Pancreatic
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Surgery and other procedures to control symptoms

This fact sheet is for people diagnosed with inoperable pancreatic cancer who will be having surgery or another interventional procedure to relieve symptoms caused by the cancer. It describes the different interventions that may be used for symptom control and provides information on getting back to normal following the different procedures.

Contents

If you have any questions about anything you read about in this fact sheet, speak to your doctor or nurse.

☎ You can also speak to our specialist nurses on our confidential Support Line. Call free on **0808 801 0707** or email **support@pancreaticcancer.org.uk**

Introduction

Pancreatic cancer is difficult to diagnose. Unfortunately, in many cases by the time someone is diagnosed with it, the tumour may have grown quite large, spread to nearby structures such as the blood vessels near the pancreas (locally advanced cancer), or have spread beyond the pancreas to other parts of the body (advanced or metastatic cancer).

In this situation surgery to remove the cancer is not an option, and you will probably have been told that your cancer is inoperable (can't be operated on). Instead you may have other treatment to help control the cancer's growth, relieve any symptoms it is causing and generally improve how you feel. Treatment is aimed at controlling your symptoms and giving you the best possible quality of life. This is known as palliative treatment.

The cancer may have grown so that it blocks your bile duct or duodenum. If your bile duct is blocked you may get jaundice. Symptoms of jaundice include yellow skin and eyes, and itching. If your duodenum is blocked food can't get through to your bowel and builds up in your stomach, causing sickness and vomiting.

Treatment may include chemotherapy and/or radiotherapy, as well as specific procedures such as:

- inserting a stent to relieve symptoms caused by a blocked bile duct or duodenum (upper part of the small intestines) (see page 3)
- bypass surgery for a blocked bile duct or duodenum (see page 8)
- blocking specific nerves to relieve pain (nerve block) (see page 12).

Fact sheets about **Chemotherapy for pancreatic cancer** and **Radiotherapy for pancreatic cancer** are available on our website at **pancreaticcancer.org.uk/publications**

Inserting a stent

If your bile duct or duodenum are blocked, a small, flexible plastic or metal tube called a stent can be inserted to relieve a blockage and keep the bile duct or duodenum open. A stent to open the bile duct is called a biliary stent. A stent for the duodenum is called a duodenal stent.

Having a stent put in is generally a simple procedure, with few side effects.

Plastic and metal stents

Plastic stents are often referred to as temporary stents. This is because:

- they can be replaced when they get blocked (which may be after only 3-4 months)
- they are sometimes used to temporarily relieve jaundice before someone has surgery or is assessed for surgery. If surgery is performed to remove the cancer, the stent will be taken out as part of that operation.

Metal stents are made of a wire mesh and are usually referred to as permanent stents. They are now being used more often as temporary stents as well. Metal stents are different from plastic stents because:

- once they are in place they expand so they can't be pulled back out, although there are newer metal stents which can be pulled out
- they are much less likely to block than plastic stents because they are wider
- they are not generally used as a temporary measure before surgery as they are more difficult to remove, and they are much more expensive.

Metal stents are often used for people who may have chemotherapy, and for people who are just having treatment to manage their symptoms. There is less risk of infection with the metal stents as they are less likely to get blocked. However, there is still some risk of infection, as the normal bacteria in the bowel can travel up the stent, causing an infection. The tumour may also block the stent by growing through the wire mesh or over the ends of it.

Fact sheets about **Surgery for operable pancreatic cancer** and **Chemotherapy for pancreatic cancer** are available on our website at **pancreaticcancer.org.uk/publications**

Biliary stent for jaundice

How is a stent inserted?

You won't usually need an operation to have a biliary stent inserted although you need to be fit enough for the procedure. This is called an endoscopic retrograde cholangio-pancreatography (ERCP). (ERCP is one of the investigations used to diagnose pancreatic cancer.) The procedure is usually carried out in the hospital's x-ray department or endoscopy suite by a specialist – a gastroenterologist, a surgeon or an interventional radiologist.

You will be given a sedative by an injection in your arm or the back of your hand. Although this won't put you to sleep, it will make you very drowsy and relaxed. A flexible tube with a camera on the end, called an endoscope, is inserted through the mouth and down into the duodenum. The stent can then be put in through the bottom of the bile duct.

If a stent can't be inserted with an ERCP, a different procedure called a percutaneous transhepatic cholangiogram (drainage) (PTC or PTCD) may be used. Here the stent is inserted directly through the skin (percutaneous) and liver (transhepatic) into the top of the bile duct, using a needle and tube.

Before and after the stent is inserted

Most people have an ERCP or PTC as an inpatient, which means you will stay in hospital. However, if you are having it done as an outpatient, you can go home on the same day. If you are going home on the same day, you will need to have someone collect you from hospital and stay with you overnight, as the sedation can stay in your system for up to 24 hours. During this period you will not be able to drive a car, operate any machinery or sign any legal documents.

For an ERCP you will be asked not to eat or drink for at least six hours beforehand to make sure that your stomach and duodenum are empty. The procedure takes 30-40 minutes, and afterwards you will be taken back to the ward. You will be told when you are able to drink again. Generally this will be once the sedation has worn off. If you can drink without problems, you will be allowed to eat. You may need to stay in hospital overnight.

For PTC or PTCD you will be asked not to eat or drink for a few hours beforehand. You will be given a sedative, and the radiologist will numb the skin on your abdomen or lower chest with local anaesthetic. They will then insert a narrow flexible needle through the skin into the liver. They guide the needle to the bile duct using x-ray pictures on a computer screen. They inject dye so that the blockage shows up on the screen. A wire is inserted into the needle and used to guide the stent into position.

You will be given antibiotics before and after the PTC to prevent infection of the biliary duct (cholangitis).

You will usually need to stay in hospital for a few days while you recover. There may be a temporary drain left in the bile duct for a few days to allow the bile to flow freely. This will be removed before you leave hospital, and the bile will drain through the stent.

Getting back to normal

If the stent insertion into the bile duct is successful, then once the sedation has worn off and the bilirubin (a chemical in the blood that builds up when the bile duct is blocked) levels start to fall, you should get back to normal fairly quickly.

Any symptoms of jaundice can take two to six weeks to settle down. The first thing you may notice is that your appetite starts to return. Your stools and urine should be a better colour and you will gradually feel less itchy, if you had itching while you had jaundice.

While you are recovering it's a good idea to have some blood tests done. These will show if the stent is working well and if the bilirubin levels are getting back to normal. If your care team don't suggest this, ask them for some blood forms before you leave hospital. Take these to the GP to have the blood tests after a week, two weeks and so on. The forms will show which blood tests you need. Your GP can then let the hospital team know if the tests show any problems.

If you have any questions about having a biliary stent inserted, speak to your medical team.

☎ You can also call our specialist nurses on our free Support Line.

Duodenal stent

How is a stent inserted?

You won't usually need an operation to have a duodenal stent inserted. You will need to be fit enough for the procedure. This will usually be a gastroscopy, sometimes called an endoscopy.

You will be given a sedative by an injection in your arm or the back of your hand. Although this won't put you to sleep it will make you very drowsy and relaxed. A flexible tube with a camera on the end, called a gastroscope, is inserted through your mouth and down into the duodenum. A fine wire is used to guide the stent into place inside the duodenum.

You may also have a stent inserted using a radiology-guided system. Whichever method is used, the procedure is usually carried out in the hospital's x-ray department or endoscopy suite. It is carried out by a specialist – either a gastroenterologist or an interventional radiologist.

Before and after the stent is inserted

Most people have a gastroscopy as an inpatient. You may be asked to come into hospital the day before your procedure, or on the day. You will be asked not to eat or drink for at least six hours beforehand to make sure that your stomach and duodenum are empty.

The procedure takes 30-40 minutes, and afterwards you will be taken back to the ward to recover. You will be told when you are able to drink again. Generally this will be once the sedation has worn off. Once you are able to drink without problems, you will be allowed to eat. You will usually need to stay in hospital for a few days.

Getting back to normal

When the duodenum has been successfully unblocked you should find that symptoms such as nausea and vomiting have been relieved and you will find it easier to eat.

The stent should help food move more easily but you will need to be careful eating some foods in order to prevent the stent from blocking. You will be advised to eat smaller, more frequent meals, to take your time eating, and to chew your food thoroughly. You may also be advised to eat soft foods for a while. You can ask to speak to a dietitian for advice about diet.

You can read more about diet with a duodenal stent in our booklet, **Diet and pancreatic cancer.**

☎ If you have any questions about having a duodenal stent inserted, speak to your doctor or nurse. Or you can call our specialist nurses on our free Support Line.

Problems with stents

The main problem with stents (both plastic and metal) is that they can get blocked by the tumour. The bile stent can also get blocked by a build-up of bilirubin (a chemical in the blood) or bile sludge (salts and other solid matter that build up in the bile). The duodenal stent can get blocked by food. If the stent gets blocked the symptoms you had before the stent was put in may come back.

You are also at risk of infection from a biliary stent. This is because the bile flows more slowly through the stent, and this encourages bacteria to travel up the stent from the bowel.

Occasionally stents may move out of place, for example if treatment has shrunk the tumour, and may need to be replaced. Signs that there may be a problem include:

- jaundice symptoms
- pain
- fever or an attack of shivering.

It's important to contact your specialist team if you are worried about any symptoms, but particularly signs of an infection. As well as fever or shivering, signs of an infection include headaches or aching muscles. This might be acute cholangitis (infection of the biliary tree) or septicaemia (infection in the blood). The doctors can then decide if the stent needs to be replaced, and give you antibiotics if needed.

A blocked plastic stent will be replaced with another plastic one or a metal one. A metal stent may be removed, but it is usually left in place and a second stent (plastic or metal) placed inside it.

If you have any questions or concerns about having a stent inserted, speak to your medical team.

☎ You can also call our specialist nurses on our free Support Line.

Bypass surgery

You might have bypass surgery if your surgeon started surgery to remove a tumour (such as a Whipple's operation), but found that the cancer had spread beyond the pancreas, so it wasn't possible to remove it.

Our fact sheet, **Surgery for operable pancreatic cancer**, is available on our website at **pancreaticcancer.org.uk/publications**

There are other types of bypass surgery, including surgery to bypass a blocked duodenum or bile duct. This would depend upon your symptoms and what is offered by your hospital. Speak to your medical team about what is suitable for you.

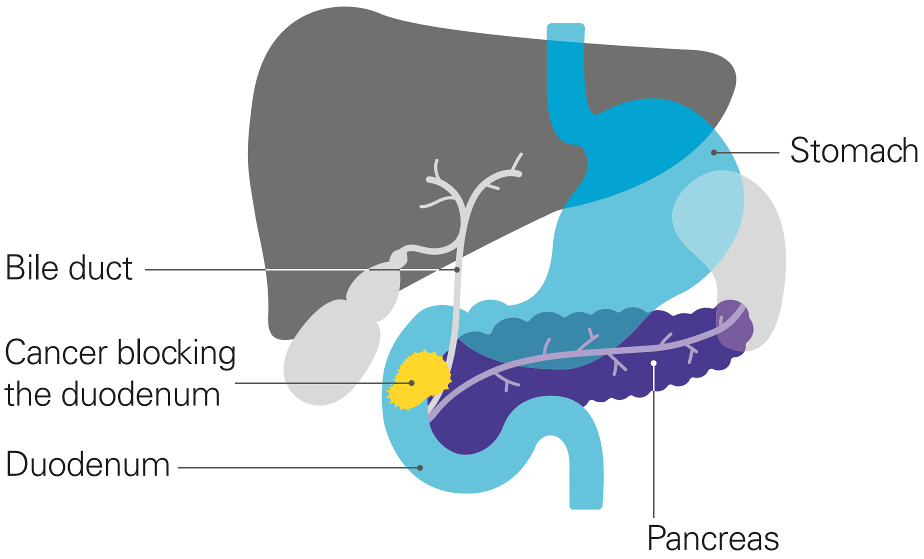
Relieving a blocked duodenum

The cancer may have grown so that it blocks your duodenum. If your duodenum is blocked, food can't get through to your bowel and builds up in your stomach, causing sickness and vomiting.

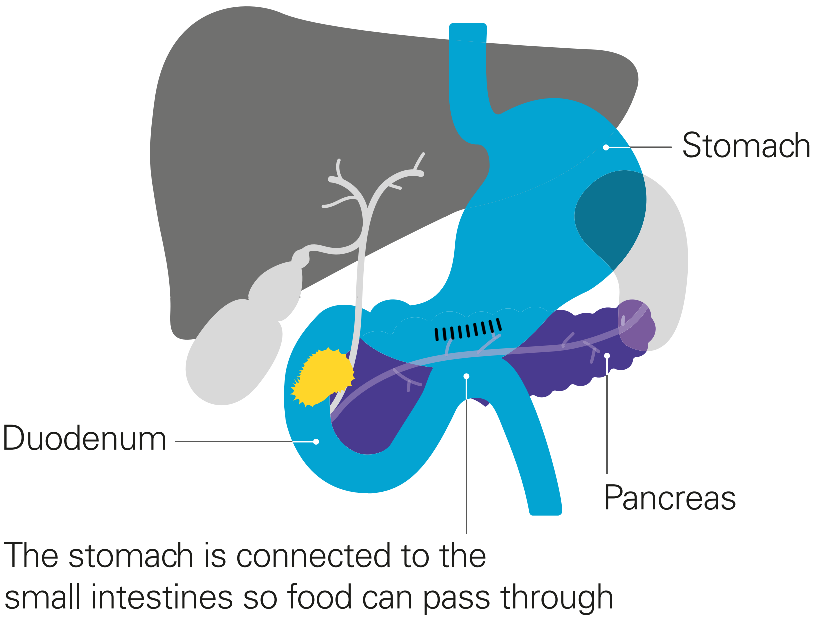
The blockage can be relieved with an operation known as a gastrojejunostomy. Here the surgeon connects the part of the small bowel just below the duodenum directly to your stomach so that food can pass from the stomach into the bowel.

This operation won't remove the cancer but it may relieve your symptoms so that you feel better. It can be carried out using open or laparoscopic (keyhole) surgery. You will need to discuss the pros and cons of the surgery with your specialist team.

Before bypass surgery for a blocked duodenum



After bypass surgery for a blocked duodenum

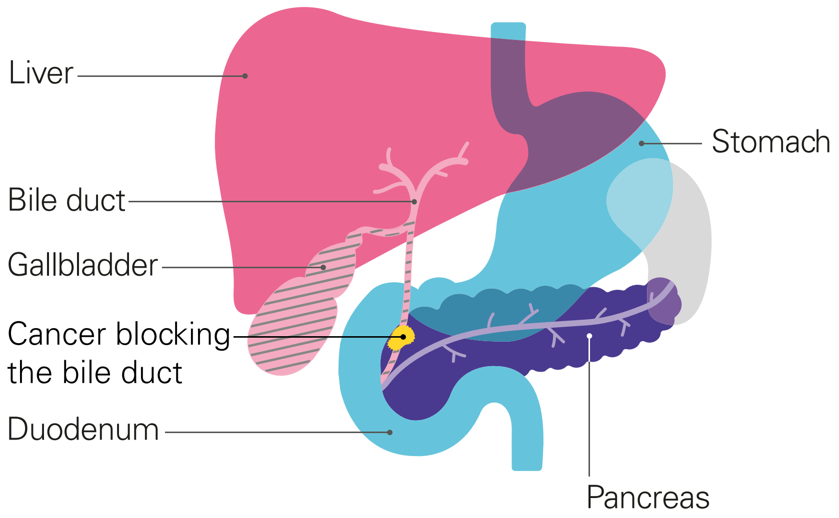


Relieving a blocked bile duct

For a blocked bile duct, the duct is cut above the blockage and connected to the small intestines, allowing the bile to flow again. This operation is called a choledochojejunostomy. It is a very successful way of relieving jaundice.

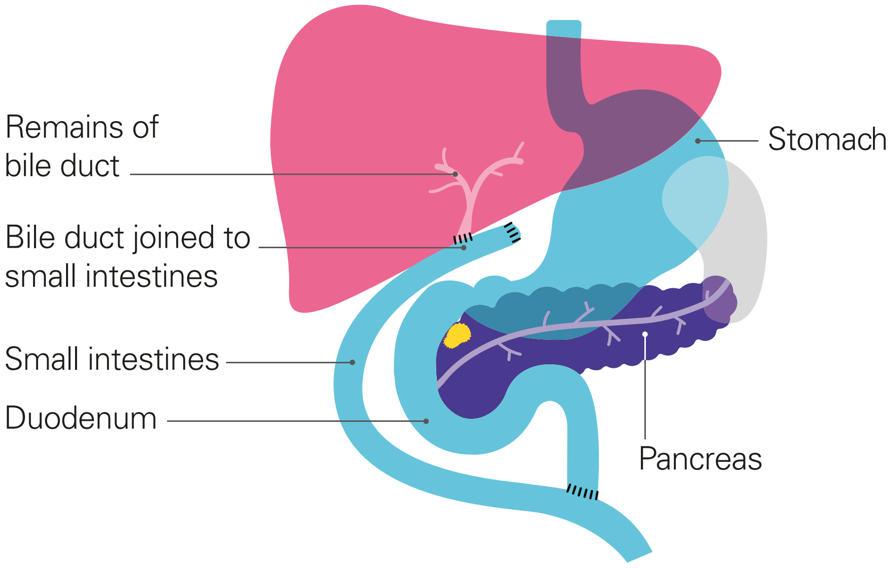
In some hospitals you might be able to have this done by keyhole surgery.

Before bypass surgery for a blocked bile duct



▨ Parts to be removed by surgery

After bypass surgery for a blocked bile duct



Before and after bypass surgery

You will be asked to stop eating at least six hours before your bypass surgery. You won't be able to smoke or chew gum either. You will be able to drink water up to three hours before your surgery.

Bypass surgery generally takes 2-4 hours, depending on the individual case and the type of bypass.

You will probably spend 4-7 days recovering in hospital, as long as there are no complications, any pain is well controlled and you are eating again.

Getting back to normal

As with any type of major surgery, you may take a while to recover and you will certainly feel tired and weak at first. Remember that the bypass may help to relieve some symptoms but it won't cure the cancer, so you may not feel all that different from before to begin with. Your wound will need time to heal and, depending how fit you are, it may take several weeks to get back to the level of activity you had before your operation.

Follow-up

You will usually have a check-up two weeks after you go home from hospital. Most people go on to have chemotherapy treatment, so longer-term follow-up will usually be with your oncologist.

If you have any questions about bypass surgery, speak to your medical team.

☎ You can also call our specialist nurses on our free Support Line.

Nerve blocks to control pain

If you have pain that is difficult to control with other treatments such as drugs or radiotherapy, it may be possible to treat it by blocking the nerves that supply the pancreas.

The nerves from the pancreas collect just behind it in a thick bundle called the coeliac plexus. Injecting an agent, usually alcohol, directly into this nerve bundle destroys the nerve bundle, and so relieves the pain. This is known as a coeliac plexus nerve block.

How is a nerve block carried out?

Before the procedure you will usually have a sedative, via an injection in your arm or the back of your hand, that makes you drowsy and relaxed. Then you will lie on your stomach on the x-ray table. Using a CT scan, ultrasound scan or an endoscopic ultrasound (EUS) as a guide, the doctor will first inject local anaesthetic to numb the nerves, then alcohol to kill them. The procedure only takes 15-30 minutes.

Before and after a nerve block

You will usually be asked not to eat anything for six hours before your appointment. You may drink clear fluids up to two hours before. If you are diabetic you will be given individual instructions.

You will need to stay in hospital for a couple of hours after the procedure before you are allowed home. You will need someone to take you home and stay with you overnight. If this isn't possible you may need to stay in hospital for the night for observation.

The nerve block may take up to a week to fully work. Nerve blocks don't cause many side effects (see below). Any side effects you do have should improve in a few days.

You will usually be asked to contact your specialist nurse a week or two after the procedure for a progress report.

Risks and benefits of a nerve block

A nerve block can be a successful way to treat severe pancreatic cancer pain.

However, it doesn't work for everyone and the relief can be temporary rather than permanent.

Possible side effects include:

- bleeding from blood vessels near the pancreas
- your blood pressure might drop when you stand up in the first few days
- sometimes, diarrhoea.

Very occasionally it causes temporary weakness in the legs.

If you have any questions about a nerve block, including the benefits and risks, speak to your doctor or nurse.

☎ You can also call our specialist nurses on our free Support Line.

? Questions to ask

What treatment can I have for my jaundice?

What treatment can I have for a blocked bowel?

Would a stent be better than bypass surgery?

Will a plastic or metal stent be used?

Do I need to have bypass surgery?

What are the benefits and risks of bypass surgery or stent insertion?

What are the after effects of stent insertion or bypass surgery?

Will I need to change my diet following stent insertion or bypass surgery?

Would a nerve block help control my pain?

What are the benefits and risks of a nerve block?

Further information and support

Pancreatic Cancer UK services

We have a range of services to support you and your family in dealing with pancreatic cancer.

Our Support Line

Our Support Line is a lifeline for thousands of people affected by pancreatic cancer. Our specialist nurses understand the issues you might be facing. They are there for you, giving you personalised information and support that you need, when you need it.

Call us free and confidentially on **0808 801 0707** (Monday to Friday, 10am-4pm), or email us at **support@pancreaticcancer.org.uk**

Our information

We have the most up-to-date information on everything you need to know about pancreatic cancer on our website. We can help you every step of the way, from explaining your diagnosis and treatment options, to managing symptoms, and questions to ask at your appointments.

Go to **pancreaticcancer.org.uk/informationandsupport**

Download or order our publications, for free, at
pancreaticcancer.org.uk/publications

Our online community

Our online community is a supportive place where everyone affected by pancreatic cancer can be there for each other. You'll find others who understand what you're going through, because they are going through it too.

Visit our forum at **forum.pancreaticcancer.org.uk**

Support groups

We help set up local support groups across the UK. You can meet other people to get support and share experiences.

Find out if there's a group near you at
pancreaticcancer.org.uk/supportgroups

Useful organisations

Cancer Research UK
www.cancerresearchuk.org
Helpline: 0808 800 4040 (Mon-Fri 9am-5pm)
Information for anyone affected by cancer.

Carers UK
www.carersuk.org
Advice Line: 0808 808 7777 (Mon-Fri 10am-4pm)
Support, information and advice for carers.

Citizens Advice
www.citizensadvice.org.uk
Tel: England 03444 111 444; Wales 03444 77 20 20;
Scotland 0808 800 9060
In person at your local Citizens Advice Bureau.
Provide information and advice on a range of issues including work, benefits, NHS healthcare and patient rights.

Healthtalkonline
www.healthtalkonline.org/Cancer/Pancreatic_Cancer
Personal and patient experiences presented in written, audio and video formats.

Macmillan Cancer Support
www.macmillan.org.uk
Support Line: 0808 808 00 00 (Mon-Fri 9am-8pm)
Provides practical, medical and financial support for anyone affected by cancer.

Maggie's Centres
www.maggiescentres.org
Centres around the UK, and online offer free, comprehensive support for anyone affected by cancer.

NET Patient Foundation
www.netpatientfoundation.org
Call free on 0800 434 6476
Information and support for people with neuroendocrine tumours (NETs).

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This fact sheet has been produced by the Support and Information Team at Pancreatic Cancer UK. It has been reviewed by health professionals and people affected by pancreatic cancer.

References to the sources of information used to write this fact sheet, and a list of health professionals who reviewed it, are available on our website – **pancreaticcancer.org.uk**

Pancreatic Cancer UK makes every effort to make sure that our services provide up-to-date, unbiased and accurate information about pancreatic cancer. We hope that this information will add to the medical advice you have received, and help you make decisions about your treatment and care. This information should not replace information and advice from your medical team – please speak to your doctor, nurse or other members of your medical team about any questions or concerns.

Give us your feedback
We hope you have found this information helpful. We are always keen to improve our information, so let us know if you have any comments or suggestions. Email us at **publications@pancreaticcancer.org.uk** or write to the Information Manager at the address below.

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Health & care information you can trust
The Information Standard
Certified Member

SurgeryInoperable/June 2016