

## Cancer Advances: New Information for Women with BRCA1 and BRCA2 Mutations

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Two new studies published in the *Journal of Clinical Oncology* (JCO) from the Abramson Cancer Center at the University of Pennsylvania have important implications for women with BRCA1 and BRCA2 mutations. BRCA1 and BRCA2 gene mutations have been shown to place women at high risk for breast and ovarian cancers.

The first study shows that women undergoing prophylactic oophorectomy—the removal of the ovaries to prevent breast and ovarian cancers—can take short-term hormone replacement therapy to combat the associated symptoms of menopause, without fear of significantly increasing breast cancer risk.

The second study shows that prophylactic mastectomy can reduce breast cancer risk by more than 90% in women with the gene mutations, particularly when performed at the time or following the removal of a woman's ovaries.

### Hormone Replacement Therapy Safe Following Removal of Ovaries

[Read the Study \[2\]](#)

Past studies have shown that removal of the ovaries can significantly reduce the risk of ovarian and breast cancers in women carrying the BRCA1 and BRCA2 gene mutations. However, it also brings on menopausal symptoms, such as hot flashes, mood swings, vaginal dryness, and sleeplessness, which can be debilitating for many women and can last for many years.

While hormone replacement therapy (HRT) can be used to treat these symptoms, a recent study in the general population found that HRT increases the risk of breast cancer, in addition to several other diseases. As a result, women with BRCA1 and BRCA2 mutations have been reluctant to have their ovaries removed, concerned that they would be unable to treat menopausal symptoms with HRT without placing themselves at higher risk for breast cancer.

However, a new study from the Abramson Cancer Center showed that short-term use of HRT did not significantly increase risk of breast cancer.

Researchers cautioned that HRT should be used only for the short term. Although HRT did not have an impact on life expectancy when completed by age 50, life expectancy decreased if therapy was continued indefinitely, beyond the age of natural menopause.

### Mastectomy Reduces Breast Cancer Risk For Women With BRCA1 and BRCA2 Mutations

[Read the Study \[3\]](#)

The second study showed that bilateral (double) mastectomy—the removal of both breasts—can significantly reduce breast cancer risk in women with BRCA1 and BRCA2 gene mutations, particularly when performed at the time or following the removal of a woman's ovaries.

Researchers followed 483 women with the gene mutations from the United States, Canada, United Kingdom and the Netherlands over six years. Breast cancer was diagnosed in two of the 105 women (1.9%) who had the operation, compared to 184 of the 378 (48.7%) who did not undergo the procedure.

The surgery reduced the risk of breast cancer by 95% among women who had their ovaries removed, and by approximately 90% among women with intact ovaries.

### What Does This Mean For Patients?

Researchers note that women carrying BRCA1 or BRCA2 gene mutations can significantly increase their life expectancy and reduce the chances they will get breast and ovarian cancer by removing their ovaries at the completion of childbearing. In addition, they can use short-term hormone replacement therapy to treat menopausal symptoms without significantly increasing breast cancer risk, if stopped before age 50.

Since removing the ovaries is an important tool for preventing breast and ovarian cancers, women should not avoid the surgery out of fear about the safety of HRT. Patients should discuss with their doctors the appropriate time to have their ovaries removed, and the possibility of using HRT to treat menopausal symptoms and improve their quality of life.

In addition, double mastectomy is another option that substantially reduces the risk of breast cancer in women with these gene mutations, particularly if their ovaries have already been removed. Since removing the breasts is a very personal issue, patients should talk to their physicians about the

risks and benefits of the procedure.

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**Links:**

[1] <http://jco.ascopubs.org/>

[2] <http://www.jco.org/cgi/content/abstract/JCO.2004.06.090v1>

[3] <http://www.jco.org/cgi/content/abstract/JCO.2004.04.188v1>