

# **The connective tissue proper**

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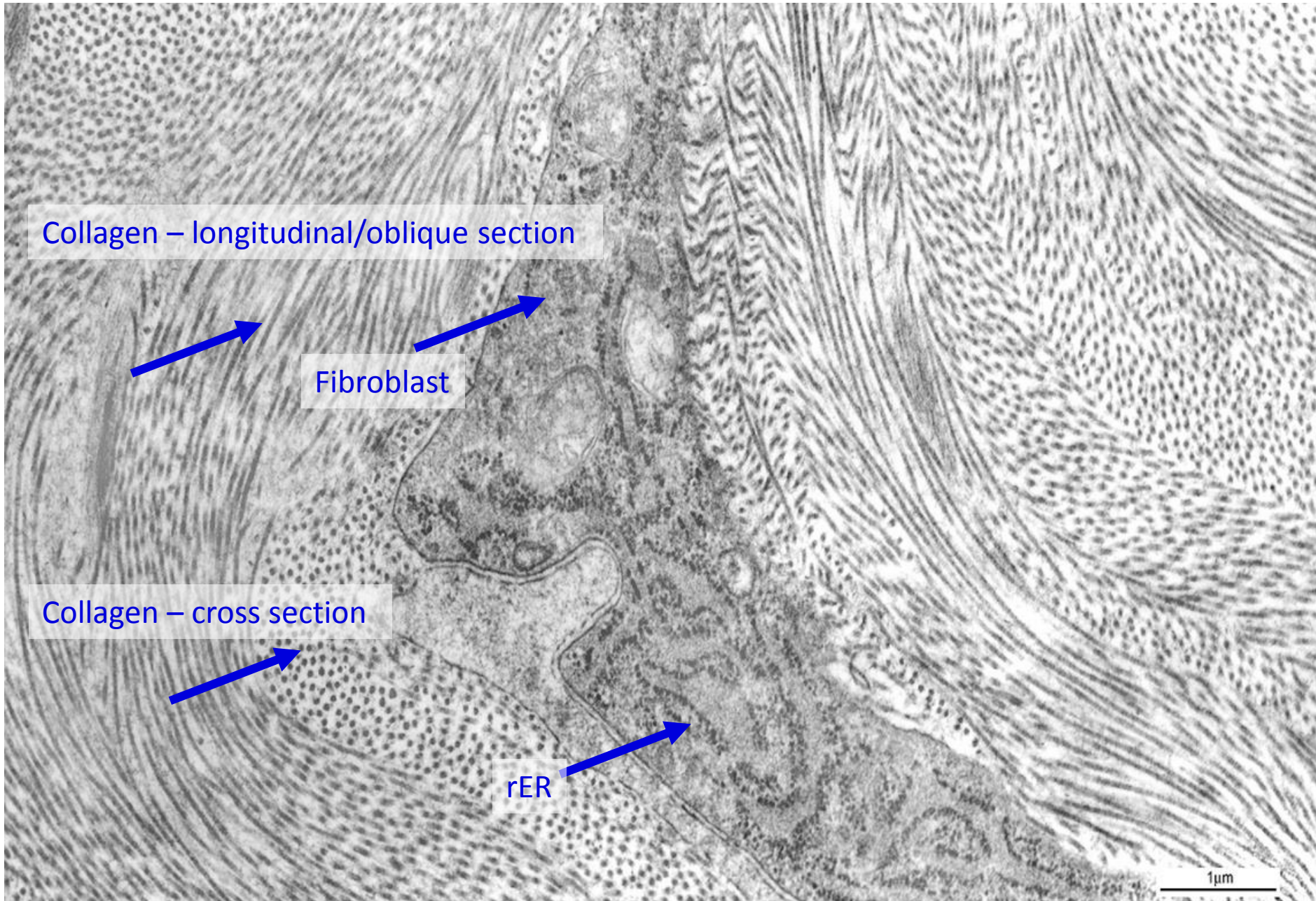
## Cells

- **Fibroblasts (ECM producers)**
- Adipocytes (fat metabolism and storage)
- Pigment cells (pigment deposition)
- Immune cells (immune response)

## Extracellular matrix (ECM)

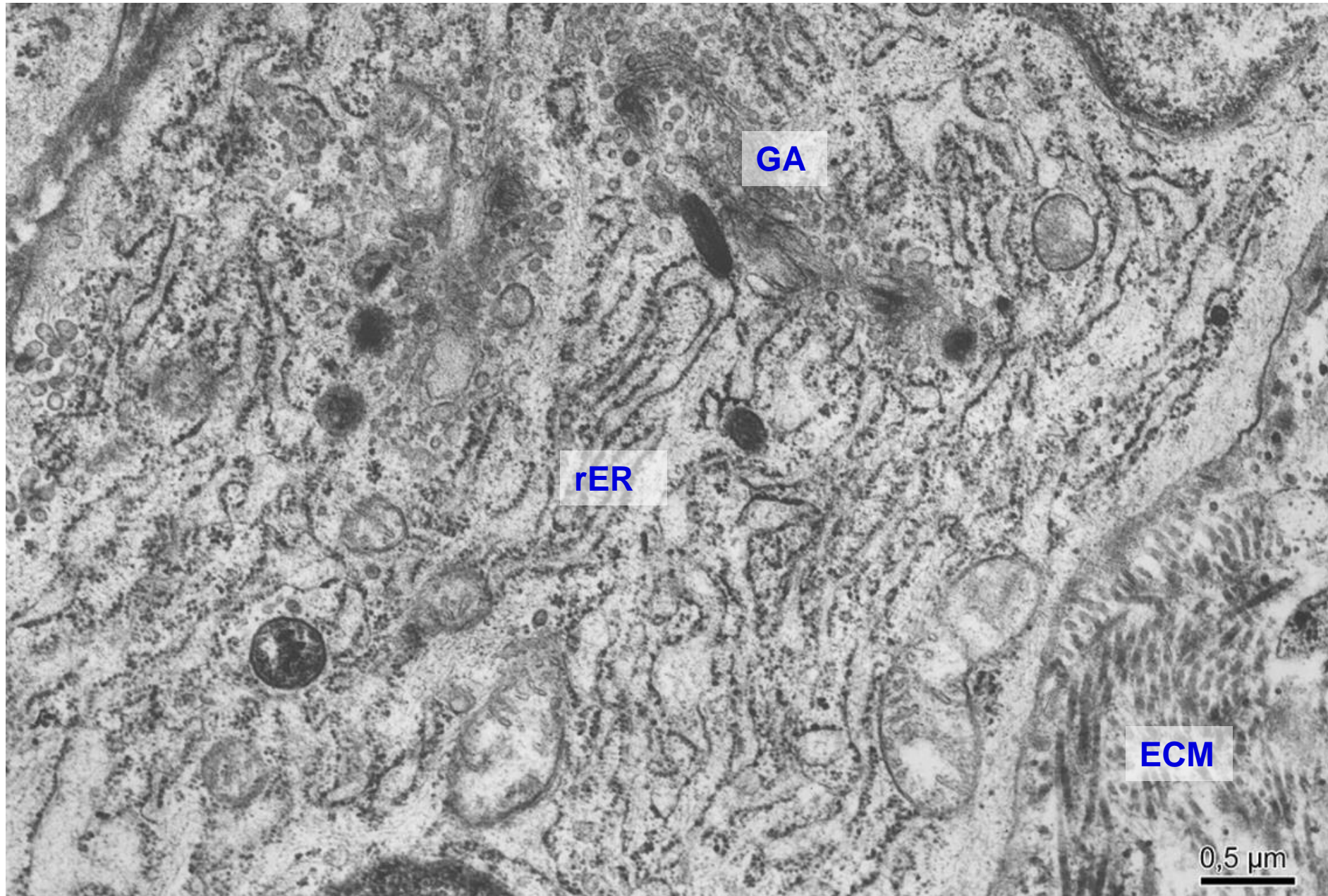
- **Amorphous ground substance**
  - Glycosaminoglycans
  - Proteglycans
  - Glycoproteins
- **Fibers**
  - Collagen
  - Elastic
  - Reticular

# Fibroblast and collagen fibrils



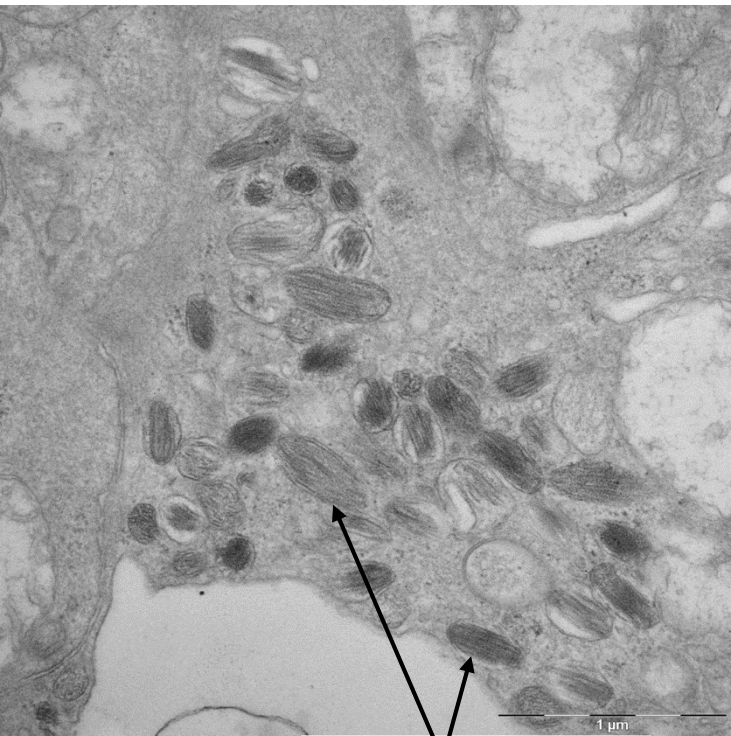
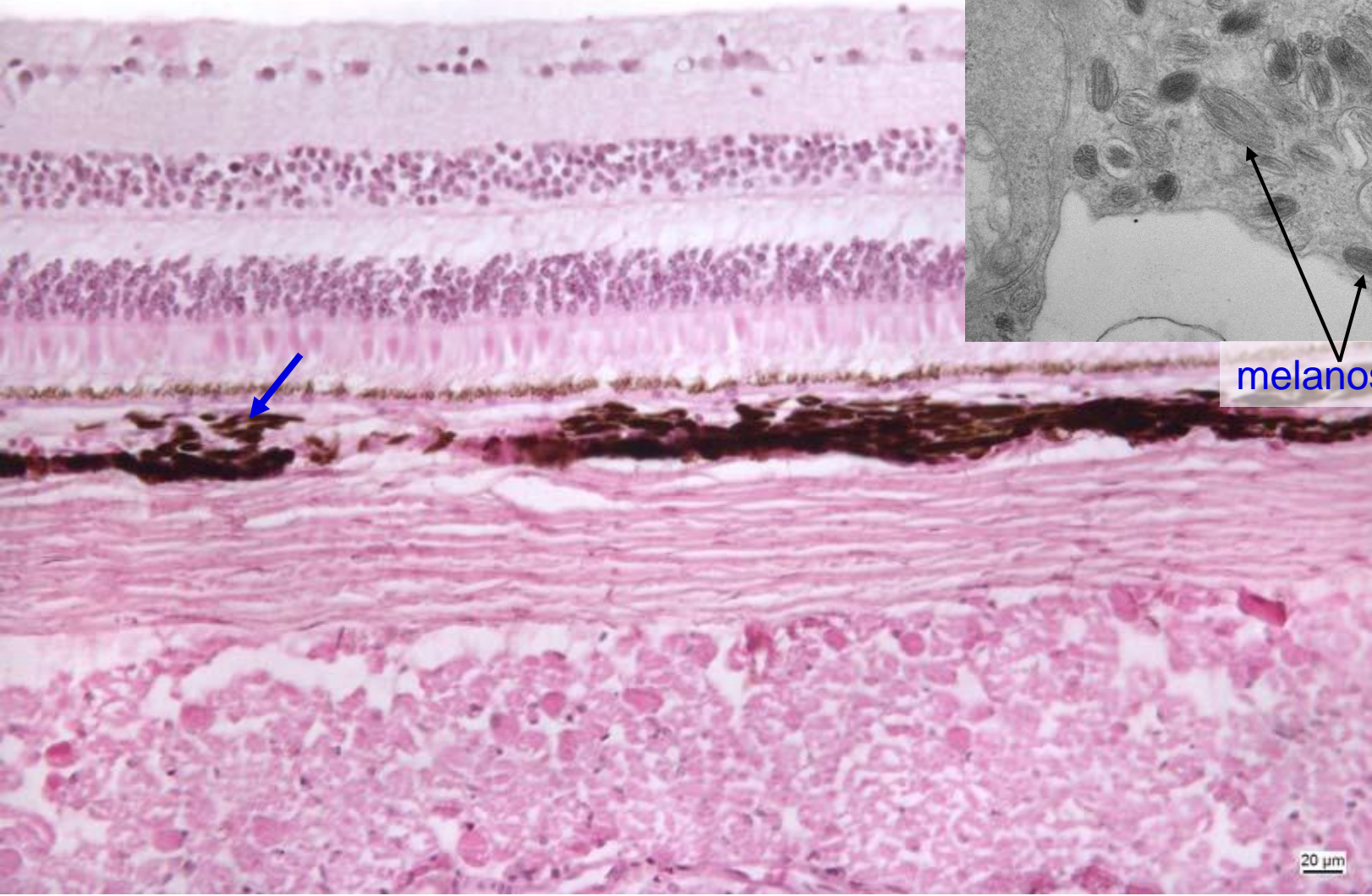


# Fibroblast – ECM producer





# Pigment cells (eye wall)

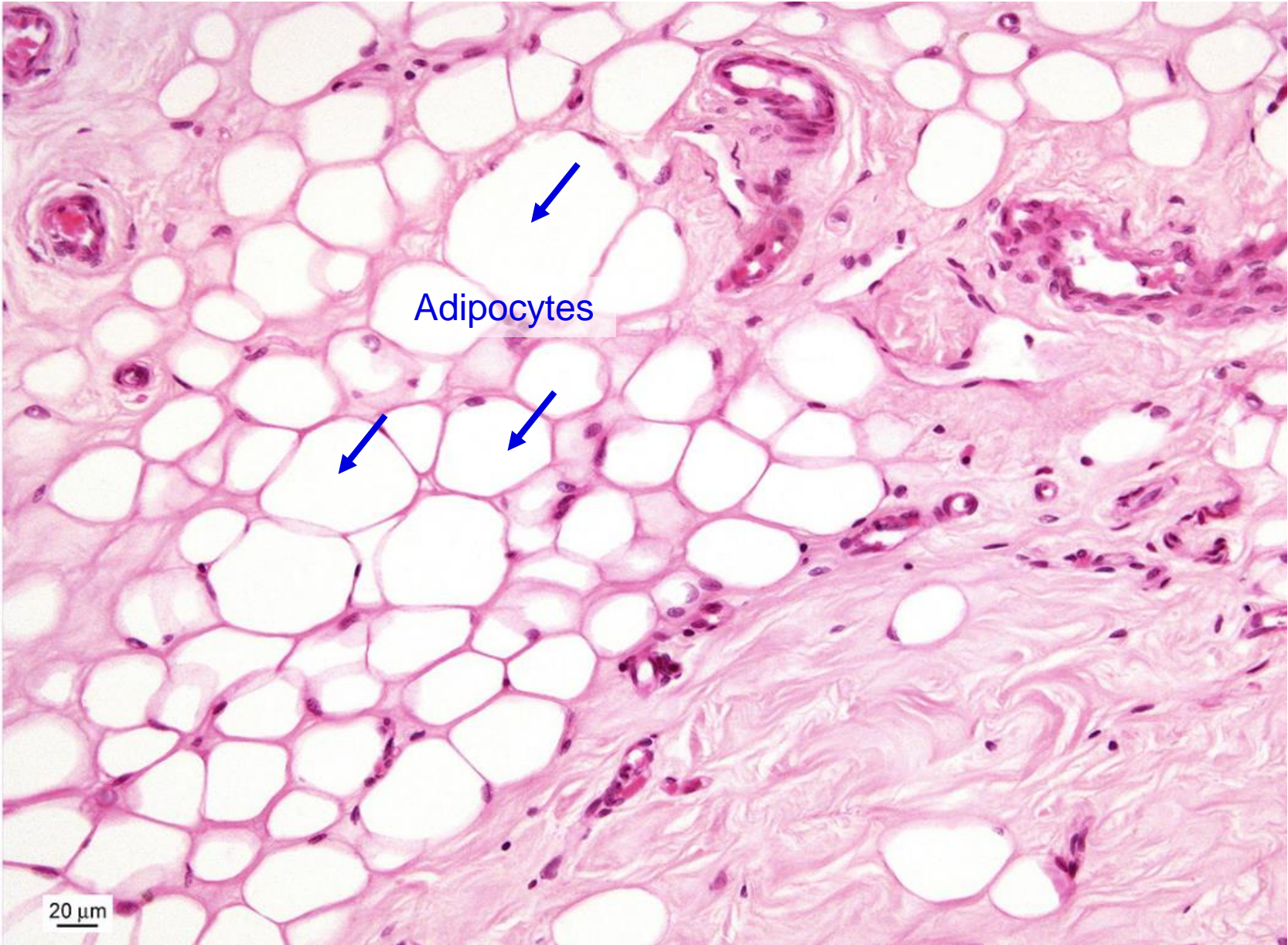


melanosomes

20 µm

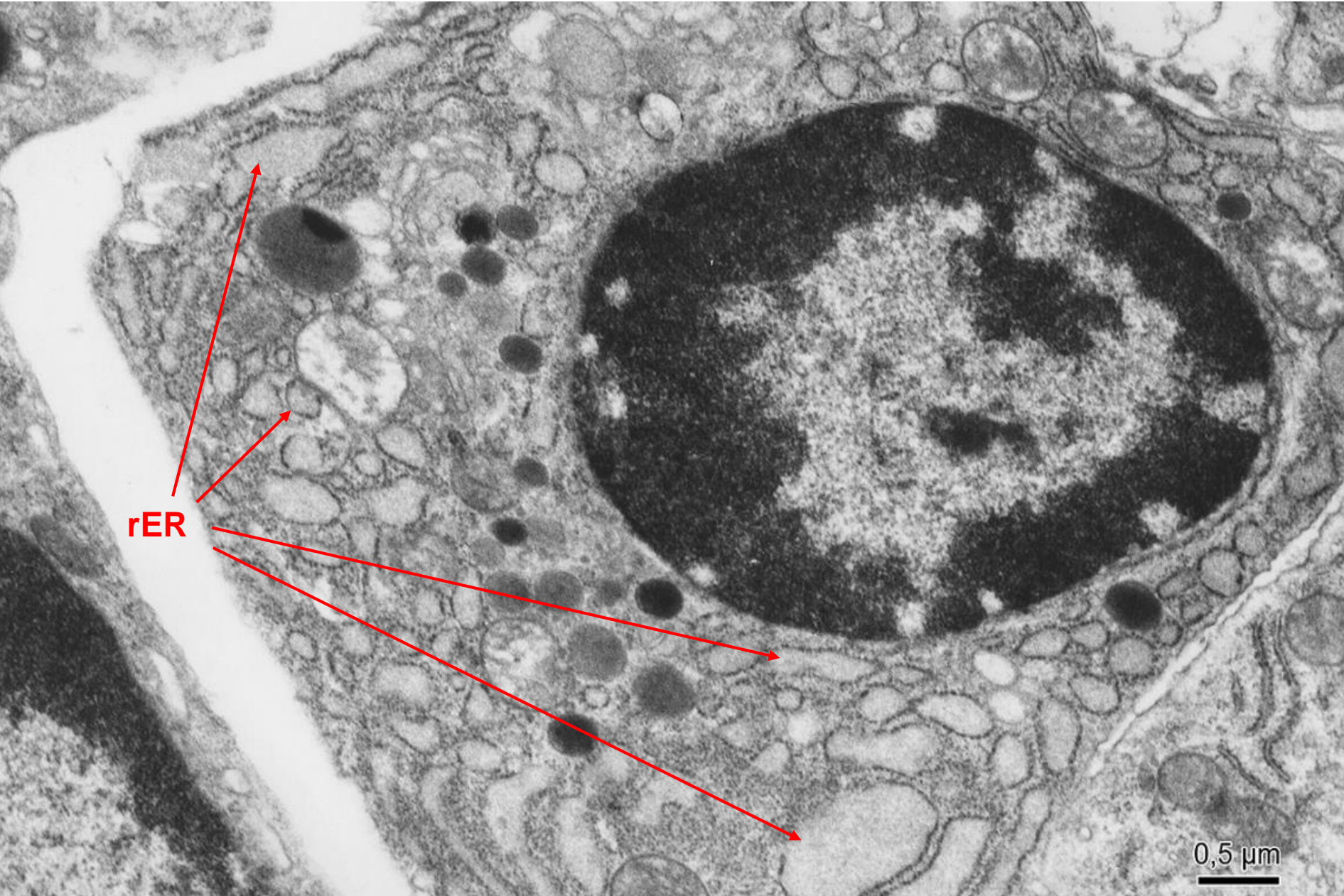


# Adipocytes in white adipose tissue



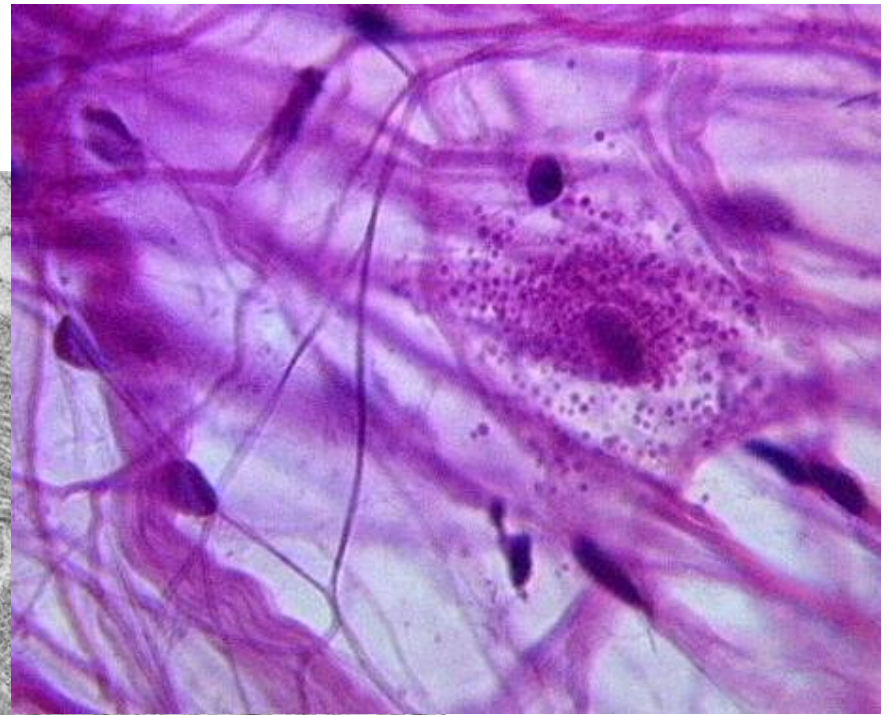


# Plasma cell

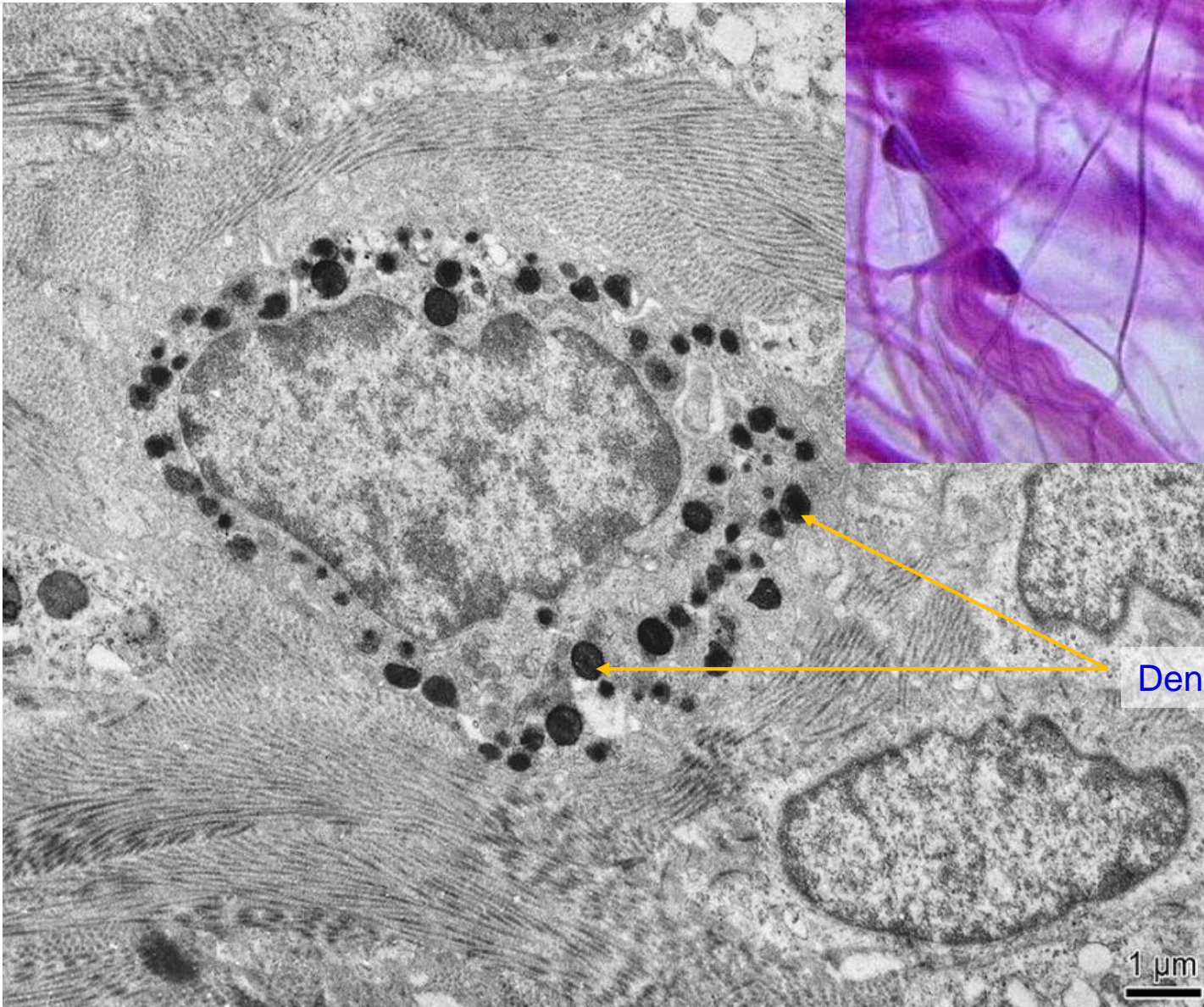




# Mast cell



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

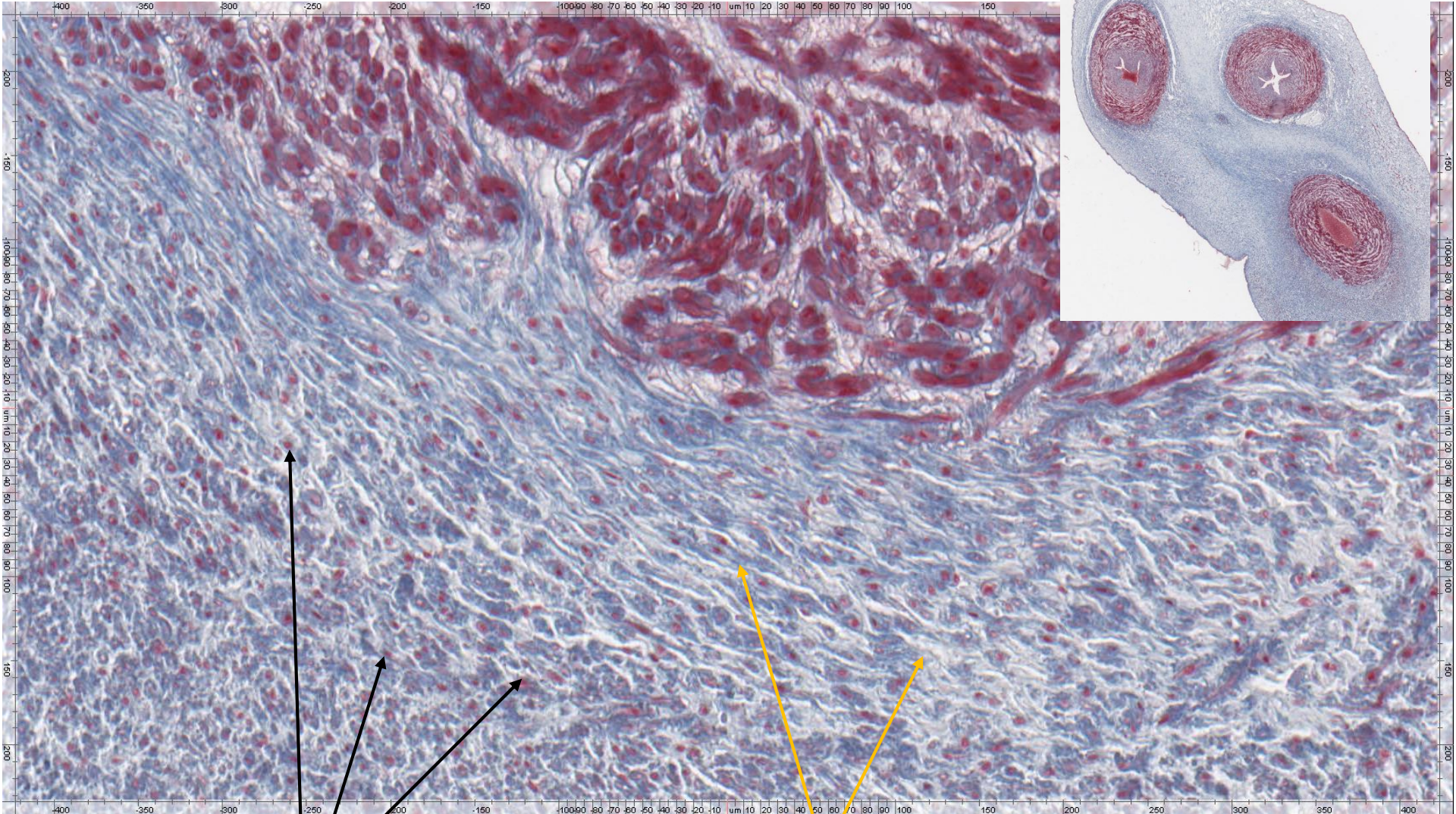


Dense secretory granules

1 μm



# Wharton's jelly – Funiculus umbilicalis (AZAN)

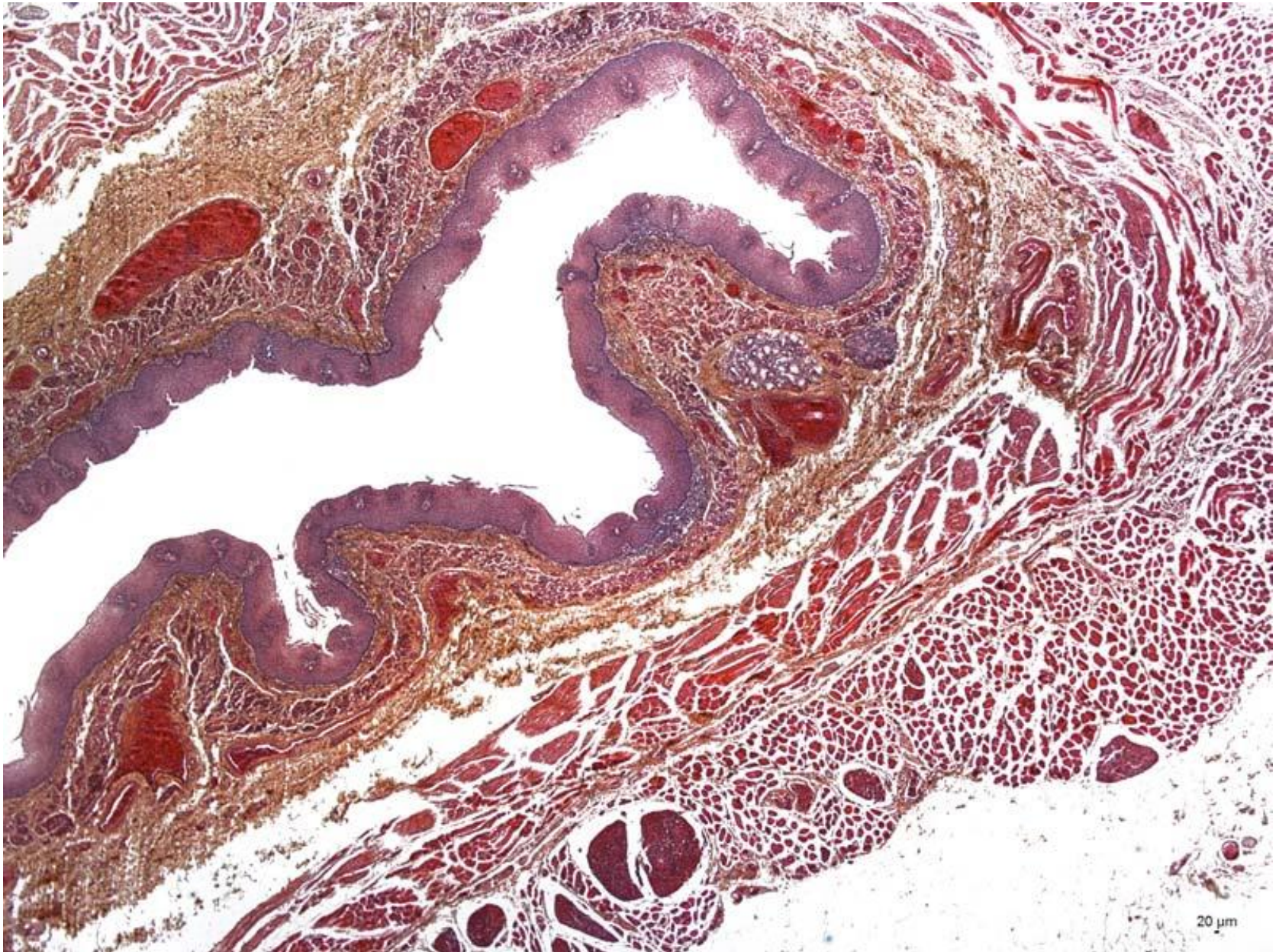


Nuclei of fibrocytes - violet

Collagen fibers - blue

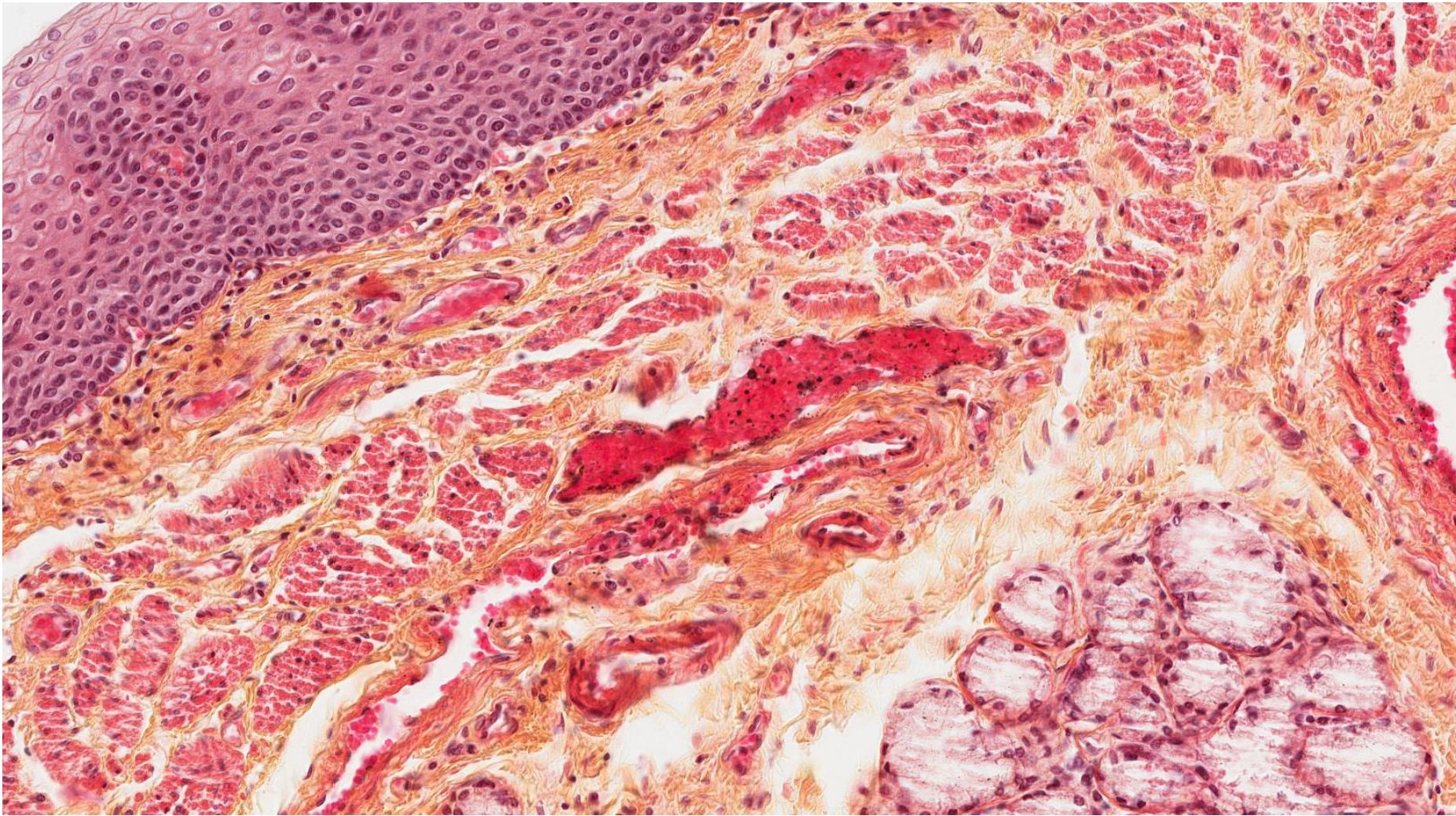


# Loose connective tissue – Esophagus (HES)



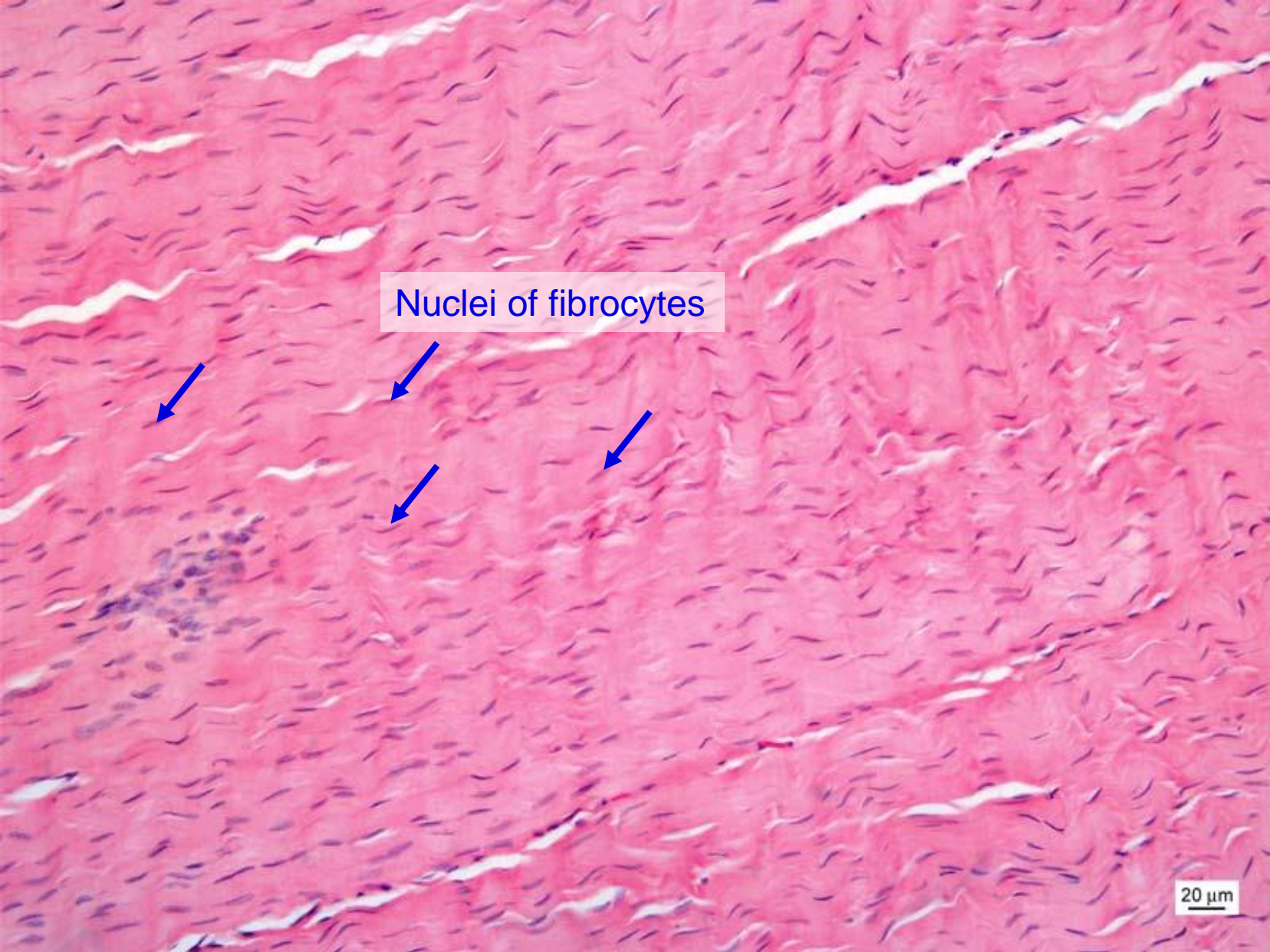


**Loose connective tissue – mucosa, submucosa (HES)**





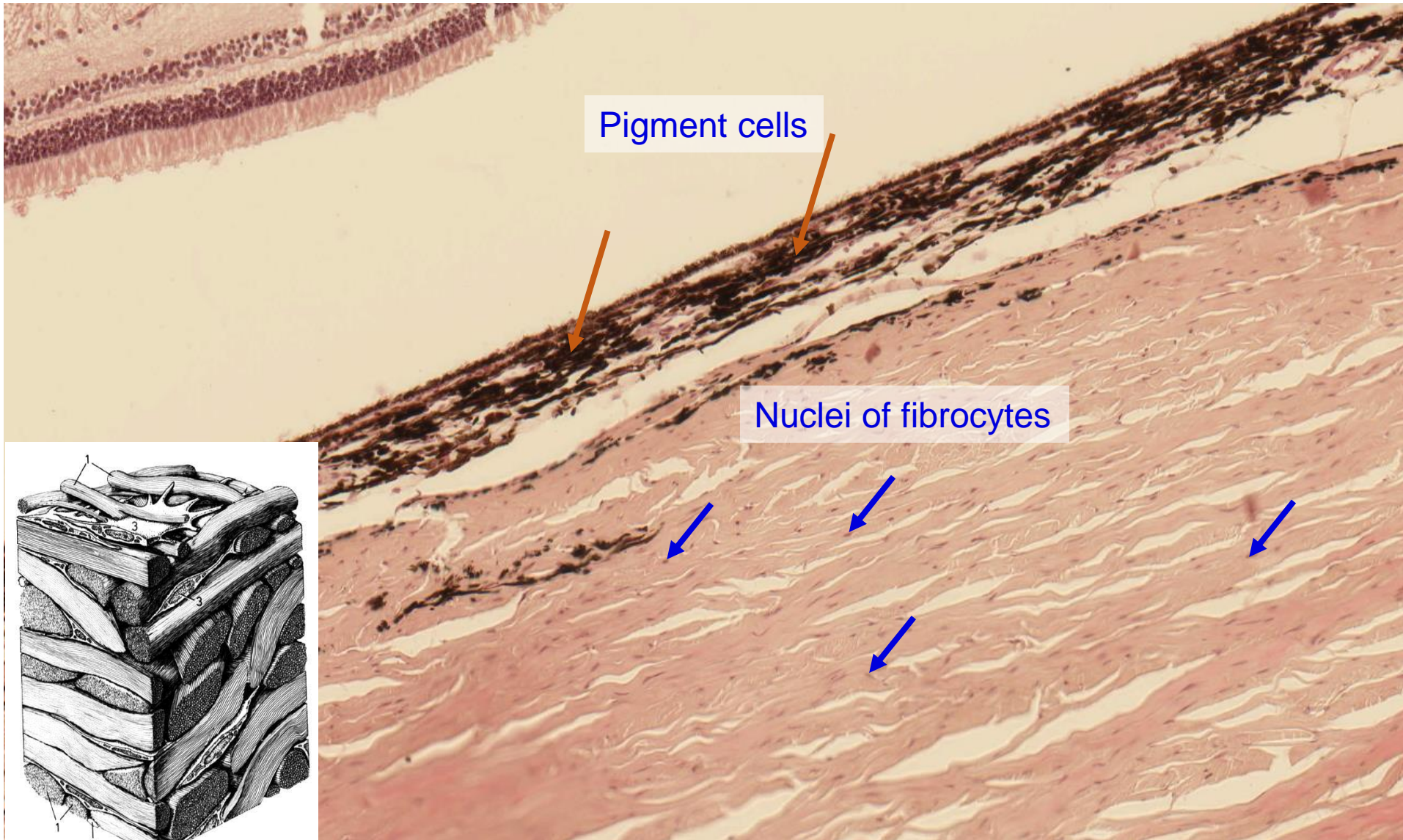
# Dense connective tissue regularly arranged – Tendon (HE)





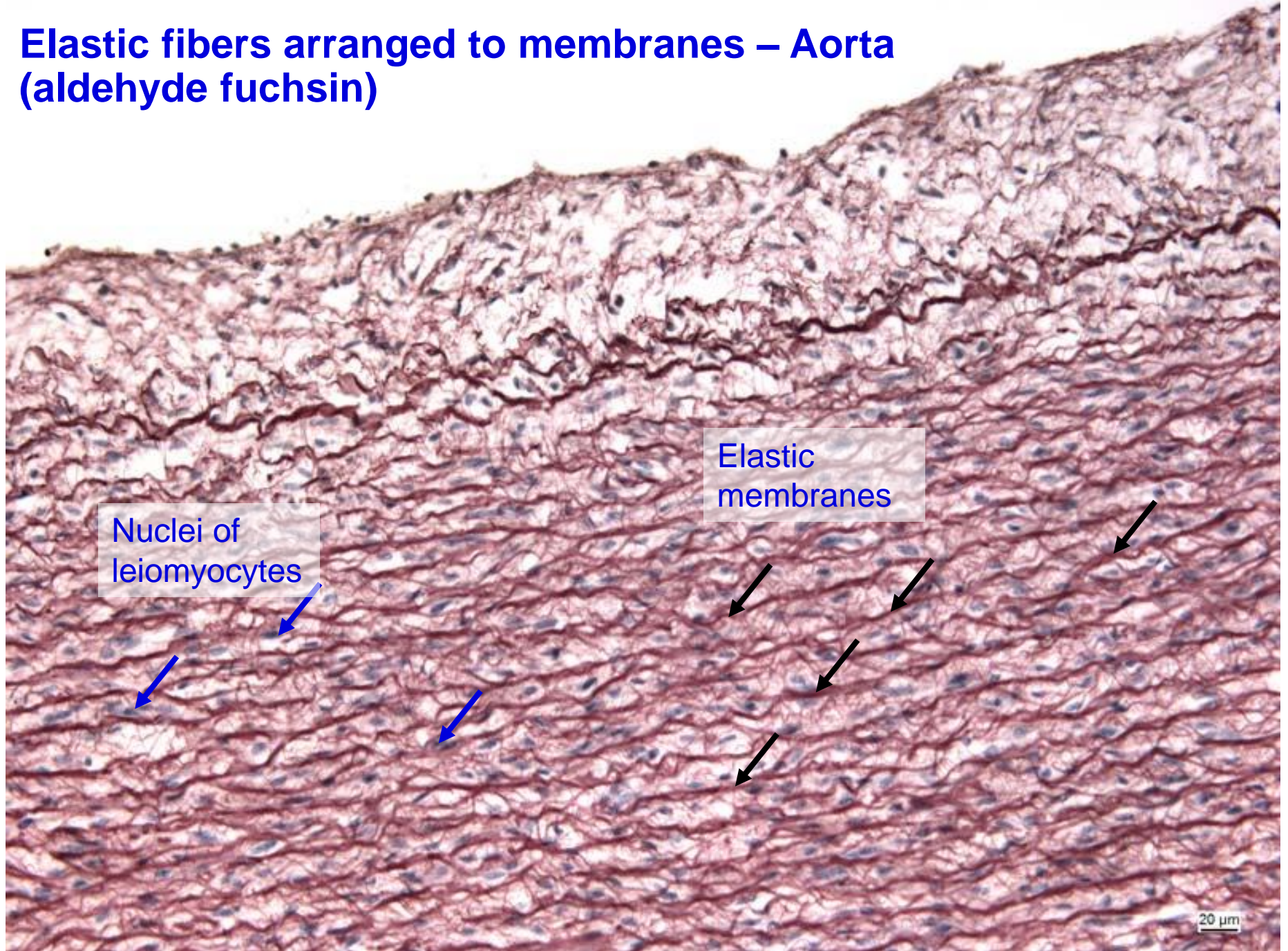
# Dense connective tissue irregularly arranged – Sclera (HE)

## Pigment cells of choroidea





# Elastic fibers arranged to membranes – Aorta (aldehyde fuchsin)



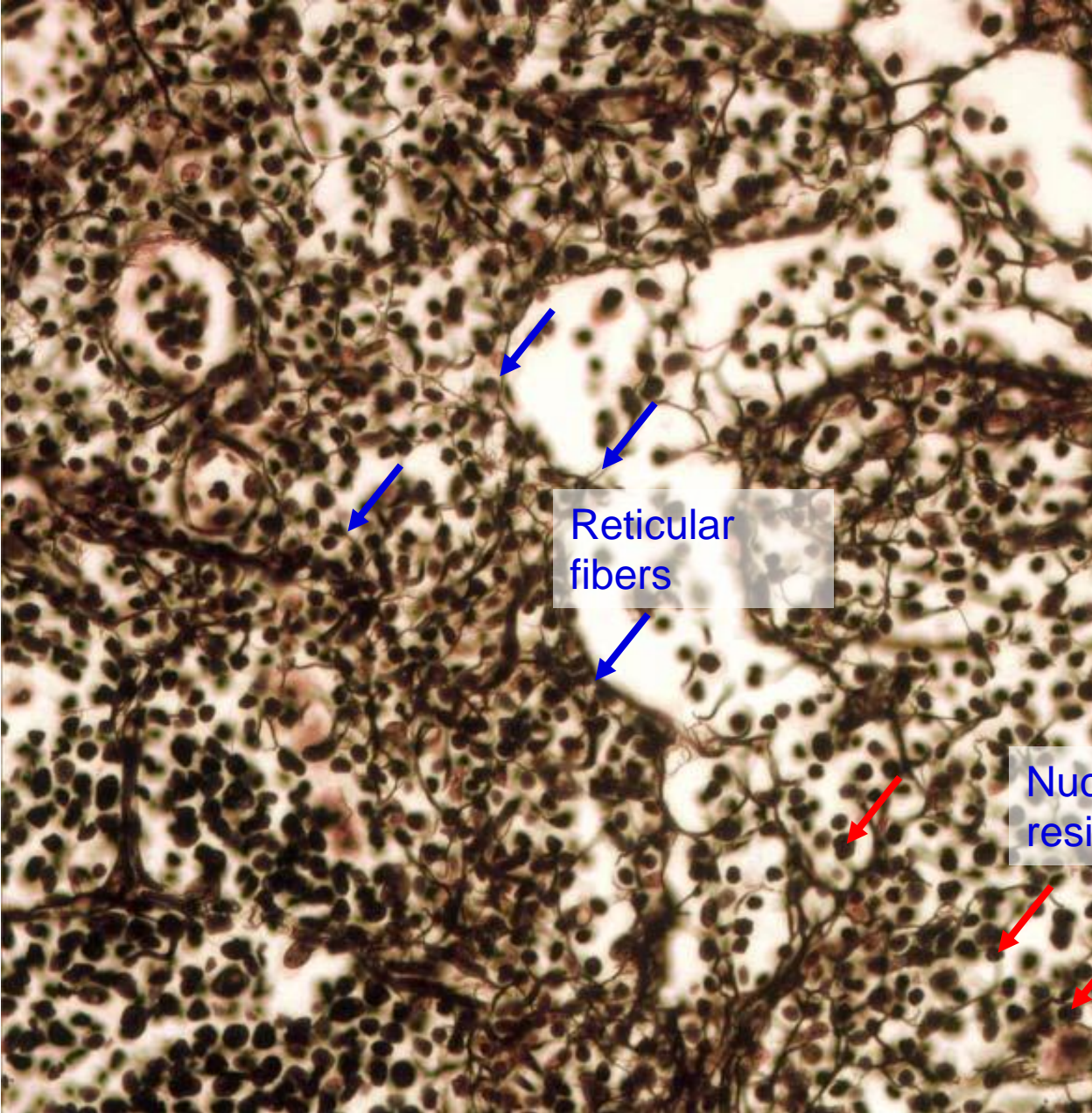
Nuclei of  
leiomyocytes

Elastic  
membranes

20 µm

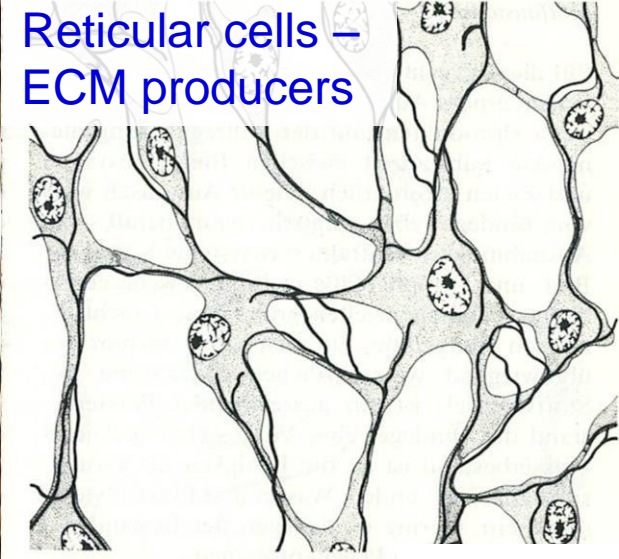


# Reticular tissue – Lien (impregnation)



Reticular fibers

Nuclei of lymphocytes residing in spleen



Reticular cells – ECM producers

<http://quizlet.com>

20 μm



# Reticular connective tissue - intestinum crassum (HE)





# Connective tissue proper

## Slides to study:

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)

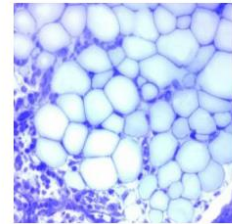
Elastic membranes (62. Aorta)

## Electronograms to study:

Atlas of Cytology and Embryology #32-37.

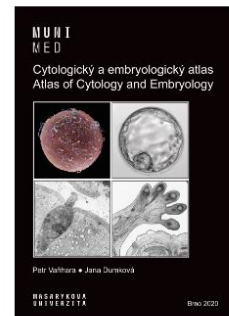
### Atlas of Histology

*recommended study tool*



### Atlas of Cytology and Embryology

*recommended study tool*



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.