



Adrenal gland & Pancreas

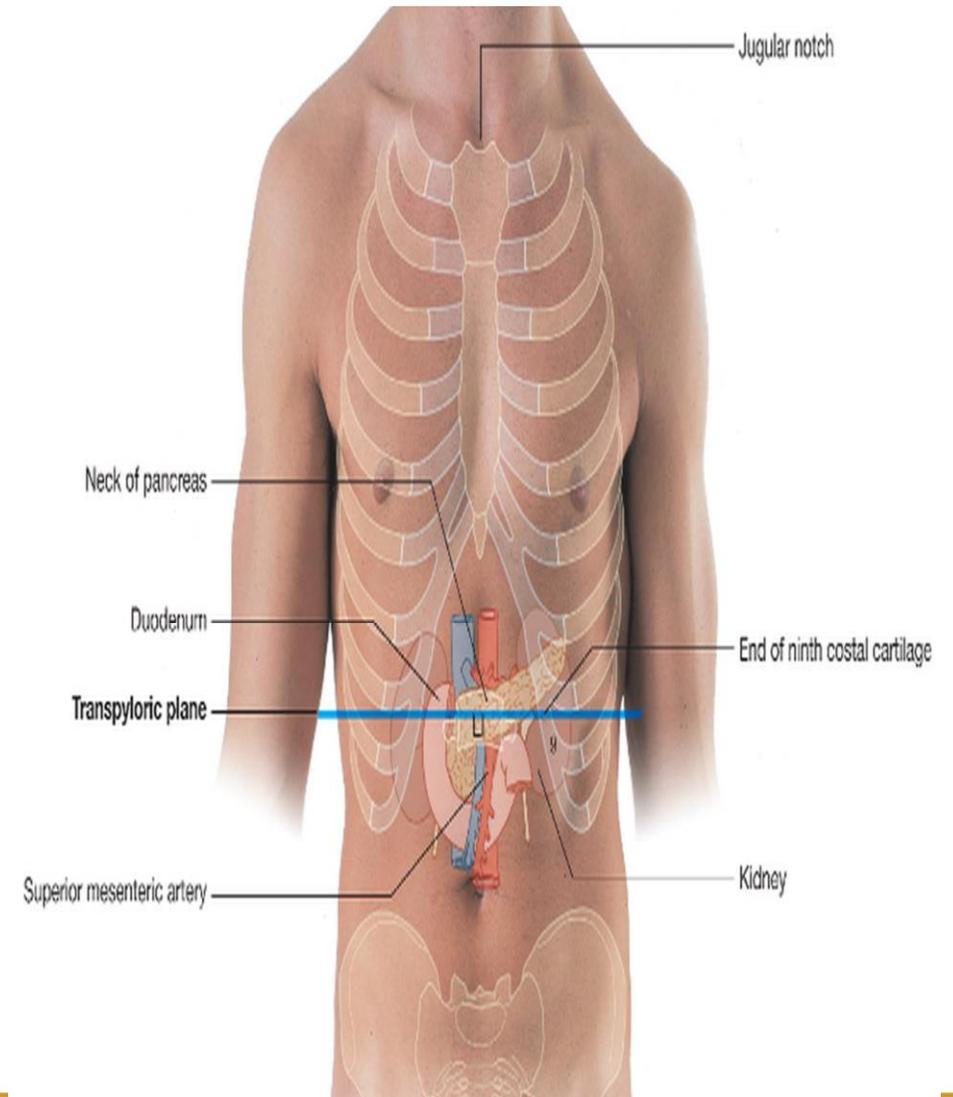
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M N U



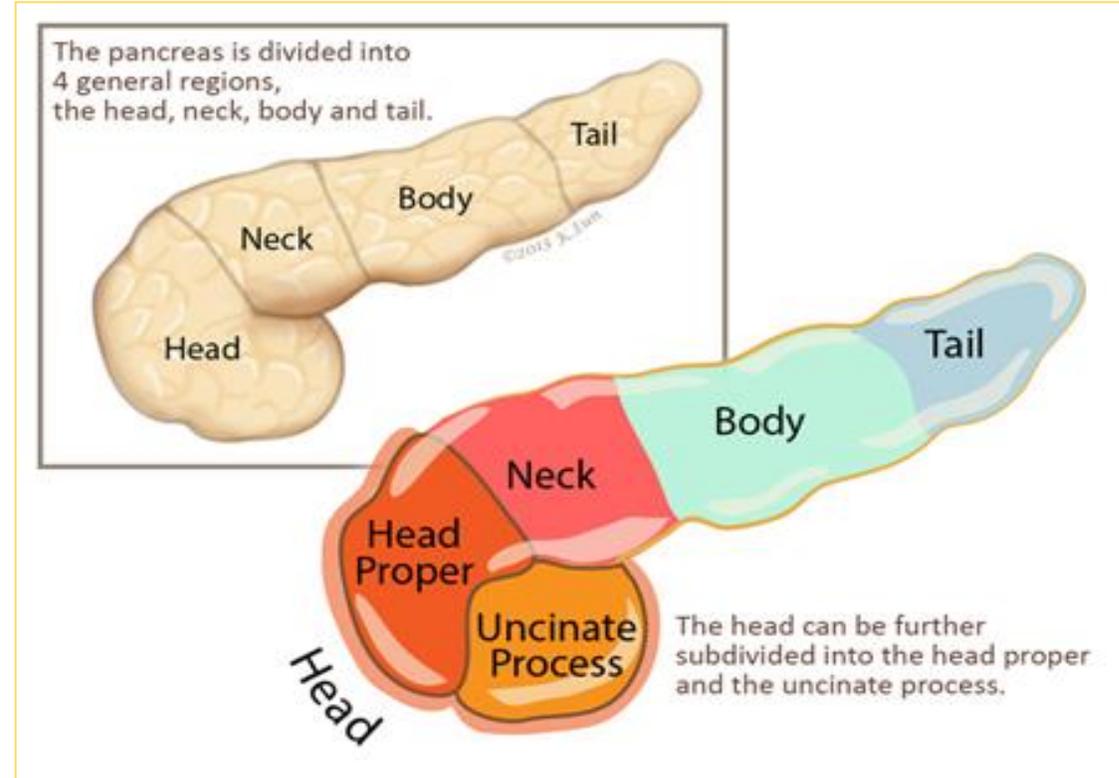
Location of pancreas

- It lies across the upper part of the posterior abdominal wall behind the peritoneum of the lesser sac. It crosses from the concavity of the duodenum to the hilum of the spleen.(Epigastrium & Left hypochondrium).



Parts of pancreas

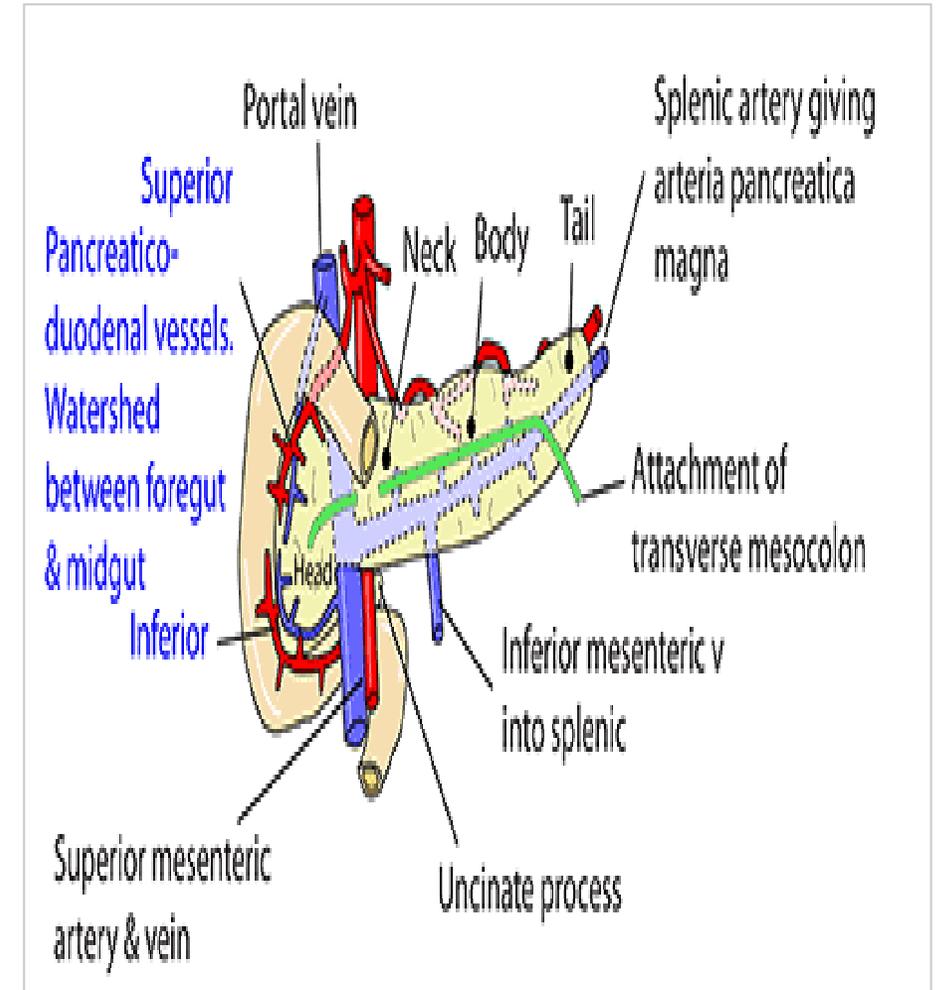
- 1- Head
 - 2- neck
 - 3- Body
 - 4- Tail
- The lower part of the head forms a projection called **uncinate process**.



Relations of pancreas

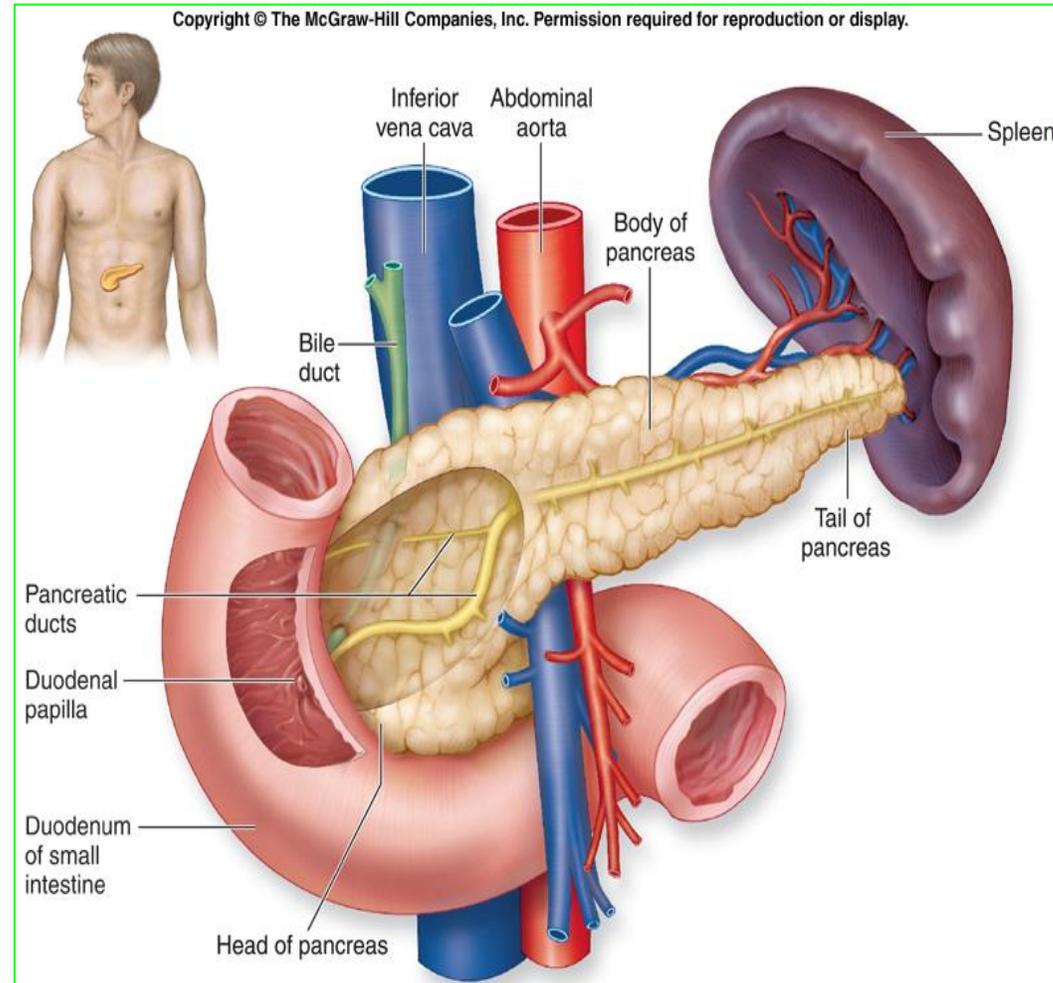
Head of pancreas:

- It lies in the concavity of the duodenum.
- It is related to the 1st part of **duodenum** superiorly, 2nd part on the right side, (separated from it by **sup. & inf. pancreatico -duodenal arteries**) and 3rd part inferiorly.



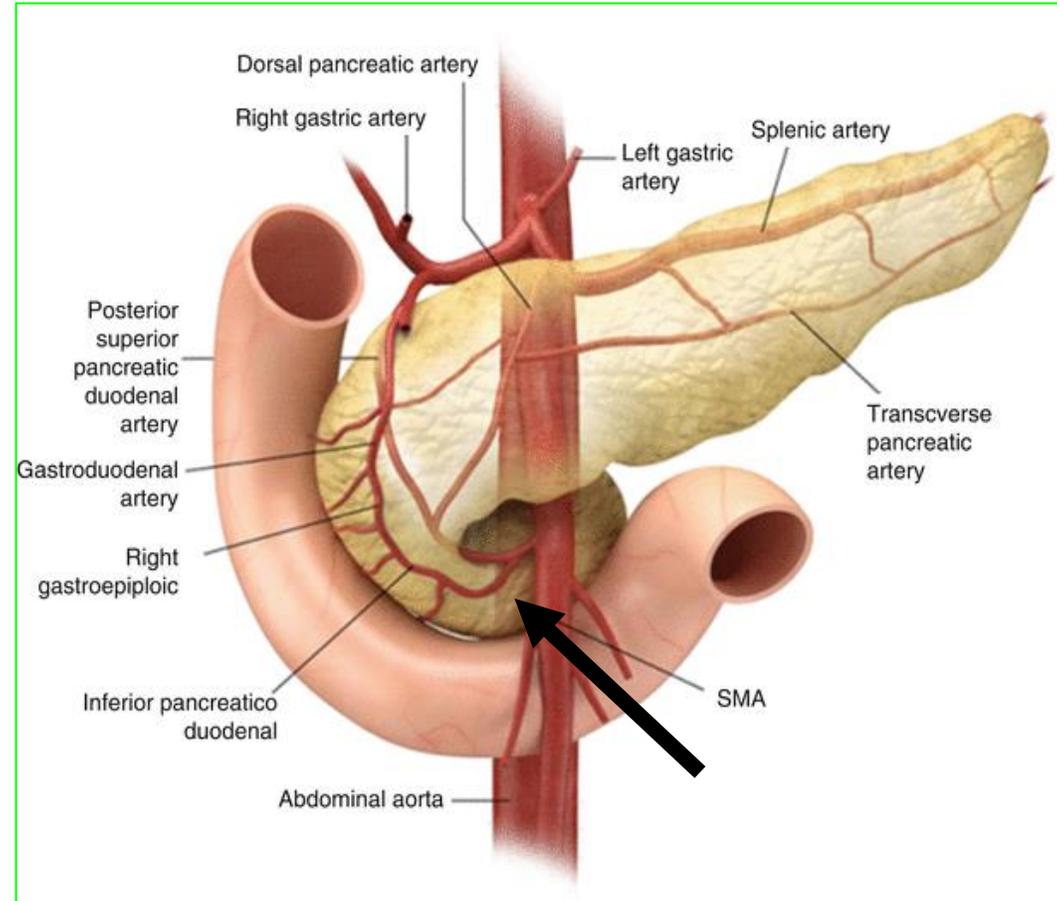
Head of Pancreas

- **Anteriorly** , it is related to transverse colon, jejunum .
- **Posteriorly** , it is related to IVC, and common bile duct.



- Uncinate process:

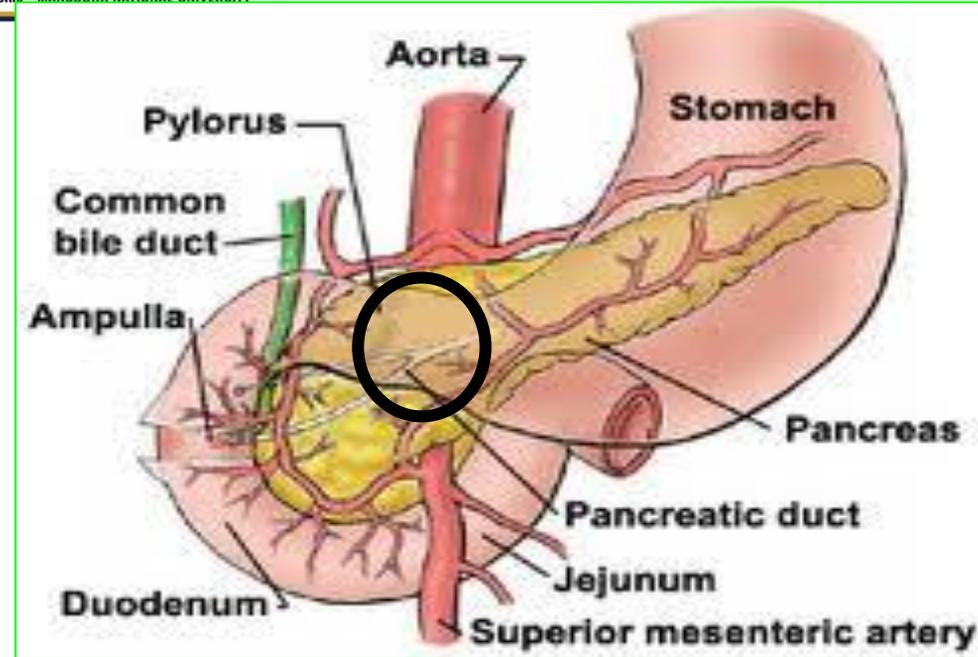
Lies between **abdominal aorta** and **superior mesenteric vessels.**



Neck of pancreas:

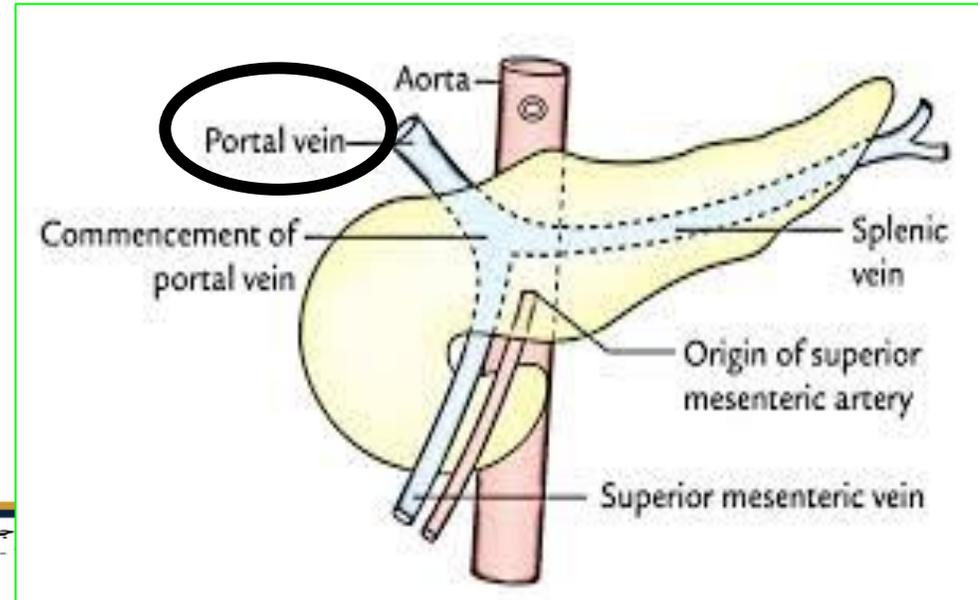
- Anteriorly:**

It is related to the **gastro-duodenal junction.**



- Posteriorly:**

It is related to the **formation of portal vein** from splenic and superior mesenteric veins.



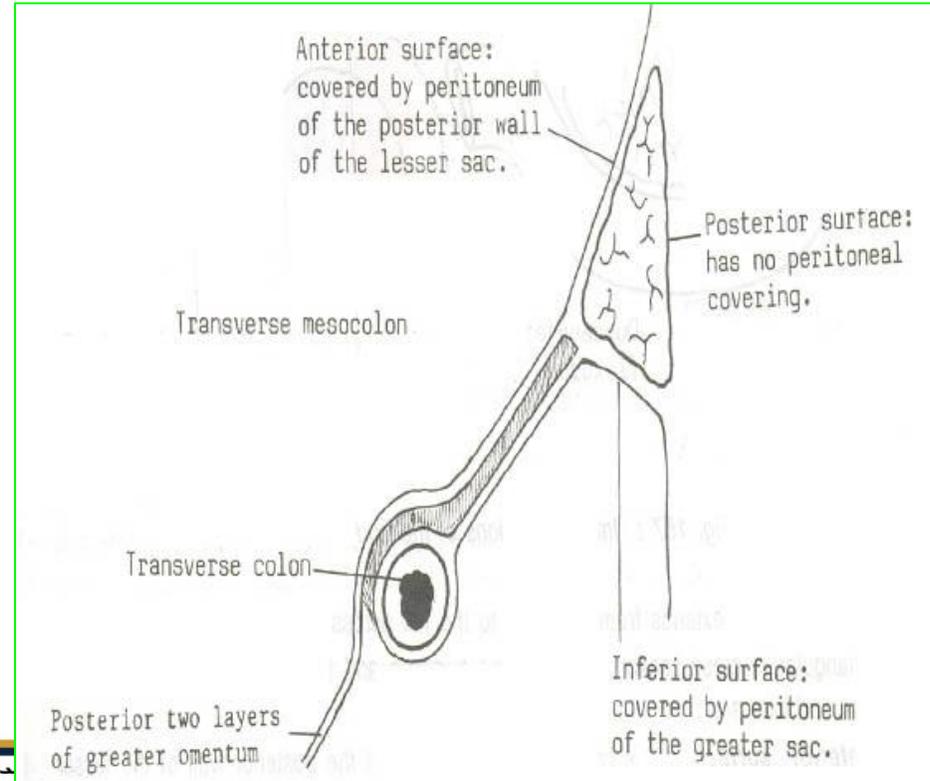
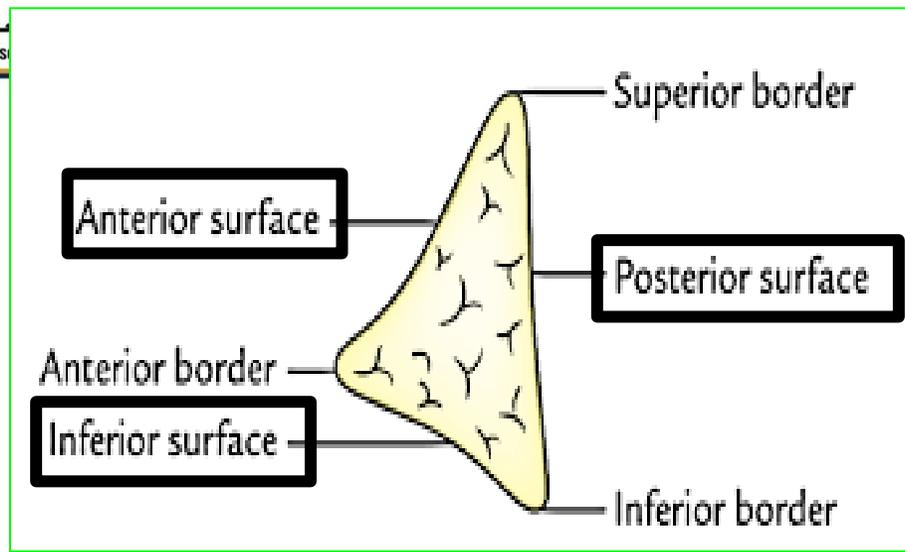
Body of pancreas:

-It has three surfaces:

- Anterior
- Posterior
- Inferior

- And three borders :

- Anterior
- Superior
- Inferior.



• Surfaces of body of Pancreas:

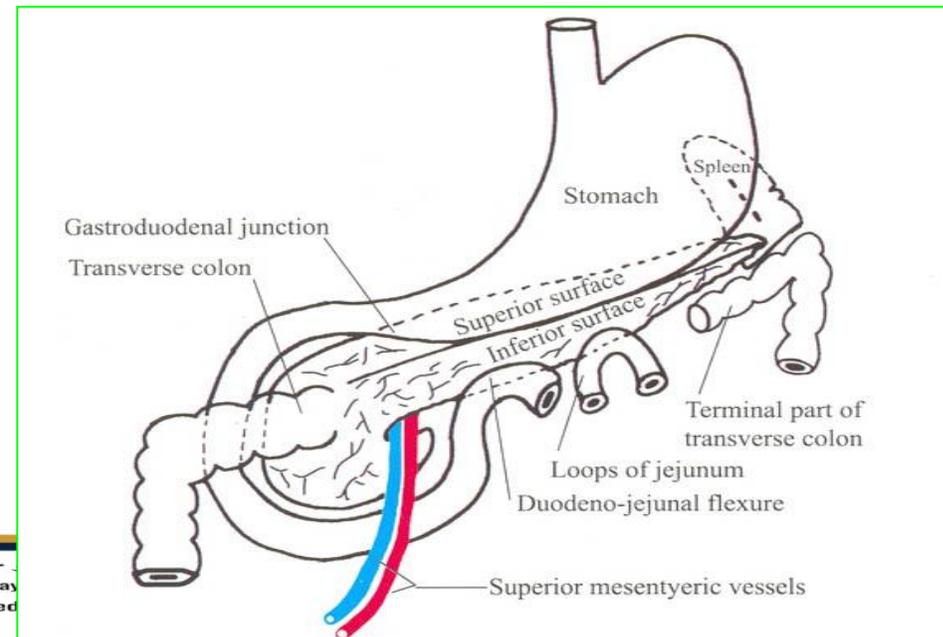
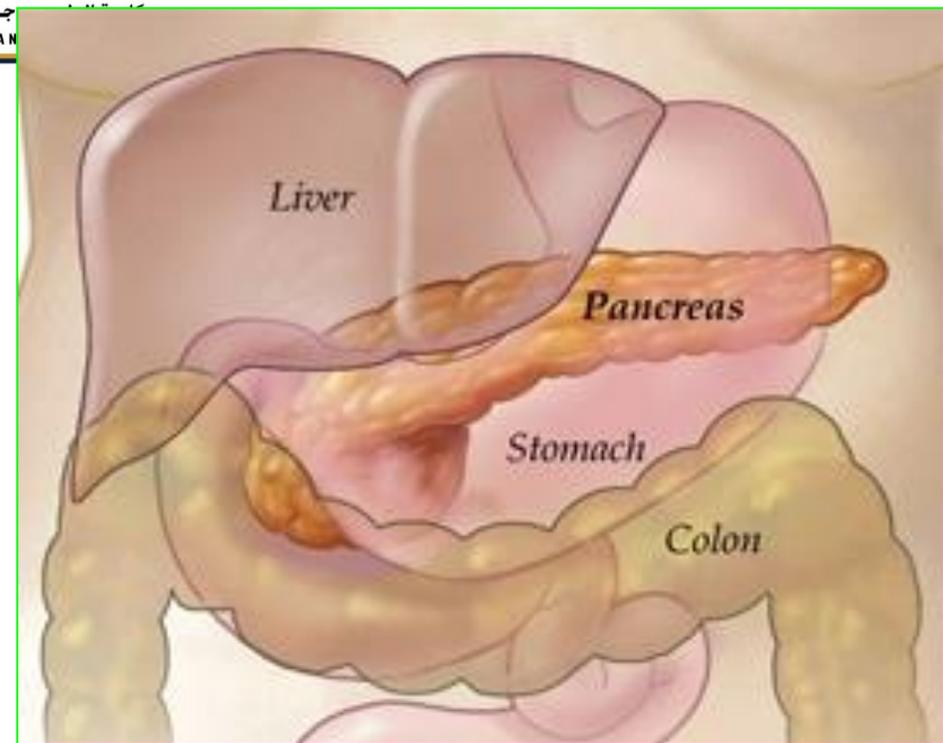
1- Anterior surface:

Related to: **stomach** , separated from it by the **lesser sac**.

2- Inferior surface:

Related to :

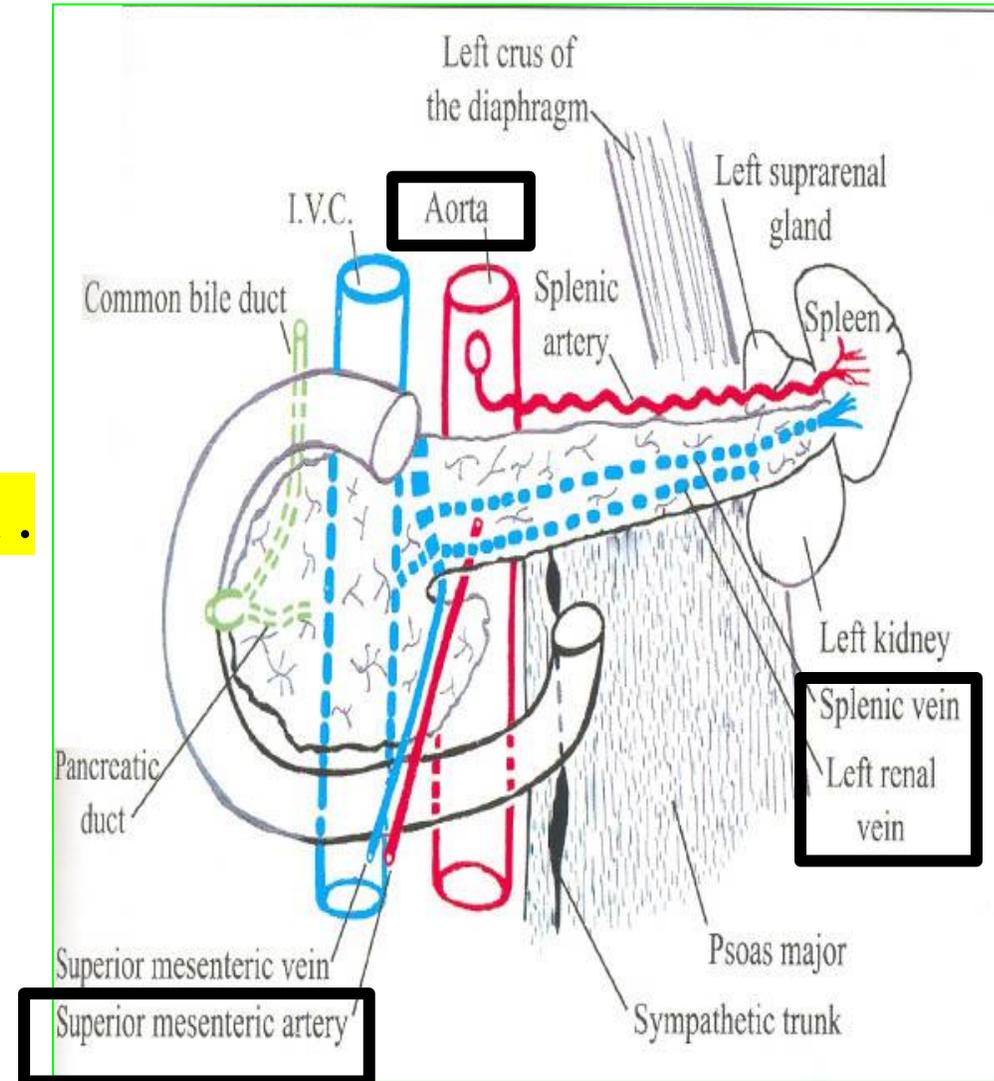
- **Coils of small intestine**
- **transverse colon**



3- Posterior surface:

- It is **not covered by peritoneum** and related to posterior abd. wall:

- 1- Aorta and origin of Sup. Mesenteric A.
- 2- Splenic and left renal vein.



Borders of the body:

1- Superior border:

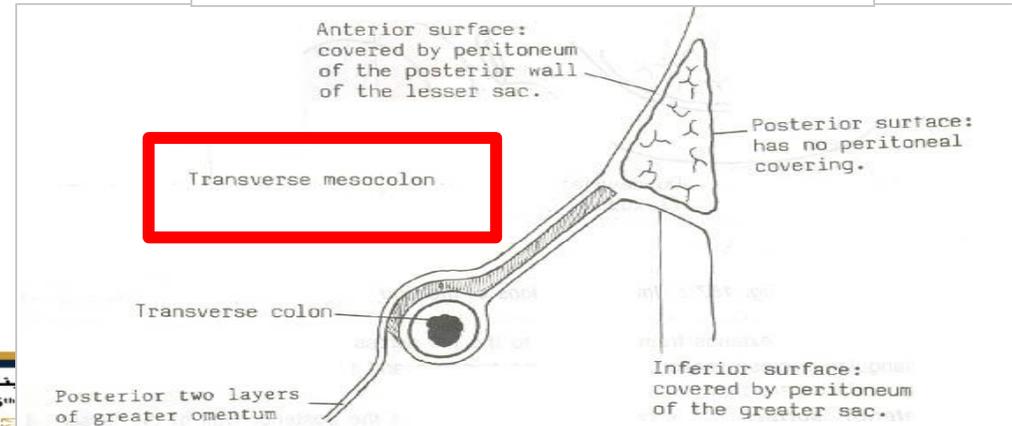
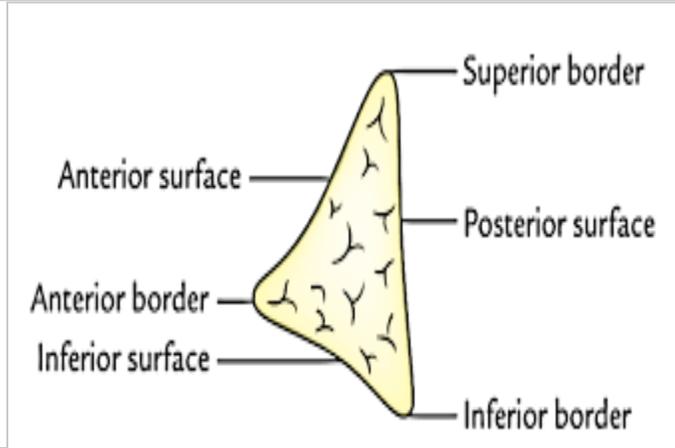
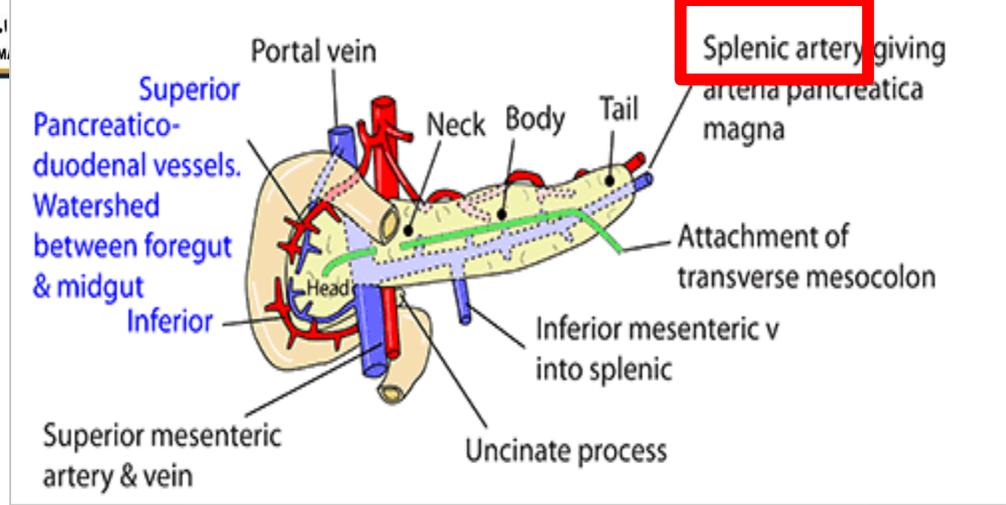
It is related to splenic artery.

2- Anterior border:

It gives attachment to transverse mesocolon and greater omentum.

3- Inferior border (posterior):

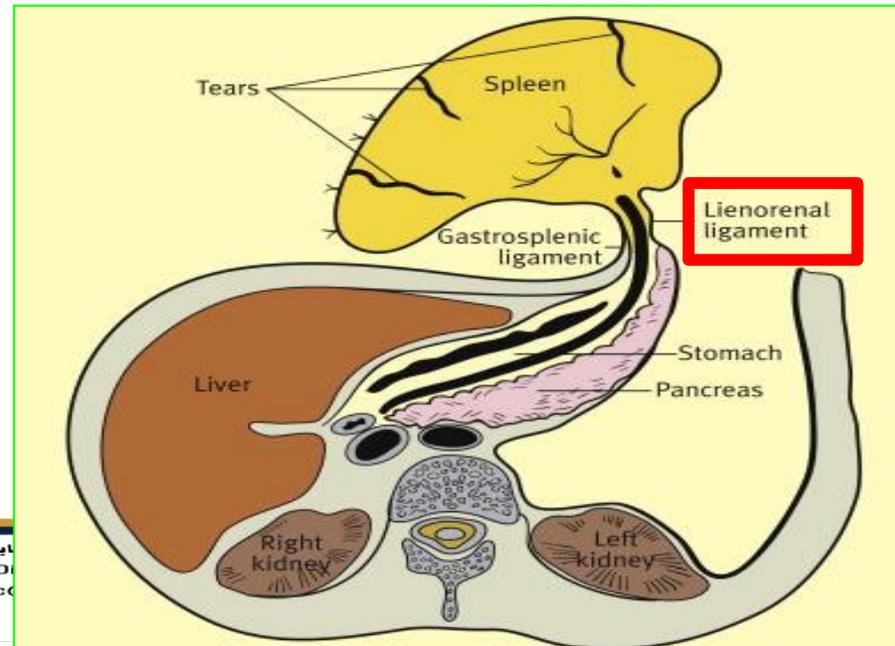
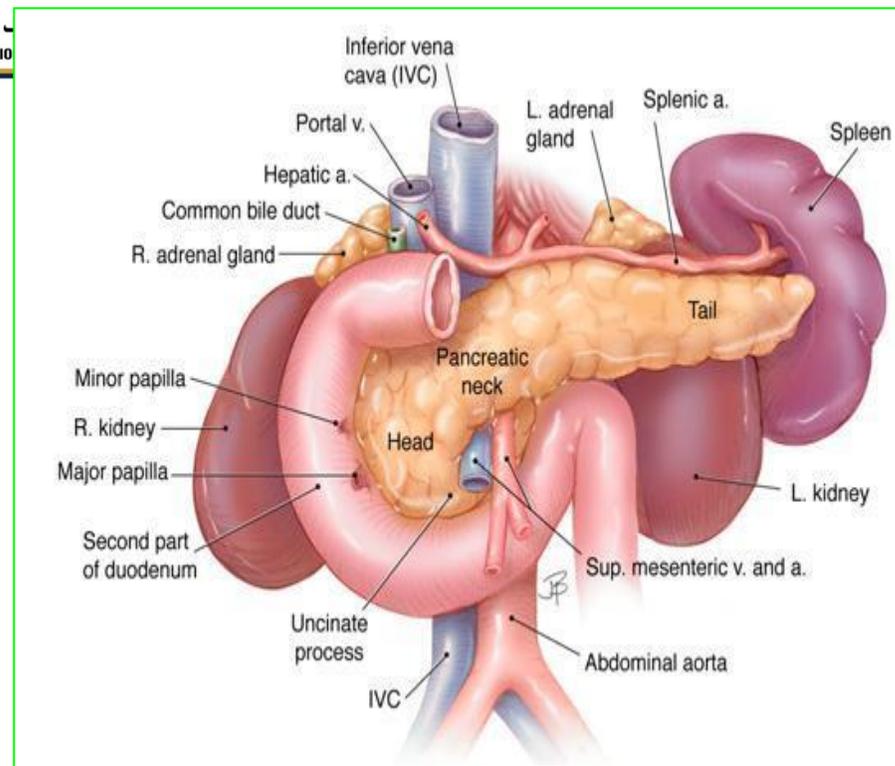
Same relations as posterior surface.



Tail of pancreas:

1- It is related to the visceral surface of spleen near its hilum.

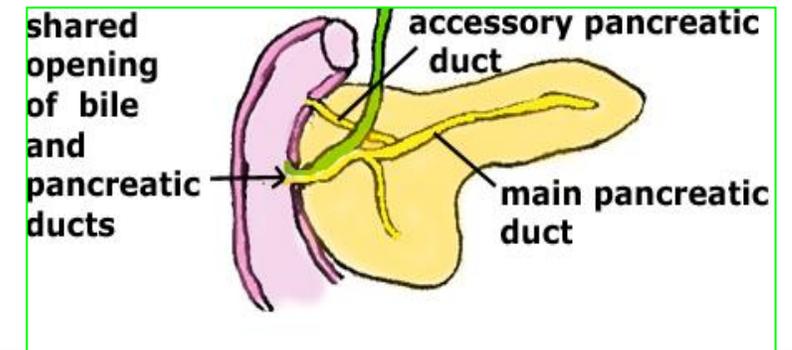
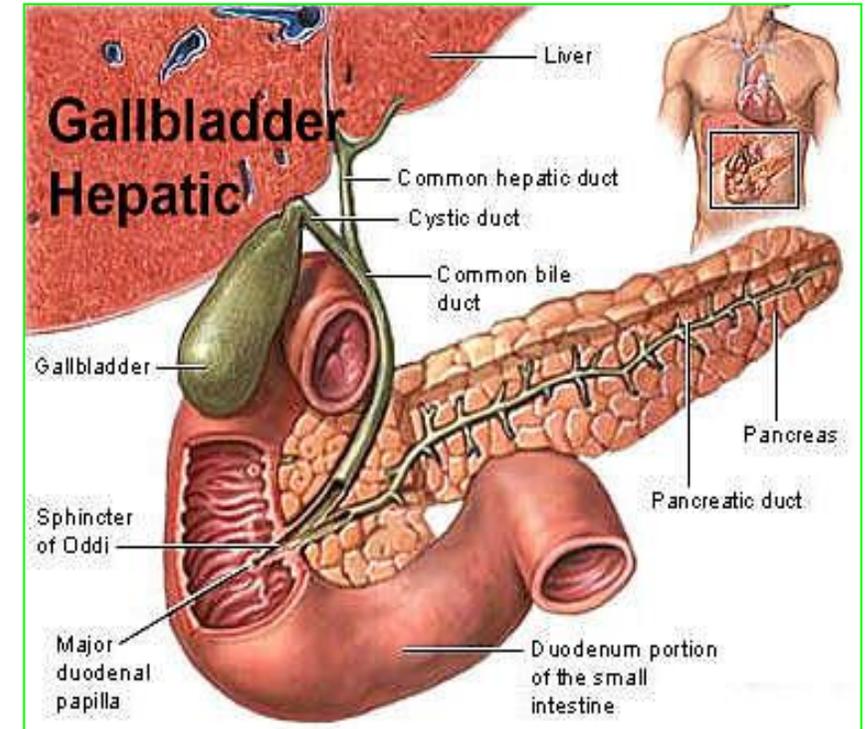
2- It reaches the hilum via the **lieno-renal ligament**.



Ducts of pancreas

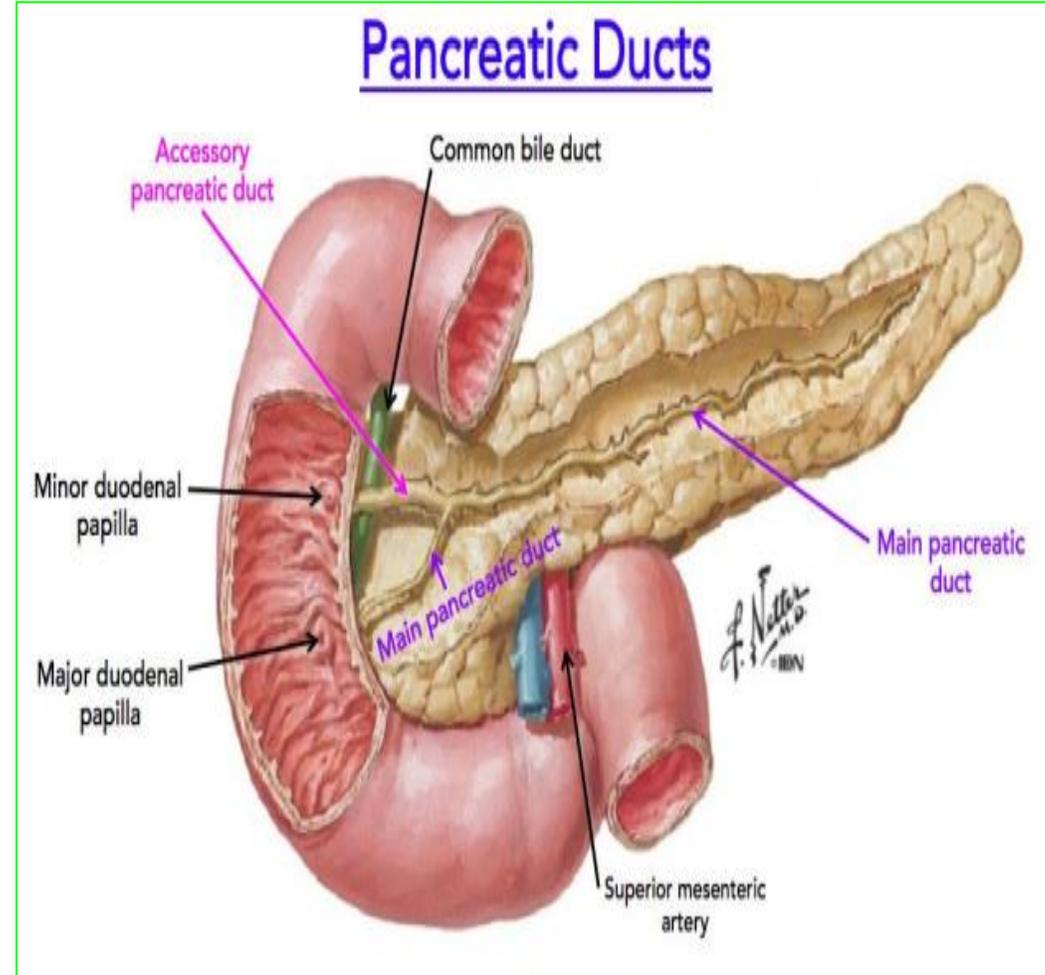
1- Main pancreatic duct:

- Main duct runs the entire length of pancreas beginning from the tail.
- It receives many tributaries from tail, body, neck, inferior portion of head & uncinete process.
- Joins **common bile duct** & together they open into a small hepatopancreatic ampulla (**Ampulla of Vater**) opens in the 2nd part of duodenum (postero-medial).
- The ampulla opens into the lumen of the duodenum by means of a small Papilla, (Major duodenal papilla).



2- Accessory pancreatic duct:

- Accessory duct drains superior portion of the head.
- It empties separately into 2nd part of duodenum at (minor duodenal papilla) above the ampulla of Vater.



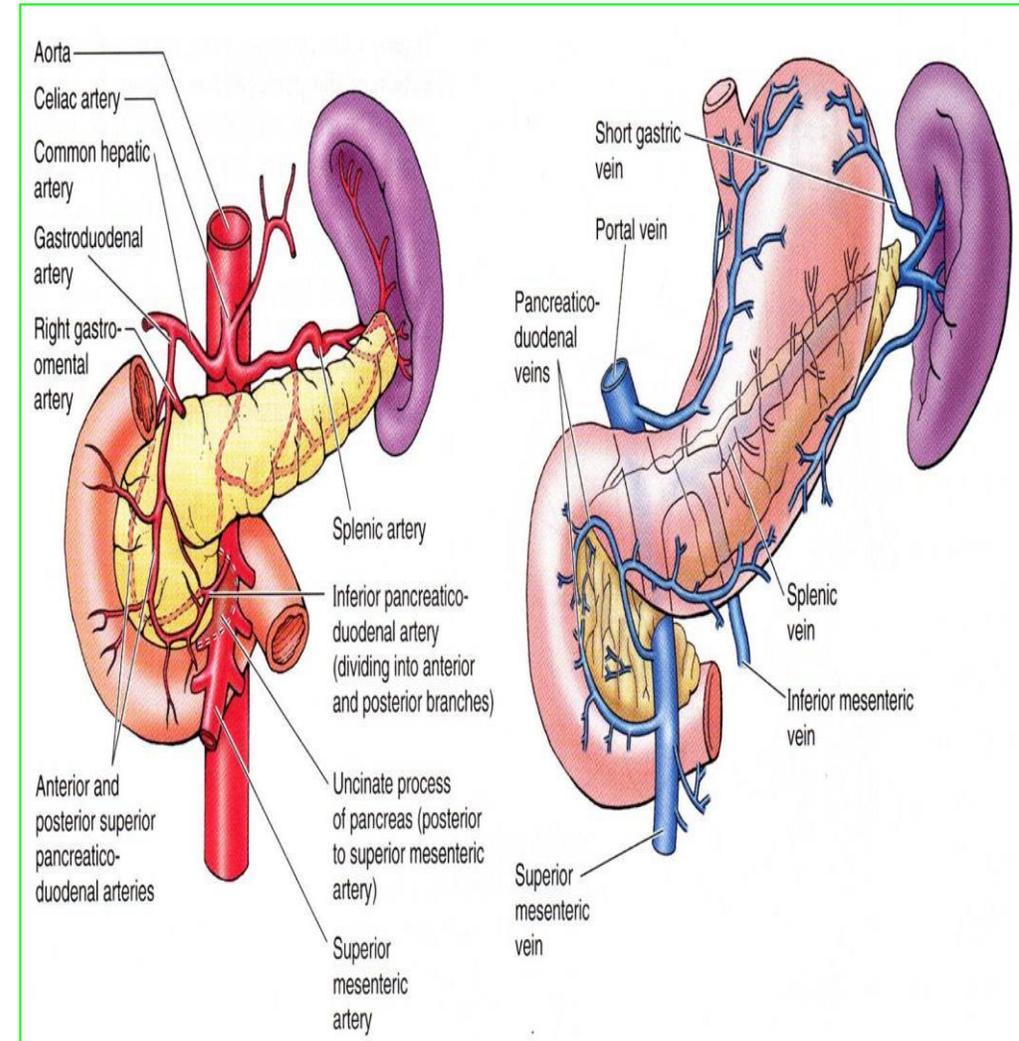
Blood supply

- **Arterial supply:**

- 1- Superior, inferior pancreaticoduodenal arteries: to the head.
- 2- Pancreatic branches of splenic artery: to the rest of pancreas.

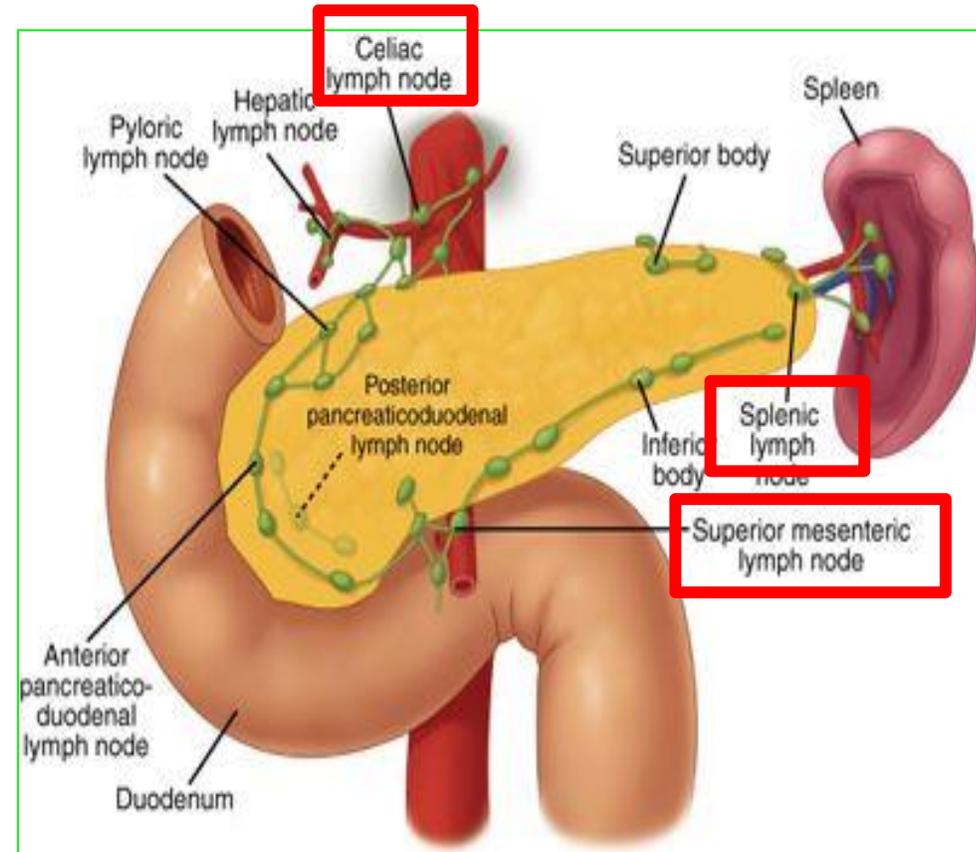
- **Venous drainage:**

- Superior & Inferior pancreaticoduodenal veins
- To splenic vein and portal vein.



Lymphatic drainage

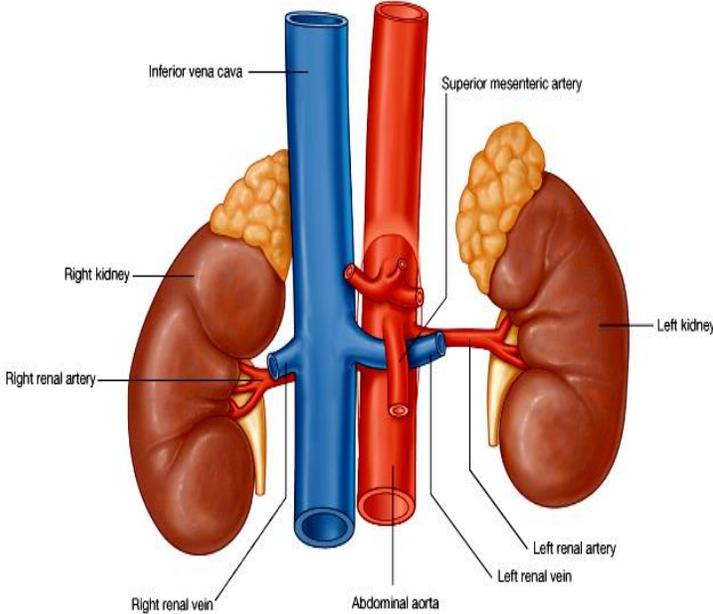
- 1- Upper part of head → **coeliac** lymph nodes.
- 2- Lower part of head → **superior mesenteric** lymph nodes.
- 3- Rest of pancreas → **pancreaticosplenic** lymph nodes.

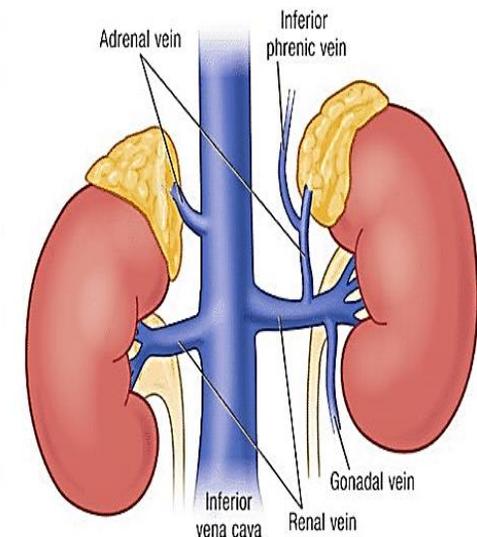
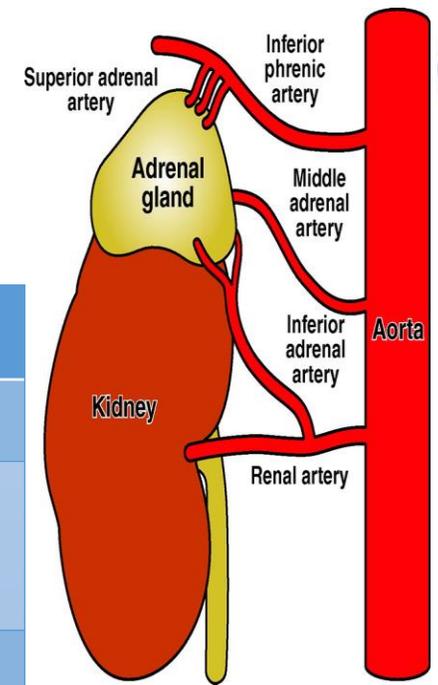


Adrenal glands

The suprarenal (adrenal) glands:

- ✓ **Structure:** consists of an outer cortex and an inner medulla
- ✓ **Position:** over the upper pole of the kidney one on each side of the midline.
- ✓ **Coverings:** enclosed together with the kidney in the renal fascia and perirenal fat, separated from the kidney by a septum of fibroareolar tissue.
- ✓ **Nerves:**
 - The medulla: supplied by preganglionic sympathetic fibers which end on the chromaffin cells of the medulla.
 - The cortex: under hormonal control of ACTH.





Right suprarenal gland

Left suprarenal gland

	Right suprarenal gland	Left suprarenal gland
Shape	pyramidal	semilunar
Anterior relations	<ul style="list-style-type: none"> ➤ IVC. ➤ Bare area of the liver. 	<ul style="list-style-type: none"> ➤ lesser sac (stomach bed) ➤ stomach.
Posterior relations	<ul style="list-style-type: none"> ➤ Right crus of diaphragm ➤ Right kidney. 	<ul style="list-style-type: none"> ➤ Left crus of diaphragm ➤ Left kidney.
Hilum	Directed upwards	Directed downwards
Suprarenal arteries	<p>Superior suprarenal artery: from inferior phrenic artery. Middle suprarenal artery: from abdominal aorta Inferior suprarenal artery: from the renal artery.</p>	
Suprarenal veins	ends in the inferior vena cava.	ends in the left renal vein.

Thank You!