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Frequently Asked Questions About Ovarian Cancer

What is ovarian cancer?

Ovarian cancer is a cancer that forms in tissues of the ovary (one of a pair of female reproduction glands in which the ova, or eggs, are formed). Most ovarian cancers are either ovarian epithelial carcinomas (cancer that begins in the cells on the surface of the ovary) or malignant germ cell tumors (cancer that begins in egg cells).

What is the cause of ovarian cancer?

It's not clear what causes ovarian cancer. In general, cancer begins when healthy cells acquire a genetic mutation that turns normal cells into abnormal cells. Healthy cells grow and multiply at a set rate, eventually dying at a set time. Cancer cells grow and multiply out of control, and they don't die. The accumulating abnormal cells form a mass (tumor). Cancer cells invade nearby tissues and can break off from an initial tumor to spread elsewhere in the body (metastasize).

How common is ovarian cancer?

Ovarian cancer is the fifth most common cancer in women. It will affect 1 in 70 women during their lifetime. In 2010, it was estimated that there were 21,880 new cases and 13,850 deaths from ovarian cancer in the United States. In Colorado, every 36 hours one woman dies from ovarian cancer and every year 220 women will lose their battle against this deadly disease.

What are the symptoms of ovarian cancer?

Symptoms of ovarian cancer are not specific to the disease, and often mimic those of many other more-common conditions, including digestive and bladder problems. When ovarian cancer symptoms are present, they tend to be persistent and worsen with time. Signs and symptoms of ovarian cancer may include:

- Abdominal pressure, fullness, swelling or bloating
- Pelvic discomfort or pain
- Persistent indigestion, gas or nausea
- Changes in bowel habits, such as constipation
- Changes in bladder habits, including a frequent need to urinate
- Loss of appetite or quickly feeling full
- Increased abdominal girth or clothes fitting tighter around your waist

- A persistent lack of energy
- Low back pain

What are the risks for developing ovarian cancer?

Certain factors may increase a woman's risk of ovarian cancer. These risk factors include:

- **Inherited gene mutations.** A small percentage of ovarian cancers are caused by an inherited gene mutation. The genes known to increase the risk of ovarian cancer are called breast cancer gene 1 (BRCA1) and breast cancer gene 2 (BRCA2). These genes were originally identified in families with multiple cases of breast cancer, which is how they got their names, but women with these mutations also have a significantly increased risk of ovarian cancer. Another known genetic link involves an inherited syndrome called hereditary nonpolyposis colorectal cancer (HNPCC). Women in HNPCC families are at increased risk of cancers of the uterine lining (endometrium), colon, ovary and stomach.
- **Family history of ovarian cancer.** If other women in a family have been diagnosed with ovarian cancer, a woman has an increased risk of the disease.
- **A previous cancer diagnosis.** If a woman has been diagnosed with cancer of the breast, colon, rectum or uterus, her risk of ovarian cancer is increased.
- **Increasing age.** A woman's risk of ovarian cancer increases as she ages. Ovarian cancer most often develops after menopause, though it can occur at any age.
- **Never having been pregnant.** Women who have never been pregnant have an increased risk of ovarian cancer.
- **Hormone replacement therapy for menopause.** Findings about the possible link between postmenopausal use of hormone replacement therapy and risk of ovarian cancer have been inconsistent. Some studies show a risk of ovarian cancer, while others do not.

Having a risk factor does not mean that a woman will get ovarian cancer. Most women who have risk factors do not get ovarian cancer. On the other hand, women who do get the disease often have no known risk factors, except for growing older. Women who think they may be at risk of ovarian cancer should talk with their doctor.

How can a woman know if she has ovarian cancer?

If you have one or more symptoms that suggest ovarian cancer, your doctor must find out whether they are due to cancer or to some other cause. In addition to your doctor asking about your personal and family medical history, you may have one or more of the following tests:

- *Physical exam:* Your doctor checks general signs of health. Your doctor may press on your abdomen to check for tumors or an abnormal buildup of fluid (ascites). A sample of fluid can be taken to look for ovarian cancer cells.
- *Pelvic exam:* Your doctor feels the ovaries and nearby organs for lumps or other changes in their shape or size. A Pap test is part of a normal pelvic exam, but it is not used to collect ovarian cells. The Pap test detects cervical cancer. The Pap test is not used to diagnose ovarian cancer.

- *Blood tests:* Your doctor may order blood tests. The lab may check the level of several substances, including CA-125, which is a substance found on the surface of ovarian cancer cells and on some normal tissues. A high CA-125 level could be a sign of cancer or other conditions. The CA-125 test is not used alone to diagnose ovarian cancer. This test is approved by the Food and Drug Administration for monitoring a woman's response to ovarian cancer treatment and for detecting its return after treatment.
- *Ultrasound:* The ultrasound device uses sound waves that people cannot hear. The device aims sound waves at organs inside the pelvis. The waves bounce off the organs. A computer creates a picture from the echoes. The picture may show an ovarian tumor. For a better view of the ovaries, the device may be inserted into the vagina (transvaginal ultrasound).
- *Biopsy:* A biopsy is the removal of tissue or fluid to look for cancer cells. Based on the results of the blood tests and ultrasound, your doctor may suggest surgery (a laparotomy) to remove tissue and fluid from the pelvis and abdomen. Surgery is usually needed to diagnose ovarian cancer.

Although most women have a laparotomy for diagnosis, some women have a procedure known as laparoscopy. The doctor inserts a thin, lighted tube (a laparoscope) through a small incision in the abdomen. Laparoscopy may be used to remove a small, benign cyst or an early ovarian cancer. It may also be used to learn whether cancer has spread.

A pathologist uses a microscope to look for cancer cells in the tissue or fluid. If ovarian cancer cells are found, the pathologist describes the grade of the cells. Grades 1, 2, and 3 describe how abnormal the cancer cells look. Grade 1 cancer cells are not as likely as to grow and spread as Grade 3 cells.

In what ways does ovarian cancer attack a woman's body?

Ovarian cancer can invade, shed or spread to other organs:

- *Invade:* A malignant ovarian tumor can grow and invade organs next to the ovaries, such as the fallopian tubes and uterus.
- *Shed:* Cancer cells can shed (break off) from the main ovarian tumor. Shedding into the abdomen may lead to new tumors forming on the surface of nearby organs and tissues. The doctor may call these seeds or implants.
- *Spread:* Cancer cells can spread through the lymphatic system to lymph nodes in the pelvis, abdomen and chest. Cancer cells may also spread through the bloodstream to organs such as the liver and lungs.

When cancer spreads from its original place to another part of the body, the new tumor has the same kind of abnormal cells and the same name as the original tumor. For example, if ovarian cancer spreads to the liver, the cancer cells in the liver are actually ovarian cancer cells. The disease is metastatic ovarian cancer, not liver cancer. For that reason, it is treated as ovarian cancer, not liver cancer. Doctors call the new tumor "distant" or metastatic disease.

Are there different types of ovarian cancer?

The type of cell where the cancer begins determines the type of ovarian cancer a woman has. Ovarian cancer types include:

- *Cancer that begins in the cells on the outside of the ovaries.* Called epithelial tumors, these cancers begin in the thin layer of tissue that covers the outside of the ovaries. Most ovarian cancers are epithelial tumors.
- *Cancer that begins in the egg-producing cells.* Called germ cell tumors, these ovarian cancers tend to occur in younger women.
- *Cancer that begins in the hormone-producing cells.* These cancers, called stromal tumors, begin in the ovarian tissue that produces the hormones estrogen, progesterone and testosterone.

What are the stages of ovarian cancer?

The stages of ovarian cancer are:

- *Stage I:* Cancer cells are found in one or both ovaries. Cancer cells may be found on the surface of the ovaries or in fluid collected from the abdomen.
- *Stage II:* Cancer cells have spread from one or both ovaries to other tissues in the pelvis. Cancer cells are found on the fallopian tubes, the uterus or other tissues in the pelvis. Cancer cells may be found in fluid collected from the abdomen.
- *Stage III:* Cancer cells have spread to tissues outside the pelvis or to the regional lymph nodes. Cancer cells may be found on the outside of the liver.
- *Stage IV:* Cancer cells have spread to tissues outside the abdomen and pelvis. Cancer cells may be found inside the liver, in the lungs or in other organs.

What is the prognosis for women diagnosed with ovarian cancer?

If found in an early stage, up to 90 percent of the women diagnosed will survive for more than five years; unfortunately, 75 percent of diagnosed cases present in stage III/IV, when the disease has already spread beyond the ovaries. Although ovarian cancer makes up only 28 percent of gynecologic cancers, it accounts for 54 percent of gynecologic cancer deaths.

What treatments are available for women with ovarian cancer?

Treatment of ovarian cancer usually involves a combination of surgery and chemotherapy.

- *Surgery:* Treatment for ovarian cancer usually involves an extensive operation that includes removing both ovaries, fallopian tubes and the uterus as well as nearby lymph nodes and a fold of fatty abdominal tissue known as the omentum, where ovarian cancer often spreads. The surgeon also removes as much cancer as possible from the abdomen (surgical debulking). Less extensive surgery may be possible if the ovarian cancer was diagnosed at a very early stage. For women with stage I ovarian cancer, surgery may involve removing one ovary and its fallopian tube. This procedure may preserve the ability to have children in the future.

- *Chemotherapy:* After surgery, the patient will most likely be treated with chemotherapy — drugs designed to kill any remaining cancer cells. Chemotherapy may also be used as the initial treatment in some women with advanced ovarian cancer. Chemotherapy drugs can be administered in a vein (intravenously) or injected directly into the abdominal cavity, or both methods of administering the drugs can be used. Chemotherapy drugs can be given alone or in combination.

Because cancer treatments often damage healthy cells and tissues, side effects are common. Side effects depend mainly on the type and extent of the treatment. Side effects may not be the same for each woman, and they may change from one treatment session to the next. Before treatment starts, your health care team will explain possible side effects and suggest ways to help you manage them.

What is the probability that ovarian cancer will reoccur?

Approximately 70 percent of patients diagnosed with ovarian cancer will have a recurrence. One of the factors in determining a patient's risk of recurrence is the stage of the cancer at diagnosis:

- Patients diagnosed in stage I have a 10 percent chance of recurrence.
- Patients diagnosed in stage II have a 30 percent chance of recurrence.
- Patients diagnosed in stage III have a 70 to 90 percent chance of recurrence.
- Patients diagnosed in stage IV have a 90 to 95 percent chance of recurrence.

Recurrent ovarian cancer is treatable but rarely curable. Women with recurrent ovarian cancer may have to undergo another surgery. Because many women with recurrent ovarian cancer receive chemotherapy for a prolonged period of time, sometimes continuously, the toxicities of therapy are a major factor in treatment decisions. The effectiveness and type of treatment for recurrent ovarian cancer depends on what kind of chemotherapy the patient received in the past, the side effects associated with previous treatments, the length of time since finishing the previous treatment, and the extent of the recurrent cancer. Chemotherapy is used to stop the progression of cancer and prolong the patient's survival. Sometimes, surgery is used to relieve symptoms, such as a blocked bowel caused by the recurrence.

Other than from her medical team, where can a woman find support for dealing with ovarian cancer?

Cancer support groups, which provide a setting in which cancer patients can talk about living with cancer with others who may be having similar experiences, have shown to have benefits for cancer survivors. One of the primary goals of the **Colorado Ovarian Cancer Alliance (COCA)** is to support women who have received a diagnosis of ovarian cancer. The organization does this through its "Nicki's Circle" support groups. Open to anyone battling ovarian cancer, "Nicki's Circle" support groups meet monthly around the Denver metro area as well as online and via a tele-support group. Among the women active in "Nicki's Circle" are some who have survived anywhere from two to twelve years with single incident and/or recurrent ovarian cancer.