

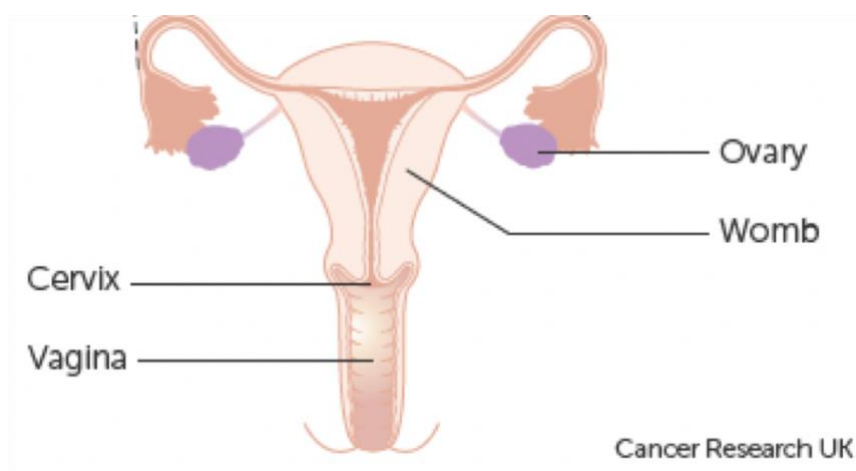


CERVICAL CANCER

The Facts

Every year in Ireland about 300 women are diagnosed with cervical cancer. It happens when cells in the cervix (neck of the womb) become abnormal and change slowly over time to cancer. Abnormal cells are sometimes called pre-cancerous cells. They are caused by the human papillomavirus (HPV).

The cervix is the opening to the vagina from the womb. It is a strong muscle.



The cervix undergoes changes as we go through puberty and throughout our lives. There is an area where the type of cell changes from gland like cells (glandular) to flattened cells (squamous). This is what is called the transformation zone and is a natural process. However, these cells when exposed to certain factors such as HPV can over time become abnormal or pre-cancerous.

In most healthy people these early changes will return to normal but for some they can continue to advance over the years and cause cervical cancer to develop.

Primary screening for the HPV virus which causes these pre-cancerous cancers is now implemented by CervicalCheck. This information sheet will focus however on cervical cancer and not the screening program.



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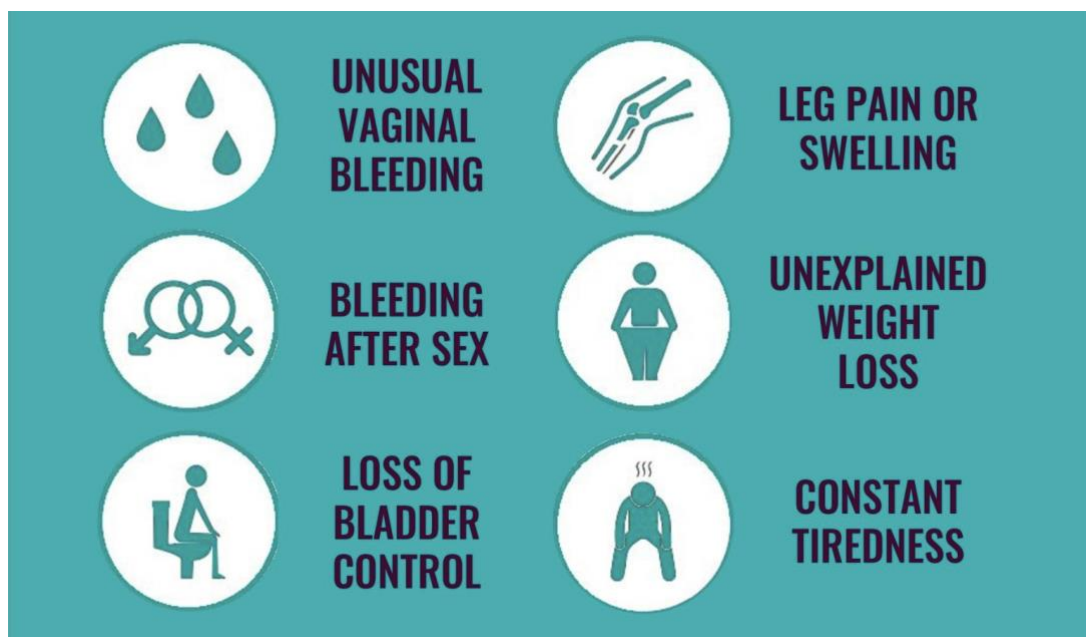
Symptoms

Cervical cancer often has no symptoms in its early stages. The most common symptom as it develops is abnormal bleeding.

Abnormal bleeding can include:

- *irregular vaginal bleeding*
- *bleeding between periods*
- *vaginal spotting or unusual discharge*
- *bleeding when you have gone through the menopause (post-menopausal bleeding)*
- *bleeding after sex*

Other symptoms can include:



Unexplained pelvic or back pain are also possible symptoms, although there can be many other causes for these.



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Risk Factors

The following increase your risk of developing cervical cancer:

- **HPV virus:** Nearly all cervical cancers are caused by the HPV virus. This is a common virus passed on during sexual contact. Usually it clears up by itself, although this can take up to 18 months.
- **Smoking:** Smoking increases your risk of abnormal changes to the cells in the cervix. Chemicals in cigarettes can affect how your cervix fights HPV infection.
- **Not having cervical screening:** Having regular cervical screening tests can help to find out if you're at risk and to spot any changes to cervical cells before they turn cancerous.

It is important to have regular cervical screening, so that any cell changes can be picked up early. Precancerous cells are often called Cervical Intraepithelial Neoplasia or CIN and these can often be treated within the Colposcopy clinic.

Diagnosis

Cervical cancer may be suspected after an abnormal cervical smear test or alternatively when symptoms develop. A **biopsy** is important to make the diagnosis and also identify which type of cervical cancer you have. The biopsy is often performed at a colposcopy clinic under local anaesthetic or occasionally under general anaesthetic.

Following a diagnosis, you will have general blood tests and specific radiological scans to check whether the cancer has spread beyond the cervix.

These scans are often a combination of an **MRI, CT scan** and/or a specialised scan called a **CT PET**.

- **CT Scan:** This is often a scan to assess your chest, abdomen and pelvis. It is performed in the X-Ray department and involves passing through a circular or "donut" shaped scanner.
- **MRI Scan:** This is a very useful scan to assess the tumour in the cervix, the tissue directly around it and also the lymph nodes in the pelvis. It involves passing into a tunnel and some people find more difficult but the procedure will be explained and the scan will aim to assess the pelvis only.
- **PET CT:** This scan also looks at the entire body and is used to identify if the cancer has spread.

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



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Occasionally it is necessary to perform an examination under anaesthetic to fully assess the cervical tumour or obtain a further biopsy.

All of our patients are discussed at our MDT 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.

Types of Cervical Cancer

There are different types of cervical cancer:

- **Squamous Cell Carcinoma**
Squamous cells are the flat, skin-like cells that cover the outer surface of the cervix (the ectocervix). This is the most common type with between 70 - 80 out of every 100 cervical cancers (70 - 80%) being this type.
- **Adenocarcinoma**
This cancer starts in the gland cells that produce mucus. The cervix has glandular cells scattered along the inside of the passage that runs from the cervix to the womb (the endocervical canal). Adenocarcinoma is less common than squamous cell cancer, but has become more common in recent years. Around 20 in every 100 cervical cancers (20%) are adenocarcinomas. They tend to be treated in the same way as squamous cell cancer of the cervix.
- **Small Cell**
A very rare type of cervical cancer. Around 3 in every 100 women (3%) are diagnosed with cervical cancer have this type. Small cell cancers tend to grow quickly and are treated in a different way to the more common types of cervical cancer.
- **Other Rare Types**
Very rarely, other types of cancer can occur in the cervix. For example, lymphomas and sarcomas. They are treated in a different way to squamous and adenocarcinoma cervical cancers.



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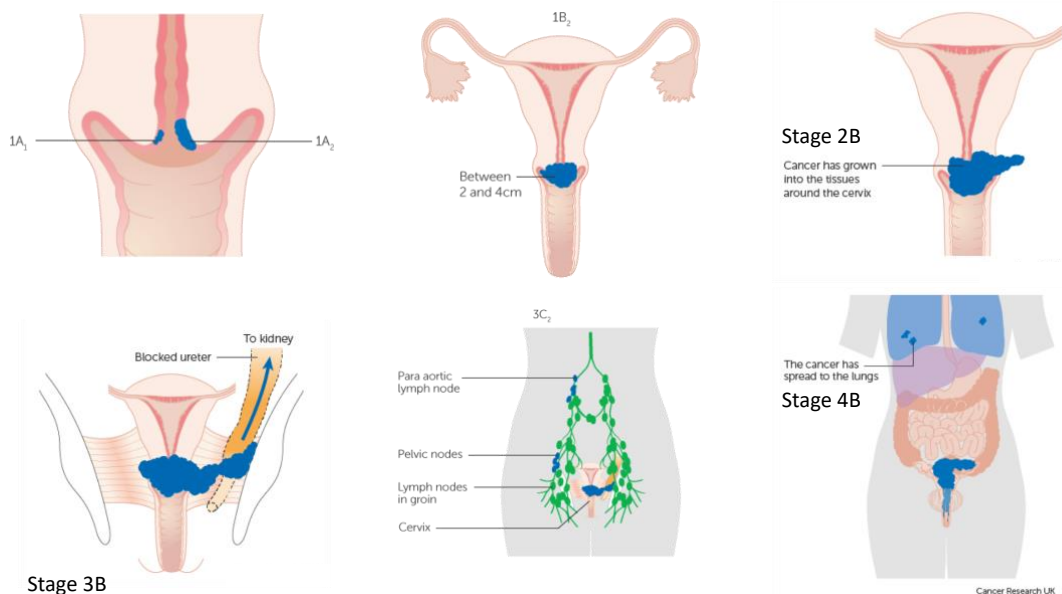
Staging of Cervical Cancer

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).

For Cervical Cancer we apply the International Federation of Gynaecology and Obstetrics (FIGO) staging system for cervical cancer.

- **Stage 1:** Confined to the cervix. This may only be seen by a microscope in Stage 1A. In Stage 1B the cancer is seen as a visible tumour but is still localised to the cervix. It is subdivided to Stages 1B1 to 1B3 depending on the size of the tumour. These stages are often treated by surgery but in larger tumours chemoradiation may be a superior treatment.
- **Stage 2:** The cancer has spread from the cervix to the upper vagina (Stage 2A) or into the surrounding tissue known as the parametrium (Stage 2B). Chemoradiation is the main treatment. Only occasionally may surgery be considered.
- **Stage 3:** The cancer has spread from the cervix into the structures around it (Stages 3A/B) or into the lymph nodes in the pelvis or abdomen (Stage 3C). Chemoradiation is the preferred treatment.
- **Stage 4:** The cancer has spread to the bladder or back passage/rectum (Stage 4A) or further away (Stage 4B). The main treatments are chemotherapy, radiotherapy or a combination of these treatments. If the cancer is within the bladder or rectum with no other spread a form of major surgery can be considered.

Summary of Stages in Cervical Cancer (For full staging please see Cancer Research UK)





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Treatment for Cervical Cancer

The Staging of the cancer, the type of cancer, your general health and also your age and fertility wishes will all be considered when deciding the best treatment pathway.

The main treatments for cervical cancer are therefore either:

1. **Surgery** – this is often in the form of a radical hysterectomy and removal of the pelvic lymph nodes
2. **Radiotherapy and Chemotherapy** – these are often run along side each other (called concomitant therapy) or occasionally the chemotherapy will be given first

▶ **Surgery**

This is the preferred option for small, visible cervical tumours. You'll usually only have this surgery if your tumour is smaller than 3cm.

A radical hysterectomy removes: the cervix and its surrounding tissue (parametrium), uterus (womb), top of the vagina, lymph nodes, fallopian tubes and occasionally the ovaries. The pelvic lymph nodes are also removed.

There is an option to retain the uterus in some patients and preserve fertility (radical trachelectomy) but this is only safe in patients with small tumours, following discussion by the MDT and following counselling of the patient.

Our aim is to try and avoid the need for other treatments after surgery such as radiotherapy as there is a higher risk of long term complications but occasionally this may still be required after careful review of the tissue by our pathology team.

▶ **Chemotherapy & Radiotherapy (Chemoradiation)**

You are most likely to have chemoradiation treatment if your cervical cancer is between Stage 1B3 up to a Stage 4A. You might also have this treatment if you have had surgery and cancer cells were found in the lymph nodes close to the cervix.

The most common chemotherapy is Cisplatin. You may have it before the radiotherapy starts and continue to have it during the radiotherapy treatment.

Chemotherapy is usually given once a week throughout a 5 week radiotherapy course. Or you may have chemotherapy every 2 or 3 weeks. It depends on the chemotherapy drugs that you have.



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Radiotherapy is given in two ways:

- **External beam radiotherapy:** The radiation comes from machines which aim rays directly at your tumour or the tumour site. The machines are called linear accelerators.
- **Internal radiotherapy (brachytherapy):** The radiation source is placed inside your body – usually inside your vagina – in special applicators on or near your tumour.

Radiotherapy treatment is usually a combination of external and internal (brachytherapy) treatments. With this treatment, you have daily external radiotherapy for 5 days every week, for around 5 weeks. You also have a boost of internal radiotherapy (brachytherapy) at the end of your course.

Before you begin treatment, the radiotherapy team work out how much radiation you need. They divide it into a number of smaller treatments. They call each treatment a fraction. At your planning appointment the radiographers might make pen marks or small tattoos on your skin in the treatment area.

There can be side effects from radiotherapy. These tend to start a few days after the radiotherapy begins. They may get worse during the treatment and for a couple of weeks after the treatment ends. But they usually begin to improve about 2 weeks after the end of treatment.

These can include:

- Diarrhoea
- Symptoms of bladder inflammation such as discomfort/burning sensation passing urine
- Vaginal irritation or discharge
- Your skin might go red or darker in the treatment area
- Tiredness

These side effects vary from person to person. You may not have all of the effects mentioned.

Most side effects gradually go away in the weeks or months after treatment. But some side effects can continue or might start some months or years later. These can include narrowing and dryness of the vagina, bladder or bowel symptoms and lymphoedema. Follow up therefore after these treatments is not only important to ensure the cancer has not returned but also to assess and treat any long-term complications.

This type of radiotherapy won't make you radioactive. It's safe to be around other people, including pregnant women and children.



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▶ Targeted Therapies

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 cervical 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. Not every patient will benefit from these treatments and it is important not to give these inappropriately as like all drugs there can be significant side effects.

- **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 and enhance the ability of the immune system to fight cancer. This treatment is effective in many cancers but is unfortunately not suitable for every patient.

Research

Our team specialises in cervical 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.

Survivorship

The treatment of cervical cancer itself may result in symptoms and longer-term complications. We do everything possible to try and minimise the risk of these complications but also have developed services to identify and treat these as early as possible.



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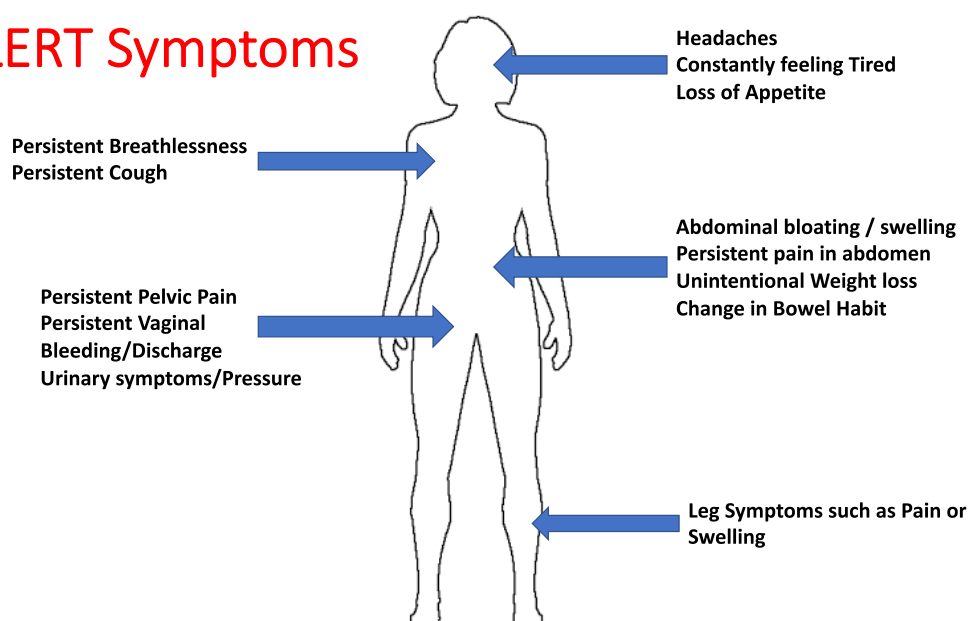
Our department is linked with a specialist group of physiotherapists in lymphoedema. This team will often be involved in our patients' care to identify lymphoedema early and manage this condition.

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. Like most cancers, the earlier the stage the higher the survival outcomes.

If the cancer does recur there are still several treatment options if this is detected early. Therefore, being aware of the symptoms of possible recurrence is 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.

ALERT Symptoms



Chemotherapy is the most common treatments for recurrent cervical cancer but many newer treatments such as immunotherapy are now being used in patients if their type of cancer is suitable. Some of these new therapies do not benefit every patient and this will be explained to you.

Some women are candidates for surgery if the recurrence is located only in the pelvis and if previous radiotherapy has been used. This may involve major surgery called an exenteration which involves the removal of the pelvic organs such as the bladder, womb/cervix/vagina and rectum. Therefore, all cases will be discussed carefully with our panel of experts and each patient and their family will have counselling regarding this surgery.



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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 from charities and support groups.

Further information and support for cervical cancer can be found at:

www.cancer.ie

www.macmillen.org.uk

www.arccancersupport.ie

www.jostrust.org.uk

www.cancerresearchuk.org

www.cervicalcheck-HSE.ie

www.trachelectomy.co.uk

www.menopausematters.co.uk