



Understanding Pancreatic Cancer

A guide for people with cancer,
their families and friends

Cancer
information

Cancer Council Helpline

13 11 20

www.cancervic.org.au

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Note to reader

Always consult your doctor before beginning any health treatment. This booklet is intended as a general introduction to the topic and should not be seen as a substitute for your doctor's or other health professional's advice. However, you may wish to discuss issues raised in this booklet with them. All care is taken to ensure that the information in this booklet is accurate at the time of publication.

Interpreting service: Deaf or hearing or speech impaired

If you use text-based communication, call Cancer Council Helpline 13 11 20 through the National Relay Service (NRS) 13 3677. If you can hear and still use your voice, but have a speech impairment, call Cancer Council Helpline through NRS 1300 555 727.

Generous Victorians who fundraise to fight cancer make many Cancer Council services, including the publication of this booklet, possible. For information on how you can help, visit www.cancervic.org.au or call 1300 65 65 85.



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Introduction

This booklet has been prepared to help you understand more about pancreatic cancer.

Many people feel understandably shocked and upset when told they have pancreatic cancer. We hope this booklet will help you understand how pancreatic cancer is 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 other questions to ask your treatment team.

This booklet does not need to be read from cover to cover – just read the parts that are useful to you. Some medical terms that may be unfamiliar are explained in the glossary. You may also 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 medical experts and people affected by pancreatic cancer.

Cancer Council Helpline **13 11 20** can arrange telephone support in different languages for non-English speakers. You can also call the Telephone Interpreter Service (TIS) direct on **13 14 50**.



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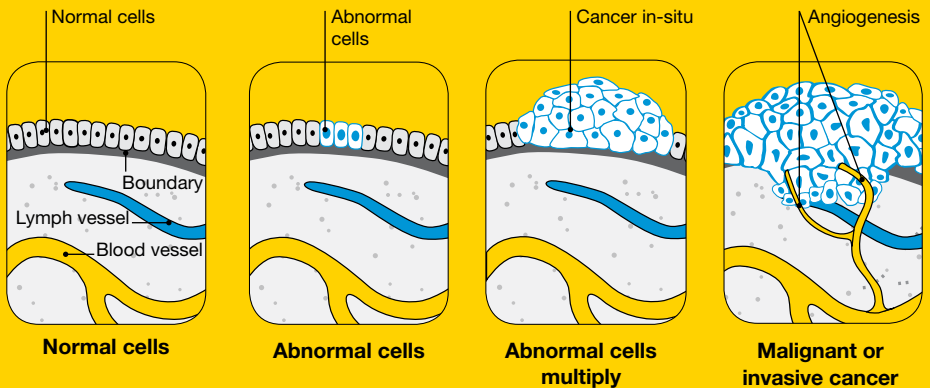
What is cancer?

Cancer is a disease of the cells, which are the body's basic building blocks. Our bodies constantly make new cells to help us grow, to replace worn-out cells and to heal damaged cells after an injury.

Normally cells grow and multiply in an orderly way, but sometimes something goes wrong with this process and cells grow in an uncontrolled way. This uncontrolled growth may result in a lump called a tumour or may develop into abnormal blood cells.

A tumour can be benign (not cancer) or malignant (cancer). A benign tumour does not spread to other parts of the body. A malignant tumour is made up of cancer cells, which grow out of control and are able to spread. The cancer that first develops in a tissue or organ is called the primary cancer. When it first develops,

How cancer starts

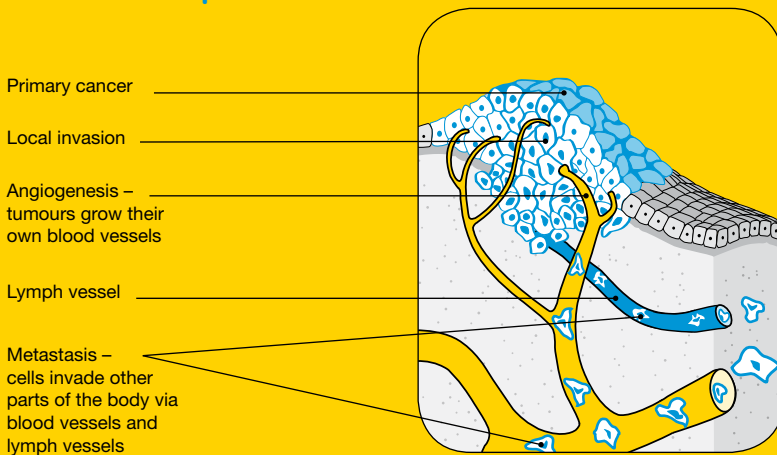


a malignant tumour may not have invaded nearby tissue. This is known as a cancer in-situ, carcinoma in-situ or localised cancer. As the tumour grows, it may spread and become what is known as invasive cancer.

Cancer cells can spread to other parts of the body by travelling through the bloodstream or the lymphatic system. They may continue to grow into another tumour at this new site. This is called a secondary cancer or metastasis.

A metastasis keeps the name of the original cancer. For example, pancreatic cancer that has spread to the liver is still called pancreatic cancer, even though the person may be experiencing symptoms caused by problems in the liver.

How cancer spreads





The pancreas

The pancreas is an organ in the digestive system that produces enzymes, which break down food so it can be absorbed and used by the body. It is a thin, lumpy gland about 13–15 cm long that lies between your stomach and spine. The pancreas is divided into:

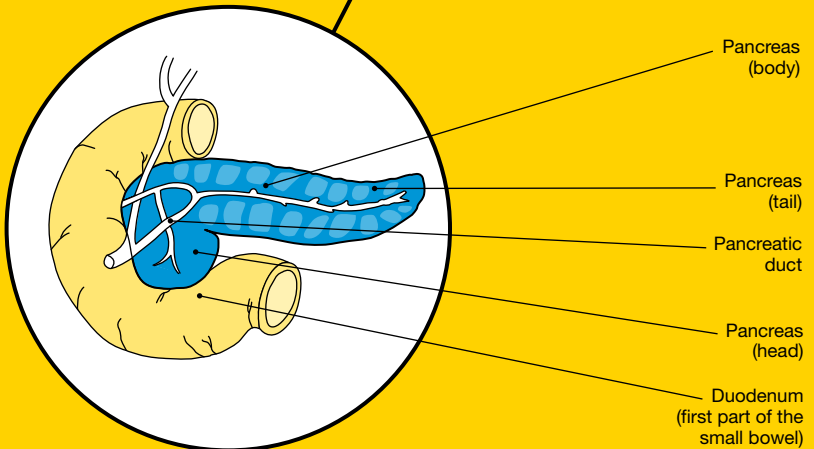
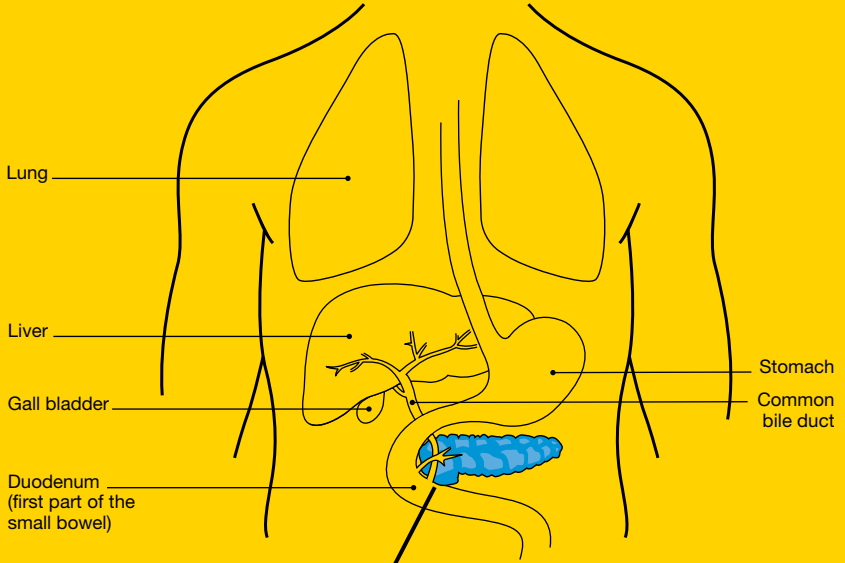
- a large rounded section, called the head of the pancreas
- the middle part, known as the body
- the narrow end, called the tail.

A tube called the pancreatic duct connects the pancreas to the first part of the small bowel (duodenum). Another tube called the common bile duct joins the pancreatic duct and connects the liver and gall bladder to the small bowel. The common bile duct carries bile, a substance that helps to digest fats.

The pancreas contains two types of glands: the exocrine glands and the endocrine glands. These glands release substances that help with digestion.

- **Exocrine glands** – produce juices called enzymes that help break down your food. The juices flow from the pancreas into your duodenum through the pancreatic duct. Most of the pancreas is made up of exocrine glands.
- **Endocrine glands** – are scattered amongst the exocrine glands in small clusters called pancreatic islets (or islets of Langerhans). They release chemical messengers (hormones) that control the amount of sugar in the blood. The hormone insulin decreases blood sugar levels, while the hormone glucagon increases blood sugar levels.

The pancreas





Key questions

Q: What is pancreatic cancer?

A: Pancreatic cancer occurs when malignant cells develop in part of the pancreas. This may affect the normal functioning of the pancreas, including the way the exocrine or endocrine glands work.

About 70% of pancreatic cancers are located in the head of the pancreas. This can block the common bile duct, which will decrease the flow of bile and cause a build-up of bile pigment in the blood. This is known as jaundice.

Cancer can also spread to nearby lymph nodes (part of the immune system), blood vessels or nerves. It may travel through the bloodstream to other parts of the body, such as the liver.

Q: What types are there?

A: There are two types of pancreatic tumours:

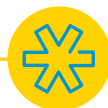
Exocrine tumours – More than 90% of pancreatic tumours. The most common exocrine tumour, called an adenocarcinoma, begins in the lining of the pancreatic duct. Other types of tumours include adenosquamous carcinomas and undifferentiated carcinomas.

Pancreatic neuroendocrine tumours (PNETs) – Rare types of tumours affecting the endocrine system. The glands in the endocrine system produce hormones that control the growth of cells in the body.

PNETs are categorised as hormone secreting (functioning) or non-hormone secreting (non-functioning). Functioning tumours are usually named after the type of hormone they secrete.

Types of PNETs include:

- **gastrinomas** – produce too much gastrin
- **insulinomas** – produce too much insulin
- **glucagonomas** – produce too much glucagon
- **somatostatinomas** – produce too much somatostatin
- **VIPomas** – create a hormone-like substance called vasoactive intestinal polypeptide (VIP).



Neuroendocrine tumours can also affect other areas of the body, including the lungs, kidneys and bowel. This booklet has information about neuroendocrine tumours affecting the pancreas. For information about other types of tumours, contact the Unicorn Foundation on **1300 2873 6387** or call Cancer Council Helpline **13 11 20**.

Q: How common is it?

A: About 2500 Australians are diagnosed with exocrine pancreatic cancer each year. The average age of people diagnosed with this cancer is 71. It is the twelfth most common cancer in men and ninth most common cancer in women.

PNETs are very rare. Less than 100 people in Australia are diagnosed with a PNET each year.

Q: What are the causes?

A: Pancreatic cancer is caused by abnormally functioning genes. This may be brought on by environmental or genetic risk factors, or a combination of the two.

Research has shown that people with certain risk factors are more likely than others to develop pancreatic cancer.

Risk factors include:

- getting older – it is most common in people over 65
- smoking – cigarette smokers are 2–3 times more likely to develop pancreatic cancer
- new onset diabetes – about 15–20% of people with pancreatic cancer have newly diagnosed diabetes
- chronic inflammation of the pancreas (pancreatitis)
- a family history of inherited cancer syndromes.

The importance of family history

Most people with pancreatic cancer do not have a family history of the disease. However, about one in 10 people who develop pancreatic cancer have an inherited faulty gene that increased their risk.

You may have an inherited family risk if you have two or more first-degree relatives affected by pancreatic cancer, or a history of an inherited syndrome. Some inherited syndromes that may cause pancreatic cancer include Peutz-Jeghers syndrome, the familial breast cancer gene (BRCA1 and BRCA2), familial atypical multiple mole melanoma syndrome, Lynch syndrome and hereditary pancreatitis.



The “degree of relationship” describes how many genes are shared between two blood relatives. A first-degree relative shares about half their genes with you. Examples are your parents, siblings or children.

Some PNETs are caused by a rare inherited syndrome, such as multiple endocrine neoplasia type 1 (MEN-1) or neurofibromatosis.

If you are concerned about your family history or if you want to know more about genetic testing, talk to your doctor or visit the Australian Familial Pancreatic Cancer Cohort website, www.pancreaticcancer.net.au/afpacc.

Q: What are the symptoms?

A: Early stages of pancreatic cancer rarely cause symptoms. Symptoms also may be unnoticed until the cancer is large enough to affect nearby organs.

Symptoms of pancreatic cancer may include:

- indigestion
- appetite loss
- feeling sick (nausea)
- vomiting
- weight loss
- pain in the upper abdomen, side or back, which may cause you to wake up at night

- changed bowel motions – either diarrhoea, severe constipation, or stools that are pale and hard to flush away
- jaundice, which causes yellowish skin and eyes, dark urine, pale stools and itchiness
- onset of diabetes within the last two years, or worsening of existing diabetes – in up to 50% of people with pancreatic cancer, the cancer stops the pancreas from making insulin properly
- for PNETs, too much sugar in the blood (hyperglycaemia)
- for PNETs, blurred vision.

Symptoms of pancreatic cancer are also common to other conditions. See your doctor if you experience any of these symptoms.

Q: Which health professionals will I see?

A: If you have cancer, one or more specialists will advise you about treatment options. You will be cared for by a team of health professionals from the relevant major fields. This is called a multidisciplinary team.

Some people in non-metropolitan areas have to travel to appointments with specialists. Your general practitioner (GP) can be kept informed about all your test results and treatment. They may refer you to specialists and answer questions you have in-between appointments.

Health professional	Role
gastroenterologist	specialises in diagnosing and treating diseases of the digestive system, including pancreatic cancer and blocked bile ducts
pancreatic surgeon	specialises in surgery to the liver, pancreas and surrounding organs
medical oncologist	prescribes and coordinates the course of chemotherapy
radiation oncologist	prescribes and coordinates the course of radiotherapy
endocrinologist	diagnoses and treats hormonal disorders, including diabetes
nurses	support and assist you through all stages of your illness
dietitian	recommends an individualised eating plan to help you manage your symptoms during and after treatment
social worker, psychologist and occupational therapist	talk to you about support services and help you resume your activities
palliative care team	assists with symptom management and emotional support for you and your family



Diagnosis

To confirm the diagnosis of pancreatic cancer, your doctor will take a full medical history and you will have several tests. Some tests will help the doctor determine if cancer has spread to other parts of your body. This is called staging – see page 20.

You will not have all the tests described in this booklet. Some tests are only used to detect neuroendocrine tumours.

Blood tests

Blood tests can check how well your liver and kidneys are working and provide a full blood count. However, blood tests alone are not used to diagnose pancreatic cancer.

- Pancreatic cancer may make a protein or tumour marker that is found in the blood, called CA19–9. Blood tests showing the amount of CA19–9 in your blood may give your doctor information about the cancer and its possible response to treatment.
- PNETs may produce high levels of certain hormones, which can also be detected in the blood.

Imaging tests

Ultrasound

An ultrasound uses soundwaves to create a picture of your pancreas and the area surrounding it, including your liver. It can show if a tumour is present and its size.

You will lie on your back for the procedure. A gel will be spread on your abdomen and a device called a transducer is then moved across your body. The transducer creates soundwaves that echo when they meet something dense like an organ or tumour. A computer turns these echoes into pictures that show if a tumour is present.


The ultrasound is painless and takes about 15–20 minutes.

CT scan

A CT (computerised tomography) scan is a type of x-ray that takes pictures of several organs at the same time. These pictures are put together to create a three-dimensional picture of your body. CT scans are usually done at a hospital or a radiology clinic.

You will be asked not to eat for a few hours before the scan. You may drink some liquid dye or have dye injected into your veins before the scan. This makes your organs appear clearly in the pictures. The dye may make you feel flushed for a few minutes.

You will lie on an examination table that is moved into the CT scanner, which is large and round like a doughnut. This takes about 15–45 minutes. Most people are able to go home as soon as the scan is over.



Some people who have a CT or MRI scan (see page 16) are allergic to the dye injection. If you are allergic to iodine, fish or dyes, tell the person doing a CT or MRI scan in advance.

MRI and MRCP scans

An MRI (magnetic resonance imaging) scan uses magnetic waves to build up detailed cross-sectional pictures of the pancreas and other organs in your abdomen. An MRCP (magnetic resonance cholangiopancreatography) is a type of MRI scan that produces more detailed images and can be used to check the common bile duct for blockage (obstruction).

Before the MRI scan, you may be asked not to eat or drink for a few hours. You may also be given an injection of dye to highlight the organs in your body.

You will then lie on an examination table inside a large metal tube that is open at both ends. The tube makes some people feel uncomfortable or afraid of being confined in a small space (claustrophobic). It can also be noisy.

If you are uncomfortable, let the person performing the scan know. They can give you medication to help you relax or earplugs to reduce the noise level. You may also be able to take someone into the room with you for company.

The MRI scan takes 30–90 minutes. Most people are able to go home as soon as the scan is over.



If you have a pacemaker or other metallic object in your body, you can't have an MRI scan due to the effect of the magnet.

Endoscopy

An endoscope is a thin, flexible tube with a light and a camera that is passed down your throat into your digestive system. An endoscopy can show blockages or inflammation in the bile ducts, stomach and duodenum.

During an endoscopy, the doctor can also take a tissue or fluid sample to help with the diagnosis. This is a biopsy (see page 19).

You will be asked not to eat or drink for several hours before an endoscopy. The doctor will give you a sedative so you are relaxed and as comfortable as possible. You may even fall asleep. Because of the sedative, you should not drive or operate machinery until the next day.

An endoscopy has some risks, including infection, bleeding and inflammation of the pancreas (pancreatitis). Your doctor will explain these risks to you before asking you to consent to the procedure.

Endoscopic ultrasound

An endoscopic ultrasound (EUS) is done using an endoscope with an ultrasound probe (transducer) attached. This allows better views of the pancreas, helps to locate small tumours and shows any local spread of cancer.

The endoscope is passed into the small bowel via the mouth and stomach. The transducer makes soundwaves that create pictures of the pancreas and ducts. The doctor may take tissue samples of the pancreas (biopsy).

Scintigraphy

Scintigraphy is an imaging method that uses a mild dose of a radioactive substance to show where tumours may be in the body. Some of these scans are less common, and their role in the management of pancreatic cancer is still undergoing evaluation.

PET (positron emission tomography) scan – You are injected with a radioactive solution and asked to sit quietly for 30–90 minutes while it goes through your body. You will then be scanned for high levels of a radioactive substance. Cancer cells show up brighter on the scan because they are more active and take up more of the solution than normal cells. The cancer may be called a ‘hot spot’.



If you have diabetes you will need to follow special procedures for a PET scan. If this applies to you, tell the hospital when you book your scan.

SRS (somatostatin receptor scintigraphy) scan – Most PNET cells have hormone receptors for somatostatin. In the SRS scan, a radioactive drug that is similar to somatostatin is injected into your body. Over the course of a day, the drug travels to the tumour and attaches itself to the receptors. The scan will show doctors where the drug has attached, highlighting the tumour.

It may take several hours to prepare for and complete a PET or SRS scan. Talk to your medical team for more information.

Tissue sampling

Fine needle biopsy

A biopsy means removing cells or tissue samples from an organ for examination under a microscope.

A biopsy may be done during an endoscopy or endoscopic ultrasound. A fine needle is usually used to remove the cells. An ultrasound or CT scan can help the doctor guide the needle through the abdomen and into the pancreas. You will have an anaesthetic for the procedure so you are not in pain.

Laparoscopy

During a laparoscopy, an instrument called a laparoscope is used to look inside the abdomen to see if a tumour has spread to other parts of the body. It can also be done to take tissue samples before another type of surgery. Laparoscopy is sometimes called keyhole surgery.

You will be asked not to eat or drink for six hours beforehand. After giving you a general anaesthetic, the doctor will make a small cut near your belly button and guide the laparoscope inside your body through a tube. The doctor can put other instruments inside your body through other small cuts (about 0.5–1 cm each) to take the biopsy.

You will have stitches where the cuts were made, and you may feel sore while you heal. Ask for medication if you are in pain.

There is a small risk of infection or damage to an organ. Your doctor will explain the risks before asking you to agree to the procedure.

Staging pancreatic cancer

After diagnostic tests, the cancer will be assigned a stage to describe how far it has spread. The most common staging system used for pancreatic cancer is the TNM system. In this system, letters are assigned numbers to describe the cancer.

T (Tumour) 1–4	Indicates the size and depth of tumour invasion into the pancreas and nearby tissues. T1 is a smaller tumour; T4 is a larger tumour that has invaded the major arteries nearby.
N (Nodes) 0–1	Shows if the cancer has spread to nearby lymph nodes. N0 means that the cancer has not spread to the lymph nodes. N1 means there is cancer in the local lymph nodes.
M (Metastasis) 0–1	Shows if the cancer has spread to other parts of the body. M0 means that the cancer has not spread; M1 means that the cancer has spread away from the area around the pancreas, to more distant parts of the body (e.g. the liver).

Your doctor may also just use numbers to describe the stage:

- **Stage 1** – Cancer is found only in the pancreas, and has not spread to any organs or lymph nodes (small, bean-shaped structures) next to the pancreas. This is sometimes called early-stage disease.
- **Stage 2** – Cancer has either spread to lymph nodes or structures near the pancreas (such as the small bowel or common bile duct), or is large but has not spread to neighbouring organs.

- **Stage 3** – Cancer has grown into nearby major arteries. There may or may not be cancer in the lymph nodes.
- **Stage 4** – The cancer has spread to other organs, such as the liver, lungs or lining of the abdomen.

Ask your doctor to explain the stage in a way you can understand. This will help you to choose the best treatment for your situation.

Prognosis

Prognosis means the expected outcome of a disease. You may wish to discuss your prognosis with your doctor, but it is not possible for any doctor to predict the exact course of your disease. Your prognosis will depend on the stage of the cancer, the location of the tumour and other factors such as your age, fitness and medical history.

In general, the sooner cancer is diagnosed, the better the prognosis. This is because the cancer may not have spread beyond the pancreas and treatment can start earlier. However, pancreatic cancers – especially exocrine tumours – are usually not found until they are advanced because symptoms can be vague or go unnoticed.

For people who have PNETs, functioning tumours may have better outcomes than non-functioning tumours.

Advanced cancer is more difficult to treat successfully, but palliative treatment can relieve various symptoms and help to improve quality of life (see page 31).



Key points

- You will have several tests to confirm the diagnosis.
- Blood tests can show how your liver and kidneys are working, and provide a full blood count.
- In an ultrasound, gel is spread over your abdomen and a device creates pictures of your organs.
- CT and MRI scans involve an injection of dye into your body, followed by a scan. Some people have a type of MRI called an MRCP. This produces more detailed images.
- During an endoscopy, a tube with a light and camera is passed into your digestive system.
- An ultrasound probe may be used during an endoscopy. This is called an endoscopic ultrasound (EUS).
- Scintigraphy is an imaging method that uses a mild dose of a radioactive substance to show where tumours may be in the body.
- A biopsy means removing cells or tissue samples from an organ for examination under a microscope. This may be done during an endoscopy or EUS.
- A biopsy can also be done during a surgical procedure called a laparoscopy, when the surgeon makes small cuts in your abdomen to access the pancreas.
- The cancer is assigned a stage to describe how much cancer there is and where it has spread.
- You may wish to talk to your doctor about your prognosis. This is the expected outcome of your disease.



Exocrine tumour treatment

This chapter gives an overview of treatments used for the most common type of pancreatic cancer: exocrine tumours. This includes adenocarcinoma. For information on the treatment of pancreatic neuroendocrine tumours (PNETs), see pages 33–38.

Although continuing research has improved outcomes for many people, pancreatic cancer can be difficult to treat. Surgery in combination with chemotherapy, and possibly radiotherapy, is the most effective treatment.

Your medical team will consider your situation and recommend the best treatment for you. This will depend on:

- the stage of the tumour (the site, size and if it has spread)
- your general health
- what you want.

It can be difficult to make decisions about treatment. For more information, see page 57.

Surgery

Surgical removal of the tumour (resection) is the most effective treatment for people who have early-stage disease.

Surgery is an option if:

- the cancer has not spread beyond the pancreas (stage 1 or 2)
- the cancer is not in surrounding major blood vessels
- you are in reasonably good health, so you could cope physically with a major operation.

Surgery may also be used as palliative treatment to treat symptoms of pancreatic cancer, such as intestinal obstruction or jaundice. Jaundice is a condition in which the skin turns a yellow colour due to a build-up of bile in the blood (see page 42).

If you have diabetes, it may go away after an operation. Talk to your doctor for more information.



Surgery for pancreatic cancer has risks and possible complications. Before consenting to the operation, talk to your doctor about this.

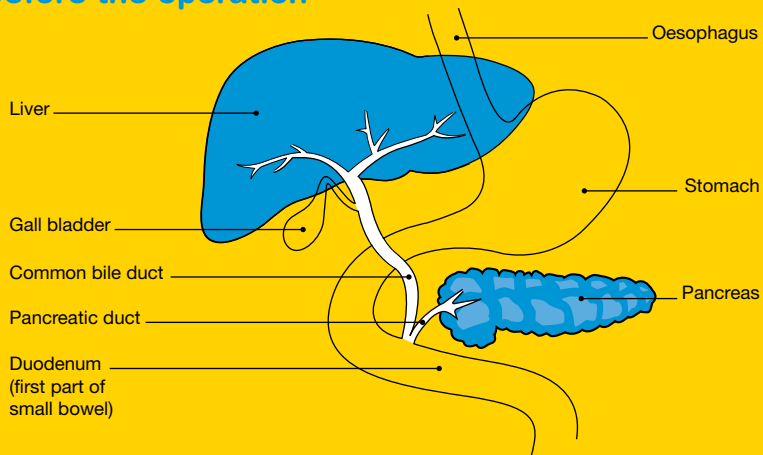
Whipple's procedure

The most common operation for pancreatic cancer in the head of the pancreas is known as pancreaticoduodenectomy or the Whipple's surgery. It is a major operation that is done by specialised surgeons. Whipple's procedure removes:

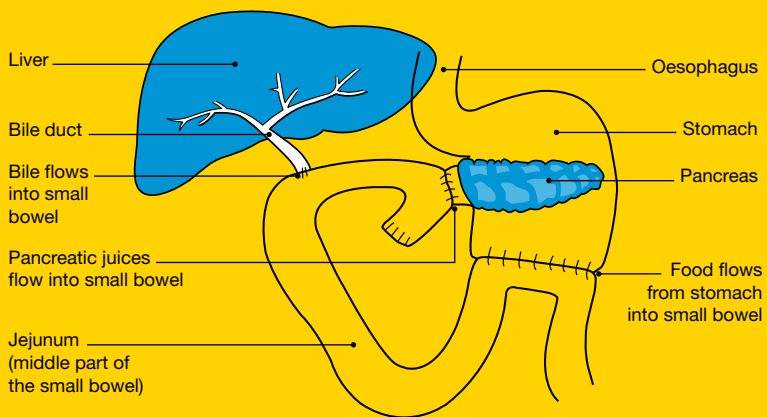
- the part of the pancreas where the cancer is
- the first part of the small bowel (duodenum)
- part of the stomach
- the gall bladder and part of the bile duct.

The surgeon reconnects the remainder of the pancreas, bile duct and stomach to different sections of the small bowel so the digestive tract keeps working. This allows food, pancreatic juices and bile to continue to flow into the small bowel for the next stage of digestion.

Before the operation



After the operation



Double bypass surgery

The surgeon may find that the cancer has spread (metastasised) at the time of the operation. This is possible even if you had several scans and tests beforehand. If this happens, the surgeon will not be able to remove the tumour, but the operation can be done to relieve symptoms, such as jaundice.

Double bypass surgery allows a blockage in the common bile duct and/or the outlet of the stomach to be bypassed. The surgeon connects a piece of your bowel to the bile duct or gall bladder to take the bile around the blockage. This is a medium-sized operation and you will be in hospital for 7–10 days.

If you do not have surgery to relieve the jaundice, the most common treatment is stenting (see page 42).

After an operation

As with all major operations, you will be given pain relief. When you are in hospital, you will also have a drip (intravenous infusion) to replace your body's fluids. If you can't eat or drink within a few days, the doctor may insert a temporary feeding tube.

Most people go home within a fortnight of surgery, but if you have complications after surgery, you may need to stay in hospital longer. If you are in pain when you return home, talk to your medical team. They may prescribe pain-killers to make you more comfortable.

Some people who have surgery will need to take tablets known as pancreatic enzymes, which will help to digest fat and proteins.

A small number of people also develop diabetes and may need insulin therapy. See the *Nutrition and dietary problems* chapter on pages 45–56 for information on the dietary issues that may be caused by pancreatic cancer and its treatment.

Barry's story

I was diagnosed with pancreatic cancer at the age of 49. I was already an insulin-dependent diabetic of some 10 years.

In my case, weight loss was the first indication that something was wrong, but the most prominent symptom was persistent itching. It was to the point where I was scratching continuously on my legs, stomach and backside. It was particularly difficult to get to sleep at night.

When the cancer was finally diagnosed, I didn't get any real time at all to process anything. I think I was diagnosed on Thursday and was in hospital having a Whipple's procedure on the following Wednesday.

I had some complications after surgery and spent two months in hospital. Pain management was essential in the early stages. I remember that I had a sense of not being in control of anything. I didn't really know enough about what was happening to me.

When I returned home, I had difficulty eating and getting my appetite back. One thing that I had particular difficulty with in the early stages was generating saliva. It seemed to be worse at night. I sought out some products from a chemist, which had limited success, but eventually the problem disappeared as my appetite returned to normal. I now take a digestive enzyme supplement.



Chemotherapy

Chemotherapy is the use of anti-cancer drugs, which kill or slow the growth of cancer cells.

If you have stage 1, 2 or 3 pancreatic cancer, your doctor may suggest that you have chemotherapy combined with radiotherapy. This may be to destroy any cancer cells remaining after surgery. Chemotherapy can also be given to reduce the risk of the cancer coming back after an operation (adjuvant chemotherapy).

If you have advanced pancreatic cancer – for example, stage 4 disease – chemotherapy may be given as palliative treatment to help slow the spread of cancer and relieve any symptoms you may have.

Chemotherapy is usually given by injecting drugs into a vein (intravenously). You will usually go to an outpatient oncology day unit, where you will sit in a chair and be attached to a drip. The drugs are given over 1–3 hours. Most people have up to six courses of treatment. After each treatment session, you will have a break or rest period of 1–3 weeks at home. Your medical team will talk to you about how they will assess if the treatment has worked.



Tell your doctors about any other prescription or over-the-counter medicines you're taking or planning to take, as these may affect how the chemotherapy works in your body. For information about complementary therapies, see page 61.

Side effects

Chemotherapy affects fast-growing cells in the body, such as the cells involved in hair growth or mouth cells.

Some chemotherapy can cause temporary side effects, which may include:

- fatigue and tiredness
- nausea and vomiting
- a low red blood cell count (anaemia), causing weakness and breathlessness
- a low white blood cell count, causing poor resistance to infection
- mouth ulcers
- diarrhoea
- flu-like symptoms such as fever, headache and muscle soreness
- poor appetite
- skin rashes.

The most common side effects are fatigue and nausea, however you may have none or some of the above side effects. Discuss how you are feeling with your medical oncologist, as steps can be taken to reduce or manage your side effects.

For more information about chemotherapy, call the Helpline for a free copy of the *Understanding Chemotherapy* booklet.

“ I found chemo a bit daunting – walking into the room with the chairs lined up. But the nurses were great and talked through it with me so I knew what to expect. ” Cheryl

Radiotherapy

Radiotherapy treats cancer by using x-rays to kill cancer cells or injure them so they cannot multiply. These x-rays can be targeted at cancer sites in your body.

Radiotherapy may be used:

- to shrink the tumour before removing it with surgery
- to destroy any cancer cells that may remain after surgery
- to relieve symptoms such as pain by shrinking the tumour, which may be pushing on a nerve or another organ
- with chemotherapy to treat tumours that cannot be operated on.

Treatment is usually given Monday to Friday, for up to five weeks.

It is painless and each session takes a few minutes. Treatment is planned to do as little harm as possible to your normal body tissues.

Side effects

Radiotherapy can cause temporary side effects, which may include:

- tiredness
- nausea
- vomiting
- diarrhoea
- poor appetite
- reddening of the skin.

Talk with your doctor about how to manage these side effects. For example, if you have nausea or vomiting, you can be prescribed anti-nausea medication. You can also call Cancer Council Helpline 13 11 20 to request a free copy of *Understanding Radiotherapy*.

Palliative treatment

Palliative treatment helps to improve people's quality of life by alleviating symptoms of cancer when a cure may not be possible. It is particularly important for people with advanced cancer, but it can be used during different cancer stages.

Often treatment is concerned with pain relief and stopping the spread of cancer, but it can also involve the management of other physical and emotional symptoms, such as depression. Treatment may include radiotherapy, chemotherapy or other medication.

If pancreatic cancer has spread and it is not possible to treat it with surgery, your doctor may recommend treatment to relieve problems such as:

- **jaundice** – caused by narrowing of the bile duct
- **persistent vomiting and weight loss** – caused by obstruction in the stomach or small bowel
- **poor digestion** – caused by the blockage of the pancreatic duct, which stops the flow of the digestive enzymes required to break down food
- **pain** – in the abdomen and middle back.

See pages 39–56 for information on how to cope with and manage these symptoms.

For more information and resources on palliative treatment or advanced cancer, call Cancer Council Helpline **13 11 20**.





Key points

- Surgery in combination with chemotherapy, and possibly radiotherapy, is the most effective treatment for exocrine tumours.
- For people with early-stage cancer, surgical removal of the tumour (resection) offers the only chance of cure. This may not be an option for some patients.
- The most common operation for pancreatic cancer is the Whipple's procedure. This removes the gall bladder and parts of the pancreas, small bowel, bile duct and stomach.
- If the surgeon finds that the tumour has spread, a piece of bowel may be connected to the bile duct or gall bladder to avoid any blockage.
- Pancreatic cancer surgery is a major operation and you will have to take pancreatic enzymes after surgery to digest fat and proteins.
- Chemotherapy is the use of anti-cancer drugs, which kill or slow the growth of cancer cells. It can be combined with radiotherapy and/or used after surgery.
- Chemotherapy side effects may include tiredness, nausea and vomiting, mouth ulcers and skin rashes.
- Radiotherapy treats cancer by using x-rays to kill cancer cells or injure them so they cannot multiply. Side effects may include tiredness, nausea and skin redness and soreness.
- Palliative treatment may be used to treat symptoms and improve your quality of life.



Endocrine tumour (PNET) treatment

This chapter has information about treatment for the rarest type of pancreatic tumours: pancreatic neuroendocrine tumours (PNETs). For information about treatment of exocrine tumours such as adenocarcinoma, which are more common, see pages 23–32.

PNET treatment will depend on:

- the type of tumour it is
- its stage (see page 20)
- if it has spread to other parts of the body, such as the liver
- if it is functioning (hormone producing) or non-functioning.

It can be difficult to make decisions about treatment. For more information, see page 57.

Surgery

Your doctor may do an operation to remove as much of the tumour as possible from the pancreas and its surrounding tissue. The type of operation you have will depend on the size of the tumour and where it is located. The surgeon may remove:

- part of the pancreas
- the whole pancreas
- the pancreas and other organs.

Some people have a Whipple's procedure – see page 24.

If the whole tumour can't be removed, the surgeon may remove as much of it as possible. This is called debulking. Debulking surgery is not always possible, as it depends on the tumour

position and size. If you have this operation, it may relieve some of your symptoms and, for functioning PNETs, reduce your hormone levels. If your hormone levels can be regulated, you will experience fewer side effects and feel better.

Ask your medical team for more detailed information about the type of operation you will have.

After an operation

As with all major operations, you will be given pain relief. When you are in hospital, you will also have a drip (intravenous infusion) to replace your body's fluids. If you can't eat or drink within a few days, the doctor may insert a temporary feeding tube.

Most people go home within a fortnight of surgery, but if you have complications after surgery, you may need to stay in hospital longer. If you are in pain when you return home, talk to your medical team. They may prescribe pain-killers to make you more comfortable.

Some people who have surgery will need to take tablets known as pancreatic enzymes, which will help to digest fat and proteins. A small amount of people also develop diabetes and may need insulin therapy. See pages 45–56 for information on dietary issues that may be caused by pancreatic cancer and its treatment.



If the surgeon is able to remove the whole tumour, you may not require any other treatment.



Leslye's story

My symptoms started with itchy skin. After a few days I was jaundiced and had dark coloured urine and back pain. I thought I had a problem with my gall bladder so I went to Emergency. The doctors did several tests and scans and couldn't figure out what was wrong, so they put a stent into my gall bladder to prevent it from becoming blocked.

The stent was changed four times over the course of a year. I had regular scans but no cancer was detected.

I wasn't feeling well and I had a bout of pancreatitis, so my surgeon removed my gall bladder and did a biliary bypass. They were then able to see that I had a carcinoid pancreatic neuroendocrine tumour on the head of my pancreas.

One good thing for me was that I didn't have to have chemotherapy or radiotherapy.

I had a Whipple's procedure. It was a serious operation and I was in hospital for five weeks.

During recovery in hospital, I didn't have a feeding tube – I drank water and built up to other fluids. Over the next six months, I lost a lot of weight because I didn't eat a great deal.

I now eat a mostly vegetarian diet with meat 1–2 times per week. I take a digestive enzyme supplement called Creon® with food and increase the dose with a larger meal. I try to eat well most of the time. I rarely eat sugary, fatty or dairy foods. I'm able to maintain my weight at about 64 kg.

Since I've learned to manage my diet, I was able to go overseas this year on a European river cruise. I was careful with what I ate and I rested a few days when I needed to, but I didn't have any serious problems.

Non-surgical treatment

The following treatments can be combined with surgery or used by themselves. Some of these treatments are used to shrink (debulk) the tumour, especially if it has spread to the liver.

If the cancer can't be cured, these treatments may be used to reduce your symptoms (palliative treatment – see page 31).

Chemotherapy

Chemotherapy is the use of anti-cancer drugs, which kill or slow the growth of cancer cells.

Treatment is usually given by injecting the drugs into a vein (intravenously). You will probably have several courses of treatment. Your doctor will determine how long treatment will last.

Some drugs can cause temporary side effects, which may include nausea and vomiting, mouth sores, diarrhoea and fatigue. You may have some or none of these side effects. Steps can be taken to prevent or manage any side effects you experience.

For more information about chemotherapy and its side effects, call the Helpline for a free copy of *Understanding Chemotherapy*.



Chemotherapy is not commonly used to treat PNETs. If you do have chemotherapy, there are a few types of drugs that may be used. Your doctor will talk to you about the drugs you are given.

Peptide receptor radionuclide therapy

This treatment is available at only a few centres in Australia. It is used for PNETs that have receptors for the hormone somatostatin.

You will be given a drug to protect your kidneys and a radioactive drug. Most people receive the drugs through an IV drip. The tumour cells with somatostatin receptors act like a target for the radioactive drug.

Most people have a few treatment sessions over several weeks. Your body will be slightly radioactive after the treatment, so your doctor will advise you if you need to take any safety measures when you return home after treatment.

Other types of treatment

If the PNET has spread, you may have other types of treatment.

This may include:

- **radiofrequency ablation** – uses radio waves to heat and destroy cancer cells
- **embolisation** – blocks the blood flow into the tumour
- **radiotherapy** – uses high-energy x-rays to kill or destroy cancer cells.

Radiotherapy is often used as palliative treatment. A machine will direct radiotherapy beams at the cancer. Most patients have treatment daily, Monday to Friday, for several weeks.

For more information about radiotherapy and other types of treatment, call 13 11 20 or talk to your medical team.



Key points

- PNET treatment will depend on what type of tumour it is, its stage, if it has spread and if it produces hormones (non-functioning or functioning).
- Your doctor may do an operation to remove as much of the tumour as possible from the pancreas and its surrounding tissue. The type of operation you have depends on your situation.
- Some people who have surgery have to take tablets called pancreatic enzymes after the operation. This helps to digest fat and proteins.
- If an operation can remove the whole tumour, you may not need any other treatment.
- Some people have non-surgical treatment. This can be used with other treatments to shrink (debulk) the tumour or to reduce symptoms and improve your quality of life – this is called palliative treatment.
- Chemotherapy is the use of anti-cancer drugs, which kill or slow the growth of cancer cells. It is not commonly used to treat PNETs but there are a few types of drugs that may be used.
- In some treatment centres, peptide receptor radionuclide therapy is used. This is a drug treatment that is used for PNETs that have receptors for the hormone somatostatin.
- Other treatments may include radiofrequency ablation, embolisation and radiotherapy. Radiotherapy, which directs x-ray beams at the cancer, is often used as palliative treatment.



Managing symptoms and side effects

People with pancreatic cancer often have some symptoms and side effects. Many of these can be well controlled with the appropriate treatment, such as medication, surgery or counselling.

The most common symptoms and side effects are discussed in this chapter. You probably won't experience them all – your situation will depend on if you have an exocrine or neuroendocrine tumour, and what kind of treatment you receive.

Discuss how you are feeling with your medical team. Your doctor may be able to prescribe medication or change your treatment to control your symptoms.

For further information, call Cancer Council Helpline 13 11 20.

Fatigue

Fatigue means feeling very tired and lacking energy to do day-to-day things. It is the most common side effect associated with cancer treatment.

Fatigue for people with cancer is different from normal tiredness because the feeling of exhaustion doesn't always go away with rest or sleep. Everyday tasks such as bathing, cleaning, shopping, eating and cooking may leave you feeling completely exhausted.

Even talking to those close to you can sometimes feel too tiring. It is not uncommon for people with pancreatic cancer to feel very tired a lot of the time.

If fatigue continues for a long period of time you may lose interest in things that you usually like doing, or you may feel unable to concentrate for very long. It can affect how you feel about yourself and others, which may impact on your close relationships.

If you are feeling low, talk to your doctor. You may be depressed, which can make fatigue worse.

Many people with cancer don't report fatigue to their doctor because they think that nothing can be done about it. However, your medical team can give you advice and helpful tips about managing your tiredness.

Feeling low or depressed

Many people feel low or depressed after a cancer diagnosis, during treatment or when they are recovering. Don't be surprised if you feel unhappy at times.

Some people feel sad or depressed because of the changes that the cancer has caused. Others are frightened about the future.

There is a difference between feeling down and feeling depressed. You may be depressed if you are in a low mood for most of the time, or if your sadness lasts two weeks or more. A list of the symptoms of depression can be found at www.beyondblue.org.au.

Depression won't go away by itself – you will need specific treatment. Being honest about how you feel will help your doctor

give you advice about the type of support and care you need. There are many effective treatments for depression, including both medication and non-medication options, such as counselling.

Pain

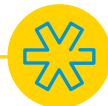
Although people feel pain in different areas and in different ways, pancreatic cancer, in general, can cause pain in the centre of the abdomen and in the middle part of the back.

Most pain can be well controlled with pain-relief tablets. Opioids, such as morphine, oxycodone and fentanyl, are very effective if taken at the correct dose. Side effects from opioids include nausea and constipation, but these can be relieved with anti-nausea medications and laxatives. Other drugs that block nerve pain (such as gabapentin) may also be useful.

If pain is severe or difficult to control, you may have pain-relieving medication injected into the nerves of your back. This is known as a nerve block or celiac axis block.

For more information on managing pain, call Cancer Council Helpline 13 11 20.

You may be concerned about becoming addicted to pain-relieving medication. These drugs rarely cause addiction problems when taken at the appropriate dose for pain relief.



Jaundice

Bile is a yellow-green liquid produced by the liver that is important for breaking down fats during digestion. It is stored in the gall bladder and travels via the bile duct to the small bowel. If cancer presses on the bile duct, it can cause a blockage and prevent bile from passing into the small bowel. Bile then builds up in the bloodstream, causing symptoms of jaundice such as:

- yellowish skin and eyes
- itchy skin
- reduced appetite, poor digestion and weight loss
- dark urine and pale stools.

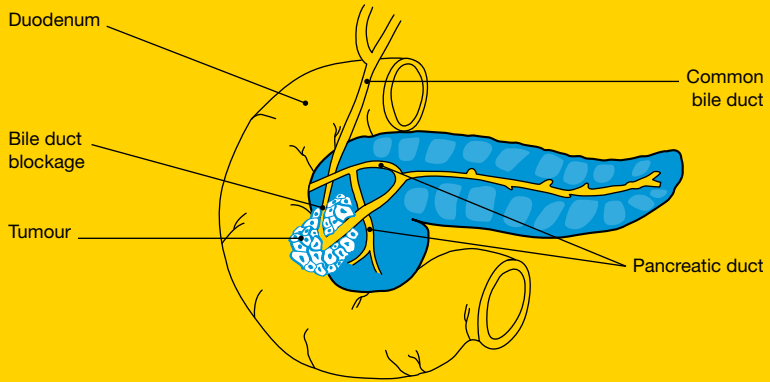
Having a stent

Bypassing or relieving the obstruction with double bypass surgery (see page 26) or a stent by endoscope can relieve the jaundice. A stent is a metal or plastic tube that is put into the blocked bile duct to hold it open so bile flows more freely.

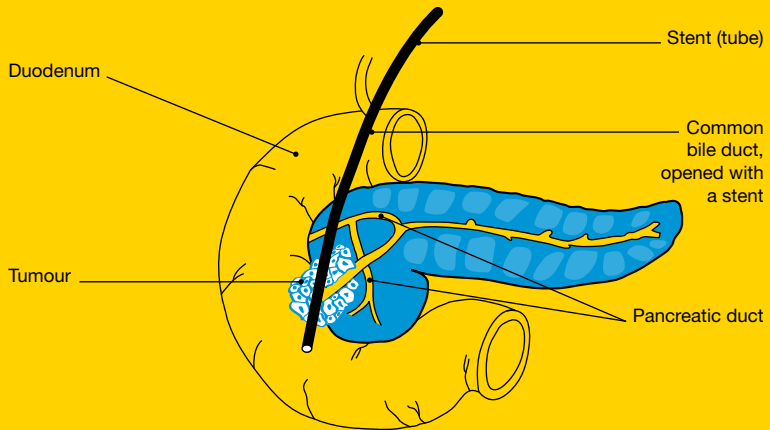
The stent is inserted during a procedure known as an endoscopic retrograde cholangio-pancreatography (ERCP). An ERCP involves passing an endoscope into the bile duct via your mouth, stomach and duodenum. X-rays are used to position the stent across the blockage to keep it open. You will have sedation for the procedure. You can have an ERCP as an outpatient or you may stay in hospital for one or two days.

Jaundice usually disappears over 2–3 weeks but the itchy skin often goes away in 3–4 days. Your appetite will improve and you may gain some weight.

Pancreas with tumour pressing on bile duct



Stent opening the blocked bile duct





Key points

- People with pancreatic cancer often have symptoms and side effects, which can usually be well controlled.
- Tell your medical team about any symptoms and side effects you experience.
- Fatigue, or feeling very tired and lacking energy, is the most common side effect. Fatigue is sometimes linked to depression.
- Many people feel low or depressed after diagnosis or during treatment and recovery. If you are in a low mood most of the time, or if your sadness lasts two weeks or more, you may be depressed.
- Depression won't go away by itself. You will need treatment, which may include counselling or medication.
- Pancreatic cancer commonly causes pain in the centre of the abdomen or middle part of the back. Most pain can be controlled with medication, such as opioids. Severe pain can be treated with an injection of medication into your back.
- If the cancer presses on the bile duct, it can cause a blockage and prevent bile from passing into the small bowel. This causes jaundice, which has symptoms such as yellowish skin and eyes, and poor digestion.
- Jaundice can be relieved by double bypass surgery or insertion of a stent (metal or plastic tube that is put into the blocked bile duct).
- A stent is inserted during a procedure known as endoscopic retrograde cholangio-pancreatography (ERCP).



Nutrition and dietary problems

Nutrition can be a major focus for people diagnosed with pancreatic cancer. Treatments such as surgery, radiotherapy and chemotherapy can affect your ability to eat, digest and absorb food.

This can lead to dietary problems, including:

- poor digestion of fats and proteins (malabsorption) caused by a lack of digestive enzymes, which help break down food
- poor appetite
- weight loss
- diarrhoea
- nausea and/or vomiting
- diabetes.

This chapter provides general suggestions on how to manage these issues. You will probably find it helpful to talk to a dietitian, as your needs may vary to those of other people with pancreatic cancer. Dietitians are experts in nutrition who can give you specialist advice on how to cope with nutrition and eating problems.

Dietitians are available in all public hospitals and some private hospitals. You can also see a dietitian in private practice. Ideally, you should see a dietitian connected to your cancer centre. Ask your oncologist how to get in touch with one. The Dietitians Association of Australia can also help you locate an accredited practising dietitian in your area, or one who has experience with a particular issue (see page 55).

Call the Helpline to request free information about nutrition.

Eating after Whipple's procedure

People with pancreatic cancer who have a Whipple's procedure may have many questions and concerns about their diet following the operation (see page 24).

The following suggestions may be helpful when you start to eat after Whipple's surgery.

tips

- Avoid eating too many fatty, greasy or fried foods, or increase your pancreatic enzyme supplements when you have such foods.
- Avoid eating too much of the foods that produce wind (gas), e.g. legumes (dried beans, peas or lentils); vegetables such as broccoli, brussels sprouts, cabbage, cauliflower or asparagus; and carbonated (gassy) drinks.
- Have small meals every 2–3 hours rather than three large meals.
- If you are not digesting and absorbing food properly (malabsorption), you will need a multivitamin supplement including extra calcium, folic acid, iron, vitamin B12 and the fat-soluble vitamins A, D, E and K. If you drink while eating, take small sips to avoid filling up too quickly.
- Take the right amount of digestive enzyme supplements (see page 53).
- Talk to a dietitian or your doctor for more information about vitamin and enzyme supplements.

Poor appetite and weight loss

Many people with pancreatic cancer lose weight. Pancreatic cancer can prevent your body from absorbing food, and it can also produce hormones that cause your body to break down your muscle and fat.

Cancer treatment may also affect your appetite or sense of taste, and you may not absorb food efficiently. If you can't manage to eat much or you are trying to gain or maintain your weight, there are ways to take in more energy (kilojoules/calories) without having to eat more food.

tips

- Eat small snacks frequently, e.g. every two hours.
- Have your biggest meal of the day when you are hungriest.
- View food as a form of therapy. Keep track of your meals and snacks.
- Add extras to your basic foods at mealtimes. For example, add milk powder to cereals, sauces, desserts, mashed vegetables, soup, drinks and egg dishes; add cheese to sauces, soup, vegetables, baked beans, casseroles, salads and egg dishes; and add sugar, golden syrup, honey or glucose powder to cereal, fruit and drinks.
- Use food-type nutrition supplements (see page 54).
- Relax low-cholesterol and other dietary restrictions. Gaining weight or maintaining your weight is more important than avoiding extra amounts of fat and sugar.
- Eat in a comfortable, relaxed place and make meals as enjoyable as possible.
- Weigh yourself once or twice a week to see if your weight is stable.

Changes in taste or smell

Sometimes your sense of taste may change because of the effects of treatment. To compensate for the loss of taste, some people add sauces, spices and other condiments to make meals more appetising. Others find it more helpful to avoid strong flavours and eat bland, unseasoned food, such as rice, pasta, steamed vegetables and fruit. Try different ideas to see what suits you best.

tips

- Add flavour with salt, garlic, cheese, bacon, herbs, marinades, chutneys, pickles, sauces, spices, sugar or chocolate.
- If food is too sweet, add salt, lemon juice or coffee powder – start with a few sprinkles, then adjust to your taste.
- If food tastes metallic or salty, add sugar or honey or try sucking on tart-flavoured boiled lollies.
- Marinate vegetables, meat or tofu to add extra flavour.
- Choose cold food or food without a strong smell. Sometimes the smell of food can put you off eating.
- Reheat meals in the microwave so the food smells don't put you off.
- Use a drinking straw to bypass your tastebuds.
- If possible, stay out of the kitchen when food is being prepared if cooking odours affect you.
- Eat with plastic utensils to help reduce any bitter or metallic tastes. Don't drink out of aluminium cans, pewter beer mugs or metallic containers.
- Don't force yourself to eat foods that you don't enjoy.

Diarrhoea

With some cancer treatments, the bowel may become irritated and sensitive, causing temporary changes to your bowel habits. Diarrhoea means your bowel motions are urgent, watery and frequent. You may also get abdominal cramping.

Diarrhoea may have several causes, including chemotherapy, radiotherapy to the abdomen or pelvis, infection, food sensitivity, malabsorption and emotional upset.

Whatever the cause of diarrhoea, a change of diet often helps, particularly if you reduce your fibre intake temporarily.

Coping with diarrhoea

Foods to choose

- ✓ soft, well-cooked, peeled vegetables and fruit
- ✓ white bread, white rice and pasta
- ✓ corn- or rice-based cereals
- ✓ lean meat, fish, chicken
- ✓ eggs and dairy products

Foods to avoid

- ✗ fruit and vegetable skins
- ✗ wholegrain bread
- ✗ bran- and muesli-based cereals
- ✗ nuts
- ✗ legumes such as lentils, peas and baked beans

There are also medications available, especially if the diarrhoea is caused by not having enough pancreatic enzymes. If you develop diarrhoea that lasts more than a couple of days or keeps recurring, or if it causes you discomfort or distress, see your doctor or dietitian.

tips

- If the stools are pale in colour, float and are difficult to flush, it may be a sign that you do not have enough pancreatic enzymes (pancreatic enzyme insufficiency). Talk to your doctor about starting on enzyme replacement therapy or adjusting your dose.
- Take anti-diarrhoea medication as prescribed by your doctor.
- Drink plenty of liquids (e.g. water, fruit juices or weak cordials) to replace lost fluids.
- Try to eat three small meals and three snacks every day.
- Avoid fried or greasy foods.
- Avoid alcohol and limit caffeine and spicy foods as these can worsen diarrhoea.
- Some people develop a temporary intolerance to the sugar in milk (lactose) when they have diarrhoea. If this occurs, try soy milk or lactose-reduced milk. Cheese and yoghurt in small amounts are usually okay.

Nausea and vomiting

Feeling sick (nausea) and vomiting may be brought on by treatment, food odours, gas in the stomach or bowel, or motion sickness. For some people, just the thought of treatment makes them feel unwell.

Some cancers press on the duodenum and prevent food from leaving the stomach. This can cause persistent vomiting and rapid weight loss.

See your doctor if vomiting lasts for more than a day or if you can't keep any fluids down and risk becoming dehydrated.

How to cope with vomiting

Stage 1 Small sips

For persistent vomiting, sip small amounts of liquid as often as you can. Try flat ginger beer/ale or lemonade, or suck on an ice-block.

Stage 2 Introduce drinks slowly

If your vomiting has stopped but you still feel sick, have small, frequent meals to stop feelings of hunger, which can aggravate nausea. Start with cold drinks. A mixture of half milk (or skim milk) and half water (or soda water) may be surprisingly soothing. A spoonful of ice-cream in a glass of lemonade, diluted fruit drinks or jellies can also be satisfying. Later, try warm drinks such as weak tea, clear soups (broth) or Bonox®.

Stage 3 Introduce solid foods

Next try small amounts of solid foods, such as plain biscuits or toast with honey or jam. Stewed fruits and yoghurt are also good.

Stage 4 Return to normal diet

As soon as you can, increase your food intake until you are eating a normal, well-balanced diet. Limit rich foods, such as meats or full-cream dairy products. Your doctor or dietitian may advise you to take additional nourishment (such as supplements) on your good days to make up for the days when you can't eat properly.

If you have persistent vomiting, the part of your body that connects your stomach to your small bowel may be blocked. Your doctor may be able to bypass it by surgery or endoscopy – see page 26.



How to cope with nausea

- Eat small meals often – not eating can make nausea worse.
- Try snacks such as dry crackers or toast.
- Eat and drink slowly. Chew food well.
- Choose cold foods instead of hot, fried, greasy or spicy foods.
- Avoid strong odours and cooking smells.
- Suck boiled lollies with peppermint or lemon.
- Try drinking ginger beer, ginger ale or ginger tea, or sucking on candied ginger.
- Talk to your doctor about trying anti-nausea medication.

Diabetes

Some people develop diabetes before the pancreatic cancer is diagnosed or soon after surgery. Diabetes, or poorly controlled blood sugar levels, occurs because your pancreas may not be making enough insulin or the cancer is stopping the glucose from working.

Symptoms of diabetes include blurry vision, excess thirst, frequent urination, hunger or weight loss.

The way diabetes is controlled varies from person to person but usually includes a combination of balancing your blood sugar levels and managing your diet. If needed, you will have medication to control your blood sugar levels. Your doctor and a dietitian will tell you the best way to take care of yourself if you have diabetes.

tips

- Eat small meals and snacks regularly to help control blood sugar levels.
- If you are taking diabetes medication, you need to include carbohydrate foods at every meal to avoid low blood sugar levels. These include breads, cereals, pasta, rice, fruit and some starchy vegetables, such as potato, sweet potato, pumpkin or corn.
- For more information about diabetes see www.diabetesaustralia.com.au.

Enzyme supplements

The pancreas produces digestive enzymes, which help break down the food you eat into basic nutrients that the body can use. When you have pancreatic cancer, your body may not have enough of these digestive enzymes. This happens when the cancer blocks the pancreatic duct, and it makes it difficult to digest fats or proteins (malabsorption).

Malabsorption can cause:

- cramping
- wind
- diarrhoea
- fatty bowel movements (stools) that are difficult to flush
- weight loss.

Your doctor may prescribe enzyme supplements to treat these symptoms. A dietitian can also advise you on dosage, which can

change depending on the amount of fat you eat. Generally, a very low-fat meal or snack (such as fruit) may not need a capsule, while a meal with fried food would require a larger dose.

It may take time to get the right balance of enzyme supplements for the foods you are eating. Write down any digestive symptoms you have and discuss them with your doctor or dietitian so you can find the right balance faster. If the tablets cause side effects, or if symptoms of malabsorption persist, tell your doctor or dietitian.

tip

Most enzyme supplements are in capsule form. If you find it hard to swallow them, open the capsules and mix the contents with food that can be swallowed easily without chewing.

Food-type nutrition supplements

Nutritional supplements such as Ensure[®], Sustagen[®] and Resource[®] can be used to boost a small meal or snack or to replace solid food. Most supplements contain a good variety of nutrients, particularly energy (kilojoules/calories), protein, vitamins and minerals. They are available as ready-made drinks or in powdered form to be mixed with water or milk.

Nutrition supplements can be sprinkled onto cereal and fruit, or mixed into foods such as mashed potato, gravy, casseroles, scrambled eggs, custard, hot and cold drinks and soup.

Protein and glucose powder supplements can also be added to meals and snacks for extra energy. These shouldn't be used as meal replacements as they don't provide vitamins or minerals. Glucose supplements may not be recommended if you have been diagnosed with diabetes.

Talk to your dietitian for more information about food-type nutrition supplements. The dietitian will advise you on the type and quantity you should have.

Seeing a dietitian

Ask your surgeon, GP or gastroenterologist for information about seeing a dietitian, either in hospital or afterwards.

The Dietitians Association of Australia can also direct you to an accredited practising dietitian in your area or to one who has experience in particular problems.

Call **1800 812 942** or go to <http://daa.asn.au>. Some dietitians are also listed in the *Yellow Pages*.

If you want to see a dietitian after you leave hospital, you may be able to receive a Medicare rebate for some of your consultations. To be eligible, your GP needs to refer you to an accredited practising dietitian as part of your Enhanced Primary Care (EPC) plan. Many private health funds also provide a rebate to see a dietitian.

The Dietitians Association of Australia has information on the typical fee for a dietitian's consultation.



Key points

- Dietitians are experts in nutrition who can give you advice on eating problems.
- People who have Whipple's surgery should avoid fatty, greasy and fried foods, and foods that produce wind (gas). They may be prescribed pancreatic enzyme supplements.
- You may lose weight because your body can't absorb food, and breaks down muscle and fat.
- Cancer treatment can affect your appetite and sense of taste. You may need to try to take in more energy (kilojoules or calories). You can eat snacks frequently, add extras such as cheese to your food, or use food-type nutrition supplements.
- Your sense of taste or smell may change. Some people compensate for this by adding sauces or spices to food, while others avoid strong flavours.
- The bowel may become irritated and sensitive, which can cause diarrhoea. Changing your diet or taking medication may help.
- If you are vomiting, try to stay hydrated and introduce foods slowly before you return to your normal diet.
- Some people develop diabetes before the cancer is diagnosed or after surgery. This means your blood sugar isn't well controlled, so you may have to adjust your diet or take medication.
- You may be prescribed digestive enzymes.
- Nutritional supplements can add nutrients and energy to food. A dietitian can advise you about supplements.



Making treatment decisions

Sometimes it is difficult to decide on the right treatment. You may feel that everything is happening so fast you don't have time to think things through. If you are feeling unsure about your options, check with your doctor how soon your treatment should start, and take as much time as you can before making a decision.

Understanding details about the disease, the available treatments and their possible side effects will help you make a well-informed decision. This decision will also take into account your personal values and the things that are important to you and your family. It is common to feel overwhelmed by information so it may help if you read and talk about the cancer gradually.

- Weigh up the advantages and disadvantages of different treatments, including the impact of any side effects.
- If only one type of treatment is recommended, ask your doctor why other choices have not been offered.
- If you have a partner, you may want to discuss the treatment options together. You can also talk to friends and family.

You have the right to accept or refuse any treatment offered by your doctors and other health care professionals. Some people with advanced cancer choose treatment even if it only offers a small benefit for a short period of time. Others want to make sure the benefits outweigh the side effects so that they have the best possible quality of life. Some people choose options that focus on reducing symptoms and make them feel as well as possible.

Talking with doctors

When your doctor first tells you that you have cancer you may not remember all the details about what you are told. You may want to see the doctor again before deciding on treatment. Ask for the time and support to make your decision.

If you have questions, it may help to write them down before you see the doctor. You can also check the list of suggested questions on page 74. Taking notes or recording the discussion can help too. Many people like to have a family member or friend go with them to take part in the discussion, take notes or simply listen.

If your doctor uses medical terms you don't understand, ask for an explanation in everyday language. You can also check a word's meaning in the glossary (see page 75).

tip

If you have several questions for your doctor, ask if it is possible to book a longer appointment.

A second opinion

Getting a second opinion from another specialist may be a valuable part of your decision-making process. It can confirm or clarify your doctor's recommendations and reassure you that you have explored all of your options.

Some people feel uncomfortable asking their doctor for a second opinion, but specialists are used to people doing this.

Your doctor 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 may decide you would prefer to be treated by the doctor who provided the second opinion.

Taking part in a clinical trial

Your doctor may suggest you consider taking 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. Over the years, trials have improved treatments and led to better outcomes for people diagnosed with cancer.

If you join what is called a randomised trial for a new treatment, you will be chosen at random to receive either the best existing treatment or the promising new treatment.

To help you decide whether or not to participate, you can talk to your specialist or the clinical trials nurse. If you're still unsure, you can also ask for a second opinion from an independent specialist. If you do decide to take part, you have the right to withdraw from the trial at any time; doing so will not jeopardise your ongoing treatment for cancer.

For more information about clinical trials and other research, including questions to ask your doctor and how to find a suitable study, call Cancer Council Helpline 13 11 20. You can also find trials on the website www.australiancancertrials.gov.au.



Looking after yourself

Cancer can cause physical and emotional strain. Eating well, exercising and relaxing may help reduce stress and anxiety, and improve well-being. Dealing with changes in your emotions and relationships early on is also very important.

Healthy eating

Eating nutritious food will help you keep as well as possible and cope with cancer and treatment side effects. Depending on your treatment, you may have special dietary needs. A hospital dietitian can help you manage any eating difficulties, and choose the best foods and meals for your situation.

Cancer Council Helpline can send you free information about nutrition and cancer.

Being active

You will probably find it helpful to be active and exercise regularly if you can. Physical activity, even if gentle or for a short duration, helps to improve circulation, reduce tiredness and elevate mood. The amount and type of exercise you do will depend on what you are used to, how well you feel and what your doctor advises.

If you aren't used to exercise or haven't exercised for a while, make small changes to your daily activities. You could walk to the shops, take the stairs, do some gardening or join a gentle exercise class. If you want to do more vigorous or weight-bearing exercise, ask your medical team what is best for you.

Complementary therapies

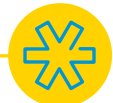
Complementary therapies are treatments that may help you cope better with side effects such as pain. They may also increase your sense of control over what is happening to you, decrease your stress and anxiety, and improve your mood.

There are many types of complementary therapies, such as herbal medicine, acupuncture, massage, relaxation and meditation. Some treatment centres offer these therapies as part of their services, but you may have to go to a private practitioner. Self-help CDs or DVDs can also guide you through different techniques.

Let your doctor know about any complementary therapies you are using or thinking about trying. Some therapies may not be appropriate, depending on your medical treatment. For example, herbs and nutritional supplements may interact with your medication or surgery, resulting in harmful side effects. Massage, acupuncture and exercise therapies should also be modified if you have lowered immunity, low platelets or fragile bones.

Call Cancer Council Helpline 13 11 20 for more information and resources about complementary therapies.

Alternative therapies are often defined as those used instead of conventional medical treatments. These therapies may be harmful if people with cancer delay or stop using medical treatment in favour of them. Examples are coffee enemas and magnet therapy.



Relationships with others

The strong emotions you experience as a result of cancer may affect your relationships. The diagnosis and ongoing challenges may cause you to make some changes in your life or develop a new outlook on your values, priorities and life in general. Sharing those thoughts and feelings with your family, friends and colleagues may strengthen your relationships.

If you feel uncomfortable talking about your feelings, take your time and approach others when you are ready. People usually appreciate insight into how you are feeling and guidance on providing support during and after treatment. Calling Cancer Council Helpline may help you build your confidence to discuss your feelings with others.

While you are giving yourself time to adjust to the cancer diagnosis, do the same for friends and family. People may react in different ways – by putting on a happy face, playing down your anxiety, or even ignoring you. They are also adjusting to changes.

If someone's behaviour upsets you, it may help to discuss how you both feel about the situation.

“ I feel lucky in some ways. My husband has been a great help and is very supportive. He will discuss the cancer but he prefers to remove the emotion and talk about it on a medical or practical level. ” *Barbara*

Sexuality, intimacy and cancer

Having cancer can affect your sexuality in both physical and emotional ways. The impact of these changes depends on many factors, such as treatment and side effects, the way you and your partner communicate, and your self-confidence. Knowing the potential challenges and addressing them will help you adjust to these changes.

Some people with cancer have the support of a partner, while others do not. If you meet a new partner during or after treatment, it can be difficult to talk about your experiences, particularly if the cancer has had an impact on your sexuality.

Sexual intercourse may not always be possible during and immediately after treatment, but closeness and sharing are vital to a healthy relationship. Call Cancer Council Helpline 13 11 20 for more information on sexuality and cancer.

Some treatments may also affect your fertility permanently or temporarily. If having children is important to you, talk to your doctor before you start treatment.

Contraception

Depending on the type of cancer and treatment you have, your doctors may advise you to use certain types of contraception, such as condoms, for a period of time during and after treatment. This is to protect your partner and also to avoid pregnancy, as some treatments, such as chemotherapy, can be toxic to your partner and can harm a developing baby. Ask your doctors about this.

Changing body image

Cancer treatment can change the way you feel about yourself (your self-esteem). You may feel less confident about who you are and what you can do. This is common whether your body has changed physically or not.

Give yourself time to adapt to any changes. Try to see yourself as a whole person (body, mind and personality) instead of focusing only on the parts of you that have changed.

For practical suggestions about hair loss, weight changes and other physical changes, call Cancer Council Helpline.

Look Good...Feel Better program

Cancer treatments, such as chemotherapy and radiotherapy, can sometimes cause side effects such as hair loss and skin irritation. These changes can make you feel self-conscious.

Look Good...Feel Better is a free two-hour program for both

men and women to teach them techniques using skin care, hats and wigs to help restore appearance and self-esteem during and after treatment.

Call **1800 650 960** or visit **www.lgfb.org.au** for more information and to book into a workshop.

“ I did the Look Good...Feel Better program before treatment. It helped me prepare mentally for losing my hair during chemotherapy. ” *Ann*

Life after treatment

You may be surprised to find out that life after cancer treatment can present its own challenges. You will need to take some time to adjust to physical and emotional changes.

You may have mixed emotions. Beforehand, you may have been busy with appointments and focused on treatment, but afterwards you may feel anxious rather than secure. You might worry about every ache and pain and wonder if the cancer is coming back.

Some people say that after cancer they have changed priorities and see life with a new clarity. For example, you may decide to travel, spend more time with family, or do volunteer work.

Although you might feel pressure to return to normal life, you may find that you don't want your life to return to how it was before cancer.

You might find it helpful to:

- take time to adjust to physical and emotional changes
- re-establish a new daily routine at your own pace
- spend time on a leisure activity you enjoy
- maintain a healthy diet and lifestyle
- schedule regular checkups with your doctor
- share your concerns with family and friends and tell them how they can support you
- call Cancer Council Helpline 13 11 20 to connect with other people who have had cancer, or to request a free booklet about life after cancer.

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, talk to your doctor. You may be experiencing depression (see page 40).

After treatment: follow-up

After your treatment, the signs and symptoms of your disease may reduce or disappear. This is known as remission.

During remission, you will still need regular check-ups by your surgeon or GP to monitor your health and confirm that the cancer hasn't come back. Blood tests and imaging tests may be done to confirm that the cancer hasn't returned.

Check-ups become less frequent if you have no further problems. If you have any concerning symptoms between appointments, let your doctor know as soon as possible.

What if the cancer returns?

Unfortunately, pancreatic cancer is difficult to treat, and it often comes back after treatment. This is known as a relapse.

Most of the time, surgery is not an option if you have a relapse. Your doctors may recommend you have other types of treatment, such as chemotherapy or radiotherapy.

If the medical team is unable to cure the cancer, treatments can be given to reduce your symptoms and improve your quality of life. This is called palliative care – see page 31.



Seeking support

When you are first diagnosed with cancer, and throughout the different stages of your treatment and recovery, it is normal to experience a range of emotions, such as fear, sadness, anxiety, anger and frustration. If sadness or anxiety is ongoing or severe, talk to your doctor.

It may help to talk about your feelings. Your partner, family members and friends can be a good source of support, or you might prefer to talk to:

- your treatment team
- a counsellor, social worker or psychologist
- your religious or spiritual adviser
- a support group – see page 69
- the Helpline.

If you need assistance, such as help around the house, it may be hard to tell people what would be useful. Some people prefer to ask a family member or friend to coordinate offers of help.

You may find that while some people you know are supportive, others may not even know what to say to you. If you have children, the prospect of telling them you have cancer can be frightening and unsettling. Cancer Council has a range of free resources to help people talk about cancer and deal with the emotions that cancer may bring up. Different resources are available for people with cancer, partners, carers, children, friends and colleagues.

Call Cancer Council Helpline 13 11 20 for resources and support. You can also download booklets from the Cancer Council website.

Practical and financial help

A serious illness can cause practical and financial difficulties. Many services are available so you don't have to face these problems alone:

- Financial or legal assistance – through benefits, pensions and programs – can help pay for prescription medicines, transport costs to medical appointments, utility bills or basic legal advice.
- Home nursing care may be available through community nursing services or local palliative care services.
- Meals on Wheels, home care services, aids and appliances can be arranged to help make life easier at home.
- Subsidised travel and accommodation may be available for rural patients.

Check with the hospital social worker, occupational therapist or physiotherapist, or Cancer Council Helpline 13 11 20 to ask whether these services are available in your area.

Cancer Council library*

Following a cancer diagnosis many people look for information about new types of treatment, the latest research findings and stories about how other people have coped. Cancer Council has a range of books, CDs, DVDs and medical journals that may be helpful for you. Call the Helpline for more information.

** Not available in Victoria and Queensland*

Talk to someone who's been there

Coming into contact with other people who have had similar experiences to you can be beneficial. You may feel supported and relieved to know that others understand what you are going through and that you are not alone. There are many ways for you and your family members to connect with others for mutual support and to share information.

In these support settings, people often feel they can speak openly and share tips with others. You may find that you are comfortable talking about your diagnosis and treatment, your relationships with friends and family, and your hopes and fears for the future.

Ask your nurse, social worker or Cancer Council Helpline about suitable support groups and peer support programs in your area.

Types of support services*

Face-to-face support groups – often held in community centres or hospitals

Online discussion forums – where people can connect with each other at any time – see www.cancerconnections.com.au

Telephone support groups – for certain situations or types of cancer, which trained counsellors facilitate

Peer support programs – match you with a trained volunteer who has had a similar cancer experience, e.g. Cancer Connect.

** Not available in all areas*



Living with advanced cancer

Many people diagnosed with pancreatic cancer think about what will happen if or when the disease progresses. You may question how much more time you have to live and begin going over your life and what it has meant for you. These thoughts are natural.

Being told that you have advanced cancer may bring up different emotions and reactions. You may not know what to say or think, or you may feel sadness, anger or disbelief. You might think things like:

- Why me?
- Why can everyone else go on as normal?
- It's not fair.
- How long do I have left?
- I am not ready to die. I have so many things I still want to do and achieve.
- How can I stop this happening?
- I don't want to live anymore. What's the point? I want it to be over now.

Some days will be easier than others. There will be days when you feel tired and unsure. Other days you will have more energy and feel more optimistic.

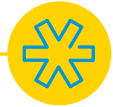
Some people find it important to stay hopeful during times of sadness or uncertainty. This may help you feel more able to deal with the situation. Your hopes may change over time – you may hope for a cure, to be around for a special event, or that your symptoms will be well controlled.

Talking to your doctor about your prognosis may help you feel that your hopes are positive and realistic.

The palliative care team is a group of professionals who can talk to you about what you are going through. For example, your doctors and nurses can help you cope with symptoms and side effects. You may want to talk to a social worker, counsellor or pastoral care worker about your feelings.

For more information about palliative care and advanced cancer, talk to the palliative care team or call Cancer Council Helpline 13 11 20.

Many people with pancreatic cancer have months or years ahead of them following treatment.





Caring for someone with cancer

You may be reading this booklet because you are caring for someone with cancer. Being a carer can be stressful and cause you much anxiety. Try to look after yourself – give yourself some time out and share your worries and concerns with somebody neutral such as a counsellor or your doctor.

Many cancer support groups are open to carers, as well as people with cancer. A support group can offer a valuable opportunity to share experiences and ways of coping.

Support services such as Home Help, Meals on Wheels or visiting nurses can help you in your caring role. There are also many groups and organisations that can provide you with information and support, such as Carers Australia, the national body representing carers in Australia. Carers Australia works with the Carers Associations in each of the states and territories. Phone 1800 242 636 or visit www.carersaustralia.com.au for more information and resources.

You can also call Cancer Council Helpline to find out more about different services and to request free information for carers and families looking after someone with cancer.



Useful websites

The internet has many useful resources, although not all websites are reliable. The websites below are good sources of information.

Australian

Cancer Council Australia..... www.cancer.org.au
Department of Health and Ageing..... www.health.gov.au
Cancer Australia..... www.canceraustralia.gov.au
HealthInsite..... www.healthinsite.gov.au
Carers Australia..... www.carersaustralia.com.au
Cancer Connections..... www.cancerconnections.com.au
Australian Pancreatic
Cancer Genome Initiative..... www.pancreaticcancer.net.au
Unicorn Foundation..... www.unicornfoundation.org.au

International

American Cancer Society..... www.cancer.org
Macmillan Cancer Support..... www.macmillan.org.uk
US National Cancer Institute..... www.cancer.gov
Johns Hopkins Medicine Pancreatic Cancer
Research Center..... www.path.jhu.edu/pancreas
Pancreatic Cancer Action Network..... www.pancan.org
Pancreatic NET Connections..... www.pannetconnections.com
The Carcinoid Cancer Foundation..... www.carcinoid.org



Question checklist

You may find this checklist helpful when thinking about the questions you want to ask your doctor about your disease and treatment. If your doctor gives you answers that you don't understand, ask for clarification.

- What type of pancreatic cancer do I have?
- How far has the cancer spread? What stage of cancer do I have?
- What treatment do you recommend and why?
- Are there other treatment choices for me? If not, why not?
- What are the risks and possible side effects of each treatment?
- How long will treatment take? Will I have to stay in hospital?
- How much will treatment cost?
- Will treatment cause a lot of side effects? What will be done about this?
- How will treatment affect my nutrition and diet?
- Are the latest tests and treatments for this type of cancer available in this hospital?
- Are there any clinical trials of new treatments or other kinds of research that I could participate in?
- How frequently will I need check-ups after treatment?
- Are there any complementary therapies that might help me?



Glossary

You may come across new terms when reading this booklet or talking to health professionals. You can check the meaning of other health-related words at www.cancercouncil.com.au/words or www.cancervic.org.au/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.

advanced cancer

Cancer that has spread from where it started (the primary site) to other parts of the body. If it has spread to distant parts of the body it is called metastatic advanced cancer.

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. A local anaesthetic numbs part of the body; a general anaesthetic causes a temporary loss of consciousness.

benign

Not cancerous or malignant. Benign lumps are not able to spread to other parts of the body.

bile

A fluid made in the liver and stored in the gall bladder that helps with the digestion of fats.

carcinoid syndrome

A variety of symptoms, such as diarrhoea, wheezing and flushing, that may occur in patients with carcinoid tumours.

carcinoid tumour

A type of neuroendocrine tumour that most commonly occurs in the appendix, small intestine, lung, kidney, colon or pancreas.

cells

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

chemotherapy

The use of cytotoxic drugs to treat cancer by killing cancer cells or slowing their growth. Chemotherapy can also be used to reduce the size of the cancer and help lessen pain.

common bile duct

The passage through which bile from the liver passes to the duodenum. Also called bile duct.

diabetes

A disorder in which sugars are not taken up in the body properly because the pancreas does not produce enough of the necessary hormone (insulin) or the body has become resistant to the effect of insulin.

diagnosis

The identification and naming of a person's disease.

duct

An enclosed tube or passage in the body.

duodenum

The first section of the small bowel.

endocrine system

The system of the body that produces hormones.

endocrine tumour

A rare type of tumour affecting the glands which produce hormones.

endocrinologist

A doctor who specialises in treating people with disorders of the endocrine system.

endoscope

The flexible tube used during an endoscopy.

endoscopic retrograde

cholangio-pancreatography

A procedure used to examine the pancreas and bile duct. The doctor injects dye into the organs and creates x-ray pictures of the organs. Also known as ERCP.

endoscopy

A type of examination or diagnostic test. A thin, flexible tube called an endoscope is used to examine the body.

enzymes

Proteins that aid digestion and the normal functioning and performance of the body.

exocrine gland

A gland that secretes a substance through a duct.

exocrine tumour

The most common type of pancreatic cancer. They start in the cells that make pancreatic enzymes that aid digestion.

functioning tumour

A type of neuroendocrine tumour that secretes hormones, which may cause symptoms.

gall bladder

A small organ on the underside of the liver that stores bile.

gastrinoma

A pancreatic neuroendocrine tumour that secretes too much of the hormone gastrin.

gastroenterologist

A specialist doctor who diagnoses and treats disorders of the digestive system.

genes

The tiny units that govern the way the body's cells grow and behave. Genes are found in every

cell of the body and are inherited from both parents.

gland

Specialised organs or groups of cells that make various fluids that are used in the body or excreted.

glucagonoma

A pancreatic neuroendocrine tumour that secretes too much of the hormone glucagon.

hormones

Chemicals in the body that send information between cells.

insulin

A chemical messenger (hormone) secreted by the pancreas to regulate the amount of sugar (glucose) in the blood. If the body does not produce enough insulin, diabetes will develop.

insulinoma

A type of pancreatic neuroendocrine tumour that secretes too much insulin.

jaundice

A condition caused by increased

amounts of bile in the blood. This causes the skin and the whites of the eyes to turn yellow.

laparoscopy

Surgery using a laparoscope, which is inserted into the body through a very small incision. Surgery done through small cuts in the abdomen using a laparoscope for viewing. Also called keyhole surgery.

liver

A large organ in the top right side of the abdomen. The liver plays an important role in digestion, breakdown and build-up, detoxification and removal of substances from the body.

lymph nodes

Small, bean-shaped glands that form part of the lymphatic system. Also called lymph glands.

malignant

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

metastasis

A cancer deposit that has spread from a primary cancer in another part of the body. Also known as secondary cancer.

neuroendocrine tumour

A type of tumour that affects the endocrine and nervous systems. Some types of neuroendocrine tumours affect the pancreas.

non-functioning tumour

A type of neuroendocrine tumour that does not produce hormones.

opioids

The strongest pain relievers available. These include morphine, fentanyl, codeine, oxycodone, hydromorphone and methadone.

pancreas

An organ in the digestive system. The pancreas produces insulin and enzymes that aid digestion.

pancreatic neuroendocrine tumour (PNET)

A neuroendocrine tumour affecting the pancreas.

pancreaticoduodenectomy

See Whipple's procedure.

pancreatitis

Inflammation of the pancreas.

radiotherapy

The use of radiation, usually x-rays or gamma rays, to kill cancer cells or injure them so they cannot grow and multiply.

scintigraphy

A scanning method that uses a radioactive substance to locate tumours in the body. Types of scans include PET (positron emission tomography) scans, SRS (somatostatin receptor scintigraphy) and MIBG (metaiodobenzylguanidine) scans.

somatostatinoma

A type of pancreatic neuroendocrine tumour that secretes too much of the hormone somatostatin.

stage

The extent of a cancer and whether it has spread from an original site to other parts of the body.

tissue

A collection of cells that make up a part of the body.

tumour

A new or abnormal growth of tissue on or in the body. A tumour may be benign (not cancer) or malignant (cancer).

ultrasound

A non-invasive scan that uses soundwaves to create a picture of part of the body. An ultrasound scan can be used to measure the size and position of a tumour.

VIPomas

A type of pancreatic neuroendocrine tumour that produces a hormone-like substance called vasoactive intestinal polypeptide (VIP).

Whipple's procedure

An operation to remove the head of the pancreas and surrounding structures. Also called a Whipple's operation, Whipple's surgery or pancreaticoduodenectomy.



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 Pink Ribbon Day, 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 Helpline 13 11 20

Cancer Council Helpline is a telephone information service provided by Cancer Council Victoria for people affected by cancer.

For the cost of a local call (except from mobiles), you, your family, or friends can talk about your concerns and needs confidentially with experienced cancer nurses. Helpline nurses can send you information and put you in touch with support services in your area.

If you need information in a language other than English, you can call the Multilingual Cancer Information Line (see the back cover).

The Helpline is open Monday to Friday, 9am to 5pm. If calling outside business hours, you can leave a message and your call will be returned the next business day.

Cancer Council Publications

If you found this booklet helpful, you might want to request another free resource from Cancer Council. Call the Helpline if you would like a copy of any of the following resources:

Treatment and side effects

- Coping with chemotherapy
- Coping with radiotherapy
- Complementary and alternative cancer therapies

Coping with cancer and recovery

- Nutrition and exercise
- Life with cancer
- Cancer pain
- Sexuality and cancer
- When cancer won't go away



13 11 20

Cancer information in your language

Do you speak a language other than English? Do you have questions about cancer?

For the cost of a local call (except from mobiles), you can confidentially talk to a nurse from Cancer Council Helpline with the help of an interpreter.

Simply follow these steps:

- 1.** Call **13 14 50**, Monday to Friday, 9am to 5pm.
- 2.** Say the language you need.
- 3.** Wait on the line for an interpreter (may take up to 3 minutes).
- 4.** Ask the interpreter to contact Cancer Council Victoria Helpline **13 11 20**.
- 5.** You will be connected to the interpreter and a cancer nurse.

For further information and details please visit our website: www.cancervic.org.au