Welcome to this NDRS training module on Upper gastrointestinal tumours - Pancreatic. This module is designed to help Cancer Administration staff gain a better understanding of these tumours and the terminology used by the clinical teams.

Agenda

- Introduction
- Pancreatic tumours
- Summary
- Acknowledgements

This module may be paused at any time

In this module we'll give you a brief introduction to Upper GI tumours including some of the symptoms that patients might experience. We'll look at the anatomy & physiology of the Upper GI system and will then go through diagnosis & treatment options. This module can be paused at any time.

Introduction

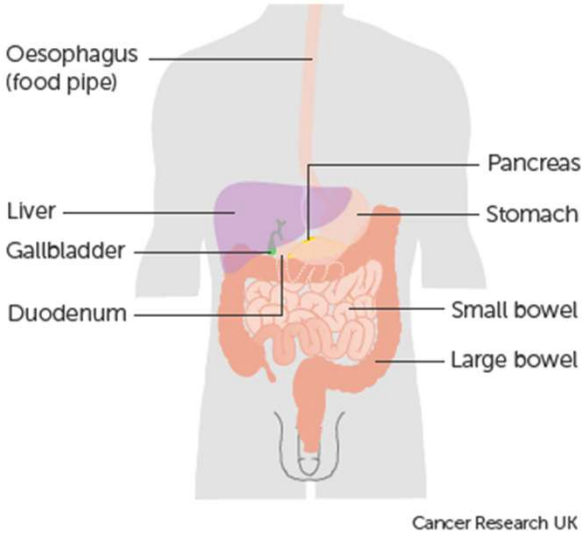
In this section we will cover:

- Types of Upper GI tumour

Firstly, we'll look at the various types of Upper GI tumour…

Upper GI - Introduction

- Oesophagus
- Stomach
- Pancreas
- Liver
- Gall Bladder
- Small Intestine



The Upper gastrointestinal tract consists of the Oesophagus, Stomach, Duodenum and small intestine. The Liver, Gall Bladder and Pancreas also play a significant role in the digestion of food. Training modules are available for Oesophageal, Stomach and Pancreatic tumours. This module covers Pancreatic tumours

Pancreatic

In this section we will cover:

- Causes and Risk Factors
- Signs and Symptoms
- Anatomy & Physiology
- Regional Lymph Nodes
- Diagnosis
- Morphology
- Topography
- Grade
- Stage
- Treatment

We'll start off by looking at the causes and risk factors for pancreatic tumours…

Pancreatic – Causes & Risk Factors

The causes and risks associated with pancreatic cancer are

- Increasing age
- Smoking
- Chronic Pancreatitis
- Diabetes
- Obesity
- Family History

… which include increased age, diabetes and obesity. A family history of pancreatic tumours will also increase the risk.

Pancreatic – Signs & Symptoms

Pancreatic cancer may not cause any symptoms for a long time.

- Jaundice (yellowing of the skin and eyes)
- Back and abdominal pain
- Weight loss

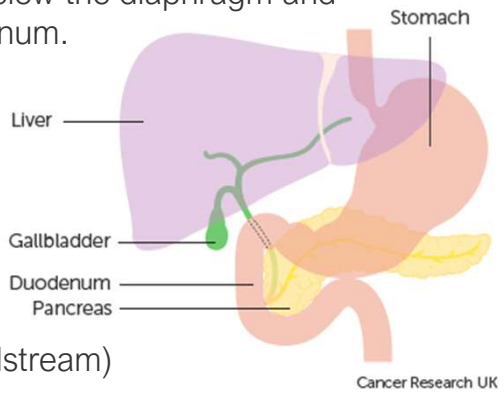
Pancreatic tumours often cause no symptoms in the early stages. Symptoms of more advanced disease may include jaundice and weight loss.

Pancreatic – Anatomy & Physiology

The pancreas lies in the left mid abdomen below the diaphragm and behind the stomach in the loop of the duodenum.

The two functions of the pancreas are:

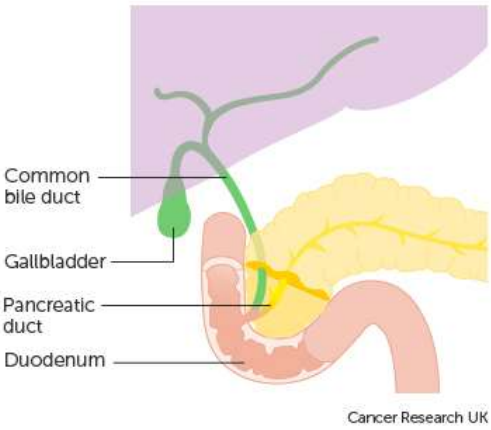
- Exocrine (secreted through a duct)
- produce digestive juices



- Endocrine (secreted directly into the bloodstream)
- produce multiple hormones, one of which is insulin

The pancreas is a leaf-shaped organ that lies below the diaphragm, near the stomach and duodenum. It makes digestive juices that enter the duodenum through a duct, as well as secreting various hormones directly into the bloodstream. One of the hormones it secretes is insulin which controls blood sugar levels

Pancreatic – Anatomy & Physiology



The pancreatic duct extends the whole length of the pancreas

The Ampulla of Vater is formed where the pancreatic duct and common bile duct meet and is the duct through which bile and pancreatic juices enter the duodenum

The Ampulla of Vater is where the pancreatic duct and the common bile duct - from the gallbladder - converge, just prior to joining with the duodenum

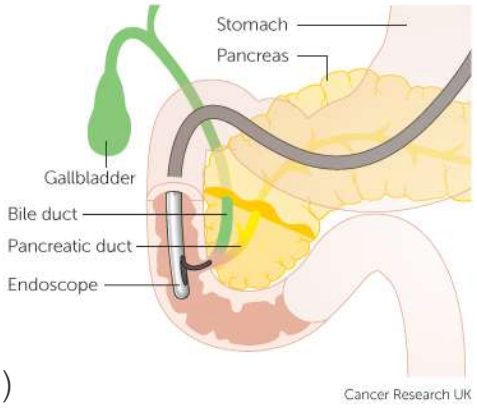
Pancreatic – Regional Lymph Nodes

- The regional lymph nodes for the pancreas are the **peripancreatic** lymph nodes, which can be subdivided as:
  - Anterior (in front of the pancreas)
  - Posterior (behind the pancreas)
  - Inferior (just below the pancreas)
  - Superior (just above the pancreas)
  - Splenic hilum (between the pancreas and the spleen)
  - Infrapyloric and Subpyloric (near the pylorum of the stomach)
  - Coeliac (on the coeliac artery)

Regional lymph nodes for the pancreas are known as the peripancreatic nodes meaning literally “around the pancreas”.

Pancreatic - Diagnosis

- Trans Abdominal ultrasound
- CA 19-9 and CEA blood markers
- Scans - CT scan and/or MRI. PET-CT (if metastatic deposits suspected)
- Endoscopic Ultrasonography
- Endoscopic Retrograde Cholangio-Pancreatography (ERCP - pictured)
- MRI / MRCP (Magnetic Resonant Cholangio-Pancreatography)
- Biopsy
- Laparoscopy (if metastatic deposits suspected)



Diagnosis of a pancreatic tumour might include blood tests, radiological imaging, endoscopic procedures and biopsies.

Pancreatic - Morphology

The most common type of tumour to occur in the pancreas is **Pancreatic Ductal Adenocarcinoma** which accounts for 90% of all pancreatic tumours

- Arise within the exocrine tissue of the cells lining the ducts of the pancreas

More rarely, neuroendocrine tumours can occur – various morphology codes (please refer to the Neuroendocrine – Key Points training module: https://digital.nhs.uk/ndrs/data/cancer-data-training-materials)

Around 90% of pancreatic tumours are Ductal Adenocarcinomas. These usually arise in the lining of the pancreatic duct. Neuroendocrine tumours are relatively rare.

Pancreatic – Topography - Invasive

- Invasive tumours of the pancreas are classified as:
  - C25.0 – Head of pancreas
  - C25.1 – Body of pancreas
  - C25.2 – Tail of pancreas
  - C25.3 – Pancreatic duct
  - C25.4 – Endocrine pancreas (including Islets of Langerhans)
  - C25.5 – Other parts of pancreas (including Neck of pancreas)
  - C25.8 – Overlapping lesion of pancreas
  - C25.9 – Pancreas, unspecified
- All invasive ICD10 codes must be recorded

The ICD10 codes for Invasive tumours of the pancreas are shown here… All invasive tumours must be recorded in your cancer data management system…

Pancreatic – Topography – In Situ

- Once diagnosed, an in situ pancreatic tumour is classified as D01.7
- While your clinical team may request that D01.7 in-situ stomach tumours are recorded, these do not currently require a COSD submission from your cancer data management system – NDRS obtains this data direct from pathology laboratories

… while the ICD10 code for an in-situ pancreatic tumour is D01.7

Pancreatic – Topography – Unknown or Uncertain Behaviour

- Once diagnosed, a pancreatic tumour of unknown or uncertain behaviour is classified as D37.7
- While your clinical team may request that D37.7 stomach tumours are recorded, these do not currently require a COSD submission from your cancer data management system – NDRS obtains this data direct from pathology laboratories

Some tumours are determined to be of unknown or uncertain behaviour. A pancreatic tumour of unknown or uncertain behaviour is coded as D37.7. It should be noted that while your clinical team may request that non-invasive tumours are also recorded, these do not currently require a COSD submission from your cancer data management system – NDRS obtains this data direct from the pathology labs

Pancreatic – Grade

Grade 1

Tumours look very similar to the normal tissue and have the best prognosis

Grade 2

Tumours are formed of cells that somewhat resemble normal tissue but have more abnormal features than Grade 1

Grade 3

Tumours have very abnormal cells and the worst prognosis

The grade of tumours is determined by their similarity to normal tissue and the extent of abnormal features

Pancreatic – Stage

- Pancreatic tumours (neuroendocrine) are staged using the European Neuroendocrine Tumour Society TNM (ENETS) version
- Pancreatic carcinoma is staged as follows:
    - For diagnosis dates up to 31st December 2025 use UICC TNM v8
    - For diagnosis dates from 1st January 2026 use UICC TNM v9
- Please note that the TNM version must be accurately recorded – if you are unable to amend the version on your cancer data management system, please refer to your line manager
- For non-neuroendocrine tumours if, after 1st January 2026, your cancer data management system has not been amended to include TNM v9 please record the TNM v9 stage and add the following statement to the Primary Diagnosis Subsidiary Comment field:
    - Patient staged using TNM9 not TNM8 as per CR2070

Carcinomas within the pancreas are staged using the appropriate UICC TNM version. However, neuroendocrine tumours are staged using the ENETS version of TNM. Please ensure the version is correctly recorded in your cancer management system

Pancreatic – Stage

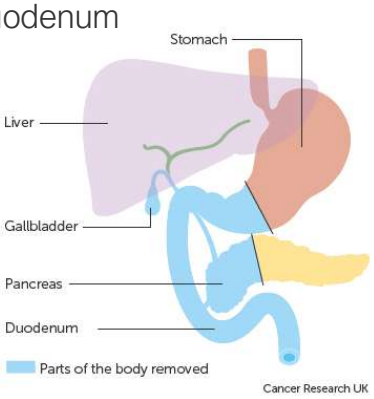
- If in doubt as to which staging system to use, please see the latest COSD User Guide, Appendix E (link to the download page in the Summary)
- For details on recording stage, please see the NDRS training module KPI-TNM Staging 101
- https://digital.nhs.uk/ndrs/data/cancer-data-training-materials
- TNM stage should be recorded for all invasive tumours

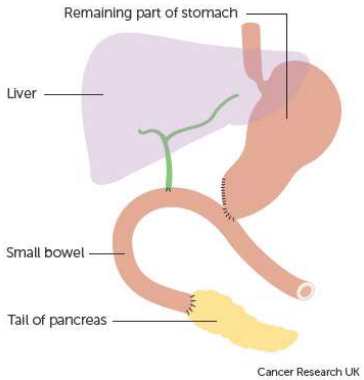
For more details please refer to the NDRS training module KPI-TNM Staging 101

Pancreatic – Treatment - Surgery

Curative Surgery

- Pancreaticoduodenectomy (Whipple's resection) – removes the head of the pancreas, the gallbladder, the lower part of the stomach and part of the duodenum



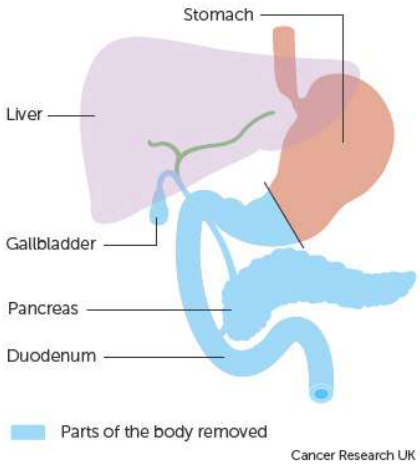


A common form of surgery for a tumour in the pancreatic duct or the head of the pancreas is a Whipples resection in which part of the pancreas is retained and reattached.

Pancreatic – Treatment - Surgery

Curative Surgery

- Pylorus Preserving Pancreaticoduodenectomy (PPPD) – preserves the bottom section of the stomach
- Total Pancreatectomy (pictured) - removes the lower portion of the stomach, the entire pancreas, the gallbladder and part of the duodenum
- Distal Pancreatectomy - removes the tail and all or part of the body of the pancreas, depending on tumour location but leaves the head of the pancreas



Other forms of surgery include a Pylorus Preserving Pancreaticoduodenectomy which is similar to a Whipples resection but unlike a Whipples does not remove the lower part of the stomach. Alternatively the surgeon may choose to perform a pancreatectomy, either total or distal, although pancreatectomies are relatively rare. Patients who have undergone pancreatectomy may require medications to preserve digestive function and possibly insulin to regulate their blood sugar.

Pancreatic – Treatment - Surgery

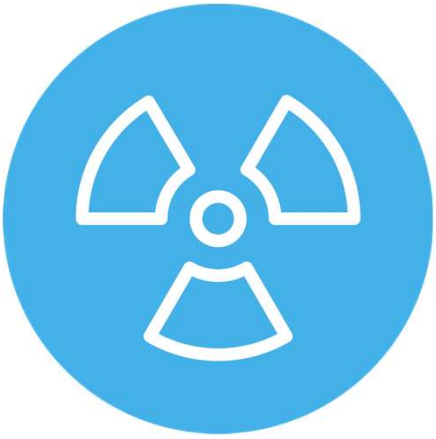
Palliative Surgery

- Hepaticojejunostomy (surgery that connects the hepatic duct from the liver to the middle part of the small intestine)
- Choledochojejunostomy (surgery that connects the common bile duct from the gall bladder to the middle part of the small intestine)
- Gastrojejunostomy (surgery that connects the stomach directly to the middle part of the small intestine)
- Duodenal stent

Other surgeries may be offered to relieve symptoms if the cancer is too advanced to be curable. These may include a stent in the duodenum to relieve severe constipation or one of several forms of bypass surgery.

Pancreatic - Treatment - Radiotherapy

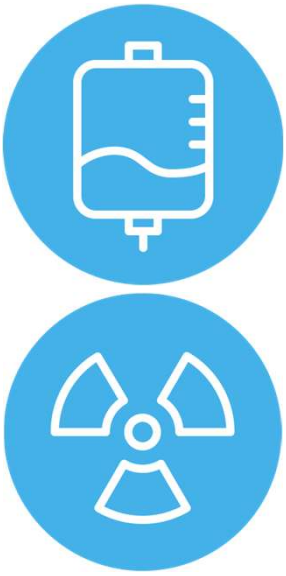
- Radiotherapy is not often used in the treatment of pancreatic cancer
- Palliative radiotherapy can be used to treat advanced disease to relieve symptoms



Radiotherapy is rarely used in the treatment of the cancer itself although it may be used to relieve symptoms in advanced disease.

Pancreatic – Treatment - Chemoradiotherapy

- Palliative chemotherapy can be given in combination with radiotherapy to relieve symptoms



Radiotherapy may be given in conjunction with chemotherapy as a palliative treatment

Pancreatic – Treatment - Chemotherapy

- Adjuvant chemotherapy is commonly given to patients after surgery to help lower the risk of the recurrence and to ensure all cancer cells have been removed
- Chemotherapy can be used for patients with an inoperable tumour to try and shrink it

Chemotherapy alone is often given post-operatively to ensure removal of as much tumour tissue as possible. It may also be used where surgery is not possible.

Summary

To summarise…

Summary

- Risk factors for pancreatic tumours include increased age, smoking, obesity and existing diabetes

Increased age, smoking and obesity are all among the risk factors for pancreatic tumours.

Summary

- Risk factors for pancreatic tumours include increased age, smoking, obesity and existing diabetes
- Pancreatic tumours often show no symptoms in the early stages. Signs of a later stage disease can include jaundice and weight loss

An early stage pancreatic tumour may not show any symptoms. Later stage disease may present with jaundice or weight loss.

Summary

- Risk factors for pancreatic tumours include increased age, smoking, obesity and existing diabetes
- Pancreatic tumours often show no symptoms in the early stages. Signs of a later stage disease can include jaundice and weight loss
- Investigations may range from a simple blood test and radiological examination through to endoscopy, solid tissue biopsies and possibly surgery

Investigations may range from a simple blood test through to surgery

Summary

- Risk factors for pancreatic tumours include increased age, smoking, obesity and existing diabetes
- Pancreatic tumours often show no symptoms in the early stages. Signs of a later stage disease can include jaundice and weight loss
- Investigations may range from a simple blood test and radiological examination through to endoscopy, solid tissue biopsies and possibly surgery
- If a tumour is diagnosed it may be invasive, in situ or of unknown or uncertain behaviour. While all invasive tumours must be recorded, in situ tumours and tumours of uncertain or unknown behaviour do not need to be recorded on a cancer data management system for the purposes of COSD - NDRS obtains these records directly from pathology laboratories

If a tumour is diagnosed, it may or may not be invasive. All invasive tumours must be recorded in your cancer data management system and while the clinical team might request that in situ tumours and tumours of unknown or uncertain behaviour are recorded, these do not need to be recorded for the purposes of COSD – NDRS obtains these records directly from the pathology labs

Summary

- Additional guidance on recording COSD data including morphology, topography, staging and recording a diagnosis can be found at: https://digital.nhs.uk/ndrs/data/cancer-data-training-materials
- Staging data sheets can also be downloaded from the NDRS website for clinical use: https://digital.nhs.uk/ndrs/data/cancer-data-training-materials/staging-sheets

Additional training modules as well as Staging sheets for clinical use may be downloaded from the NDRS website.

Summary

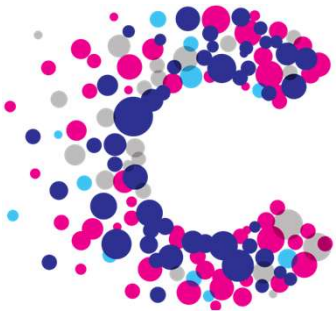
- If in any doubt as to whether you should be recording a diagnosis, please refer to the latest COSD User Guide, Appendices A, B & C
- For guidance on the required staging system, please refer to the latest COSD User Guide, Appendix E

- https://digital.nhs.uk/ndrs/data/data-sets/cosd#downloads

Do please remember, guidance **is** available on our website. You can download the COSD User Guide by clicking on this link and selecting the COSD version appropriate to your trust.

Acknowledgements

Many thanks to Cancer Research UK for the use of their images within this training module.



CANCER RESEARCH UK

We'd like to thank Cancer Research UK for the use of their images within this training module.

Questions?

East Midlands: **Simon Cairnes** – simon.cairnes@nhs.net

Eastern: **Marianne Mollett** – marianne.mollett@nhs.net

London & South East: **Katrina Sung** – katrina.sung@nhs.net

London & South East: **Karen Graham**– karen.graham36@nhs.net

North West: **Paul Stacey** – p.stacey@nhs.net

Northern & Yorkshire: **Rachael Mann** – rachaelmann@nhs.net

Oxford: **Gemma Feeney** – gemma.feeney@nhs.net

South West: **James Withers** – james.withers@nhs.net

West Midlands: **Gemma Feeney** – gemma.feeney@nhs.net

If you have any questions on the information contained within this module or about COSD in general, do please feel free to email your regional Data Liaison Manager