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### CANCER CONSULTANTS OF AMERICA

BRIDGING THE GAP BETWEEN CANCER AND UNDERSTANDING®

# Cancer Answers

#### Do I Have the Breast Cancer Gene?

Many people ask, "Do I have the breast cancer gene?" The short answer is yes — we all do.

Everyone has the genes linked to breast cancer, called BRCA1 and BRCA2. These genes actually help protect our bodies by repairing damaged DNA.

The more important question is:

"Do I have a mutation in one of these genes?"

When a BRCA gene has a mutation — a small change in its DNA — it may not work properly. This can increase a person's risk of developing breast cancer or other cancers. That's why it's important to understand your genetic status, especially if several family members have had cancer.

#### The Discovery of BRCA1 and BRCA2

In the early 1990s, scientists worked hard to find the "breast cancer genes."

- In 1994, researchers discovered BRCA1 on chromosome 17 and shared their findings in the journal Science.
- 1995, another group located BRCA2 on chromosome 13, publishing their work in Nature.

Since then, scientists have learned that these genes are linked not only to breast cancer in both women and men, but also to ovarian cancer (in women) and prostate cancer (in men).

#### What We Know Today

With modern technology, researchers can look closely at the BRCA genes to see if they carry mutations. Experts now classify genetic changes into five categories, based on how likely they are to cause cancer:

- Pathogenic mutation is known to cause cancer
- Likely Pathogenic evidence suggests that increased risk of cancer development
- Variant of Uncertain Significance (VUS) the current evidence is insufficient to make a determination
- Likely Benign mutation not likely to contribute to cancer development
- Benign no evidence to indicate the mutation is linked to cancer development

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#### Understanding Your Genetic Status

If cancer runs in your family, finding out whether you have a BRCA1 or BRCA2 mutation can bring clarity and peace of mind.

The good news is that genetic testing is now simple and noninvasive. Many tests use an at-home saliva kit — no needles required. Several companies offer these kits directly to consumers.

However, it's important to remember that these tests do not replace medical advice. Always review your results and next steps with your healthcare provider or a certified genetic counselor. They can help you understand what your results mean and what actions to take.

Knowledge Is Power.

Learning about your genetic makeup can reduce fear and help you make informed choices. Whether you are newly diagnosed, in treatment, or living beyond cancer, understanding your genes empowers you to take an active role in your health.

If you learn that you are a carrier for the BRCA1 or BRCA2 mutations, steps can be taken now to lower the risk of developing cancer. These steps include living a healthy lifestyle, eating a balanced diet, regular exercise, and frequent cancer screenings.

Submit your Cancer Answers topics to info@CancerConsultantsOfAmerica.com

#### We Are Available to You

Please contact us today if you would like more information about how our services can benefit you and your family.

#### Services:

- Individual and Family Cancer Education
- Medical Appointment Liaison Services
- Information Seminars and Public Speaking Events

#### Fun Facts – October

Cancer Awareness Month:

- Breast Cancer (Pink)
- Liver Cancer (Emerald Green)

October 4 – National Taco Day

October 8 – World Octopus Day

October 15 – National Mushroom Day

October 18 – Sweetest Day (started in Cleveland, Ohio)

October 21 – National Cat Day 🐱

## Cancer Consultants Of America

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October 2025

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