Larynx(1)

بسم الله الرحمن الرحيم

Respiratory System

قال تلميذ: يا سيدي، كم دعوة لله طال وُقوفها؟

قال الشيخ: قُلْ عمّا تُحبها، وافهَم عنّي: إنّ لِكُلِّ شيءٍ أوّلًا، وأوّلُ الخَيرِ الاستِغفار، ومن أدام الاستغفار فُتحت له المغاليق، ومَن تمسّك بالمفتاح لا بُد أنْ يَفتح!

Larynx

* Box of cartilage (hyaline cartilage)
* inside → mucosa
* longitudinal section of ventricle

False vocal cord = ventricle
true vocal cord
(Vestibular fold)
vocal ligament
Vocalis muscle

Vestibular fold (False vocal cord)
vocal ligament
Ventricular fold
Seromucous gland

True vocal cord
Vocalis muscle

RESPIRATORY EPITHELIUM
RESPIRATORY EPITHELIUM

Ventricle → False vocal cord. → Respiratory epithelium

True vocal cord	false vocal cord
* St. squ. epith.	* Respiratory epith.
* No seromucus gland	* seromucus gland
* vocalis muscle ligament elastic fiber	

C-SHAPE TRACHEA- transeverse section

esophagus
trachea
lining epithelium
stripped softened non keratinized
pseudo stratified ciliated with goblet
lamina propria (gland)
+ muscularis mucosa
→ thin ribbon smooth muscle
+ Sub mucosa (areolar)
supportive C.T. cartilage
adventitia
lymph
BV
lymphocytes
esophagus

1 lumen always open (its passage air)
2 (Trachealis muscle) smooth muscle (Autonomic nervous system)
lining epithelium
lumen in esophagus collapse
goblet cell
hyaline cartilage (C-shaped)
2 absent C-shaped cartilage (posteriorly)

ESOPHAGUS- posteriorly

Trachea + esophagus

lining Epithelium	lamina propria	muscularis mucosa	Submucosa	supportive	adventitia
Trachea: Pseudo Stratified Columnar ciliated with goblet cell	gland, lymph	Smooth muscl	BV, lymph, connective tissue, gland (Trachea) esophagus	Trachea: Cartilage, smooth muscle; esophagus: Inner circular Smooth muscle, outer longitudinal Smooth muscle	
esophagus: Pseudo Stratified squamous non keratinized					

MUCOSA SUBMUCOSA CARTILAGE ADVENTITIA

PERICHONDRIUM

RESPIRATORY EPITHELIUM TRACHEAL GLAND IN SUBMUCOSA

gland in lamina propria
gland (extend to submucosa)
Seromucous gland
Hyaline Cartilage

Branched seromucous gland
trachea

TRACHEALIS (SMOOTH) MUSCLE
HYALINE CARTILAGE

TRACHEALIS (SMOOTH) MUSCLE
hyalin cartilage
lining epithelium

* Trachea
R main bronchi
L main bronchi
extra pulmonary
extralung

Trachea	main bronchi
C- Shape cartilage	Plat cartilage (large number)
HYALINE CARTILAGE	surrounding lumen
	space between 2 plate of cartilage → narrow space
other things (all Same)	

EXTRAPULMONARY BRONCHUS
TRACHEA
plate
C-shape

* terminal bronchiole
lining epithelium: Simple columner ciliated → Simple colonbal ciliated.
No cartilage at all
Smooth muscle
No gland
few goblet cell
scattered lymphocyte
folding
lung tissue

TERMINAL BRONCHIOLES
PULMONARY VESSEL
SIMPLE COLUMNAR CILIATED EP

* Respiratory bronchiole.
3 type epithelium: Simple cuboidal ciliated. non ciliated Clara cell. simple sequamus epithelium
SM (makes of SM)
pulmonary BV
Respir. Bronchial wall:

Respiratory bronchioles in lung tissue
Respiratory bronchioles open to alveolar duct
Alveolar duct
atria
Pulmonary artery
alveolar duct

alveoli
lung tissue

visceral pleura: elastic fiber
Serous membrane (mesothelium)
Simple Sequmus epithelium
C.T.
Elastic fibers
collagen + reticular fiber
inflation
B.V.

Plura
visceral & lung
Pariatle & thoracic cavity

monocyte → dust cell

Alveolar macrophage= dust cells
from monocyte.
C.C.
B.
dust cell
B.V
lung tissue
Plura
Surface
inside
mediastinum
lung tissue
dust cell most common in lung tissue

اللهم صلِّ وسلم وبارك على نبينا محمد وعلى آله وأصحابه أجمعين.

* Intrapulmonary bronchus (Scondary lobar bronchus)
① lung tissue
② Same lining epithelium with less number → gland, goblet cell
③ lymphatic nodule
④ Circular Plate of cartilage around lumen.

INTRAPULMONARY BRONCHUS (LARGE)
LUNG TISSUE
H.C.
LYMPH. GLAND
GLAND

INTRAPULMONARY BRONCHUS- LARGE
LUNG TISSUE
SMC

Intra pulmonary bronchus

Small (segmented)	large (lobar)
• more distaly	• circular cartilage around lumen
• 2-3 hyaline cartilage.	• less SM
• more Smooth muscle (ribbon (غشاء على شكل شريط))	• more goblet cell ↑ cartilage
• less goblet cell cartilage.	• no folding.
• folding lining epithelium	• less lung tissue.
↑ smooth muscle [contraction] ↓ cartilage.	
↑ lung tissue.	
• Blood vessels (Pulmonary vessels) artery, vein.	

INTRAPULMONARY BRONCHUS: SMALL (segmental) LARGE (lobar)
INTRAPULMONARY BRONCHUS PULMONARY VESSEL
SMALL (segmental) LARGE (lobar)

إنَّ الذُّنوب تورث الهُموم، فَقل: يا رب، إنَّا تائبون فاهْدِ الخُطى طُرقاتها، وزِدْ على السَّواقي ماءها، فقد تصدَّعت الجرار من جَفافها! يا رب، وخيل الشَّهوة عادِيَةٌ، فاكبَح اللهمَّ جِماحها، وإن راوَدتنا فِتنةُ الهَوى، فلا تدعنا لأنفسنا!
قال التلميذ: اللهم إنَّا نبتدئ طريقنا بالاستغفار!

سُبحانك اللهم نشهد أن لا إله إلا أنت نستغفرك ونتوب إليك