ASCOanswers

Hereditary Breast & Ovarian Cancer

What is hereditary breast and ovarian cancer?

Hereditary Breast and Ovarian Cancer (HBOC) is a genetic condition that increases the lifetime risk for breast, ovarian, and other cancers in women, and breast, prostate, and other cancers in men. HBOC is inherited, which means that the cancer risk is passed from generation to generation in a family.

What causes hereditary breast and ovarian cancer?

Genes are found in every cell of your body, controlling how each cell functions. Abnormal changes to genes called mutations can contribute to the growth and development of cancer. Most HBOC is the result of an inherited mutation in the *BRCA1* or *BRCA2* genes. A person with a *BRCA1* or *BRCA2* mutation has a 50% chance of passing it on to each child.

How is hereditary breast and ovarian cancer identified?

Your doctor or a genetic counselor will review your family cancer history, looking for signs such as multiple cases of breast and/or ovarian cancer on the same side of the family; breast cancer before age 50 in one woman; a second breast cancer in the same or other breast or a diagnosis of both breast and ovarian cancer; a male relative with breast cancer; and a history of breast and/or ovarian cancer with Ashkenazi Jewish ancestry. Genetic testing can confirm a hereditary increased risk for these cancers by testing a person's blood or saliva. You should receive genetic counseling before and after genetic testing. This helps you better understand the results so you and your doctor can develop a tailored plan for screening and monitoring. You may need increased monitoring even if the genetic test finds no *BRCA* mutation because of your specific family history. Find more information at www.cancer.net/hboc.

How is hereditary breast and ovarian cancer managed?

Not everyone with HBOC develops cancer, and there are ways to reduce cancer risk. A specialized cancer screening plan for women may include breast self-examinations beginning at a younger age, magnetic resonance imaging (MRI) scans of the breasts, pelvic exams, and vaginal ultrasound tests. Recommendations for men may include breast self-examinations, clinical breast examinations, a baseline mammogram, and prostate cancer screening. Women may also consider surgical removal of both breasts and/or the ovaries and fallopian tubes. The medication tamoxifen (Nolvadex, Soltamox) may reduce breast cancer risk associated with *BRCA1* and *BRCA2* mutations, and birth control pills may reduce ovarian cancer risk associated with *BRCA1* and *BRCA2* mutations. Your doctor can determine the best course of action, based on your health and your individual risk for developing cancer.

How can I cope with hereditary breast and ovarian cancer?

Absorbing the news that gene testing found a *BRCA1* or *BRCA2* mutation result and communicating with your genetic counselor and health care team are key parts of the coping process. Seeking support, organizing your health information, making sure all of your questions are answered, and participating in the decision-making process are other steps. Understanding your emotions and those of people close to you can help you cope.

ASCO ANSWERS is a collection of oncologist-approved patient education materials developed by the American Society of Clinical Oncology (ASCO) for people with cancer and their caregivers.

Questions to ask the doctor

Regular communication is important in making informed decisions about your health care. Consider asking the following questions of your health care team, especially a genetic counselor or someone trained in cancer genetics:

- Does my family history increase my risk of breast or ovarian cancer?
- Can you explain to me what causes HBOC and the roles genes play in cancer?
- Should I meet with a genetic counselor? What support and information can he or she provide?
- Should I consider genetic testing for a *BRCA1* or *BRCA2* gene mutation? How accurate is testing?
- What will genetic testing tell me? What are the possible results?
- Does health insurance cover the cost of *BRCA1* and *BRCA2* testing?
- What is my risk of developing cancer if I test positive for a *BRCA1* or *BRCA2* gene mutation?
- If I have a *BRCA1* or *BRCA2* gene mutation, what steps can I take to reduce my risk of breast or ovarian cancer?
- If I undergo genetic testing, how should I share the results with family members? Will they also need to be tested?
- If I am worried about managing the costs related to genetic testing or cancer care, who can help me with these concerns?
- What support resources are available to help people cope with an increased risk of cancer?
- Are there clinical trials related to HBOC?
- Where can I find emotional support for my family?
- Whom should I call for questions or concerns?
- Is there anything else I should be asking?

Find additional information on HBOC at www.cancer.net/hboc and genetics at www.cancer.net/genetics.

To order more printed copies, please call 888-273-3508 or visit www.cancer.net/estore.

TERMS TO KNOW

Bilateral mastectomy:
Surgical removal of breast tissue in both breasts

Bilateral salpingo-oophorectomy:
Removal of both ovaries and fallopian tubes

***BRCA1* and *BRCA2*:**
Genes associated with an increased risk of breast, ovarian, and other cancers, including melanoma, prostate, and pancreatic cancers

Chemoprevention:
Use of prescription medications to reduce the risk of developing cancer

Genetic counselor:
A health professional with specialized training in medical genetics, counseling, and genetic testing

Genetic testing:
Analysis of genes, chromosomes, or proteins for changes that may increase the risk of cancer

Germline mutation:
A gene mutation that is usually present in every cell in the body and can be passed from parent to child

Magnetic resonance imaging:
Test that uses a magnetic field to produce detailed images of the body

Mammogram:
An x-ray of the breast to help find breast cancer

Predictive testing:
A term for genetic testing for hereditary risk for an individual who has never had cancer. Usually this tests for a known mutation that is in the family.

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of the American Society of Clinical Oncology

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