



OVARIAN CANCER

The Facts

Ovarian cancer is the fourth most common cancer in women. Each year about 400 women are diagnosed with ovarian cancer in Ireland.

The symptoms can be very vague, particularly when the disease is in its early stages.

Please see your doctor if you have any of these signs and symptoms:

- **Feeling full quickly**
- **Loss of appetite**
- **Pain in your tummy (abdomen) that doesn't go away**
- **Bloating or an increase in the size of your abdomen**
- **Needing go to the toilet to pass urine more often**

The risk of developing ovarian cancer in the general population of women is 2% or 1 in 50. However, some women have an increased risk of developing ovarian cancer.

Risk Factors

- **Age**

As with most cancers the risk of developing ovarian cancer increases as a woman gets older. More than half the cases of ovarian cancer diagnosed are women over 65 years. However, younger women do get ovarian cancer and therefore all women should be aware of the symptoms and risk factors.

- **Inherited gene mutations**

The majority of ovarian cancer cases are sporadic, meaning they are not inherited and close family relatives are not at increased risk of developing cancer.

We now know that up to 15% of cases are believed to be caused by an inherited faulty (or mutated) gene, which is often within the BRCA1/BRCA2 gene or Lynch Syndrome. Women who inherit a mutated copy of the BRCA1 or BRCA2 gene have a much higher risk of developing breast and/or ovarian cancer than the general population.

- **Other potential risk factors include obesity, smoking, diabetes, endometriosis and HRT**

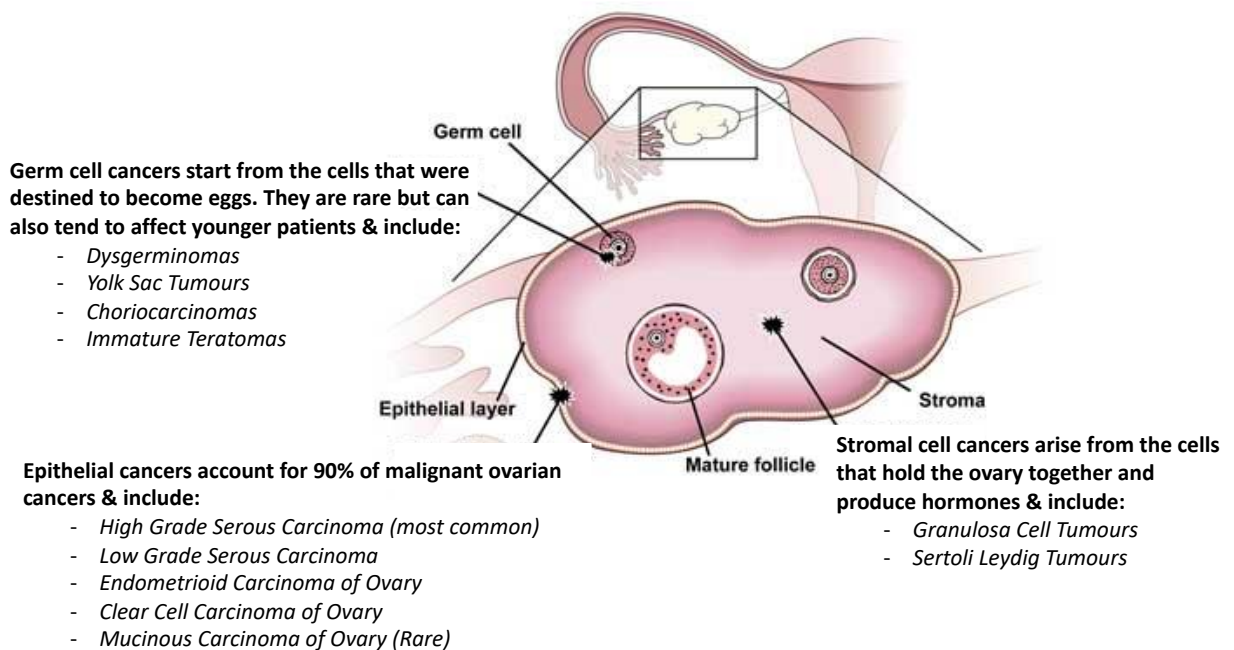


OVARIAN CANCER

Types of Ovarian Cancer

There are different types of ovarian cancer. These tend to be defined by which part of the ovary the cancer originates from. However, there are different subtypes within each group and these cancers can sometimes require slight differences in treatments such as chemotherapy type. Therefore, knowing the type of cancer either by biopsy before surgery or on assessment after surgery is very important.

Epithelial ovarian cancer is the most common type of ovarian cancer and the most common subtype of this group are high grade serous cancers. We previously thought all epithelial cancers originated from the surface of the ovary but now know that many may originate from the end of the fallopian tube.



Primary peritoneal cancer is also very similar to epithelial ovarian cancer and is treated in the same way.



OVARIAN CANCER

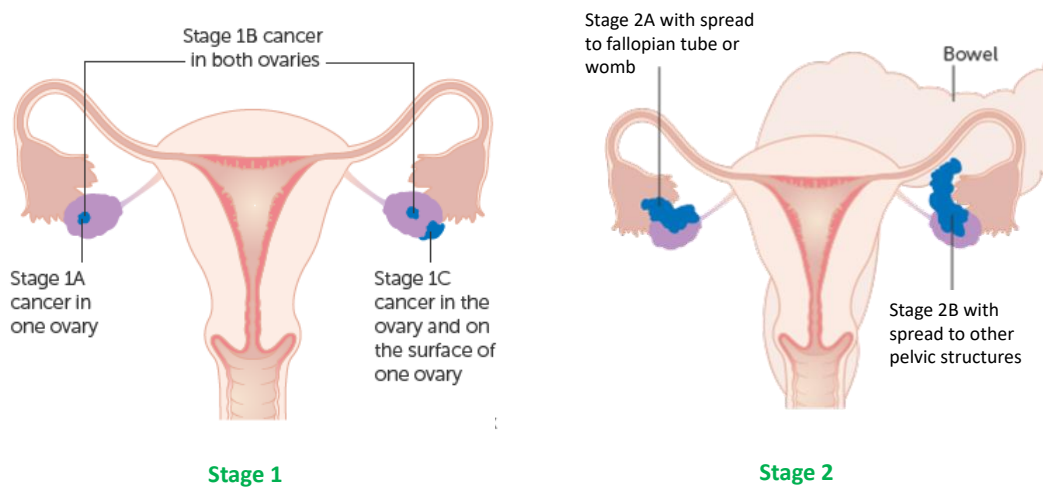


Staging of Ovarian Cancer

The tests and scans you have to diagnose your cancer will give some information about the size of your cancer and whether it has spread (the stage). But we may not be able to tell you the exact stage until you have had surgery.

For Ovarian cancer we apply the FIGO Staging system which is summarised below:

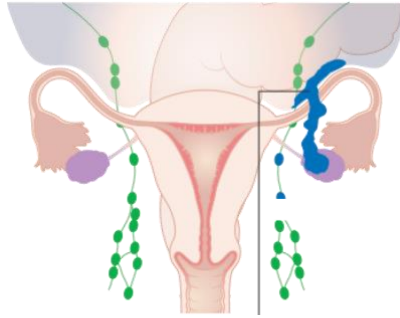
- **Stage 1:** The cancer is only in the ovaries. Surgery is the main treatment but some women need chemotherapy.
- **Stage 2:** The cancer has grown outside the ovaries and is growing within the pelvis. Treatment is surgery and chemotherapy.
- **Stage 3:** The cancer has spread outside the pelvis into the abdominal cavity or to lymph nodes. Treatment is surgery and chemotherapy.
- **Stage 4:** The cancer has spread to other body organs such as the liver or lungs. The main treatments are chemotherapy (usually first) and surgery.



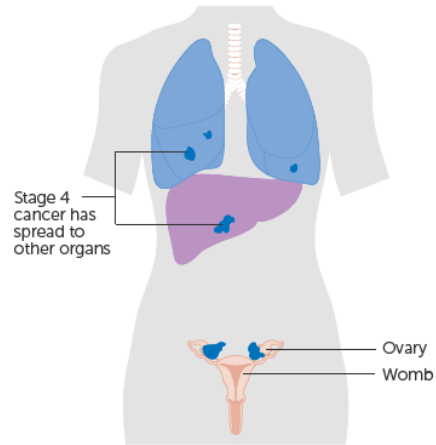
Adapted from Cancer Research UK



OVARIAN CANCER



Stage 3 cancers involve the lymph nodes and also involve disease within the abdomen and when greater than 2cm this is Stage 3C



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The Diagnosis of Ovarian Cancer

Your GP or Consultant will take a history of your symptoms and may examine you when you attend. It is common for them to take blood tests called tumour markers (which can include tests such as CA 125, CEA and Ca19.9) and refer you for an ultrasound scan.

Further scans in the form of a CT or MRI scan may be required. If there is concern for ovarian cancer your case will be referred for review by the Gynaecological Oncology MDT. A biopsy may be recommended to confirm if there is cancer present and also what type of ovary cancer it is. Often this is done in the X-Ray department using ultrasound or CT guidance. Occasionally you may be admitted to hospital for a laparoscopy (key-hole procedure). This may also help our decision about which treatment pathway is best for you. Drainage of any fluid within the abdomen or chest which may also be performed and provide some relief to symptoms.

You will attend a clinic appointment with a consultant Gynaecological Oncology Surgeon and will be introduced to a Clinical Nurse Specialist. At this appointment there is often another discussion about your symptoms and general health and we may ask permission to examine you again. The main part of the appointment will, however, focus on discussing results and a treatment plan.

All of our patients are discussed at an MDT (multi-disciplinary meeting) with all the members of our extended team. Therefore, each decision for treatment is made by an expert group and is personalised for each patient. Often, we may see you at clinic on the morning before this meeting. You will be given a treatment plan at that visit, however in 1 in 10 cases this plan will be changed at the MDT meeting and we may contact you after this to confirm the treatment plan.



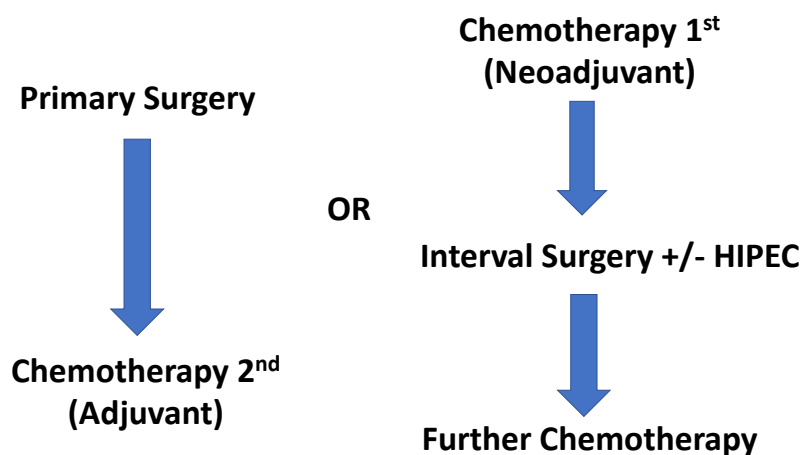
OVARIAN CANCER



Treatment for Ovarian Cancer

The main treatment for ovarian cancer is surgery and often in combination with chemotherapy. However, there are two main pathways for this treatment.

1. Surgery followed by chemotherapy – known as primary surgery and adjuvant chemotherapy
2. Chemotherapy before and after surgery – known as neoadjuvant chemotherapy with interval surgery (usually after 3 cycles of chemotherapy)



▶ Surgery

The aim of surgery is to fully remove any cancer from the abdomen. Our surgical team has extensive experience in advanced cytoreductive (previously referred to as debulking) surgery for ovarian cancer. This is often major surgery and can include removal of the ovaries, womb, fat pad (omentum), lymph nodes, but also can include bowel surgery, removal of the lining of the abdomen (peritoneum), removal of the spleen or gallbladder and surgery around the liver. As a result of the extensive nature of this surgery, up to 1 in 5 women will have a surgical complication and the most people are admitted to hospital for between 7 days and 2 weeks after surgery. These issues will be discussed in detail at your clinic visit.

▶ HIPEC

Depending on the timing of surgery and type of ovarian cancer you may also be offered Hyperthermic Intraperitoneal Chemotherapy (HIPEC) which is where heated chemotherapy is placed within the abdomen for approximately 90 minutes after the surgery and then removed before closure of the abdomen. Large studies have demonstrated that in carefully selected women HIPEC can prolong survival and does not increase surgical complications. However, it is not suitable for every patient.



OVARIAN CANCER



▶ **Chemotherapy**

Chemotherapy uses anti-cancer drugs to destroy cancer. The drugs circulate throughout the body in the bloodstream. The most commonly used drugs are carboplatin and paclitaxel.

You usually have chemotherapy once every 3 weeks where you have the chemotherapy drugs on day 1 followed by a rest period to allow you to recover from any side effects. Each 3 week period is called a cycle of treatment. You normally have about 6 cycles in all, but you may have more.

▶ **Targeted Cancer Drugs**

Targeted cancer drugs change the way that cells work and help the body control the growth of cancer. They can help some women with advanced ovarian cancer that has come back after previous treatment. Although these treatments can't cure the cancer, they may help to control it for a while and help some people to live longer.

- **PARP Inhibitors**

PARP is short for Poly (ADP-ribose) polymerase. It is a protein that helps damaged cells to repair themselves. PARP Inhibitors therefore stop PARP working and in cancer cells this means the cell cannot repair itself and cannot function. This type of drug is called a cancer growth blocker.

There are many drugs in this group but the most common one used in ovarian cancer is Olaparib (Lynparza). This drug does not unfortunately work for all patients and your medical oncologist will explain if this drug is appropriate for you.

An explanation of how PARP Inhibitors work can be accessed at

<http://www.youtube.com/watch?v+mgW30YyJz4>

- **Bevacizumab (Avastin)**

Bevacizumab targets a cancer cell protein called vascular endothelial growth factor (VEGF). This protein helps cancers to grow blood vessels, so they can get food and oxygen from the blood. All cancers need a blood supply to be able to survive and grow.

Bevacizumab blocks this protein and stops the cancer from growing blood vessels, so it is starved and can't grow. Treatments that interfere with the development of a blood supply are called anti-angiogenesis treatments.

- **Immunotherapy**

Immunotherapy is a form of cancer treatment that uses the power of the body's immune system to prevent, control, and eliminate cancer. Checkpoint inhibitors are a type of precision cancer immunotherapy that helps to restore the body's immune system to fight the cancer by releasing checkpoints that cancer uses to shut down the immune system. PD-1 and PD-L1 are proteins that inhibit certain types of immune responses, allowing cancer cells to evade detection and attack by certain immune cells in the body. A checkpoint inhibitor can block the PD-1 and PD-L1 pathway



OVARIAN CANCER

and enhance the ability of the immune system to fight cancer. This treatment is very effective in many cancers such as melanoma and liver cancer.

There has been extensive research to assess whether ovarian cancer patients would benefit from this type of treatment. Results from clinical trials have been mixed and to date there is no evidence that ovarian cancer patients benefit from immunotherapy but the research is ongoing.

▶ **Genetic Testing**

The assessment and treatment of ovarian cancer has undergone many advances in recent years. More advanced surgery and the development of the targeted therapies are starting to show significant benefits to patients. Our understanding of the genetic component to ovarian cancer is still continuing to grow.

Upon your diagnosis (especially if you have a family history of breast, ovarian or bowel cancer) or in the event your cancer has returned you may be asked to consider genetic testing. This will involve referral to the genetic counselling service and upon your consent a blood sample is taken.

Research

Our team specialises in ovarian cancer and we are involved in many research projects and clinical trials to ensure every effort is made to provide the best possible care and to try and develop new treatments. We will ask you to partake in our research program and this will be explained in detail along with asking for your consent.

Living With & After Ovarian Cancer

Survival depends on many different factors. There are general statistics based on large groups of patients, but, they can't tell you what will happen in your individual case. Therefore, being aware of the symptoms that can suggest the cancer may be back is very important along with attending for follow up appointments. These appointments can be a combination of physical and virtual appointments and this will be explained to you.

For women with ovarian cancer, the cancer may return after primary treatment, this is known as a recurrence. Although the cancer can recur anywhere, it most commonly recurs in the abdominal cavity. Typically, symptoms of recurrence are abdominal pain, bloating, nausea or vomiting, or changes in bowel or bladder habits.

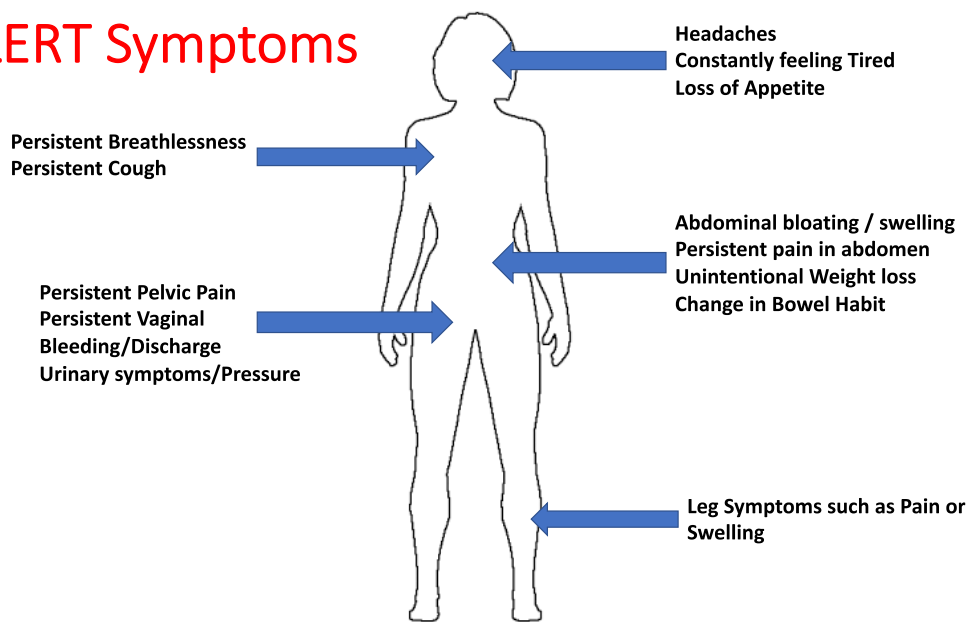


OVARIAN CANCER



If you experience any of these “ALERT” symptoms it is important that you communicate this to your GP or Gynaecology Oncology CNS/Team.

ALERT Symptoms



There are a number of different treatment options for recurrent ovarian cancer. Chemotherapy is the most common treatment for recurrent ovarian cancer. Some women are candidates for secondary surgery. Those women who undergo surgery are typically treated after surgery with additional chemotherapy and possibly some of the targeted therapies.

It might only be a few months since you finished treatment, or it might be many years. But whatever your situation, it can be a big shock hearing that your cancer has come back. It can feel very difficult having to face treatment again and cope with a range of feelings such as shock, frustration and fear. Our team will talk you through the process and the treatments options and what they involve.

Symptoms as a result of treatment are equally important to address and treat. Our department work closely with the lymphoedema service, physiotherapy and dietician department.

Throughout your journey with our team we will support you fully in any decision you make. You can get emotional and practical support through our team, local hospice and GP practice. You can also get help and information from charities and support groups.



OVARIAN CANCER



Support for patients

