The Role of *BRCA* Mutations in Ovarian Cancer

BRCA1 and *BRCA2* (*BRCA*) are human genes that make proteins that repair damaged DNA and therefore play a role in ensuring the integrity of a cell's genetic material. When *BRCA* is mutated or altered, DNA damage that is not properly repaired may result in genetic alterations that cause cells to grow out of control. This can lead to cancer.[1]

Not all *BRCA* mutations are the same.

An estimated 25% of women with ovarian cancer have a *BRCA* mutation.[2] The mutation is not always hereditary. It can be inherited (germline) or acquired (somatic).

Germline

***BRCA* mutations** are **inherited** and are present in every cell in the body, including in the tumor.[3] They are present in approximately **18%** of women with ovarian cancer.[2]

Somatic

***BRCA* mutations** are **acquired** and are only found within tumor cells.[4] They are present in approximately **7%** of women with ovarian cancer.[2]

Tumor DNA testing can detect a *BRCA* mutation of either germline or somatic origin, while a blood or saliva-based diagnostic can only detect a germline *BRCA* mutation.[4,5,6] Testing the tumor is important since it identifies all ovarian cancer patients with a *BRCA* mutation who may receive benefit from treatment with a PARP inhibitor. Detection is important as inherited *BRCA* mutations increase the risk of female breast and ovarian cancers, and they have been associated with increased risk of several additional types of cancer. [1]

Each patient is unique.

The National Comprehensive Cancer Network Clinical Practice Guidelines in Oncology (NCCN Guidelines®) recommend that genetic testing be offered to all women with ovarian cancer.[7]

No one cancer is the same. Women with ovarian cancer should learn more about their *BRCA* status as it can have an impact on treatment decisions.

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About Clovis Oncology

Clovis Oncology, Inc. is a biopharmaceutical company focused on acquiring, developing and commercializing innovative anti-cancer agents in the U.S., Europe and additional international markets. Clovis Oncology targets development programs at specific subsets of cancer populations, and simultaneously works with trusted partners who develop diagnostic tools that direct a compound in development to the population that may be most likely to benefit. Clovis Oncology is headquartered in Boulder, Colorado.

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