



# Ovarian Cancer



## Basic description

Ovarian cancer often does not have obvious signs and symptoms until its later stages. Swelling or bloating of the abdomen, pelvic pressure, abdominal pain, trouble eating or feeling full quickly, and urinary symptoms are common signs of ovarian cancer. Warning signs may also include abnormal vaginal bleeding and leg or back pain.

Individual symptoms are often attributed to many different causes, but most women with ovarian cancer report a combination of these symptoms that are either persistent and/or increase in severity.

## Opportunities

**Prevention** Although the causes of ovarian cancer are not yet completely understood, researchers have found several factors that appear to increase the risk of developing the disease. Most women have 1 or more risk factors for ovarian cancer; however, most of the common factors only slightly increase a woman's risk, so they only partly explain the frequency of the disease. For women who are at very high risk of ovarian cancer due to a BRCA gene mutation and who have finished having children, removing the ovaries greatly lowers (but does not completely eliminate) the risk. But so far, knowledge about risk factors has not been translated into practical ways to prevent most cases of ovarian cancer.

**Detection** Early cancers of the ovaries tend to cause symptoms that are more commonly caused by other things, such as abdominal swelling or bloating (due to a mass or ascites), pelvic pressure or abdominal pain, trouble eating or feeling full quickly, and/or urinary urgency and frequency.

A thorough pelvic exam may detect ovarian cancer, but because the ovaries lie deep within the pelvic area, early tumors are difficult for even skilled doctors to find. For women at high risk or who have symptoms of ovarian cancer, transvaginal sonography and a CA-125 blood test, in addition to the pelvic exam, may be able to detect the disease.

**Treatment** Surgery, radiation therapy, and chemotherapy are the current treatments for ovarian cancer. Surgery usually involves removing 1 or both ovaries, the fallopian tubes, and the uterus. In some cases, when tumors are detected very early, only the cancerous ovary and fallopian tube are removed, especially in young women who want to have children.

## Who is at risk?

**Age** Most ovarian cancers occur after menopause and half after age 63.

**Reproductive history** Having children and breast-feeding appear to reduce the risk of ovarian cancer. Using birth control pills for several years or having a hysterectomy or tubal ligation also lowers risk. On the other hand, some fertility drugs may increase risk.

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**Obesity** Heavier body weight appears to increase risk.

**History of breast cancer** Women who have had breast cancer may be at increased risk.

**Family history of breast, ovarian, or colorectal cancer** Women who have a family history of breast, ovarian cancer, or colorectal cancer may be at increased risk.

Inherited mutations in BRCA1 or BRCA2 genes increase risk. Studies suggest that preventive surgery to remove the ovaries and fallopian tubes can decrease risk in women who have BRCA1 or BRCA2 mutations.

Hereditary non-polyposis colon cancer (HNPCC) is also associated with ovarian cancer.

**Estrogen replacement therapy and hormone replacement therapy** The use of estrogen alone as post-menopausal hormone therapy has been shown to increase risk. The increased risk is less certain for women taking both estrogen and progesterone.

## Quality-of-life issues

From the time of diagnosis, the quality of life for every cancer patient and survivor is affected in some way. They may be affected socially, psychologically, physically, and spiritually.

Concerns that patients and survivors most often express are fear of recurrence; chronic and/or acute pain; sexual problems; fatigue; guilt for delaying screening or treatment, or for doing things that may have caused the cancer; changes in physical appearance; depression; sleep difficulties; changes in what they are able to do after treatment; and the burden on finances and loved ones. Women with ovarian cancer are generally very concerned about end-of-life issues due to the low survival rate for this cancer.

## Bottom line

Ovarian cancer presents unique concerns because it is difficult to prevent and difficult to detect at an early, treatable stage. Women should be encouraged to see a doctor right away if they have multiple or persistent abdominal or pelvic symptoms.

### Ovarian cancer in the United States: 2011 estimates

- New cases: 21,990
- Deaths: 15,460
- 5-year relative survival rate for localized stage: 94%
- 5-year relative survival rate for all stages combined: 46%



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