

# Covering (sheet) epithelia

# Epithelia

according to  
morphology

according to  
function

- covering
- trabecular
- reticular
  
- glandular
- resorption
- sensory
- alveolar
  
- ...

# Classification of covering epithelia

- according to number of cell layers
- according to morphology of superficial layer

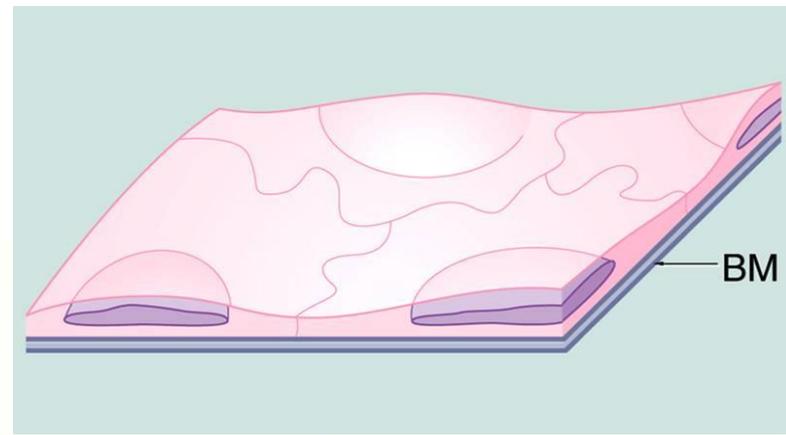
## Simple

- Simple squamous
- Simple cuboidal
- Simple columnar
- Pseudostratified columnar

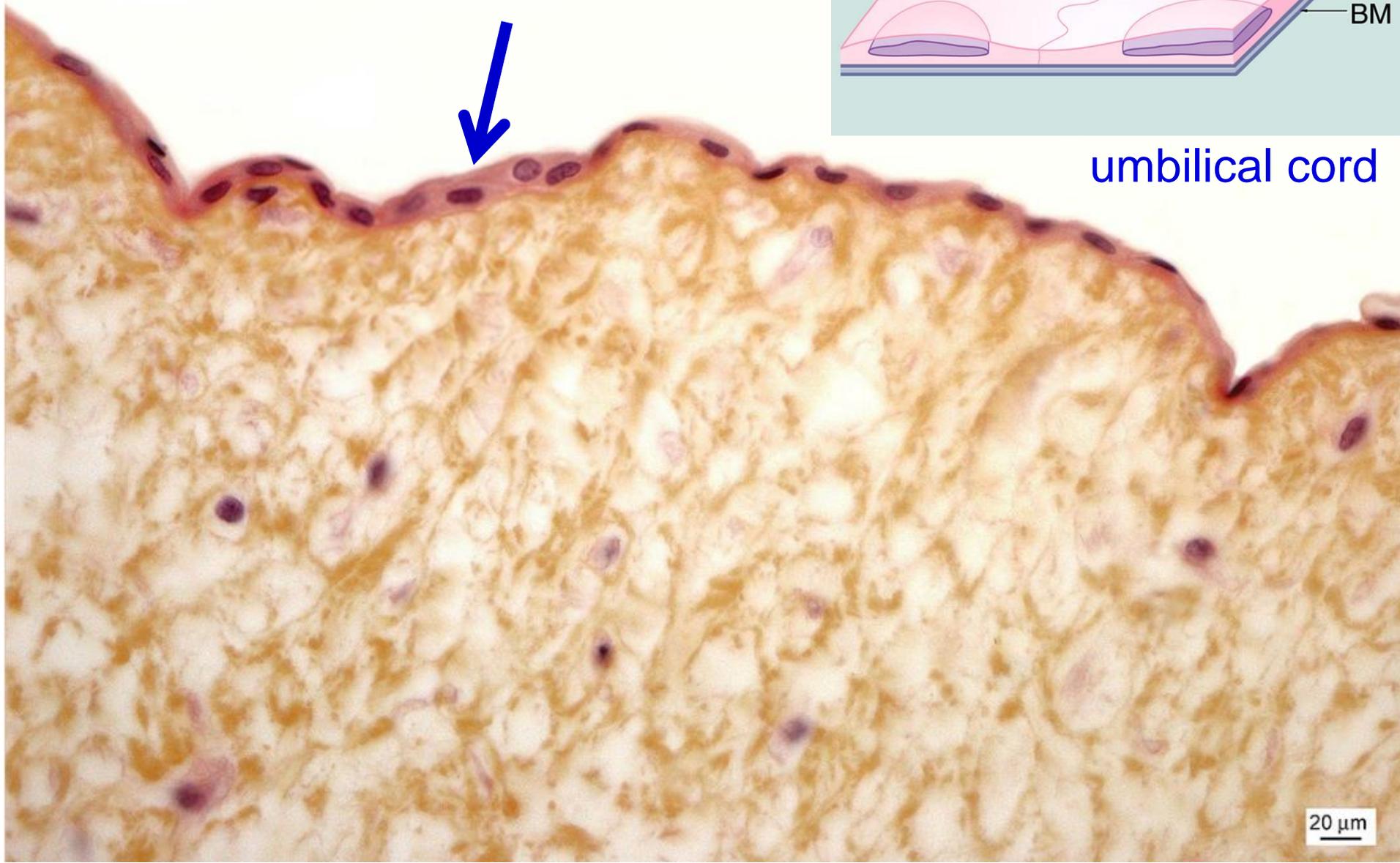
## Stratified

- Stratified squamous non-keratinized
- Stratified squamous keratinized
- Stratified columnar
- Transitional

# Simple squamous epithelium



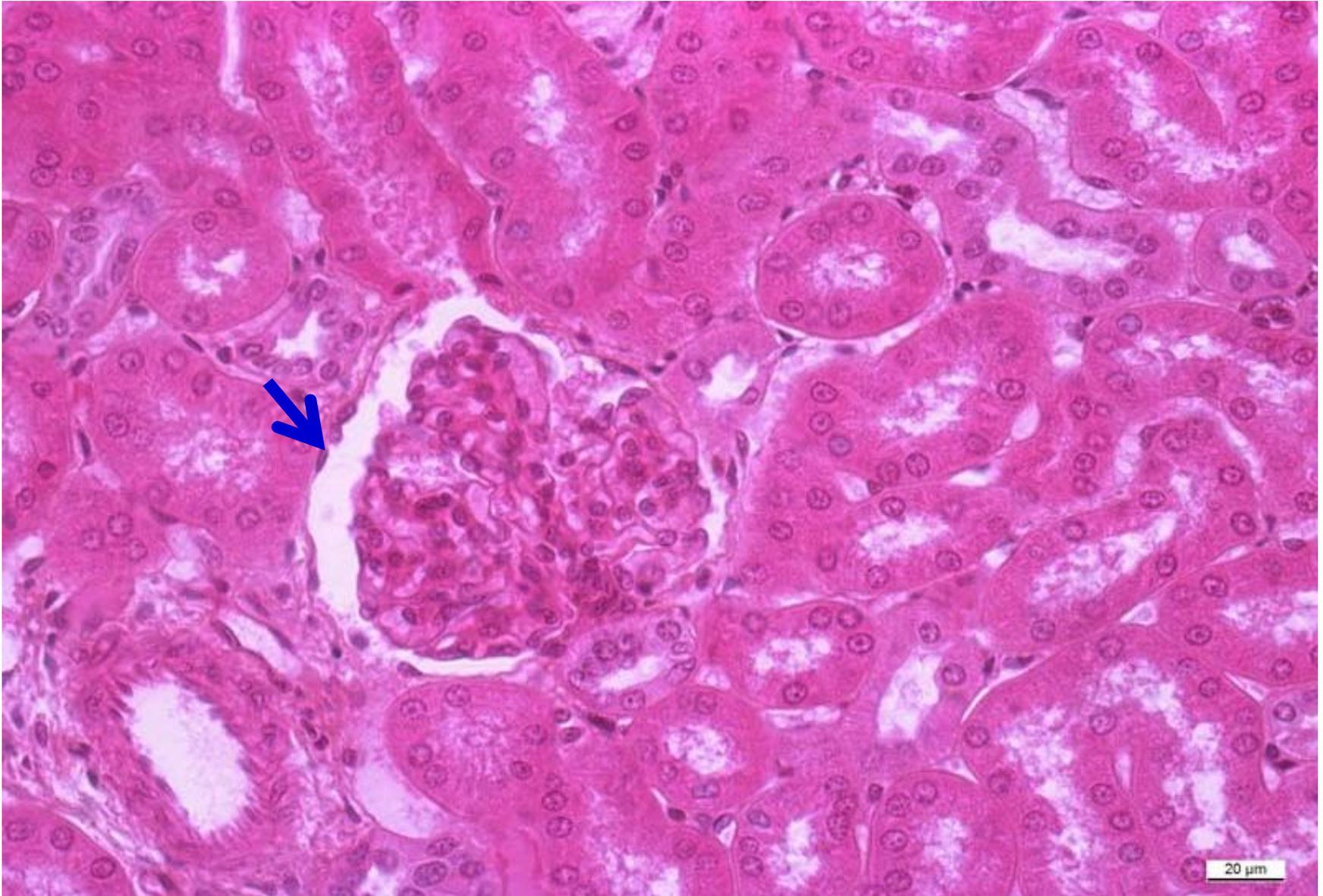
umbilical cord



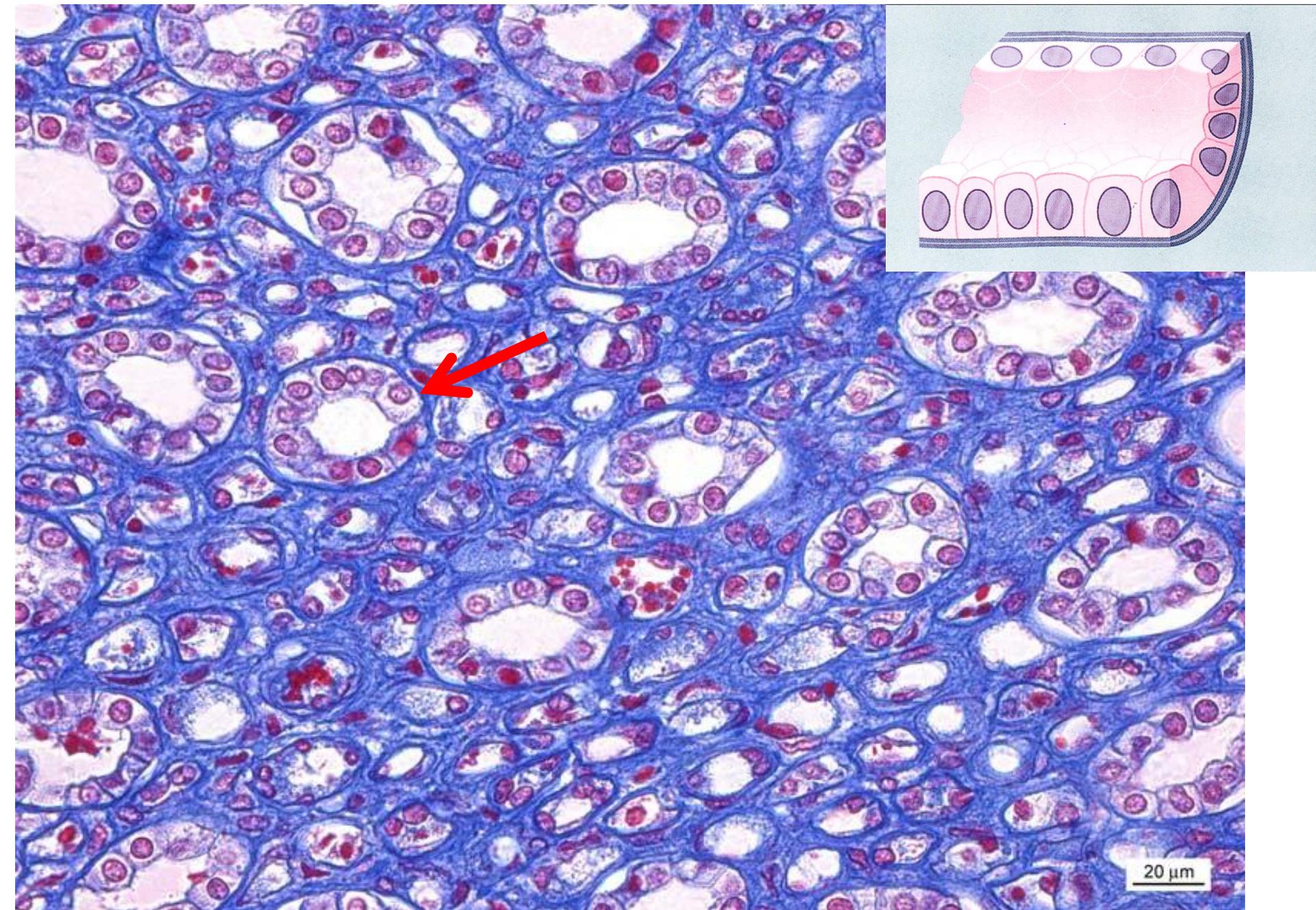
20  $\mu$ m

# Simple squamous epithelium

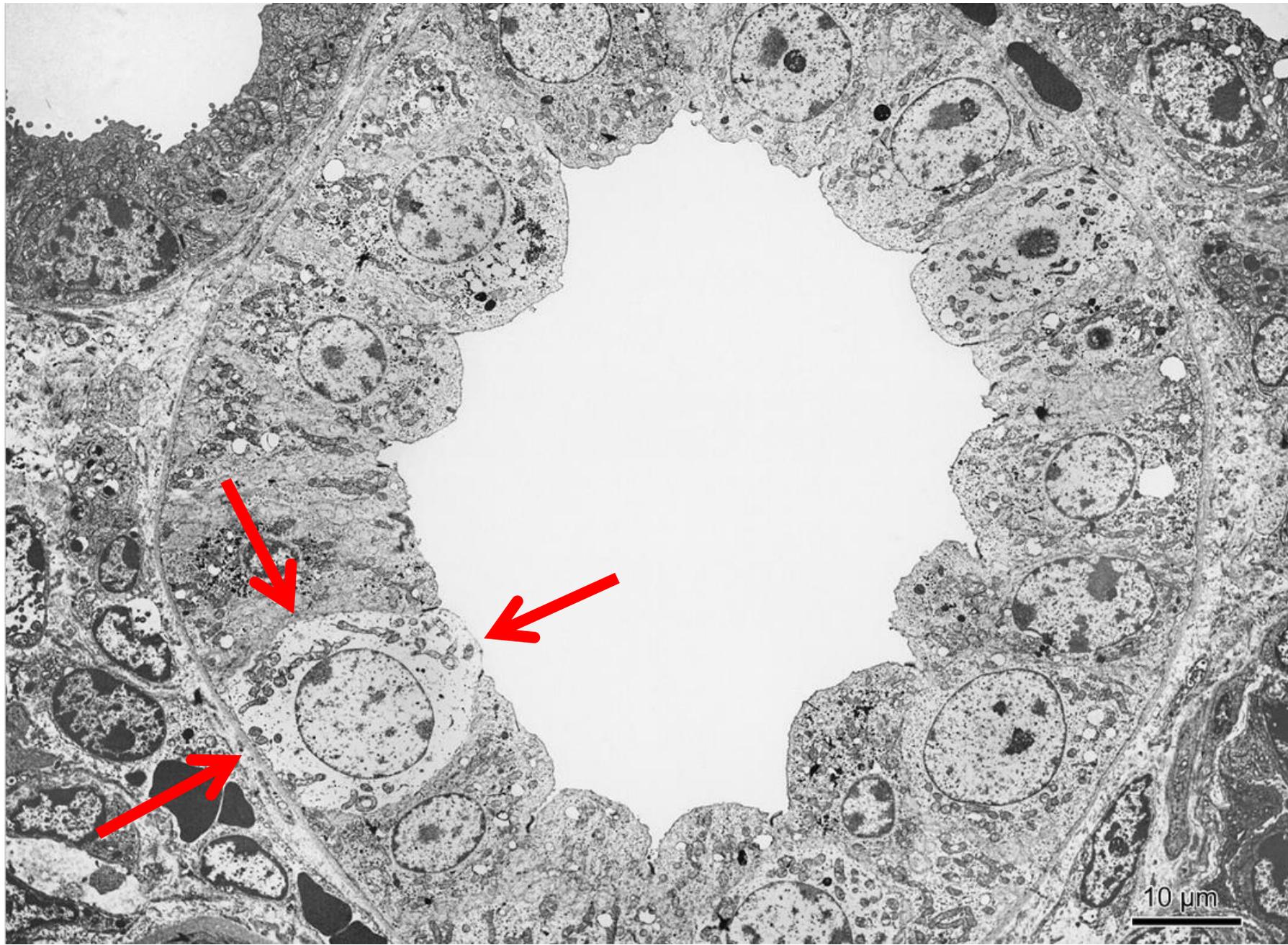
– parietal sheet of Bowman's capsule, corpusculum renis



# Simple cuboidal epithelium – loop of Henle (asc.)



# Simple cuboidal epithelium – t. renalis colligens

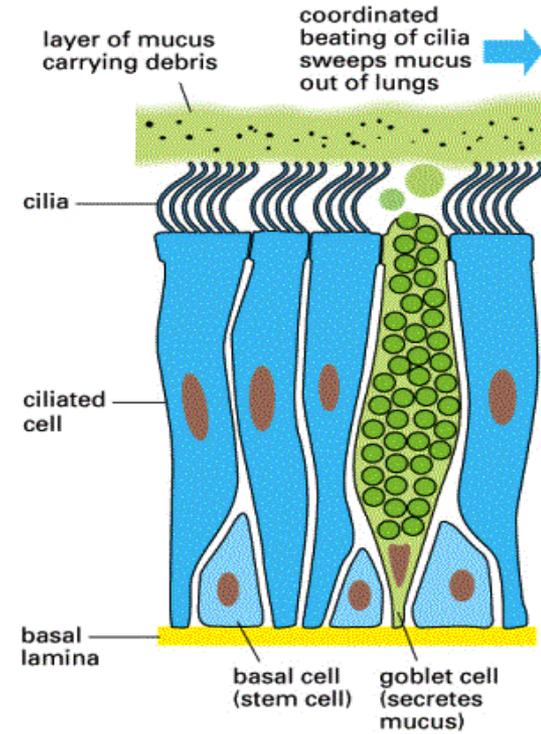


# Simple columnar epithelium – vesica fellea



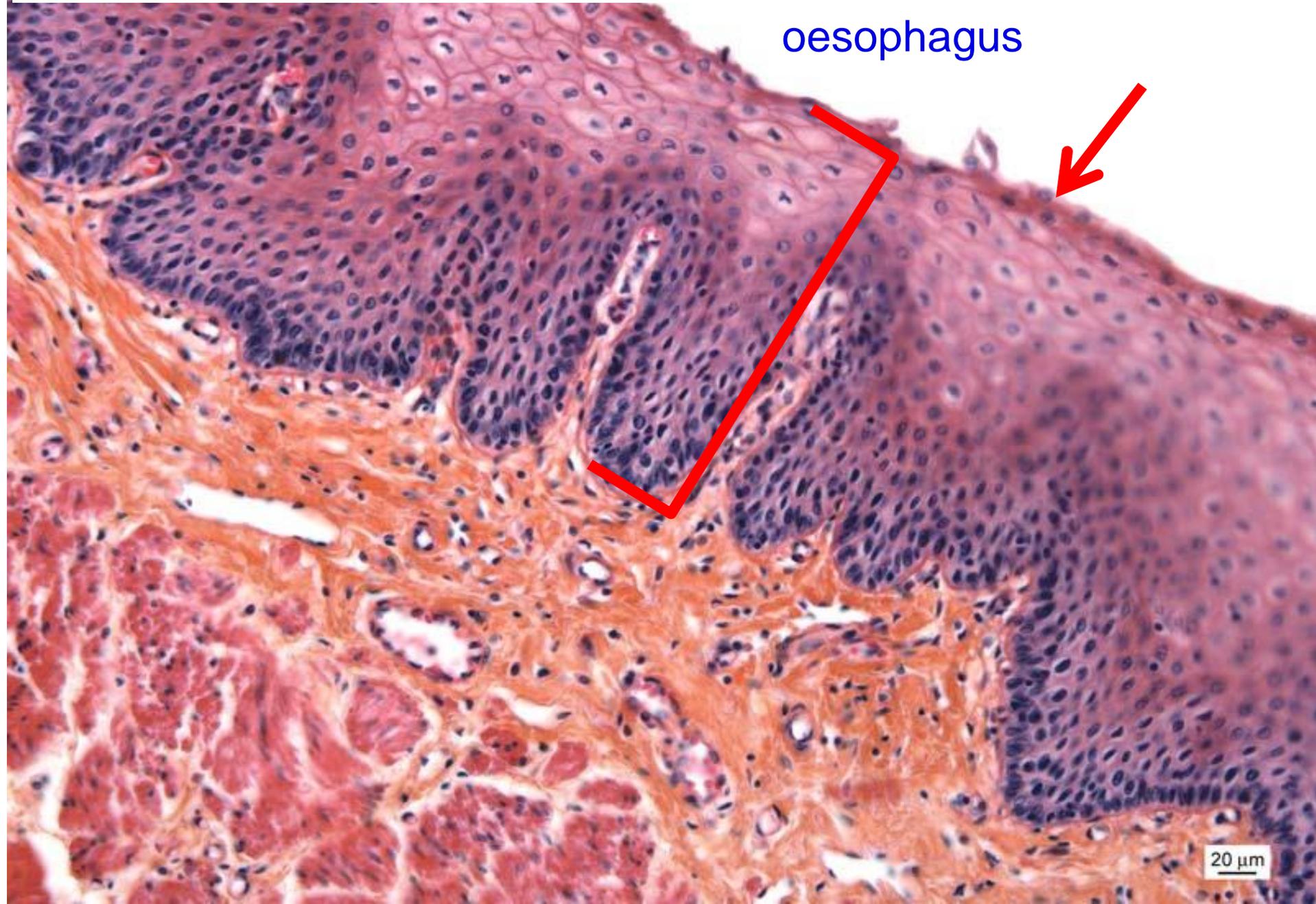
# Pseudostratified columnar epithelium (ciliated) – respiratory passages

trachea



# Stratified squamous epithelium – non-keratinized

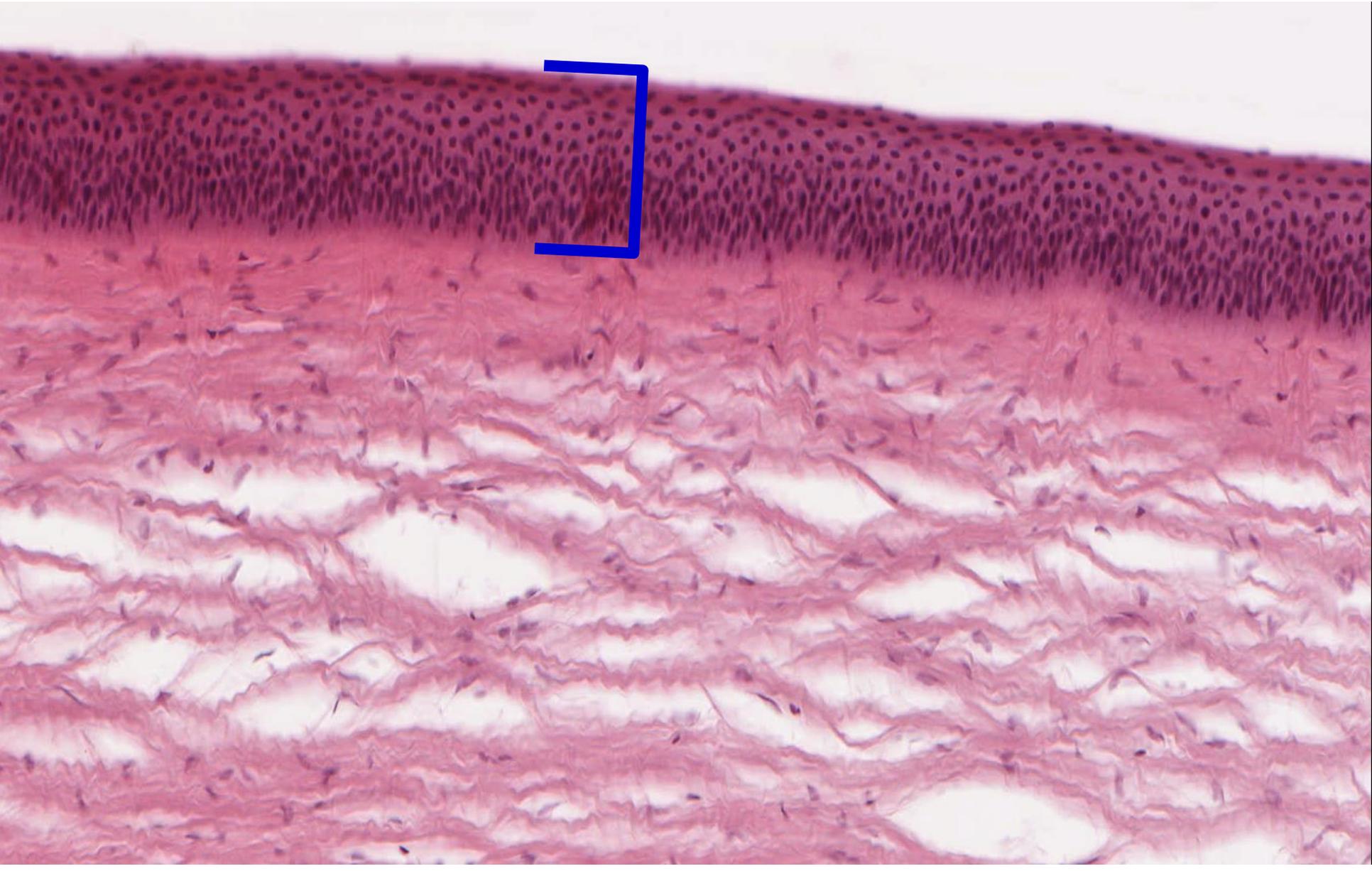
oesophagus



20 μm

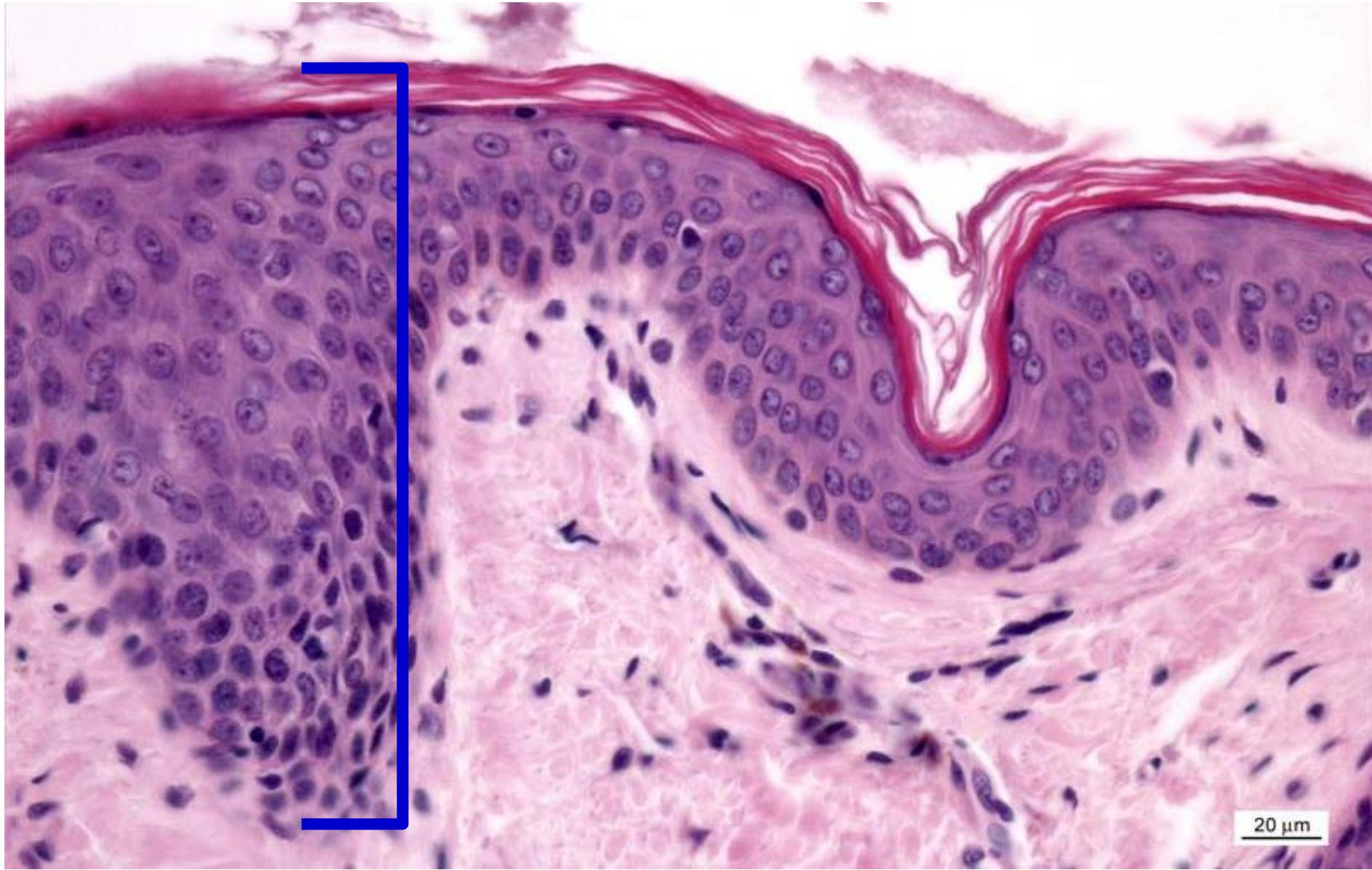
# Stratified squamous epithelium – non-keratinized

– cornea



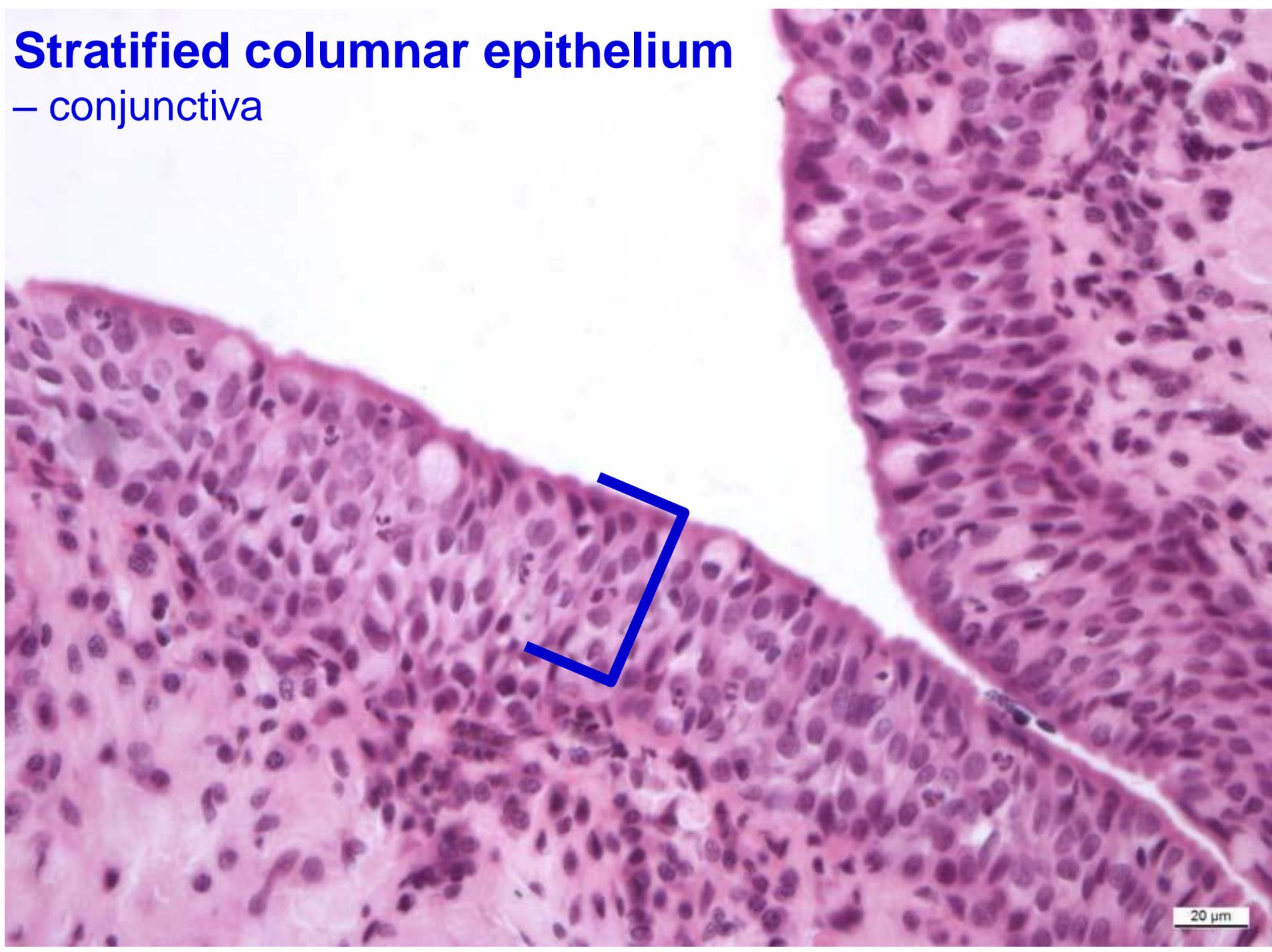
# Stratified squamous epithelium – keratinized

– epidermis

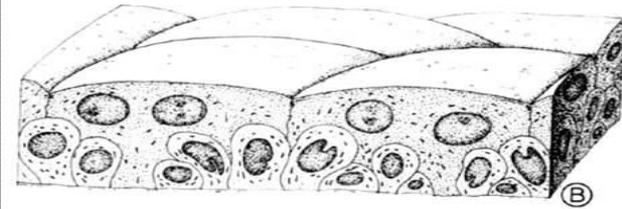
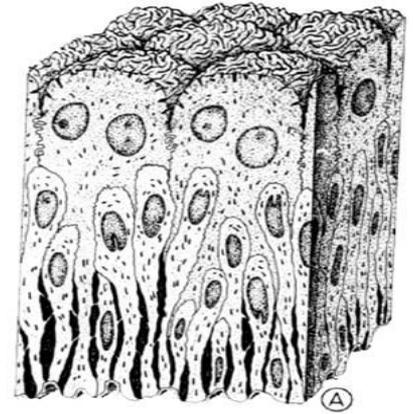


# Stratified columnar epithelium

– conjunctiva



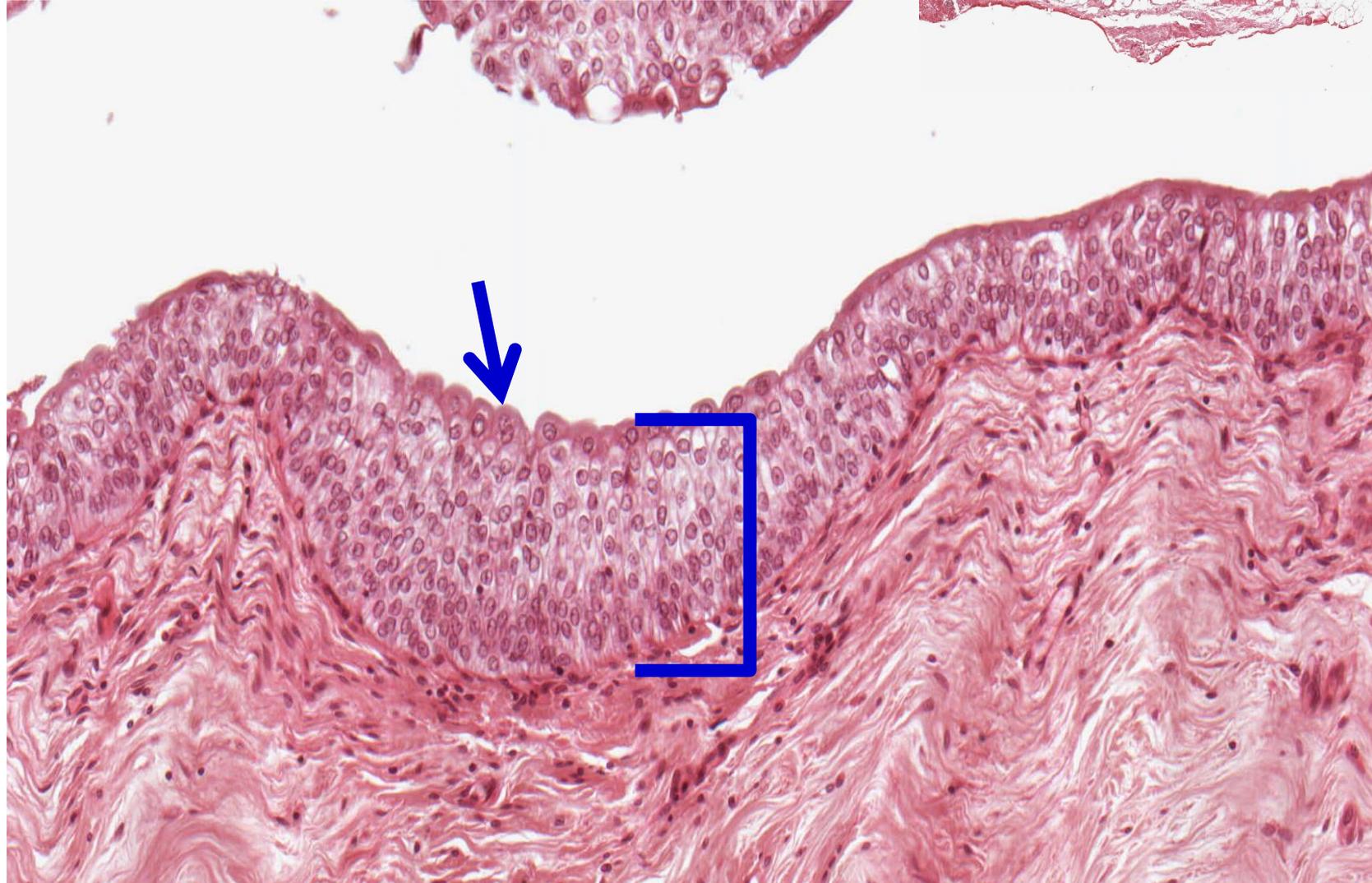
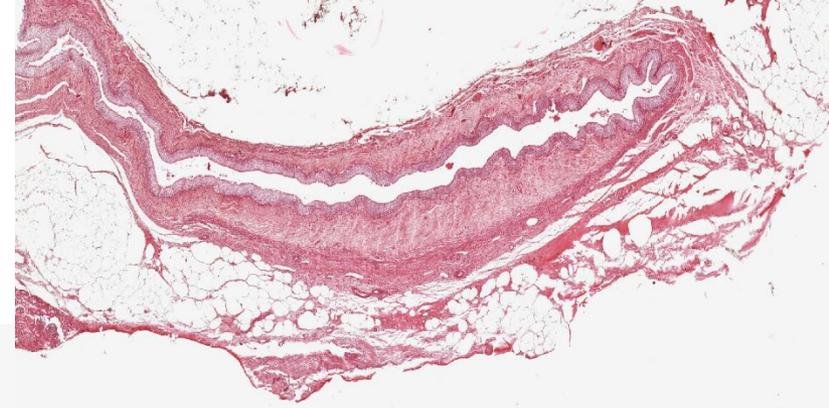
# Transitional epithelium – ureter



20  $\mu$ m

# Transitional epithelium

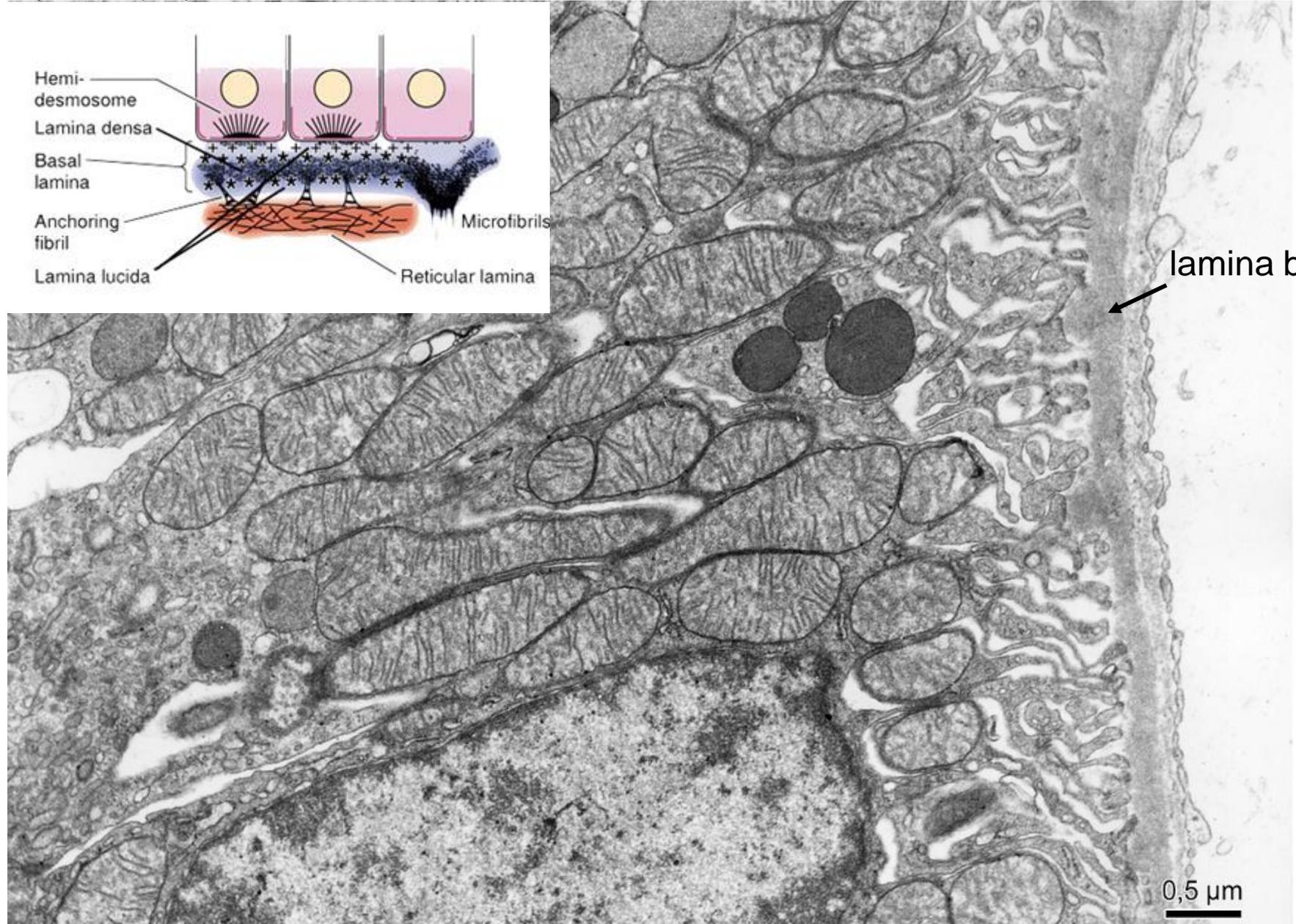
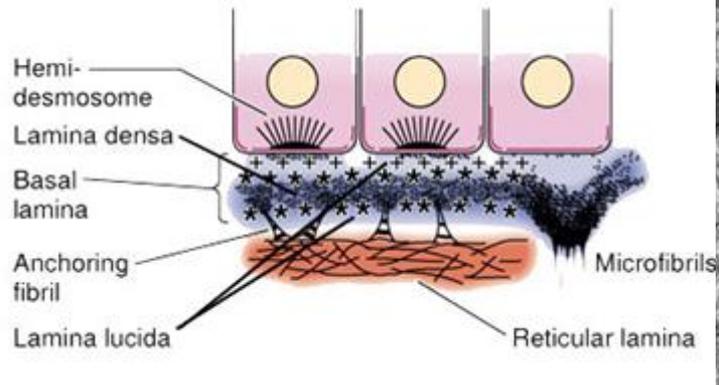
– calyx renalis



# Basement membrane

(0,5 - 1  $\mu\text{m}$ )

- Lamina basalis
- Lamina fibroreticularis

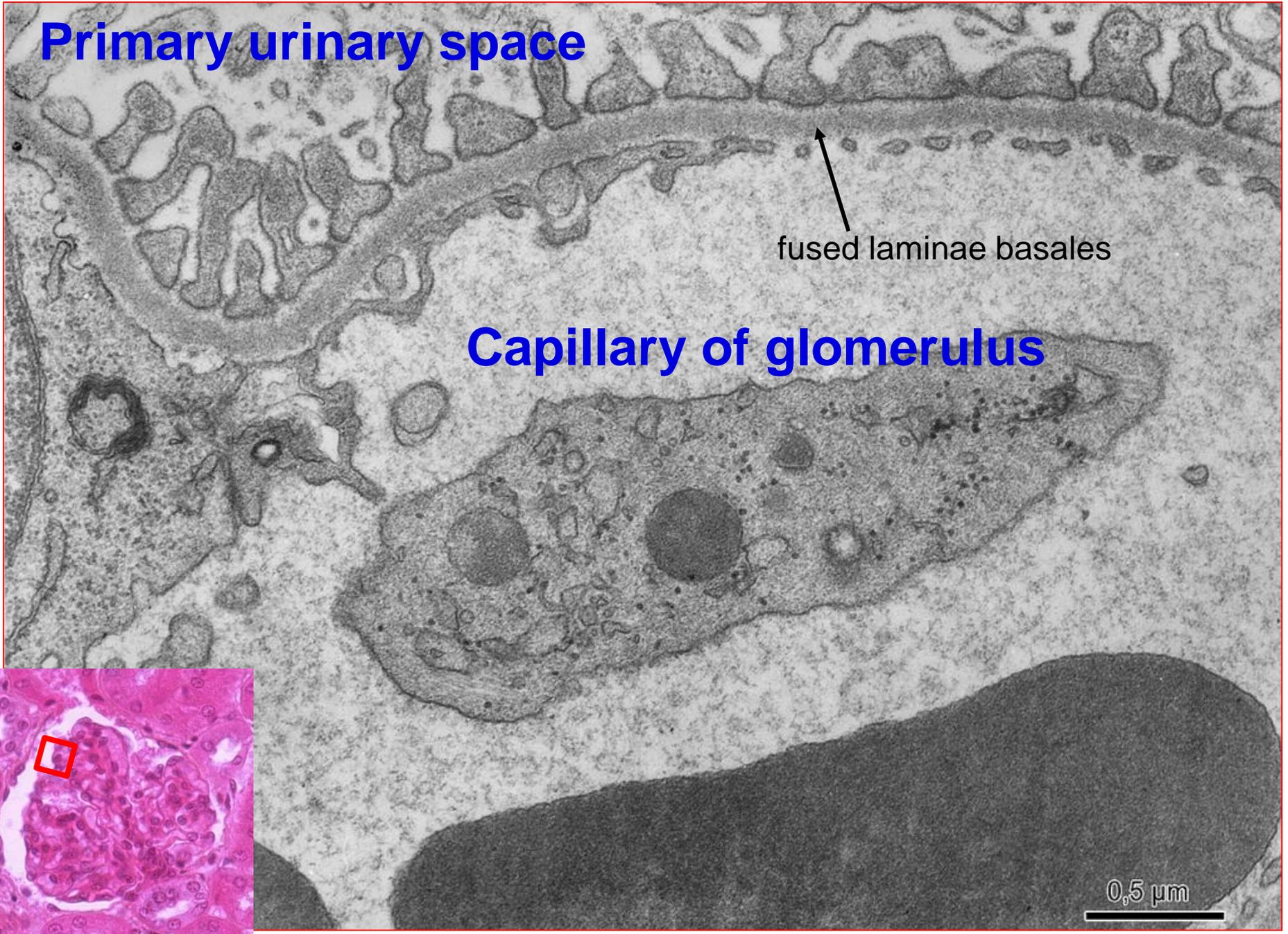
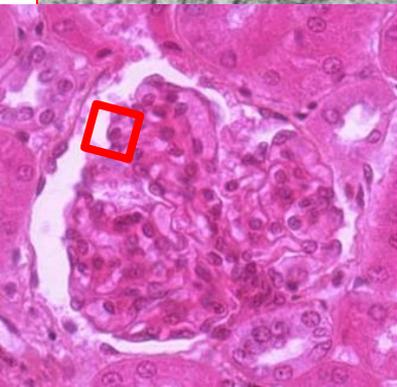


**Primary urinary space**

fused laminae basales

**Capillary of glomerulus**

0,5  $\mu$ m



# Covering epithelia

## Slides:

Simple squamous and cuboidal epithelium (30, 31. Ren)

Simple columnar epithelium (22. Vesica fellea)

Pseudostratified columnar ep. with cilia (27. Trachea)

Stratified squamous epithelium (11. Esophagus)

Stratified keratinized squamous epithelium (69. Skin from finger tip)

Transitional epithelium (32. Renal calyx, 33. Ureter)

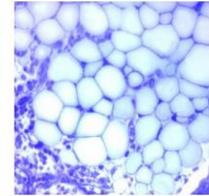
Stratified columnar epithelium (91. Palpebra)

## Electronograms:

Atlas of Cytology and Embryology

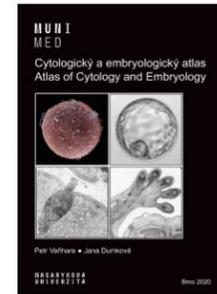
### Histologický atlas

*Doporučený studijní materiál*



### Cytologický a embryologický atlas

*Doporučený studijní materiál*



Numbers by the slides indicate their positions in sets in Microscopic Hall, not in online atlases. These numbers allow you to find the slides easily and study them using a microscope when the normal classes are opened.