

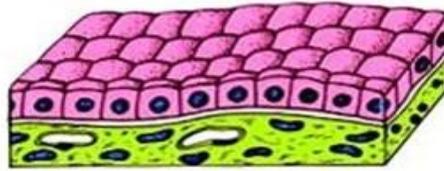
# Epithelium practical

## Covering epithelium

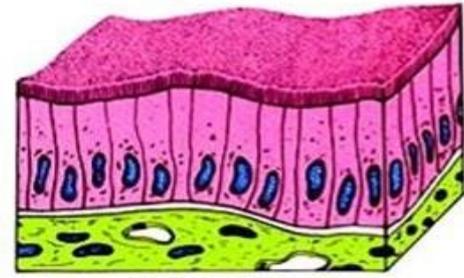
(SIMPLE)



Squamous

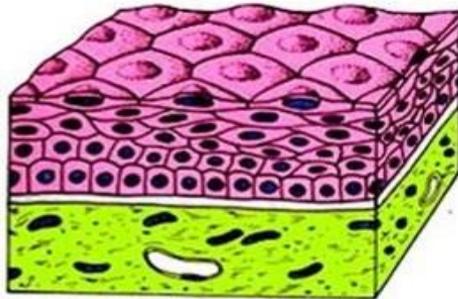


Cuboidal

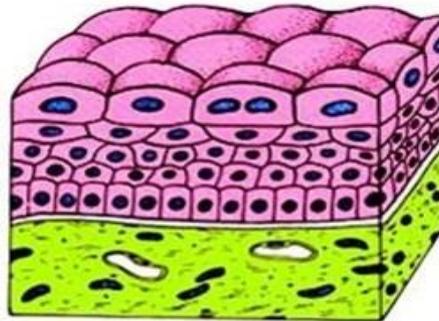


Columnar

(STRATIFIED)



Squamous

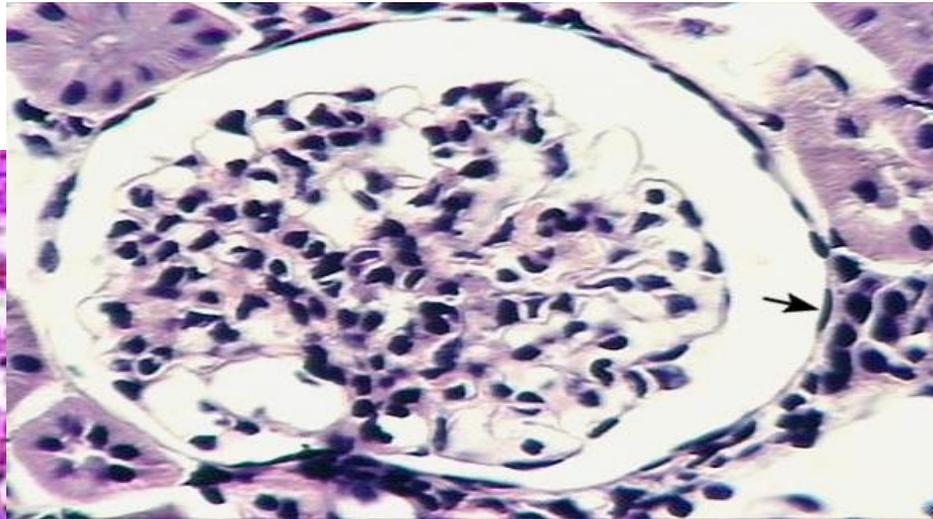


Transitional

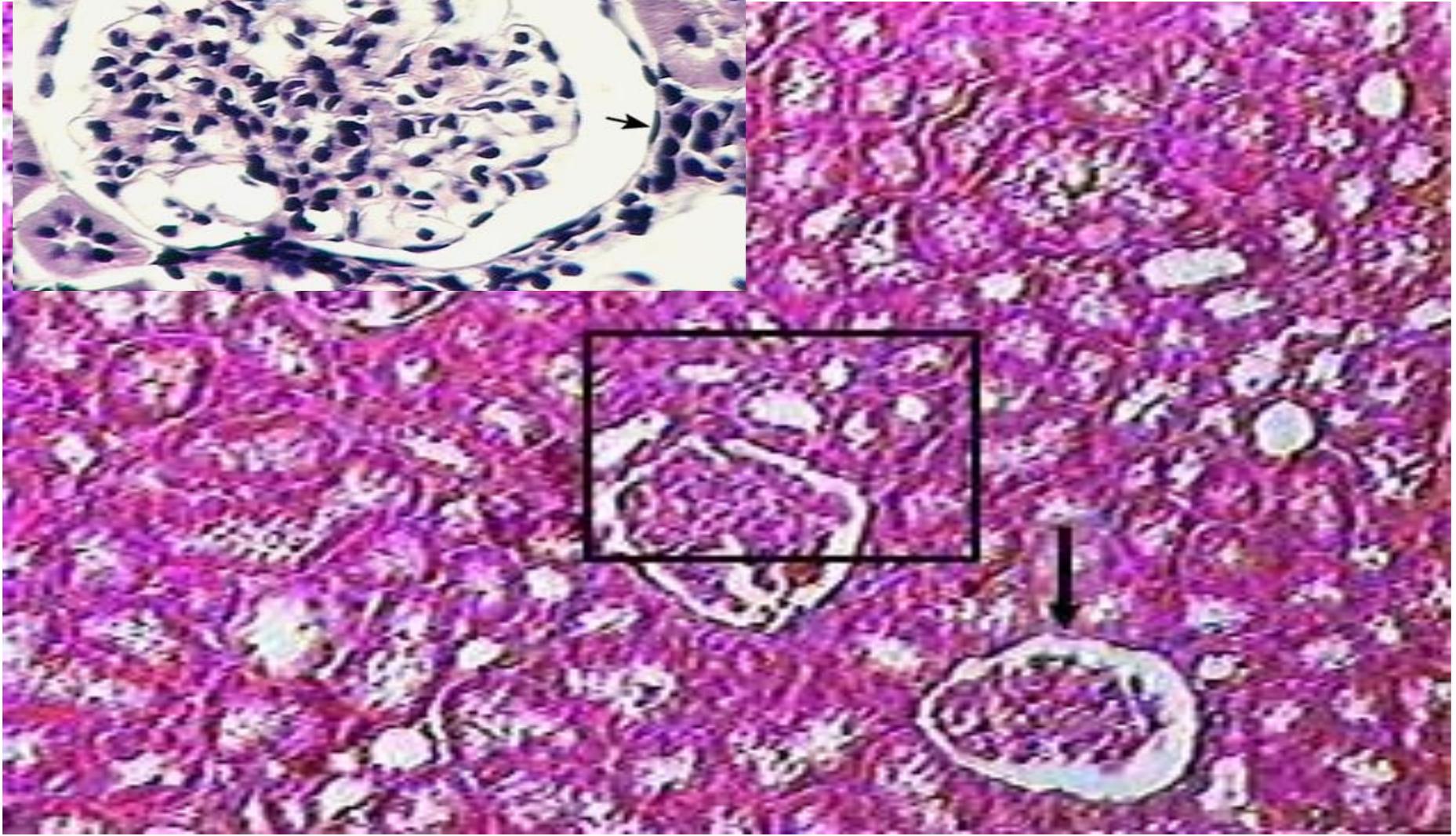


Pseudostratified columnar  
(Respiratory)

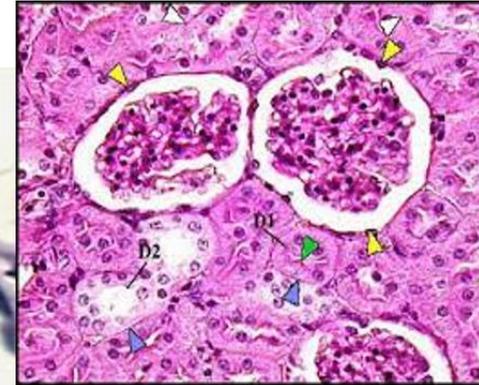
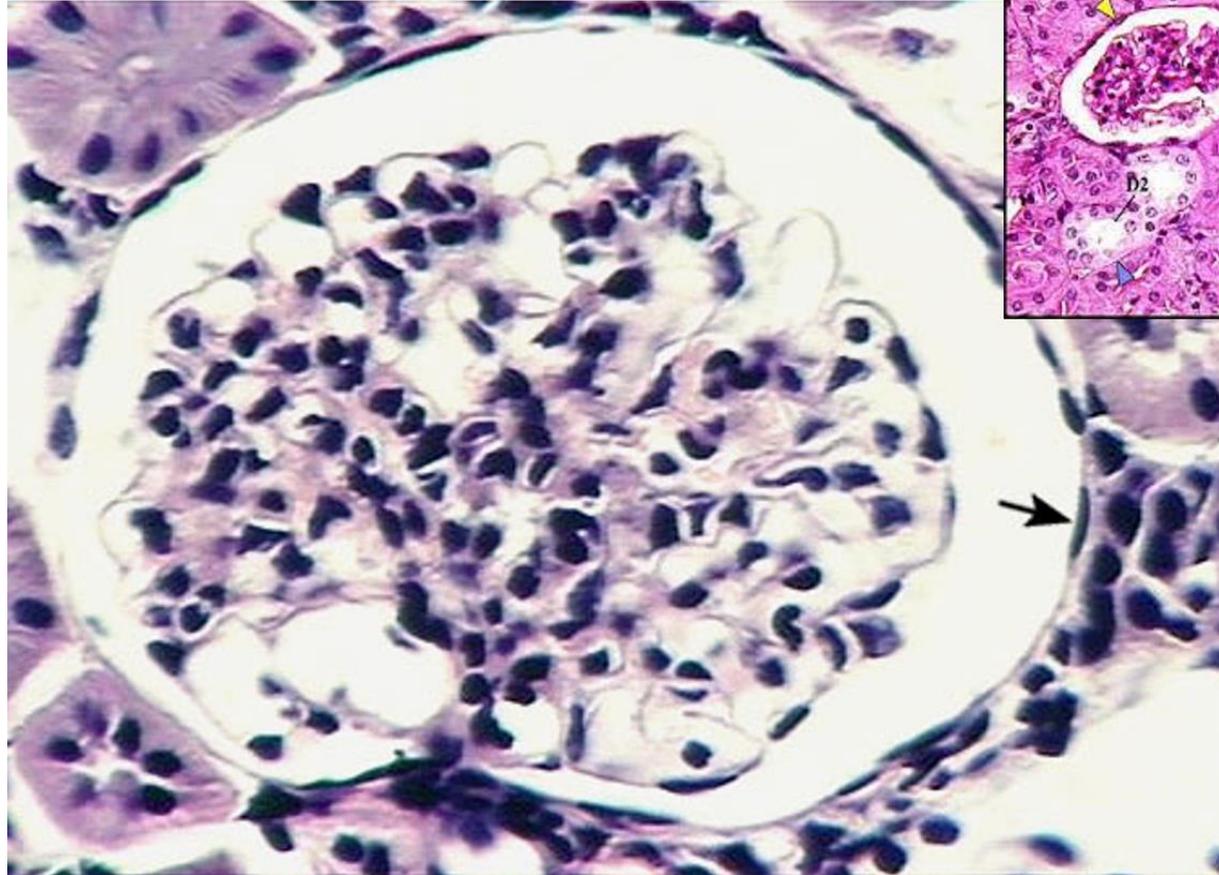
# Bowman's capsule



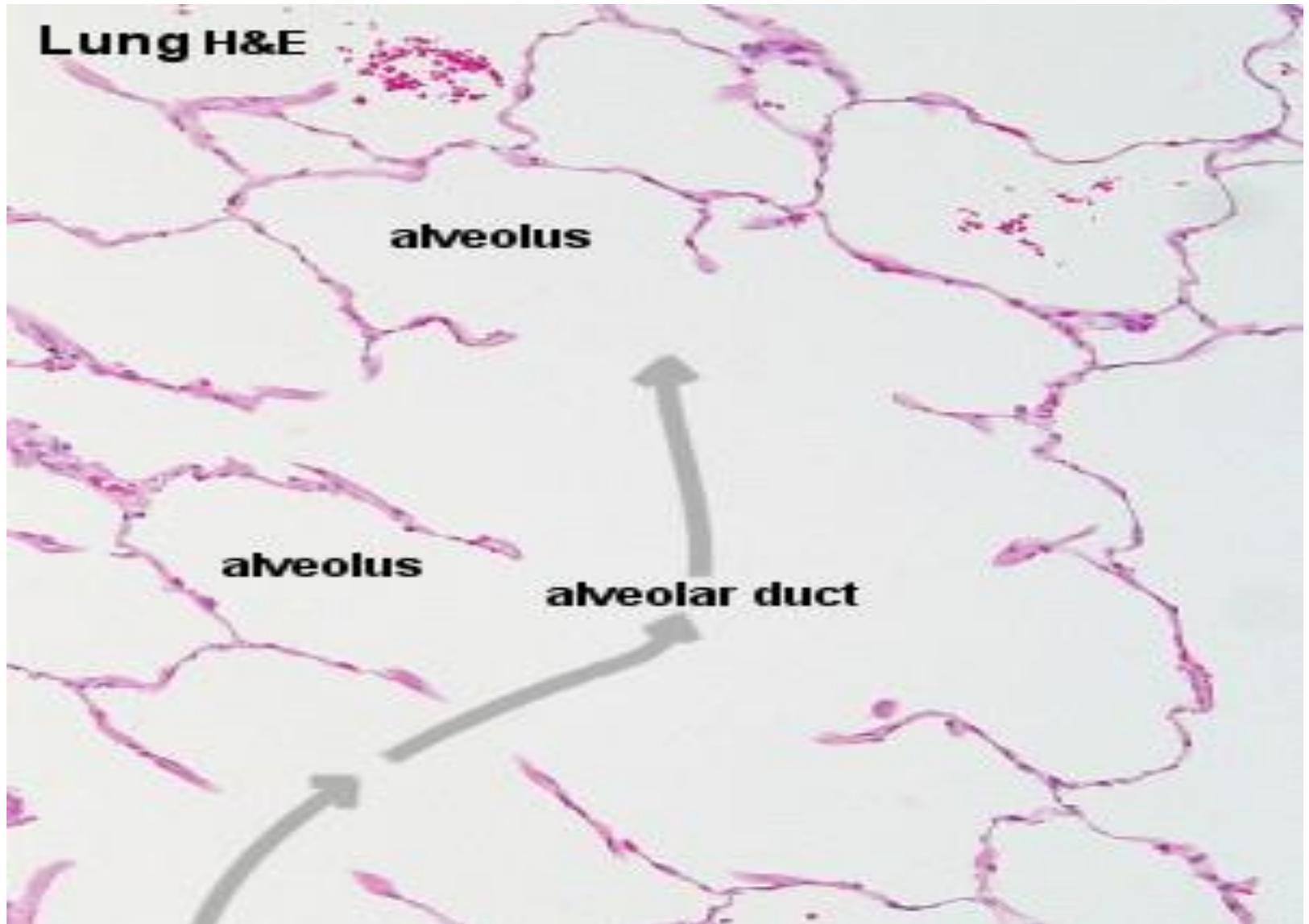
**Bowman's capsule**



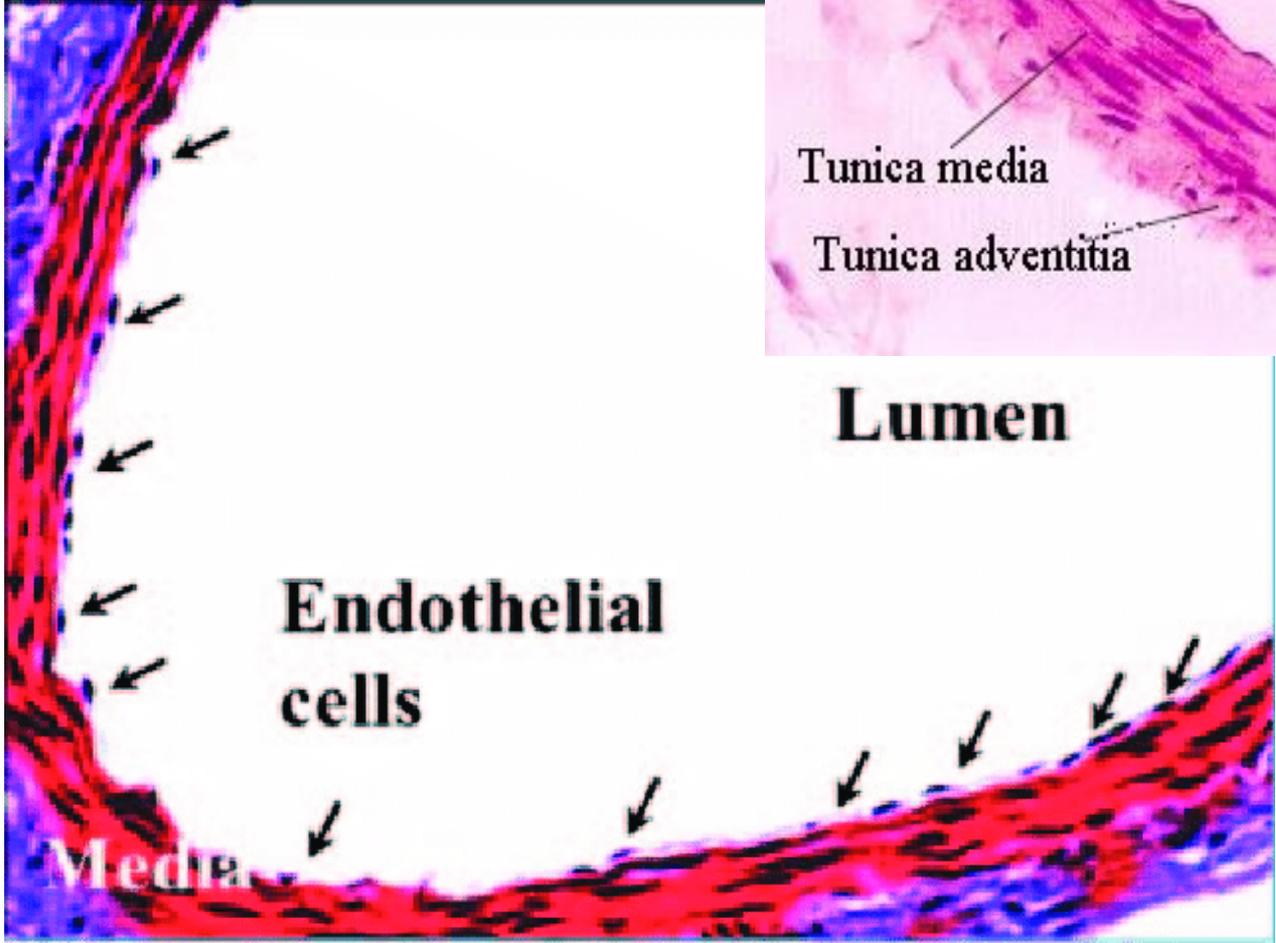
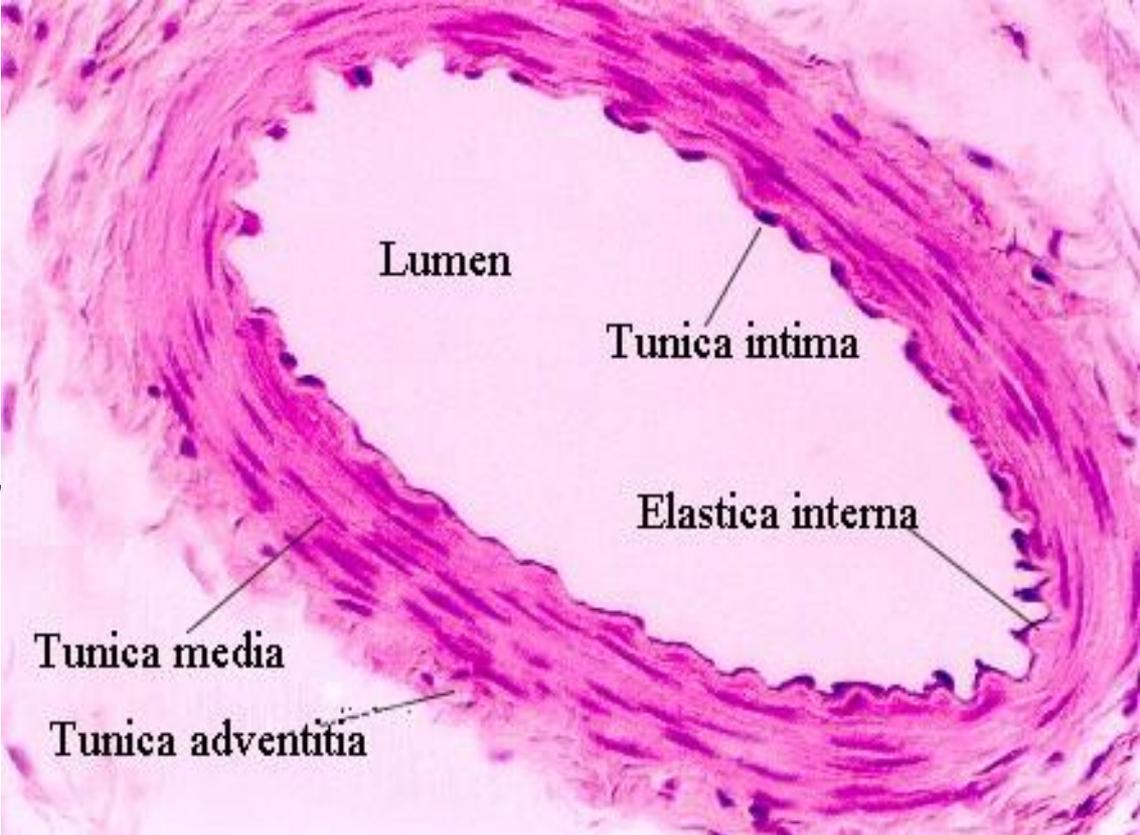
# Bowman's capsule



# Lung alveoli

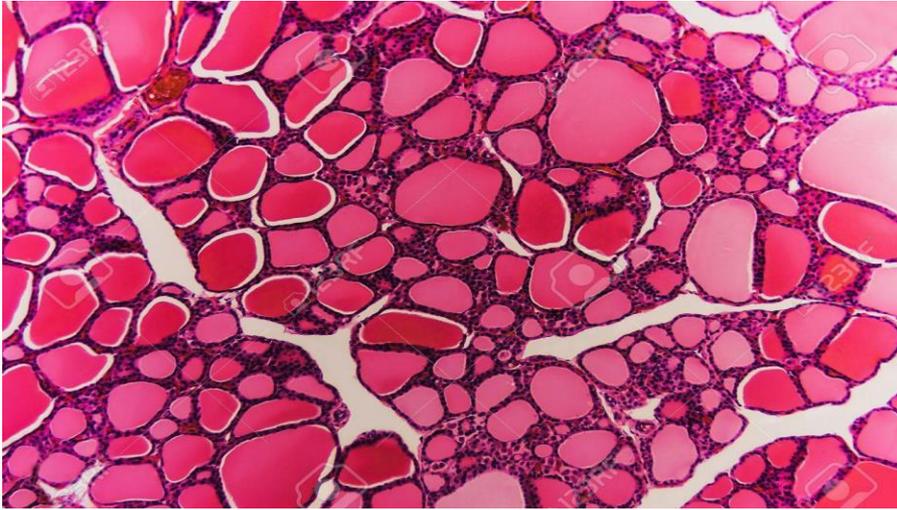


# Endothelium

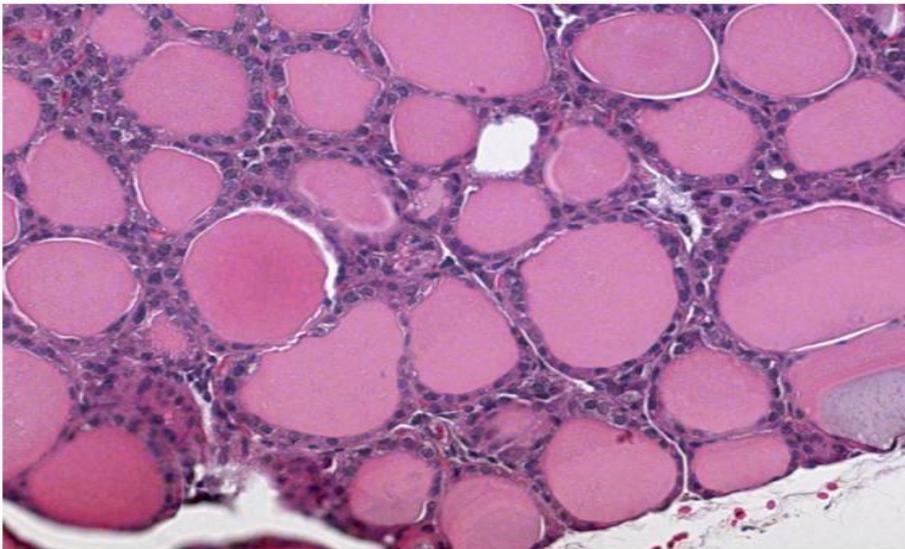
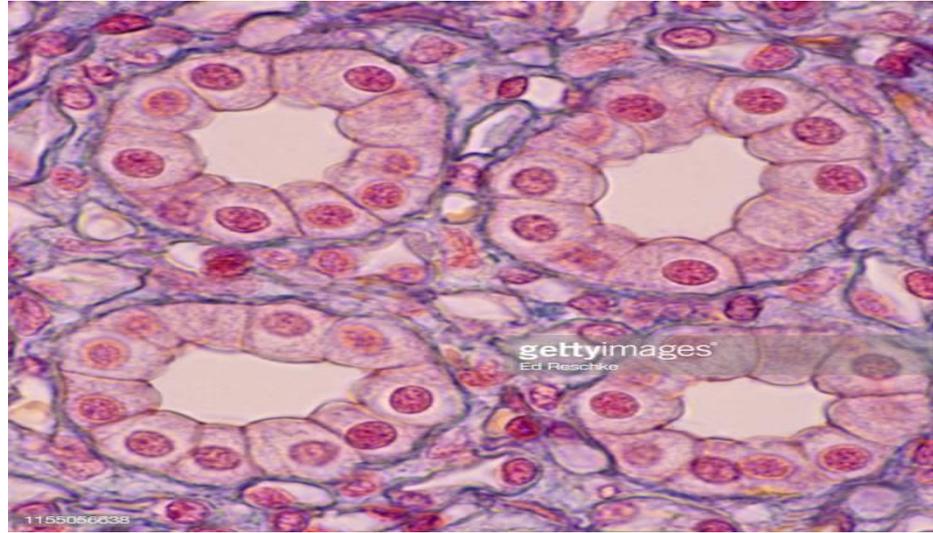


# Simple cuboidal

Thyroid gland



kidney tubules

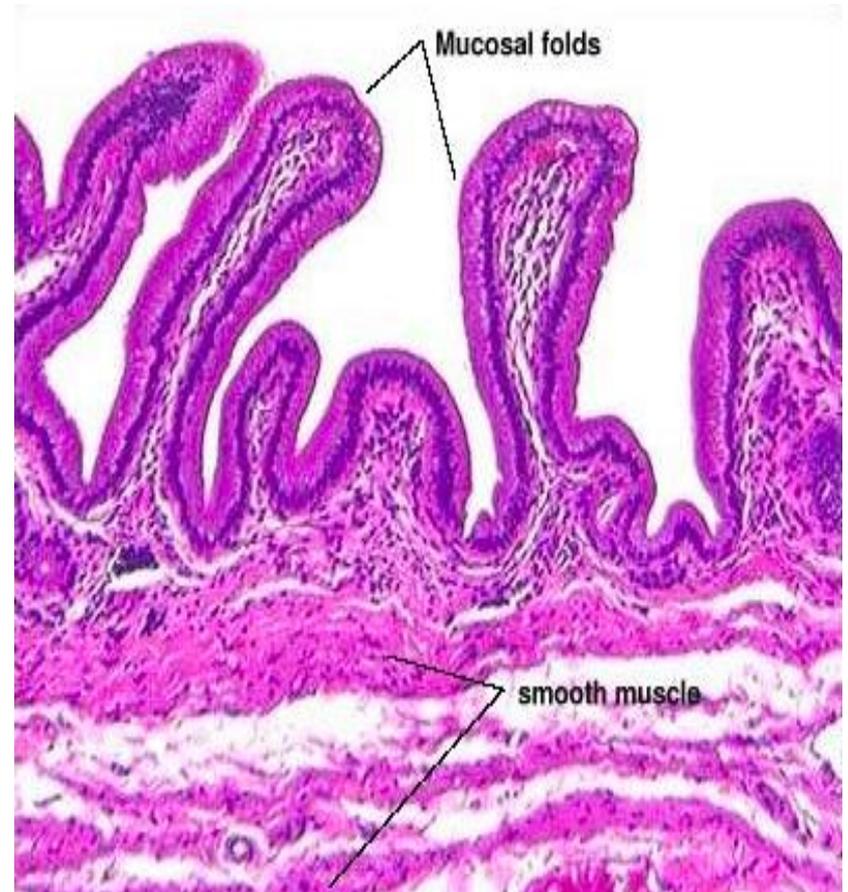
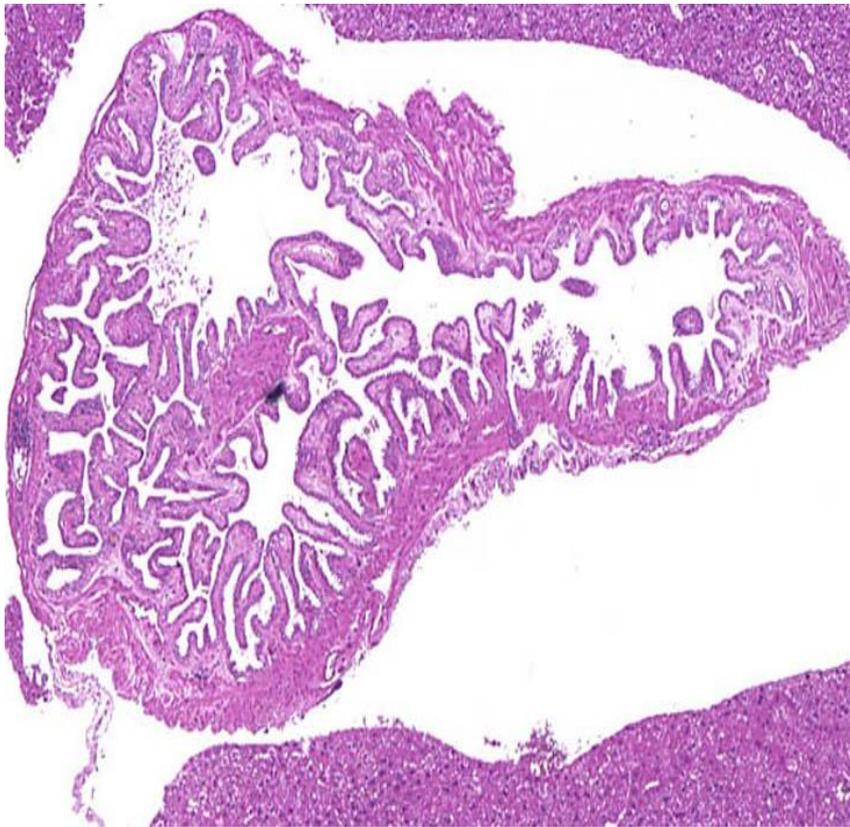


**Site:** Thyroid gland  
secretion

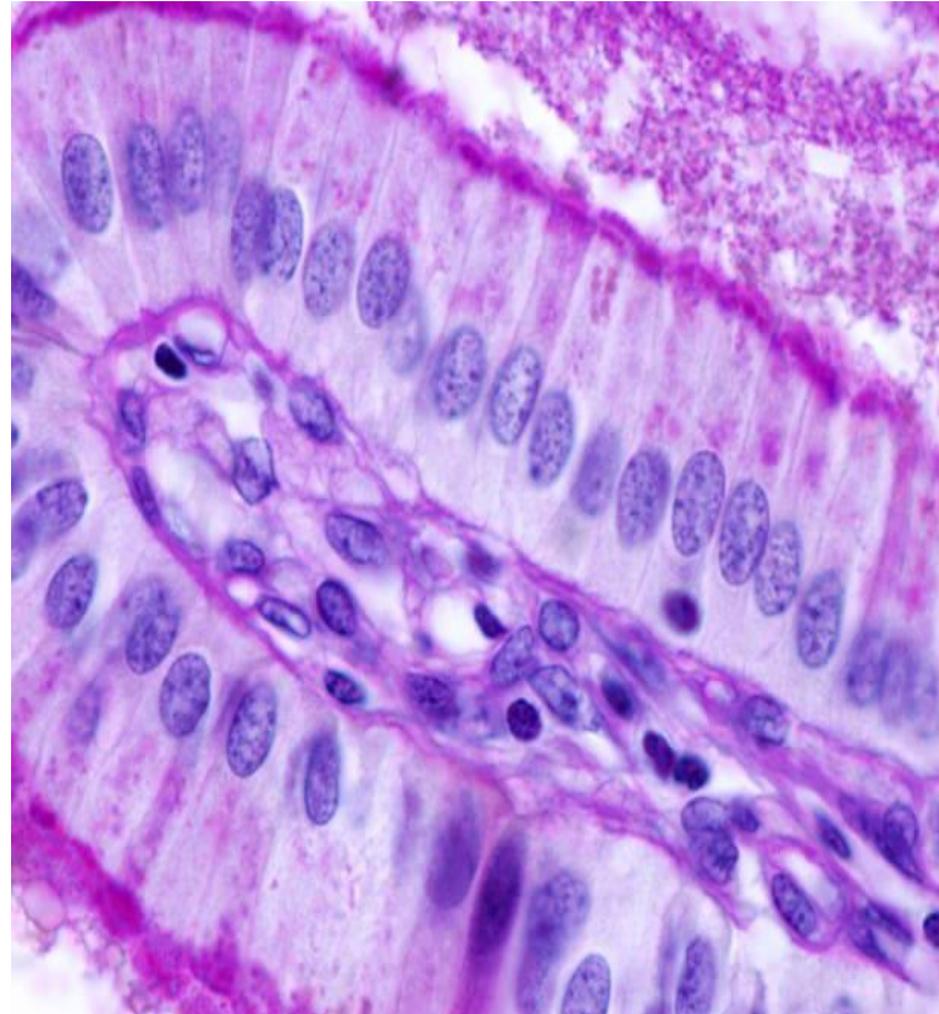
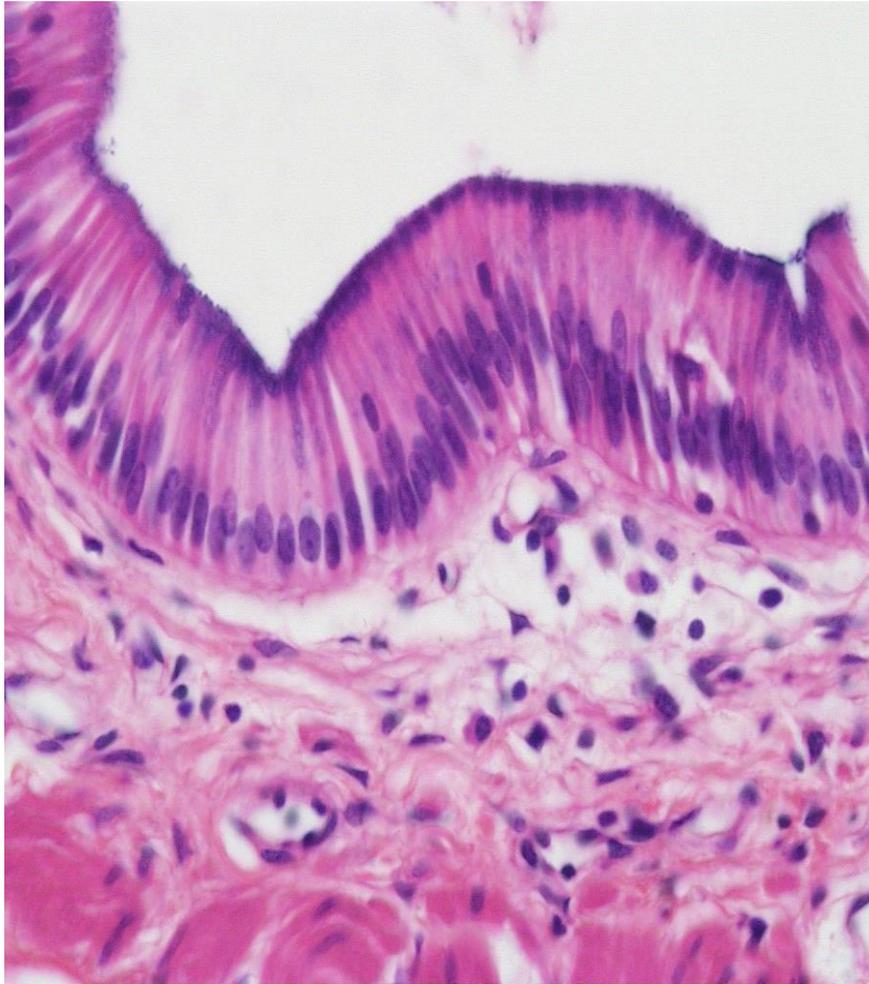
- kidney tubules  
ion exchange

# Simple columnar

**non ciliated**



# Simple columnar



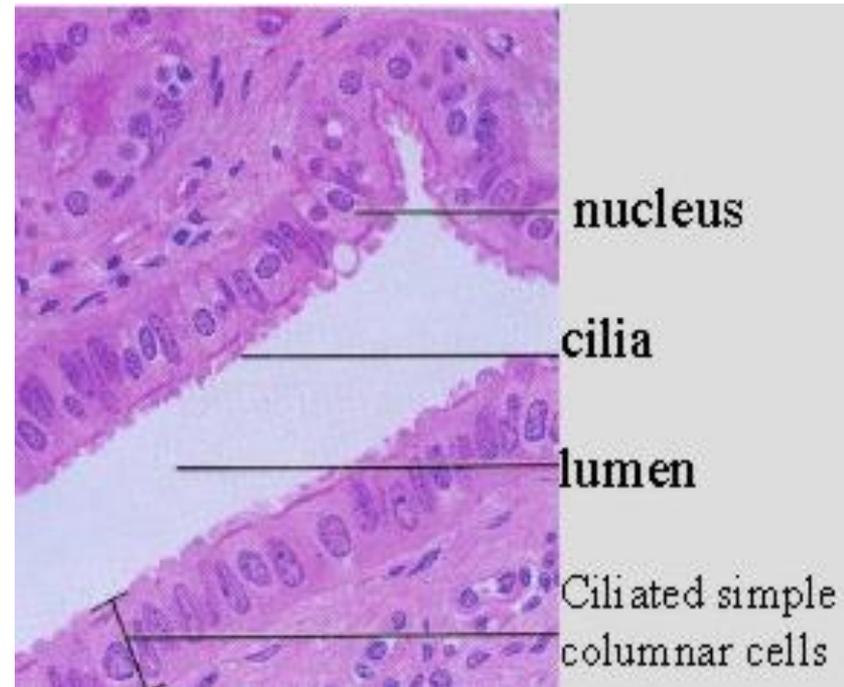
# Simple columnar



**non ciliated**

- **Sites: ducts of glands: secretion**
- **digestive tract : absorption**

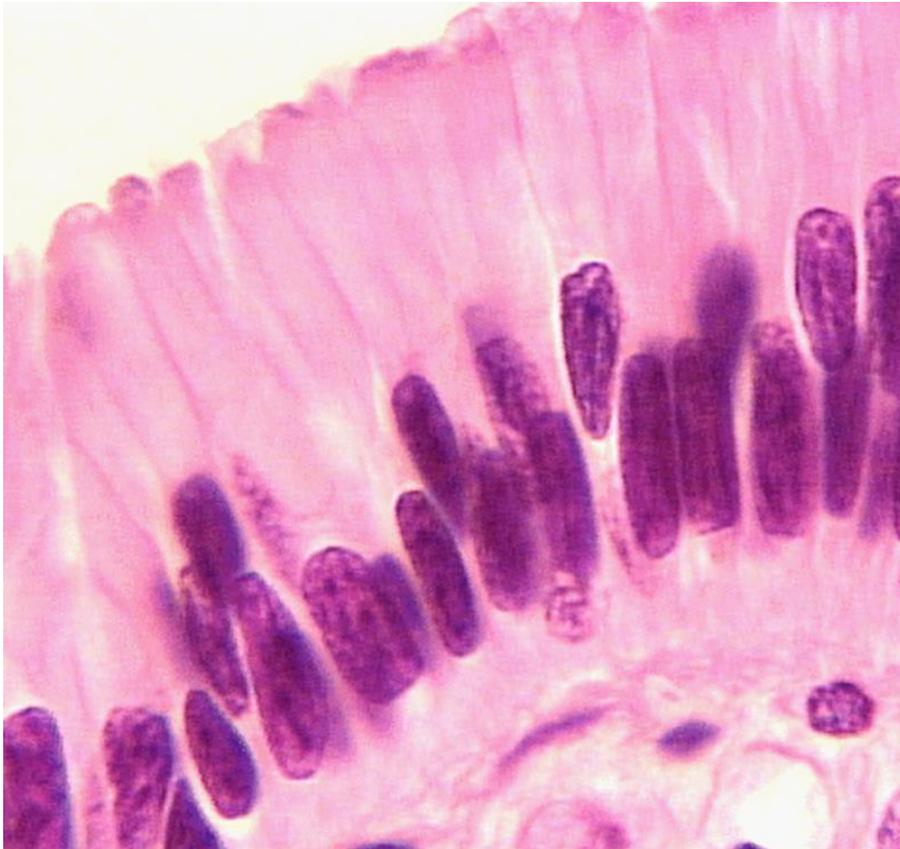
## **columnar ciliated •**



- **Sites: uterus, oviduct & bronchiole of the lung (movement of luminal contents)**

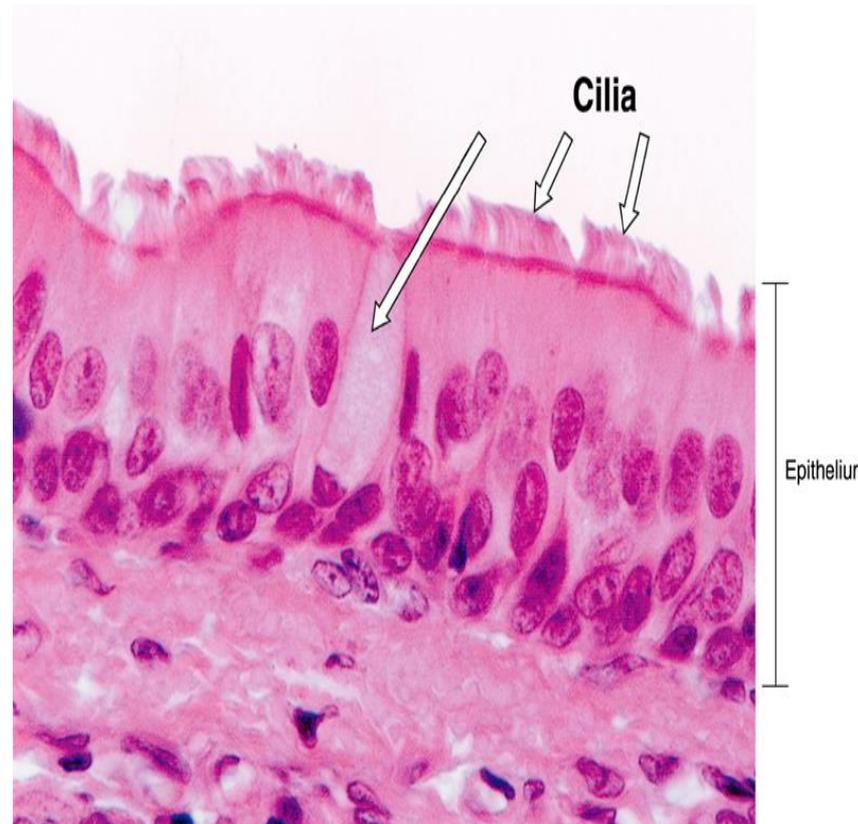
# Pseudostratified columnar

**non ciliated**



**Sites:** Male genital tract – large ducts of glands: (secretion)

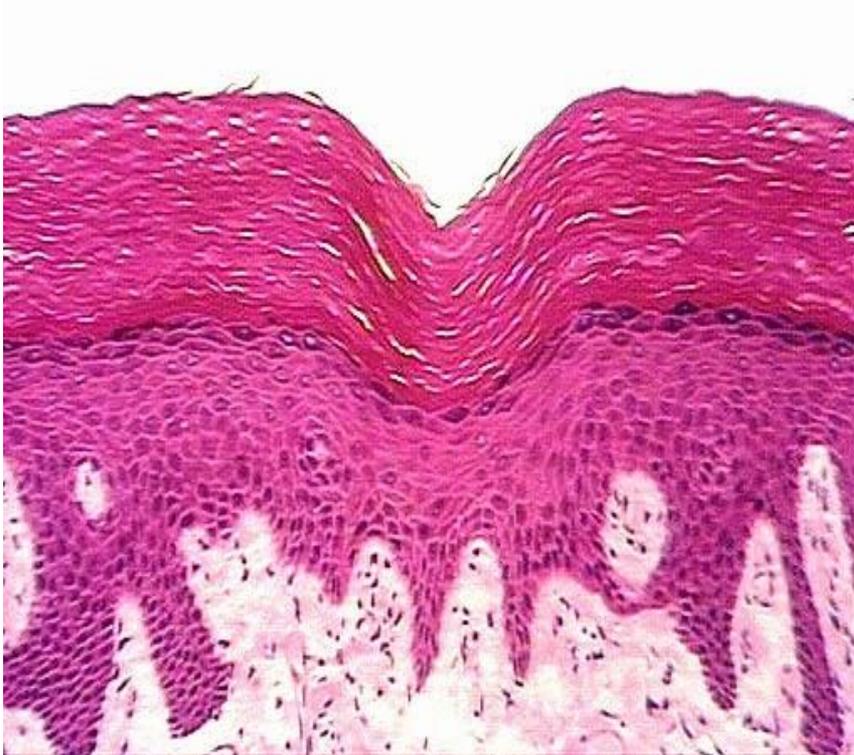
**ciliated**



**Sites:** Nose- Trachea

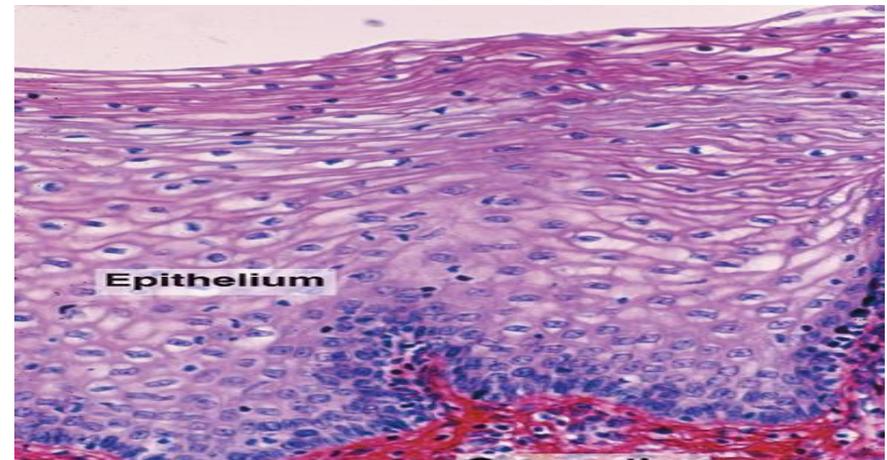
# Stratified squamous

Keratinized



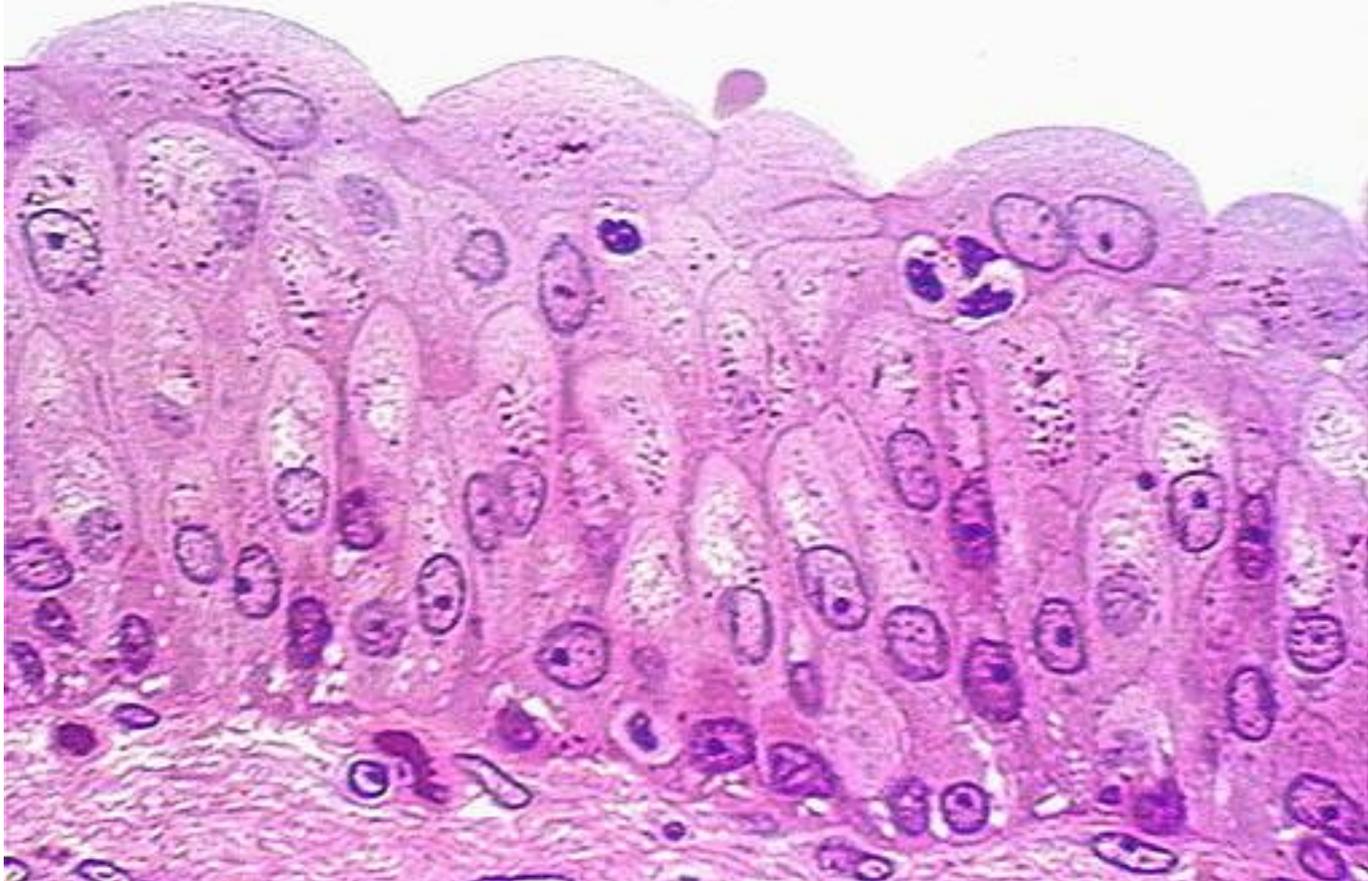
skin

Non Keratinized



Oesophagus- vagina

# Transitional epithelium

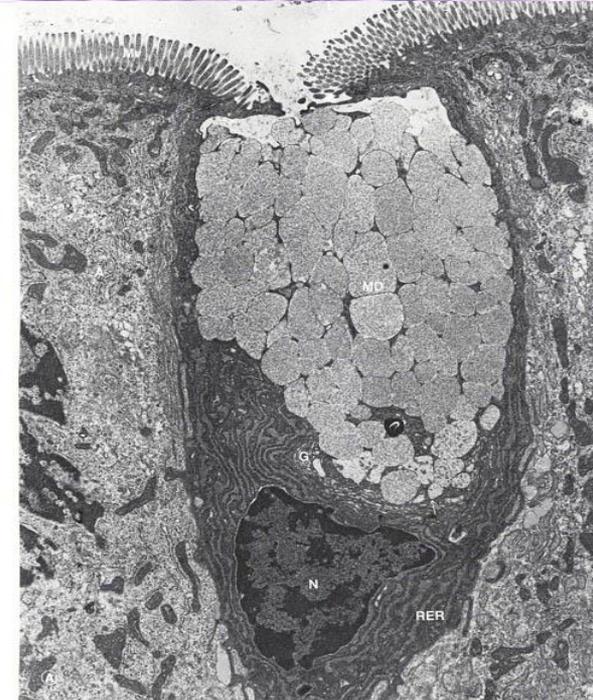
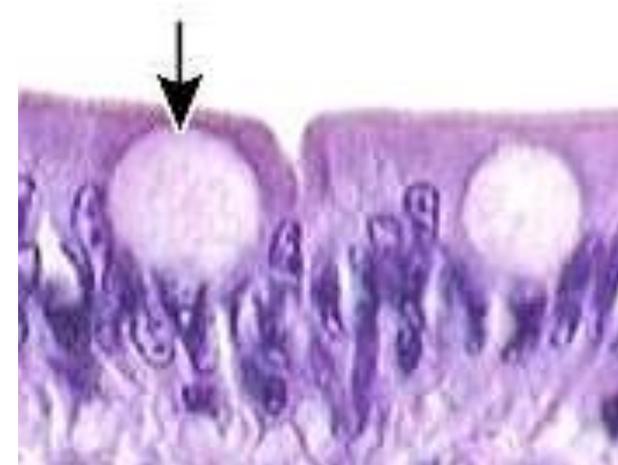


(urinary bladder - empty)

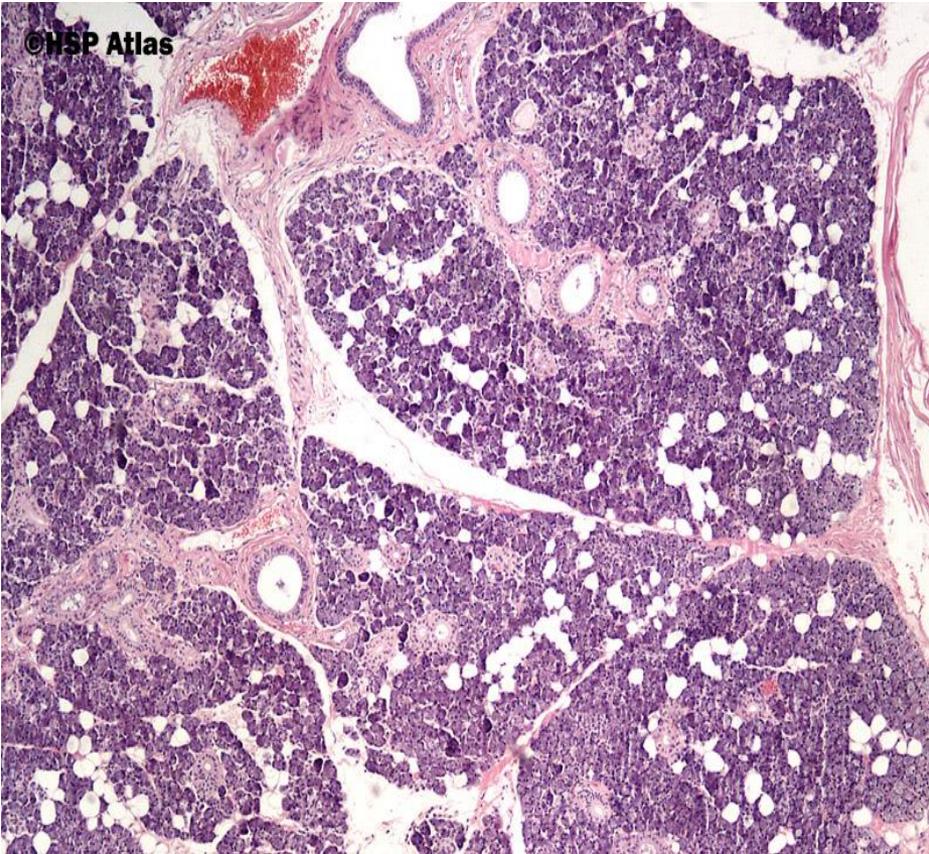
# Glandular epithelium

## Goblet cells

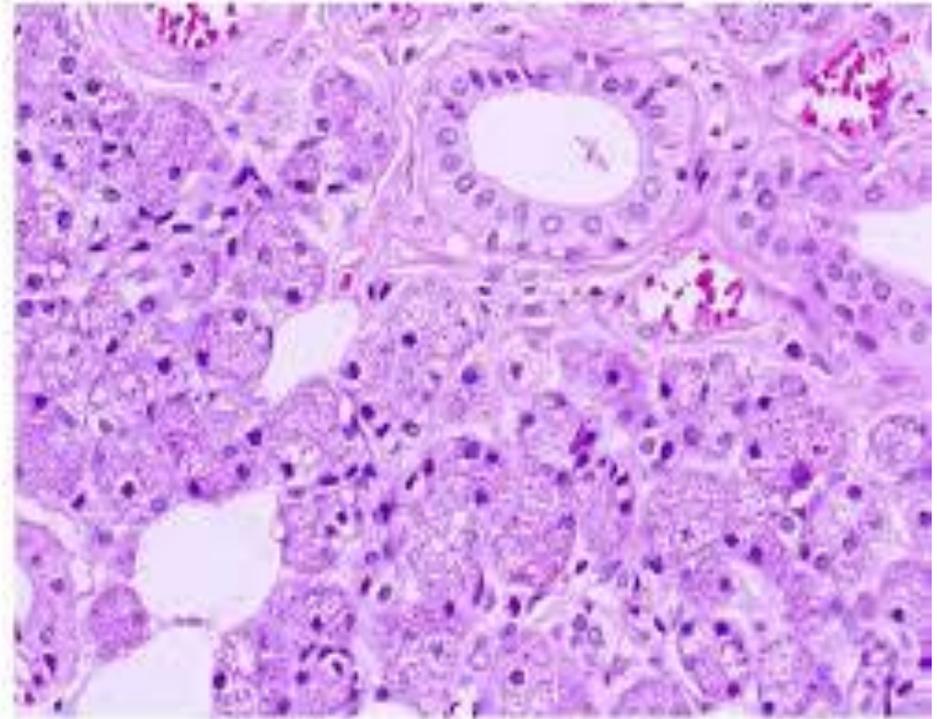
- Unicellular
- Exocrine
- Shape of the cell : flask shape with basal nuclei
- **Mode** of secretion: Merocrine
- **Nature** of secretion : Mucus
- **Site** : Respiratory system , GIT



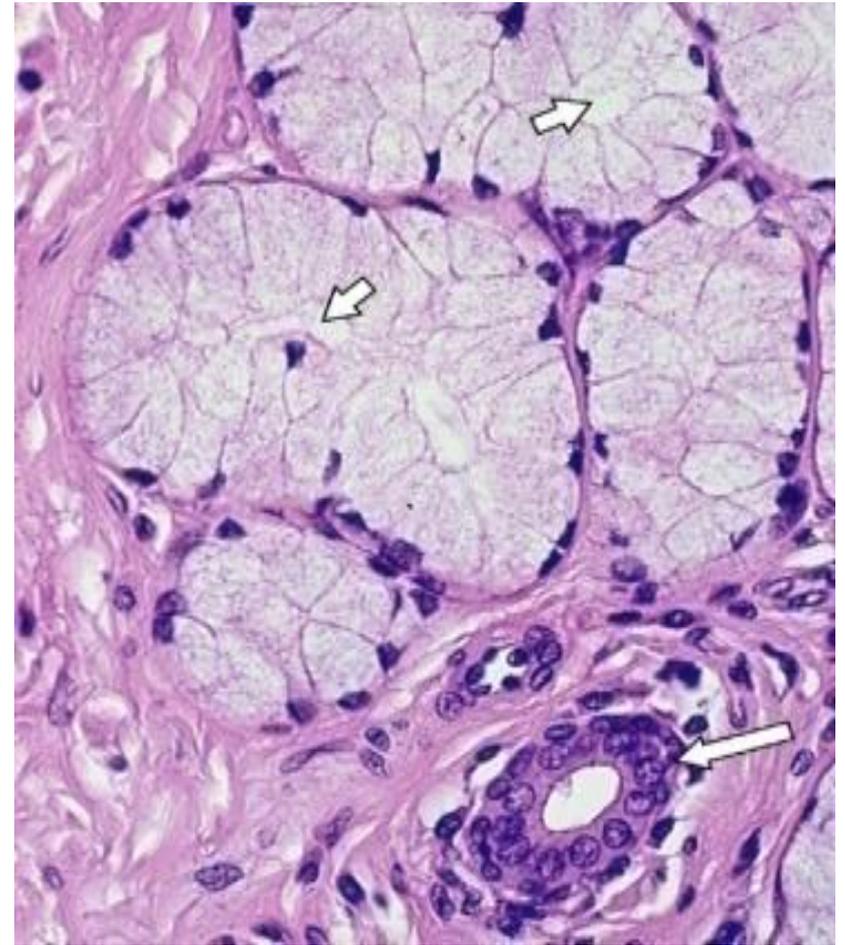
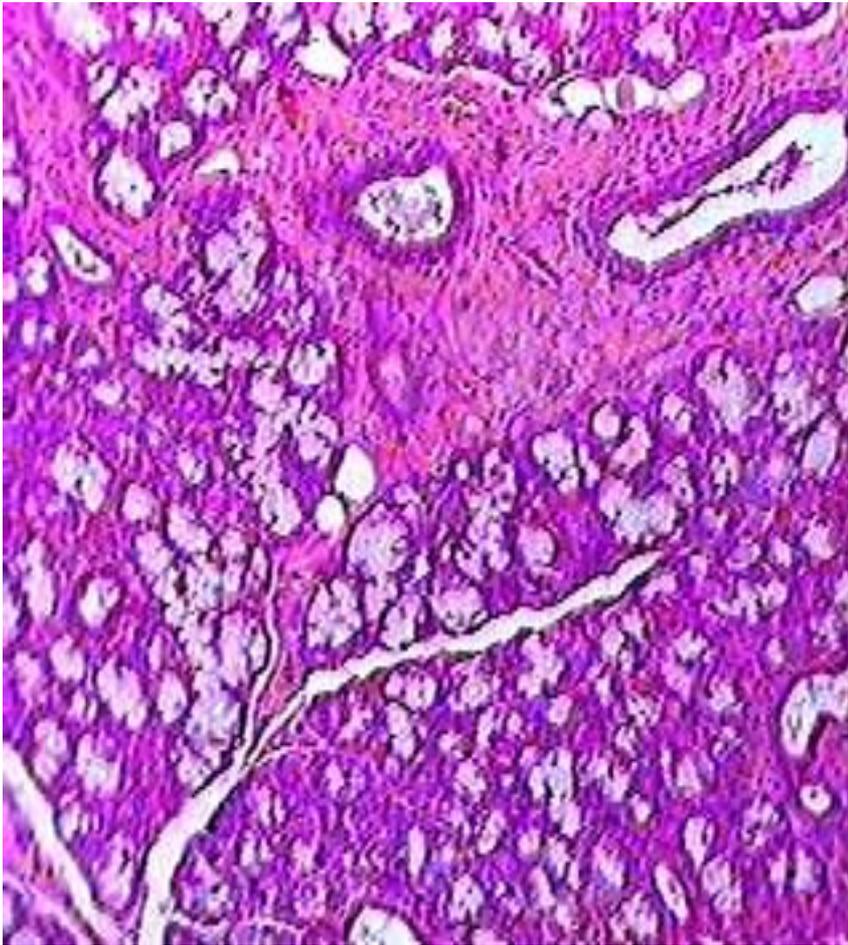
**Serous glands**, which secrete a watery secretion rich in enzymes e.g. parotid salivary gland.



Parotid Gland

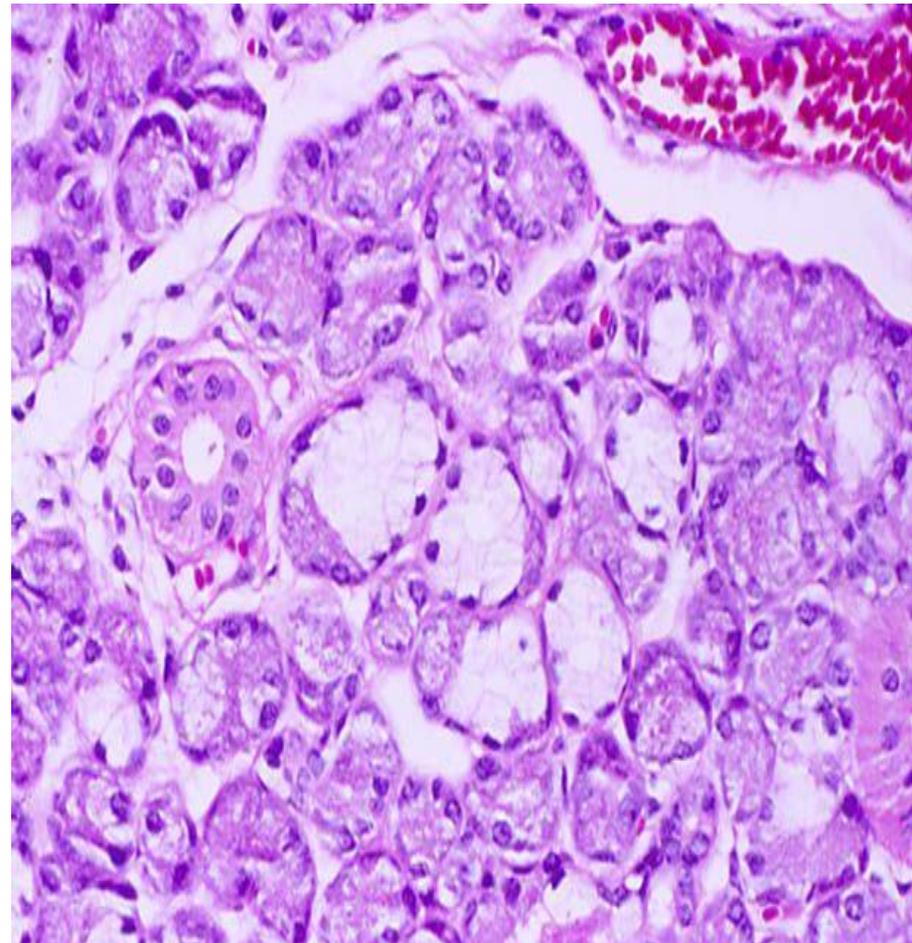
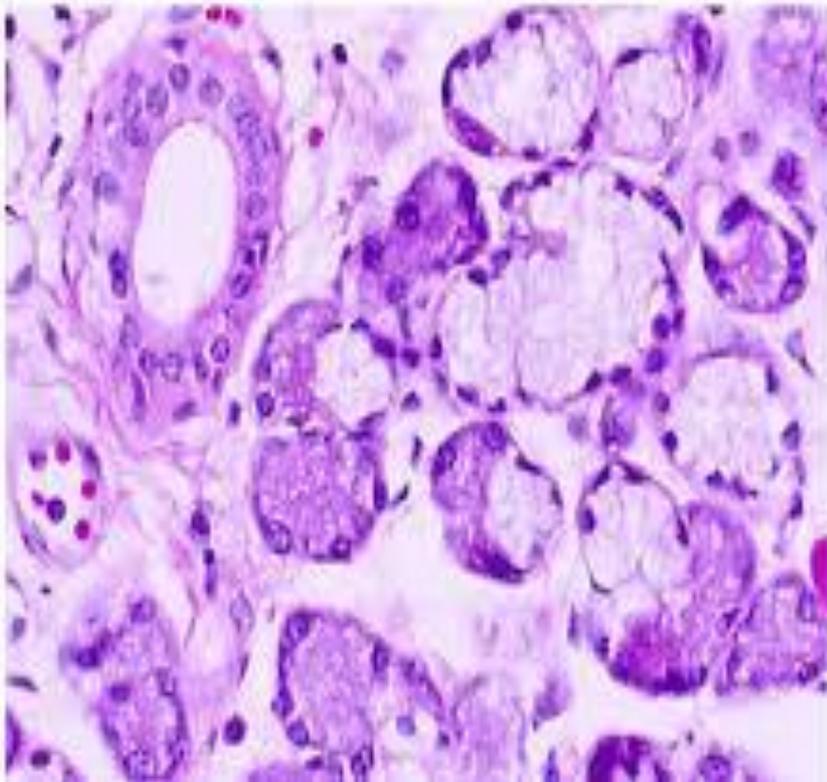


**Mucous glands**, which secrete a viscid glycoprotein secretion e.g. goblet cells and sublingual salivary gland.



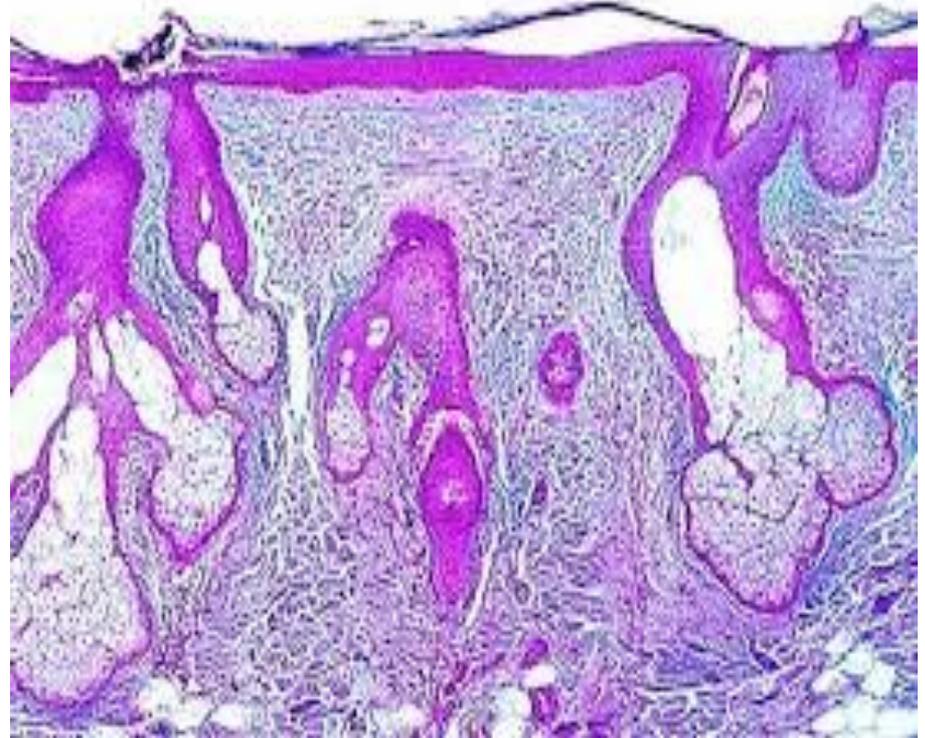
**Mixed glands**, which secrete both mucous and serous secretions e.g. submandibular salivary gland.

Submandibular Gland

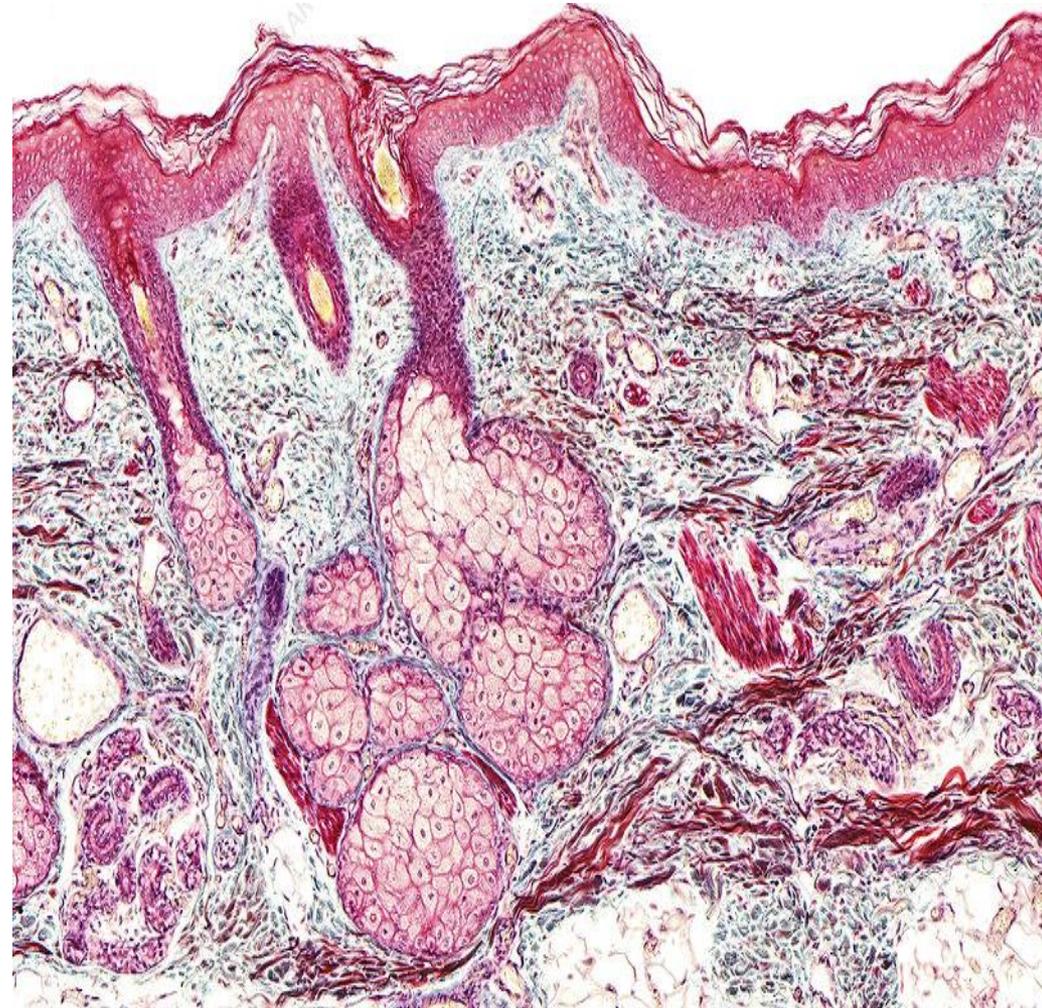
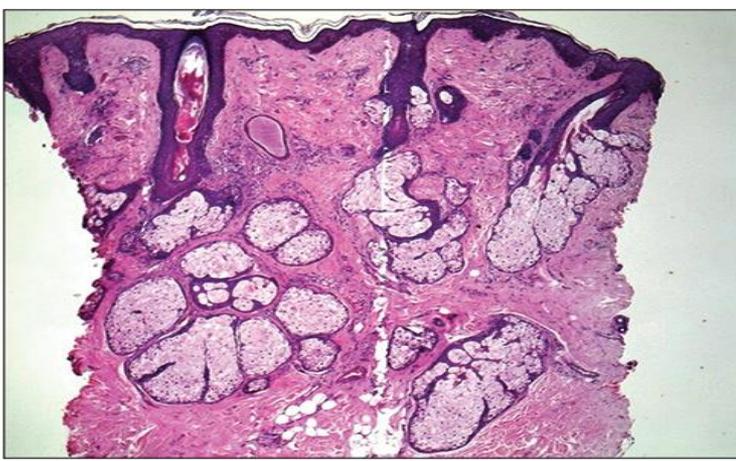


# Sebaceous gland

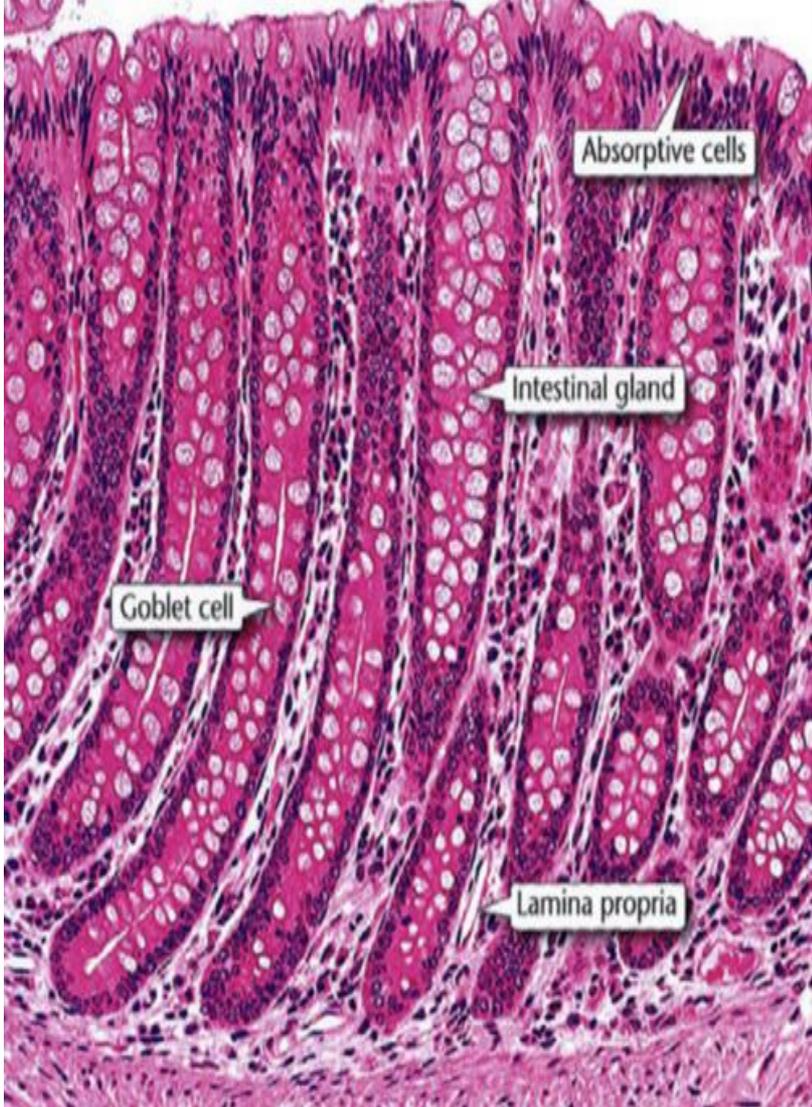
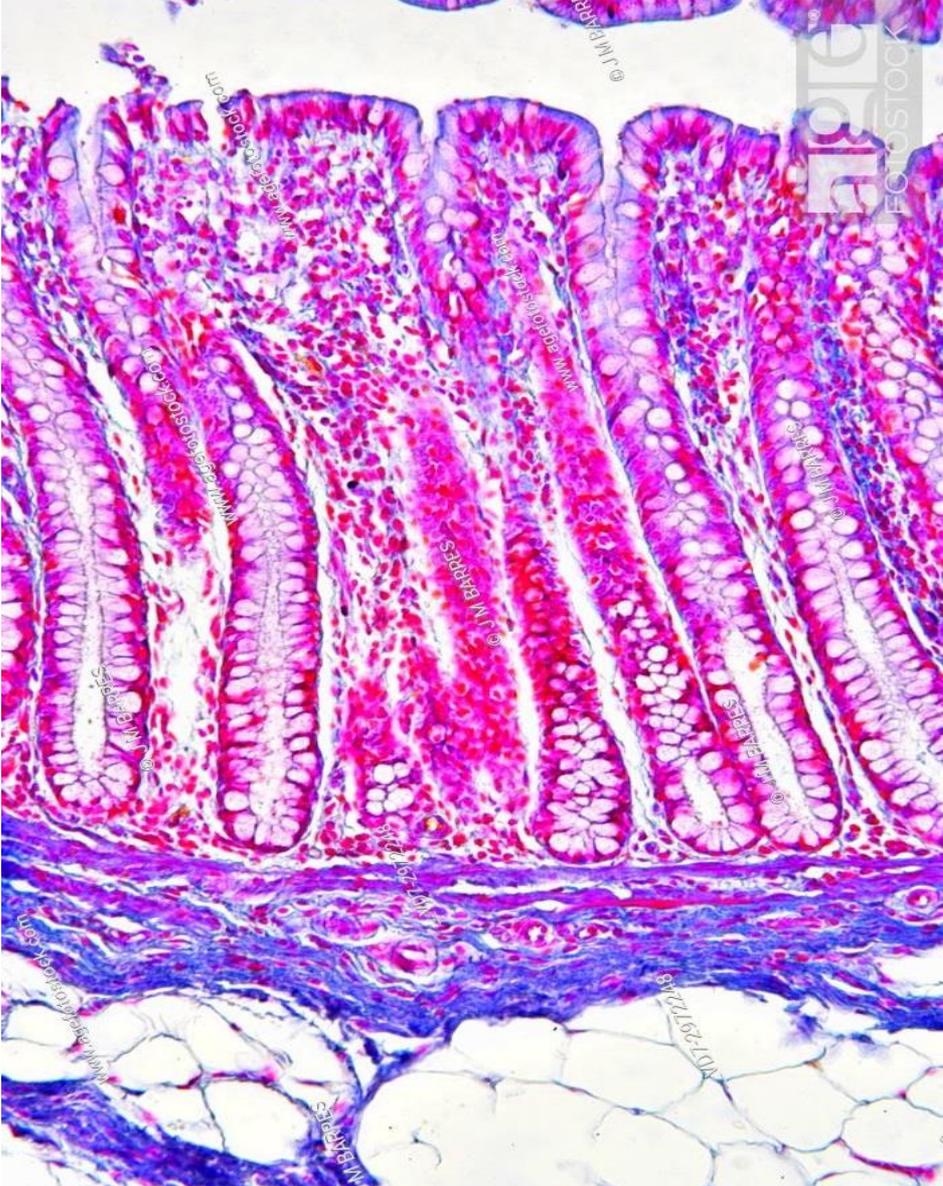
- Exocrine
- Mode : Holocrine
- **Nature : (oily secretion)**
- **Shape of secretory units : Branched alveolar**
- **Site : Related to hair follicles**
- **Activity of the gland increase at the age of puberty**
- **Obstruction of the duct by thick secretion & keratin**  **Acne**



# Sebaceous gland



# Tubular gland + goblet cell

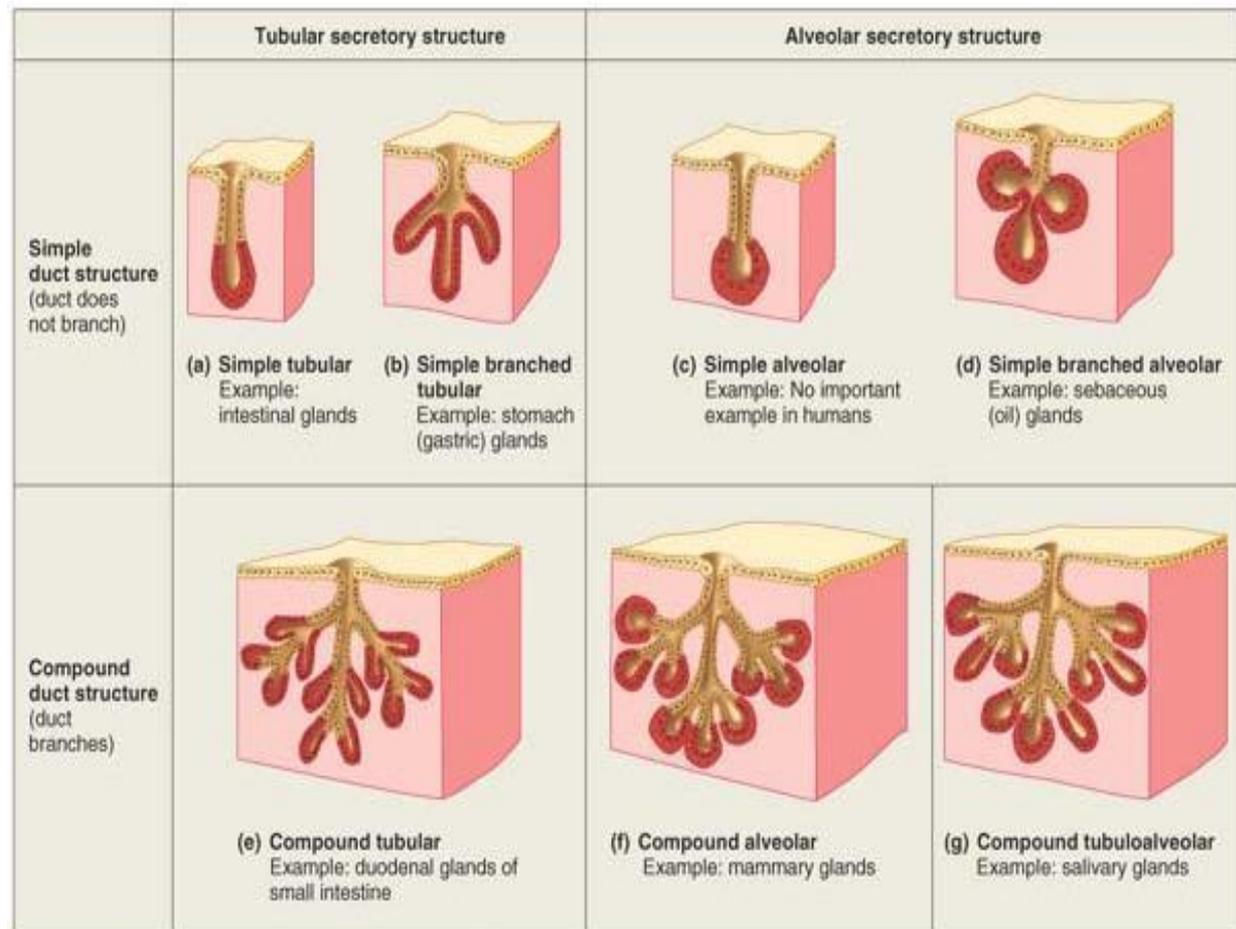


## 6- According to the branching of the ducts and branching of the secretory portion:

exocrine glands could be

### **Classified into:**

- **Simple glands**, which have only one unbranched duct and one secretory unit.
- **Simple branched glands**, which have one unbranched duct and branched secretory units.
- **Compound glands**, which have branched duct system as well as branched secretory units.

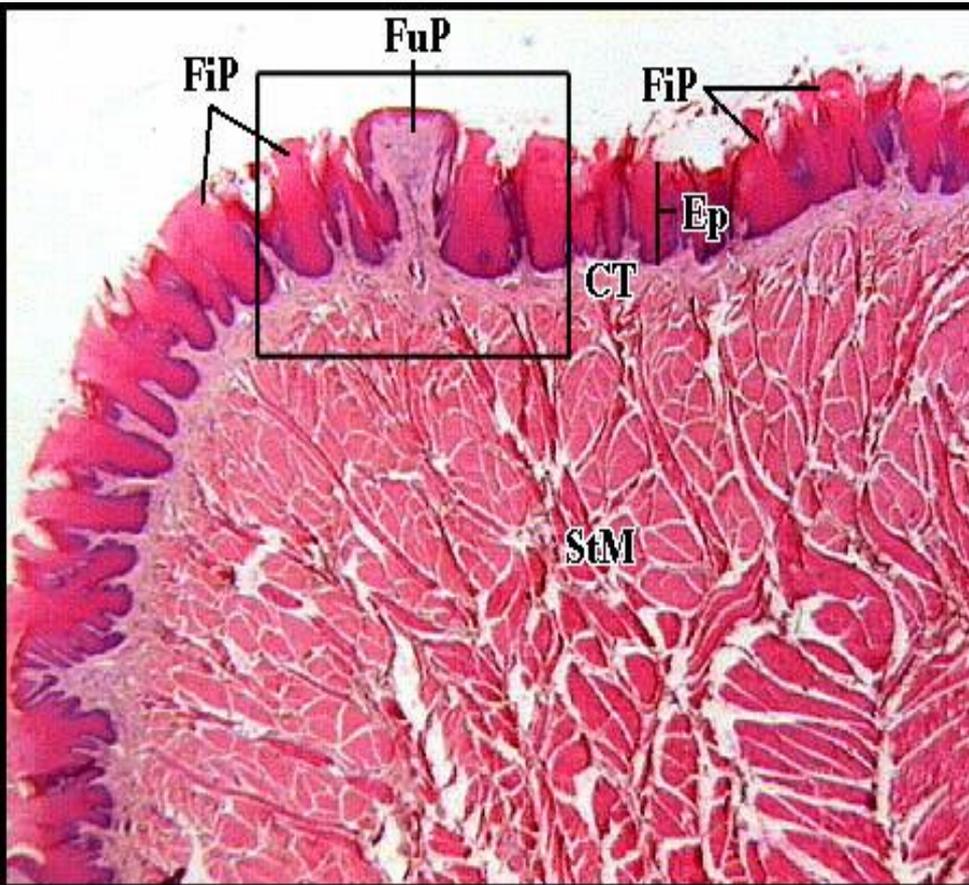


Key:  = Surface epithelium  = Duct  = Secretory epithelium

# Special types of epithelium

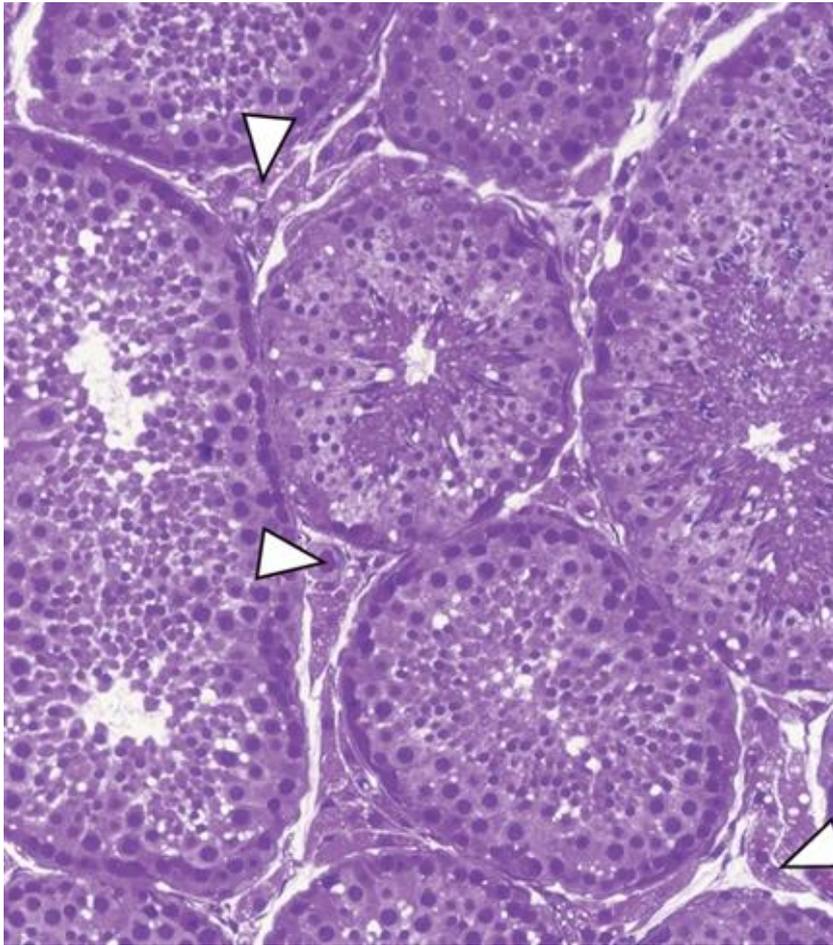
## Neuro-epithelium

### Taste bud

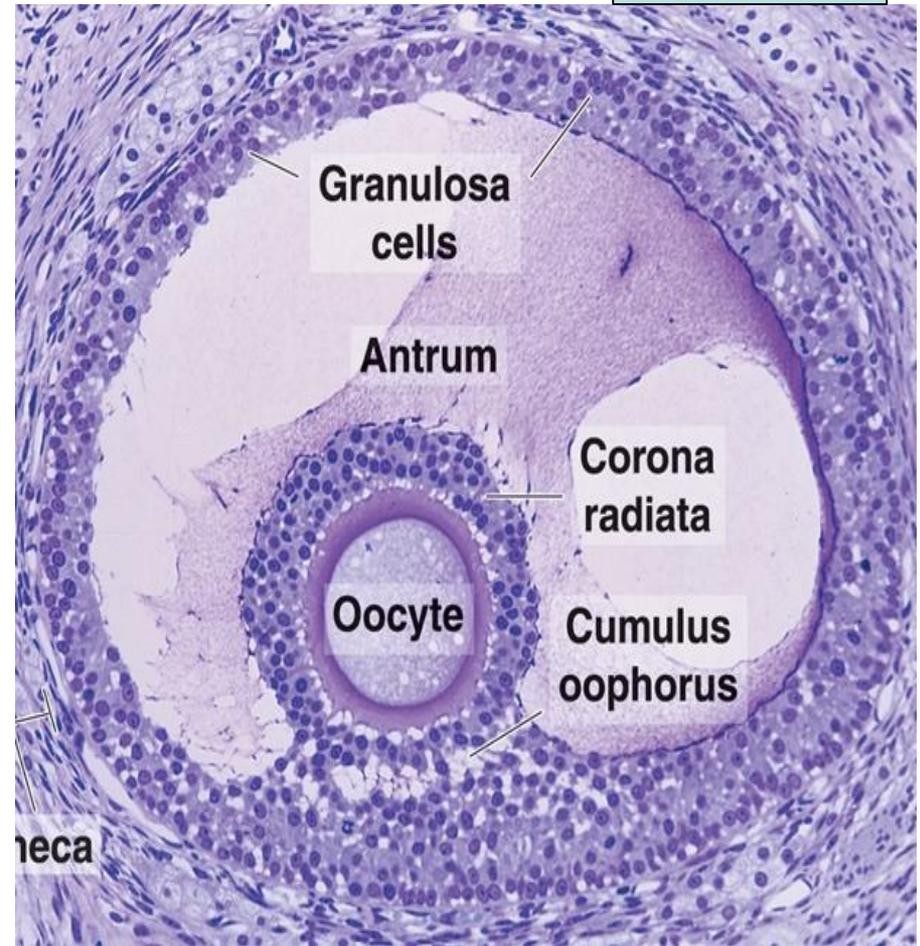


# Germinal epithelium

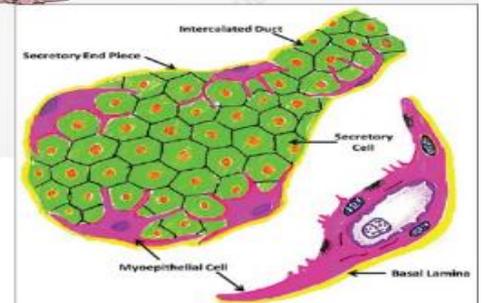
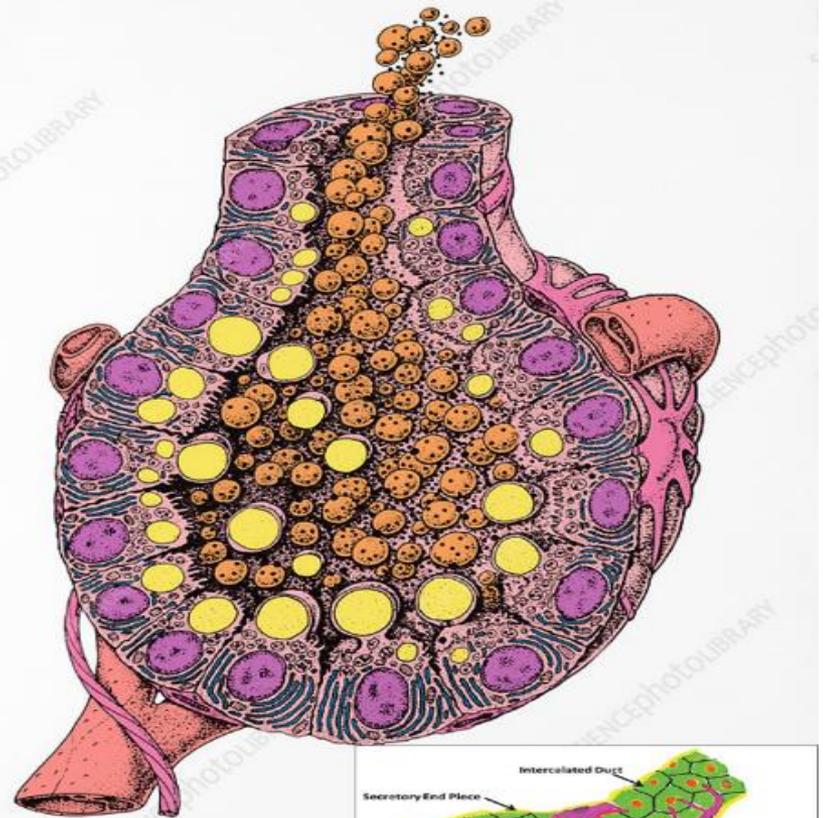
Testis



Ovary



# Myoepithelium



Thank  
You

