \$0**

 **90% of patients have or will qualify for a payment of \$100 or less**

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WHAT IF I HAVE A HIGH DEDUCTIBLE PLAN OR CO-INSURANCE?

If you have a high deductible or co-insurance, you may qualify for the Myriad Financial Assistance Program (MFAP) for a reduced out-of-pocket cost.[†]

[†] Patients who are recipients of U.S. government-funded programs such as Medicaid, Medicare, Medicare-Advantage and Tricare may not be eligible.

QUESTIONS YOU MAY HAVE...

HOW DO I APPLY FOR MYRIAD'S FINANCIAL ASSISTANCE PROGRAM?*

1. Include your income and number of family members in your household on the Test Request Form (TRF) your healthcare provider asks you to sign.
2. Provide your correct email address and phone number on the TRF so Myriad can contact you with further details.
3. Provide income verification (from your most recent tax return) and complete a 1-page application.

* For uninsured patients please go to www.MyriadPro.com/mfap for application information

WHAT IS THE DIFFERENCE BETWEEN AN EXPLANATION OF BENEFITS (EOB) AND A BILL?

Your insurance carrier will process our claim and then send you an Explanation of Benefits (EOB)— THIS IS NOT A BILL. Most patients do not receive a bill, and you will NOT be responsible for any balance unless you receive a bill directly from Myriad, even if you receive a denial letter from your insurance company. If you have concerns about your EOB please contact Myriad at (844) 697-4239 or billinghelp@myriad.com.



THE MYRIAD PROMISE IS OUR COMMITMENT TO PROVIDE PATIENTS WITH ACCESS TO ACCURATE AND AFFORDABLE GENETIC RESULTS.

Learn more at myriadpromise.com

NEXT STEPS

- Pursue Testing by giving a blood or saliva sample
- Decline Testing - Medical management based on personal and family history of cancer
- Undecided / Talk to family

Who to contact with questions: _____



TEST OFFERINGS

BRACAnalysisCDx[®]

BRACAnalysis CDx[®] can help determine if your prostate cancer is or may be appropriate for PARP Inhibitor therapy by identifying if you have a germline *BRCA1/2* mutation. This test was designed to provide *BRCA1/2* results quickly and accurately.



The Myriad myRisk[®] test is a 35-gene cancer panel that will provide you with comprehensive information about your unique cancer. Using industry leading accuracy, unmatched turnaround time, and a lifetime commitment to patients, myRisk is an essential part of prostate cancer evaluations.



RESOURCES

Your healthcare provider is always your number one resource. You are also invited to visit **[Prolaris.com/Hereditary-Cancer-Patient-Central](https://www.prolaris.com/hereditary-cancer-patient-central)**, the Myriad program offering information and support for patients. You will find valuable information that will help you better understand your test result.

You may also contact Myriad's Medical Services team at 1-800-469-7423 ext. 3850.

REFERENCES

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3. For the most up-to-date general population and syndrome associated cancer risks, please refer to the Gene Table at <https://www.MyriadPro.com/myRisk>
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