Pancreatic ductal adenocarcinoma

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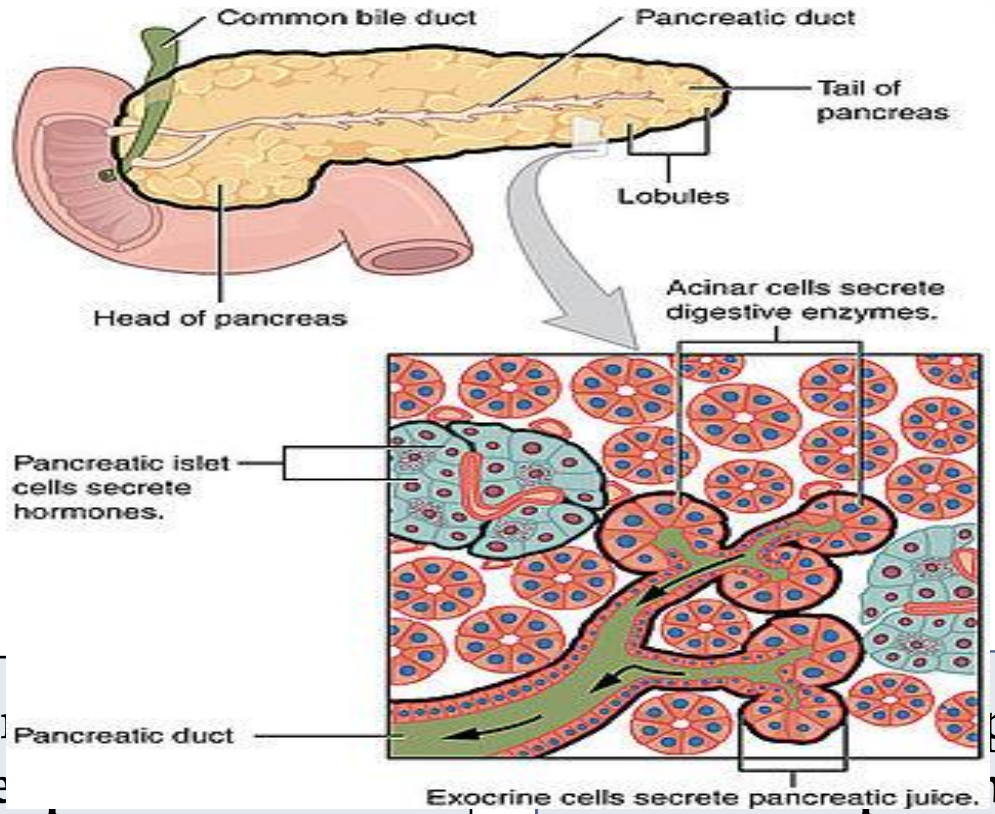


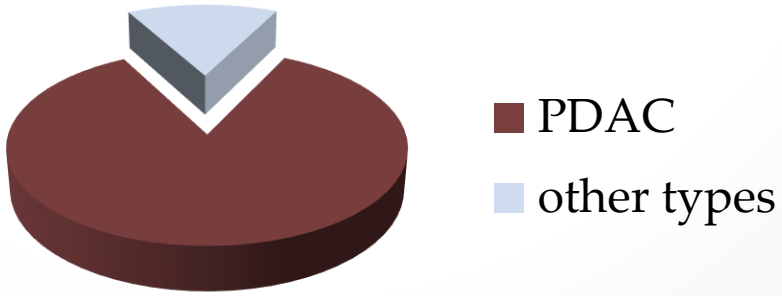
Exocri **pancreatic**

ne **ns**

95% **5%**

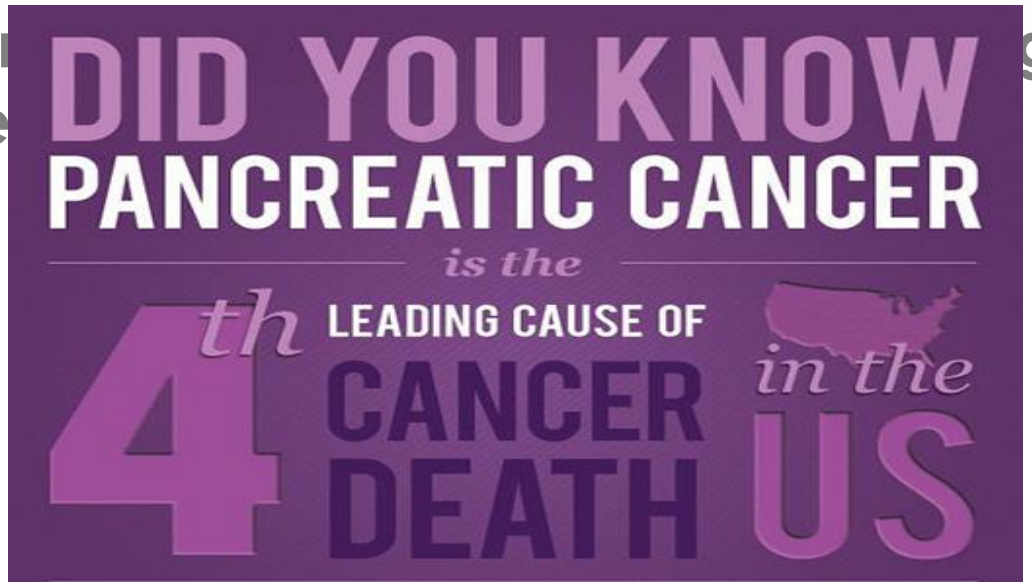
- The **most common** type of exocrine-derived pancreatic cancer is **ductal adenocarcinoma (PDAC)**, which arises from cells lining the pancreatic duct epithelium.

- PDAC accounts for **85%** of all pancreatic cancers.

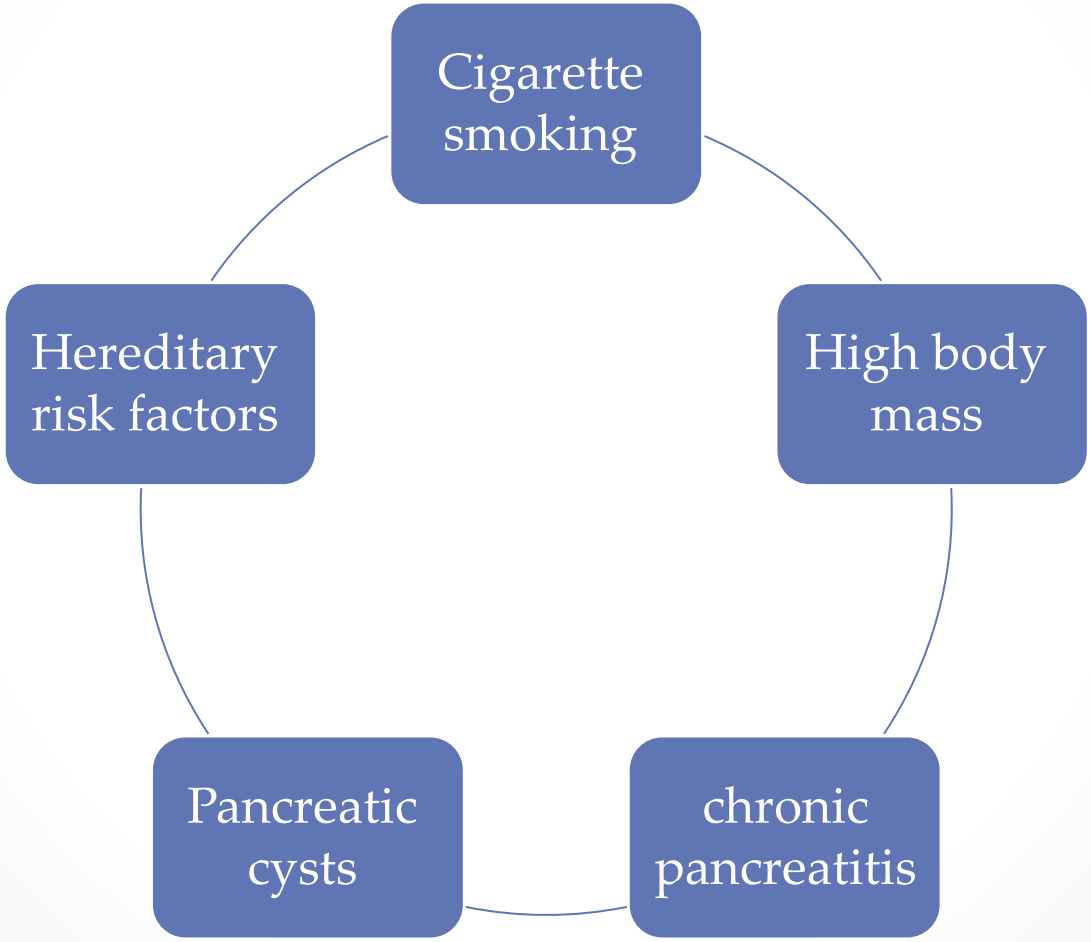


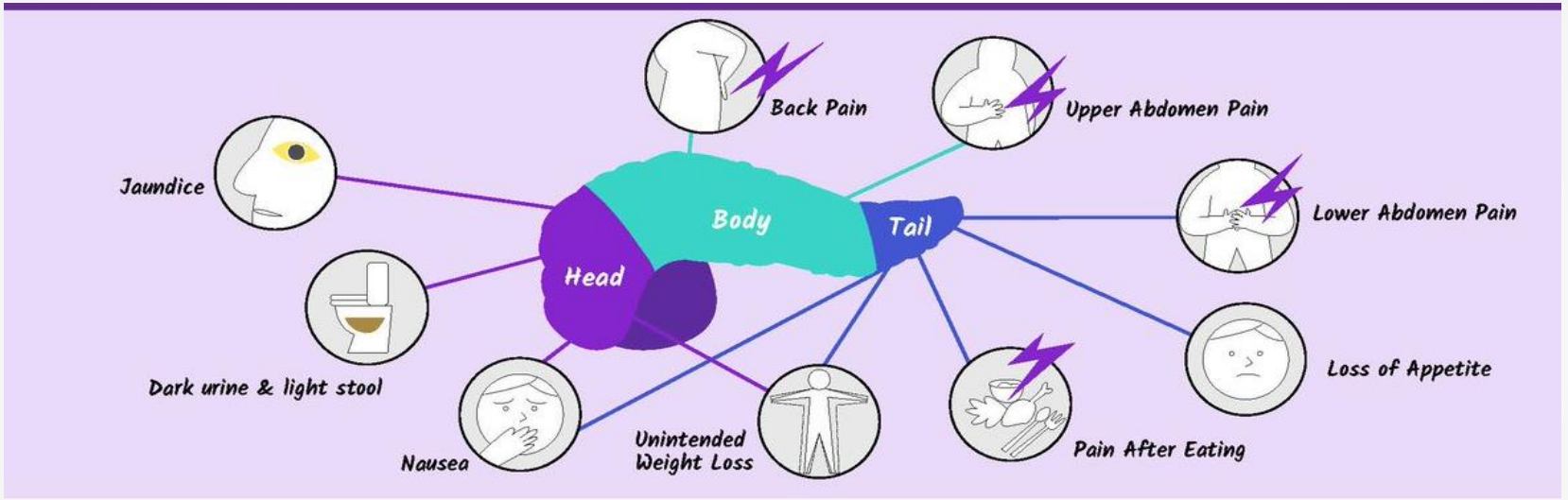
- Pancreatic cancer is the **fourth** most common cause of cancer death in the United States

- Approxi gnosed each ye



RISK FACTORS





- approximately 80% of patients are deemed to have advanced disease at the time of diagnosis

PANCREATIC CANCER SCREENING

- **NO** routine screening in the general population

PANCREATIC CANCER SCREENING

- First-degree relatives (FDRs) of patients with PC from a FPC family with at least two affected FDRs
- Patients with Peutz-Jeghers syndrome (PJS)
- Patien ry pancreatitis and a PRSS1 mutation
- *CDKN 1, BRCA2, PALB2,* and Lynch syndrome mutati one or more affected FDRs

- We begin screening at age **45 to 50 years**, or **10 to 15 years younger** than the **youngest relative** with pancreatic cancer

- We begin screenir s with **PJS** at **30 years**

- We begin screenir with **hereditary pancreatitis** at ag

SCREENING MODALITIES

- Endoscopic ultrasound
- MRI and MRCP
- Computed tomography

EUS and/or MRCP appear to have the highest yield and do not involve ionizing radiation

SCREENING MODALITIES

- ERCP
- Transabdominal ultrasound
- carbohydrate antigen 19-9 (CA 19-9)

Conditions associated with increased serum levels of the tumor marker CA 19-9

Malignant
Pancreatic exocrine and neuroendocrine cancers
Biliary cancer (gallbladder, cholangiocarcinoma, ampullary cancers)
Hepatocellular cancer
Gastric, ovarian, colorectal cancer (less often)
Lung, breast, uterine cancer (rare)
Benign
Acute cholangitis
Cirrhosis and other cholestatic diseases (including gallstones)

Hepatobiliary Pancreat Dis Int. 2018 Jun;17(3):263-268. doi: 10.1016/j.hbpd.2018.04.001. Epub 2018 Apr 20.

Usefulness of CA 19-9 for pancreatic cancer screening in patients with new-onset diabetes.

Gastrointest Endosc. 2011 Jul;74(1):87-95. doi: 10.1016/j.gie.2011.03.1235.

Screening for pancreatic cancer in a high-risk population with serum CA 19-9 and targeted EUS: a feasibility study.

Zubarik R[1], Gordon SR, Lidofsky SD, Anderson SR, Pipas JM, Badger G, Ganguly E, Vecchio J.

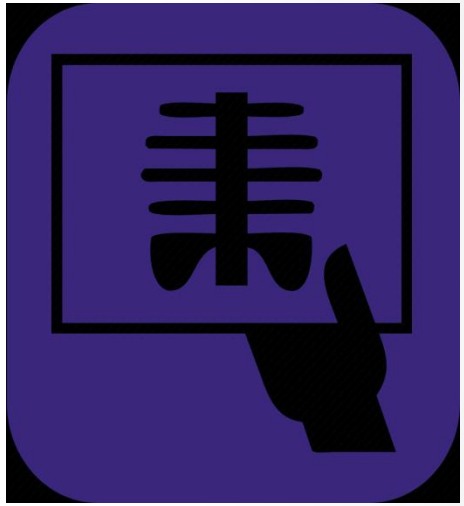
Medicine (Baltimore). 2018 Aug;97(35):e12132. doi: 10.1097/MD.0000000000012132.

Clinical utilization of serum- or plasma-based miRNAs as early detection biomarkers for pancreatic cancer: A meta-analysis up to now.

CONCLUSIONS: Serum- or plasma-based miRNAs are capable of distinguishing PC from non-PC with relatively high sensitivity and specificity. In future, miRNAs may be used as promising diagnostic biomarkers for detection of PC.

Staging

- For people with newly diagnosed pancreatic cancer who have not had a pancreatic protocol CT scan, offer a **pancreatic protocol CT scan** that includes the chest, abdomen and pelvis.



- Offer **FDG-PET/CT** to people with localised disease on CT who will be having cancer treatment (surgery, radiotherapy or systemic therapy).

Staging

- If more information is needed to decide the person's clinical management, consider one or more of the following:

1- **MRI**, for suspected liver metastases

2- **EUS**, if more information is needed for node staging

3- **laparoscopy with laparoscopic ultrasound**, for suspected small-volume peritoneal and/or liver metastases if resectional surgery is a possibility.

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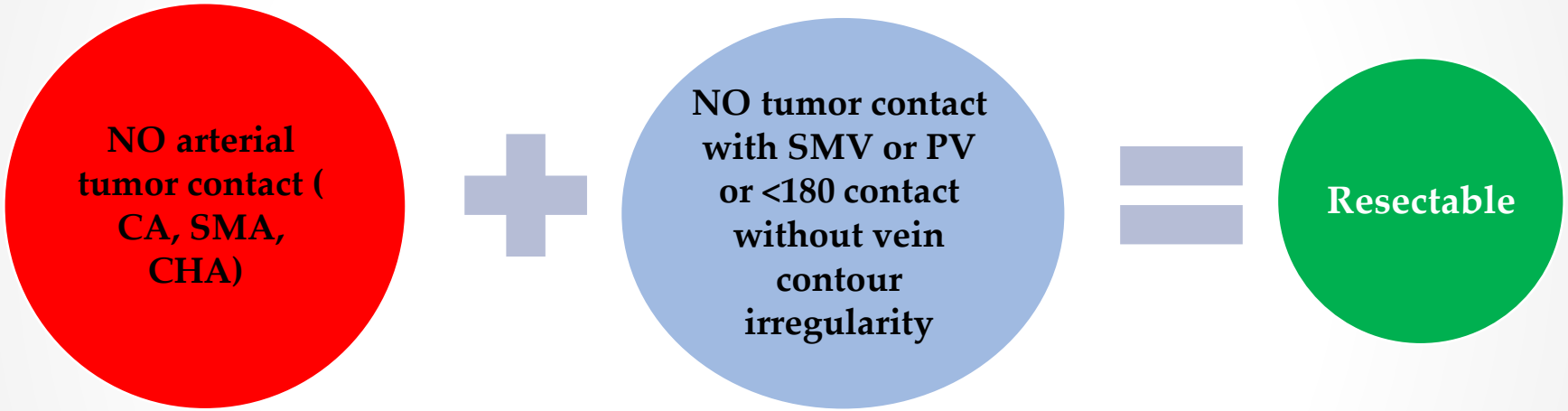

Role of preoperative biliary drainage :

- For patients presenting with obstructive jaundice, preoperative **biliary decompression is recommended** for selected patients :

✓ in whom surgery will be **delayed for longer than two weeks**

✓ in the presence of **cholangitis**

Borderline Resectable :

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Pancreatic head/uncinate process:

- Solid tumor contact with CHA without extension to celiac axis or hepatic artery bifurcation allowing for safe and complete resection and reconstruction.
- Solid tumor contact with the SMA of ≤180°
- Solid tumor contact with variant arterial anatomy (ex: accessory right hepatic artery, replaced right hepatic artery, replaced CHA, and the origin of replaced or accessory artery) and the presence and degree of tumor contact should be should be noted if present as it may affect surgical planning.

Pancreatic body/tail:

- Solid tumor contact with the CA of ≤180°
- Solid tumor contact with the CA of >180° without involvement of the aorta and with intact and uninvolved gastroduodenal artery thereby permitting a modified Appleby procedure [some members prefer this criteria to be in the unresectable category].

- Solid tumor contact with the SMV or PV of >180°, contact of ≤180° with contour irregularity of the vein or thrombosis of the vein but with suitable vessel proximal and distal to the site of involvement allowing for safe and complete resection and vein reconstruction.

- Solid tumor contact with the inferior vena cava (IVC).

Borderline Resectable :

- All patients who meet the definition for borderline resectable disease because of vascular involvement are referred for some form of induction (**neoadjuvant**) treatment to increase the likelihood of a margin-negative resection

Unresectable :

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- Distant metastasis (including non-regional lymph node metastasis)

Head/uncinate process:

- Solid tumor contact with SMA >180°
- Solid tumor contact with the CA >180°
- Solid tumor contact with the first jejunal SMA branch

Body and tail

- Solid tumor contact of >180° with the SMA or CA
- Solid tumor contact with the CA and aortic involvement

Head/uncinate process

- Unreconstructible SMV/PV due to tumor involvement or occlusion (can be due to tumor or bland thrombus)
- Contact with most proximal draining jejunal branch into SMV

Body and tail

- Unreconstructible SMV/PV due to tumor involvement or occlusion (can be due to tumor or bland thrombus)

Unresectable :

- ✓ Offer systemic **chemotherapy** to patients who are well enough to tolerate it

- ✓ **Palliative Care:**

1- Endoscopic biliary metal stent is preferred for biliary obstruction
2- Enteral stent for gastric outlet obstruction
3- Consider radiation therapy with or without chemotherapy to palliate pain
4- Pancreatic enzyme replacement for pancreatic insufficiency
5- Low-molecular-weight heparin is preferred over warfarin for management of thromboembolic disease


HOPE


HOPE


Thank
you