



Ovarian Cancer

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What is cancer?

Cancer occurs when old cells do not die when they should or are damaged. Normally, the body repairs or destroys such cells. Sometimes, these cells may grow out of control. This causes growths or tumors to form. Tumors can be benign (not cancer) or malignant (cancer).

Benign tumors do not spread to other parts of the body. Malignant tumors can invade and destroy healthy tissues and organs. Cancer cells also can spread to other parts of the body and form new tumors.

What is cancer of the ovary?

Cancer of the ovary is a disease that affects one or both **ovaries**.

How are types of ovarian cancer distinguished?

The type of ovarian cancer is based on the type of cells in which it occurs. The three main types are listed as follows:

1. Epithelial cell cancer—Epithelial cells cover the surface of the ovary. Eighty-five to ninety percent of ovarian cancer cases are this type.
2. Germ cell cancer—Germ cells are the cells in the ovary that develop into eggs. This type of cancer is more common in younger women and usually has a high cure rate.
3. Stromal cell cancer—Stromal cell cancer occurs in the connective tissue, which provides the internal structure of the ovary. It also has a high cure rate.

What are the risk factors for epithelial ovarian cancer?

Certain risk factors are associated with epithelial ovarian cancer. The following factors have been shown to increase a woman's risk of getting cancer of the ovary:

- Age older than 55 years
- Family history of breast cancer, ovarian cancer, colon cancer, or endometrial cancer (cancer of the lining of the **uterus**)

- Personal history of breast cancer
- Certain changes (*mutations*) in **BRCA1** or **BRCA2**
- Never having had children
- Infertility
- **Endometriosis**

What tests are available to screen for epithelial ovarian cancer?

The **Pap test** is a good way to screen for cervical cancer, but it does not detect ovarian cancer. A **pelvic exam** sometimes can detect problems with the ovaries. At this time, however, there is no good screening test for ovarian cancer.

Is screening recommended for women who have a high risk of epithelial ovarian cancer?

For women at high risk of epithelial ovarian cancer, such as women with **BRCA1** or **BRCA2** mutations, periodic tests to check for ovarian cancer may be recommended. These tests include **transvaginal ultrasound** to look for changes in the ovaries and measurement of **CA 125** levels. CA 125 is a substance made by tumor cells. It sometimes is increased in women with ovarian cancer.

What are the symptoms of epithelial ovarian cancer?

If you have any of the following symptoms, and they do not go away, are frequent, or get worse over time, you should contact your health care provider:

- Bloating or an increase in abdominal size
- Pelvic or abdominal pain
- Difficulty eating or feeling full quickly

How is ovarian cancer diagnosed?

If you have frequent or persistent symptoms of ovarian cancer, you will usually have a physical exam, including a pelvic exam. An imaging test of the ovaries, such as a transvaginal ultrasound exam, may be done. The level of CA 125 in your blood may be measured.

The only way to tell for certain that a woman has ovarian cancer is with a **biopsy**. In a biopsy, tissue is removed during surgery and is tested for cancer.

How is ovarian cancer treated?

Treatment is based on the stage of the cancer and how much the cancer has spread outside the ovary. Epithelial ovarian cancer has four stages. Stage I is the least advanced stage. Stage IV is the most advanced stage. Cancer grade also is important in ovarian cancer treatment. Ovarian tumors are graded as low-grade or high-grade.

If a woman is thought to have ovarian cancer, surgery and other tests are needed to find out the stage and grade of the cancer. Usually, surgery to remove the uterus (**hysterectomy**) and the ovaries and **fallopian tubes** (salpingo-oophorectomy) is performed. **Lymph nodes** and tissue from the abdomen may be removed. Surgery may be followed by chemotherapy. Chemotherapy is the use of drugs that kill cancer cells.

What tests are used to find out if the cancer has spread?

To find out whether the cancer has spread, imaging tests such as a **colonoscopy**, **computed tomography** scan, **magnetic resonance imaging**, and chest X-ray may be done. If possible, it is best that a doctor specially trained or experienced in cancer, such as a gynecologic oncologist, performs the surgery and evaluates test results.

What type of follow-up is needed after treatment?

Women treated for cancer of the ovary need to have regular checkups, including exams and blood tests to check CA 125 levels. Other tests, including ultrasound, chest X-ray, magnetic resonance imaging, or computed tomography, also may be done.

Glossary

Biopsy: A surgical procedure to remove a small piece of tissue that is then examined under a microscope in a laboratory.

BRCA1 and BRCA2: Genes that function in the control of cell growth. Changes in these genes have been linked to an increased risk of breast cancer and ovarian cancer.

CA 125: A substance in the blood that may increase in the presence of some cancerous tumors.

Colonoscopy: An exam of the entire colon using a small, lighted instrument.

Computed Tomography: A type of X-ray procedure that shows internal organs and structures in cross section.

Endometriosis: A condition in which tissue that lines the uterus is found outside of the uterus, usually on the ovaries, fallopian tubes, and other pelvic structures.

Fallopian Tubes: Tubes through which an egg travels from the ovary to the uterus.

Hysterectomy: Removal of the uterus.

Lymph Nodes: Small glands that filter the flow of lymph (a nearly colorless fluid that bathes body cells) through the body.

Magnetic Resonance Imaging: A method of viewing internal organs and structures by using a strong magnetic field and sound waves.

Mutations: Permanent changes in genes that can be passed on from parent to child.

Ovaries: The paired organs in the female reproductive system that contain the eggs released at ovulation and produce hormones.

Pap Test: A test in which cells are taken from the cervix and vagina and examined under a microscope.

Pelvic Exam: A physical examination of a woman's reproductive organs.

Transvaginal Ultrasound: A type of ultrasound in which a transducer specially designed to be placed in the vagina is used.

Uterus: A muscular organ located in the female pelvis that contains and nourishes the developing fetus during pregnancy.

If you have further questions, contact your obstetrician–gynecologist.

FAQ096: Designed as an aid to patients, this document sets forth current information and opinions related to women's health. The information does not dictate an exclusive course of treatment or procedure to be followed and should not be construed as excluding other acceptable methods of practice. Variations, taking into account the needs of the individual patient, resources, and limitations unique to institution or type of practice, may be appropriate.

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