

# Spotlight on Health

## Hereditary Breast Cancer

Did you know that breast cancer is the most common type of cancer in women? Over 250,000 new cases of breast cancer will be diagnosed in the United States this year.<sup>1</sup> Fortunately, treatment options are available that can help save lives. But in order for some treatments to work most effectively, the cancer needs to be caught early. For some types of breast cancer, the survival rate is 99% if detected and treated early.<sup>1</sup>

About 5% to 10% of breast cancers are hereditary, meaning that the condition may run in the family. Understanding your risk for hereditary breast cancer is important, and may help with early detection.<sup>2</sup> This newsletter will discuss the risk factors for breast cancer, including the risk factors for hereditary breast cancer. It will also discuss how women can decide whether they need to have genetic testing to help assess their risk for hereditary breast cancer.

### Breast Cancer Risk Factors

Some of the risk factors for breast cancer that *all* women should be aware of include<sup>3</sup>:

- Sex: Females are 100 times more likely than males to develop breast cancer
- Age: Being over age 55
- Menstruation: Starting before age 11
- Menopause: Starting after age 54
- Diet and lifestyle: Smoking, excessive alcohol intake, being physically inactive, being overweight
- Family history: Having close relatives with certain types of cancer (see sidebar)

Cancer can sometimes develop because a gene that you inherit has a change, known as a mutation, which causes the gene to not work properly. A mutation is also referred to as a *variant*. If you have a relative who has had hereditary breast cancer, or some other types of hereditary cancer, you may also be at risk.

The most common causes of hereditary breast cancer are variants in the genes called *BRCA1* and *BRCA2*.<sup>2</sup> Variants in other genes can also increase the risk for hereditary breast cancer, but they are less common. Genetic testing can tell you if you have a variant that puts you at greater risk for getting breast cancer or other types of cancer. Doctors recommend that women with a personal or family history of certain types of cancer should be screened to see if they should see a genetic counselor.<sup>4</sup>



### Family History and Risk for Hereditary Cancer

The risk for having a variant associated with hereditary breast cancer is higher if you have any of these factors<sup>4</sup>:

- A personal or family history of breast cancer before age 50
- A personal or family history of a relative with cancer involving both breasts
- A personal or family history of breast and ovarian cancer
- A male family member with breast cancer
- Multiple family members with breast cancer
- Your family is of Ashkenazi Jewish ethnicity
- A family member who tested positive for a gene variant associated with hereditary breast cancer (like *BRCA1* or *BRCA2*)

Having one or more risk factors does not mean you will get breast cancer. Women with a variant in the *BRCA1* or *BRCA2* gene have about a 50% change of getting breast cancer in their lifetime.<sup>5</sup> Other genes may have a lower risk. Even though a lot of information goes into figuring out your risk, your healthcare provider and other healthcare professionals are ready to help.

## How Your Healthcare Provider Can Help

You can talk to your healthcare provider about your risk factors for breast cancer. He or she can help assess your risk. First, your healthcare provider will take a personal and family health history. Then he or she will discuss if you might benefit from genetic counseling and genetic testing.

If you have genetic testing, the results of the tests may help you and your doctor decide your next steps.

## How the Laboratory Can Help

Quest Diagnostics offers the BRCAVantage™ Comprehensive Test for *BRCA1* and *BRCA2*, the genes most commonly associated with breast cancer. Quest also offers Qvantage™ Hereditary Women's Health Cancer Test, which includes 14 genes predominantly associated with breast, colon, uterine, and ovarian cancers. And Quest offers the MyVantage™ 34-gene Hereditary Comprehensive Cancer Panel, which tests for *BRCA1*, *BRCA2*, and 32 other genes associated with common cancers.

For people of Ashkenazi Jewish descent, Quest offers the BRCAVantage™ Ashkenazi Jewish Screen for the 3 commonly found *BRCA* variants in this population. Your healthcare provider or genetic counselor can help you decide which test is right for you.

## Additional Information

You can take a quiz to help you look for red flags in your personal and family history that suggest a risk for hereditary cancer. To take the quiz, please visit the QuestVantage™ website at [questvantage.com/take-control](http://questvantage.com/take-control).

For more information, you can visit any of these helpful websites:

- National Society of Genetic Counselors: [nsgc.org/](http://nsgc.org/)
- National Cancer Institute: [cancer.gov/about-cancer/causes-prevention/genetics/brca-fact-sheet](http://cancer.gov/about-cancer/causes-prevention/genetics/brca-fact-sheet)
- American Cancer Society: [cancer.org/cancer/breast-cancer.html](http://cancer.org/cancer/breast-cancer.html)
- Breastcancer.org: [breastcancer.org/](http://breastcancer.org/)

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## References

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2. *BRCA1* and *BRCA2*: cancer risk and genetic testing. National Cancer Institute website. [cancer.gov/about-cancer/causes-prevention/genetics/brca-fact-sheet](http://cancer.gov/about-cancer/causes-prevention/genetics/brca-fact-sheet). Updated April 1, 2015. Accessed September 9, 2017.
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