

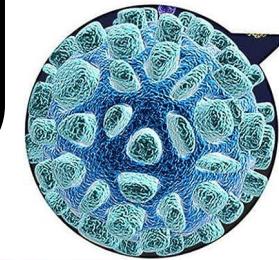
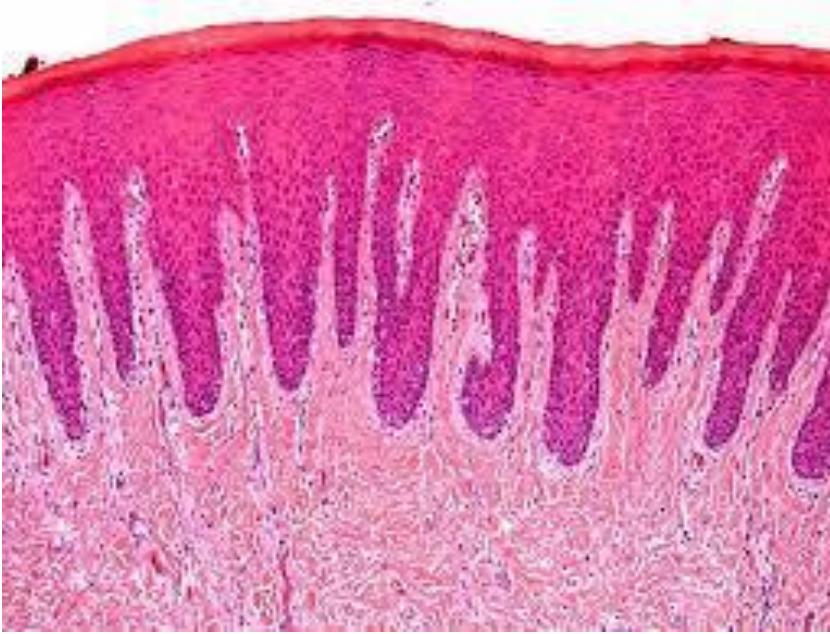
PRACTICAL SESSION-2, 3

2. Orientation for Practical session

3. Histology of salivary glands

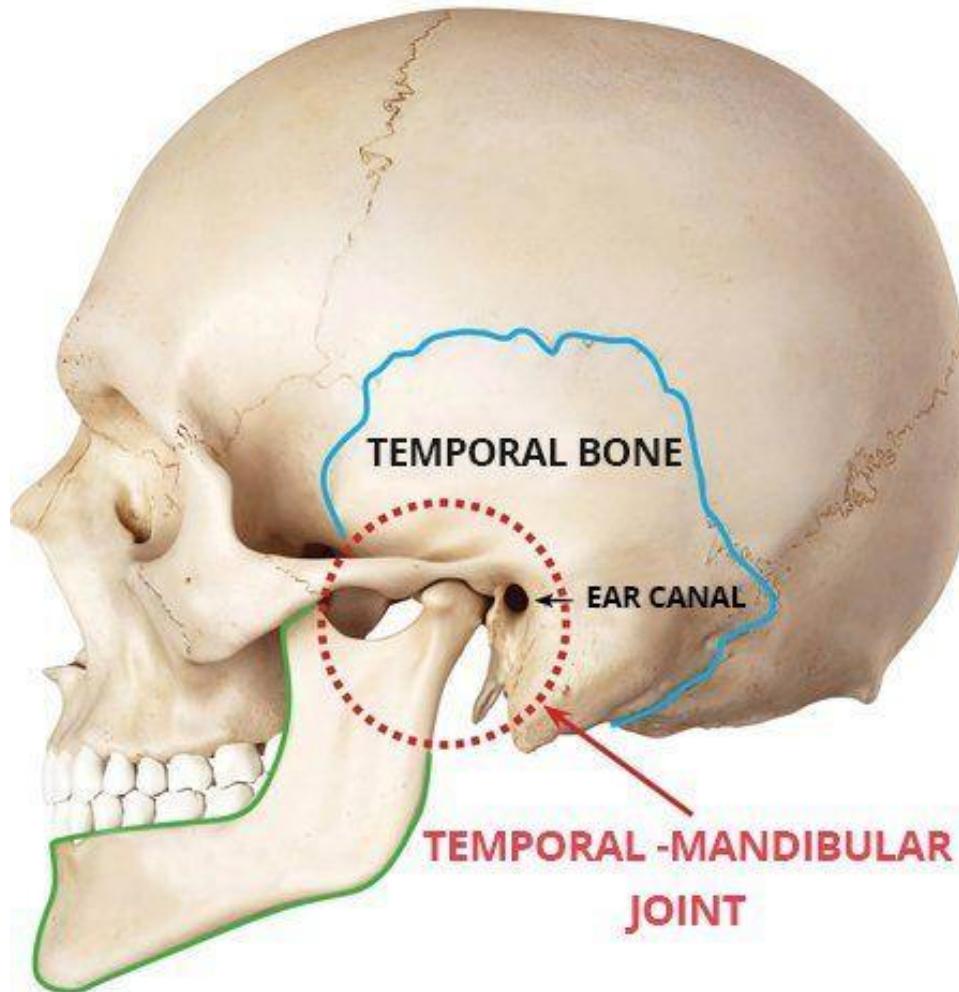
DR SAJDA GAJDHAR
COURSE COORDINATOR
ORAL CAVITY IN HEALTH

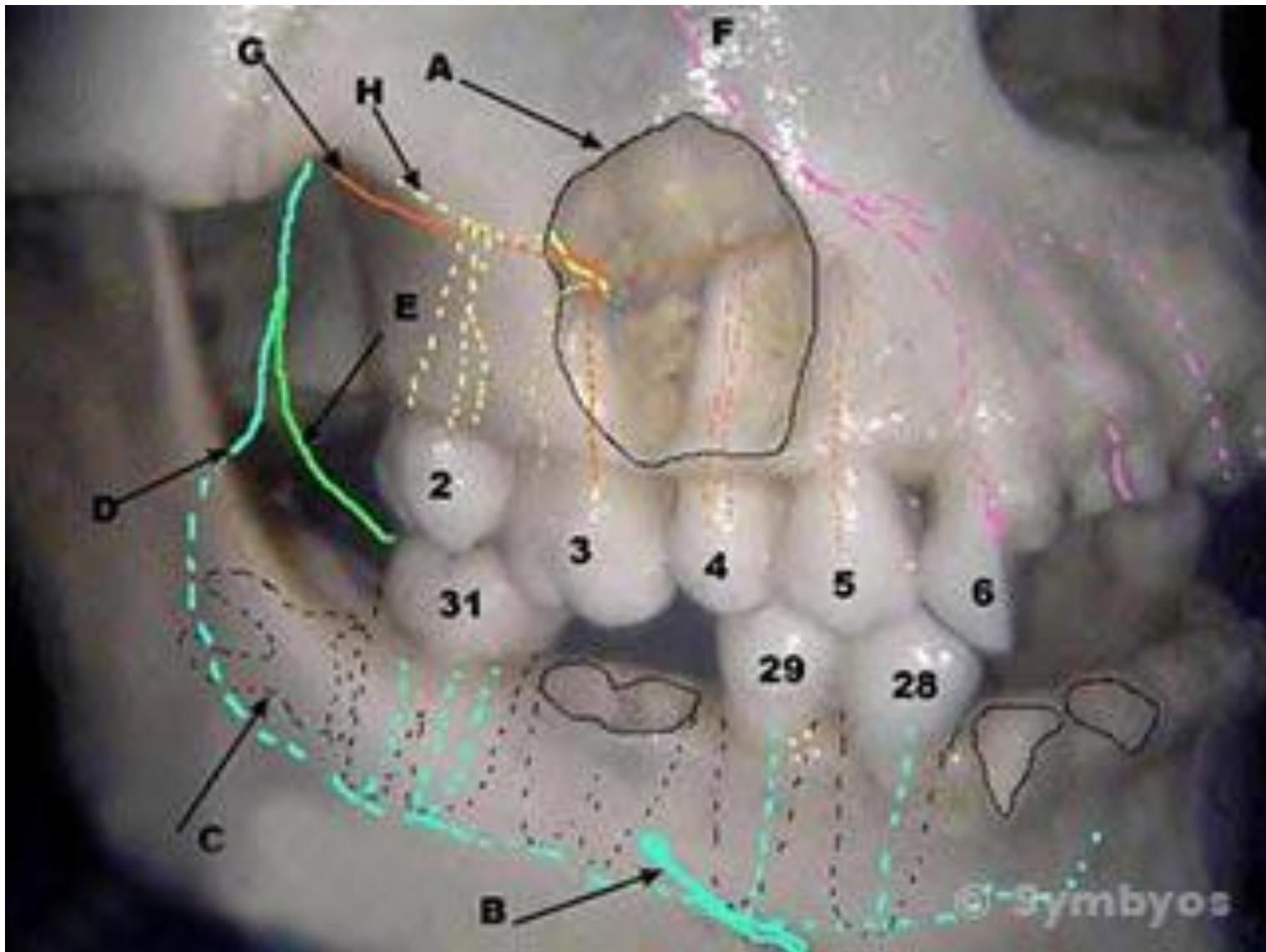
Microscopic Examination



Digital slide discussion





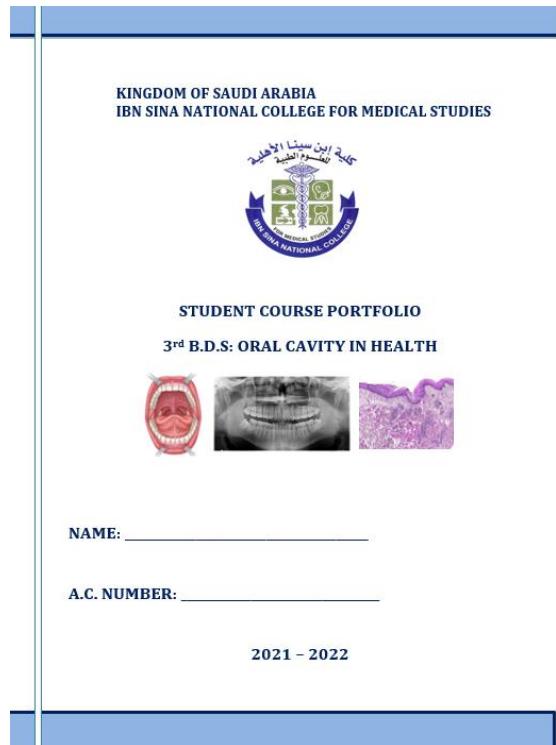


Orthopantomogram



STUDENT COURSE PORTFOLIO

Kindly collect your portfolio from Dr. Naif at the earliest, as we will begin the exercises this week.



Rubric

No	Parameters	Student Assessment				Staff Assessment			
		1	2	3	4	1	2	3	4
1.	Labelling								
2.	Key features								
3.	Identification								
4.	Answer the written question								
5.	Spellings								
6.	Neatness in writing								
7.	Time Management								
8.	Ethical values and professionalism								
		Out of 32				Out of 32			
STAFF SIGNATURE:									

Oral Biology: Microscopic examination of

- Salivary gland (Mucous, Serous and Mixed)
- Maxillary sinus
- Oral Mucous Membrane (lining mucosa, gingiva, hard palate, tongue and taste buds)
- Tooth development (Bud stage, Cap stage, Early bell stage and Advanced bell stage)
- Cementum (Cellular & acellular cementum and Cemento-enamel junctions)
- Periodontal Ligament (Principle Fibers of Periodontal ligament, Interstitial tissue and Cells)
- Alveolar bone (Bundle bone and Supporting alveolar bone)
- Enamel (Enamel rod, Incremental lines of Retzius, Gnarled enamel, Enamel lamellae, enamel tufts and enamel spindles)
- Dentin (Dentinal tubules, Interglobular dentin, dentinoenamel junction, Primary and secondary dentin, Dead tract and Sclerotic dentin)
- Pulp (Zones of pulp and Pulp stones)

Oral Radiology: Study of Normal Radiographic Anatomy of

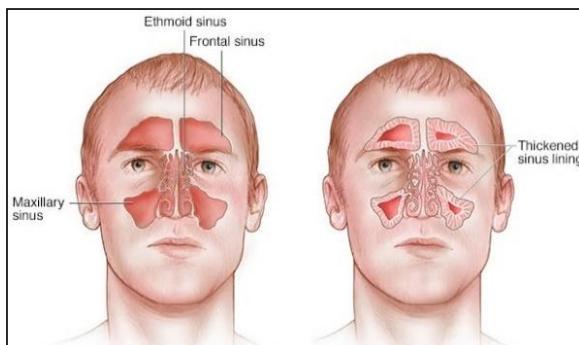
- Salivary Glands
- Temporomandibular Joint
- Maxillary Sinus
- Anatomy of Jaw bones and Periodontium
- Anatomy of tooth Structures
- Anatomy of pulp cavity

Visits to Dental Clinics: Study of clinical appearance of normal structures

- Paraoral Structures
- Oral Mucosa
- Periodontal tissues
- Teeth



Case Based Learning Sessions



Case Based Learning – Topics

- 1 Temporo-Mandibular Joint and Maxillary sinus**
- 2 Oral Mucosa/OMM/Pulp**
- 3 Development of tooth, Enamel and Dentin**

Practical Exams are divided into 2 parts;

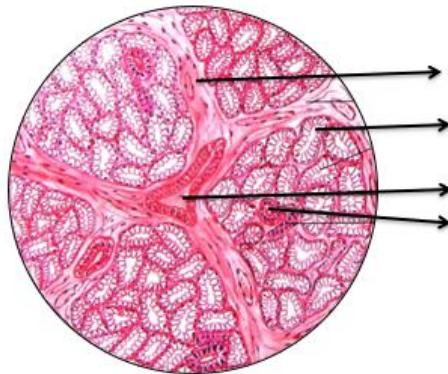
Part 1 is conducted during MSE for **10 marks OSPE-1**

Second part during Final Exam **15 marks for OSPE – 2**

Which involves 10 stations. Photomicrographs or microscopes or radiographic picture with histologic slides will be kept at these stations

Exercise -1

Slide labelling:



Key features:

- 1.
- 2.
- 3.
- 4.

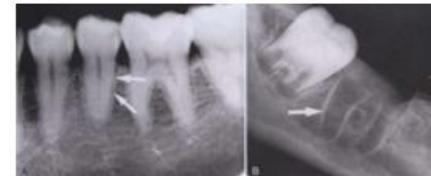
Slide Identification:

.....
Write two differences between mucous and serous acini:

- 1.
- 2.

Exercise-9

Identify and mark any 5 important landmarks in given picture

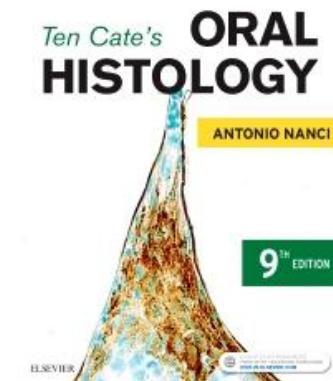
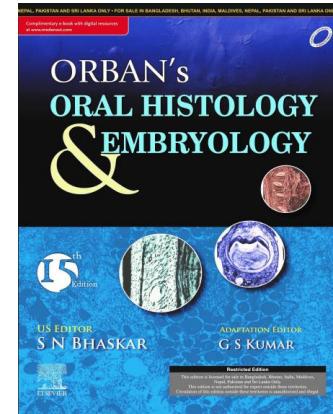


LEARNING RESOURCES

1. Tencate's Oral Histology book
2. **Orban's Oral Histology book**
3. James K Avery -Essentials of Oral Histology and Embryology
4. Satish Chandra - Dental Histology text book
5. White Stuart C White, Michael J. Pharoah: Oral Radiology: Principles and interpretation,Mosby Co

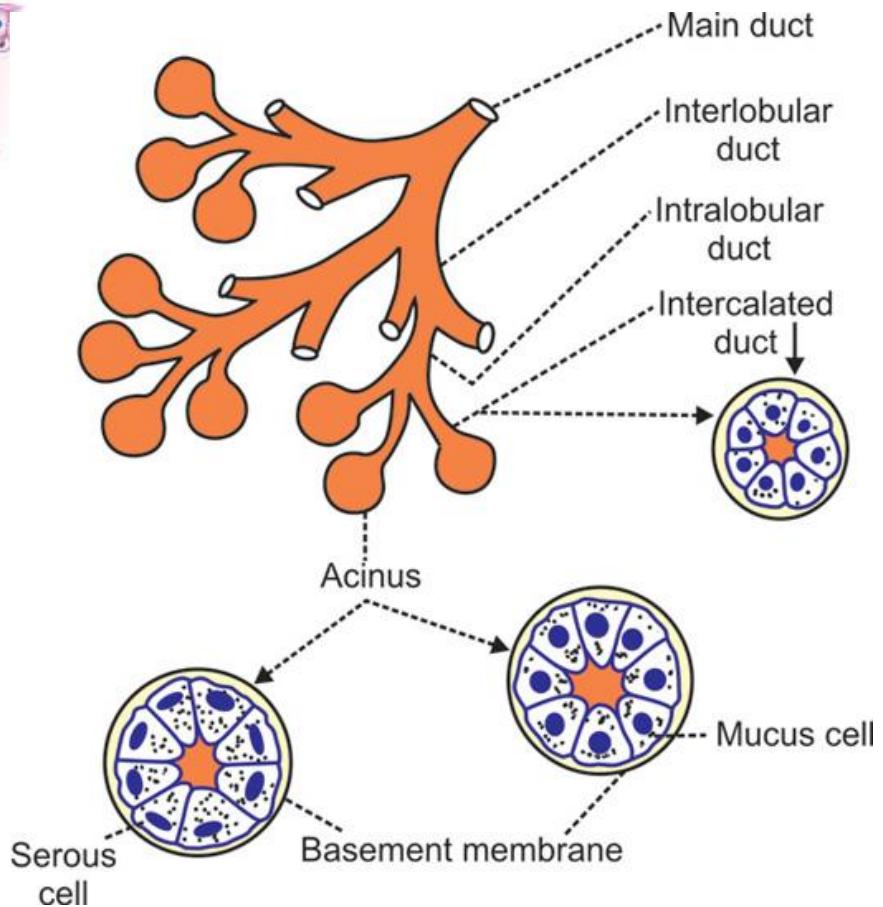
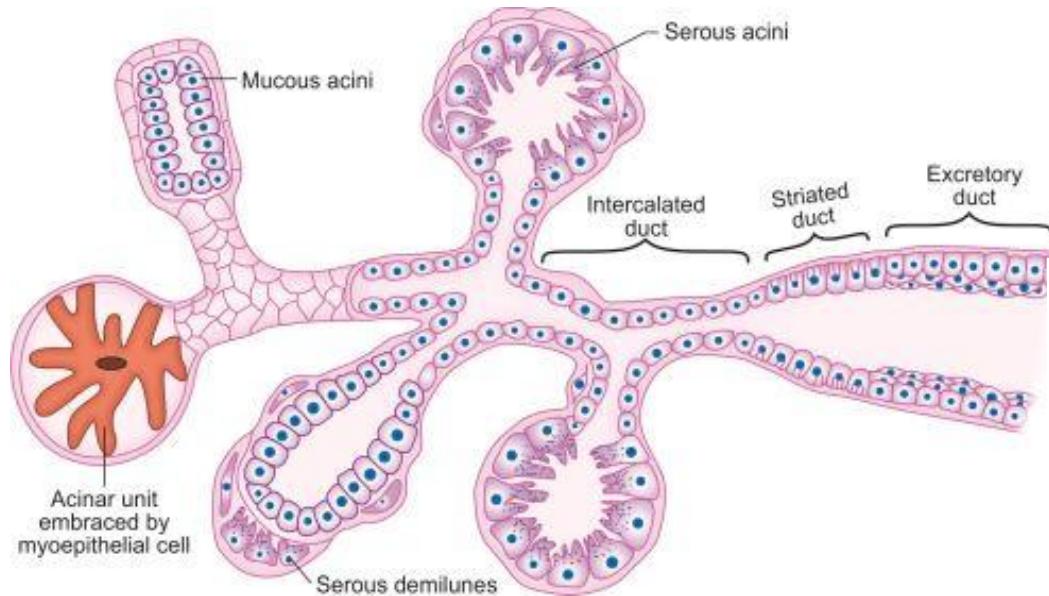
Saudi Digital Library: E-books, journals, multimedia database of dentistry

PubMed Database for researching the dental literature



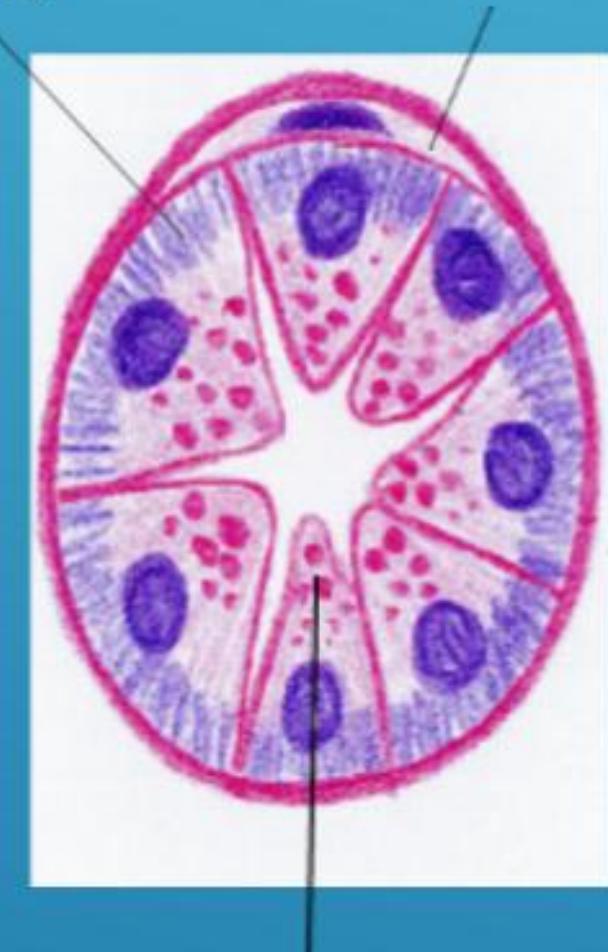
Practical Session Learning Outcomes

1. Identify parotid, submandibular and sublingual salivary glands
on the basis of histological appearance.
 2. Illustrate the difference between serous and mucous acini
 3. Compare and correlate the difference between interlobular duct
and intralobular ducts
- Tencate's Oral histology; pages 278 - 310
 - James K Avery; pages 177-194

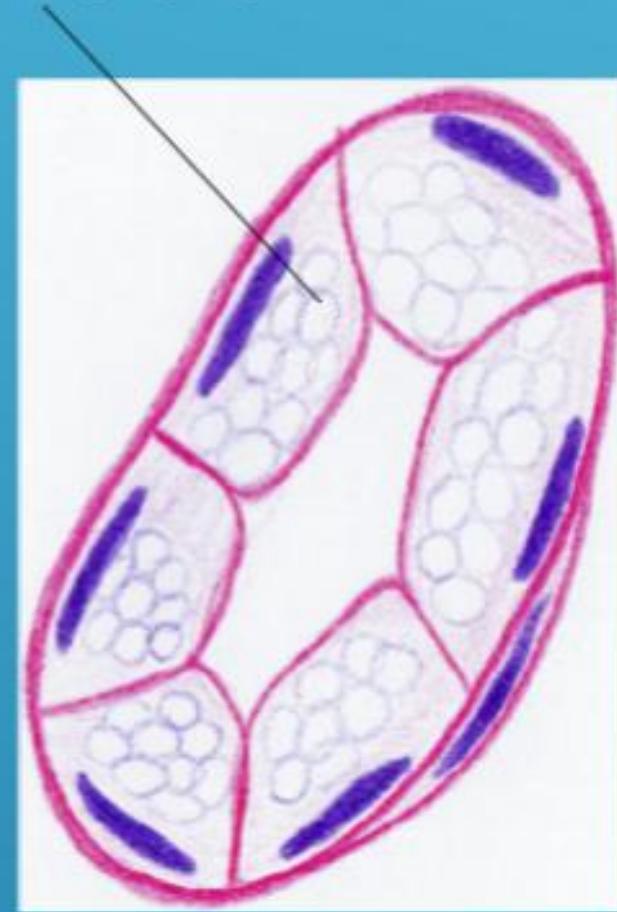


Basophilic basal striations

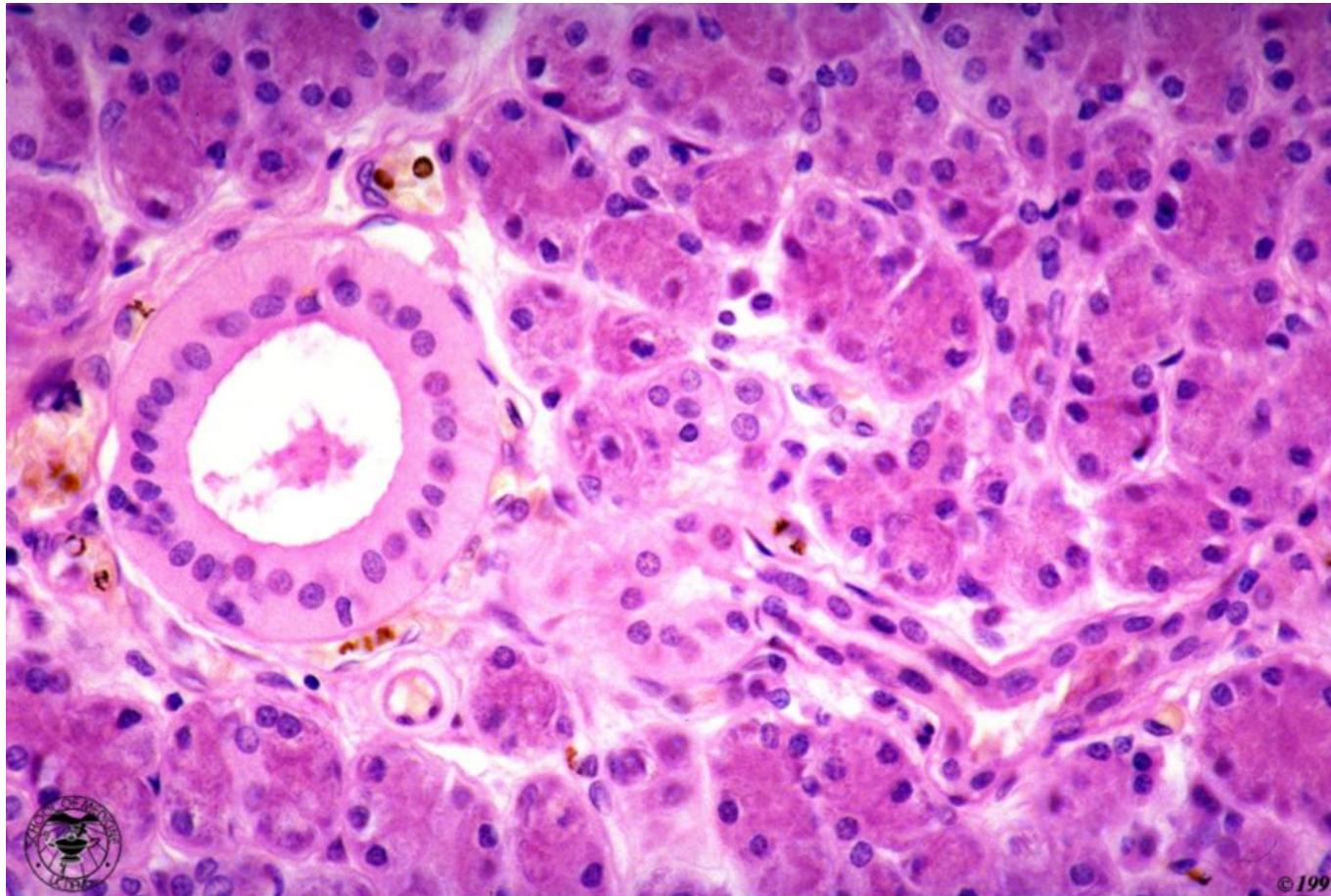
Myoepithelial cell



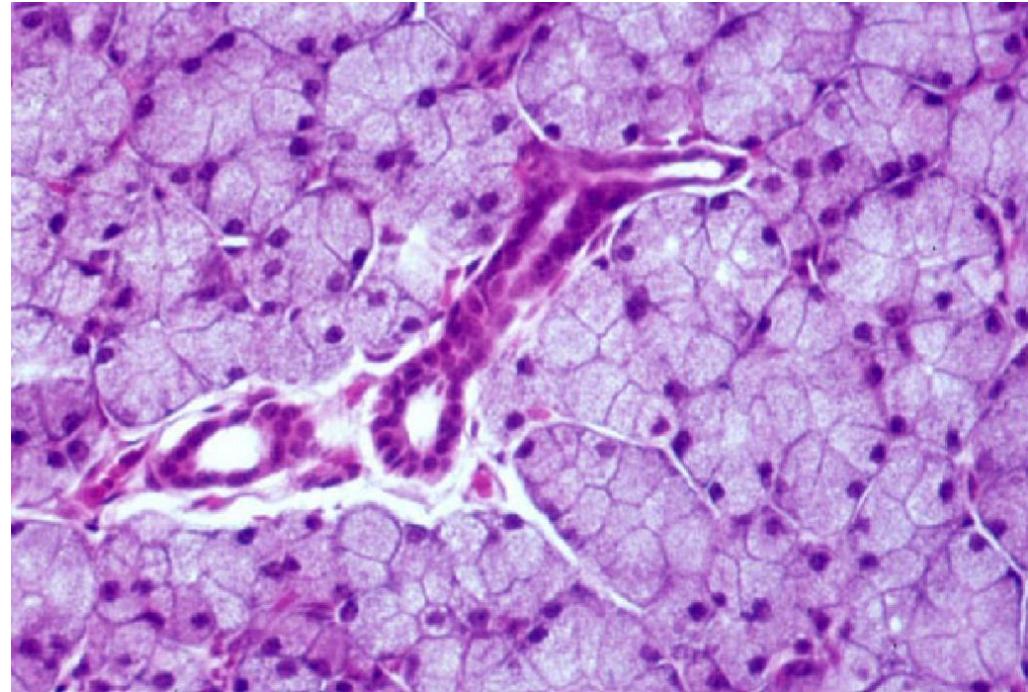
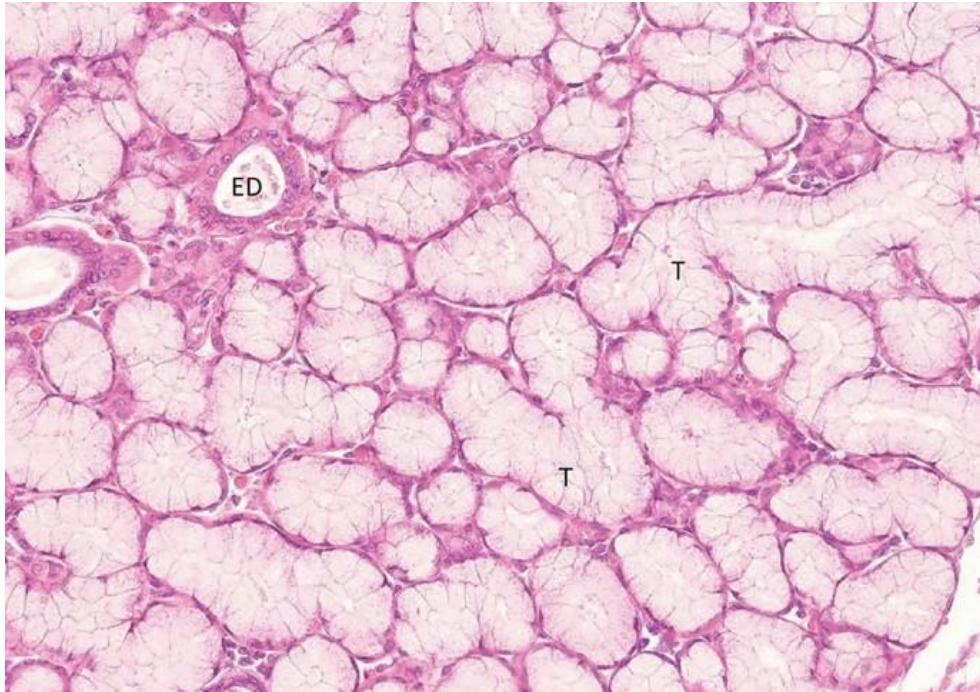
Foamy cytoplasm



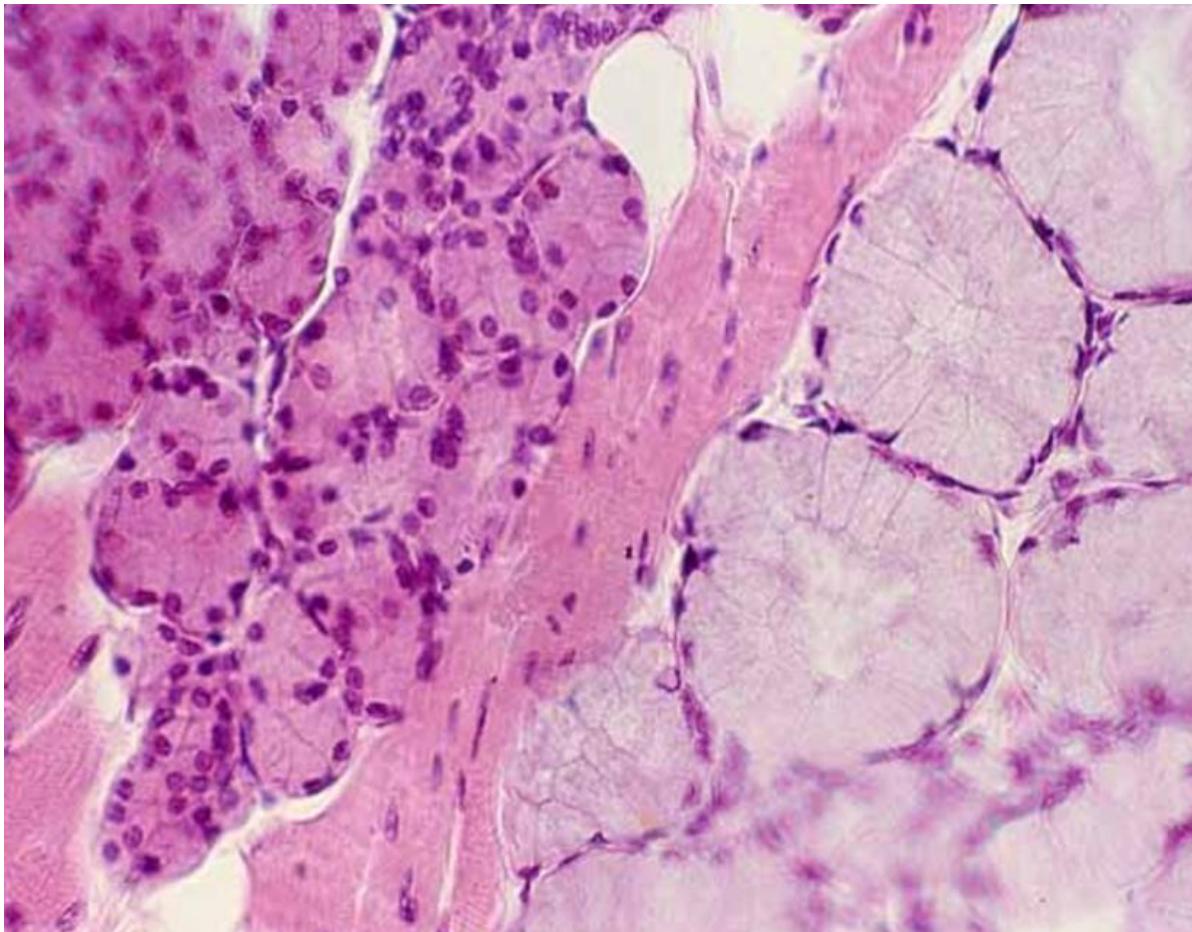
PURE SEROUS GLAND



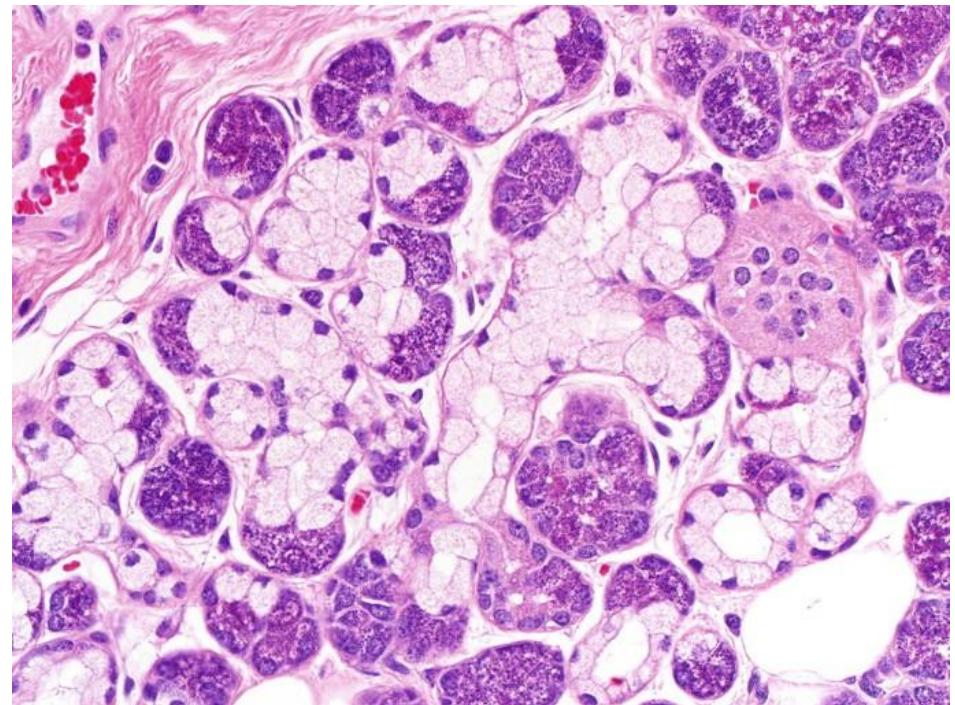
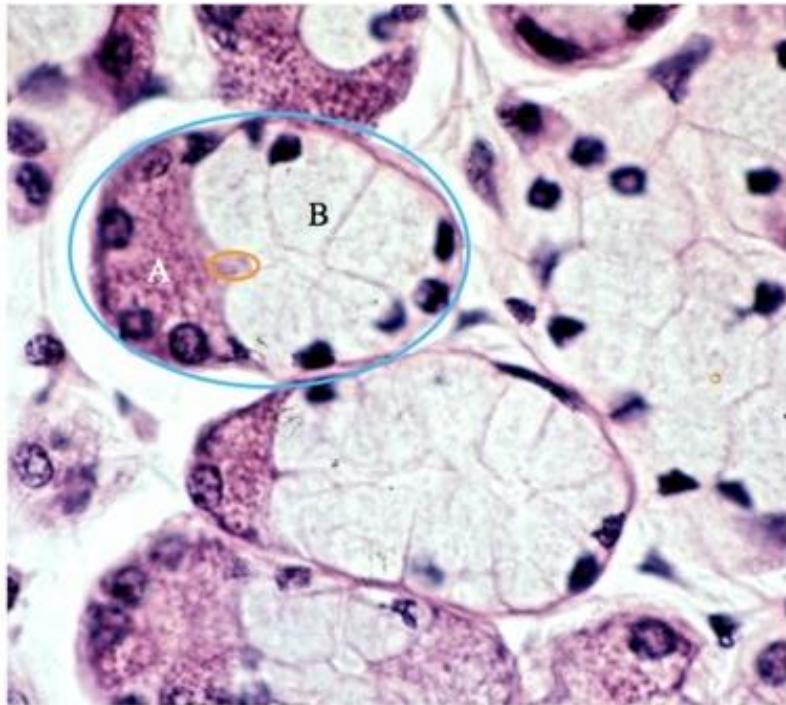
PURE MUCOUS GLAND



MIXED SEROUS MUCOUS GLAND

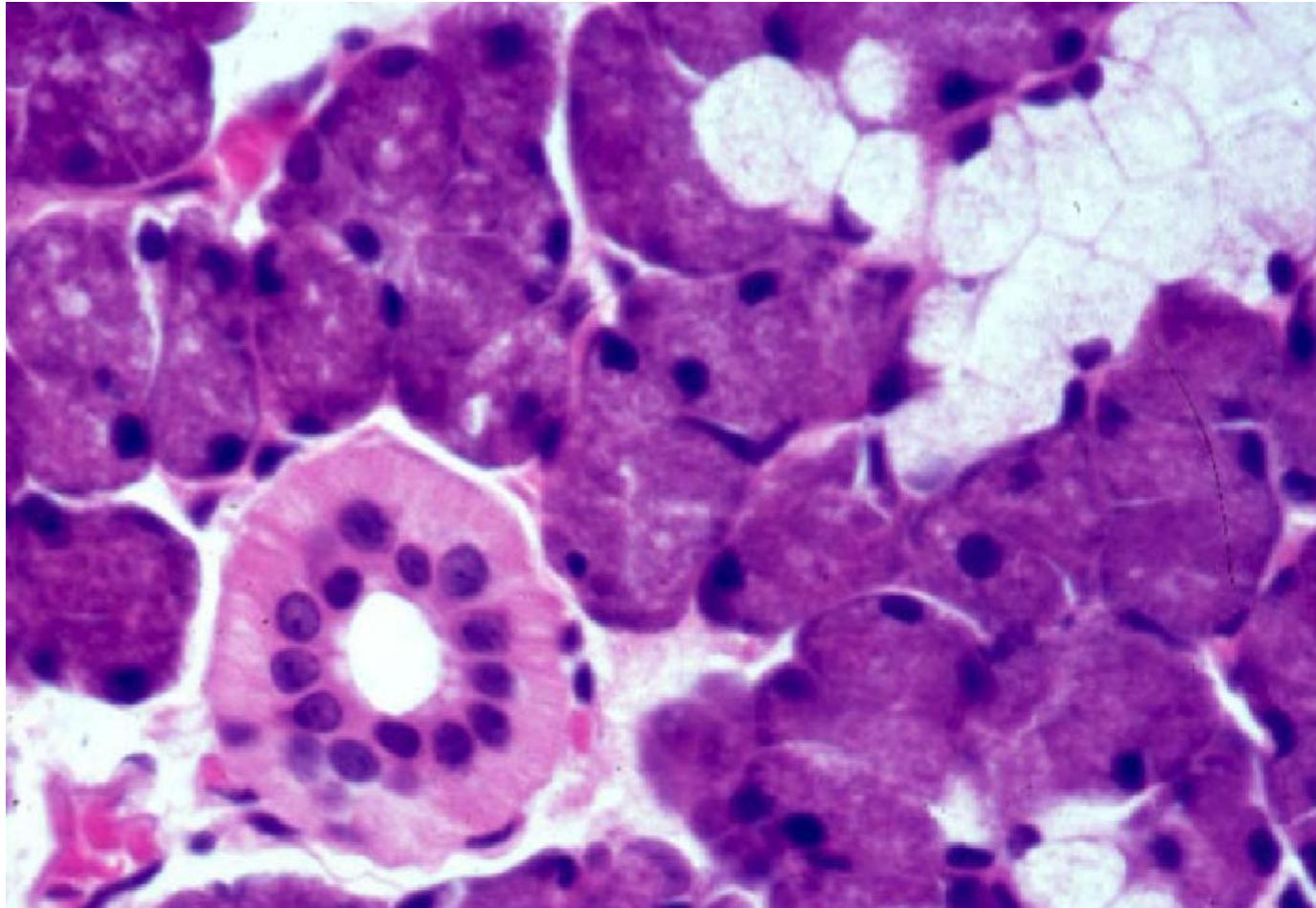


Serous Demilune



R record

Striated duct



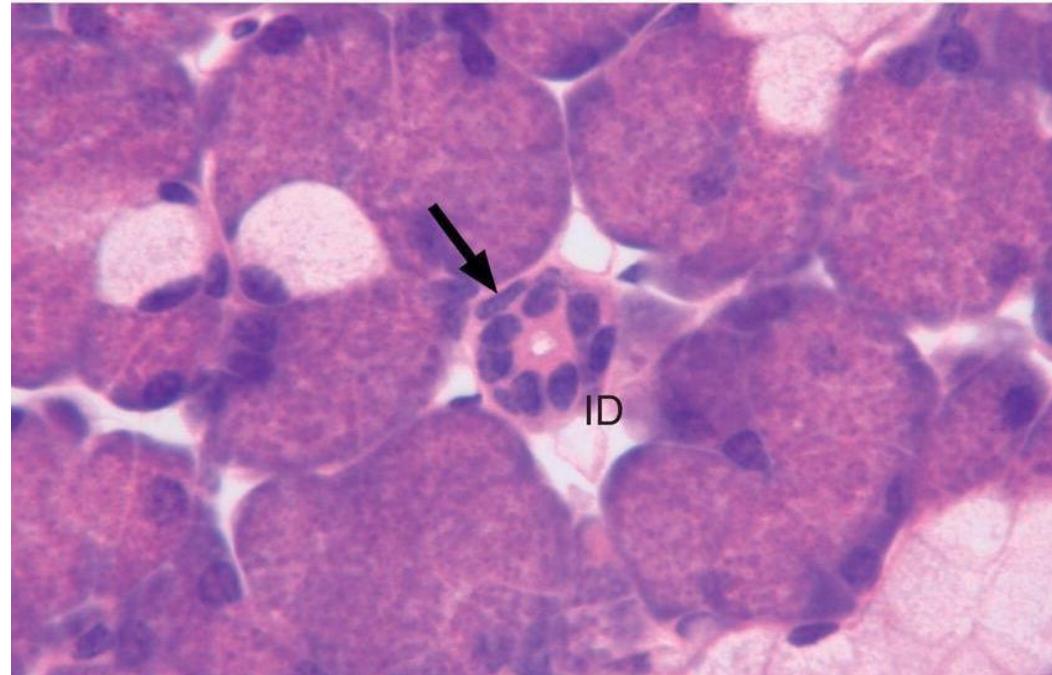
Excretory duct



Ductal system

Intercalated ducts

The diameter of the intercalated duct is considerably smaller than that of the endpiece. The duct cells are low cuboidal to cuboidal in shape.





Serous acini

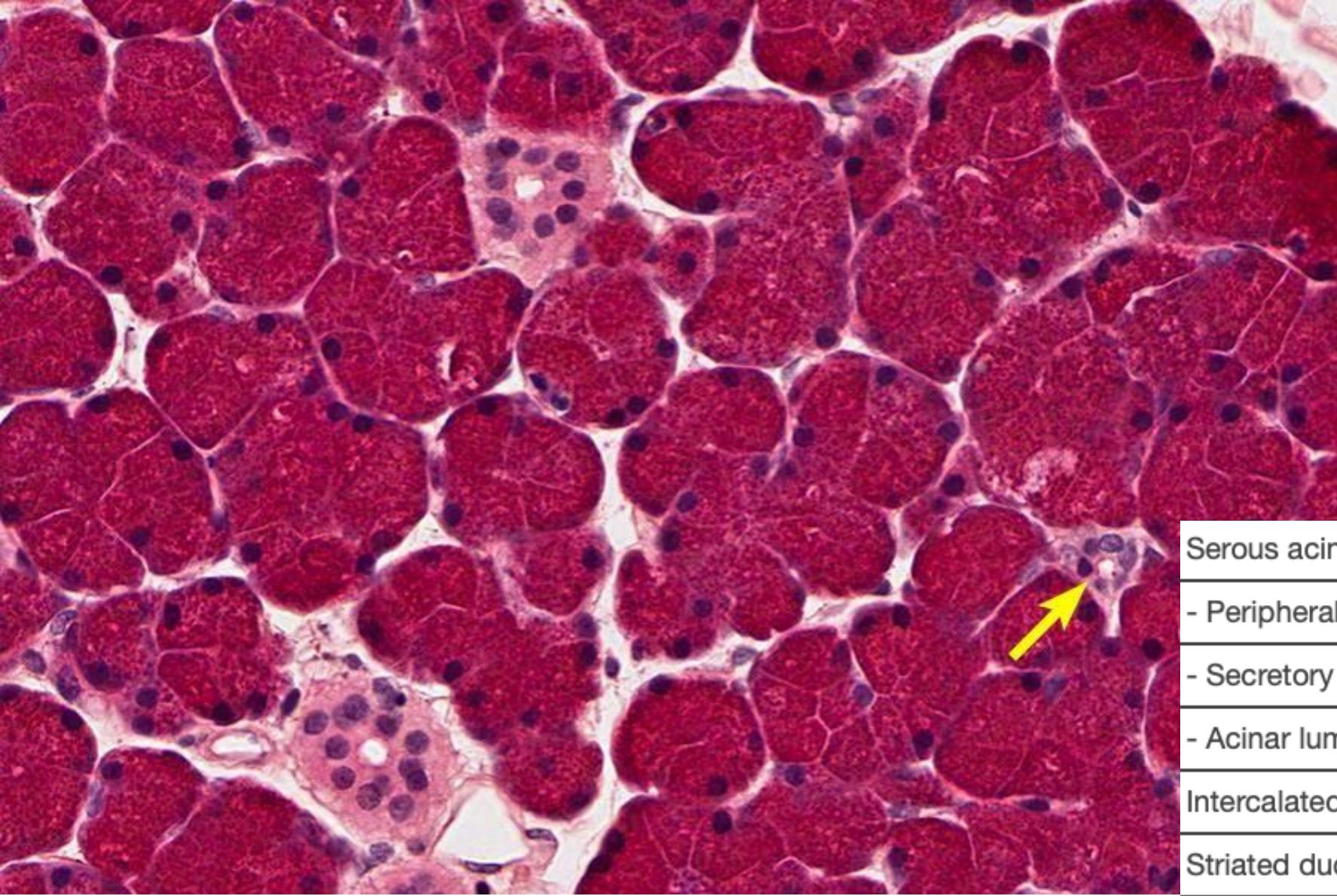
Intercalated duct

Intralobular (striated) ducts

Interlobular ducts >

Interlobular connective tissue

Blood vessels



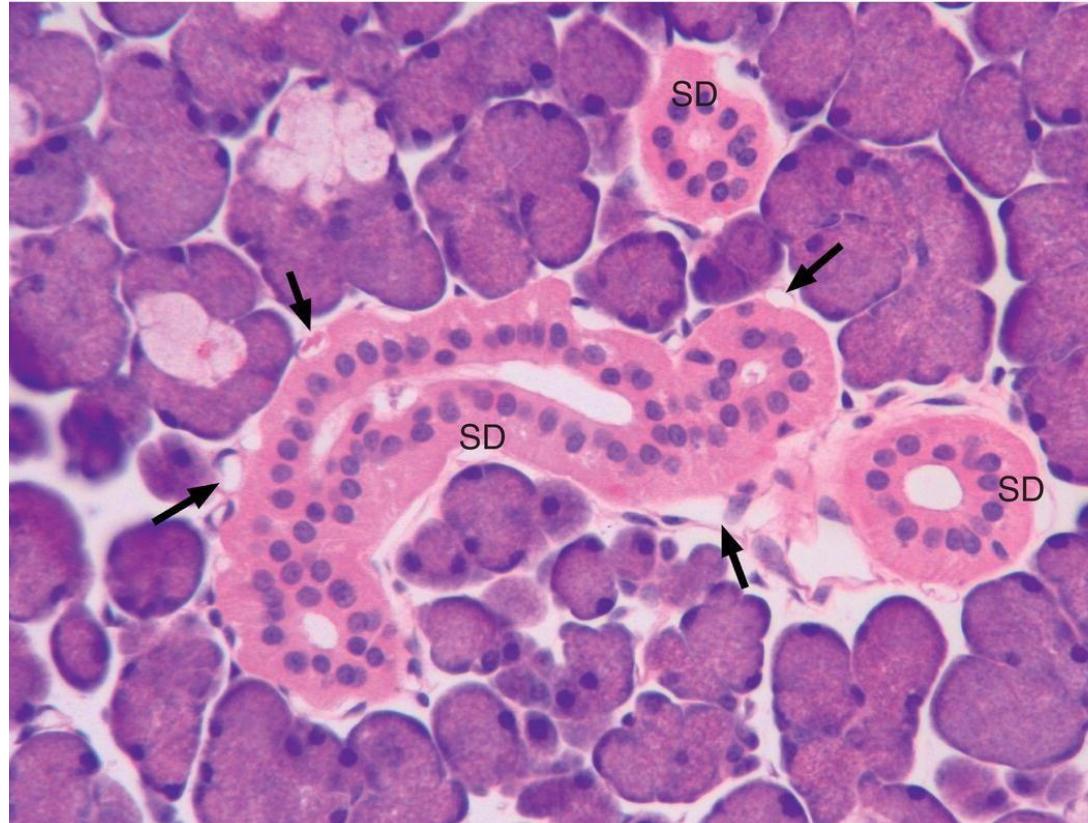
Serous acini

- Peripheral nuclei
 - Secretory granules
 - Acinar lumens
- Intercalated duct >
- Striated ducts >

Striated ducts

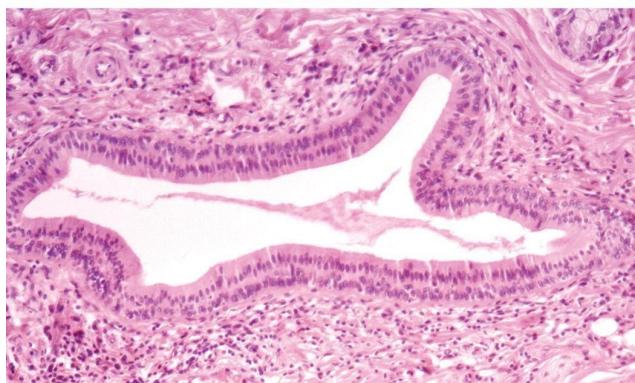
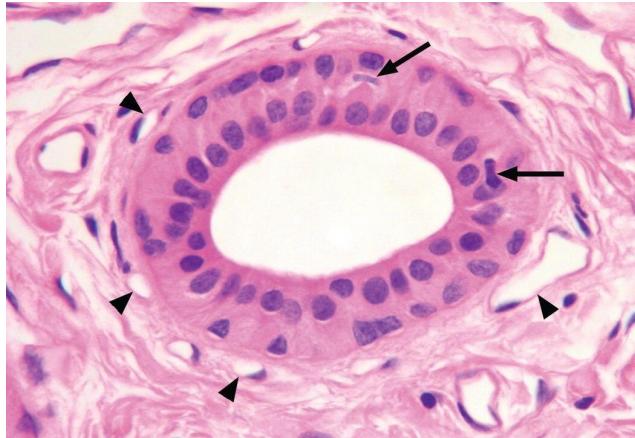
Cross and longitudinal sections of striated ducts (SD). The ducts are lined by a simple columnar epithelium, and their diameter is usually greater than that of the endpieces.

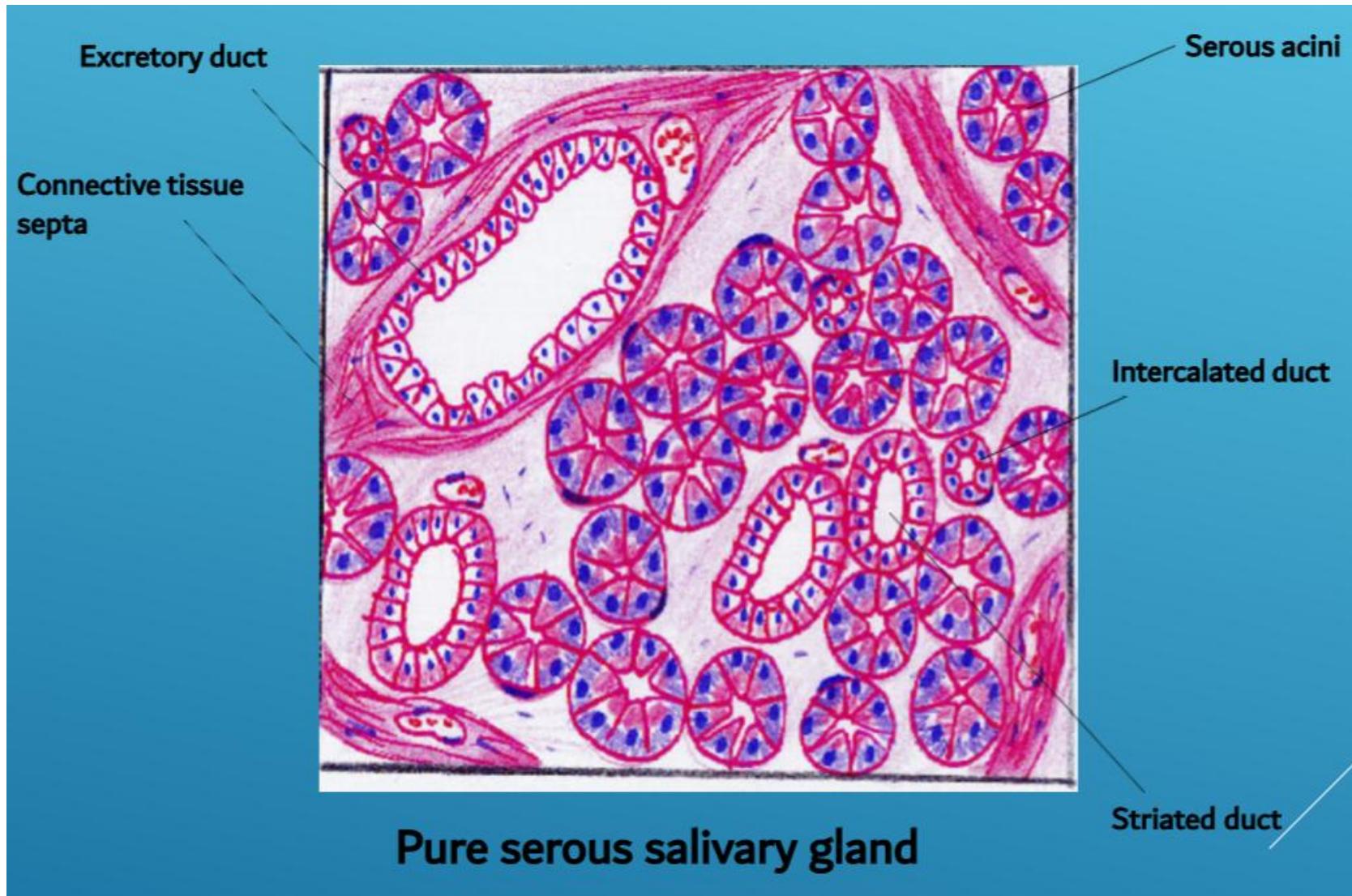
Numerous small blood vessels (arrows) are present adjacent to the striated ducts.



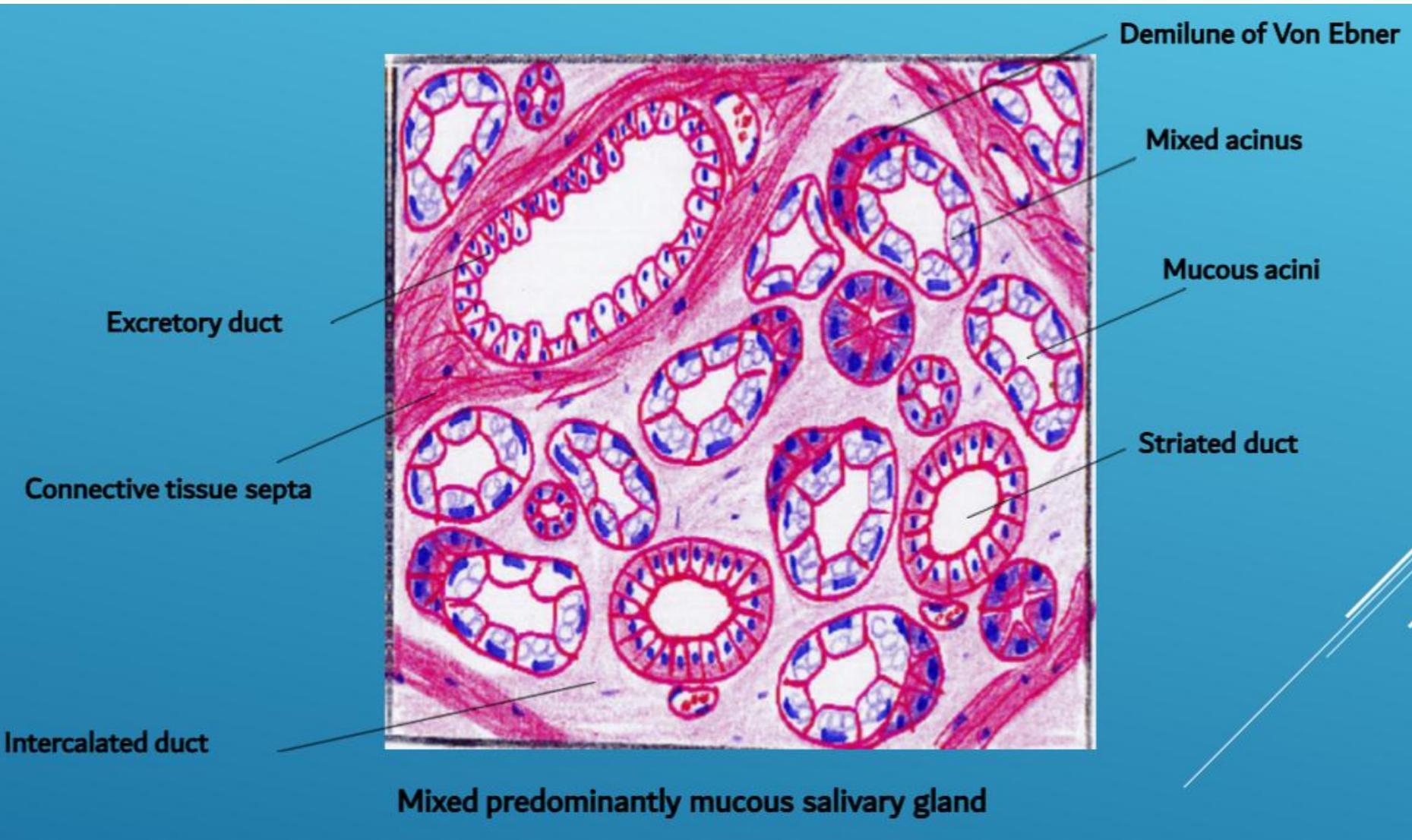
Excretory duct

Excretory ducts are located in the interlobular connective tissue septa. Smaller excretory ducts (upper panel) are lined by a pseudostratified epithelium and have a larger lumen than the intralobular striated ducts. Larger excretory ducts may have a stratified cuboidal or stratified columnar epithelium







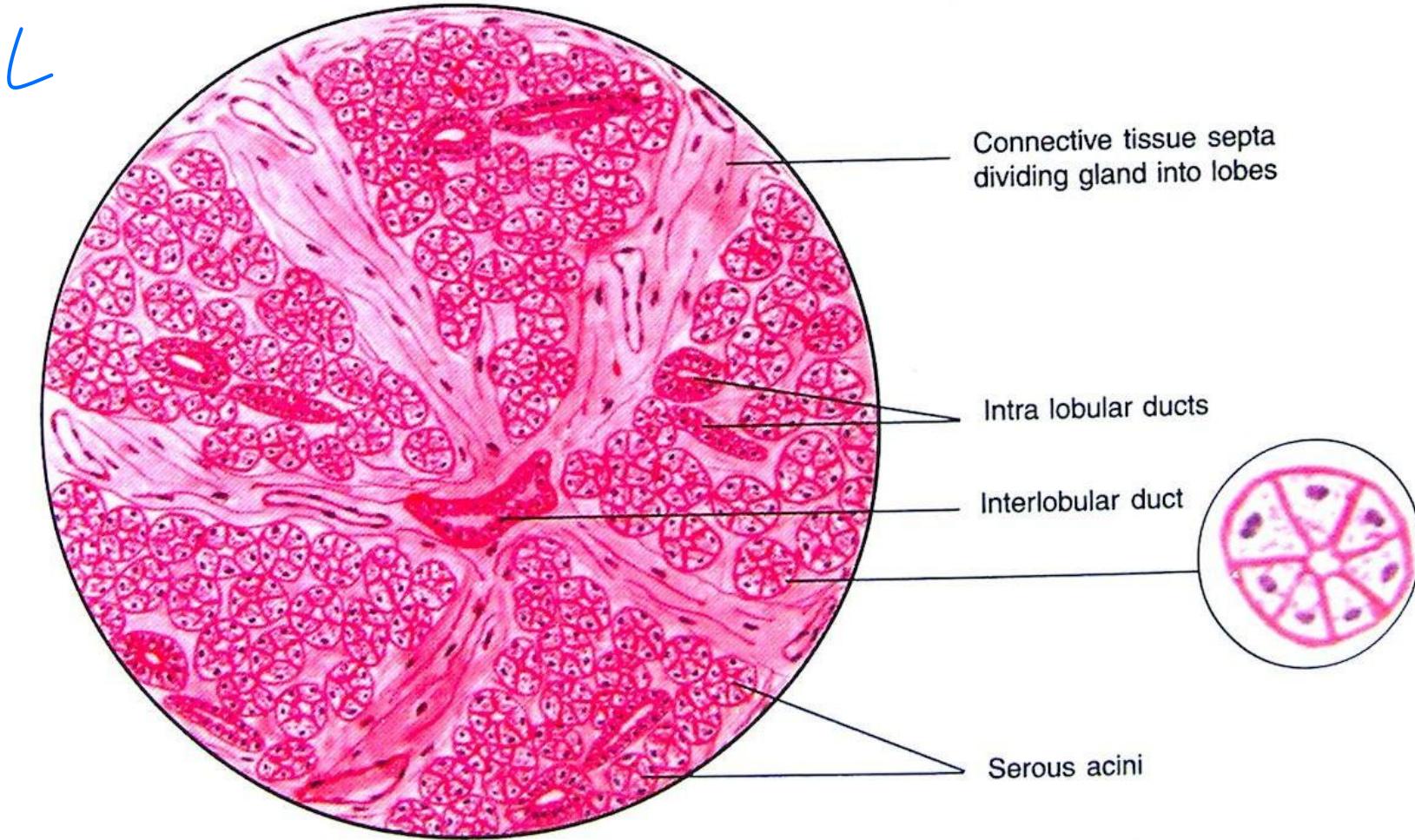


SEROUS SALIVARY GLAND - PAROTID GLAND:

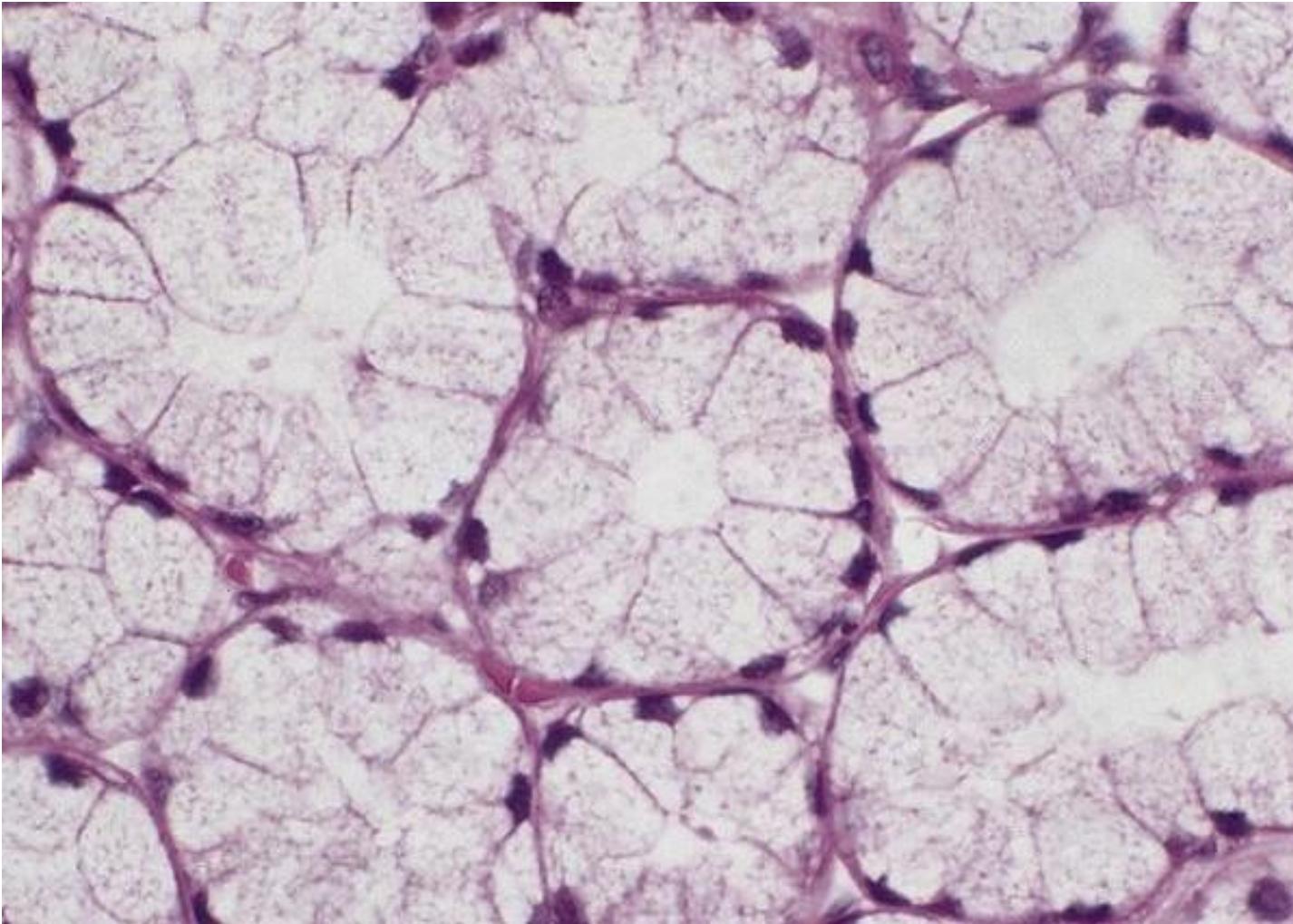


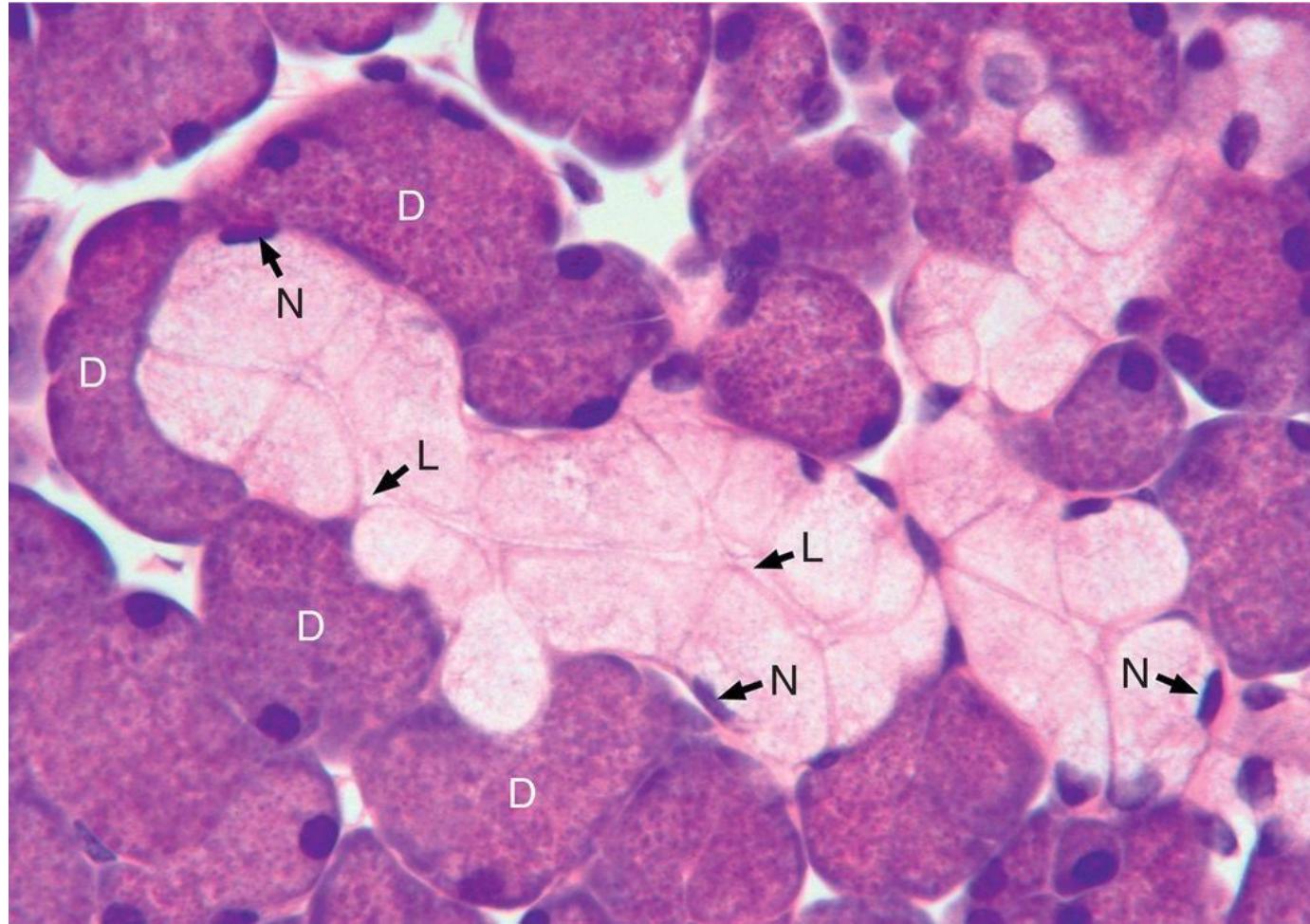
- 1 Pyramidal shaped cells with basally located rounded nuclei are found in a group (secretory cells forming acinus)
- 2 Each acinus is spherical in shape and stained darkly (serous acini)
- 3 The pyramidal cells surround a central narrow opening(narrow lumen)
- 4 Columnar cells with large, apically-located nuclei arranged in a ring like structure. They have basal striations (Striated Duct)

SEROUS SALIVARY GLAND - PAROTID GLAND:

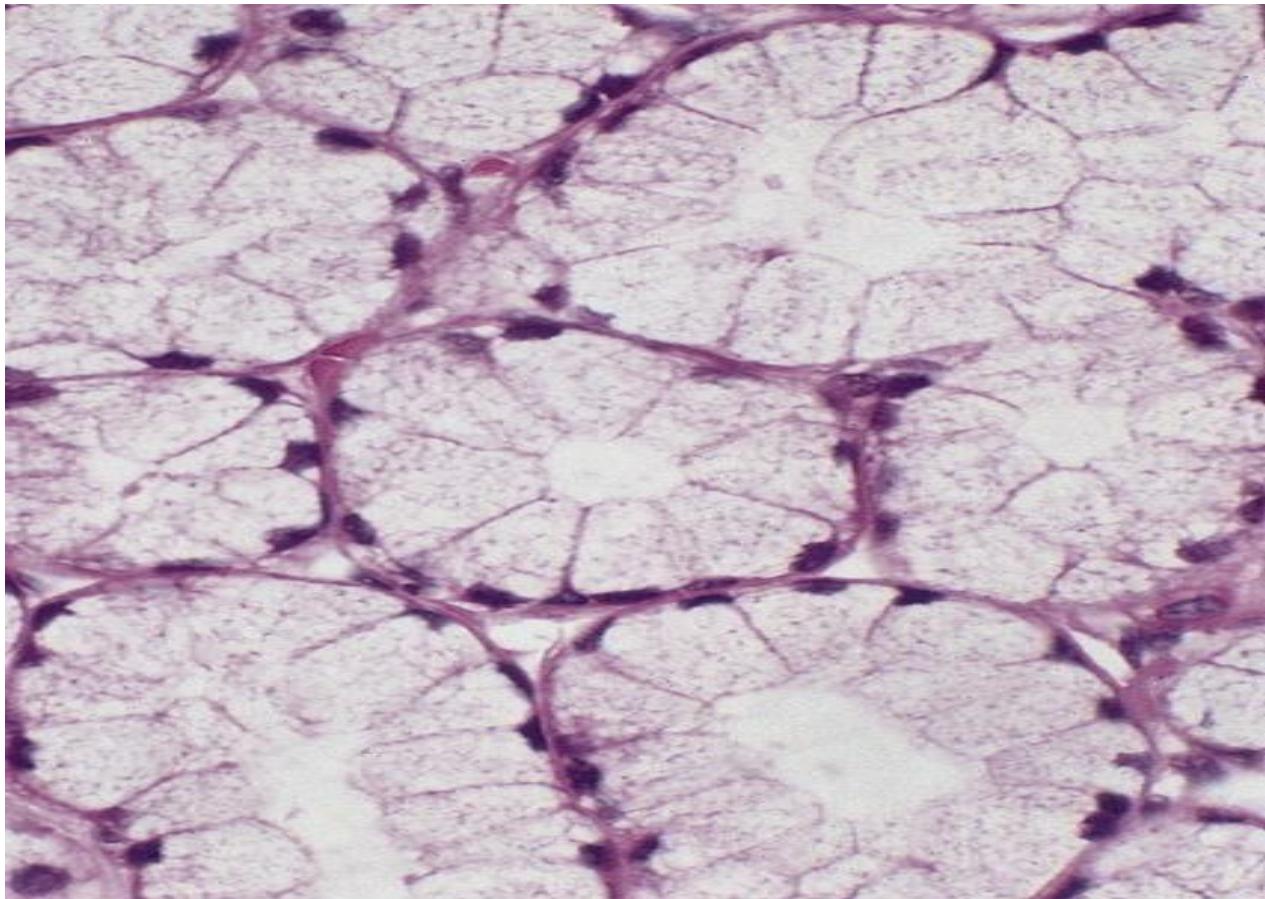


MUCOUS SALIVARY GLAND - SUBLINGUAL GLAND:

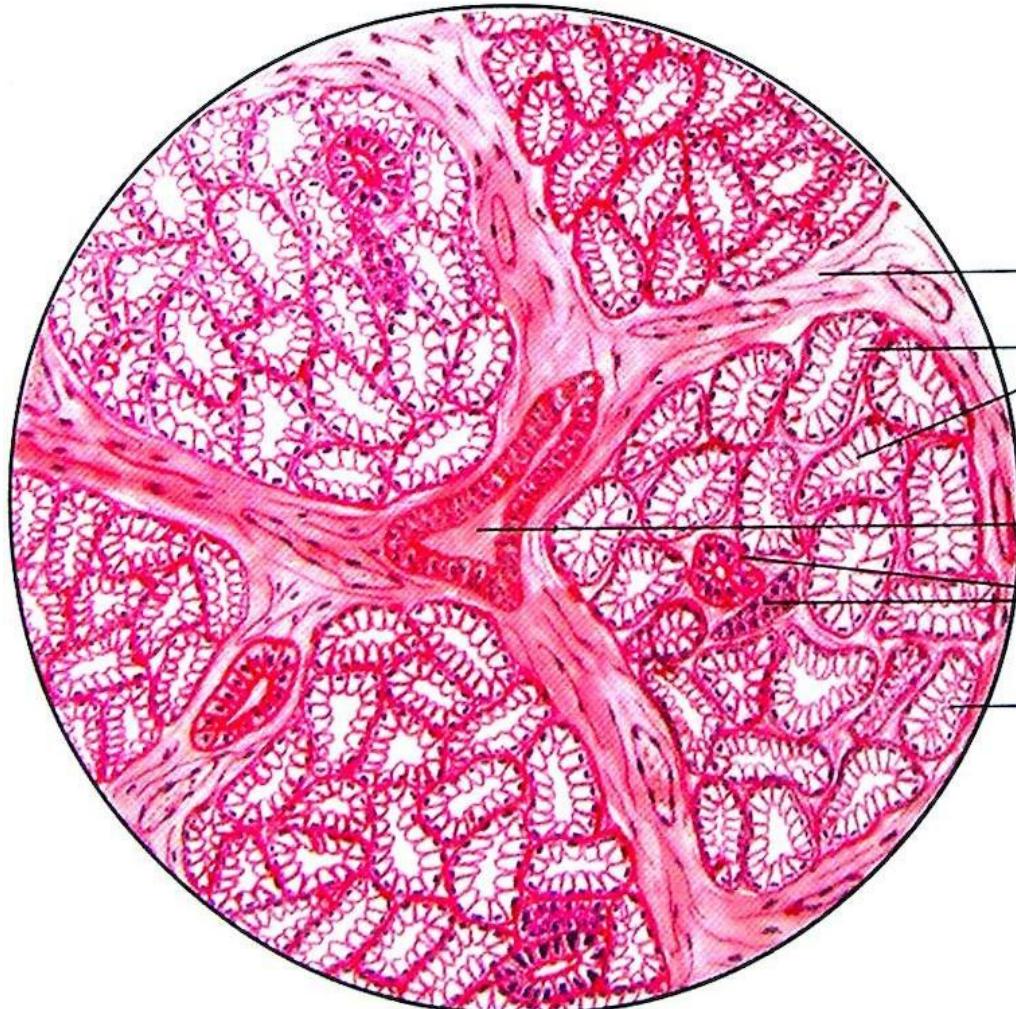




MUCOUS SALIVARY GLAND - SUBLINGUAL GLAND:

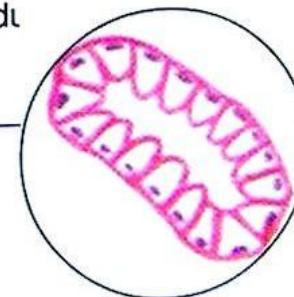


- 1 Cells have pale granular abundant cytoplasm and basally located, flattened nuclei
(MUCOUS CELLS)
- 2 The cells are arranged in groups (acini) that are large in size and has tubular or irregular pattern
(MUCOUS ACINI)
- 3 The cells surround a central large opening(LARGE LUMEN)



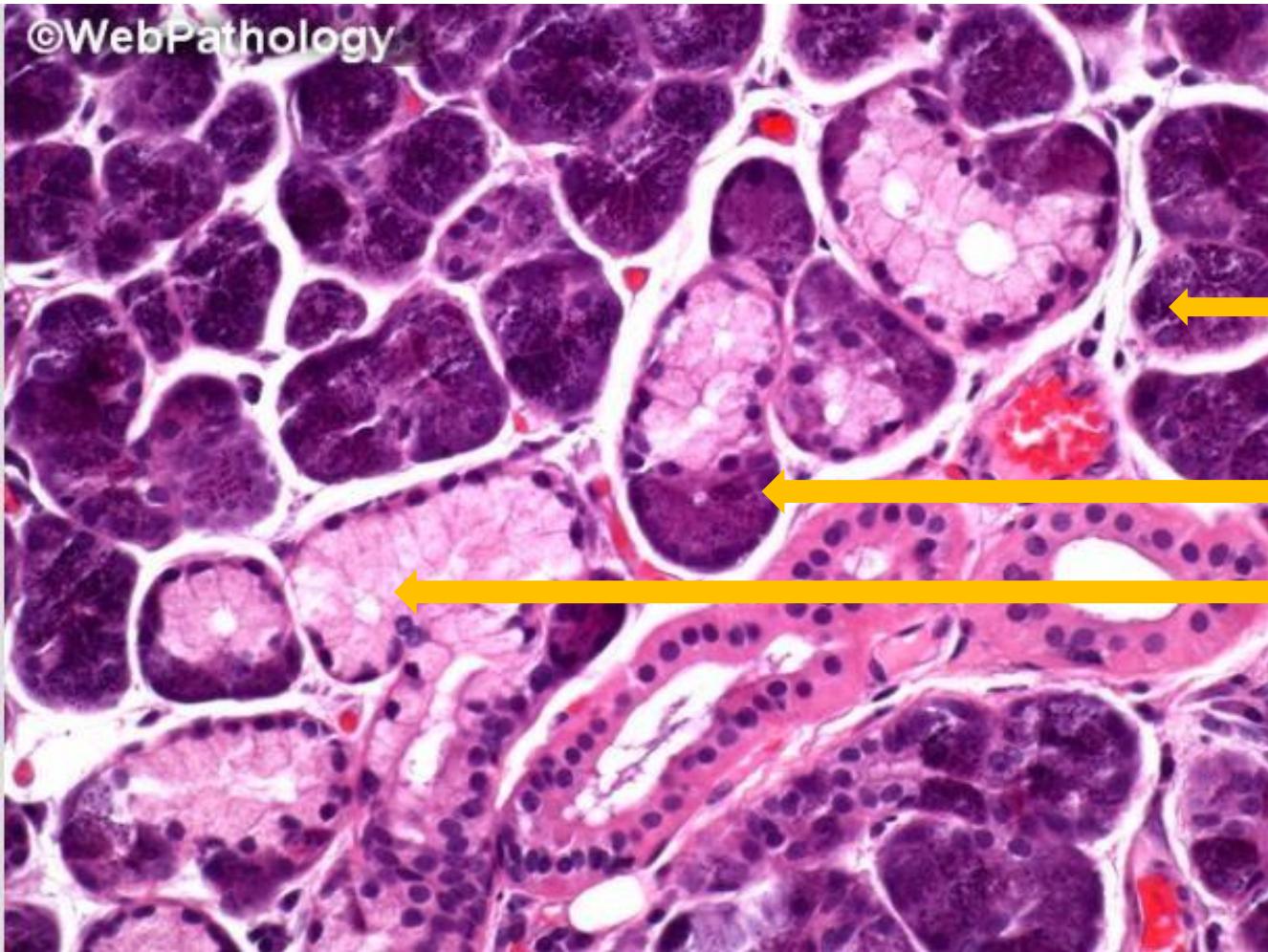
Connective tissue septa
dividing gland into lobes
Mucous acini

Interlobular duct
Intra lobular dt



Mucous salivary gland

MIXED SALIVARY GLAND (SUBMANDIBULAR)

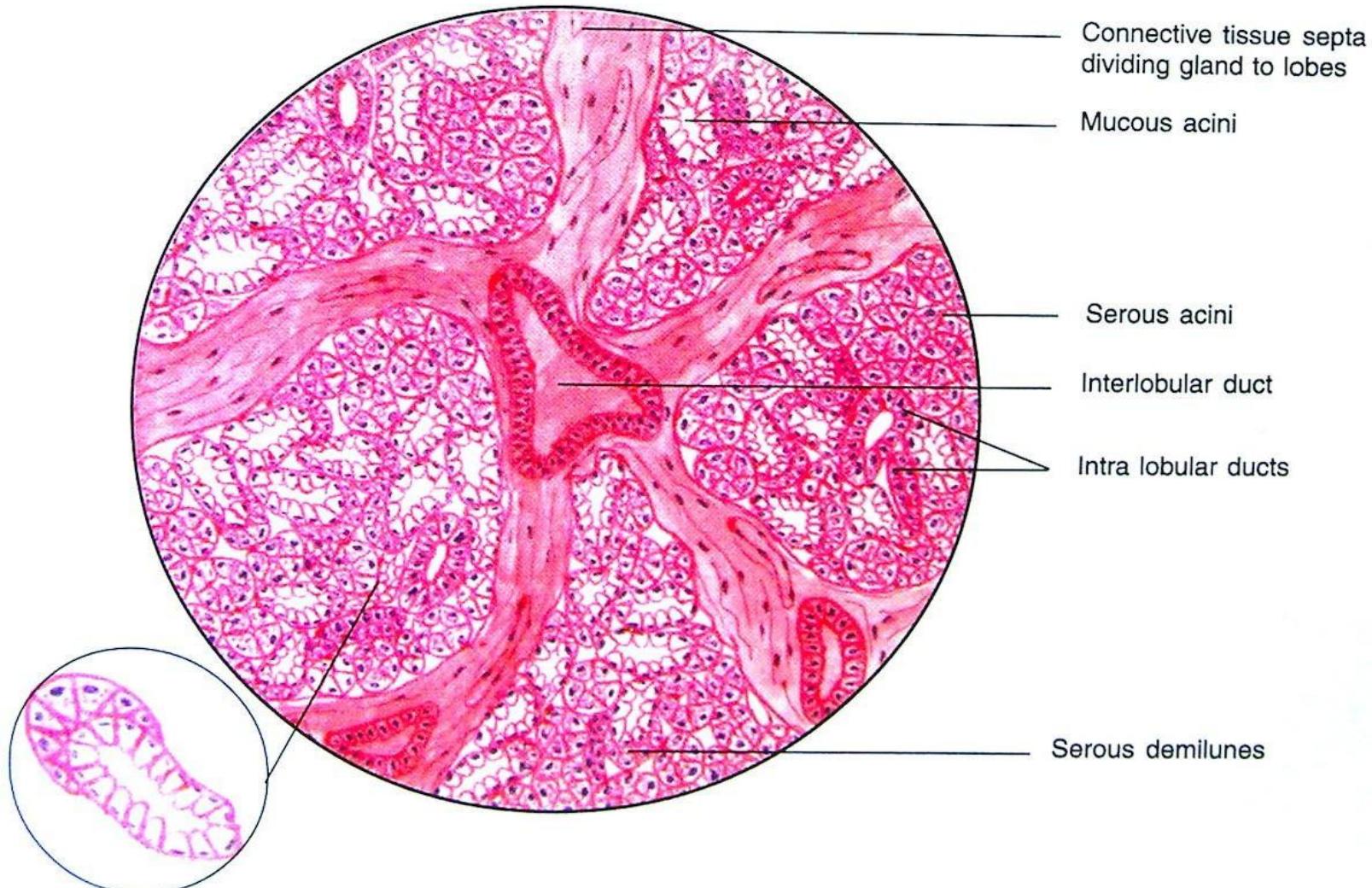


Serous acini

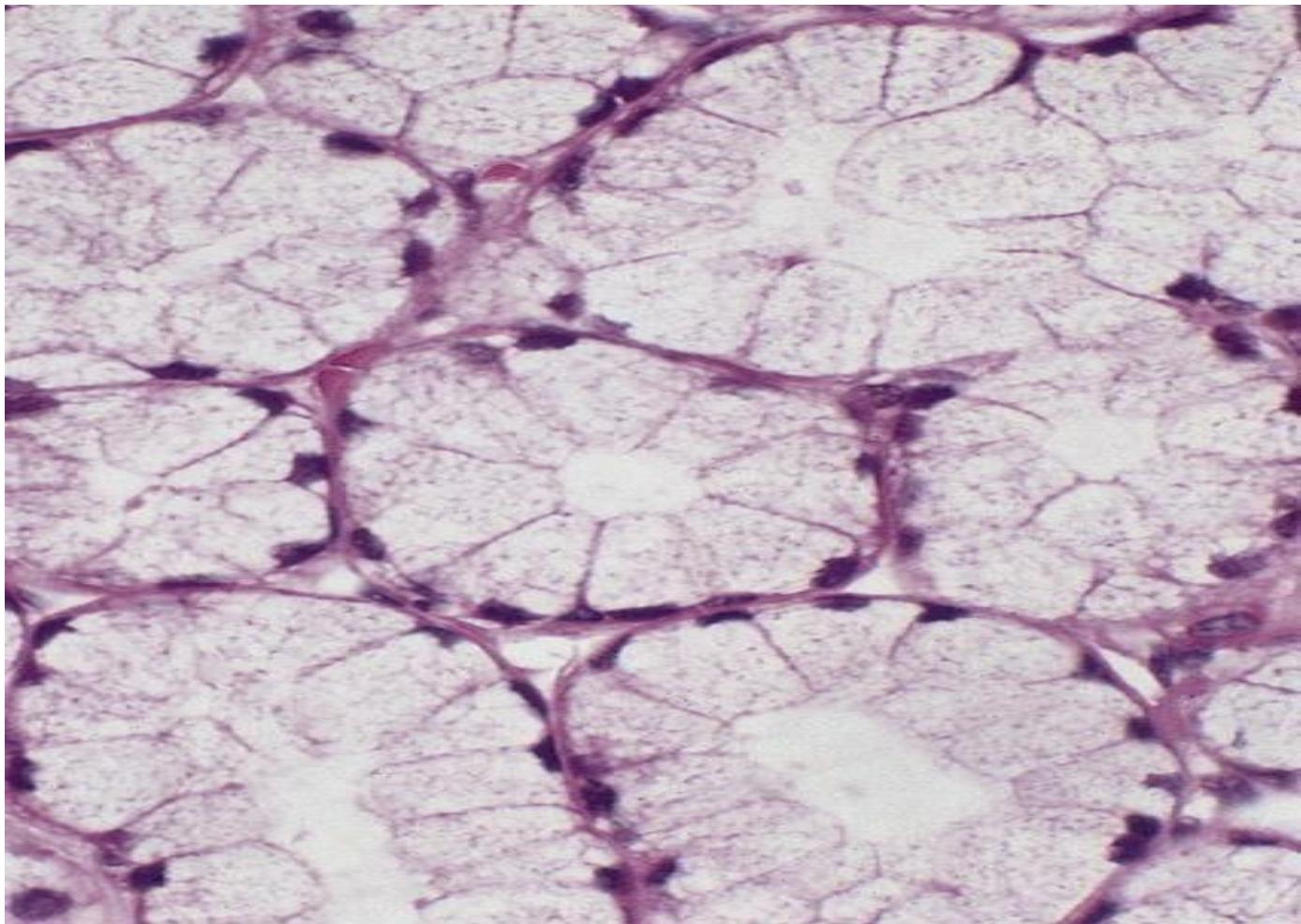
Serous demilunes

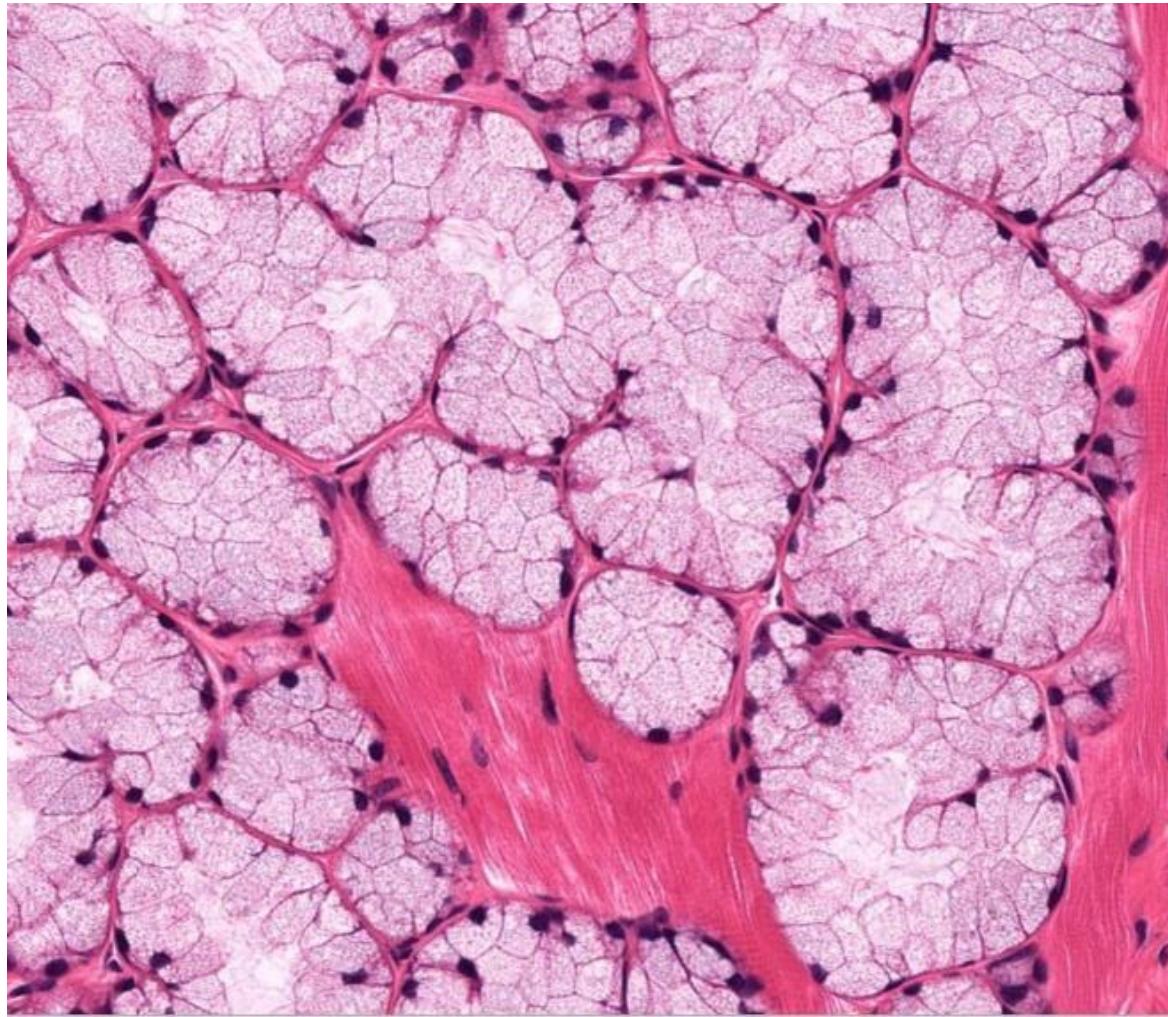
Mucous acini

MIXED SALIVARY GLAND – SUBMANDIBULAR GLAND:

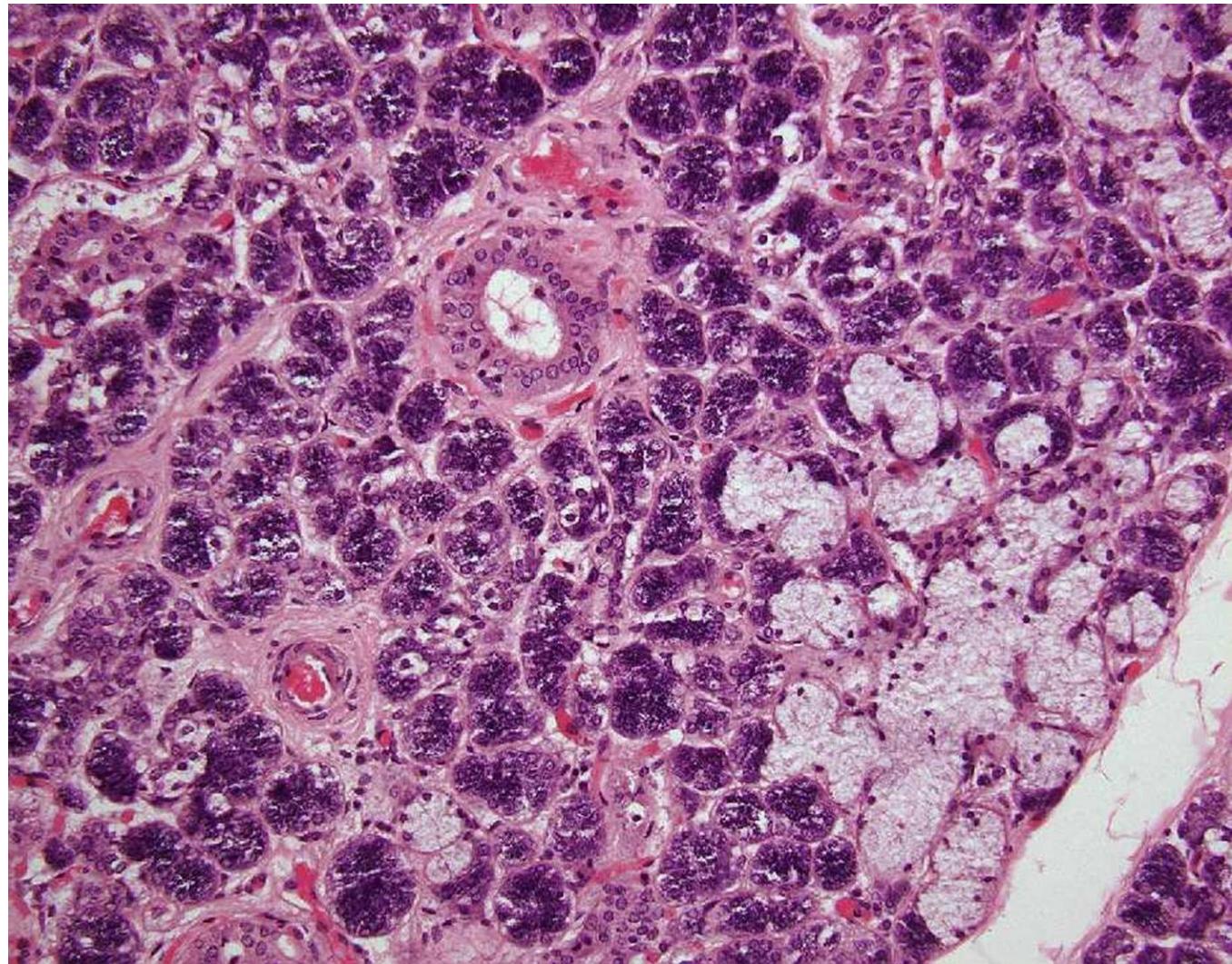


DIAGNOSIS / IDENTIFICATION



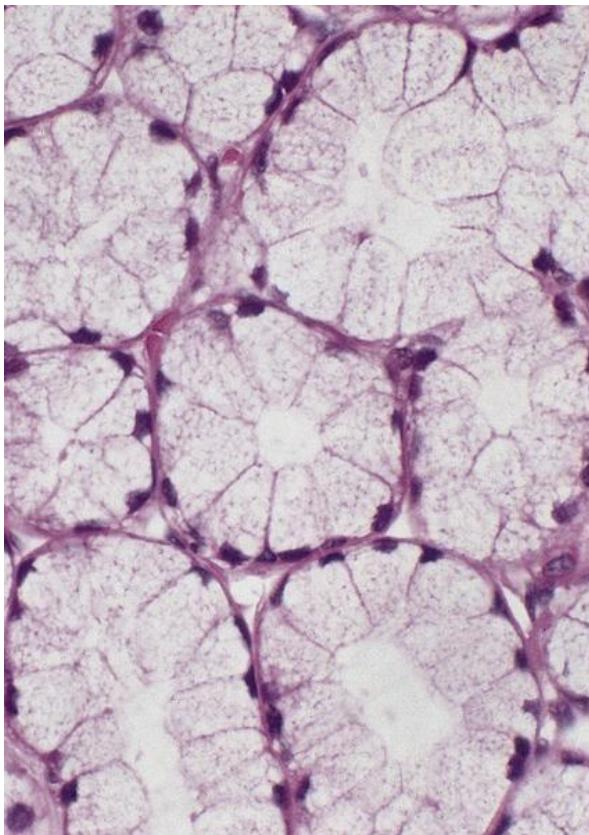


DIAGNOSIS / IDENTIFICATION



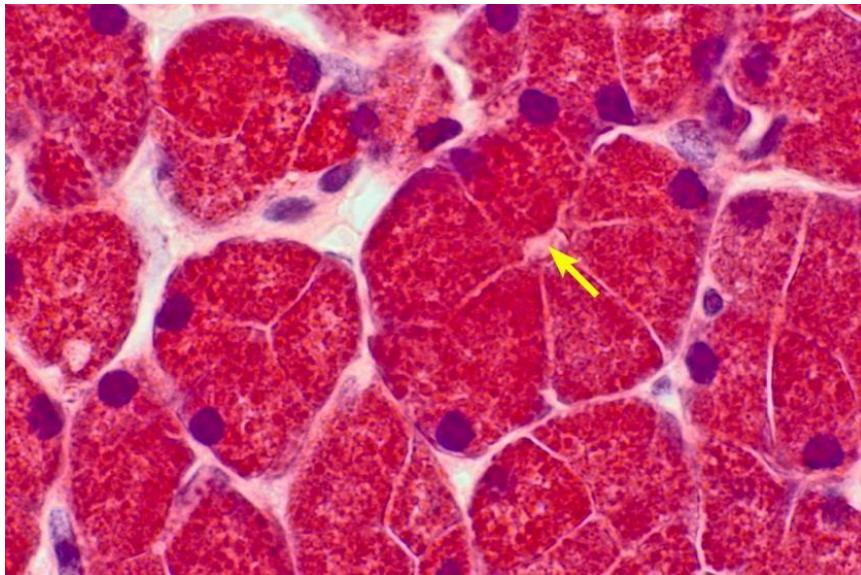
Formative Assessment

1. IDENTIFY THE PICTURE?????



Why?

2. IDENTIFY THE PICTURE?????



Why?

3. IDENTIFY THE PICTURE??????



Why?

4. IDENTIFY THE PICTURE?????



Why?



All the best!