



DIGESTIVE SYSTEM 3

- Big salivary glands
 - parotid gland
 - submandibular gl.
 - sublingual gl.

- Liver
- Gallbladder
- Pancreas

Salivary glands - schema

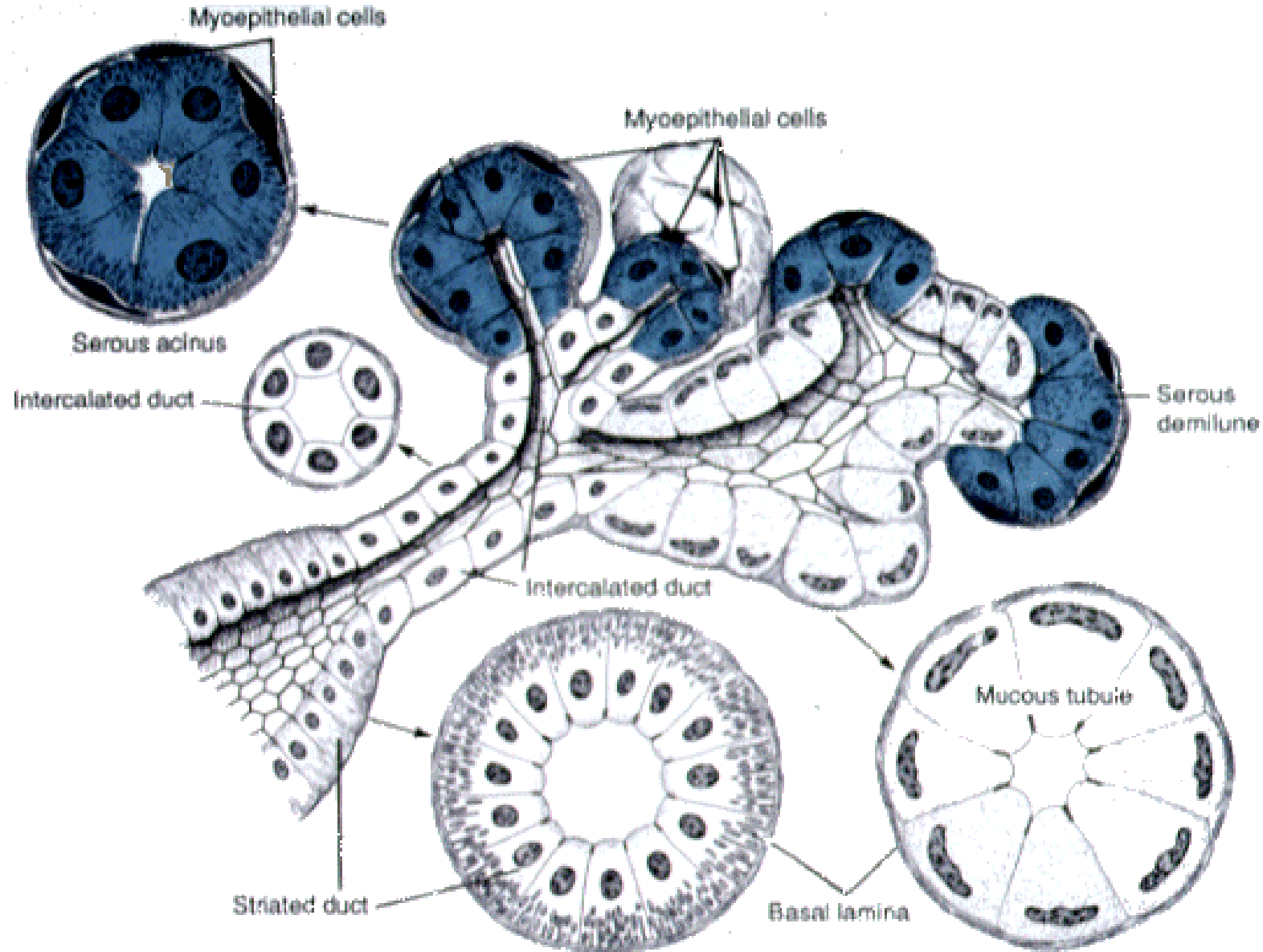
Glandular parenchyma

secretory portion

serous acini
mucous tubules
mixed /serous demilunes
of Gianuzzi/
+ myoepithelial cells

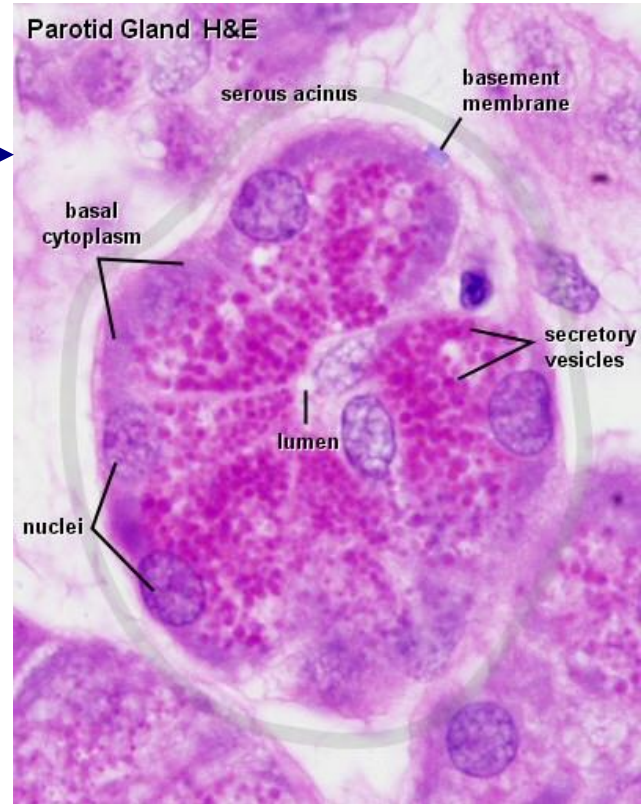
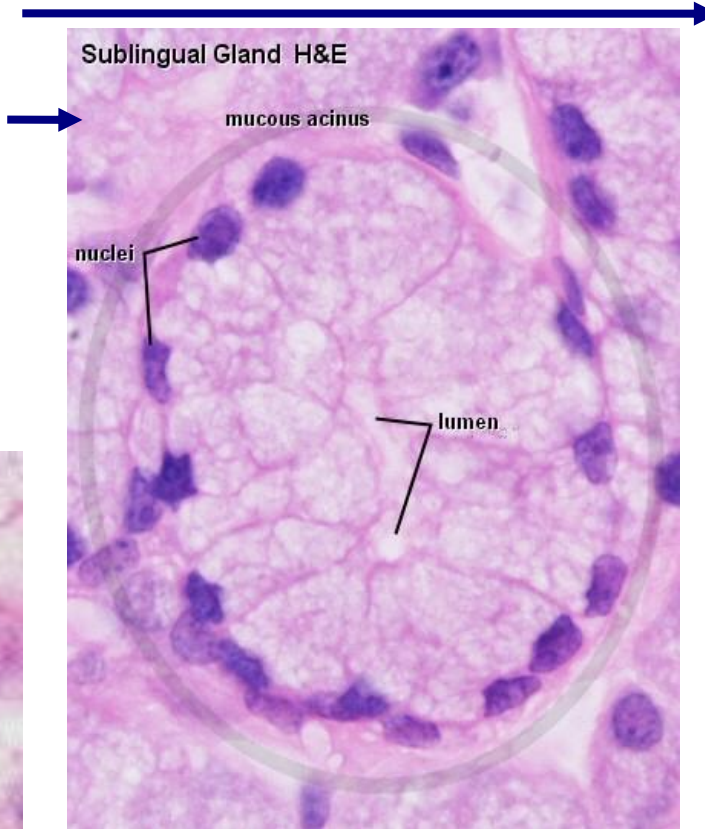
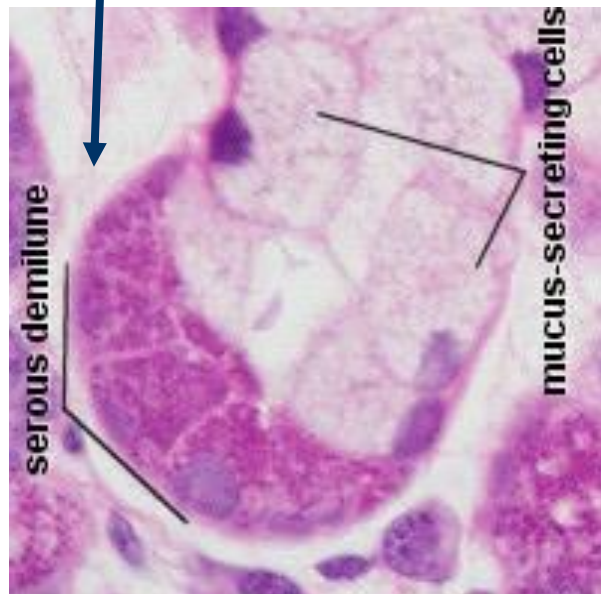
duct system

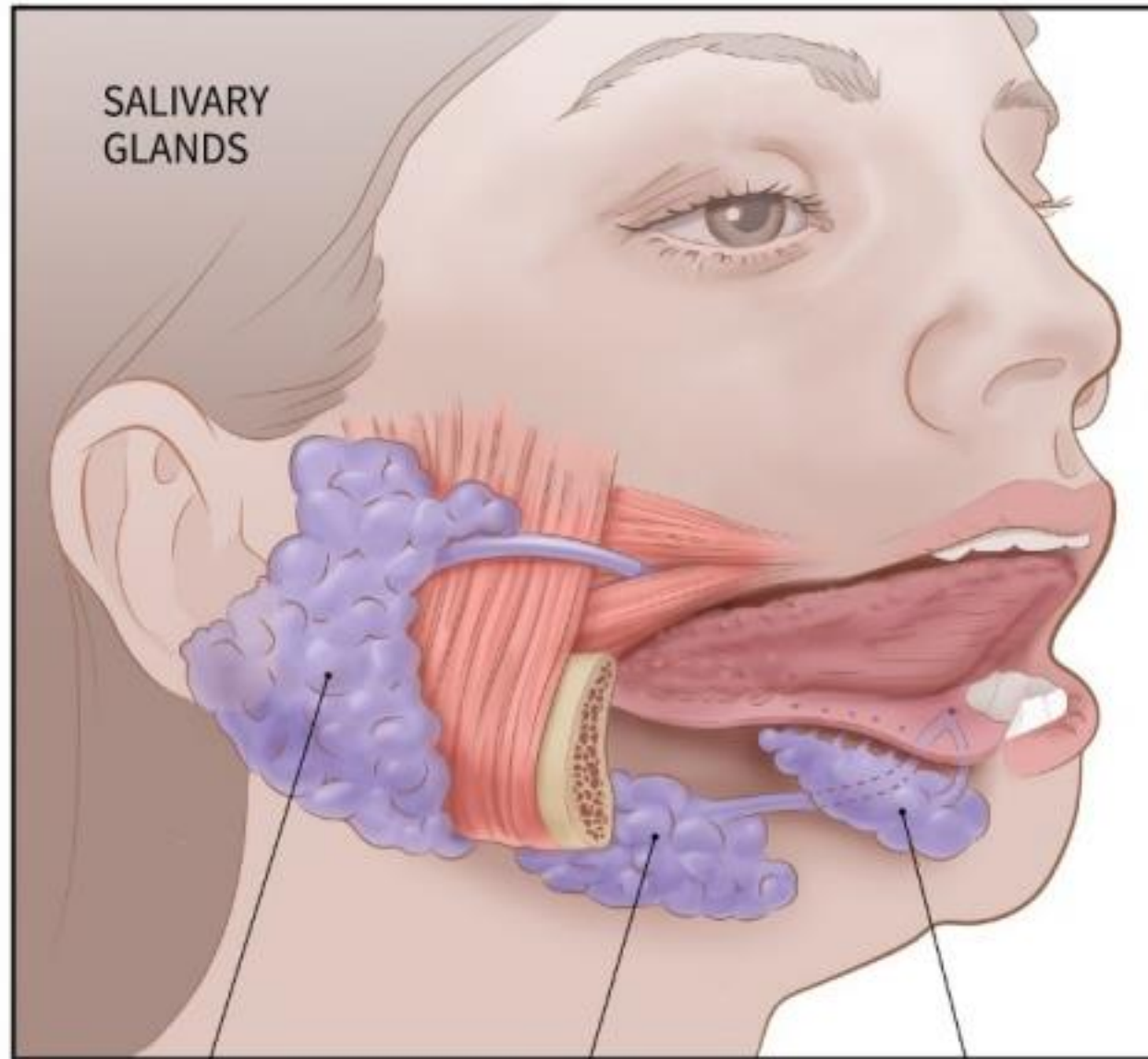
intercalated ducts
intralobular /striated/
ducts
interlobular and
interlobar ducts
main excretory duct



Secretory portion of salivary glands

- serous acini
- mucous tubules
- mixed (serous demilunes of Gianuzzi)





SALIVARY
GLANDS

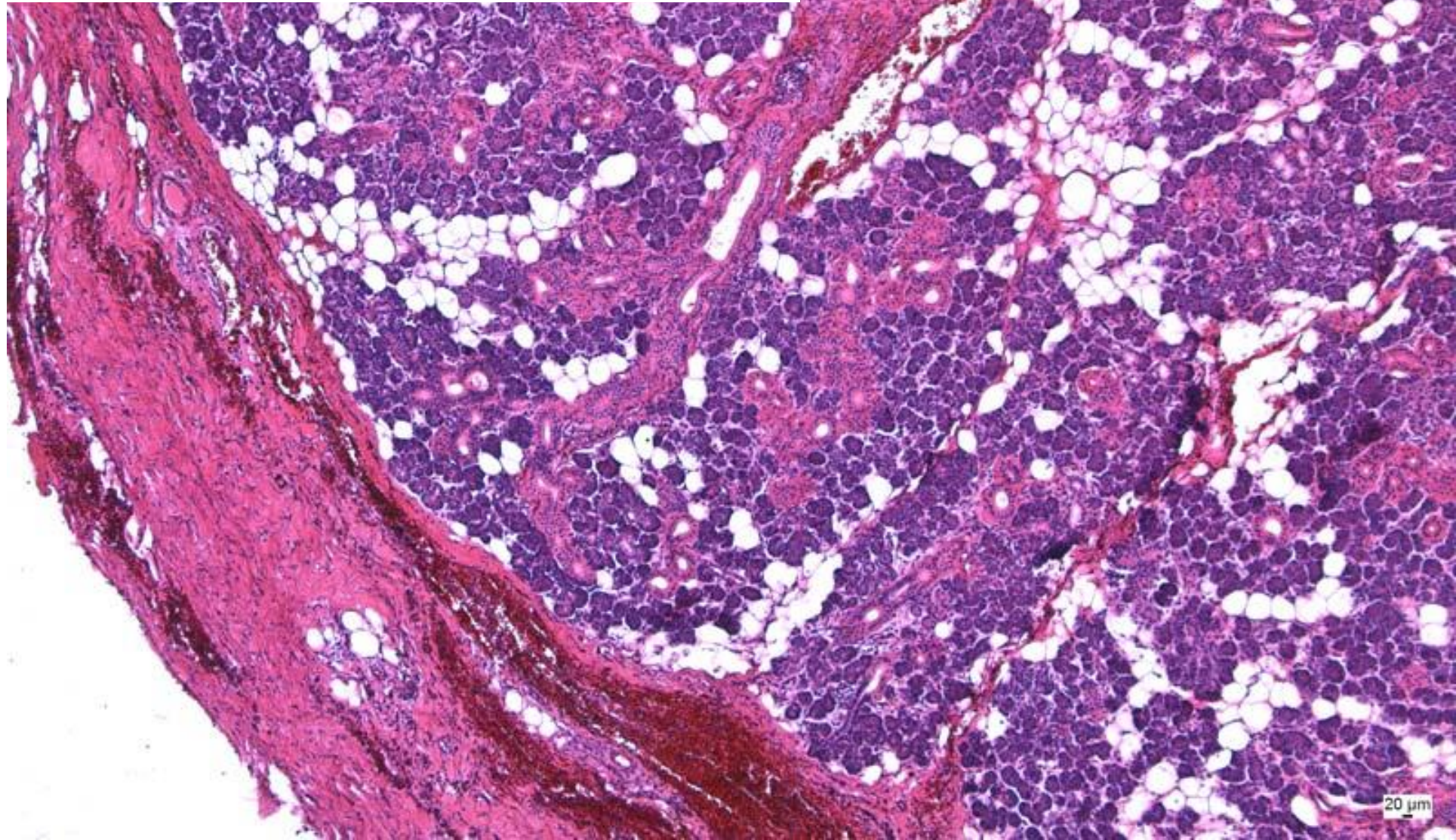
Parotid
gland

Submandibular
gland

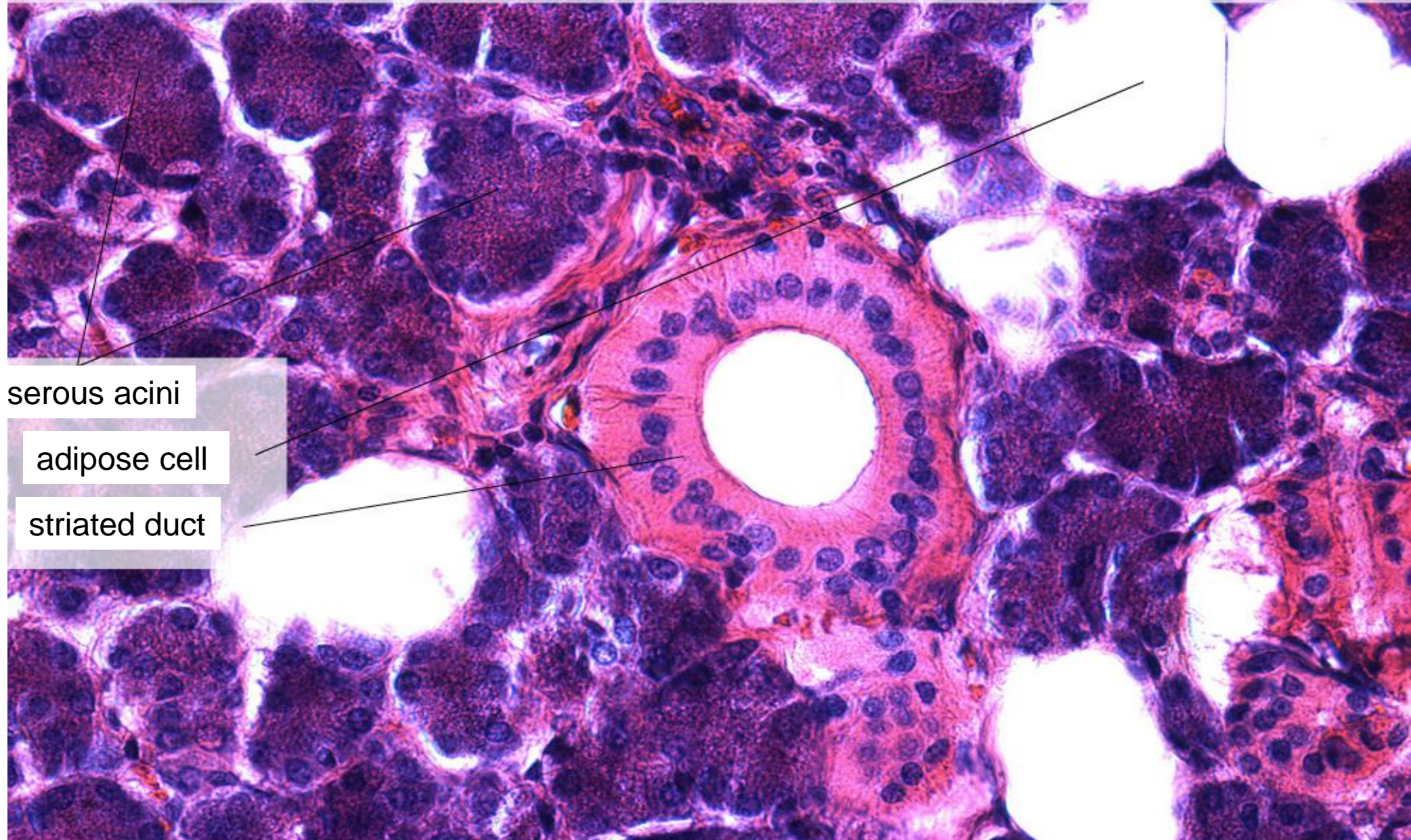
Sublingual
gland

Parotid gland

Compound acinar serous gl.
ducts – intercalated, striated, interlobular,
excretory ducts
Adipose tissue



Gl. parotis – detail, (HE), objektiv 40×



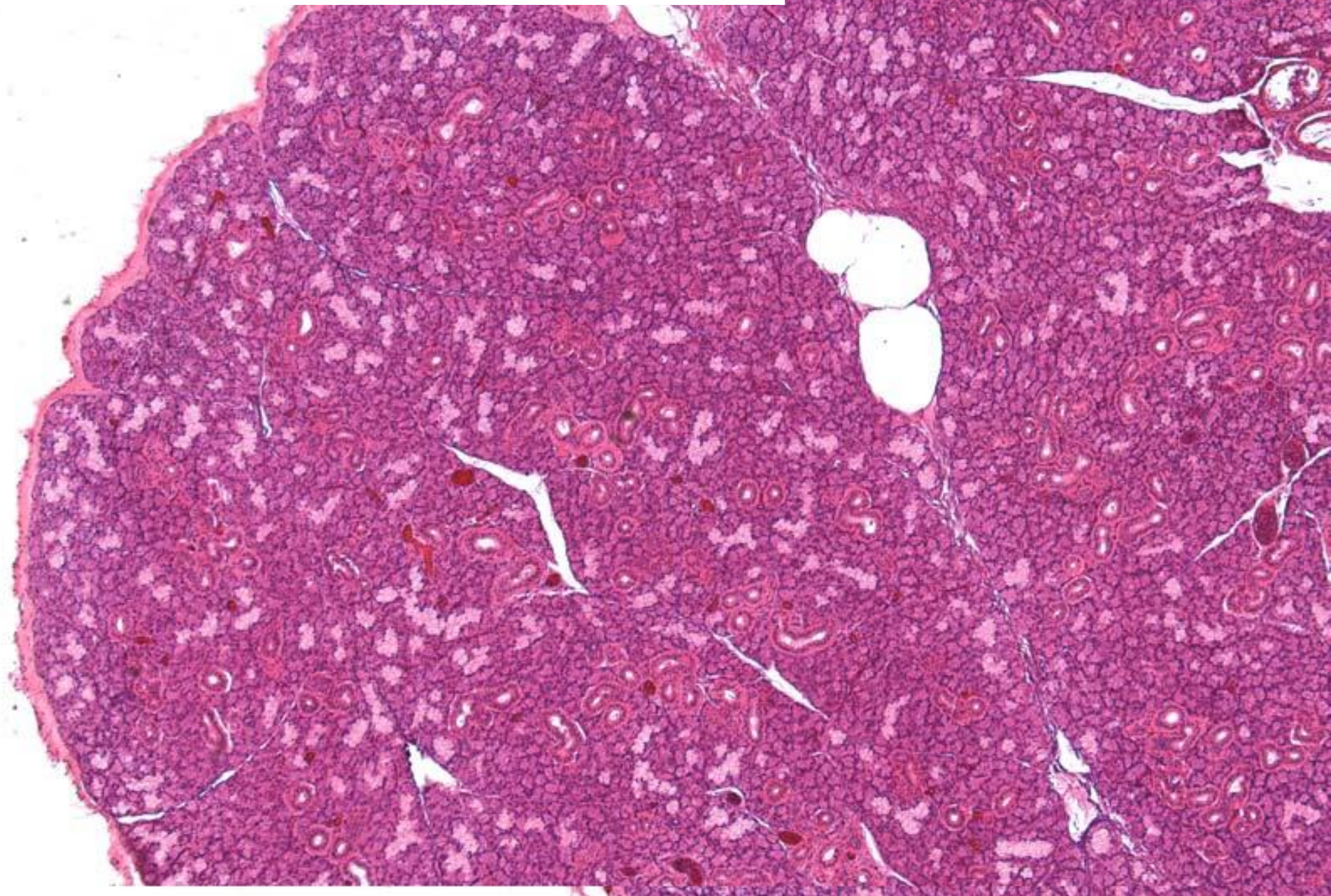
serous acini

adipose cell

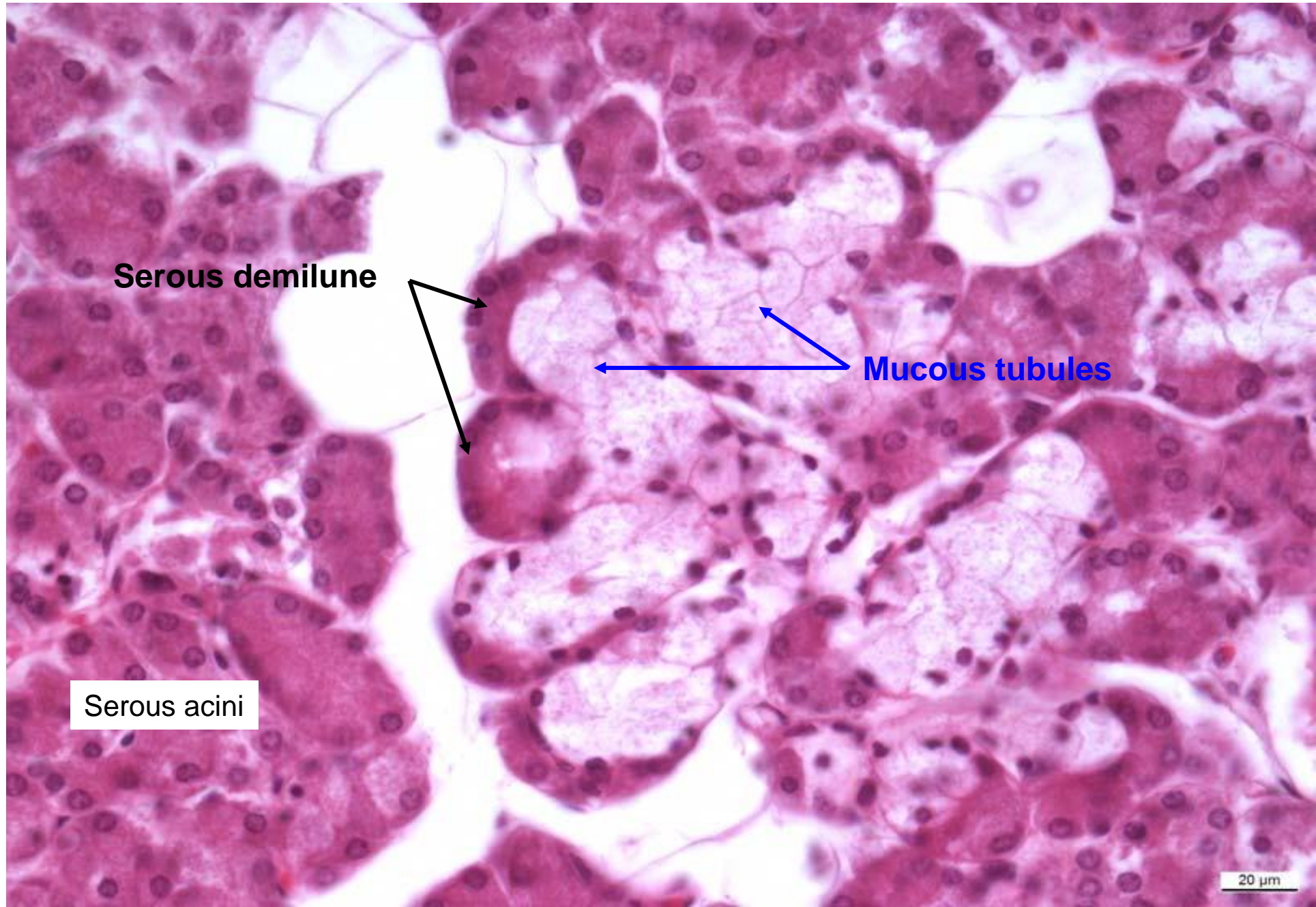
striated duct

Submandibular gland

Compound tubuloacinar mixed gl.

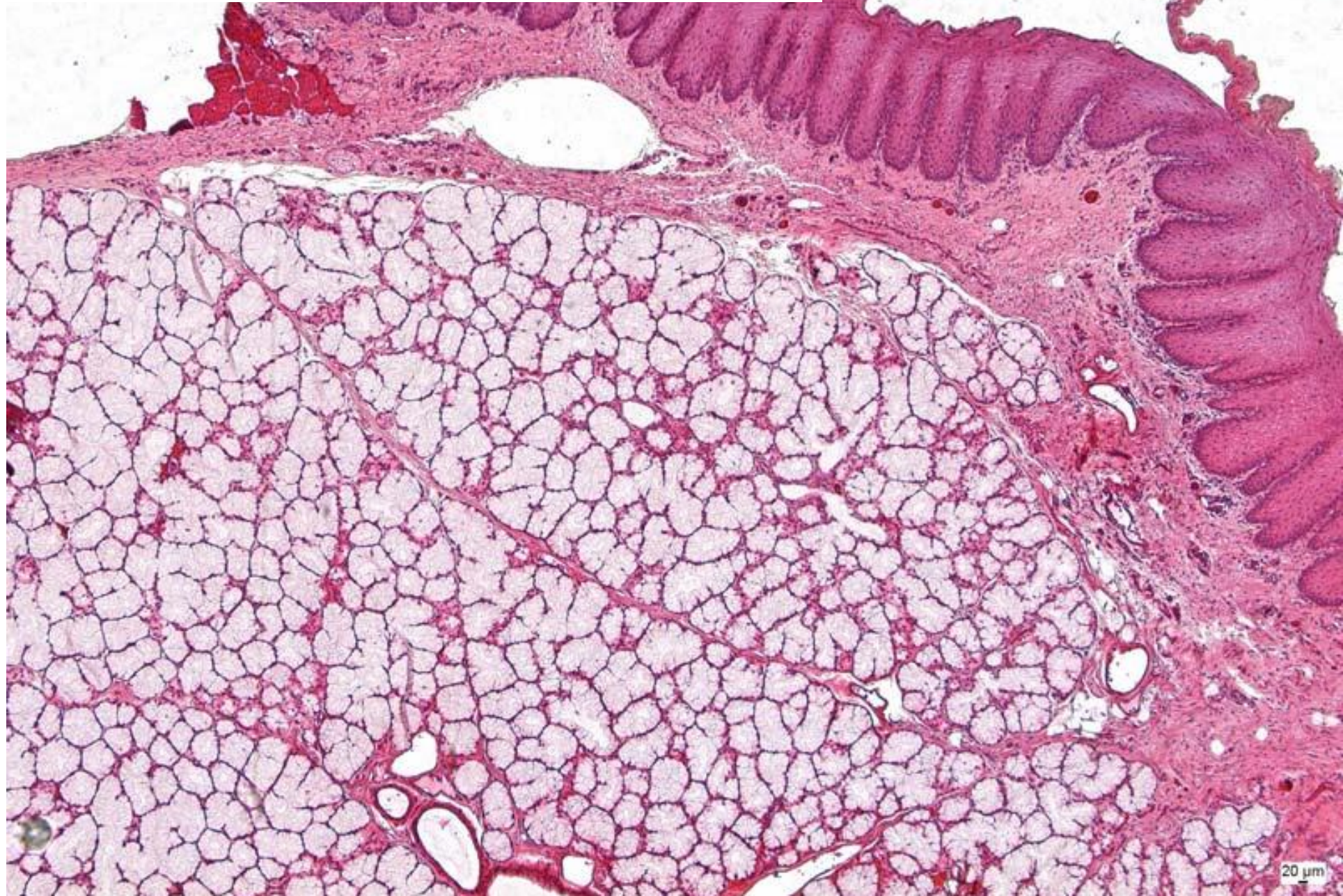


Submandibular gland



Sublingual gland

Compound tubuloacinar mixed gl.

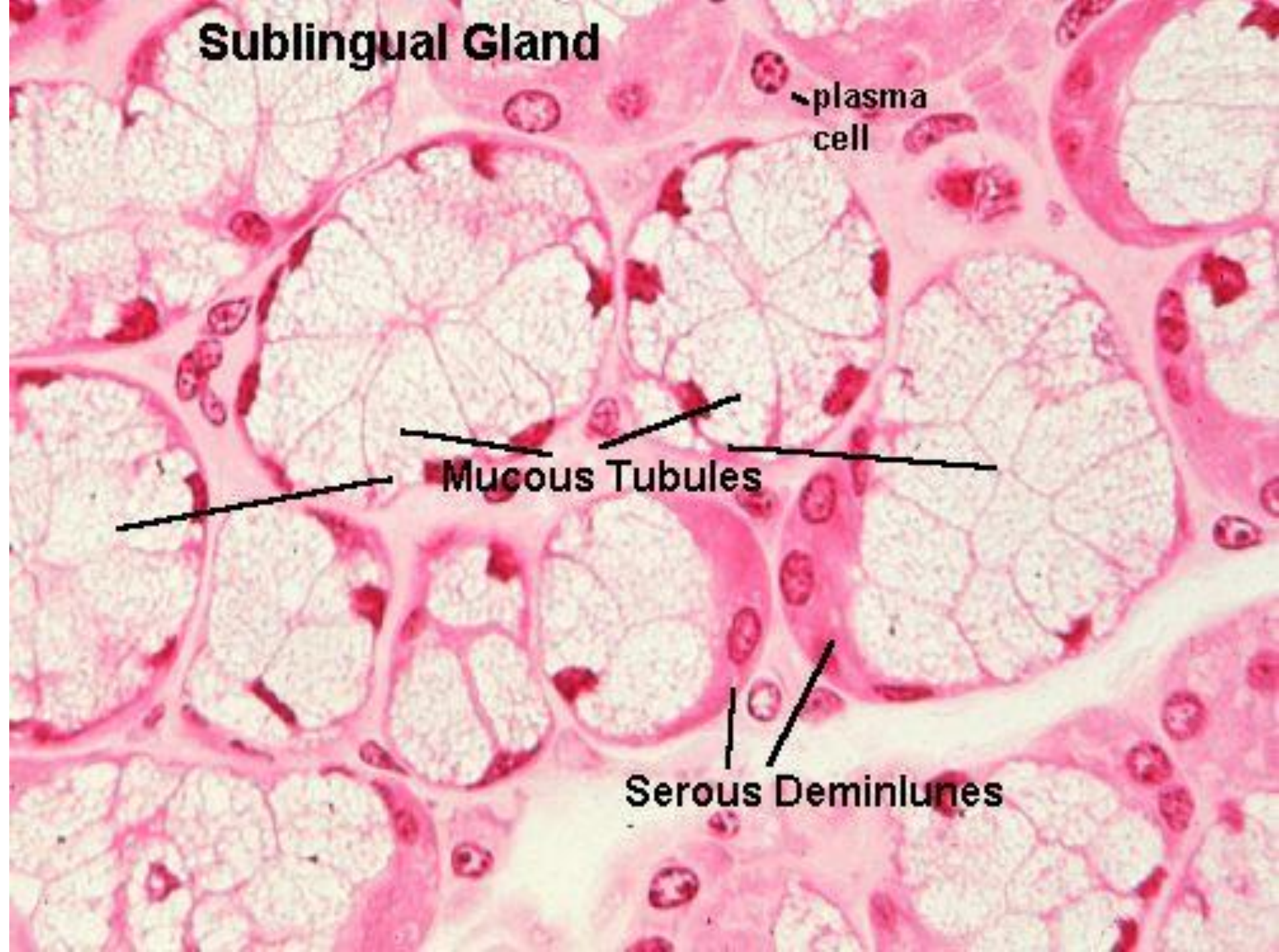


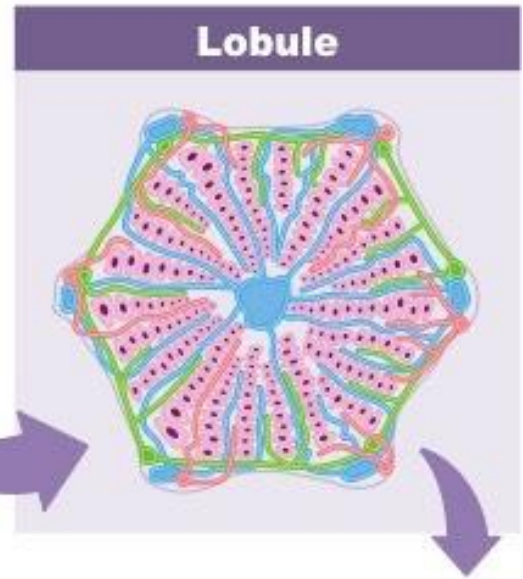
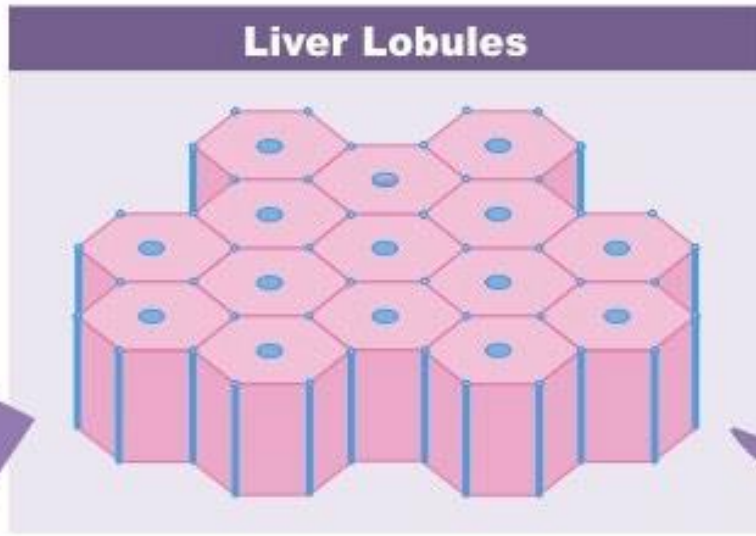
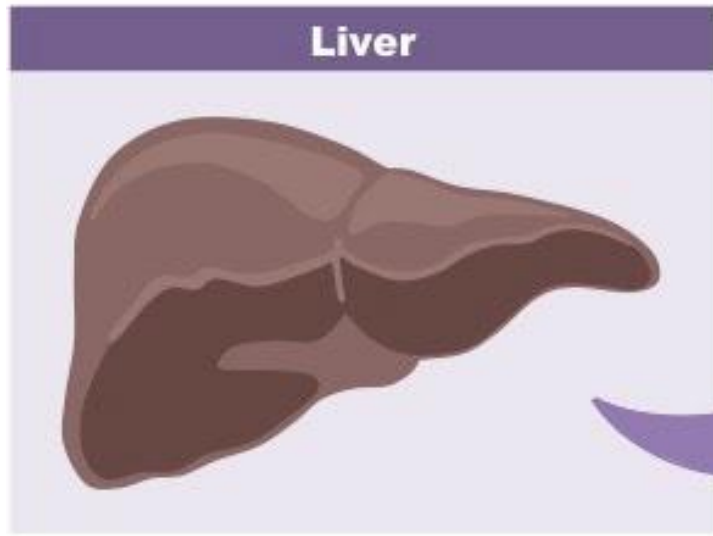
Sublingual Gland

plasma cell

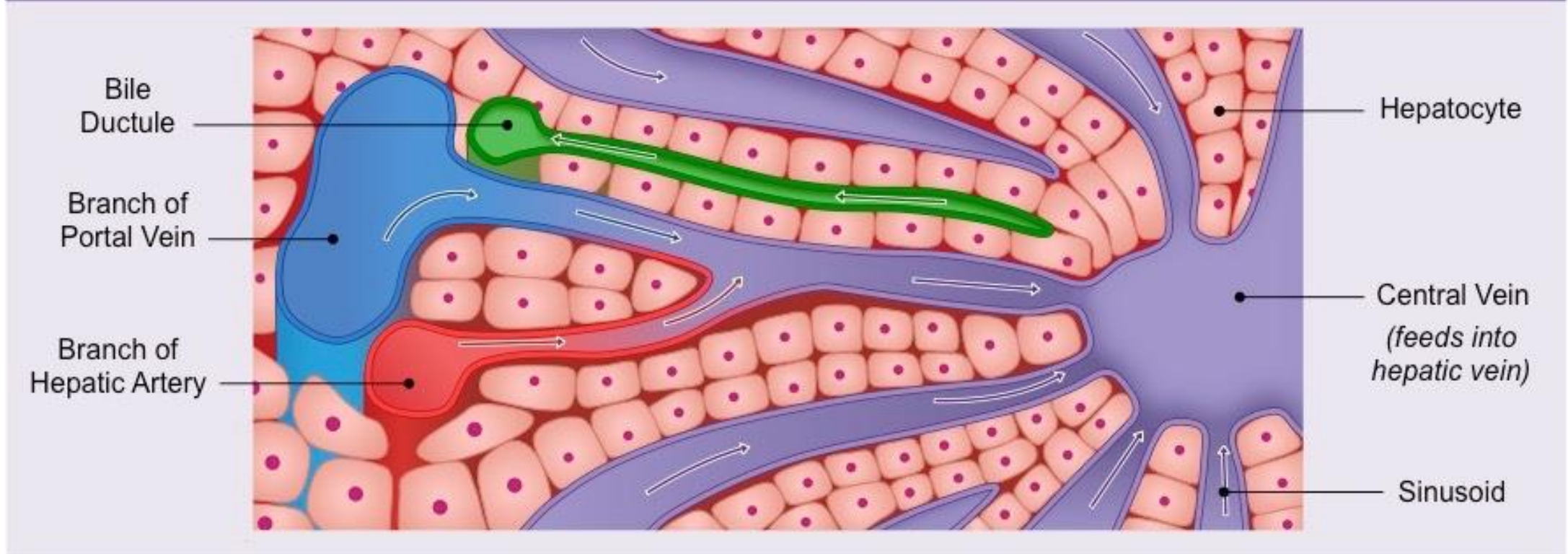
Mucous Tubules

Serous Deminlunes



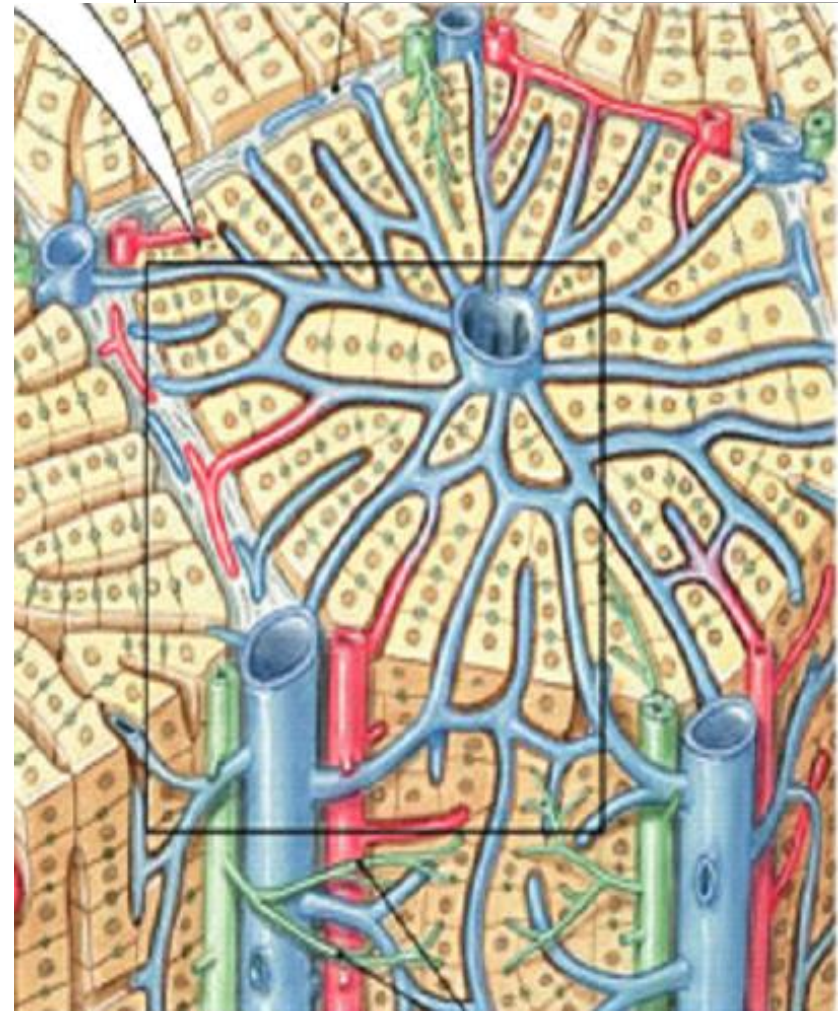
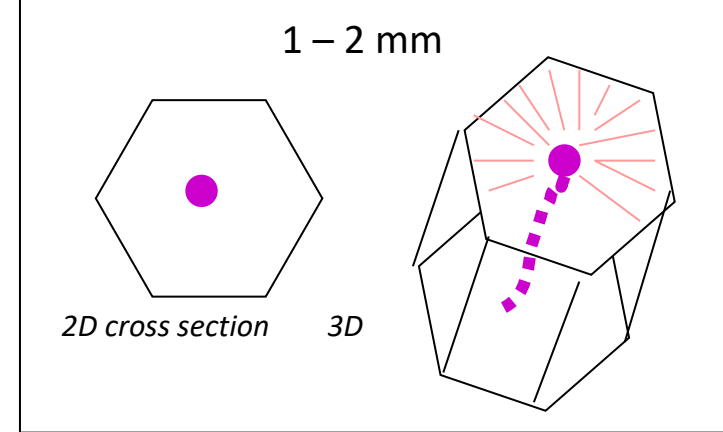


Cross-Section of a Liver Lobule



Classic liver lobule

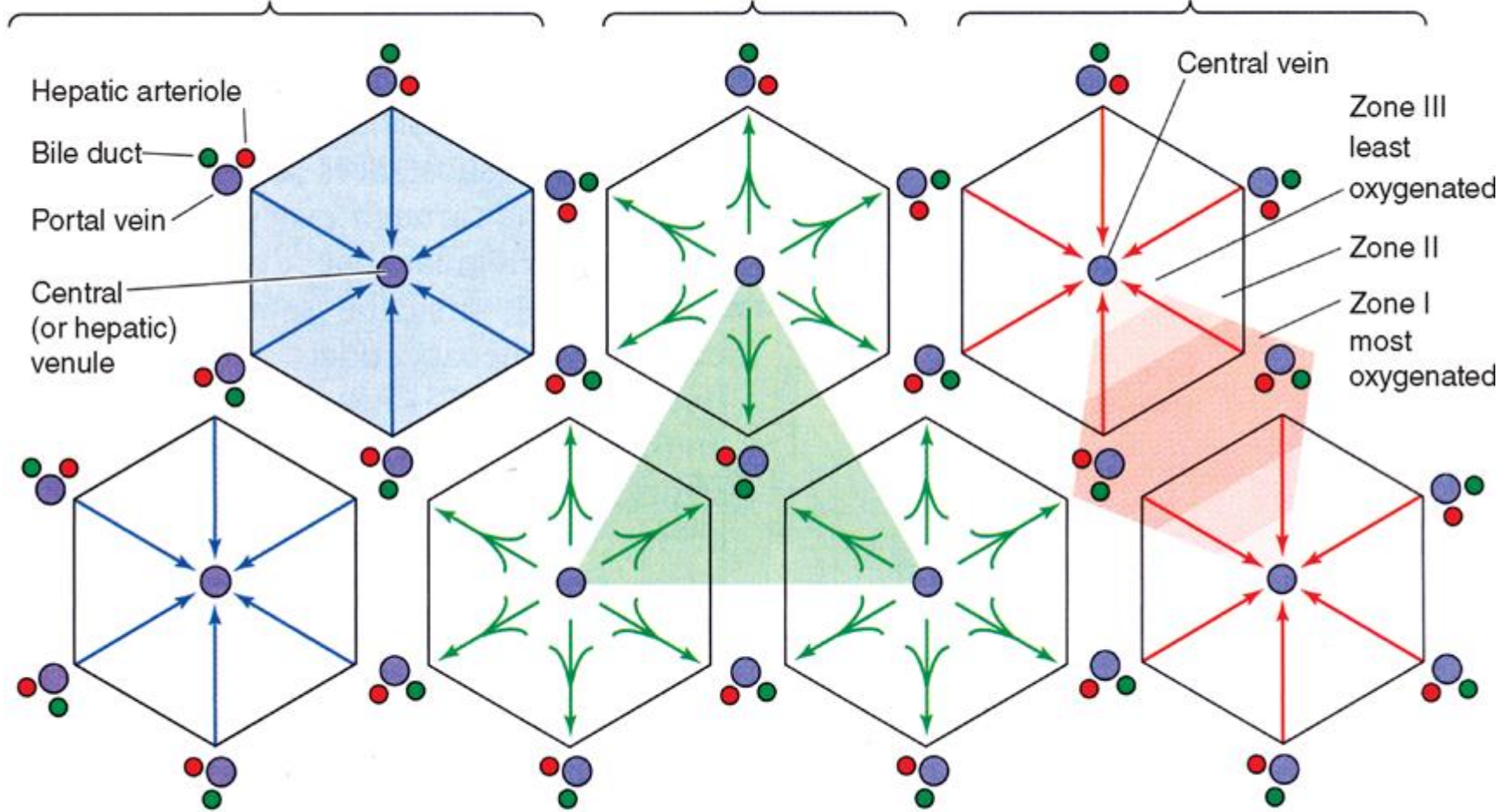
- Shape – polygonal (polyhedral)
- Central vein
- Hepatocytes in interconnected plates
- Liver sinusoids
- Bile canaliculus



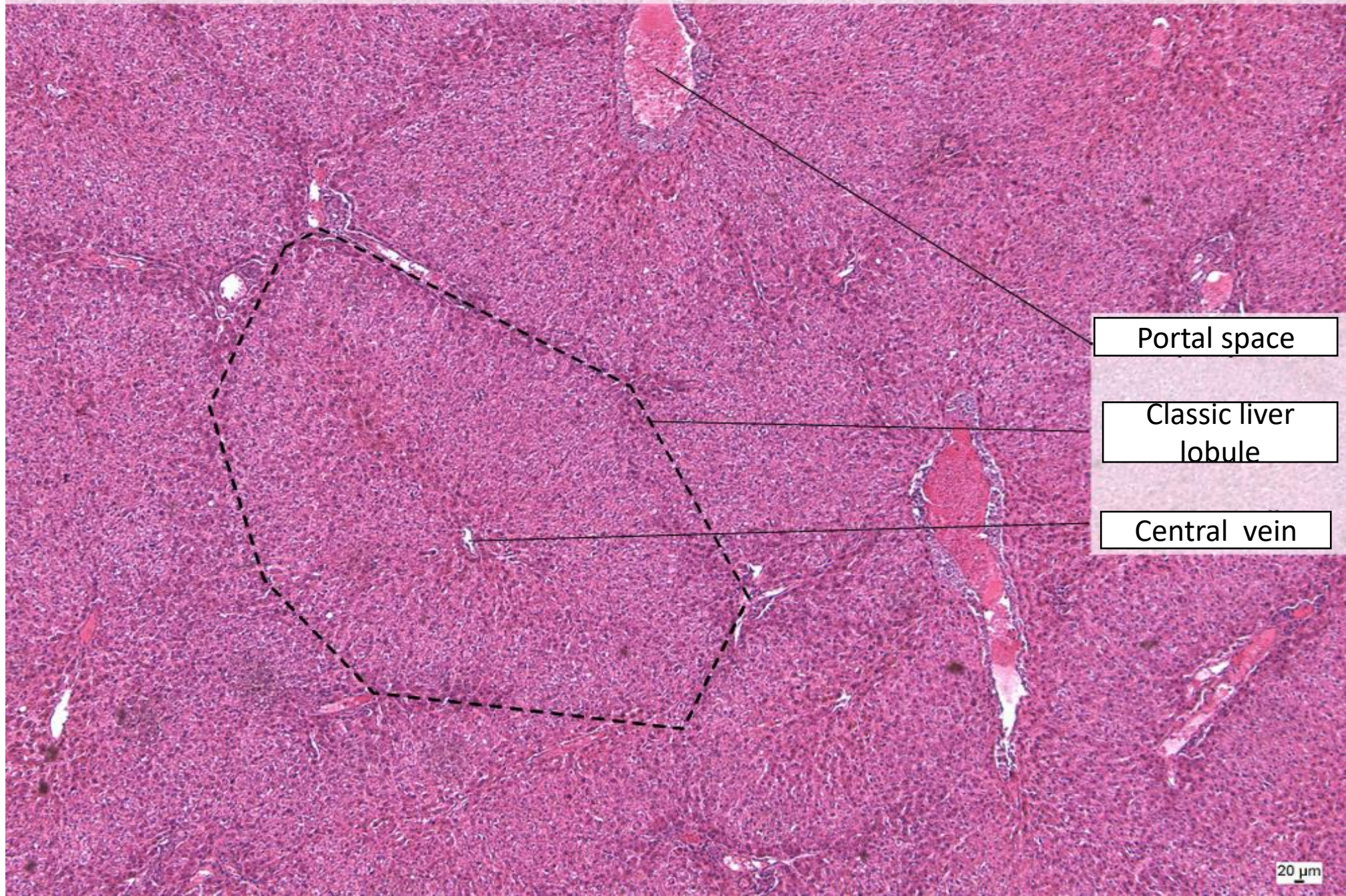
(a) Classic Hepatic Lobule
Drains blood from the portal vein and the hepatic artery to the hepatic or the central vein

(b) Portal Lobule
Drains bile from hepatocytes to the bile duct

(c) Hepatic Acinus
Supplies oxygenated blood to hepatocytes



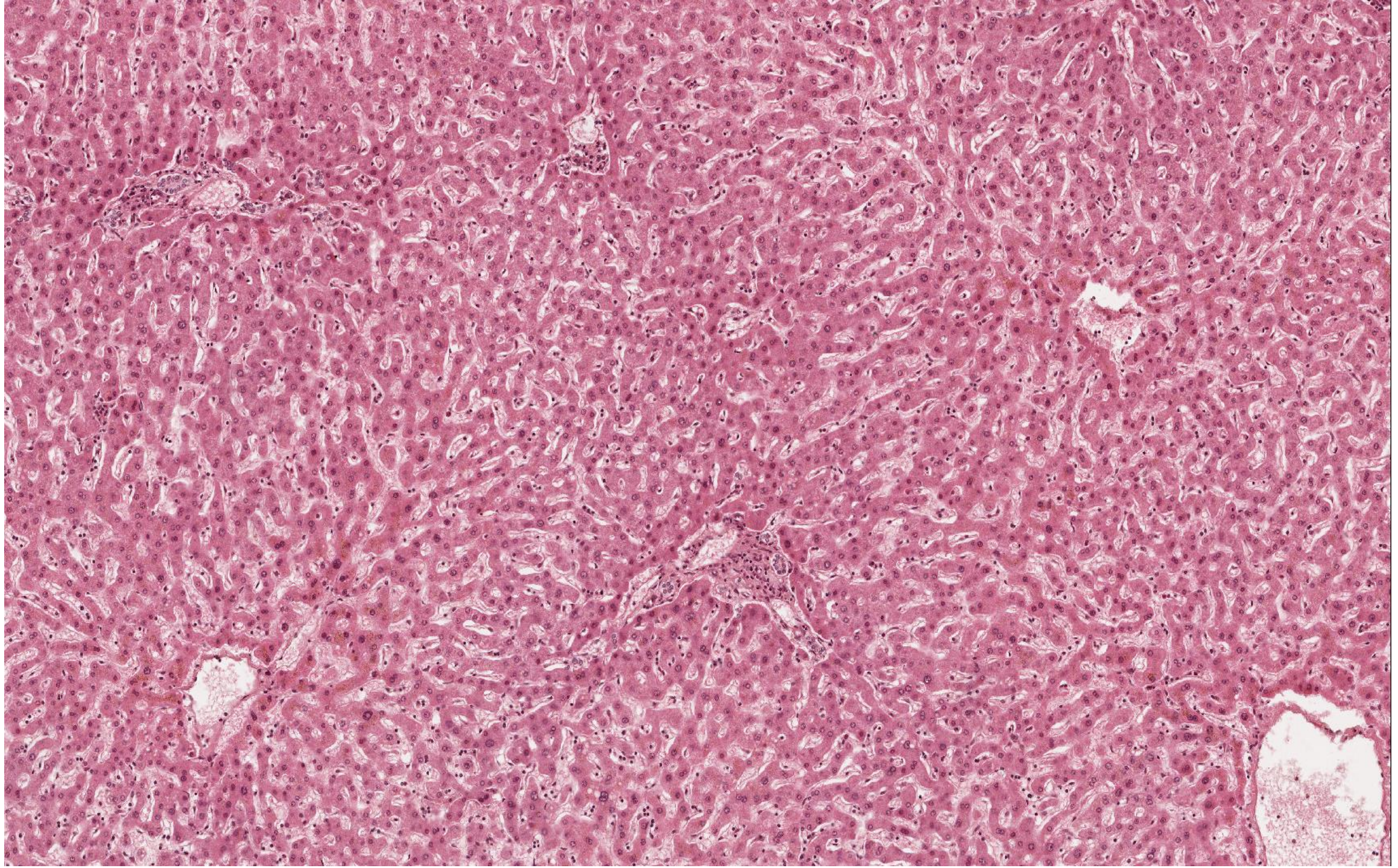
Hepar – lobulus venae centralis, (HE), objektiv 5×



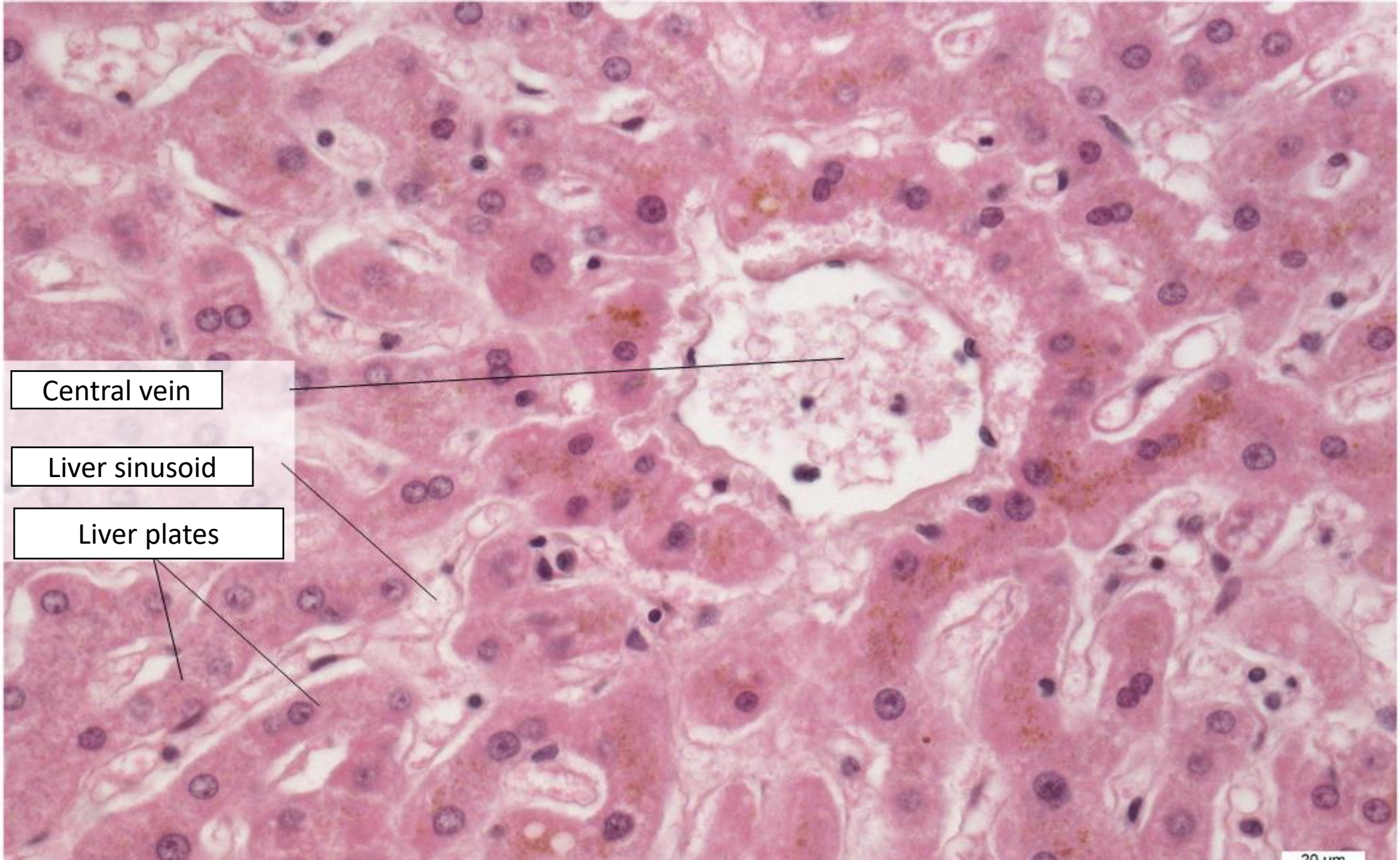
Portal space

Classic liver lobule

Central vein



Hepar – detail lalůčku, (HE), objektiv 40×

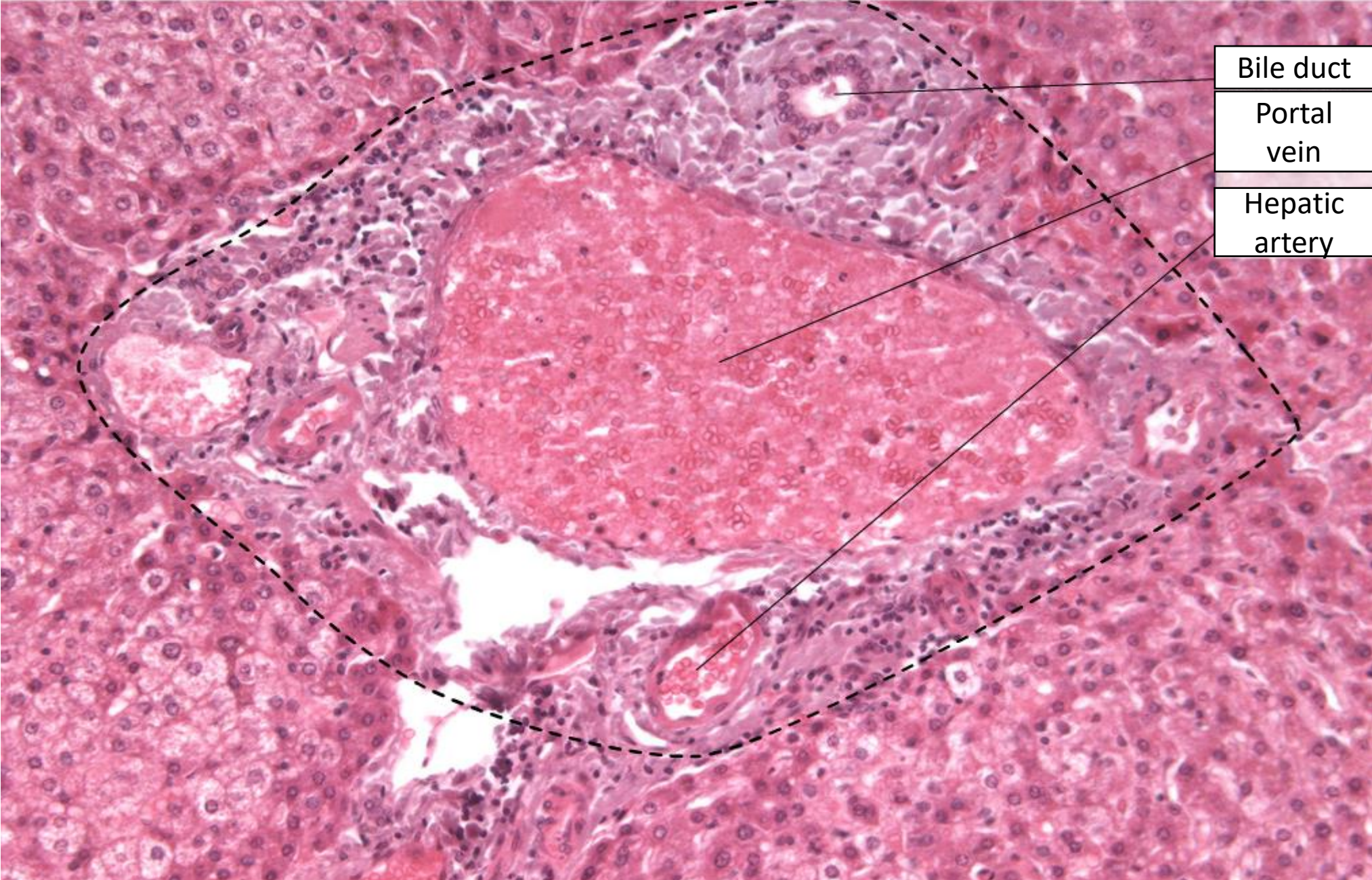


Central vein

Liver sinusoid

Liver plates

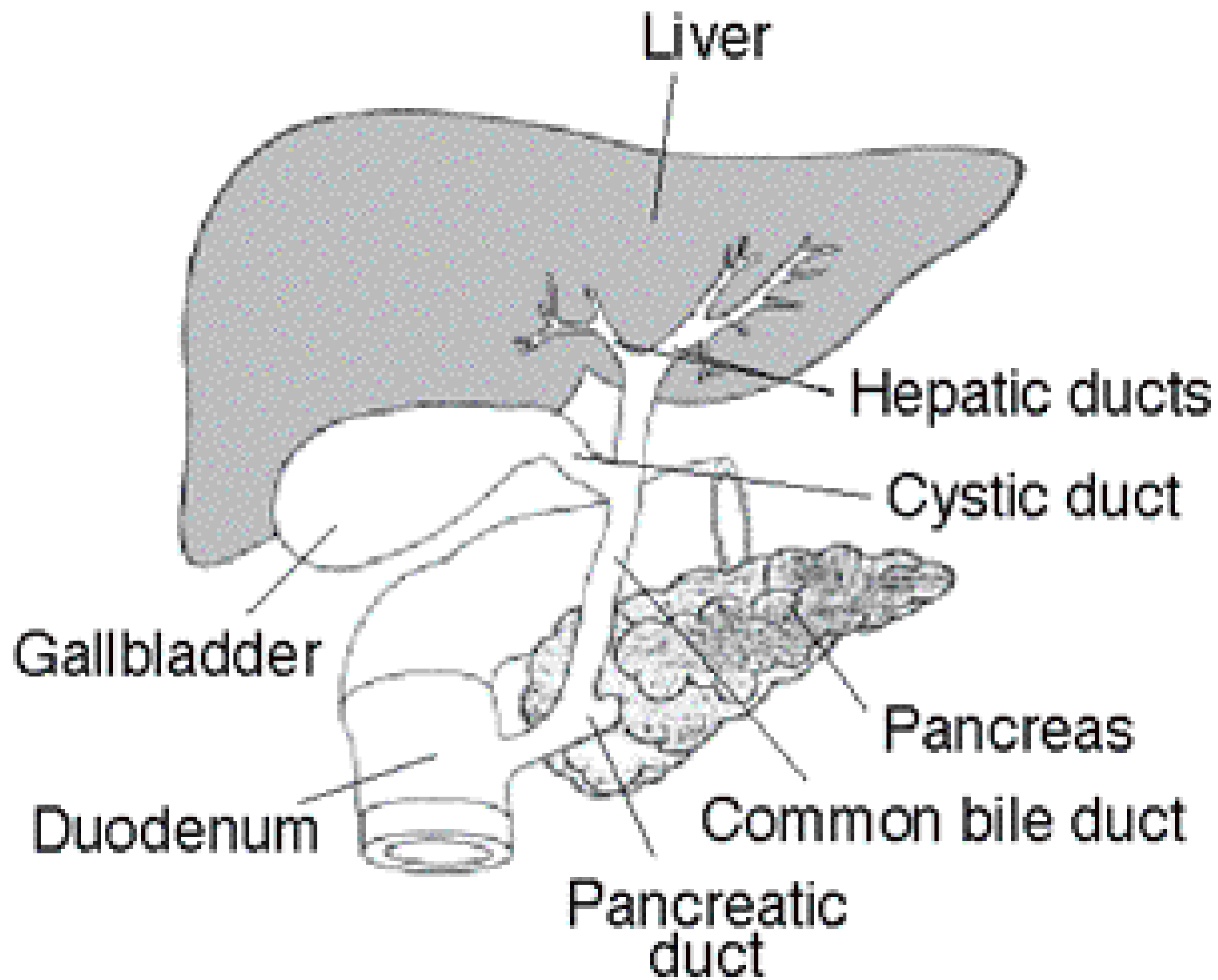
Hepar – area periportalis, (HE), objektiv 20×



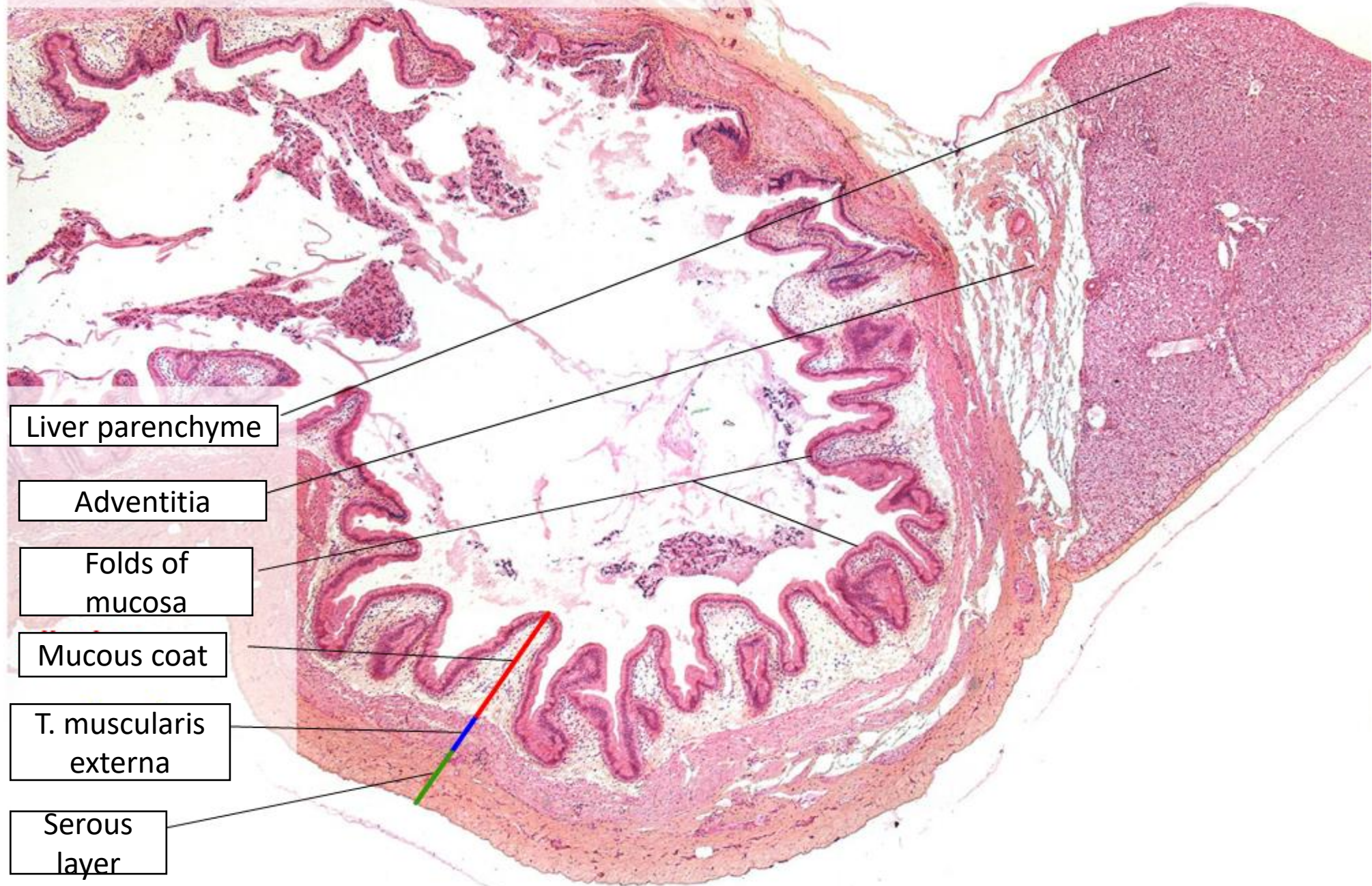
Bile duct

Portal vein

Hepatic artery



Vesica fellea, (HEŠ), objektiv 2,5×



Liver parenchyme

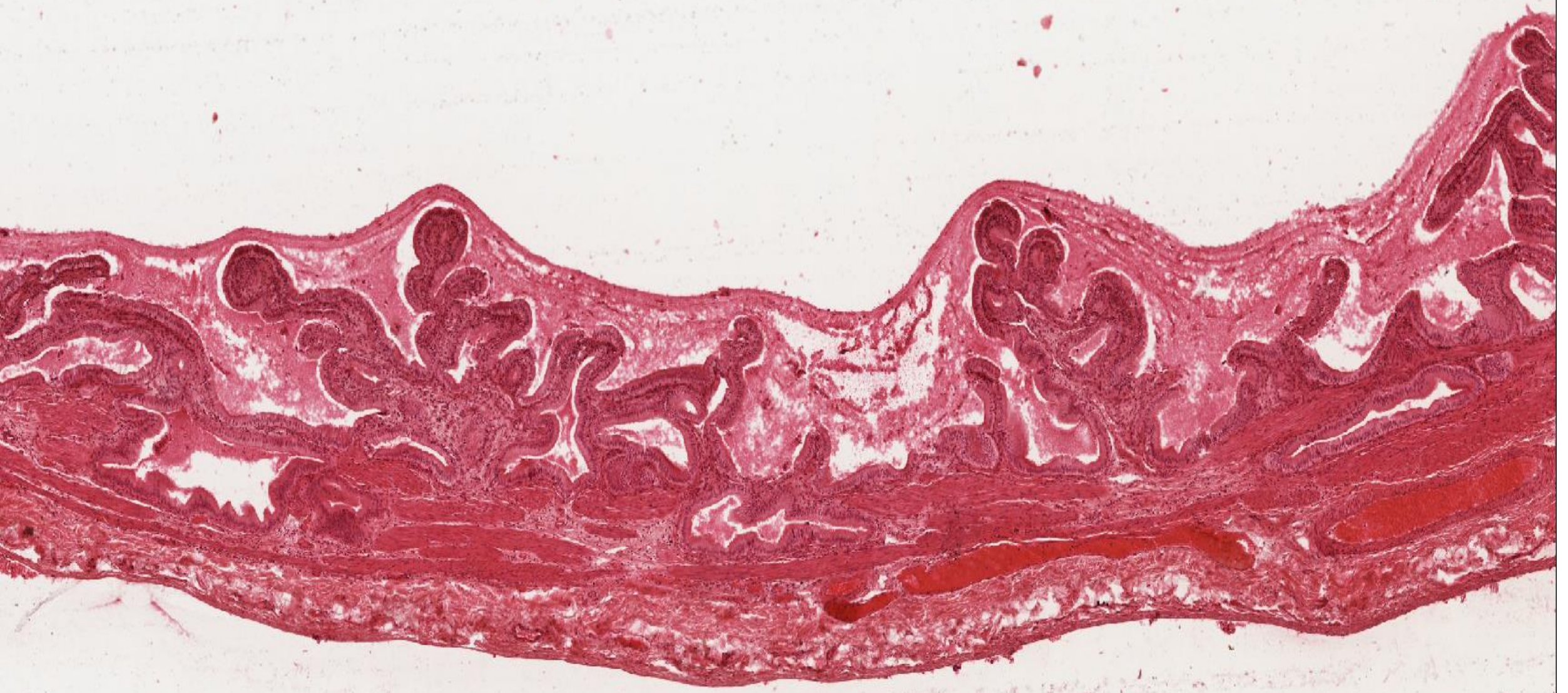
Adventitia

Folds of mucosa

Mucous coat

T. muscularis externa

Serous layer



Gallbladder with mucus

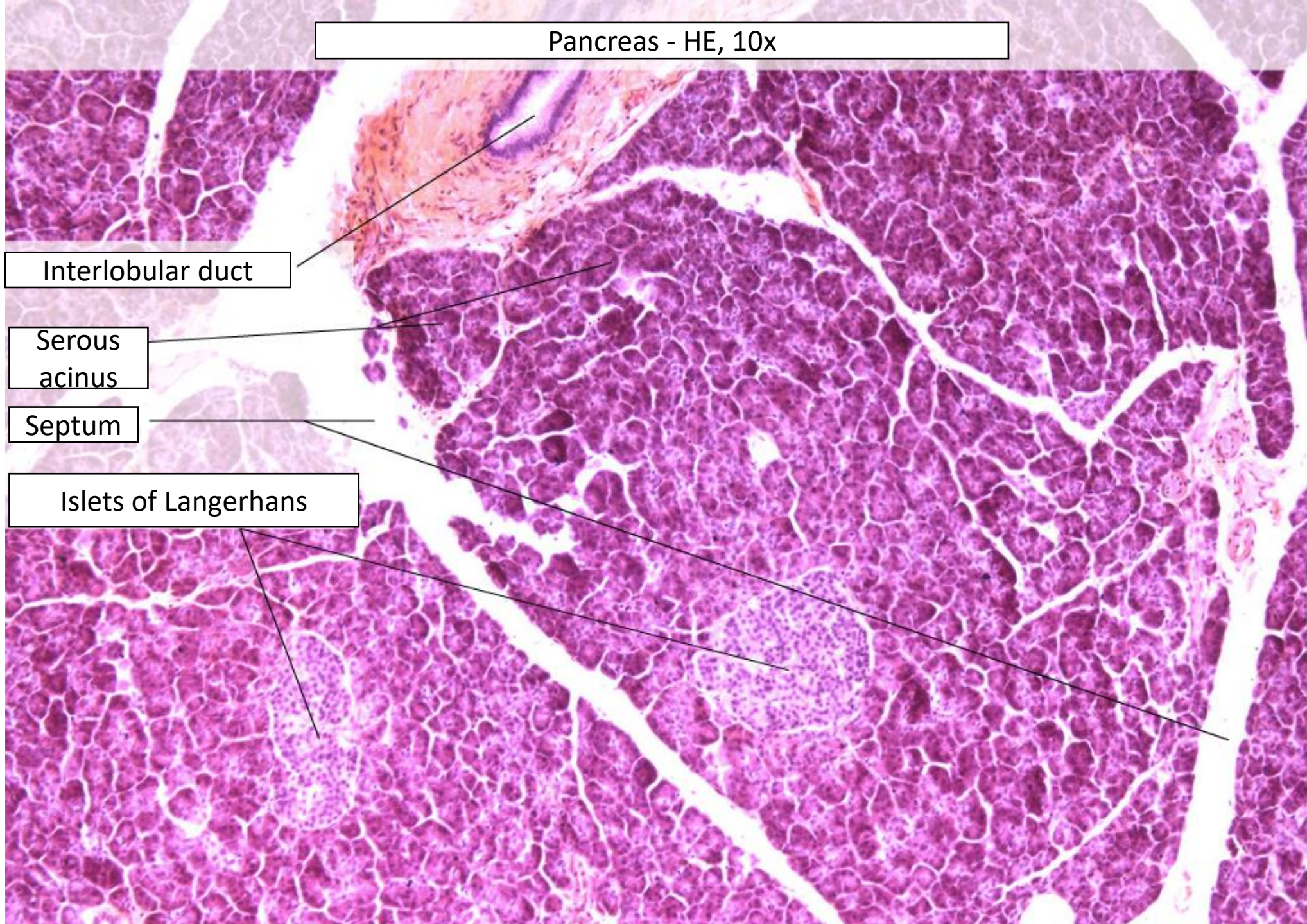
Pancreas - HE, 10x

Interlobular duct

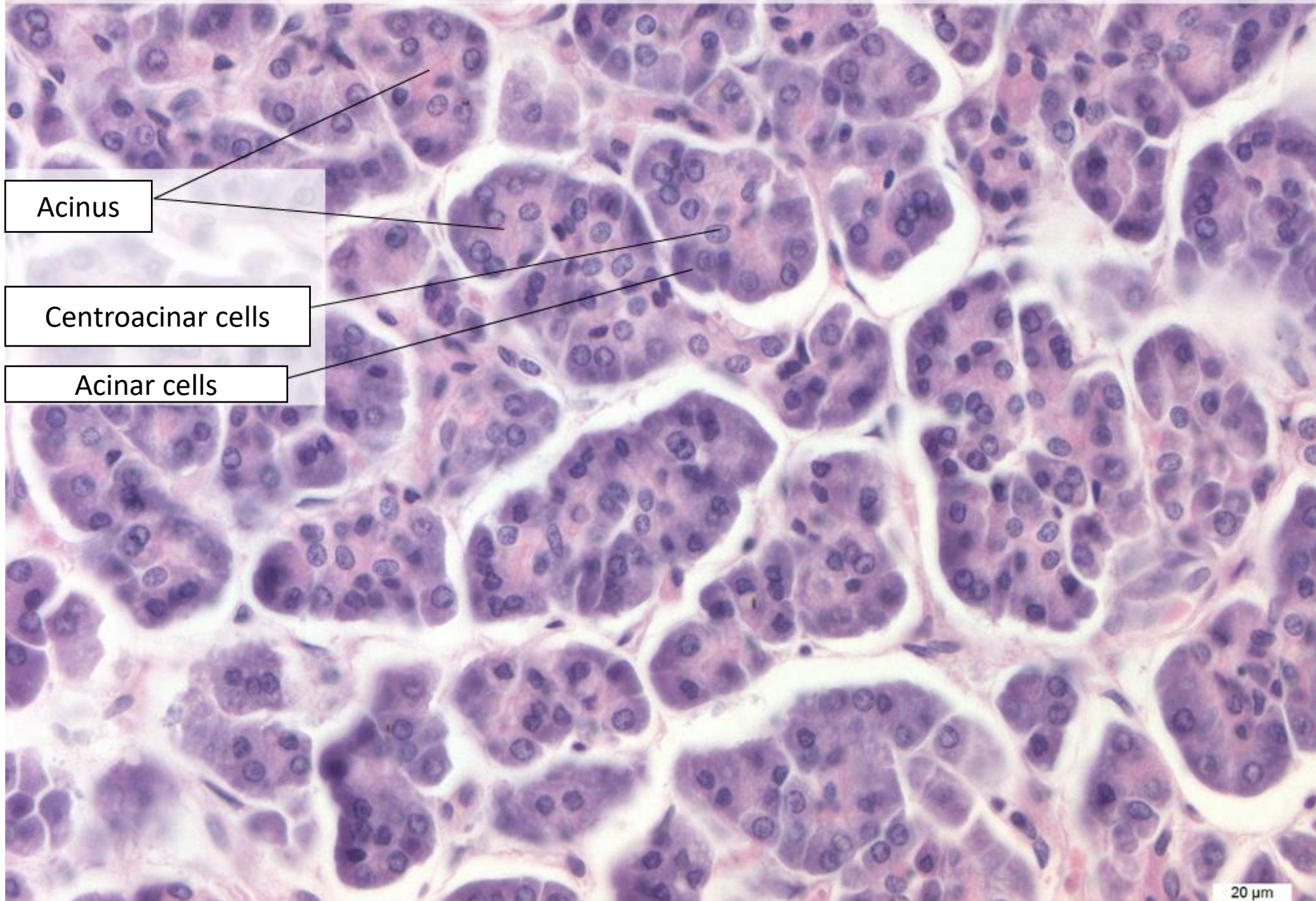
Serous
acinus

Septum

Islets of Langerhans



Pancreas – serous acinus, HE , 10x



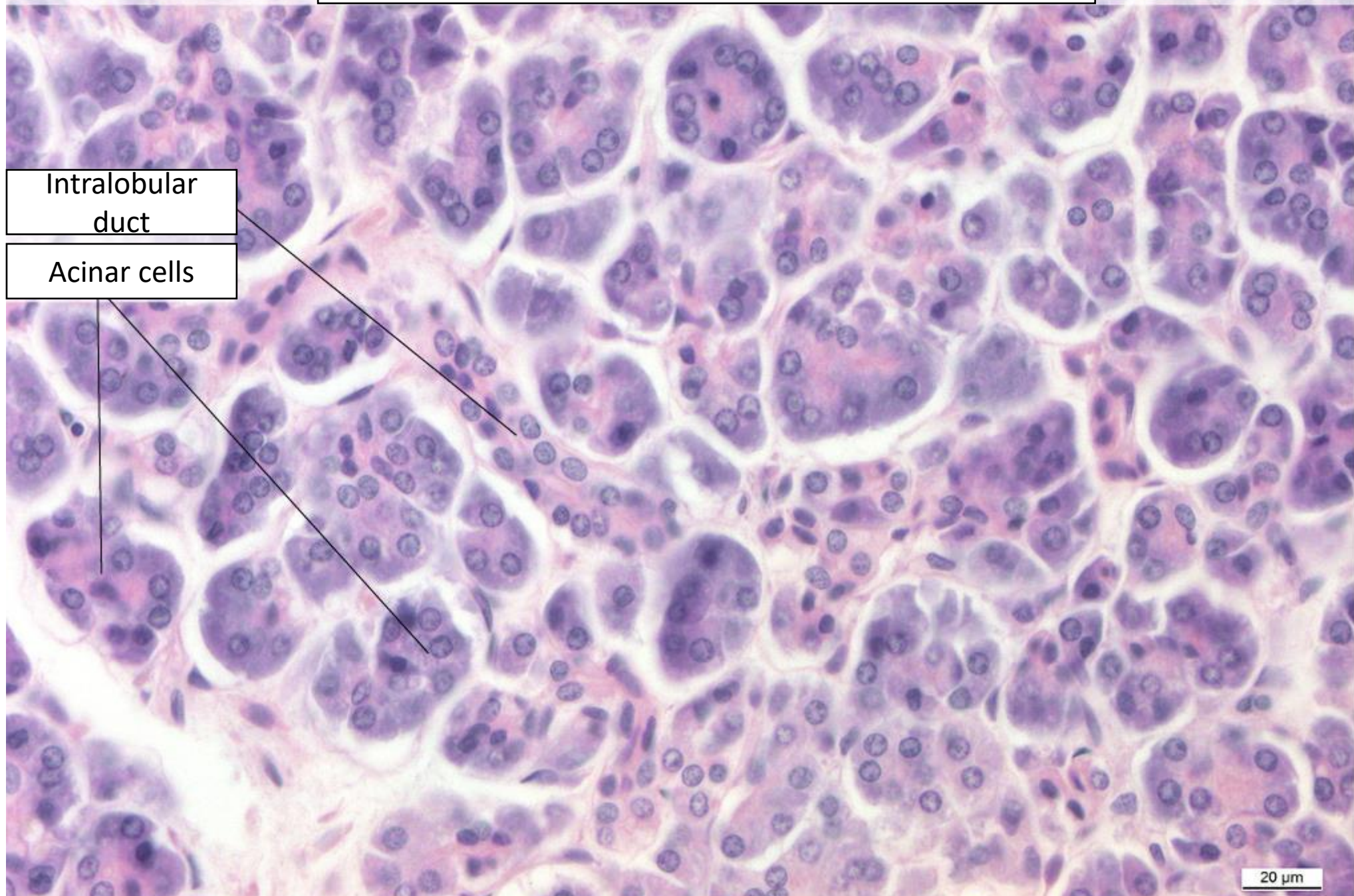
Acinus

Centroacinar cells

Acinar cells

20 μm

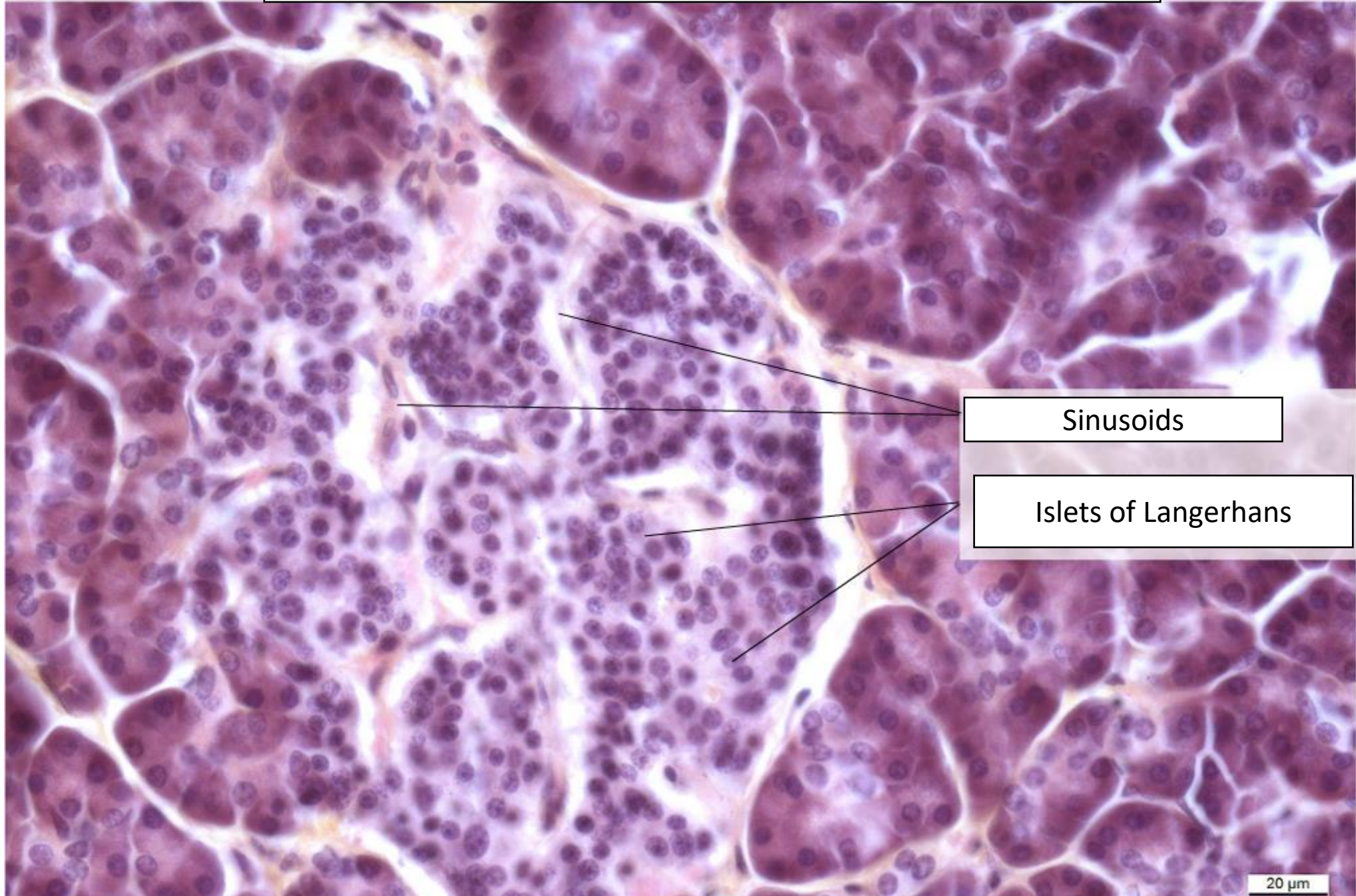
Pancreas, He, 10x



Intralobular
duct

Acinar cells

20 μ m



Sinusoids

Islets of Langerhans

3.

Digestive system - III



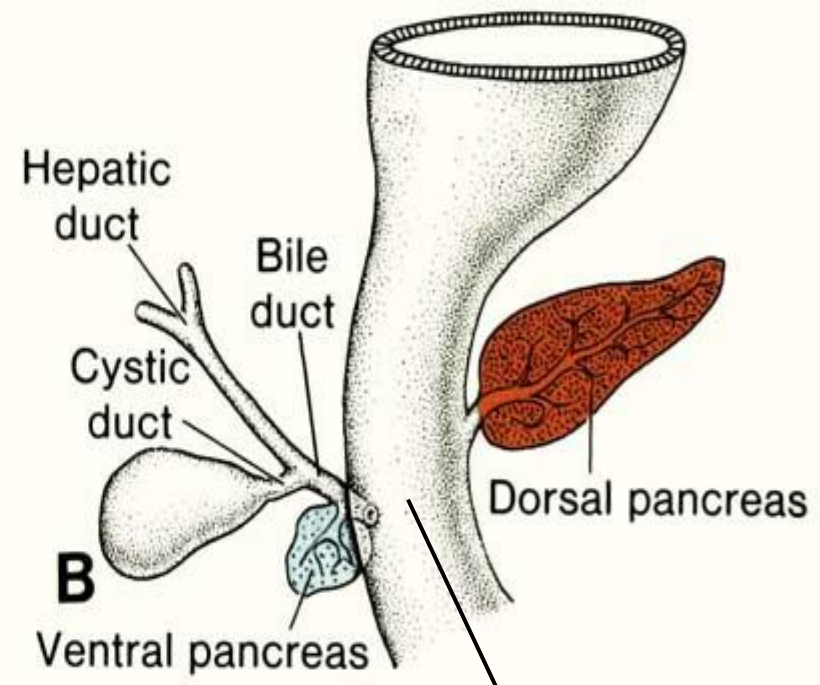
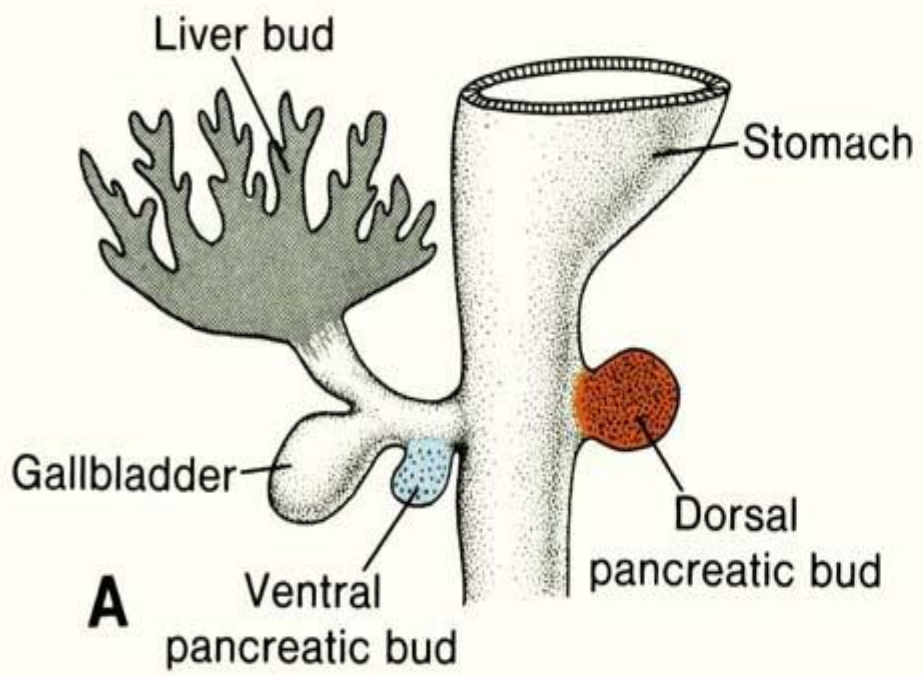
Slides:

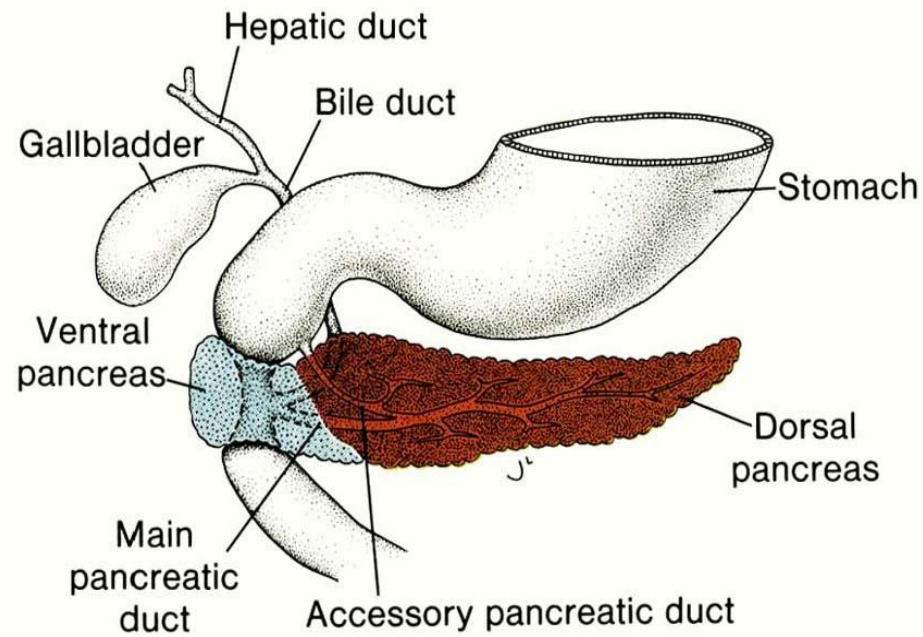
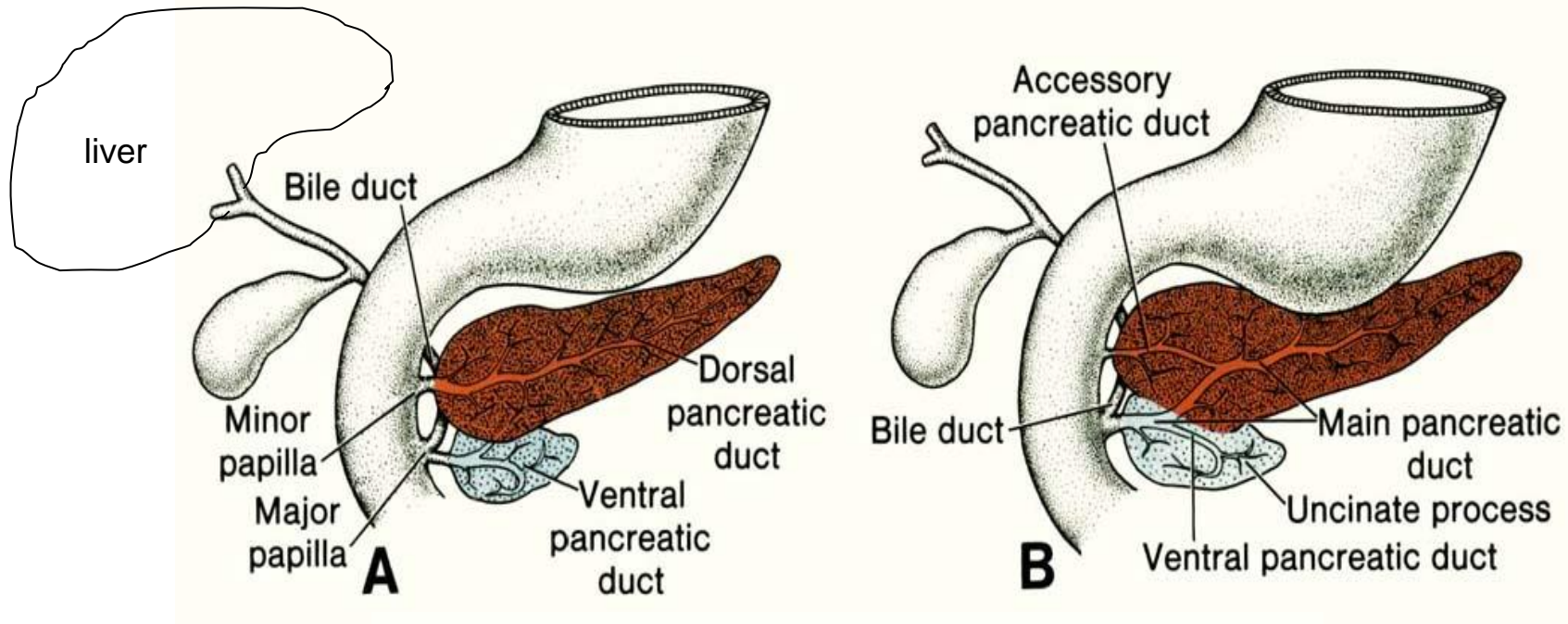
- 8. Glandula parotis (HE)
- 9. Glandula submandibularis (HE)
- 10. Glandula sublingualis (HE)
- 20. Hepar (HE)
- 21. Hepar (AZAN)
- 22. Vesica fellea (HE)
- 23. Pancreas (HE)



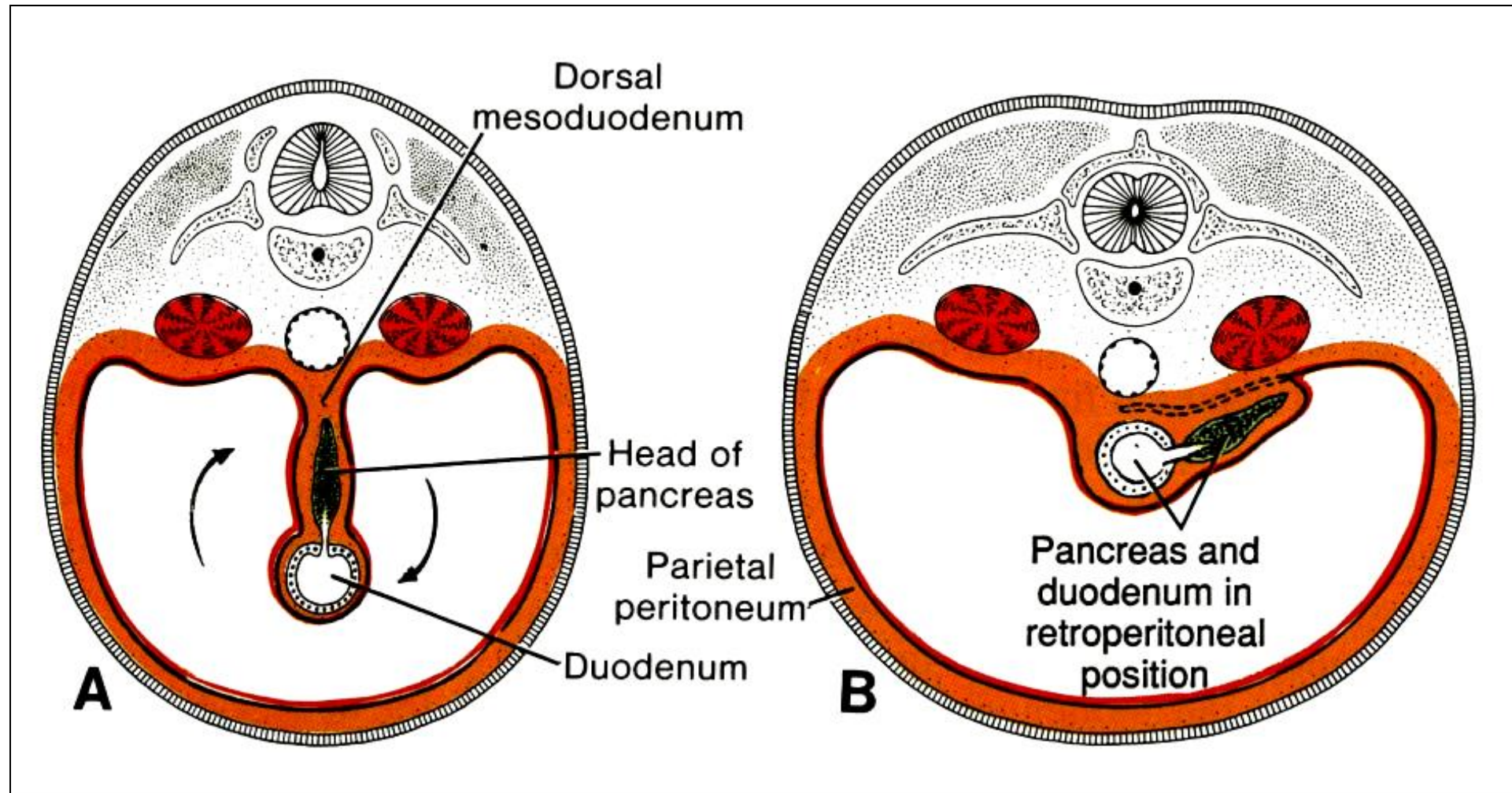
Atlas EM:

- Bile canaliculus 9
- Hepar – Kupffer cells 67
- Pancreas – Islets of Langerhans 66
- Development of pancreas 85



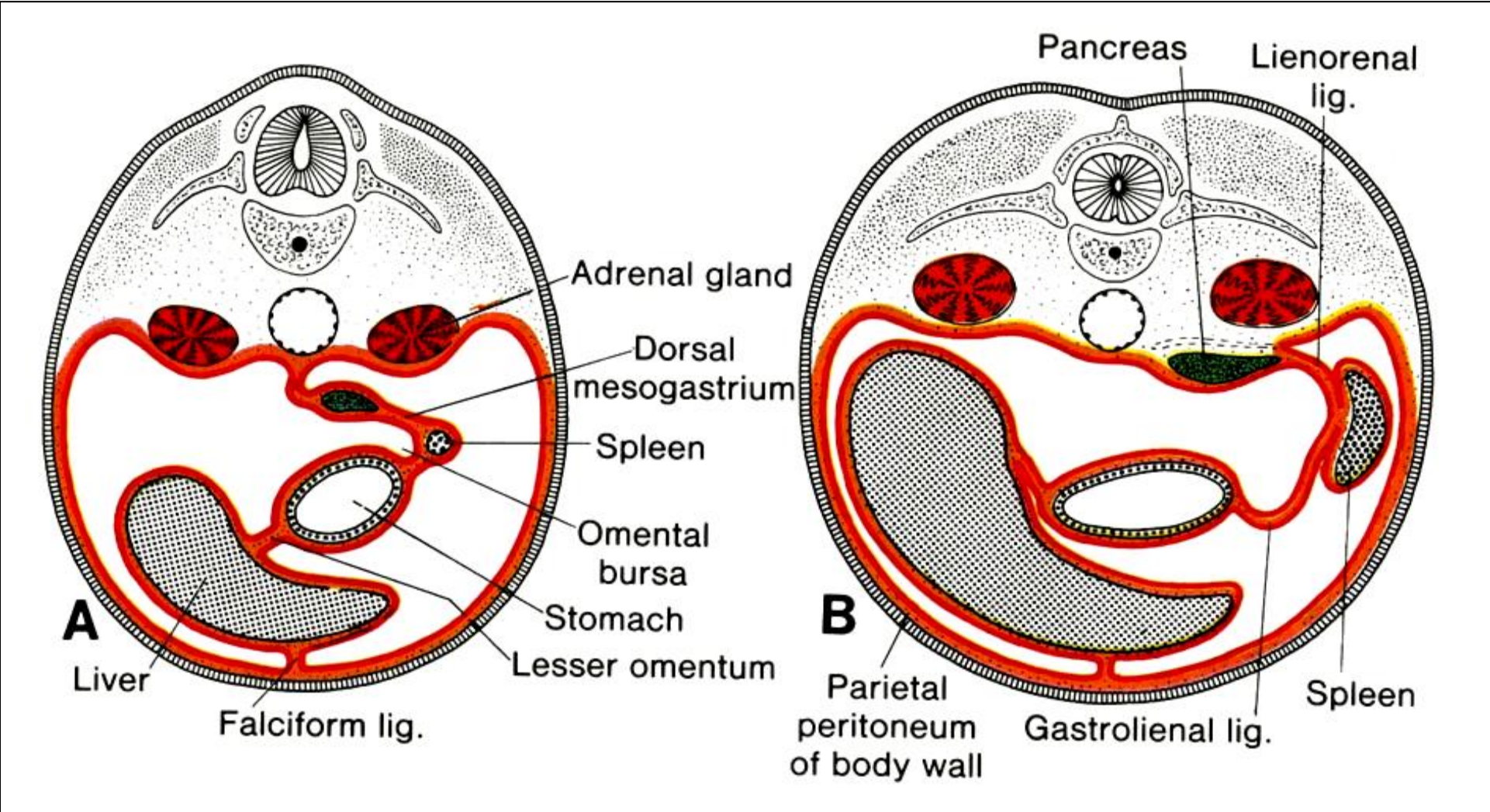


Pancreas – passes into dorsal mesoduodenum and mesogastrium by proliferation of endoderm of duodenal loop;
During rotation of stomach and duodenum – duodenum + pancreas are situated retroperitoneally



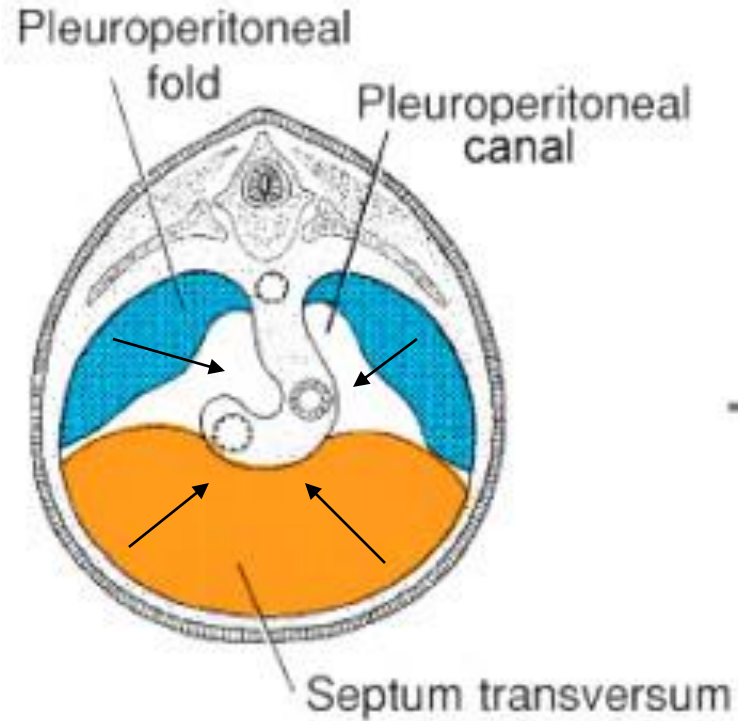
Lien – arises by proliferation of mesoderm cells in dorsal mesogastrium, which is transformed into lig. gastrolienalis and lig. lienorenalis.

Spleen is intraperitoneal organ, its surface is covered by mesothelium.

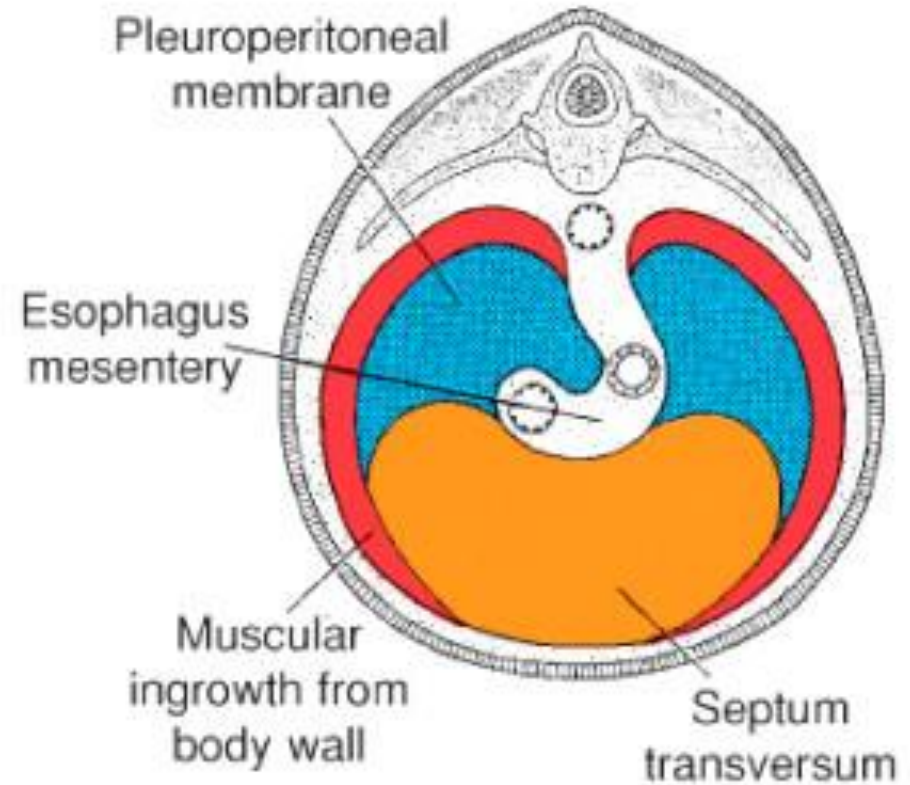


Development of diaphragm

A Week 5



B month 4



The diaphragm originates from:

1. **septum transversum** (mesoderm mass)
2. **plicae pleuroperitoneales**
3. **mesoesophageum dorsale**
4. **dorsolateral wall of the body**