

# UCSF Center for BRCA Research

## Genetic Testing

## Frequently Asked Questions



### **What is genetic counseling?**

Genetic counseling is provided by a board-certified and state-licensed counselor with extensive training and experience in hereditary cancer. A counselor works with each individual to see how genetic testing fits into their medical care, choose the most appropriate testing, and discuss the potential medical and personal impact of genetic testing.

### **How much will the test cost? Will my insurance cover it?**

Costs can vary. Many insurance companies will cover testing and associated genetic counseling when there is a significant family history of cancer or a known family mutation. The cost of accompanying genetic counseling is also usually covered by insurance. Multiple state and federal laws provide legal protection from genetic discrimination, including GINA (Genetic Information Nondiscrimination Act), HIPAA (Health Insurance Portability and Accountability Act), and the ACA (Affordable Care Act).

### **I've already had cancer. Do I still need genetic testing?**

Genetic testing is helpful for people who have already had cancer. In some cases, the genetic test results can help your doctors choose specific treatments for your type of cancer. Genetic testing can also help people take steps to take to detect or prevent future cancers for themselves or their family members.

### **What is my chance of having a gene mutation?**

Your chance of having a gene mutation depends on many things, including if there is a gene mutation in your family and how you are related to the family member with the mutation, your personal medical history, and family history of cancer. The best way to determine if you have a gene mutation or have a higher chance of getting cancer, is to see a genetic counselor, who can evaluate your family history and medical records, and provide information so you can decide whether or not to pursue genetic testing.

### **What test result can I get?**

Genetic testing can lead to a wide range of sometimes-complex results. When you are testing

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For more information about our research program and current projects, please contact Sydney Pietrzak, program manager, at [Sydney.Pietrzak@ucsf.edu](mailto:Sydney.Pietrzak@ucsf.edu) or (415) 514-2255.

for a mutation that has already been found in a family member, the results are easier to interpret. “Testing positive” means that you have the same mutation as your family member and have an increased chance of developing certain types of cancer. “Testing negative” means that you do not have the mutation found in your family member, and your chances of developing cancer are similar to the average person.

### **How can I use a positive test result?**

A positive genetic test result means that you have an increased chance of developing certain types of cancer. Our clinicians will evaluate your risks based upon your genetic testing results, family history, and other specific risk factors and discuss your goals of care to recommend appropriate options and care plan for you, like cancer screening tests, medications to reduce cancer risk, risk-reducing surgery, and lifestyle changes.

### **What if I don't want to test right now?**

If, after genetic counseling, you decide that it is not the right time for you to have genetic testing, the counselor can still discuss cancer screening and prevention. If you are closely related to the family member with a mutation, the counselor will usually recommend following guidelines for increased cancer screening, as if positive. However, genetic testing is recommended before considering medications or surgery to prevent cancer.

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**UCSF** Helen Diller Family  
Comprehensive  
Cancer Center



## **How do BRCA genes affect health?**

BRCA1 and BRCA2 are normal genes that protect everyone from cancer by repairing damaged DNA and preventing cells from growing and multiplying in an uncontrolled way. Two copies of BRCA1 and BRCA2 are found in every cell. Some people are born with a mutation in one of the copies of a BRCA gene, meaning the gene does not work properly, increasing the risk for certain cancers. Women and men with a BRCA mutation are recommended to have cancer screenings more often due to their higher risk for cancer. The UCSF Hereditary Cancer Clinic provides genetic testing services to identify individuals with a BRCA and other cancer risk mutations, and has clinicians who create individualized care plans for patients with hereditary cancer risk. For individuals with cancer, knowing about a BRCA mutation can help in planning your cancer treatment. There are now targeted drugs that work better on some types of BRCA-related cancers. We recommend asking your oncologist if genetic testing may be right for you.

## **Which types of cancer are increased with a BRCA mutation?**

BRCA1 and BRCA2 mutations increase the risk for female breast cancer, ovarian cancer (including tubal and primary peritoneal cancers), prostate cancer, male breast cancer, and pancreatic cancer. BRCA2 also increases the risk for melanoma.

## **What imaging tests are suggested for screening for breast cancer for someone with a BRCA mutation?**

According to National Comprehensive Cancer Network (NCCN) guidelines, screening for female breast cancer includes breast MRI without and with contrast once a year starting at age 25. At age 30, screening with breast MRI and with mammogram, each once a year, is recommended. It is ideal to stagger breast MRI and mammogram by 6 months.

## **What should BRCA parents tell their children about their risk?**

This is a very personal question and attitudes vary between families. A genetic counselor is a great person to help you think about what, when and how to tell your children. It is important to keep information honest and age-appropriate. In general, BRCA related cancers happen to adults, so there is time to plan and reassure children (and parents).

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**What specialized resources are available at UCSF for BRCA-positive patients?**

The UCSF Center for BRCA Research is a specialized and dedicated Center for families with BRCA and other mutations linked to cancer risk. Our Hereditary Cancer Clinic (HCC) is where patients with BRCA and other mutations receive personalized care for their long-term health & well-being. The HCC helps individuals navigate their BRCA diagnosis and maintains relationships with other UCSF oncology specialty areas like breast surgery or urologic surgery. Our team includes genetic counselors, a nurse practitioner, oncologists and other specialists. Psychologists in the UCSF Psycho-Oncology practice are available to help patients cope with the emotional and psychological aspects of a BRCA mutation or other hereditary cancer syndrome.

**What do you see as the future for BRCA patients and new research?**

At the UCSF Center for BRCA Research, we strive to end BRCA-related cancers in our children's lifetimes. Our team is leading diverse, ambitious efforts in the research lab, clinic and community to determine cancer risk, prevent, intercept and cure BRCA-related cancers.