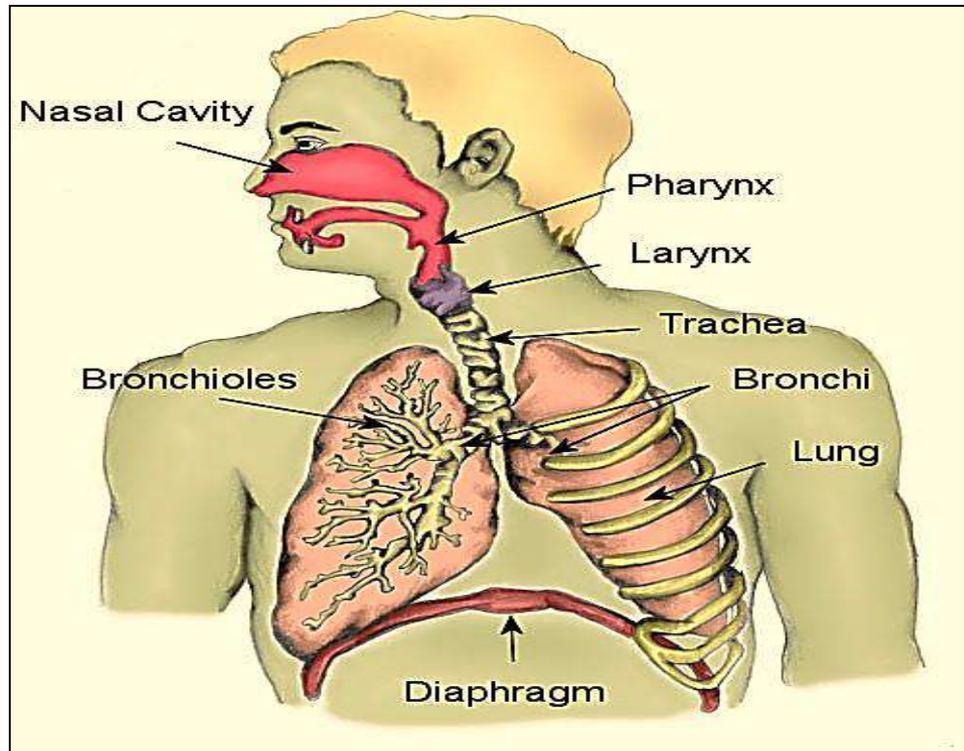
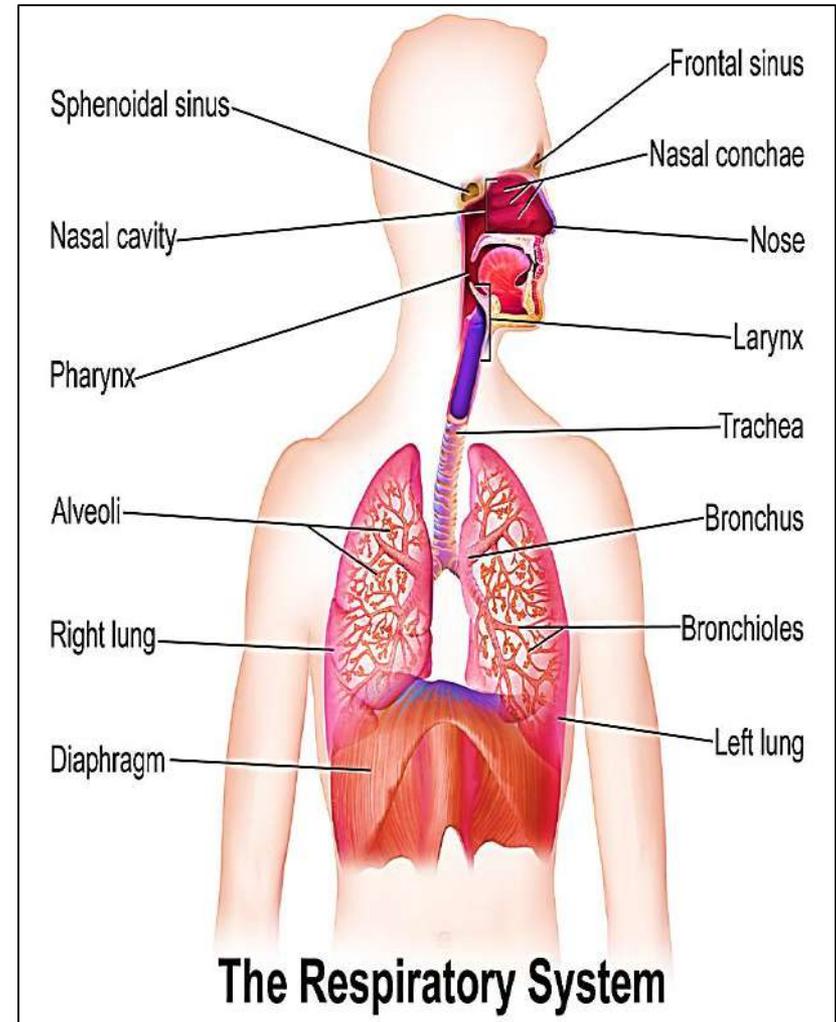


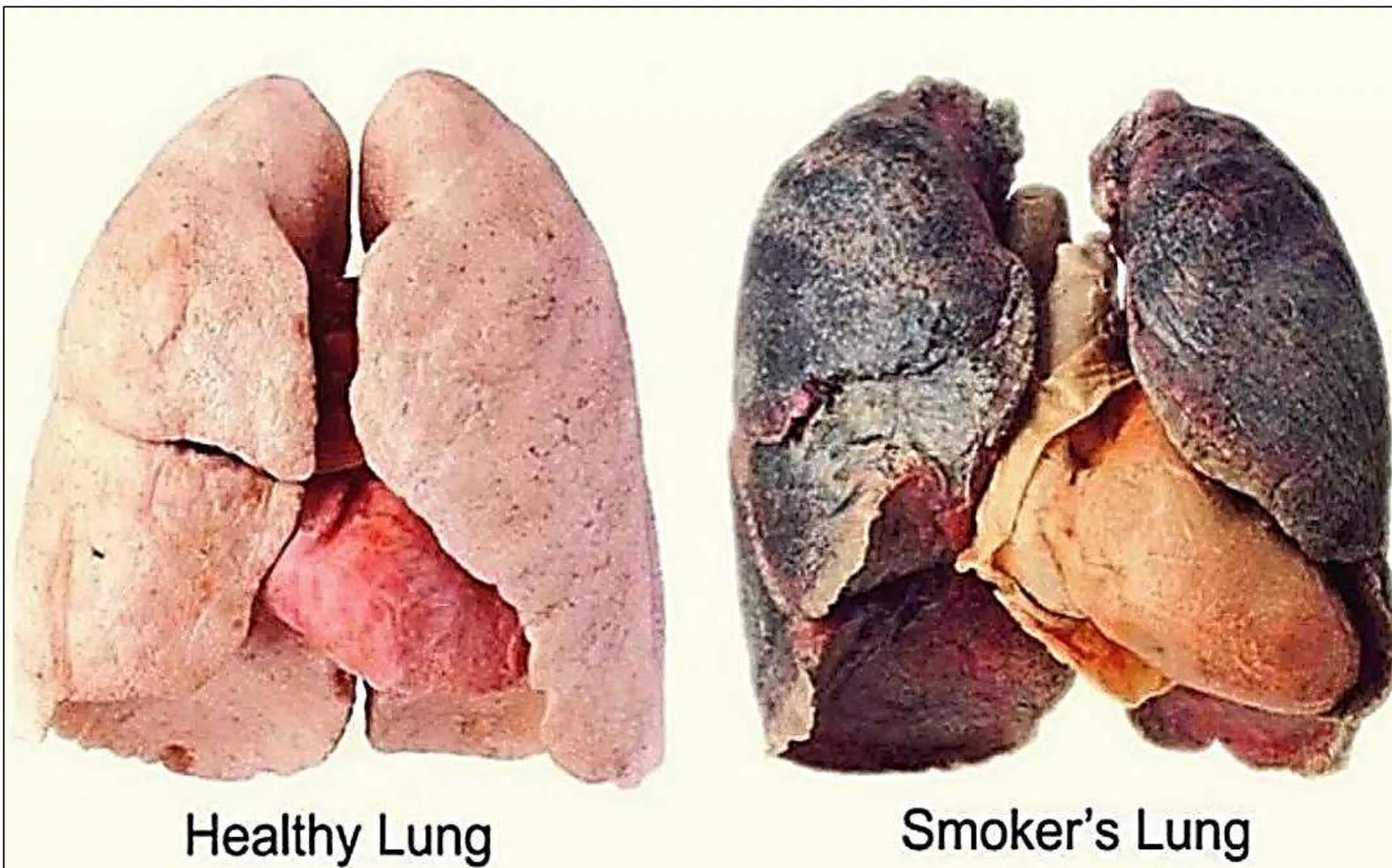
# Respiratory system practical lab, 3<sup>rd</sup> year



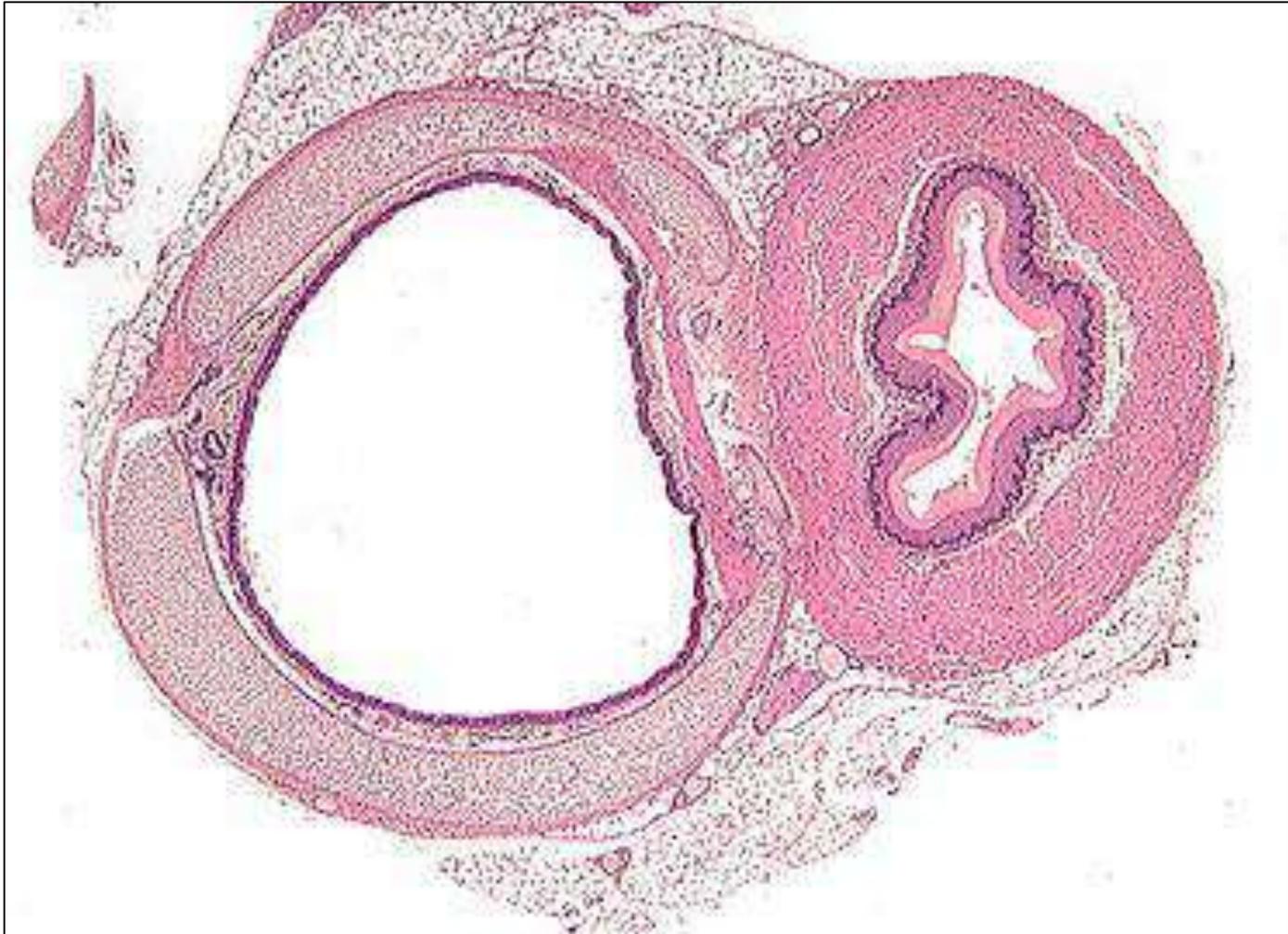
## Microscopic slides in the LAB:

- 1- Trachea
- 2- Epiglottis
- 3- Respiratory epithelium
- 4- Olfactory epithelium
- 5- Lung + bronchus  
+ bronchiole
- 6- lung

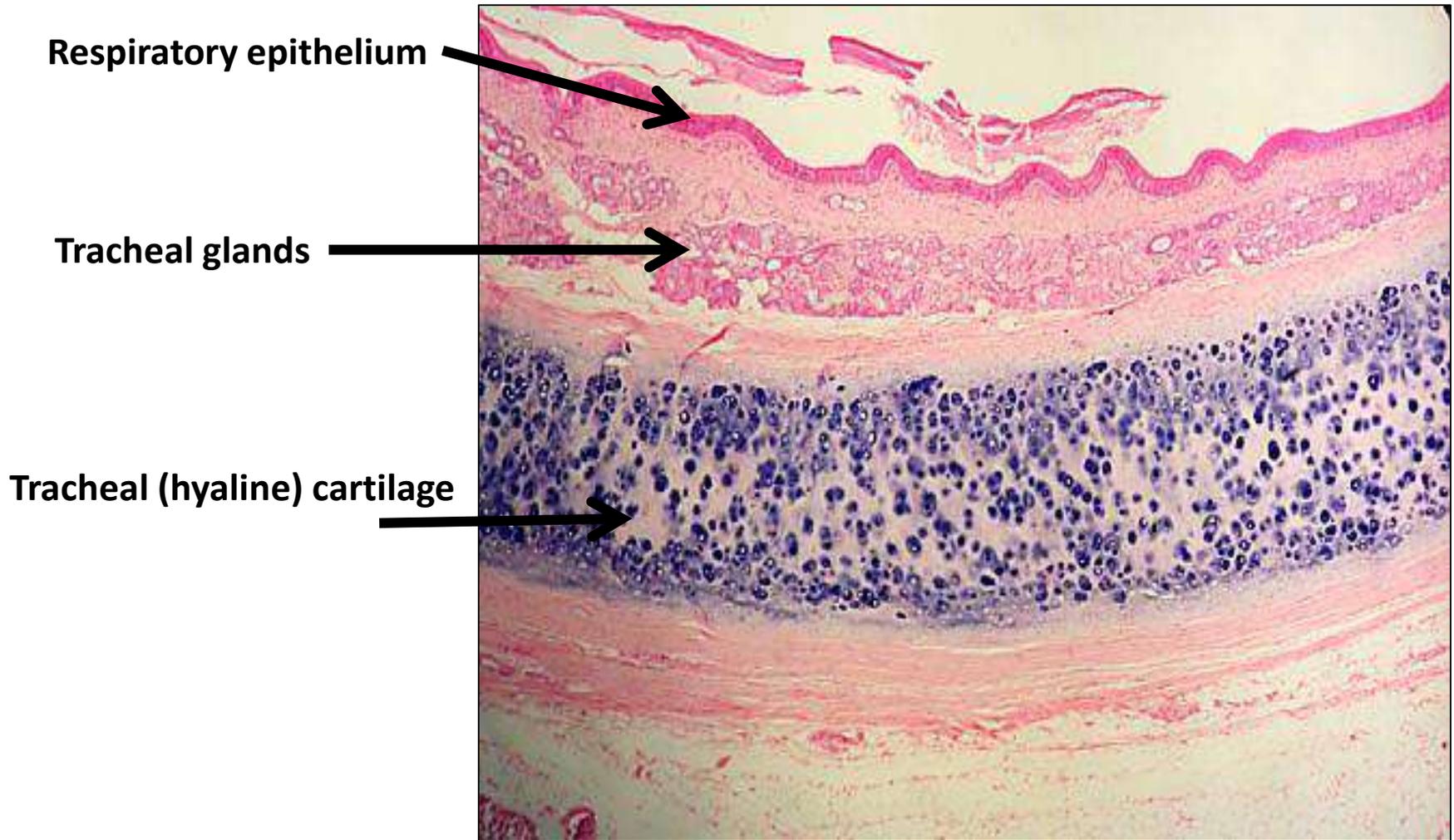




# Trachea & Esophagus



# Cross section in trachea

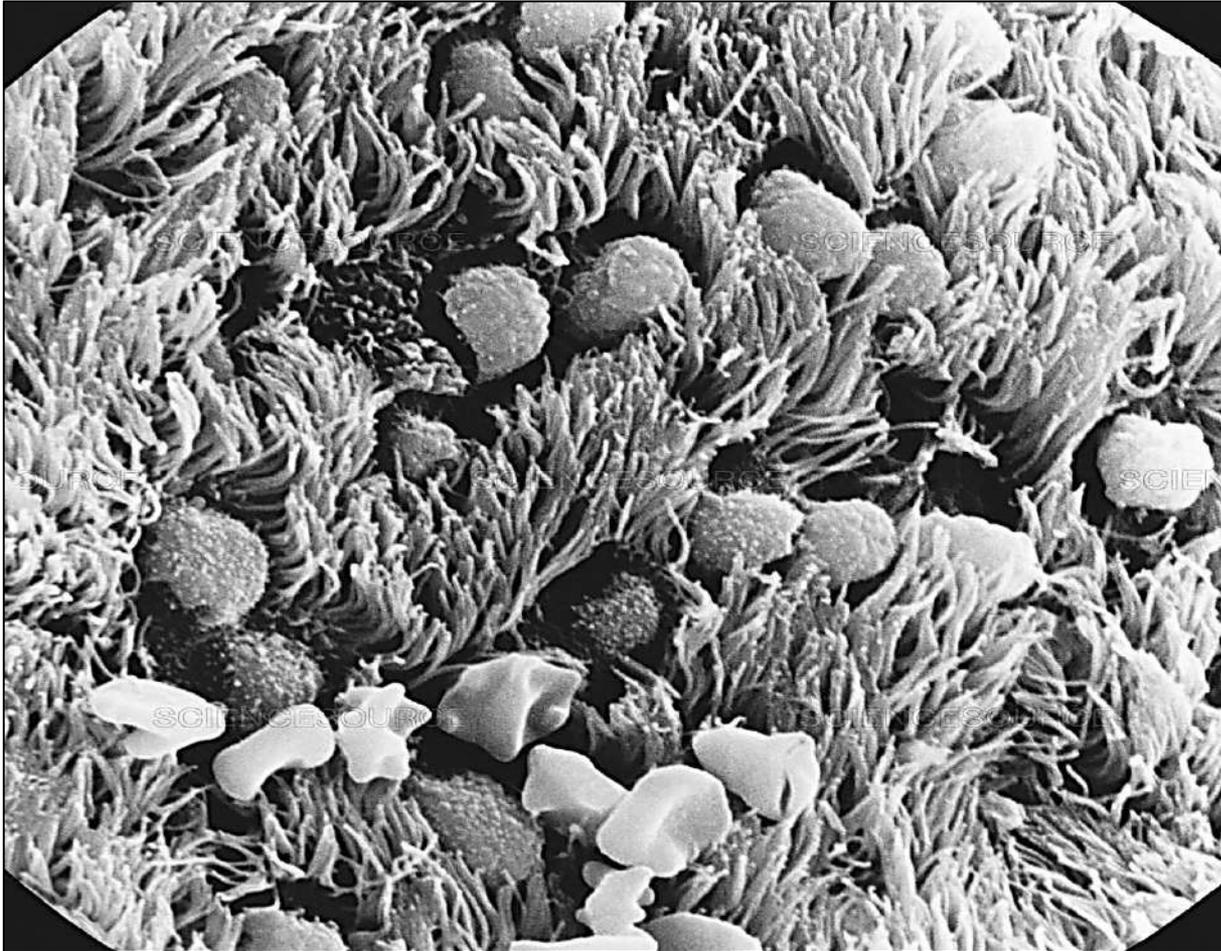


# Respiratory epithelium



**Pseudo stratified columnar ciliated with goblet cells**

# SEM of respiratory epithelium



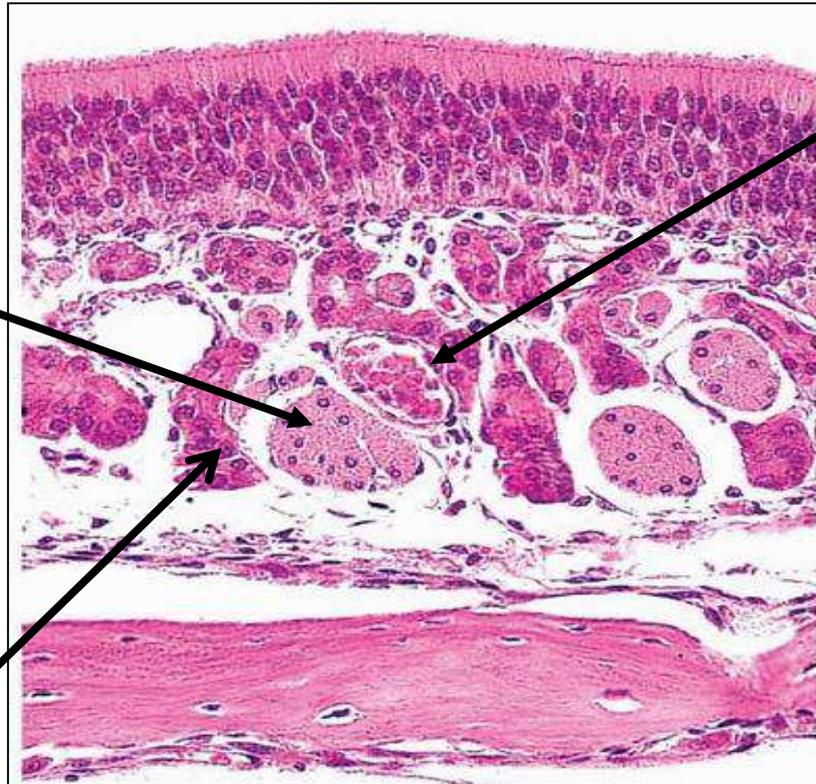
# Olfactory epithelium

## Olfactory Filia:

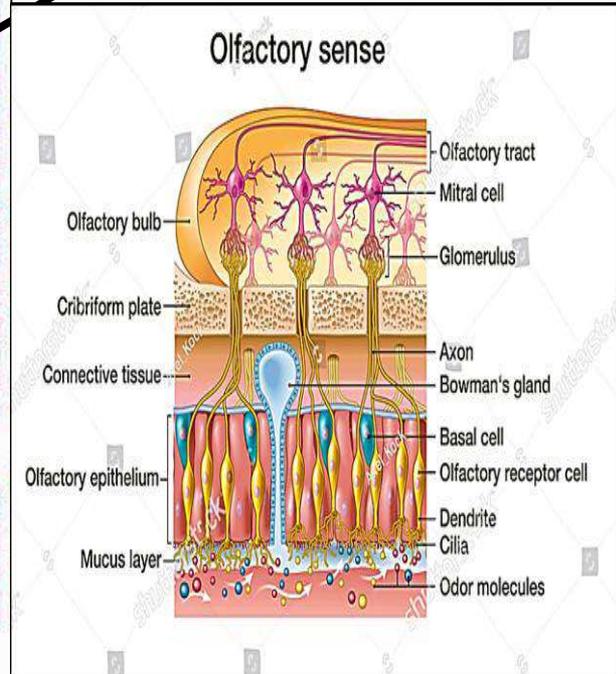
Bundles of olfactory neurons axons, unmyelinated bundles.

20 in # on each side of the nasal cavity .

Form the olfactory nerve

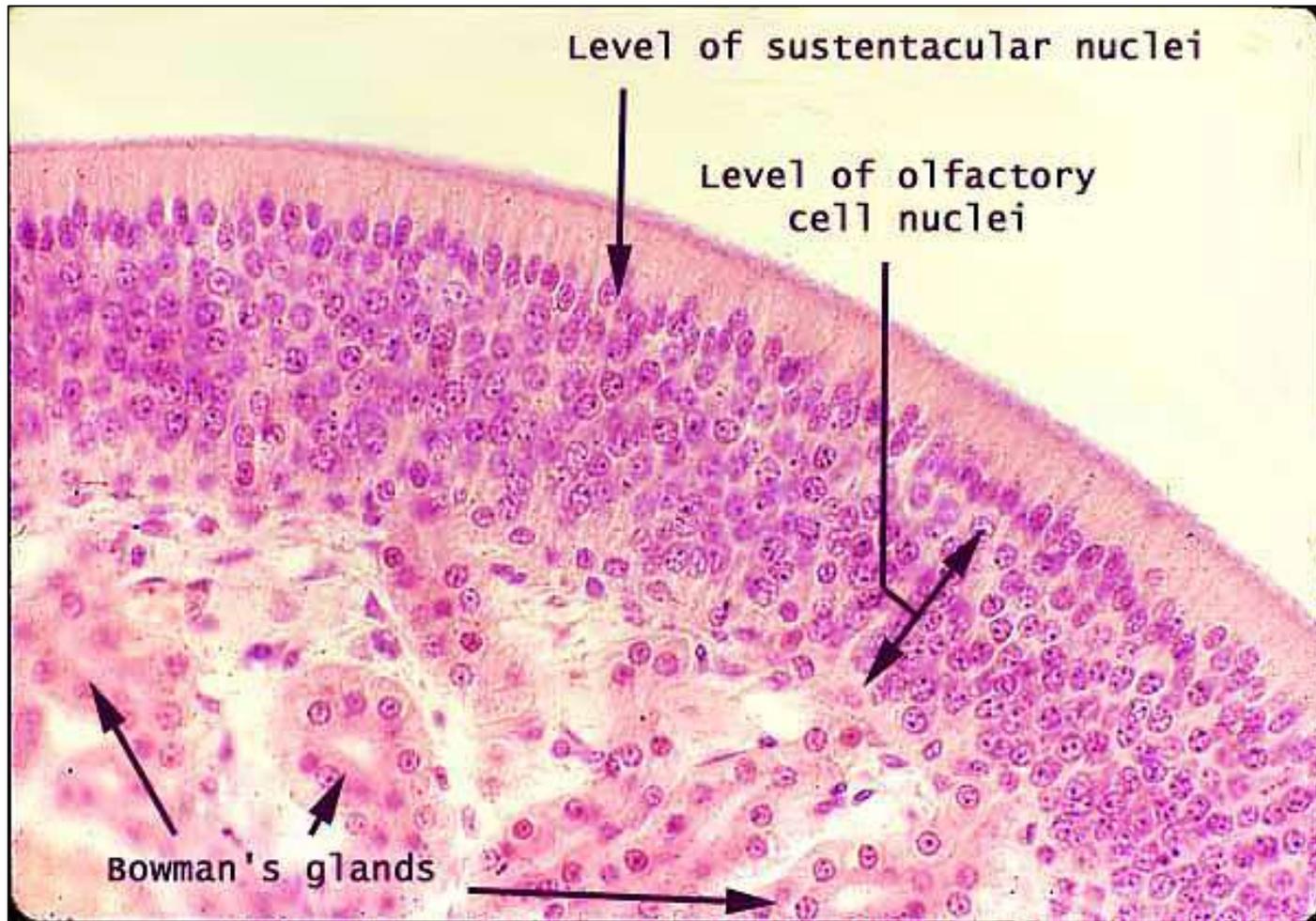


Venous plexus



Bowman's gland

Pseudo-stratified columnar with chemoreceptors



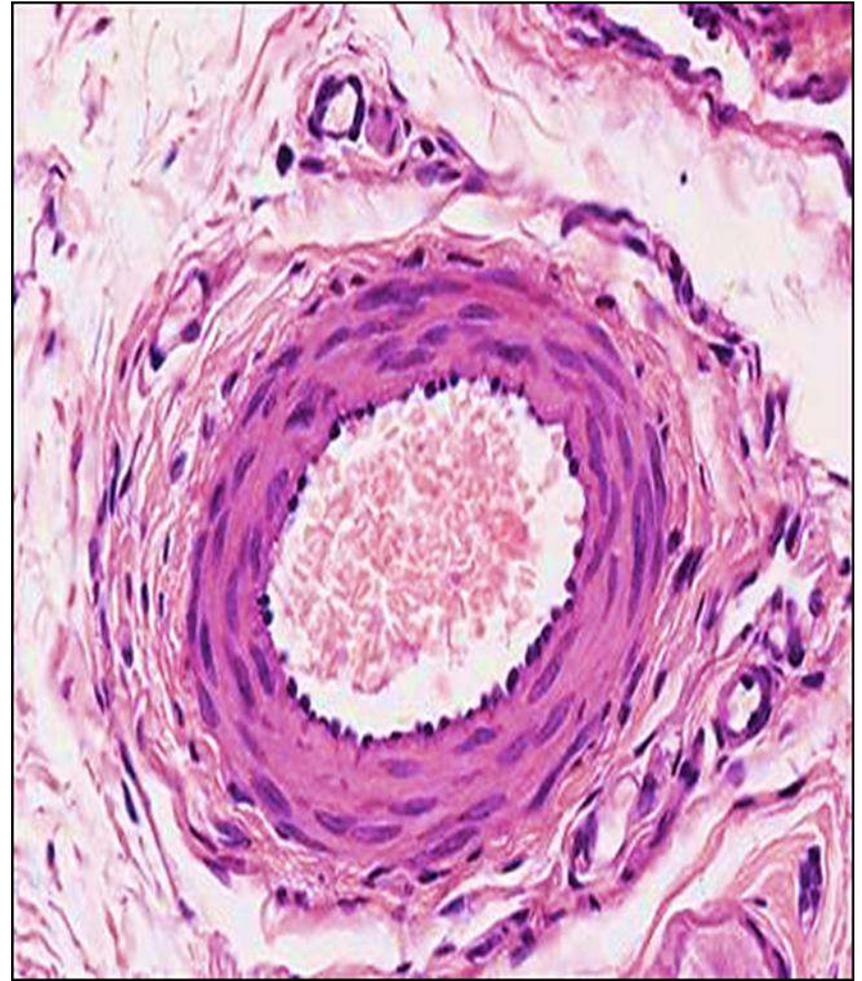
# Bronchus

Cartilage plates





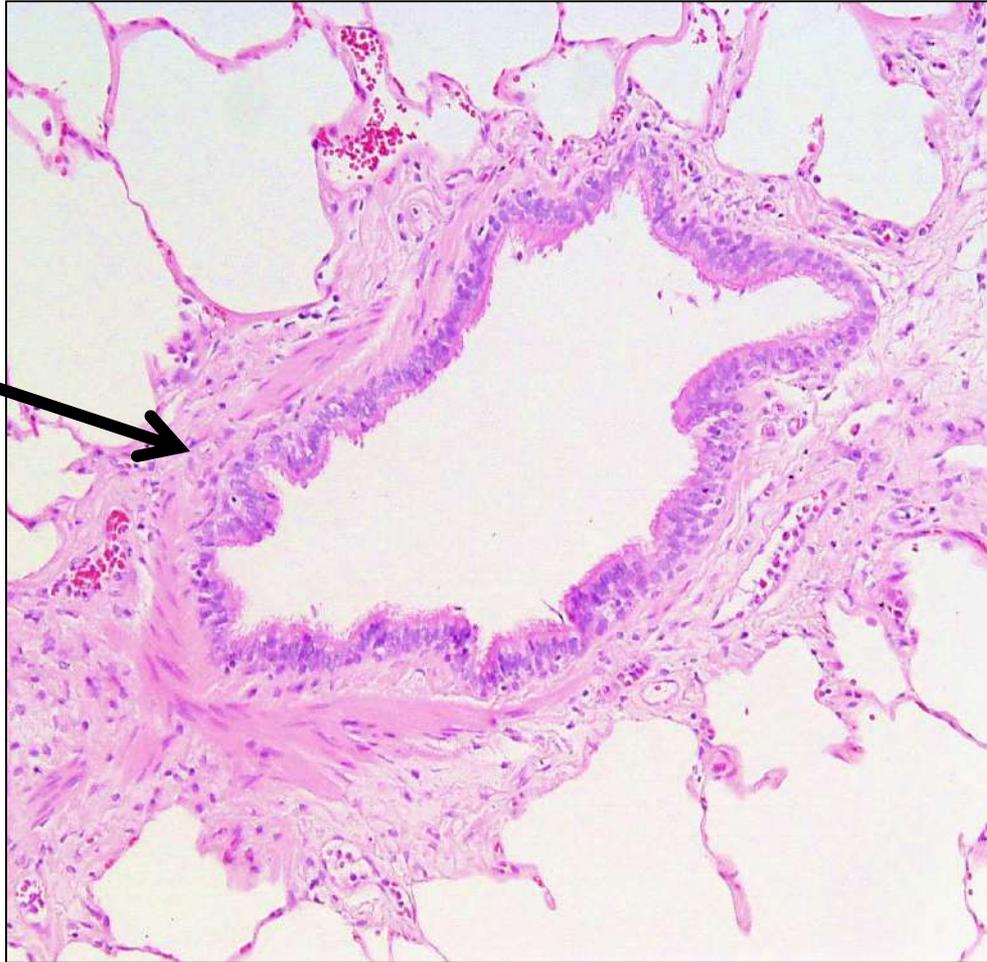
Bronchus

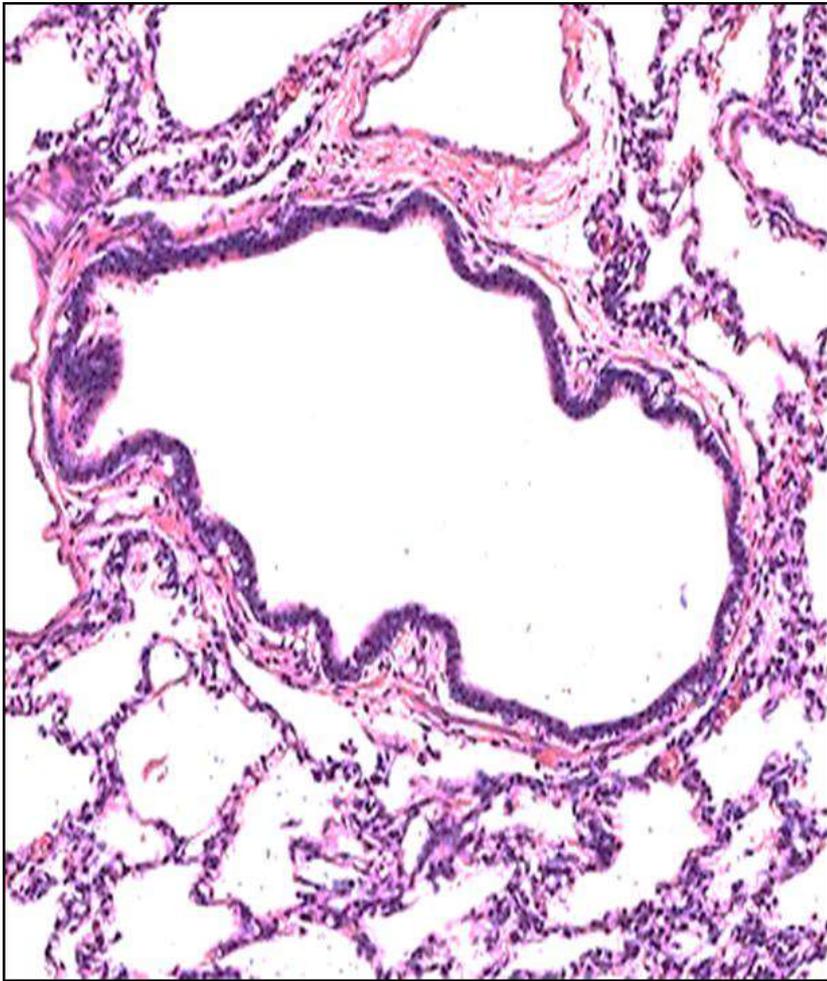


Blood vessel

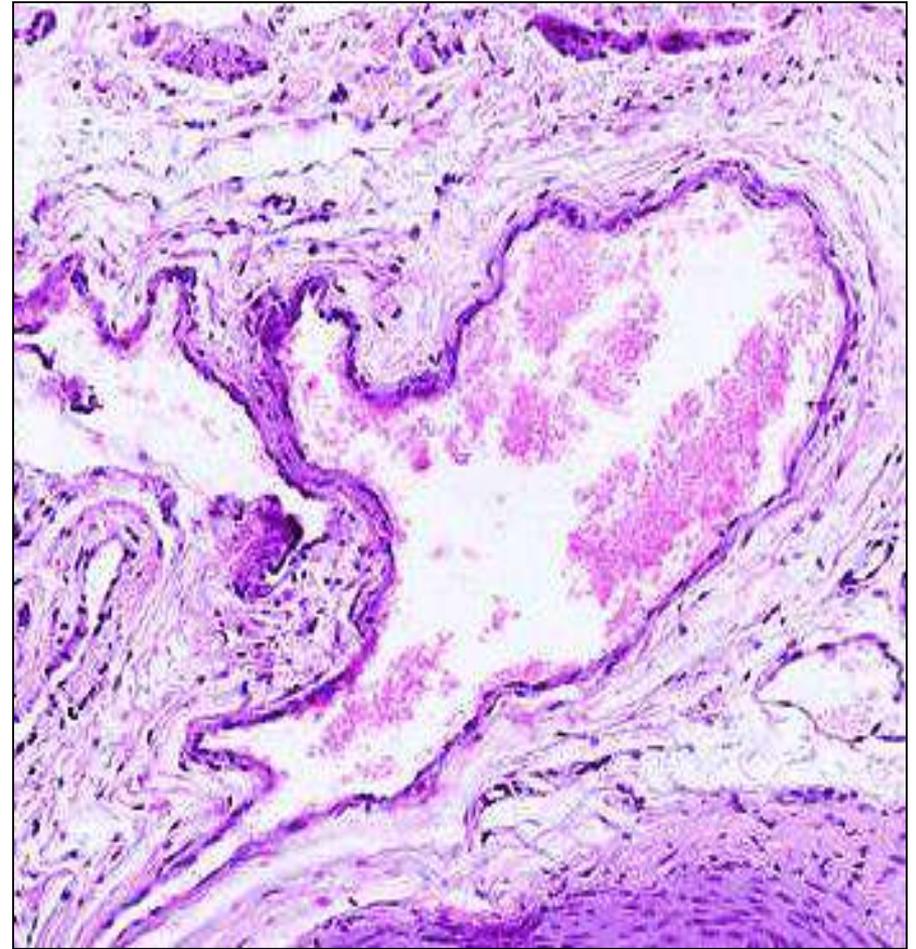
# Bronchiole

Layer of circularly  
arranged  
smooth muscle

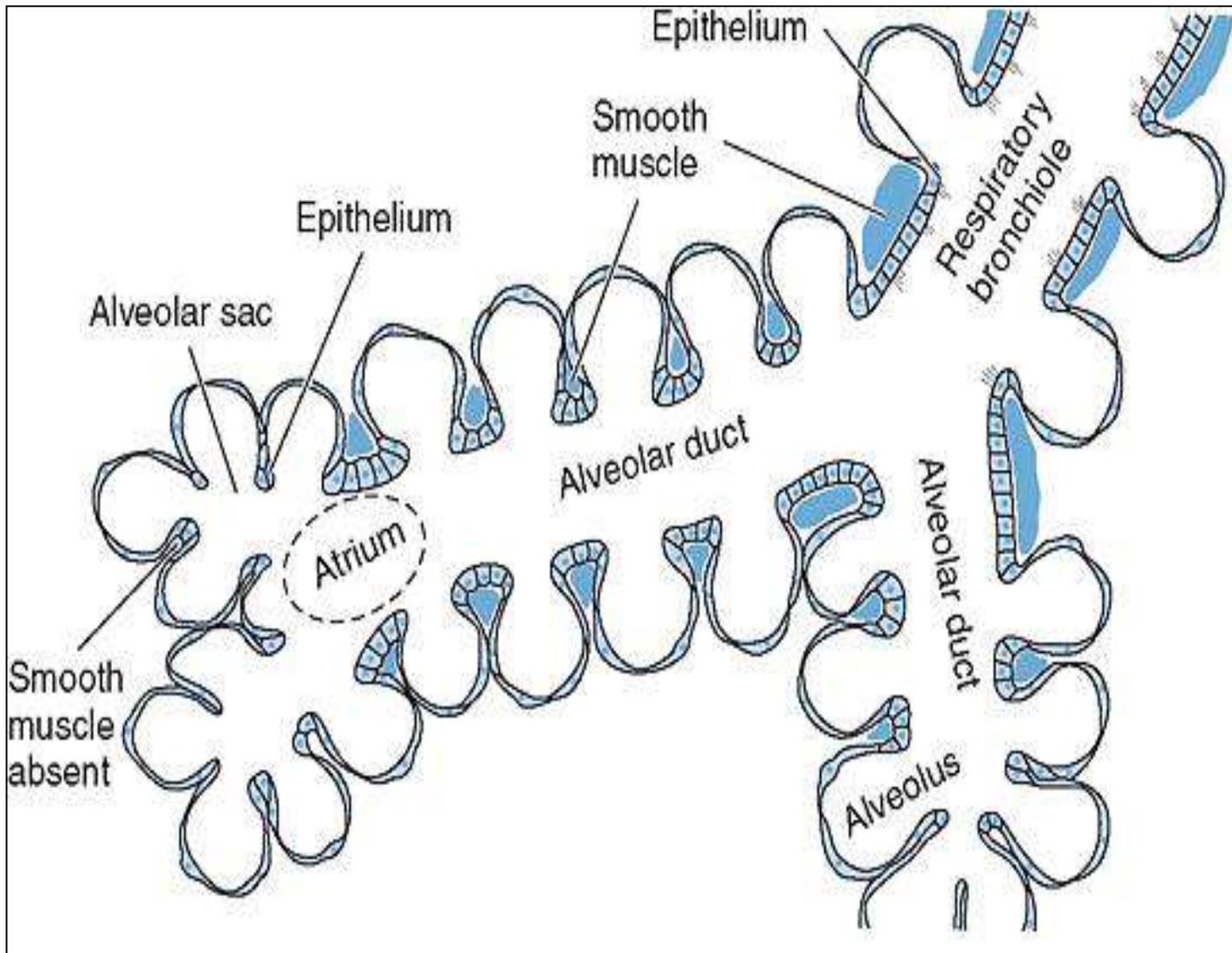




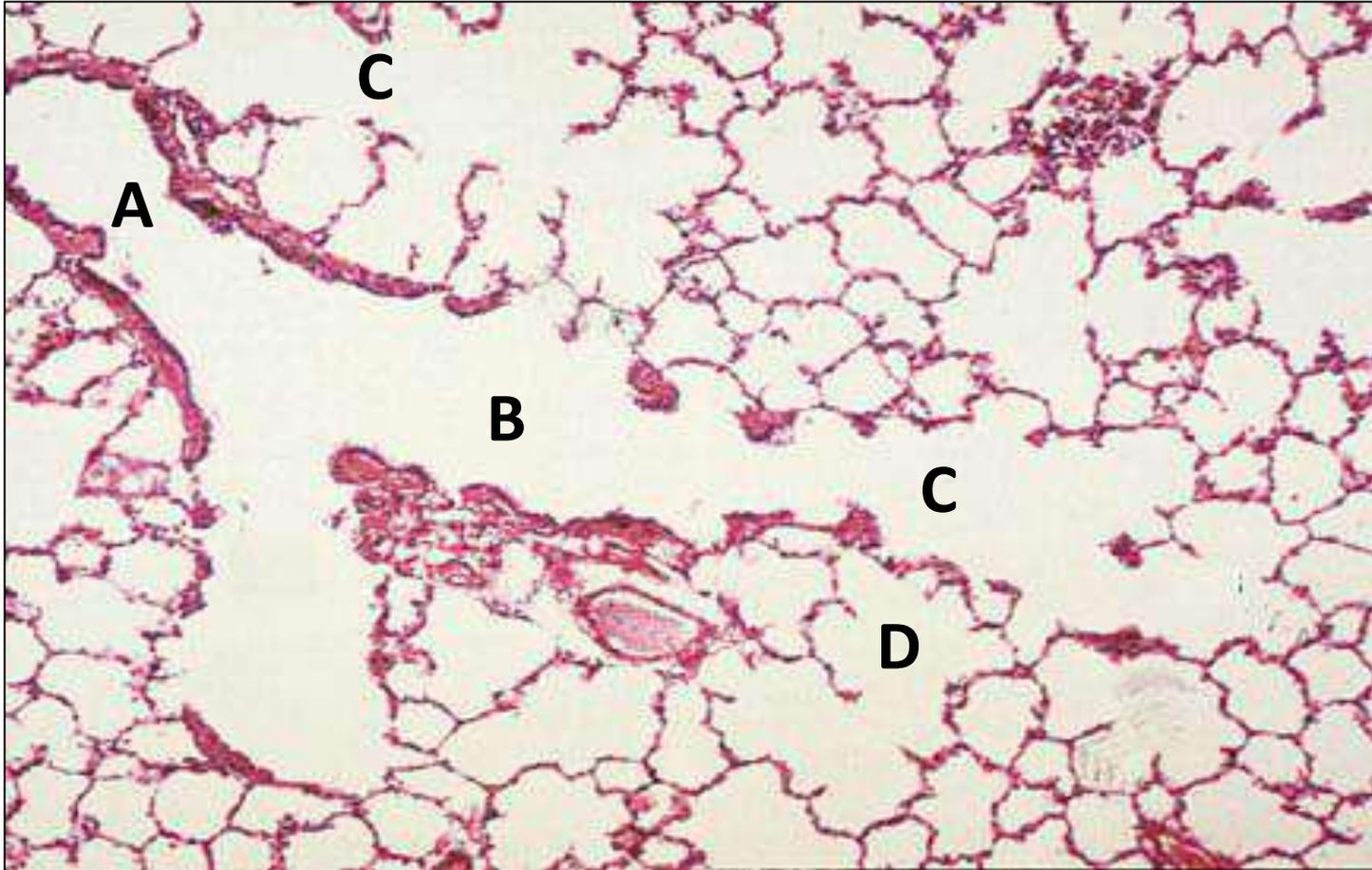
bronchiole



Blood vessel

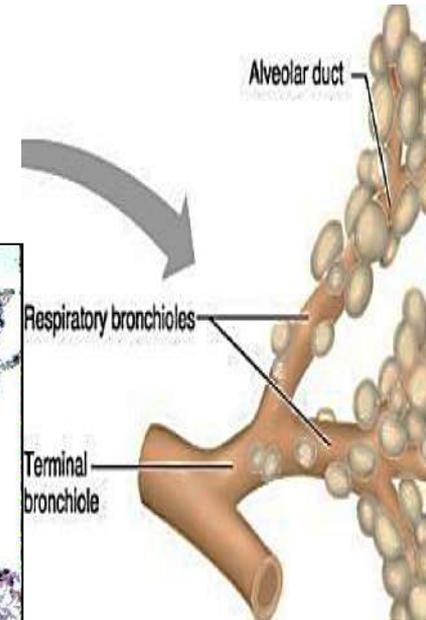
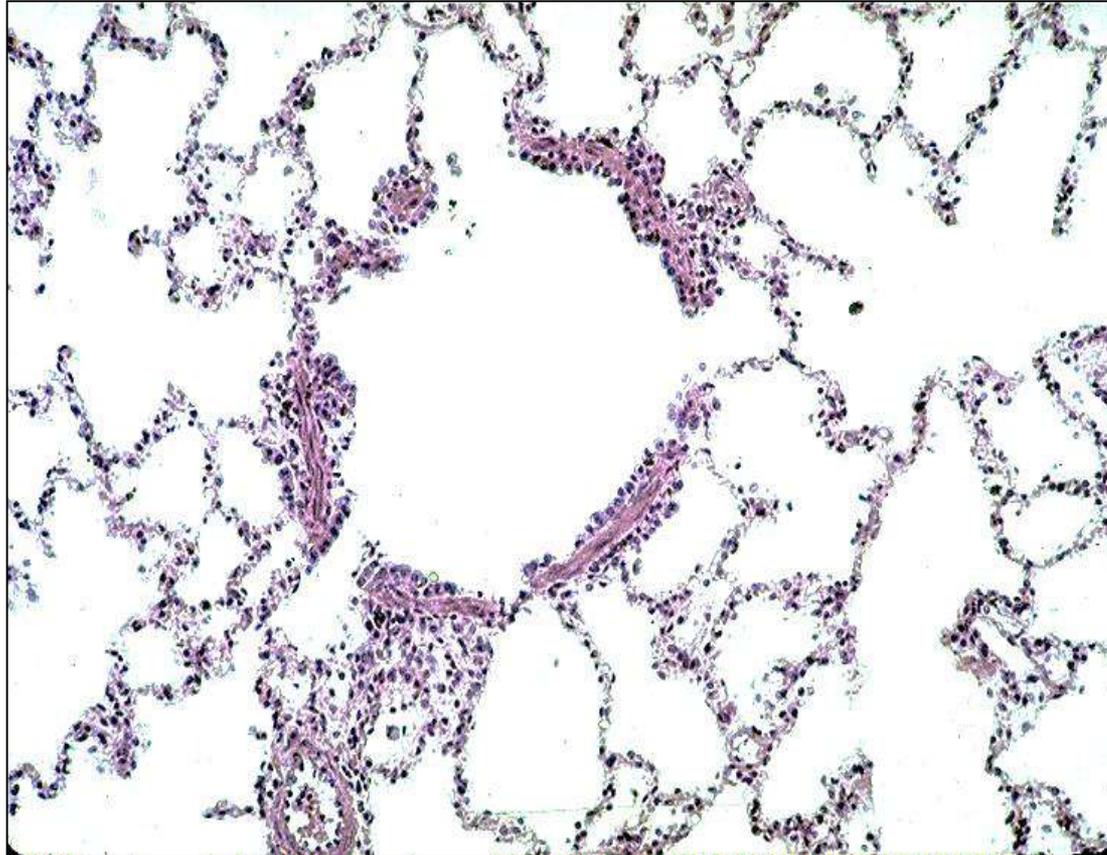


# Section in lung



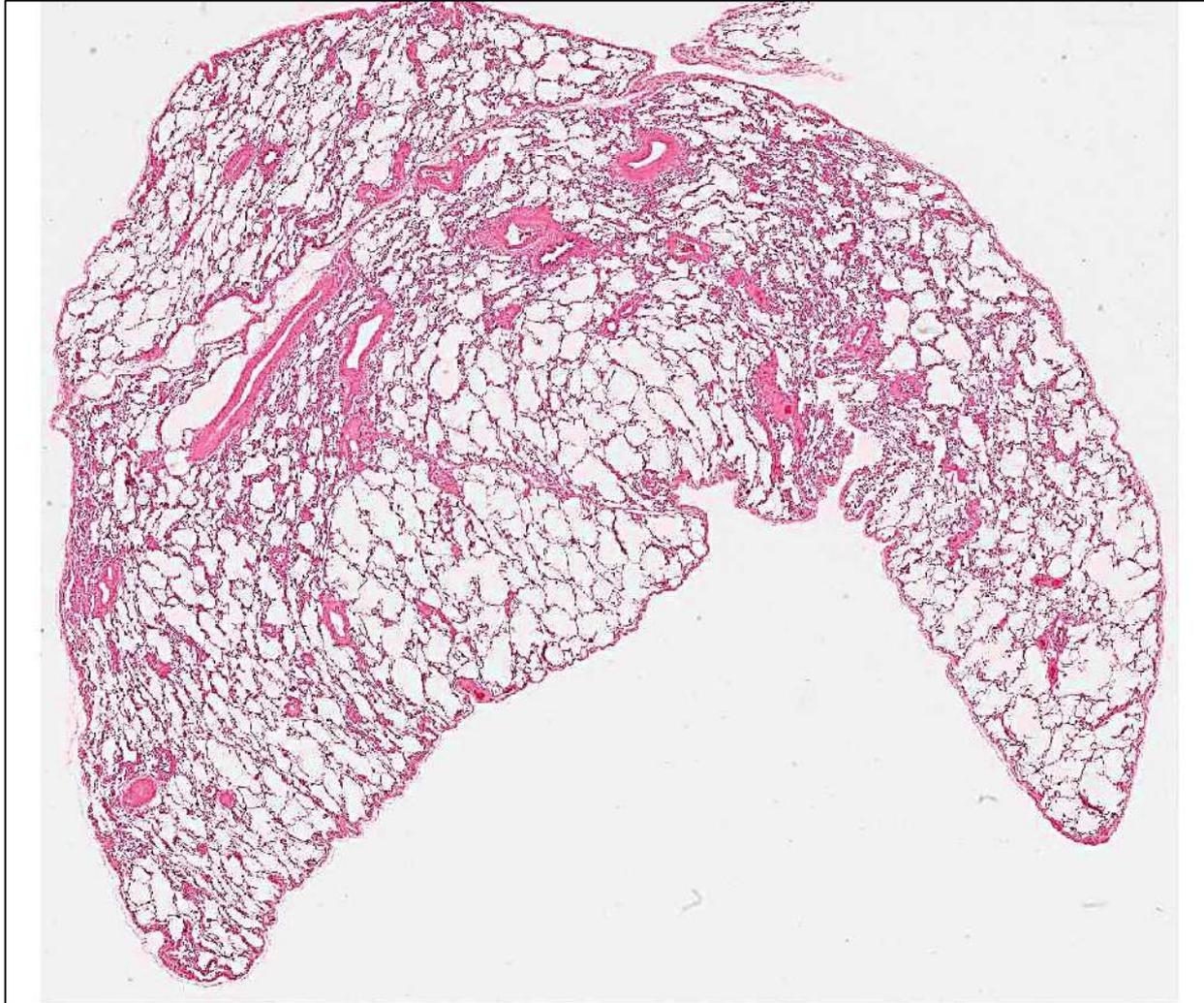
- A: Terminal bronchiole**
- B: Respiratory bronchiole**
- C: Alveolar duct**
- D: Alveolar Sac**

# Respiratory bronchiole

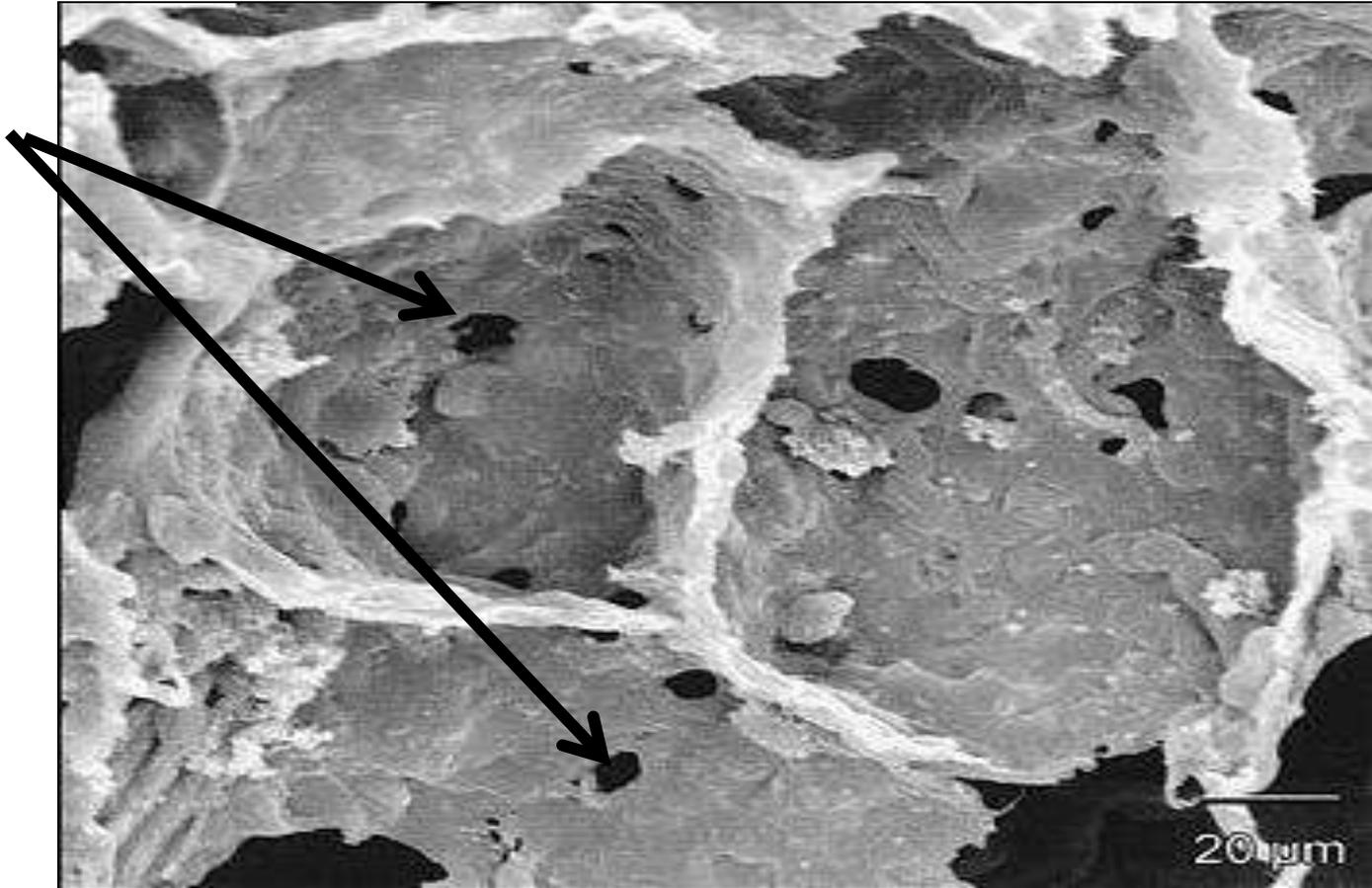


**Simple cuboidal ciliated with Clara cells**

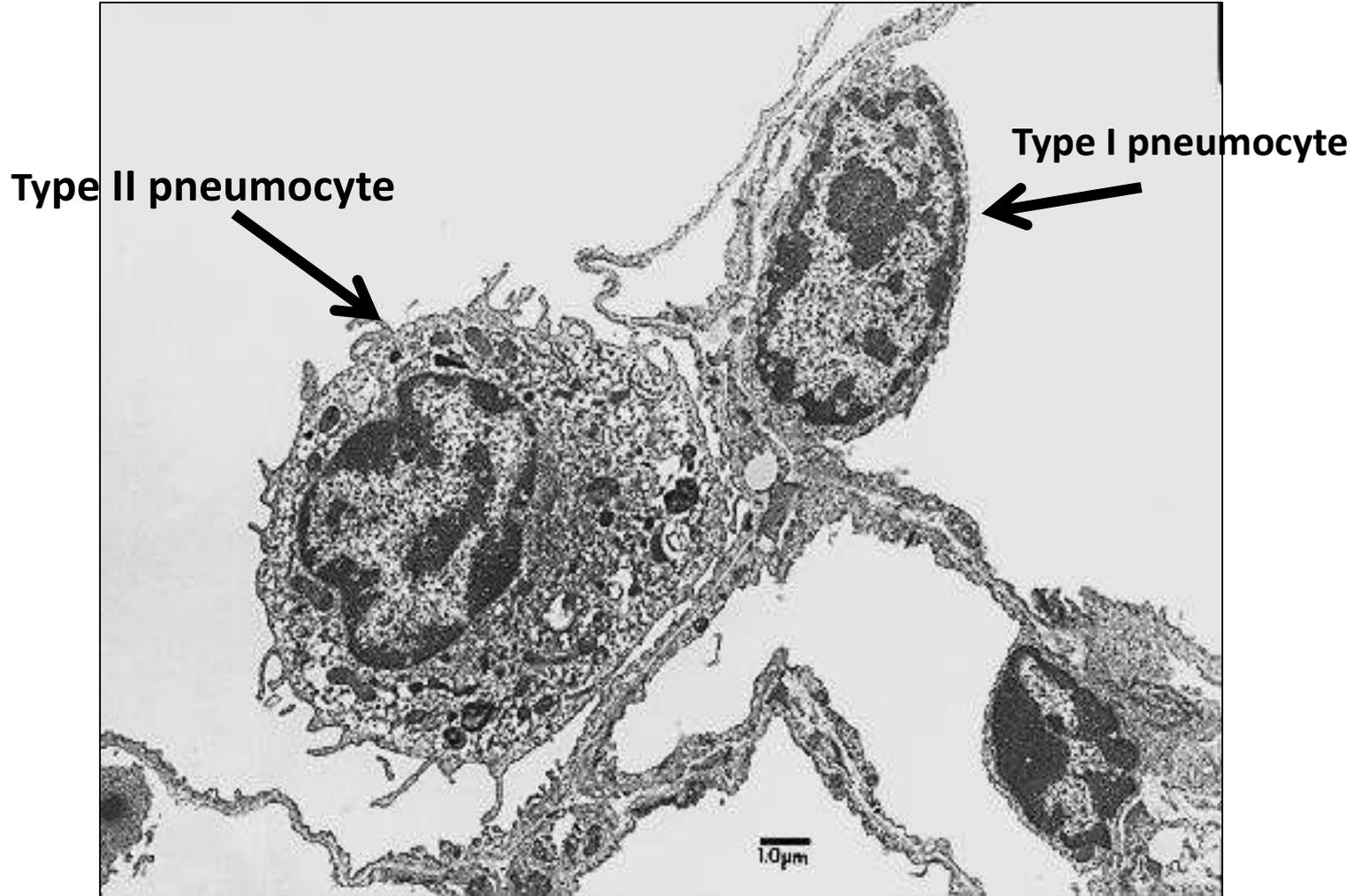
# Lung



# Pores of Kohn (E/M)

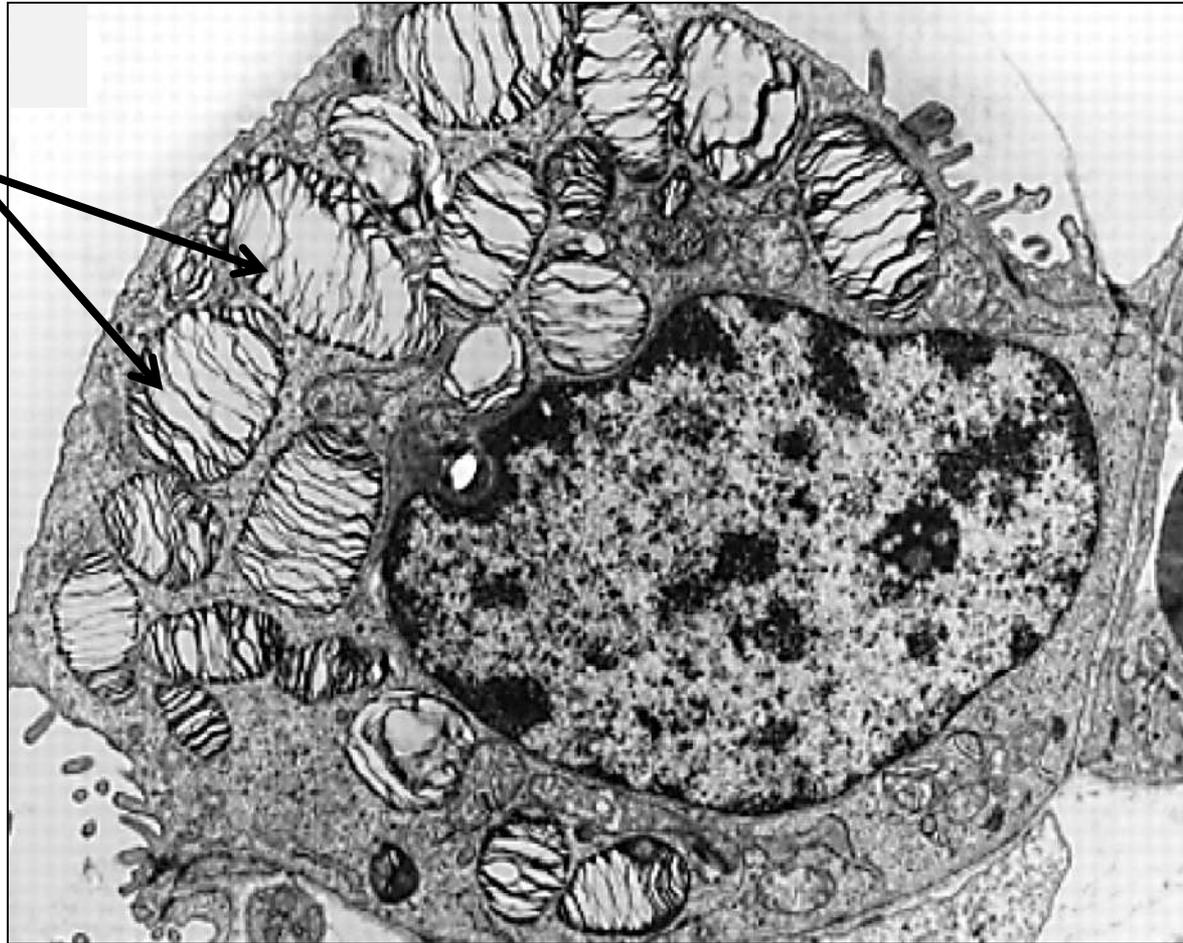


# Type I & type II pneumocyte (E/M)

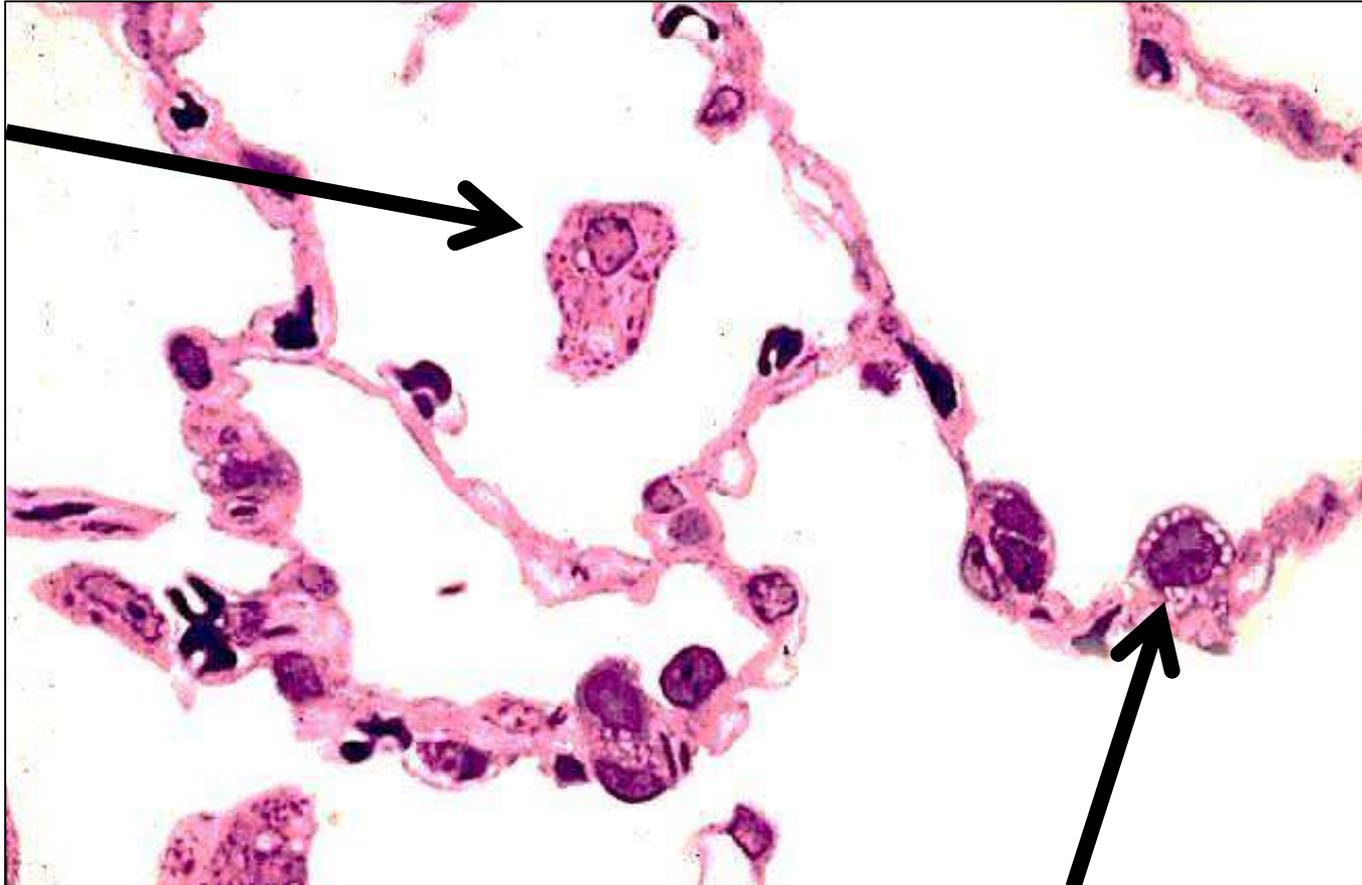


# Type II pneumocyte (E/M)

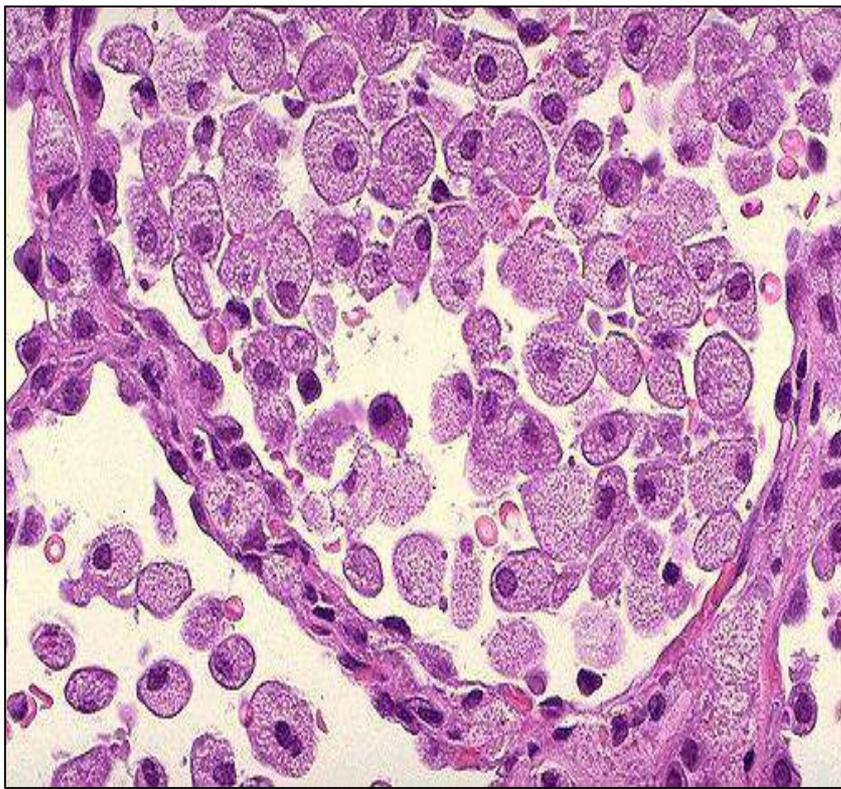
Lamellar bodies



**Dust cell**

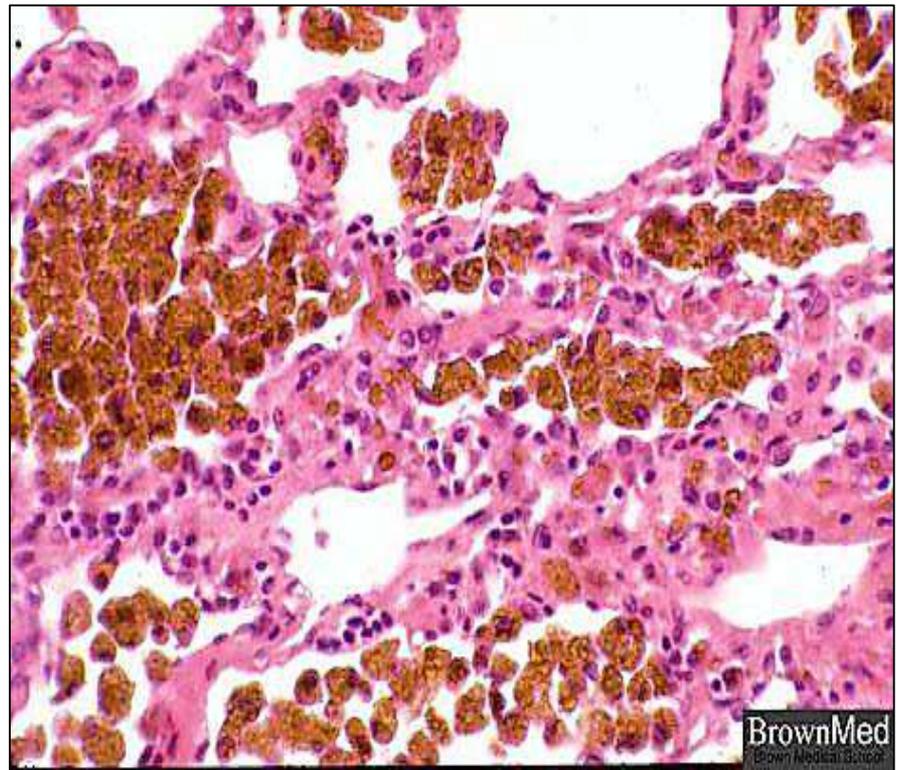


**Pneumocyte type II**



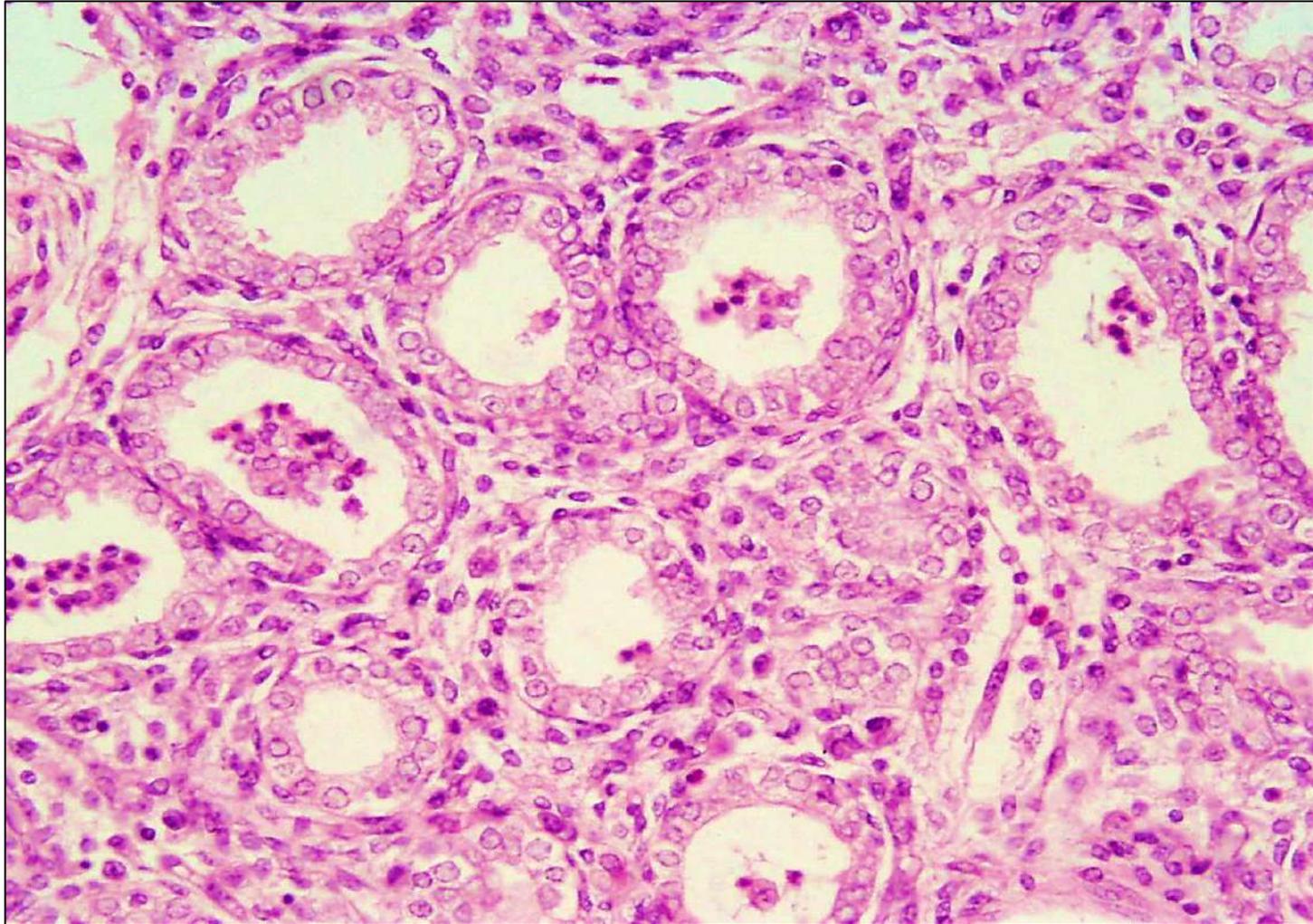
**Foamy macrophage:** e.g. endogenous lipid pneumonia

The term endogenous refers to the origin of the lipid material from breakdown of lung, usually distal to the site of an obstructive process (such as a neoplasm, an inhaled foreign body, or bronchiectasis). Blood monocytes become macrophages that collect to ingest the lipid material.



**Heart failure cells:**  
seen in congestive heart failure

# Fetal lung



# Thank you

