

# If Cancer Runs in Your Family... Information about BRCA Testing for Men



## How does Hereditary Breast and Ovarian Cancer Syndrome affect men?

Cancer can run in families, and increased cancer risk can be passed down from either a mother or a father to their sons and daughters.

Hereditary cancers occur when a person inherits a change, called a mutation, in a gene that normally protects the body from cancer. A change in one of the protective genes known as BRCA1 and BRCA2 leads to a very high risk for cancer in women. Men can also inherit a BRCA1 or BRCA2 mutation and increased risk for certain cancers.

Men with BRCA mutations have a higher than average lifetime risk for breast cancer, prostate cancer, and other cancers. Each of their children has a 50% chance of carrying the same gene change and associated increased cancer risk.

## How can I find out if a BRCA mutation runs in my family?

Having relatives with cancer does not necessarily mean that your risk is higher. Genetics experts look for certain patterns of cancer that may indicate an increased cancer risk. If you are concerned about cancer running in your family, you should consult with a genetic counselor, an expert who can help you understand your personal risk and the benefits and limitations of genetic testing. Visit the FORCE website to locate a specialist near you.

### Having a family member with any of the following can be a sign that a BRCA mutation may run in your family:

- ovarian or fallopian tube cancer at any age
- breast cancer at age 50 or younger
- more than one breast cancer diagnosis
- both breast and ovarian cancer
- triple negative breast cancer
- Eastern European (Ashkenazi) Jewish ancestry and a history of breast or ovarian cancer
- male breast cancer

### Having more than one relative on the same side of the family with any of these cancers may also signal that a BRCA mutation runs in your family:

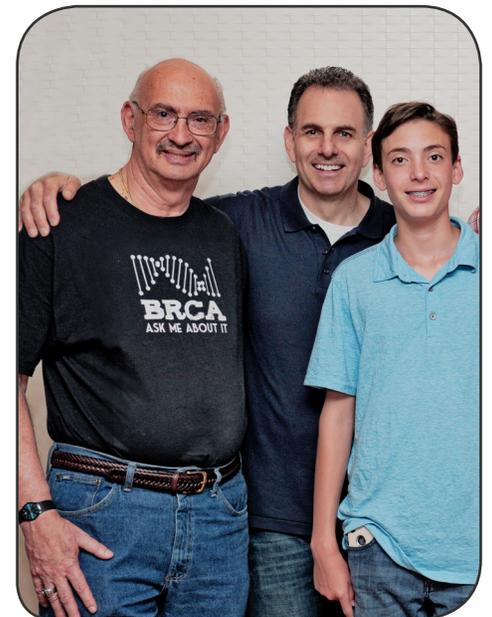
- breast cancer
- ovarian or fallopian tube cancer
- prostate cancer
- pancreatic cancer
- melanoma

If colon, uterine, thyroid, sarcoma, or young-onset cancers run in your family, please see a genetics expert to learn more about risk assessment and genetic testing for other hereditary cancer syndromes.

If one of your family members has already tested positive for a BRCA mutation, you can be tested for that same mutation with a blood or saliva test. If there is no known mutation in your family then more thorough testing of these genes may be needed.

## Why men should consider genetics evaluation

Much attention has been given to women with BRCA mutations because of the very high risks for cancer and the many options available for managing those risks. Less attention and research has focused on high-risk men, however, and therefore fewer men have undergone BRCA testing. As more men have genetic counseling and testing, scientists will learn more about inherited cancers in men and develop better options for detecting, preventing, and treating these cancers. Knowing your hereditary risk can help you and your family make informed decisions about your health care choices. If you have certain cancers, knowing you have a BRCA mutation may change your treatment recommendations or make you eligible for research studies.



## What are the cancer risks and screening options for men with BRCA mutations?

Like women, men can inherit BRCA mutations. Men who inherit a mutation in either BRCA gene have an increased lifetime risk for the cancers listed below. The risk of these cancers is higher in men with a BRCA2 mutation than men with a BRCA1 mutation.

### Male breast cancer

Men with BRCA mutations have a 1-10% lifetime risk of developing male breast cancer. This is ten times greater than the risk for men in the general population. Experts recommend that men with a BRCA mutation undergo screening with an annual breast exam by a doctor. Some experts also recommend monthly breast self-exams and a baseline mammogram for high-risk men; however, research on the benefits of screening in men is scarce. If you are at high risk for breast cancer, talk to your doctor about whether you should get a mammogram.

### Prostate cancer

Men with BRCA mutations have a 15-25% lifetime risk for prostate cancer, which is much higher than average-risk men. In men with BRCA mutations, prostate cancers tend to occur at a younger age and may be more aggressive and life threatening than prostate cancer in men without mutations. Although some organizations recommend against routine prostate cancer screening in the general population, screening may be more beneficial for men with BRCA mutations because of their prostate cancer risk. Experts recommend a Prostate Specific Antigen (PSA) blood test and baseline digital rectal exam for all men with BRCA mutations, starting at age 40.

If you have already been diagnosed with prostate cancer, speak with your doctor about tests that can determine if your prostate cancer is an aggressive form that may require additional treatment.

### Melanoma

People with BRCA mutations have a 3-5% lifetime risk for an aggressive skin cancer known as melanoma. This is higher than the risk in the general population. Experts recommend people with a mutation undergo an annual skin exam with a dermatologist, and report any new, suspicious, or changing moles to their doctor.

### Pancreatic cancer

People with BRCA mutations have a 2-5% lifetime risk for pancreatic cancer. This is higher than the risk in the general population. There are no routine screening tests to detect pancreatic cancer, however, research studies are looking at new methods for early detection. If you are high-risk and you are interested in participating in pancreatic cancer research, visit the FORCE website to find studies on pancreatic cancer detection that are enrolling patients.

## Where can I get more information?

Experts in cancer genetics can help you and your family understand hereditary cancer and provide you and your family with information about your cancer risk.

Cancer genetics experts will:

- review your family medical history to assess and explain your risk for cancer.
- discuss whether you are a candidate for gene testing and describe the benefits and limitations of testing.
- order the appropriate test if you choose to proceed with gene testing.
- interpret gene test results and explain what they mean for you and your family.
- discuss how to manage your cancer risk and refer you to experts for further consultation.

High-risk men may consider participating in research studies that look for ways to lower risk for cancer or detect it early. You can visit the FORCE website for links to studies enrolling high-risk men.



Fighting Hereditary Breast and Ovarian Cancer