



Ovarian Cancer Research Fund

THE SCIENCE OF *Hope*

About Ovarian Cancer

Ovarian cancer is a disease affecting the ovaries, the reproductive organs responsible for producing eggs and female hormones. Ovarian cancer is often difficult to detect, because the symptoms of ovarian cancer—such as bloating and appetite changes—are similar to those of other non-cancerous conditions. There is no effective screening test for the early detection of ovarian cancer. The pap smear tests for cervical cancer, not ovarian cancer.

When ovarian cancer is detected and treated early, the five-year survival rate is greater than 92 percent. But only 20 percent of ovarian cancer cases are caught before the cancer has spread. Most patients are diagnosed at advanced stages, when the disease is harder to treat.

The good news is that today 50 percent of women are surviving more than five years after diagnosis—a marked improvement from 30 or more years ago, when the survival rate was 10 to 20 percent.

In spite of improvements in treatment, ovarian cancer accounts for more deaths than all other gynecologic cancers combined, and is the fifth leading cause of cancer death among American women. Approximately 22,000 U.S. women will be diagnosed with ovarian cancer each year, and about 15,500 women will die from the disease. One in 78 American women will develop ovarian cancer in her lifetime.

► Symptoms

Symptoms of ovarian cancer can be vague and not always gynecologic, such as:

- **A swollen or bloated abdomen or increased girth (some women notice that their pants are getting tight around the waist)**
- **Persistent pressure or pain in the abdomen or pelvis**
- **Difficulty eating or feeling full quickly**
- **Urinary concerns, such as urgency or frequency**
- **Change in bowel habits with constipation and/or diarrhea**

Any woman may have these symptoms for reasons not related to ovarian cancer. But if these symptoms are new and unusual, and persist for more than two weeks, a woman should see her doctor and ask about ovarian cancer.

Factors that may *increase* the risk of ovarian cancer:

- **Personal or family history of cancer (especially ovarian or breast cancer)**
- **Testing positive for either the BRCA1 or BRCA2 gene mutation, which increases the risk of ovarian and breast cancer**
- **Over age 55**
- **No pregnancies**
- **Menopausal hormone replacement therapy**
- **Endometriosis**

Factors that may *decrease* the risk of ovarian cancer:

- **Oral contraceptive use (birth control pills)**
- **Pregnancy**
- **Breast feeding**
- **Hysterectomy/tubal ligation**
- **Removal of the ovaries and/or fallopian tubes, which may be performed as a preventative measure in women with the BRCA1 or BRCA2 mutations**

► **Each year, 200,000 women worldwide are diagnosed with ovarian cancer and 125,000 women die from this disease.**

► Hereditary Risk

Inherited mutations in the BRCA1 and BRCA2 genes account for approximately 10 to 15 percent of ovarian cancers. These mutations are most commonly found in families with a strong history of ovarian and/or breast cancer, and in Ashkenazi Jews. A woman can get these abnormal genes from one or both of her parents, and the mutation is present in every cell of the body, increasing her risk for both ovarian and breast cancer. Women who have a BRCA1 or BRCA2 mutation have a 15 to 40 percent lifetime risk of getting ovarian cancer, compared to women in the general population who have a 1.4 percent lifetime risk. Lynch Syndrome, an inherited genetic condition of mutations in the MLH1, MSH2, MSH6, and PMS2 genes which greatly increases the risk of colon cancer, also increases the risk of ovarian cancer. Scientists are currently investigating other gene mutations that may be responsible for increasing a woman's risk of developing ovarian cancer.

► Diagnosis

If a gynecologist suspects that a woman has ovarian cancer, tests will be ordered including a pelvic exam, radiological tests and blood tests. A definitive diagnosis only occurs after surgery. The most common preliminary tests are:

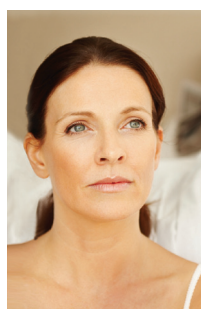
- **Physical examination**
- **Recto-vaginal pelvic examination**
- **Transvaginal ultrasound (TVU) and/or CT scan**
- **A blood test for CA-125, a protein in the blood produced by ovarian cancer cells, which is elevated in many women with ovarian cancer.**

If the results from these tests suggest ovarian cancer might be present, **the patient should seek a referral to a gynecologic oncologist before surgery.** Research has shown that women treated by gynecologic oncologists live longer than those treated by other physicians.

► Treatment

The goal of treatment for ovarian cancer is to surgically remove as much of the cancer as possible and then to provide chemotherapy to kill any remaining cancer cells in the body. During surgery, the doctor—preferably a gynecologic oncologist—will excise as much of the cancer that can be seen visibly, in a process known as debulking or cytoreductive surgery. The doctor will also assess the cancer stage (how far it has spread) and give tissue samples to a pathologist, who determines the cancer grade (the aggressiveness of the cancer).

After the operation, the use of chemotherapy will depend on the stage of the disease and how much of the tumor was removed. A doctor might also offer the possibility of enrolling in a clinical trial to test new drugs or therapeutic regimens, if the patient meets the criteria for a particular trial. After surgery and chemotherapy, women need regular check-ups that include a pelvic exam, the CA-125 test, and other blood and imaging tests. In many cases, ovarian cancer may recur after initial treatment, and these tests will help determine if cancer has returned. While women with ovarian cancer are living longer and better, more research is needed to develop much-needed new treatments. Basic science research is helping us understand more about this complex illness, and clinical trials are testing new therapies to eradicate cancer cells and to prevent recurrence.



HOW OVARIAN CANCER RESEARCH FUND IS HELPING

Ovarian Cancer Research Fund is the largest charity in the United States funding ovarian cancer research. Our mission is to fund scientific research that leads to more effective identification, treatment, and ultimately a cure for ovarian cancer. Since 1998, OCRF has awarded over \$50 million in grants to the finest researchers at academic medical centers throughout the United States. These researchers work tirelessly every day to:

- **Develop innovative strategies for early detection**
- **Explore the genetics that increase risk for ovarian cancer**
- **Understand the molecular biology of the disease**
- **Identify new and better targets for treatment**
- **Decipher how and why ovarian cancer spreads, and how to stop it.**

You can join us in the fight against ovarian cancer. For more information, or to make a secure, tax-deductible donation, please go to our website at www.ocrf.org or call us at **1-800-873-9569**.



Ovarian Cancer
Research Fund
14 Pennsylvania Plaza
Suite 1710
New York, NY 10122
800-873-9569 | www.ocrf.org



www.facebook.com/ovariancancerresearchfund



www.twitter.com/ocrf