



# Understanding Stomach and Oesophageal Cancers

A guide for people with cancer,  
their families and friends

Cancer  
information

For information & support, call

**13 11 20**



## **Understanding Stomach and Oesophageal Cancers**

A guide for people with cancer, their families and friends

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### **Note to reader**

Always consult your doctor about matters that affect your health. This booklet is intended as a general introduction to the topic and should not be seen as a substitute for medical, legal or financial advice. You should obtain independent advice relevant to your specific situation from appropriate professionals, and you may wish to discuss issues raised in this book with them.

All care is taken to ensure that the information in this booklet is accurate at the time of publication. Please note that information on cancer, including the diagnosis, treatment and prevention of cancer, is constantly being updated and revised by medical professionals and the research community. Cancer Council Australia and its members exclude all liability for any injury, loss or damage incurred by use of or reliance on the information provided in this booklet.

### **Cancer Council**

Cancer Council is Australia's peak non-government cancer control organisation. Through the eight state and territory Cancer Councils, we provide a broad range of programs and services to help improve the quality of life of people living with cancer, their families and friends. Cancer Councils also invest heavily in research and prevention. To make a donation and help us beat cancer, visit [cancer.org.au](http://cancer.org.au) or call your local Cancer Council.



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# About this booklet

This booklet has been prepared to help you understand more about cancers of the stomach and oesophagus. Many people feel shocked and upset when told they have stomach or oesophageal cancer. We hope this booklet will help you, your family and friends understand how these cancers are diagnosed and treated. We also include information about support services.

We cannot give advice about the best treatment for you. You need to discuss this with your doctors. However, we hope this information will answer some of your questions and help you think about what to ask your treatment team (see page 60 for a question checklist).

This booklet contains separate information for stomach cancer and oesophageal cancer – just read the parts that are useful to you. Some medical terms that may be unfamiliar are explained in the glossary (see page 61). You may like to pass this booklet to your family and friends for their information.

## How this booklet was developed

This information was developed with help from a range of health professionals and people affected by these cancers. It is based on international clinical practice guidelines.<sup>1-2</sup>

If you or your family have any questions, call Cancer Council **13 11 20**. We can send you more information and connect you with support services in your area. You can also visit your local Cancer Council website (see back cover).



**Cancer  
Council**  
**13 11 20**

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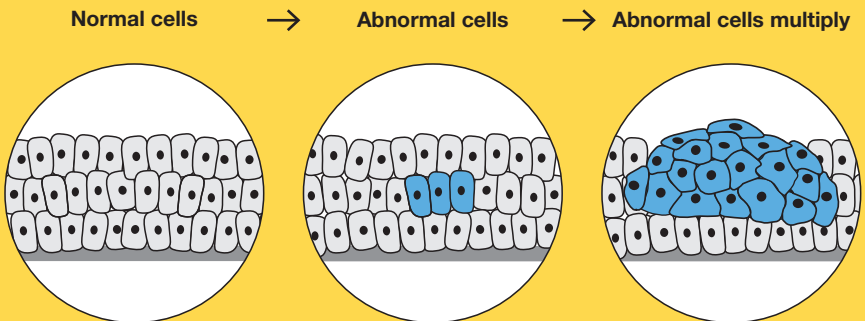
# What is cancer?

Cancer is a disease of the cells. Cells are the body's basic building blocks – they make up tissues and organs. The body constantly makes new cells to help us grow, replace worn-out tissue and heal injuries.

Normally, cells multiply and die in an orderly way, so that each new cell replaces one lost. Sometimes, however, cells become abnormal and keep growing. In solid cancers, such as stomach or oesophageal cancer, the abnormal cells form a mass or lump called a tumour. In some cancers, such as leukaemia, the abnormal cells build up in the blood.

Not all tumours are cancer. Benign tumours tend to grow slowly and usually don't move into other parts of the body or turn into

## How cancer starts

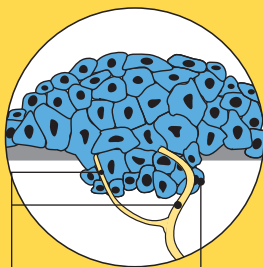


cancer. Cancerous tumours, also known as malignant tumours, have the potential to spread. They may invade nearby tissue, destroying normal cells. The cancer cells can break away and travel through the bloodstream or lymph vessels to other parts of the body.

The cancer that first develops is called the primary cancer. It is considered localised cancer if it has not spread to other parts of the body. If the primary cancer cells grow and form another tumour at a new site, it is called a secondary cancer or metastasis. A metastasis keeps the name of the original cancer. For example, stomach cancer that has spread to the bowel is called metastatic stomach cancer, even though the main symptoms may be coming from the bowel.

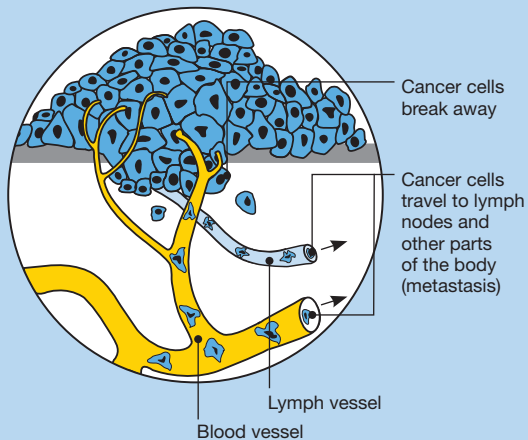
## How cancer spreads

### → Malignant cancer



Grows own  
blood vessels  
(angiogenesis)

Invades  
surrounding  
tissue



Cancer cells  
break away

Cancer cells  
travel to lymph  
nodes and  
other parts of  
the body  
(metastasis)

Lymph vessel

Blood vessel



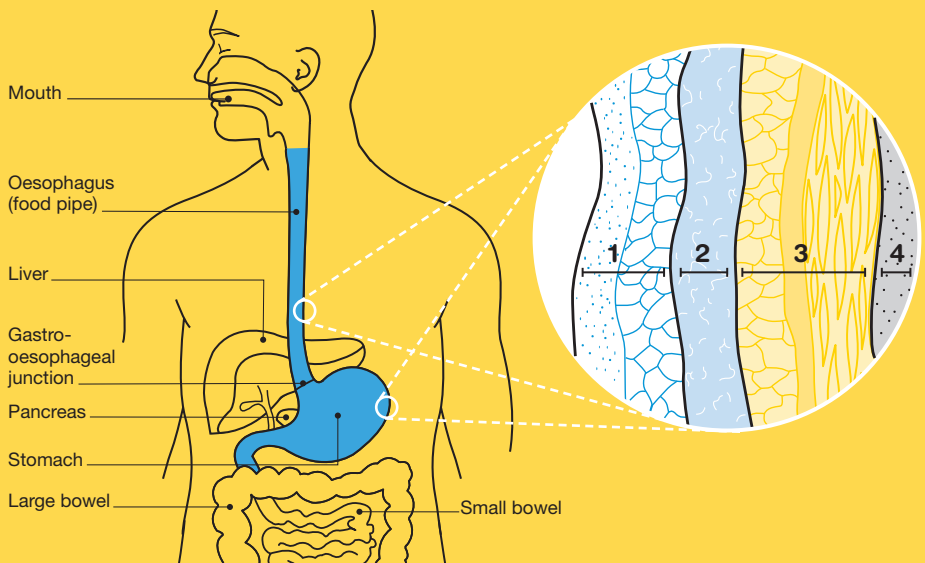
# The oesophagus and stomach

The oesophagus and stomach are part of the upper gastrointestinal (GI) tract, which is part of the digestive system. The digestive system helps the body break down food and turn it into energy.

The oesophagus (food pipe or gullet) is a long, muscular tube. It moves food, fluid and saliva from the mouth and throat to the stomach. A valve (sphincter) at the end of the oesophagus stops acid and food moving from the stomach back into the oesophagus.

The stomach is a hollow, muscular sac, located between the end of the oesophagus and the beginning of the small bowel. The stomach

## The oesophagus and stomach





expands to store and help digest food that has been swallowed. It also helps the body absorb some vitamins and minerals.

Juices in the stomach break down food into a thick fluid, which then moves into the small bowel. In the small bowel, nutrients from the broken-down food are absorbed into the bloodstream. The waste matter moves into the large bowel, where fluids are absorbed into the body. The solid waste matter is passed out of the body as a bowel movement.

The oesophageal wall has three layers of tissue and an outer covering known as the adventitia. The stomach wall has four layers of tissue.

Layer	In oesophagus	In stomach
<b>1. mucosa</b> (moist innermost layer)	<ul style="list-style-type: none"> <li>made up of squamous cells</li> </ul>	<ul style="list-style-type: none"> <li>made up of glandular cells</li> <li>produces gastric fluids to help break down food</li> <li>produces mucus (a thick fluid) that protects the stomach lining</li> </ul>
<b>2. submucosa</b> (supports the mucosa)	<ul style="list-style-type: none"> <li>glands in the submucosa produce fluid (mucus)</li> <li>this fluid helps to move food through the oesophagus</li> </ul>	<ul style="list-style-type: none"> <li>provides blood and nutrients to the stomach</li> </ul>
<b>3. muscle layer</b>	<ul style="list-style-type: none"> <li>known as the muscularis propria</li> <li>produces contractions to help push food down the oesophagus and into the stomach</li> </ul>	<ul style="list-style-type: none"> <li>known as the muscularis externa</li> <li>produces contractions to help break down food and push it into the small bowel</li> </ul>
<b>4. outer covering/ layer</b>	<ul style="list-style-type: none"> <li>known as the adventitia</li> <li>connective tissue supporting the oesophagus</li> </ul>	<ul style="list-style-type: none"> <li>known as the serosa</li> <li>a smooth membrane that surrounds the stomach</li> </ul>



## Key questions

### Q: What is stomach cancer?

**A:** Stomach cancer develops when cells in the lining of the stomach grow and divide in an abnormal way. Tumours can begin anywhere in the stomach, although most start in the glandular tissue found on the stomach's inner surface (mucosa). This type of cancer is called adenocarcinoma of the stomach (also known as gastric cancer).

If it is not found and treated early, stomach cancer can spread through the lymphatic system to nearby lymph nodes or through the bloodstream to other parts of the body, such as the liver and lungs. It may also spread to the walls of the abdomen (peritoneum). Rarely, it can grow through the stomach wall into nearby organs such as the pancreas and bowel.

### Q: How common is stomach cancer?

**A:** About 2200 people are diagnosed with stomach cancer in Australia each year. Men are twice as likely as women to be diagnosed with stomach cancer. It is more common in people over 60, but it can occur at any age. About one in 130 men and one in 300 women are likely to develop stomach cancer before the age of 75.<sup>3</sup>

#### Rare types of stomach and oesophageal cancer

Some less common types of cancer can affect the stomach and oesophagus. These include small cell carcinomas, lymphomas, neuroendocrine tumours and gastrointestinal stromal tumours. These types of cancer aren't discussed in this booklet and treatment may be different. For more information, call Cancer Council **13 11 20**.



Some cancers start at the point where the stomach meets the oesophagus (the gastro-oesophageal junction). Depending on the type of gastro-oesophageal cancer, it may be treated similarly to stomach cancer or oesophageal cancer. For more information about your situation, talk to your treatment team.

## Q: What is oesophageal cancer?

**A:** Oesophageal cancer begins when abnormal cells develop in the innermost layer (mucosa) of the oesophagus. A tumour can start at any point along the length of the oesophagus. There are two main subtypes:

**Oesophageal adenocarcinoma** – often starts near the gastro-oesophageal junction and is linked with a condition called Barrett’s oesophagus (see next page). Adenocarcinomas are the most common form of oesophageal cancer in Australia.

**Oesophageal squamous cell carcinoma** – starts in the thin, flat cells in the lining of the oesophagus, which are called squamous cells. It often begins in the middle and upper part of the oesophagus. In Australia, squamous cell carcinomas are less common than adenocarcinomas.

If it is not found and treated early, oesophageal cancer can spread through the lymphatic system to nearby lymph nodes or through the bloodstream to other parts of the body, most commonly the liver and lungs. It can also grow through the oesophageal wall and invade nearby structures.

## Q: Is oesophageal cancer common?

**A:** This is an uncommon cancer. In Australia, about 1500 people are diagnosed with oesophageal cancer each year. Men are much more likely than women to be diagnosed with this cancer. It is more common in people over 60, but can occur in younger people. About one in 160 men and one in 580 women are likely to develop oesophageal cancer before the age of 75.<sup>4</sup>

## Q: What are the risk factors?

**A:** The exact causes of stomach and oesophageal cancers are unknown, but the factors listed in the table on the opposite page may increase your risk. Having one or more of these risk factors does not mean you will develop cancer.

### GORD and Barrett's oesophagus

Reflux is when stomach acid flows up into the oesophagus. Some people with reflux are diagnosed with gastro-oesophageal reflux disease (GORD).

Over time, stomach acid can damage the lining of the oesophagus, causing inflammation or ulceration (oesophagitis). This may cause the squamous cells lining the oesophagus to be replaced by column-shaped

cells, which look like the cells lining the stomach. This condition is called Barrett's oesophagus and it can lead to oesophageal adenocarcinoma.

If you have Barrett's oesophagus, your doctor may recommend you have regular endoscopies to look for early cell changes that may lead to cancer. Most people with Barrett's oesophagus will not develop oesophageal cancer.

## Known risk factors

Stomach cancer	Oesophageal cancer
<ul style="list-style-type: none"><li>• older age (being over 60)</li><li>• infection with <i>Helicobacter pylori</i> (<i>H. pylori</i>), a type of bacteria found in the stomach</li><li>• having had a subtotal gastrectomy (see page 25) to treat non-cancerous conditions</li><li>• smoking</li><li>• low red blood cell levels (pernicious anaemia)</li><li>• a family history of stomach cancer</li><li>• having an inherited genetic condition such as familial adenomatous polyposis (FAP), Lynch syndrome, gastric adenocarcinoma and proximal polyposis of the stomach (GAPPS) or hereditary diffuse gastric cancer (HDGC)</li><li>• chronic inflammation of the stomach (chronic gastritis)</li><li>• being overweight or obese</li><li>• drinking alcohol</li><li>• eating foods preserved by salting</li></ul>	<h3>Adenocarcinoma</h3> <ul style="list-style-type: none"><li>• being overweight or obese</li><li>• medical conditions, including gastro-oesophageal reflux disease (GORD) and Barrett's oesophagus (see box on opposite page)</li><li>• smoking</li><li>• older age (being over 60)</li><li>• having an inherited genetic condition such as Peutz-Jeghers syndrome (PJS) or Cowden syndrome</li></ul> <h3>Squamous cell carcinoma</h3> <ul style="list-style-type: none"><li>• drinking alcohol</li><li>• smoking</li><li>• older age (being over 60)</li><li>• drinking very hot liquids</li></ul>

## Q: What are the symptoms?

**A:** Stomach and oesophageal cancers may not cause symptoms in their early stages. This means that they are usually diagnosed when the cancer is more advanced. Common symptoms are listed in the table below. These symptoms can also occur in many other conditions and do not necessarily mean that you have cancer. Speak with your general practitioner (GP) if you are concerned.

### Common symptoms

Stomach cancer	Oesophageal cancer
<ul style="list-style-type: none"><li>• unexplained weight loss or loss of appetite</li><li>• difficulty swallowing</li><li>• indigestion – e.g. pain or burning sensation in the abdomen (heartburn), frequent burping, reflux</li><li>• persistent nausea and/or vomiting with no apparent cause</li><li>• abdominal (stomach) pain</li><li>• sense of fullness, even after a small meal</li><li>• swelling of the abdomen or feeling bloated</li><li>• unexplained tiredness, which may be due to anaemia</li><li>• vomit containing blood</li><li>• black-coloured or bloody stools</li></ul>	<ul style="list-style-type: none"><li>• difficulty swallowing</li><li>• new or worsening heartburn or reflux</li><li>• food or fluids “catching” in the throat or episodes of choking when swallowing</li><li>• pain when swallowing</li><li>• unexplained weight loss or loss of appetite</li><li>• development of discomfort in the upper abdomen, especially when eating</li><li>• persistent unexplained tiredness</li><li>• vomiting blood</li><li>• black-coloured or bloody stools</li></ul>



# Diagnosis

There is no national screening program for the early detection of stomach or oesophageal cancer. If your GP suspects that you have stomach or oesophageal cancer, they will examine you and refer you to a specialist for further tests. The main tests are endoscopy and biopsy (the removal of a tissue sample). You may have other tests to check your overall health and see if the cancer has spread. Your specialist will combine the test results to work out the overall stage and prognosis of the cancer (see pages 18–19).

## Endoscopy and biopsy

An endoscopy (also called a gastroscopy, oesophagoscopy or upper endoscopy) allows your doctor to look inside your digestive tract to examine the lining. This procedure is usually performed as day surgery.

Most people are told not to eat or drink (fast) for 6 hours before an endoscopy. In some cases, you can continue drinking clear fluids until two hours before the procedure. Your doctor will advise you about this. Before the procedure, your throat may be sprayed with a local anaesthetic, which can taste very bitter, and you will usually be given a sedative into a vein to ensure you are comfortable during the procedure. A long, flexible tube with a light and small camera on the end (endoscope) will then be passed into your mouth, down your throat and oesophagus, and into your stomach and small bowel.

If the doctor sees any suspicious-looking areas, they may remove a small amount of tissue from the stomach or oesophageal lining. This is known as a biopsy. A pathologist will examine the tissue under a microscope to check for signs of disease. Biopsy results are usually

available within 5–7 days. This waiting period can be an anxious time. It may help to talk to a supportive friend, relative or health professional about how you are feeling.

An endoscopy takes about 15 minutes. You will need to have someone take you home after the procedure, as you may feel drowsy or weak. You could have a sore throat afterwards and feel a little bloated. Endoscopies have some risks, such as bleeding or getting a small tear or hole in the stomach or oesophagus (perforation). These risks are very uncommon. Your doctor should explain all the risks before asking you to agree (consent) to the procedure.

### **Endoscopic ultrasound (EUS)**

You may have this test at the same time as a standard endoscopy. The doctor will insert an endoscope with an ultrasound probe on the end. The probe releases soundwaves, which echo when they bounce off anything solid, such as an organ or tumour. This procedure helps determine whether the cancer has spread into the oesophageal wall, nearby tissues or lymph nodes. During the EUS, your doctor may use the ultrasound to guide the needle into the area of interest and take further tissue samples.

### **Further tests**

If the biopsy shows you have stomach or oesophageal cancer, you will have some of the following tests to find out whether the cancer has spread to other areas of your body. This is called staging (see page 18). Some of the tests may be repeated during or after treatment to check your health and see how well the treatment is working.



## Blood tests

You might have blood tests to assess your general health, look for signs of anaemia, and see how well your liver and kidneys are working. Blood tests can also help identify nutritional problems.


## CT scan

A computerised tomography (CT) scan uses x-ray beams to create detailed, cross-sectional pictures of the inside of your body. It helps determine how far the cancer has spread from the primary tumour site. You may have a CT scan of your:

- chest, abdomen and pelvis for stomach cancer
- neck, chest, abdomen and pelvis for oesophageal cancer.

Before a CT scan, you may have an injection of dye and/or be asked to drink a liquid dye. This dye, known as the contrast, helps ensure that anything unusual can be seen more clearly. The dye might make you feel hot all over and leave a strange taste in your mouth for a few minutes. Rarely, more serious reactions can occur.

The CT scan machine is large and round like a doughnut. You will need to lie still on a table while the scanner moves around you. The scan itself is painless and takes only a few minutes, but the preparation can take 10–30 minutes.



Before having scans, tell the doctor if you have any allergies or have had a reaction during previous scans. You should also let them know if you have diabetes or kidney disease or are pregnant.

## PET-CT scan

A positron emission tomography (PET) scan combined with a CT scan is a specialised imaging test. The two scans provide more detailed and accurate information about the cancer than a CT scan on its own. A PET-CT scan is most commonly used to help determine whether oesophageal cancer has spread to other parts of the body. Only some people need this test. As PET scans do not detect some stomach cancers, Medicare does not currently cover the cost.

To prepare for a PET-CT scan, you will be asked not to eat or drink for a period of time (fast). Before the scan, you will be injected with a glucose solution containing a small amount of radioactive material. Some cancer cells may show up brighter on the scan because they take up more glucose solution than normal cells do.

You will be asked to sit quietly for 30–90 minutes as the glucose spreads through your body, then you will be scanned. The scan itself will take around 30 minutes. Let your doctor know if you are claustrophobic, as you need to be in a confined space for the scan.

## Laparoscopy

A laparoscopy is usually done as day surgery under general anaesthetic. This procedure allows your doctor to look inside your abdomen and examine the outer layer of the stomach for signs that the cancer has spread. A laparoscopy is used to stage:

- stomach cancer to see whether it involves the lining of the abdomen (peritoneum) or other organs
- oesophageal cancer that is located in the gastro-oesophageal junction and also involves the upper part of the stomach.

The doctor will make small cuts in your abdomen and pump in gas to inflate your abdomen. A tube with a light and camera attached (a laparoscope) will then be inserted into your body. The camera projects images onto a TV screen so the doctor can see cancer cells that are too small to be seen on CT or PET–CT scans. The doctor may take more tissue samples for biopsy. Your doctor will explain the risks before asking you to agree to the procedure.

## Staging endoscopic resection

If you are diagnosed with very early cancer in the stomach or oesophagus, you may have an endoscopic resection (see pages 25 and 35). This procedure may help your doctor assess the risk that cancer has spread to the lymph nodes and needs further treatment.

## Molecular testing

If you are diagnosed with advanced cancer in the stomach or gastro-oesophageal junction, your doctor may order extra tests on the biopsy sample to look for particular features that can cause the cancer cells to behave differently. These tests may look for mutations in the HER2 gene or specific proteins linked with the growth of cancer cells. Knowing whether the tumour has one of these features may help your treatment team decide on suitable treatment options. See *Targeted therapy for stomach cancer* on page 32 for more details.



For an overview of what to expect during all stages of your care for stomach or oesophageal cancer, visit [cancerpathways.org.au/optimal-care-pathways/oesophagogastric-cancer](https://cancerpathways.org.au/optimal-care-pathways/oesophagogastric-cancer). This is a short guide to what is recommended, from diagnosis to treatment and beyond.

## Staging

The tests described on pages 13–17 help show how far the cancer has spread. This process is called staging and it helps your health care team recommend the best treatment for you.

The TNM staging system is the method most commonly used to describe the different stages of stomach and oesophageal cancers. The specialist gives numbers to the size of the tumour (T1–4), whether or not lymph nodes are affected (N0–N3), and whether the cancer has spread or metastasised (M0 or M1). The lower the numbers, the less advanced the cancer.

The TNM scores are combined to work out the overall stage of the cancer, from stage I to stage IV (see table below). If you need help to understand staging, ask someone in your treatment team to explain it in a way that makes sense to you. You can also call Cancer Council 13 11 20.

### Stages of stomach and oesophageal cancers

<b>stage I</b>	tumours are found only in the stomach or oesophageal wall lining	early or limited cancer
<b>stages II–III</b>	tumours have spread deeper into the layers of the stomach or oesophageal wall and to nearby lymph nodes	locally advanced cancer
<b>stage IV</b>	tumours have spread beyond the stomach or oesophageal wall to nearby lymph nodes or parts of the body, or to distant lymph nodes and parts of the body	metastatic or advanced cancer

## Prognosis

Prognosis means the expected outcome of a disease. You may wish to discuss your prognosis and treatment options with your doctor, but it is not possible for anyone to predict the exact course of the disease. Instead, your doctor can give you an idea about the general prognosis for people with the same type and stage of cancer.

Generally, the earlier stomach or oesophageal cancer is diagnosed, the better the chances of successful treatment. If cancer is found after it has spread from the primary tumour site, the prognosis is not as good.

The following factors are all important in assessing your prognosis: test results; the type of cancer; the size of the cancer and how far it has grown into other tissue; whether the cancer has spread to the lymph nodes; the likelihood of response to treatment; and your age, level of fitness and medical history. These factors will also help your doctor advise you on the best treatment options.

## Which health professionals will I see?

Your GP will assess your symptoms and arrange the first tests to check your general health. You will usually be referred to a specialist such as a gastroenterologist or an upper gastrointestinal surgeon for an endoscopy (see page 13) and further tests. If stomach or oesophageal cancer is diagnosed, the specialist will consider treatment options. Often these will be discussed with other health professionals at what is known as a multidisciplinary team (MDT) meeting. During and after treatment, you will see a range of health professionals who specialise in different aspects of your care.

## Health professionals you may see

<b>gastroenterologist*</b>	diagnoses and treats some disorders of the digestive system; may perform endoscopies and insert feeding tubes
<b>upper gastrointestinal surgeon*</b>	diagnoses, treats and performs surgery for diseases of the upper digestive system; performs endoscopies and inserts feeding tubes
<b>medical oncologist*</b>	treats cancer with drug therapies such as chemotherapy, targeted therapy and immunotherapy (systemic treatment)
<b>radiation oncologist*</b>	treats cancer by prescribing and overseeing a course of radiation therapy
<b>radiation therapist</b>	plans and delivers radiation therapy
<b>cancer care coordinator</b>	coordinates your care, liaises with other members of the MDT and supports you and your family throughout treatment; may be a clinical nurse consultant (CNC) or clinical nurse specialist (CNS)
<b>nurse</b>	administers drugs and provides care, information and support throughout treatment
<b>dietitian</b>	recommends an eating plan to follow while you are in treatment and recovery
<b>physiotherapist</b>	helps with restoring movement and mobility, and preventing further injury
<b>social worker, psychologist</b>	link you to support services; help with emotional and practical issues associated with cancer and treatment
<b>palliative care team</b>	work closely with the GP and cancer team to help control symptoms and maintain quality of life

\* Specialist doctor



## Key points about diagnosis

### Main test

- Endoscopy is the main diagnostic test. This allows your doctor to look inside the digestive tract and take tissue samples (biopsies). It also provides important information which will guide treatment recommendations.
- You may have an endoscopic ultrasound (EUS) to show how far the cancer has spread into the oesophageal wall or lymph nodes.
- A pathologist examines the biopsied tissue under a microscope to find out more about the cells. This shows if cancer is present and how quickly it is growing.

### Other tests

Other tests can give more information about the cancer to help guide treatment. These tests may include:

- imaging scans (CT or PET-CT) to show whether the cancer has spread from the stomach or oesophageal wall
- a laparoscopy to see whether the cancer has spread to the lining of the abdomen or other organs
- endoscopic resection to help predict the risk of spread and the need for other treatments
- molecular testing to look for particular features in the cancer cells.

### Staging and prognosis

The stage shows how far the cancer has spread through the body. In general, earlier stages have better outcomes.



# Making treatment decisions

Sometimes it is difficult to decide on the type of treatment to have. You may feel that everything is happening too fast, or you might be anxious to get started. Check with your specialist how soon treatment should begin – often it won't affect the success of the treatment to wait a while. Ask them to explain the options, and take as much time as you can before making a decision.

**Know your options** – Understanding the disease, the available treatments, possible side effects and any extra costs can help you weigh up the options and make a well-informed decision. Check if the specialist is part of a multidisciplinary team (see page 19) and if the treatment centre is the most appropriate one for you – you may be able to have treatment closer to home, or it might be worth travelling to a centre that specialises in a particular treatment.

**Record the details** – When your doctor first tells you that you have cancer, you may not remember everything you are told. Taking notes or recording the discussion can help. It is a good idea to have a family member or friend go with you to appointments to join in the discussion, write notes or simply listen.

**Ask questions** – If you are confused or want to check anything, it is important to ask your specialist questions. Try to prepare a list before appointments (see page 60 for suggestions). If you have a lot of questions, you could talk to a cancer care coordinator or nurse.

**Consider a second opinion** – You may want to get a second opinion from another specialist to confirm or clarify your specialist's recommendations or reassure you that you have explored all of



your options. Specialists are used to people doing this. Your GP or specialist can refer you to another specialist and send your initial results to that person. You can get a second opinion even if you have started treatment or still want to be treated by your first doctor. You might decide you would prefer to be treated by the second specialist.

**It's your decision** – Adults have the right to accept or refuse any treatment that they are offered. For example, some people with advanced cancer choose treatment that has significant side effects even if it gives only a small benefit for a short period of time. Others decide to focus their treatment on quality of life. You may want to discuss your decision with the treatment team, GP, family and friends.

- See our *Cancer Care and Your Rights* booklet and “Making Treatment Decisions” podcast episode.

### Should I join a clinical trial?

Your doctor or nurse may suggest you take part in a clinical trial.

Doctors run clinical trials to test new or modified treatments and ways of diagnosing disease to see if they are better than current methods. For example, if you join a randomised trial for a new treatment, you will be chosen at random to receive either the best existing treatment or the modified new treatment. Over the years, trials have improved treatments

and led to better outcomes for people diagnosed with cancer.

You may find it helpful to talk to your specialist, clinical trials nurse or GP, or to get a second opinion. If you decide to take part in a clinical trial, you can withdraw at any time. For more information, visit [australiancancertrials.gov.au](http://australiancancertrials.gov.au).

- See our *Understanding Clinical Trials and Research* booklet.



# Treatment for stomach cancer

The most important factor in planning treatment for stomach cancer is the stage of the disease, particularly whether the tumour has spread from its original location. Treatment will also depend on your age, medical history, nutritional needs and general health.

Surgery to remove the tumour is the main treatment for stomach cancer that has not spread. If the cancer has spread, treatment may also include chemotherapy, targeted therapy or radiation therapy.

## Preparing for treatment

**Improve diet and nutrition** – People with stomach or oesophageal cancer often lose a lot of weight and can become malnourished. Your doctor will usually refer you to a dietitian for advice on ways to reduce the weight loss through changes to your diet, liquid supplements or a feeding tube (see page 27). This will help improve your strength, lessen side effects, and lead to better treatment outcomes.

**Stop smoking** – If you are a smoker, you will be encouraged to stop smoking before surgery. If you continue to smoke, you may not respond as well to treatment and smoking may make any side effects you experience worse. For support, see your doctor or call the Quitline on 13 7848.



For more information about treatments and managing side effects, see Cancer Council's publications on surgery, chemotherapy, targeted therapy and radiation therapy. Call **13 11 20** for free copies.

## Surgery for stomach cancer

Surgery aims to remove all of the stomach cancer while keeping as much normal tissue as possible. The surgeon will remove some healthy tissue around the cancer to reduce the risk of the cancer returning. You may have an endoscopic resection or a gastrectomy depending on where the tumour is growing and how advanced the cancer is.

### Endoscopic resection (ER)

Very early-stage tumours that have not spread from the stomach walls may be removed with an endoscope. For some people, an endoscopic resection may be the only treatment needed. This is usually an overnight-stay procedure. Preparation and recovery are similar to endoscopy (see pages 13–14), but there is a higher risk of bleeding or getting a small tear or hole in the stomach (perforation).

### Gastrectomy

This procedure removes part or all of the stomach, leaving as much healthy tissue as possible. The goal is to completely cut out the cancer, including any nearby affected lymph nodes.

**Subtotal or partial gastrectomy** – The cancerous part of the stomach is removed, along with nearby fatty tissue (omentum) and lymph nodes. The upper stomach and oesophagus are usually left in place.

**Total gastrectomy** – The whole stomach is removed, along with nearby fatty tissue (omentum), lymph nodes and parts of nearby organs, if necessary. The surgeon reconnects the oesophagus to the small bowel. The top part of this connection (which is a tube of intestine) takes over some of the stomach's function.

**Lymphadenectomy (lymph node dissection)** – As the cancer might have spread to nearby lymph nodes, your doctor will usually remove some lymph nodes from around your stomach. This reduces the risk of leaving any cancer behind.

### **How the surgery is done**

The surgery will be done under a general anaesthetic. There are two ways to perform a gastrectomy:

- in a laparotomy (open surgery), the procedure is done through a long cut in the upper part of the stomach
- in a laparoscopy (keyhole surgery), the surgeon will make some small cuts in the abdomen, then insert a thin instrument with a light and camera (laparoscope) into one of the cuts. The surgeon inserts tools into the other cuts and performs the surgery using the images from the camera for guidance.

The hospital stay and recovery time are fairly similar for both types of surgery. Laparoscopic surgery usually means a smaller scar, however, open surgery may be considered a better option in many situations.

### **Risks of stomach surgery**

As with any major surgery, stomach surgery has risks. These may include infection, bleeding, increased strain on the heart and lungs, damage to nearby organs, or leaking from the connections between the small bowel and either the oesophagus or stomach. Some people experience an irregular heartbeat, but this usually settles in a few days.

You will be carefully monitored for any side effects. For more information about ongoing effects after surgery, see pages 45–51.

## Feeding tubes

If you are unable to eat and drink enough to meet your nutritional needs, you may need a feeding tube.

You may receive all of your nutrition through this tube, or it may be used to supplement the food you eat.

Some people with stomach or oesophageal cancers will have a feeding tube before treatment to help them maintain weight and build up their strength.

Other people will have a feeding tube after surgery while their wound is healing.

Your doctor and dietitian will discuss your individual nutrition needs with you.

Many people find that having a feeding tube eases the pressure and discomfort of eating. Medicines can also be given through a feeding tube. However, if the tube is very small, you may be advised not to put any medicines down the tube to prevent blockages.

A feeding tube can be placed into your small bowel either through a nostril (nasojeunal tube) or through an opening on the outside of your abdomen (jejunostomy or J-tube).

If you go home with the feeding tube in place, a dietitian will advise you on the type and amount of feeding formula you will need.

Your health care team will also tell you how to keep the tube clean; how to prevent wear, leakage and blockages; and when to replace the tube.

Your doctor will remove the feeding tube when it is no longer required.

Having a feeding tube inserted is a major change. It can take time to adjust to a feeding tube and it is common to have a lot of questions. It may help to talk to your family, or to a counsellor or nurse. You can also call Cancer Council **13 11 20** for information and support.

## What to expect after surgery

This is a general overview of what to expect. The process varies from hospital to hospital, and everyone will respond to surgery differently.



### Recovery time

- Your recovery time after the operation will depend on your age, the type of surgery you had and your general health.
- When you wake up after the operation, you will be in a recovery room near the operating theatre or in the intensive care unit.
- Most people will need a high level of care. You can expect to spend time in the high dependency unit or intensive care unit before moving to a standard ward.
- You will probably be in hospital for 5–10 days, but it can take 3–6 months to fully recover from a gastrectomy.
- Talk to your treatment team about any concerns you have about caring for yourself once you return home. If you think you will need home nursing care, ask hospital staff about services in your area.



### Help with your recovery

- You will have some pain and discomfort for several days after your surgery. You will be given pain-relieving medicines to manage this.
- Let your doctor or nurse know if you're in pain so they can adjust your medicines to make you as comfortable as possible. Do not wait until the pain is severe.
- You may have a dressing over the wound. Your doctor or nurse will talk to you about how to keep the wound clean when you go home, to prevent it becoming infected.
- After surgery you will have several tubes in your body, which will be removed as you recover. You may have a drip inserted into a vein in your arm to give you pain relief and to replace your body's fluids until you are able to drink and eat again. You may have a tube from your bladder (catheter) to collect urine in a bag. You may also have a feeding tube.



## Diet

- You will be unable to eat or drink straight after surgery. Your doctor will tell you when you are able to start eating.
- You will usually start with fluids such as soup, and then eat soft foods for about a week. When you are ready, you can try eating some solid foods.
- You may be advised to eat 6–8 small meals or snacks throughout the day.
- The hospital dietitian can prepare eating plans for you and work out whether you need any nutritional supplements.
- After surgery, a feeding tube is sometimes placed into the small bowel through a cut in the abdomen (see page 27). Specially prepared feeding formula is given through this tube while the join between the oesophagus and small bowel heals. The tube is usually removed after 3–4 weeks.
- For more information about eating after surgery, see pages 45–51.



## Activity/exercise

- Your health care team will probably encourage you to walk the day after surgery. They will also provide guidance on suitable activity levels as you recover from surgery.
- Gentle exercise has been shown to help people manage some of the common side effects of treatment, speed up a return to usual activities and improve quality of life. Ask your doctor or nurse if there are any suitable exercise programs available in your area.
- You will have to wear compression stockings for a couple of weeks to help the blood in your legs circulate and reduce the risk of developing blood clots.
- You will most likely need to avoid driving for a few weeks after the surgery and avoid heavy lifting.
- A physiotherapist will teach you breathing or coughing exercises to help keep your lungs clear. This will reduce your risk of getting a chest infection.



## Pete's story

I was diagnosed with stomach cancer eight years ago when I was 44. I was really fortunate that the cancer was found early. I was being treated for a stomach ulcer and a follow-up gastroscopy found a tumour in my stomach.

I found it really beneficial to participate in a clinical trial looking at what combination of treatment worked best for stomach cancer. The treatment path I trialled was preoperative chemotherapy, a total gastrectomy, and postoperative chemotherapy.

Chemotherapy was very difficult and I struggled with the side effects. My wife at the time gave birth to our little girl while I was having chemotherapy. This was very challenging – I was advised to be really careful with the baby because the chemotherapy meant I had a greater risk of getting an infection. I couldn't even change her nappies.

I was also trying to understand that I had cancer and deal with

the emotional aspects. I found it really helpful to tap into Cancer Connect peer support.

I got a lot of benefit from connecting with someone who'd had a similar type of experience and lived through it. My contact shared his experiences of waking up from surgery with lots of tubes coming out of him, so I wasn't shocked when this happened to me. It was really good to have that awareness prior to the surgery.

Once treatment was finished, it was quite daunting and I was fearful that the cancer would come back somewhere. Eight years later, it hasn't come back, which is fantastic.

I've changed my career path and am studying community services in order to help people though changes in their life. The way you view life is different after cancer. I really appreciate and have a lot of gratitude for what I have now.



## Chemotherapy for stomach cancer

Chemotherapy uses drugs to kill or slow the growth of cancer cells. For stomach cancer, chemotherapy is commonly given before surgery to shrink large tumours and destroy any cancer cells that may have spread. It may also be used after surgery to reduce the chance of the disease coming back. Chemotherapy is also used palliatively (see page 33).

Chemotherapy is usually given as a liquid through a drip inserted into a vein in the arm. It may also be given through a tube implanted into a vein (called a port, catheter or vascular access device), or as tablets you swallow. You will usually receive treatment as an outpatient.

Most people receive a combination of drugs in repeating cycles spread over several months. There may be a rest period of 2–3 weeks between each cycle of chemotherapy. Your doctor will talk to you about how long your treatment will last.

### Side effects of chemotherapy

The side effects of chemotherapy vary greatly for each person. Some people have few side effects, while others have many. Most side effects are temporary, but some may last longer or be ongoing. Your medical oncologist or nurse will discuss the likely side effects with you, including how they can be prevented or controlled with medicine.

Side effects may include feeling sick (nausea), vomiting, sore mouth or mouth ulcers, appetite changes and difficulty swallowing (see pages 46–47), skin and nail changes, numbness in the hands or feet, ringing in the ears or hearing loss, constipation or diarrhoea, and hair loss or thinning. You may also be more likely to catch infections.

## Targeted therapy for stomach cancer

This is a type of drug treatment that attacks specific features of cancer cells to stop the cancer growing and spreading.

HER2 (human epidermal growth factor receptor 2) is a protein that causes cancer cells to grow uncontrollably. If you have HER2 positive advanced stomach or gastro-oesophageal junction cancer, you may be given a targeted therapy drug called trastuzumab. This drug destroys the HER2 positive cancer cells or slows their growth. Trastuzumab is given with chemotherapy every three weeks through a drip into a vein.

Another targeted therapy drug called ramucirumab aims to reduce the blood supply to a tumour to slow or stop its growth. It has been approved to treat advanced stomach or gastro-oesophageal junction cancer that has not responded to chemotherapy. Ramucirumab is not subsidised on the PBS so it is expensive (as at October 2019).

### Side effects of targeted therapy

Ask your doctor what side effects you may experience. Possible side effects of trastuzumab include fever and nausea. In some people, trastuzumab can affect the way the heart works. Possible side effects of ramucirumab include stomach cramps, diarrhoea and high blood pressure. Let your doctor know of any side effects immediately.



You may be able to access other new drugs to treat stomach cancer through clinical trials (see page 23). Talk to your doctor about the latest developments and whether there are any suitable clinical trials for you.

## Radiation therapy for stomach cancer

Also known as radiotherapy, this treatment uses a controlled dose of radiation to kill or damage cancer cells (for more information, see page 40). Radiation therapy for stomach cancer is commonly used to control symptoms. It is usually given externally as a short course (between one day and two weeks). Occasionally radiation will be given over a longer period (5–6 weeks), particularly if surgery is not possible, or there are concerns about cancer cells being left behind after surgery.

Each treatment takes about 15 minutes and is not painful. You will lie on a table under a machine that delivers radiation to the affected parts of your body. Your doctor will advise you about your treatment schedule. Potential side effects include fatigue, nausea, vomiting, skin redness and loss of appetite (anorexia).

## Palliative treatment

Palliative treatment aims to help maintain a person's quality of life by managing the symptoms of cancer without trying to cure the disease. Many people think that palliative treatment is for people at the end of life, but it can help at any stage of advanced stomach cancer.

The treatment you are offered will be tailored to your individual needs, and may include surgery, stenting (see page 43), radiation therapy, chemotherapy or other medicines. These treatments can help manage symptoms such as pain, bleeding, difficulty swallowing and nausea. They can also slow the spread of the cancer.

- ▶ See our *Understanding Palliative Care* and *Living with Advanced Cancer* booklets, and *The Thing About Advanced Cancer* podcast.



## Key points about treating stomach cancer

### Main treatment

- The main treatment is surgery to remove part of the stomach (partial gastrectomy) or all of the stomach (total gastrectomy). The remaining parts of the digestive system are usually stitched together so that food can still be swallowed and digested.
- Most people are in hospital for 5–10 days after surgery. It may take 3–6 months before you can return to your usual activities.

### Other treatment options

- Some small tumours may be removed using a long, flexible tube (endoscopic resection).
- Some people also have chemotherapy and/or radiation therapy before or after surgery to reduce the chance of the cancer coming back.
- If you have advanced stomach or gastro-oesophageal cancer, you may be given a targeted therapy drug.
- Advanced or metastatic stomach cancer can be treated palliatively with surgery, chemotherapy or radiation therapy to ease symptoms. Some people have a stent.

### Treatment side effects

- All treatments can cause side effects such as pain, nausea, fatigue, difficulty eating or skin redness.
- Most side effects are temporary, but some may last longer or be ongoing.
- Talk to your doctor about how to manage any side effects.



# Treatment for oesophageal cancer

The most important factor in planning treatment for oesophageal cancer is the stage of the disease. Your treatment will also depend on your age, nutritional needs, medical history and general health.

The main treatments for oesophageal cancer are surgery, radiation therapy and chemotherapy, either alone or in combination. Treatment will be tailored to your specific situation.

## Surgery for oesophageal cancer

Oesophageal cancer that has not spread outside the oesophageal wall can generally be treated with surgery. Your doctor will tell you how to prepare for surgery. For example, you may need to treat any nutritional issues before surgery or, if you are a smoker, stop smoking (see page 24).

Surgery aims to remove all of the cancer while keeping as much normal tissue as possible. The surgeon will remove some healthy tissue around the cancer to reduce the risk of the cancer coming back. You may have an endoscopic resection or an oesophagectomy depending on where the tumour is growing and how advanced the cancer is.

➤ See our *Understanding Surgery* booklet.

## Endoscopic resection (ER)

Very early-stage tumours that have not spread from the oesophageal wall may be removed with an endoscope. For some people, an endoscopic resection may be the only treatment needed. This is usually a day or overnight-stay procedure. Preparation and recovery are similar to endoscopy (see pages 13–14).



Surgery for oesophageal cancer is complex. As the best outcomes are achieved by hospitals that regularly perform this type of surgery, you might need to travel to a specialist centre to have surgery. Call Cancer Council **13 11 20** for more information and to ask about patient travel assistance that may be available.

## Oesophagectomy (surgical resection)

This procedure removes the cancerous tissue and part or all of the oesophagus, leaving as much healthy tissue as possible. The goal is to completely remove the cancer, including nearby affected lymph nodes. It is common to have chemotherapy and/or radiation therapy before an oesophagectomy, as this has been shown to lead to better outcomes.

Depending on where in the oesophagus the cancer is located, the surgeon may also remove a part of the upper stomach. This is the preferred option for tumours that have spread deeper into the wall of the oesophagus or to nearby lymph nodes.

Once the cancerous sections have been removed, the stomach is pulled up and reconnected to the healthy part of the oesophagus. This will allow you to swallow and, in time, eat relatively normally. Occasionally, if the oesophagus cannot be reconnected to the stomach, the oesophagus will be connected to the small bowel or a piece of large bowel will be used to help you swallow.

## How the surgery is done


To remove the cancerous tissue, the surgeon will need to access the upper abdomen and chest. This may be done in two ways:

- in an open oesophagectomy, the surgeon will open the chest and the abdomen with large surgical cuts
- in a minimally invasive oesophagectomy (keyhole or laparoscopic surgery), the surgeon will make some small cuts in the abdomen and/or between the ribs, then insert tools into the cuts. One of the tools will have a light and camera so the surgeon can see inside the body.

The hospital stay and recovery time are fairly similar for both types of surgery. Although laparoscopic surgery usually means a smaller scar, open surgery may be considered a better option in many situations.

### Risks of oesophageal surgery

As with any major surgery, oesophageal surgery has risks. These may include infection, bleeding, blood clots, damage to nearby organs, leaking from the connections between the oesophagus and stomach or small bowel, pneumonia (see next page) and paralysis of the vocal cords. Some people may experience an irregular heartbeat, but this usually settles within a few days. Narrowing of the oesophagus from surgical scars (known as oesophageal stricture) can make it difficult to swallow. Your doctor may perform a procedure to stretch the walls of the oesophagus (dilatation). Some people need to have only one dilatation, others need many. Your surgeon will discuss these risks with you before surgery, and you will be carefully monitored for any side effects.

“After surgery my oesophagus would not stay open due to scar tissue pulling tight... Nearly two years after surgery I still have to have my oesophagus dilated monthly.”  Grant

## What to expect after oesophageal surgery

Recovery after oesophageal surgery is similar to the overview for stomach surgery (see pages 28–29), but there are some differences:

**Recovery time** – You will probably be in hospital for 7–10 days, but it can be significantly longer if any complications occur. It generally takes 6–12 months to recover from an oesophagectomy.

**Drips and drains** – In addition to the tubes listed on page 27, you will have a tube down your nose into your stomach (nasogastric tube) to drain fluids from the stomach.

**Dietary changes** – As with stomach surgery, you will not be able to eat or drink straight after surgery. It is common for a temporary feeding tube to be inserted at the time of your surgery (see page 27). You can be given specially prepared feeding formula through this tube while the join between the oesophagus and stomach heals. Once you begin eating, it is common to start with fluids such as soup, and then move onto soft foods for a few weeks. You may be advised to eat 5–6 small meals or snacks throughout the day.

**Breathing problems** – It is important that your pain is controlled to help avoid problems with breathing that can lead to pneumonia. To reduce the risk of pneumonia, a physiotherapist will teach you breathing or coughing exercises that help keep your lungs clear. You may also be taught how to use an incentive spirometer, a device you breathe into to help your lungs expand and prevent a chest infection.

For more information, see *Managing side effects* on pages 45–51.





## John's story

My diagnosis of oesophageal cancer came as a complete surprise. Looking back, I can see that I hadn't been able to eat as much, but I put that down to getting older.

It wasn't until I suddenly started vomiting out of the blue that I saw my doctor. A series of scans revealed I had a blockage in the gullet. An endoscopy confirmed it was oesophageal cancer. Luckily the cancer hadn't spread outside my oesophagus.

I was admitted to hospital for chemotherapy and radiation therapy to shrink the tumour, and then went home to recover for six weeks before having surgery.

For those three months, I was fed through a feeding tube. I found it a bit frightening at first to deal with the feeding tube at home – it was difficult to clear when it got blocked and one night I pulled it out in my sleep and had to go to hospital to have it reinserted.

The surgery was a major procedure: it took eight hours to remove my oesophagus and reconnect my stomach.

While recovering, I found the dietitians at the hospital very helpful in suggesting foods I could eat. At first I had a feeding tube, then I started on liquids and soft foods. By the time I left rehab, about four weeks after surgery, I was able to handle most foods.

Once I was home, I followed the dietitian's advice and I haven't had many problems with eating or swallowing. I take a tablet to help prevent regurgitation, sleep sitting up, and eat small meals throughout the day.

Although it took a while before I was game to try some foods, I now eat most things, but in small portions. You learn what foods suit you and what foods don't.

Nearly four years after surgery, I have an almost normal lifestyle with moderation in all things.

## Chemoradiation for oesophageal cancer

When radiation therapy is combined with chemotherapy, it is known as chemoradiation. The chemotherapy drugs make the cancer cells more sensitive to radiation therapy.

Oesophageal cancer may be treated with chemoradiation before surgery. Chemoradiation may also be used as the main

treatment for oesophageal cancer when the tumour can't be removed safely with surgery.

If you have chemoradiation, you will usually receive chemotherapy a few hours before some radiation therapy appointments. Your doctor will talk to you about the treatment schedule and how to manage any side effects.

## Radiation therapy for oesophageal cancer

Also known as radiotherapy, this treatment uses a controlled dose of radiation, such as focused x-ray beams, to kill or damage cancer cells. The radiation is targeted at the cancer and treatment is carefully planned to do as little harm as possible to healthy body tissue near the cancer.

Radiation therapy may be given alone or combined with chemotherapy (chemoradiation). It is commonly used before surgery to shrink large tumours and destroy any cancer cells that may have spread. In this case, there will be a break of one to two months between radiation therapy and surgery to allow the treatment to have its full effect. Radiation therapy, with or without chemotherapy, is also used as the main treatment for oesophageal cancer that has not spread to other parts of the body and cannot be removed surgically.

Before starting treatment, you will have a planning appointment that will include a CT scan. The radiation therapy team will use the images from the scan to plan your treatments. The technician may make some small permanent tattoos or temporary marks on your skin so that the same area is targeted during each treatment session.

You will usually have treatment as an outpatient once a day, Monday to Friday, for 4–5 weeks. If radiation therapy is used palliatively (see page 43), you may have a short course of 1–10 sessions. Each treatment takes about 20 minutes and is not painful. You will lie on a table under a machine that delivers radiation to the affected parts of your body. Your doctor will advise you about your treatment schedule.

## Side effects of radiation therapy

Many people will develop temporary side effects during or shortly after treatment. The lining of the oesophagus can become very sore and inflamed (oesophagitis). This can lead to painful swallowing and difficulty eating. In rare cases, you may need a feeding tube (see page 27) to ensure you receive enough nutrition. Other common side effects include fatigue, skin redness, loss of appetite and weight loss. Most side effects settle within four weeks of treatment finishing.

More rarely, some people will develop long-term side effects. Radiation therapy can cause scar tissue and narrowing of the oesophagus (known as oesophageal stricture). This can make it difficult to swallow, and your doctor may perform a procedure to stretch the walls of the oesophagus (dilatation). Radiation therapy can also create inflammation in the lungs, causing shortness of breath.

► See our *Understanding Radiation Therapy* booklet.

## Chemotherapy for oesophageal cancer

Chemotherapy uses drugs to kill or slow the growth of cancer cells. The aim is to destroy cancer cells, while causing the least possible damage to healthy cells. Chemotherapy for oesophageal cancer may be given alone or combined with radiation therapy.

For oesophageal cancer, chemotherapy is commonly given before surgery to shrink large tumours and destroy any cancer cells that may have spread. It may be used after surgery to reduce the chance of the disease coming back. Chemotherapy is also used on its own for people unable to have surgery.

Chemotherapy is usually given as a liquid through a drip inserted into a vein in the arm. It may also be given through a tube implanted into a vein (called a port, catheter or vascular access device), or as tablets you swallow. You will usually receive treatment as an outpatient.

Most people receive a combination of drugs in repeating rounds of treatment for several months. These may be given on one day, or continuously using a small pump that is linked to the implanted tube. There may be a rest period of a few weeks between each round. Your doctor will talk to you about how long your treatment will last.

› See our *Understanding Chemotherapy* booklet.

### Side effects of chemotherapy

The side effects of chemotherapy vary greatly, depending on the drugs you receive, how often you have treatment, and your general fitness and health. Most side effects are temporary. Your treatment team can help you prevent or manage any side effects.

Side effects may include nausea and/or vomiting, sore mouth or mouth ulcers, appetite changes and difficulty swallowing (see pages 46–47), skin and nail changes, numbness or tingling in the hands or feet, ringing in the ears or hearing loss, changed bowel habits (e.g. constipation, diarrhoea), and hair loss or thinning. You may also be more likely to catch infections. If you feel unwell or have a temperature higher than 38°C, seek urgent medical attention.

## Palliative treatment

Palliative treatment aims to help maintain a person's quality of life by managing the symptoms of cancer without trying to cure the disease. It can help at any stage of advanced oesophageal cancer. Treatments will be tailored to your individual needs. For example, radiation therapy can help to relieve pain and make swallowing easier by helping to shrink a tumour blocking the oesophagus. Palliative treatments can also slow the spread of the cancer.

People with advanced oesophageal cancer who are having trouble swallowing and do not have any other treatment options may have a flexible tube (stent) inserted into the oesophagus. The stent expands the oesophagus to allow fluid and soft food to pass into the stomach more easily. This stent also prevents food and saliva going into the lungs and causing infection. The stent does not treat the cancer but will allow you to eat and drink more normally. Stents can cause indigestion (heartburn) and discomfort. Occasionally, the stents will move down the oesophagus into the stomach and may need to be removed. For more information about eating and swallowing, see pages 45–49.

➤ See our *Understanding Palliative Care* booklet.



## Key points about oesophageal cancer

### Treatment options

- Oesophageal cancer that has not spread outside the oesophageal wall is often treated with surgery to remove all or part of the oesophagus (oesophagectomy). The remaining parts of the digestive system are usually stitched together so that food can still be swallowed and digested.
- Some small early-stage tumours may be removed using a flexible tube (endoscopic resection) without removing the oesophagus.
- People commonly have radiation therapy and/or chemotherapy before surgery. Radiation therapy, with or without chemotherapy, is also used as the main treatment for oesophageal cancer that cannot be removed surgically.
- You may have palliative treatment to manage the symptoms of advanced cancer. This may include the insertion of an oesophageal stent to help with swallowing.

### Treatment side effects

- All treatments can cause side effects. Most side effects are temporary. Talk to your doctor about how to manage any side effects.
- Surgery will affect your eating and digestion. Learning to adapt to these changes will take time. A dietitian can help with your recovery.
- Radiation therapy can cause side effects, such as oesophagitis, which leads to painful swallowing and difficulty eating.
- Chemotherapy can cause a range of side effects depending on the drugs received. Side effects may include nausea and a sore mouth.



# Managing side effects

Stomach and oesophageal cancers and their treatment can cause many side effects. Some of these side effects are permanent and may affect your ability to eat, digest foods and absorb essential nutrients. This chapter explains common side effects and how to manage them.

During and after treatment, it's important to make sure you are eating and drinking enough to maintain your weight and avoid malnutrition or dehydration. If you are eating less than usual it is often recommended that you choose high energy, high protein foods and relax healthy eating guidelines. You may need a feeding tube during or after treatment if you are unable to eat and drink enough to meet your nutritional needs (see page 27). Ask your doctor for a referral to a dietitian with experience in cancer care.

After treatment, some foods you used to eat may cause digestive problems. You will need to try different foods and ways of eating to find out what works for you. You may need to change your eating habits, such as eating smaller meals more often throughout the day.

Some people find it difficult to cope emotionally with the changes to how and what they can eat. You may feel self-conscious or worry about eating in public or with friends. These reactions are natural. It may help to talk about how you feel with your family and friends, or to speak with a counsellor or someone who has been through a similar experience. They may be able to give you advice on how to adjust. It may take time and support to adapt to your new way of eating.

- ▶ See our *Nutrition and Cancer* booklet or call 13 11 20 to arrange to speak to a Cancer Connect volunteer who has had a similar cancer experience.

## Poor appetite and weight loss

After surgery, you may have a poor appetite caused by changes to your digestive system. Your stomach will be smaller (or completely removed) and you will feel full more quickly. You may not feel like eating or you may have lost your sense of taste. It is important to maintain your weight. Even a small drop in your weight (e.g. 3–4 kg), particularly over a short period of time, may put you at risk of malnutrition and affect your recovery.

Chemotherapy and radiation therapy can also affect your appetite, due to nausea, irritation to the oesophagus or a sore mouth. If your oesophagus is very sore from radiation therapy, talk to your doctor about pain-relieving medicines and a referral to a dietitian.



### How to prevent unplanned weight loss

- Snack during the day – eat 5–6 small meals rather than three large ones each day.
- Keep a selection of snacks handy, e.g. in your bag or car.
- Make the most of the times you feel hungry or crave certain foods. Eat slowly and stop and rest when you are full.
- Ensure you have room for nourishing food – avoid filling up on liquids at mealtimes, unless it's a hearty soup.
- Prevent dehydration by drinking between meals (30–60 minutes before or after meals).
- Test your ability to eat different foods. Your taste and tolerance for some foods may change.
- Ask your dietitian how you can increase your energy and protein intake.
- Don't eat late at night. It may make you uncomfortable, bring on reflux and disturb your sleep.



## Difficulty swallowing

You may have difficulty swallowing (dysphagia) before, during or after treatment. This may be because of where the tumour is located or a side effect of treatment. Signs that swallowing is difficult include taking longer to chew and swallow, coughing or choking while eating or drinking, or food sticking in your mouth or throat like a ball. Some people find that food and fluid goes into the windpipe instead of the food pipe. This is called aspiration and it can block the airways and cause difficulty breathing.

It is important to change your diet so that you can still get enough nutrition, and to prevent losing weight and strength. A speech pathologist can give you strategies to help you eat and drink safely.



### How to manage swallowing difficulties

- Change the consistency of your food by chopping, mincing or pureeing.
- Make food softer, e.g. mash your food or use a slow cooker to keep food moist.
- Snack on soft foods between meals, such as avocado, yoghurt, ice-cream, diced tinned fruit and milkshakes.
- Chew carefully and slowly, sitting still and upright. Try to avoid talking while eating.
- Avoid dry foods – add extra gravy or sauce to your meals.
- Wash food down with small sips of fluid.
- Talk to your doctor or dietitian if you are losing weight, or if you have pain or discomfort when swallowing.
- Think about adding nutritional supplement drinks to your diet to help maintain your strength. Examples include Sustagen, Resource and Ensure.

## Reflux and choking

Many people experience reflux after surgery for oesophageal cancer. This can cause heartburn, chest discomfort, or your stomach contents to flow up your oesophagus, particularly when lying flat or bending over. Taking medicines to reduce stomach acid generally helps. It is important to avoid eating or drinking before going to bed at night.

After surgery or radiation therapy for oesophageal cancer, scar tissue may cause choking or swallowing problems while eating or drinking. See your doctor if this continues. After an oesophagectomy, the stomach can take longer to empty. You may feel full more quickly or be more likely to vomit after eating.



### How to relieve reflux and choking

- Limit spicy foods, fatty foods, fizzy drinks, alcohol and citrus fruits to prevent reflux.
- Take small sips of liquid to reduce coughing or choking.
- Chew foods well, eat slowly, and avoid talking while eating.
- To help food digest, sit up straight when eating and for at least another 30 minutes.
- Consider eating your main meal earlier in the day and having a small snack in the evening.
- After an oesophagectomy, you should remain upright for four hours after eating. Eat your evening meal more than four hours before going to bed.
- Avoid bending over too far.
- Keep your chest higher than your stomach when sleeping by lifting the head end of your bed with blocks about the thickness of a house brick. The whole bed should be tilted slightly.
- Don't overexert yourself, as this can cause reflux.

## Dumping syndrome

If surgery has changed the normal structure of your stomach, partially digested food and/or fluid containing high amounts of simple sugar, such as cordial, can go into the small bowel too quickly. This may cause cramps, nausea, racing heart, sweating, bloating, diarrhoea or dizziness. This is called dumping syndrome. Symptoms usually begin 15–30 minutes after eating.

Sometimes symptoms occur 1–2 hours after a meal. These are called late symptoms, which tend to cause weakness, light-headedness and sweating, and are usually worse after eating foods high in sugar.



### How to manage dumping syndrome

- Eat small meals throughout the day. Chew your food well.
- Eat slowly so your body can sense when it is full.
- Surgery may have affected your ability to tolerate certain foods. Keep a record of foods that cause problems and talk to a dietitian for help changing your meals to reduce the symptoms.
- Avoid eating highly processed food and eat plenty of fresh, unprocessed food.
- Avoid foods and drinks high in sugar, e.g. cordial, soft drinks, cakes and biscuits, as eating large amounts of these foods can lead to diarrhoea and pain.
- Eat meals high in protein, e.g. lean meats and poultry, fish, eggs, milk, yoghurt, nuts, seeds, and legumes/beans.
- Eat starchy food, e.g. pasta, rice or potato.
- Drink liquids between meals rather than at mealtimes.
- Symptoms usually improve over time. If they don't, ask your doctor for advice about medicines that may help.

## Anaemia and osteoporosis

Surgery to the stomach may reduce your ability to absorb some vitamins and minerals from food. This may lead to low levels of:

- **calcium** – Over time, your bones may become weak and brittle, and break more easily (osteoporosis), which may cause pain. Talk to your doctor and dietitian about ways to look out for and treat osteoporosis.
- **vitamin B12** – This can cause a condition called pernicious anaemia. The most common early symptom of anaemia is tiredness. Your skin will look pale and you may feel breathless, get headaches, have a racing heart and lose your appetite. You will need regular vitamin B12 injections.
- **iron** – This can cause iron deficiency anaemia. You may need iron supplements, which are usually given as a tablet or liquid you swallow.



### Tips for managing anaemia

- Talk to your doctor if you have symptoms of anaemia.
- Find out what kind of anaemia you have and how to treat it.
- Rest when you need to and don't overexert yourself.
- Limit tea and coffee, as these can prevent iron absorption.
- Ask your GP or dietitian if you need iron or other supplements, and whether certain foods can help.
- Eat foods rich in iron, such as meat, eggs and softened dark green leafy vegetables.
- Eat foods high in vitamin C (e.g. red or orange fruits and vegetables) in the same meal as iron-rich foods. Vitamin C helps the body absorb iron.
- If you smoke, talk to your GP about quitting or call the Quitline on **13 7848** for support and information. Tobacco can worsen your symptoms.



## Key points about managing side effects

### Common changes

- After treatment for stomach or oesophageal cancer, most people find their digestive function changes.
- You may have a poor appetite, find it difficult to eat certain foods, or feel full quickly. This can lead to weight loss and malnutrition.
- Physical changes to the way you eat and digest food may include reflux, heartburn, coughing and choking. Dumping syndrome is less common.

### Managing changes

- Eating several small meals a day slowly, and sitting up during and after meals can help swallowing and digestion.
- It's best to avoid eating meals late in the day and to wait about four hours after a meal before going to bed.
- You may need a feeding tube before, during or after treatment to help you meet your nutritional needs.
- To avoid dehydration, try to drink fluid in small amounts throughout the day.
- Dietitians can help tailor eating plans to suit your individual needs and provide advice about suitable nutritional supplements.
- Talk to your doctor, nurse or dietitian if you have ongoing trouble with eating and digestion, or keep losing weight.
- You may feel self-conscious when eating. Talking to a counsellor or someone who has been through a similar experience to you may help you cope with the changes.



# Looking after yourself

Cancer can cause physical and emotional strain, so it's important to look after your wellbeing. Cancer Council has free booklets and programs to help you during and after treatment. Call 13 11 20 to find out more, or visit your local Cancer Council website (see back cover).

**Eating well** – Healthy food can help you cope with treatment and side effects. See pages 45–51 for information about coping with eating problems after treatment and choosing the best foods for your situation.

➤ See our *Nutrition and Cancer* booklet.

**Staying active** – Physical activity can reduce tiredness, improve circulation and lift mood. The right exercise for you depends on what you are used to, how you feel, and your doctor's advice.

➤ See our *Exercise for People Living with Cancer* booklet.

**Complementary therapies** – Complementary therapies are designed to be used alongside conventional medical treatments. Therapies such as massage, relaxation and acupuncture can increase your sense of control, decrease stress and anxiety, and improve your mood. Let your doctor know about any therapies you are using or thinking about trying, as some may not be safe or evidence-based.

➤ See our *Understanding Complementary Therapies* booklet.



Alternative therapies are therapies used instead of conventional medical treatments. These are unlikely to be scientifically tested and may prevent successful treatment of the cancer. Cancer Council does not recommend the use of alternative therapies as a cancer treatment.

**Work and money** – Cancer can change your financial situation, especially if you have extra medical expenses or need to stop working. Getting professional financial advice and talking to your employer can give you peace of mind. You can also check with a social worker or Cancer Council whether any financial assistance is available to you.

› See our *Cancer and Your Finances* and *Cancer, Work & You* booklets.

**Relationships** – Having cancer can affect your relationships with family, friends and colleagues in different ways. Cancer is stressful, tiring and upsetting, and this may strain relationships. It may also result in positive changes to your values, priorities or outlook on life. Give yourself time to adjust to what's happening, and do the same for those around you. It may help to discuss your feelings with each other.

› See our *Emotions and Cancer* booklet.

**Sexuality** – Cancer can affect your sexuality in physical and emotional ways. The impact of these changes depends on many factors, such as treatment and side effects, your self-confidence, and if you have a partner. Although sexual intercourse may not always be possible, closeness and sharing can still be part of your relationship.

› See our *Sexuality, Intimacy and Cancer* booklet.

**Contraception and fertility** – If you can have sex, you may need to use certain types of contraception to protect your partner or avoid pregnancy for a time. Your doctor will explain what precautions to take. They will also tell you if treatment will affect your fertility permanently or temporarily. If having children is important to you, discuss the options with your doctor before starting treatment.

› See our *Fertility and Cancer* booklet.



# Life after treatment

For most people, the cancer experience doesn't end on the last day of treatment. Life after cancer treatment can present its own challenges. You may have mixed feelings when treatment ends, and worry that every ache and pain means the cancer is coming back.

It is important to allow yourself time to adjust to the physical and emotional changes, and establish a new daily routine at your own pace. Cancer Council 13 11 20 can help you connect with other people who have had cancer, and provide you with information about the emotional and practical aspects of living well after cancer.

➤ See our *Living Well After Cancer* booklet.

## Follow-up appointments

After treatment ends, you will have regular appointments to monitor your health, manage any long-term side effects and check that the cancer hasn't come back or spread. You will also be able to discuss how you're feeling and mention any concerns you may have. You may have blood tests, imaging scans or an endoscopy if necessary. However, routine tests have not been shown to be of benefit and are not recommended by current treatment guidelines.

How often you will need to see your doctor will depend on the level of monitoring needed for the type and stage of the cancer. You should



Some people with advanced stomach or oesophageal cancer require ongoing treatment to keep their cancer under control. Call Cancer Council **13 11 20** for support and information.



also see a dietitian for advice about good nutrition. Check-ups will become less frequent if you have no further problems. Between follow-up appointments, let your doctor know immediately of any health problems. When a follow-up appointment or test is approaching, many people find that they think more about the cancer and may feel anxious. Talk to your treatment team or call Cancer Council 13 11 20 for help.

## What if the cancer returns?

For some people, stomach or oesophageal cancer does come back after treatment, which is known as a recurrence. If the cancer returns, you may have further treatment, including chemotherapy, radiation therapy or surgery. Sometimes people have palliative treatment to ease symptoms. Treatment may be similar to what you had after your initial diagnosis, or you may be offered a different type of treatment if the cancer comes back in another part of your body.

### Dealing with feelings of sadness

If you have continued feelings of sadness, have trouble getting up in the morning or have lost motivation to do things that previously gave you pleasure, you may be experiencing depression.

This is quite common among people who have had cancer.

Talk to your GP, as counselling or medication – even for a short time – may help. Some people

can get a Medicare rebate for sessions with a psychologist. Ask your doctor if you are eligible. Cancer Council may also run a counselling program in your area.

For information about coping with depression and anxiety, call Beyond Blue on **1300 22 4636** or visit [beyondblue.org.au](http://beyondblue.org.au). For 24-hour crisis support, call Lifeline **13 11 14** or visit [lifeline.org.au](http://lifeline.org.au).



## Seeking support

A cancer diagnosis can affect every aspect of your life. You will probably experience a range of emotions – fear, sadness, anxiety, anger and frustration are all common reactions. Cancer also often creates practical and financial issues.

There are many sources of support and information to help you, your family and carers navigate all stages of the cancer experience, including:

- information about cancer and its treatment
- access to benefits and programs to ease the financial impact of cancer treatment
- home care services, such as visiting nurses and home help
- free or low-cost meal delivery services, such as Meals on Wheels, through your local council or rural health network
- aids and appliances
- support groups and programs
- counselling services.

The availability of services may vary depending on where you live, and some services will be free but others might have a cost. To find good sources of support and information, you can talk to the social worker or nurse at your hospital or treatment centre, or get in touch with Cancer Council 13 11 20.



If your GP refers you to an allied health practitioner such as a dietitian or physiotherapist, you may be eligible for a Medicare rebate. Talk to your GP about developing a Chronic Disease Management Plan to help you manage any ongoing issues.

## Support from Cancer Council

Cancer Council offers a range of services to support people affected by cancer, their families and friends. Services may vary depending on where you live.

### Cancer Council 13 11 20

Trained professionals will answer any questions you have about your situation and link you to services in your area (see inside back cover).



### Information resources

Cancer Council produces booklets and fact sheets on over 25 types of cancer, as well as treatments, emotional and practical issues, and recovery. Call **13 11 20** or visit your local Cancer Council website (see back cover).

### Practical help

Your local Cancer Council can help you find services or offer guidance to manage the practical impact of a cancer diagnosis. This may include access to transport and accommodation services.



### Legal and financial support

If you need advice on legal or financial issues, we can refer you to qualified professionals. These services are free for people who can't afford to pay. Financial assistance may also be available. Call Cancer Council **13 11 20** to ask if you are eligible.

### Peer support services

You might find it helpful to share your thoughts and experiences with other people affected by cancer. Cancer Council can link you with individuals or support groups by phone, in person, or online. Call **13 11 20** or visit [cancercouncil.com.au/OC](http://cancercouncil.com.au/OC).



## Useful websites

You can find many useful resources online, but not all websites are reliable. These websites are good sources of support and information.

### Australian

Cancer Council Australia	<a href="http://cancer.org.au">cancer.org.au</a>
Cancer Australia	<a href="http://canceraustralia.gov.au">canceraustralia.gov.au</a>
Cancer Council Online Community	<a href="http://cancercouncil.com.au/OC">cancercouncil.com.au/OC</a>
<i>The Thing About Cancer</i> podcast	<a href="http://cancercouncil.com.au/podcasts">cancercouncil.com.au/podcasts</a>
Optimal Care Pathways	<a href="http://cancerpathways.org.au">cancerpathways.org.au</a>
Carer Gateway	<a href="http://carergateway.gov.au">carergateway.gov.au</a>
Carers Australia	<a href="http://carersaustralia.com.au">carersaustralia.com.au</a>
Department of Health	<a href="http://health.gov.au">health.gov.au</a>
Department of Human Services	<a href="http://humanservices.gov.au">humanservices.gov.au</a>
Healthdirect Australia	<a href="http://healthdirect.gov.au">healthdirect.gov.au</a>
Australia and New Zealand Gastric and Oesophageal Surgery Association	<a href="http://anzgosa.org">anzgosa.org</a>
Dietitians Association of Australia	<a href="http://daa.asn.au">daa.asn.au</a>
Gastroenterological Society of Australia	<a href="http://www.gesa.org.au">www.gesa.org.au</a>
GI Cancer Institute	<a href="http://gicancer.org.au">gicancer.org.au</a>
Pancare Foundation	<a href="http://pancare.org.au">pancare.org.au</a>

### International

American Cancer Society	<a href="http://cancer.org">cancer.org</a>
Cancer Research UK	<a href="http://cancerresearchuk.org">cancerresearchuk.org</a>
Macmillan Cancer Support (UK)	<a href="http://macmillan.org.uk">macmillan.org.uk</a>
No Stomach for Cancer (US)	<a href="http://nostomachforcancer.org">nostomachforcancer.org</a>



# Caring for someone with cancer

You may be reading this booklet because you are caring for someone with cancer. What this means for you will vary depending on the situation. Being a carer can bring a sense of satisfaction, but it can also be challenging and stressful.

It is important to look after your own physical and emotional wellbeing. Give yourself some time out and share your concerns with somebody neutral such as a counsellor or your doctor, or try calling Cancer Council 13 11 20. There is a wide range of support available to help you with both the practical and emotional aspects of your caring role.

**Support services** – Support services such as Meals on Wheels, home help or visiting nurses can help you in your caring role. You can find local services, as well as information and resources, through the Carer Gateway. Call 1800 422 737 or visit [carergateway.gov.au](http://carergateway.gov.au).

**Support groups and programs** – Many cancer support groups and cancer education programs are open to carers as well as to people with cancer. Support groups and programs offer the chance to share experiences and ways of coping.

**Carers Associations** – Carers Australia works with the Carers Associations in each state and territory to provide information and services to carers. Call 1800 242 636 or visit [carersaustralia.com.au](http://carersaustralia.com.au).

**Cancer Council** – You can call Cancer Council 13 11 20 or visit your local Cancer Council website to find out more about carers' services.

- See our *Caring for Someone with Cancer* booklet or listen to our “Cancer Affects the Carer Too” podcast episode.



# Question checklist

Asking your doctor questions will help you make an informed choice. You may want to include some of the questions below in your own list.

## Diagnosis

- What type of cancer do I have?
- Has the cancer spread? If so, where has it spread? How fast is it growing?
- Are the latest tests and treatments for this cancer available in this hospital?
- Will a multidisciplinary team be involved in my care?
- Are there clinical guidelines for this type of cancer?

## Treatment

- What treatment do you recommend? What is the aim of the treatment?
- Are there other treatment choices for me? If not, why not?
- If I don't have the treatment, what should I expect?
- How long do I have to make a decision?
- I'm thinking of getting a second opinion. Can you recommend anyone?
- How long will treatment take? Will I have to stay in hospital?
- Are there any out-of-pocket expenses not covered by Medicare or my private health cover? Can the cost be reduced if I can't afford it?
- How will I know if the treatment is working?
- Are there any clinical trials or research studies I could join?
- Can I be referred to a dietitian?

## Side effects

- What are the risks and possible side effects of each treatment?
- Will I have a lot of pain? What will be done about this?
- Can I work, drive and do my normal activities while having treatment?
- Will the treatment affect my sex life and fertility?
- How will the treatment affect the way I eat and digest food?
- Should I change my diet or physical activity during or after treatment?
- Are there any complementary therapies that might help me?

## After treatment

- How often will I need check-ups after treatment? Who should I see?
- If the cancer returns, how will I know? What treatments could I have?



# Glossary

## **abdomen**

The part of the body between the chest and hips, which contains the stomach, spleen, pancreas, liver, gall bladder, bowel, bladder and kidneys.

## **adenocarcinoma**

A cancer that starts in the mucus-producing (glandular) cells that form part of the lining of internal organs, such as the stomach and oesophagus.

## **anaemia**

A reduction in the number or quality of red blood cells in the body.

## **anaesthetic**

A drug that stops a person feeling pain during a medical procedure. Local and regional anaesthetics numb part of the body; a general anaesthetic causes a temporary loss of consciousness.

## **Barrett's oesophagus**

Abnormal changes in the cells that line the lower oesophagus. A risk factor for oesophageal adenocarcinoma.

## **biopsy**

The removal of a sample of tissue from the body for examination under a microscope to help diagnose a disease.

## **catheter**

A hollow, flexible tube through which fluids can be passed into the body or drained from it.

## **cells**

The basic building blocks of the body. A human is made of billions of cells that are adapted for different functions.

## **chemotherapy**

A cancer treatment that uses drugs to kill cancer cells or slow their growth.

May be given alone or in combination with other treatments.

## **CT scan**

Computerised tomography scan. This scan uses x-rays to create cross-sectional pictures of the body.

## **dilatation**

A type of procedure. An object (dilator) is inserted into the oesophagus to stretch the walls and widen the opening.

## **dumping syndrome**

When partially digested food moves into the small bowel too quickly, causing symptoms such as cramps and dizziness.

## **endoscope**

A flexible tube with a light and camera on the end. It is used during diagnostic tests, e.g. to examine the oesophagus or stomach during an endoscopy.

## **endoscopic resection (ER)**

A type of procedure for early-stage stomach or oesophageal cancer. Tissue is removed using an endoscope.

## **endoscopy**

A type of internal examination or diagnostic test. A thin, flexible tube with a light and camera (endoscope) is used to examine the inside of the body. Also called gastroscopy.

## **gastrectomy**

The surgical removal of part or all of the stomach.

## **gastrointestinal (GI) tract**

The passage from the mouth to the anus that allows a person to digest food and eliminate waste. The upper GI tract includes the oesophagus and stomach.

### **gastro-oesophageal junction**

The point where the stomach meets the oesophagus.

### **gastro-oesophageal reflux disease (GORD)**

A condition when stomach acid leaks into the oesophagus, causing irritation. This is caused by the muscle at the end of the oesophagus not closing properly.

### **gastroscopy**

See endoscopy.

### **heartburn (indigestion)**

A sensation of tightness or burning in the chest. Heartburn is caused by stomach acid backing up into the oesophagus and throat (reflux).

### **HER2**

Human epidermal growth factor receptor 2. A type of protein found on most cells in the human body.

### **laparoscopy**

Surgery done through small cuts in the abdomen using a thin viewing instrument called a laparoscope. Also called keyhole or minimally invasive surgery.

### **laparotomy**

A type of open surgery in which a long cut is made in the abdomen to examine and remove internal organs.

### **lymphatic system**

A network of vessels, nodes and organs that removes excess fluid from tissues, absorbs fatty acids, transports fat, and produces immune cells.

### **lymph nodes**

Small, bean-shaped structures found in groups throughout the body. They help

protect the body against disease and infection. Also called lymph glands.

### **malignant**

Cancerous. Malignant cells can spread (metastasis) and eventually cause death if they cannot be treated.

### **metastasis (plural: metastases)**

Cancer that has spread from a primary cancer elsewhere in the body. Also known as secondary or advanced cancer.

### **mucosa**

Moist tissue that lines organs of the body. The mucosal layer is the innermost layer of the oesophagus and stomach.

### **nutrition**

The process of eating and digesting food that the body needs.

### **oesophagectomy**

The surgical removal of part or all of the oesophagus.

### **oesophagitis**

Inflammation or loss of tissue in the lining of the oesophagus.

### **oesophagoscopy**

The examination of the oesophagus with an endoscope.

### **oesophagus**

The passage that carries food from the throat into the stomach. Also known as the food pipe or gullet.

### **omentum**

A protective apron of fatty tissue over the abdominal organs.

### **pernicious anaemia**

A type of anaemia caused by vitamin



B12 not being absorbed, which affects the development of red blood cells.

### **PET scan**

Positron emission tomography scan. A scan in which a person is injected with a small amount of radioactive glucose solution to find cancerous areas.

### **radiation therapy**

The use of targeted radiation to kill or damage cancer cells so they cannot grow, multiply or spread. The radiation is usually in the form of x-ray beams. Also called radiotherapy.

### **reflux**

When stomach acid flows up into the oesophagus.

### **squamous cell carcinoma (SCC)**

Cancer that starts in the squamous cells, which are flat cells found on the surface of the skin or in the lining of certain organs, such as the oesophagus.

### **stent**

A metal or plastic tube placed into a

blocked organ to create a passage for substances to pass through.

### **stomach**

The hollow, muscular organ between the end of the oesophagus and the beginning of the small bowel that stores and breaks down food.

### **subtotal gastrectomy**

The surgical removal of part of the stomach.

### **targeted therapy**

Drugs that attack specific particles (molecules) within cells that allow cancer to grow and spread.

### **total gastrectomy**

The surgical removal of the whole stomach.

### **Can't find a word here?**

For more cancer-related words, visit:

- [cancercouncil.com.au/words](http://cancercouncil.com.au/words)
- [cancervic.org.au/glossary](http://cancervic.org.au/glossary)
- [cancersa.org.au/glossary](http://cancersa.org.au/glossary)

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## How you can help

At Cancer Council, we're dedicated to improving cancer control. As well as funding millions of dollars in cancer research every year, we advocate for the highest quality care for cancer patients and their families. We create cancer-smart communities by educating people about cancer, its prevention and early detection. We offer a range of practical and support services for people and families affected by cancer. All these programs would not be possible without community support, great and small.

**Join a Cancer Council event:** Join one of our community fundraising events such as Daffodil Day, Australia's Biggest Morning Tea, Relay For Life, Girls' Night In and other Pink events, or hold your own fundraiser or become a volunteer.

**Make a donation:** Any gift, large or small, makes a meaningful contribution to our work in supporting people with cancer and their families now and in the future.

**Buy Cancer Council sun protection products:** Every purchase helps you prevent cancer and contribute financially to our goals.

**Help us speak out for a cancer-smart community:** We are a leading advocate for cancer prevention and improved patient services. You can help us speak out on important cancer issues and help us improve cancer awareness by living and promoting a cancer-smart lifestyle.

**Join a research study:** Cancer Council funds and carries out research investigating the causes, management, outcomes and impacts of different cancers. You may be able to join a study.

To find out more about how you, your family and friends can help, please call your local Cancer Council.



# Cancer Council

## 13 11 20

Being diagnosed with cancer can be overwhelming. At Cancer Council, we understand it isn't just about the treatment or prognosis. Having cancer affects the way you live, work and think. It can also affect our most important relationships.

When disruption and change happen in our lives, talking to someone who understands can make a big difference. Cancer Council has been providing information and support to people affected by cancer for over 50 years.

Calling 13 11 20 gives you access to trustworthy information that is relevant to you. Our cancer nurses are available to answer your questions and link you to services in your area, such as transport, accommodation and home help. We can also help with other matters, such as legal and financial advice.

If you are finding it hard to navigate through the health care system, or just need someone to listen to your immediate concerns, call 13 11 20 and find out how we can support you, your family and friends.

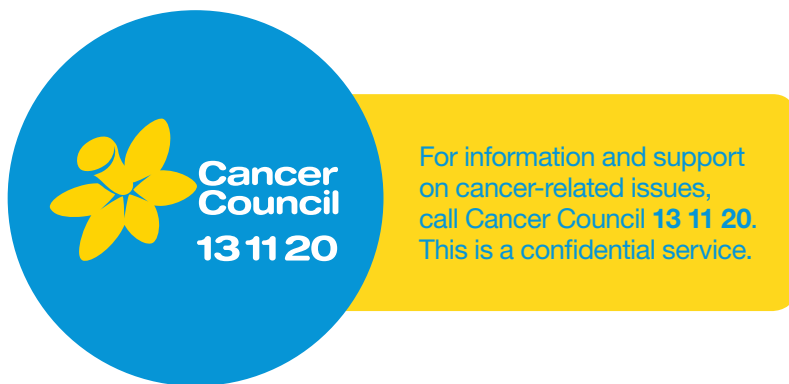
Cancer Council services and programs vary in each area.

13 11 20 is charged at a local call rate throughout Australia (except from mobiles).



**If you need information in a language other than English, an interpreting service is available. Call 13 14 50.**

**If you are deaf, or have a hearing or speech impairment, you can contact us through the National Relay Service. [www.relayservice.gov.au](http://www.relayservice.gov.au)**



## Visit your local Cancer Council website

**Cancer Council ACT**  
[actcancer.org](http://actcancer.org)

**Cancer Council NSW**  
[cancercouncil.com.au](http://cancercouncil.com.au)

**Cancer Council NT**  
[nt.cancer.org.au](http://nt.cancer.org.au)

**Cancer Council Queensland**  
[cancerqld.org.au](http://cancerqld.org.au)

**Cancer Council SA**  
[cancersa.org.au](http://cancersa.org.au)

**Cancer Council Tasmania**  
[cancertas.org.au](http://cancertas.org.au)

**Cancer Council Victoria**  
[cancervic.org.au](http://cancervic.org.au)

**Cancer Council WA**  
[cancerwa.asn.au](http://cancerwa.asn.au)

**Cancer Council Australia**  
[cancer.org.au](http://cancer.org.au)

*This booklet is funded through the generosity of the people of Australia.  
 To support Cancer Council, call your local Cancer Council or visit your local website.*