

Embryology Of Accessory Organs Of G.I.T.

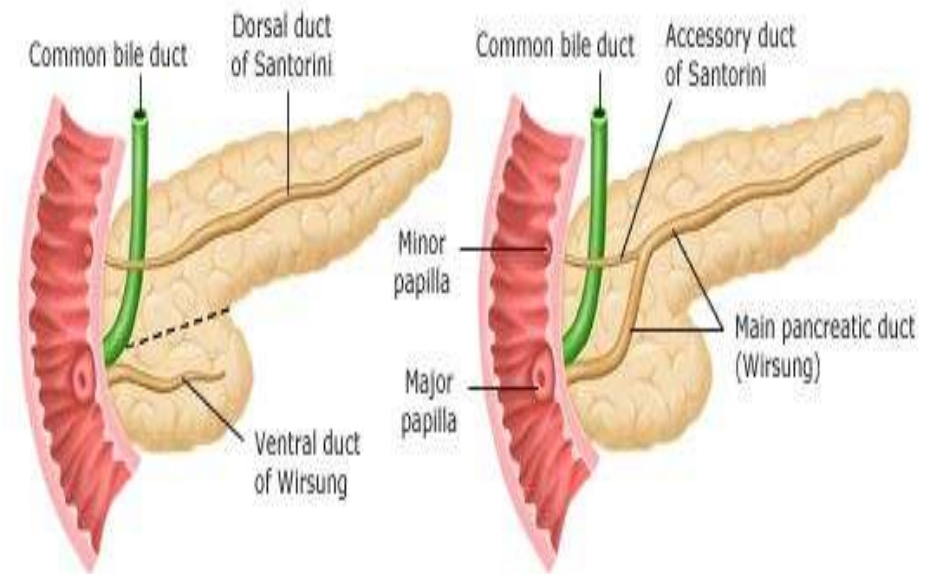
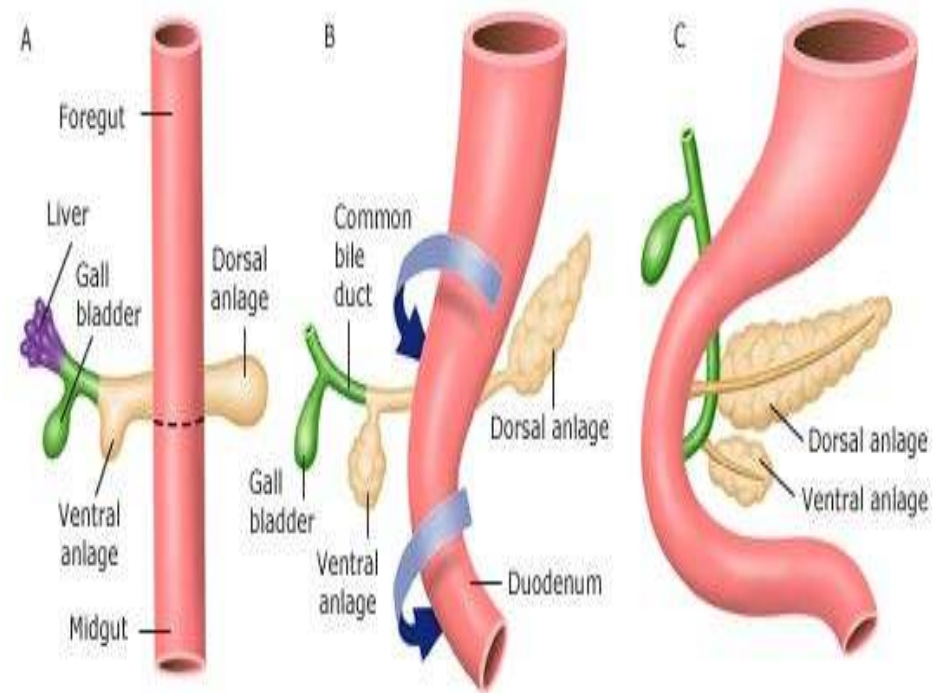
Pancreas:

○ It arises from endoderm that lined duodenum as 2 buds :

1) Dorsal bud

2) Ventral bud which moved dorsally to lie below dorsal bud, later the parenchyma & duct system of 2 buds will fused .

○ **N:** Ventral bud form uncinate process & inferior part of head while the remaining part is derived from dorsal bud .



Pancreas divisum

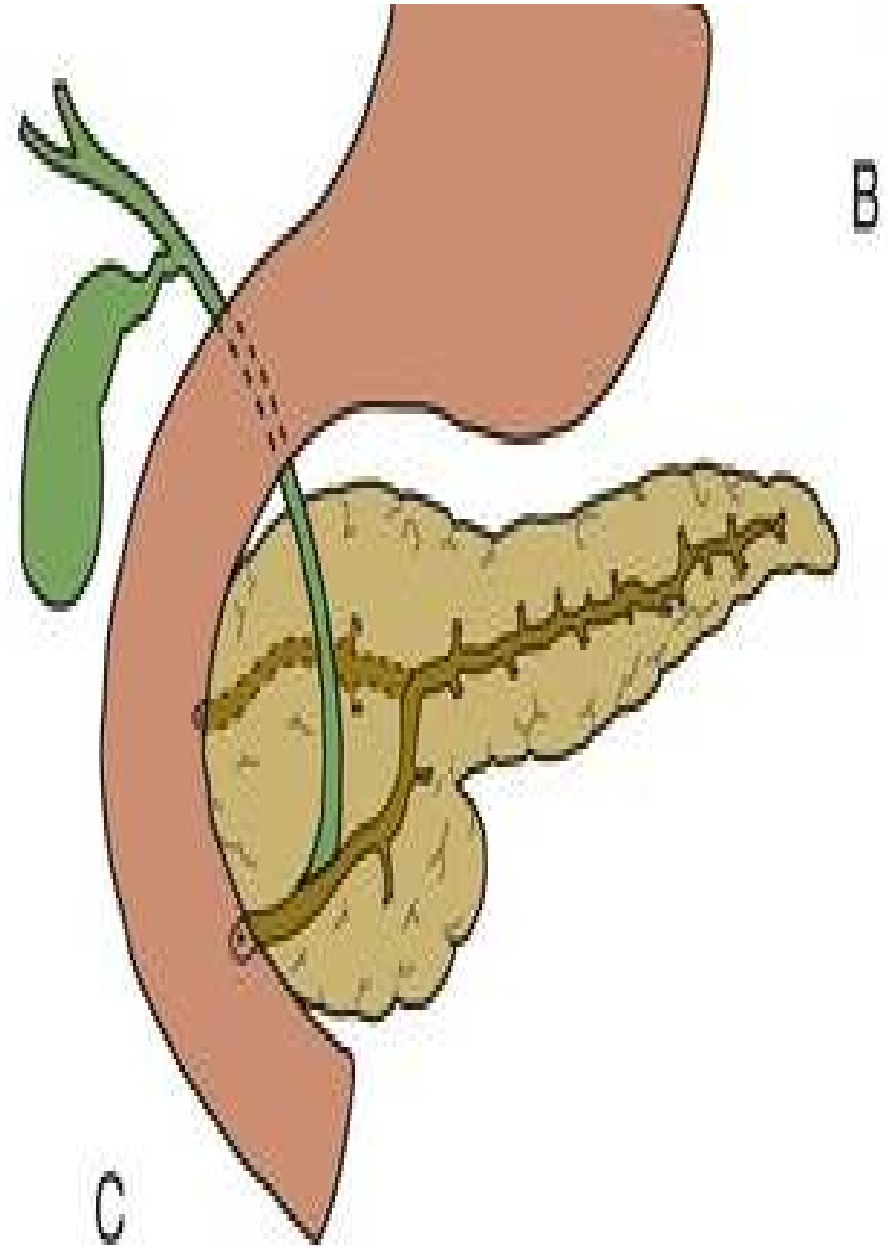
Normal pancreas

Pancreatic duct system:

- **Main pancreatic duct (Wirsung)**

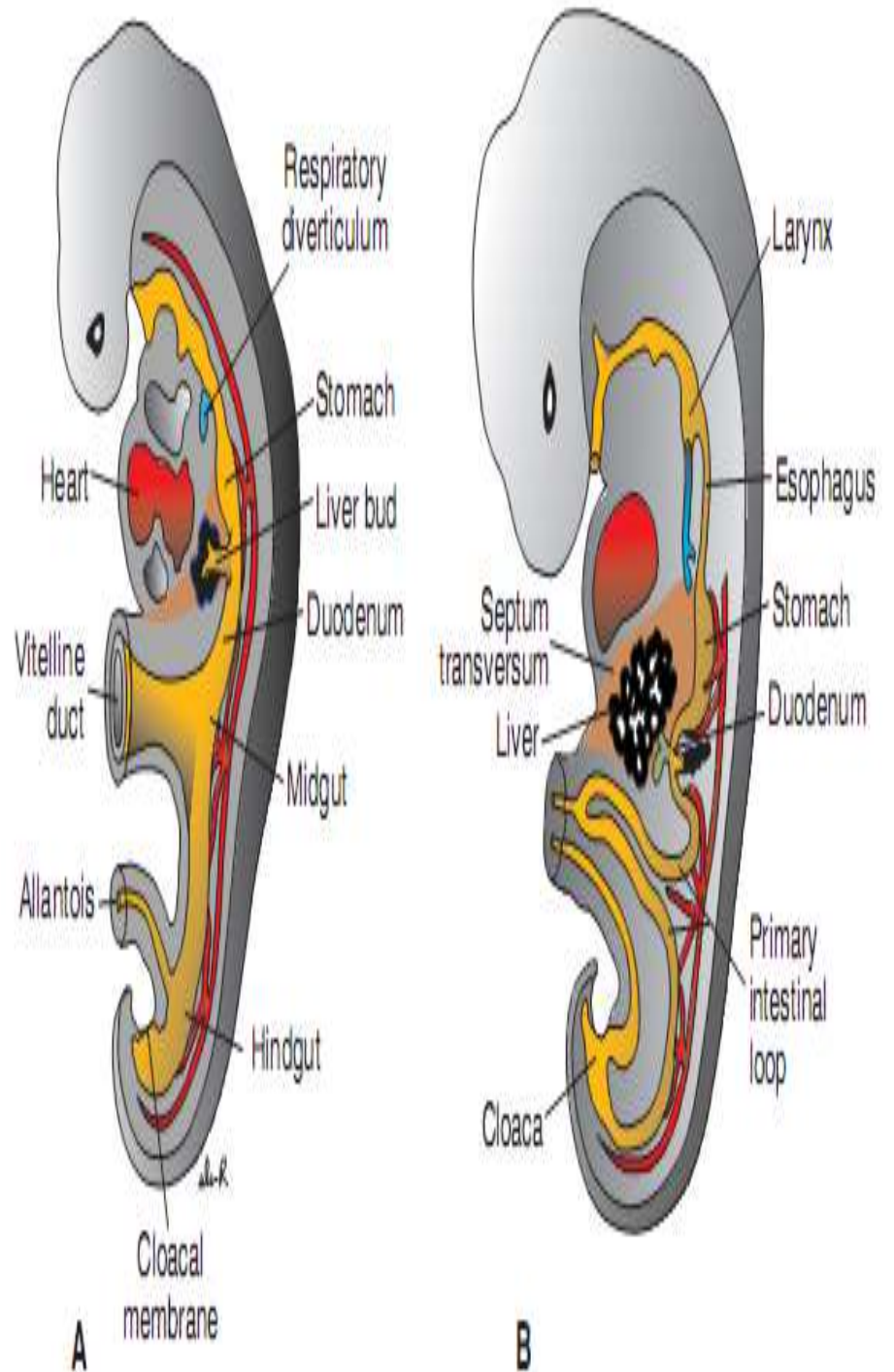
formed by the distal part of dorsal pancreatic duct & entire ventral pancreatic duct.

- The proximal part of dorsal pancreatic duct either obliterated if it persists called **accessory pancreatic duct (Santorini)**.

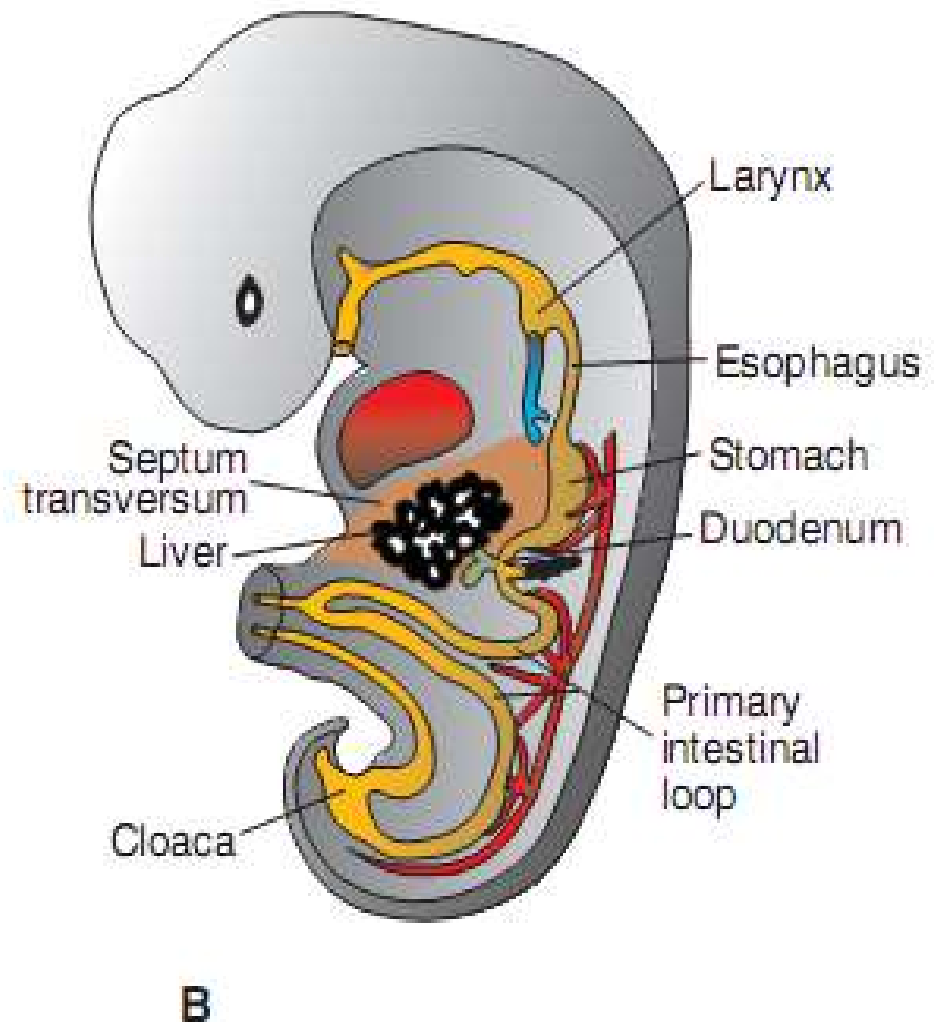
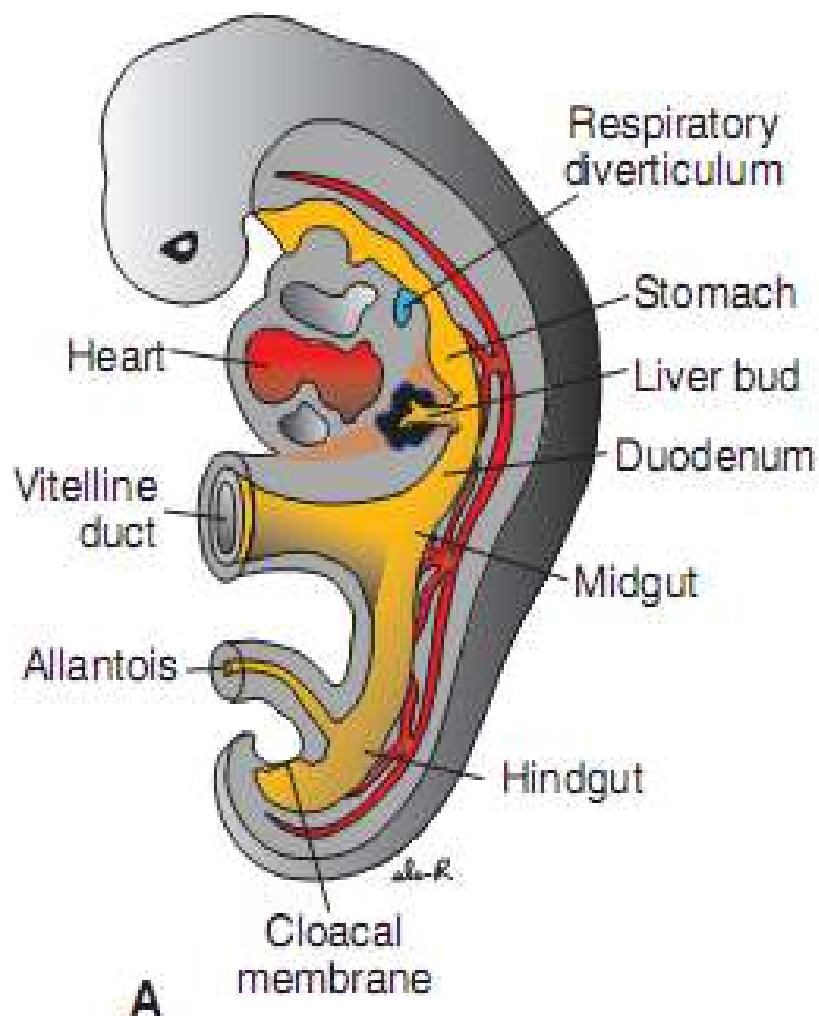


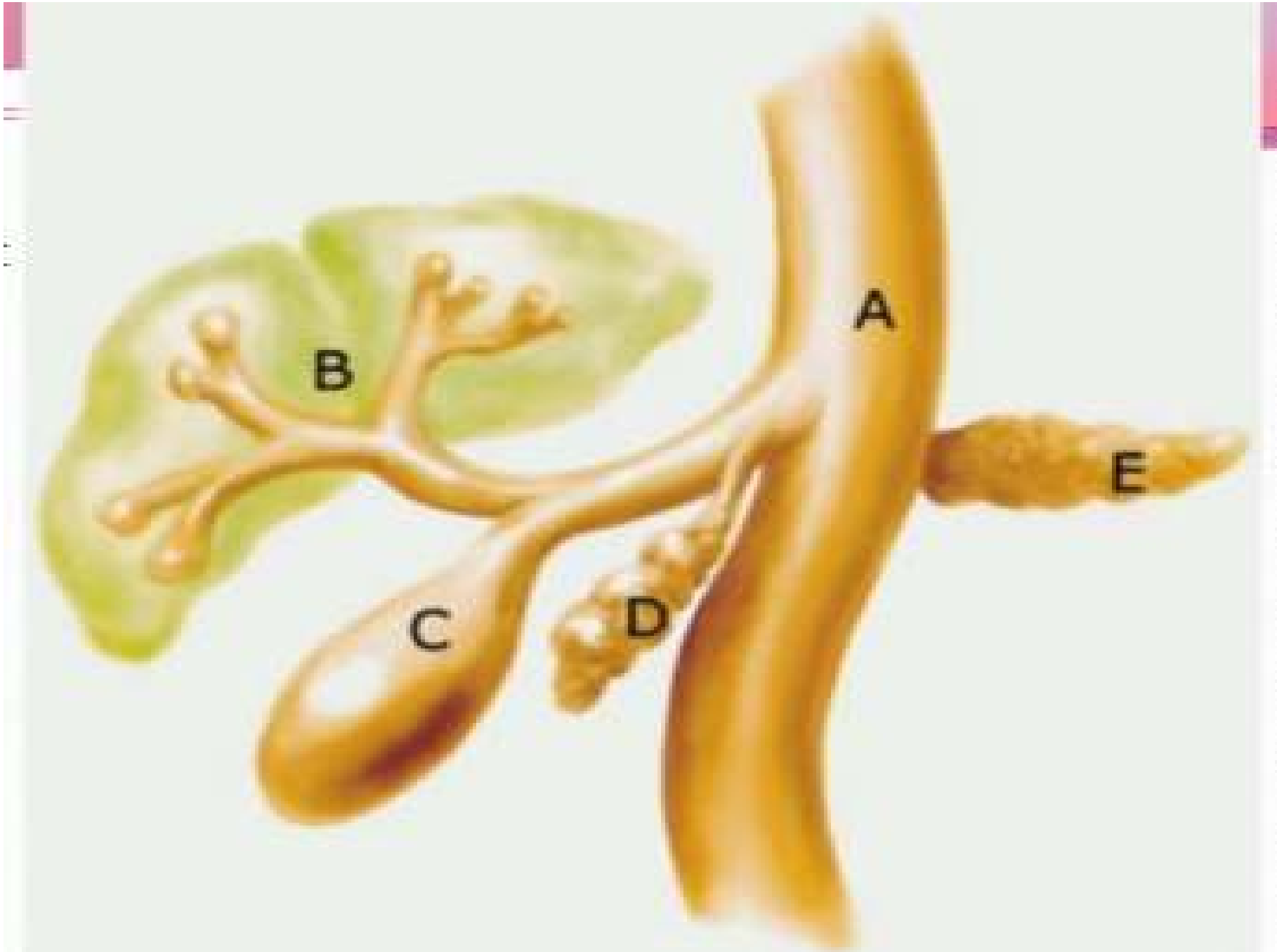
Liver & Gallbladder:

- ❖ At 3rd wk hepatic diverticulum arised from endoderm of foregut .
- ❖ It rapidly proliferated & penetrated **septum transversum** (mesdermal plate between pericardial cavity & stalk of yolk sac).



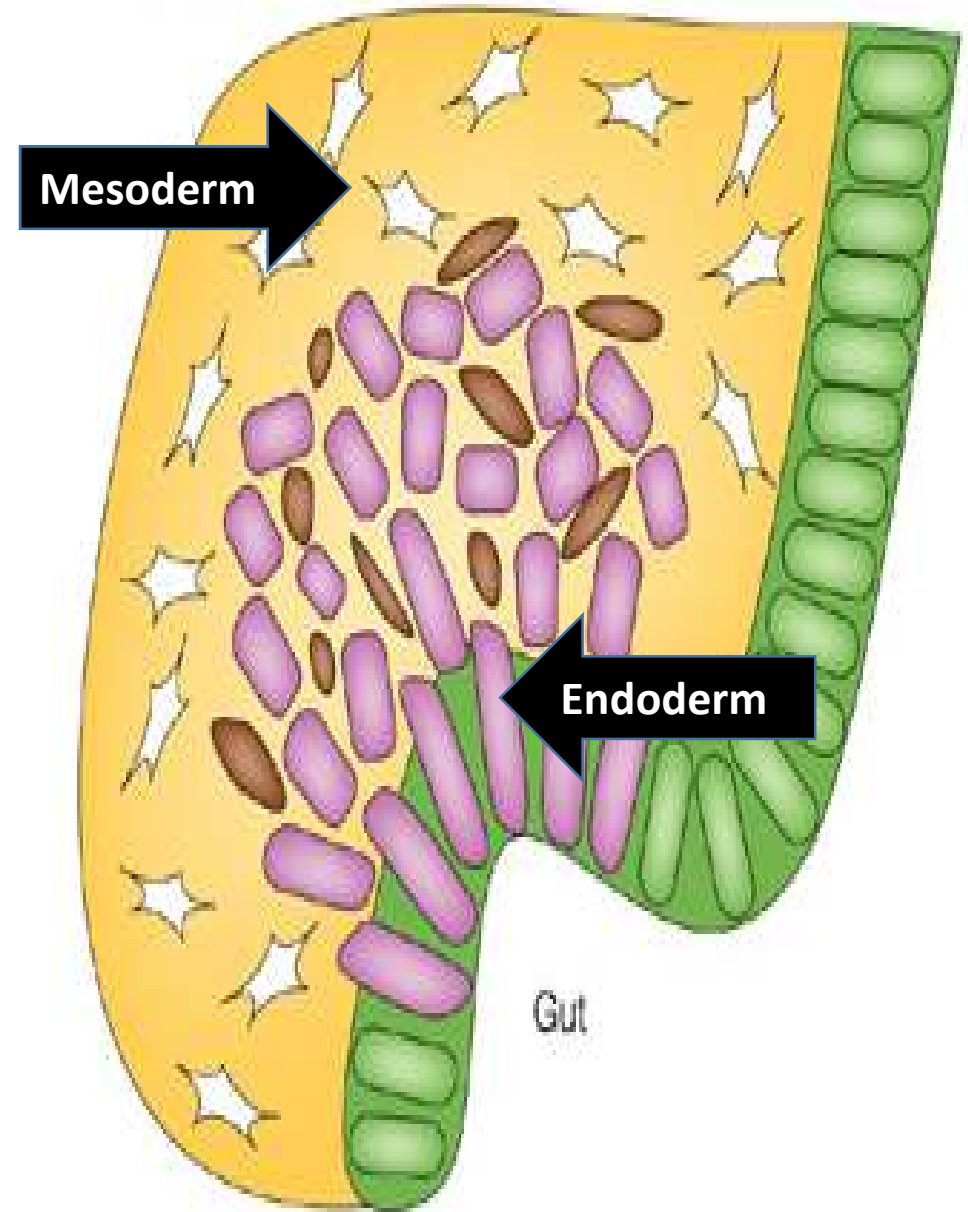
- The connection between liver & foregut narrows to form the bile duct, outgrowth from this duct give rise to gallbladder & cystic duct.





Differentiation of liver:

- Liver cords are **endoderm** differentiated to parenchyma liver cells, kupffer cell, hematopoietic cell lining epithelial of biliary ducts.
- The connective tissue cells arise from **mesoderm of septum transversum**.



Position of liver:

○ Once liver invades septum

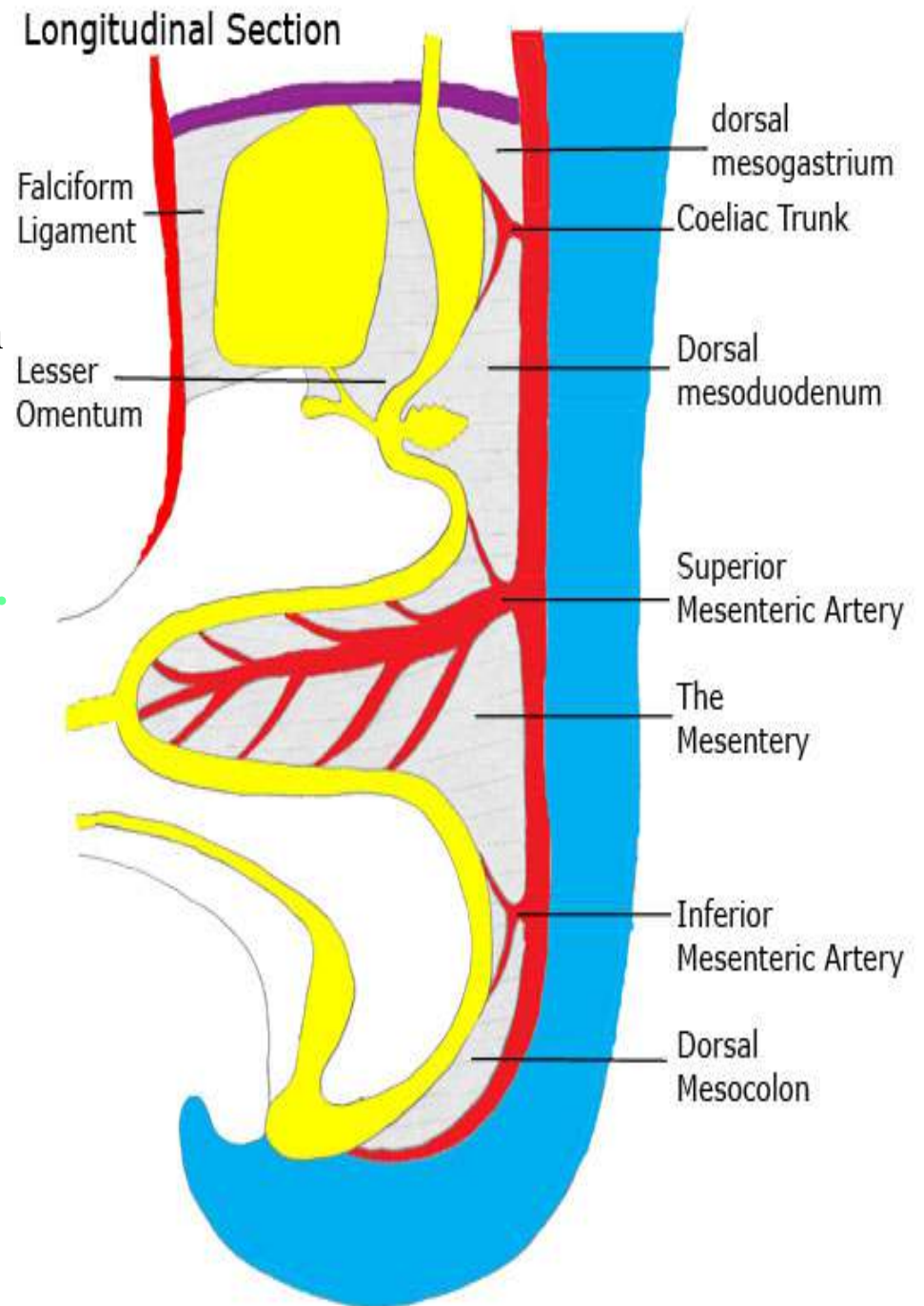
transversum, the mesoderm of septum

transversum be membranous form

falciform ligament & lesser omentum .

○ The mesoderm on the liver surface

give rise to visceral peritoneum .



Function Of Liver :

○At **10 wk** the wt. of liver is **10% of TBW**

because large number of sinusoid & major hematopoietic function .

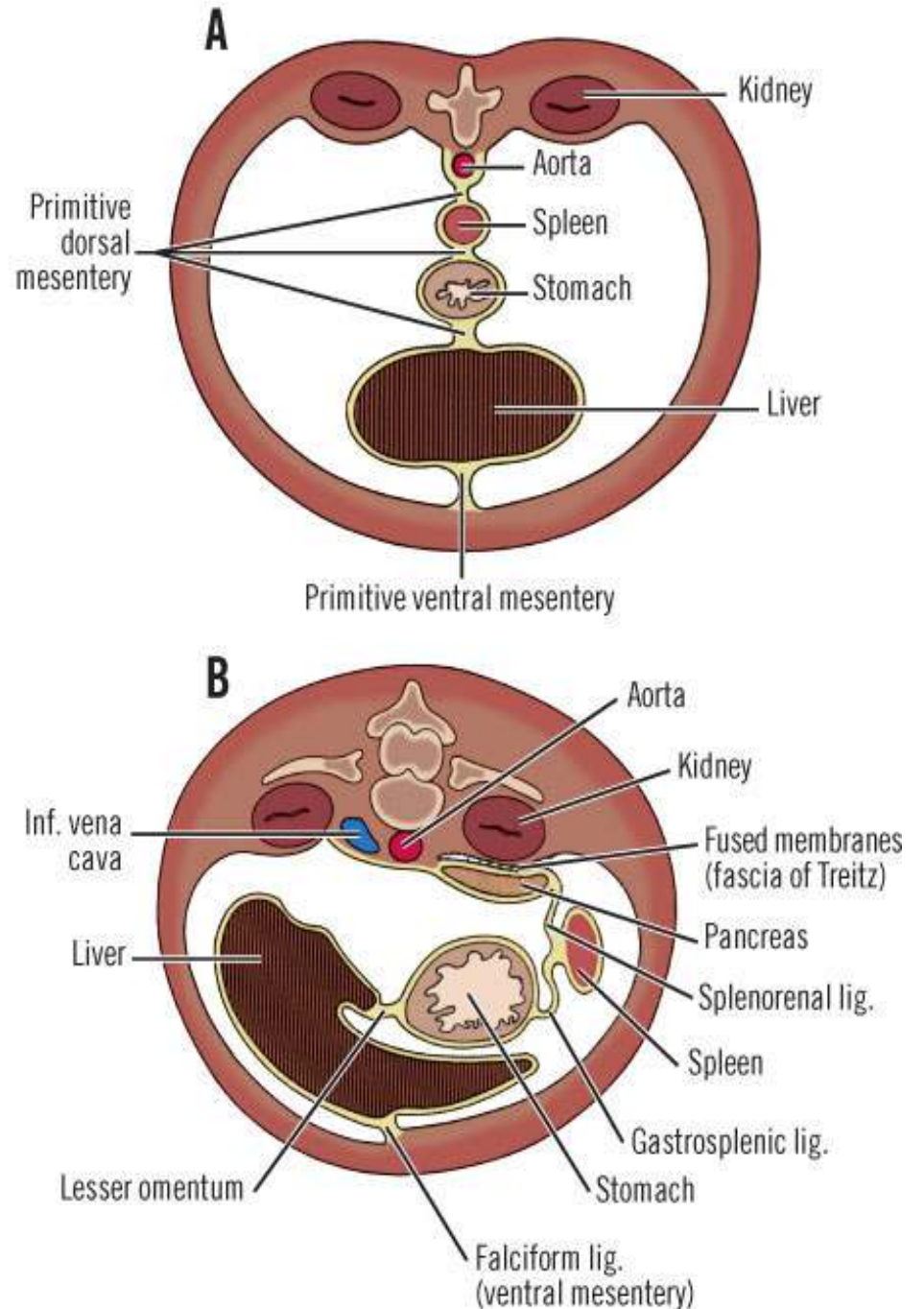
○At last 2mth of intrauterine life this activity of subside & small hematopoietic islands remain at birth so liver is **5% of**

TBW .



Spleen :

○ At 5th wk of development **Spleen primordium** appear as mesodermal proliferation between 2 leaves of dorsal mesogastrium & with rotation of stomach the spleen swing to LT & fused with posterior abdominal wall & degenerated ,



- So spleen be intraperitoneal organ connect to kidney by lienorenal ligament & with stomach by gastrosplenic ligament .

