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You are entitled to a copy of any letter we write about you. Please ask if you want one when you come to the hospital.

If you are unhappy with the advice you have been given by your GP, consultant, or another healthcare professional, you may ask for a second (or further) opinion.

The evidence used in the preparation of this leaflet is available on request. Please email: patient.information@salisbury.nhs.uk if you would like a reference list.

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Pancreatic Cancer (1 of 5)

What is the pancreas?

The pancreas is part of the digestive system. It lies high up in the upper half of the abdomen behind the stomach and in front of the spine. It is a solid flat gland about nine inches long, salmon pink in colour and shaped like a comma.

The larger end is the head and the smaller end is the tail; in between is the body of the pancreas. The head is attached to the first part of the small intestine (duodenum), where all the food enters from the stomach. The tube (bile duct) which carries bile from the liver to the intestines passes through the head of the pancreas where it is joined by the tube carrying the pancreatic digestive juices. The main blood vessels of the intestines go under the pancreas.

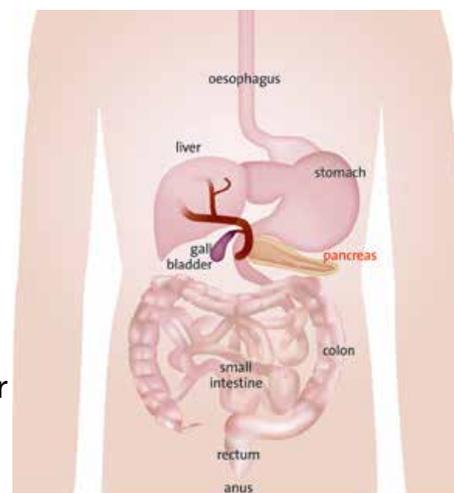
The pancreas has two main functions. It produces digestive juice (enzymes which help to digest food) and insulin (a hormone which balances the sugar in your blood). The digestive juice flows into the duodenum and mixes with the food and bile to digest your meal. It also produces other hormones which help with digestion, and bicarbonate to balance the acid from the stomach.

How common is pancreatic cancer?

In the UK about 7,000 new cases of pancreatic cancer are diagnosed each year. It affects men and women in equal numbers. It can affect people of any age but is commoner in people older than 60 years of age.

Are there different types of pancreatic cancer?

The most common type of pancreatic cancer comes from part of the pancreas that produces the digestive juice, and is called ductal adenocarcinoma. This is the type that this leaflet is referring to. Most (90%) of these pancreatic cancers are found in the head of the pancreas. There are other less common types (endocrine/neuroendocrine tumours) which come from the parts of the pancreas that produce hormones, and cancers can also arise from the bile duct as it passes through the pancreas or as it empties into the duodenum.



How do people get pancreatic cancer?

The main risk factors for developing pancreatic cancer are increasing age, smoking tobacco, being overweight and having long-standing inflammation of the pancreas (chronic pancreatitis). About 10% of pancreatic cancer is due to specific inherited diseases. These types of patients and families may be suitable for research screening programmes.

What signs and symptoms will I have?

Sometimes there may be no signs or symptoms for a long time or they may be very vague, such as a stomach upset, sometimes with altered stool habit that keeps recurring over a few months. Signs and symptoms can also depend on which part of the pancreas the cancer is located. You may have one or more of the following:

- Yellowing of the eyes and skin (jaundice), with pale coloured motions and dark urine (there also may be itching of the skin). This is due to a cancer in the head of the pancreas which blocks the bile duct.
- The stools can also be loose and float in the toilet pan.
- There may be loss of weight and appetite with tiredness.
- There may be a pain in the abdomen and back which gradually gets worse and is relieved by sitting forward.
- Occasionally patients may develop diabetes.

How do you diagnose pancreatic cancer?

The signs and symptoms listed above may suggest diagnosis and occasionally there may be a lump to feel in the abdomen. But further tests are needed to make a diagnosis of pancreatic cancer.

- Blood tests can identify the presence of jaundice and low blood count (anaemia). There are proteins in the blood which can be abnormal in pancreatic cancer, these are called tumour markers. CA19.9 is the one used for pancreatic cancer, and the level in the blood may be (but not always) raised in patients with pancreatic cancer.
- Ultrasound scan. This may be the first test to be done, especially if the patient is jaundiced. This uses sound waves to look at organs inside the abdomen. Gel is applied to the abdomen and then a hand-held probe is moved over this area. This type of scan is useful but must not be relied on as the only test for pancreatic cancer.
- CT (computer tomography) scan. This is the best initial way to diagnose pancreatic cancer and should always be used if pancreatic cancer is suspected. These scanners use X-rays to build up a three dimensional picture of the body. A patient is given an injection and a drink to have before the scan. The scan can identify a pancreatic cancer in a high number of cases and also show whether it has spread outside of the pancreas.

Other scans such as MRI (magnetic resonance imaging) may be used as well.

- EUS (endoluminal ultrasound) is carried out under local anaesthetic and involves a thin flexible tube (endoscope) being passed through the mouth, down the gullet, stomach and duodenum. At the end of the scope is an ultrasound probe and scans can be taken

of the pancreas. A biopsy (small sample of tissue for examination under a microscope) of the pancreas can also be taken to help with the diagnosis. This technique can help to diagnose very small cancers.

- ERCP (endoscopic retrograde cholangiopancreatography) involves a thin flexible tube (endoscope) being passed through the mouth, down the gullet, stomach and duodenum and is carried out under local anaesthetic. This is used in jaundiced patients (in whom tumour is blocking the bile duct) to place a plastic tube (stent) into the bile duct, past the pancreatic cancer to allow the bile to flow into the duodenum again. This will allow the jaundice to get better. Biopsy/ brushings can be taken to help diagnosis. Brushings may pick up cancer cells as another way of confirming the diagnosis.
- PTC (percutaneous transhepatic cholangiography) involves passing a very thin tube through the skin, into the liver to the bile duct. This is done under local or general anaesthetic and is used for patients who cannot have ERCP and need their jaundice to be treated.
- A biopsy can be done during EUS and ERCP or using a needle through the skin using CT scan guidance. The last one should only be done for patients who are not having surgery to remove the cancer.

What happens when pancreatic cancer has been diagnosed?

If you have undergone tests that show you may have pancreatic cancer, you will be referred to a pancreatic surgeon in a specialist centre which deals with a high number of these cancers. Your case will be reviewed by an expert multi-disciplinary team (made up of surgeons, gastroenterologists, cancer specialists, radiologists, pathologists) to decide on your treatment. Sometimes an operation called a laparoscopy is needed as well. This is carried out under general anaesthetic and a small telescope is passed into the abdomen through the belly button to get a close look inside.

Can I have surgery to remove the cancer?

This depends on how far the cancer has grown and if you are well enough to have surgery. If it is at an early stage it may be possible to remove the cancer using surgery. This is a major operation and should only be done in a specialist pancreatic centre. You will be able to ask your surgeon about the risks of surgery and fitness for major surgery.

If the cancer is in the tail of the pancreas, then the left side of the pancreas will be removed.

If the cancer is in the head, then the head of pancreas, duodenum and bile duct and gall bladder will be removed.

The remaining areas are then re-joined to the intestines.

Occasionally the whole of the pancreas may need to be removed (total pancreatectomy), and sometimes part of the stomach as well.

What happens after I have surgery?

- You will stay in hospital for 2-3 weeks and take 3 or more months to recover.
- You should be able to eat normally when you have left hospital.
- You may need to take capsules containing enzymes to help you digest your food at mealtimes.
- If you have had a total pancreatectomy you will become diabetic after surgery and need medication (insulin) for this.
- You will usually be considered for a course of chemotherapy once you are over the surgery.
- You will be followed up in the outpatient clinic regularly.
- Sometimes further scans are needed to see if the cancer has come back. If this is the case then further chemotherapy or other treatment may be necessary.

What happens if I cannot have surgery to remove my cancer?

- If your cancer has spread outside the pancreas (advanced cancer) and is not able to be removed by surgery (or you are not well enough to have an operation) then other treatments can be considered.
- If you are jaundiced you will need to be treated using ERCP or PTC to place a stent in the bile duct.
- Painkillers will be needed for pain relief and capsules are needed to help your digestion at mealtimes.
- Chemotherapy is the usual treatment for advanced pancreatic cancer and newer treatments may be available as part of a clinical trial. These therapies aim to control the cancer.
- You will be followed up regularly in the clinic. You will normally have a specialist nurse throughout your care who you can contact for any help or problems.

If I have had pancreatic cancer, what can I do to stop it coming back?

A healthy lifestyle and positive mental attitude can help. Regular medical follow-up is very important.

Are there any implications for my family?

Advice to family members about not smoking is useful. Unless you are part of a family with a specific inherited disorder associated with pancreatic cancer, your family will not need to be screened.

Is there a screening programme for pancreatic cancer?

There is no screening programme for pancreatic cancer in the general population. In families with specific inherited diseases which are at high risk for pancreatic cancer, 'secondary' screening is carried out as part of ongoing research programmes.

What research is going on?

Research is being carried out to identify new markers for pancreatic cancer which may help in early diagnosis, treatment and screening in high risk groups. New and better ways to image the pancreas are also being tested. There is a lot of work looking at the changes in expression of genes and proteins in pancreatic cancer; this will contribute to a better understanding of the processes involved in pancreatic cancer development. There are ongoing clinical trials of chemotherapy in the UK which are hoping to improve survival in patients with advanced disease and also after surgery.

Useful websites

For more information on other digestive diseases and cancers.

CancerBackup is a support network for sufferers of cancer as well as their families and friends.

www.cancerbackup.org.uk

CancerHelp UK is a free information service about cancer and cancer care for people with cancer and their families. It is hosted by Cancer Research UK.

www.cancerhelp.org.uk

This has information to help you and your family understand what could happen at each stage of your experience of cancer, and help you access information and support.

www.macmillan.org.uk

This is the website for The European Registry of Hereditary Pancreatitis and Familial Pancreatic Cancer.

www.liv.ac.uk/europac

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