

Ovarian Cancer

Information for people with cancer

This information should not be used to diagnose yourself or in place of a doctor's care.

Ovarian cancer starts in the ovary. The ovaries are two glands in the reproductive system. They are located in your pelvis, one on each side of your uterus.

They are almond-shaped and about 4 cm (1.5 inches) long.

Ovaries produce and release the eggs that are needed for reproduction (making a baby).

Ovaries are the main source of the hormones estrogen and progesterone.

Image of ovaries: visualsonline.cancer.gov/details.cfm?imageid=4278

Diagnosis and Staging

What are the signs and symptoms of ovarian cancer?

Ovarian cancer is harder to find in the early stages because it has symptoms that are very subtle. Symptoms of ovarian cancer may also be symptoms of other conditions.

Symptoms of ovarian cancer may include:

- Pain or discomfort in your abdomen (belly).
- Swelling or bloating in your lower abdomen.
- Indigestion, gas, nausea, constipation, diarrhea.
- Unusual bleeding (heavy periods or bleeding after menopause).
- Frequent and urgent need to urinate (go pee).
- Loss of appetite.
- Feeling full even after a small meal.
- Pain in your lower back or legs.
- Pain during intercourse (sex).

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If you have any signs or symptoms that you are worried about, please talk to your family doctor or nurse practitioner.

How is ovarian cancer diagnosed?

Tests that may help diagnose ovarian cancer include:

- **Physical examination:** includes an internal pelvic examination to feel the ovaries. If you have regular Pap tests to screen for cervix cancer, this type of exam is usually done at the same time.
- **Blood tests for CA 125 and CEA:** These proteins may be higher in the blood of people who have ovarian cancer. These proteins are also called tumour markers.
 - More information on CA 125: www.bccancer.bc.ca/books/tumour-markers-assays/ca125
 - More information on CEA: www.bccancer.bc.ca/books/tumour-markers-assays/cea
- **Ultrasound:** to see the tumour.
- **Chest X-ray:** to see if the cancer has spread to your lungs.
- **CT (Computed tomography) scan:** to see if the cancer has spread to other organs, tissues or lymph nodes.
- **MRI (magnetic resonance imaging):** to see if the cancer has spread to other organs, tissues or lymph nodes.
- **PET (positron emission tomography):** to see if the cancer has spread to other organs, tissues or lymph nodes.
- **Exploratory surgery** to get a biopsy (sample of tissue). A specialist doctor (pathologist) will examine the tissue to see if it is cancer. Only a biopsy can diagnose ovarian cancer.

For more information on tests used to diagnose cancer, see our Screening and Diagnosis pathfinder: bccancer.libguides.com/pathfinder-screening

What are the types of ovarian cancer?

Epithelial Cell Tumours

- Make up 90% (90 out of 100) of ovarian cancers.
- There are different types: serous, mucinous, endometrioid, clear cell and undifferentiated.
- Serous carcinoma is the most common type.
- Mostly affects people over the age of 50.

Non-epithelial tumours

- These tumours make up about 10% (10 out of 100) of ovarian cancers.
- Types of non-epithelial tumours:

Germ cell tumours

- Start in the egg-producing cells of the ovary.
- Most tumours are benign (not cancer) but some are malignant (cancer).
- Mostly affects people under the age of 20.
- Respond well to treatment.

Stromal tumours

- Very rare.
- Start in the connective tissue in the ovary.
- Mostly affects people over the age of 50.

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What are the stages of ovarian cancer?

Staging describes the cancer. Staging is based on how much cancer is in the body, where it was first diagnosed, if the cancer has spread and where it has spread to.

The stage of the cancer can help your health care team plan your treatment. It can also tell them how your cancer might respond to treatment and the chance that your cancer may come back (recur).

Ovarian cancer is staged during and after surgery. All tissues removed during surgery are examined and tested for cancer. After the tissues are examined, a stage is assigned to the cancer.

Ovarian cancer staging:

- **Stage 1:** Cancer is only in the ovaries.
- **Stage 2:** Cancer is in one or both ovaries. Cancer has spread into the pelvis.
- **Stage 3:** Cancer has spread to areas outside the pelvis or to local lymph nodes.
- **Stage 4:** Cancer has spread to other parts of the body (distant metastasis).

For more information on staging, see our About Cancer page:

bccancer.bc.ca/health-info/types-of-cancer/about-cancer

What are the grades of ovarian cancer?

The grade of the cancer describes how different the cancer cells look from normal cells and how fast the cancer cells are growing. A pathologist will give the cancer a grade after looking at the cells under a microscope.

Ovarian cancer can be grade 1, 2 or 3. The lower the number, the lower the grade.

Low grade: cells are abnormal but look a lot like normal cells. Low grade cancers usually grow slowly and are less likely to spread.

High grade: cells are abnormal and do not look like normal cells. High grade cancers usually grow more quickly and are more likely to spread.

Treatment

What is the treatment for ovarian cancer?

Cancer treatment may be different for each person. It depends on your particular cancer. Your treatment may be different from what is listed here.

Surgery

- Most people with ovarian cancer will have surgery. Even if a cure is not possible, surgery can often help with symptoms and offer you a better quality and length of life.
- The type of surgery depends on the type and stage of ovarian cancer.
- Some surgeries affect your fertility (your ability to have children). If having children after cancer treatment is important to you, please talk about fertility options with your oncologist or surgeon before the surgery.
- If both of your ovaries are removed and you are a pre-menopausal person (still having regular periods), menopause happens soon after your surgery. This type of premature menopause (early menopause before the average age of 50) can have challenging side effects. Your doctor will offer ways to help you manage the side effects.
- **Types of surgery**
 - **Hysterectomy:** your uterus is removed.
 - **Unilateral salpingo-oophorectomy:** one of your ovaries and one of your fallopian tubes is removed (unilateral means one side).

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- **Bilateral salpingo-oophorectomy:** both of your ovaries and both of your fallopian tubes are removed (bilateral means both sides).
- **Omentectomy:** some of the fatty tissue which attaches to your stomach and to your transverse colon (the middle part of your colon that crosses your belly below your stomach) is removed.
- **Debulking surgery:** as much of the tumour is removed as possible.

Systemic therapy (chemotherapy)

- Often given after surgery.
- May cause infertility and premature menopause.
- For more information about systemic therapy go to:
[bccancer.bc.ca/our-services/treatments/systemic-therapy-\(chemotherapy\)](http://bccancer.bc.ca/our-services/treatments/systemic-therapy-(chemotherapy))

Radiation therapy (uses high energy x-ray to kill or shrink cancer)

- May be used to treat some early stage epithelial ovarian tumours.
- For more information about radiation therapy, go to:
bccancer.bc.ca/our-services/treatments/radiation-therapy

What is the follow-up after treatment?

- Follow-up testing and appointments are based on your type of cancer.
- Guidelines for follow-up after treatment:
 - Epithelial ovarian cancer:
www.bccancer.bc.ca/health-professionals/clinical-resources/cancer-management-manual/gynecology/ovary-epithelial-carcinoma#Follow-up

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- Non-epithelial ovarian cancer:
www.bccancer.bc.ca/health-professionals/clinical-resources/cancer-management-manual/gynecology/ovary-non-epithelial-carcinoma#Management-ovary-non-epithelial
- These are guidelines written for your doctor, nurse practitioner or specialist. You can look at them to see what appointments and tests you might need after treatment.
- After treatment, you may return to the care of your family doctor or specialist for regular follow-up. If you do not have a family doctor, please talk to your BC Cancer health care team.
- Follow up schedule and tests are different depending on which type of ovarian cancer you have. These are general guidelines. Please talk to your oncologist or doctor about your follow-up.
 - You should be seeing your doctor regularly (every 3-4 months), for the first two years after treatment.
 - For the next three years after that, you should see your doctor every 6 months.
 - Appointments with your doctor should include a pelvic and rectal exam.
 - You may have blood tests to check tumour markers.
- The BC Cancer Life after Cancer page has information on issues that cancer survivors may face: bccancer.bc.ca/lifeaftercancer

More Information

What causes ovarian cancer and who gets it?

The cause of ovarian cancer is unknown.

Most cases are not caused by inherited genes.

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These are some of the risk factors for this cancer. Not all of these risk factors may cause this cancer, but they may help the cancer start growing.

- Most cases happen in people with ovaries who are over the age of 50.
- Having a family history of cancer (ovarian, breast, uterine, colon and rectal).
- Having the BRCA1 or BRCA2 gene mutation.
 - People of European (Ashkenazi) Jewish ancestry have a higher chance of having a BRCA gene mutation.
 - There is more information on hereditary cancer and genetic testing from our Hereditary Cancer Program: <http://www.bccancer.bc.ca/screening/hereditary>
- Having breast cancer.
- Not giving birth or having your first birth after age 30.
- Having early menstruation (before age 12) and late menopause (after age 50).
- Taking hormonal medicines such as:
 - Menopausal hormone replacement therapy (HRT)
 - Hormones taken by transgendered / transsexual persons
 - Fertility drugs
- Eating foods with a lot of saturated fat (fat from animals, such as the fat in meat or milk products).
- Being exposed to asbestos.

Statistics

- **B.C.:** www.bccancer.bc.ca/health-info/disease-system-statistics/statistics-by-cancer-type
- **Canada:** www.cancer.ca/en/cancer-information/cancer-type/ovarian/statistics/?region=bc

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Note: Available statistics do not have information about the inclusion of transgender and gender diverse participants. It is unknown how these statistics apply to transgender and gender diverse people. Patients are advised to speak with their primary care provider or specialists about their individual considerations and recommendations.

Can I help prevent ovarian cancer?

We do not understand the causes of ovarian cancer very well. This makes it difficult to talk about preventing ovarian cancer.

Some things that may help lower your risk of ovarian cancer:

- Birth control medications can lower your risk by up to 50% if you use them for 5 or more years. However, these medications do have possible side effects. They are usually only recommended for the prevention of ovarian cancer in people known to have a hereditary ovarian cancer gene.
- Pregnancy and breast-feeding.
- If you are at high risk because of a hereditary ovarian cancer gene, a prophylactic (preventive) oophorectomy surgery may protect you against future cancers. This is when a surgeon removes both of your ovaries before any cancer appears. The oophorectomy should also remove your fallopian tubes.
- If you are having a hysterectomy for non-cancer reasons, it is a good idea to also have your fallopian tubes removed. This will lower your risk of getting ovarian cancer.
- Eating lots of vegetables.
 - Visit the BC Cancer Food Choices and Cancer Prevention page:
www.bccancer.bc.ca/health-info/prevention/food-choices
- Ensure you talk to your doctor about any symptoms you are having, even if they are mild.



Provincial Health Services Authority

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Is there screening for ovarian cancer?

There is no screening for this disease. Pap tests screen for cervix cancer but are not able to screen for ovarian cancer.

Where can I find more information?

- If you have questions about ovarian cancer, please talk to your health care team.
- Our librarians can help you find the information you need. Visit our Library page: bccancer.bc.ca/our-services/services/library
- BC Cancer Library Ovarian Cancer pathfinder: bccancer.libguides.com/pathfinder-ovarian
- Managing Your Symptoms: <http://www.bccancer.bc.ca/health-info/coping-with-cancer/managing-symptoms-side-effects>
- Emotional Support: www.bccancer.bc.ca/health-info/coping-with-cancer/emotional-support