



## UNDERSTANDING THE CONNECTION BETWEEN MBC AND *BRCA1* AND *BRCA2* MUTATIONS

*BRCA1* and *BRCA2* genes (Breast Cancer genes 1 and 2) play a role in protecting the body against certain cancerous cells. Everyone has these genes, but some people are born with a mutation. People with *BRCA* mutations are more likely to develop cancers such as ovarian and breast cancers – including metastatic breast cancer (MBC) and advanced ovarian cancer. A simple blood, saliva or tissue test can determine if you have the mutation and can be administered/recommended by a healthcare professional.

### WHAT ARE *BRCA1* AND *BRCA2* GENES?

A mutation in one or both *BRCA1* and *BRCA2* genes increases the risk of breast and other cancers. About 5% to 10% of women diagnosed with breast cancer have a *BRCA* mutation.

### HOW CAN *BRCA1* AND *BRCA2* MUTATIONS INFLUENCE BREAST CANCER?

For women who have *BRCA1* or *BRCA2* mutation, the risk of developing breast cancer at any stage in their lifetime is about 40% to 85% — about 3 to 7 times greater than women who don't have the mutation.

Women with *BRCA1* or *BRCA2* mutation tend to develop breast cancer at a younger age (45 and under), and they're more likely to develop cancer in both breasts. At this time, it is unknown if *BRCA1* or *BRCA2* influence progression of the disease.

### WHAT ARE THE SIGNS OF A GENETIC MUTATION?

You are more likely to have an inherited mutation if you, or a blood relative on either side of the family have had:

- Breast cancer before the age of 50
- Cancer in both breasts
- Both breast and ovarian cancers on the same side of the family or in a single individual
- Multiple breast cancers
- Two or more types of *BRCA1*- or *BRCA2*-related cancers (breast, ovarian, pancreatic, prostate, melanoma) are in a single family member
- Triple-negative breast cancer
- Pancreatic cancer
- Male breast cancer in the family
- Prostate cancer at age 55 or younger or metastatic prostate cancer at any age

While some ethnicities — for example people of Ashkenazi Jewish descent — are at increased risk of genetic mutations, they are found in people of every ethnicity.

### WHAT CAN I DO IF I'M AT INCREASED RISK?

Your doctor may recommend talking to a genetic counselor about taking a genetic test. Knowing your *BRCA* status may affect medical options for cancer treatment or prevention for you and your relatives.



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### WHAT TESTS COULD MY HEALTHCARE TEAM RECOMMEND TO DETERMINE IF I HAVE THE MUTATION?

Your doctor may recommend a genetic test. Genetic testing is usually performed using blood, saliva or a tissue sample. A *BRCA* gene test does not test for cancer itself.

The sample is sent to a laboratory and takes several weeks for results. Test results can be positive, negative or inconclusive.

### ARE THERE RESOURCES THAT CAN HELP ME DECIDE IF I SHOULD HAVE A GENETIC TEST?

Talking to a genetic counselor is generally recommended before and after having a genetic test and should be performed by a health care professional who is experienced in cancer genetics.

Counseling usually covers many aspects of the testing process, including a hereditary cancer risk assessment based on an individual's personal and family medical history.

Discussion topics may include:

- Is genetic testing appropriate for me?
- Which genes to test for and which tests to order?
- Interpretation of test result and what it means for you and your relatives
- Psychological risks and benefits of genetic test results
- Is the genetic test covered by insurance?

The Centers for Disease Control and Prevention's (CDC) *Bring Your Brave* program recommends taking the *Know: BRCA Assessment* before considering genetic counseling and testing.

For more information about Bring your Brave, go to [www.cdc.gov/cancer/breast/young\\_women/bringyourbrave](http://www.cdc.gov/cancer/breast/young_women/bringyourbrave)

Talking to someone with a similar experience can help. Facing Our Risk of Cancer Empowered (FORCE), a nonprofit organization specialized in hereditary cancers, has a Peer Navigation Program that will match you with a trained volunteer and personalized resources.

For more information about FORCE's Peer Navigation Program, go to [www.facingourrisk.org/get-support/PNP](http://www.facingourrisk.org/get-support/PNP)

