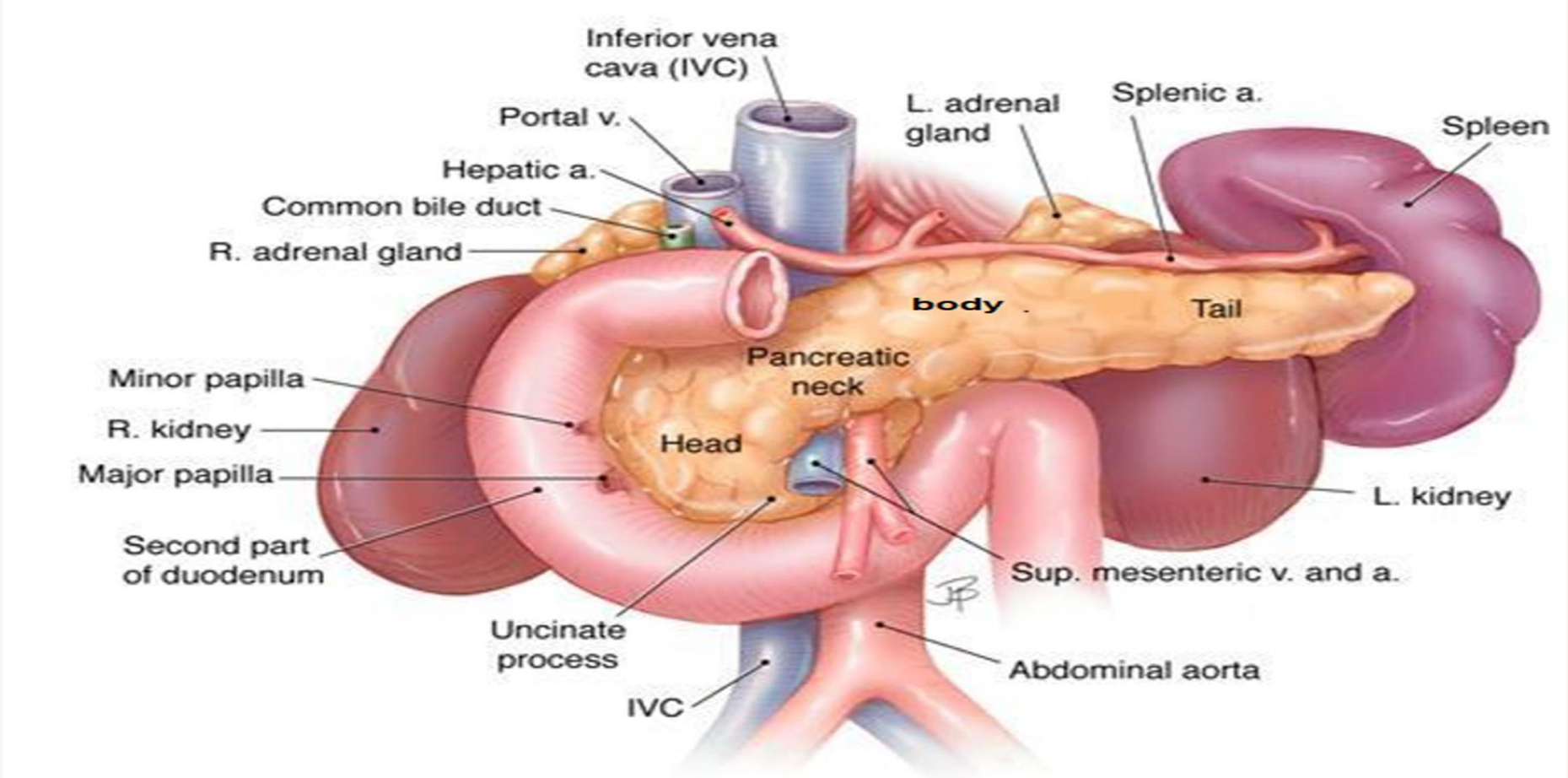
ANATOMY OF PANCREAS

BY DR. DALIA M. BIRAM

position of pancreas

It is a combined exocrine & endocrine gland which lies transversely retroperitoneal across the posterior abdominal wall. The healthy pancreas is creamy pink in colour, with a soft to firm consistency and lobulated surface

- **It extends from the concavity of the duodenum on the right side to the spleen on the left side.**
- **Parts of pancreas:**
- **It consists of head, neck, body and tail. The lower part of the head forms a projection called uncinate process.**



Relations of pancreas

Head of pancreas:

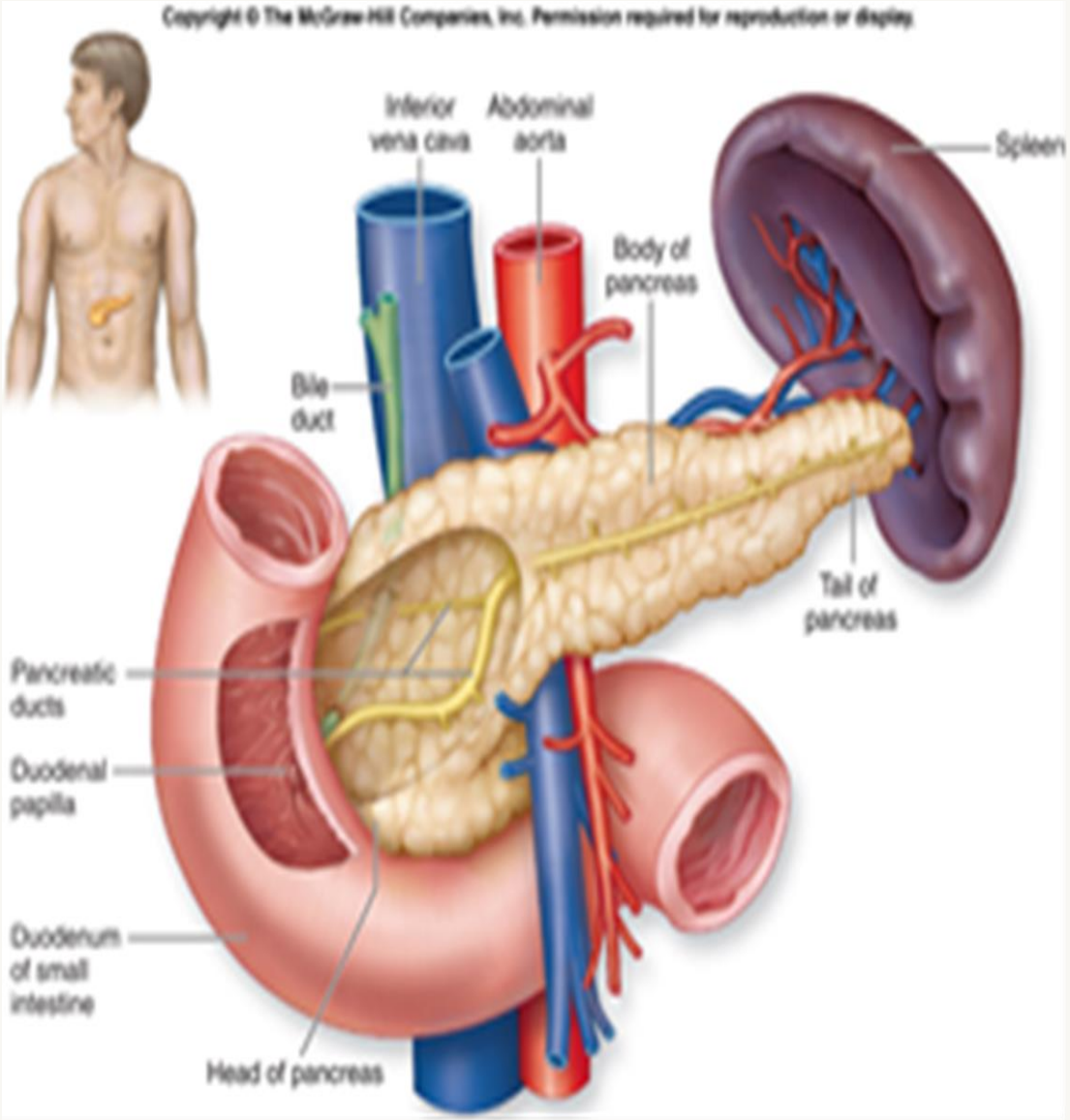
It lies in the concavity of the duodenum.

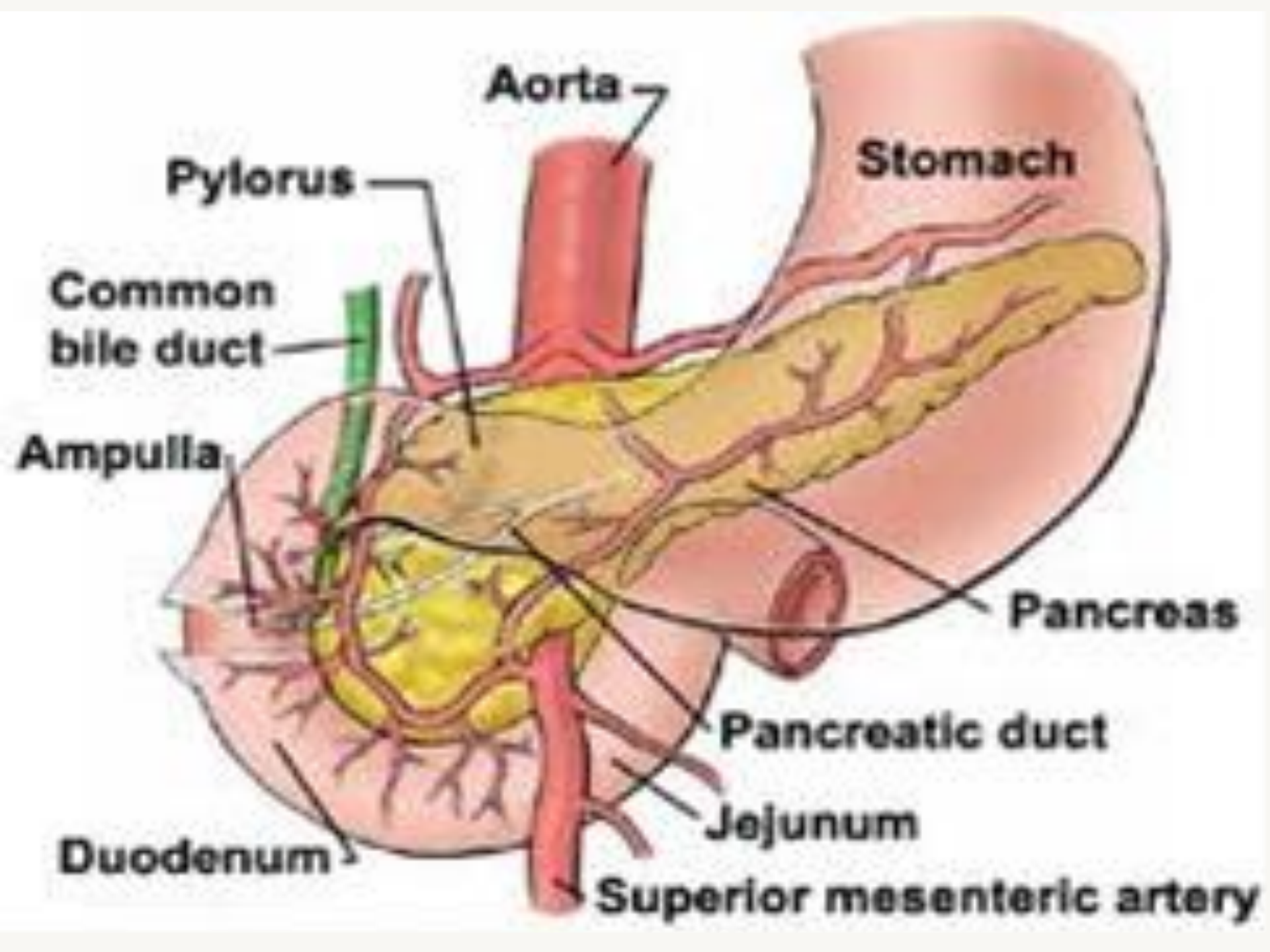
It is related to the 1st part of duodenum superiorly, 2nd part on the right side (separated from it by superior & inferior pancreatico- duodenal arteries), and 3rd part inferiorly.

Anteriorly: it is related to transverse colon.

Posteriorly: it is related to IVC, renal veins and common bile duct.

Uncinate process lies between abdominal aorta and superior mesenteric vessels.

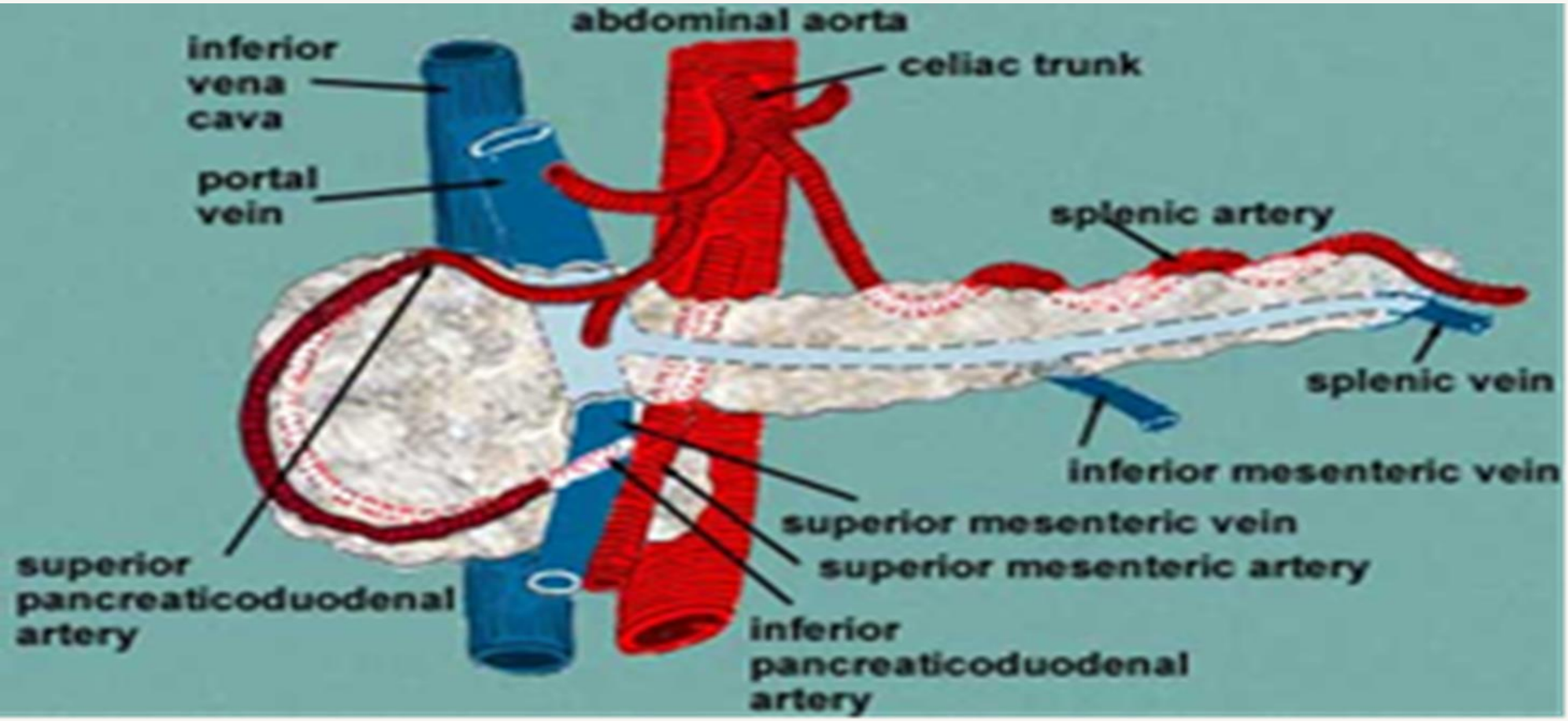



Aorta
Stomach
Pylorus
Common bile duct
Ampulla
Pancreas
Pancreatic duct
Jejunum
Duodenum
Superior mesenteric artery

Neck of pancreas:

Anteriorly: The anterior surface of the pancreatic neck is covered by peritoneum and lies adjacent to the pylorus. it is related to superior pancreaticoduodenal branch of gastro-duodenal artery.

Posteriorly:. it is related to the formation of portal vein from splenic and superior mesenteric veins

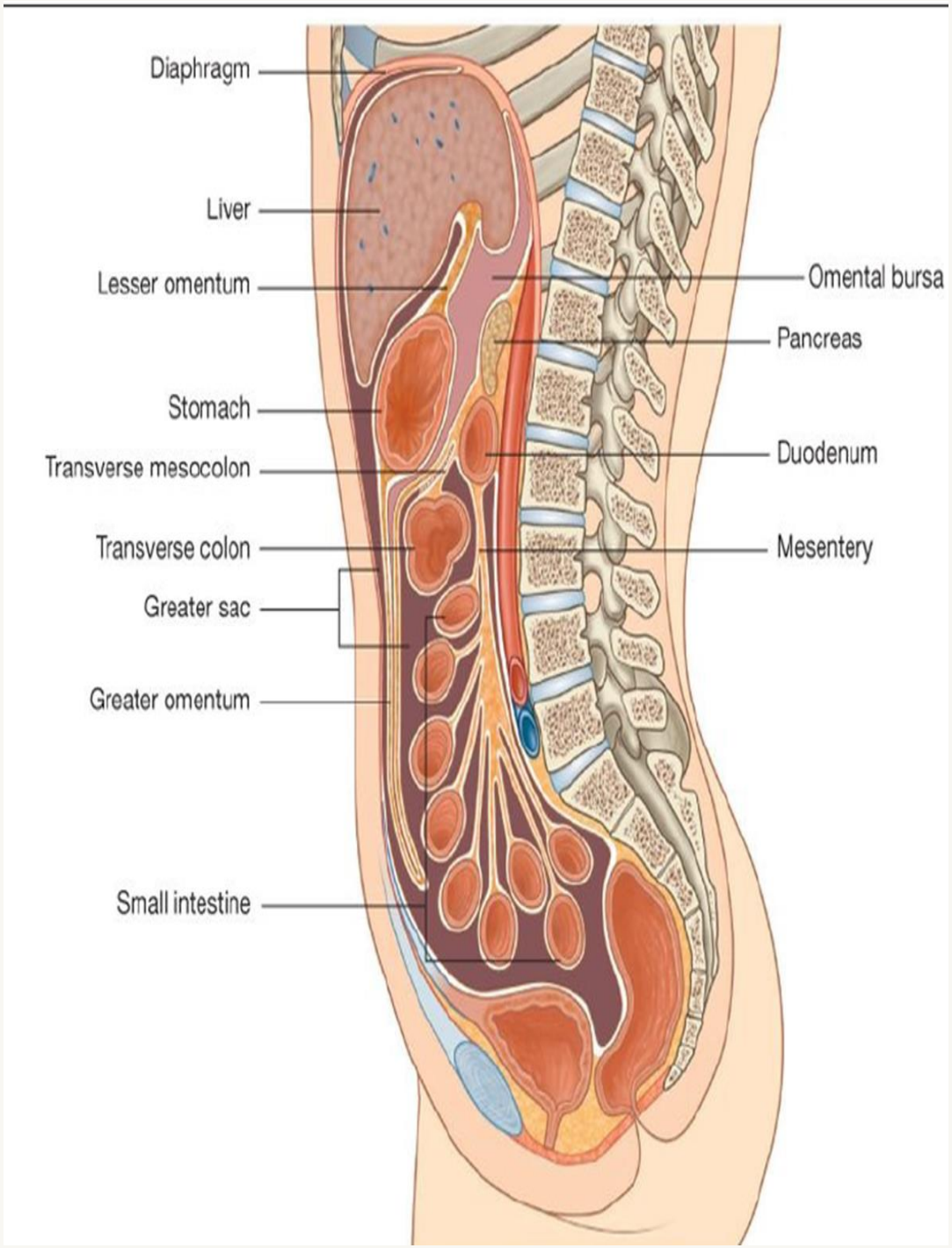


Body (triangular in cross section):

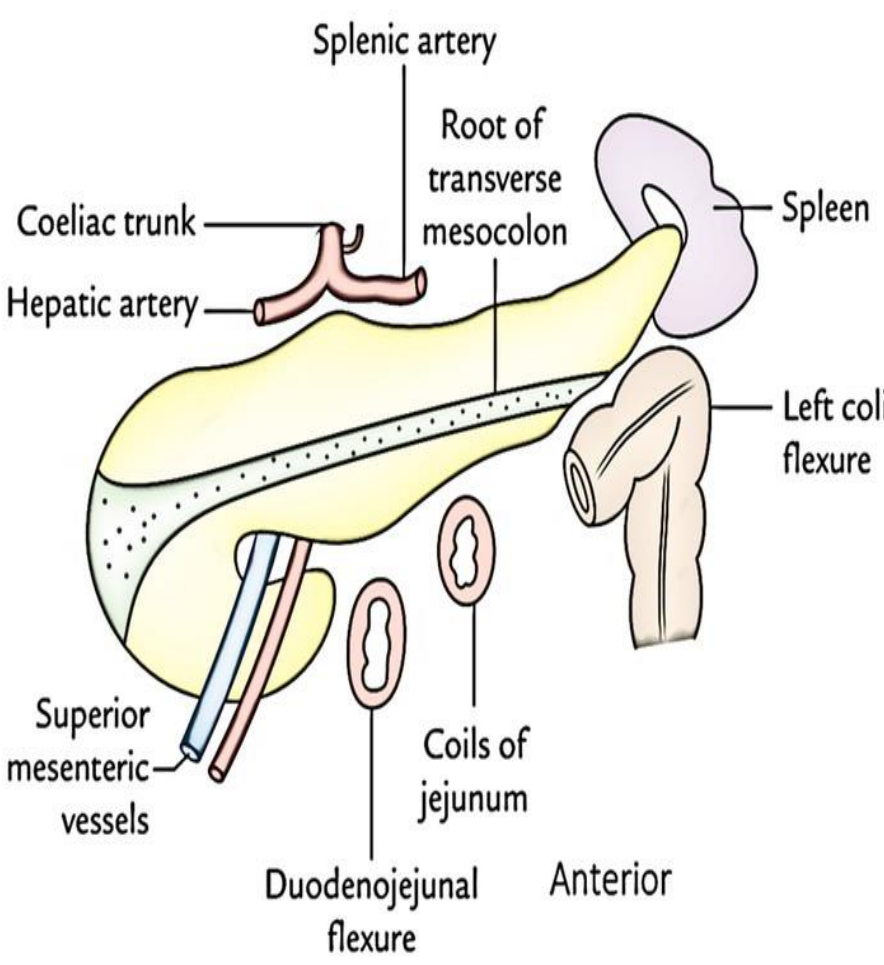
It has three surfaces (anterior, posterior and inferior) and three borders (anterior, superior and inferior).

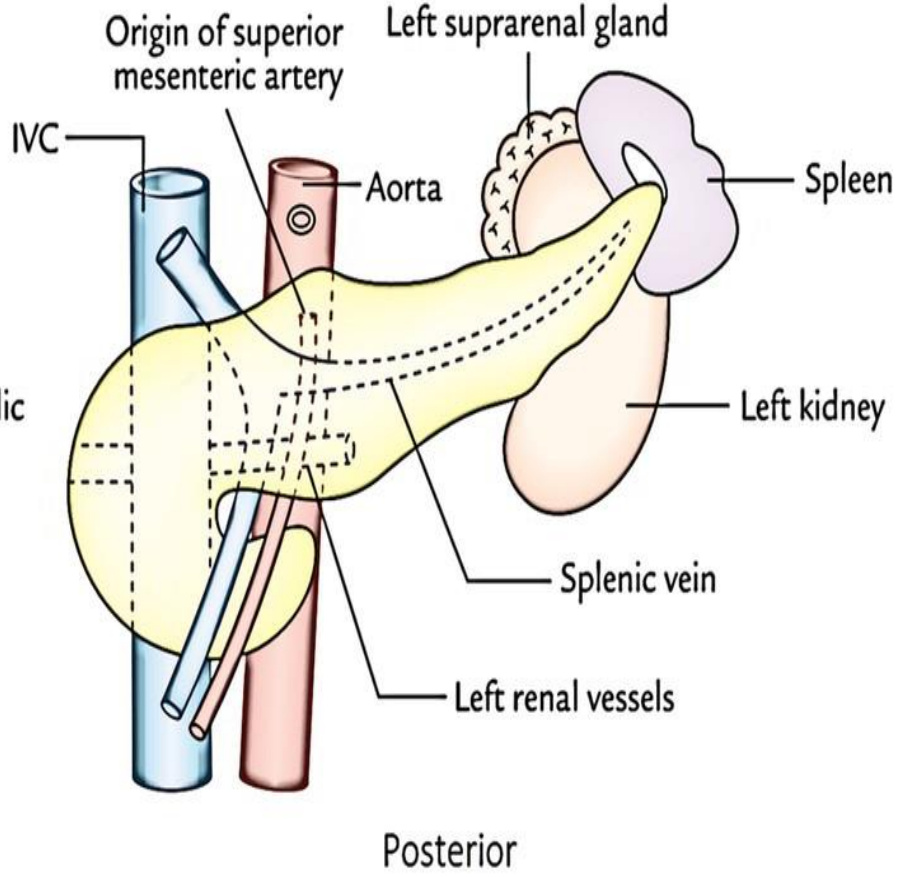
1- Anterior surface:

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



2- Inferior surface: Related to duodeno-jejunal flexure, loops of ileum and end of transverse colon (from right to left).





3- Posterior surface:

It is devoid of Peritoneum and related to posterior abdominal wall

-Aorta and origin of sup. mesenteric artery.

-Splenic and left renal vein.

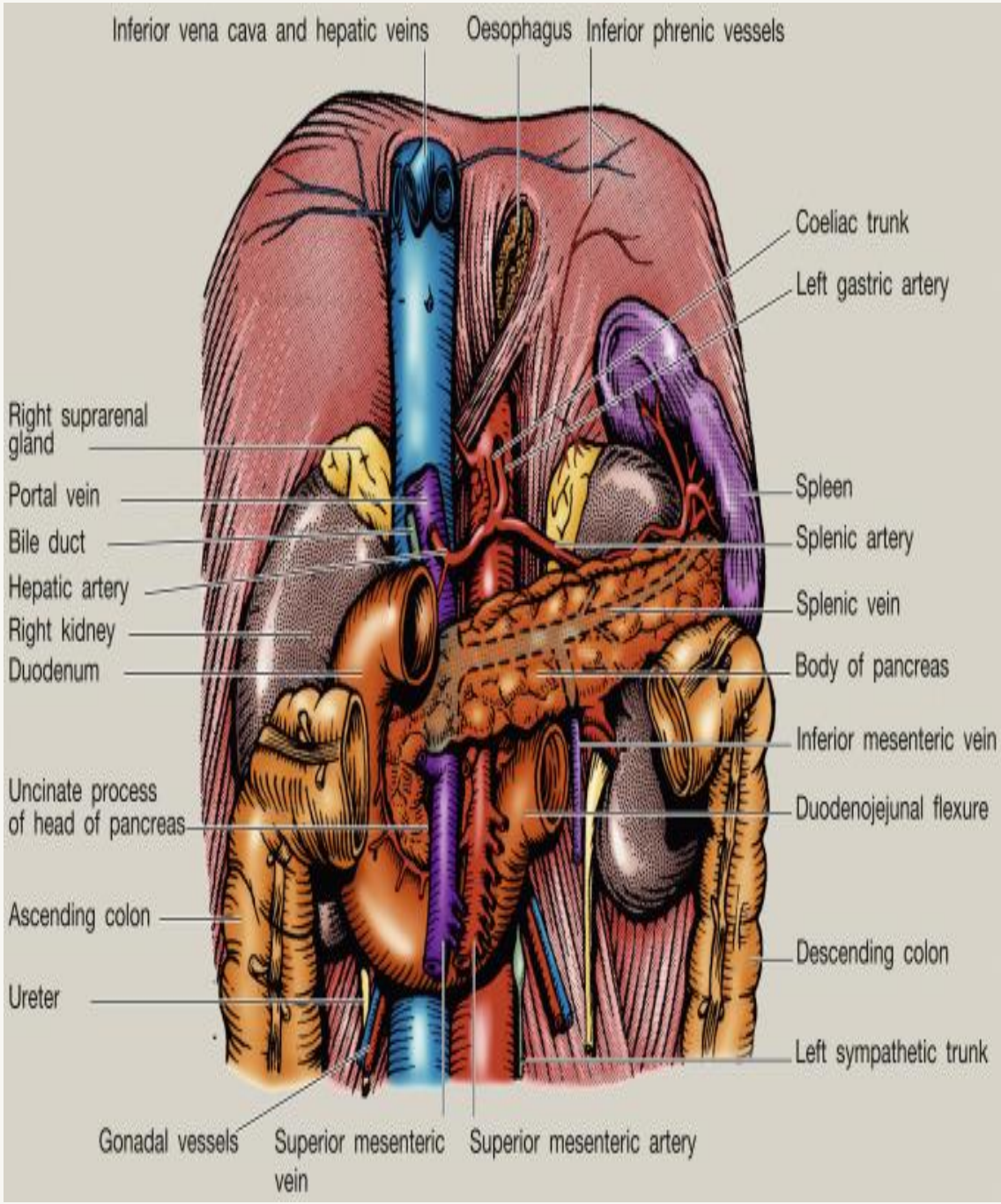
-Left psoas major.

-Left crus of diaphragm.

-Left kidney.

-Left supra renal gland.

-Left sympathetic chain.



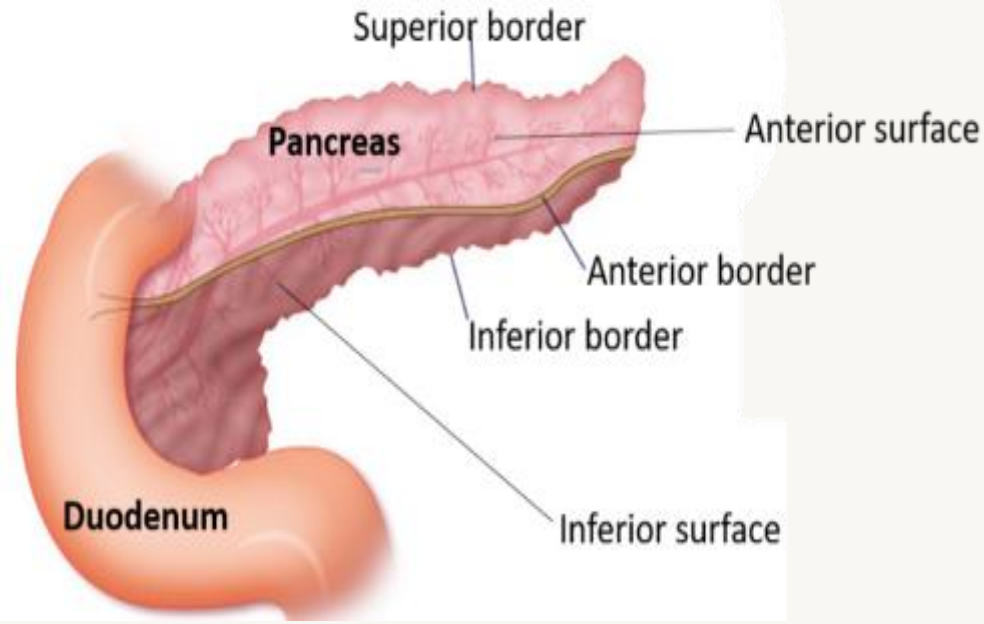
Borders:

1- Superior border: It is related to splenic artery.

2- Anterior border: It gives attachment to transverse mesocolon and greater omentum.

3- Inferior border: It separates the inferior from the posterior surfaces. Laterally, the inferior mesenteric vein runs behind

the inferior border to join the splenic vein.

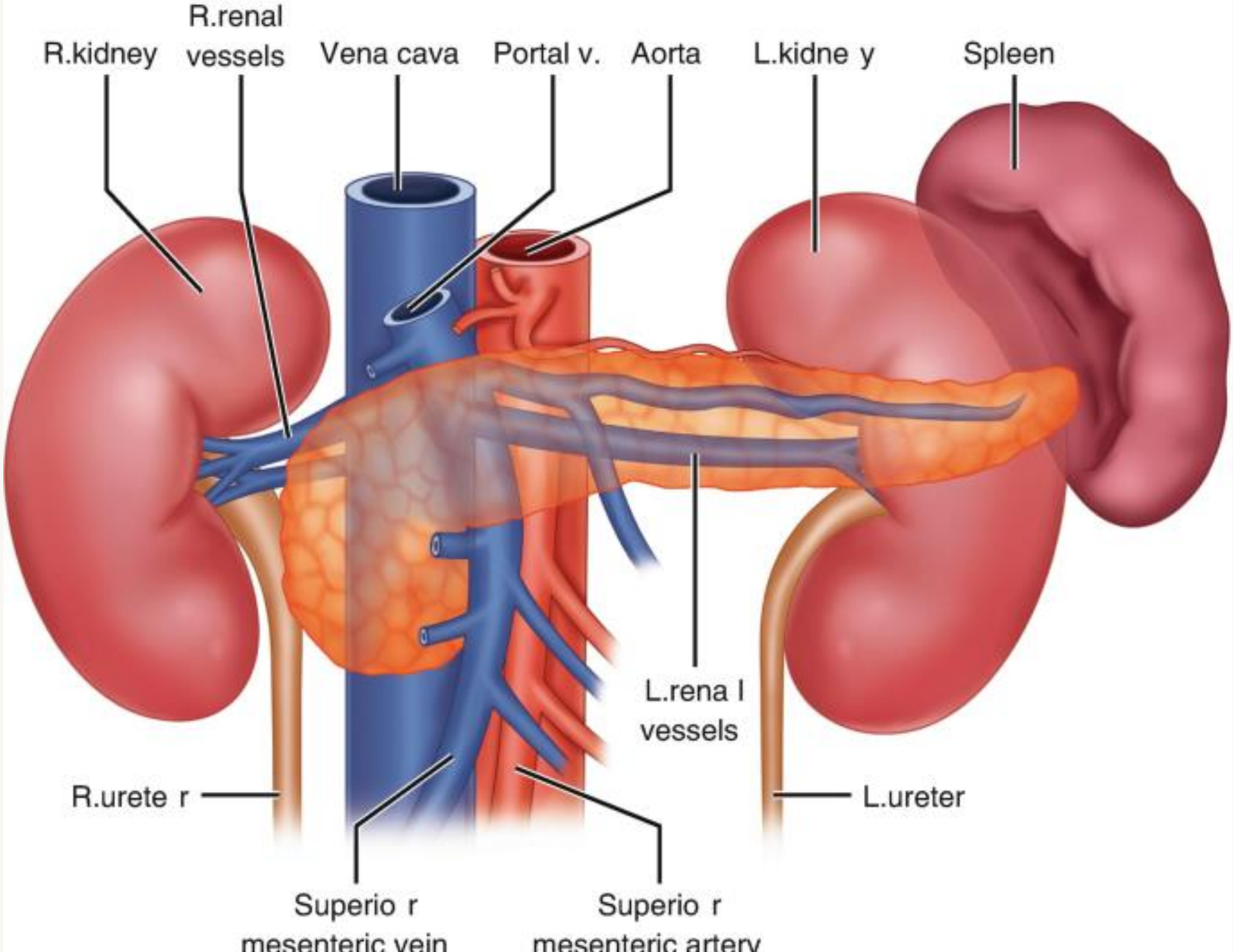


Tail of pancreas:

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

It reaches the hilum as a content of the lieno-renal ligament. when it is at risk of injury at splenectomy

during ligation or stapling of the splenic vessels.


R.kidney
R.renal vessels
Vena cava
Portal v.
Aorta
L.kidne y
Spleen
L.rena l vessels
R.urete r
L.ureter
Superio r mesenteric vein
Superio r mesenteric artery

Ducts of pancreas:

It has two ducts:

1- Main pancreatic duct:

It drains the upper part of the head, all the body and tail of pancreas.

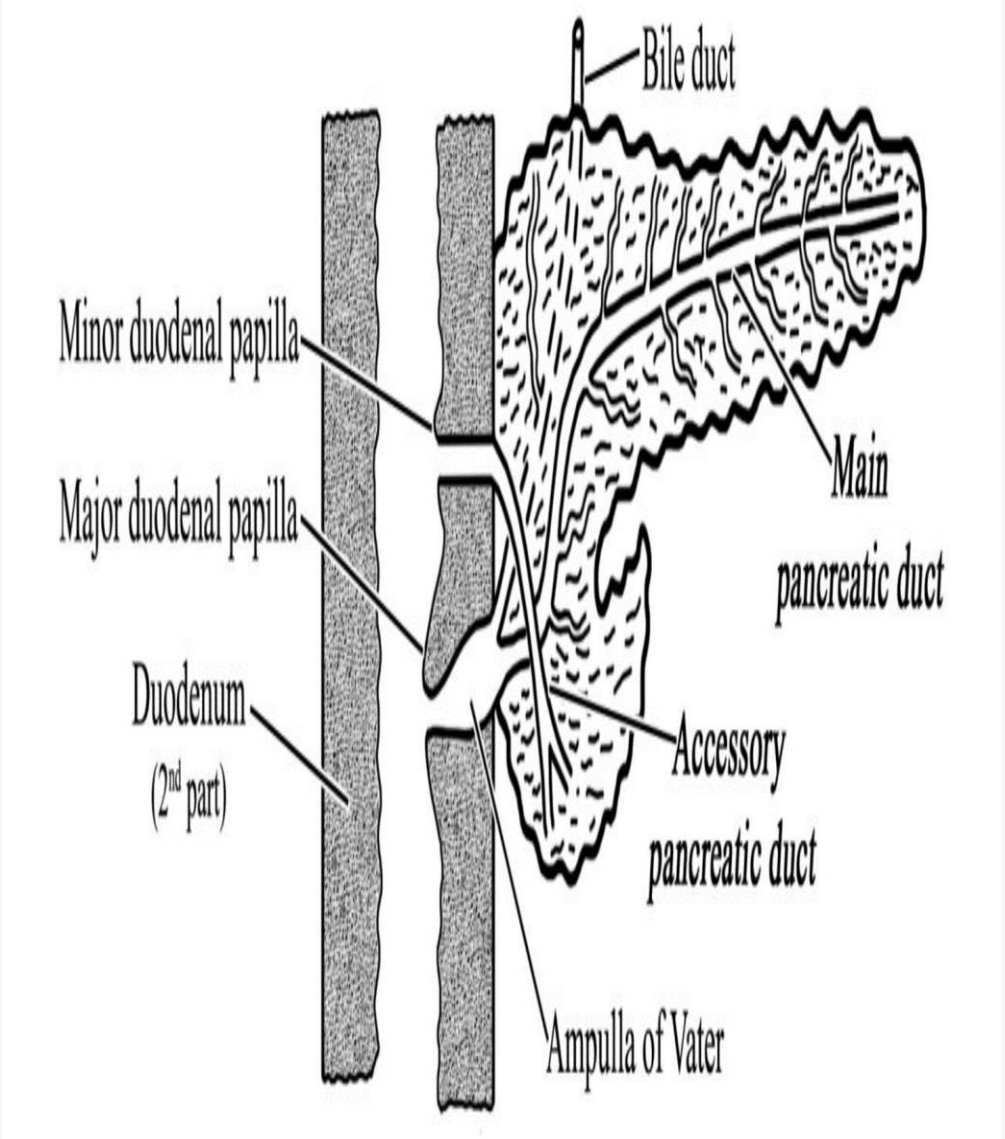
It runs from the tail to the head, then it unites with common bile duct to form ampulla of Vater which opens in the 2nd part of duodenum.

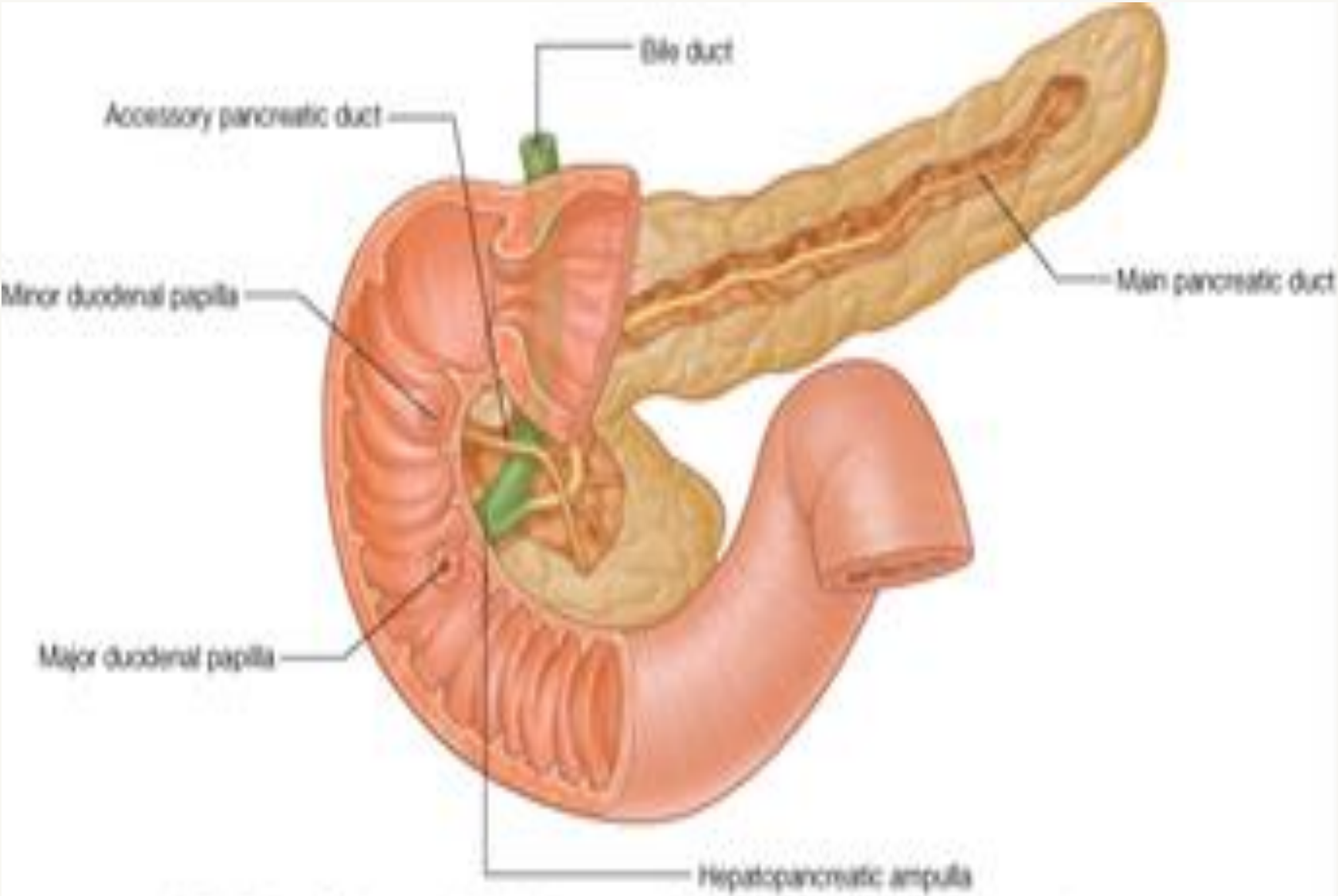
The ampulla of vater opens into the apex of a mucosal elevation in the second part of the duodenum called the major duodenal papilla.

2- Accessory pancreatic duct:

It drains the uncinate process and lower part of head.

It open in the 2nd part of duodenum in minor duodenal papilla above the major duodenal papilla.





Blood supply

Arterial supply:

1- Superior and inferior pancreatico-duodenal arteries: to the head.

2- Pancreatic branches of splenic artery: to the rest of pancreas.

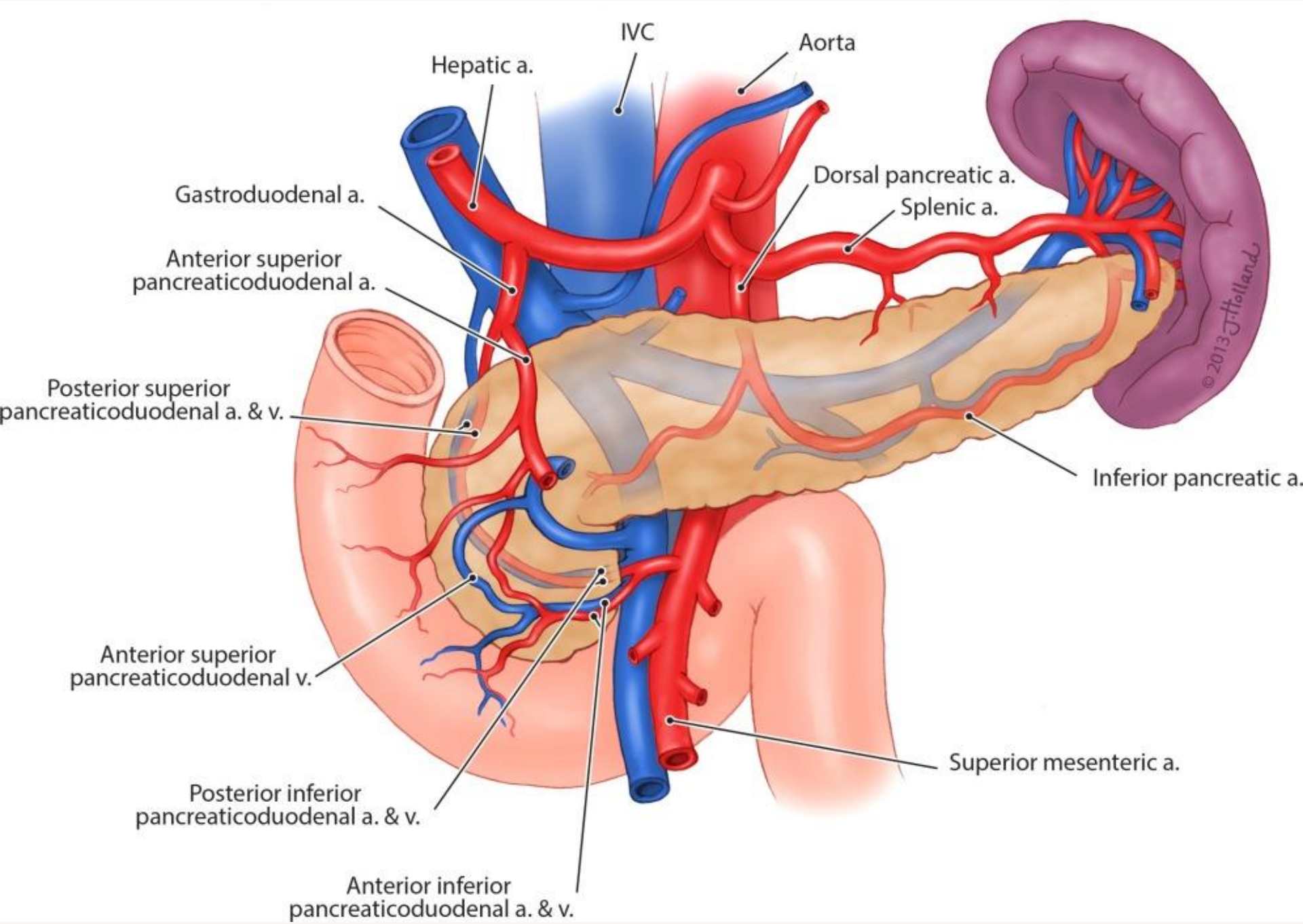
Venous drainage: To splenic vein and portal vein.

Lymphatic drainage:

1. To the left of the neck: Drains into regional pancreatic lymph nodes lymph nodes then to pre-aortic nodes

2. Lymphatics from the neck and head

drain more widely into nodes along the pancreaticoduodenal, superior mesenteric and hepatic arteries, and, ultimately, into pre-aortic nodes


IVC
Aorta
Hepatic a.
Dorsal pancreatic a.
Splenic a.
Gastroduodenal a.
Anterior superior pancreaticoduodenal a.
Posterior superior pancreaticoduodenal a. & v.
Inferior pancreatic a.
Anterior superior pancreaticoduodenal v.
Superior mesenteric a.
Posterior inferior pancreaticoduodenal a. & v.
Anterior inferior pancreaticoduodenal a. & v.
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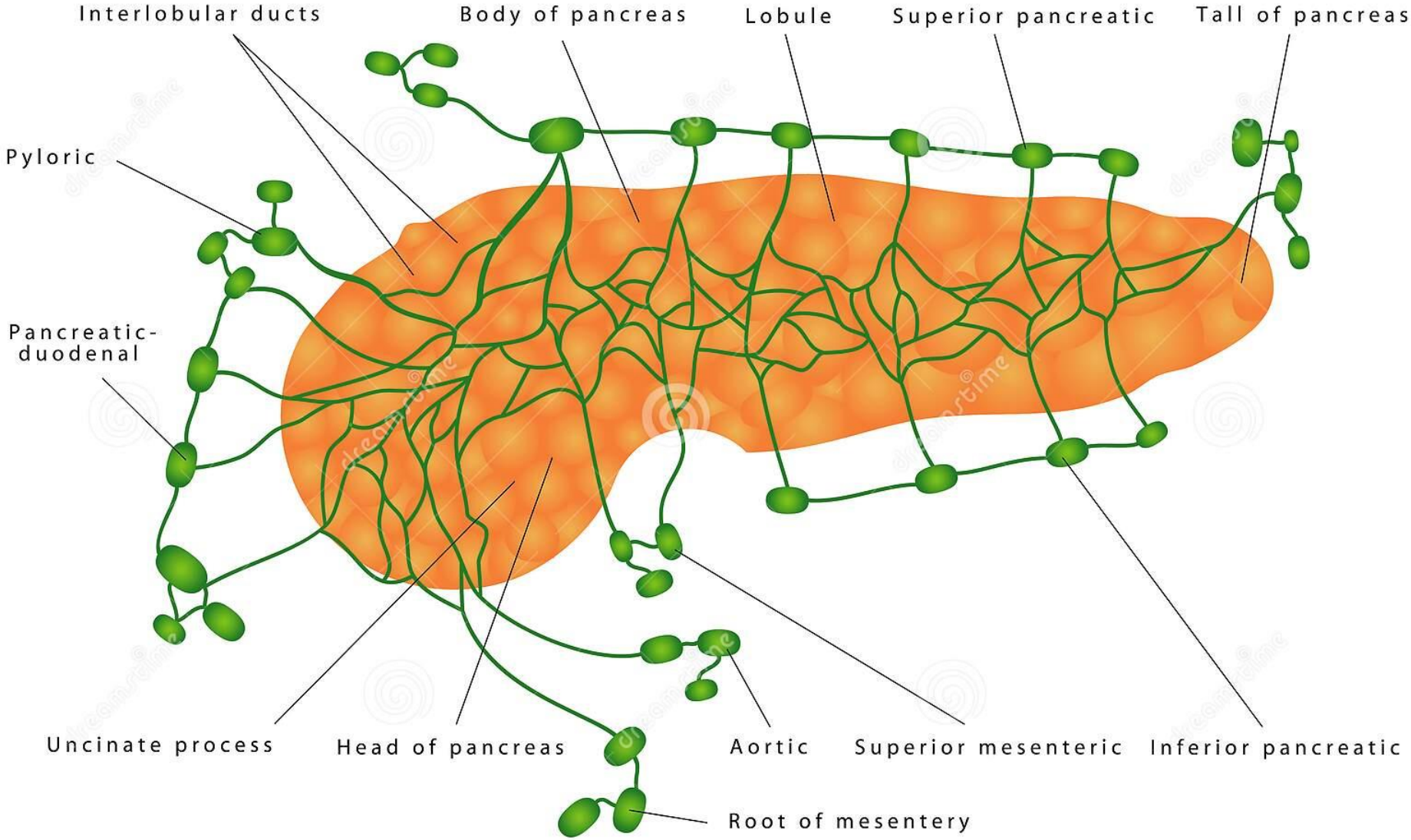

LYMPHATIC DRAINAGE OF THE PANCREAS


Thank you!