

Genetic Testing for Breast Cancer and Surgical Decisions

Your breast surgeon recommended genetic testing for you related to breast and other cancers. This factsheet provides information about the genetic testing ordered for you.

What is genetic testing?

Genetic testing looks for changes in your genes called mutations. Mutations can make genes stop working. This raises the risk of getting cancer.

What genetic test is being ordered for you?

Genetic testing can look at one or two genes at a time (for example, *BRCA1* and *BRCA2* only) or for many at once. A test for many genes at the same time is called a multigene panel test. A multigene panel can help find a hereditary cancer risk in a family more quickly than testing one gene at a time.

The test ordered for you is a high-risk breast cancer gene panel that includes 9 genes. The genes tested are *BRCA1*, *BRCA2*, *ATM*, *CHEK2*, *PALB2*, *CDH1*, *PTEN*, *STK11*, and *TP53*. Each of these genes increase the risk for breast cancer, but they may also be related to other cancers. Each of these genes may also increase the risk for a second breast cancer and may impact the type of surgery offered to you for your treatment.

There are many more genes related to cancer, and you will be offered more genetic testing after your initial results are reported. This additional genetic testing may include more genes related to breast, ovarian, colon, uterine, pancreatic, prostate cancer, and melanoma.

Will my insurance cover testing?

Insurance will cover the testing cost for most people who need genetic testing. Payment plans and discounts can help other patients. Most patients pay less than \$250 for genetic testing. Many pay nothing at all.

The lab Invitae Genetics will create a patient portal for you. You will receive a text message with a link to that portal. Here, you can view your out-of-pocket cost and approve whether you would like to continue with testing. If insurance does not cover testing, you have a limited window to switch from insurance bill to \$250 "patient pay" flat rate. Please contact Invitae within 3 days of receiving the text message to ensure there is no

unexpected bill. Call our genetics team if there are concerns or questions at 801-587-9555.

When will I get results?

The initial high risk breast cancer panel will be available in 7-10 business days.

You will receive a call from a genetic counseling assistant when your results are ready, and they will schedule a phone consultation with a genetic counselor to review your results.

Your results phone call will take between 15-30 minutes. At that time the genetic counselor will discuss your results and will also collect a comprehensive family history. You should ask your family members about their cancer history prior to your results consultation. You will also be offered more genetic testing, at no additional cost. If you choose to get more genetic testing, results will be ready 2-4 weeks later.

How could genetic testing change your treatment?

Genetic testing can help you to know why you developed breast cancer. If your test finds a mutation then you may be at increased risk to develop a second breast cancer, unrelated to this diagnosis. In this case, you may want to discuss different surgical options with your breast surgeon (e.g. mastectomy v. lumpectomy) to prevent a second breast cancer.

This genetic test may also tell you if you are at increased risk for a different type of cancer (e.g. ovarian, colon). If you are found to be at increased risk for another type of cancer your genetic counselor will review appropriate screening or risk reduction recommendations.

How can genetic testing impact my family members?

Some gene mutations can be passed down through families. When this happens, other family members may be more likely to get cancer. If your test shows a mutation, other family members can have a test for that mutation. The genetic counselor will discuss if testing is recommended for your children, siblings, parents, or other relatives.

If you have questions about your genetic testing, call Huntsman Cancer Institute's Family Cancer Assessment Clinic to learn more: 801-587-9555.