



Canadian Cancer Society Société canadienne du cancer

Ovarian Cancer

Understanding your diagnosis



Let's Make Cancer History

1 888 939-3333 | www.cancer.ca

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Understanding your diagnosis

When you first hear that you have cancer you may feel alone and afraid. You may be overwhelmed by the large amount of information you will have to take in and the decisions you will need to make.

The introductory information in this brochure can help you and your family take the first step in learning about ovarian cancer. A better understanding may give you a sense of control and help you work with your healthcare team to choose the best care for you.

What is cancer?

Cancer is a disease that starts in our cells. Our bodies are made up of millions of cells, grouped together to form tissues and organs such as muscles and bones, the lungs and the liver. Genes inside each cell order it to grow, work, reproduce and die. Normally, our cells obey these orders and we remain healthy.

But sometimes the instructions in some cells get mixed up, causing them to behave abnormally. These cells grow and divide uncontrollably. After a while, groups of abnormal cells form lumps, or tumours.

Tumours can be either *benign* (non-cancerous) or *malignant* (cancerous). Benign tumour cells stay in one place in the body and are not usually life-threatening.

Malignant tumour cells are able to invade nearby tissues and spread to other parts of the body. Cancer cells that spread to other parts of the body are called *metastases*.

The first sign that a malignant tumour has spread (metastasized) is often swelling of nearby lymph nodes, but cancer can spread to almost any part of the body. It is important to find and treat malignant tumours as early as possible.

Cancers are named after the part of the body where they start. For example, cancer that starts in the ovary but spreads to the liver is called ovarian cancer with liver metastases.

What is ovarian cancer?

Ovarian cancer starts in the cells of the ovary or ovaries. The ovaries are two small, oval-shaped organs that lie deep in the pelvis on either side of the uterus (womb), close to the end of the Fallopian tubes. The ovaries are part of the female reproductive system.

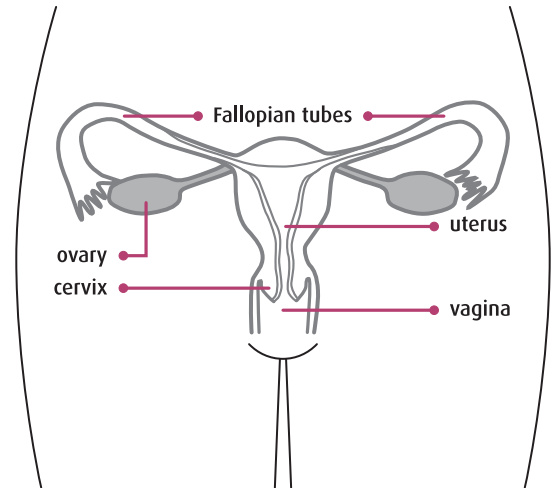
Each month, in women of childbearing age, one of the ovaries releases an egg (*ovum*). This is called *ovulation*. The egg travels down the Fallopian tube to the uterus, where it may be fertilized by a sperm and develop into a fetus. If the egg is not fertilized, it is shed as part of your monthly period.

The ovaries also produce the female hormones estrogen and progesterone. Estrogen and progesterone help control reproduction and sexual development. As a woman ages and reaches menopause, the ovaries make less of these hormones and periods gradually stop.

There are three main types of ovarian cancer. For each type, the cancer starts in a different type of cell found in the ovaries.

- *Epithelial cell cancer* starts in the cells that cover the outer surface of the ovary.
- *Germ cell tumours* start in the egg cells within the ovary and generally occur in younger women. Germ cell cancer can even develop in children.
- *Stromal tumours* start in the connective tissue cells that hold the ovary together.

Epithelial cell cancer is the most common type of ovarian cancer. Ovarian germ cell tumours and stromal tumours develop differently and may require different treatment.*



Causes of ovarian cancer

There is no single cause of epithelial ovarian cancer, but some factors increase the risk of developing it:

- age - particularly after 50
- personal history of cancer (a woman who has had breast, uterine or colorectal cancer has an increased risk of getting ovarian cancer)
- a family history of ovarian cancer or breast cancer (especially in a mother, sister or daughter, or if a woman has hereditary mutations on certain genes,

* The information in this brochure is about ovarian epithelial cell cancer. For information about other types of ovarian cancer, contact our Cancer Information Service at 1 888 939-3333.

such as the BRCA1 or BRCA2 genes) and a family history of colon, uterine or pancreatic cancer

- never having been pregnant
- taking hormone replacement therapy (especially estrogen-only therapy) for a long period of time
- exposure to asbestos

Other possible risk factors are being studied, such as the use of fertility drugs, obesity, particular types of diet, the use of talcum powder on the genital area and smoking (which seems to increase the risk for some types of ovarian tumours). Further research is also being done to understand if the combined effect of early menstruation and late menopause, which increases the number of menstrual cycles over a woman's lifetime, is a risk factor.

Some women develop ovarian cancer without any of these risk factors. Most women with ovarian cancer do not have a family history of the disease.

Symptoms of ovarian cancer

Ovarian cancer in its early stages often does not cause any symptoms at all. If there are symptoms, they are usually vague or very mild. Possible symptoms include pressure or pain in the abdomen (lower stomach area), pelvis, back or legs. You may notice a swelling of the abdomen caused by a buildup of fluid or have digestive problems such as nausea, gas, bloating or indigestion.

Less common symptoms may include unusual vaginal bleeding, shortness of breath or fatigue. There could also be changes to your bowel habits, such as constipation or diarrhea, or changes to your bladder habits, such as needing to pass urine more often.

Often, these symptoms are caused by other less serious health problems, not cancer. Testing is needed to make a diagnosis.

Diagnosing ovarian cancer

Your doctor most likely suspected that you had ovarian cancer after talking with you about your health, your personal and family medical history, and completing a physical examination. This will include an examination of your abdomen and pelvis. To confirm the diagnosis, your doctor will arrange special tests. These tests may also be used to “stage” and “grade” the cancer. You may have one or more of the following tests.

Imaging studies: Imaging studies allow tissues, organs and bones to be looked at in more detail. Using x-rays, ultrasounds, CT scans, MRIs or bone scans, your healthcare team can get a picture of the size of the tumour and see if it has spread. These tests are usually painless and do not require an anesthetic.

To diagnose or stage ovarian cancer, a *transvaginal ultrasound* may be done. A transvaginal ultrasound uses sound waves to form a picture of the vagina, uterus, Fallopian tubes and ovaries. A small probe is inserted into the vagina to look for dark or dense areas on the image that may be cancer.

Blood tests: Blood is taken and studied to see if the different types of blood cells are normal in number and appearance. The results show how well your organs are working and may suggest whether or not you have cancer. The blood may also be tested for body chemicals called *tumour markers*. For ovarian cancer, the blood may be tested for several tumour markers, including CA-125. CA-125 is a substance found on the surface of ovarian cancer cells and on some normal tissues. If the CA-125 level is high, there is a higher chance of ovarian cancer and some other conditions. Further tests will be done. CA-125 can also help tell whether the cancer has spread or not.

Biopsy: A biopsy is usually necessary to make a definite diagnosis of cancer. Cells are removed from the body and checked under a microscope. If the cells are cancerous, they may be studied further to see how fast they are growing and how different they look from normal cells. There are different ways to do a biopsy.

In the case of ovarian cancer, your doctor may choose to examine and take samples of tissue or fluid from the abdomen. This may be done by laparoscopy or laparotomy.

- For a *laparoscopy*, a thin, flexible tube with a light and camera at the end is inserted through a small cut near the belly button. Your doctor will look around the abdomen and pelvis and take several small biopsy samples. A local anesthetic (freezing) will be used to numb the area.
- A *laparotomy* is an operation used to both diagnose and treat ovarian cancer. During the operation, your doctor will first find out if there is cancer. If cancer is found, then your doctor will remove as much of the cancer as possible. A laparotomy is done through an incision in the abdomen under a general anesthetic (you will be unconscious). You will stay in the hospital for several days after the surgery.

Staging and grading

Once a definite diagnosis of cancer has been made and your healthcare team has the information it needs, the cancer will be given a stage and a grade.

It is important to know the stage and grade of the cancer. This information helps you and your healthcare team choose the best treatment for you.

The cancer stage describes the tumour size and tells whether it has spread beyond the place where it started to grow.

For ovarian cancer, there are four stages.

Stage	Description
1	Cancer is found in one or both ovaries. The cancer cells may be on the surface of the ovaries or in fluid collected from the abdomen.
2	Cancer has spread to other tissues in the pelvis. Cancer cells may be in fluid collected from the abdomen.
3	Cancer has spread to tissues outside the pelvis to organs of the abdomen or to nearby lymph nodes.
4	Cancer has spread outside the pelvis and the abdomen to distant parts of the body.

To find out the grade of a tumour, the biopsy sample is examined under a microscope. A grade is given based on how the cancer cells look and behave compared with normal cells. This can give your healthcare team an idea of how quickly the cancer may be growing. There are three grades.

Grade	Description
1	Low grade – slow growing, less likely to spread
2	Moderate grade
3	High grade – tend to grow quickly, more likely to spread

Treatments for ovarian cancer

Your healthcare team will consider your general health and the type, stage and grade of the cancer to recommend what treatments will be best for you. You will work together with your healthcare team to make the final treatment choices. Talk to them if you have questions or concerns.

Treatments affect everyone in different ways. It's hard to predict which side effects you will have. Your healthcare team will tell you what to expect with each treatment. They will also let you know what side effects you should report right away and which ones you can wait to tell them about at your next appointment. If you notice any side effects or symptoms that you did not expect, talk to a member of your healthcare team as soon as possible.

Patients often worry about the side effects of treatment. However, side effects can often be well managed and even prevented with medicine. Be open with your healthcare team. Tell them your concerns and ask questions. They will help you get the care and information you need.

For ovarian cancer, you might receive one or more of the following treatments.

Surgery: Surgery is the most common treatment for ovarian cancer. A decision to have surgery depends on the tumour's location, stage and grade. During the operation, all or part of the tumour and some healthy tissue around the tumour are removed. Surgery is done under general anesthetic (you will be unconscious) and you will stay in the hospital for several days after the surgery.

For ovarian cancer, one or both ovaries, the Fallopian tubes and the uterus are usually removed. This is called a *total abdominal hysterectomy and salpingo-oophorectomy*. Often the fatty covering inside the abdomen (the *omentum*), together with nearby lymph nodes, is also removed.

After surgery you may have some pain or nausea, or may not feel like eating. These side effects are temporary, and can be controlled.

Some effects of surgery for ovarian cancer are permanent. If you have both of your ovaries removed, you will go into menopause right away (if you haven't gone through menopause already). Menopause means you will no longer have your period and you will no longer be able to become pregnant. The side effects of having your ovaries removed are likely to be more severe than if you had gone into menopause naturally. These include hot flashes, night sweats, vaginal dryness and loss of desire for sex. Your healthcare team can suggest ways to cope with these side effects.

For young women with early-stage ovarian cancer, it may be possible to remove only one ovary, one Fallopian tube and the omentum. This is called *fertility-sparing surgery*. With fertility-sparing surgery you may be able to remain fertile and become pregnant after treatment. If you plan to have children after surgery, ask your doctor about this option or any others you may have.

Having a hysterectomy may change how you feel about your body and your sexuality. Perhaps you are worried about being intimate with your partner or that your partner may reject you. It may help to talk about feelings with your partner, a close family member or a friend. Your doctor can also refer you to specialists and counsellors who can help you and your partner with the emotional side effects of ovarian cancer surgery.

Radiation therapy: In *external beam radiation therapy*, a large machine is used to carefully aim a beam of radiation at the tumour. The radiation damages the cells in the path of the beam – normal cells as well as cancer cells. In *brachytherapy*, or internal radiation therapy, radioactive material is placed directly into or near the tumour. For ovarian cancer, a radioactive fluid may be put into the abdomen through a plastic tube (*intraperitoneal radiotherapy*). This fluid stays radioactive for only a few days, so it does not have to be removed from the body.

Side effects will be different depending on what part of the body receives the radiation. You may feel more tired than usual or notice changes to the skin (it may be red or tender) where the treatment was given. These side effects are a result of damage to normal cells. The side effects will usually go away when the treatment period is over and the normal cells repair themselves.

Chemotherapy: Chemotherapy may be given as pills or by injection. For ovarian cancer, the drugs may be given through a thin tube inserted into the abdomen (*intraperitoneal chemotherapy*). Chemotherapy drugs interfere with the ability of cancer cells to grow and spread, but they also damage healthy cells. Although healthy cells can recover over time, you may experience side effects from your treatment like nausea, vomiting, loss of appetite, fatigue, hair loss and an increased risk of infection.

Clinical treatment trials: Clinical treatment trials investigate new approaches to treating cancer, such as new drugs, new types of treatments or combinations of existing treatments. They are closely monitored to make sure that they are safe for the participants. Ask your doctor if there is a clinical trial suitable as a treatment option for you. You may benefit and so may future cancer patients.

Complementary therapies: Complementary therapies are used *together with* conventional treatments. More research is needed to understand if these therapies are effective and how they work.

Alternative therapies are used *instead of* conventional treatments. Alternative therapies haven't been tested for safety or effectiveness. It's not known whether they will harm you or be effective in the treatment of cancer.

If you are thinking about using a complementary or alternative therapy, find out as much as you can about the therapy and talk to your healthcare team. It's possible that the therapy might interfere with test results or regular treatments.

After treatment

Follow-up care helps you and your healthcare team monitor your progress and your recovery from treatment. At first, your follow-up care may be managed by one of the specialists from your healthcare team. Later on it may be managed by your family doctor.

The schedule of follow-up visits is different for each person. You might see your doctor more often in the first year after treatment, and less often after that.

The end of cancer treatment may bring mixed emotions. You may be glad the treatments are over and look forward to returning to your normal activities. But you could feel anxious as well. If you are worried about your treatment ending, talk to your healthcare team. They are there to help you through this transition period.

Living with cancer

There are many sources of help available for people with cancer and for their caregivers.

Your healthcare team: If you need practical help or emotional support, members of your healthcare team may be able to suggest services in your community or refer you to cancer centre staff or mental health professionals.

Family and friends: Those closest to you can be very supportive. Accept offers of help. When someone says “Let me know how I can help,” tell them what they can do. Maybe they can run errands, cook a meal or give you a ride to your doctor’s office.

People who have had a similar experience: Consider visiting a support group or talking with a cancer survivor in person, over the telephone or online. Talking with and learning from others who have had similar experiences can be helpful. Try more than one option to see which one suits you best.

Yourself: Try to stay positive. Staying positive is about figuring out how to deal with cancer in the best way that you can – and everyone will do this their own way. It doesn’t mean that you must seem happy or cheerful all the time or avoid talking or thinking about the difficulties of having cancer. But it can mean looking after yourself by finding relaxing, enjoyable activities that refresh you mentally, spiritually or physically

The Canadian Cancer Society

Helping you understand cancer

Now that you have been introduced to the basics of ovarian cancer, you may want to learn more. Please contact the Canadian Cancer Society for more detailed information on ovarian cancer. Our services are free and confidential.

To contact the Canadian Cancer Society:

- Call an information specialist toll-free at **1 888 939-3333** Monday to Friday 9 a.m. to 6 p.m.
- E-mail us at **info@cis.cancer.ca**.
- Visit our website at **www.cancer.ca**.
- Contact your local Canadian Cancer Society office.



We'd like to hear from you

E-mail us at publicationsfeedback@cancer.ca if you have comments or suggestions to help us make this booklet more useful for you and other readers.

What we do

The Canadian Cancer Society fights cancer by:

- doing everything we can to prevent cancer
- funding research to outsmart cancer
- empowering, informing and supporting Canadians living with cancer
- advocating for public policies to improve the health of Canadians
- rallying Canadians to get involved in the fight against cancer

Contact us for up-to-date information about cancer, our services or to make a donation.



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