



# **The connective tissue proper**

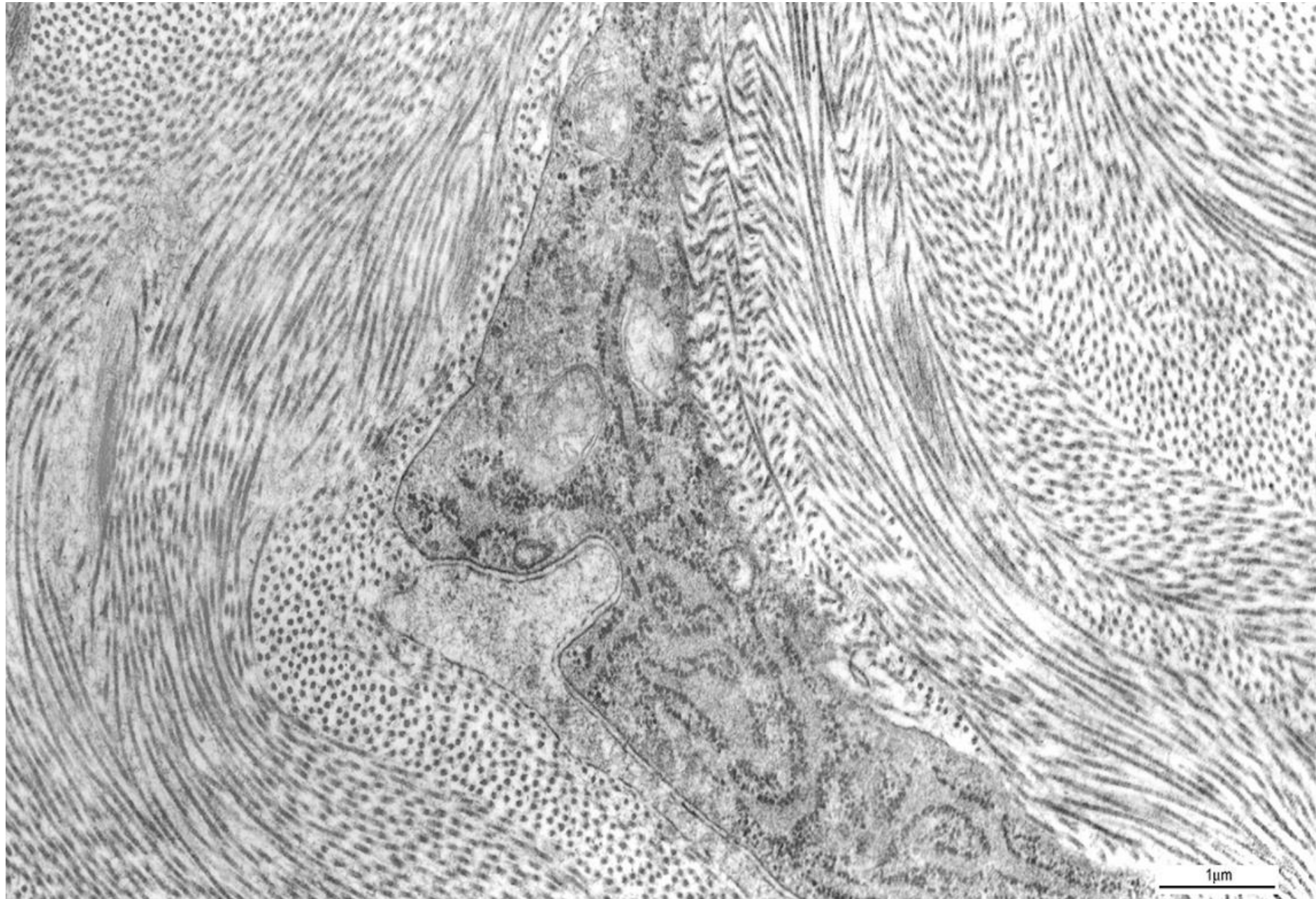
Connective tissue cells

Extracellular matrix - fibers

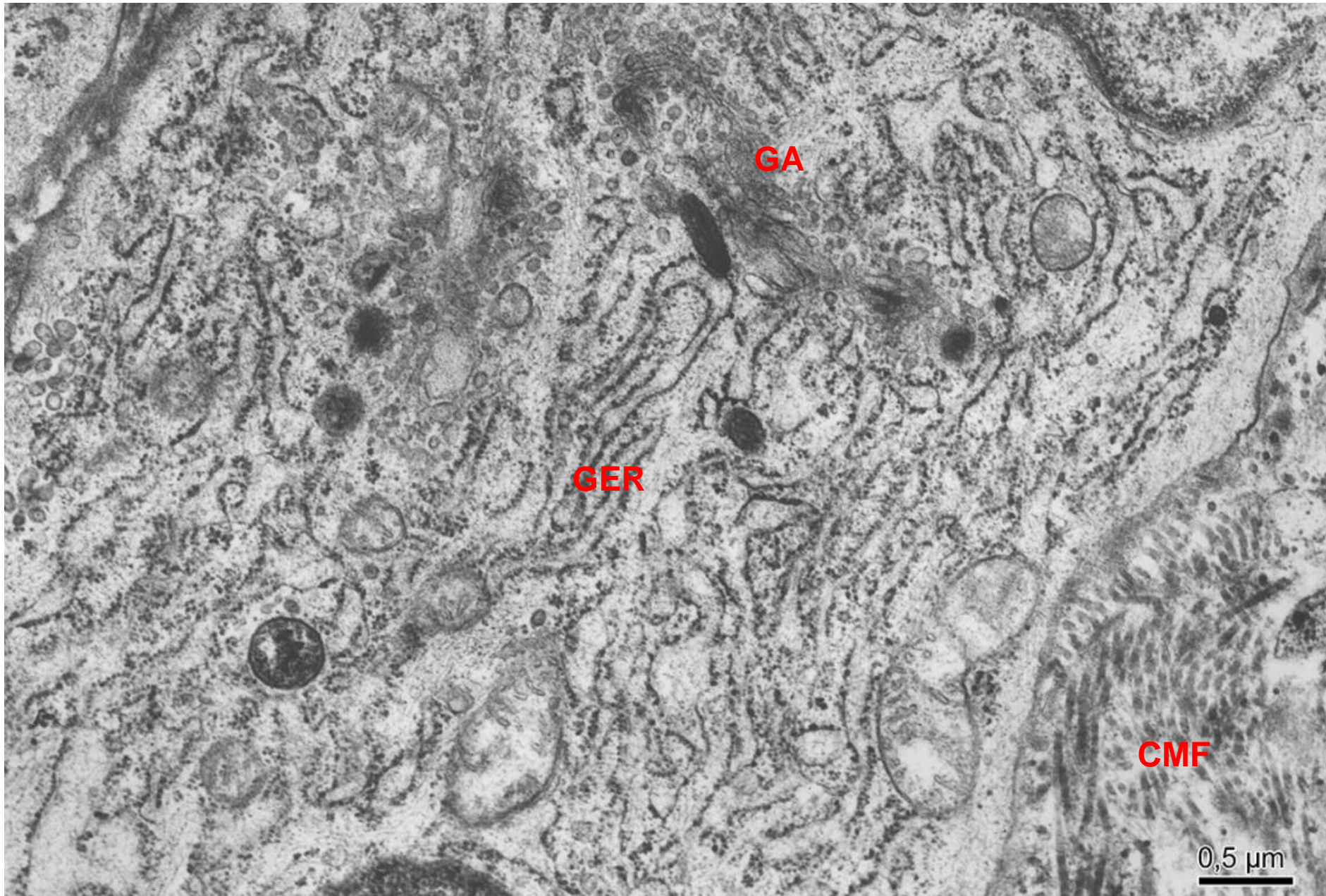
- ground substance

Classification of connective tissue

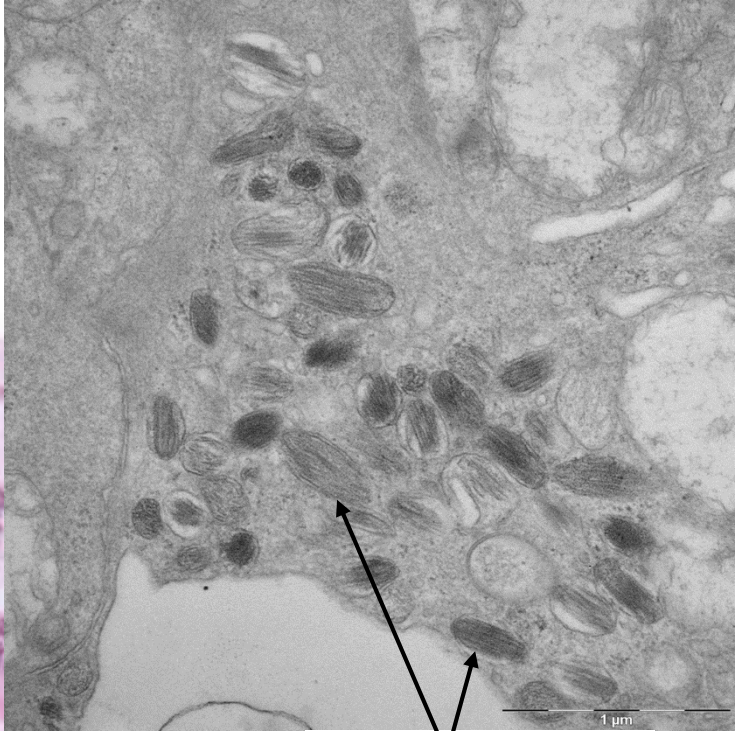
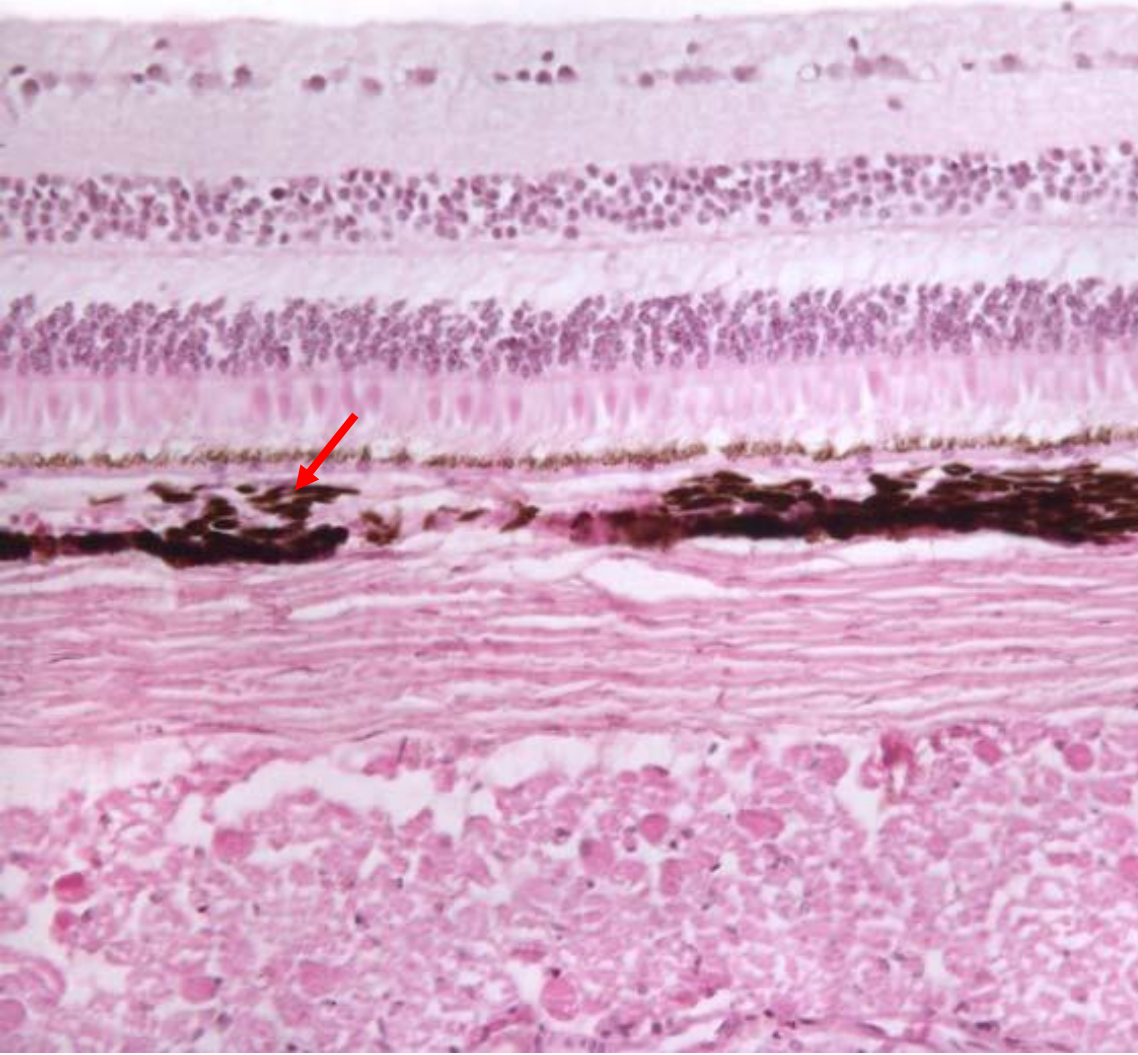
# Fibroblast + collagen fibrils



# Fibroblast – synthetically active cell



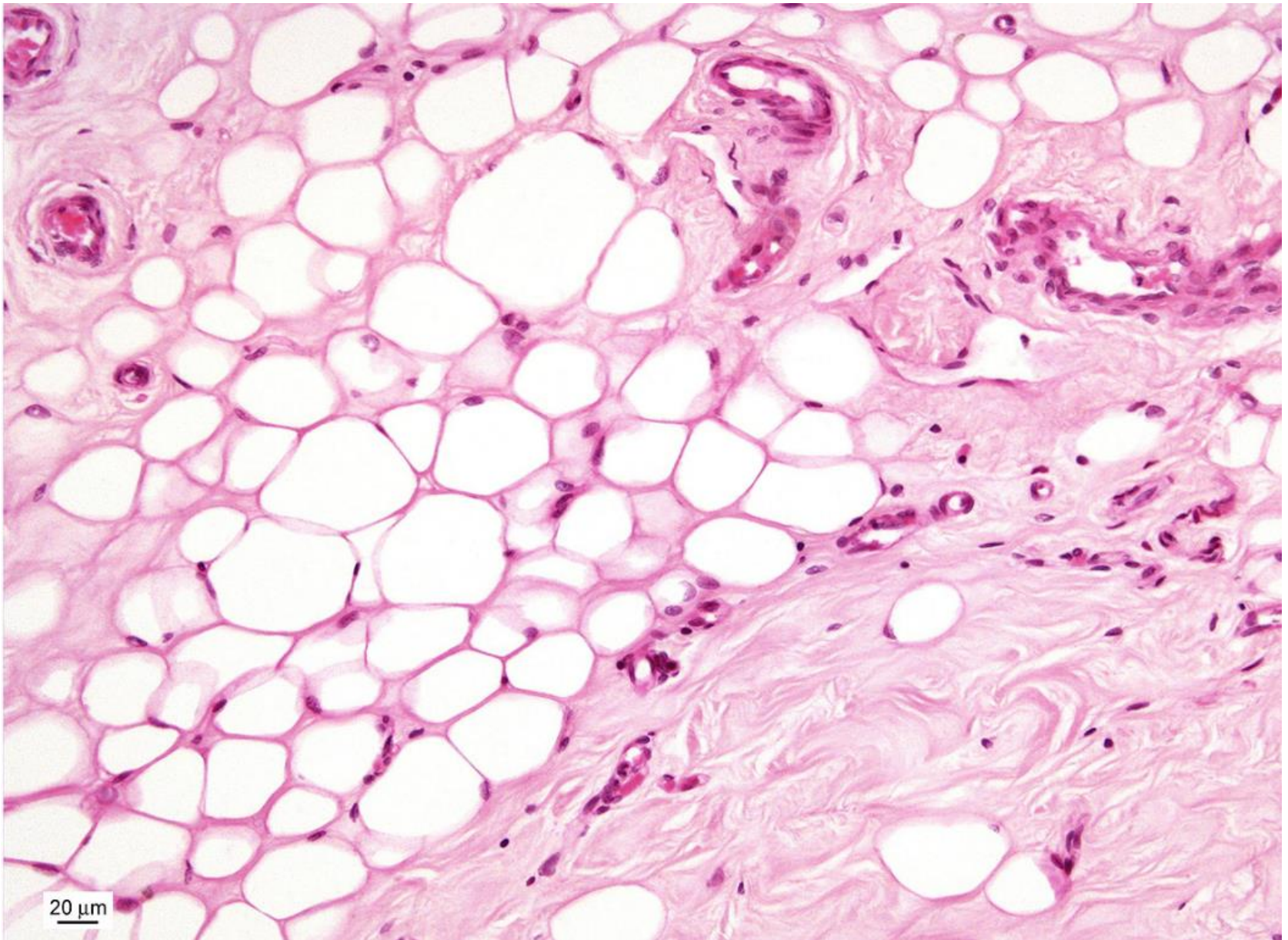
# Pigment cells



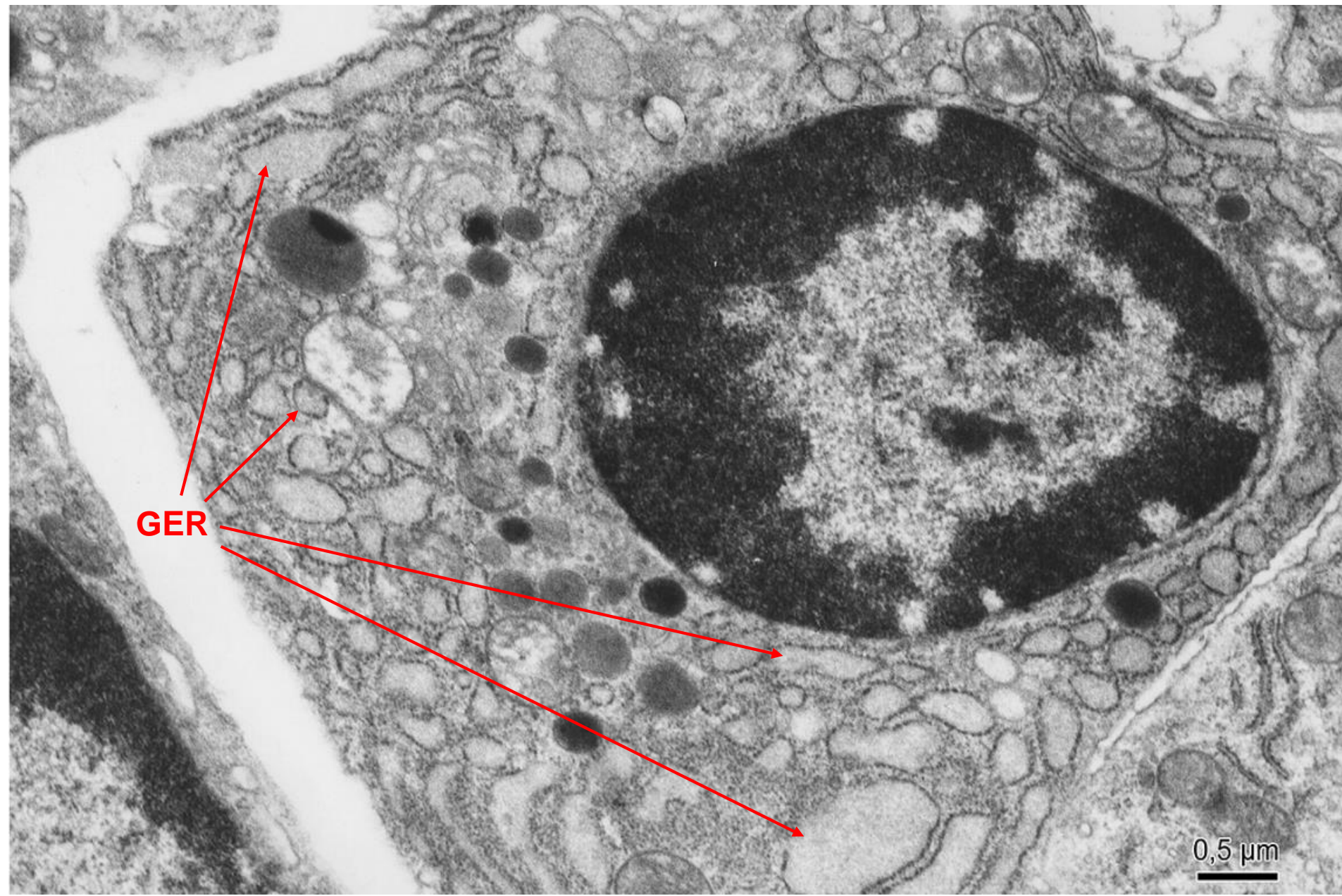
melanosomes

20  $\mu\text{m}$

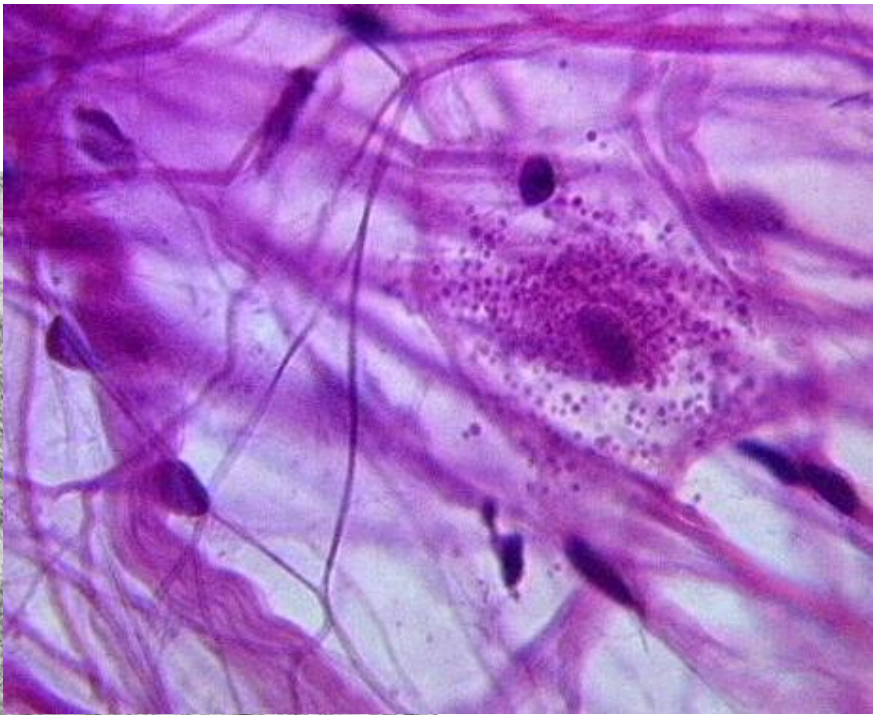
# Adipocytes



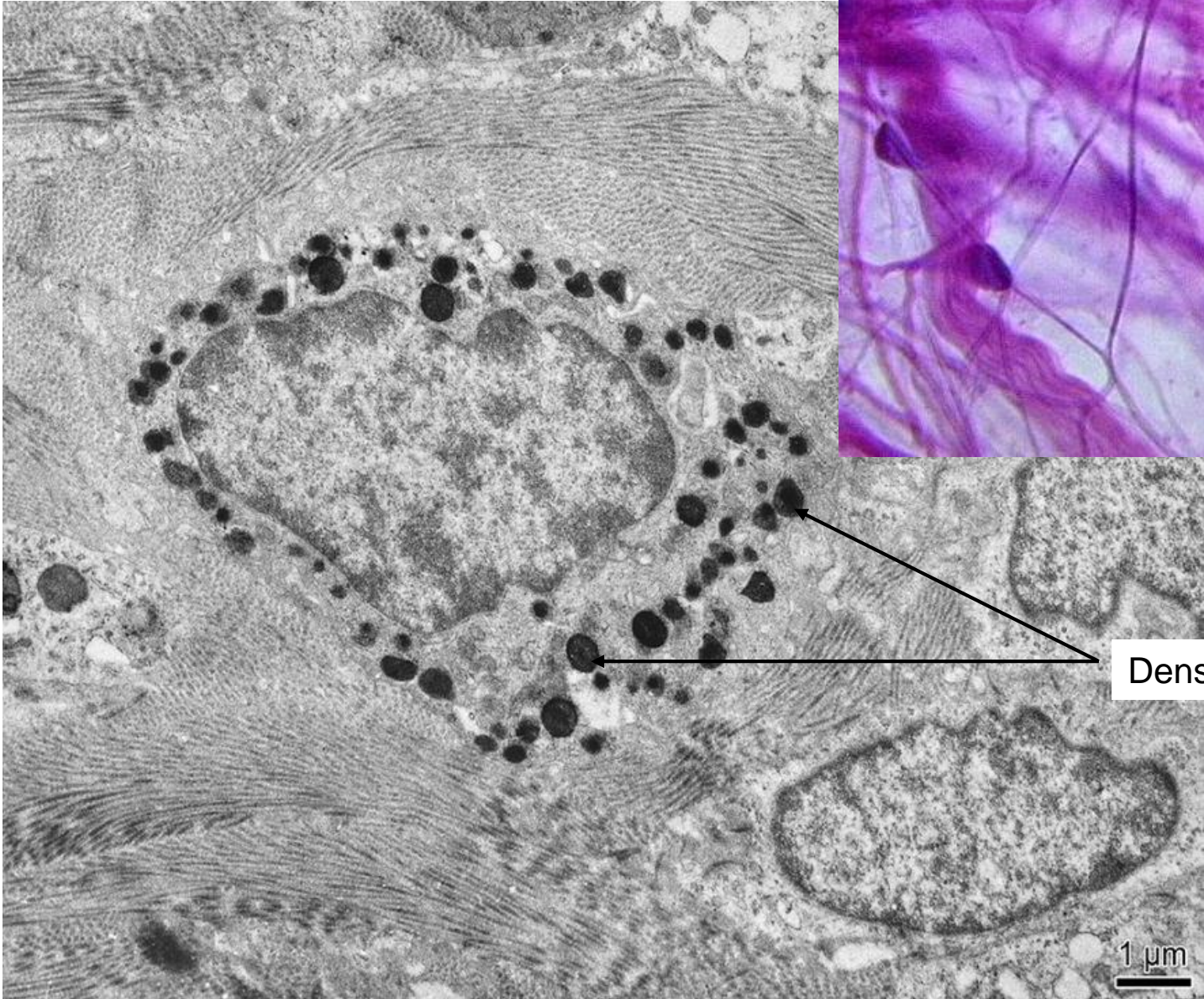
# Plasma cell



# Mast cell

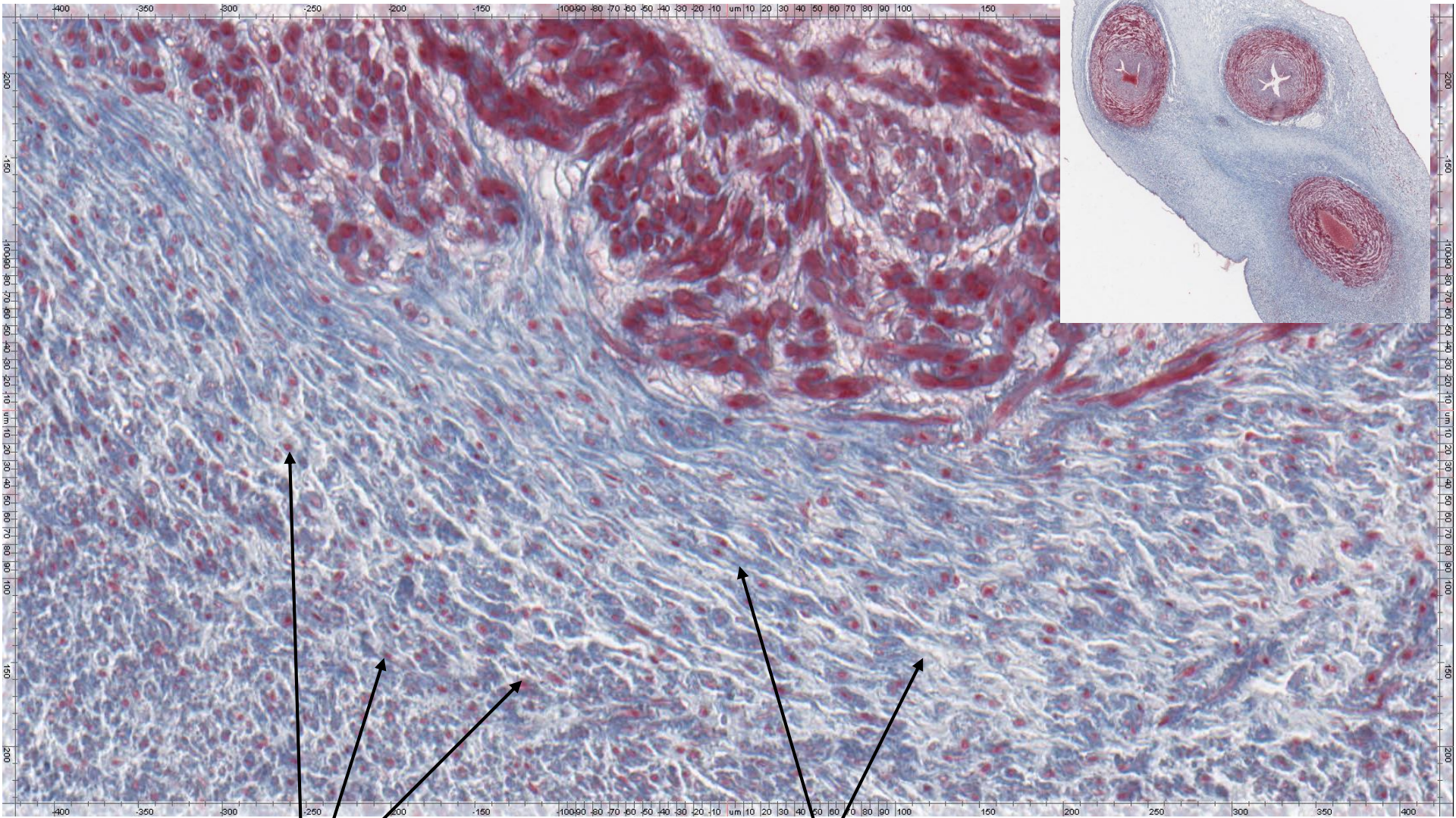


<http://www.gwc.maricopa.edu>



Dense secretory granules

# Wharton's jelly – Funiculus umbilicalis

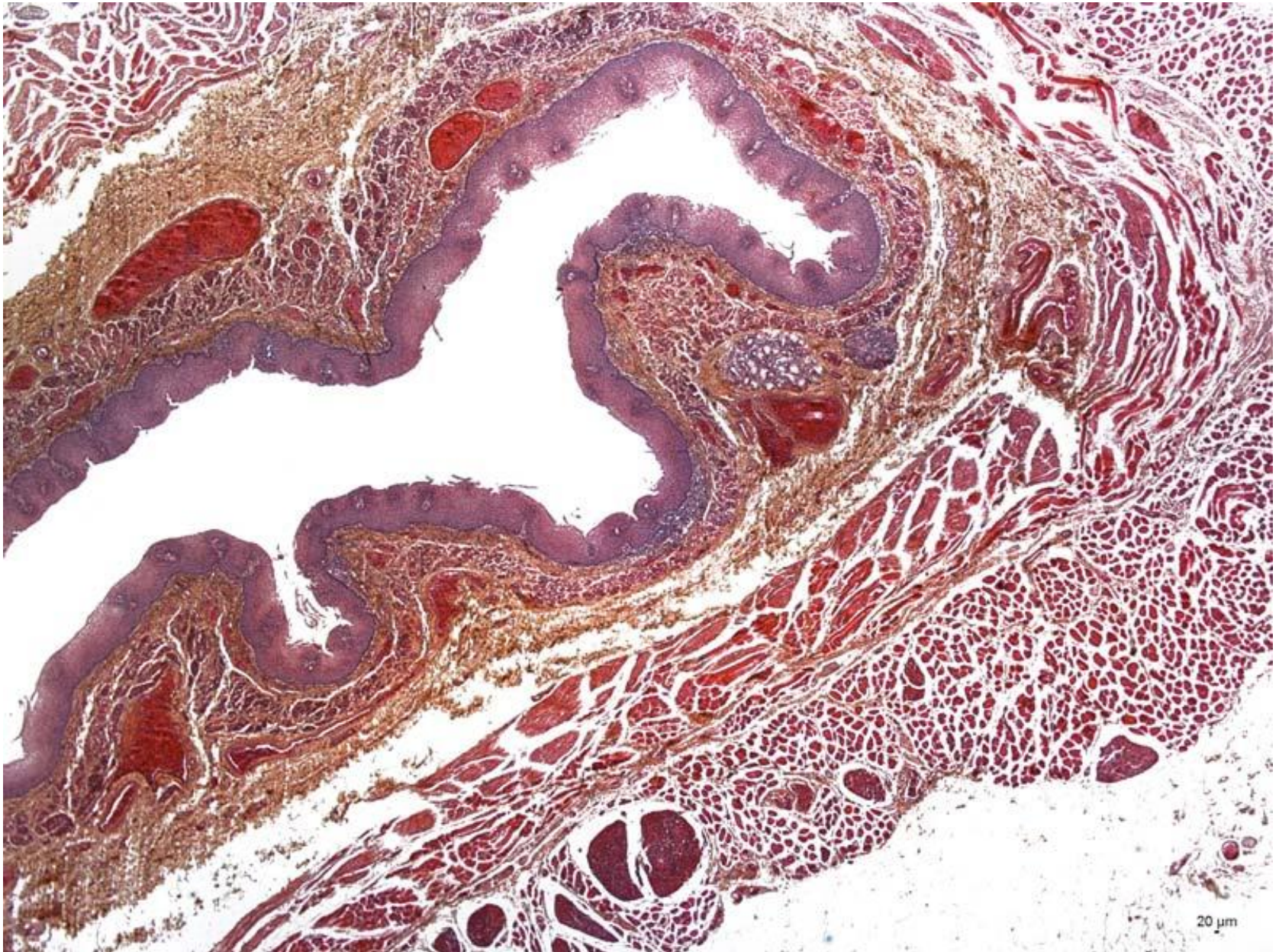


Nuclei of fibrocytes - violet

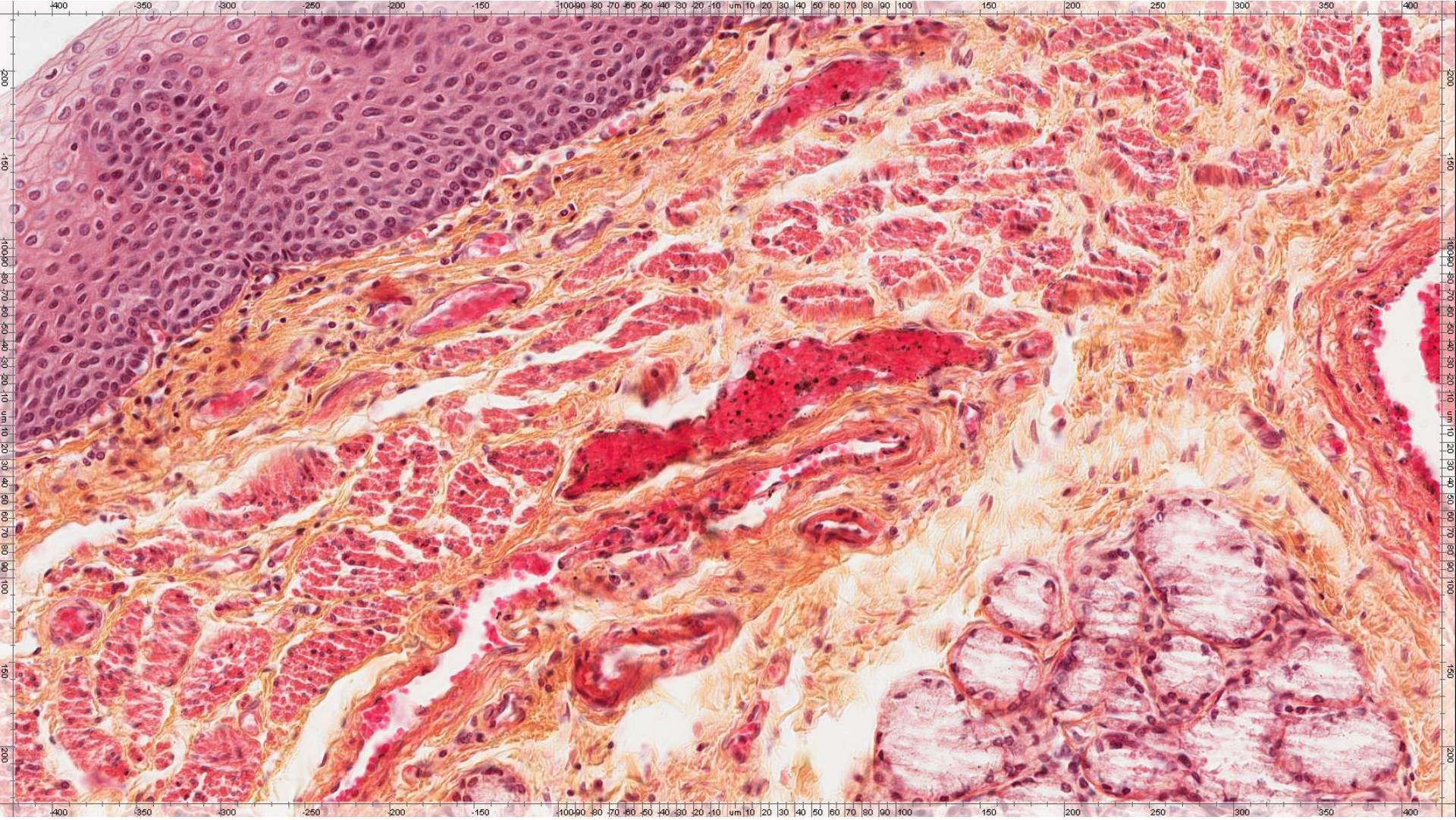
Collagen fibers - blue



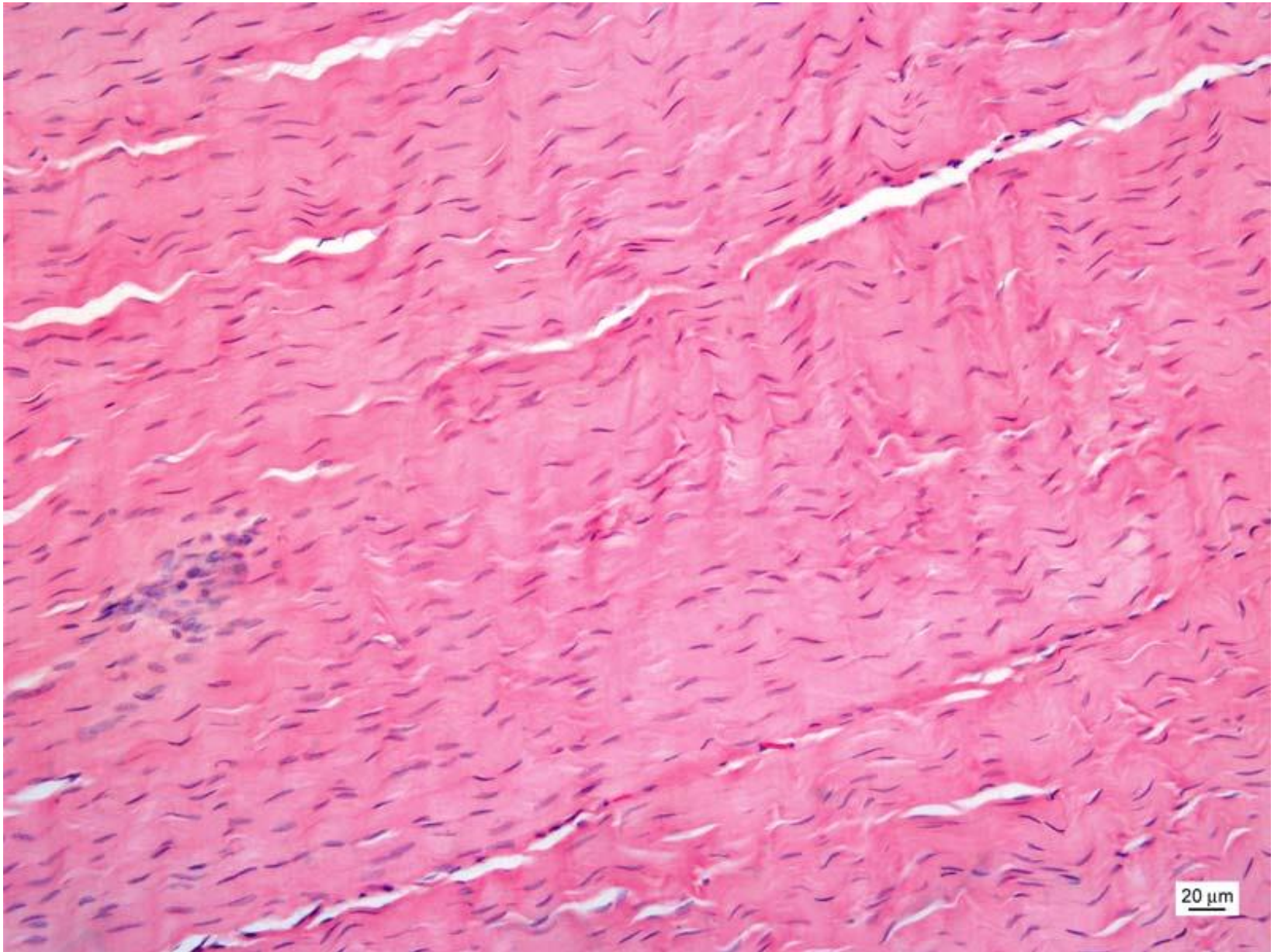
# Loose connective tissue - Esophagus



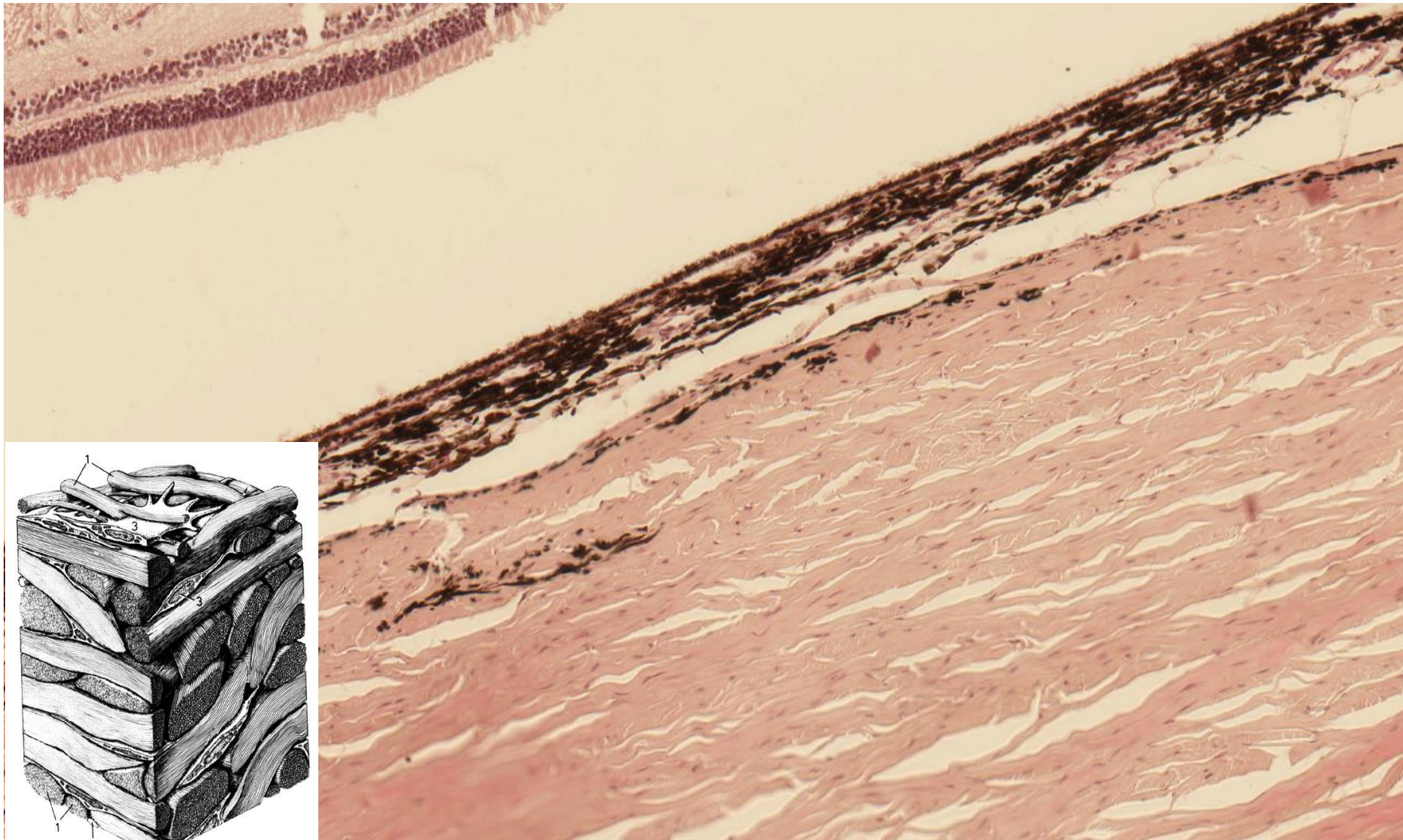
# Loose connective tissue – mucosa, submucosa



## Dense connective tissue regularly arranged - Tendon



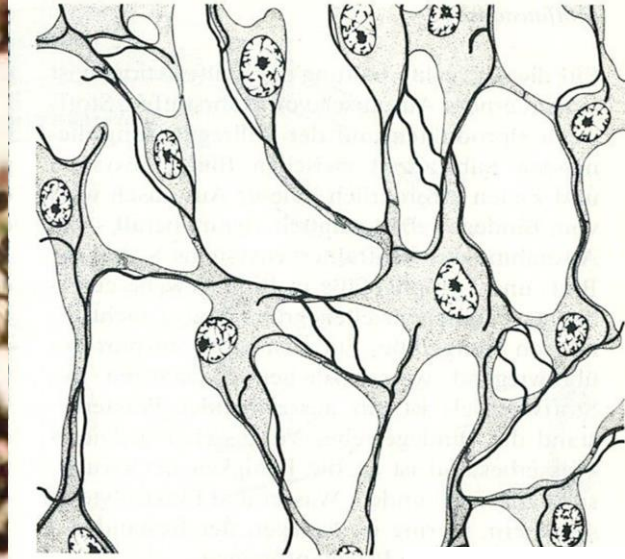
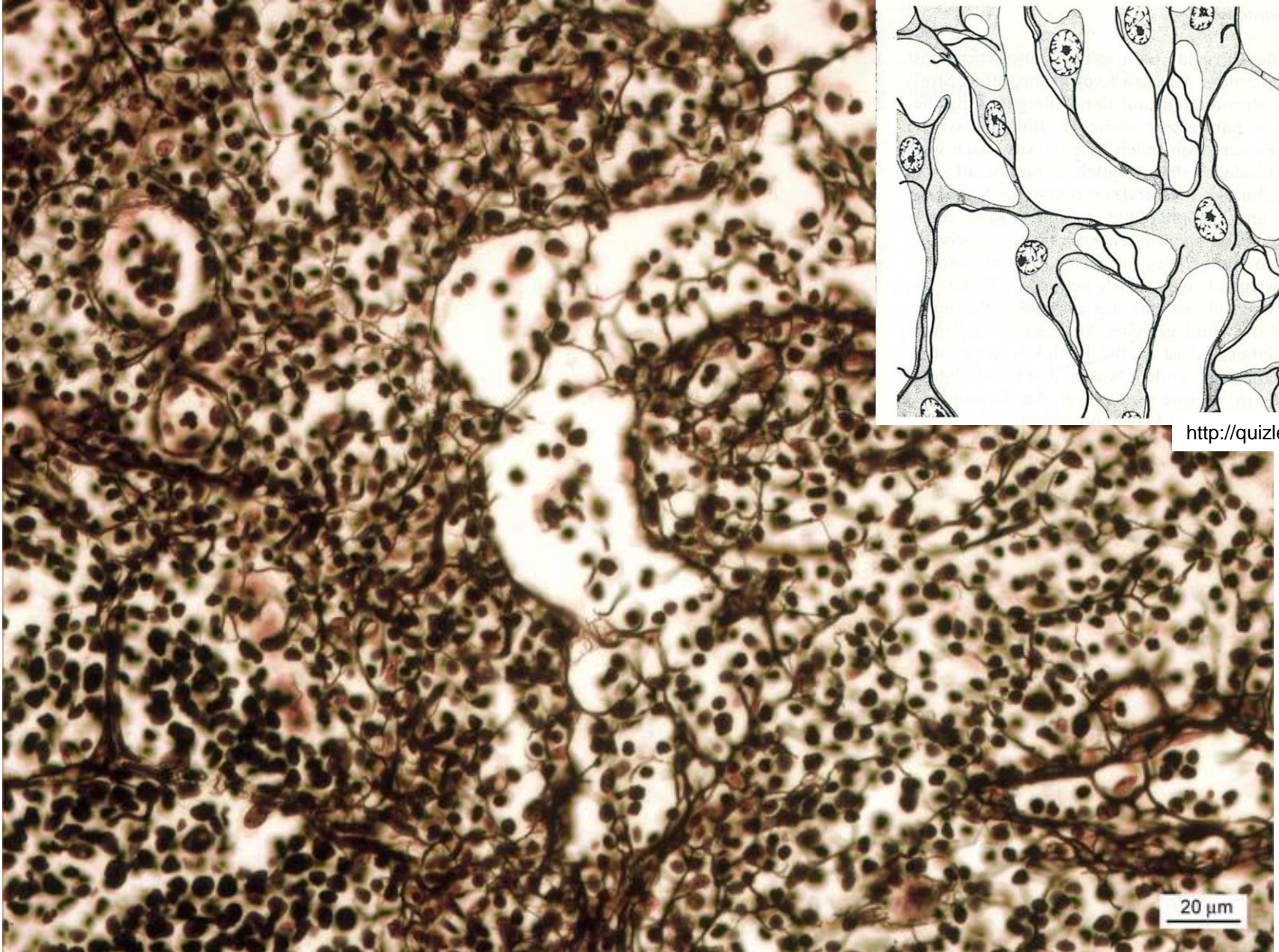
# Dense connective tissue irregularly arranged - Sclera



# Elastic membranes - Aorta



# Reticular tissue – Lien (impregnation)



<http://quizlet.com>

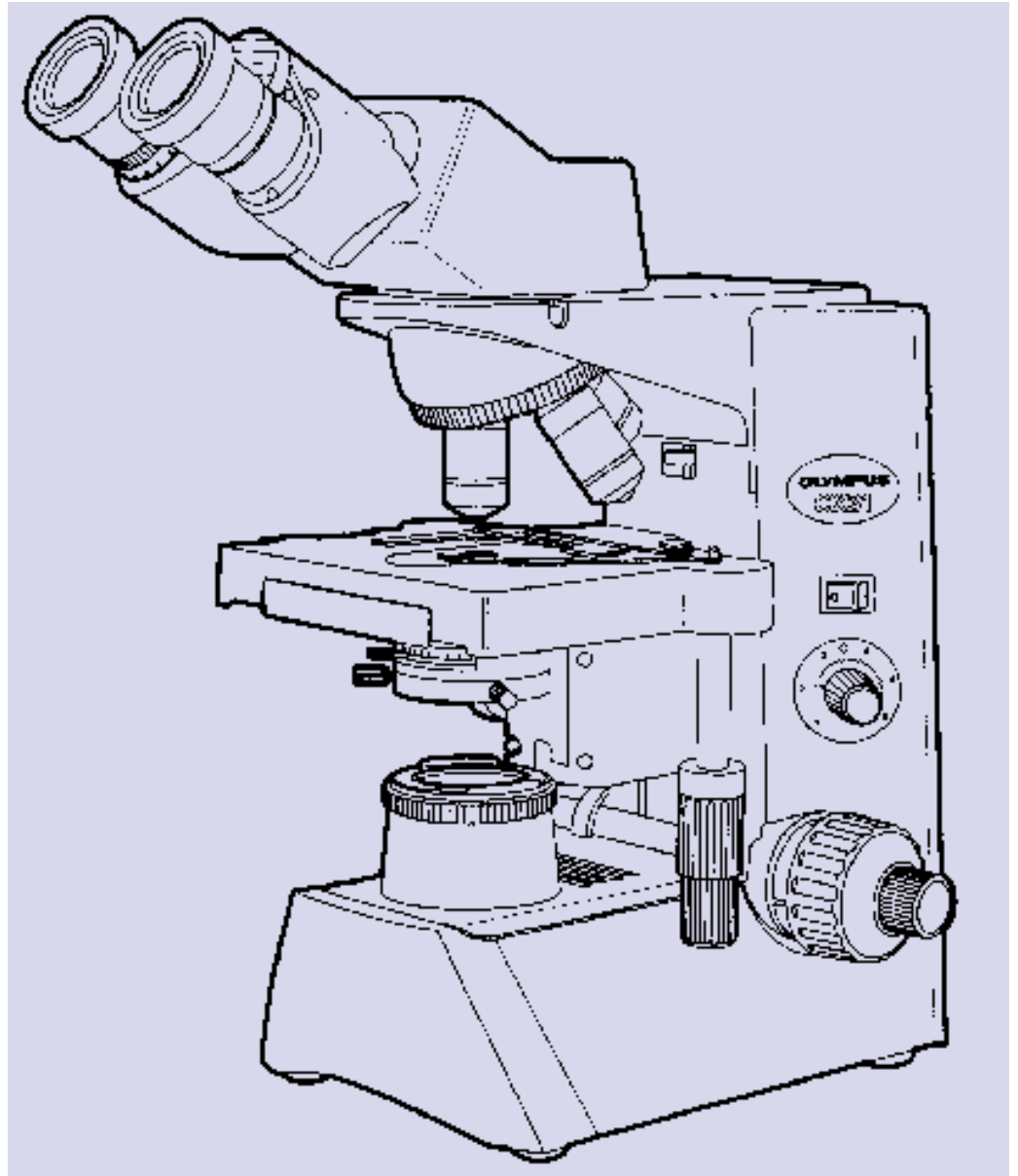
20  $\mu$ m

# Reticular connective tissue - intestinum crassum (HE)



# Light microscope

- Eyepieces
- Objective lens
- Stage with specimen holder
- On/Off
- Light control
- Condenser and Iris aperture
- Stage controls
- Coarse focus
- Fine focus
- Light source with diaphragm

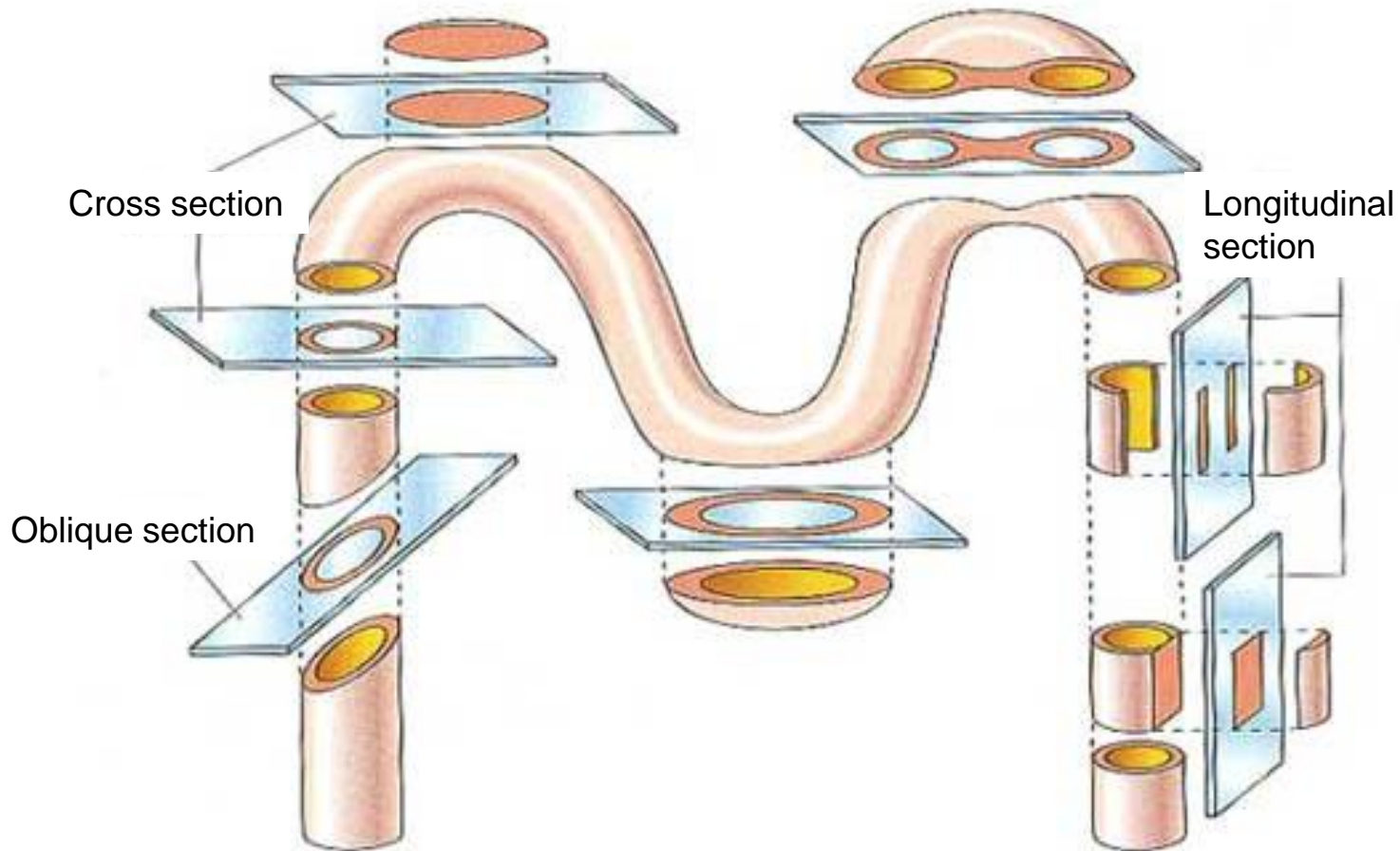




# Instructions

- Turn on the light.
- **Start with the 4x objective.**
- Put the slide on the stage – cover glass must be above
- Look through the scope and focus. Use the coarse focus knob at first, until the image is more or less in focus; then switch to the fine focus.
- Adjust the light. Not too bright, not too dim.
- Adjust the oculars.
- Switch to the 10x objective. A slight adjustment with the fine focus knob should get it just right. If you lose the focus and can't see your specimen at all, go back to the 4x and start again.
- Switch to the 40x objective if you want to see more detail. **Don't use the 100x!**
- When you want to look at a new slide, switch back to the 4x before changing slides.
- **Only one slide is out of the box at the moment!** Do not remove more!
- When you're done with the scope, switch to the 4x and turn the light all the way down before turning it off.
- At the end of lesson, the box with slides is checked in your presence before you leave your place

# Various shapes on different sections of tubular structures



# Connective tissue proper:

## Slides:

Wharton's jelly (99. Funiculus umbilicalis)

Loose (areolar) connective tissue (11. Esophagus)

Dense connective tissue - irregular (89. Posterior part of the eye)

Reticular tissue (68. Lien – impregnation)

Elastic membranes (62. Aorta)

## Atlas EM:

Fibroblast (42)

Plasma cell (43)

Mast cell (44)

Collagen fibers (42, 44)