Brought to you by National Society of Genetic Counselors

BRCA Fact Sheet

www.aboutgeneticcounselors.com

BRCA Fact Sheet

Cancer is caused by genetic changes, known as mutations or pathogenic (disease-causing) variants, in a cell. These mutations can be acquired throughout a lifetime and are caused by various risk factors including aging, environmental factors, and lifestyle factors. 5-10% of cancer cases are associated with genetic mutations inherited from a parent and run in families. Families with an inherited mutation tend to have young-onset cancers (under the age of 50) and multiple family members diagnosed with cancer, typically involving multiple generations of family members. People with inherited mutations in the *BRCA1* or *BRCA2* genes have an increased risk to develop breast, ovarian, and other cancers such as prostate, pancreatic, and melanoma.

There are genetic tests available directly to consumers, with a sample collected at home, that provide a wide range of information from traits to ancestry, and even some health information. While the FDA has currently approved these at-home genetic tests for the BRCA genes, there are important limitations that you should consider before you decide what test, if any, is right for you. It is equally important to have appropriate expectations about what next steps may need to be taken should you choose to purchase an FDA-approved, at-home genetic test for cancer risk.

Here are some quick points to keep in mind while considering at-home BRCA testing:

- Many at-home genetic tests use a technology that only looks at a few specific genetic mutations or **variants**- most often, you are not getting a complete picture of your genetic risk.
- There are also many other genes besides *BRCA1* and *BRCA2* that are associated with hereditary cancer risk, and each gene can have hundreds to thousands of different mutations.
- The FDA requires the result of an at-home BRCA test be confirmed with a clinical or diagnostic test that is usually ordered by a health care provider with specific genetics training.
- Even if you are truly negative for a mutation in a gene associated with cancer, meaning that no known genetic risk is identified, you may still have an increased risk for cancer based on your family history or other factors.
- Learning you have a gene **mutation** in one of the BRCA genes means that you are at increased risk for developing certain types of cancer, but there are steps you can take to lower your risks or detect cancer at an earlier stage.

If you are considering an at-home BRCA test, you may want to speak with a genetic counselor before you decide. Genetic counselors can help review your personal and family history, as well as explore why you are seeking this information, to help make sure you are getting the test that is most appropriate for you.