

Pancreatic Cancer UK

Types of pancreatic cancer

There are different types of pancreatic cancer. This fact sheet explains the different types, including the most common type, pancreatic ductal adenocarcinoma, neuroendocrine tumours, and rarer types of pancreatic cancer.

If you have any questions about anything you read in this fact sheet, speak to your medical team.

You can also speak to our specialist nurses on our Support Line. You can call them free on 0808 801 0707, or email nurse@pancreaticcancer.org.uk

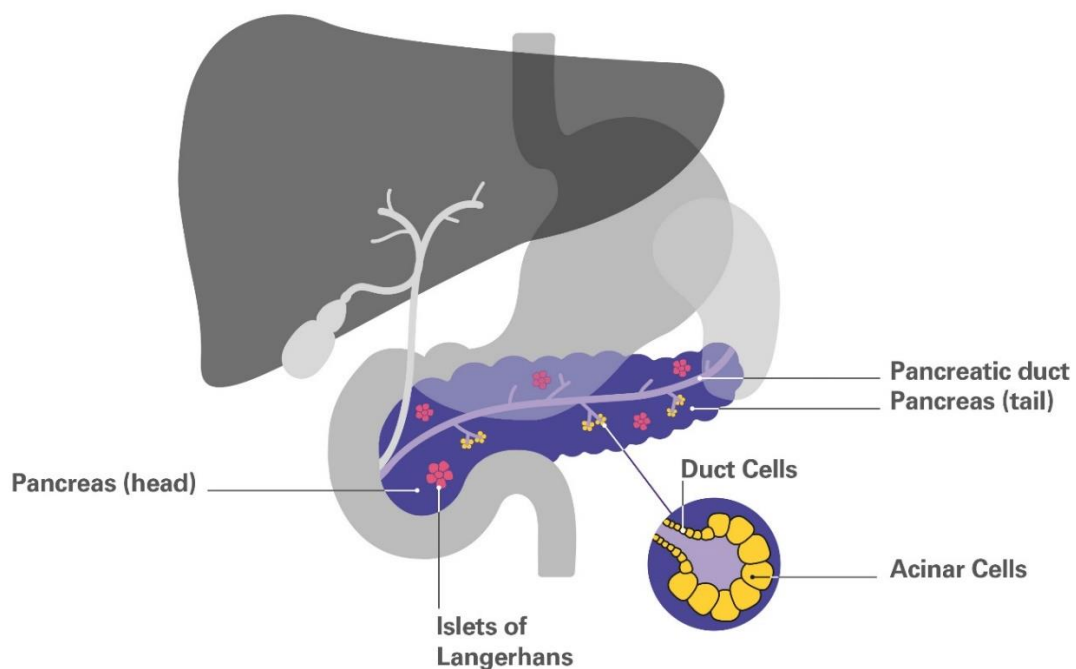
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There are different types of pancreatic cancer. They are divided into two main groups, based on the different types of cells found in the pancreas.

- Exocrine tumours start in the exocrine cells, where enzymes that help to digest food are made. Ninety-six out of a hundred (96%) pancreatic cancers are exocrine tumours. The most common type of pancreatic cancer, pancreatic ductal adenocarcinoma (PDAC), is an exocrine tumour (see page 3).
- Neuroendocrine tumours start in the neuroendocrine cells. These cells produce hormones that help control the normal functions of the body. For example, they produce insulin which helps to control the level of sugar in the blood. These tumours are known as pancreatic neuroendocrine tumours or PancNETs (see page 4).

Diagram showing the anatomy of the pancreas



The pancreas can also be affected by pancreatic cysts, or by other cancers that grow in structures close to it or inside it.

Exocrine tumours

Pancreatic ductal adenocarcinoma (PDAC)

Pancreatic ductal adenocarcinoma (PDAC) is a type of exocrine pancreatic cancer. It is the most common type of pancreatic cancer – 95 out of 100 (95%) of all pancreatic cancers are PDAC.

PDAC develops from cells lining small tubes in the pancreas called ducts (duct cells in the diagram on page 2). These carry the digestive juices, which contain enzymes, into the main pancreatic duct and then on into the duodenum (first part of the small intestine).

PDAC can grow anywhere in the pancreas, though it is most often found in the head of the pancreas. Symptoms can include tummy (abdominal) and back pain, weight loss and changes to bowel habits.

Read about the symptoms of pancreatic ductal adenocarcinoma on our website at pancreaticcancer.org.uk/symptoms

Rare exocrine cancers

One in a hundred pancreatic cancers (1%) are rare exocrine cancers.

Acinar cell carcinoma

Fewer than one out of a hundred pancreatic cancers (less than 1%) are acinar cell carcinomas. Acinar cell carcinoma is more common in men. It develops in the acinar cells at the end of the ducts (see diagram on page 2), which produce the digestive enzymes. Symptoms can include tummy pain, weight loss, and feeling and being sick (nausea and vomiting).

Solid pseudopapillary neoplasm

Solid pseudopapillary neoplasms grow mostly in the body and tail of the pancreas. They are more common in younger women. Symptoms can include a lump in the tummy, tummy pain, weight loss and sickness.

Pancreatoblastoma

This rare type of pancreatic cancer mostly affects children. It is extremely rare in adults.

Questions to ask

What type of cancer do I have in my pancreas?

Is it an exocrine or neuroendocrine tumour?

Where in my pancreas is the cancer?

How is this type of cancer treated?

If you have any questions about your cancer, speak to your medical team. You can also speak to our specialist nurses on our Support Line.

Pancreatic neuroendocrine tumours (PancNETs)

Neuroendocrine tumours (NETs) grow in neuroendocrine cells found throughout the body. Pancreatic neuroendocrine tumours (PancNETs) start in the neuroendocrine cells in the pancreas called Islet of Langerhans cells. Neuroendocrine cells produce hormones that help to control how our body works. Neuroendocrine tumours can be cancerous (malignant) or non-cancerous (benign), although they can all become cancerous.

The NET Patient Foundation has more detailed information about the different neuroendocrine tumours, including pancreatic neuroendocrine tumours. Find their contact details on page 13.

The neuroendocrine cells in the pancreas produce hormones, including insulin and glucagon, which control the sugar levels in the blood. Four in a hundred pancreatic cancers (4%) are PancNETs.

PancNETs are described as **functioning** or **non-functioning** tumours. This depends on whether they produce hormones and cause symptoms.

Functioning pancreatic neuroendocrine tumours

Some PancNETs produce too much of certain hormones when the cells become cancerous. This can cause specific symptoms. These are called functioning PancNETs. About 10-30 in 100 pancreatic neuroendocrine tumours (10-30%) are functioning.

Gastrinomas

Gastrinomas are found in the pancreas and the duodenum (first part of the small intestine). They produce too much of a gut hormone called gastrin, causing the production of too much stomach acid. Symptoms may include tummy (abdominal) pain, heartburn, diarrhoea and weight loss. Gastrinomas can cause ulcers in the stomach or duodenum, which can be life-threatening if they bleed severely.

Gastrinomas are linked to a condition called Zollinger-Ellison Syndrome. People with a family cancer syndrome called multiple endocrine neoplasia type 1 (MEN1) are more likely to get gastrinomas.

Read more about Multiple endocrine neoplasia type 1 (MEN1) on our website at pancreaticcancer.org.uk/hereditaryPNETs

Insulinomas

Insulinomas can occur anywhere in the pancreas. They produce too much of the hormone insulin, causing the symptoms of low blood sugar levels (hypoglycaemia). These may include dizziness, sweating, palpitations (your heart feels like it is pounding, fluttering, or beating irregularly), drowsiness and confusion.

Glucagonomas

These tumours are mostly found in the body and tail of the pancreas. They produce too much of the gut hormone glucagon. Symptoms of glucagonomas include a distinct type of skin rash (redness, ulcers and scabbing), diabetes, depression, anaemia (low levels of red blood cells), weight loss, and a sore mouth and tongue.

Somatostatinomas

These tumours are mostly found in the head and tail of the pancreas. They produce too much somatostatin, a substance that affects the production and release of other gut hormones.

Somatostatinomas can cause tummy pain, gallstones, diabetes, diarrhoea, steatorrhoea (large, pale, oily poo that smells horrible and is difficult to flush down the toilet), low levels of stomach acid and weight loss. But symptoms may be vague, and some people may not have any symptoms.

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0808 801 0707
nurse@pancreaticcancer.org.uk

VIPomas

VIPomas are more common in the tail of the pancreas. They produce too much of a hormone called vasoactive intestinal peptide (VIP). Symptoms include lots of watery diarrhoea, dehydration, high calcium levels in the blood and a flushed face.

Non-functioning pancreatic neuroendocrine tumours

Most PancNETs don't produce hormones that cause specific symptoms. These are called non-functioning PancNETs. Rarely, they can cause symptoms that are similar to the symptoms of pancreatic ductal adenocarcinoma (the most common type of exocrine pancreatic cancer). These include pain, weight loss, jaundice, or diarrhoea.

Non-functioning PancNETs can be harder to detect and diagnose than functioning PancNETs. This is because they don't cause specific symptoms. They are often diagnosed during tests for another problem.

Finding out more

Speak to your medical team with any questions about pancreatic neuroendocrine tumours and how they are treated.

Contact the NET Patient Foundation for more detailed information and support around diagnosing, treating, managing and living with PancNETs. The support they offer includes a helpline, support groups, an online community and counselling. Find their contact details on page 13.

Questions to ask

What type of pancreatic neuroendocrine tumour (PancNET) do I have?
Is it functioning or non-functioning?
Is the tumour cancerous?
How is this type of cancer treated?

Pancreatic cysts

Different types of cysts can affect the pancreas. A cyst is a sac filled with fluid. These cysts are usually not cancerous (benign) but some can become cancerous (malignant).

If you have a pancreatic cyst you should be offered a CT and/or MRI/MRCP scan to check that it's not cancer. You should be referred for surgery if the scan shows that:

- you have jaundice and cysts in the head of the pancreas
- the cyst may have a solid part to it, which may suggest that the cyst could be cancer
- the main pancreatic duct is very large.

The NICE guidelines have made recommendations about how cysts should be diagnosed and treated.

Read more about CT scans, MRI/MRCP scans and other tests in our fact sheet, **How is pancreatic cancer diagnosed?**, or on our website at pancreaticcancer.org.uk/diagnosis

Read the NICE guidelines in our fact sheet, **NICE guidelines for diagnosing and managing pancreatic cancer**, or on our website at pancreaticcancer.org.uk/NICE

Intraductal papillary mucinous neoplasm

Intraductal papillary mucinous neoplasms (IPMNs) are cysts that are usually not cancerous, although they can become cancerous. IPMNs can develop in the main pancreatic duct or the smaller ducts in the pancreas. They are more common in people over 50.

IPMNs often don't cause any symptoms and may be found during a scan for another reason. If there are symptoms, these can include tummy pain, weight loss, sickness and jaundice.

Surgery may be an option, but it depends on several things, including the size of the IPMN, how quickly it is growing, and any changes found during monitoring.

Mucinous cystic neoplasm

Mucinous cystic neoplasms (MCNs) are cysts that are usually not cancerous but can become cancerous. MCNs are usually found in the body or tail of the pancreas. They almost always affect women in their 40s and 50s.

MCNs often don't cause any symptoms, although some people may have tummy pain or a lump in the tummy. Surgery may be an option, but this depends on several things, including the size of the MCN and how quickly it is growing.

Serous cystadenoma (also known as serous cystic neoplasm)

Serous cystadenomas (SCAs) are non-cancerous cysts. They may be found anywhere in the pancreas, and mostly affect women over 50. SCAs often don't cause any symptoms, and are only found because a person has had a scan for another reason. If they do cause symptoms, these may include tummy pain, a lump in the tummy or, rarely, jaundice.

If there are no symptoms, no treatment is needed. If there are symptoms, surgery may be an option.

Questions to ask

What type of pancreatic cyst do I have?
Does it need any treatment?
Will it be monitored to check for any changes?
Could the cyst become cancerous?

If you have any questions about pancreatic cysts, speak to your doctor. You can also speak to our specialist nurses on our Support Line.

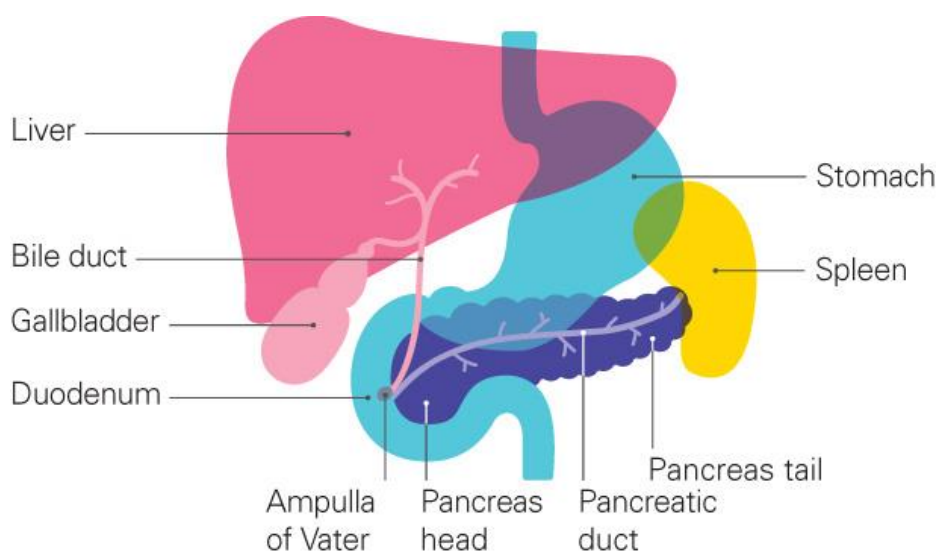
Other cancers linked with the pancreas

Some cancers grow in structures that are close to or inside the pancreas, such as the bile duct. They cause similar symptoms to pancreatic cancer. You may be offered an operation to remove the cancer called a Whipple's operation, which is also used to treat operable pancreatic cancer.

Read about the Whipple's operation in our fact sheet, **Surgery for operable pancreatic cancer** or on our website at pancreaticcancer.org.uk/surgery

Less commonly, cancer in other parts of the body can spread to the pancreas. Strictly speaking, these cancers are not pancreatic cancers.

Diagram of the pancreas and surrounding organs



Ampullary cancer

This is found in the ampulla of Vater. This is the area where the pancreatic duct and bile duct meet and empty into the duodenum (see diagram above). These tumours may block the bile duct. This means they often cause jaundice by blocking the flow of bile.

Intra-pancreatic bile duct cancer

Bile duct cancer (cholangiocarcinoma) can occur in any part of the bile duct. The bile duct is a tube that carries bile from the liver to the duodenum (the first part of the small intestine). If bile duct cancer occurs where it passes through

the pancreas it is called intra-pancreatic bile duct cancer or distal cholangiocarcinoma.

Bile duct cancer can be confused with pancreatic cancer, as it causes similar symptoms such as jaundice. AMMF is a charity that supports people with bile duct cancer. Find their contact details on page 13.

Duodenal cancer

The duodenum is the first part of the small intestine and is next to the pancreas. Duodenal cancer (cancer of the duodenum) causes symptoms similar to pancreatic cancer. It can block food moving through the duodenum to the rest of the bowel. It can also block the bile duct, causing jaundice.

Sometimes duodenal cancer can be removed without removing the pancreas. But if surgery is possible, the head of the pancreas is often also removed. This is a Whipple's operation, which is used to treat operable pancreatic cancer.

Lymphoma of the pancreas

Lymphoma is a cancer of the body's lymphatic system, which is part of the immune system. It can occur anywhere in the body, including the pancreas, although this is rare. It is called primary pancreatic lymphoma.

Lymphoma Action has more information on lymphoma of the pancreas. Find their contact details on page 13.

Metastatic (secondary) cancers

Sometimes cancer found in the pancreas has spread (metastasised) to the pancreas from another part of the body. Although this is unusual, kidney cancer, lung cancer, bowel cancer, skin cancer (melanoma) and breast cancer can all spread to the pancreas.

Cancer that has spread from another part of the body is still called by its original name. For example, kidney cancer that has spread to the pancreas will still be kidney cancer, not pancreatic cancer. So if you have cancer that has spread to the pancreas, the medical team specialising in that particular cancer will treat you, rather than a team that specialises in pancreatic cancer. Pancreatic surgeons may also be involved, as surgery is sometimes a treatment option.

Macmillan Cancer Support and Cancer Research UK have more information about these cancers.

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

Questions to ask

What type of cancer do I have?

How is this cancer affecting my pancreas?

Who will treat me for this type of cancer?

Where can I find out more about treatment for this type of cancer?

Pancreatic Cancer UK services

We're here to support and listen

Our free and confidential Support Line is a lifeline for thousands of people affected by pancreatic cancer. Our specialist nurses understand the issues you might be facing and their expert help will support you in coping with pancreatic cancer.

Call free on **0808 801 0707** weekdays 10am-4pm, or email **nurse@pancreaticcancer.org.uk**

We're here with the information you need

We have the most up-to-date information on everything you need to know about pancreatic cancer. We can help you every step of the way through diagnosis and treatment options to managing your symptoms and the care you receive.

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

Download or order our free publications at **pancreaticcancer.org.uk/publications** or call **0808 801 0707**

Find an A-Z of medical words at **pancreaticcancer.org.uk/medicalwords**

We're here so you can share

Our Forum is a supportive place where everyone affected by pancreatic cancer can be there for each other online, any time of day or night:

forum.pancreaticcancer.org.uk

The local support groups mean you can meet other people to share your experiences: **pancreaticcancer.org.uk/supportgroups**

And our Living with Pancreatic Cancer Support Days provide local face to face support in an informal setting for people with pancreatic cancer:

pancreaticcancer.org.uk/supportdays

Useful organisations

AMMF – The Cholangiocarcinoma Charity

ammf.org.uk

Tel: 01371 811811

Provides information and support to people with bile duct cancer.

Cancer Research UK

www.cancerresearchuk.org

Helpline: 0808 800 4040 (Mon-Fri 9am-5pm)

Information for anyone affected by cancer.

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.

Lymphoma Action

www.lymphoma-action.org.uk

Helpline: 0808 808 5555

Information and support for people affected by lymphoma, including lymphoma of the pancreas.

NET Patient Foundation

www.netpatientfoundation.org

Call free on 0800 434 6476

Information and support for people with neuroendocrine tumours (NETs).

Speak to our specialist nurses on our free Support Line

0808 801 0707

nurse@pancreaticcancer.org.uk

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 to take part in decisions related to 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 our Information Manager at the address below.

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