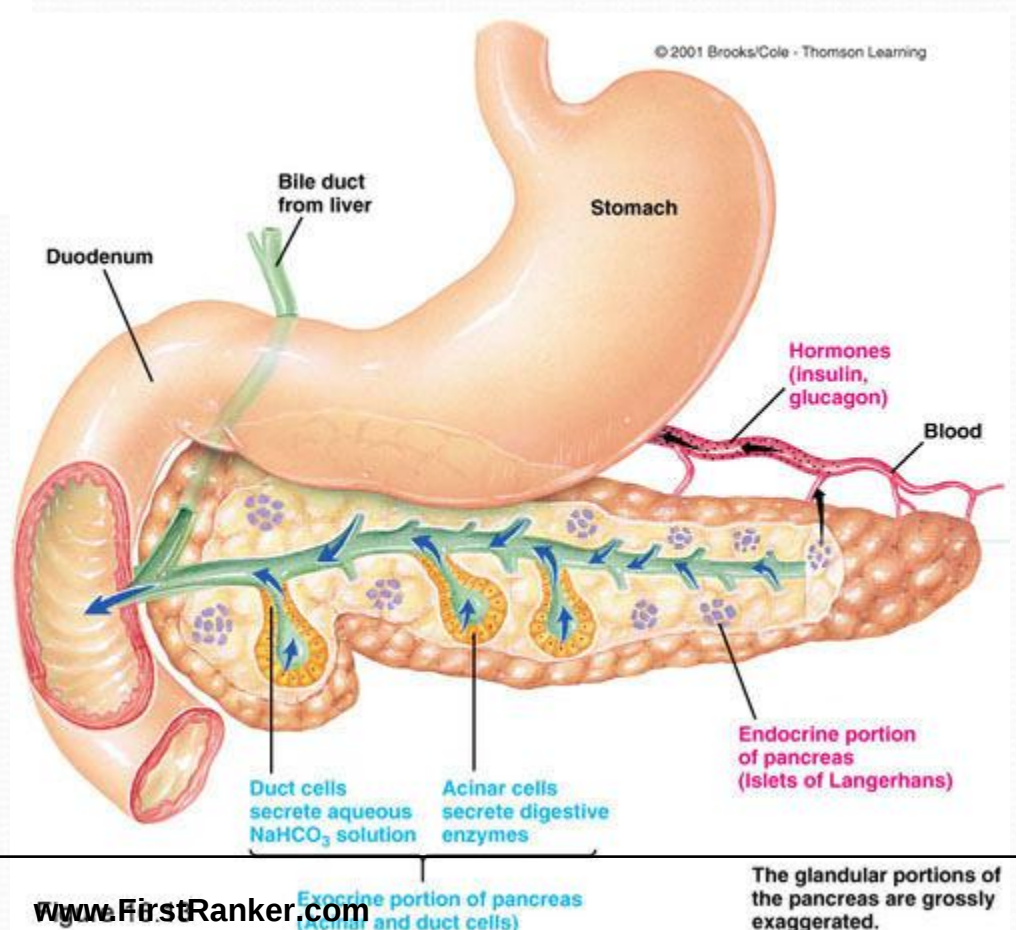
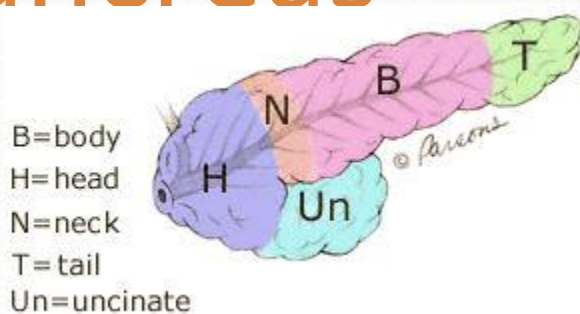


Pancreas- Brief History

- Herophilus, Greek surgeon first described pancreas.
- Wirsung discovered the pancreatic duct in 1642.
- Pancreas as a secretory gland was investigated by Graaf in 1671.
- R. Fitz established pancreatitis as a disease in 1889.
- Whipple performed the first pancreaticoduodenectomy in 1935 and refined it in 1940.

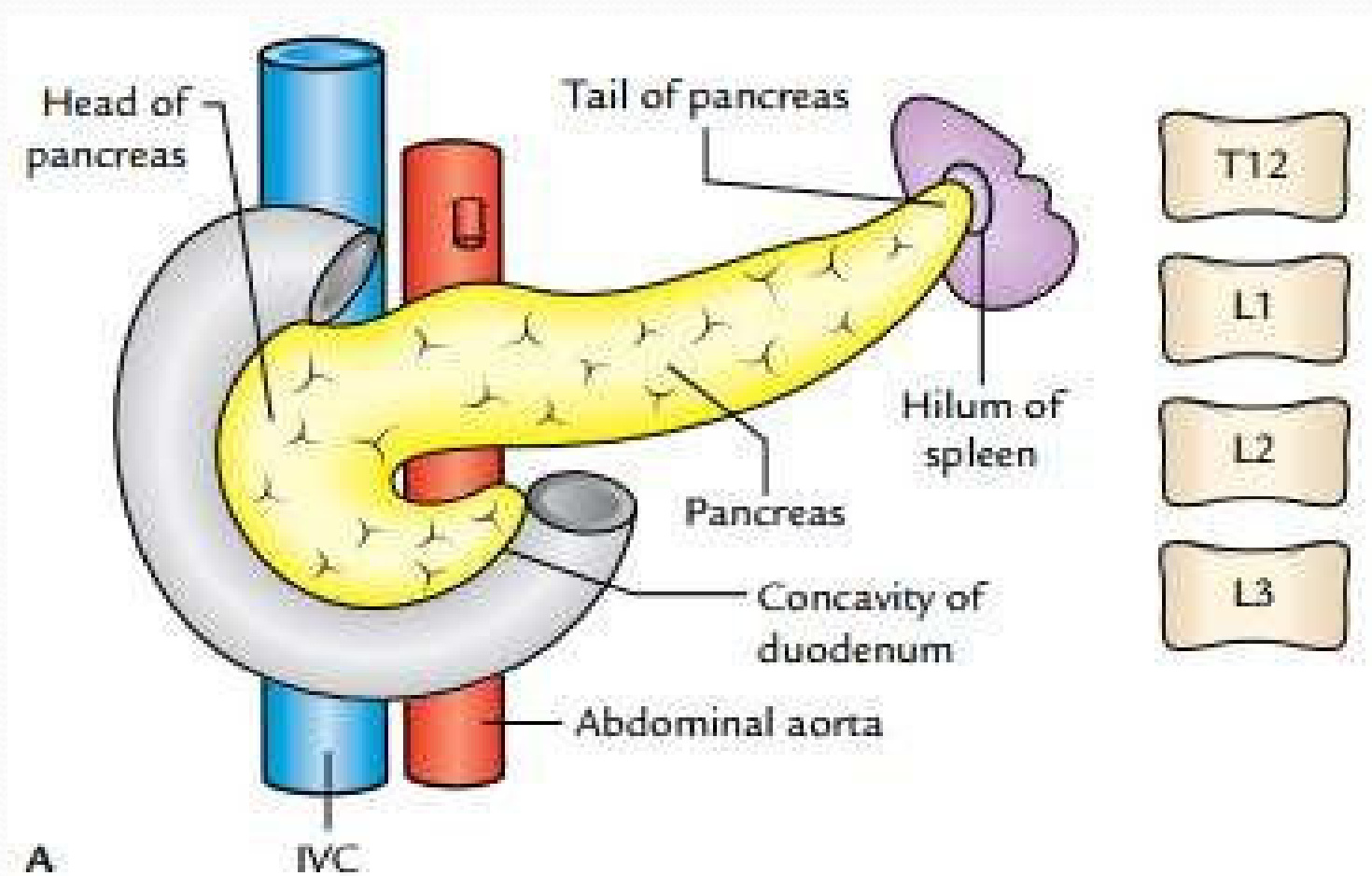
Pancreas



Pancreas

- Gland with both exocrine and endocrine functions
- 15-20 cm long, 2.5-3.8 cm broad, & 1.2-1.8 cm thick.
- 60-100 gram in weight
- Location: retro-peritoneum*, 2nd lumbar vertebral level
- Extends in an oblique, transverse position
- Parts of pancreas: head, neck, body and tail

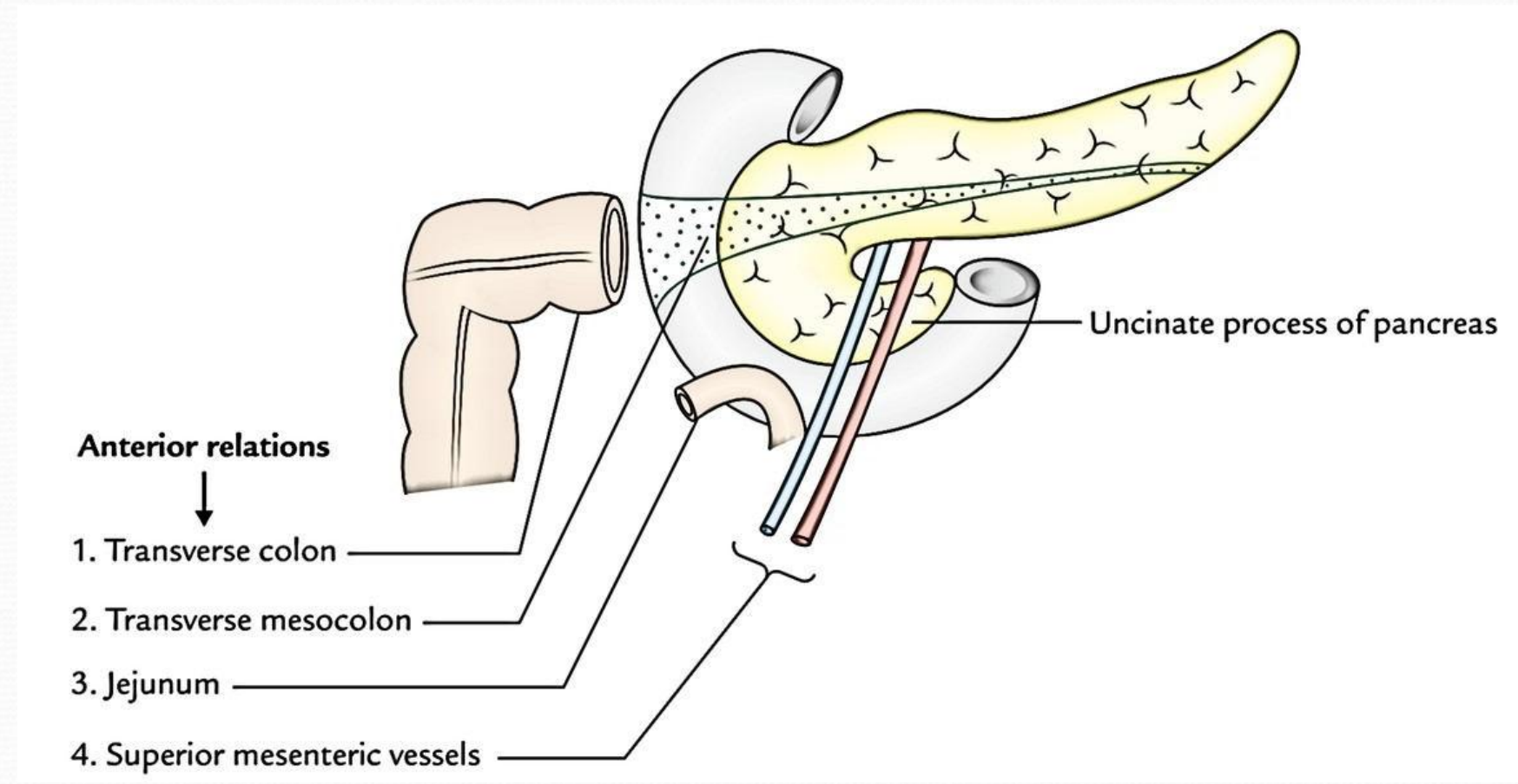
LOCATION



Head of Pancreas

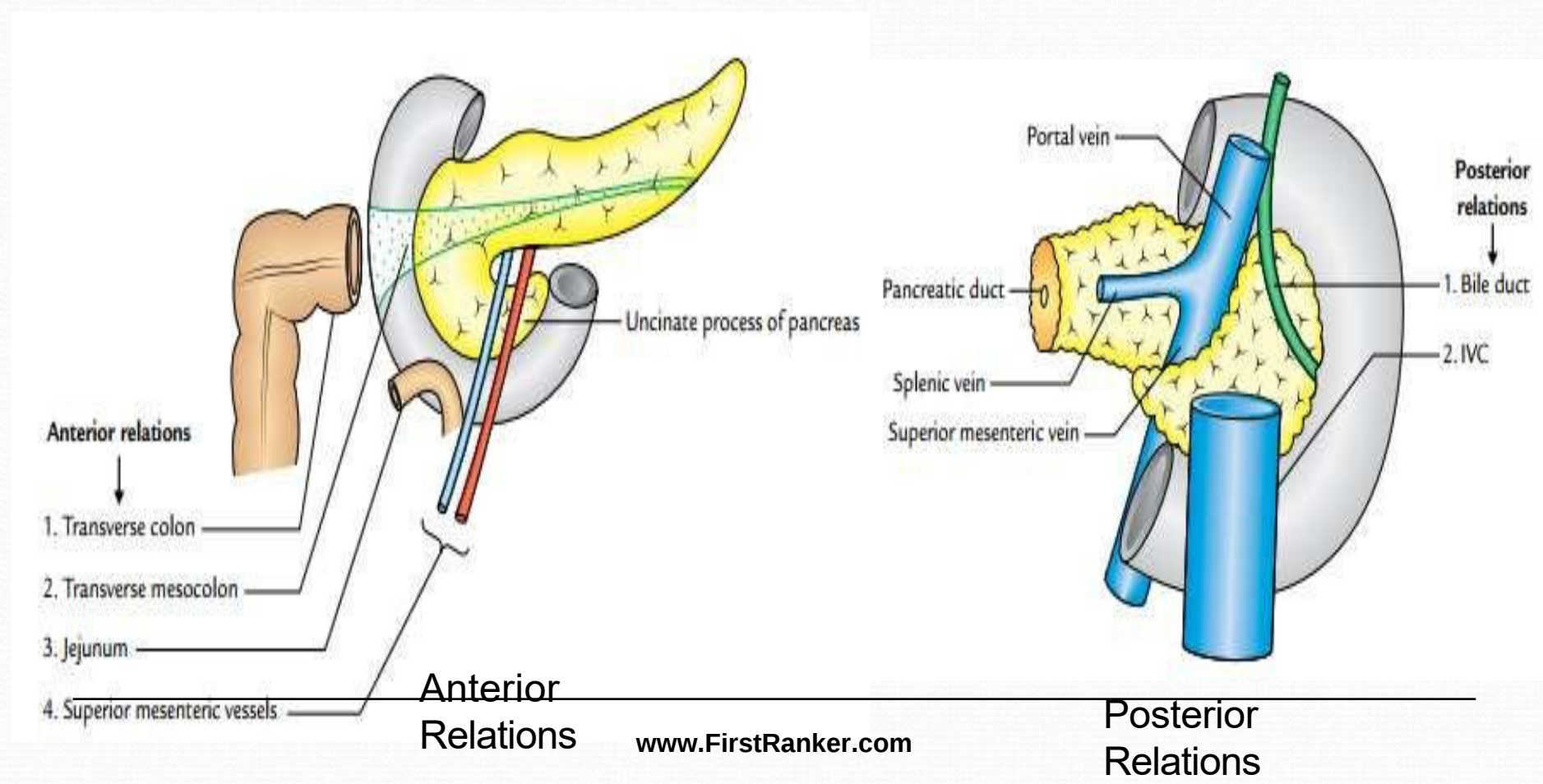
- Enlarged flattened right end of pancreas, situated within the curve of the duodenum.
- External features-
- 3 borders- sup., inf. & rt. lat.
- 2 surfaces- ant. & post.
- 1 process
- RELATIONS-
- Sup border – overlapped by 1st part of duodenum & is related to SPDA
- Inf. Border- 3rd part of duodenum & IPDA.
- Rt. Lat. Border- 2nd part duodenum, terminal part of bile duct & anastomosis between 2 pan. art.
- Two surfaces-
- Ant. Suf- gastroduodenal a.
transverse colon
jejunum sep. frm it by peritoneum.
- Post. Suf- IVC, Terminal part of Renal veins
Rt. Crus of diaphragm & bile duct.

Uncinate proc.- Ant.- SMA
Post.- Aorta.



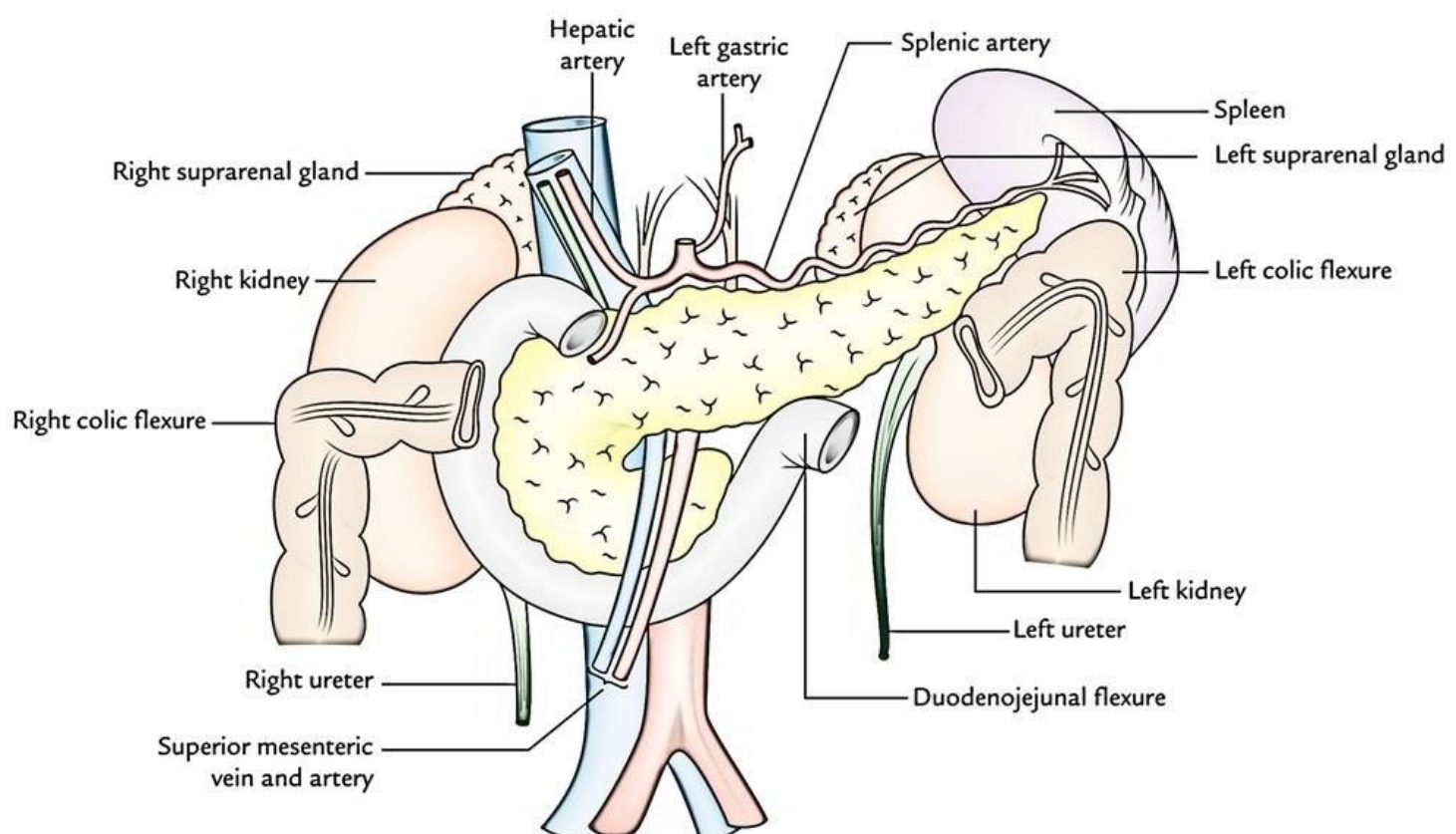
Dr.
Ravi

HEAD OF THE PANCREAS & Its relations.

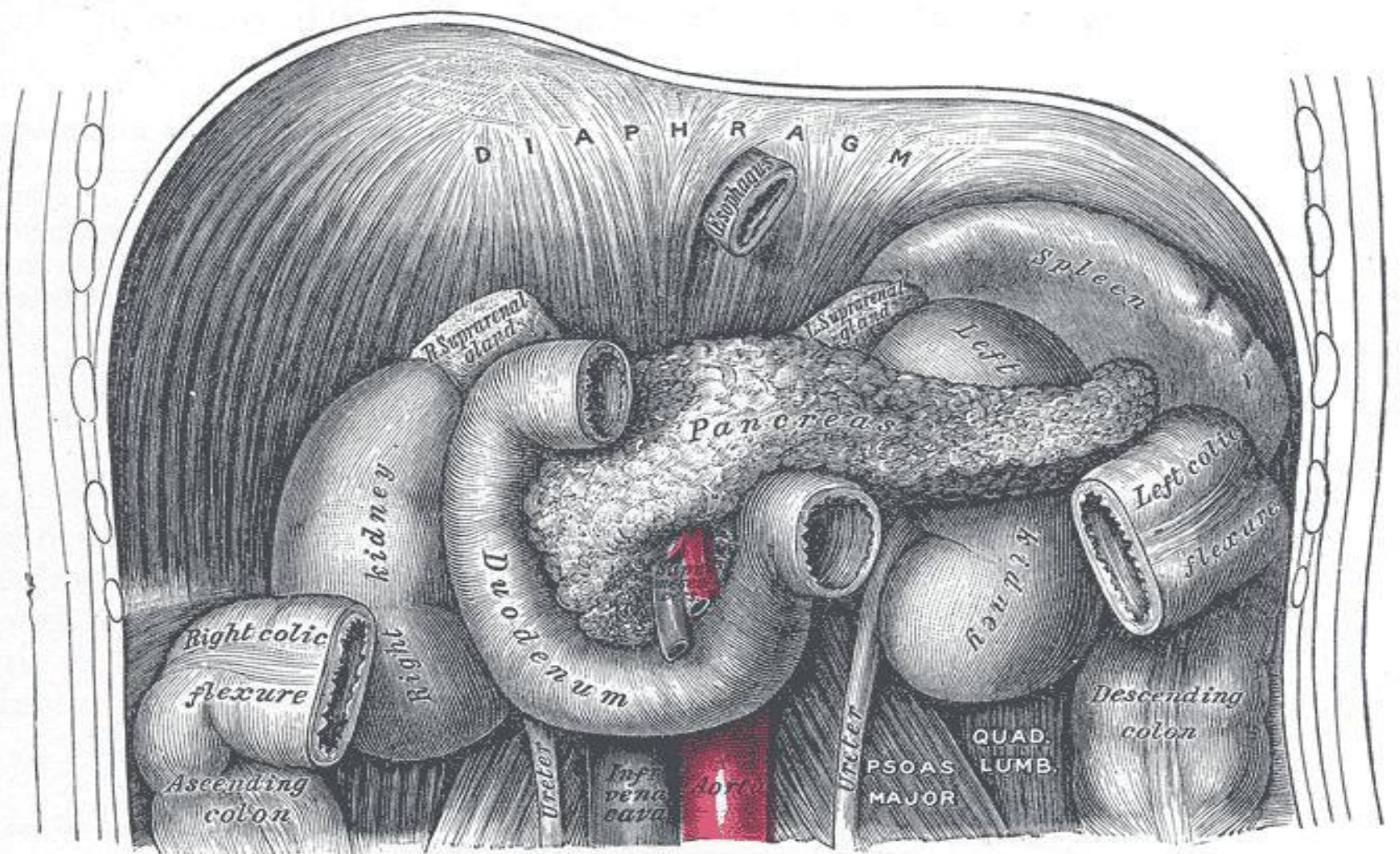


Neck of Pancreas

- 2.5 cm in length, constricted part bet. Head & Body.
- 2 surfaces – Ant. & Post.
- Ant. – peritoneum covering post.wall of lesser sac & pylorus
- Post.- termination of SMV and splenic vein confluence to form portal vein

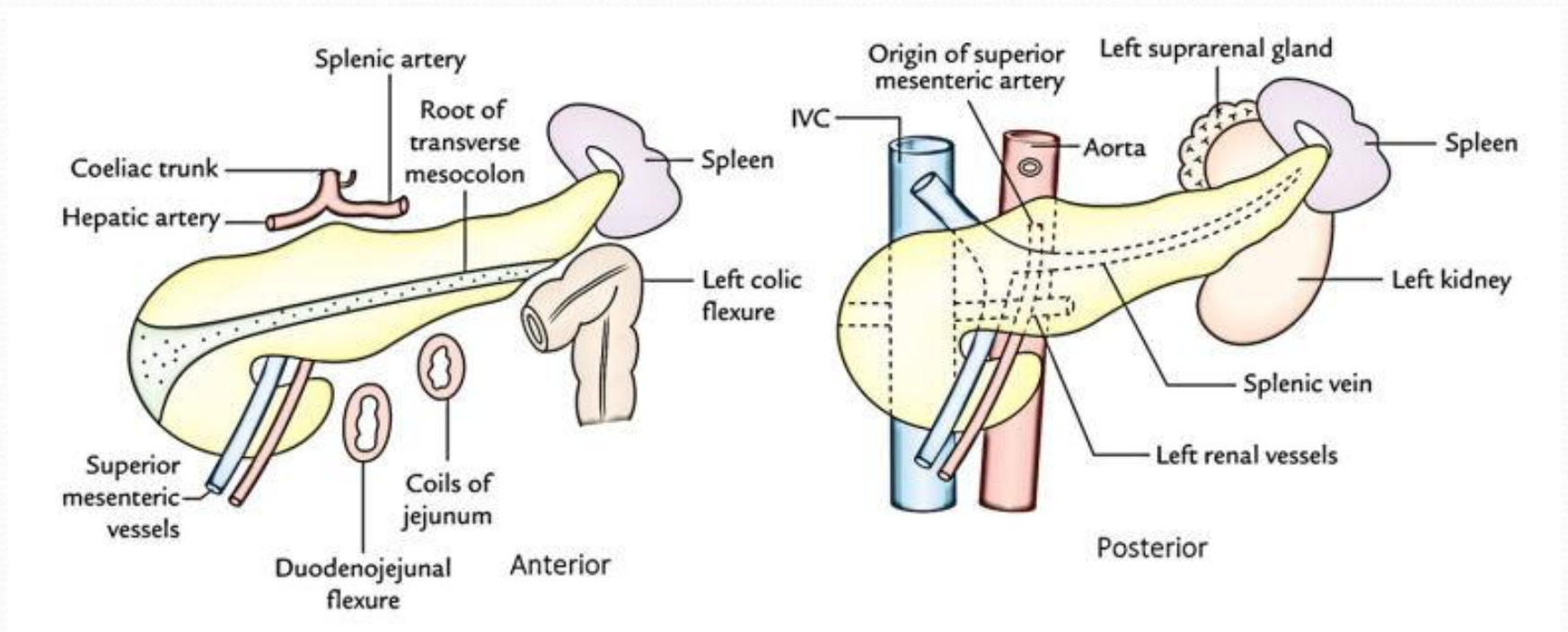


Pancreas

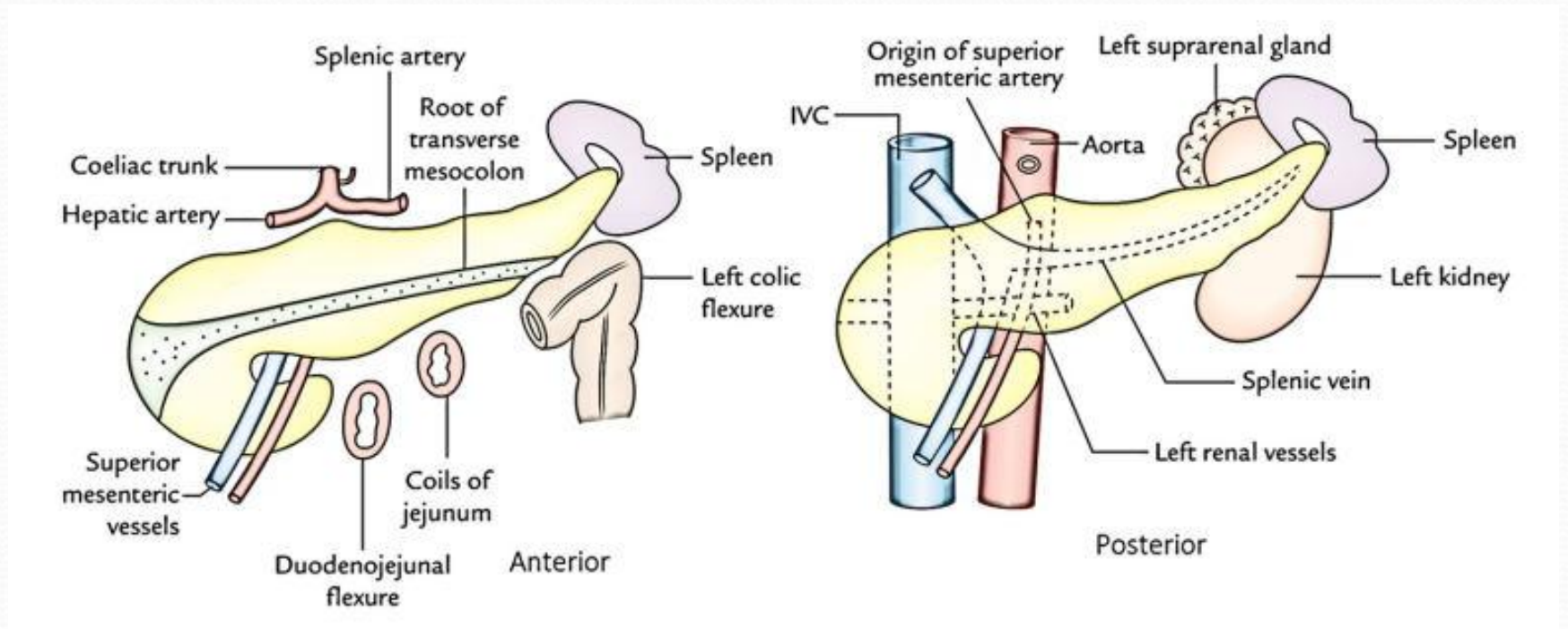


Body of Pancreas

- Elongated, long structure Extends from neck to tail
- Triangular on cross section
- 3 borders- ant., sup., & inf.
- Tuber omentale
- **Relations-**
- Ant. Border- root of transeverse mesocolon
- Sup. Border- coeliac trunk, hepatic a.(r) & splenic a(l)
- Inf. Border- sup. Mesent. Vessesls.



- **Ant. Suf.-** covered by peritoneum & related to lesser sac & to stomach
- **Post. suf.-** devoid of peritoneum related to aorta, lt. adrenal gland, lt. renal vessels and upper 1/3rd of lt. kidney, lt. crus of diaphragm & Splenic vein
- **Inf. suf.-** covered by peritoneum & related to DJ flexure, coils of jejunum & lt. colic flexure

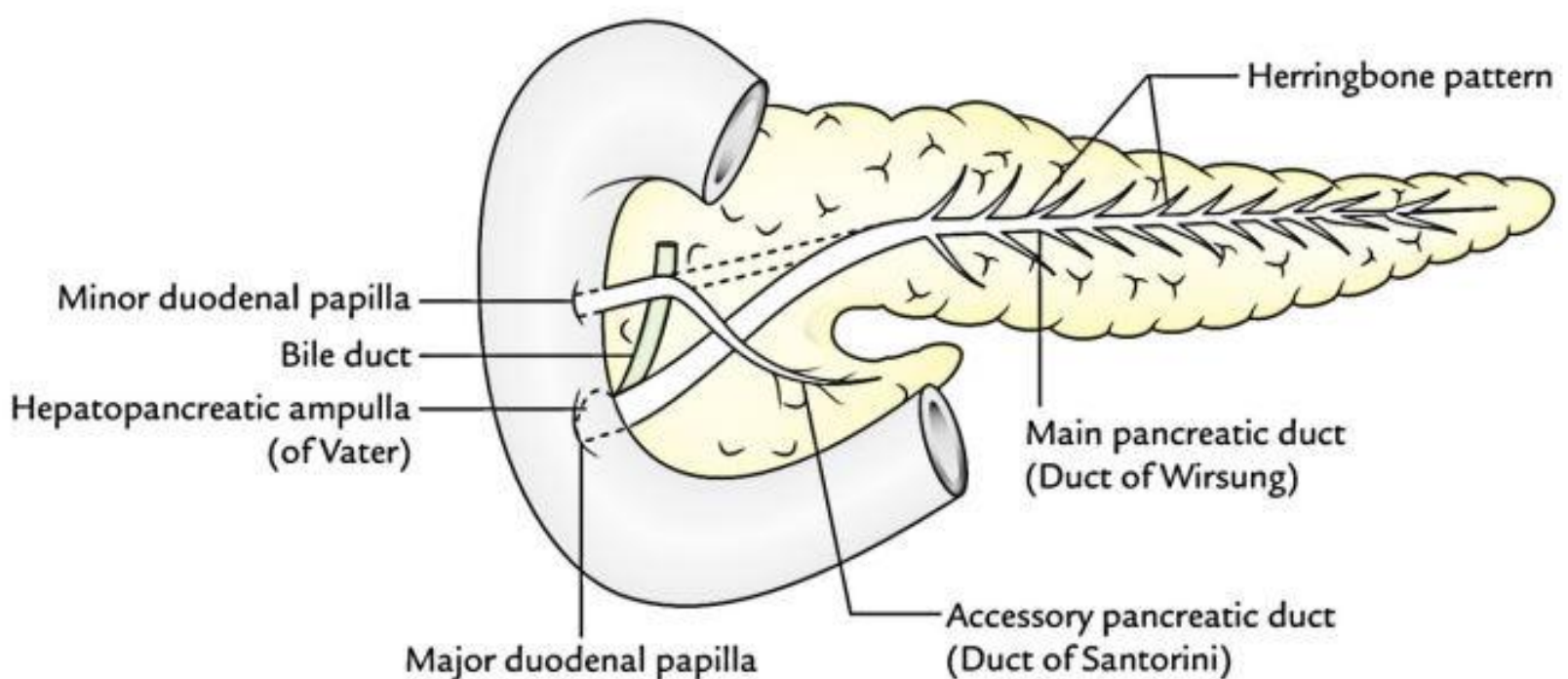


Tail of Pancreas

- Narrow, lt. end of pancreas
- Lies at the level of 12th thoracic vertebra
- Ends within the splenic hilum
- Lies in the lienorenal ligament
- Anteriorly, related to splenic flexure of colon
- May be injured during splenectomy (fistula)

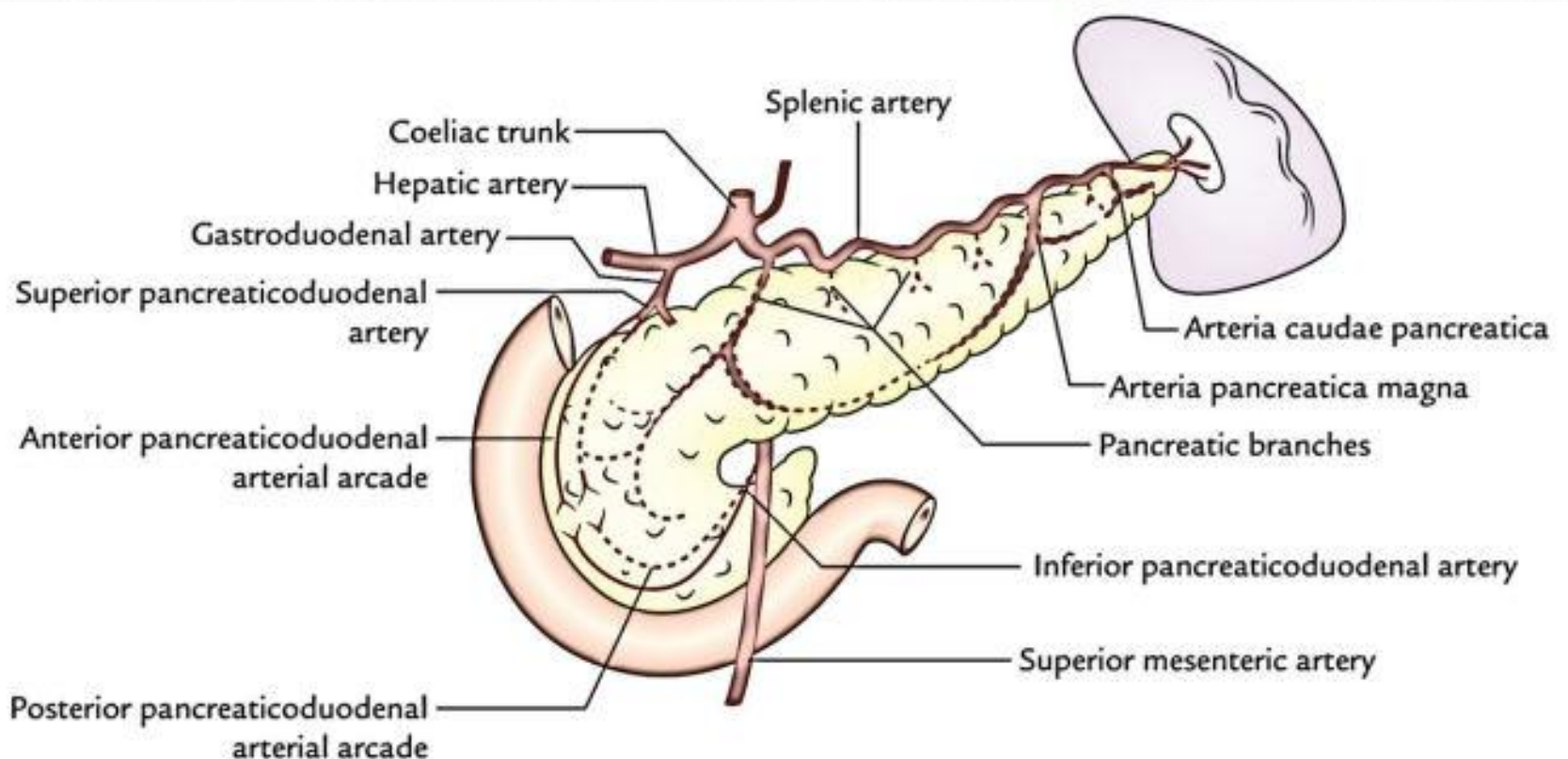
Pancreatic Duct

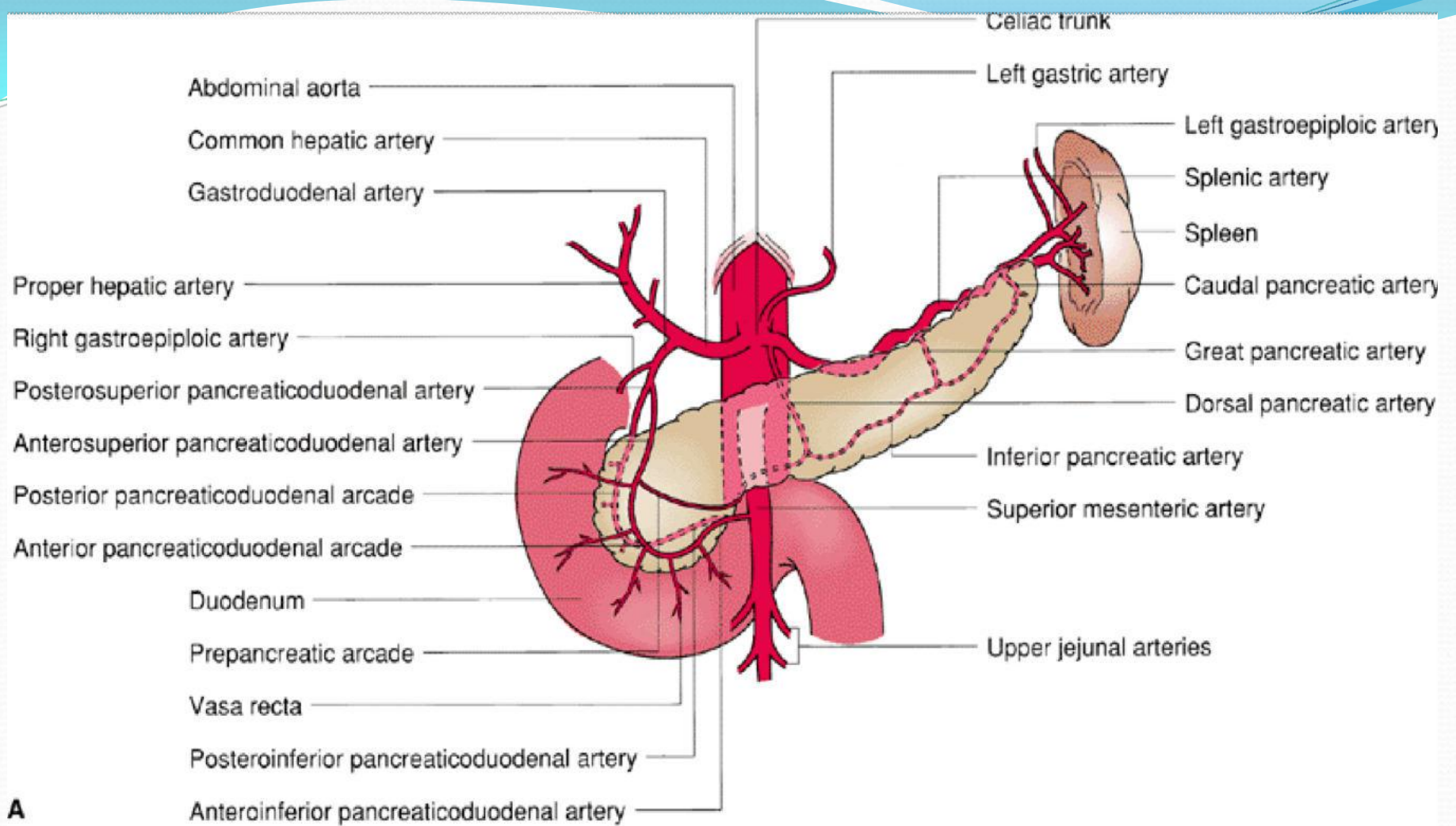
- Main duct (Wirsung) runs the entire length of pancreas
- Joins CBD at the ampulla of Vater
- 2 – 4 mm in diameter, 20 secondary branches
- Ductal pressure is 15 – 30 mm Hg (vs. 7 – 17 in CBD) thus preventing damage to panc. duct
- Lesser duct (Santorini) drains superior portion of head and empties separately into 2nd portion of duodenum



Arterial Supply of Pancreas

- Variety of major arterial sources (celiac, SMA and splenic)
- Mainly pancreatic br. Of Splenic a.
- Superior pancreaticoduodenal a.
- Inferior pancreaticoduodenal a.

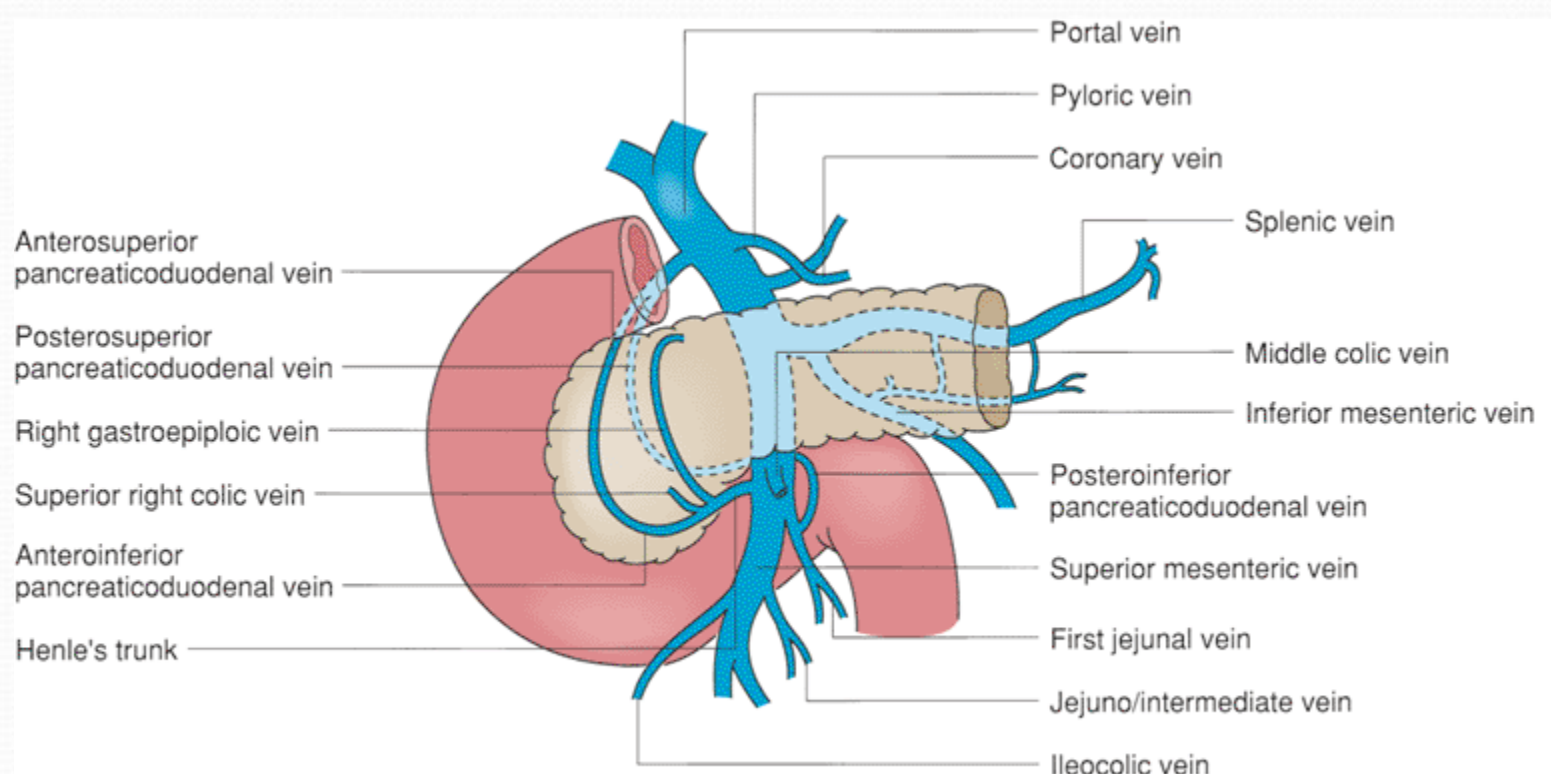
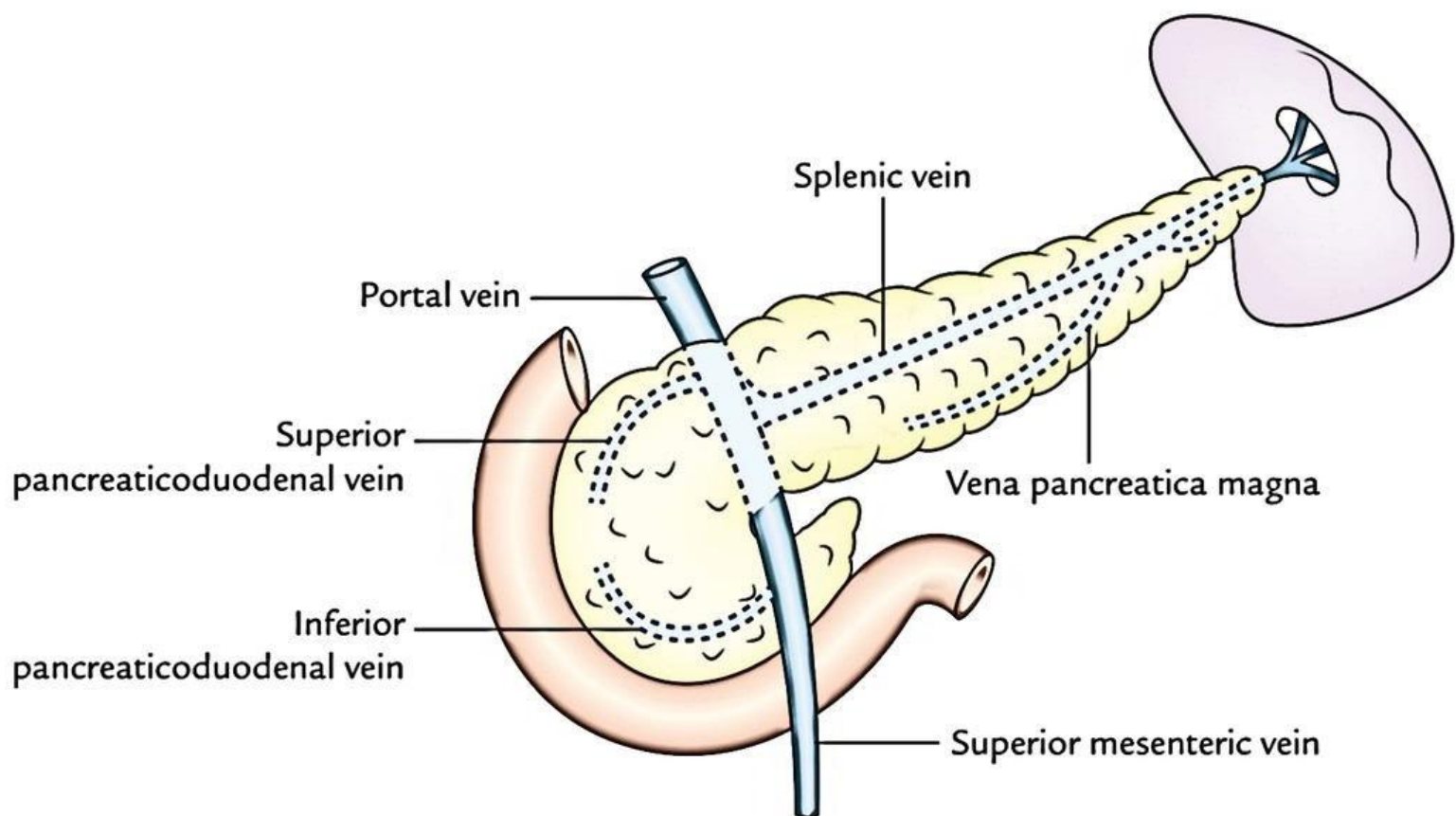




Arterial Supply of Pancreas

Venous Drainage of Pancreas

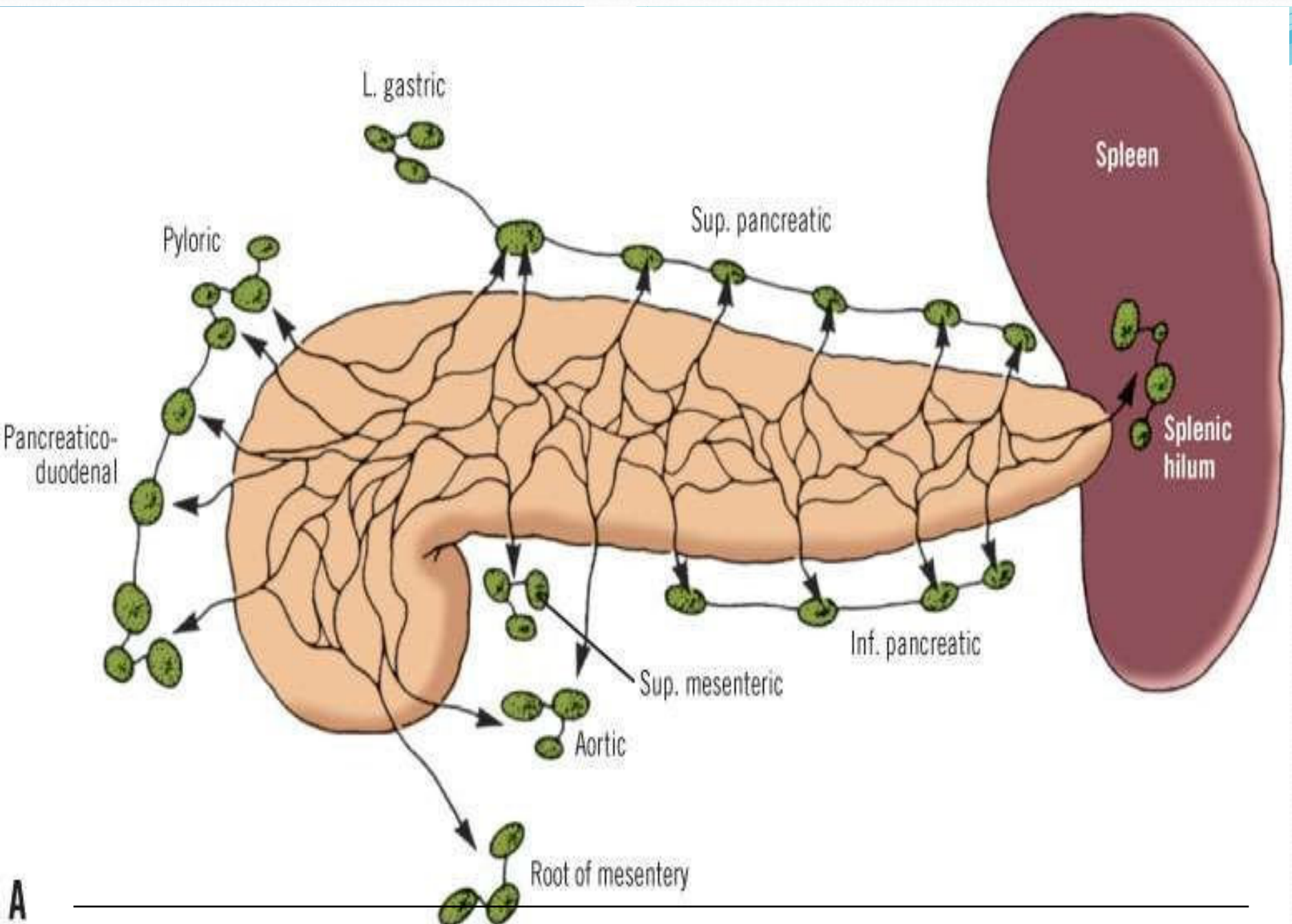
- Follows arterial supply
- Drain into- splenic, superior mesenteric
- Ultimately, into portal vein



Venous Drainage of Pancreas

Lymphatic Drainage

- Lymphatics follows the arteries
- Drain into **pancreaticosplenic, coeliac & superior mesenteric group** of lymph nodes.



Innervation of Pancreas

- Sympathetic fibers from the splanchnic nerves
- Parasympathetic fibers from the vagus
- Both give rise to **intrapancreatic periacinar plexuses**
- Parasympathetic fibers stimulate both exocrine and endocrine secretion
- Sympathetic fibers have a predominantly inhibitory effect