

+ Motivational Corner:

Winners are not people who never fail, but people who never quit.



HISTOLOGY
— 435 —



Practical exam revision

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Nasal Septa

1- Identify ?

Nasal cavity and septum.

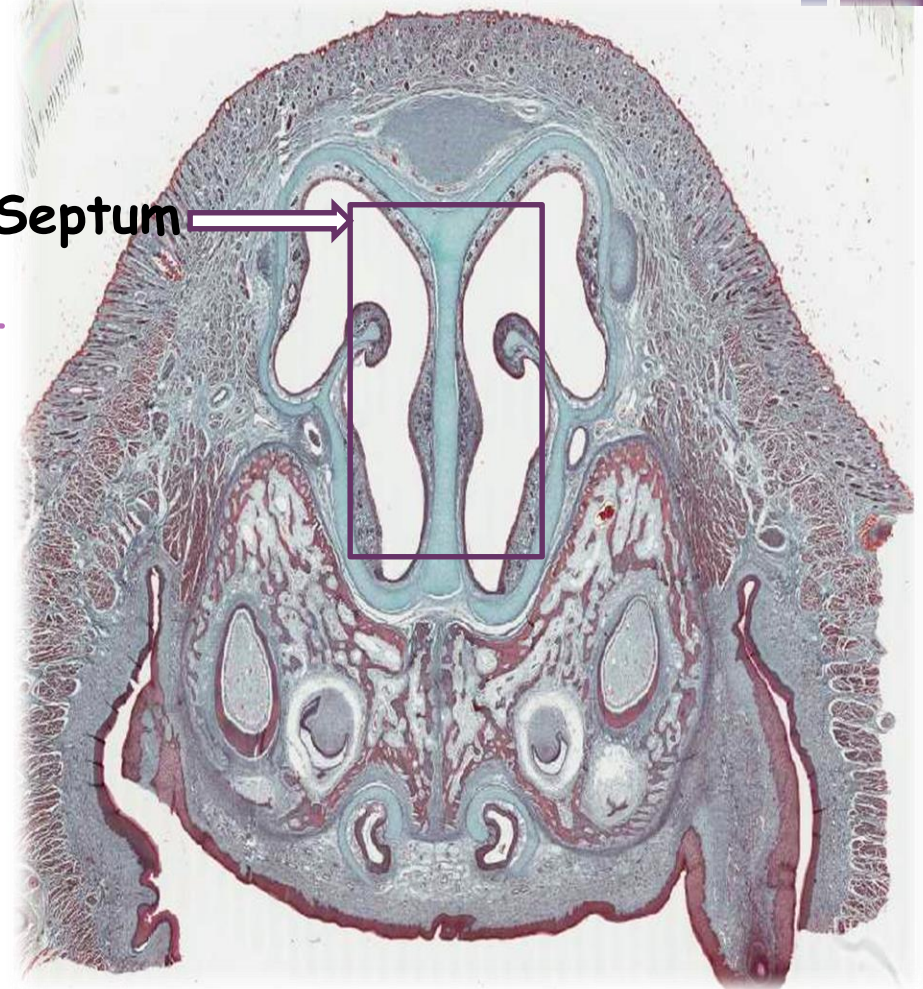
2- Lining epithelium ?

Pseudo-stratified **ciliated** columnar epithelium with goblet cells.

3-Type of cartilage ?

Hyaline cartilage.

Nasal Septum



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Respiratory Mucosa

1- Identify ?

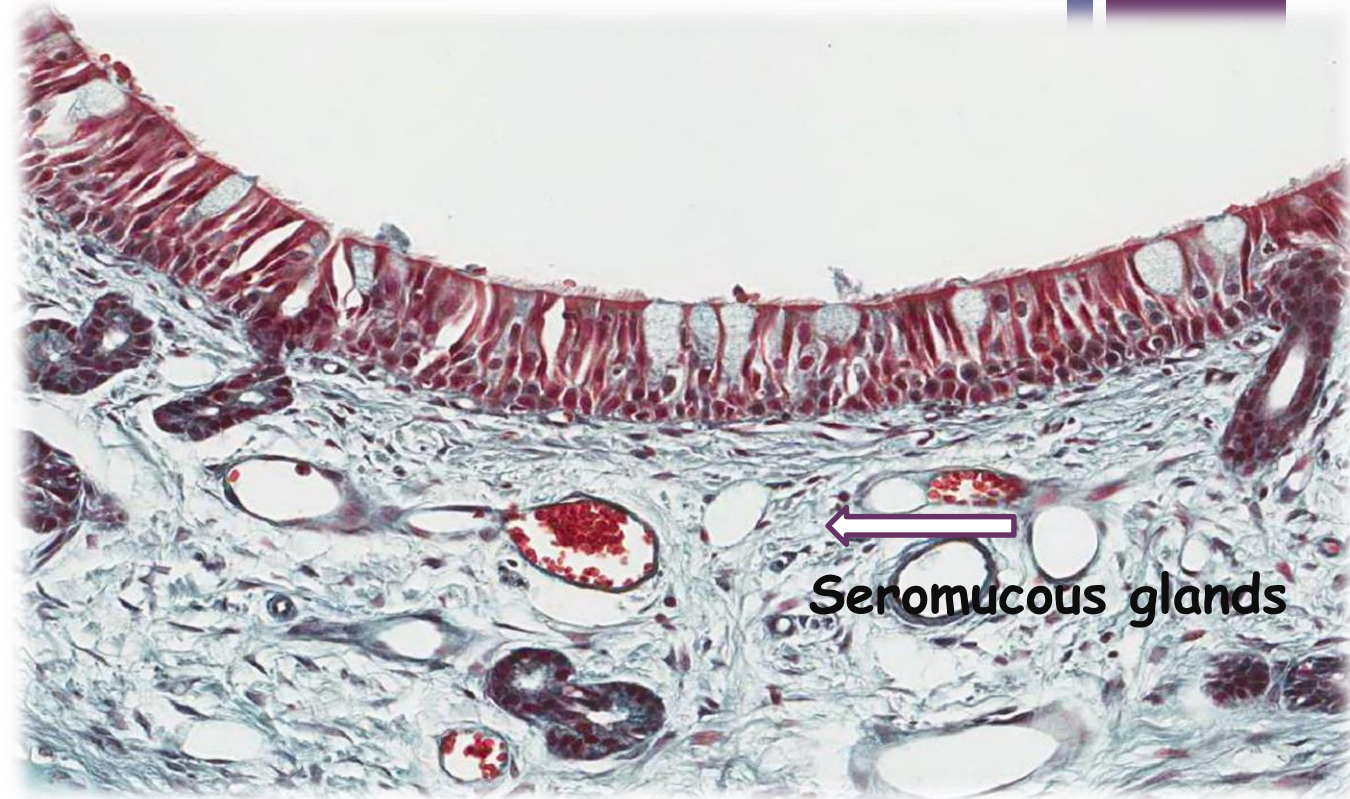
Respiratory Mucosa.

2- Lining epithelium ?

Pseudo-stratified ciliated columnar epithelium with goblet cells.

3-What are the type of cells found in Olfactory epithelium ?

- 1.Bipolar neural olfactory cells.
- 2.Sustentacular cells.
- 3.Basal cells.



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Trachea**

1- Identify ?

Trachea.

2- Lining epithelium ?

Pseudo-stratified ciliated columnar epithelium with goblet cells.

3-Type of cartilage ?

C-shaped hyaline cartilage
"in adventitia"

4- What is the name of the muscle in this structure and what type is it?

Trachealis- Smooth muscle





Tracheal Mucosa



1- Identify ?

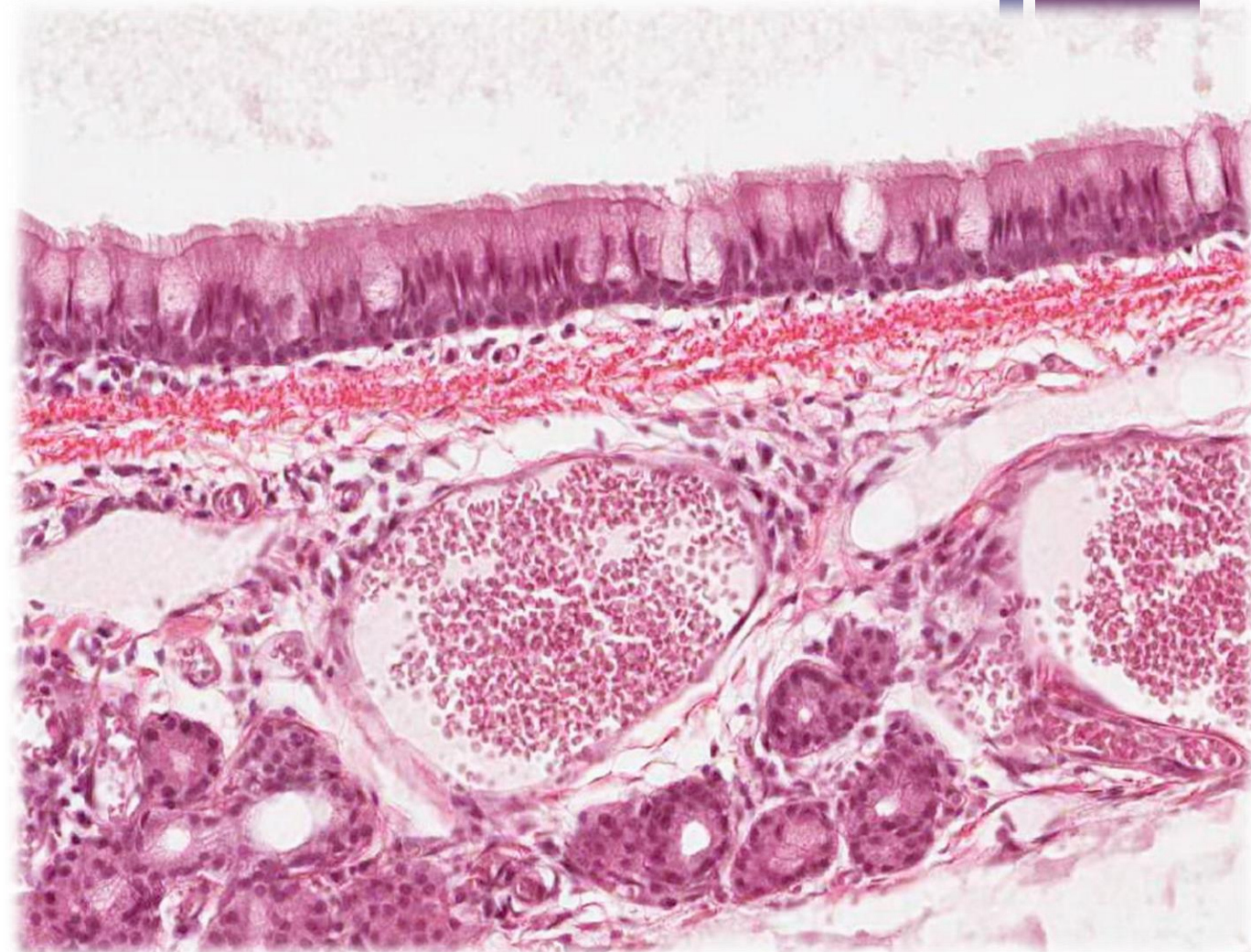
Tracheal Mucosa.

2- Lining epithelium ?

Pseudo-stratified ciliated columnar epithelium with goblet cells.

❖ Submucosa contains

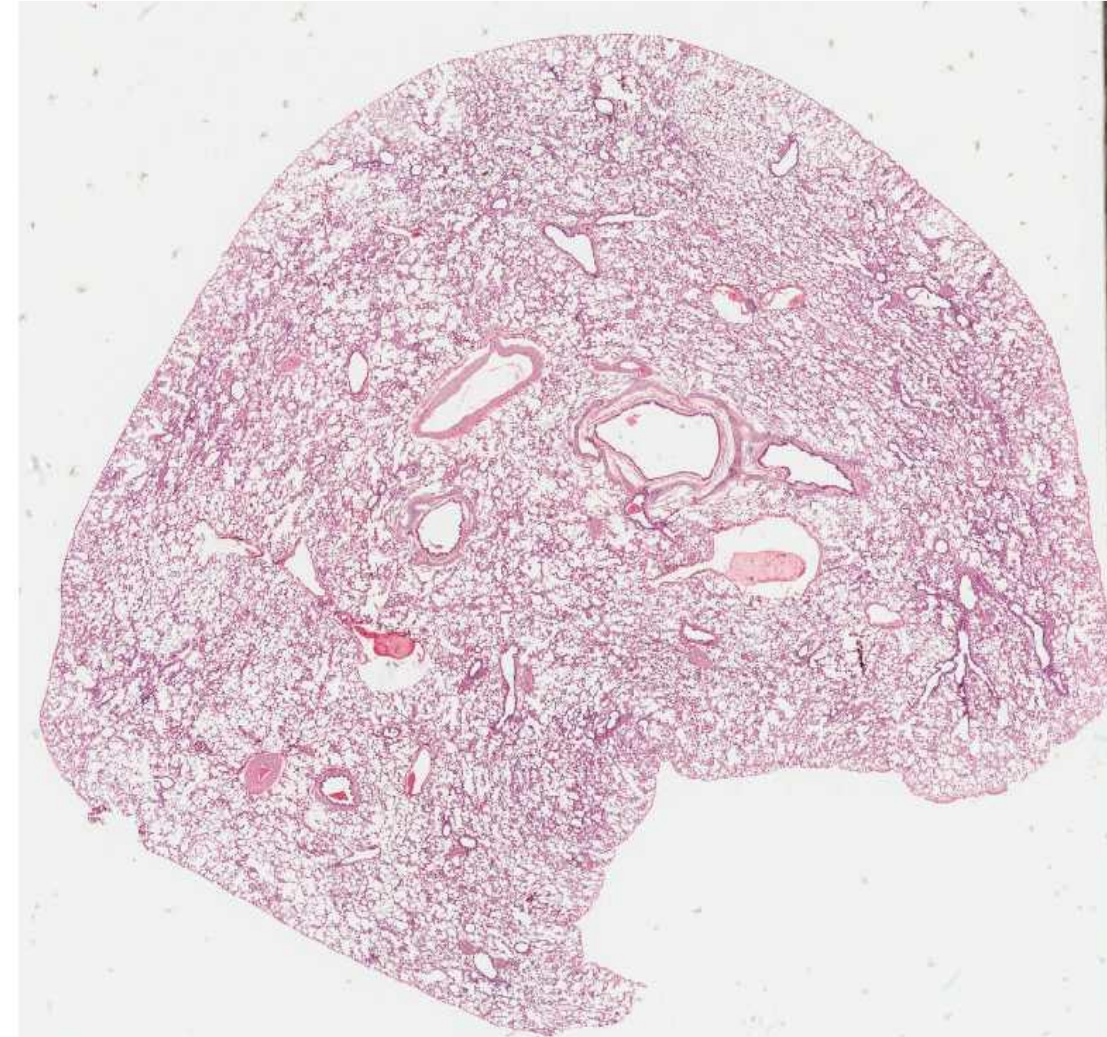
- Seromucous glands.
- Lymphoid elements.



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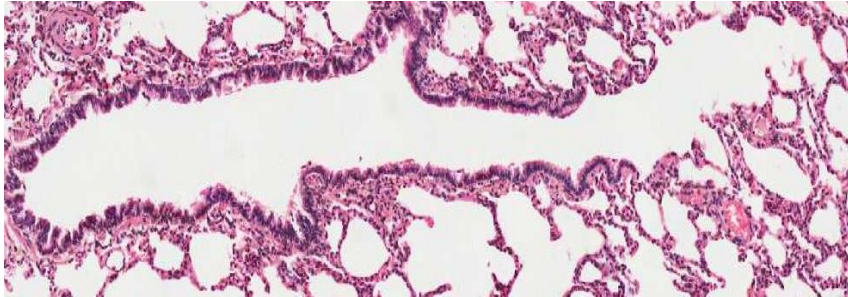
Lung

- Intrapulmonary Bronchus
- Bronchioles
- Pulmonary Alveoli

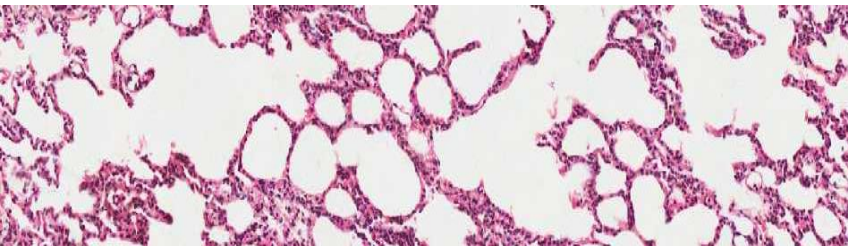


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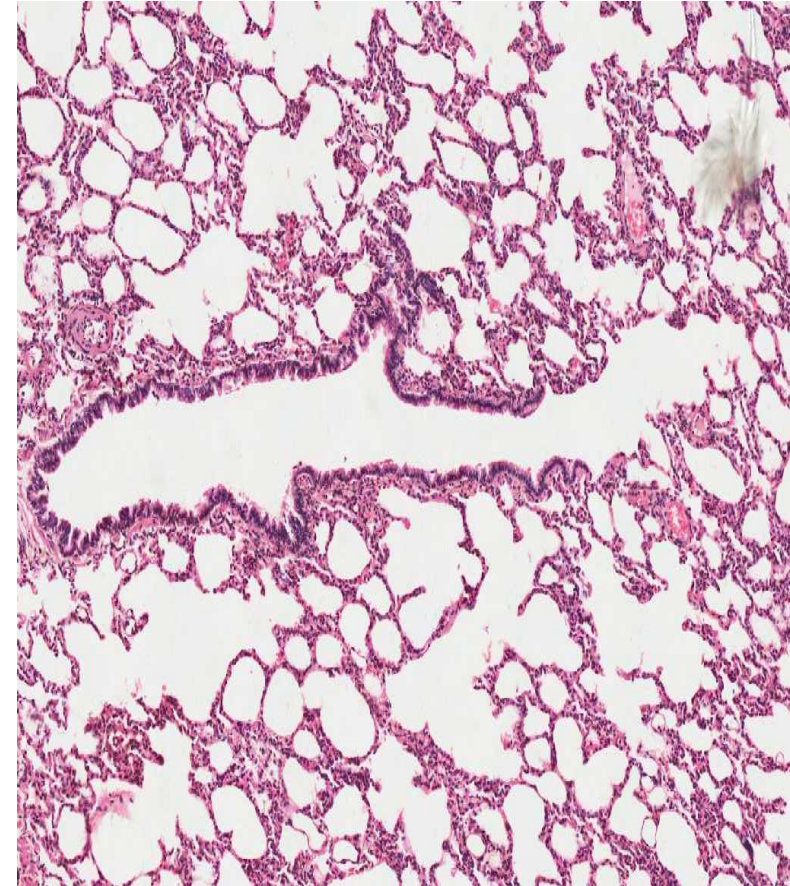
Longitudinal section "LS"



Bronchiole (LS)



Pulmonary Alveoli



Lung

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Intrapulmonary Bronchi *

1- Identify ?

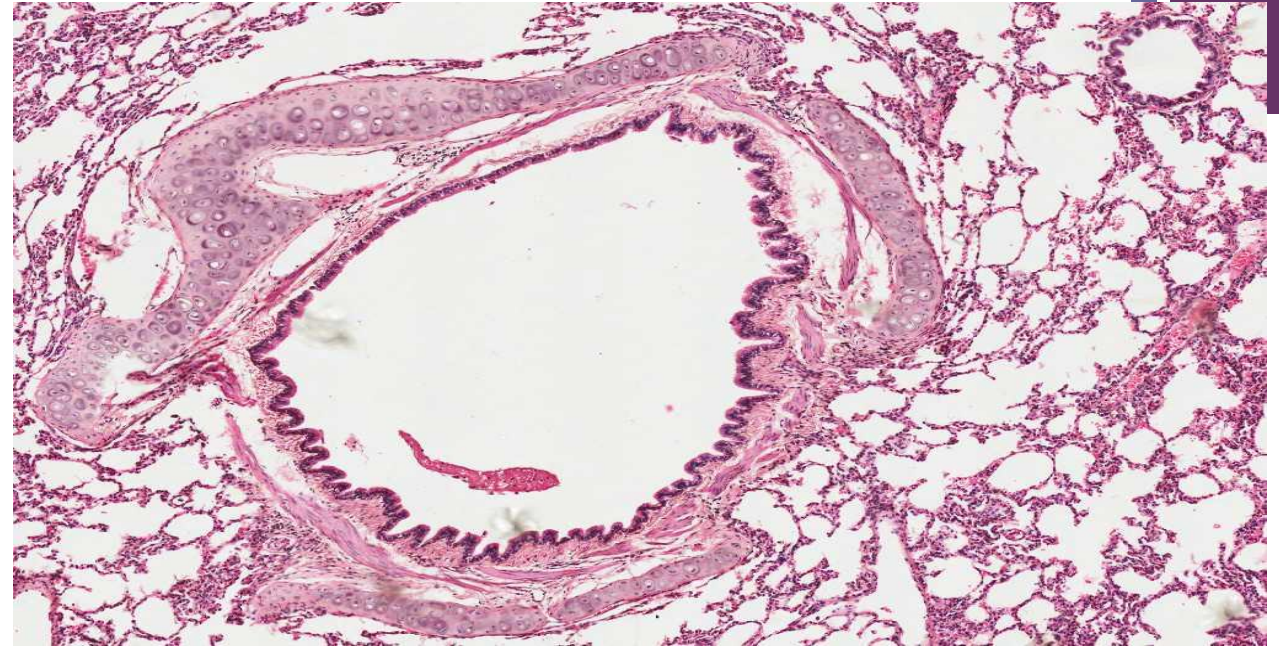
Intrapulmonary Bronchi.

2- Lining epithelium ?

Pseudo-stratified ciliated columnar epithelium with goblet cells.

3-Type of cartilage ?

Hyaline cartilage.



□ Difference between Intrapulmonary and Extrapulmonary Bronchi

Intrapulmonary	Extrapulmonary
Plates of Cartilage	C-shaped Cartilage

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Terminal Bronchioles *

1- Identify ?

Terminal Bronchioles (TS)

2- Lining epithelium ?

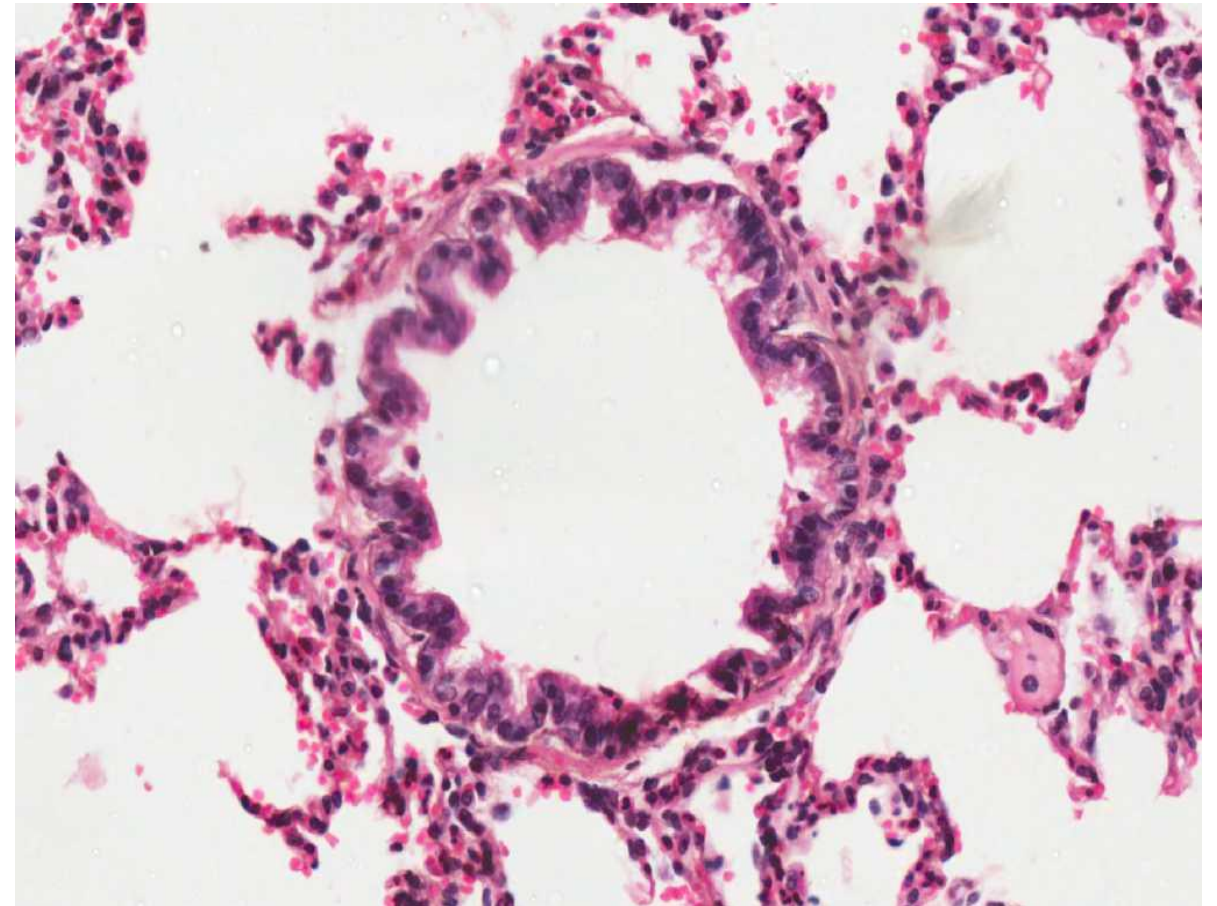
Simple cuboidal partially ciliated epithelium with Clara cells.

(**NO goblet cells**)

Functions of Clara Cells :

1. Degrade toxins in inhaled air.
2. Divide to regenerate the bronchiolar epithelium.
3. Produce surfactant-like material

Terminal Bronchioles



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Pulmonary Alveoli *

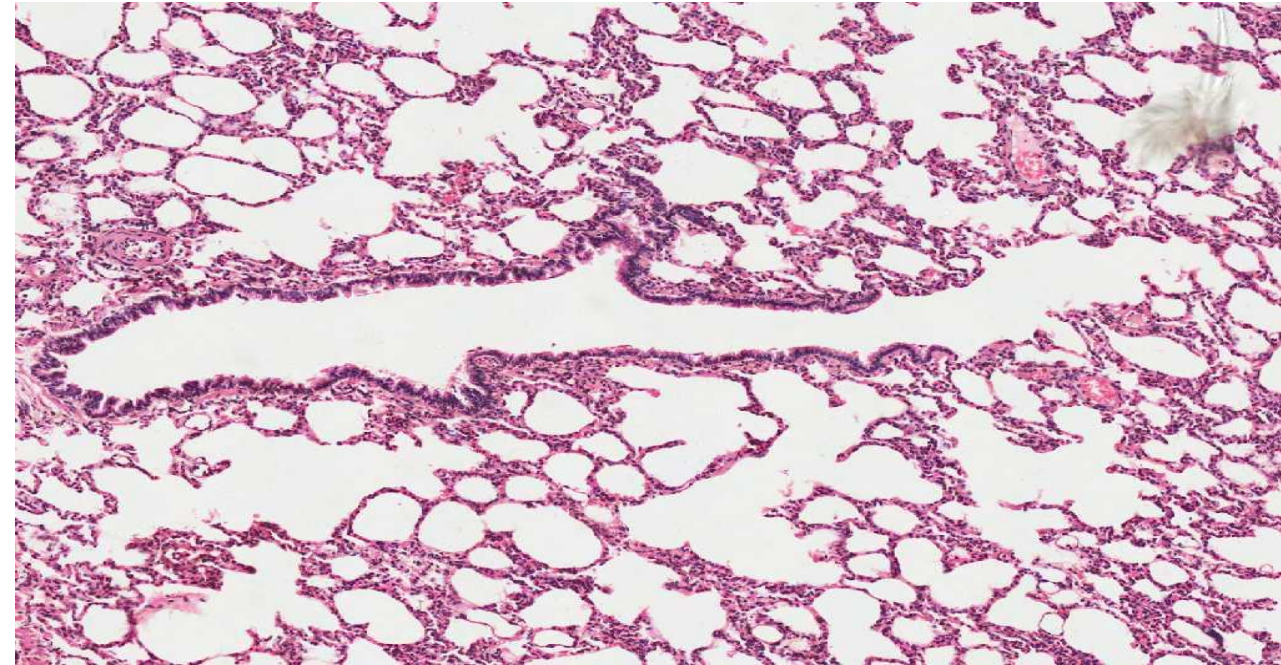
1- Type of epithelium ?

Simple squamous epithelium

2-What are the type of cells found in Alveoli epithelium ?

1.Type I Pneumocytes.

2.Type II Pneumocytes.





	Type I Pneumocyte	Type II Pneumocyte
Function	Gas Exchange	Secrete Surfactant
Structure	Simple Squamous "Flattened"	Cuboidal "Rounded"

- ❑ Inter-alveolar Septum: is a region between 2 adjacent alveoli

- ❑ Dust Cells "Macrophages"
 - Site:** In the Lumen of Alveoli and in the inter-alveolar septa
 - Structure:** Irregular

- ❑ Blood Gas Barrier Components
 1. Surfactant
 2. Type I Pneumocyte epithelium
 3. Endothelial cells
 4. Basement membrane of both type I pneumocyte and endothelium cells of pulmonary capillaries

+ Credit

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Thanks for checking our work,
Good luck.

-Special Thanks to
Histology team 434.

-Team histology.

