

Key points:

- Your cancer treatment team will advise you on the best treatment for pancreatic cancer.
- Depending on the stage of the cancer, treatment may include:
 - surgery
 - radiation treatment
 - chemotherapy
 - palliative care
 - or a combination of these.
- If you are thinking about using complementary, traditional Māori, or Pacific therapies, please talk about them with your cancer treatment team.

Ngā korero matua:

- Mā tō rōpū atawhai koe e kōrero mō te maimoatanga pai rawa mō te matepukupuku repetaiaki huka.
- E ai ki te wāhanga kua eke tō matepukupuku, tērā pea ka mahia ko ēnei maimoa
 - te hāparapara
 - te maimoatanga iraruke
 - te mahi hauhau
 - te whakaora atawhai taurima
 - he whiriwhiringa rānei o ēnei.
- Mehemea e whakaaro ana koe ki te whakamahi haumanu tautoko, haumanu Māori taketake, haumanu Moana-nui-ā-Kiwa, kōrero mō ēnei ki tō rōpū maimoa matepukupuku.

Treatment options

Your treatment team will advise you on the best treatment for your pancreatic cancer. Depending on the stage of the cancer, it may include surgery, radiation treatment, chemotherapy, or palliative care, or a combination of these.

Sometimes treatment will be offered with the goal of curing the cancer. Your treatment team will talk with you about how likely the treatment is to be successful.

Even when treatment to cure the cancer is not possible, your treatment team may recommend treatment options to reduce the symptoms of the cancer and improve your quality of life.

| Stage of pancreatic cancer | Main treatment options |
|-----------------------------------|--|
| Early (Stages 1 and 2) | Surgery to remove the cancer Chemotherapy (with or without radiation treatment) before surgery to try to shrink the cancer (neo-adjuvant treatment) Chemotherapy after surgery (adjuvant treatment) |
| Locally advanced (Stages 2 and 3) | Chemotherapy using a combination of medications Sometimes radiation treatment can be used after chemotherapy Clinical trials |
| Advanced (Stage 4) | Chemotherapy using a combination of medications Targeted therapy can be effective for people with advanced cancer who have specific gene changes Clinical trials Palliative treatment and supportive care |

Surgery

If pancreatic cancer is early stage (stage 1 or 2), you may be able to have surgery to remove it (potentially curative surgery).

If the cancer cannot be removed, you may be offered surgery to help control some of the symptoms of pancreatic cancer (palliative surgery).

Surgery to treat pancreatic cancer

There are different surgeries used to treat pancreatic cancer. All surgeries remove part (or sometimes all) of the pancreas. Other organs around the pancreas may also be removed. The most common type of surgery is called the Whipple procedure.

People having surgery to treat pancreatic cancer need to be otherwise fit and well, as this is major surgery and it takes a long time to recover.

The Whipple procedure

The Whipple procedure removes the head, and sometimes the body, of the pancreas. The surgeon also removes:

- the first part of the small bowel (duodenum)
- part of the bile duct
- the gall bladder
- lymph nodes near the pancreas
- sometimes part of the stomach.

The end of the bile duct and what is left of the pancreas are reattached to the small bowel. This means that bile and digestive juices can still enter the small bowel to help with the breakdown of food (digestion).

The ends of the small bowel (or the stomach and small bowel) are also reattached so that food can pass through the stomach into the small bowel.



You can find more information on pancreatic cancer surgery and the Whipple procedure on the following websites:

Pancreatica

https://pancreatica.org/pancreatic-cancer/pancreatic-cancer-surgicaltreatment

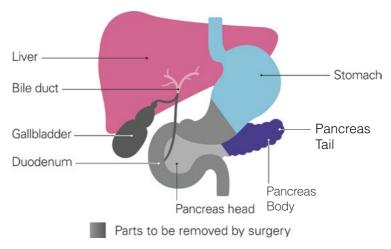
Waitematā DHB

www.waitematadhb.govt.nz/assets/Documents/clinics-services/upper-gi/ TheWhippleAguideForPatientsJun14.pdf

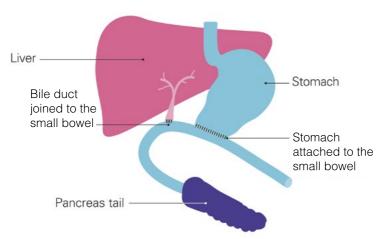
Pancreatic Cancer UK

www.pancreaticcancer.org.uk/information/treatments-for-pancreaticcancer/surgery-for-pancreatic-cancer

This diagram shows the parts of the body removed by the Whipple procedure:



This diagram shows the pancreas and surrounding organs after the Whipple procedure:



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Distal pancreatectomy

A distal pancreatectomy removes the body and tail of the pancreas.

Sometime the spleen is removed at the same time. This is called a splenectomy.

Total pancreatectomy

A total pancreatectomy removes the whole pancreas. Depending on where the cancer is, the surgeon may also remove:

- the first part of the small bowel (duodenum)
- the gall bladder
- part of the bile duct
- sometimes part of the stomach
- sometimes the spleen.



You can find more information on surgery for pancreatic cancer on this website: www.pancreaticcancer.org.uk/information/treatments-forpancreatic-cancer/surgery-for-pancreatic-cancer

Recovery after surgery

Your recovery after surgery will depend on many factors. Here are some things you can do to help.

- Try to eat as well as possible in the weeks before your surgery.
- Stay active.
- If you have lost weight, you may need to gain some weight before surgery. Your treatment team will guide you on this.

Side effects of surgery

Your treatment team will talk to you about the benefits and side effects of surgery.

Surgery to remove pancreatic cancer may cause problems with digesting your food. It can also cause diabetes.

If your spleen is removed during surgery to treat pancreatic cancer, you will need to have a course of immunisations and antibiotics as part of your recovery.

Food digestion

Having part of your pancreas removed will affect how well the pancreas makes pancreatic enzymes that help digest the food you eat. After surgery, some people need medication (pancreatic enzyme replacement therapy) to help them digest food (see page 42).

Ask if you can see a dietician before and after your surgery. They can give you advice on managing symptoms after surgery, eating well and putting on weight, and taking pancreatic enzymes.

Stents or bypass surgery to help control symptoms of pancreatic cancer

Stents and bypass surgery can be used to help control the symptoms of pancreatic cancer. Stents are usually inserted as a day surgery using endoscopy. Bypass surgery is a more complex operation that requires a hospital stay.

These procedures aim to help reduce any symptoms you may be experiencing. They do not cure the cancer.

| Common surgical procedures to control symptoms | |
|--|--|
| Symptom | Surgery (procedure) |
| Jaundice (see page 40) | Placing a small tube (stent) in the bile duct to unblock the duct or stop it getting blocked. Day surgery using endoscopy. |
| Feeling or being sick | Placing a small tube (stent) in the first part of the small bowel (duodenum) to unblock it or stop it getting blocked. Day surgery using endoscopy. |
| Jaundice and feeling or being sick | Bypassing a blockage in the bile duct or small intestine to make a new path for food or bile to move around the cancer. Larger operation that requires a hospital stay. |

Placing a stent

A stent is a small tube that is put into your bile duct or the first part of your small bowel (duodenum) to unblock it or stop it getting blocked. Your symptoms should improve soon after you have a stent put in.

A stent placed in the bile duct helps to relieve jaundice. A stent placed in the small intestine can help to improve symptoms of nausea and vomiting.

There is a chance that the stent will get blocked or move once it has been put in. If this happens, the stent may need to be replaced.

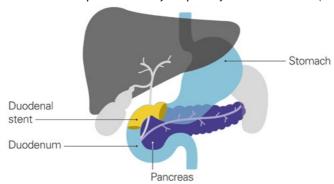
Sometimes the bile duct gets infected (cholangitis). This will need treatment in hospital.

If your symptoms return or you feel unwell (such as with a high temperature or shivering) at any time after you have had a stent put in, you need to contact your treatment team straight away.

Liver -Bile duct -Gallbladder Biliary stent Duodenum -Pancreas Pancreatic duct

Bilary Stent: A stent placed in the bile duct

Duodenal Stent: A stent placed in the first part of the small bowel (duodenum)



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Bypass surgery

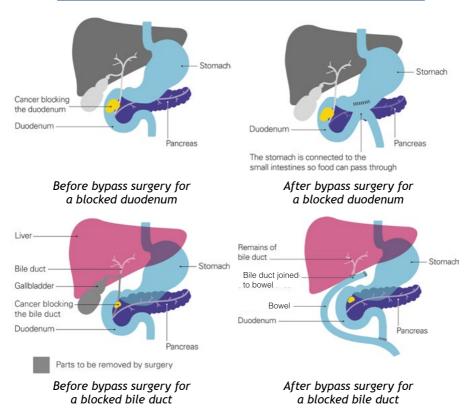
If the cancer has blocked the first part of your small bowel (duodenum) or bile duct, you may need bypass surgery to treat your symptoms (jaundice and nausea/ vomiting). It does not remove the cancer.

Bypassing a blockage in the bile duct or small intestine makes a new path for food or bile to move around the cancer.

Bypass surgery is a big operation. Your treatment team will talk to you about the advantages and disadvantages of having this surgery.



You can find more information on bypass surgery on this website: https://cdn.shopify.com/s/files/1/0424/0949/2641/files/211021PC01 PCUK_Bypass_Surgery_2021_Factsheet_Download.pdf?v=1637425744



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Chemotherapy treatment

Chemotherapy uses medication to kill cancer cells or slow their growth. It affects cells throughout the body and is used to reduce the risk of cancer returning to the pancreas or growing in other parts of the body.



You can find more information on chemotherapy in our *Chemotherapy*, Immunotherapy and Targeted Treatment booklet, available on our website: www.cancer.org.nz/chemotherapy

When chemotherapy treatment is given

Chemotherapy may be given:

- before surgery to try to make the cancer smaller
- after surgery to reduce the chances of the cancer coming back
- to improve symptoms if you are unable to have surgery
- as palliative treatment for cancer that has spread beyond the pancreas, to reduce symptoms and improve your quality of life or extend your life.

In Aotearoa New Zealand the chemotherapy medication nab-paclitaxel (ABRAXANE) has been approved for use (but not funded) for some advanced pancreatic cancers (2022). You may like to ask your oncologist if there are any unfunded treatments available that may be beneficial for you. Your oncologist can give you an estimate of the cost involved if you choose to fund your own treatment.

How chemotherapy is given

Chemotherapy is given as tablets (oral chemotherapy) or into a vein (intravenously).

If chemotherapy is given intravenously, it may be through a cannula. A cannula is a small tube that is put into a vein in your arm or the back of your hand and is removed after each treatment. Intravenous treatment is usually given to you at vour local treatment centre.

Some people may need a central venous access device such as a portacath or a peripherally inserted central catheter (PICC), which stays in place for the whole of your treatment. This is a fine tube placed in your arm or chest that ends in the large veins inside vour chest.

Intravenous treatment is usually given to you as an outpatient at your local treatment centre, at regular intervals over several months. It may be helpful to know that not all people with pancreatic cancer receive the same treatment.

Side effects of chemotherapy

Chemotherapy side effects vary depending on the combination of medications you receive.

You can ask your treatment team to provide you with some written information on the side effects that are most likely to affect you.

Common side effects that you may experience include:

- increased risk of infection
- hair loss

- infertility
- fatigue
- forgetfulness and concentration problems (chemo brain)
- nausea and vomiting
- constipation or diarrhoea
- sore mouth and ulcers.

Your treatment team will provide you with the contact phone numbers you need - keep this information somewhere you can easily find it.

Some side effects of chemotherapy can be life threatening. If you develop any of the following symptoms you must contact your treatment team, or go immediately to your nearest hospital emergency department and tell them you are receiving chemotherapy treatment.

- Fever a temperature over 38°C
- Chills shivers or shakes, feeling hot or cold
- Chest pain
- · Difficulty breathing
- Vomiting that continues after taking anti-sickness medication
- Diarrhoea
- Gum or nose bleeds, or bleeding that does not stop
- Pain or burning when passing urine, or blood in urine

It is important that you do not wait to seek assistance until the next morning or after the weekend.

Radiation treatment

Radiation treatment is the use of x-ray beams to destroy cancer cells or slow their growth. Radiation treatment only affects the part of the body that the beams are aimed at.



You can find more information on how radiation treatment works in our Radiation Treatment/Haumanu Iraruke booklet, available on our website: www.cancer.org.nz/radiation-treatment

When is radiation treatment offered?

Radiation treatment is not often used to treat pancreatic cancer. But you may have radiation treatment:

- to treat early-stage pancreatic cancer if you are not able to have surgery. It is usually combined with chemotherapy (chemoradiation)
- with chemotherapy before surgery to try to make the cancer smaller
- to reduce symptoms of advanced pancreatic cancer, improve your quality of life or extend your life (palliative treatment).

How radiation treatment is given

External beam radiation treatment

External beam radiation treatment is given from outside the body by a machine called a linear accelerator (LINAC). This is the most commonly used type of radiation treatment for pancreatic cancer.

Treatment is given daily (Monday to Friday) and your treatment team will give you information on how long you will have treatment for. The LINAC is on for only a few minutes and the total amount of time spent in the treatment room is usually 10 to 20 minutes.

Treatment is carefully planned to do as little harm as possible to your normal body tissue.

OncoSil

A newer form of radiation treatment, called OncoSil, is available for people who meet specific treatment criteria. It is currently only available in Waikato (2022). The radiation is placed directly into the pancreatic tumour using an endoscope (a telescope placed into the bowel via the stomach).

This treatment is not funded in Aotearoa New Zealand. However, you may want to ask your treatment team if this treatment is suitable for you.

Where radiation treatment is provided

Radiation treatment is available at specialist treatment centres in Auckland, Hamilton, Tauranga, Palmerston North, Wellington, Christchurch, and Dunedin (2022).

If you need to be away from home for your treatment, help may be available for transport and accommodation costs through the National Travel Assistance Scheme (NTA).

Your treatment centre, hospital social workers, the travel office at your local hospital, or your local Cancer Society can advise you on what help may be available.



You can find more information on the National Travel Assistance Scheme on our website: www.cancer.org.nz/nta

Side effects of radiation treatment for pancreatic cancer

People react in different ways to treatment. These are the common side effects that you may experience.

- Fatigue (tiredness) can occur during and after treatment
- Red and dry skin in the area being treated
- Nausea (feeling sick) or vomiting
- · Loss of appetite

The availability of targeted treatment and immunotherapy for pancreatic cancer

There have been recent advances in pancreatic cancer treatment. Unfortunately, these treatments are expensive and Pharmac is not able to provide funding for all the treatments that might be helpful for the management of cancer. You may like to ask your oncologist if there are any unfunded treatments available that may be beneficial for you. Your oncologist can give you an estimate of the cost involved if you choose to fund your own treatment.

Targeted treatment

What is targeted treatment?

This type of treatment targets the damaged genes or proteins of cancer cells to stop cancer growing and spreading. It is sometimes called biological therapy.

How targeted treatment works

Targeted treatment medication travels through the bloodstream. Each medication blocks a specific target, for example a damaged gene or protein, on or within a cancer cell. Blocking these targets can kill cancer cells or slow their growth. The signs and symptoms of cancer reduce or disappear, and damage to healthy cells is minimal.

Why you might be offered targeted treatment

If the cancer contains a change in a specific gene or protein that is helping it to grow, you may benefit from targeted treatment.

To find out if the cancer contains these gene or protein changes, your doctor will take a tissue sample from the cancer and send it to a laboratory for testing. It may take anywhere from a few days to a few weeks to receive the results.

In Aotearoa New Zealand, targeted treatments olaparib (Lynparza) and erlotinib (Tarceva) have been approved for use for some people with advanced pancreatic cancer.

Palliative treatment and supportive care

Palliative treatment is for people with advanced cancer (stage 4) and focuses on improving quality of life. Depending on the cancer, radiation treatment, chemotherapy, targeted treatments, and immunotherapy can be used to slow the growth of the cancer and relieve symptoms you may be experiencing.

Everyone with advanced cancer needs supportive care. Supportive care will mostly be provided by your primary health care team and palliative care team. It includes the management of physical symptoms, cultural, emotional, and spiritual support, and guidance to help you plan ahead.

It is a good idea to ask for palliative care early. Being able to manage problems or issues early, rather than waiting until they become difficult to cope with, can help reduce stress for both you and your whanau.

In general, palliative care services are free. There may be a charge for hiring some equipment for home care. Palliative care and hospice services are funded by both the government and voluntary donations.

Advance care planning

An important part of planning ahead is preparing an advance care plan. Advance care planning helps you, and the people important to you, to talk about the treatments and care you might want towards the end of your life. It will guide your whānau and doctors when you can no longer tell them yourself.

Advance care planning is voluntary — no one can force you to do it.



You can find more information on our website: www.hqsc.govt.nz/our-programmes/advance-care-planning

Other treatments

It is important to discuss any additional treatments you are using or thinking of using with your treatment team. Some treatments may be harmful if they are taken at the same time as medical treatments, so it is advisable to discuss the benefits, medicine interactions, and any safety concerns.

Complementary treatment

Complementary treatments (sometimes called integrative therapy) are healing practices and products that are not usually part of standard medical care. A number of practices are now being used to complement medical treatments. Examples include massage, meditation, and acupuncture, which are sometimes used to lessen the side effects of treatment.

Alternative treatments

When these treatments are used instead of medical treatment, they are considered alternative treatments. Some alternative therapists may claim their treatments are cancer cures — this is very unlikely to be true.



You can check for warnings on natural and herbal products on the Medsafe website: www.medsafe.govt.nz



You can find more information on complementary and alternative medicines in our Complementary and Alternative Medicine booklet, available on our website: www.cancer.org.nz/complementary-therapy

Traditional treatments

Traditional Māori healing

Traditional healing has been a central part of Māori culture for generations. Values, belief systems, and teachings from kaumātua and tohunga have seen Māori focus on total wellbeing, which includes taha tinana, taha hinengaro, taha wairua, and taha whānau (the physical domain, the domain of the mind and behaviour, the spiritual domain, and the whānau or social domain).

Traditional healing methods can include rongoā Māori, romiromi or mirimiri. These therapies are based on the use of native plants, massage therapy, and spiritual healing.



You can find more information on rongoā Māori and providers on our website: www.cancer.org.nz/traditional-healing

Hauora Māori

Mai rā anō te hauora Māori i noho ai hei wāhanga ō te ahurea Māori. Nā ngā uaratanga, te pūnaha whakapono me ngā akoranga a ngā kaumātua me ngā tohunga i kitea ai te arotahi a te Māori ki te oranga kotahi e rarawhi ana i te taha tinana, te taha hinengaro, te taha wairua me te taha whanau.

Ka whai wāhi te rongoā Māori, te romiromi, te mirimiri rānei, hei tauira atu. Ka hāngai katoa ki tarutaru otaota whenua me ngā rākau, te haumanu romiromi me te whakaoranga ā-wairua.

Ka taea etahi atu mōhiohio e pa ana ki te rongoā Māori me ngā kaiwhakarato i runga i tō mātou paetukutuku: cancer.org.nz/traditional-healing/

Traditional Pacific healing

Traditional healing is also important to Pacific peoples, to help in their recovery. It takes a holistic approach to treating the person, where mental, emotional, physical, and spiritual needs are looked after together, rather than as separate parts. The therapy offered to each person depends on their specific needs. Medicinal plants and herbs may be used during the treatment process, as well as stones and massage.

If you are thinking about using Māori or Pacific traditional healing, please discuss them with your treatment team. Both traditional healers and your treatment team aim to provide you with the best possible care that has minimal side effects. If you have difficulty expressing your needs to your treatment providers, find someone to advocate on your behalf. The traditional healers and hospital treatment specialists can then work together to support you on your cancer journey.