

# GENETIC TESTING FOR INHERITED CANCER RISK



Cancer is caused by changes in **DNA**, called variants or mutations. Cancer develops because DNA variants allow cells to grow uncontrollably which can cause a tumor to develop. There are many kinds of genetic tests that may be offered to patients during cancer care to look for these changes. **This resource focuses on genetic testing for inherited cancer risk, which is also called hereditary cancer testing.**

## HOW DOES GENETIC TESTING FOR INHERITED CANCER RISK DIFFER FROM BIOMARKER TESTING?

**Genetic testing** for inherited cancer risk looks for changes that are passed down in families. It looks at non-cancer cells and is done on a blood or saliva sample.

**Biomarker testing** looks for genetic changes that are only present in cancer cells to determine if certain treatments will work. These changes are not passed down in families. Biomarker testing is done on a tumor or blood sample.

## WHAT IS THE GOAL OF GENETIC TESTING FOR INHERITED CANCER RISK?

Knowing about an inherited cancer risk helps you and your family members take appropriate steps, including getting relevant cancer screenings. If you have already been diagnosed with cancer, genetic testing can sometimes help identify potential treatments.

## WHO IS MORE LIKELY TO HAVE INHERITED CANCER RISK?

Most of the time, genetic changes are acquired over a lifetime — due to environmental exposures, the aging process, or even by chance. It can take years for enough of these changes to accumulate and cause cancer. However, sometimes a person is born with a change in a gene that can increase their chances of developing cancer by making the accumulation happen more quickly.



## YOU'VE MADE YOUR APPOINTMENT — HERE ARE SOME QUESTIONS YOU MAY HAVE FOR YOUR GENETIC COUNSELOR

- ☐ *Can you explain how the genetic testing process works?*
- ☐ *Why is it important to know this information if I already have cancer?*
- ☐ *If my test is positive, what types of cancer could I be at risk for?*
- ☐ *Are there ways I can lower my chances of getting cancer?*
- ☐ *How could my test results affect my family?*
- ☐ *What are my options for paying for this test?*
- ☐ *If I test positive, could my health or life insurance rates go up?*
- ☐ *Should I get life insurance before I do the genetic test?*

If you or a family member had cancer diagnosed at a young age, this could be because of an inherited genetic change. Your doctor may order testing to determine if you have an inherited change, or they may refer you to a genetic counselor.

## WHAT SHOULD I EXPECT DURING GENETIC COUNSELING?

Genetic counselors have advanced training in assessing genetic risks, interpreting test results, and providing support and guidance to anyone seeking information about how inherited risk might affect them or their families. During your appointment, you and the genetic counselor will discuss your personal and family history of cancer, as well as the pros and cons of genetic testing for inherited cancer risk, to help determine if it's right for you.

If you decide to move forward with genetic testing, you will have a follow up conversation with the genetic counselor about your results and what they mean for you and your relatives. This may include additional cancer screenings or identifying ways to lower your risk factors. You may also discuss what it means for your treatments if you are currently receiving cancer treatment. We recommend asking for a copy of your genetic testing results. It can be helpful when speaking with relatives or future health care providers.

**To prepare for a genetic counseling appointment,** write down your family's cancer history, as well as questions you have ahead of time. Unsure where to start? We've gathered some questions to consider asking (*left*) at your appointment.

## NOTES:

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## RESOURCES

Explore more resources like this, including how to find a genetic counselor and a short video on genetic cancer testing, at [www.jax.org/patients](http://www.jax.org/patients)

