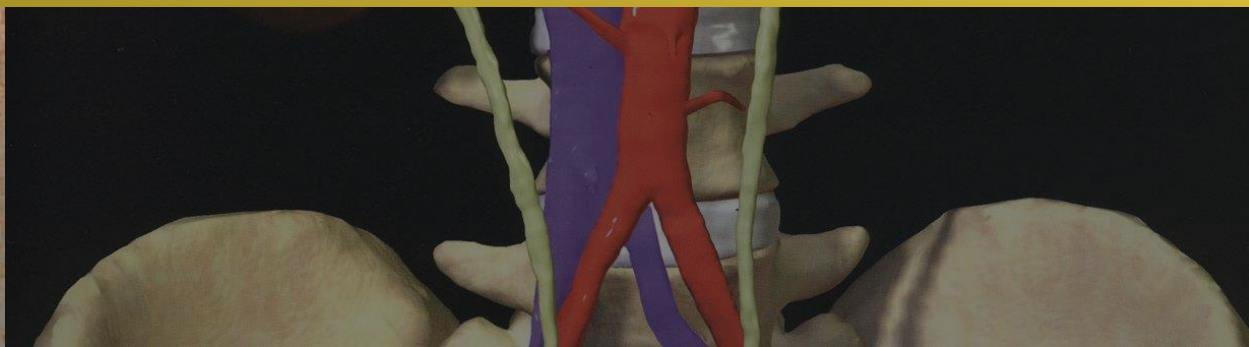




PANCREAS

Dr. Saeed Vohra & Dr. Jamila Elmedany



OBJECTIVES

- By the end of this lecture the student should be able to:
- Describe the anatomical view of the pancreas regarding ; location, parts relations, ducts
- Arterial supply & Venous drainage
- Describe the nerve supply and lymph drainage

Pancreas

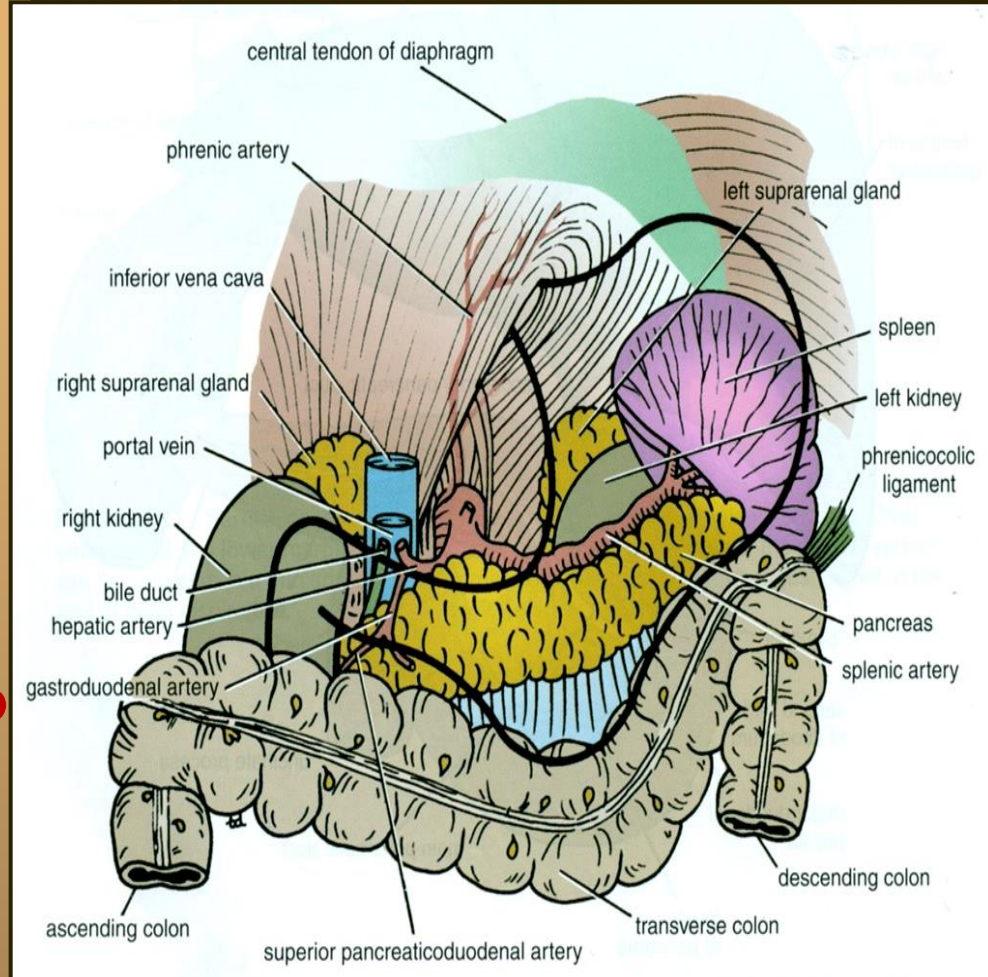
It is an elongated soft pinkish structure

(60-100) gram in weight & (6-10) inch in length

It is **Lobulated?**

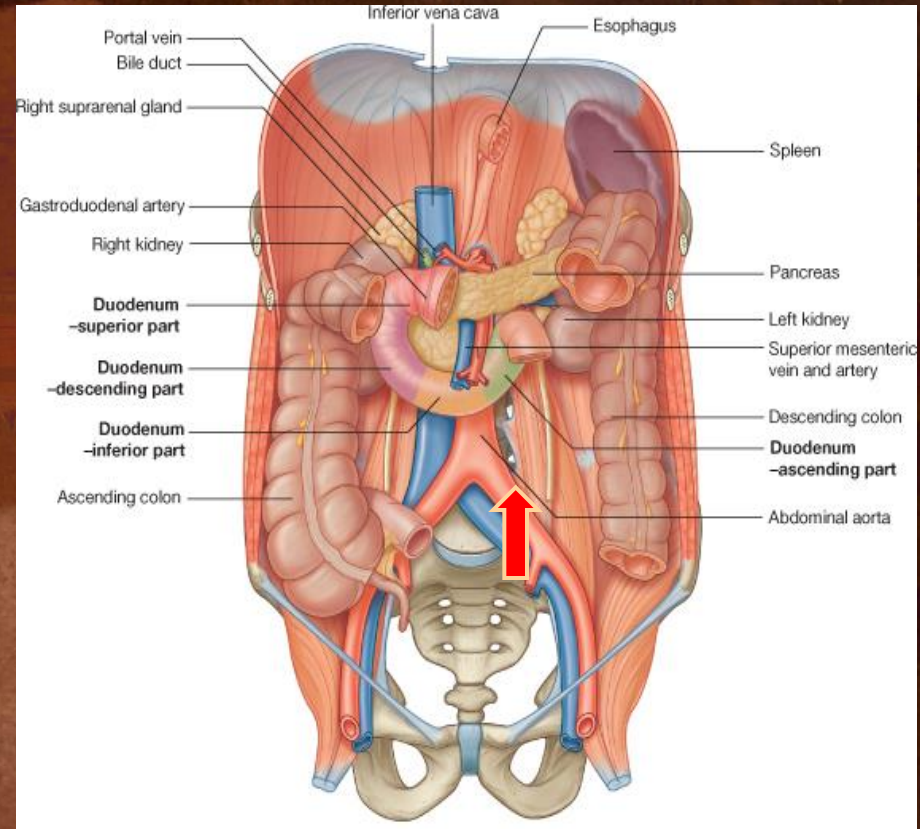
Because it is surrounded by a fibrous tissue capsule from which septa pass into the gland and divide it into lobes.

The lobes are divided into lobules.



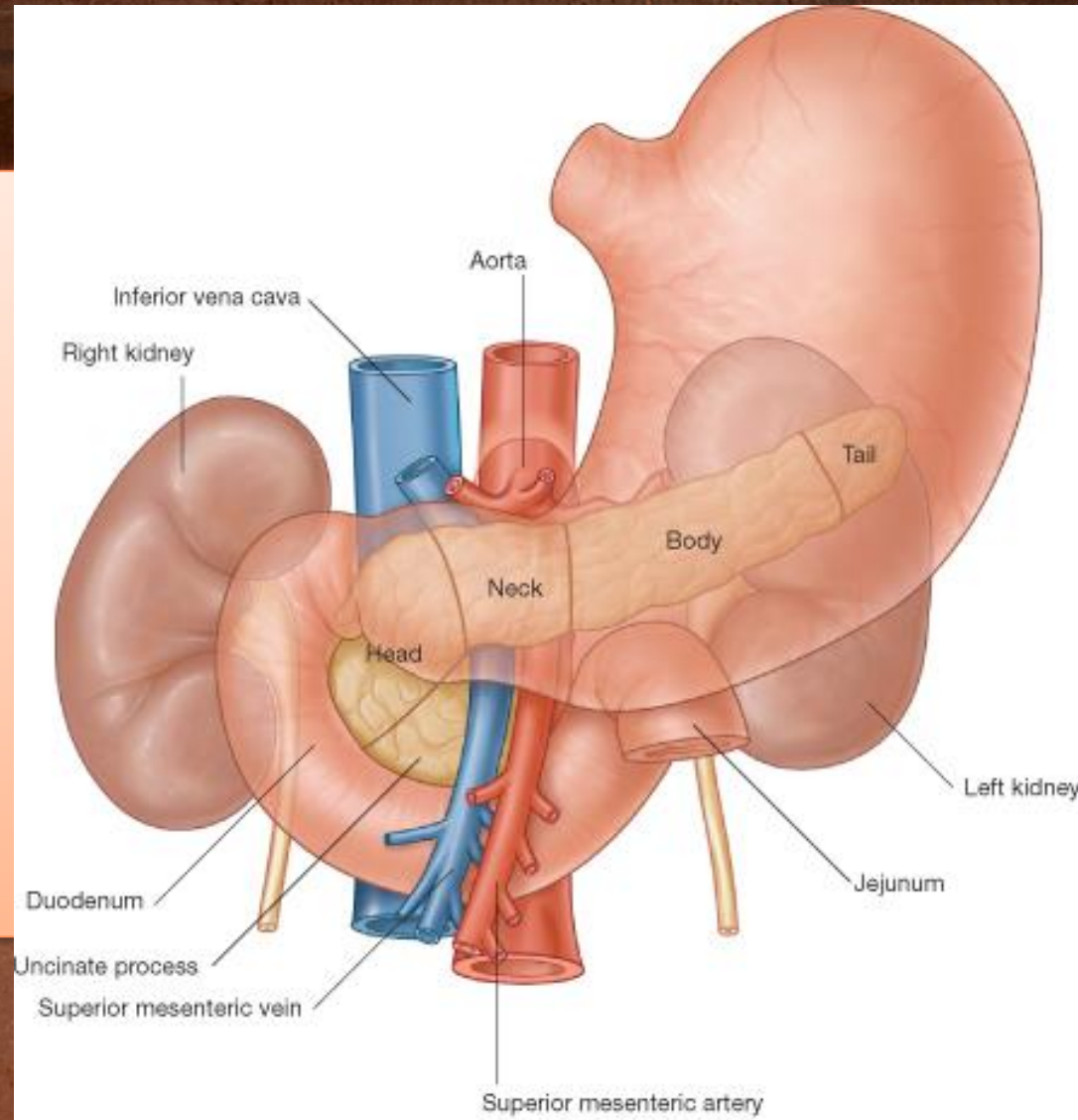
Location

- It is a **Retro-Peritoneal structure**.
- It lies on the posterior abdominal wall in the: **Epigastrium & Left upper quadrant of the abdomen**.
- It extends in a transverse oblique direction at the **transpyloric plane (1st lumbar vertebral)** from the concavity of the duodenum on the right to the spleen on the left.



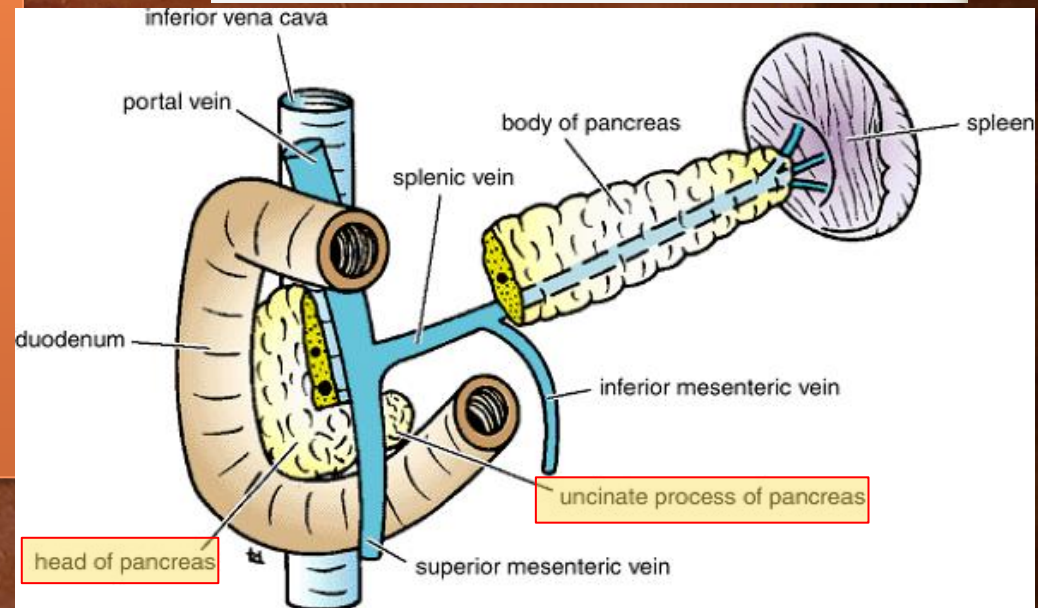
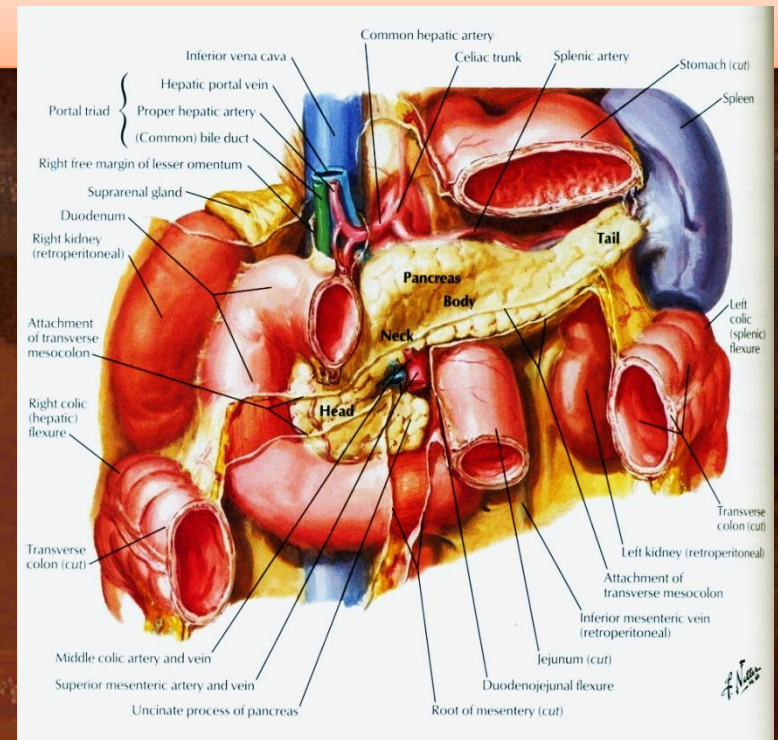
Parts

- It is divided into:
- **Head, Neck, Body and Tail.**
- Because of its oblique direction the tail is higher than the head (at T12).



Head of Pancreas

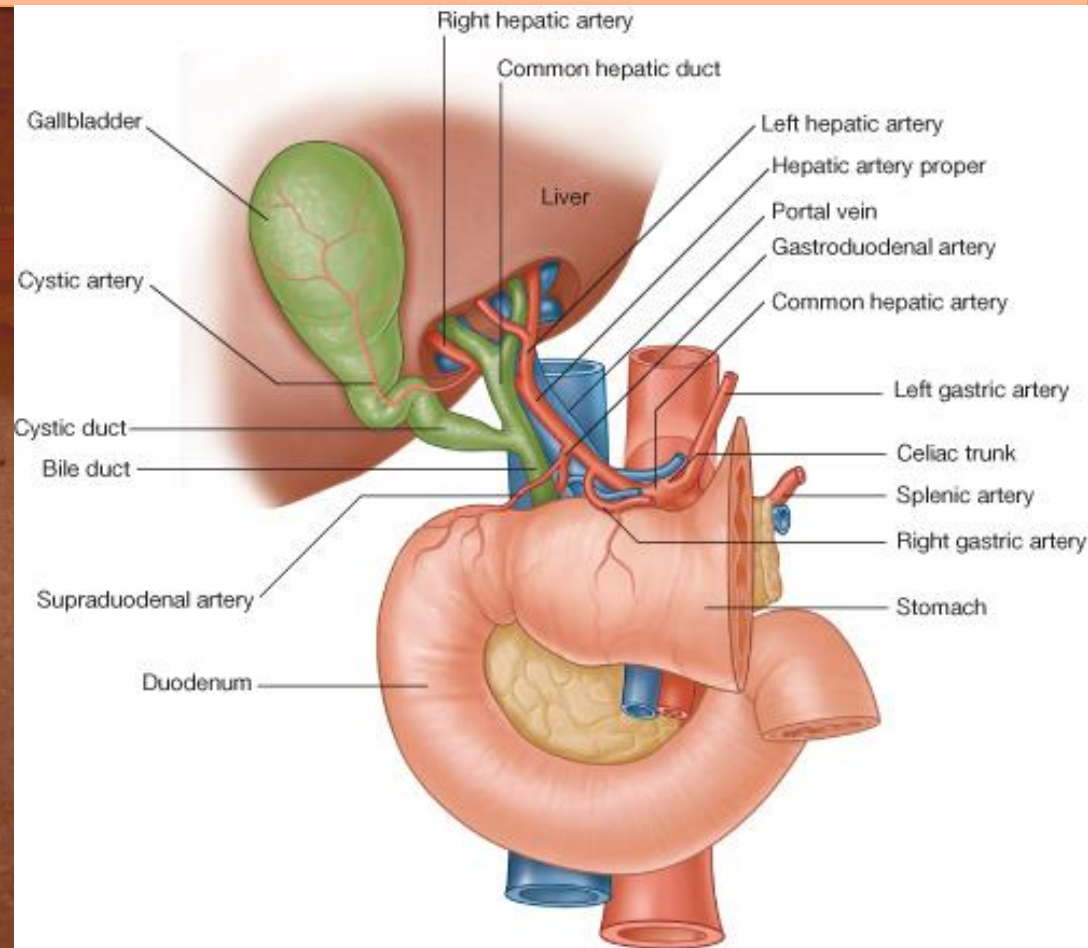
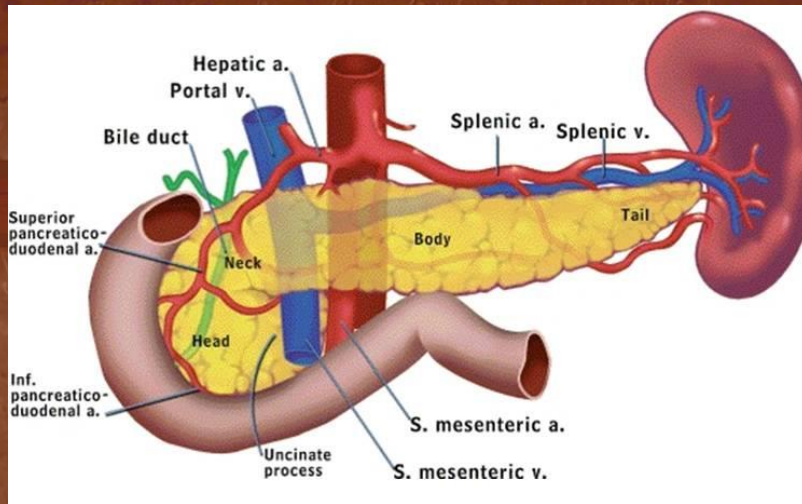
- It is disc shaped
- Lies within the concavity of the duodenum
- Related to the 2nd and 3rd portions of the duodenum.
- On the left, it emerges into the neck.
- **Uncinate Process**
 - Is an extension of the lower part of the head behind the superior mesenteric vessels.



Head of Pancreas

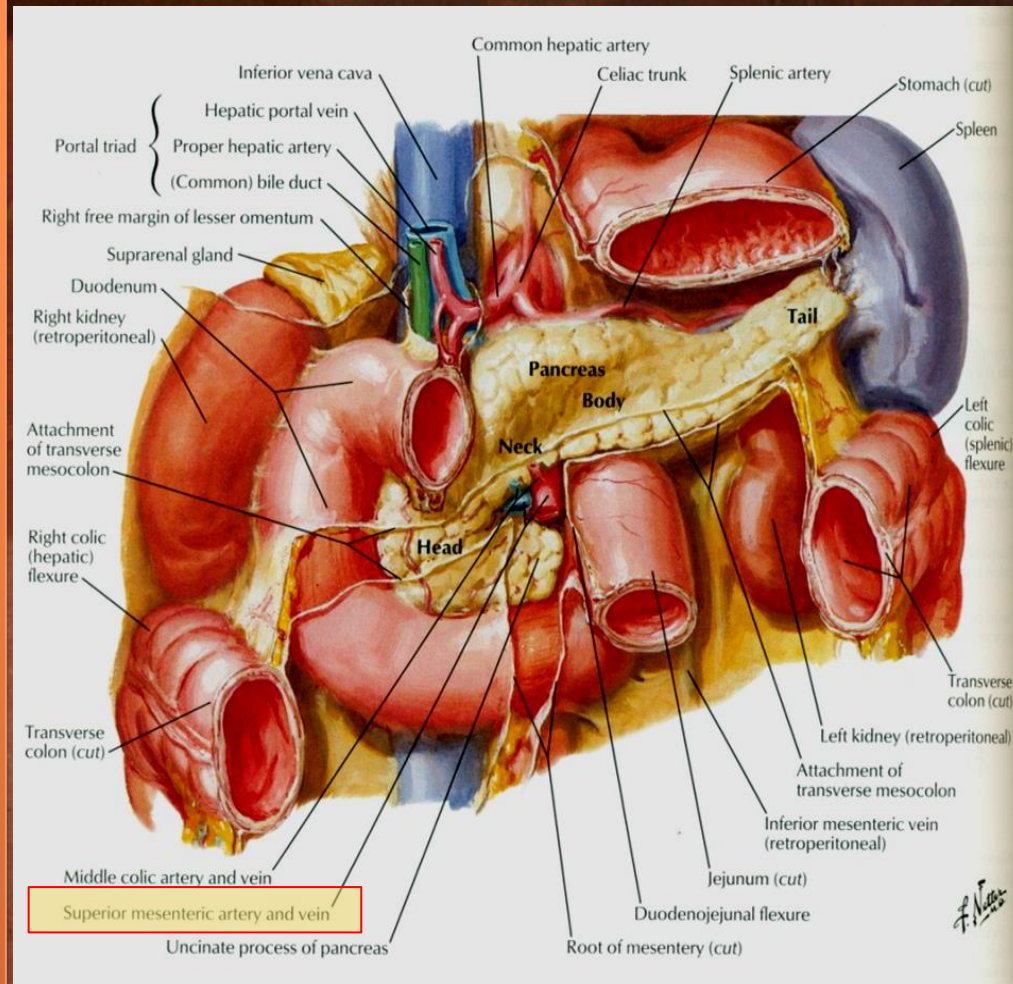
Structures Posterior to the Head

1. **Bile Duct** runs downwards and may be embedded in it
2. **IVC** runs upwards



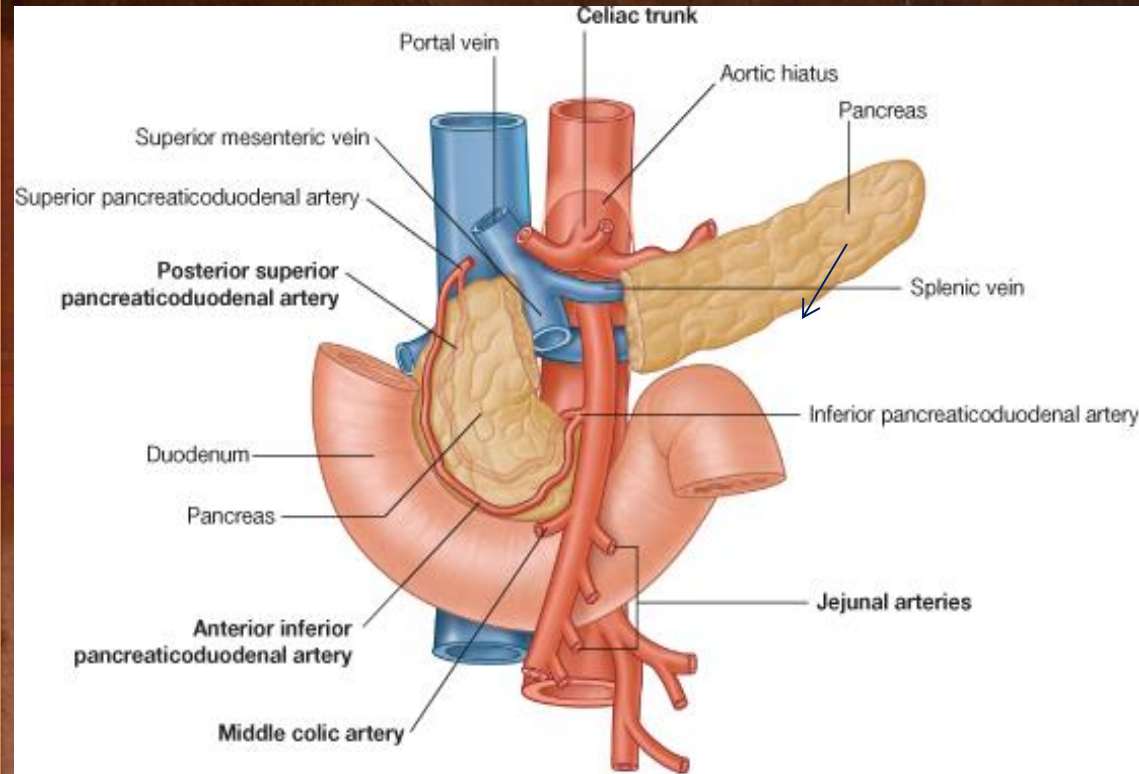
Neck of Pancreas

- It is the constricted portion connecting the head & body of pancreas
- It lies in front of:
- Aorta
- Origin of Superior Mesenteric artery
- the confluence of the Portal Vein
- Its antero-superior surface supports the pylorus of the stomach
- The **superior mesenteric vessels** emerge from its inferior border



Body of Pancreas

- It runs upward and to the left.
- It is triangular in cross section.
- The Splenic Vein is embedded in its post. Surface
- The Splenic Artery runs to the left along the upper border of the pancreas.



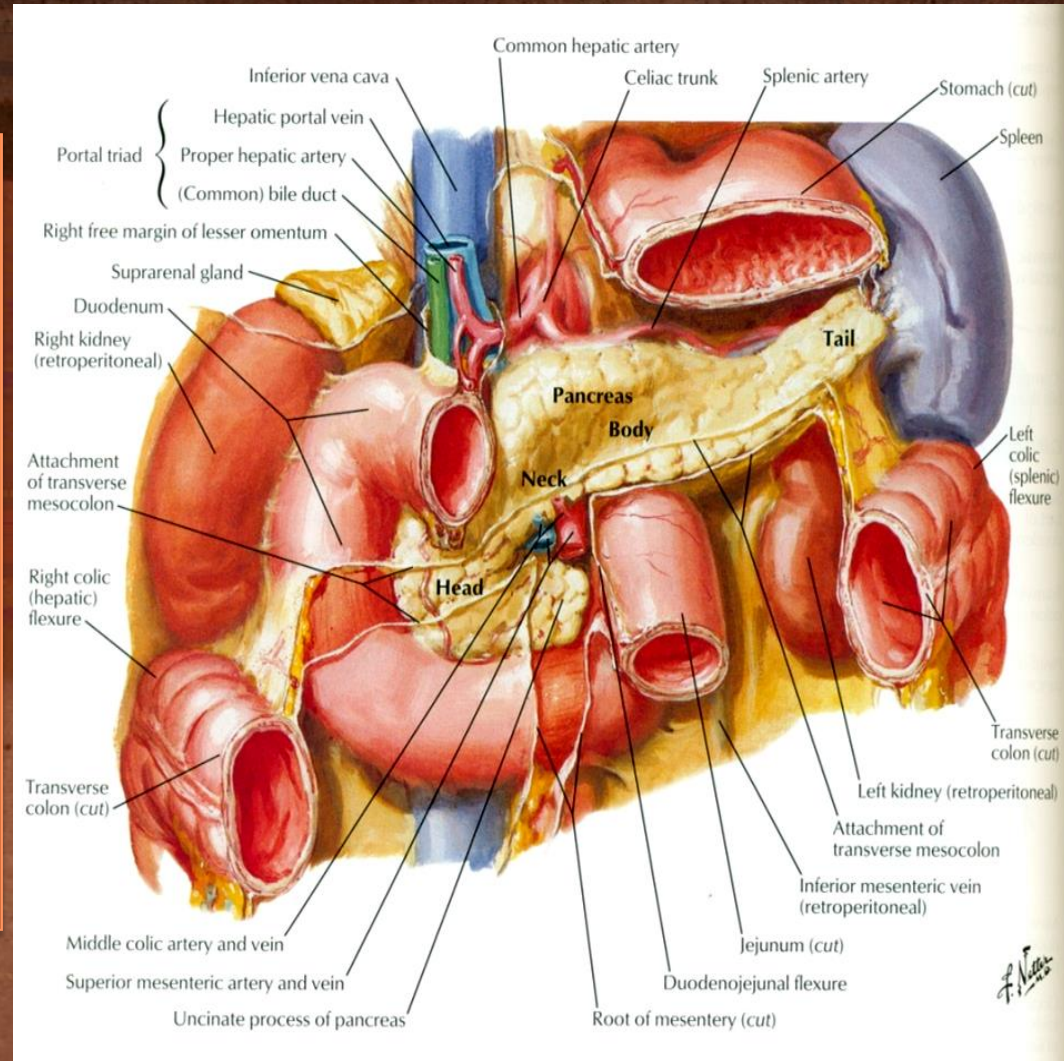
Tail of Pancreas

A narrow, short segment
Ends within the splenic
hilum

Lies in the Splenicorenal
ligament

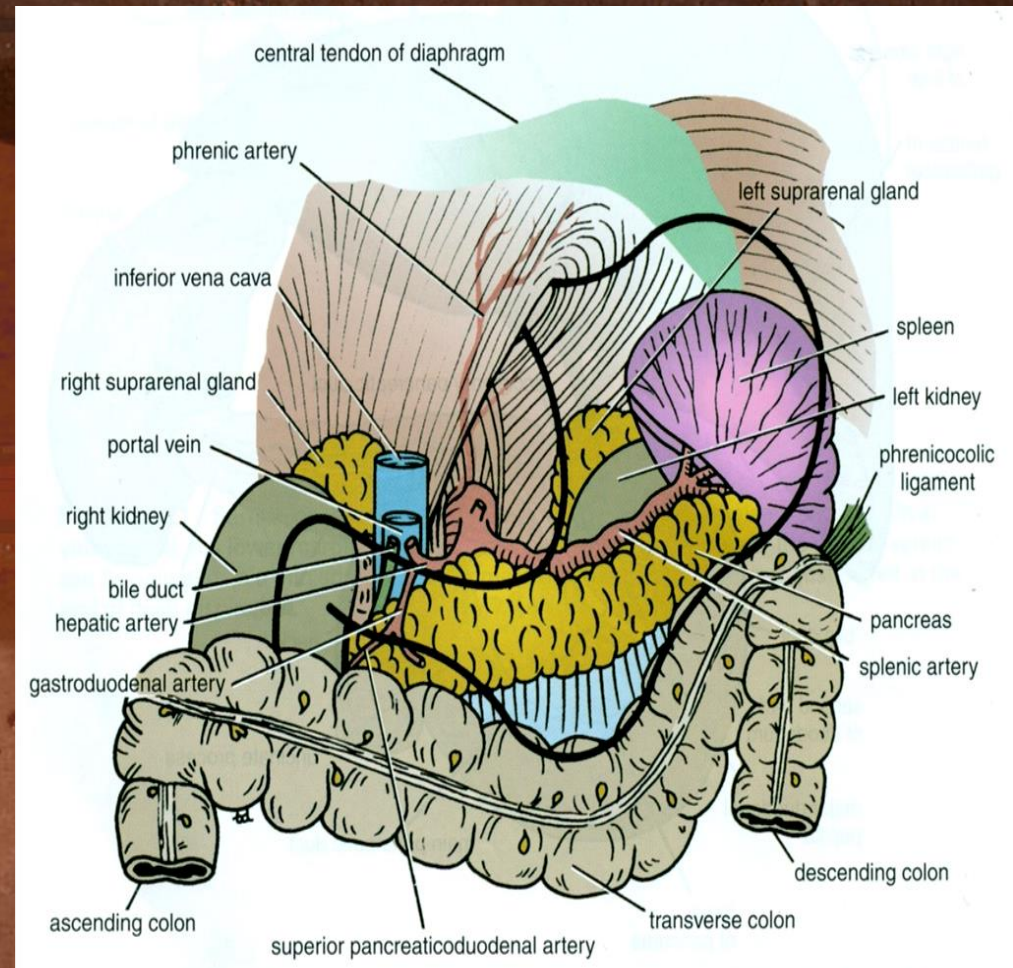
Anteriorly, related to:
splenic flexure of colon

May be injured during
Splenectomy



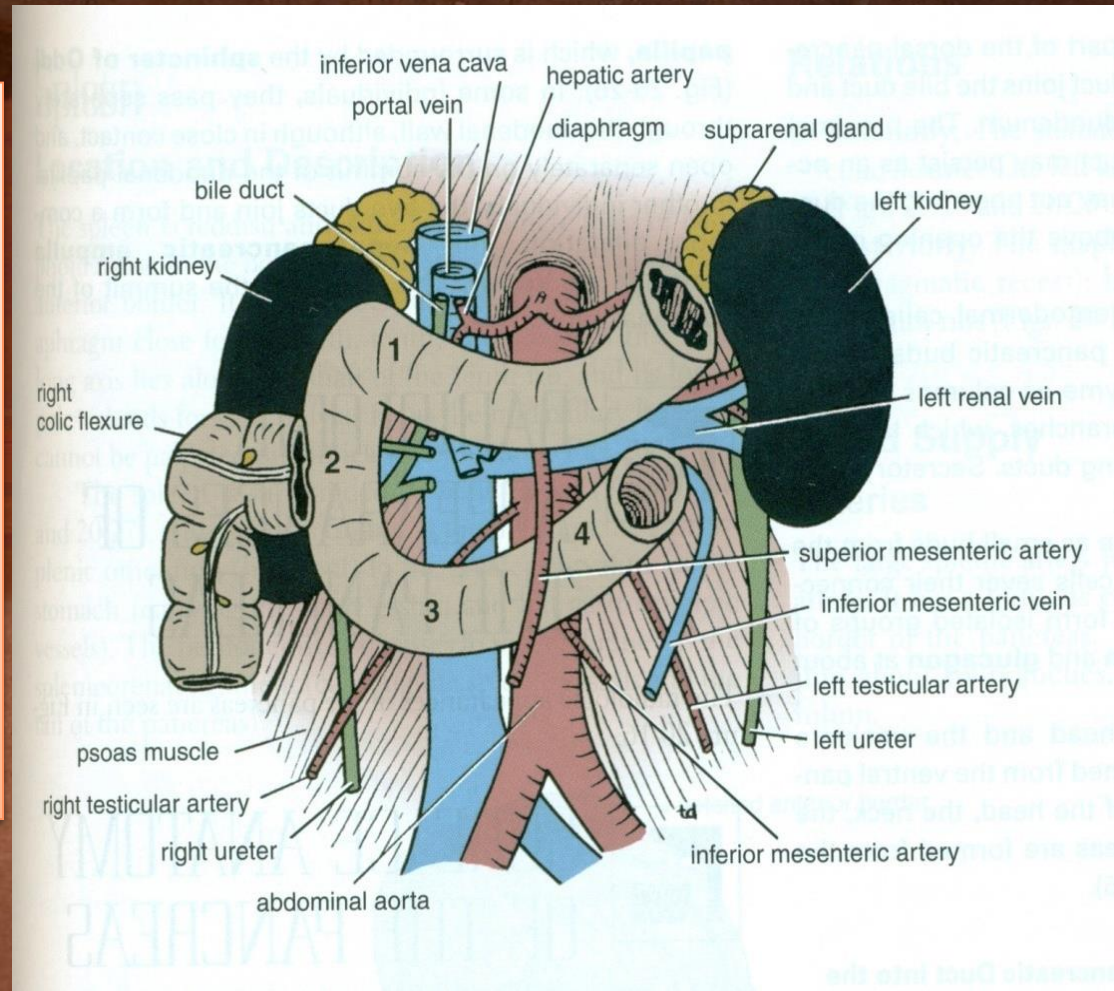
Relations of Pancreas

- Anterior to (body & tail):
- **Stomach** separated from by lesser sac
- **Transverse colon & transverse mesocolon**



RELATIONS OF PANCREAS

- Posterior to (body & tail) :
- Left Psoas muscle
- Left Adrenal gland
- Left Renal vessels
- Upper 1/3rd of Left kidney
- Hilum of the spleen.



ARTERIAL SUPPLY

- Celiac trunk, Superior mesenteric & Splenic arteries

Celiac T → CHA → R gastric

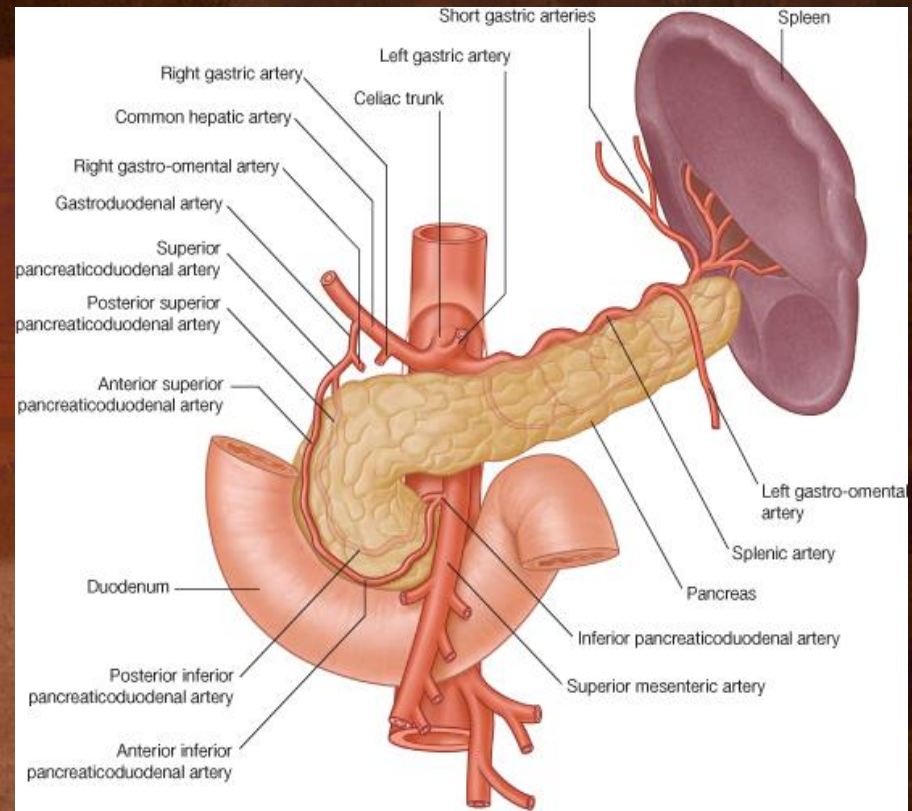
Hepatic ← • Gastrooduodenal

• Superior pancreaticoduodenal

SMA → Inferior pancreaticoduodenal

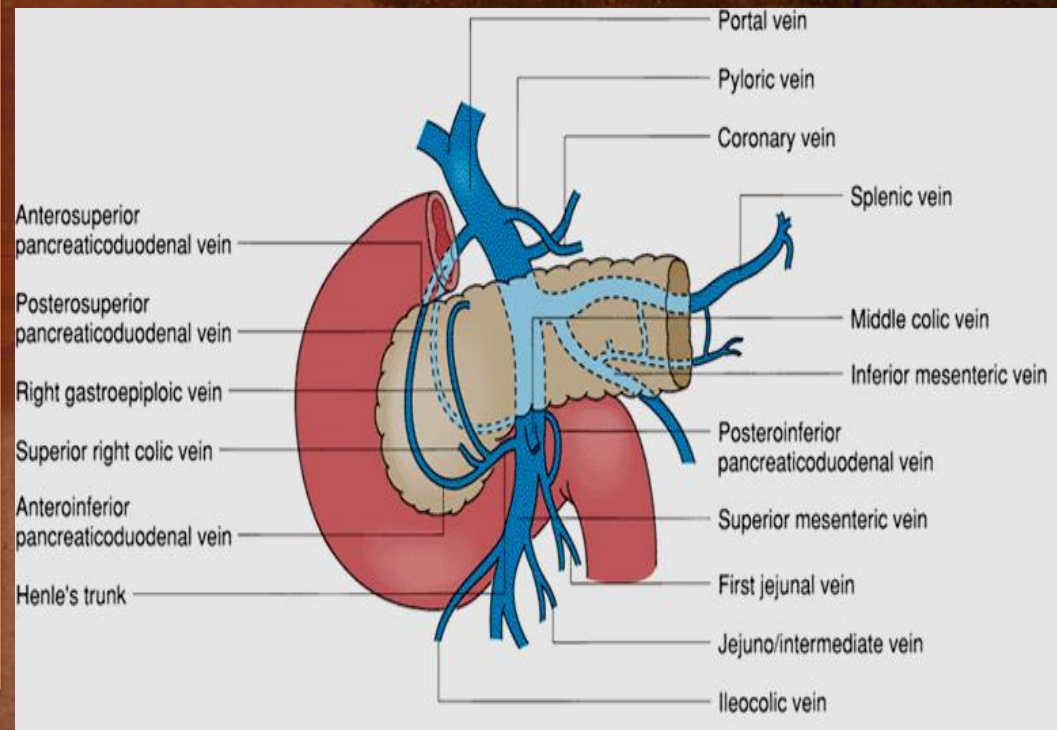
TO HEAD

Splenic A supplies the Body and Tail of pancreas by about 10 branches



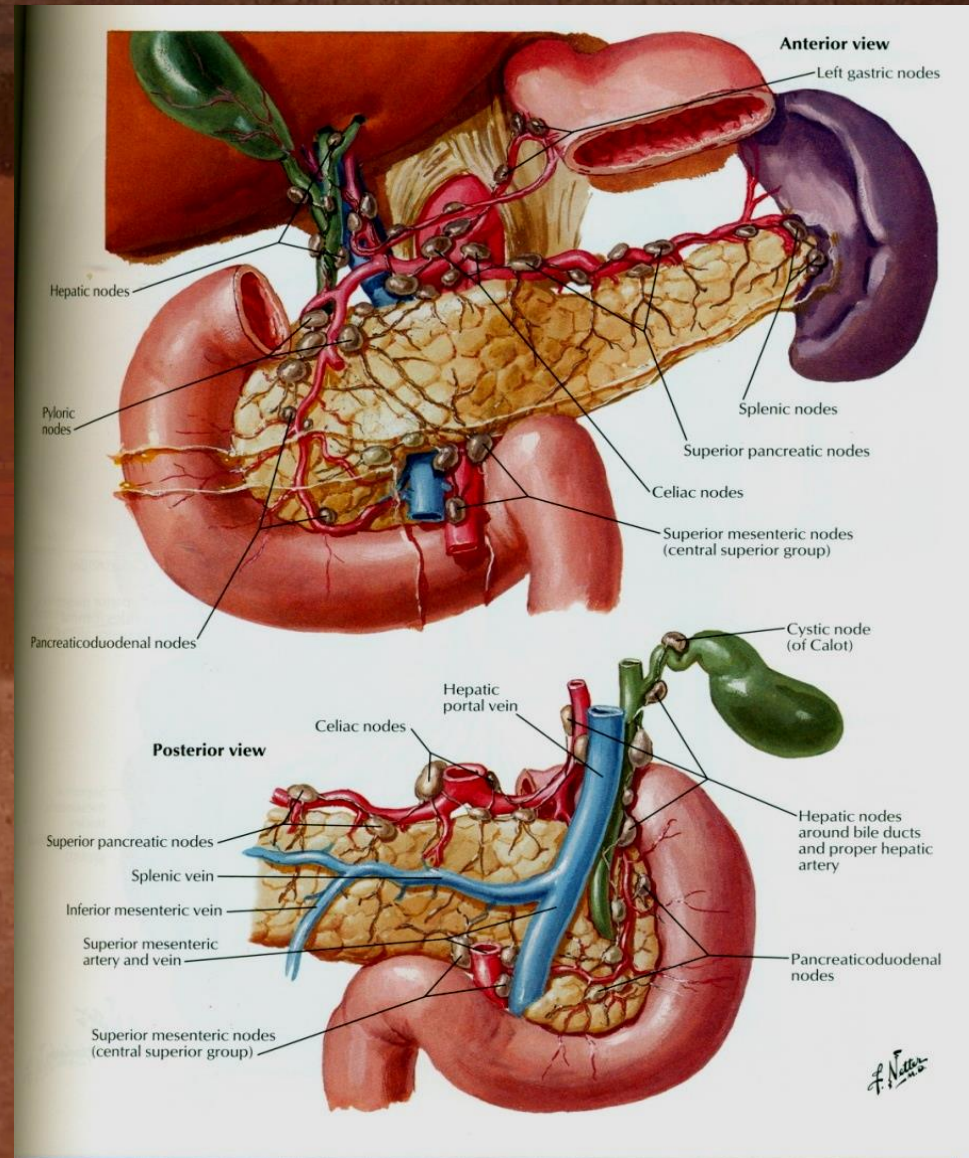
VENOUS DRAINAGE

- Anterior and posterior arcades drain head and the body
- Splenic vein drains the body and tail
- Ultimately, ends into Portal Vein



LYMPHATIC DRAINAGE

- Rich network drains into nodes along the upper border of the pancreas
- Ultimately the efferent vessels drain into the Celiac nodes.
- Lymph vessels from the region of the Head pass to
- Superior Mesenteric nodes

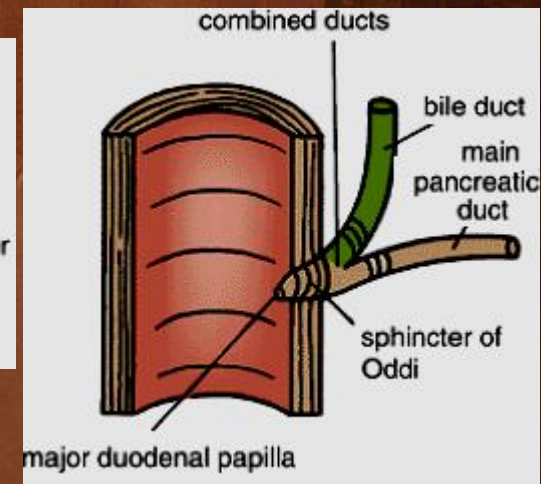
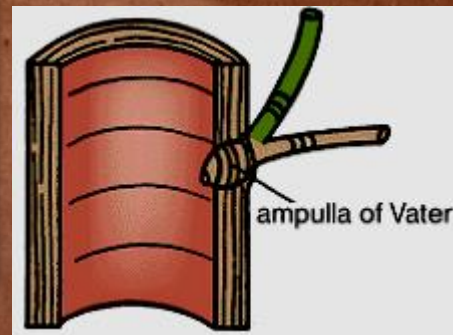
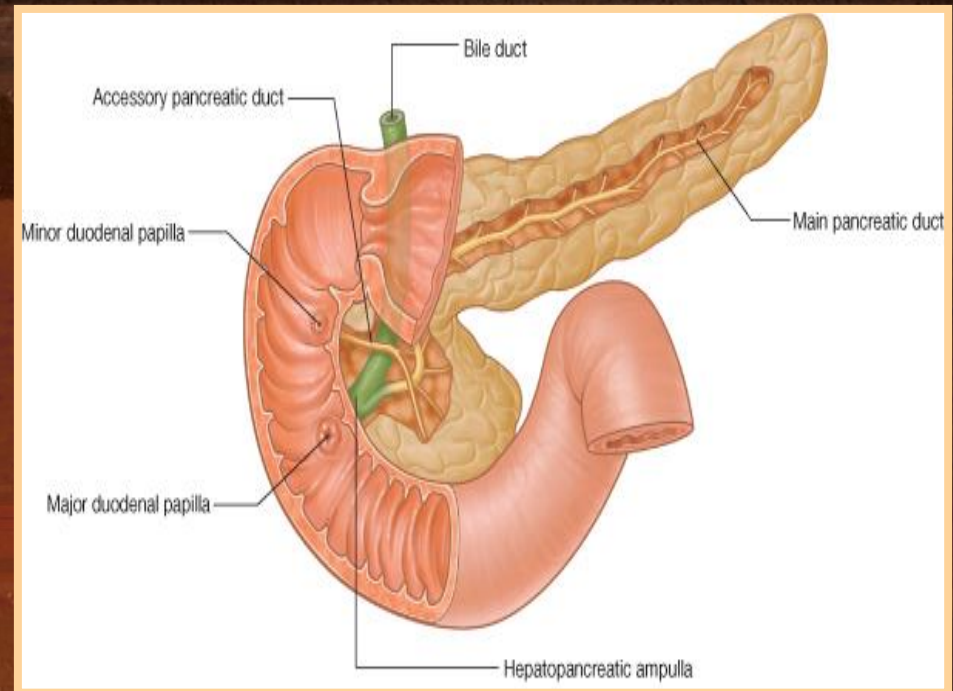


NERVE SUPPLY

- Sympathetic from the **splanchnic nerves** , they have a predominantly inhibitory effect
- Parasympathetic from the **Vagus**,
- they stimulate both exocrine and endocrine secretions

Pancreatic DUCTS

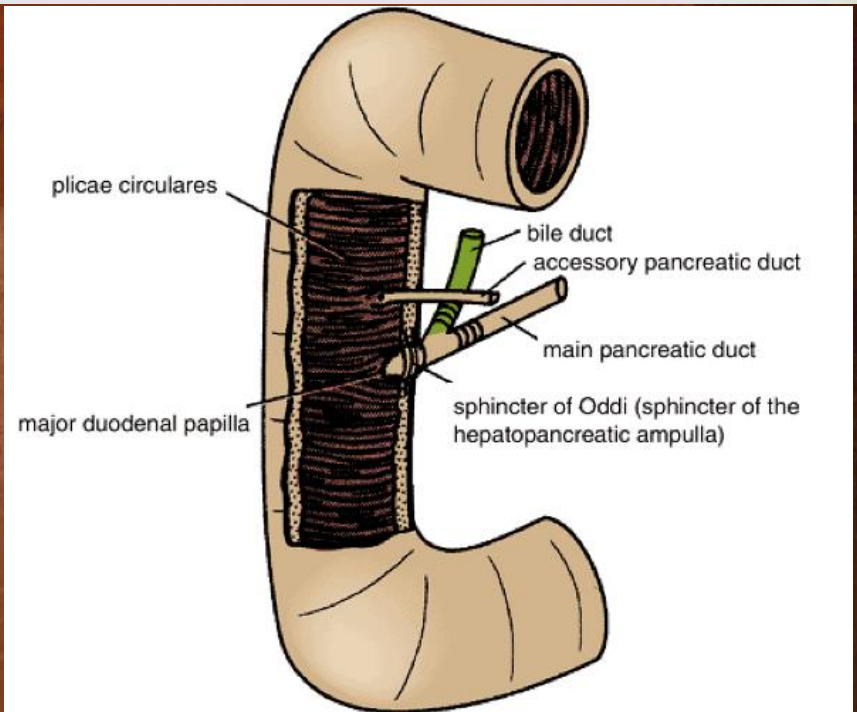
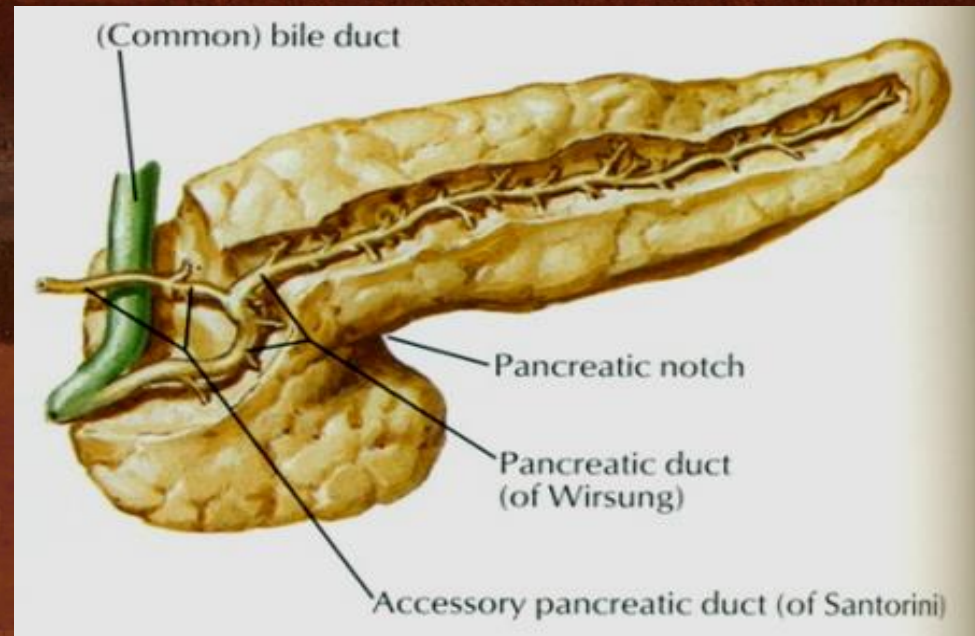
- Main P duct :
- Joins common bile duct & they open into a small hepatopancreatic ampulla in the duodenal wall (**Ampulla of Vater**).
- The ampulla opens into the lumen of the duodenum through (**Major Duodenal Papilla**).



- Accessory Pancreatic duct (of Santorini)

Drains superior portion of the head

- It empties separately into 2nd portion of duodenum at (minor duodenal papilla)



Functions

Exocrine and Endocrine gland

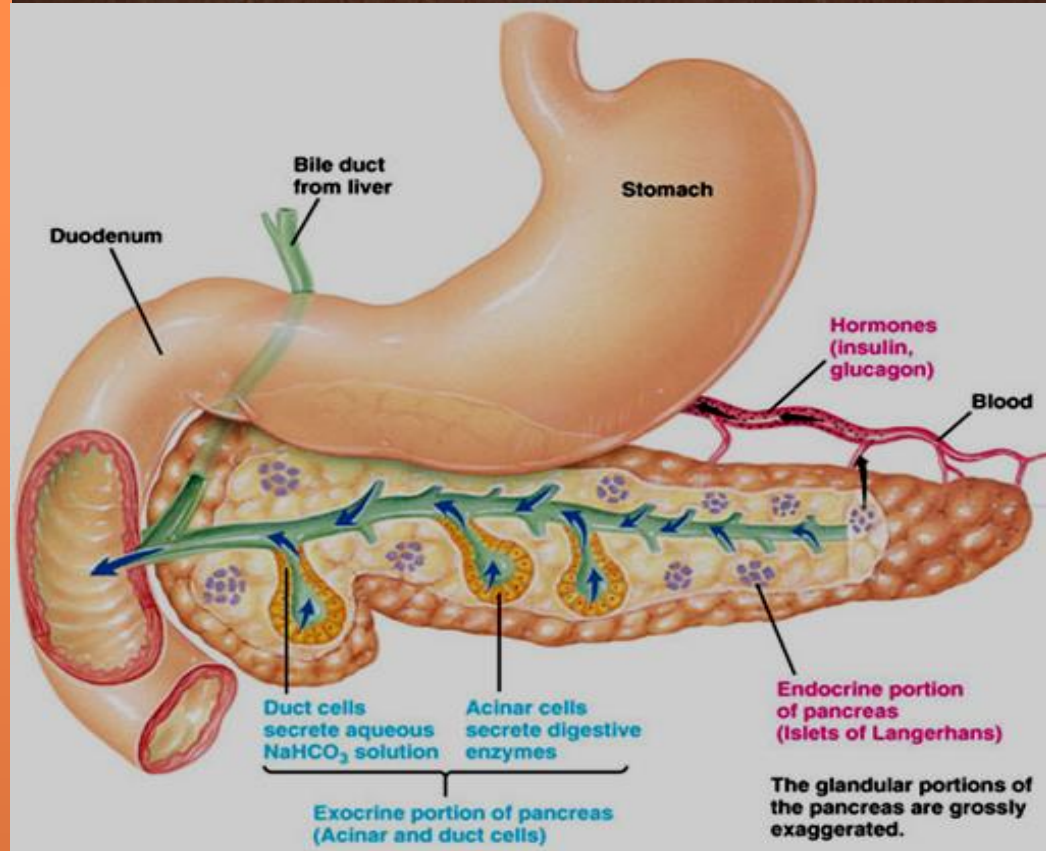
The Exocrine portion:

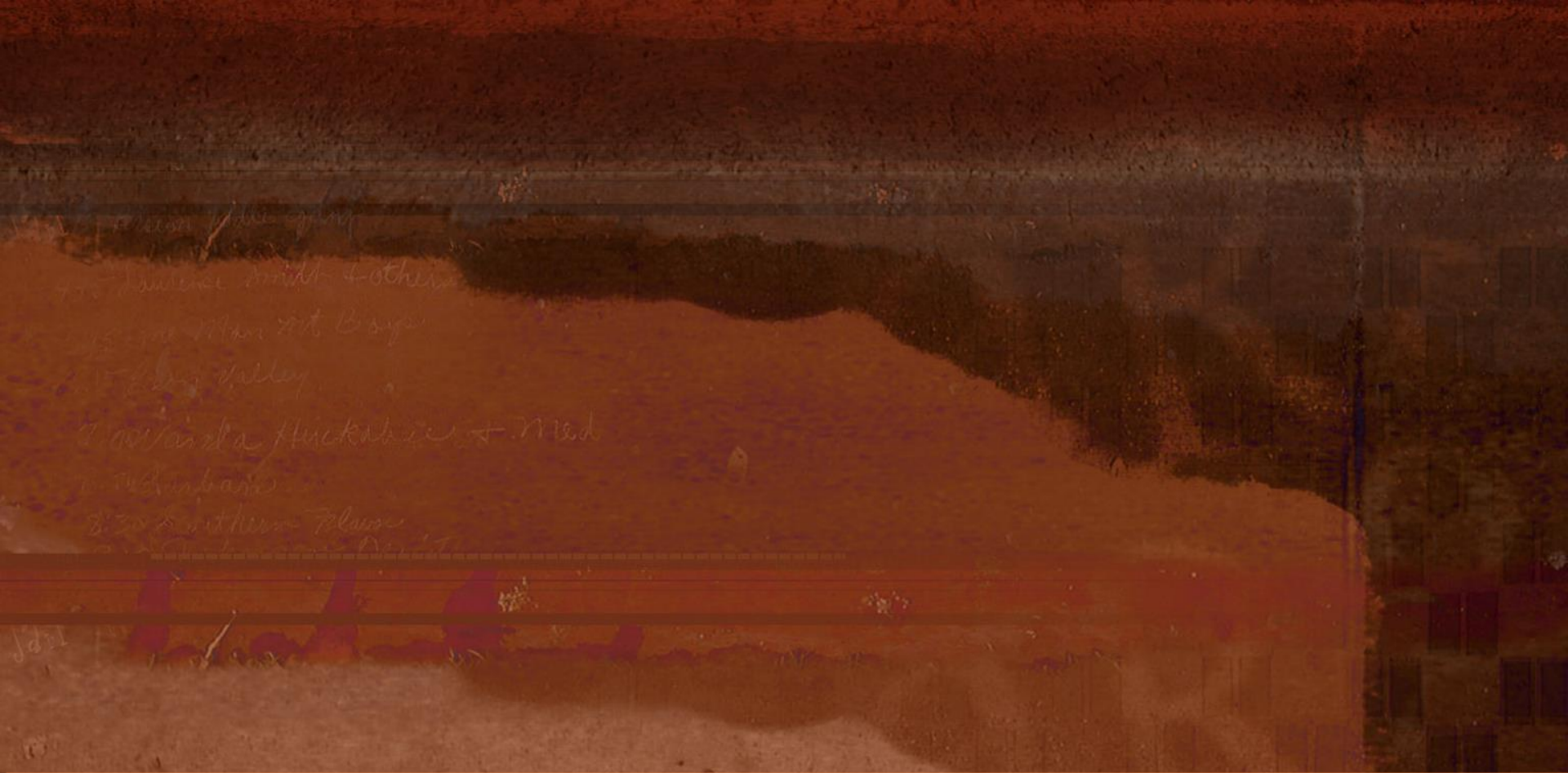
Small ducts arise from the lobules and enter the main pancreatic duct (which begins in the tail), and passes through the body and head where it meets the bile duct.

The Endocrine portion:

(Islets of Langerhans)

produce insulin & glucagon.





THANK YOU