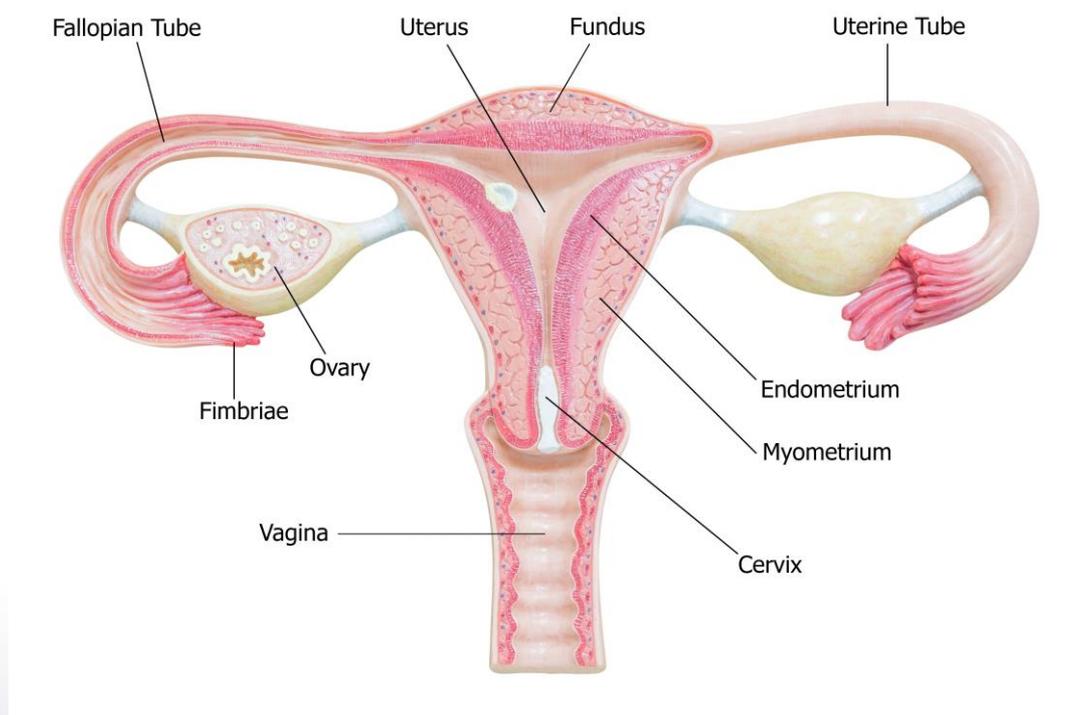


Ovarian Cancer

What is ovarian cancer?

The ovaries form part of the female reproductive system (**see graphic below**) and are responsible for producing eggs and also for secreting the female hormones, oestrogen and progesterone. Ovarian cancers arise when a mutated cell within the ovary grows and divides in an uncontrolled way, producing more and more abnormal cells that form a tumour.

Organs of the female reproductive system



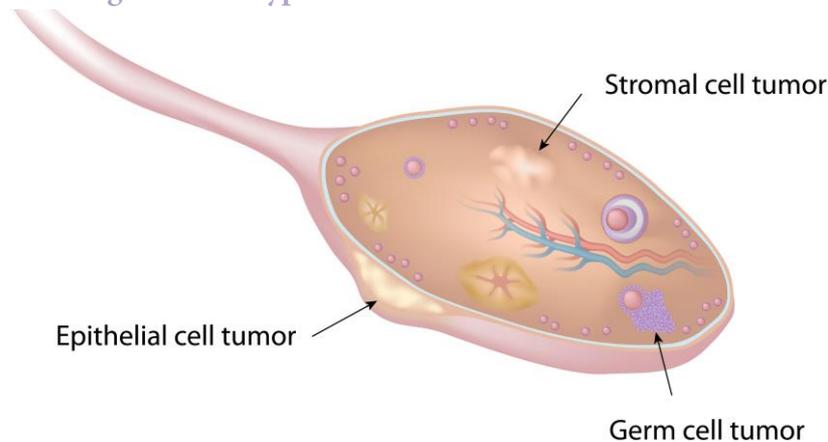
Who is most at risk of getting ovarian cancer?

Ovarian cancer is the seventh most common cancer among females in New Zealand, with around 300 cases diagnosed each year.¹ The risk of ovarian cancer increases with age — 85% of all cases in New Zealand occur in women over 45 years of age.²

Major types of ovarian cancer

By far the most common form of ovarian cancer is epithelial carcinoma, which first arises in the cells that cover the surface of the ovary (the epithelium) and is present in 90% of ovarian cancer cases.² Much less common are germ cell carcinoma tumours, sex-cord stromal cell tumours, and borderline tumours (a type of epithelial tumour with a lower risk of spreading than other types of tumours).

Diagram of the ovaries showing different types of ovarian cancer



How is ovarian cancer diagnosed?

Epithelial ovarian cancer may at first be difficult to recognise because the symptoms are often nonspecific and mimic those seen in other common disorders. These symptoms usually include persistent pelvic and abdominal pain, persistent abdominal bloating, and difficulty eating or feeling full quickly. The symptoms may also involve changes in bowel habits, urinary symptoms, back pain, and tiredness.

Diagnosis of ovarian cancer involves a number of different tests.

Your doctor will perform a pelvic exam to look for any unusual lumps or masses.

Imaging tests

Imaging tests are then carried out to look for cysts and tumours on the ovaries. This is usually done by transvaginal ultrasound (an ultrasound exam in which a probe is inserted into the vagina), but may also include a computerised tomography (CT) scan and/or magnetic resonance imaging (MRI) scan to look for any spread of cancer through the chest and abdomen.

CA-125 test

A blood test may be performed to assess the level of CA-125 in your bloodstream. CA-125 is a type of protein; levels of this protein may be elevated in people with ovarian cancer. While the results of this test will not be able to give a definite diagnosis of ovarian cancer, CA-125 is found at higher than normal levels in around half of women with early stage ovarian cancer and in around 90% of women with more advanced disease.²

Biopsy

Biopsy is the only way to confirm the presence of cancerous cells. It involves an operation to remove a small amount of tissue from the ovaries for examination under a microscope. If ovarian cancer is suspected, your doctor will probably suggest surgery to remove as much cancerous tissue as possible, meaning that this surgery is the start of treatment, and a biopsy sample will be analysed afterwards.

Stage and grade of ovarian cancer

The results of these tests are used to determine the stage and grade of ovarian cancer.

Cancer stage refers to the extent to which cancer cells have spread to other parts of the body and is a key factor in determining treatment options. In ovarian cancer, the stages are:

- Stage I – cancer is limited to one or both ovaries.
- Stage II – the cancer extends within the pelvis to other nearby organs such as the fallopian tubes, uterus, bladder or bowel.
- Stage III – cancer cells have spread beyond the pelvis to the lining of the abdomen (omentum), the intestines or to nearby lymph nodes, but is still contained within the abdomen.
- Stage IV (metastatic) – involves spread of cancer to distant parts of the body such as the lungs and liver.

Tumour grading looks at the appearance of the cancer cells to assess how likely it is that the cancer will spread. In epithelial ovarian cancer, grades range from grade 1, meaning cells still appear similar to normal ovarian cells and treatment is more likely to be successful, to grade 3, in which cells look less like normal tissue and prognosis is usually worse.

How is ovarian cancer treated?

This section provides an overview of treatments for ovarian cancer. Remember each person is different and your doctor will discuss with you the best treatment options for the particular type of cancer you have.

Treatment options depend on the type, size and location of the tumour and the stage of ovarian cancer, as well as your overall health and personal considerations (for example, whether you are planning to have children).

Ovarian cancer is generally treated with a combination of surgery and chemotherapy and is carried out by a team of specialists that usually includes a gynaecological oncologist.

Surgery

The aims of surgery are to stage the cancer (i.e. see how far it has spread) and to remove as much cancerous tissue as possible. The extent of surgery depends on the type of cancer and whether it has spread outside the ovaries. Surgery involves removal of the ovaries and possibly fallopian tubes, and if the cancer has spread it may also be necessary to remove the uterus, omentum, appendix, nearby lymph nodes and, in some cases, part of the bowel or other affected organs.

Chemotherapy

Chemotherapy drugs destroy cancer cells or control their growth. A course of chemotherapy, usually involving a combination of two or more drugs, is generally administered after surgery to kill any remaining cancer cells. Chemotherapy is likely to require a number of treatments every three to four weeks over several months.

Chemotherapy kills rapidly growing cancer cells, but can also damage healthy cells that divide rapidly, such as those in the bone marrow, digestive tract, and hair follicles. As a result you may experience side effects of chemotherapy such as nausea and vomiting, hair loss, fatigue and increased risk of infection. Your doctor may prescribe medicines to help minimise some of these temporary side effects, which usually go away when treatment is finished.

Biological therapy for ovarian cancer

Biological therapy (also known as targeted therapy) means treatment with an agent that has been designed specifically to target cancer cells and leave normal healthy cells alone. Biological therapies generally don't cause such severe side effects as chemotherapy does.

Avastin® (bevacizumab) is a biological therapy that inhibits tumour growth by blocking the development of new blood vessels, something cancers need to grow and spread.

References

1. Ministry of Health. Cancer: New registrations and deaths 2011. Available at: <http://www.health.govt.nz/system/files/documents/publications/cancer-new-registrations-deaths-2011-v4sept14.pdf> Accessed 11 April 2015.
2. New Zealand Gynaecological Cancer Foundation. Understanding Ovarian Cancer. Available at: <http://www.nzgcf.org.nz/index.cfm/pageid/165/ViewPage/Understanding-Ovarian-Cancer> - Accessed 9 April 2015.



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Avastin Consumer Panel

Avastin[®] (bevacizumab), 100 mg/4mL and 400 mg/16 mL vials, is a **Prescription Medicine** used to treat metastatic (spreading) colorectal, kidney, breast, brain, lung and ovarian cancers.

Do not use Avastin if: you have had an allergic reaction to Avastin, any of its ingredients or other antibodies, or if you have been coughing or spitting up blood.

Tell your doctor if: you are pregnant or breast-feeding, or plan to become pregnant or breast-feed; you have any other health problems, especially the following: inflammation of the bowel or stomach ulcers, high blood pressure, a history of blood clots or stroke, bleeding problems, bleeding in the lungs or coughing or spitting up blood, low white blood cell counts, you have/ had a fistula, or have a history of diabetes; you have had major surgery in the last 28 days or a wound that has not healed properly; you have had a blocked lung artery (pulmonary embolism); you have heart disease; you have received anthracyclines (e.g. doxorubicin) for cancer, or radiotherapy to your chest; you are 65 years of age or older, or you are taking any other medicines.

Tell your doctor immediately or go to your nearest Accident and Emergency Centre if you notice any of the following: severe body or stomach pain or cramps; severe headache; severe diarrhoea, nausea and vomiting; coughing or spitting up blood; blood clots in the veins of the legs; pain and/or swelling in the lower legs, feet or hands; severe bleeding or problems with your wounds healing after surgery; seizures; confusion; sleepiness/drowsiness or fainting; abscesses (pus-filled sores); severe infection with high fever, chills, headache, confusion and rapid breathing; feeling of numbness or tingling in feet or hands; dry mouth with thirst and/or darkened urine; increased heart rate; shortness of breath; symptoms of an allergic reaction which may include shortness of breath, wheezing or difficulty breathing, swelling of the face, lips, tongue or other parts of the body, or rash, itching or hives on the skin. **Possible common side-effects may also include:** high blood pressure (symptoms include, headache, dizziness, ringing in the ears, tiredness, blurred vision); body pain, tiredness/ weakness; diarrhoea, constipation or rectal bleeding; sore mouth or mouth ulcers; loss of appetite, being thirsty; shortness of breath; runny, blocked or bleeding nose; dry, scaling or inflamed skin, change in skin colour; taste changes; blurred vision or other eye problems; dizziness; headache; frequent infections with symptoms such as fever, chills or sore throat; changes in your voice or difficulty speaking.

Avastin has risks and benefits. Ask your oncologist if Avastin is right for you. Use strictly as directed. If symptoms continue or you have side effects, see your healthcare professional. For further information on Avastin, please talk to your health professional or visit www.medsafe.govt.nz for Avastin Consumer Medicine Information.

Avastin is not funded by PHARMAC. You will need to pay the full cost of this medicine. A prescription charge and normal oncologist fees may apply.

Consumer panel dated 03 November 2014 based on CMI dated 07 October 2014.

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