



# Smyslové orgány

Orgán zraku

orgán sluchu a rovnováhy

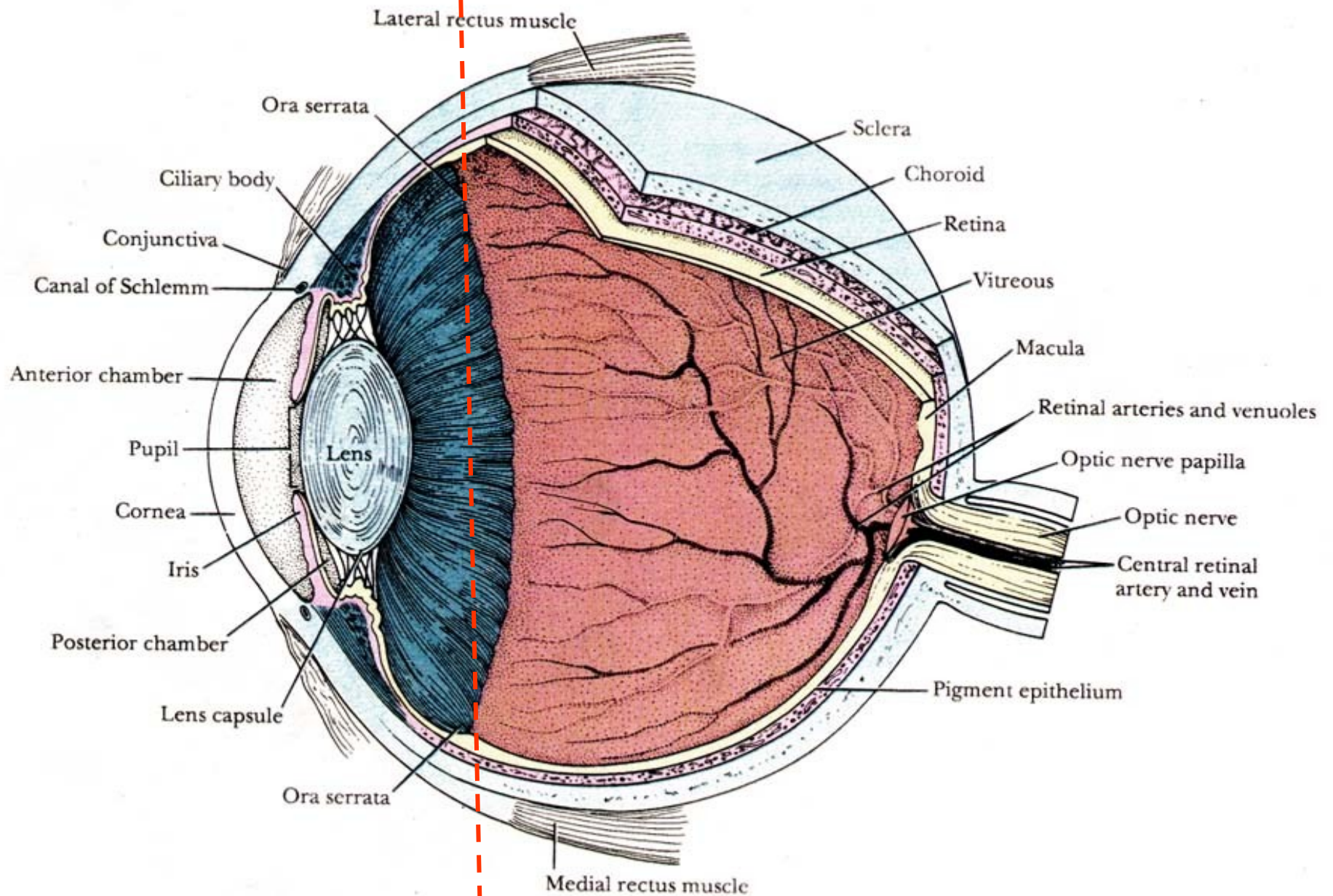
a přídatné orgány

# Orgán zraku

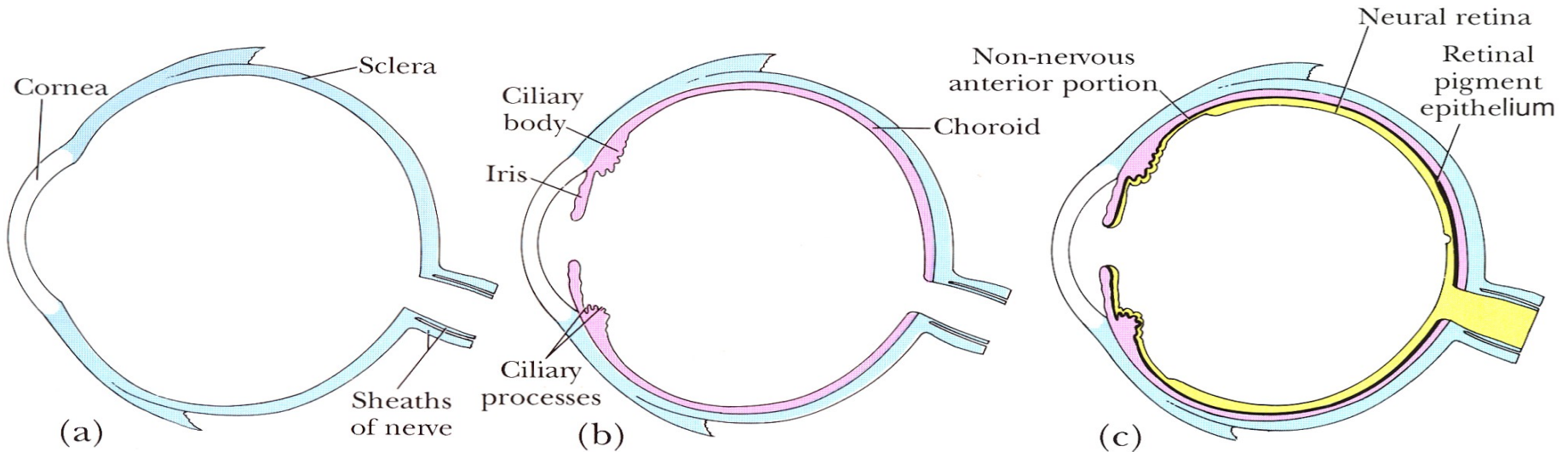
- Oční koule (bulbus oculi)
  - přední segment oční
  - zadní segment oční
- Fasciculus opticus
- Víčko (palpebra)
- Slzná žláza (gl. lacrimalis)

# Přední segment

# Zadní segment



# Stěna oční koule

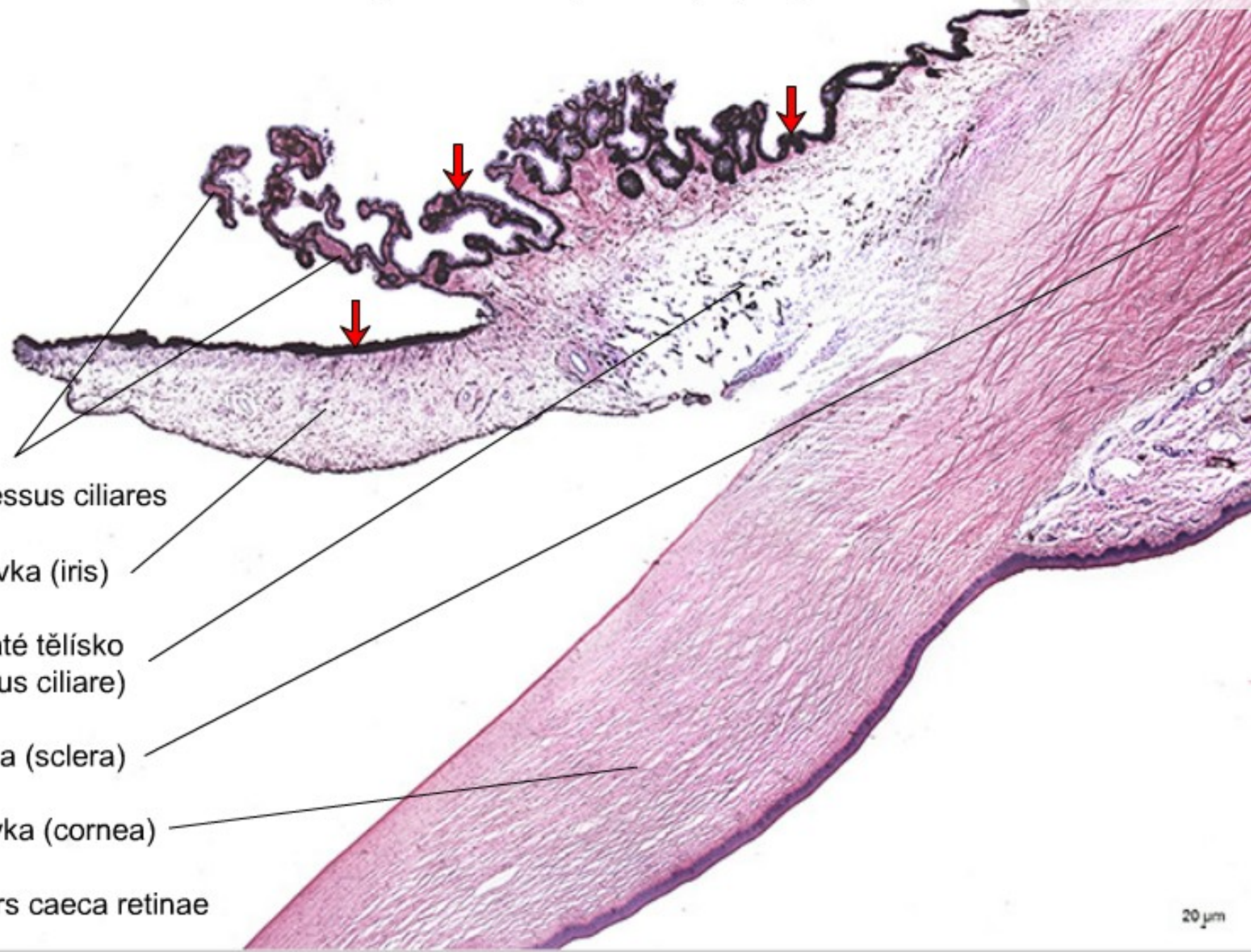


**Figure 23.1.** Schematic diagram of the layers of the eye. The layers are organized in three separate concentric layers: an outer supporting layer, the *corneoscleral*

*coat* (a), a middle vascular coat, the *uvea* (b), and an inner photosensitive layer, the *retina* (c).

|                       | Tunica externa<br>(fibrosa) | Tunica media<br>(vasculosa)    | Tunica interna<br>(nervosa)    |
|-----------------------|-----------------------------|--------------------------------|--------------------------------|
| <b>přední segment</b> | <b>cornea</b>               | <b>iris<br/>corpus ciliare</b> | <b>pars caeca<br/>retinae</b>  |
| <b>zadní segment</b>  | <b>sclera</b>               | <b>choroidea</b>               | <b>pars optica<br/>retinae</b> |

Přední segment oční – přehled, (HE), objektiv 2,5×



processus ciliares

duhovka (iris)

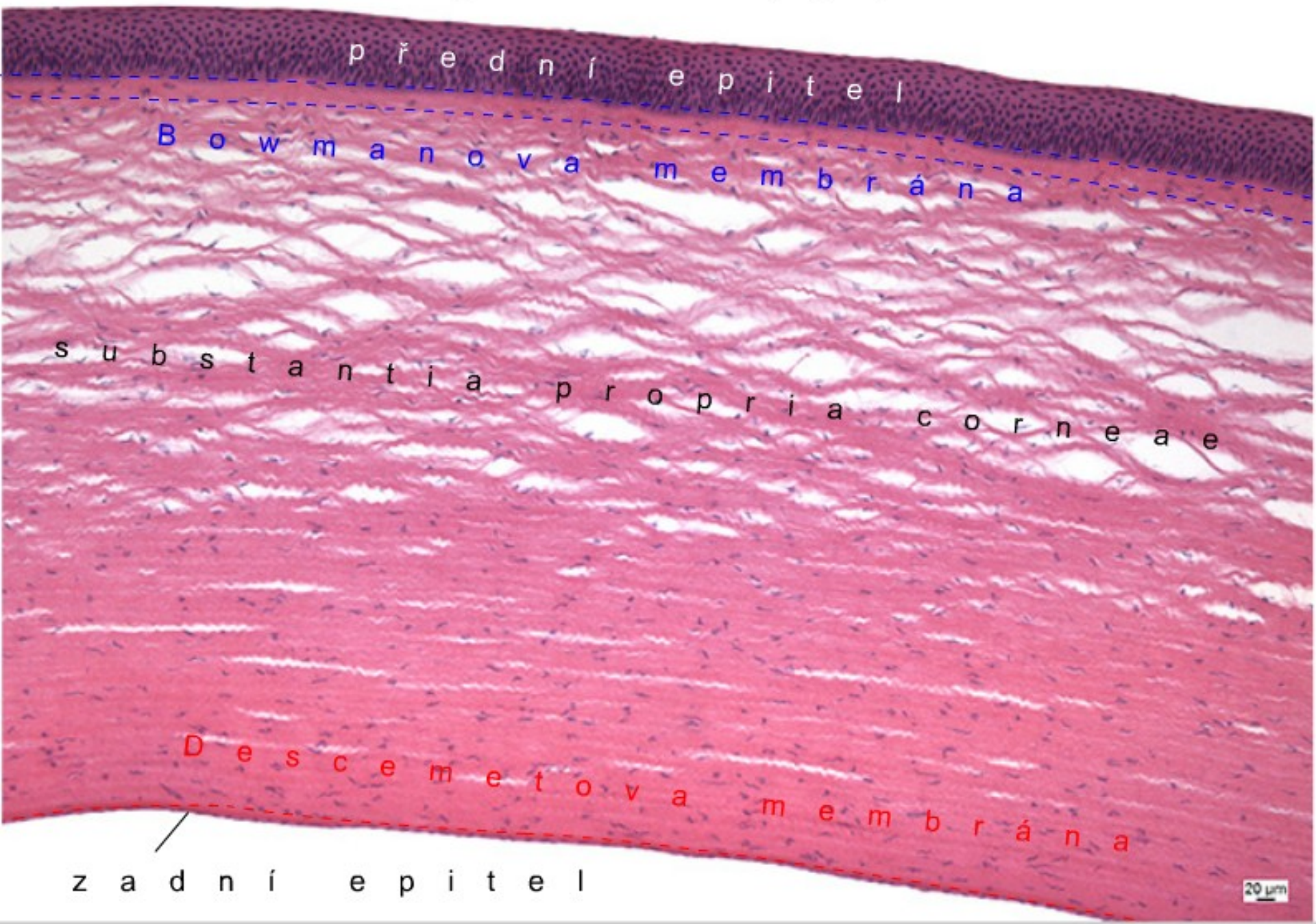
řasnaté tělísko  
(corpus ciliare)

bělima (sclera)

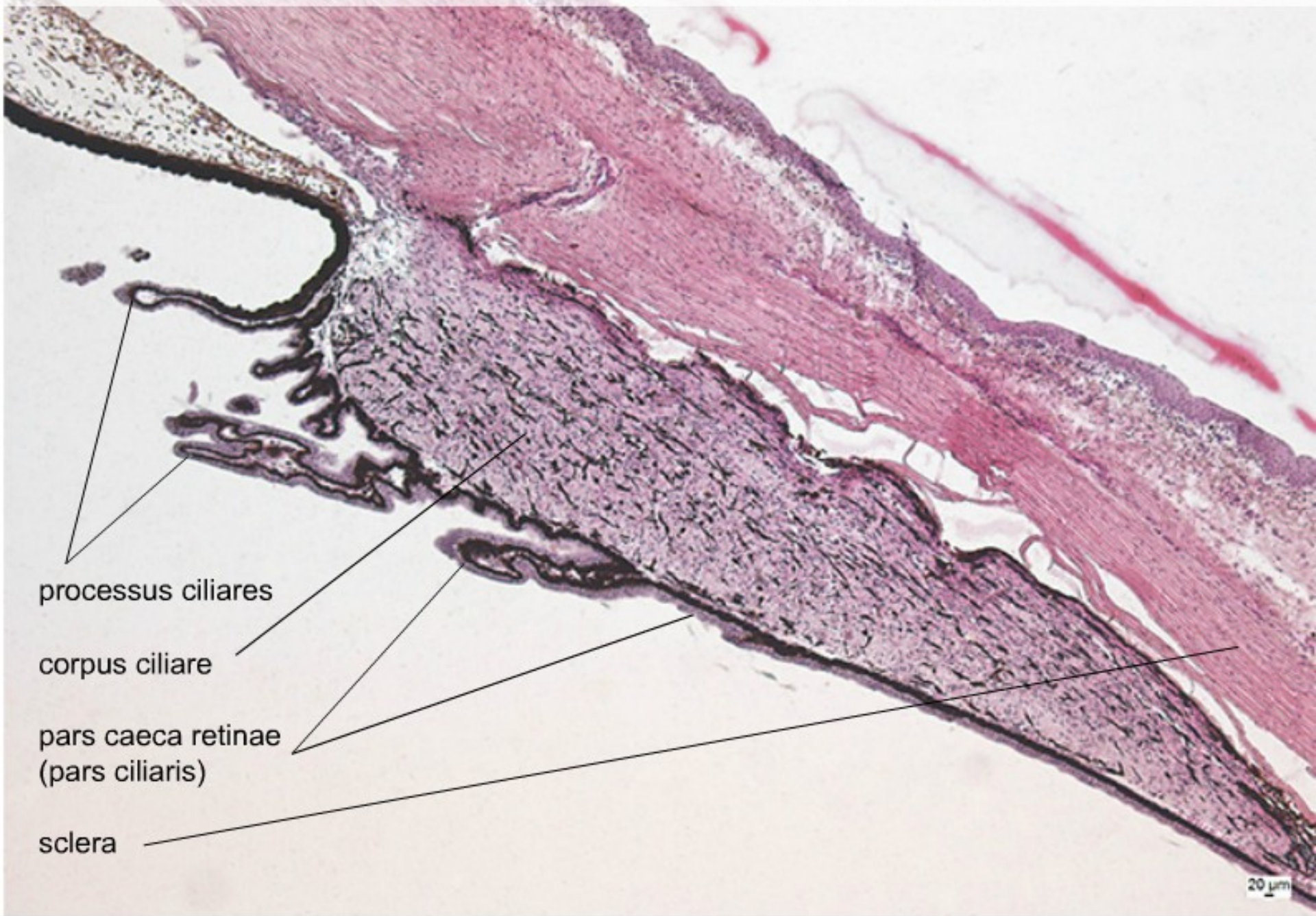
rohovka (cornea)

↓ pars caeca retinae

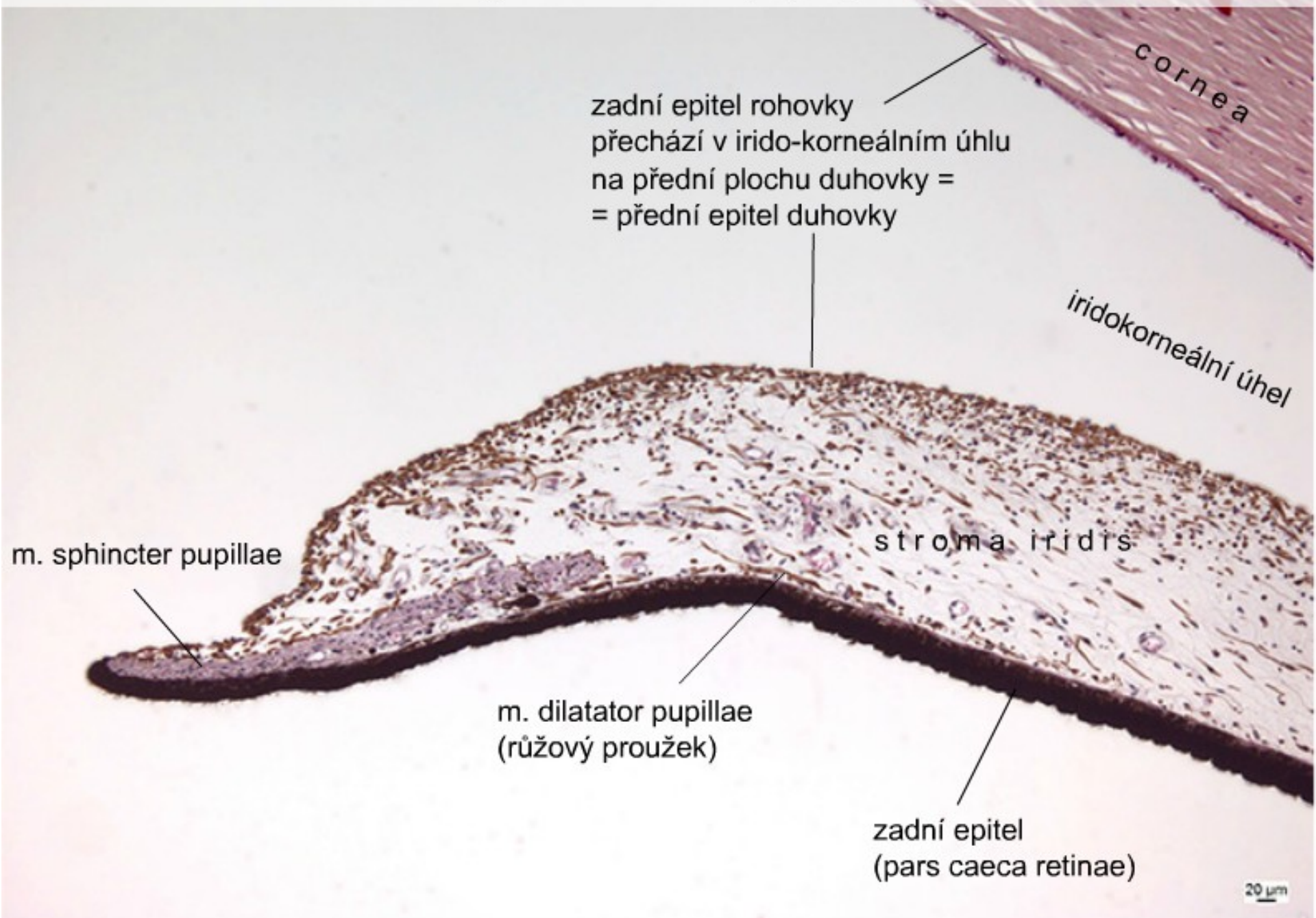
Přední segment oční – cornea, (HE), objektiv 10×



Přední segment oční – corpus ciliare, (impregnace), objektiv 5×

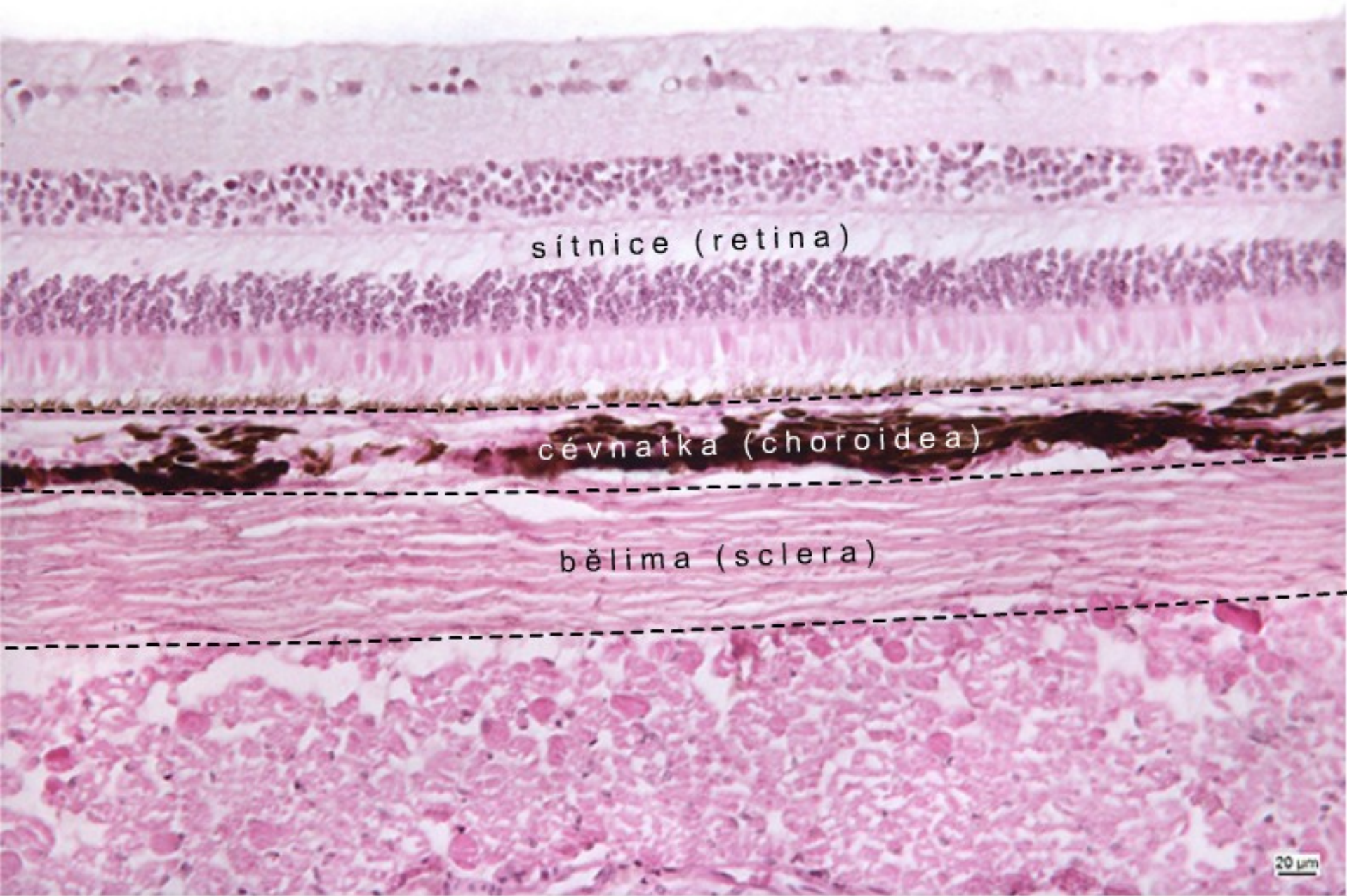


Přední segment oční – iris, (HE), objektiv 10×

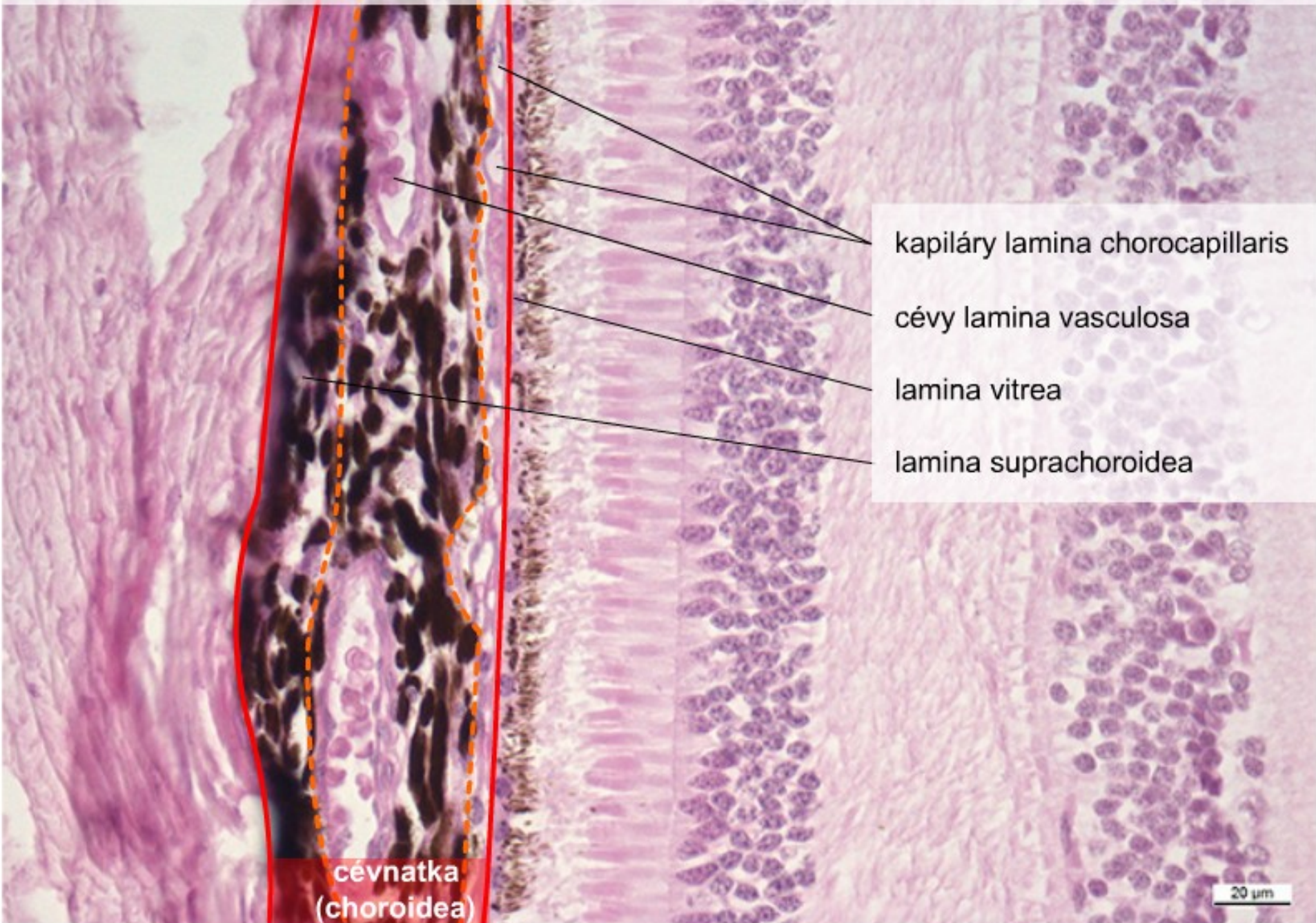




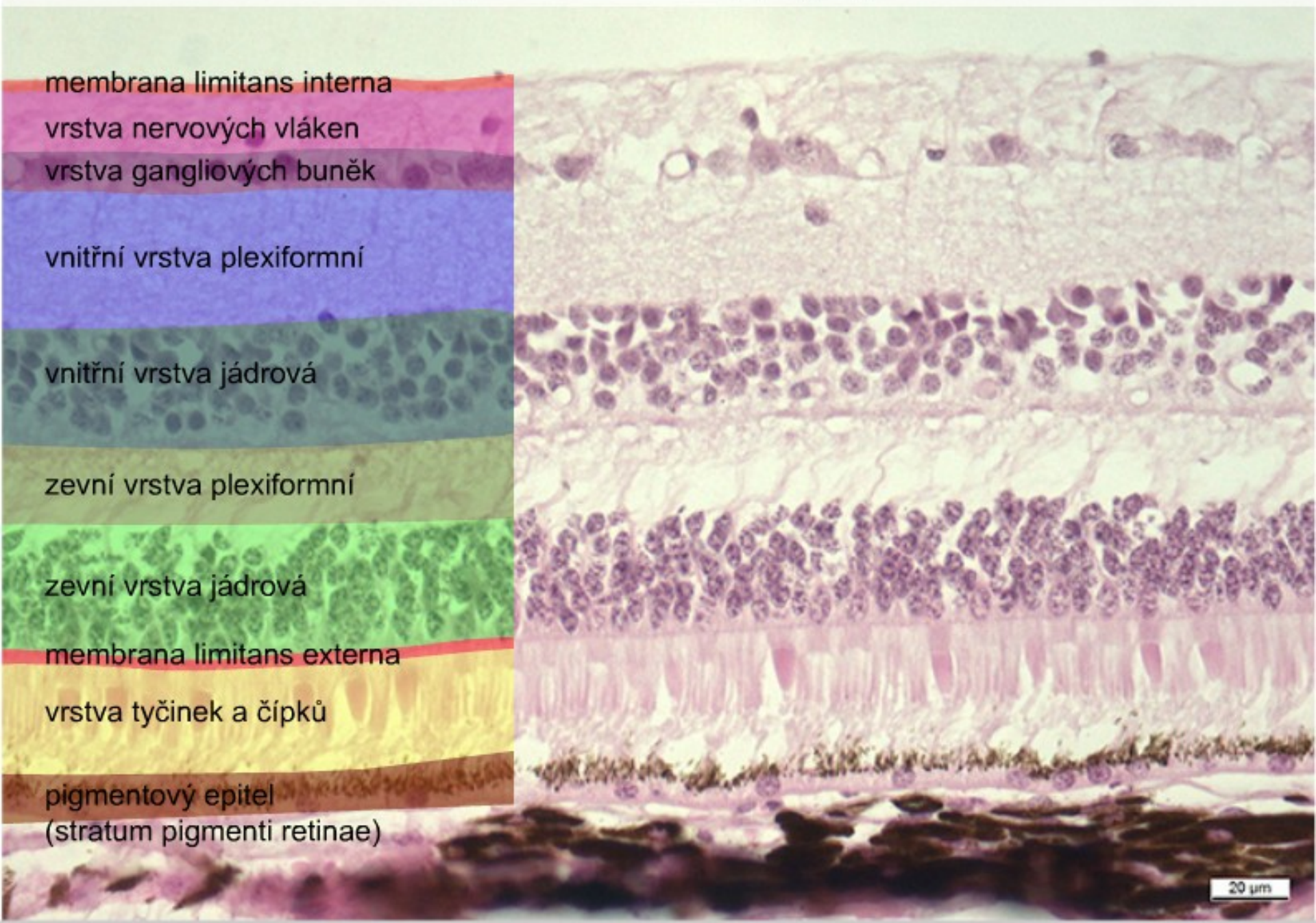
Zadní segment oční – přehled, (HE), objektiv 20×



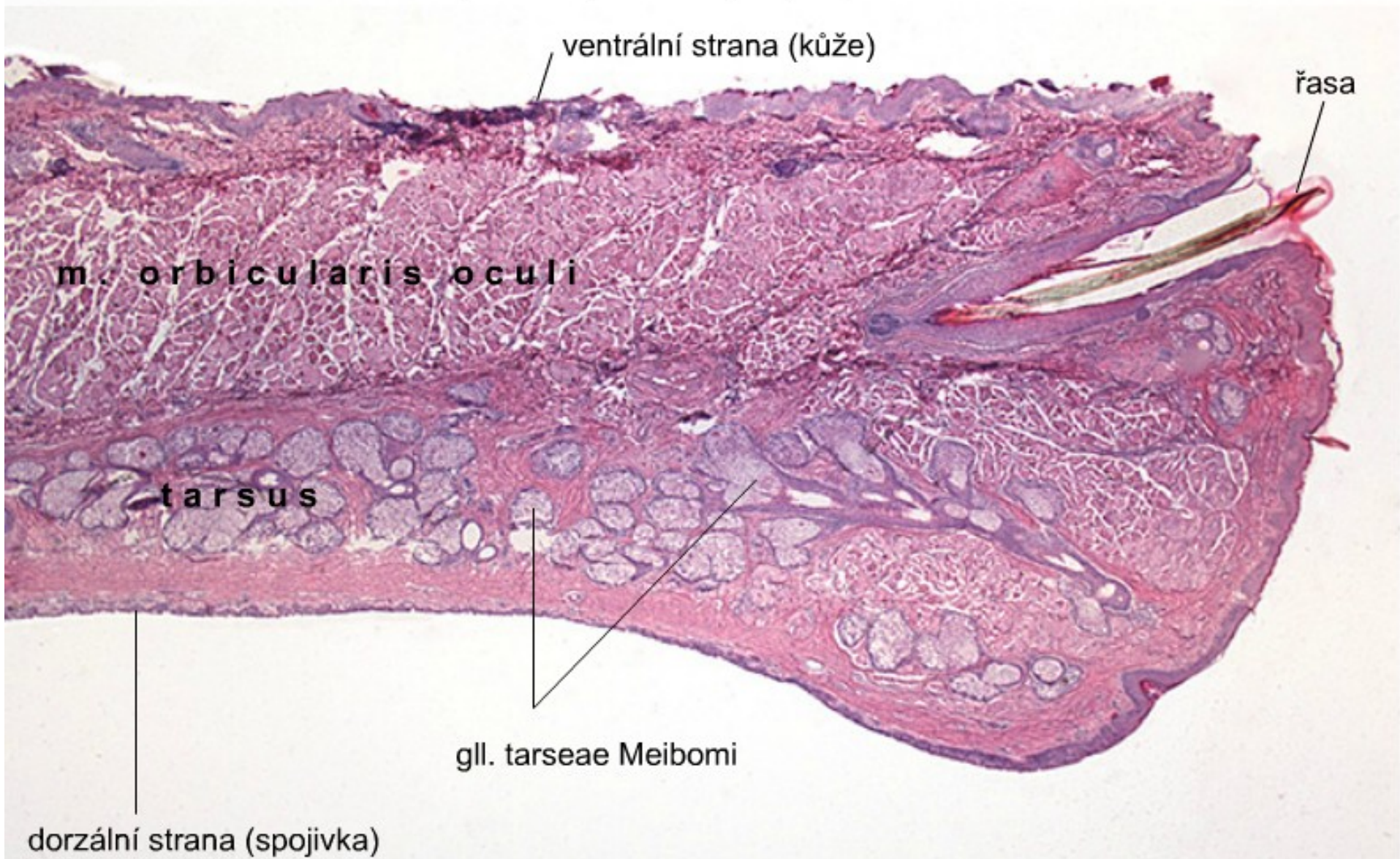
Zadní segment oční – choroidea, (HE), objektiv 40×



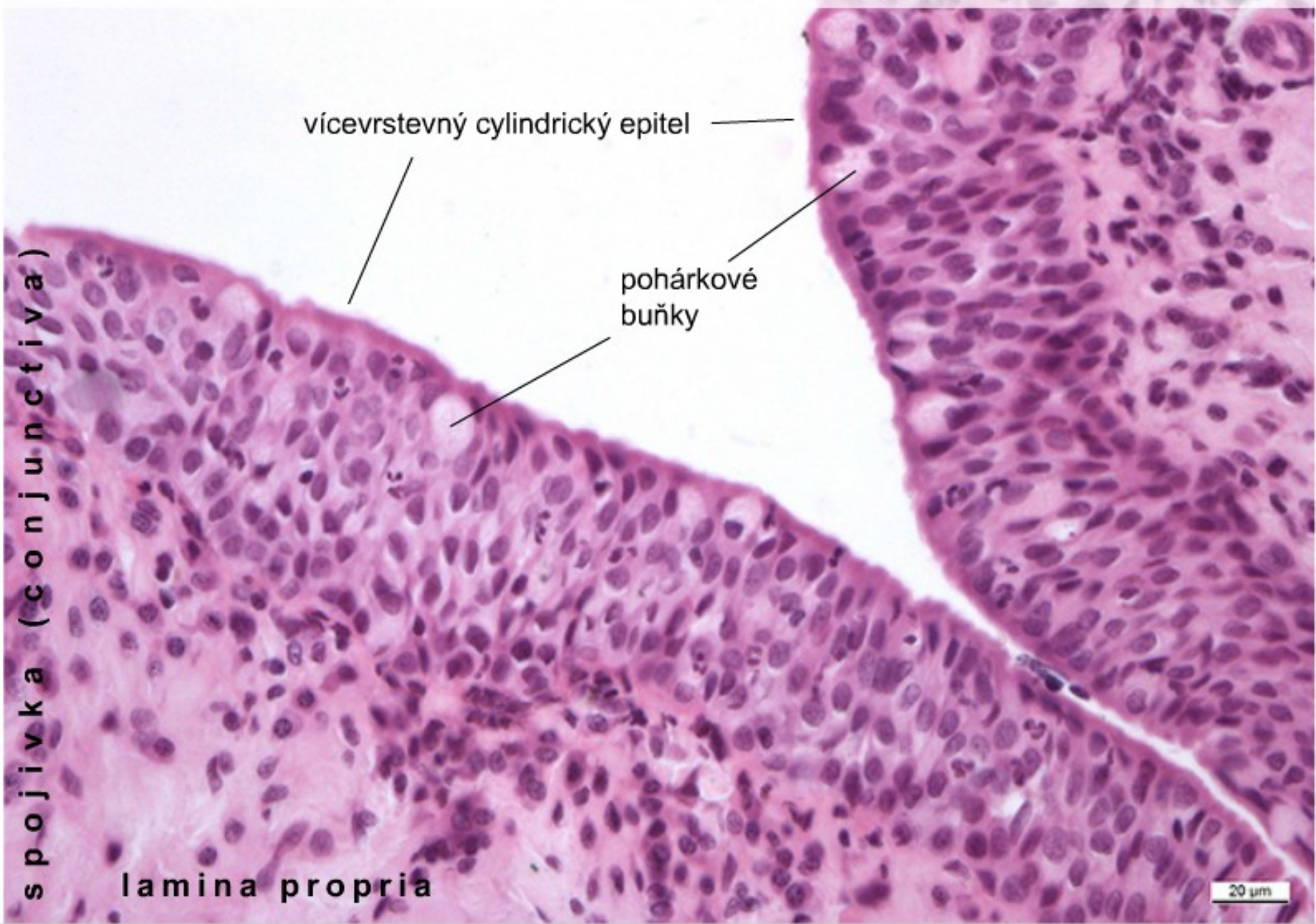
# Zadní segment oční – retina, (HE), objektiv 40×



Palpebra – přehled, (HE), objektiv 2,5×



Vícevrstevný cylindrický epitel spojivky (Palpebra), (HE), objektiv 40×



vícevrstevný cylindrický epitel

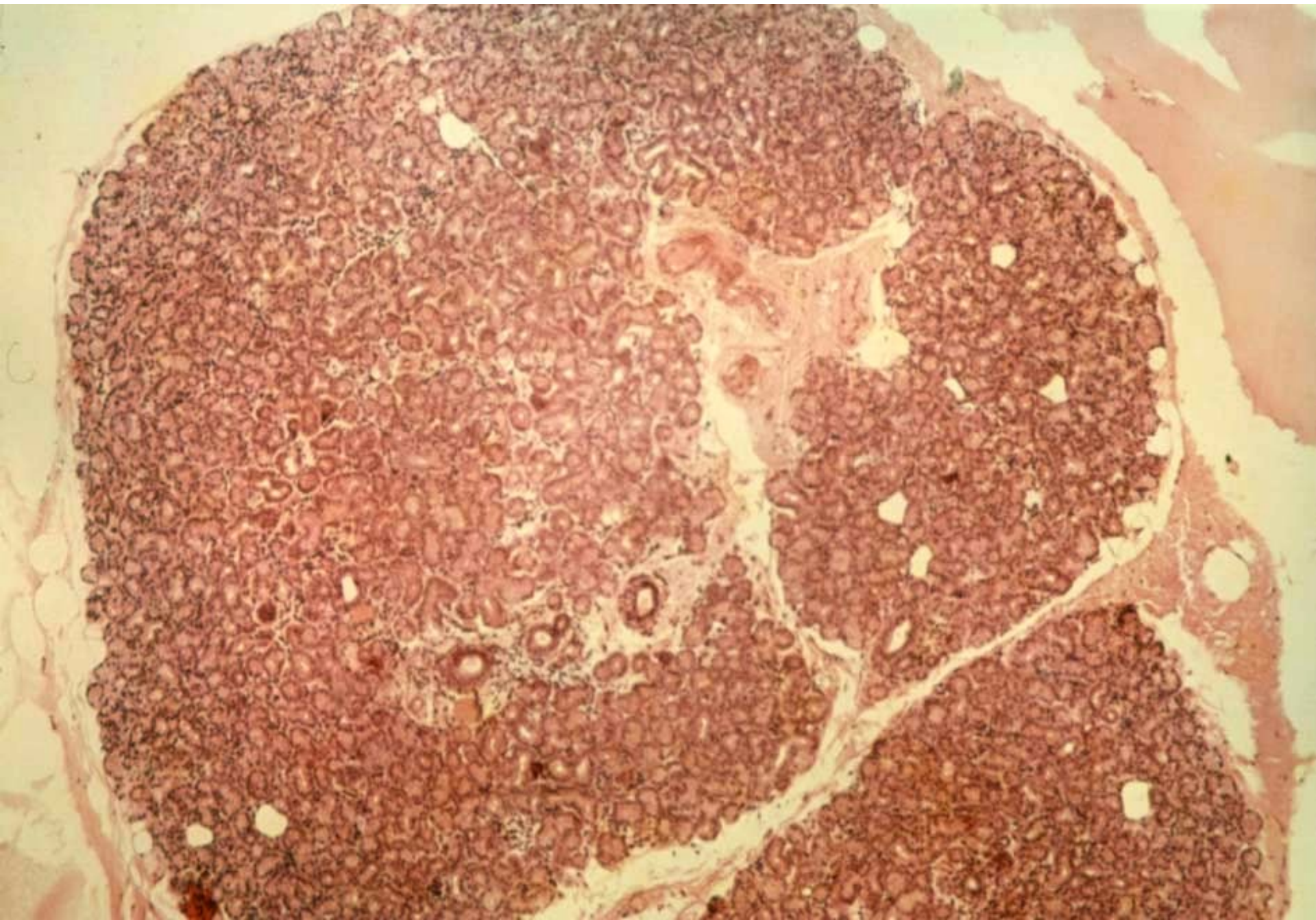
pohárkové  
buňky

s  
p  
o  
j  
i  
v  
k  
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 (c  
o  
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j  
u  
n  
c  
t  
i  
v  
a  
)

lamina propria

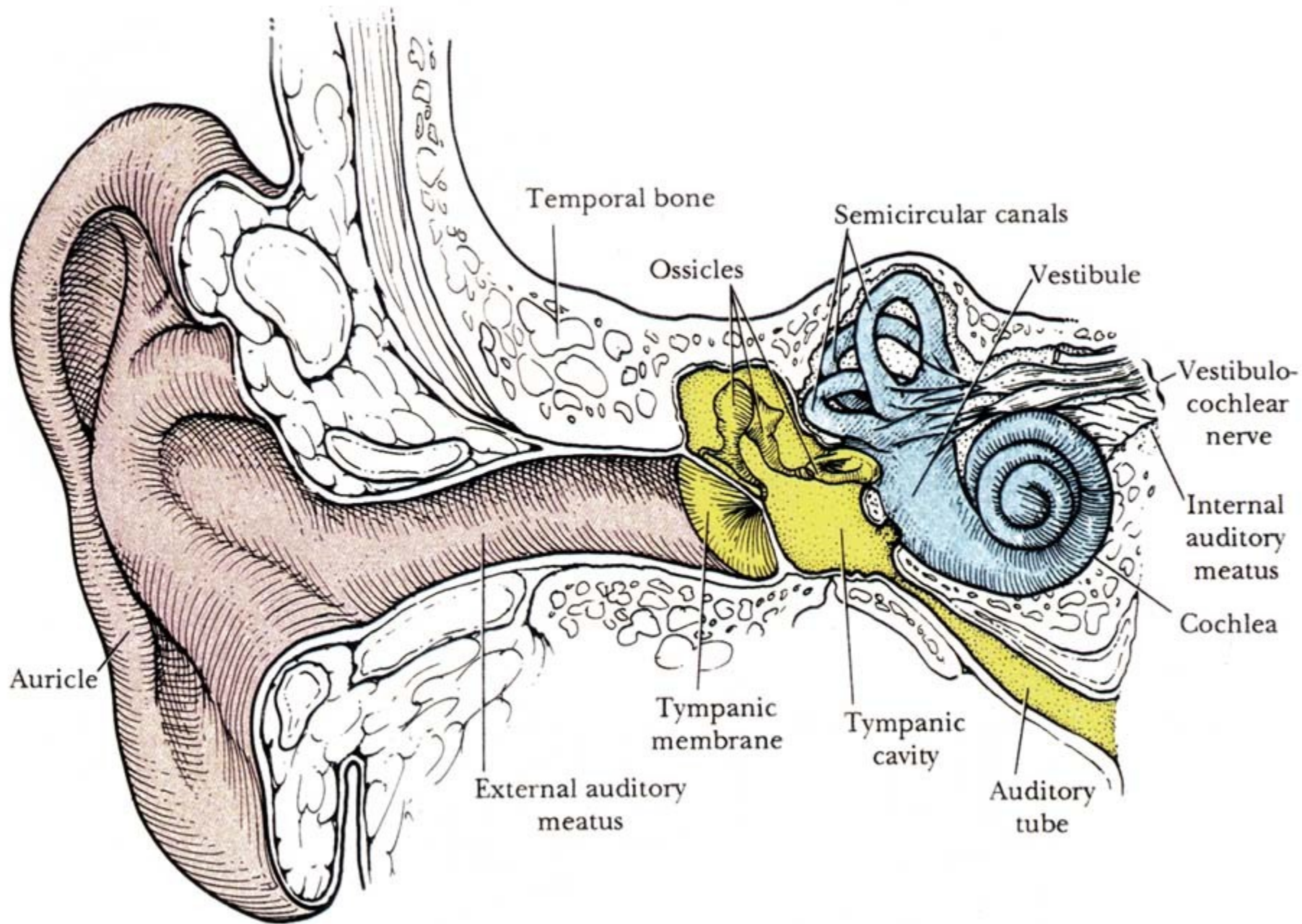
20 μm

**Gl. lacrimalis**



# Orgán sluchu a rovnováhy

- Zevní ucho
  - boltec (auricula)
  - zevní zvukovod (meatus acusticus ext.)
  - bubínek (membrana tympani)
- Střední ucho
  - bubínková dutina (cavum tympani)
- Vnitřní ucho
  - sacculus – macula sacculi
  - utricle – macula utriculi
  - ductus semicirculares – cristae ampullares
  - ductus cochlearis – organon Corti





# Vnitřní ucho

(v pyramidě ossis petrosus ossis temporalis)

## Kostěný labyrint

- 1) vestibulum
- 2) canales semicirculares
- 3) cochlea

## Blanitý labyrint

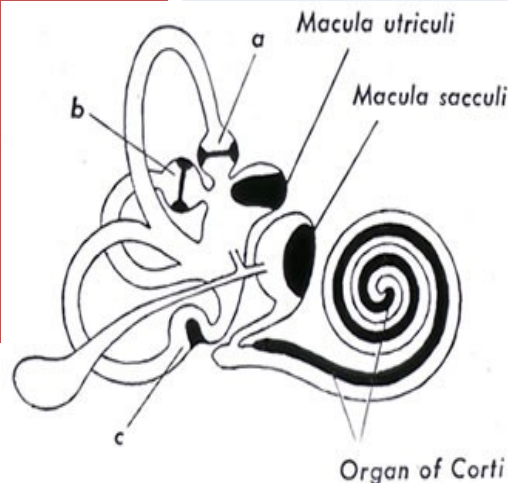
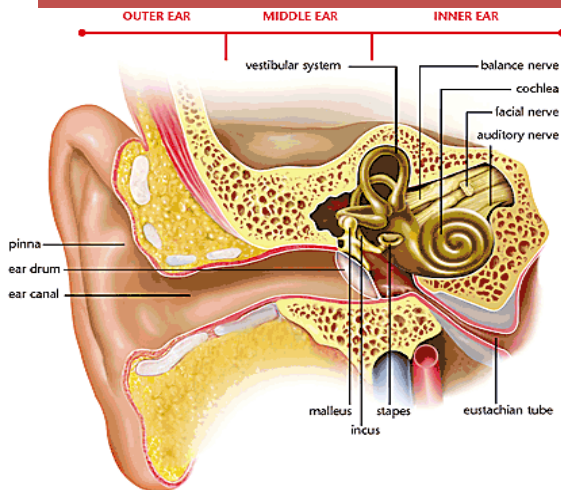
pars statica (1, 2)

pars akustica (3)

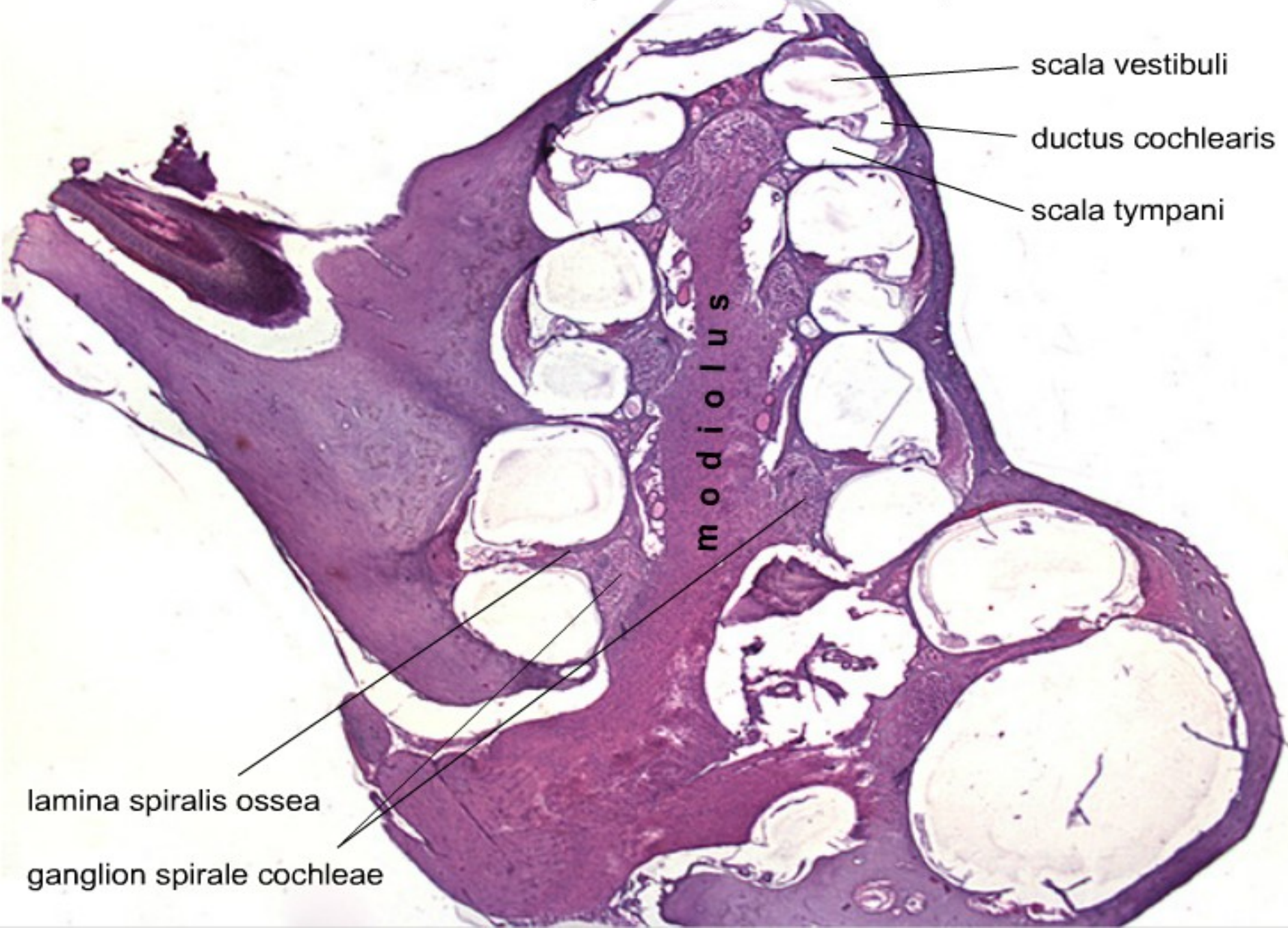
- 1) sacculus  
utriculus  
saccus endolymphaticus
- 2) ductus semicirculares
- 3) ductus cochlearis

endolymfa

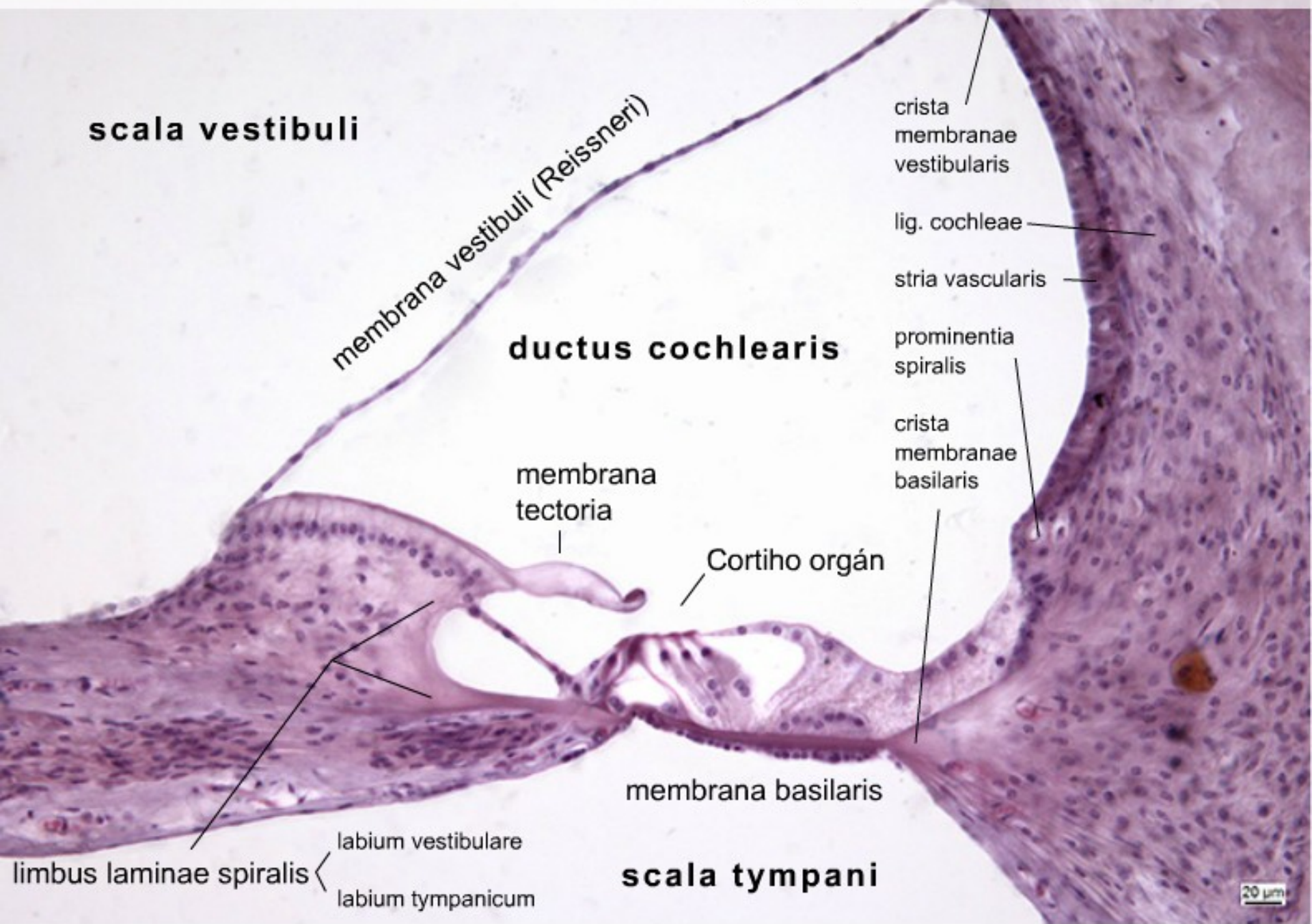
perilymfatický  
prostor  
*spatium  
perilymphaceum*



Cochlea – přehled, (HE), objektiv 2,5×



Cochlea – ductus cochlearis, (HE), objektiv 20×



**scala vestibuli**

membrana vestibuli (Reissneri)

**ductus cochlearis**

membrana tectoria

Cortiho orgán

membrana basilaris

crista membranae vestibularis

lig. cochleae

stria vascularis

prominentia spiralis

crista membranae basilaris

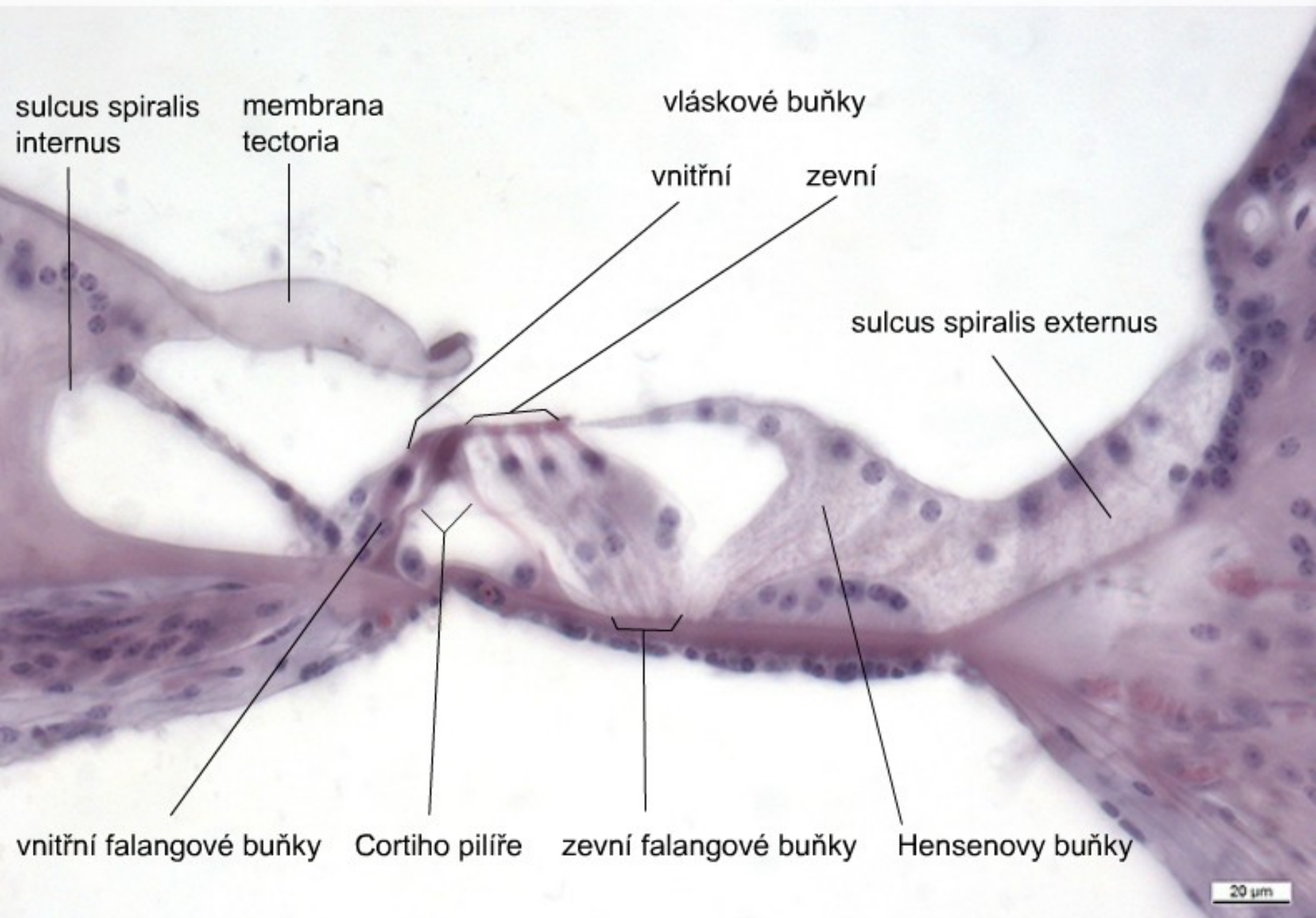
limbus laminae spiralis

labium vestibulare

labium tympanicum

**scala tympani**

Cochlea – Cortiho orgán, (HE), objektiv 40×



elastická chrupavka

kůžn e x  
k o ž n í a d n e x a



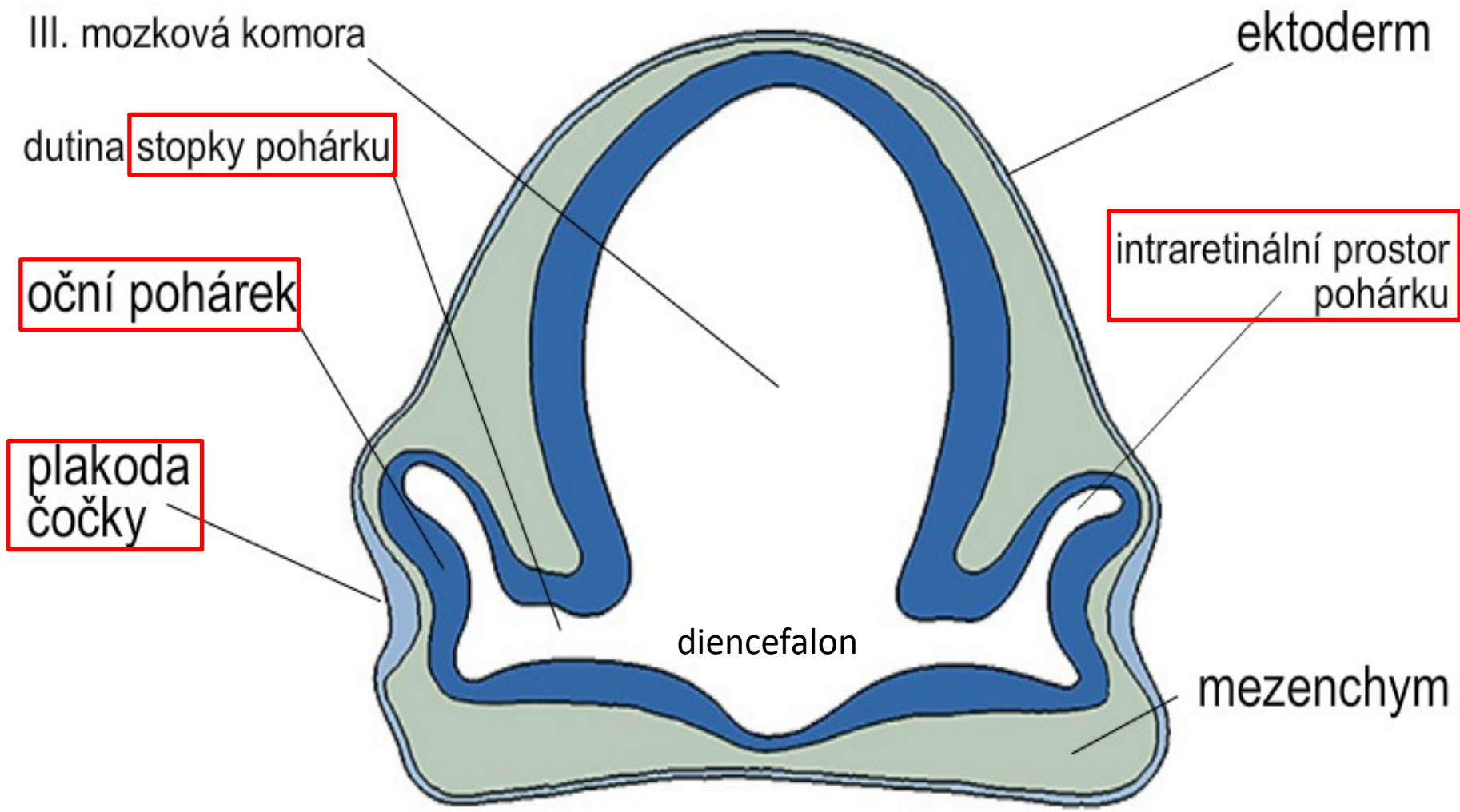


# SMYSLOVÉ ORGÁNY

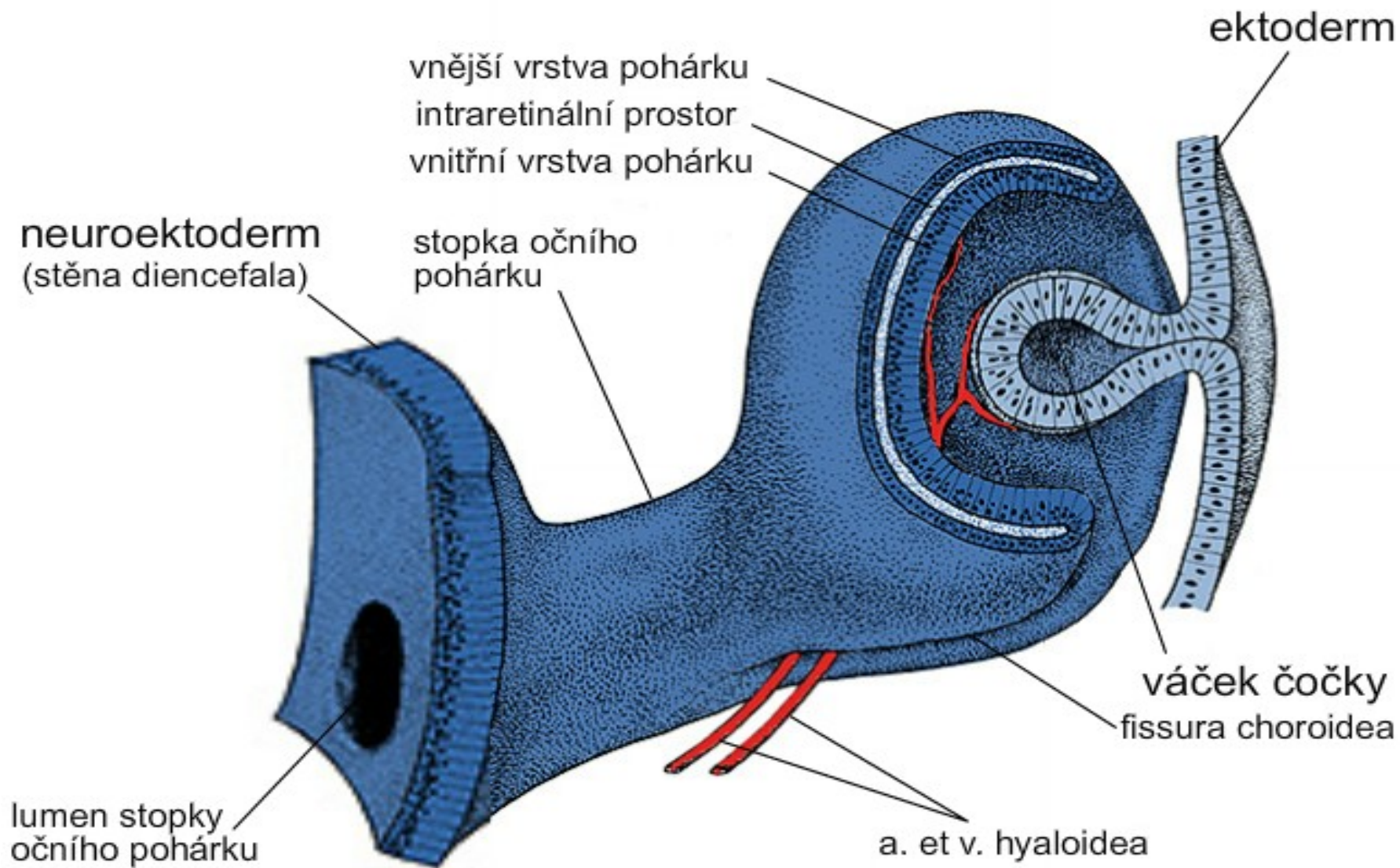


## Preparáty:

- 88. Přední segment oční
- 89. Zadní segment oční
- 90. Fasciculus opticus
- 91. Palpebra
- 92. Gl. lacrimalis
- 93. Ductus cochlearis
- 94. Auricula



# Vývoj očního pohárku a čočky





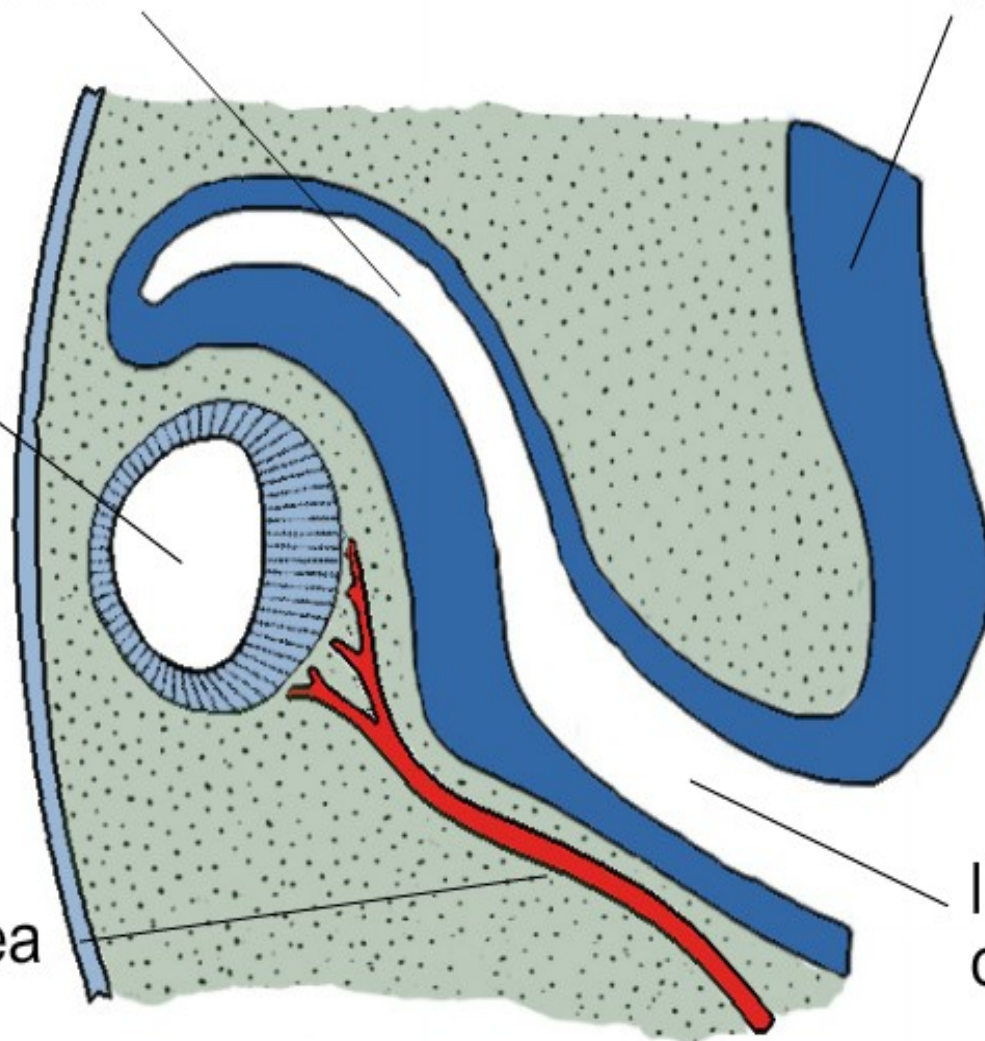
intraretinální prostor

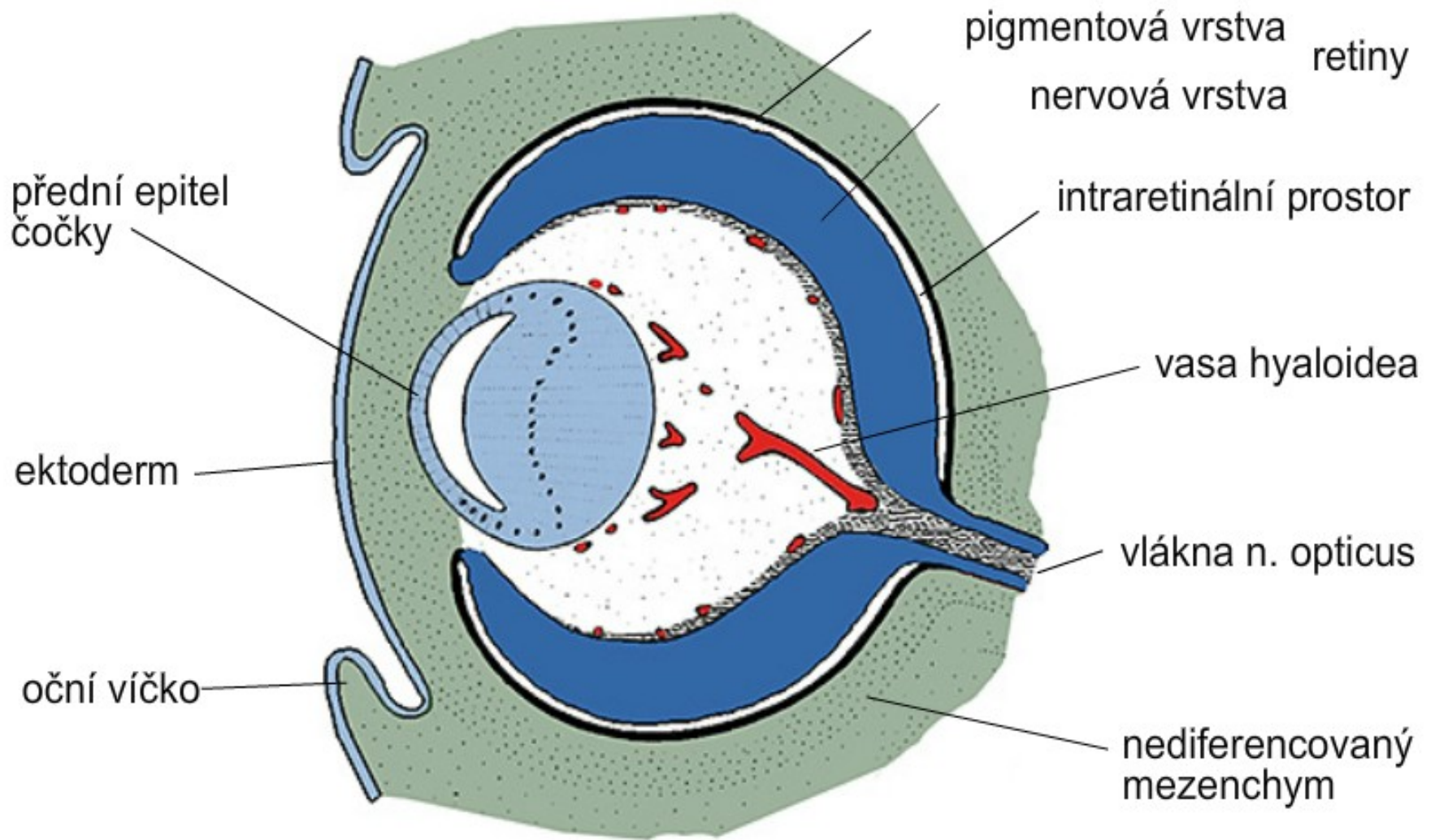
stěna diencefala

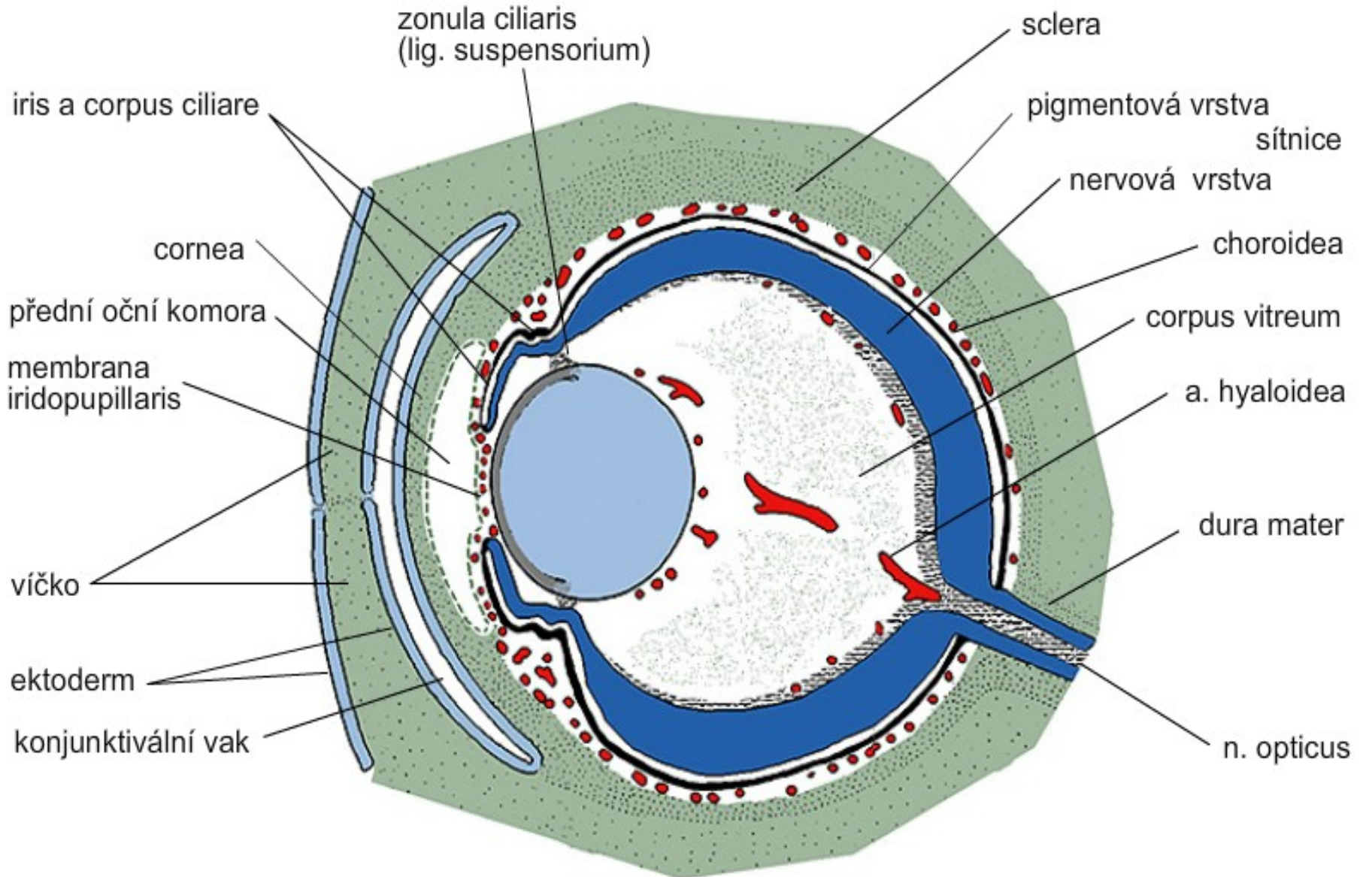
váček čočky

arteria hyaloidea

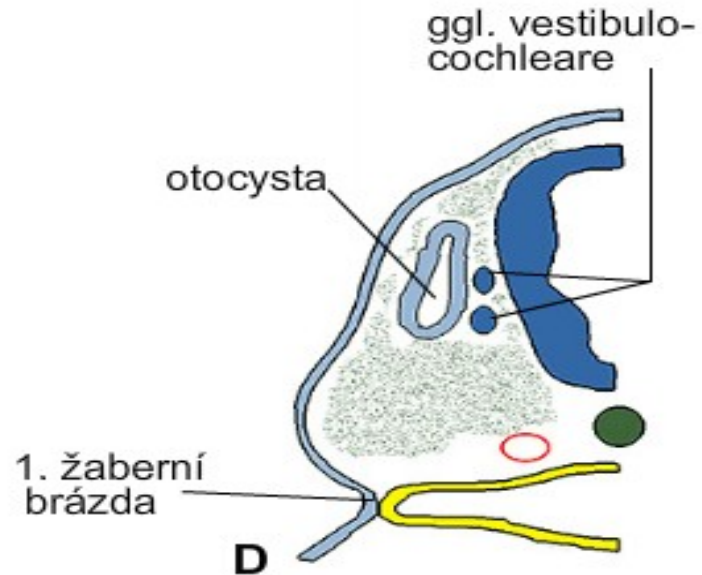
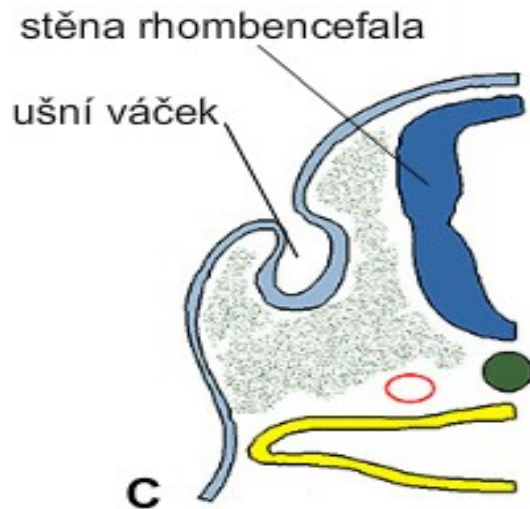
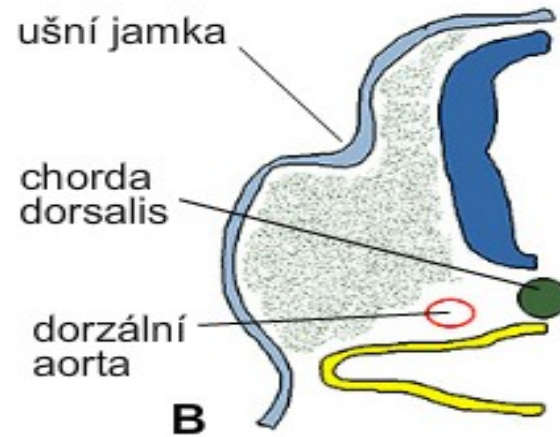
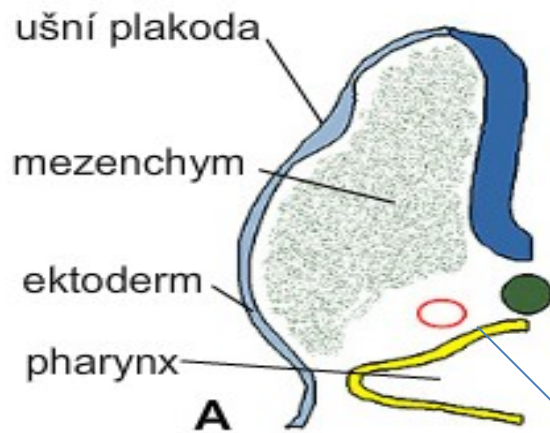
lumen stopky  
očního pohárku



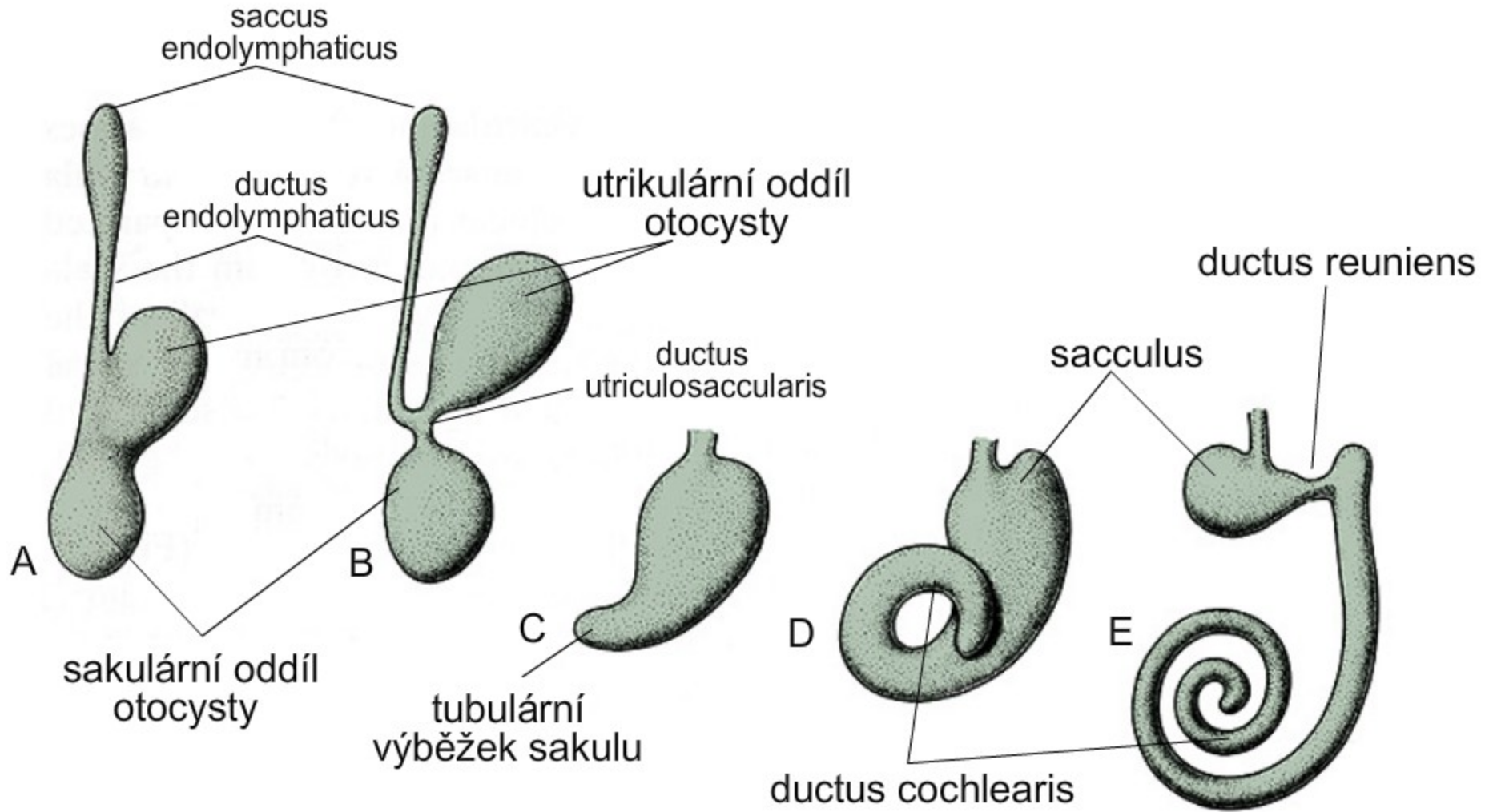


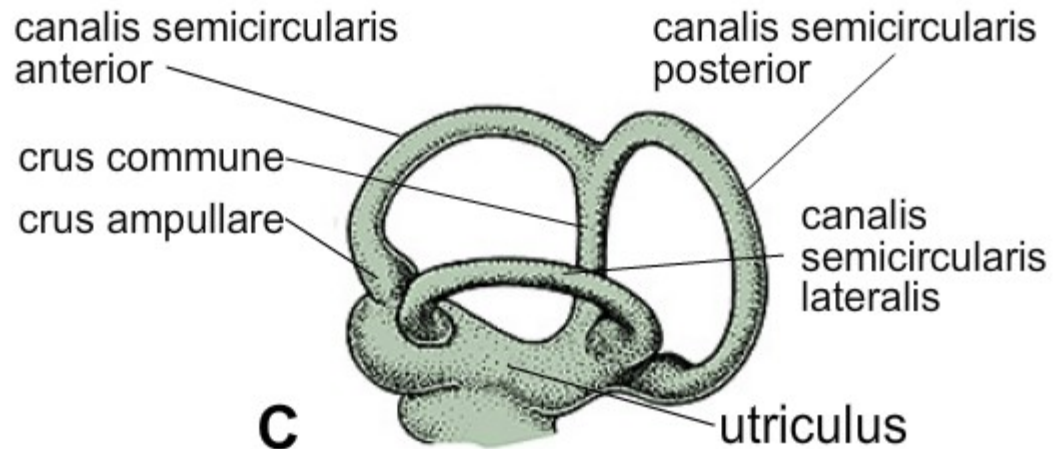
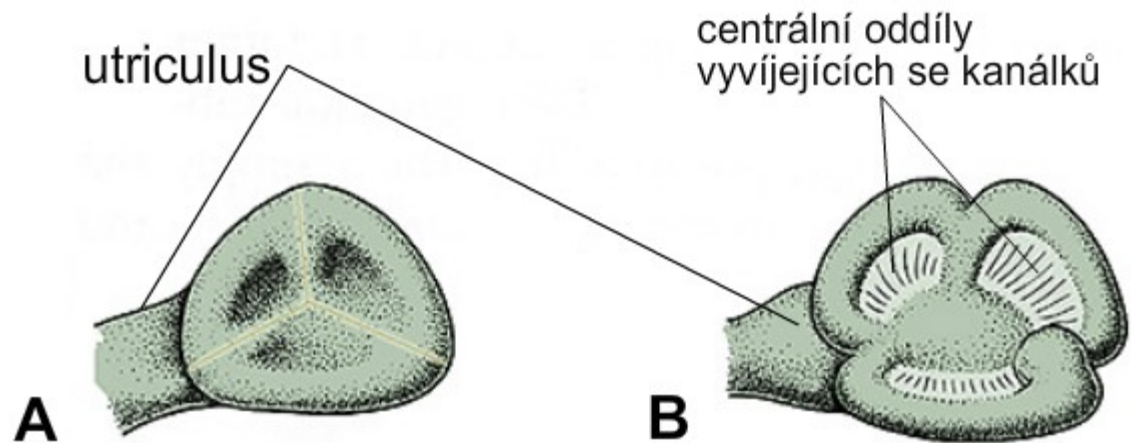


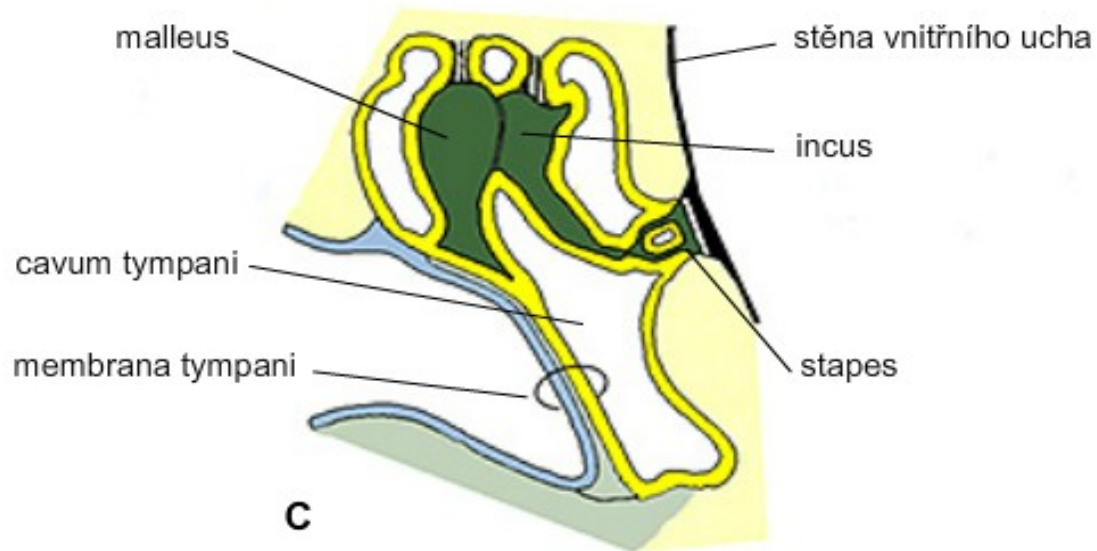
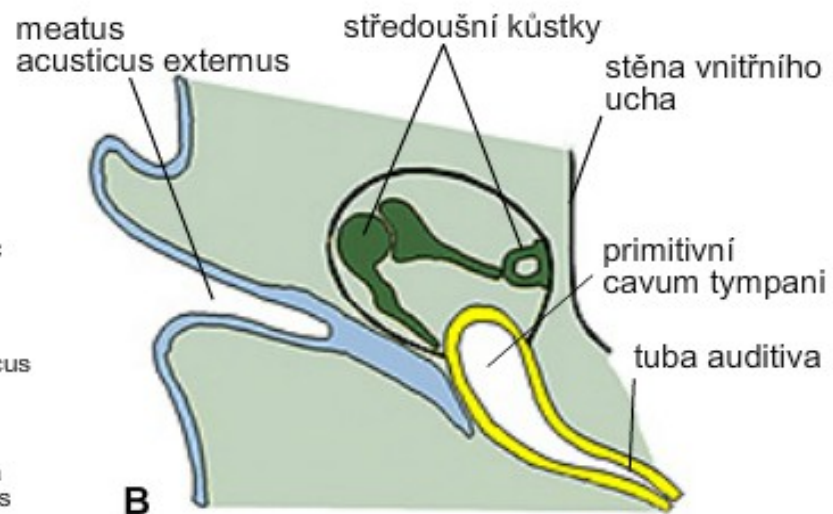
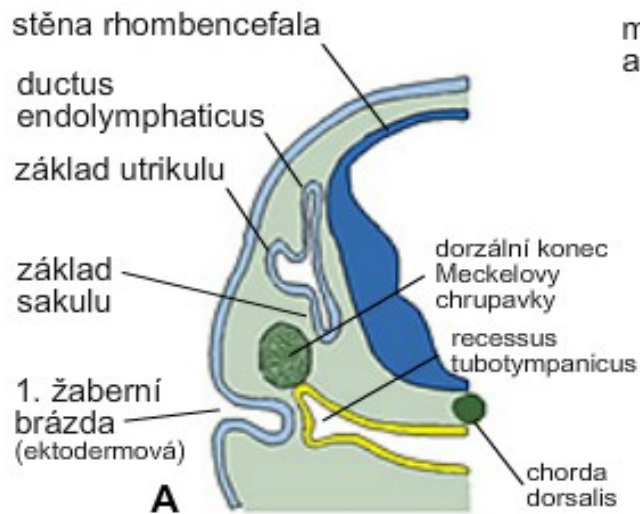
# Vývoj zevního, středního a vnitřního ucha



# Vývoj blanitého labyrintu







# Vývoj ušního boltce

