



Understanding Genetic Mutations and Biomarkers in Ovarian Cancer

YouAndOvarianCancer.com

Genetic Mutations and Ovarian Cancer

Inherited genetic mutations:

Ovarian cancer is sometimes part of an **inherited cancer syndrome**, when mutations (changes) happen in a gene and can be passed from father or mother to child. These are also called germline mutations.

Family members with an inherited cancer syndrome have a higher risk of certain cancers than the general population.

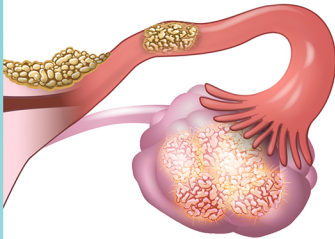
Acquired genetic mutations:

Not all gene mutations are inherited from parents. Some gene mutations **develop on their own** over time. These are also called somatic mutations.



Inherited Cancer Syndromes and Ovarian Cancer

The two most commonly-inherited cancer syndromes related to ovarian cancer are **hereditary breast-ovarian cancer syndrome** and **Lynch syndrome**.



Hereditary breast-ovarian cancer (HBOC):

The best-known gene mutations in those with HBOC are **BRCA1** and **BRCA2**.

Lynch syndrome:

Lynch syndrome is caused by mutations in genes **MLH1**, **MSH2**, **MSH6**, **PMS2**, and **EPCAM**.

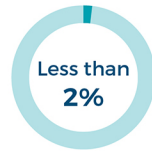
BRCA1 and BRCA2 Mutations and Risk of Ovarian Cancer



BRCA1 mutation:
35-70% risk of ovarian cancer



BRCA2 mutation:
10-30% risk of ovarian cancer



Without mutation:
Less than 2% risk of ovarian cancer

Genetic Testing for Ovarian Cancer

Gene mutations are found by a process called **genetic testing**. A medical laboratory tests a sample of blood, saliva, or tissue for mutations.



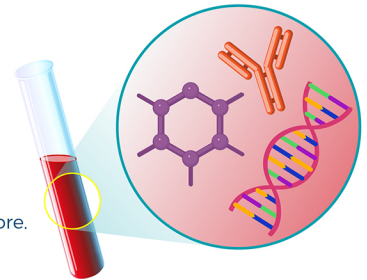
Before getting genetic testing, talk with a **genetic counselor** or **healthcare professional**. They can explain how genetic testing works, the pros and cons, and what to expect.



Biomarker Tumor Testing

Finding **genetic mutations** and **other substances**, like proteins, in the tumor itself can help identify ovarian cancer and guide **treatment** decisions. We call these mutations and other substances found in the tumor - **biomarkers**.

Biomarkers for ovarian cancer include CA-125, BRCA, HRD, HER2, VEGF, and more.



Why is Genetic Testing and Biomarker Testing Important for Ovarian Cancer?

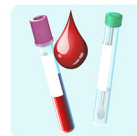
Your healthcare team can use information from genetic testing to choose the most effective cancer treatment for you.

The **results of biomarker testing** may help your doctor select the best options for your treatment, to ensure the most positive outlook possible. Biomarker testing helps you and your doctor learn:

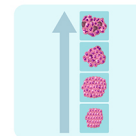


Genetic testing can also help your **family members** identify their risk for cancer and decide on the best way to address risk, and if needed, plan treatment.

Talk with your doctor about genetic counseling and genetic testing.



How your cancer behaves



How fast your cancer will grow



Which treatments may work best

Talk with your doctor to discuss whether biomarker testing should be part of your cancer care.

Developed by the National Ovarian Cancer Coalition and Mechanisms in Medicine Inc.



For more information visit:

YouAndOvarianCancer.com

An Animated Patient® Guide to Ovarian Cancer

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