

# Get Tested for Peace of Mind

BRCA1 and BRCA2 are human genes that produce tumor suppressor proteins. These proteins help repair damaged DNA and play a role in ensuring the stability of the cell's genetic material.

## THE RISK

When either of these genes is mutated, or changed, DNA damage may not be repaired properly. As a result, cells are more likely to develop additional genetic alterations that can lead to cancer.

## Our Commitment

Offering our clients and patients state-of-the-art testing is part of AEL's ongoing commitment to excellence.

## Our Values

Commit to service excellence.

Treat each other with respect and honesty.

Demonstrate responsibility and accountability.

Be enthusiastic about continuous improvement.

Maintain confidentiality.

## Quality is in our DNA.



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### References

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National Comprehensive Cancer Network. Clinical practice guidelines in oncology, genetic/familial high-risk assessment: breast and ovarian. Available at: [www.nccn.org](http://www.nccn.org). 2010. Accessed 5.29.13.

### Resources:

National comprehensive Cancer network: <https://www.nccn.org/>

National Cancer Institute: [www.cancer.gov/cancertopics/genetics](http://www.cancer.gov/cancertopics/genetics)

National Society of Genetic Counselors: [www.nsgc.org](http://www.nsgc.org)

American Cancer Society: [www.cancer.org](http://www.cancer.org)

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# Understanding the Facts

Should you consider this important test?

## BRCA1 BRCA2



# The Importance of BRCA1 and BRCA2 Screening

## Benefits of Genetic Testing, Whether you Receive a Positive or a Negative Result

### Cancer Risk

Specific inherited mutations in BRCA1 and BRCA2 increase the risk of breast and ovarian cancers, and have been associated with increased risks of several other types of cancer. Together, BRCA1 and BRCA2 mutations account for approximately 20%-25% of hereditary breast cancers and almost 5%-10% of all breast cancers. Mutations in BRCA1 and BRCA2 account for nearly 15% of ovarian cancers overall. Breast and ovarian cancers associated with BRCA1 and BRCA2 mutations tend to develop at younger ages than cancers not associated with the mutations.

### Gene Inheritance Factors

A harmful BRCA1 or BRCA2 mutation can be inherited from a woman's mother or father. Any child of a parent who carries a mutation in one of these genes has a 50% chance of inheriting the mutation.

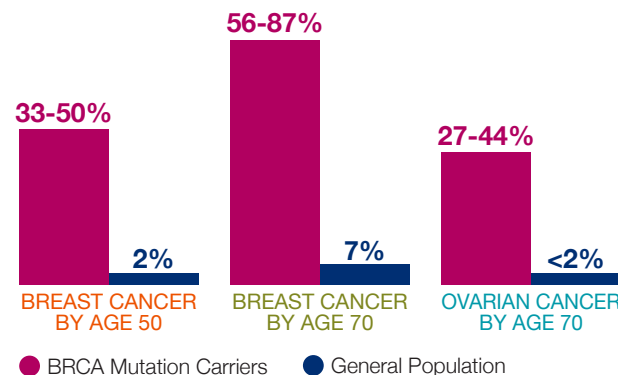
A woman's lifetime risk for developing breast and/or ovarian cancer is greatly increased if she inherits a harmful BRCA1 or BRCA2 mutation.

There is increased risk of other cancers as well, including fallopian tube cancer and peritoneal cancer, and pancreatic cancer.

Testing for mutations in BRCA1 and BRCA2 is recommended when a person's individual or family history suggests the possible presence of a harmful mutation:

### Important Risk Factors Include:

- Breast cancer diagnosed before age 50
- Cancer in both breasts in the same woman
- Ovarian cancer at any age
- Multiple breast cancers
- 2+ primary types of BRCA1- or BRCA2-related cancers in a single family member
- Ashkenazi Jewish ethnicity
- Male breast cancer



The benefits of a **NEGATIVE** result include:

- Learning that your children are not at risk of inheriting the BRCA1/BRCA2 gene
- The possibility that special checkups, tests, or preventive surgeries may not be needed

A **POSITIVE** test result can:

- Help women make informed decisions
- About their future, including taking steps to reduce cancer risk
- Allow women to participate in medical research that could help reduce deaths from hereditary breast and ovarian cancer



For more information regarding testing, please contact AEL at 901.405.8200.