



CARDIOVASCULAR SYSTEM

- Heart
- Vessels
 - arteries
 - veins
 - capillaries
 - continuous
 - fenestrated
 - sinusoids



Credits for HE practice

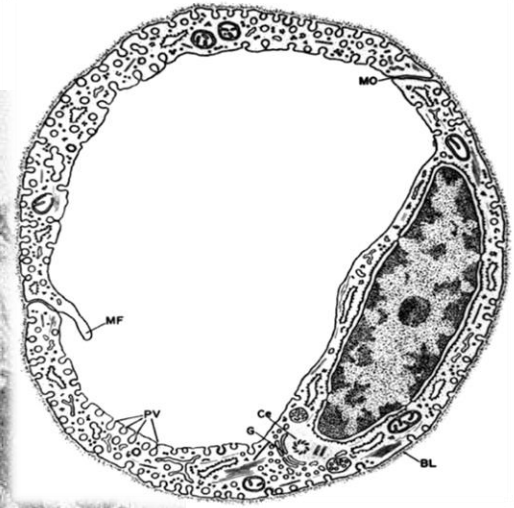
- 100% attendance
- complete **set** of signed protocols from all lessons
- passed 4 partial written tests

- every student is examined **4×** per semester
- testing the knowledge of **structures** of the **previous practical lesson**, including the **theory** (their English and Latin names, functions, development and biological context) **and** the **theory** for the **current practical lesson**
- short written test with images or schemes results: „Passed“ (P; >50% of correct answers) or „Failed“ (F; =<50%)
- all images and schemes are made public (MedAtlas, IS)
- if you fail the partial test, you can repeat it once a semester (the **1st resit test**)
- you have to successfully pass **all 4 tests** (4/4 or 4/5)
- failing in the partial tests (F, F) results in the overall **2nd resit test** at the end of semester from the knowledges of the whole semester
- tests can always be written only in proper practice, not in a substitute
- =>30% absence in the practices results in the test from the knowledges of the whole semester (incl. all 4 partial tests during semester)

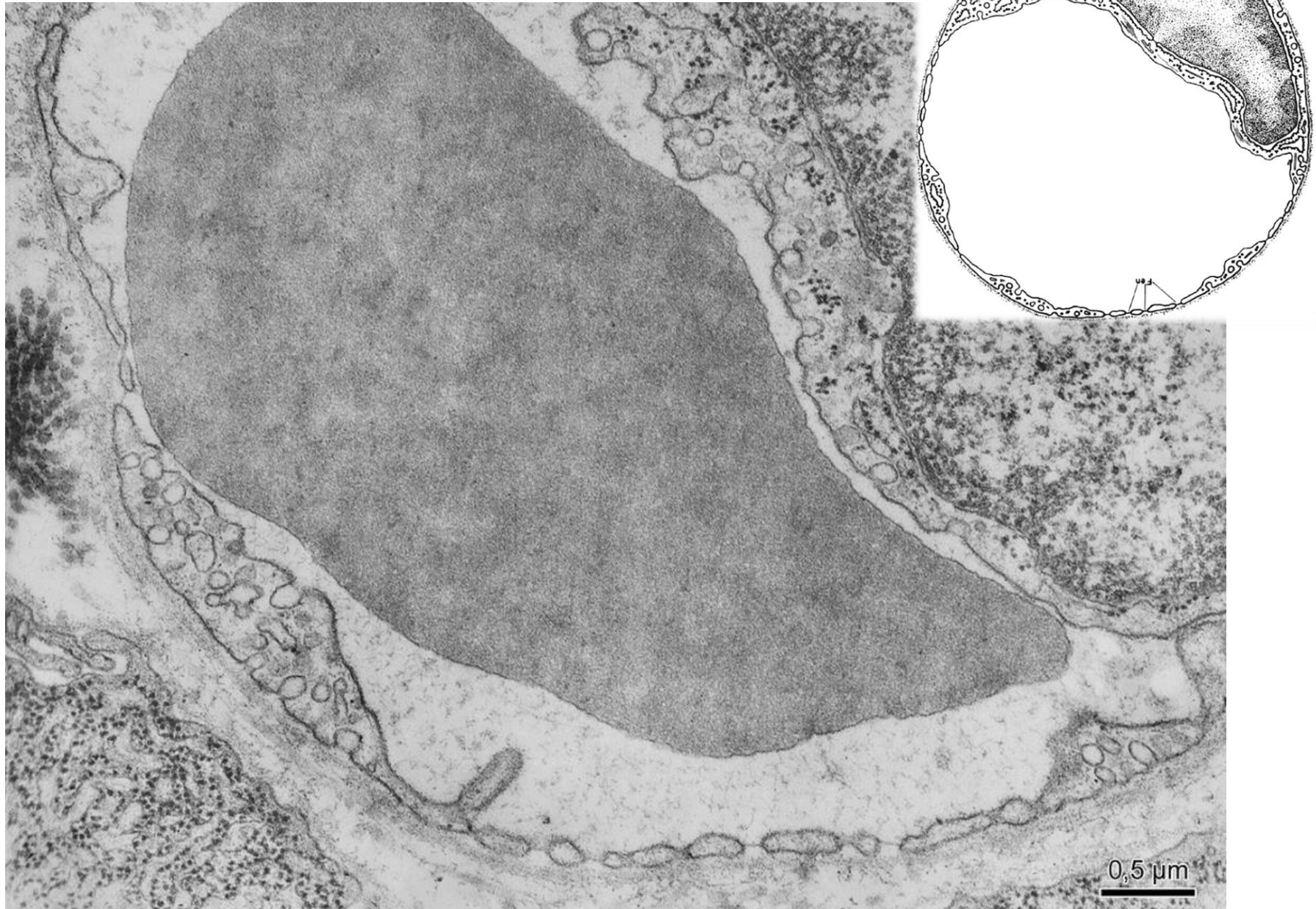
HE lectures

- lectures from HE will be in presence form and be streamed, so they will **not** be available offline (in IS)

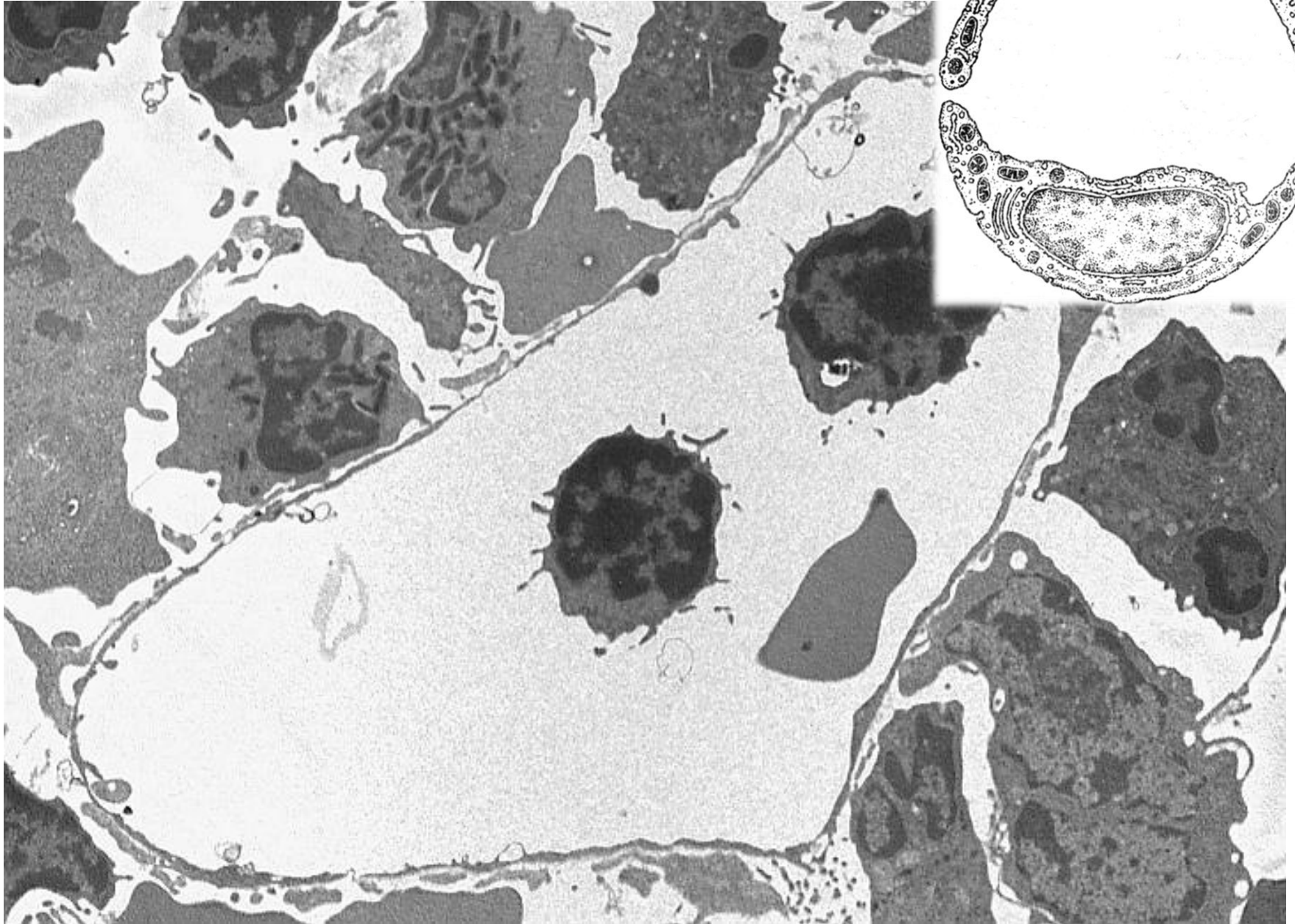
continuous capillary



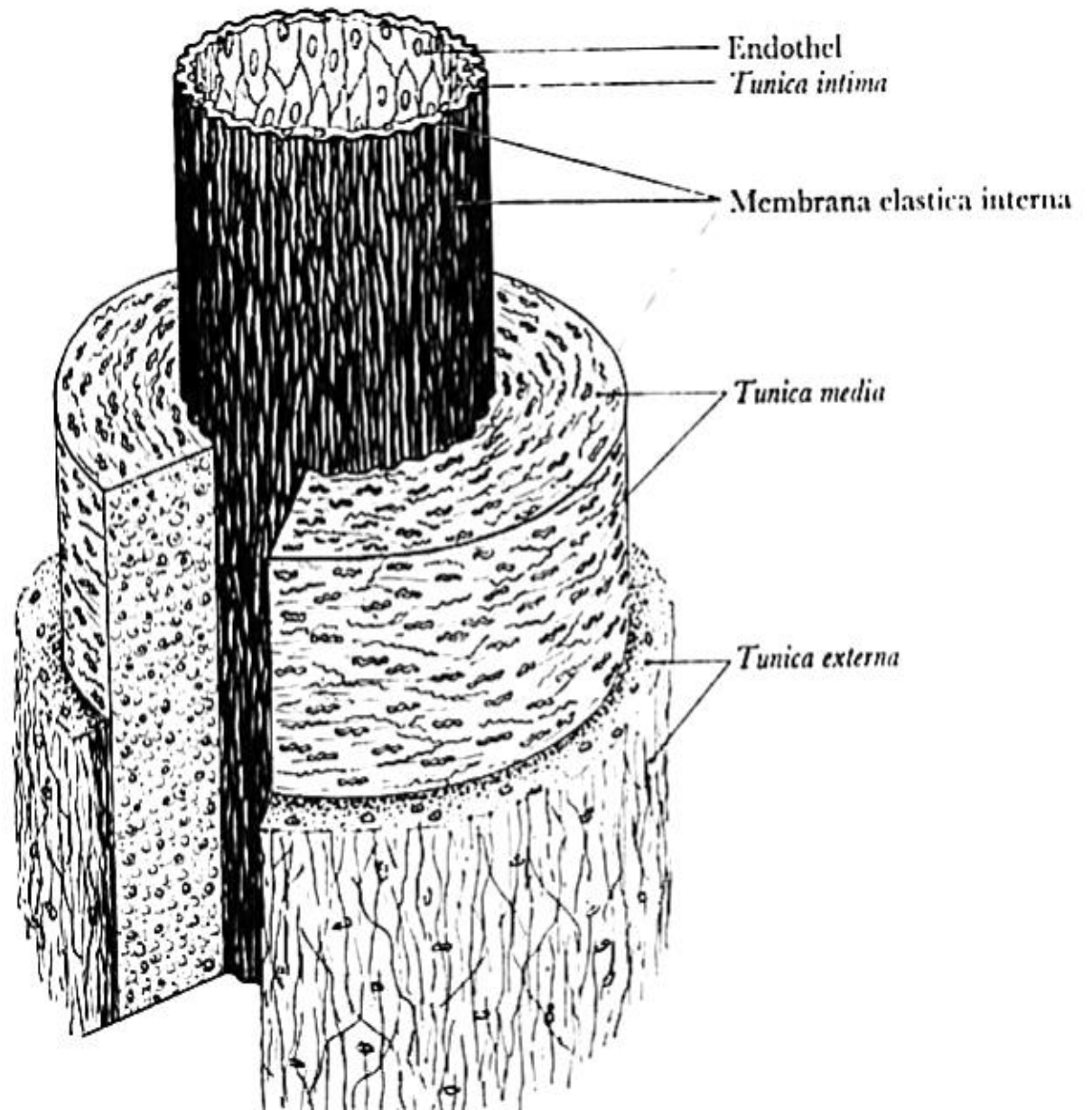
fenestrated capillary



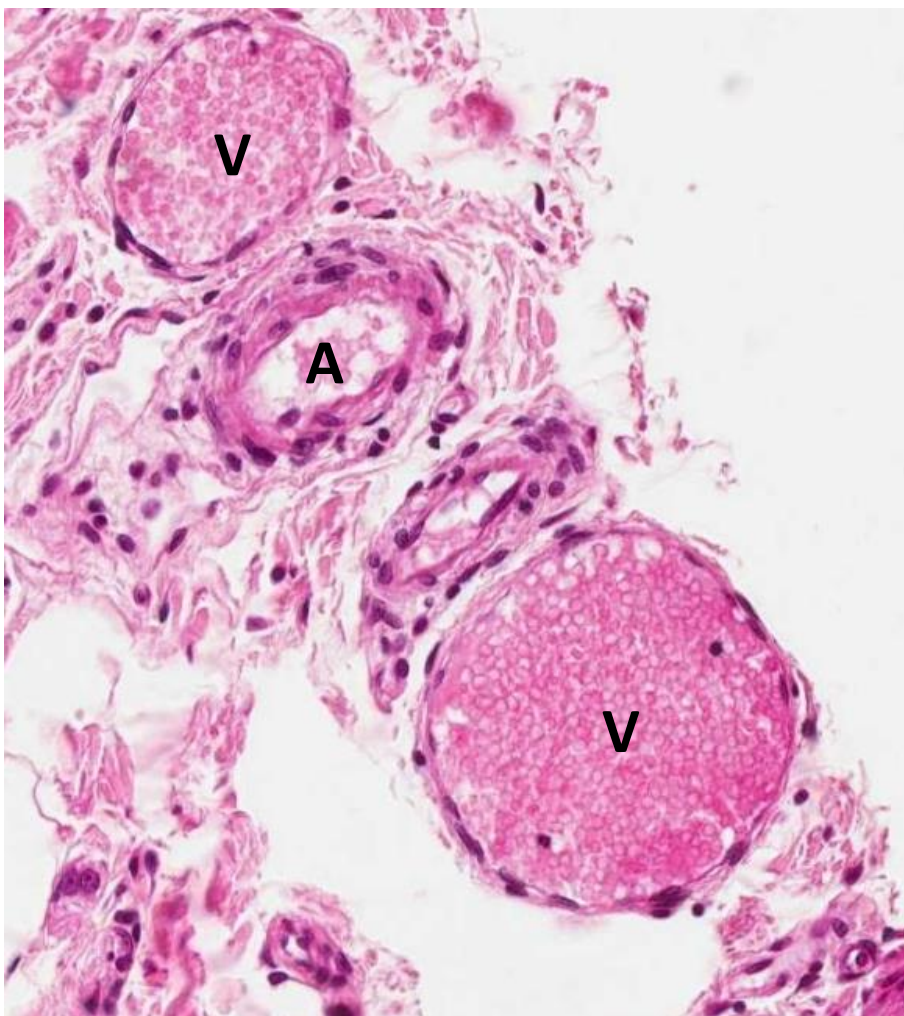
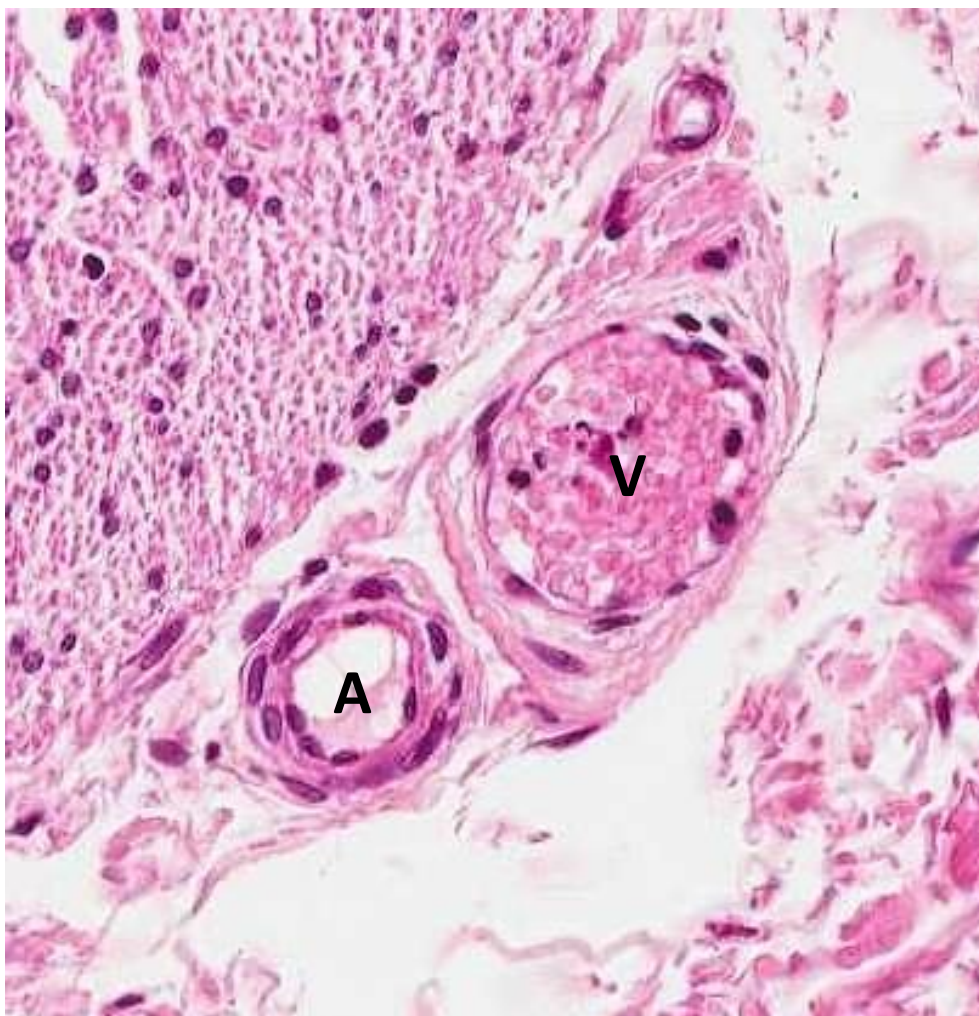
sinusoid capillary



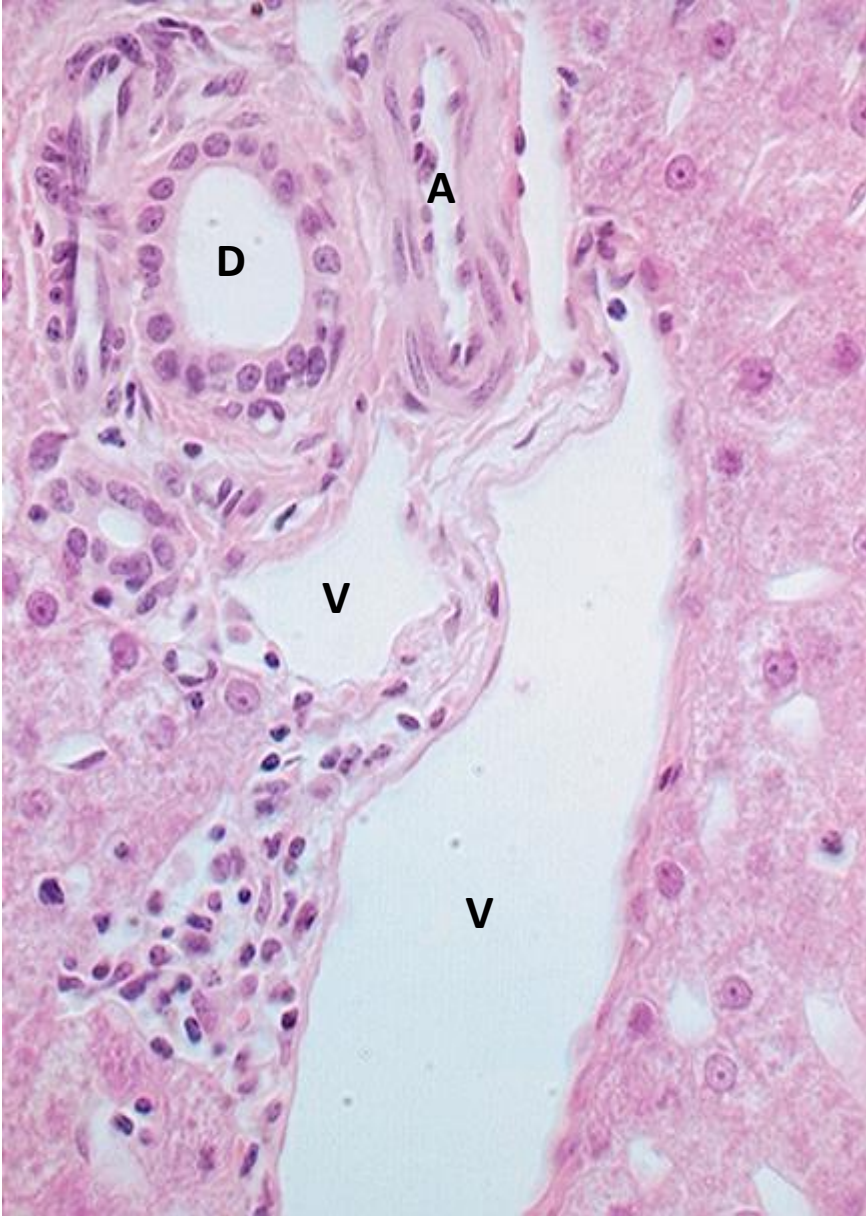
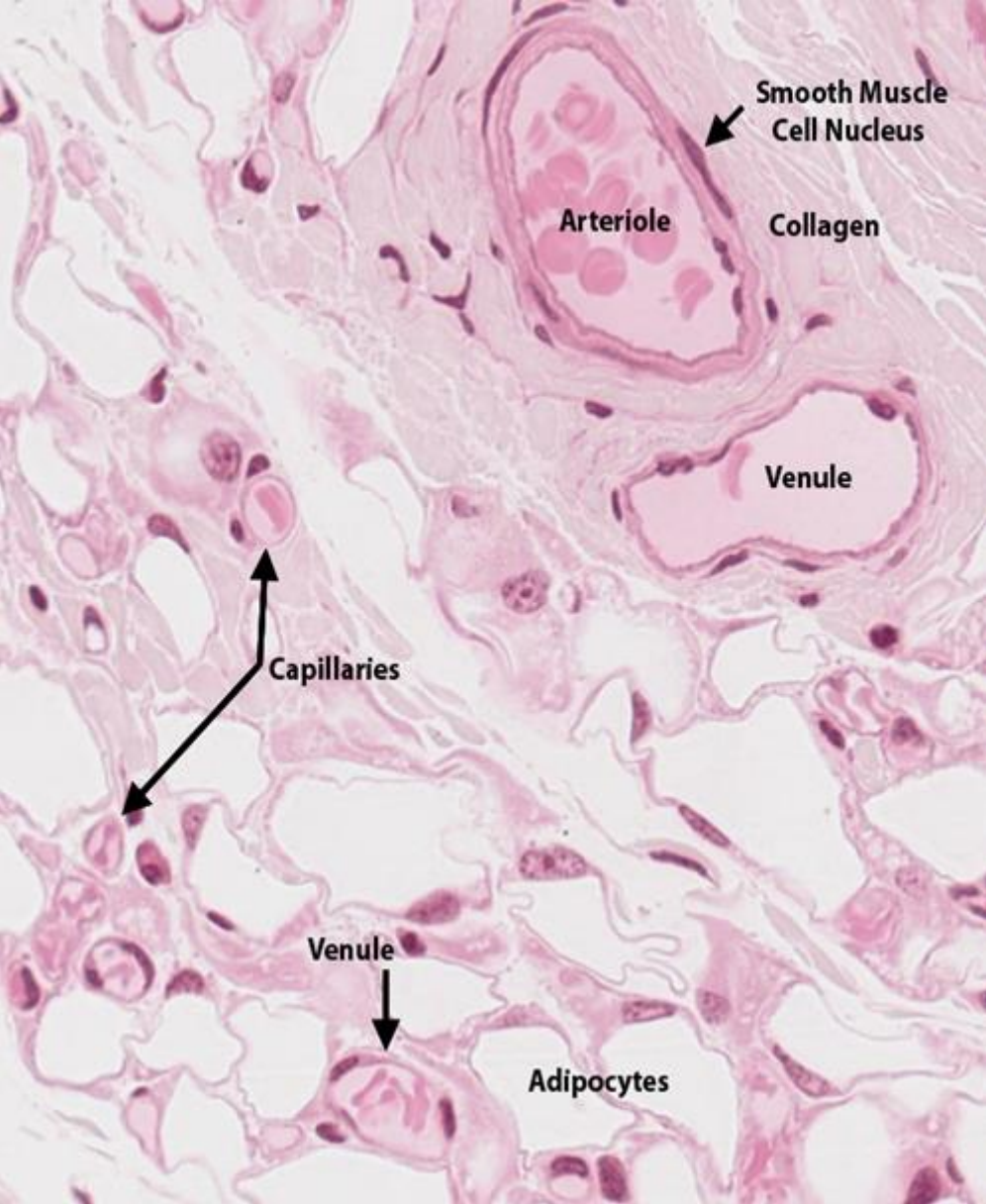
general structure of blood vessels



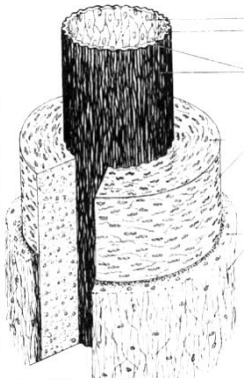
arteriole and venule



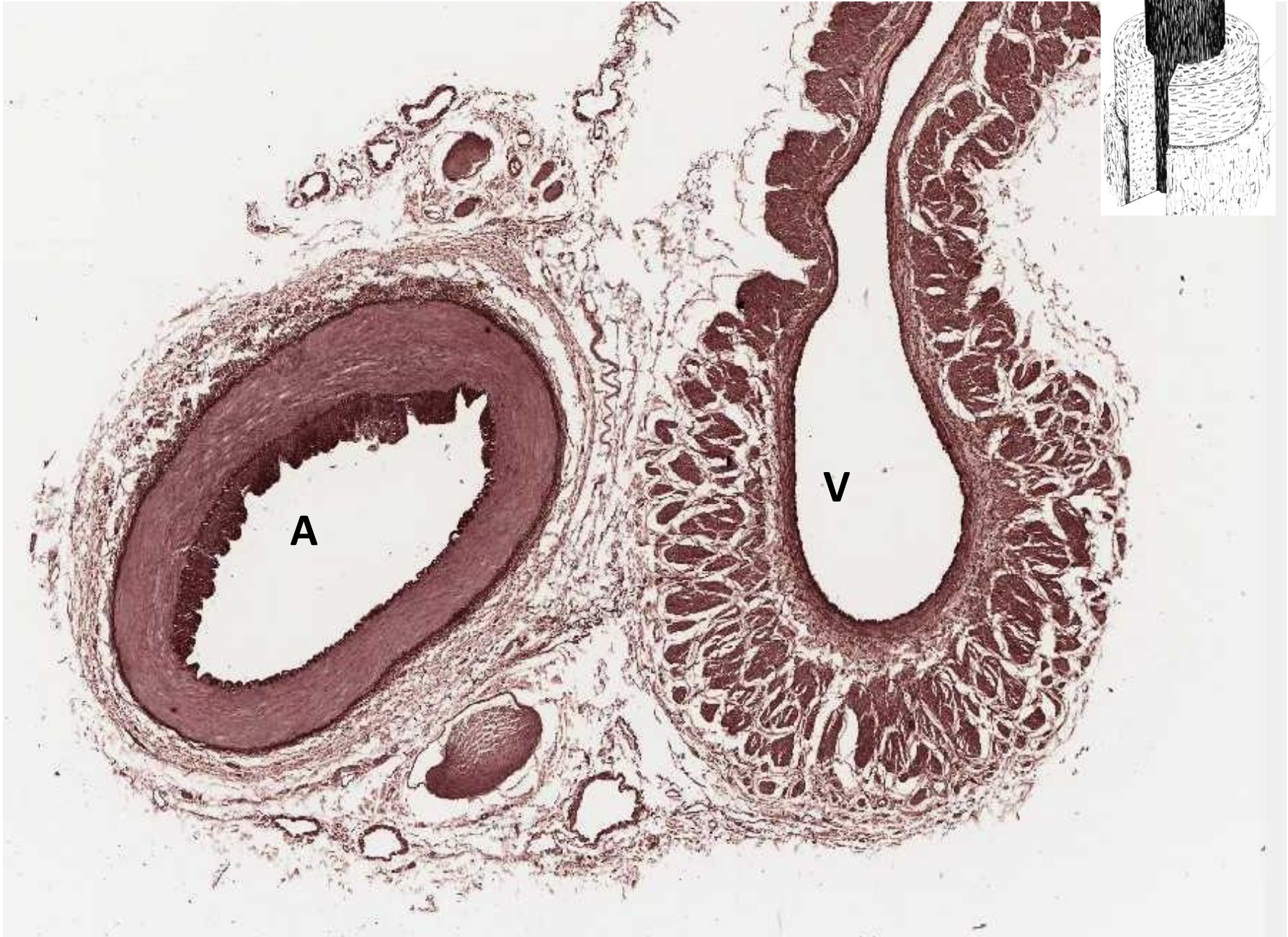
capillaries, arterioles, venules [**endothelium**] x ducts [**epithelium**]



muscular artery and vein - HE



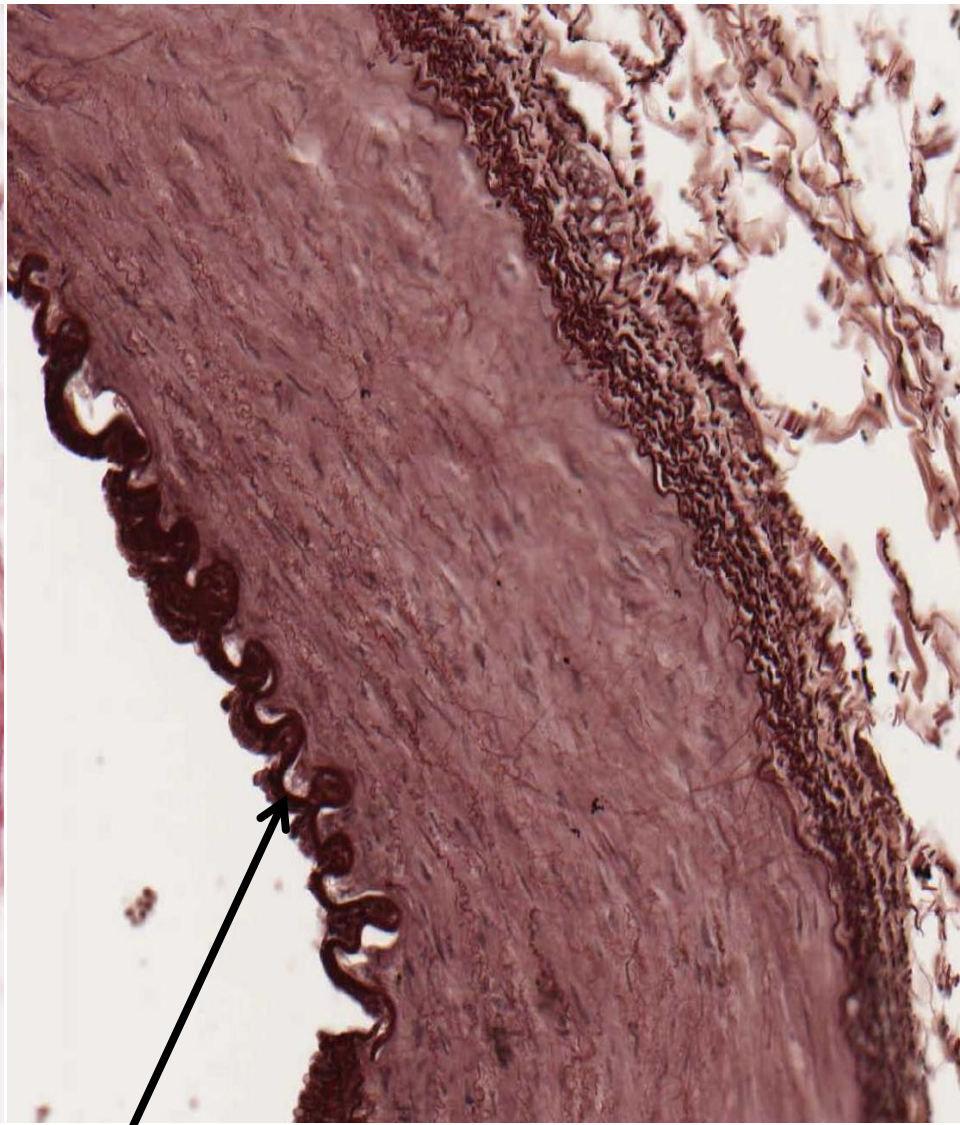
muscular artery and vein - orcein



muscular artery

HE

orcein

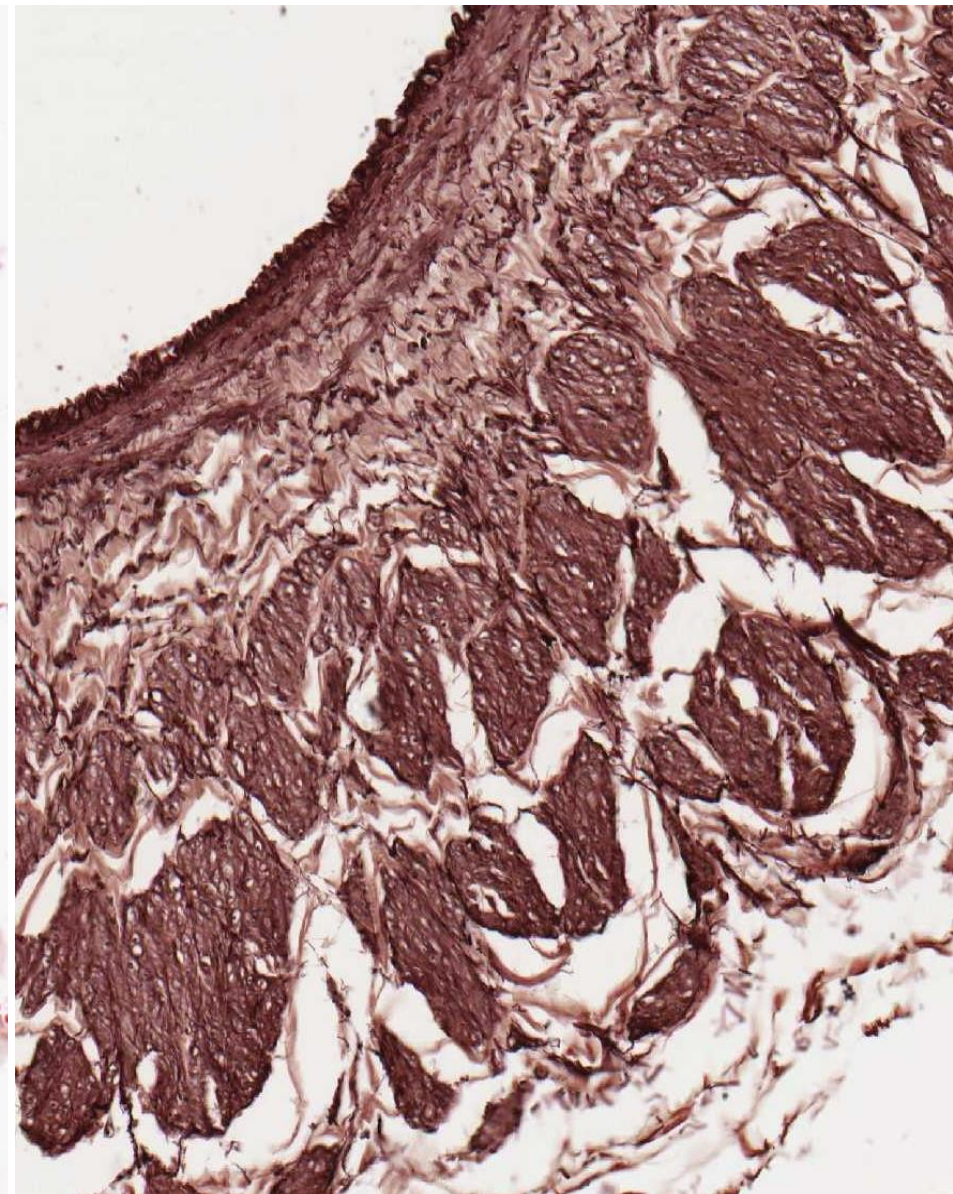
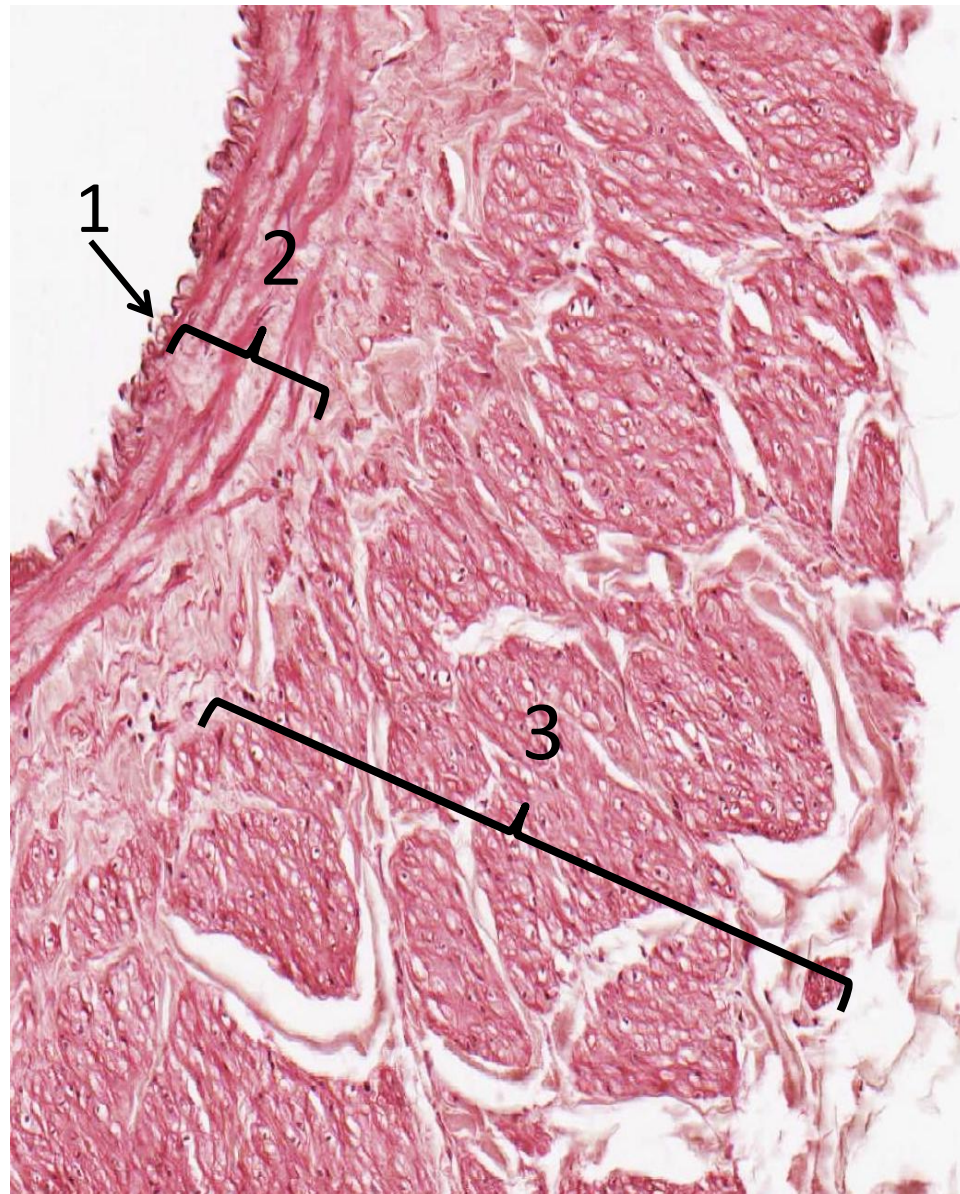


membrana elastica interna

vein (1-intima, 2-media, 3-adventitia)

HE

orcein

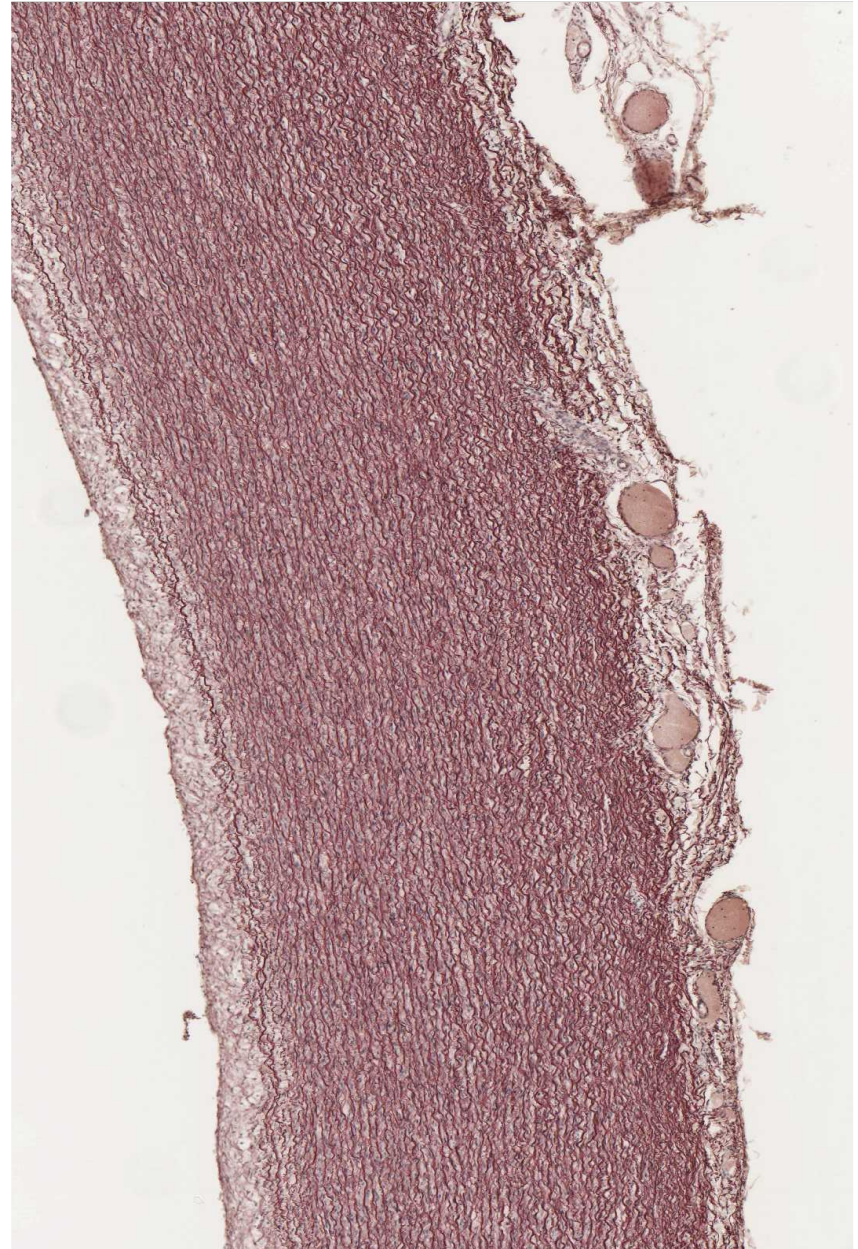


aorta

HE

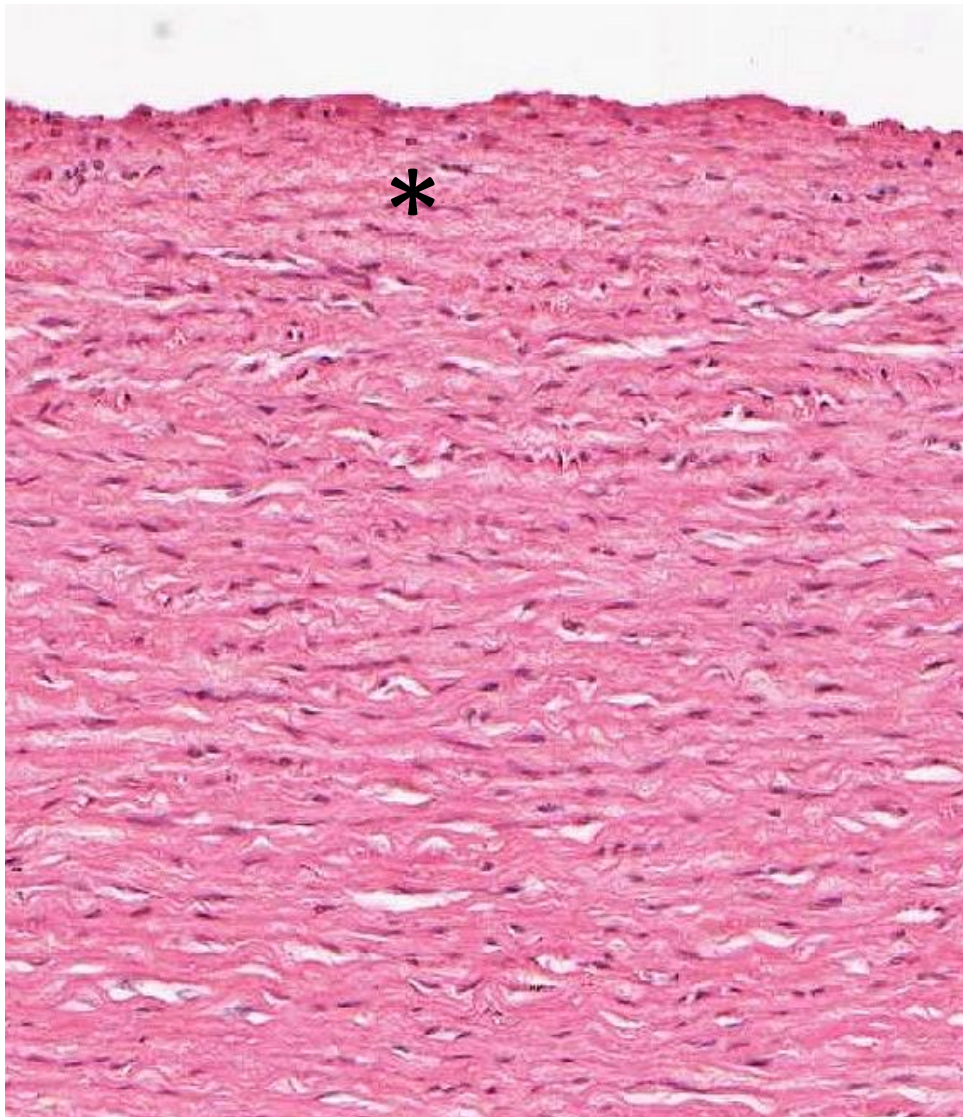


orcein

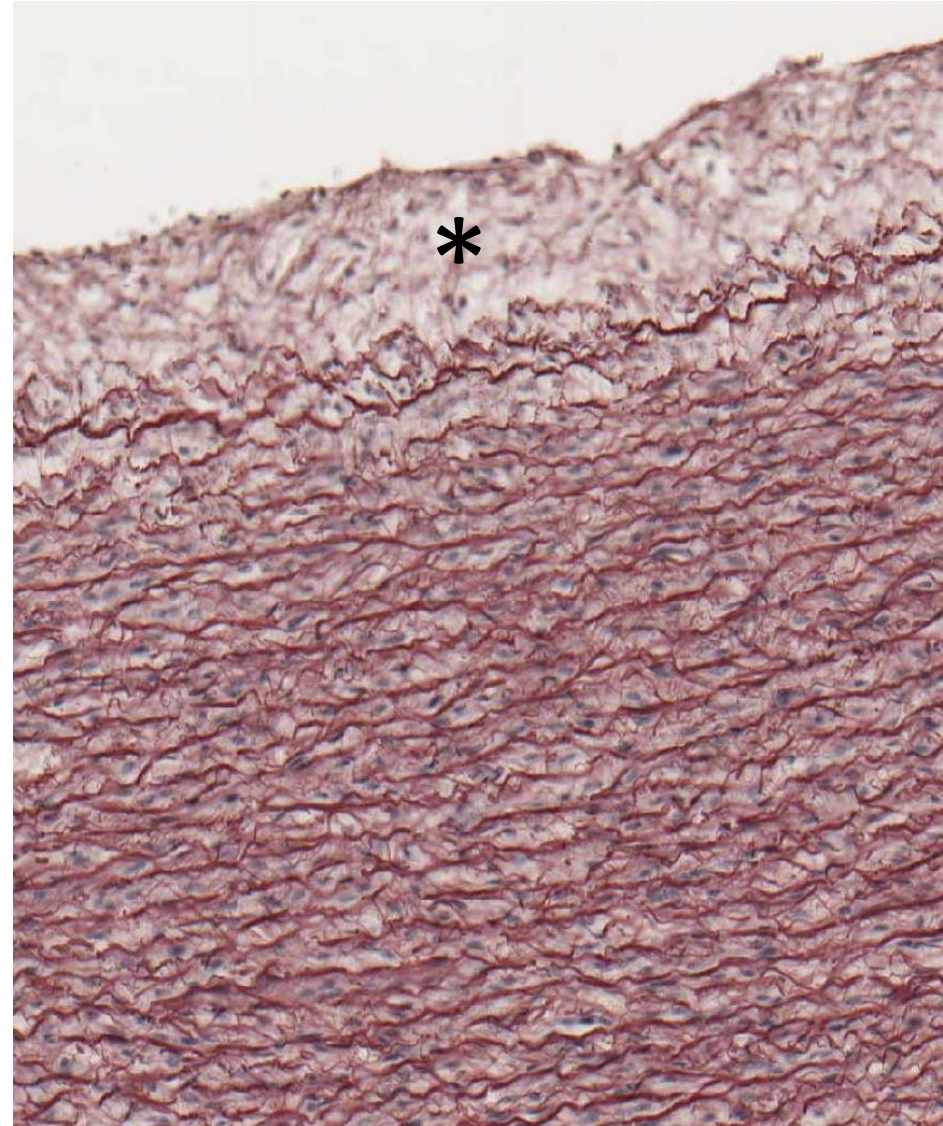


aorta – intima *

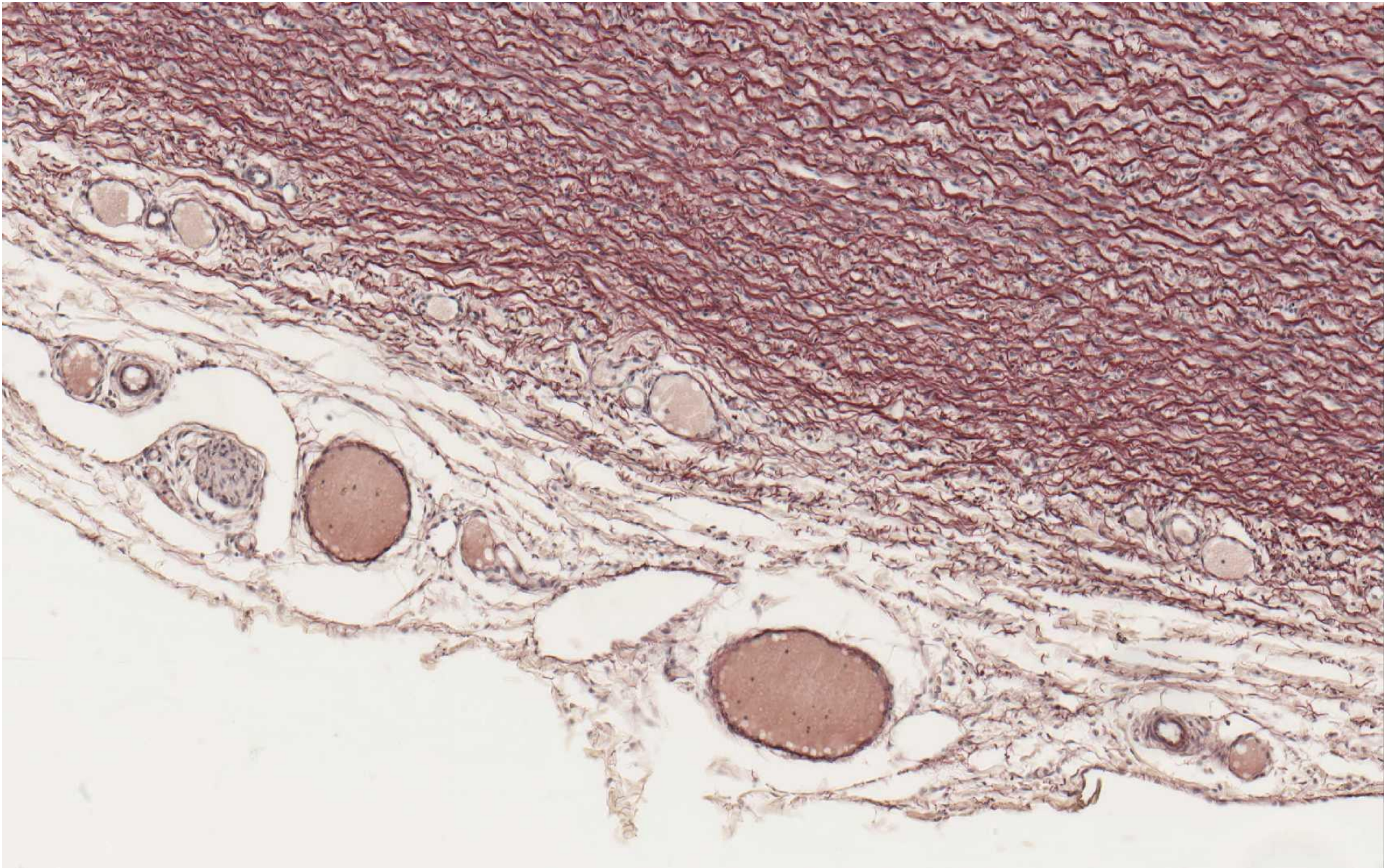
HE



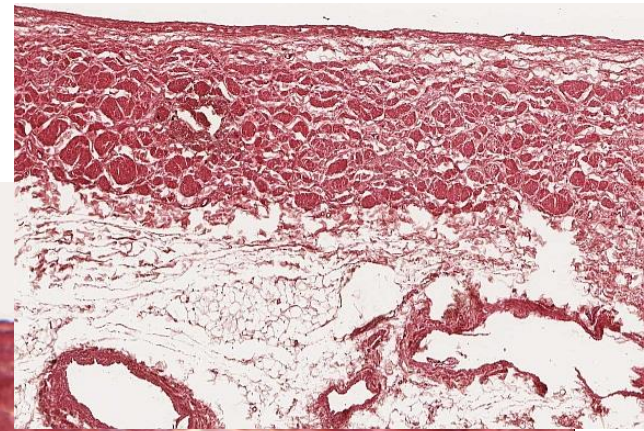
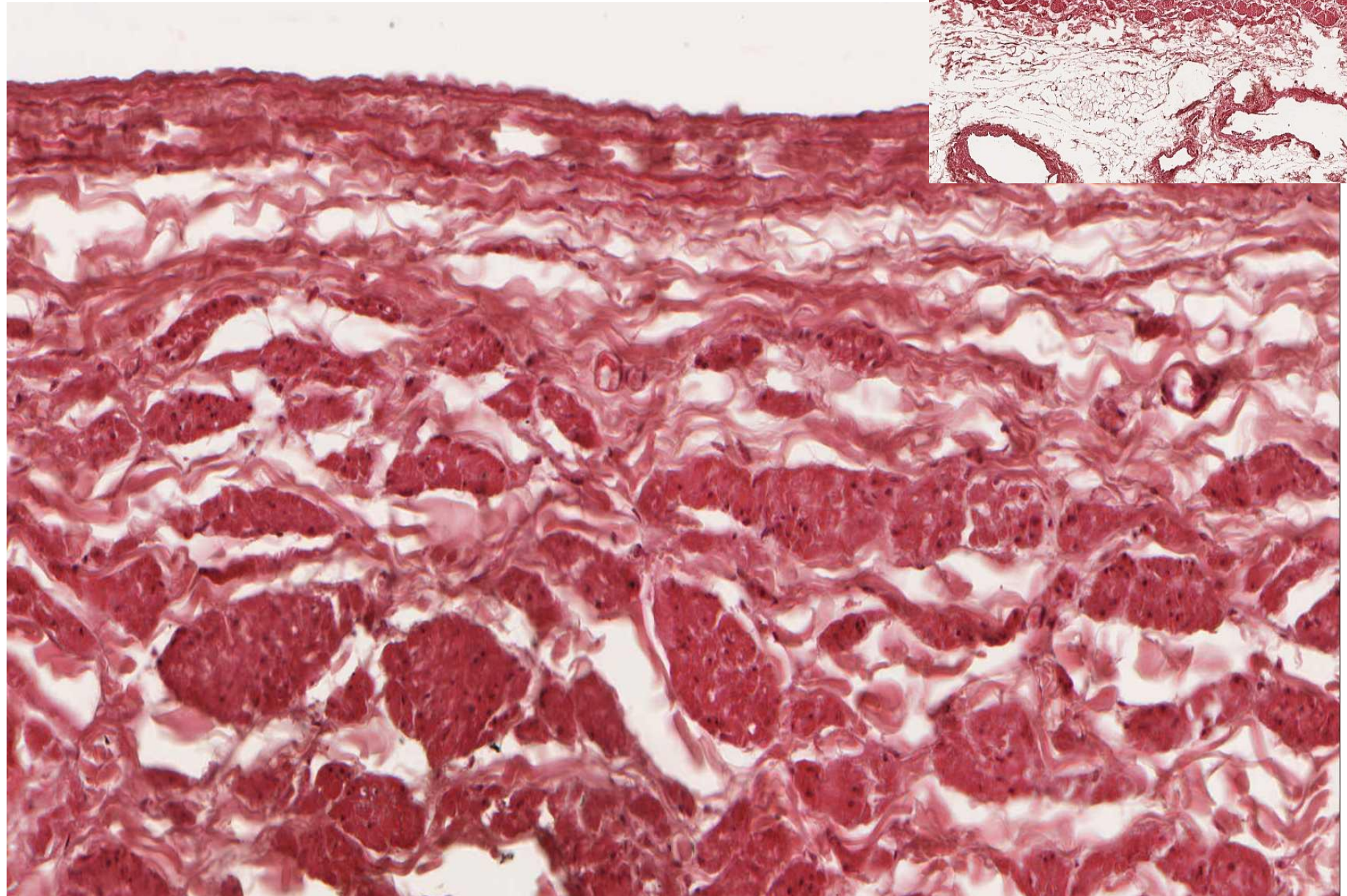
orcein



aorta (orcein) – adventitia, vasa vasorum, nervi vasorum

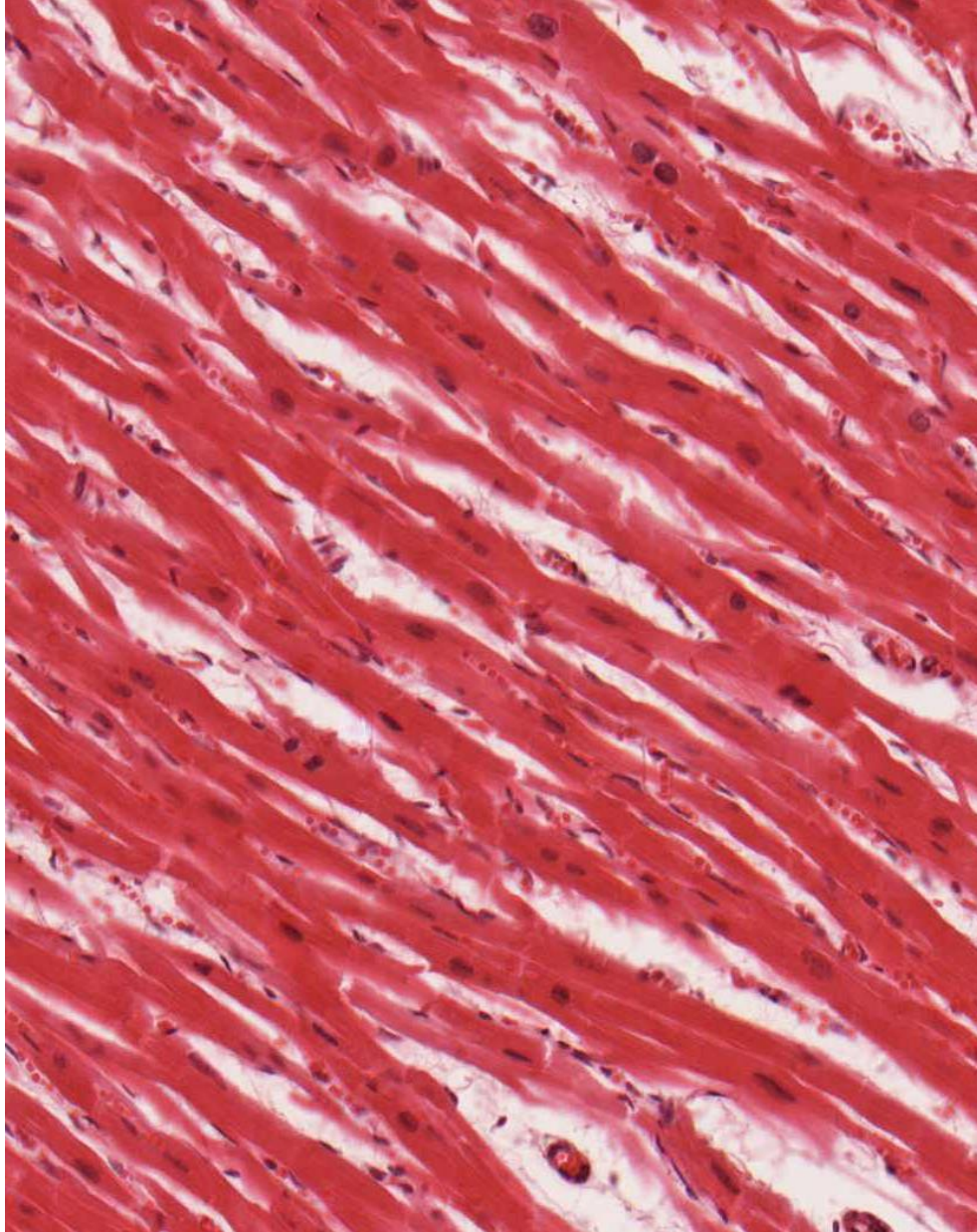


vena cava (HE)

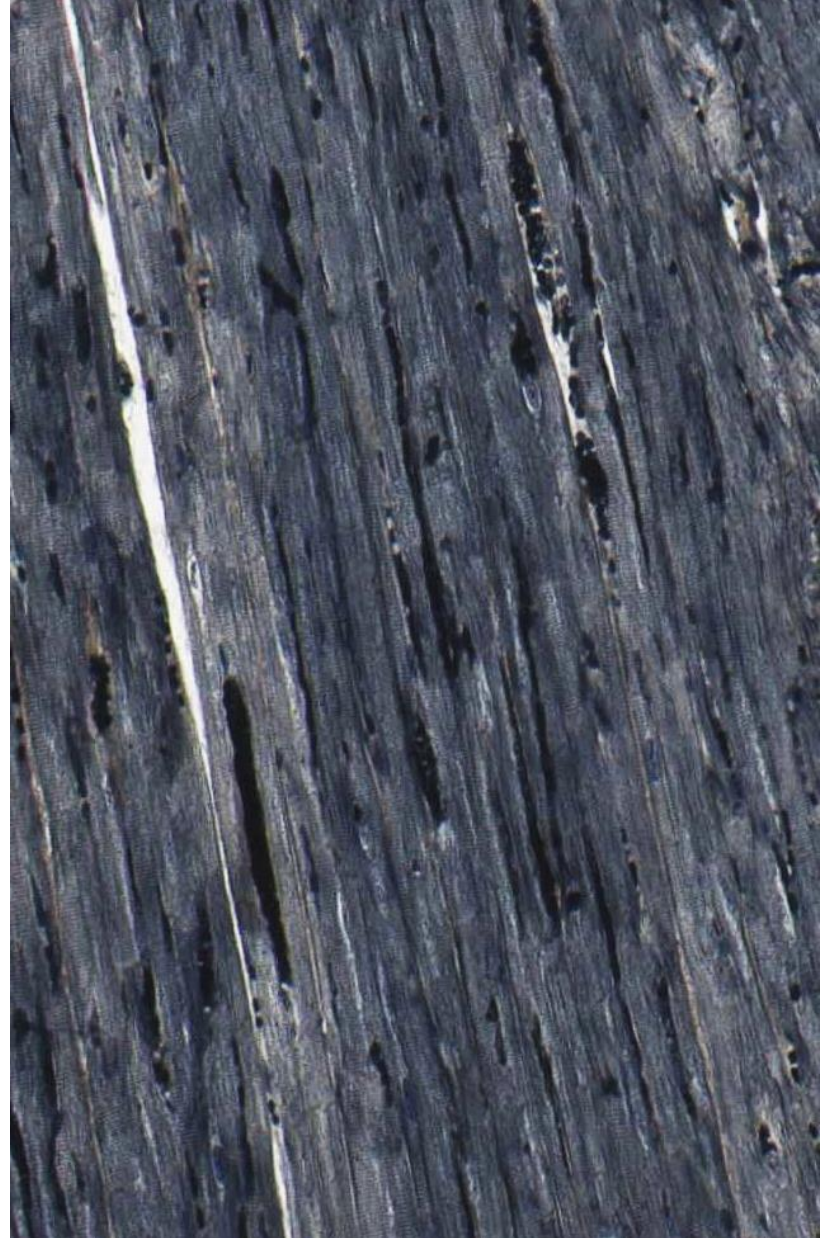


myocardium

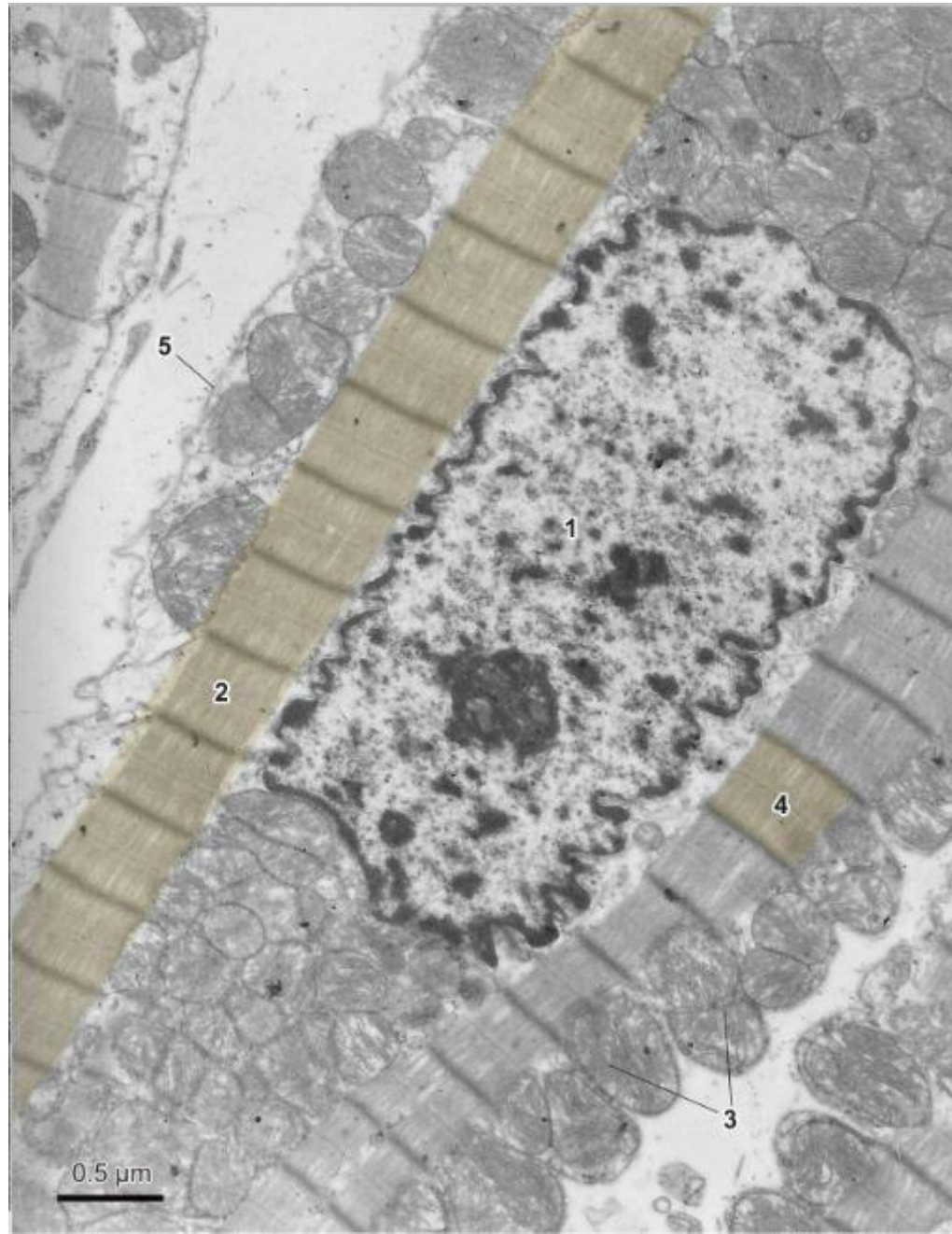
HE



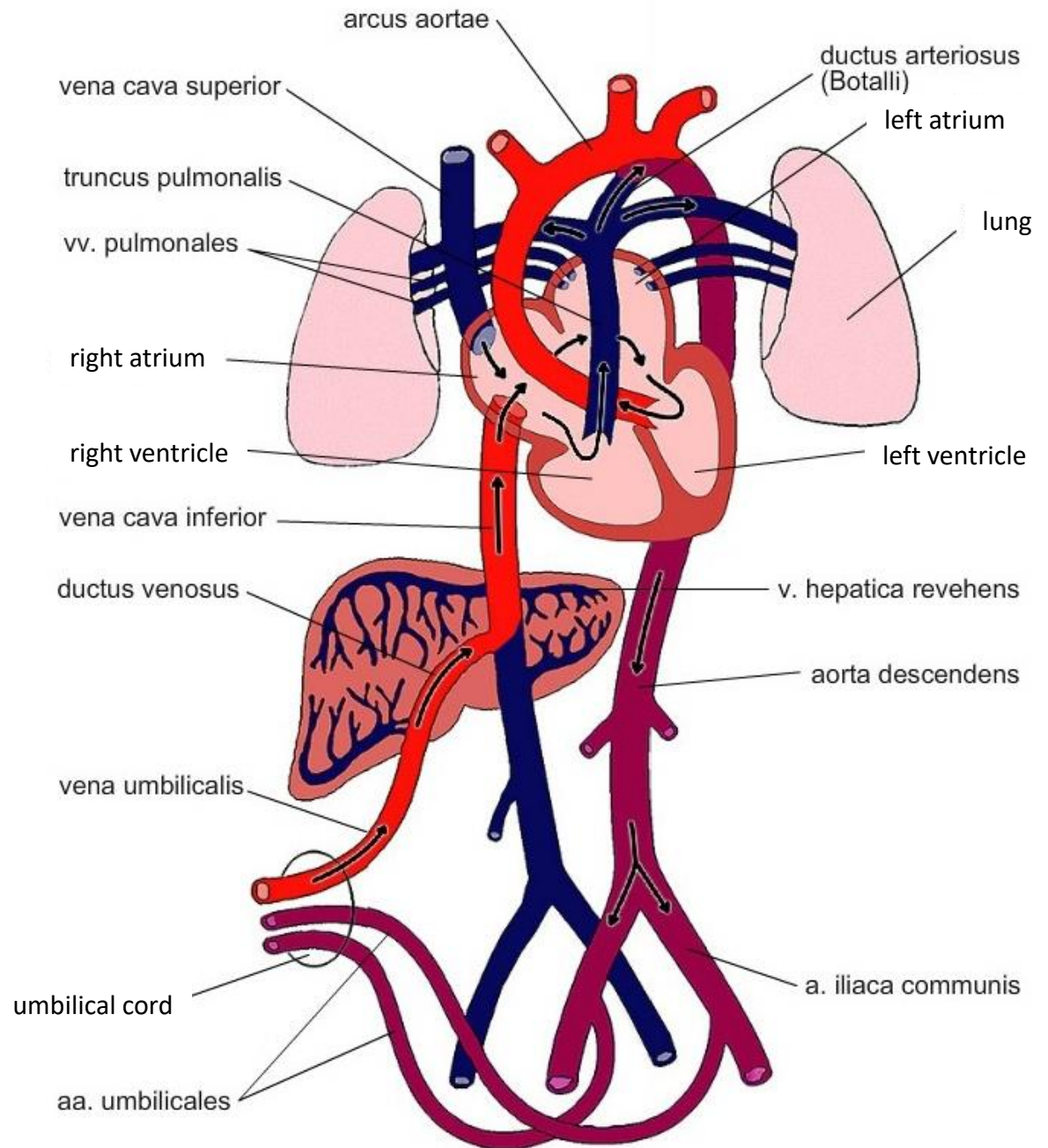
Heidenhain



cardiomyocyte (TEM)



fetal blood circulation





CARDIOVASCULAR SYSTEM

Slides

Muscular artery and vein (59 – HE, 60 - orcein)

Aorta (61 – HE, 62 - orcein)

Vena cava (63 - HE)

Myocardium (64 – HE, 65 - Heidenhain)

Atlas EM:

Continuous capillary (55)

Fenestrated capillary (56, 57)

Sinusoid capillary (58)

Arteriole (59)

Cardiomyocyte (44-46)

Development of heart, embryonic and fetal blood circulation (91-93)