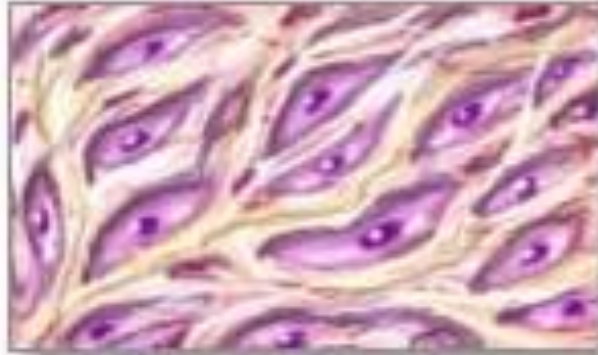


*BIOLOGY LAB.*

# ***EPITHELIAL TISSUE***

# TYPES OF BODY TISSUES



Connective tissue



Epithelial tissue



Muscle tissue

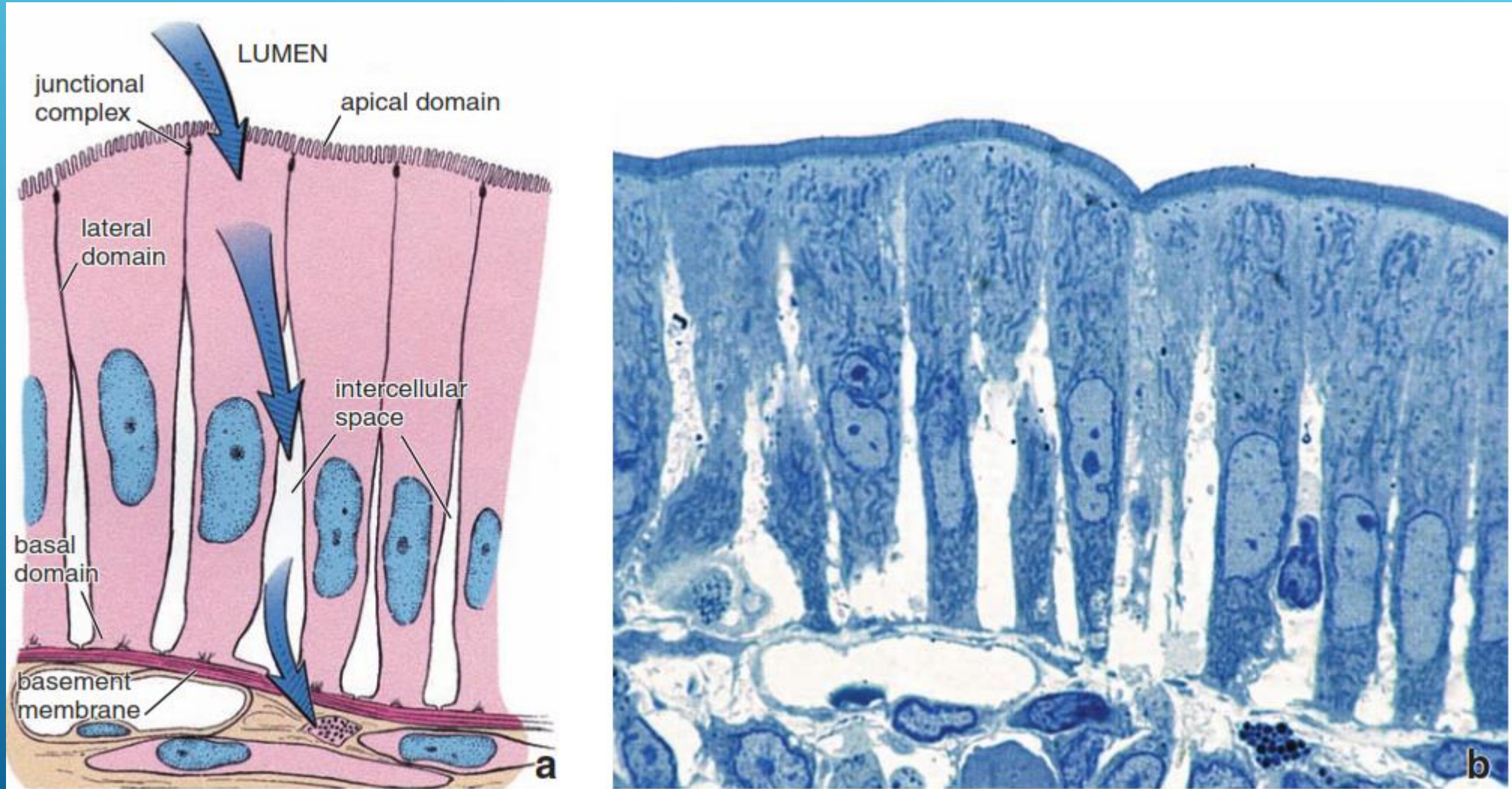


Nervous tissue

# ***EPITHELIAL TISSUES***

- ▶ **Cover body surfaces**
  - ▶ **Line body cavities**
  - ▶ **Line body tubes**
  - ▶ **Form secretory portions of glands & their ducts**
- 
- A decorative graphic consisting of several parallel white lines of varying lengths, slanted diagonally from the bottom right towards the top right, located in the lower right quadrant of the slide.

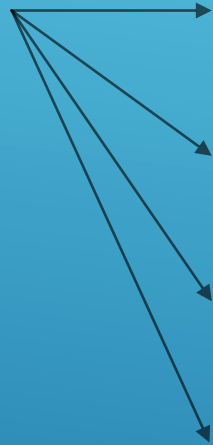
# EPITHELIAL CELL



# EPITHELIAL TISSUE

## Number of layers

▶ Simple (single layer)



Simple squamous epithelium

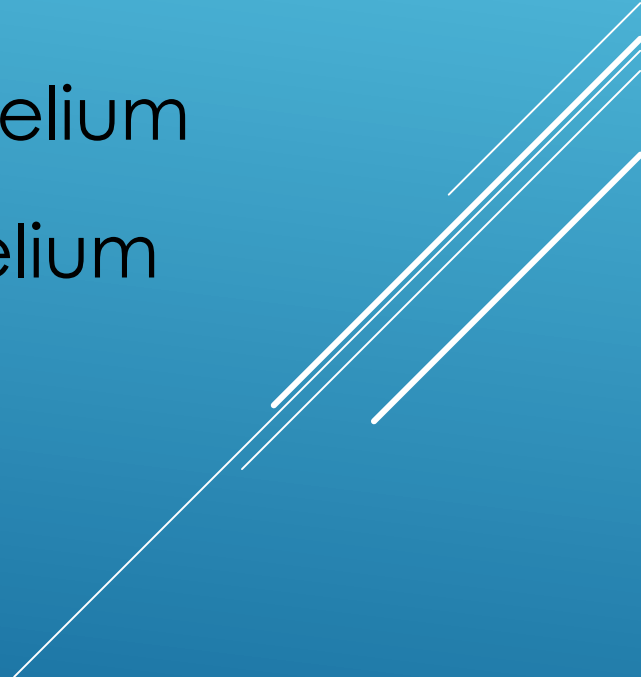
Simple cuboidal epithelium

Simple columnar epithelium

Pseudostratified epithelium

▶ Stratified (multiple layer)

## Shape of cells

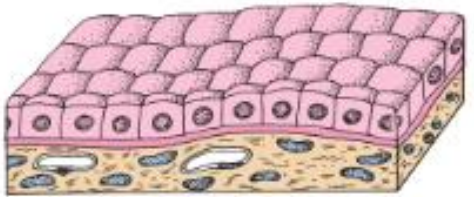


**Classification****Some Typical Locations****Major Function**

Simple squamous

Vascular system (endothelium)  
 Body cavities (mesothelium)  
 Bowman's capsule (kidney)  
 Respiratory spaces in lung

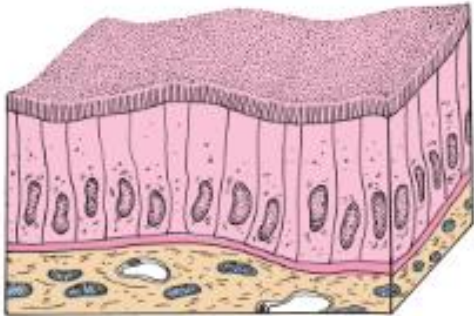
Exchange, barrier in  
 central nervous system  
 Exchange and lubrication  
 Barrier  
 Exchange



Simple cuboidal

Small ducts of exocrine glands  
 Surface of ovary  
 (germinal epithelium)  
 Kidney tubules  
 Thyroid follicles

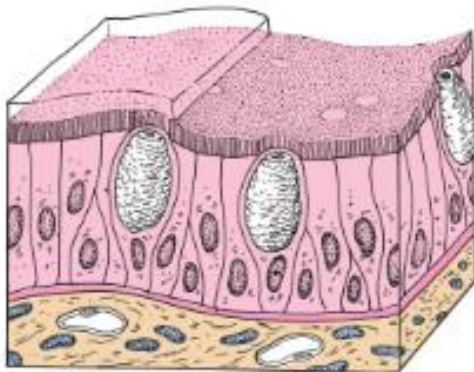
Absorption, conduit  
 Barrier  
 Absorption and secretion



Simple columnar

Small intestine and colon  
 Stomach lining and gastric  
 glands  
 Gallbladder

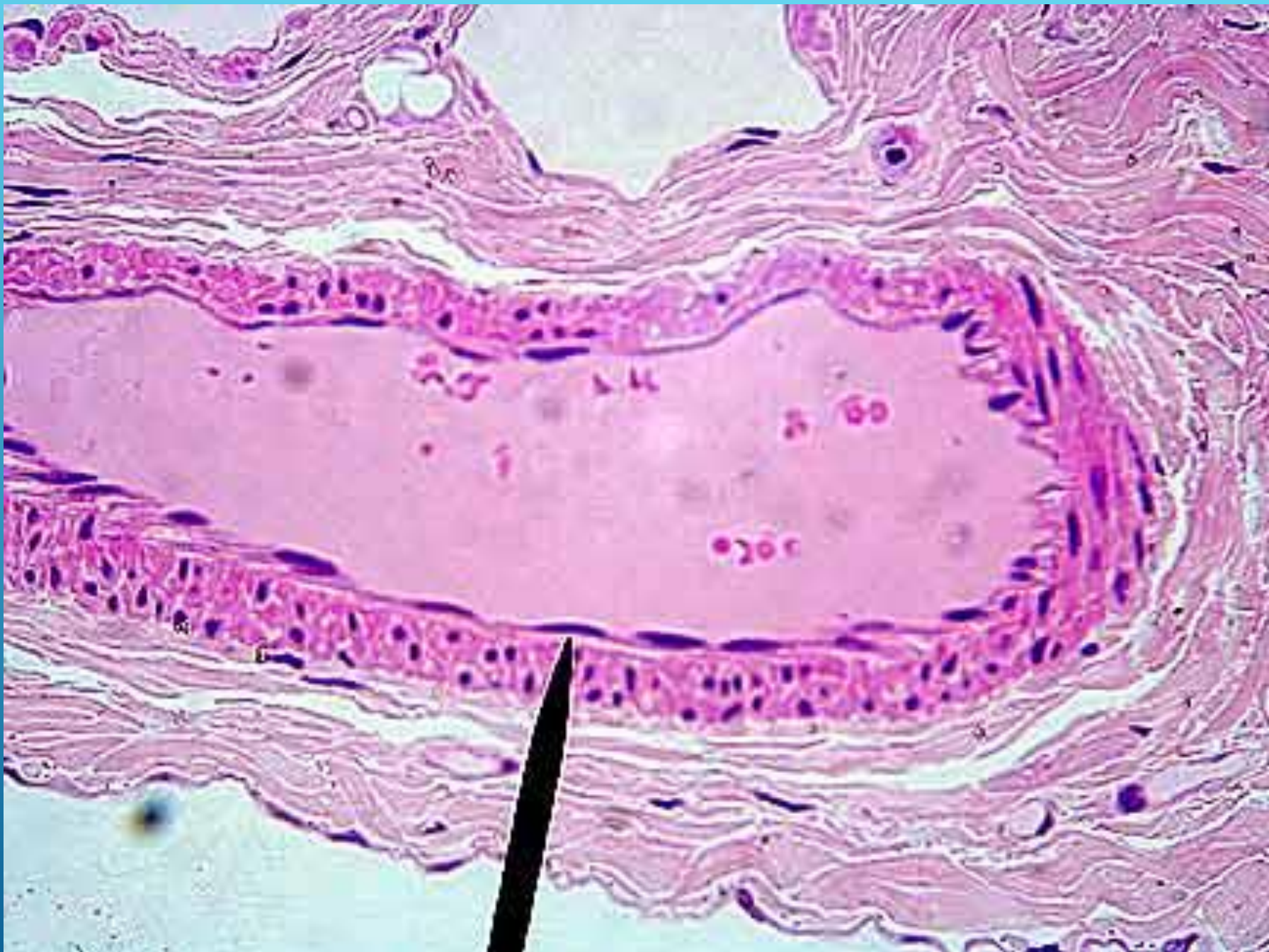
Absorption and secretion  
 Secretion  
 Absorption

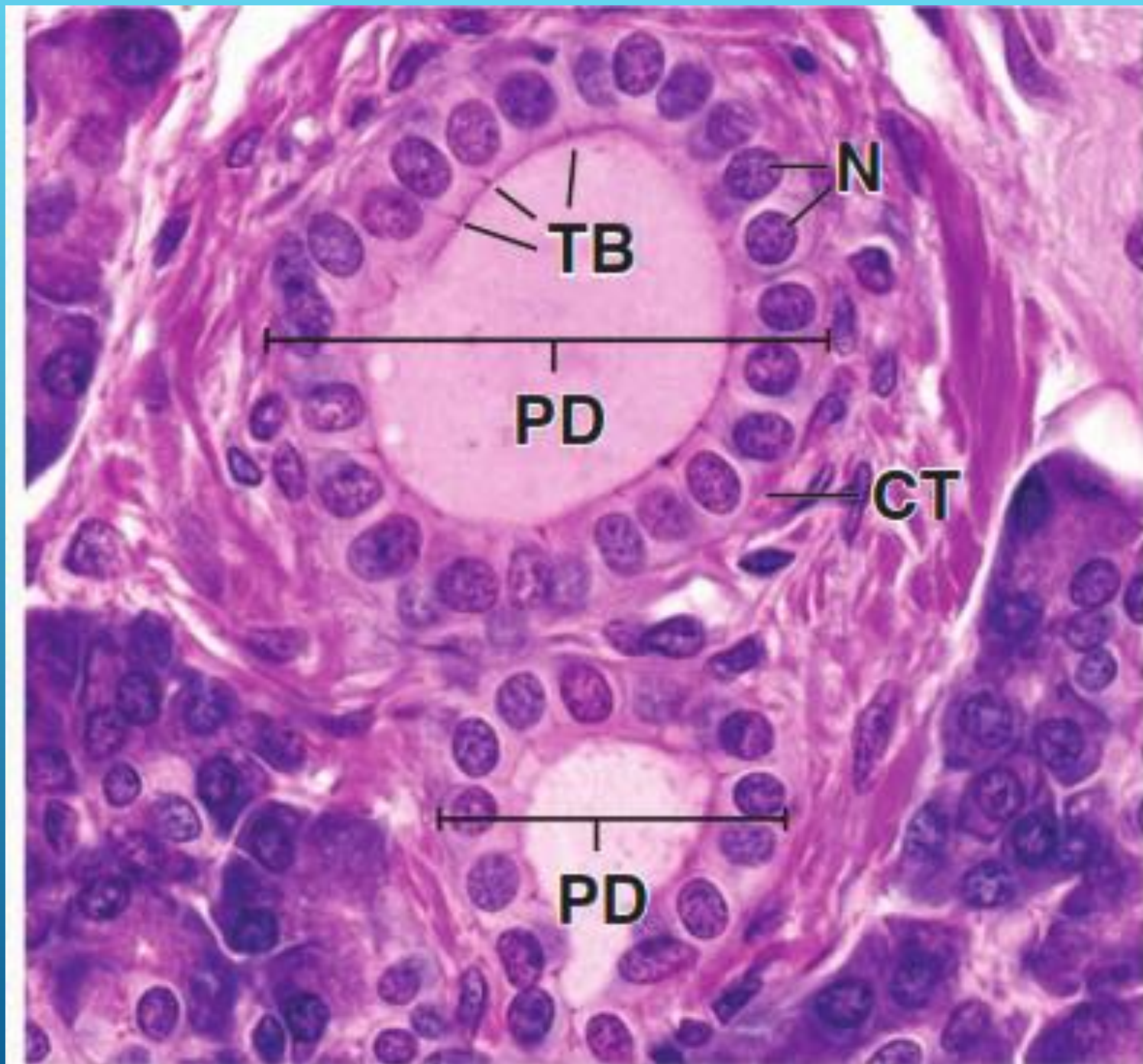


Pseudostratified

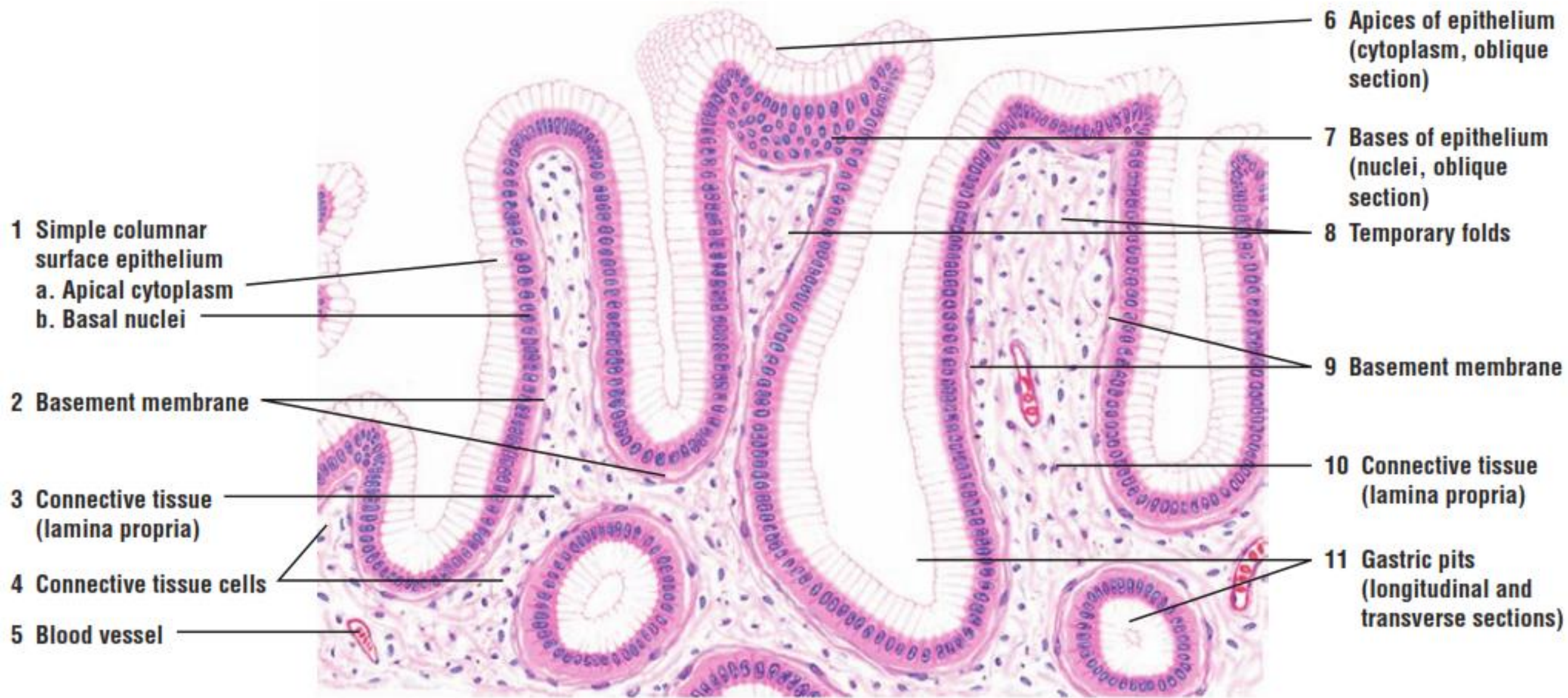
Trachea and bronchial tree  
 Ductus deferens  
 Efferent ductules of epididymis

Secretion, conduit  
 Absorption, conduit

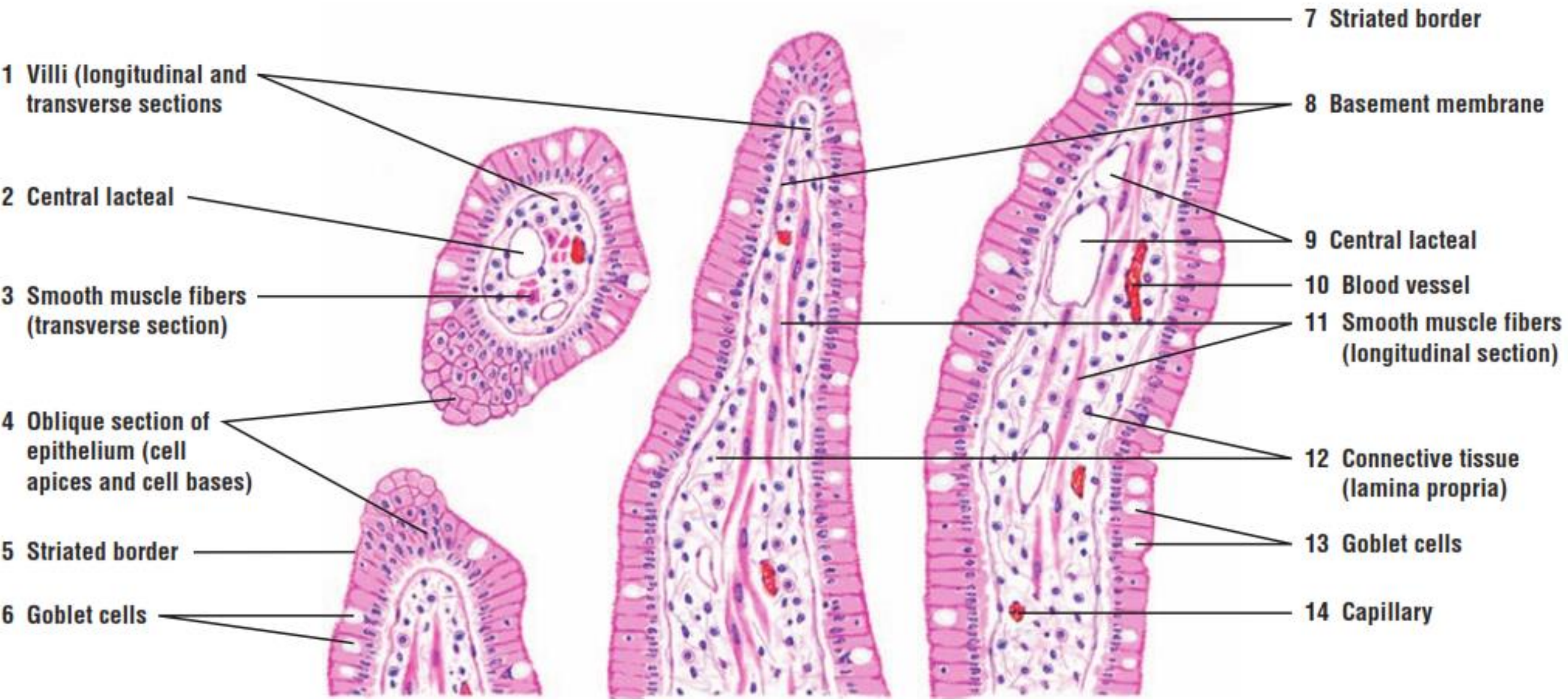




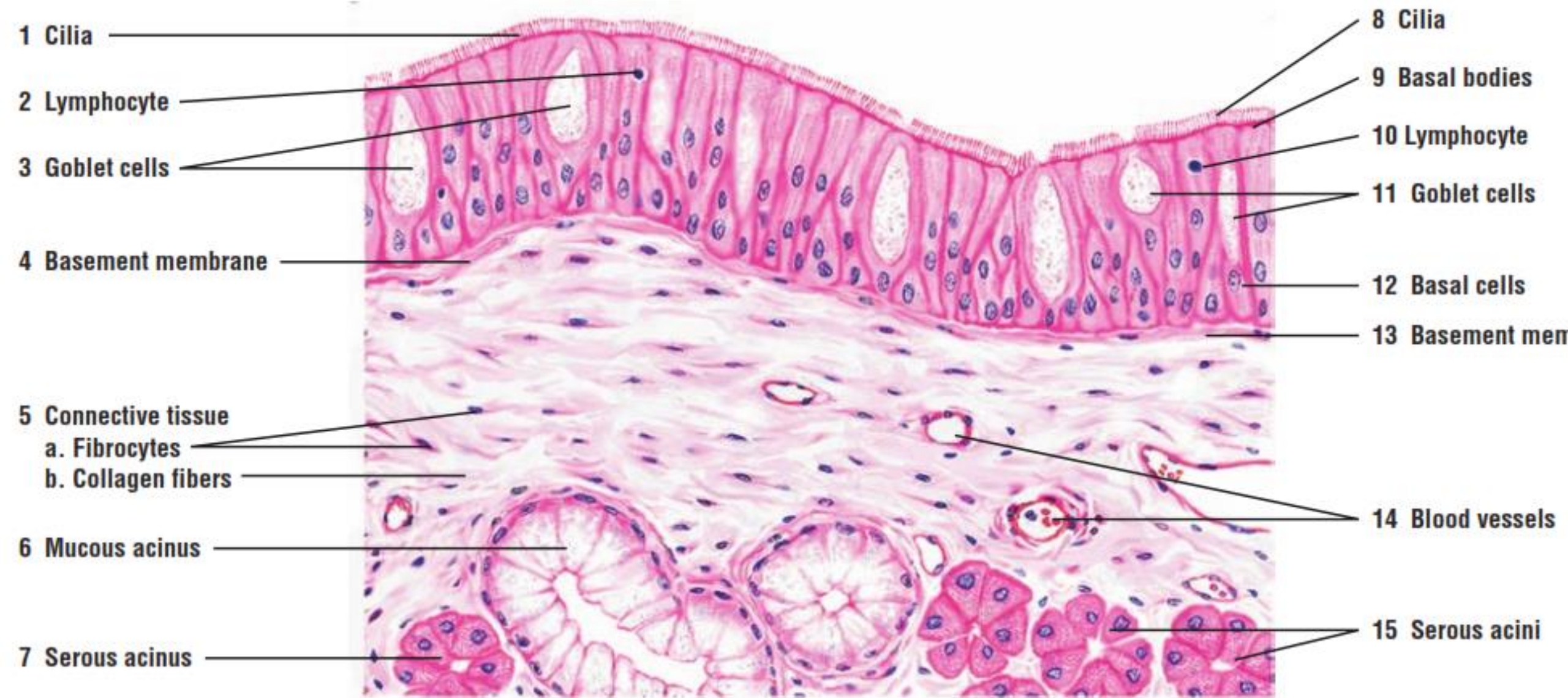




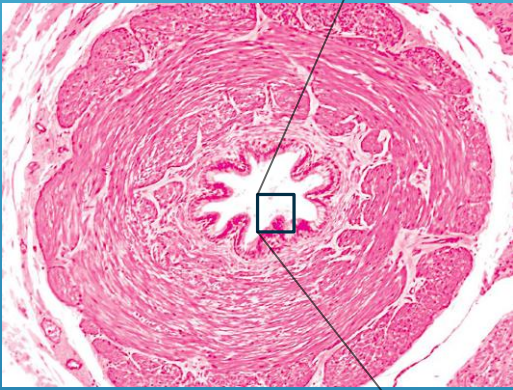
**FIGURE 2.4** ■ Simple columnar epithelium: surface of stomach. Stain: hematoxylin and eosin. Medium magnification.



**FIGURE 2.5** ■ Simple columnar epithelium on villi in small intestine: cells with striated borders (microvilli) and goblet cells. Stain: hematoxylin and eosin. Medium magnification.

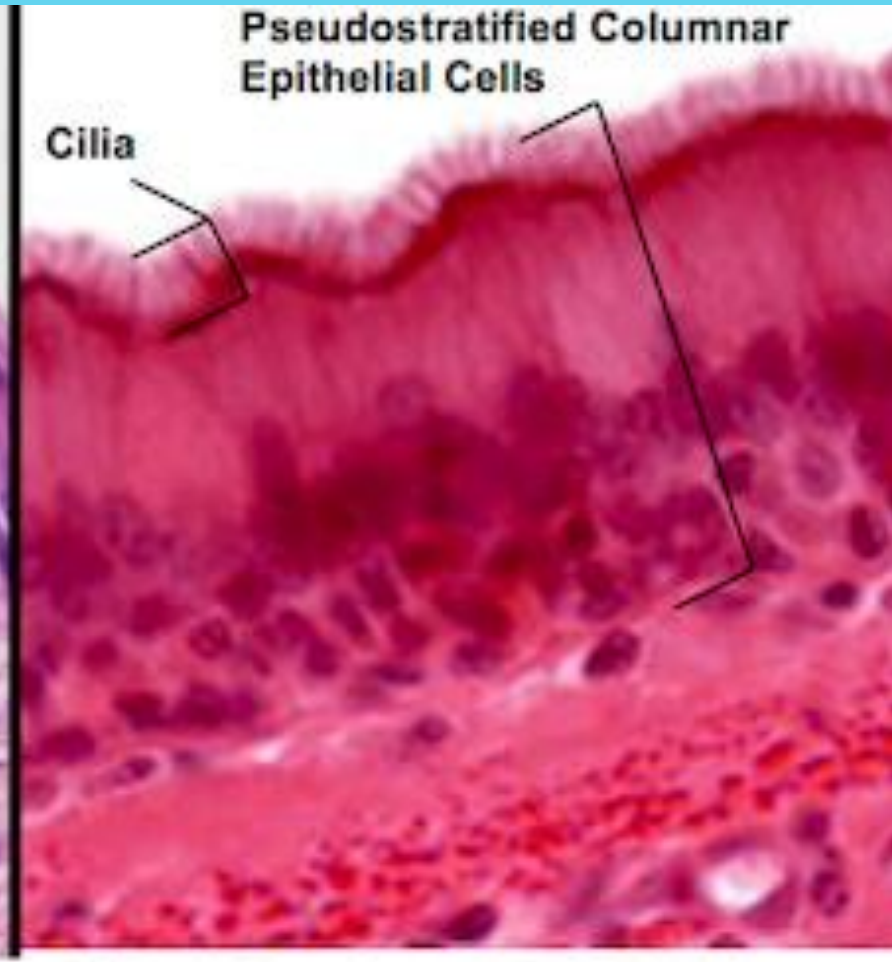


**FIGURE 2.6** ■ Pseudostratified columnar ciliated epithelium: respiratory passages—trachea. Stain: hematoxylin and eosin. High magnification.



Pseudostratified Columnar Epithelial Cells

Non-Ciliated Pseudostratified Epithelium



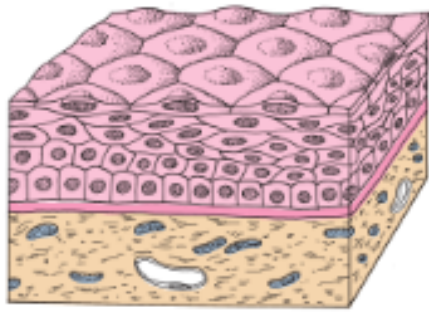
Pseudostratified Columnar Epithelial Cells

Cilia

Ciliated Pseudostratified Epithelium

Vas deferens

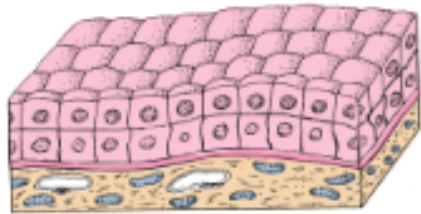
Trachea & upper respiratory



Stratified squamous

Epidermis  
Oral cavity and esophagus  
Vagina

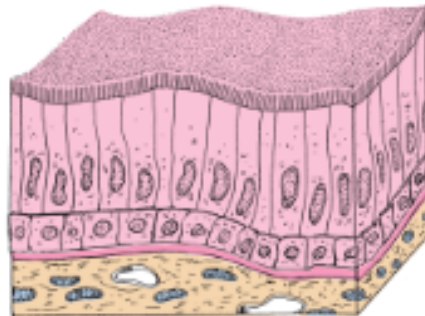
} Barrier, protection



Stratified cuboidal

Sweat gland ducts  
Large ducts of exocrine glands  
Anorectal junction

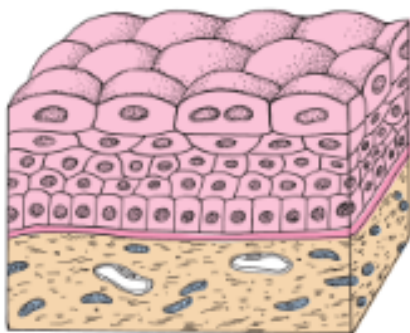
} Barrier, conduit



Stratified columnar

Largest ducts of exocrine glands  
Anorectal junction

} Barrier, conduit



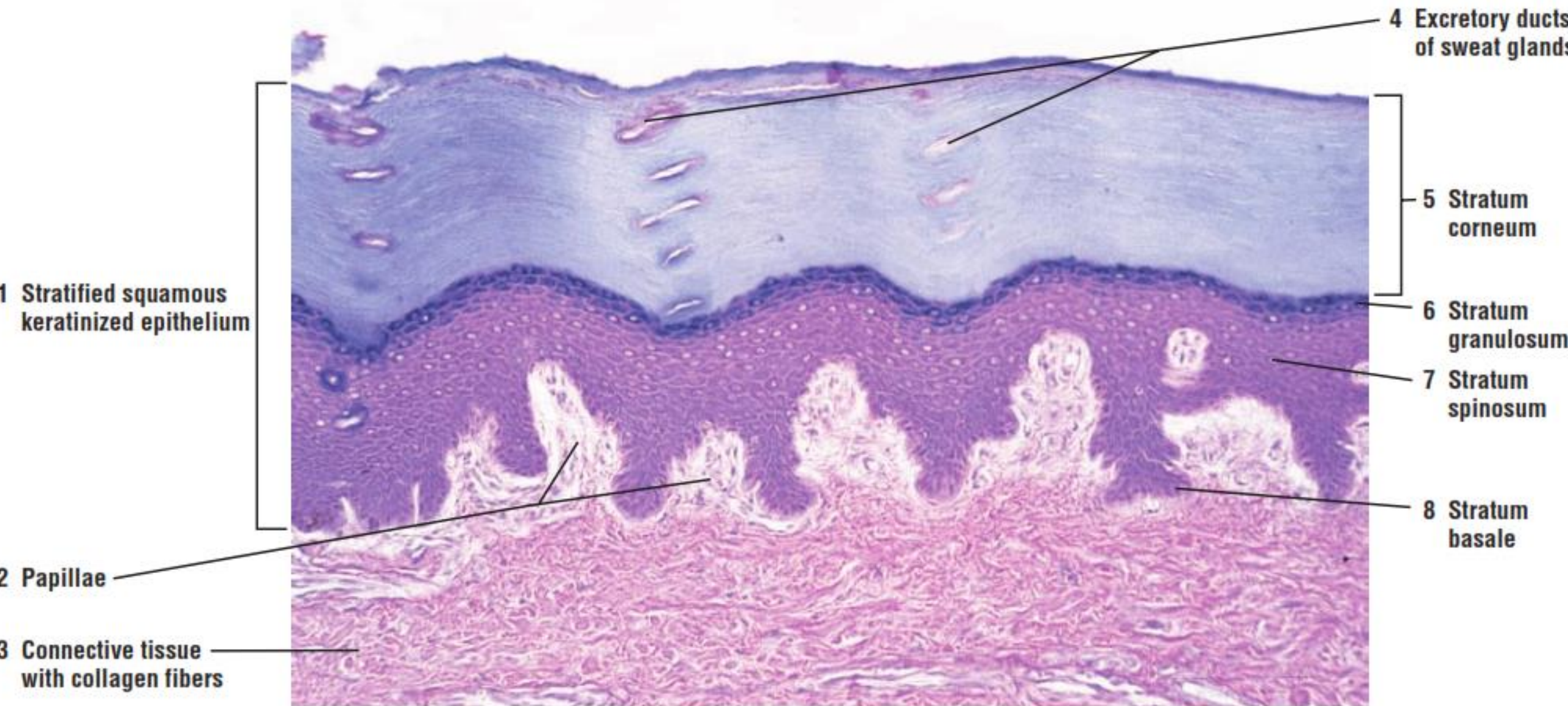
Transitional  
(urothelium)

Renal calyces  
Ureters  
Bladder  
Urethra

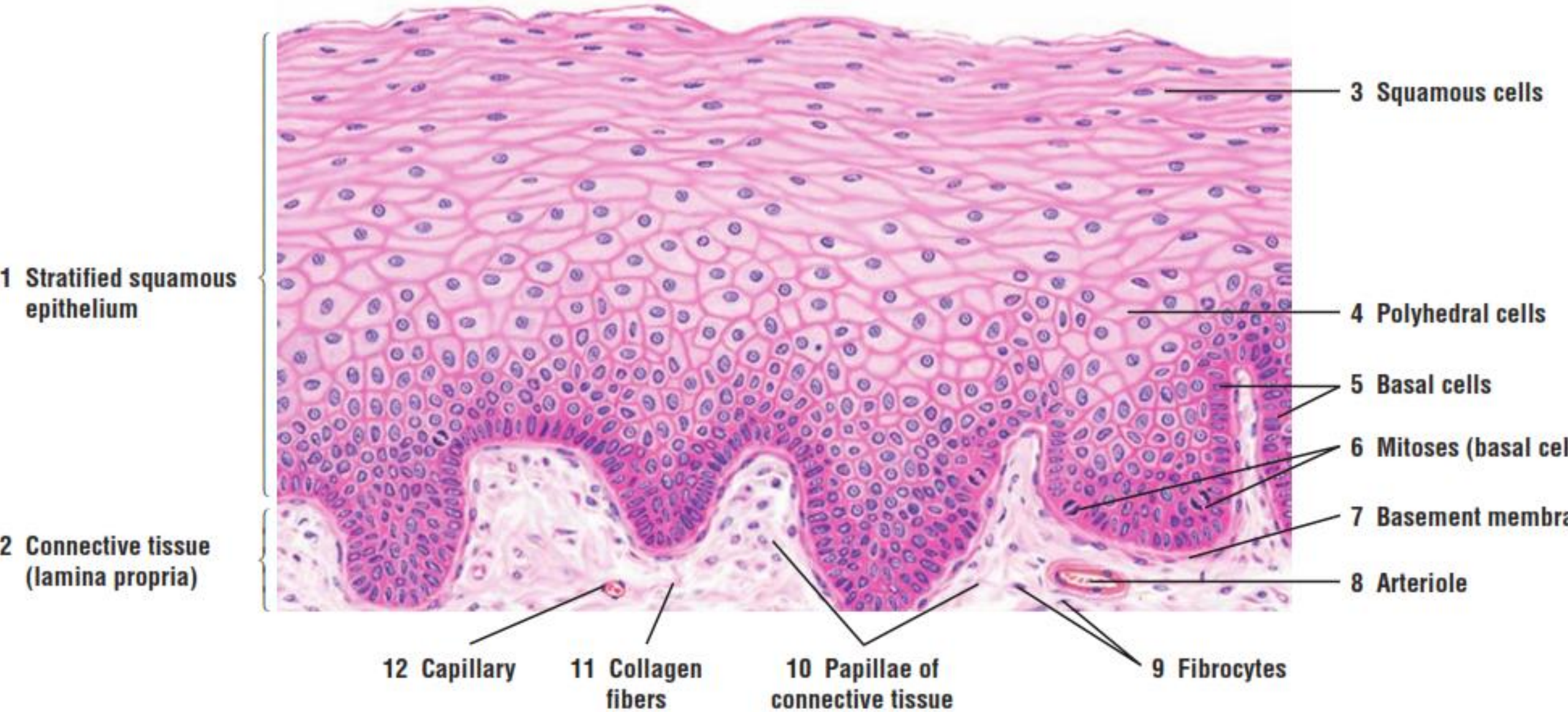
} Barrier, distensible property

# SKIN

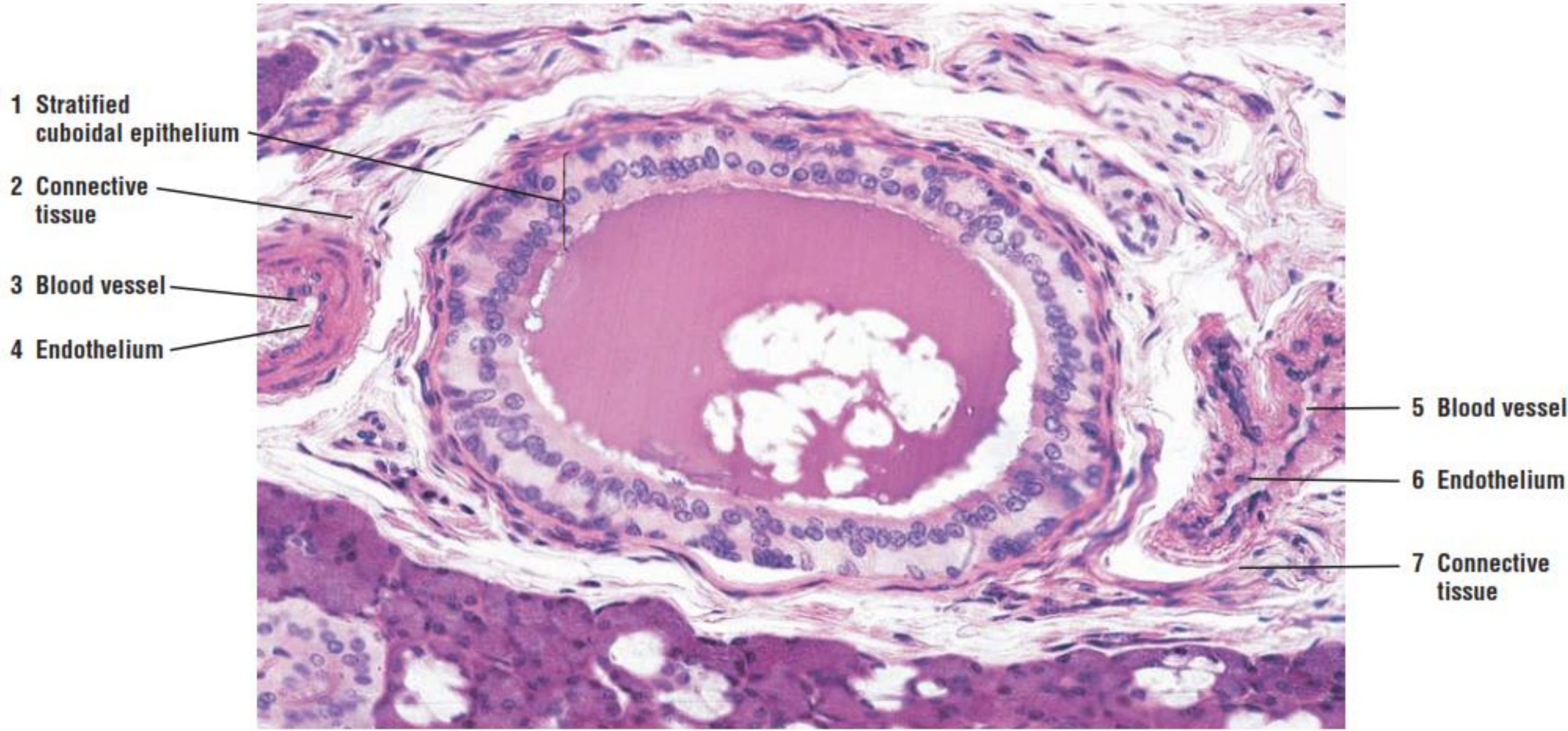
## ▶ Stratified Squamous keratinized Epith. (epidermis)



► Stratified squamous non-keratinized epith (esophageal lining).



# ▶ Stratified cuboidal epith. (sweat glands ducts)

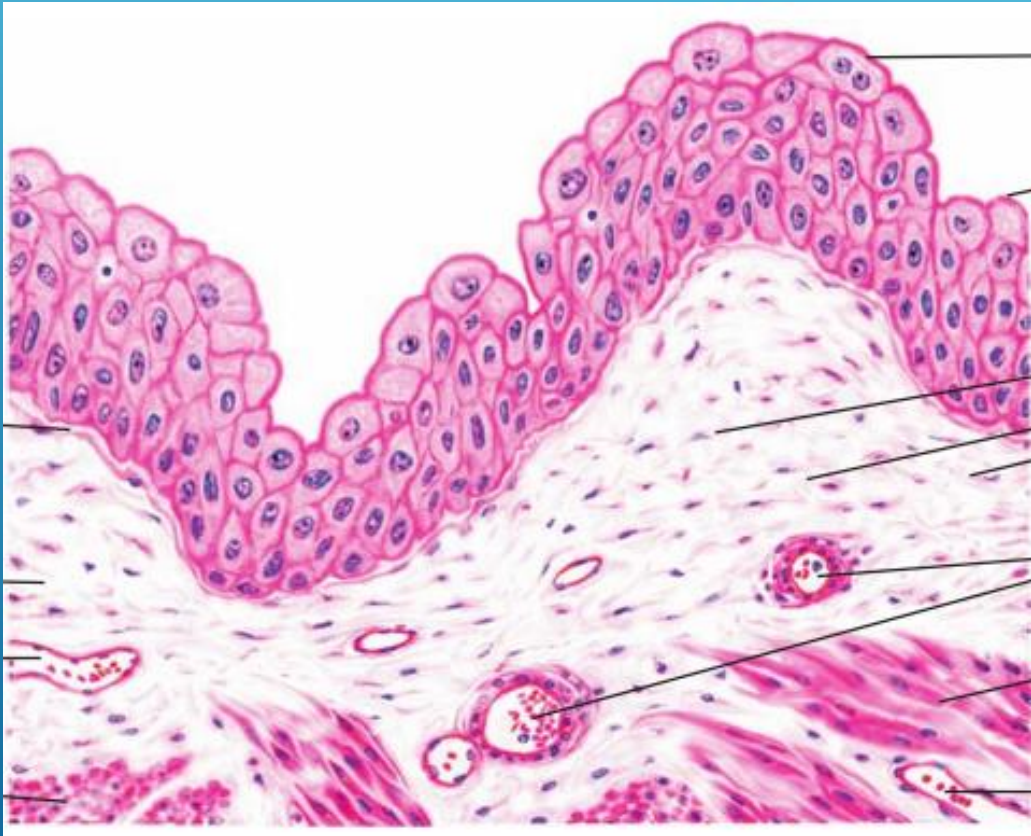




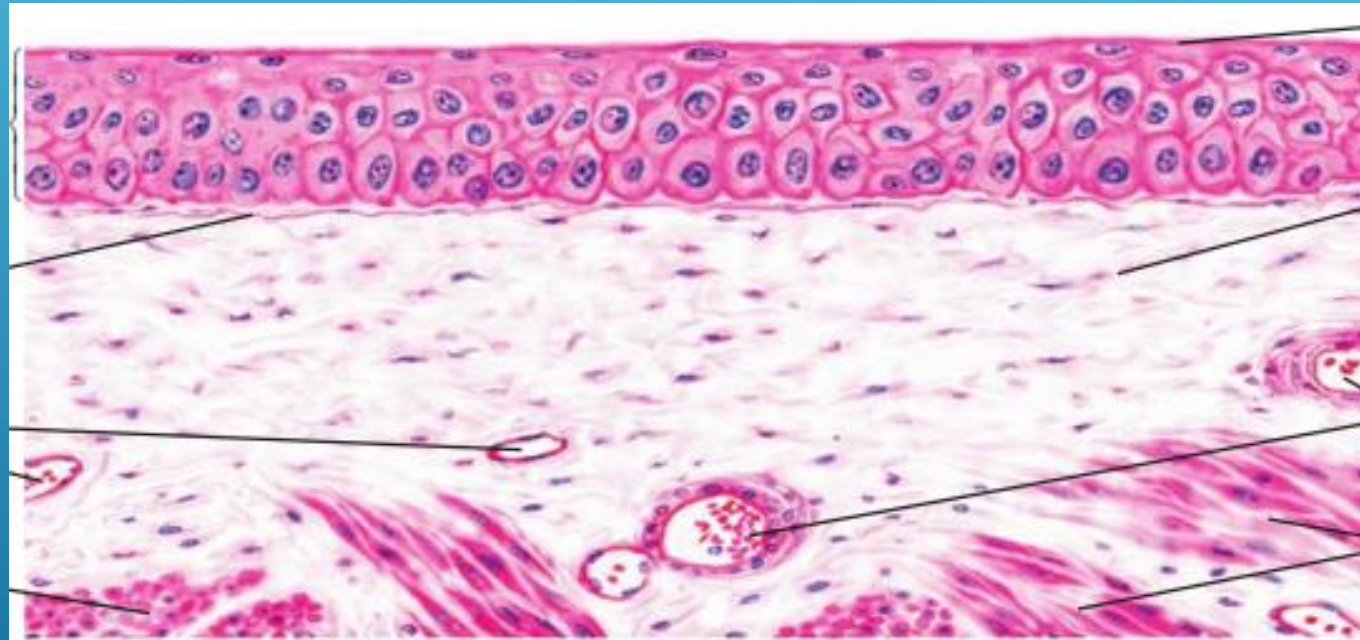
- **Stratified columnar epith. Ducts of exocrine glands (not corneal epithelium)**



- Transitional epith. (urothelium)



Unstretched



stretched

***THANK YOU***

