Gi Symptoms in Pancreatic Cancer

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NHS
The Leeds Teaching Hospitals
NHS Trust

Presenting symptoms affecting nutritional status

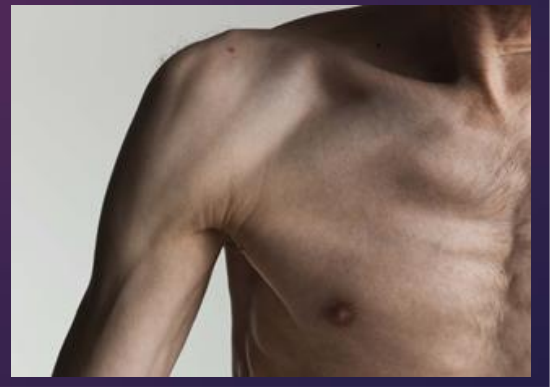
- ABDOMINAL PAIN
- JAUNDICE
- POOR APPETITE
- NAUSEA
- FEELING FULL
- INDIGESTION
- DIARRHOEA
- STEATORRHOEA
- CONSTIPATION
- TASTE CHANGES
- LETHARGY
- DEPRESSION (33 – 70%)
- VOMITING – DUODENAL/GASTRIC OBSTRUCTION

- **TORGERSON AND WIEBE 2013, GOODEN ET AL 2016**

Weight loss

1 **Physical symptoms**
2 **Endocrine insufficiency**
3 **Exocrine insufficiency** –
   Pancreatic enzyme insufficiency (PEI)
   Pancreatic head 60 -90%
   Pancreatic body/tail 30 - 50% (Sikkens et al,2014)
4 **Metabolic**

Hyper metabolism and catabolism
Complex metabolic disorder which is poorly understood and difficult to treat
(Fearon, et al, 2011, 2013)



Picture taken from **Jupiterimages**

Pancreatic enzyme insufficiency (PEI)
Symptoms of fat maldigestion (Steatorrhoea)

- PALE
- FLOATING
- DIFFICULT TO FLUSH
- GREASY/OILY
- STICKY
- LARGE VOLUME STOOL
- DIARRHOEA
- FOUL SMELLING
- WIND AND BLOATING
- URGENCY TO GO TO THE TOILET
- DIARRHOEA
- CONSTIPATION*

Picture taken from www.buoyhealth.com

Pancreatic Cancer

- "Malnutrition is a state of nutrition in which a deficiency or excess (or imbalance) of energy, protein and other nutrients causes measurable adverse effects on tissue / body form (body shape, size and composition) and function and clinical outcome." (BAPEN, 2020)

Incidence and mortality

- Pancreatic cancer is the 10th most common cancer with an average of **10,787 people** diagnosed annually between 2017 and 2019.
- Pancreatic cancer is the **5th biggest cancer killer** in the UK with 9,558 deaths per year between 2017 and 2019.
- **80% (4 in 5)** are diagnosed at stage three and stage four.
- **1 in 2** diagnosed via an emergency admission, such as A&E

Statistics

- **1 in 10** people with pancreatic cancer will receive potentially curative surgery.
- **2 in 10** people will receive chemotherapy.
- **7 in 10** people with pancreatic cancer do not receive any active treatment.
- **47% of people diagnosed with pancreatic cancer survive 90 days**
- **77% die within 1 year from diagnosis**

Malnutrition in Pancreatic Cancer - Cachexia

- Occurs in 46-89% of those with pancreatic cancer (yule, 2024 & Yoon et al, 2025)
- Cachexia is caused by pathophysiological metabolic changes, tumour microenvironment interactions and systemic inflammation.
- Muscle wasting is one of the key features due to increasedcatabolic activity (Yule, 2024).
- Inflammation drives changes in the adipose tissue, converting white fat (storage) to brown fat (energy) (Yule, 2024)

Symptom Burden

- Loss of apetite
- Weight loss
- Indigestion
- Diarrhoea
- Constipation
- Steatorrhoea
- Abdominal Pain
- Bloating
- Early Satiety
- Nausea
- Faecal Frequency
- **Pain** During **or After Meals**
- **Taste Changes**
- Offensive Stool

BMJ Open Gastroenterology

Consensus for the management of pancreatic exocrine insufficiency: UK practical guidelines

Mary E Phillips [1], Andrew D Hopper [2], John S Leeds [3], Keith J Roberts [4], Laura McGeeney [5], Sinead N Duggan [6], Rajesh Kumar [7]

Box 1 Diagnosis of PEI

PEI is highly likely with high benefit from PERT: no further test required as significant benefit from treatments and the negative predictive value of FEL-1 is not strong enough to prevent starting treatment

- Head of pancreas cancer
- Pre-surgery and post-surgery for head of pancreas cancer with or without pylorus preserving operation
- Total pancreatectomy
- Steatorrhoea or malabsorption symptoms in patients with CP with dilated pancreatic duct or severe pancreatic calcification
- Severe necrotising pancreatitis

Pancreatitis

NICE guideline
Published: 5 September 2018
Last updated: 16 December 2020

www.nice.org.uk/guidance/ng104

Pancreatic cancer in adults: diagnosis and management

NICE guideline
Published: 7 February 2018

Contents lists available at ScienceDirect

Clinical Nutrition

journal homepage: http://www.elsevier.com/locate/clnu

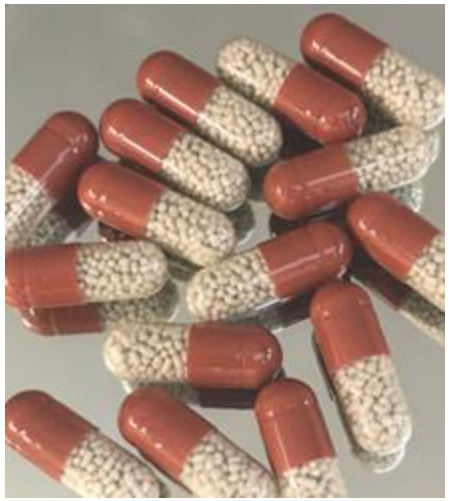
ESPEN Guideline

ESPEN guideline on clinical nutrition in acute and chronic pancreatitis

Marianna Arvanitakis [a,*], Johann Ockenga [b], Mihailo Bezmarevic [c], Luca Gianotti [d], Željko Krznarić [e], Dileep N. Lobo [f,g], Christian Löser [h], Christian Madl [i], Remy Meier [j], Mary Phillips [k], Henrik Højgaard Rasmussen [l], Jeanin E. Van Hooft [m], Stephan C. Bischoff [n]

Pancreatic enzyme replacement therapy (PERT).

- Brands – Creon, Nutrizyme 22, Pancrex
- Enzymes sourced from the pancreas of pigs – consent.
- **Starting doses** 44 000 – 75 000 with **meals** and 22 000 – 50 000 units lipase with **snacks** and **nutritious fluids. (**Phillips et al, 2021).
- Dose adjust - depending on the nutritional content of the meal or snack or nutritious fluid/ONS.
- Timing and mode of action.
- Foods and drinks which don't require PERT
- Right time, right place and right ph.
- Temperature sensitive



What is normal?

- Unique backgrounds
- Subjective perception
- Brain shortcuts

Pancreatic cancer and weight loss

72% of people with pancreatic cancer had unintentional weight loss within a year of diagnosis (Hue et al, 2020).

- **Maldigestion** caused by blocked pancreatic ducts/ tumour in the head of the pancreas.
- **Poor appetite** is driven by pancreatic cancer metabolites and symptoms.
- **Symptoms:** GOO, taste changes, oral candida, nausea, pain, diarrhoea, constipation.
- **New onset diabetes** relating to pancreatic cancer.
- **Increased nutritional requirements** – 10% rise in energy expenditure due to tumour metabolism.

Assessment and managing malnutrition Pancreatic cancer

Timely nutritional intervention:

Improves survival: increasing tolerance and response to disease treatments.

QOL.

Reducing post operative complications.

- Offer Pancreatic Enzyme Replacement Therapy PERT (NICE 2018).
- Refer to dietetics.
- Prescribe oral nutritional supplements (PERT, avoid juice style if DM).
- Check for diabetes and glycaemic control.
- Symptom management.
- Monitoring plan.

Nutritional support

- Optimise symptom management.
- Little and often eating pattern
- High protein/higher kcal food choices.
- Nutritional drinks.
- Oral nutritional supplements (ONS} – style (milkshake, jucy, taste changes).
- Enteral nutritional support.
- Impact on caring relationships

Micronutrient deficiencies

- Fat maldigestion – fat soluble vitamins – A, E, D, K.
- Surgical resections – stomach, duodenum, jejunum, gallbladder: B12, copper, iron
- Reduced oral intake, dietary deficiencies.
- Catabolic state.
- Smoking and alcohol

Nausea

- **Common Causes of Vomiting**
  - **Tumor Growth:**
  - **Chemotherapy Toxicity:**
  - **Other Factors:**

Imagine

- You are told eat whatever you want!
- Now you cant face the things you have wanted all of your life.
- Change in taste,
- Oral Thrush

Vomit

- Really useful to know
  - What the vomit contains
  - How much
  - When
  - Taste/Smell

Vomiting the Cost

Malnutrition and weight loss

Medication failure

Dehydration

Increased pain and distress

Constipation

- True Constipation?
- Passing wind/flatus?
- Discomfort?
- Pain?

Constipation - Drugs

- Do we need to prescribe something new?

- **Osmotic laxatives**
- **Stimulant laxatives**
- **Stool softeners**

Statistics – Opiate induced Constipation

Non-cancer chronic pain: Affects about **40% to 60%** (and up to 57% in specific cohorts) of patients taking opioids.

Cancer-related pain: Affects up to **80% to 90%** of patients due to higher doses and advanced disease factors.

Short-term or weak opioid use: Studies on weak opioids like tramadol show a cumulative incidence rising from roughly **30.2% at day 7** to **49.2% by day**

Lifestyle

- **Fluids:**
- **Fiber**
- **Gentle movement**

What works for you??

Patient Stories

Patient Story - Nausea

Pateint Story - Bowels Story

“Don't Ask, Don't Tell" (DADT)

- Previous History
- Gentle and sensitive conversations
- Be open

Control!!

- Control what we can
- Discuss what we can not control
- Simple remedies

Daily Reality

- Hyper Vigilant Planning
- Wardrobe Restrictions
- Physical Discomfort
- Emotional Strain

Knowledge is Power

- Changing Places Toilets
- Radar Key
- Simple Solutions

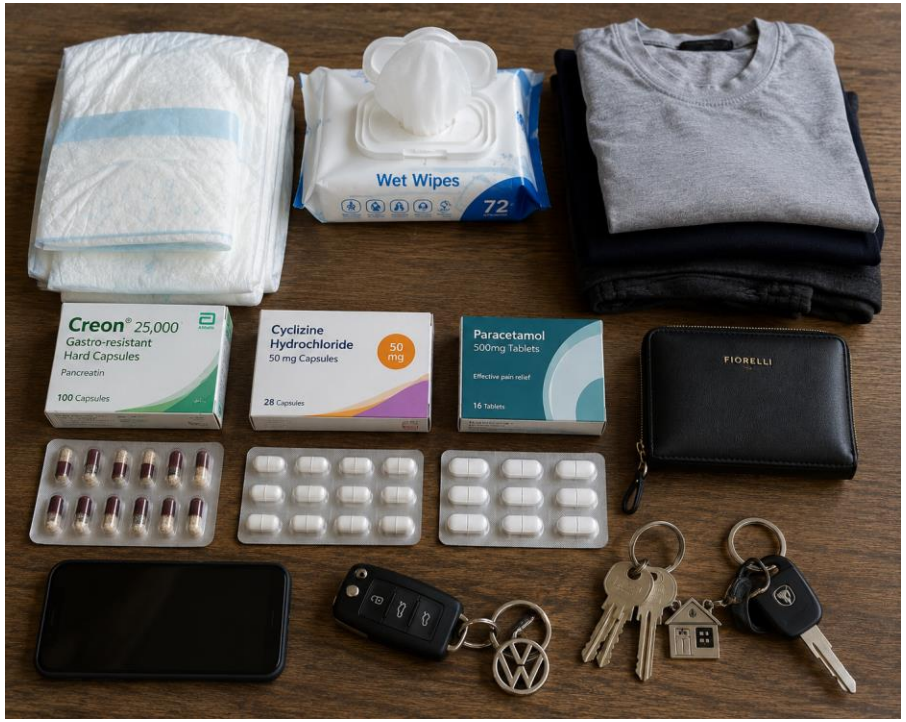
Simple Solutions

Skin Protection

Emergency Preparedness Kits

Avoid Misinformation

Are these simple solutions



TikTok

There Is Always 1

- I used to take Creon. I say I used to take it because I now no longer have to as I am no longer insufficient. My grandmother died of pancreatic cancer, my mom died 1.5 years ago from pancreatic cancer and I had pancreatic insufficiency, I felt like the writing was on the wall. So my acupuncturist suggested I started taking a spoonful of sauerkraut every morning. I started with that along with a probiotic (Visbiome) I continued with the sauerkraut and added kombucha, I waited 6 months and I was fine. Then I started adding more fermented foods, eating green bananas (to help colonize the colon with good gut bacteria) and waited another 6 months! So one year after making those changes I am no longer pancreatic insufficient AND I am no longer lactose intolerant. I actually reversed it, I no longer take Creon.
- A great show to watch on Netflix is Hack your health, it's all about the microbiome and how it affects your health. My integrative Dr was blown away when I told her what happened, she said she was shocked. I'd love to hear from anyone who wants to try it. And the best part is that I feel fantastic now, I used to be fatigued all the time and had brain fog. I no longer have that. Next I'm going to work on my cholesterol.

Redditt user 2024

Patient experience

- New pancreatic mass what should I be doing now?
- This roller coaster ride with cancer
- 4 months post whipples and its back
- My dad is experiencing diarrhea 1
  month post whipples. He had the same problem in the hospital just after surgery. He feels better after a day or 2 of anti diarrhea meds like loperamide , but the diarrhea comes back again. Doctors have adjusted his creon dosage to almost 100k units a day!!!! but the problem still persists. He is unable to eat properly and is losing a lot weight, around 9kgs since the surgery Is this expected, or normal for post whipples? Is there anything we can optimize in his diet etc, that can provide relief? Any suggestions are appreciated.

Going Out for a meal

HOUSE KEYS

WALLET

BAG

GLASSES

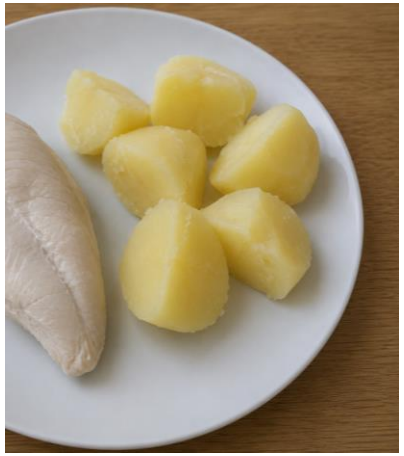
Going out for a meal with Pancreatic Cancer What to take?

- Glasses
- House Keys
- Wallet
- Bag
- Creon
- Pain killers
- Pads
- Change of clothes
- Anxiety

Food

- Starter?
- Main?
- Dessert?
- Drinks?

- How many Creon?
- Where is the toilet?
- Can I order form the Children's menu?



Is it easier to stay at home?

- Loss of social interaction
- Less exercise
- Mental stimulation
- Depression
- Lack of worth

Where Next?

UTILISE LOCAL INSTITUTIONAL KNOWLEDGE AND GUIDELINES

NATIONAL GUIDES – PCUK, PSGBI, AUGIS.

DIETETICS

LOCAL/NATIONAL SUPPORT GROUPS

FACEBOOK?

WHATS APP GROUPS?

How Can We Help?

SUPPORT

INFORMATION

REASSURANCE

LOOK AFTER YOURSELF!! YOU CAN NOT POUR FROM AN EMPTY VESSEL

"Thro' the wave that runs forever / By the island in the river, / Flowing down to Camelot."

Questions?