

# Pancreatic Cancer & Diabetes

## **Learning objectives**

- **Explore the challenges pancreatic cancer poses, including**
  - **PDAC statistics**
  - **Presentation**
  - **Risk factors**
  - **PDAC and diabetes**
- **Pancreatic Enzyme Insufficiency and Diabetes**
- **How might Pancreatic Cancer UK support you in supporting your patients**

# The Facts

# Pancreatic Cancer UK

10,000

Pancreatic cancer cases  
in 2016, UK



Pancreatic cancer  
is the **11th most  
common cancer**

9,000

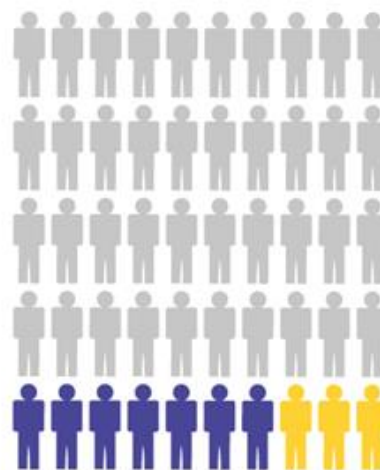
Pancreatic cancer deaths in  
2016, UK



Pancreatic cancer  
is the **5th biggest  
cancer killer**

7%

Five-year survival



Pancreatic cancer has the **lowest  
survival of all common cancers**

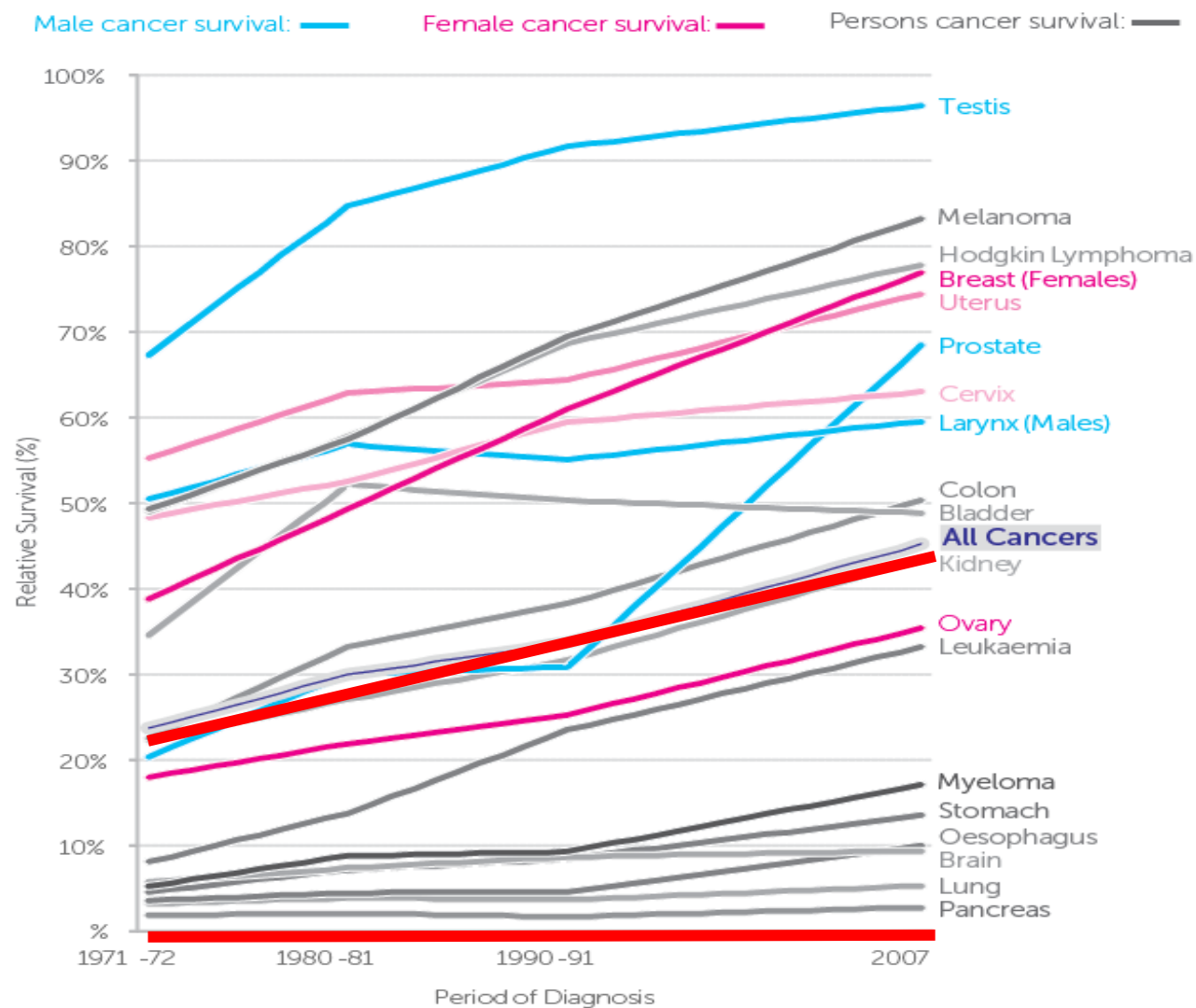
24%

One-year survival



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Pancreatic cancer has an extremely poor prognosis that has hardly changed over the last 45 years



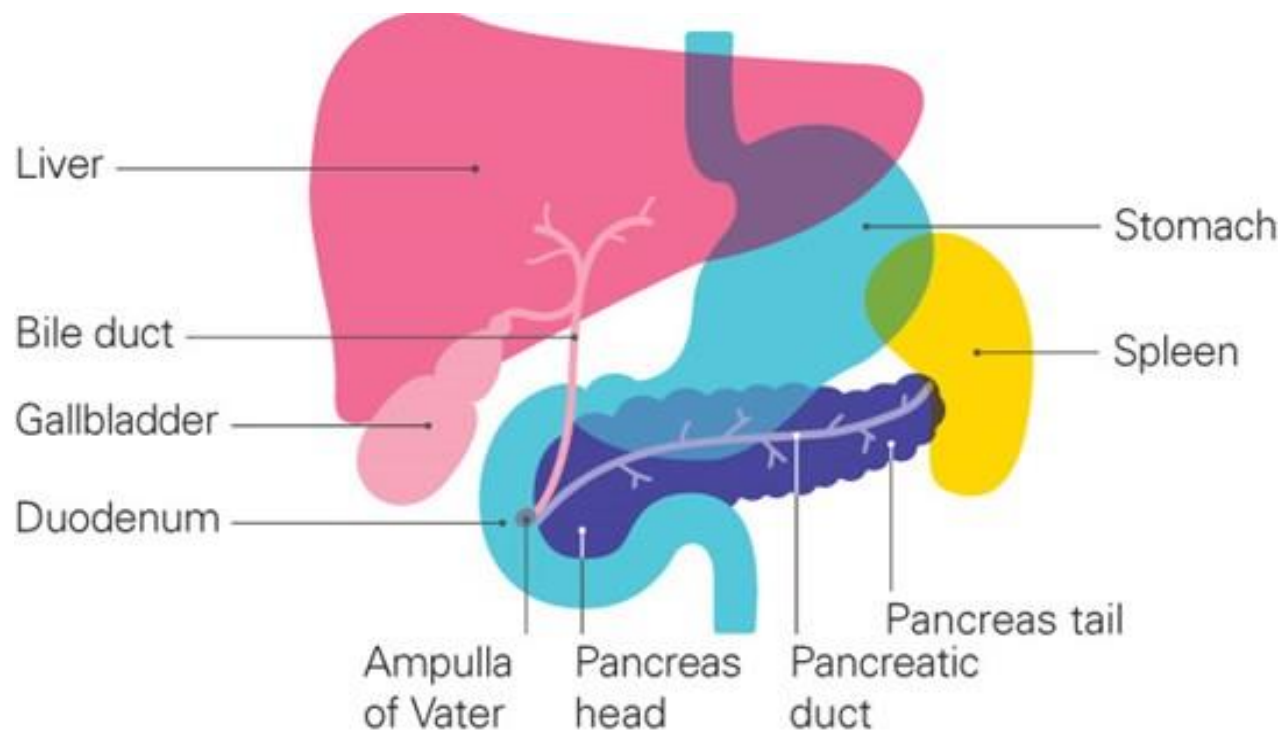
Pancreatic cancer is the **5<sup>th</sup>** biggest cancer killer and is predicted to become the **4<sup>th</sup>** biggest cancer killer by 2026.

The **5-year net survival** of pancreatic cancer is **6.9%**, the lowest of the 20 common cancers in England (2015)

28 people get a pancreatic cancer diagnosis every day

Globally is it the **13<sup>th</sup>** most common cancer and the **8<sup>th</sup>** most common cause of cancer-related deaths

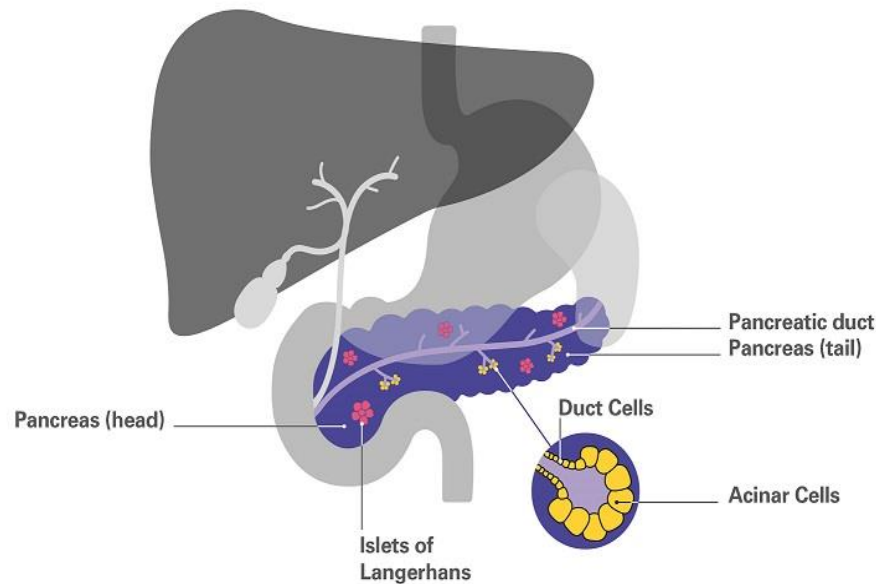
# The Pancreas



- Large gland situated deep in the abdomen in between the stomach and the spine.
- Plays an important role in digestion.
- Produces enzymes and hormones to help break down food and regulate blood sugar.

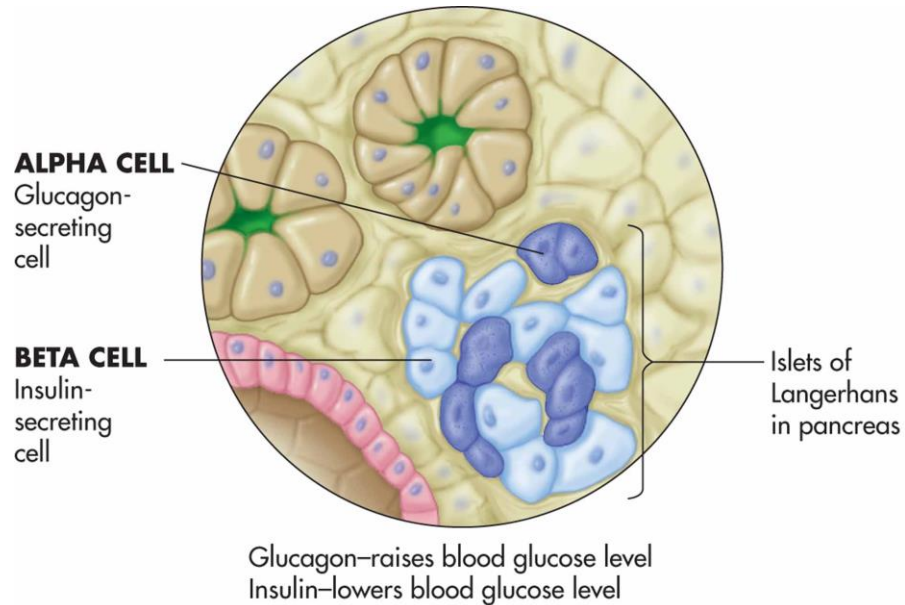


## Exocrine Pancreas



- Digestive function – helps break down carbs, fats, proteins in the duodenum.
- The pancreatic enzymes travel along the pancreatic duct and become activated when they reach the duodenum.
- They also stimulate release of bicarbonate which neutralizes the stomach acid in the duodenum.

## Endocrine Pancreas



- Insulin is released to regulate blood sugar levels
- Glucagon is released when more sugar is required for (ie: in the fright, fight, flight syndrome – stress response).
- Somatostatin which is known as an ‘inhibitor’ as decreases or increases the amount of glucose/insulin as required.

## Pancreatic Adenocarcinoma & Pancreatic Neuroendocrine Tumours

### Is there a difference?

**YES**

### **Pancreatic Adenocarcinoma (PDAC)**

- Exocrine pancreatic cancer (including Pancreatic Ductal Adenocarcinoma (PDAC)) is the most common and aggressive subtype of pancreatic cancer
- Accounts for 95% of pancreatic malignancies
- Originates in the ductal cells
- 8% receive surgery
- 1 year survival 18.9%
- Ongoing symptoms management,
  - Diet, think pancreatic enzyme insufficiency (PEI) and pancreatic enzyme replacement therapy (PERT) <https://www.pancreaticcancer.org.uk/information/managing-symptoms-and-side-effects/diet-and-pancreatic-cancer/pancreatic-enzyme-replacement-therapy-pert>
  - **Diabetic monitoring and treatment**
  - Exercise
  - Psychological support

## Pancreatic Neuroendocrine Tumour (pNET)

- Endocrine pancreatic cancer is a rare cancer and largely less aggressive (although higher grade pNETs are more aggressive)
- Accounts for 5% of pancreatic malignancies
- Originates in the neuroendocrine cells within the pancreas – known as Islet of Langerhans
- 40% receive surgery
- 1 year survival 79.8%
- Still think.
  - Diet, think pancreatic enzyme insufficiency (PEI) and treatment with pancreatic enzyme replacement therapy (PERT)  
<https://www.neuroendocrinecancer.org.uk/neuroendocrine-cancer/diet-nutrition/>  
<https://www.pancreaticcancer.org.uk/information/managing-symptoms-and-side-effects/diet-and-pancreatic-cancer/pancreatic-enzyme-replacement-therapy-pert>
  - **Diabetic monitoring and treatment**
  - psychological support
- For pNET (and all NET) patient support and information <https://www.neuroendocrinecancer.org.uk/>

# **Presentation & Diagnosis**

## Early diagnosis is essential to increase survival

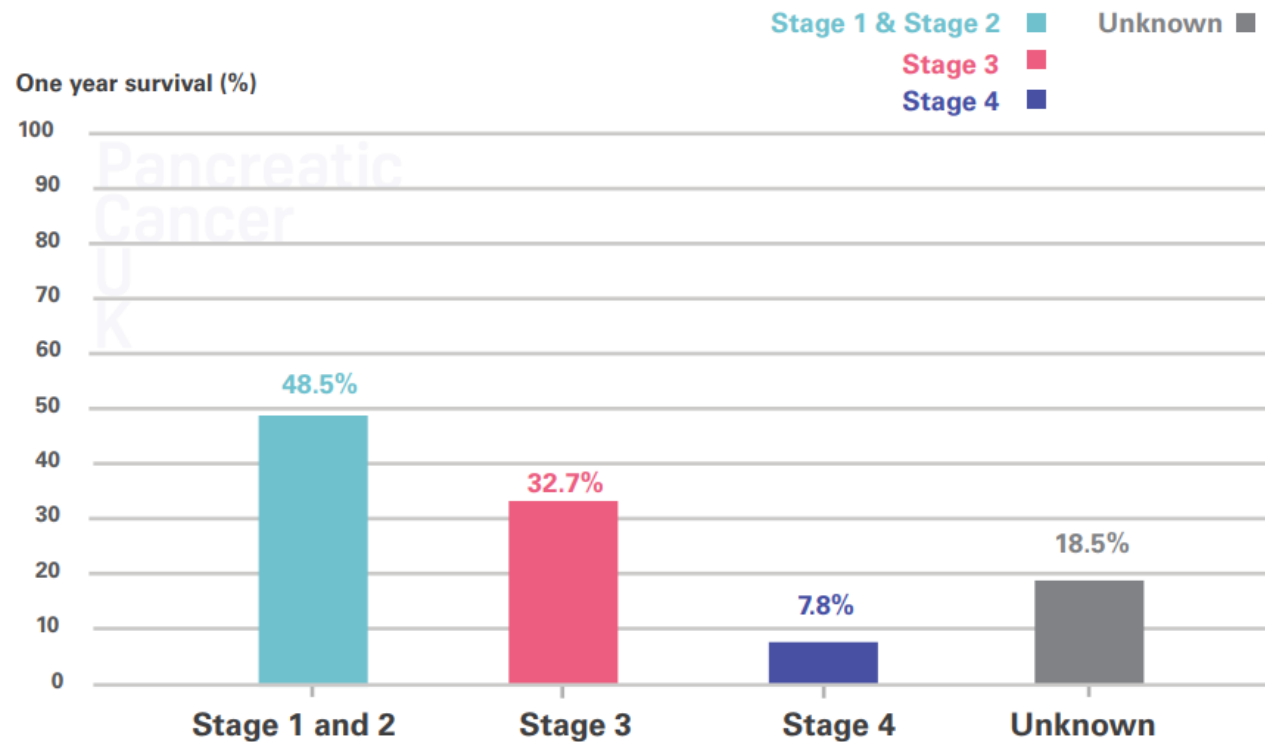


Figure 1: One year survival for people with exocrine pancreatic cancer diagnosed at each stage

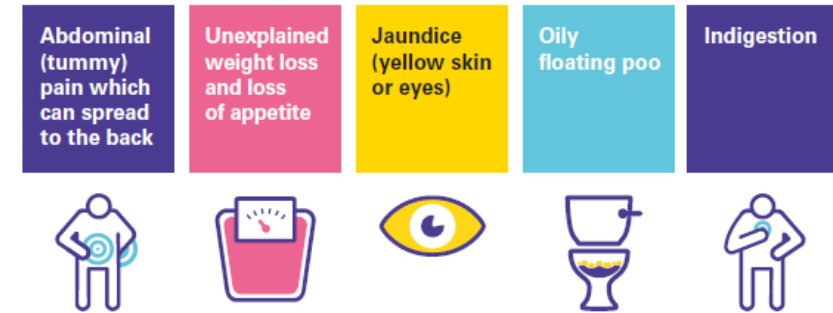
- 48% of patients are diagnosed via A&E emergency route
  - One year survival of pancreatic cancer patients presenting via A&E is just 12%
  - Survival is 3x higher is diagnosed through GP referral
- 55% diagnosed with metastatic disease
- 30% diagnosed with locally advanced pancreatic cancer
- The only potential cure of pancreatic cancer is surgery; 15% of patients are diagnoses at this stage **yet only 8%** of patients are currently resected

## Signs and Symptoms

- Abdominal pain +/- back pain
- Dyspepsia/reflux/bloating
- Fatigue
- Change in bowel habits
- Unintentional weight loss
- **New onset diabetes**
- Jaundice
- Clots

## Nobody knows your body better than you.

If you have any of these symptoms it might suggest a problem with your pancreas, such as pancreatic cancer.



If you have jaundice you should go to your GP without delay. If you have any of the other symptoms and they are unexplained or persistent (lasting 4 weeks or more), visit your GP. Remember, these symptoms can be signs of other conditions and may not be pancreatic cancer.



## What are the known risk factors?

There is **good** evidence that, age, smoking, being overweight, family history of cancer, pancreatitis and diabetes **may** increase your risk of pancreatic cancer.

**Some** evidence has suggested that there are other things **may** also increase risk, such as alcohol, red and processed meat and hx of cancer – more research is needed.

Diabetes and PDAC demonstrate “dual causality,”

- long-standing type 2 diabetes (T2DM) is a risk factor for the development of PDAC
- PDAC is a presumed cause of diabetes in a large number of cases.

At the time of diagnosis of pancreatic cancer, an estimated 65% of patients have diabetes mellitus (DM). Whereas the prevalence of diabetes ranged from 15 to 21% in the other age-matched cancer cohorts.

Whilst a small proportion of DM in pancreatic cancer patients is long standing (present more than 3 years) the remainder is new-onset-DM.

This often goes undiagnosed, and when it is diagnosed, in the majority of cases this comes within one year prior to pancreatic cancer being identified.

New-onset diabetes can be an early warning sign of the presence of pancreatic cancer, and individuals with new-onset diabetes are a high-risk group for pancreatic cancer.

Approximately 1% of individuals (1 in 100) diagnosed with new onset type 2 DM (T2DM) have undiagnosed pancreatic cancer. This group of individuals actually has pancreatic cancer associated DM, although it is mistakenly diagnosed as T2DM.

Currently individuals with new-onset DM are not screened for pancreatic cancer as there are no reliable tests to distinguish between T2DM and pancreatic cancer associated DM

<https://www.lctc.org.uk/research/uk-edl/>

Diabetes Volume 66, May 2017

# **Pancreatic Enzyme Insufficiency & Diabetes**

One of the functions of the pancreas is to help with digestion, it does this by producing enzymes

- Protease to break down protein
- Lipase to break down fat
- Amylase to break down carbohydrate (starchy) foods

Pancreatic cancer will often affect the production of these enzymes (**in around 90% of cases**), and cause dietary malabsorption and something we call '**Pancreatic Enzyme Insufficiency' (PEI)**

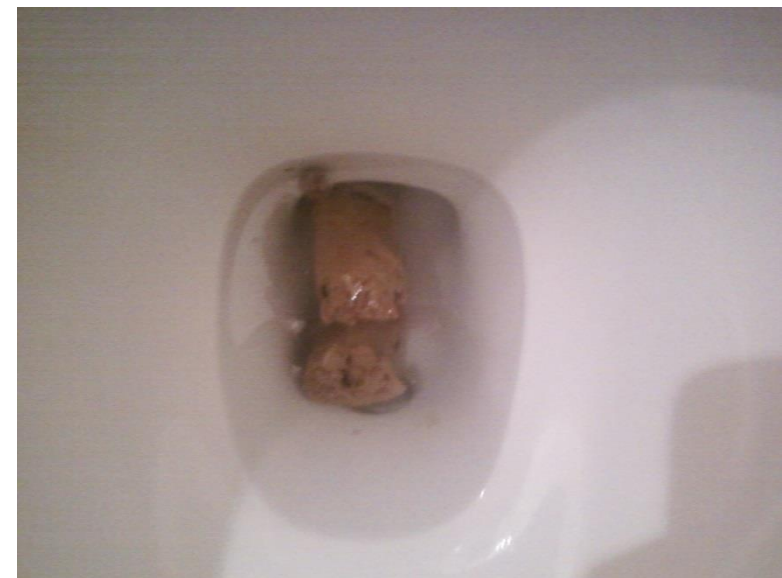
## Nutritional management

1.6.1 Offer enteric-coated pancreatin for people with unresectable pancreatic cancer.

1.6.2 Consider enteric-coated pancreatin before and after pancreatic cancer resection.

The common signs that this is happening are

- Unintentional weight loss, despite eating well
- Diarrhoea/Constipation
- Pale poo which is difficult to flush
- Oily or greasy poo, or oil and grease in the toilet pan afterwards (steatorrhoea)
- Large bulky poo
- Urgency to open your bowels after eating
- Very offensive poo or flatulence (or both)
- Indigestion
- Bloating or stomach cramps/pain after eating
- Feeling full up quickly





The way we treat PEI is by using **Pancreatic Enzyme Replacement Therapy (PERT)** and the most common PERT is Creon 25000 but other brands are available

A healthy pancreas produces approximately 720 000 units of Lipase in response to a small meal  
We only need to replicate as a starting dose 10% of 720 000 units of pancreatic enzymes to maintain normal digestion (approx. creon 25000 x3)

Patients with pancreatic cancer may be diagnosed with both PEI and type 3c diabetes; which can pose some challenges in management

When your patient first starts taking pancreatic enzymes, their blood sugar level may start to rise because PERT improves the absorption of carbohydrates. This can change how their diabetes needs to be managed and they should be referred to their diabetes team.

If your patient doesn't take enough PERT or if they forget to take PERT with food, their blood sugar level may drop and they may get hypoglycaemia

Your patients may need to take high calorie foods to improve nutritional wellbeing and their PEI and diabetes should be managed around this.

**We make changes to patients PEI and diabetic control rather than make changes to their diet**



# **Supporting those with Pancreatic cancer**



Providing cancer patients with information helps patients with decision making, prepares them for treatment and helps them cope with adverse effects associated with it, reduces anxiety and depression, increases satisfaction with treatment, improves communication with family and improves quality of life

The National Cancer Patient Experience survey reports that access to information and support is poorer in pancreatic cancer than in other cancers



## Publications

### New patient packs

- A pack for people with **operable pancreatic cancer** (stage 1 or stage 2)
- A pack for people with **inoperable pancreatic cancer** (stage 3 or stage 4)

Other publications include;

Diet

Chemotherapy

Surgery

Stents

Fatigue

With easy read options

<https://publications.pancreaticcancer.org.uk/>

**Pancreatic Cancer UK**

**You don't have to face pancreatic cancer alone**

Let us help you and your family today.

**Pancreatic Cancer UK**

**We're here to guide you through every stage**  
In addition to our nurse Support Line, our range of services are here when you need them most.

**Expert information**

Our free information covers everything about pancreatic cancer to help you understand your diagnosis, ask questions, make decisions and live as well as you can.



**Living with Pancreatic Cancer Online Support Sessions**

Our online support sessions are hosted by our specialist pancreatic cancer nurses and will give you the chance to connect with others who have also been diagnosed.

**Side by Side service for people having surgery**

This phone service connects you to trained volunteers who have already had pancreatic cancer surgery. They understand what you might be going through and share their own experiences of both before and after surgery.



**Online forum**

The forum is a supportive online space where everyone affected by pancreatic cancer can be there for one another at any time.



**Pancreatic cancer Support Groups**

Run by people affected by pancreatic cancer, these groups are an opportunity for people to meet others and support each other.



**Real life stories**

Read other people's experiences of pancreatic cancer on our website to find out how they coped with their diagnosis and treatment and their tips on looking after themselves.



Whether it's support for you, or a friend or family member, our services are available now. Find out more at

**pancreaticcancer.org.uk/getsupport**

Or you can call one of our nurses on

**0808 801 0707**

**Pancreatic Cancer UK**

**Our specialist nurses are here to talk now**  
If your world has been turned upside down by a pancreatic cancer diagnosis, we are here to talk now. We can answer your questions, recommend practical steps and provide the emotional support you and your loved ones need, when you need it most.

**Waiting for your call**

Specialists in pancreatic cancer, we are only a call or email away. You can contact us about anything - managing symptoms, questions about your diagnosis, treatment options or just to talk about how you're really feeling.

**A specialist nurse, dedicated to you**

We can assign a dedicated nurse who stays with you through everything and gets to know you and your situation. Supporting over 2,000 people affected by pancreatic cancer each year, we are specialists in pancreatic cancer.

**Unlimited time and bespoke follow-up**

From 4 minutes to 40 minutes, we can talk and listen for as long as you need. After your call, we can provide personalised information by email or post, explaining the next steps and giving you confidence to move forward.

**Nurse Support Line**

Specialists in pancreatic cancer, our friendly nurses are only a phone call away and are here to answer questions and talk for as long as you need.

**0808 801 0707**  
Mon to Fri 10am - 4pm

[nurse@pancreaticcancer.org.uk](mailto:nurse@pancreaticcancer.org.uk)

**You don't have to face pancreatic cancer alone**

Let us help you and your family today.

Call our free and confidential Support Line today

**0808 801 0707**

You can email our nurses at

**nurse@pancreaticcancer.org.uk**






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For health professionals Information for researchers COVID-19 information Talk to a nurse: 0808 801 0707

Pancreatic Cancer UK

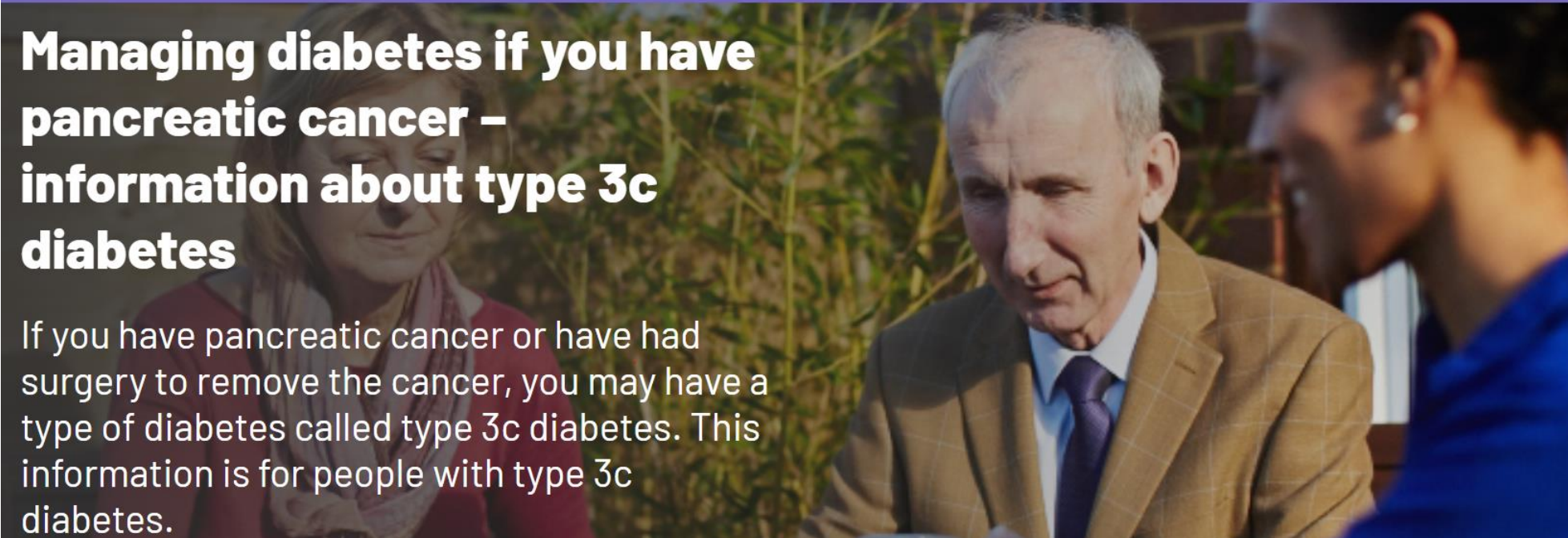
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## Managing diabetes if you have pancreatic cancer – information about type 3c diabetes

If you have pancreatic cancer or have had surgery to remove the cancer, you may have a type of diabetes called type 3c diabetes. This information is for people with type 3c diabetes.



<https://www.pancreaticcancer.org.uk/information/managing-symptoms-and-side-effects/diabetes-with-pancreatic-cancer/>

## Health Professional Support and Information Bulletin



**Support for your patients**



**Learning and development for  
you**



**Events for you**

By joining our bulletin you will:

- Hear about the latest pancreatic cancer updates
- Be the first to hear about our upcoming events
- Find out about and order free copies of new and updated pancreatic cancer publications

<https://www.pancreaticcancer.org.uk/health-professionals/health-professional-support-and-information-bulletin/>



## **Support line**

We are here to support and listen. Our free and confidential Pancreatic Cancer UK Support Line is a lifeline for thousands of patients, families and friends. Our specialist nurses understand the issues you might be facing and will support you in coping with pancreatic cancer.

**0808 801 0707**

**Weekdays 9am - 4pm**

**[nurse@pancreaticcancer.org.uk](mailto:nurse@pancreaticcancer.org.uk)**



100% of people who have given us feedback said they would recommend attending one of our online support sessions to someone else who is diagnosed, or supporting someone, with pancreatic cancer.

- Newly Diagnosed
- Managing Nutrition and Pancreatic Enzymes
- Managing Chemotherapy
- Undergoing Surgery and Recovery
- and Family, Friends and Carers' Cuppa



<https://www.pancreaticcancer.org.uk/support-for-you/living-with-pancreatic-cancer-support-sessions/>



'I really did find it informative and took a great deal from it. It's easy to feel very alone with our problems especially during the current climate. It was so nice to be able to hear from others at different stages of the journey.'  
(Michelle from Lincolnshire)

'I found the session really helpful and felt comforted by the fact I wasn't alone' (Jeni from Portsmouth)

'The specialist nurses running the sessions are friendly, very experienced and knowledgeable. Attending the sessions left us feeling comforted and supported. It made us realise there is a vast community of people going through the same ordeal we can draw strength from.' (Theresa from Coventry)

'I found out such a lot about the enzymes, why I need them and how to use them effectively. I was very grateful for the clear and thorough information given.'  
(Vivien from Greater London)

'Don't hesitate, join. You will be treated with respect, you will be listened to, you will be seen.'  
(Terry from Essex)

'Getting people to talk is great and in some cases is highly amusing. We cannot underestimate the value of levity in our circumstances. Laugh and the world laughs with you is not a bad maxime.'  
(David from Leeds)

Pancreatic  
Cancer  
UK



Thank you.

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