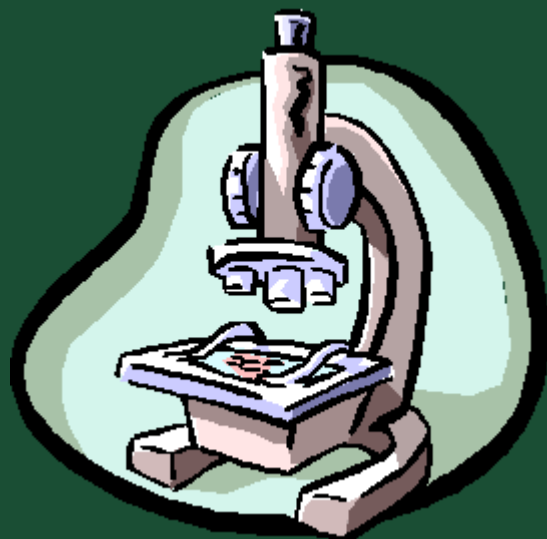


بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

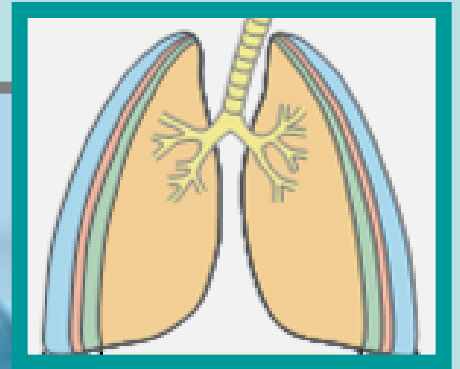




- Sel ???
- Shape
- Size
- Struktur → warna, isi, dsb
- Something around
- Something special
→ the most remarkable feature.
- Sample of organs
- Staining

- Sel
- Organ
- **Struktur/bangunan**





RESPIRATORY TRACT SYSTEM

Conducting Portion

- Nasal cavities
- Nasopharynx
- Larynx
 - **Epiglottis**
- **Trachea**
- **Bronchi**
 - Extrapulmonary
 - Intrapulmonary
- **Bronchioles (terminalis)**

Respiratory Portion

- **Respiratory bronchioles**
- **Alveolar ducts**
- **Alveolar sacs**
- **Alveoli**

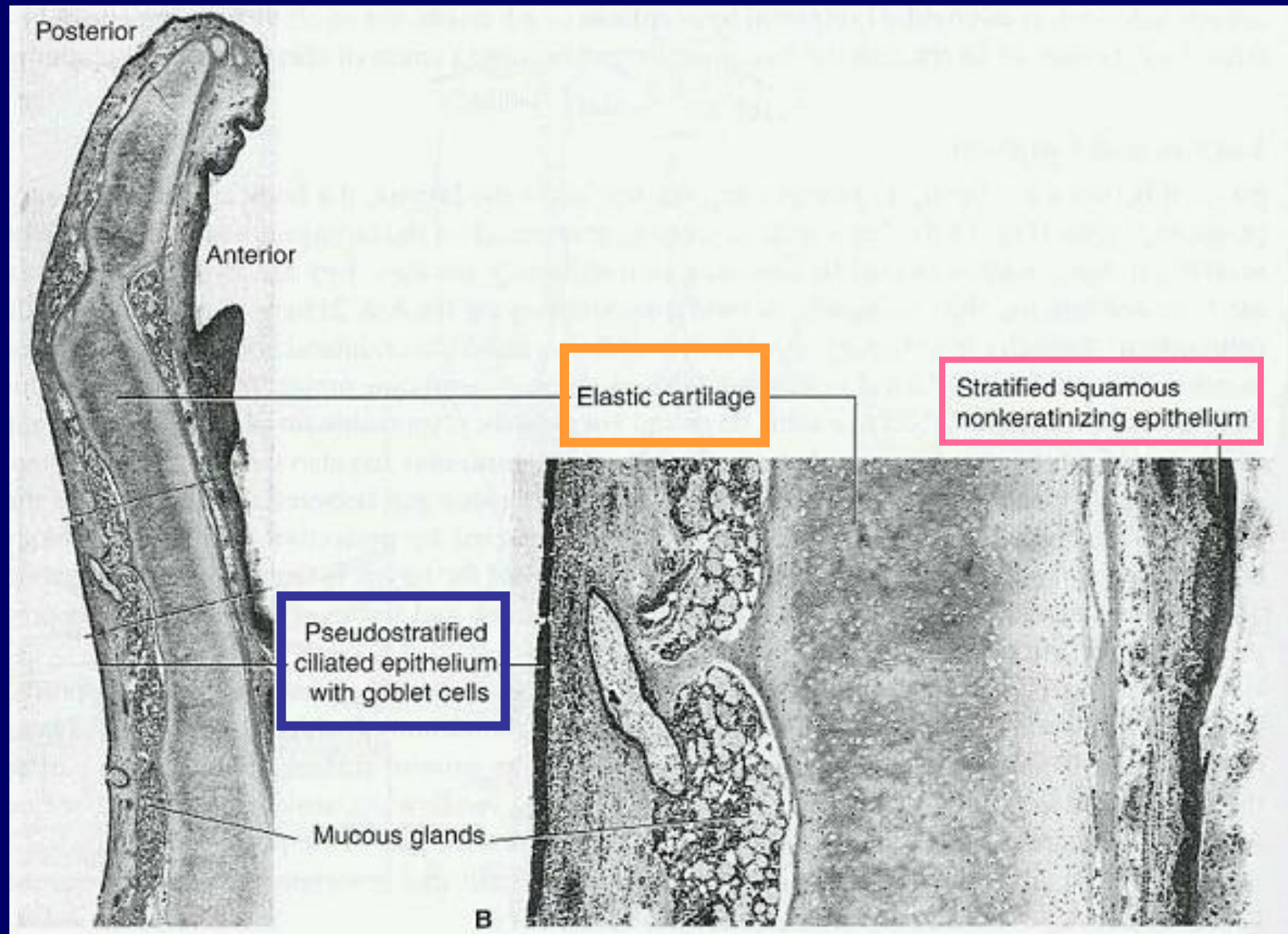
EPITHEL

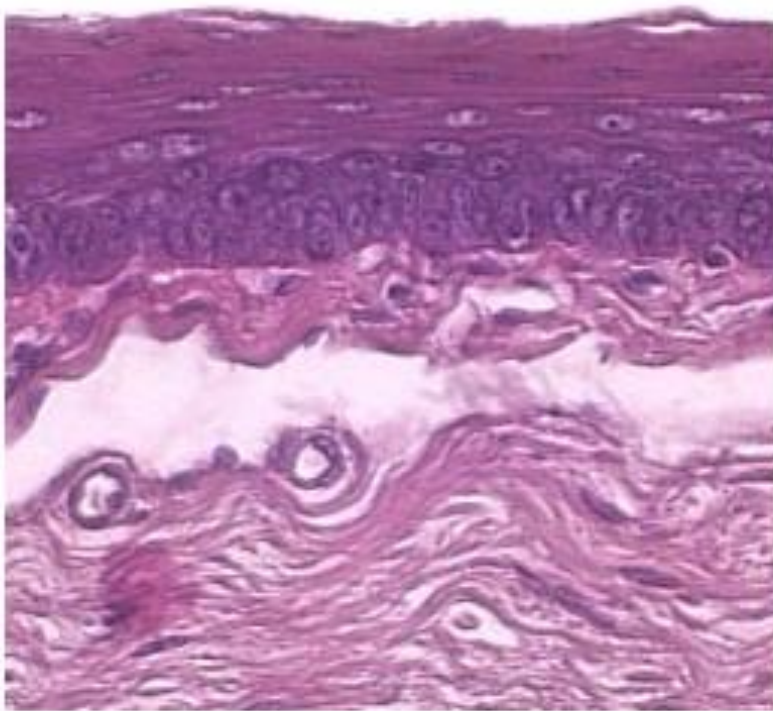
umum :

- **pseudostratified columnar cilia** → epithel respirasi
- Goblet cell [+]
- ke distal :epithel makin rendah, Goblet <<, Cilia <<

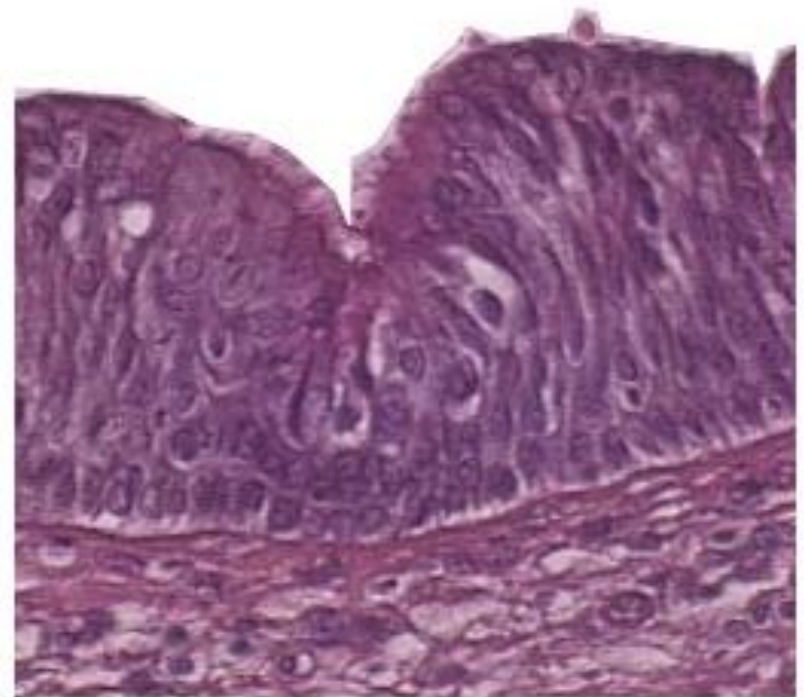
Epiglottis

- **epithel** : [superior/lingual] : **squamous complex** tanpa kornifikasi
[inferior/laryngeal] : **respirasi (pseudocomplex)**
- LP : klj.mucous sedikit
Keping **kartilago elastik**

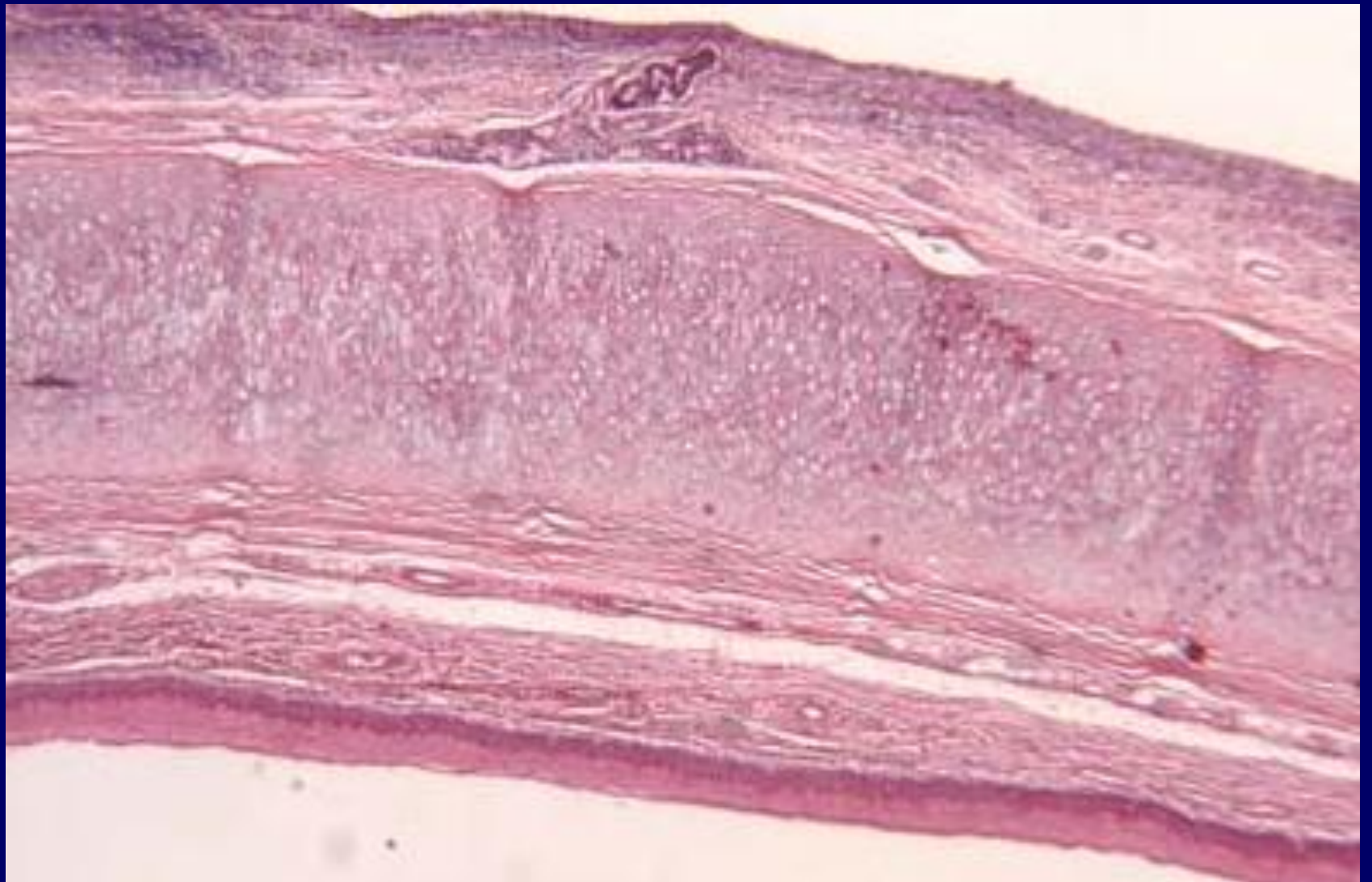




Permukaan Lingual

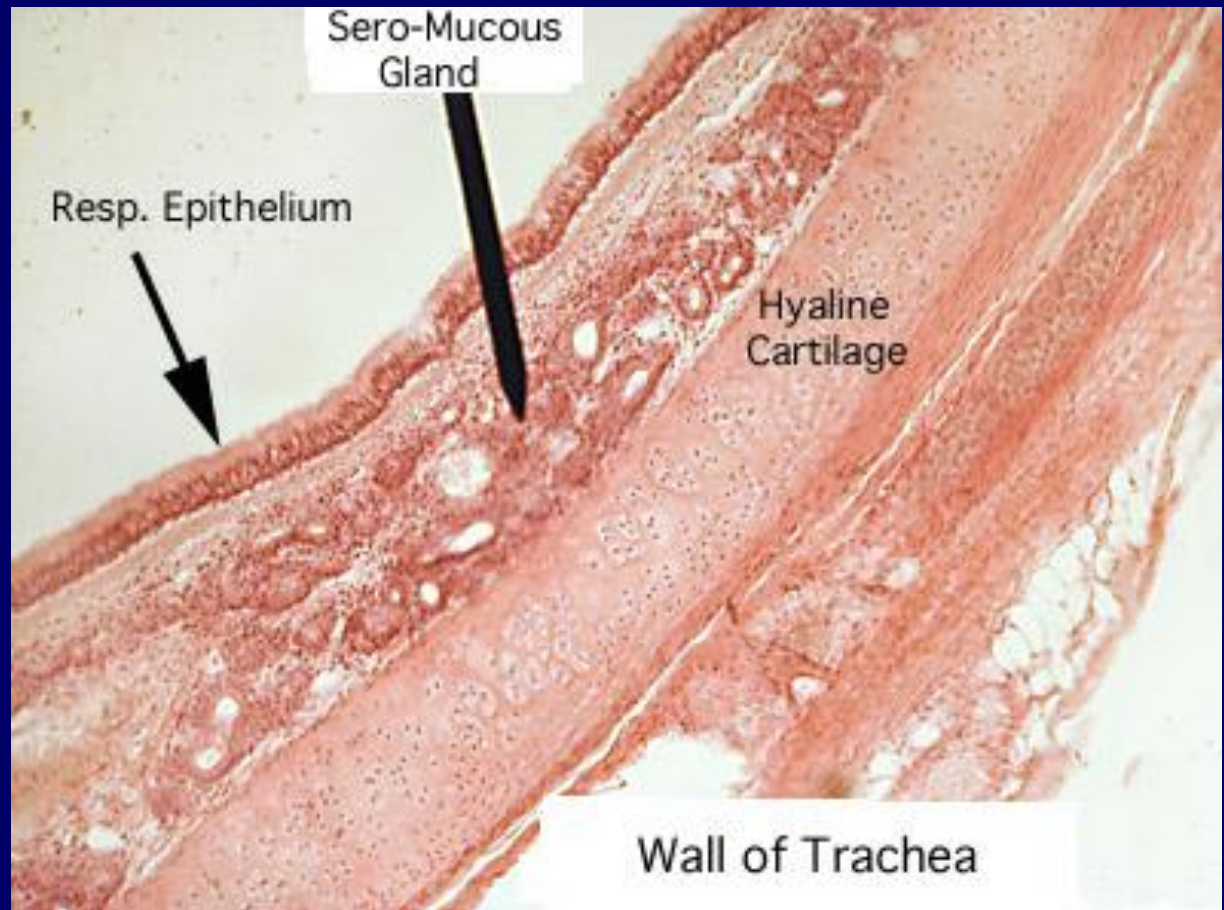


Permukaan Laryngeal

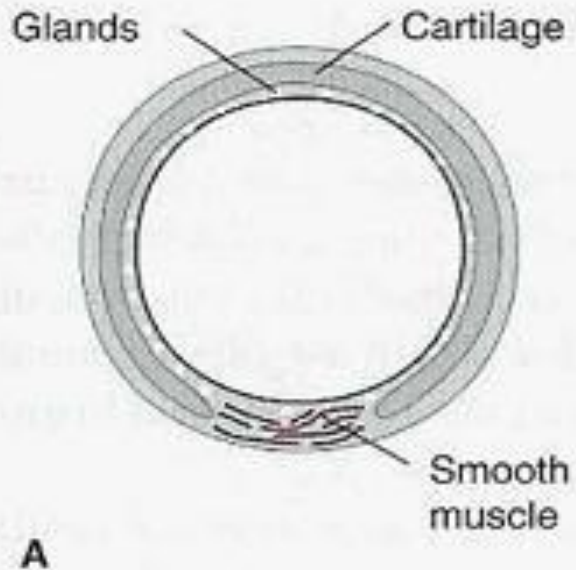


TRACHEA

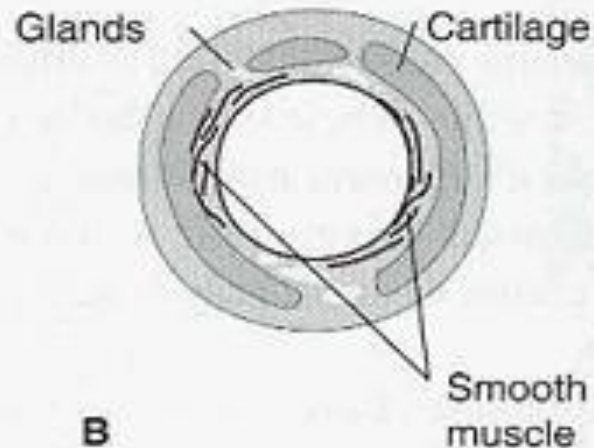
- epithel : **respirasi** (juga ada brush cell & short cell)
- SM : jaringan ikat longgar, mengandung **klj.sero-mucous**
Cincin **kartilago hyalin** berbentuk C, membuka di posterior



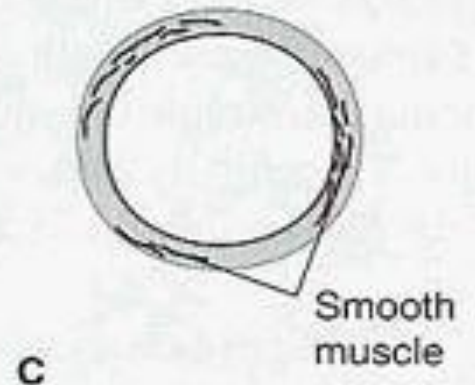
BRONCHIAL TREE



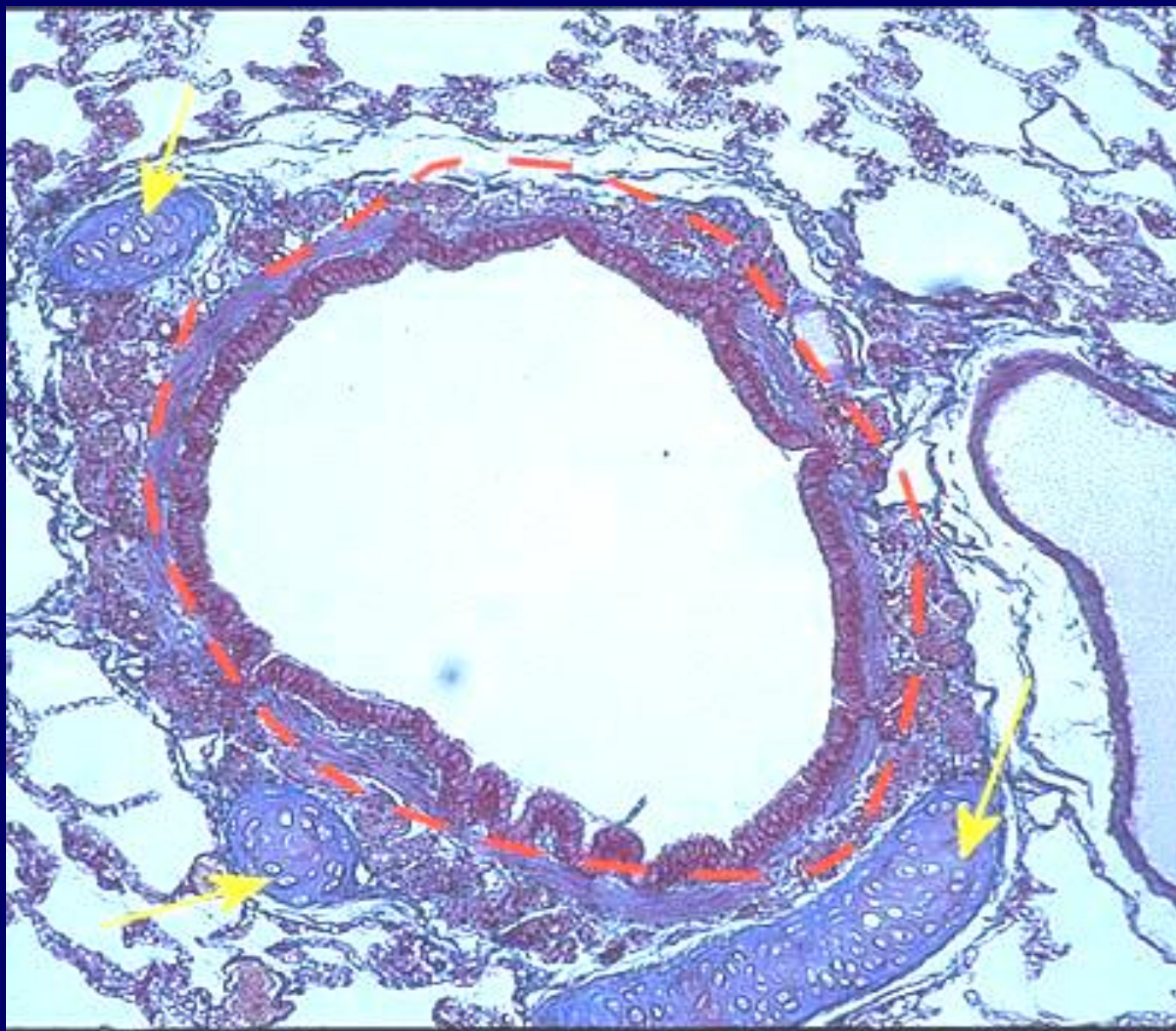
TRACHEA



BRONCHUS



BRONCHIOLUS



Bronchiolus : epithel respirasi, smooth muscle [+], cartilage [-]

Bronchiolus terminalis

- epithel : columnar / cuboid bercilia.
- cartilage [-] , Sel Goblet [-]
- smooth muscle [+]
- membentuk ≥ 2 bronchiolus respiratorius

Bronchiolus respiratorius

- bagian pertama bagian respirasi
- epithel : cuboid, diselingi alveoli (makin ke distal makin >>)
- Cilia [-] di distal
- Jaringan ikat elastik di bawah epithel



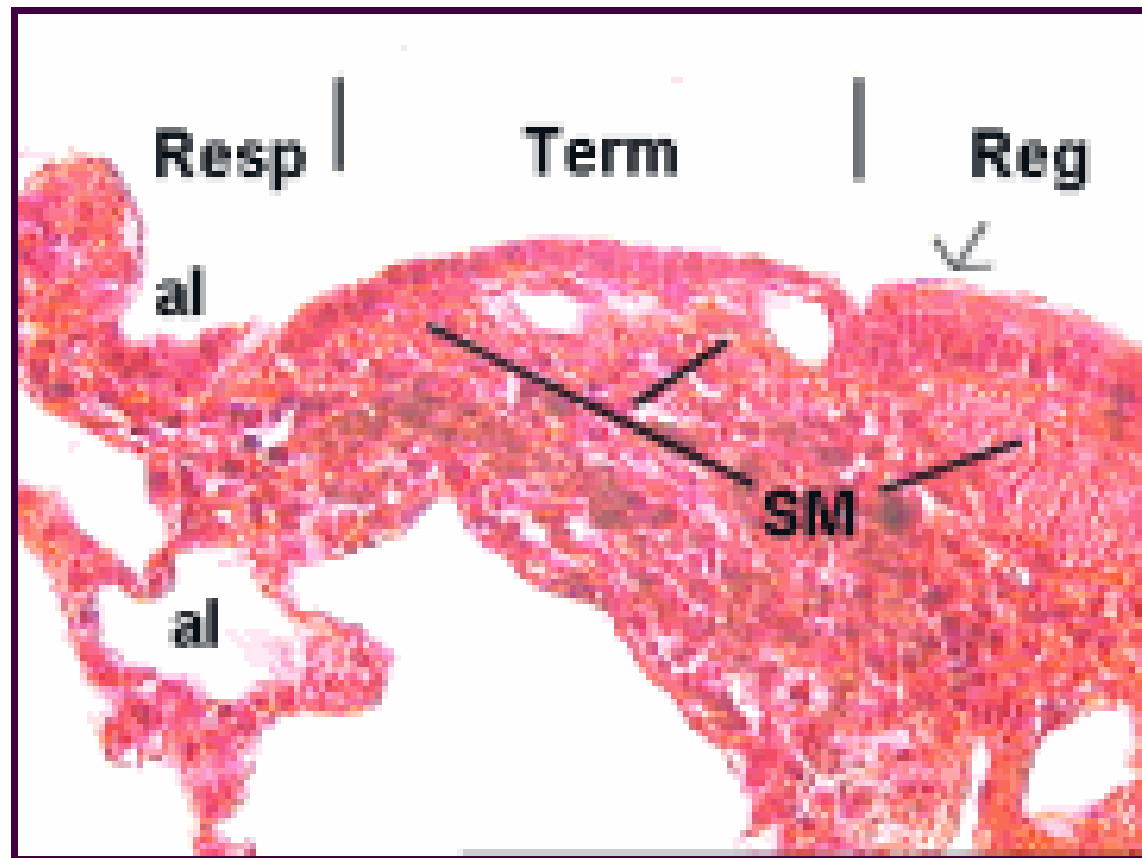


Fig. 15 Longitudinal section of bronchiole from regular to terminal to respiratory

Ductus alveolaris

- perpanjangan bronchiolus respiratorius
- Epithel : squamous
- alveoli >>
- dinding : “knob2” otot polos
(ditutupi epithel cuboid simplex tidak bercilia)
- Membuka ke atria

Atria & Saccus alveolaris

Atria : ujung distal ductus alveolaris

Terbuka ke :

- * alveoli
- * saccus alveolaris
- * ductus alveolaris

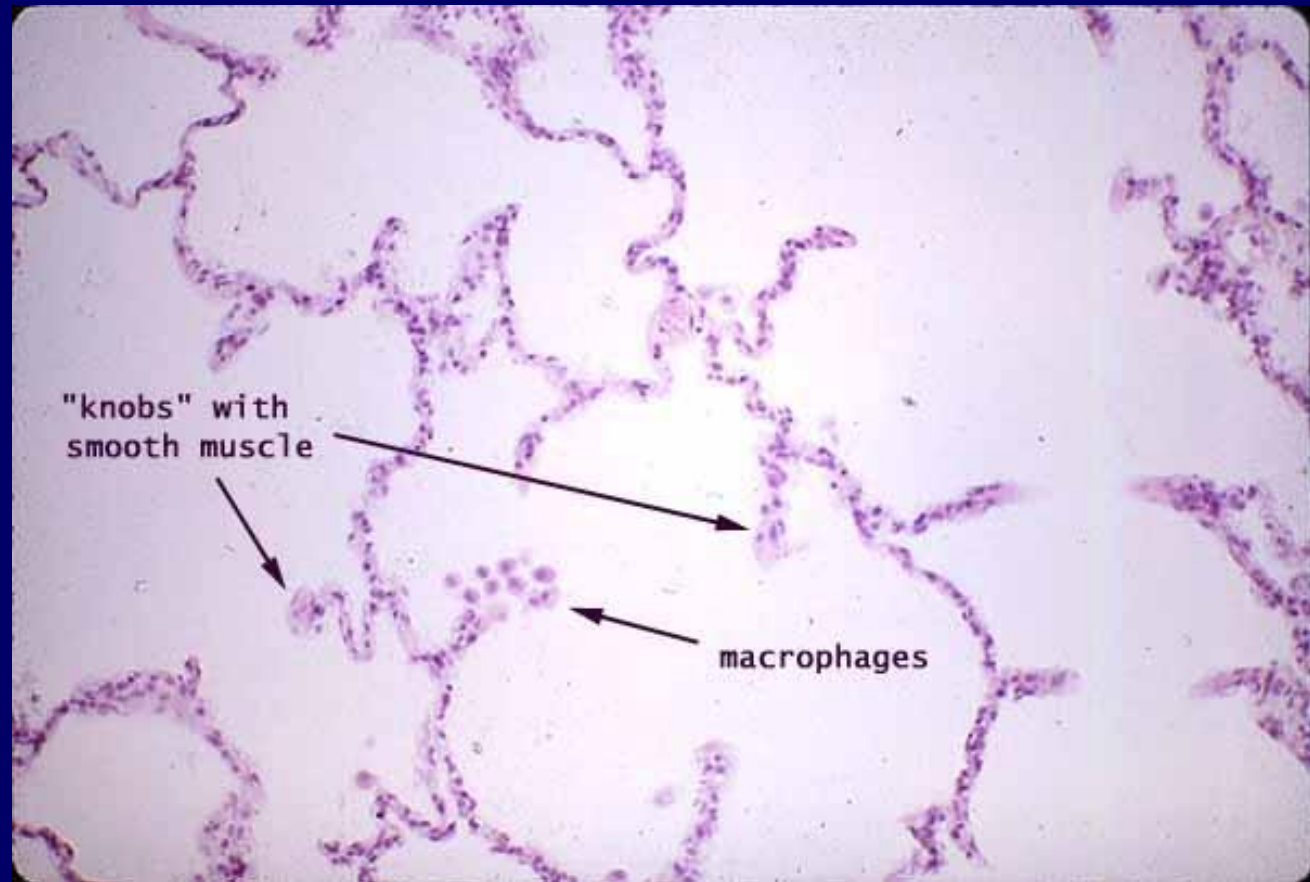
Saccus alveolaris : membuka ke arah alveoli & atria

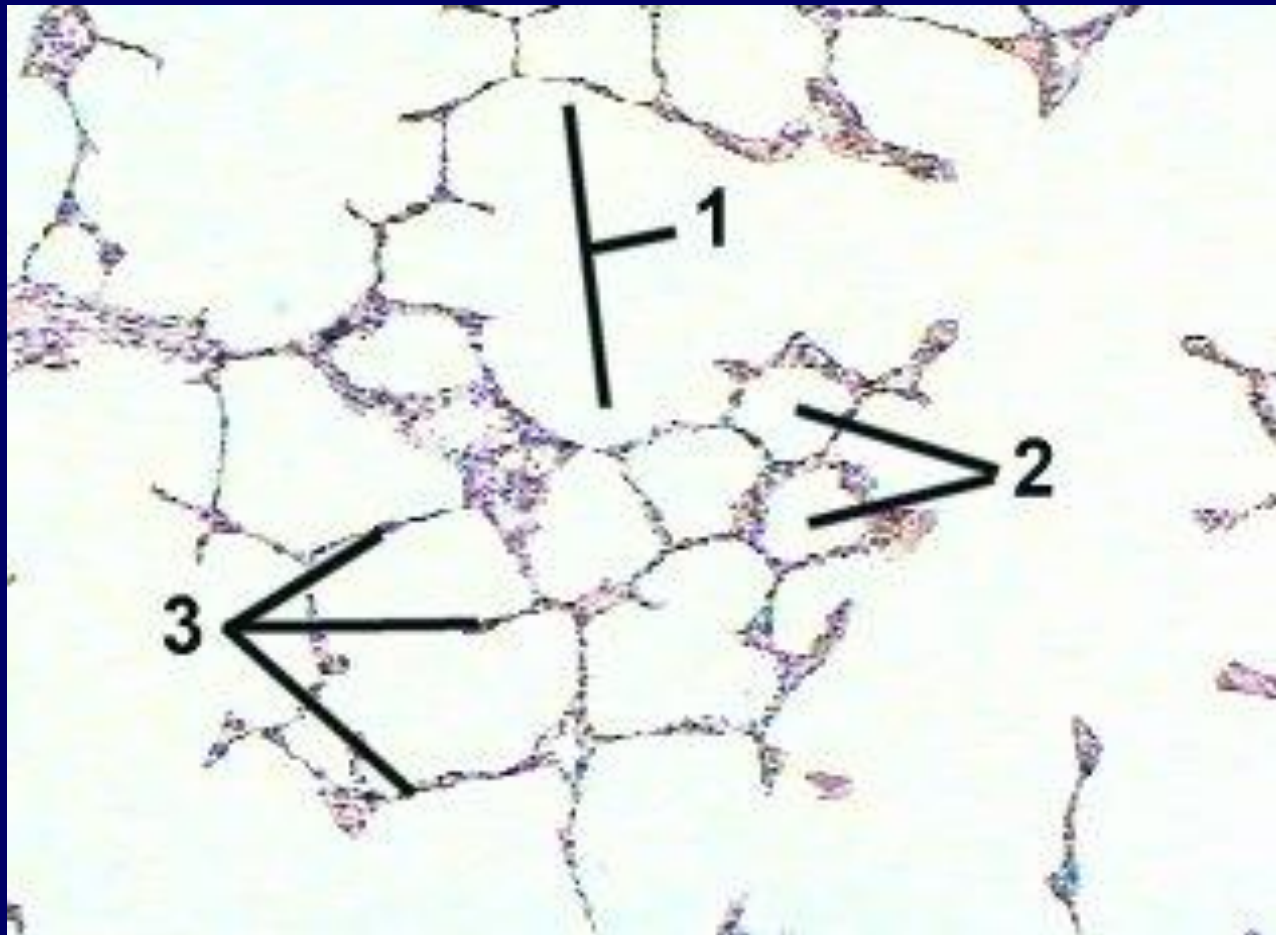
Otot polos [-]

ALVEOLI

- terbuka ke arah :
 - saccus alveolaris atau
 - atria atau
 - ductus alveolaris atau
 - bronchus respiratorius
- terpisah dg septum alveolar/septum interalveolar





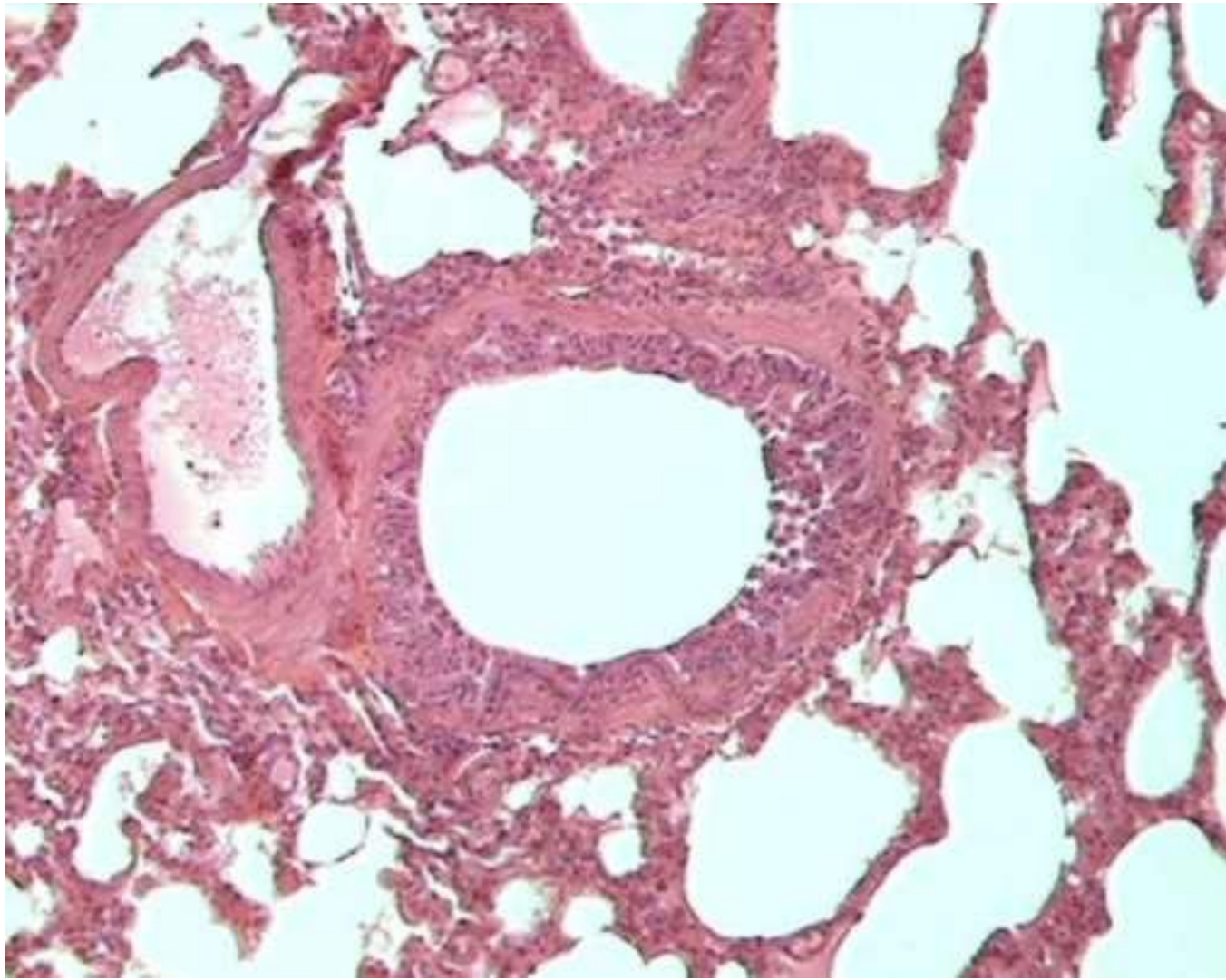


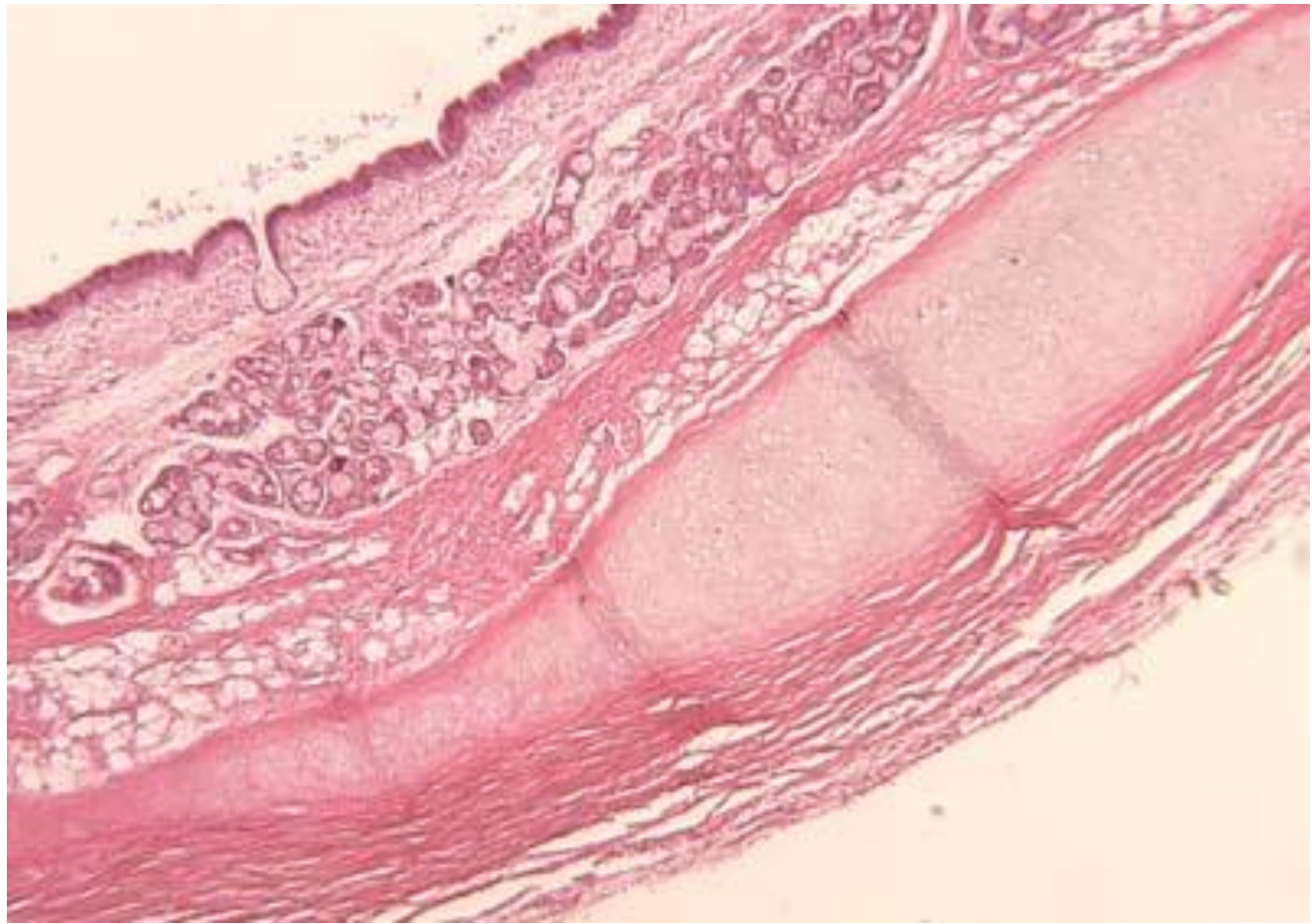
SUMMARY

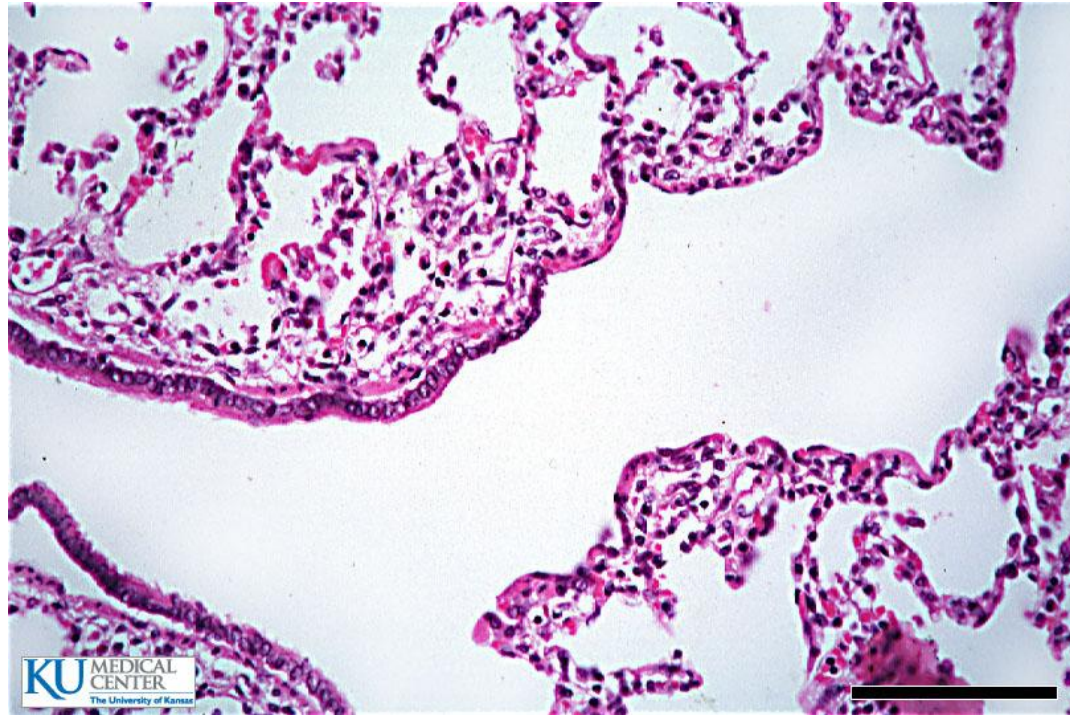
- Epiglottis : Dual epithelial, elastic cartilage
- Trachea : “complete” hyaline cartilage, outside of the lung
- Bronchus : cartilage island, inside the lung
- Bronchiolus : no cartilage anymore
- Bronchiolus terminalis : like bronchiolus, but with cuboidal epithelial
- Bronchiolus respiratorius : epithel cuboid, diselingi alveoli
- Ductus alveolaris : “tunnel” with alveoli >>, “knob2” otot polos.
- Saccus alveolaris : “kantong” Alveoli

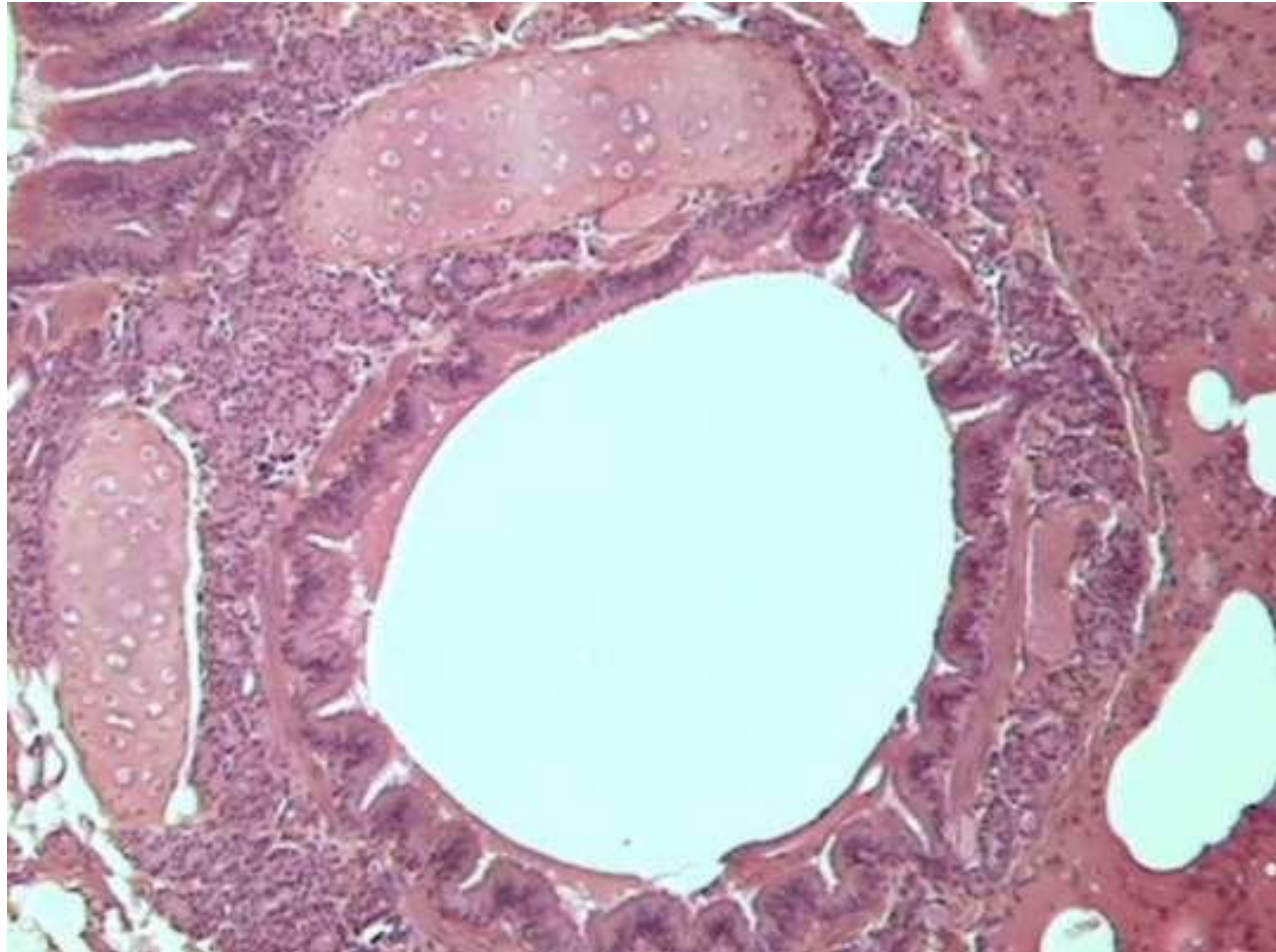
GUESS

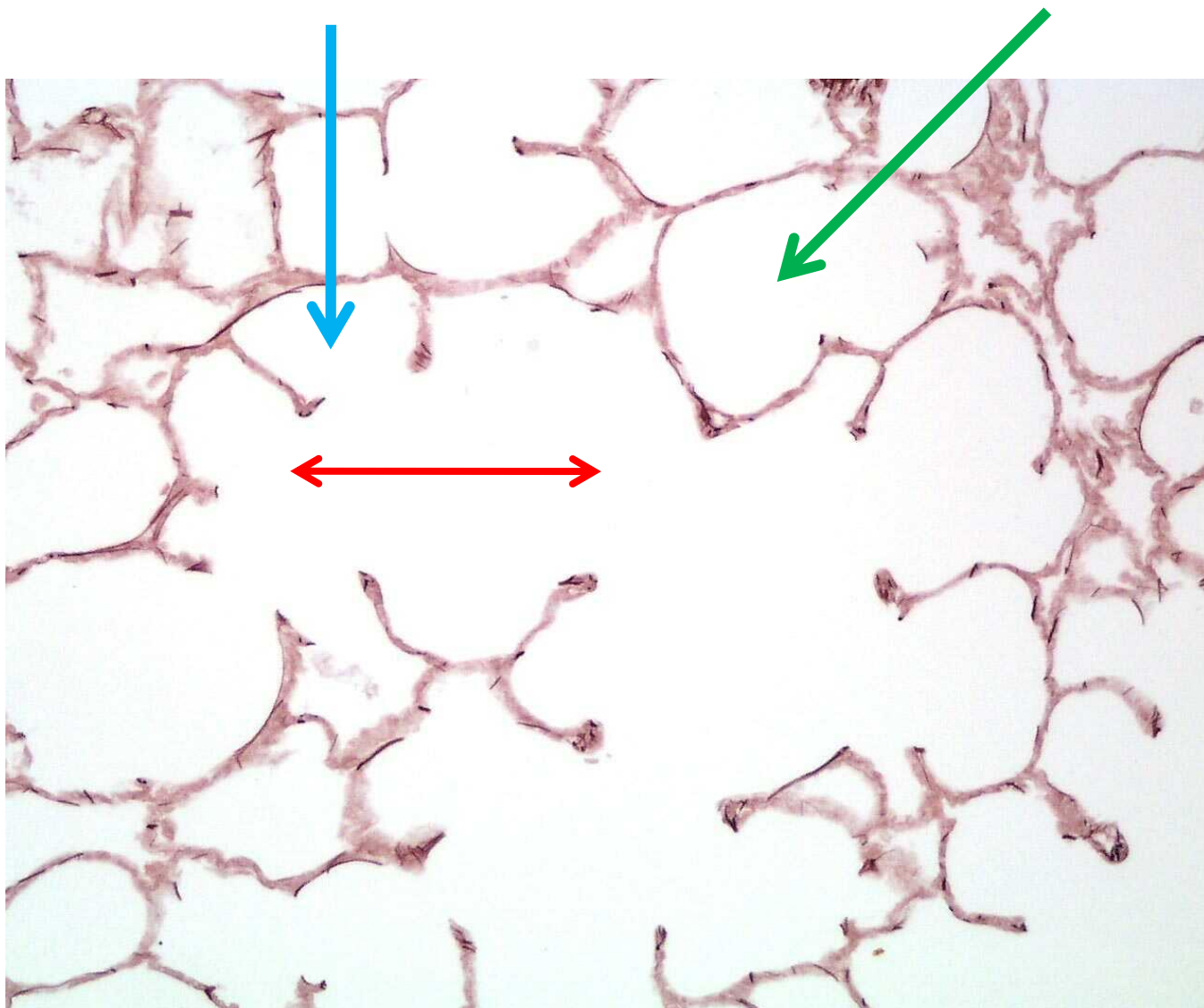
?

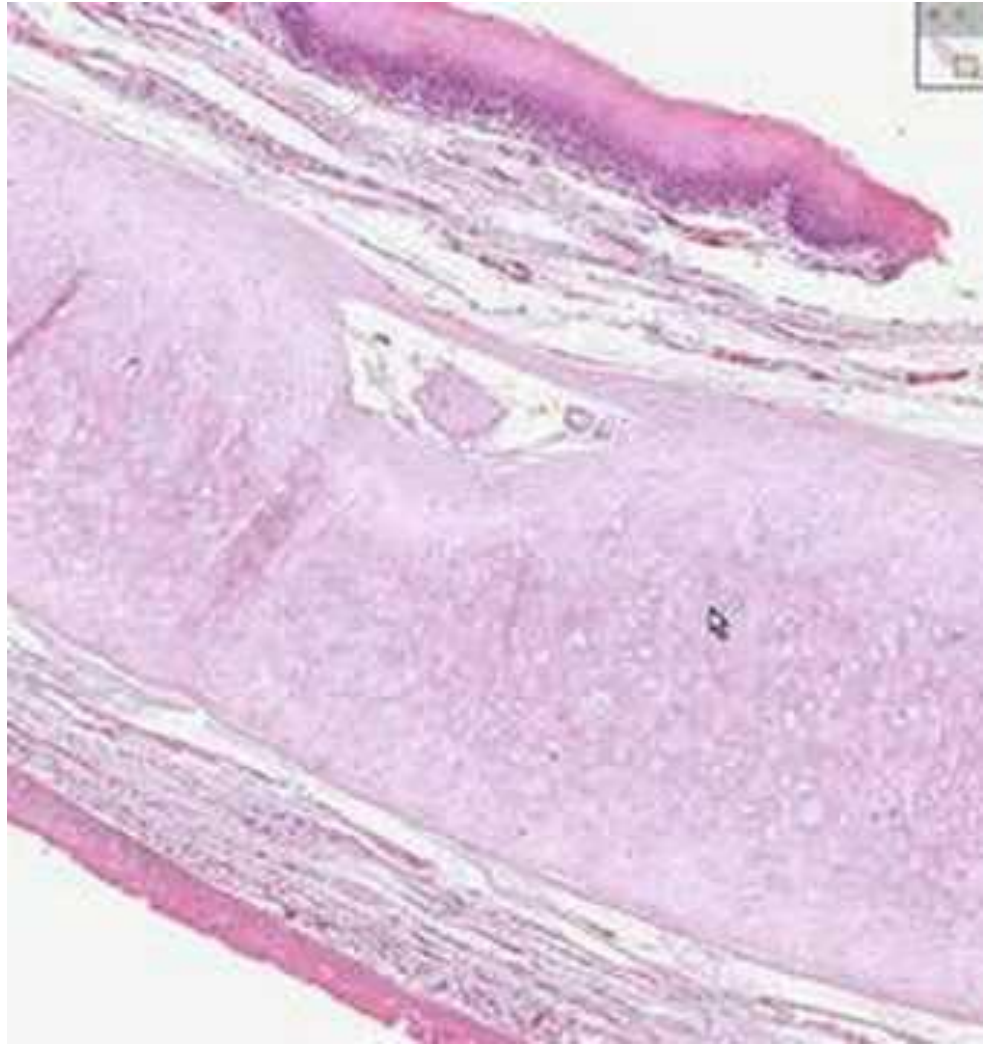












TERIMA KASIH

