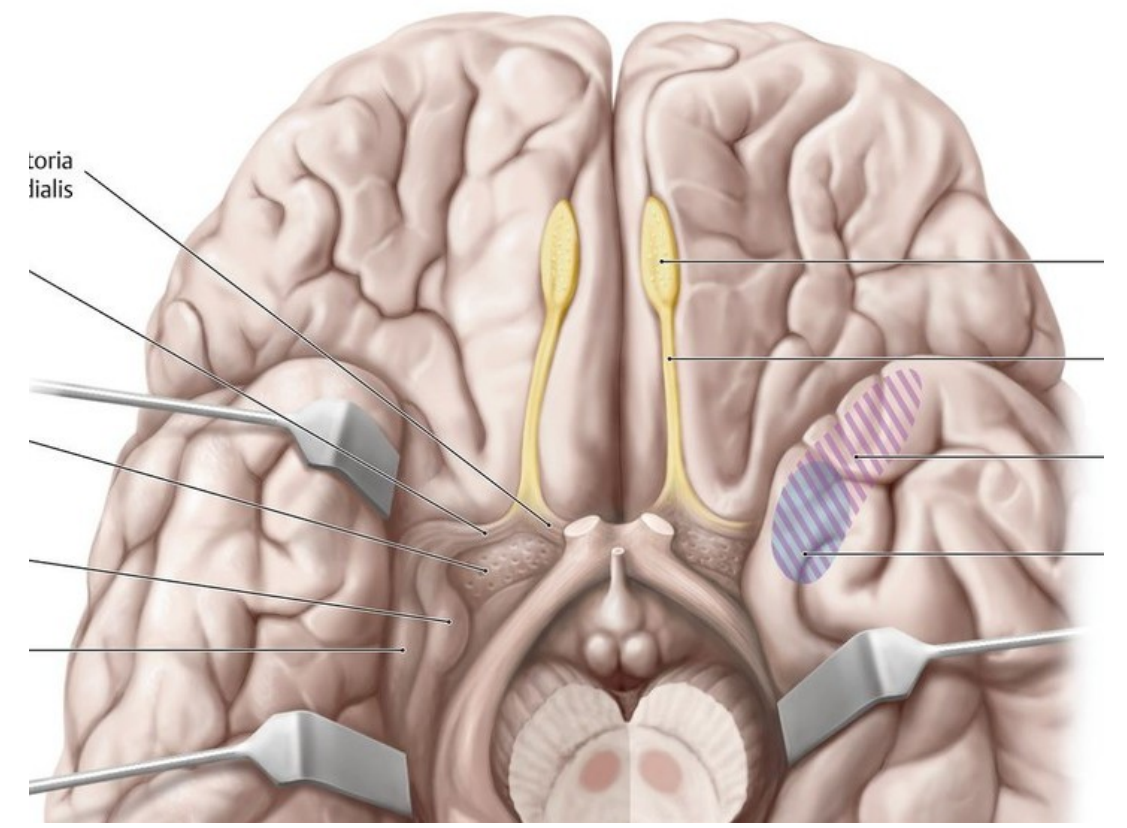
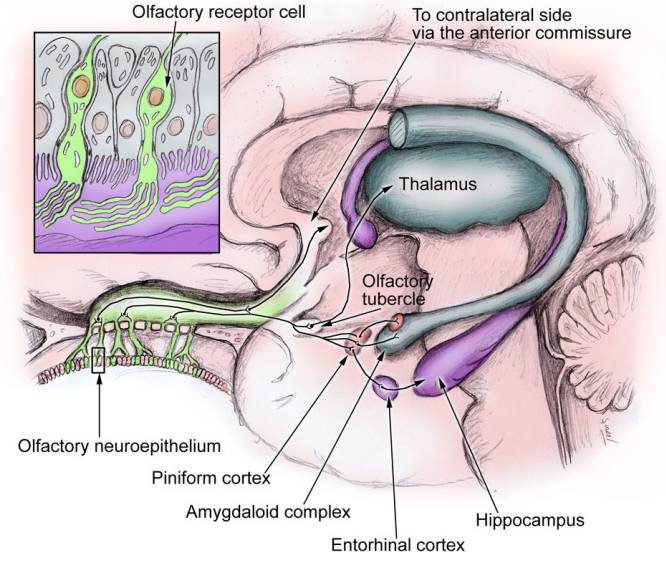
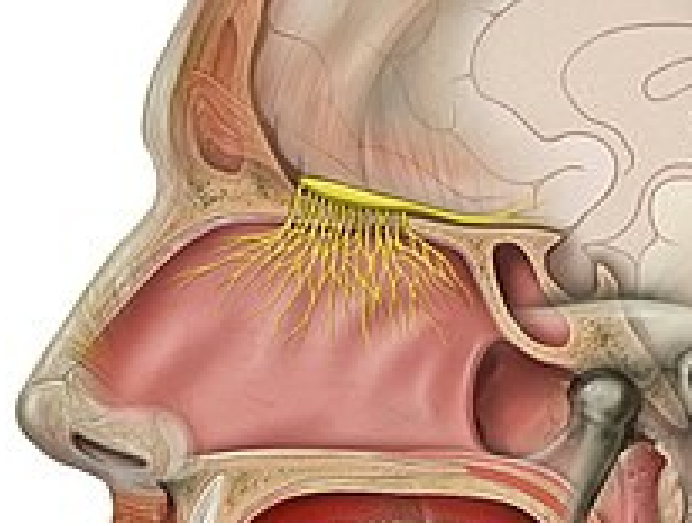
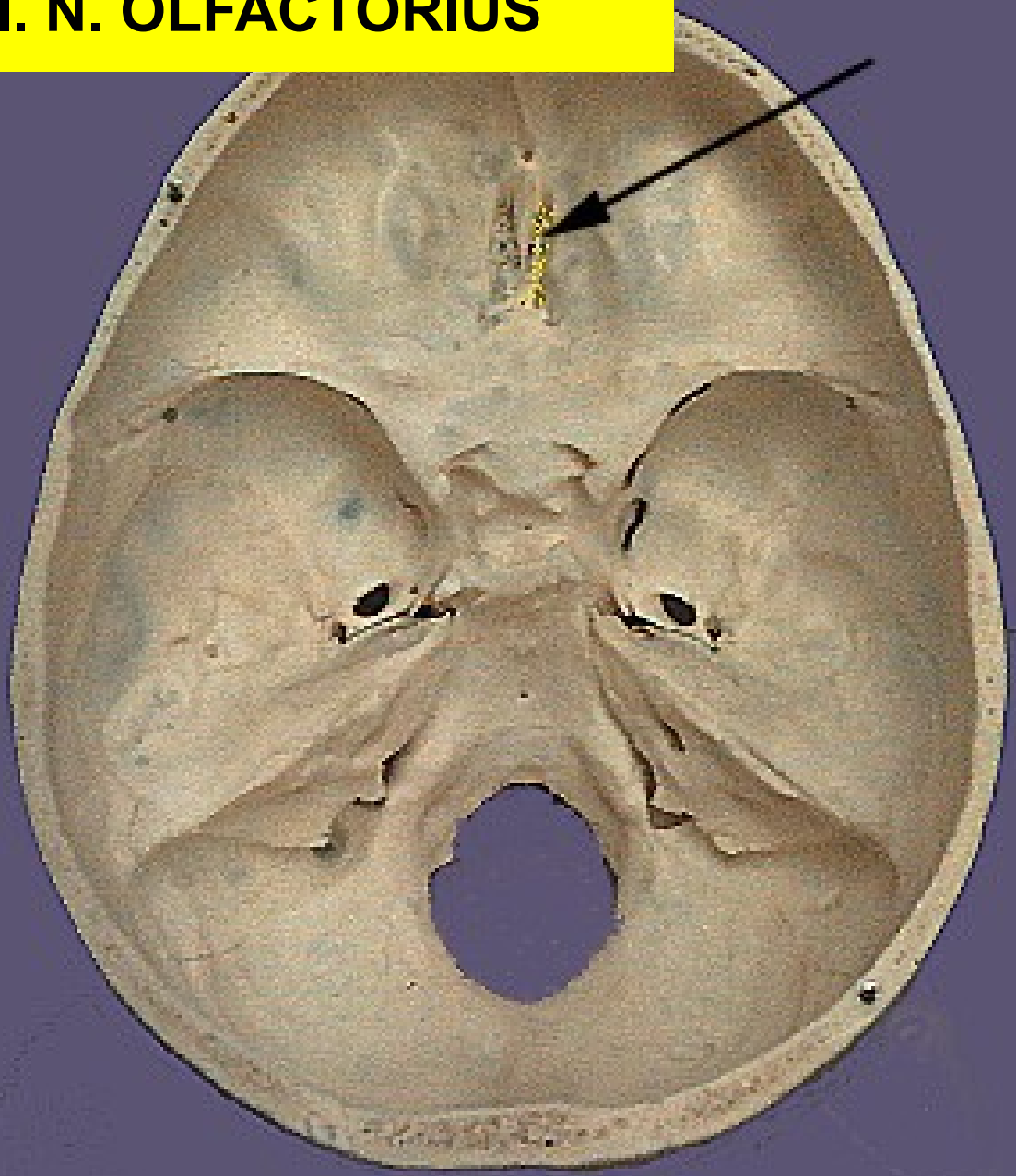
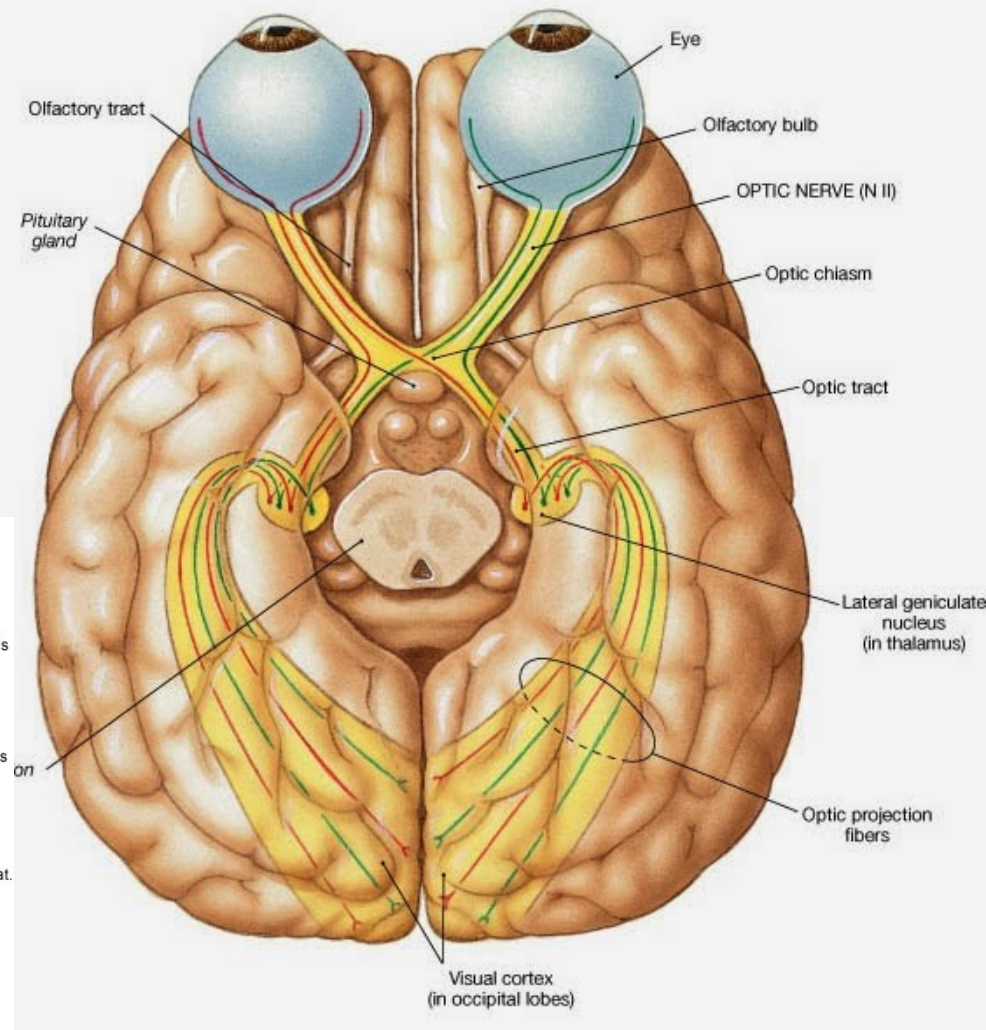
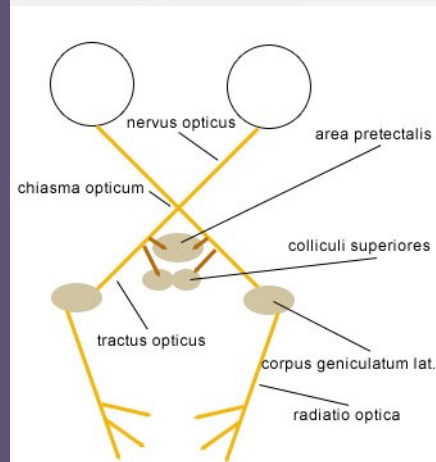
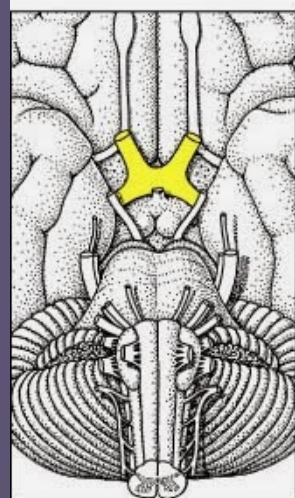
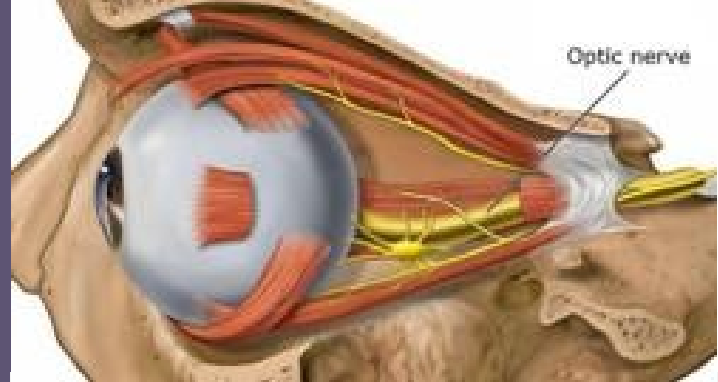
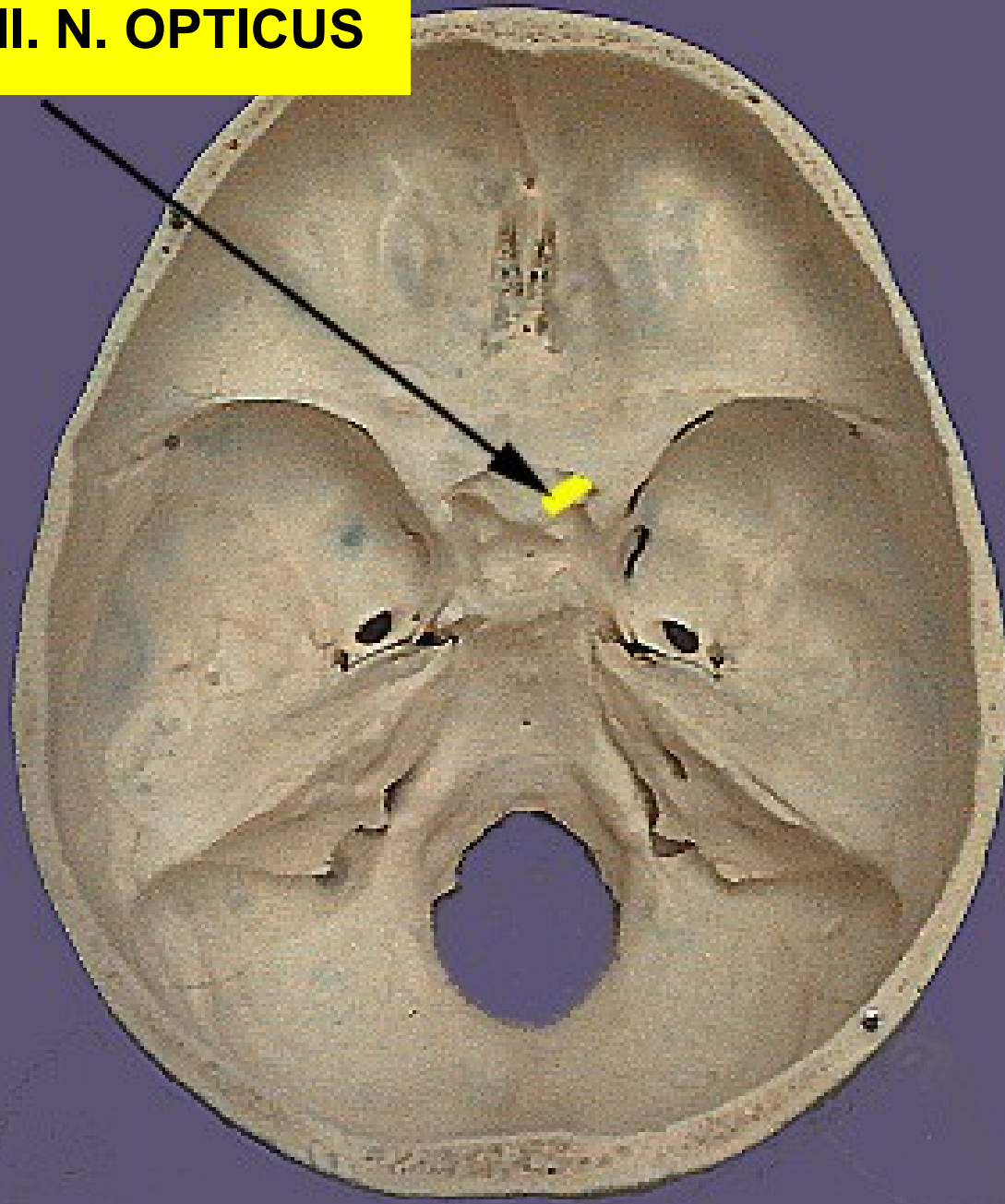


37. Zrkové ústrojí, tunica fibrosa bulbi
38. Zrkové ústrojí, tunica media bulbi
39. Zrkové ústrojí, tunica interna bulbi, strukturální uspořádání retiny
40. N. opticus, vznik a průběh
41. Obsah oční koule, camera bulbi et humor aquosus, jeho vznik a cirkulace
42. Obsah oční koule, čočka, závěsný aparát čočky
43. Obsah oční koule, sklivec, cévní zásobení oka
44. Okohybné svaly a jejich inervace
45. Víčka a spojivka
46. Slzné ústrojí
47. Zevní ucho a membrana tympani
48. Dutina středoušní, stěny
49. Sluchové kůstky a jejich spoje
50. Dutina středoušní, svaly, jejich funkce a inervace
51. Sluchová trubice, antrum mastoideum, cellulae mastoideae
52. Kostěný labyrint
53. Blanitý labyrint
54. N. vestibulocochlearis, vznik a průběh
56. Zrková dráha
57. Sluchová dráha
58. Pupilární reflex (mióza a mydriáza)
59. Vestibulární dráha (význam FLM)

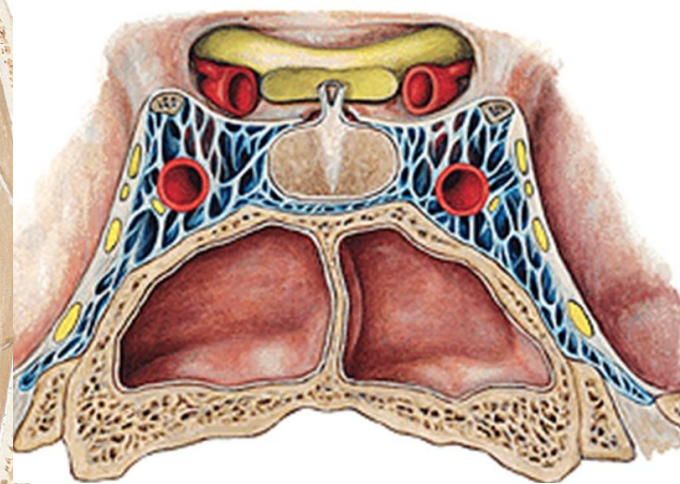
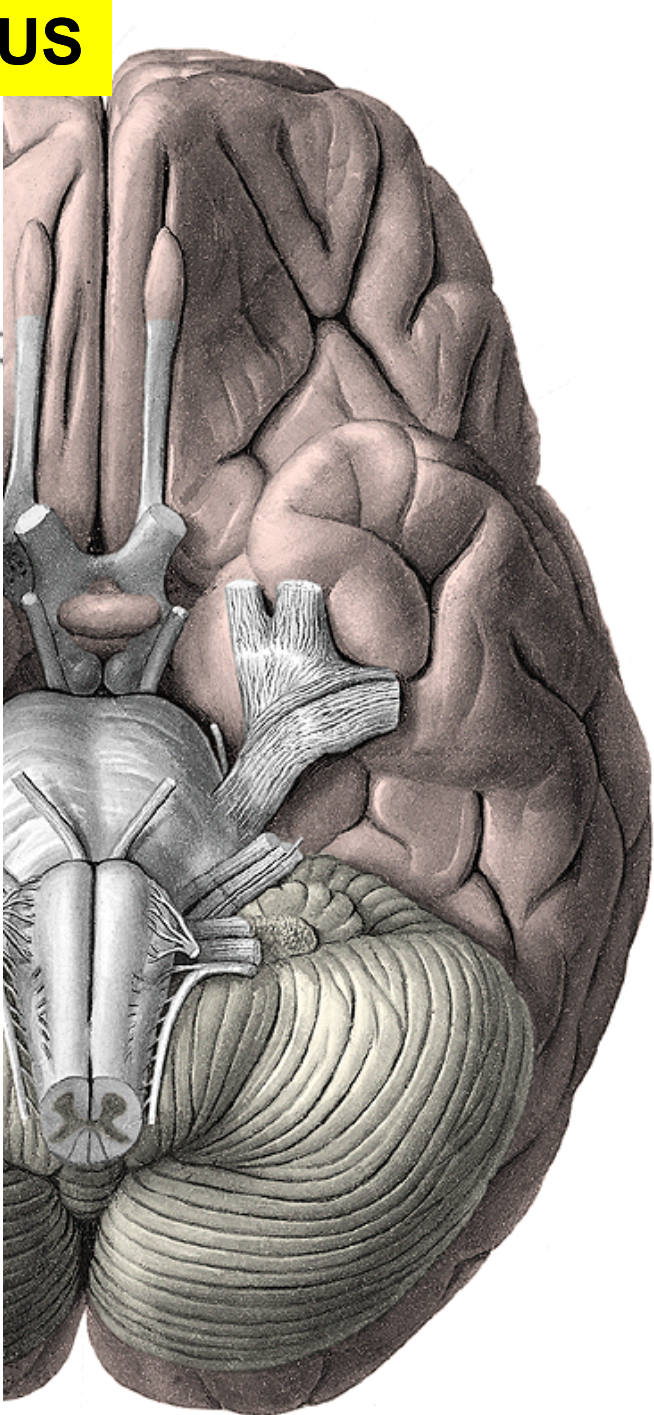
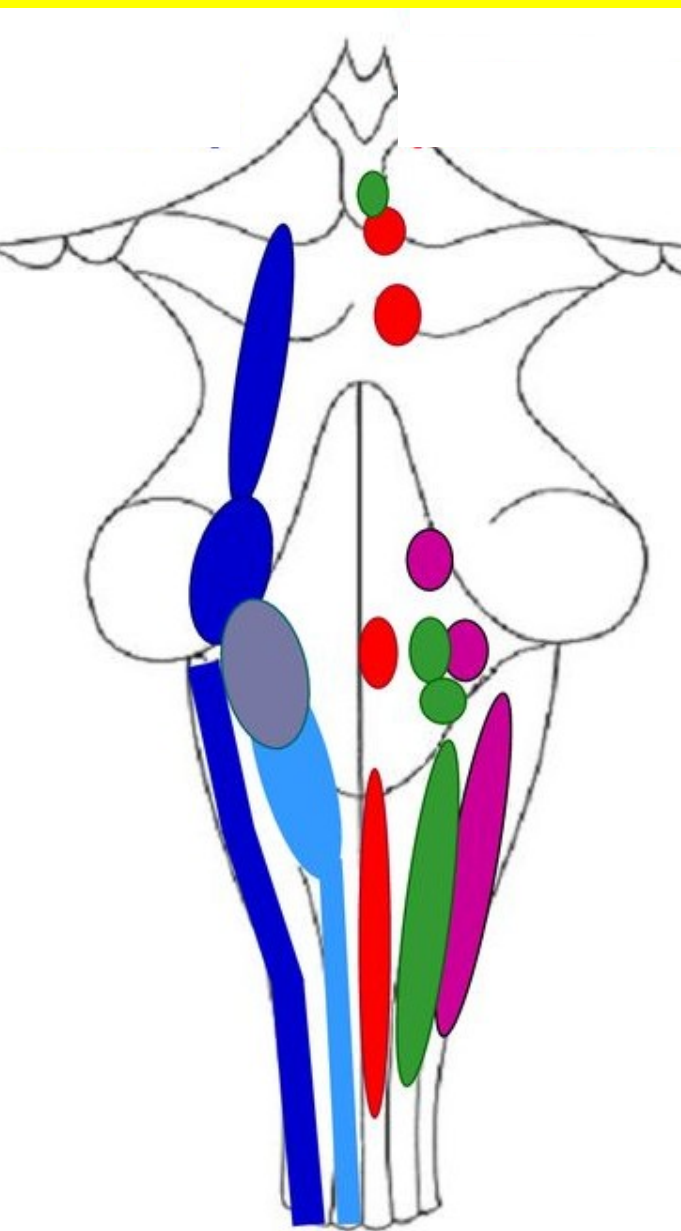
I. N. OLFACTORIUS



II. N. OPTICUS



III. N. OCULOMOTORIUS



OBRNA N. III

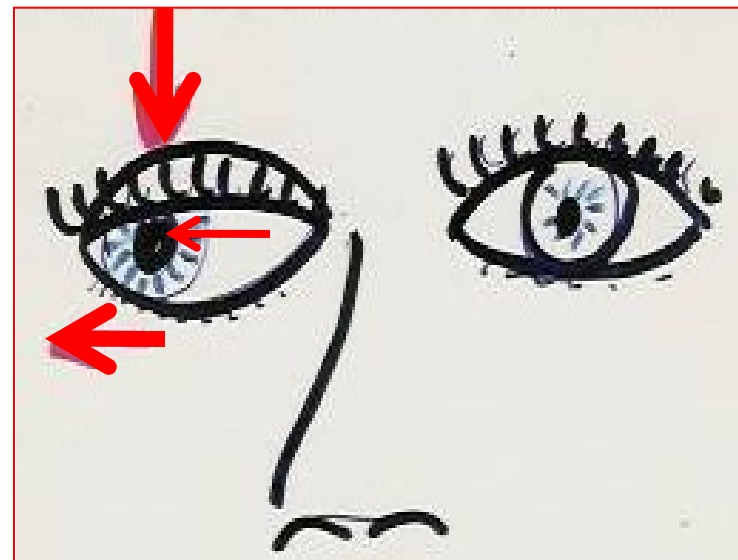
Ptóza: pokles víčka z obrny m. levator palpebrae superioris

Obrna pohledu mediálně: obrna m. rectus bulbi medialis

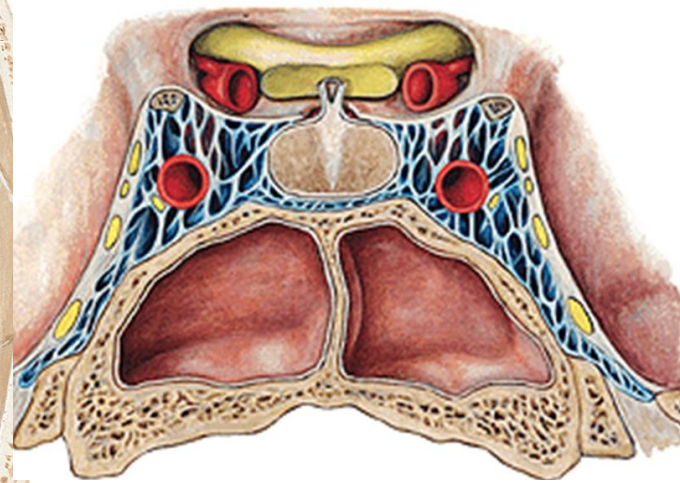
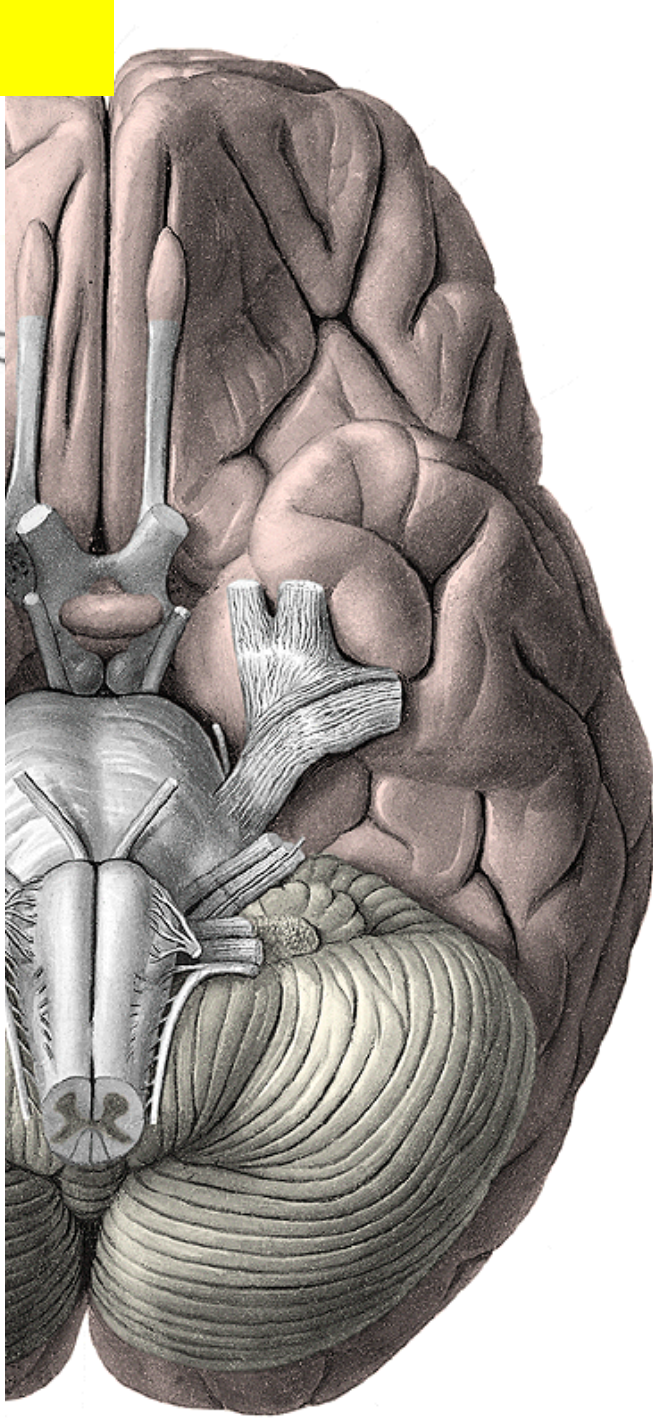
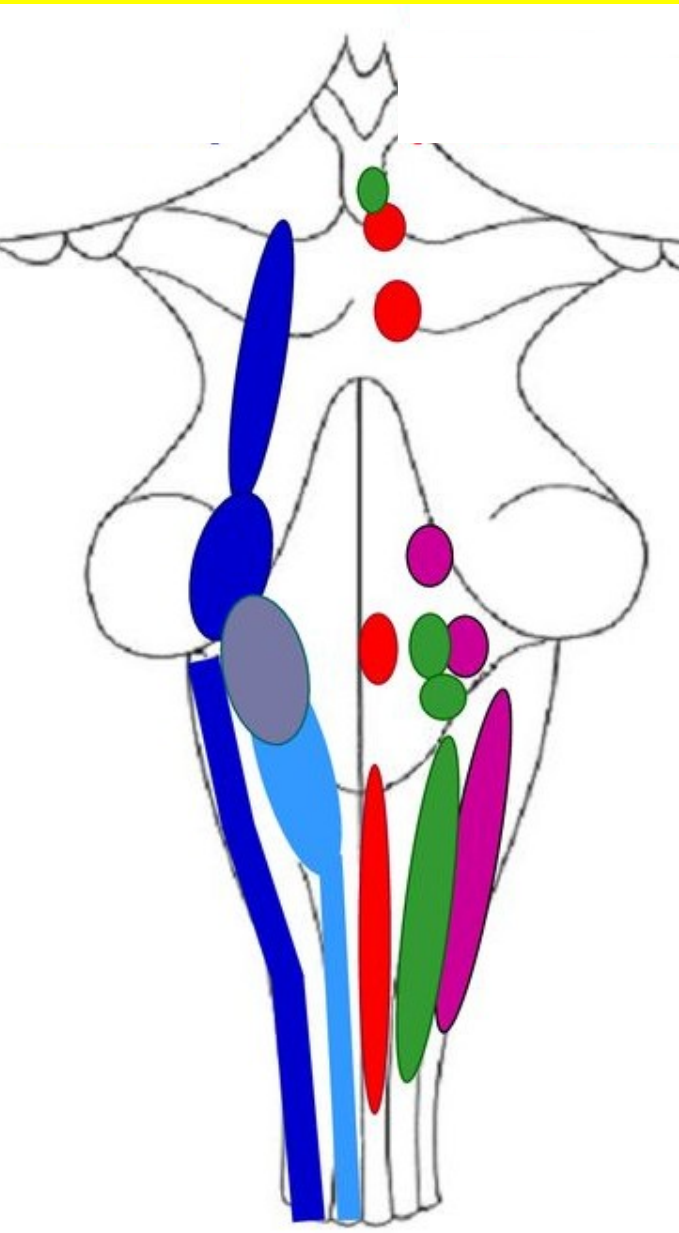
Strabismus divergens (rozbíhavé šilhání)+ **diplopie** (dvojité vidění): převaha intaktního m. rectus lateralis (inervovaného z n. VI) nad ochrnutým m. rectus medialis

Mydriáza (rozšířená zornice): obrna m. sphincter pupillae, převaha m. dilatator pupillae (inervovaného z krčního sympatiku)

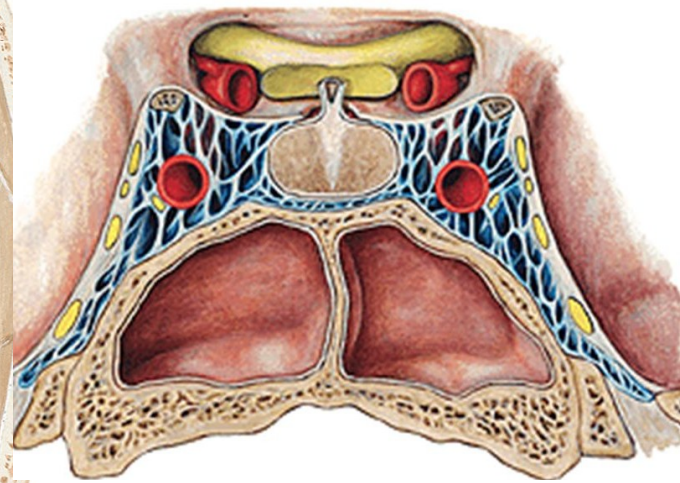
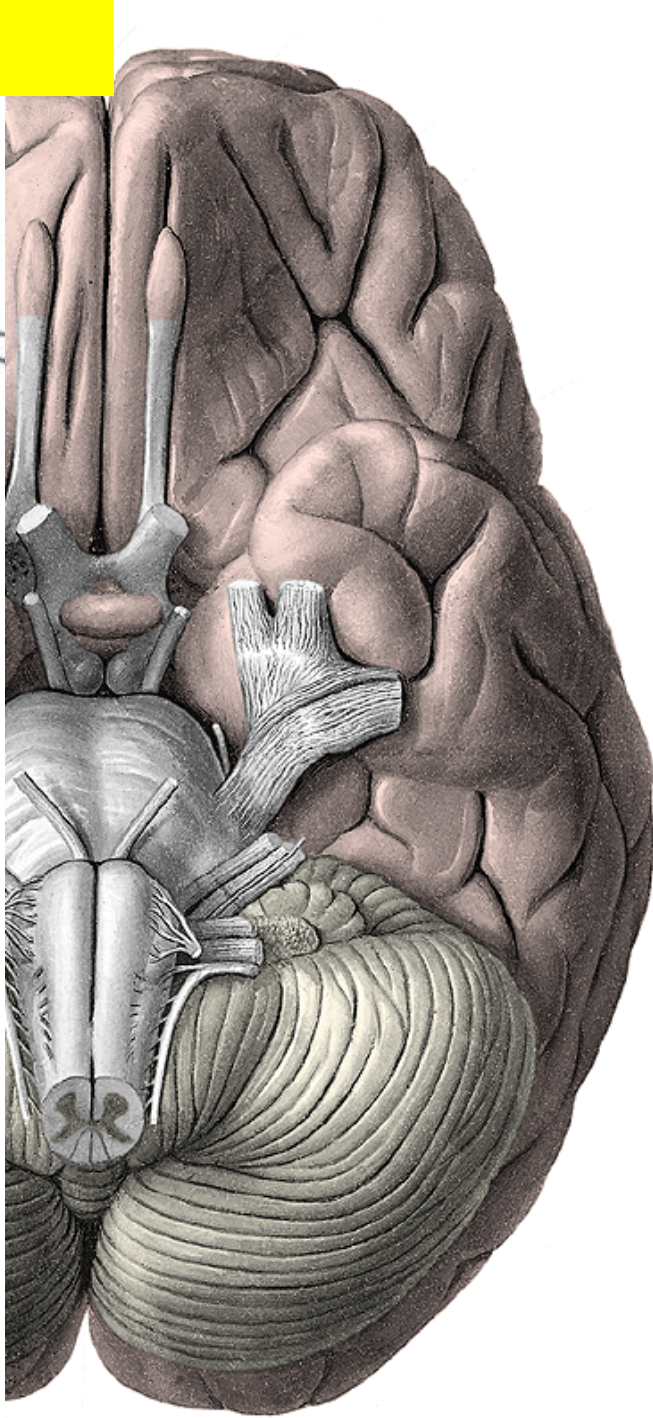
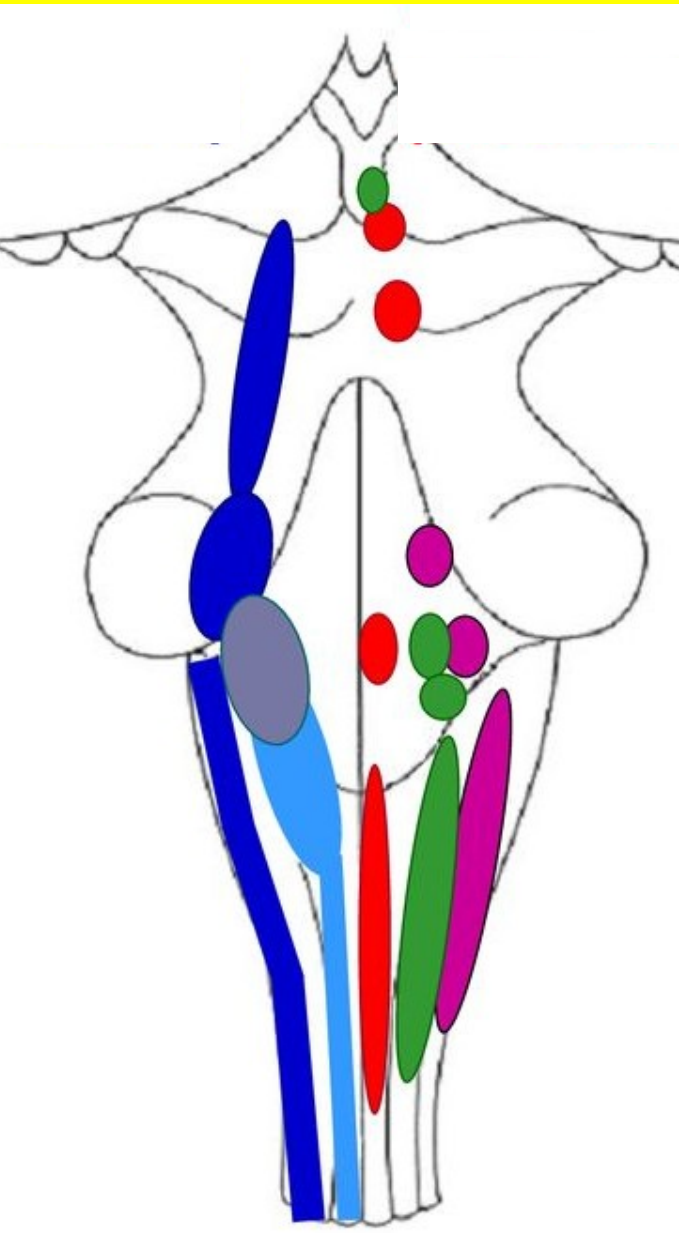
Porucha akomodace (do blízka)



IV. N. TROCHLEARIS

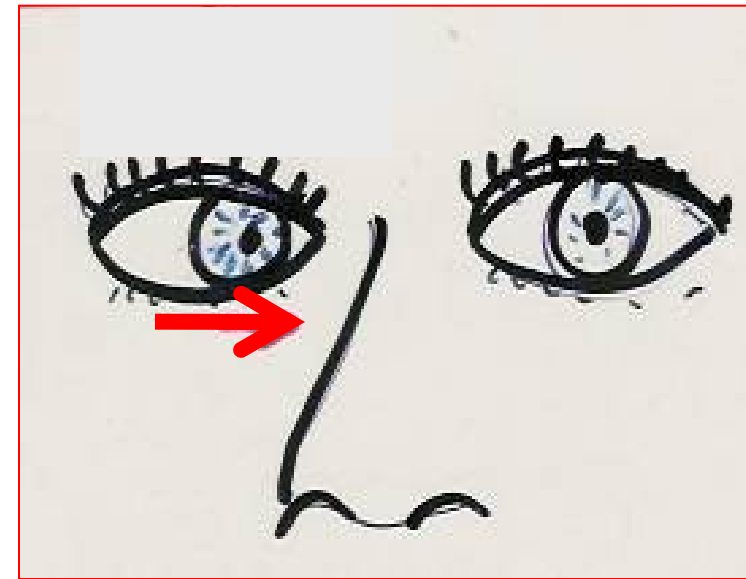


IV. N. ABDUCENS



OBRNA N. VI

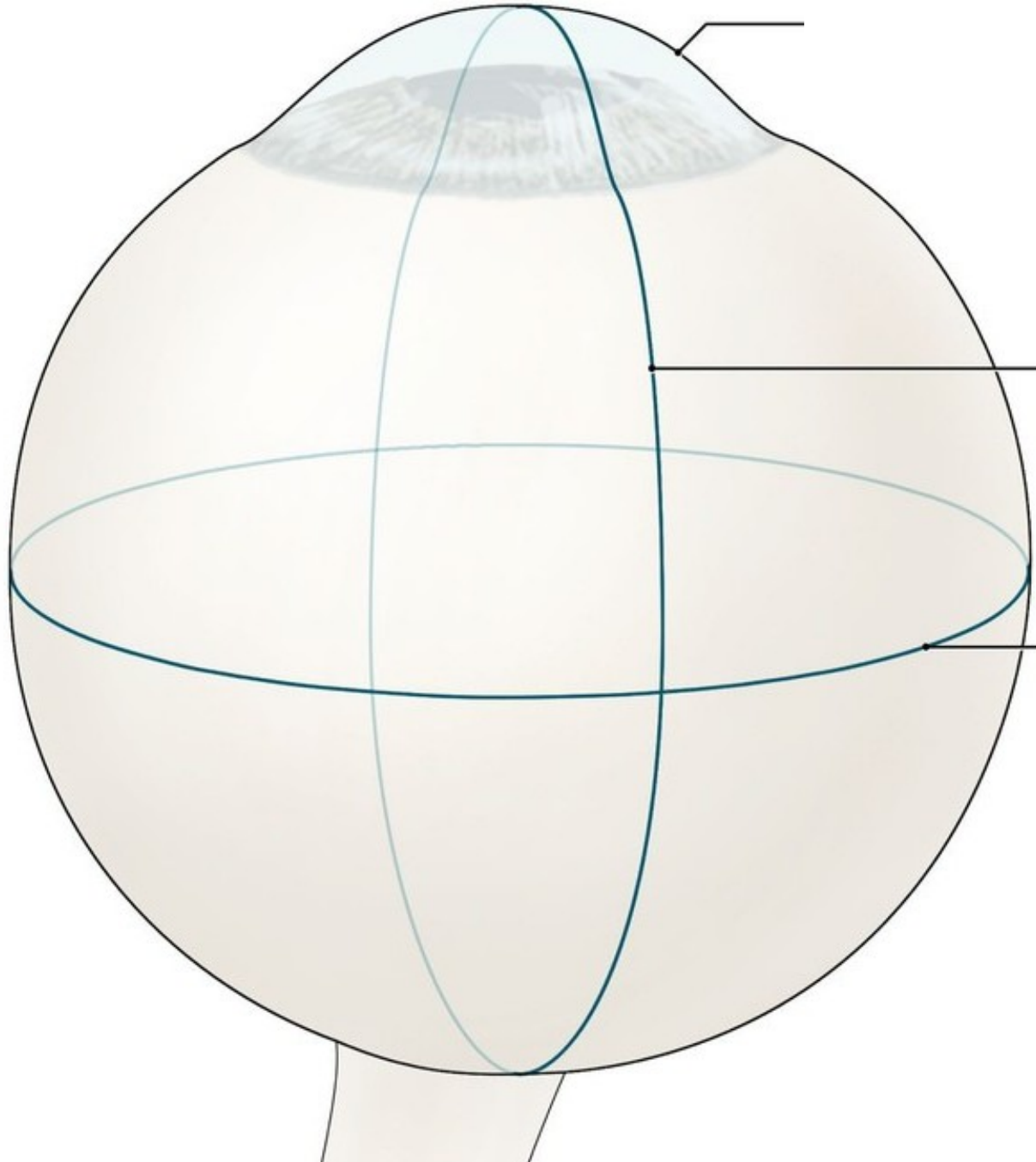
1. **Obrna pohledu laterálně** z obrny m. rectus bulbi lateralis
2. **Strabismus convergens + diplopie:** převaha intaktního m. rectus medialis (inervovaného z n. III) nad ochrnutým m. rectus bulbi lateralis



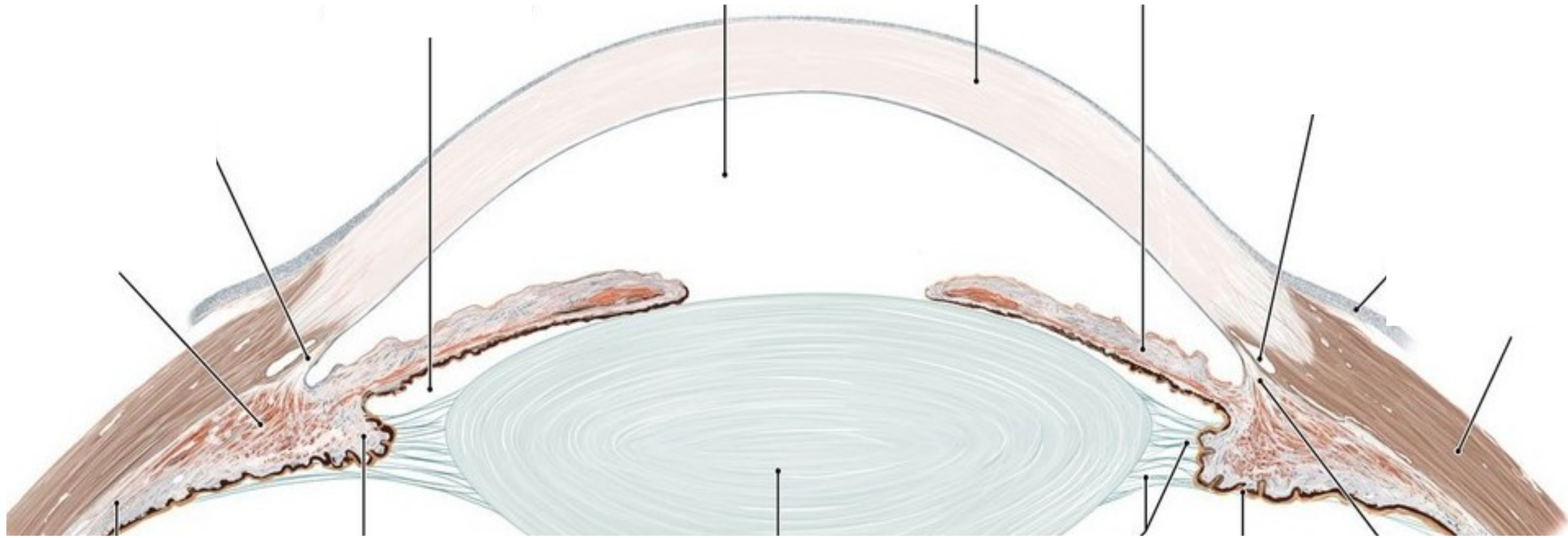
ZRAKOVÝ SYSTÉM



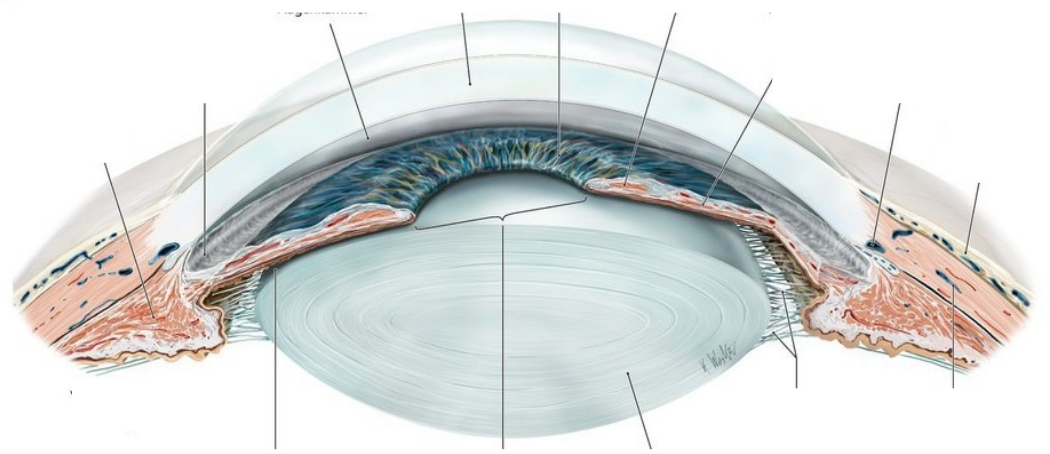
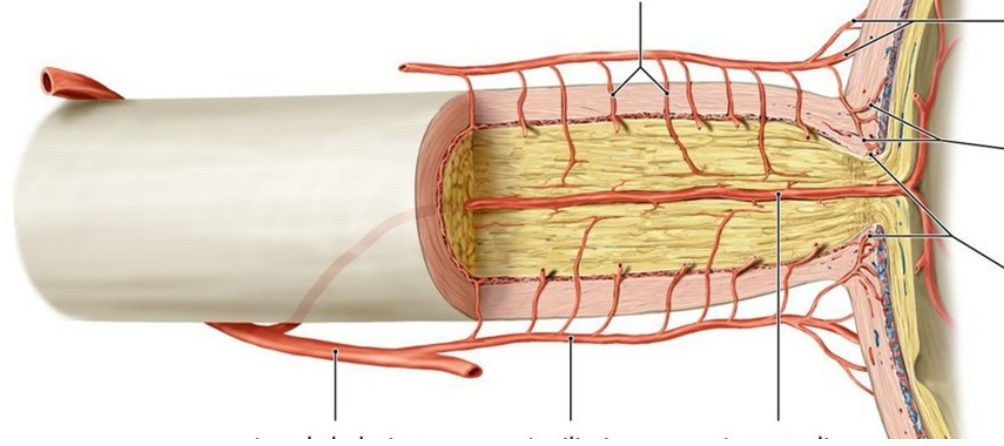
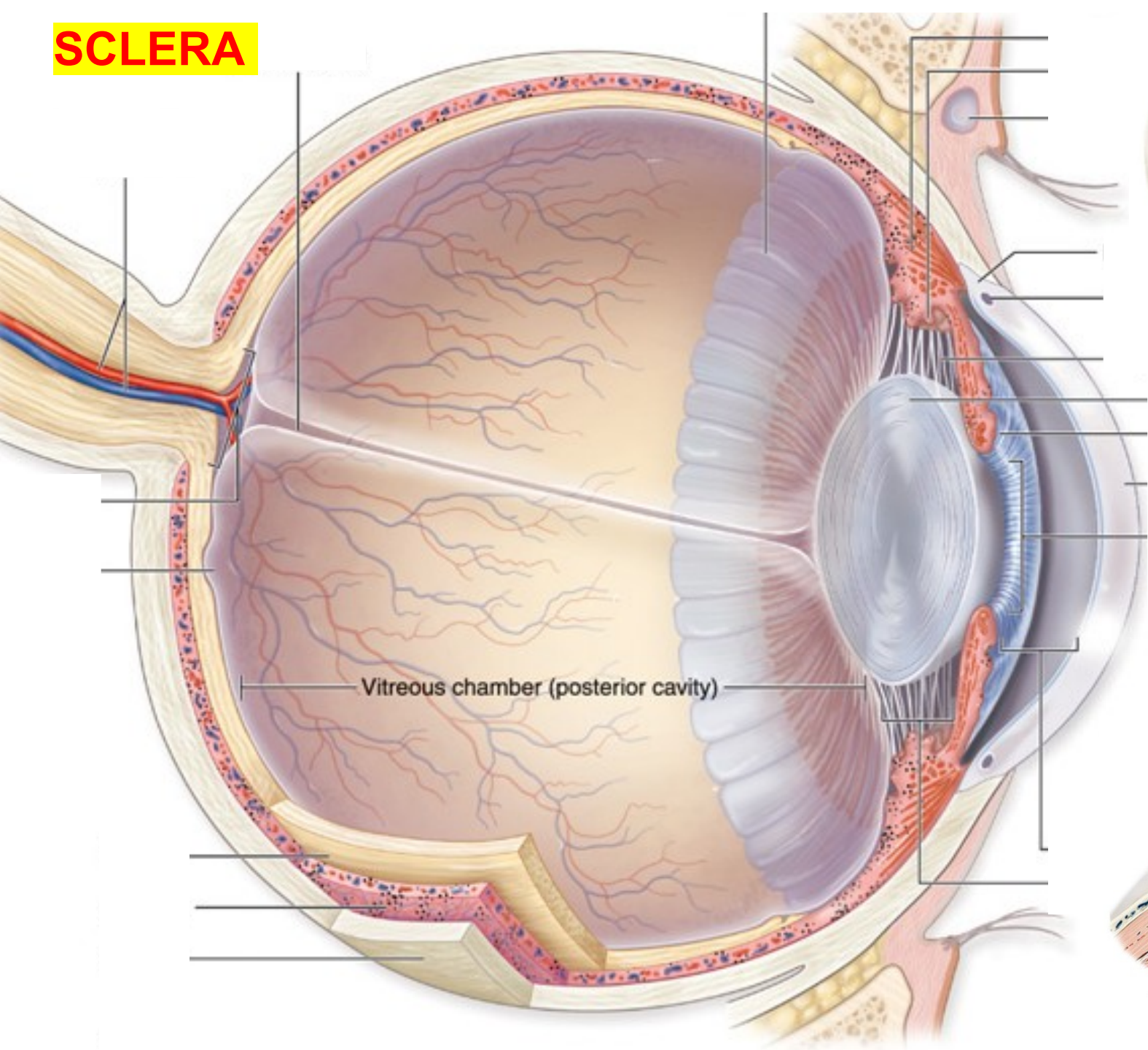
BULBUS OCULI



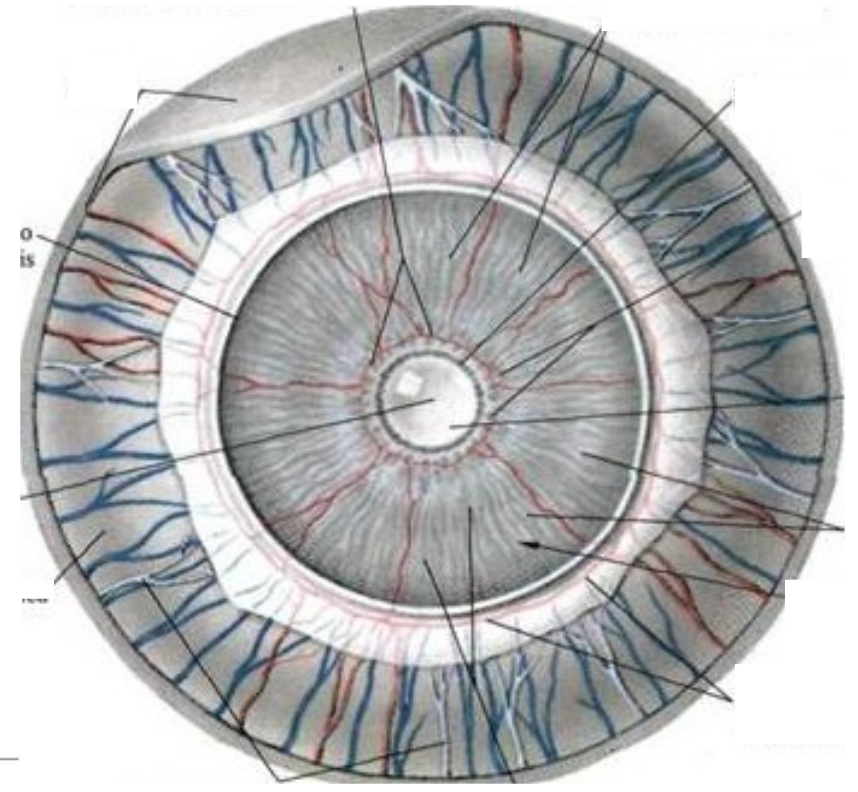
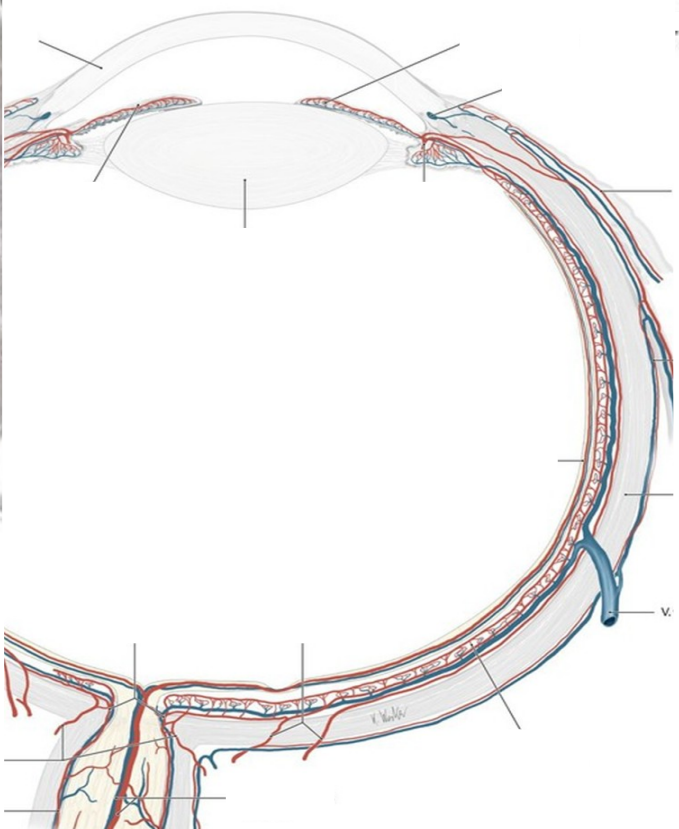
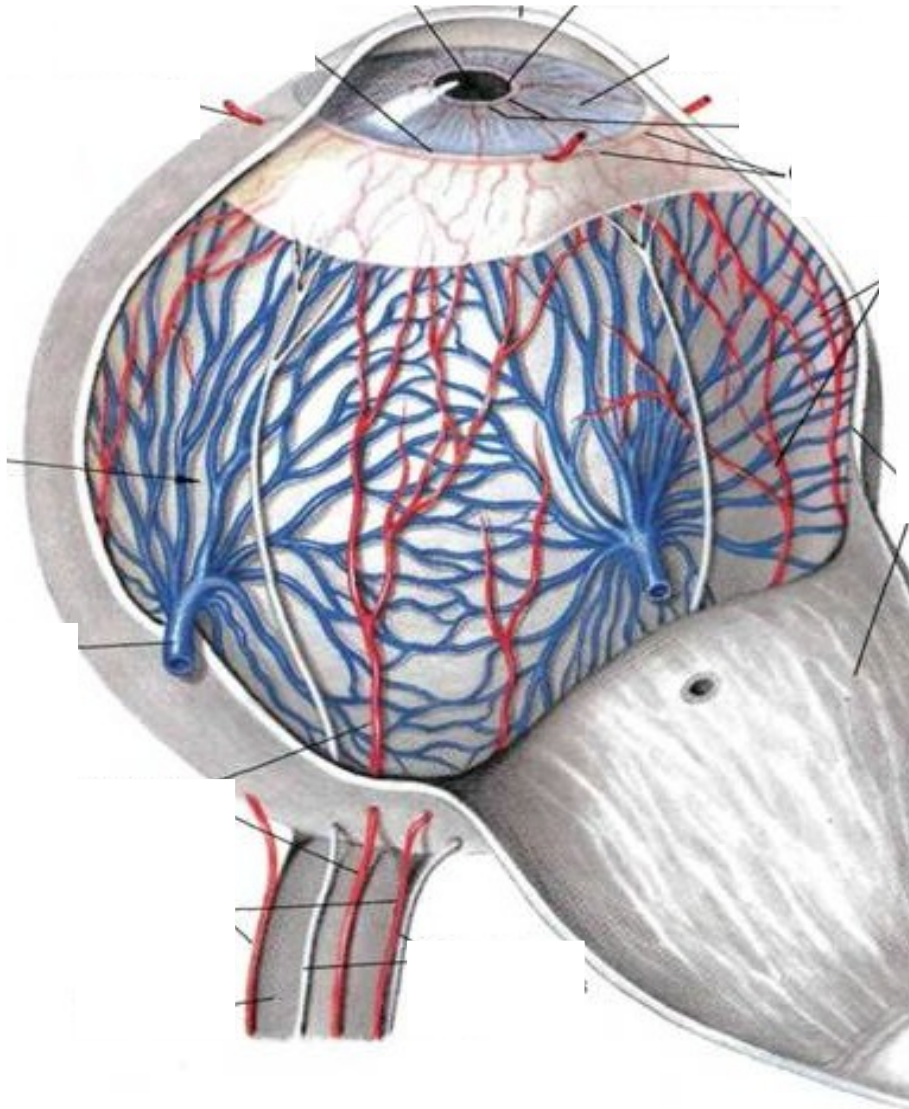
CORNEA



SCLERA

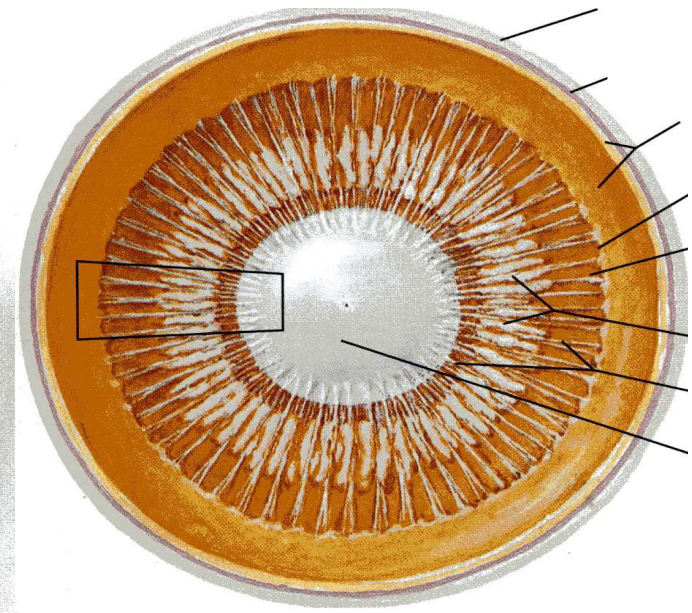
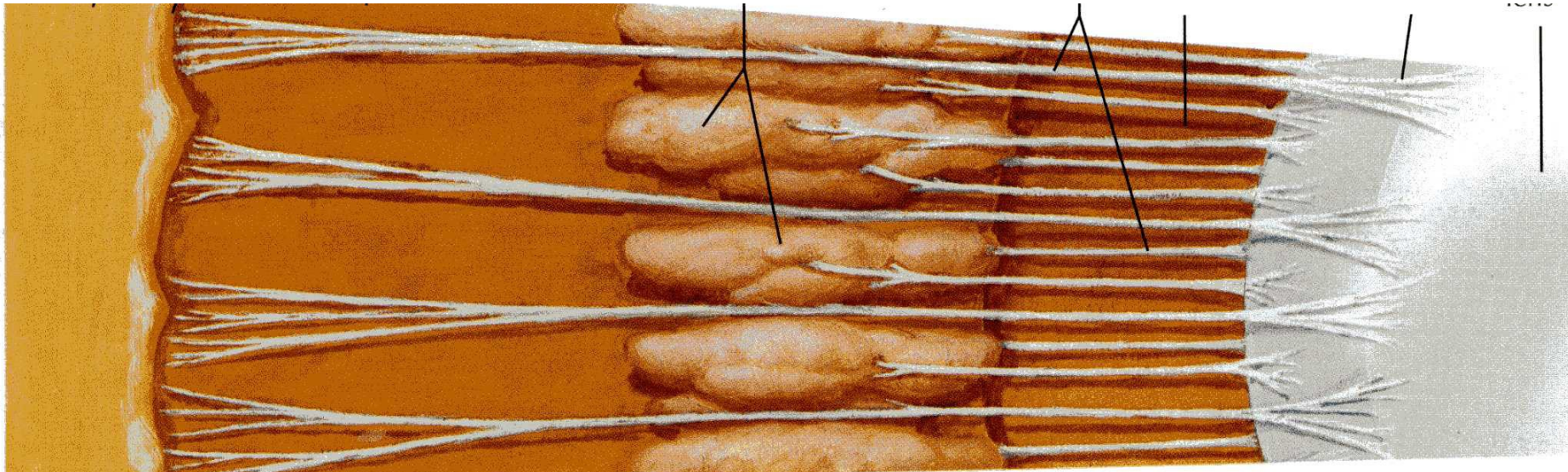
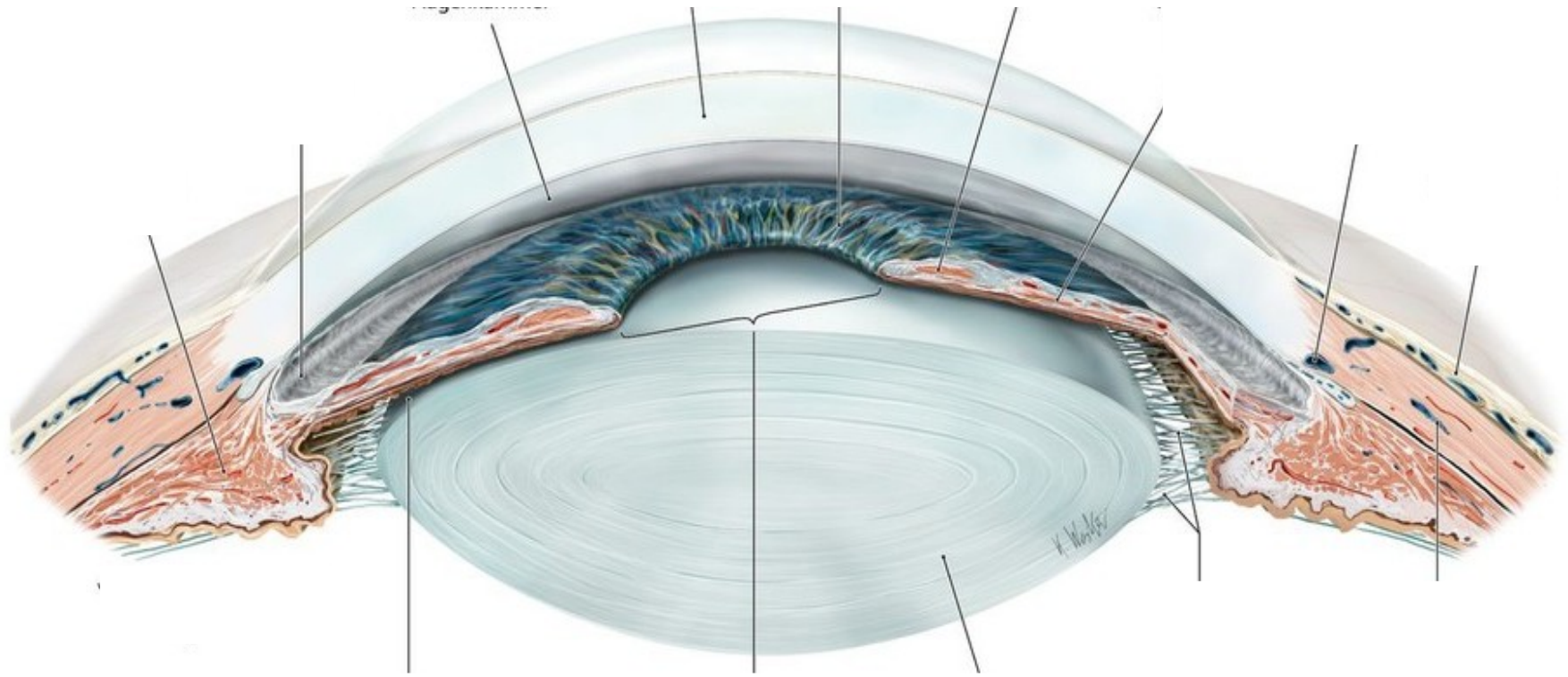


CHOROIDEA

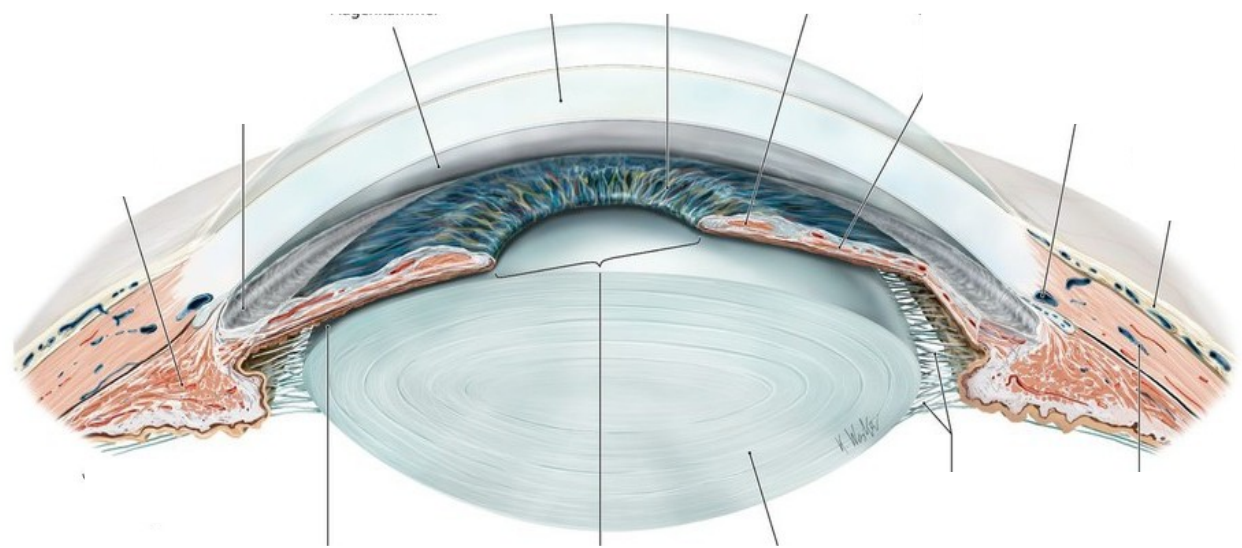
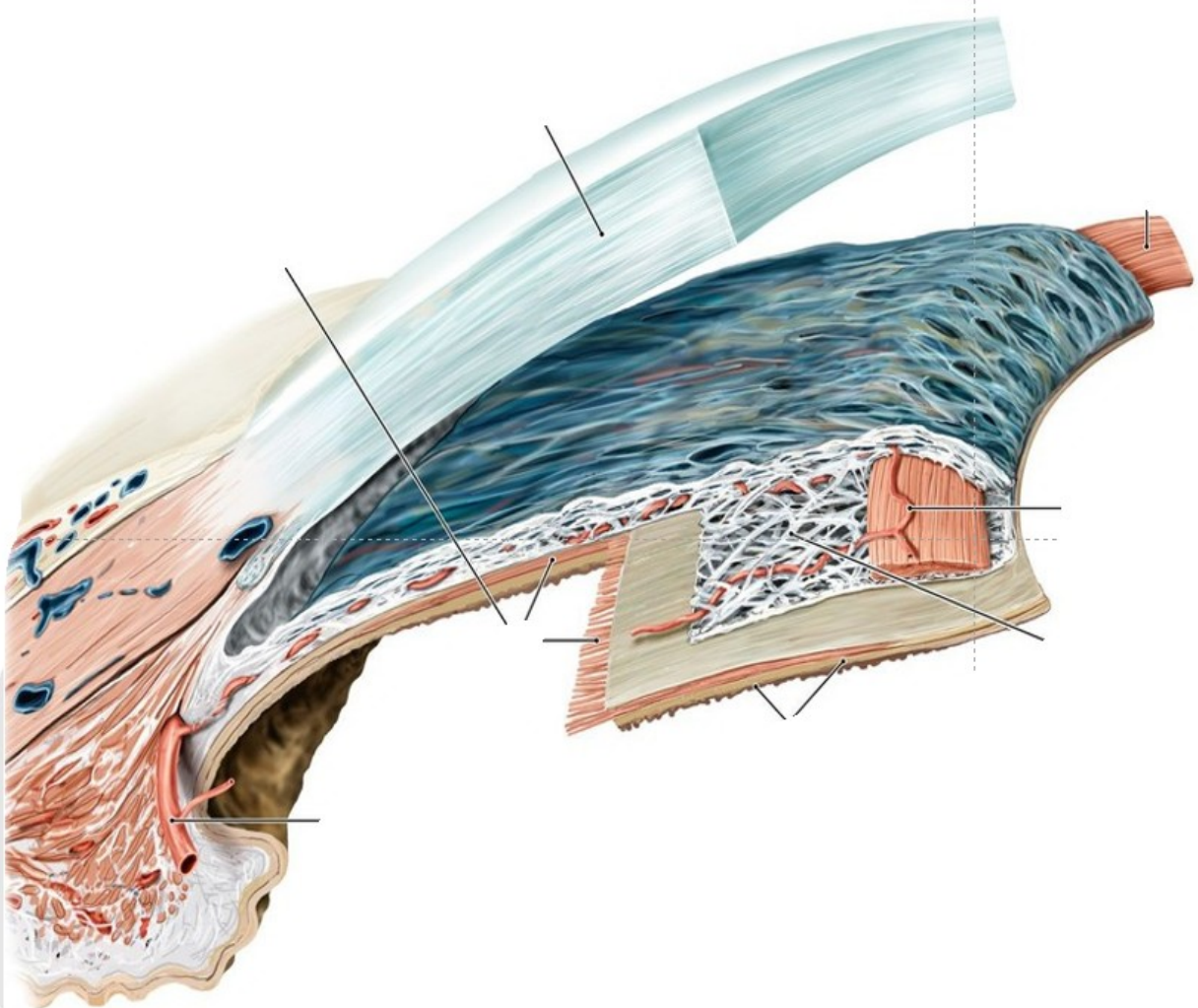
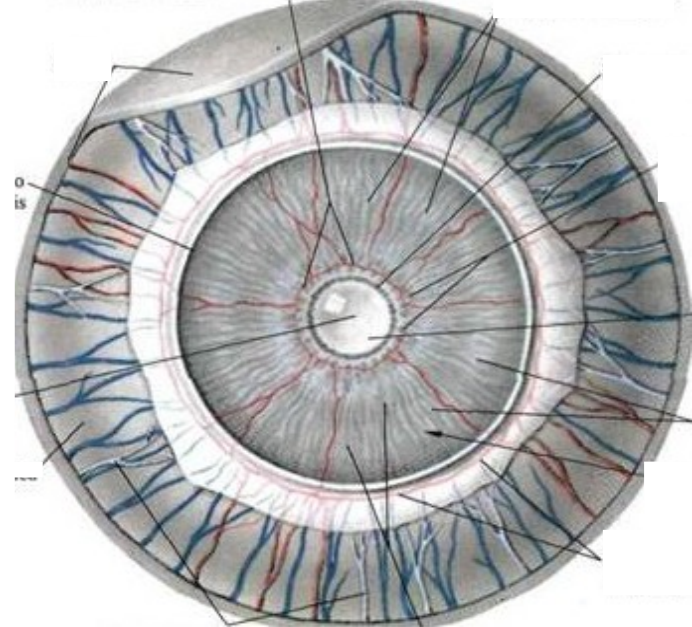
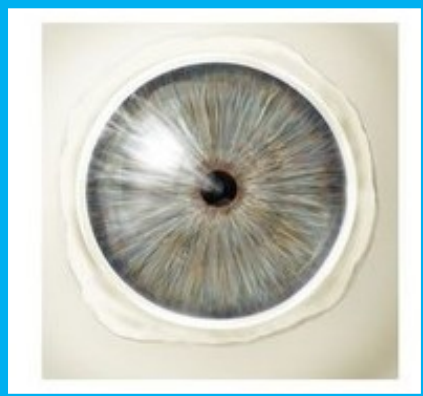


CORPUS CILIARE

ZÁVĚSNÝ APARÁT ČOČKY

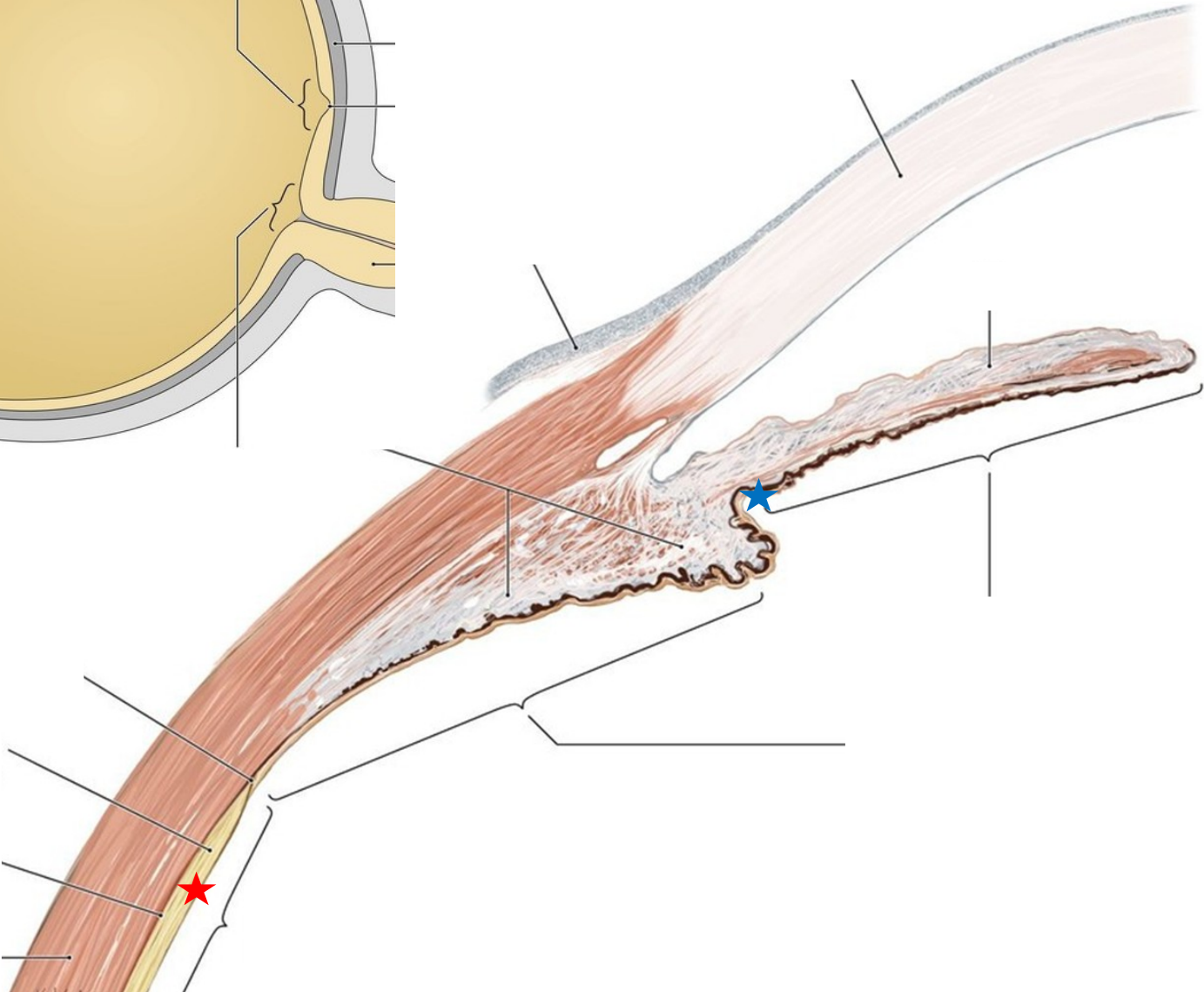
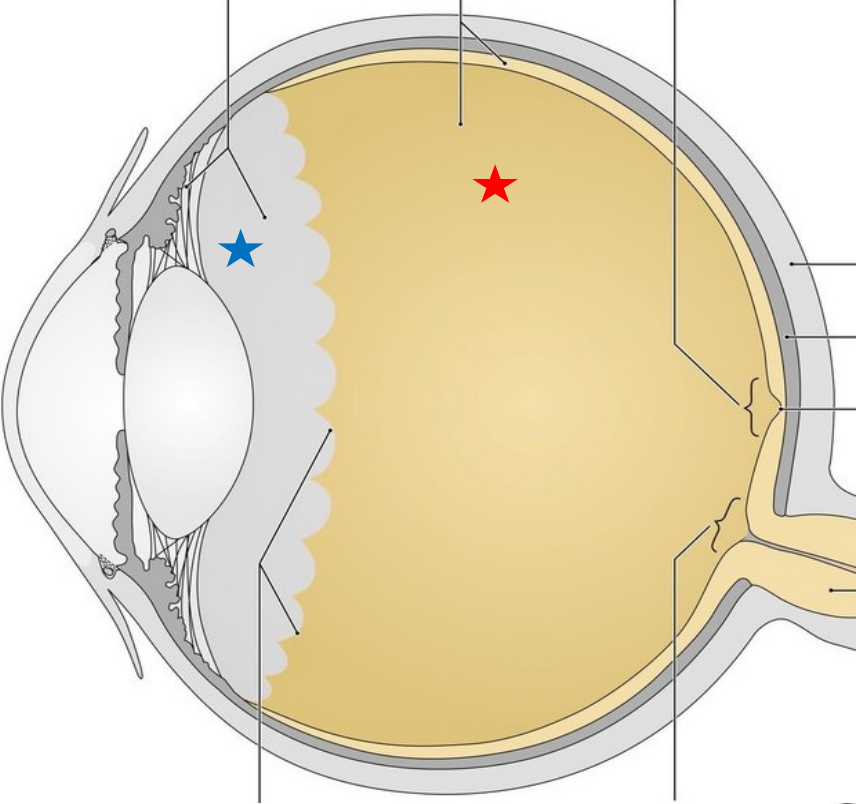
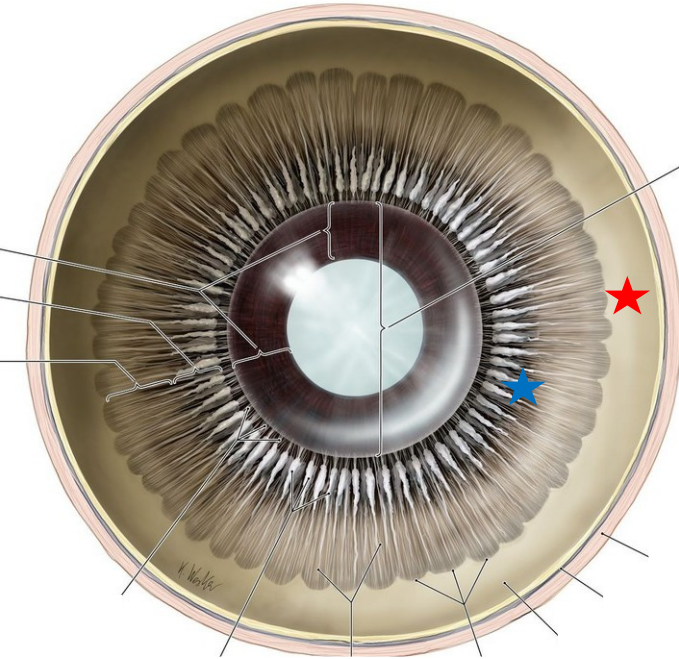


IRIS

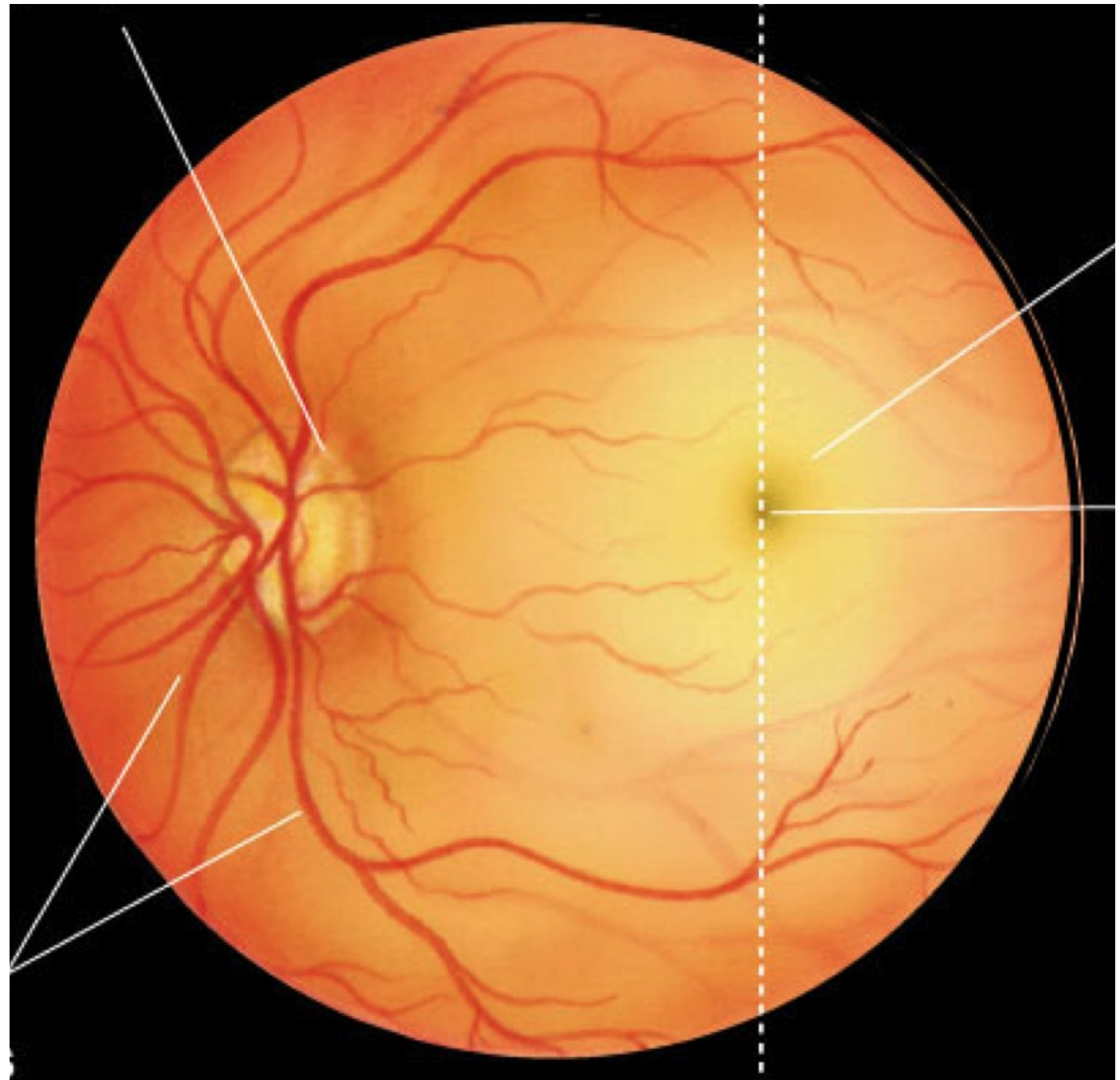


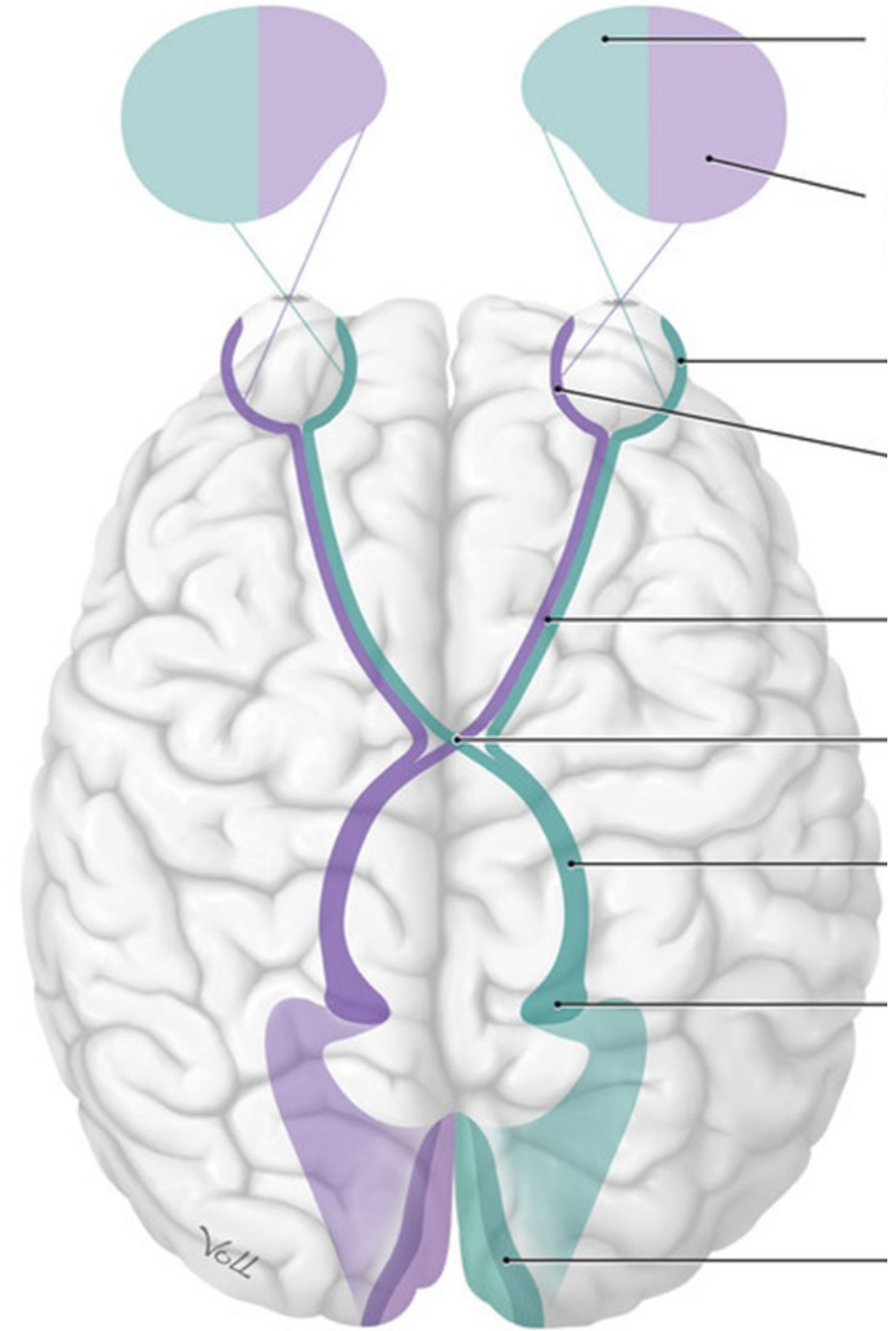
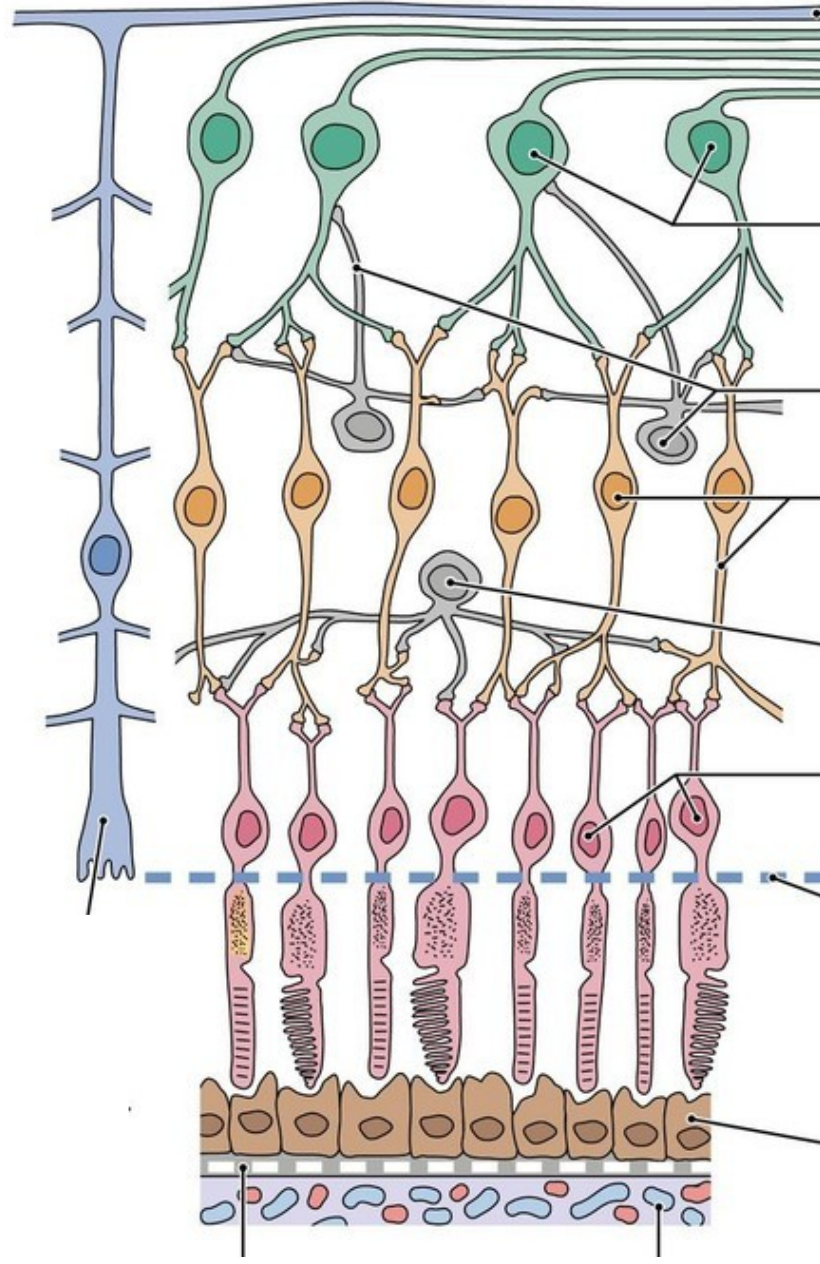
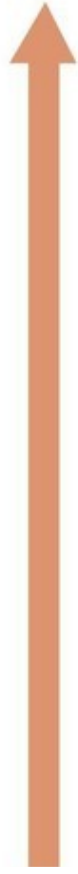


RETINA

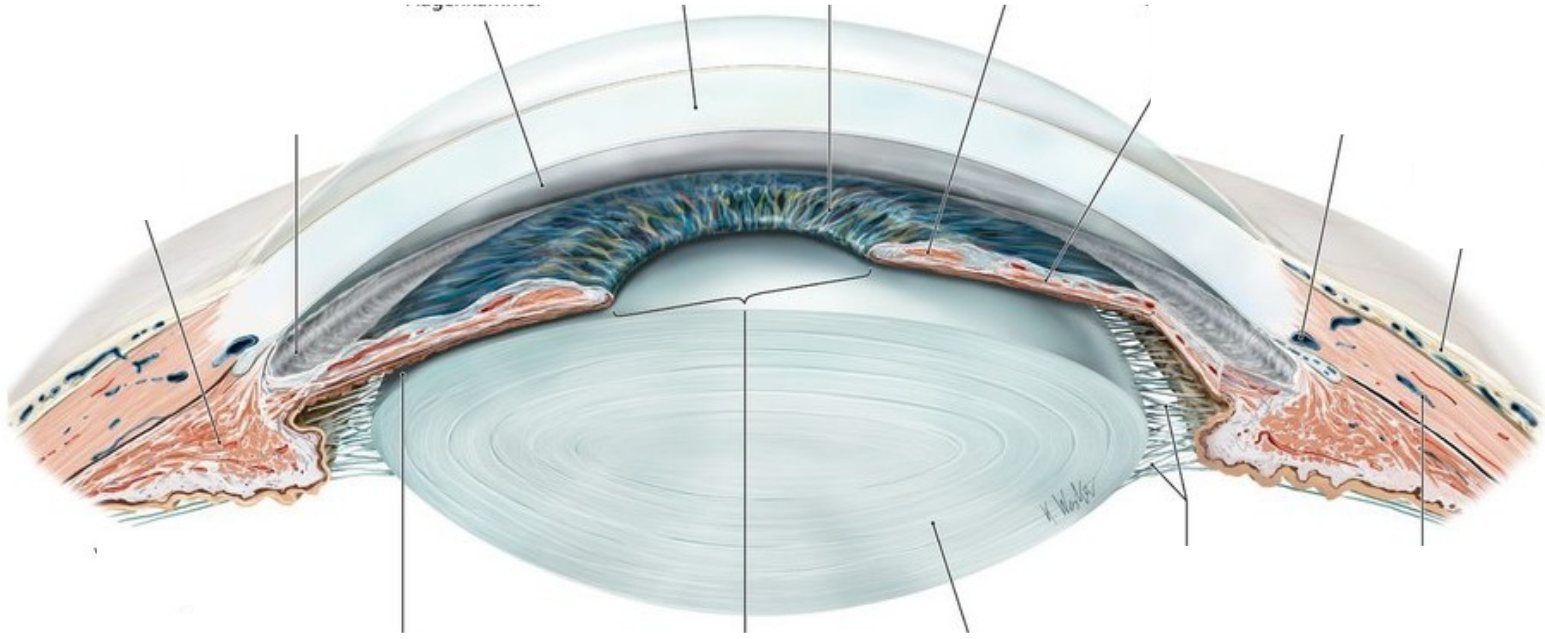
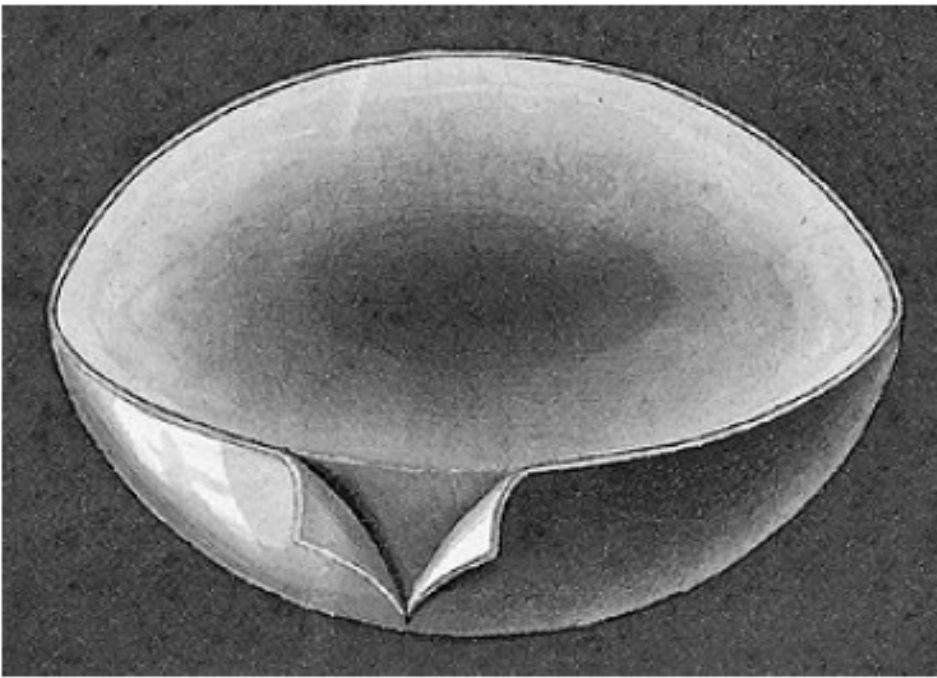


FUNDUS OCULI

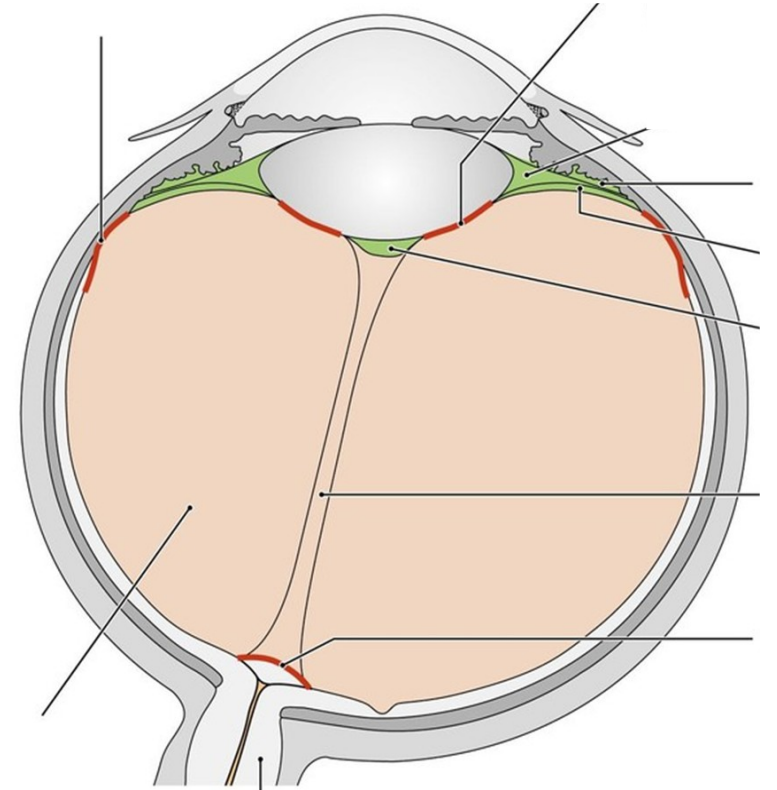
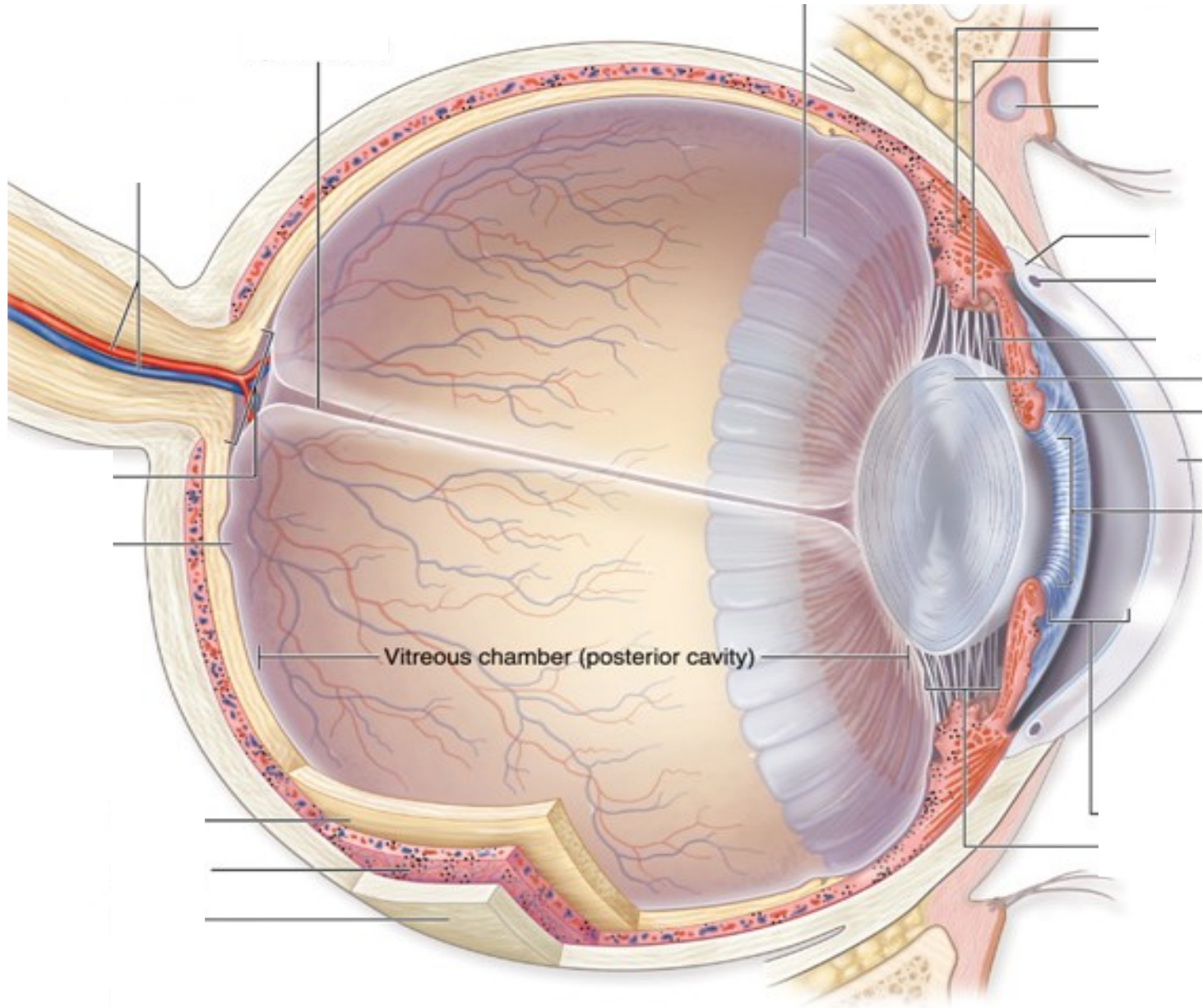




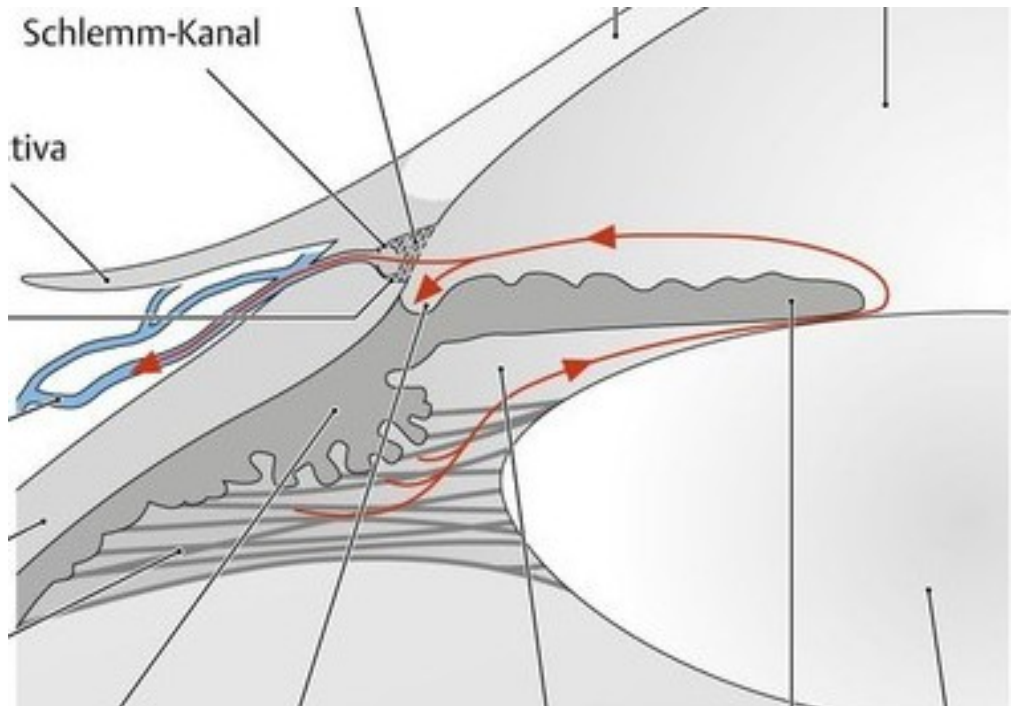
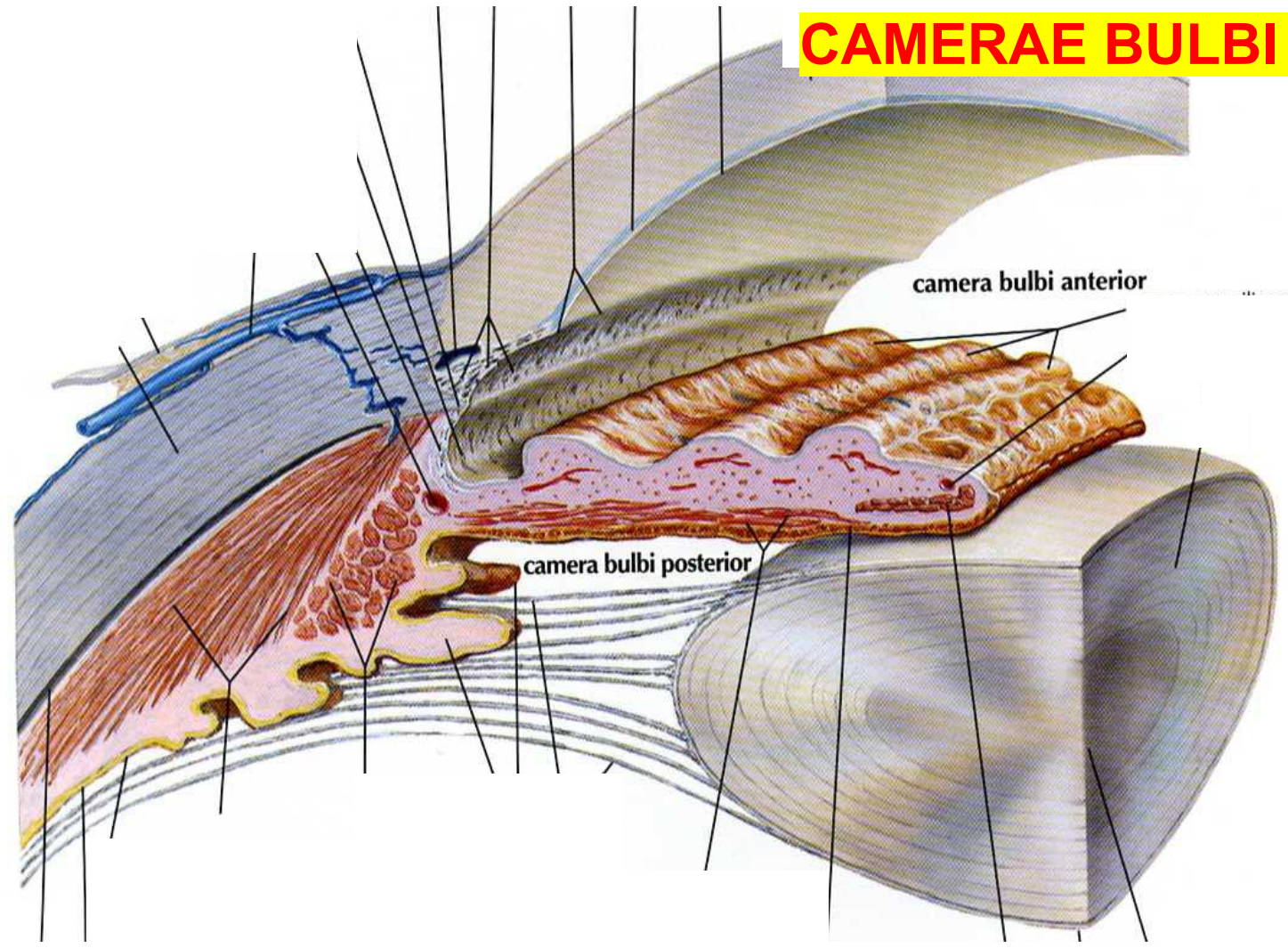
LENS



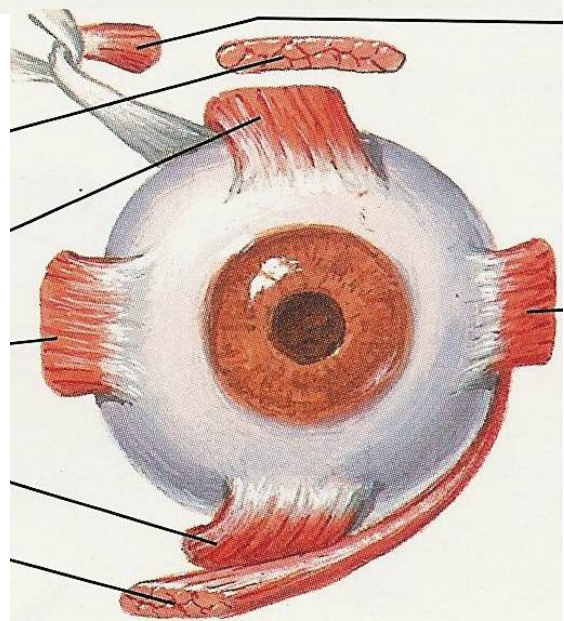
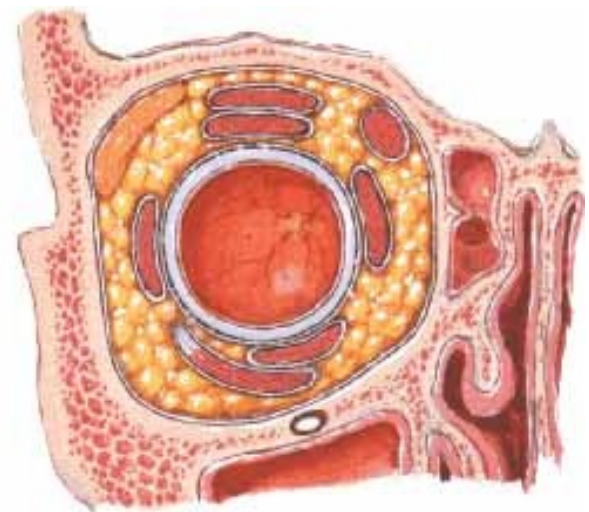
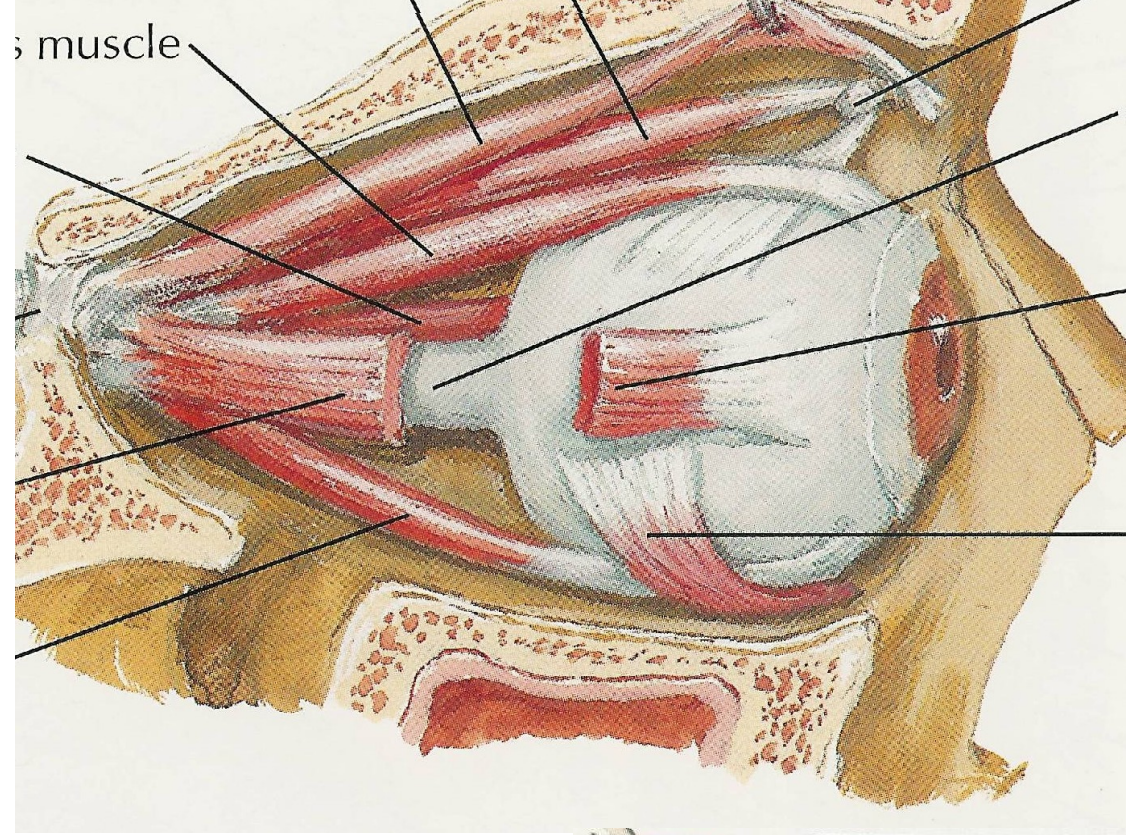
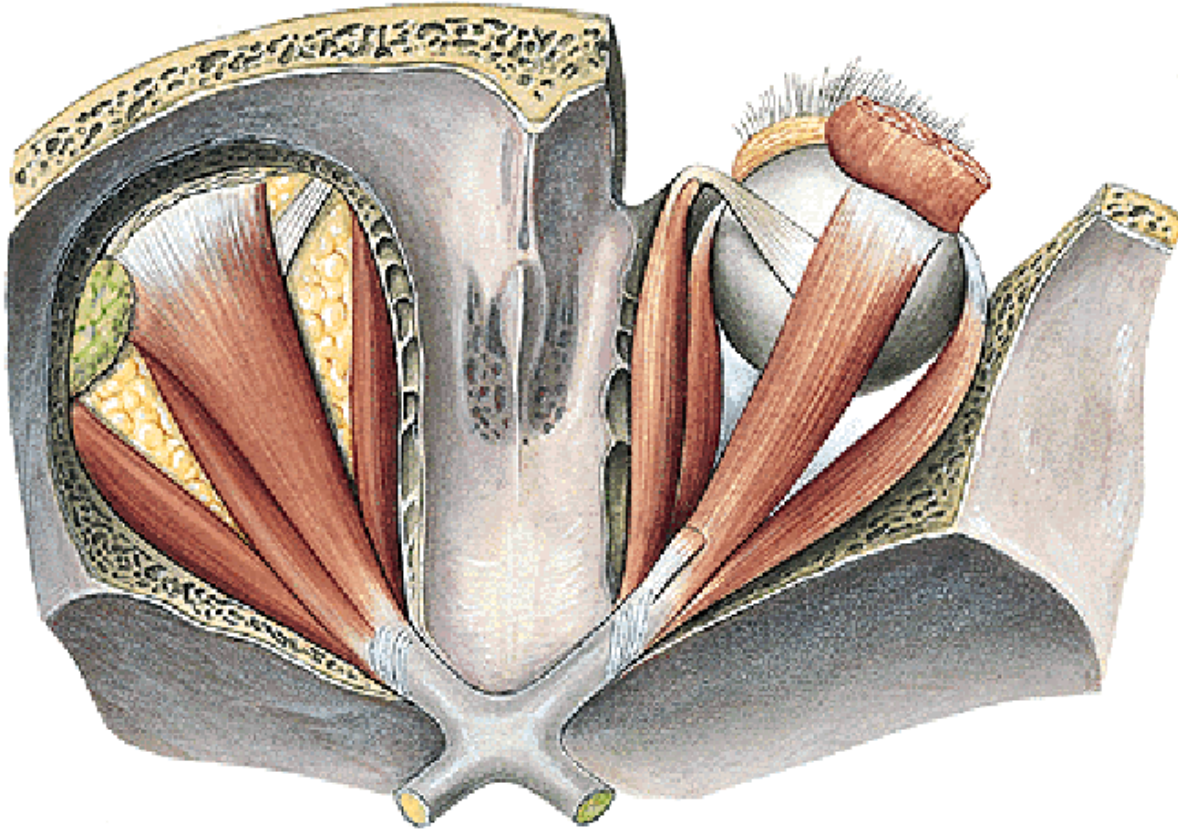
CORPUS VITREUM



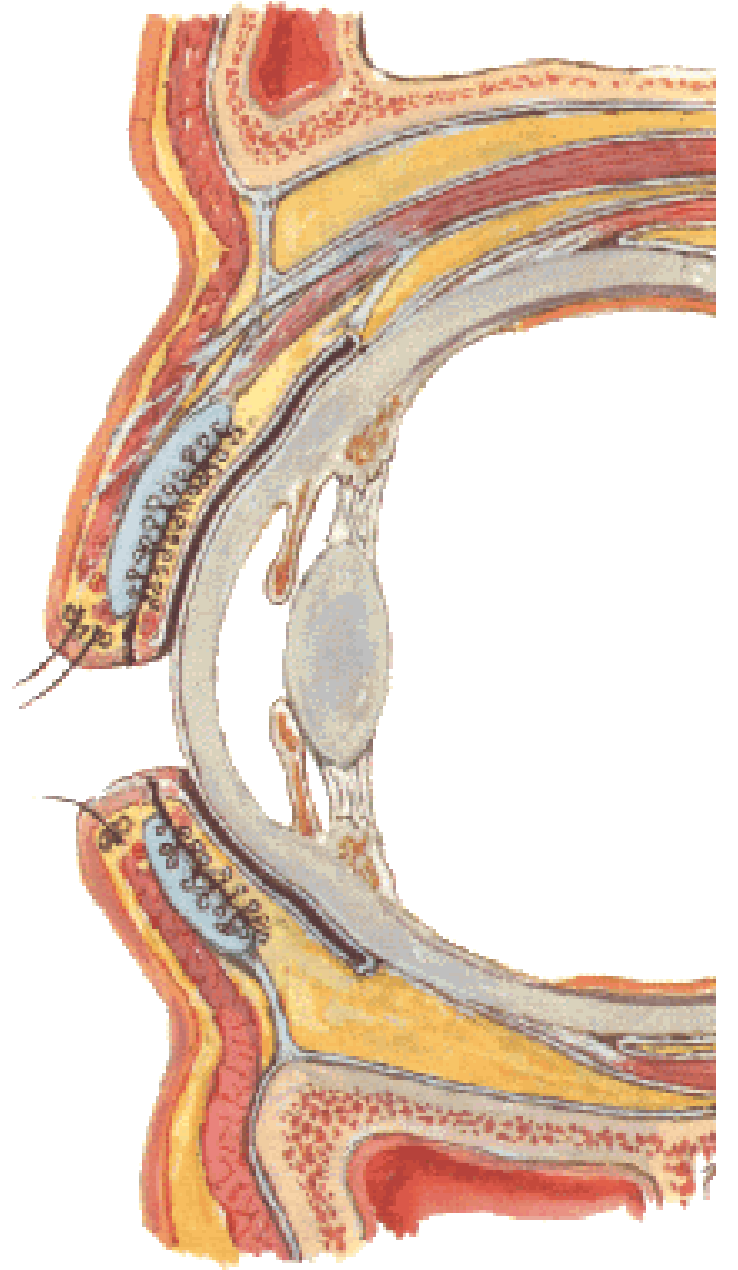
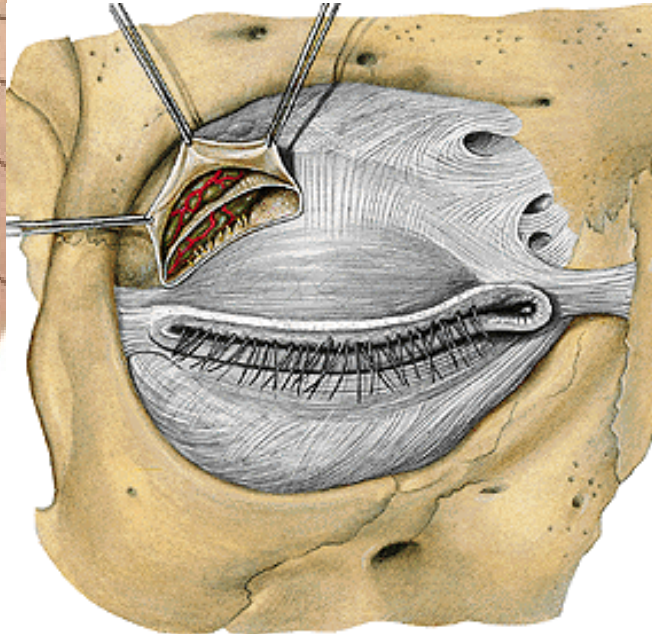
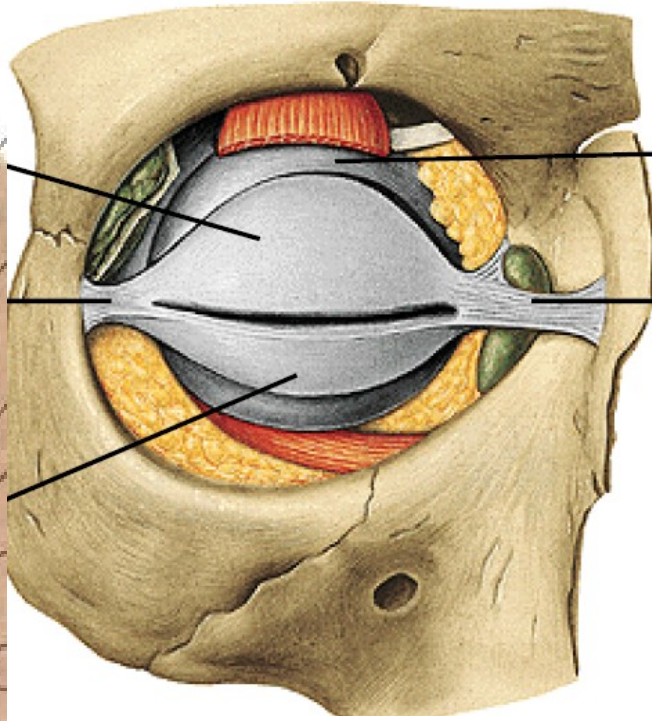
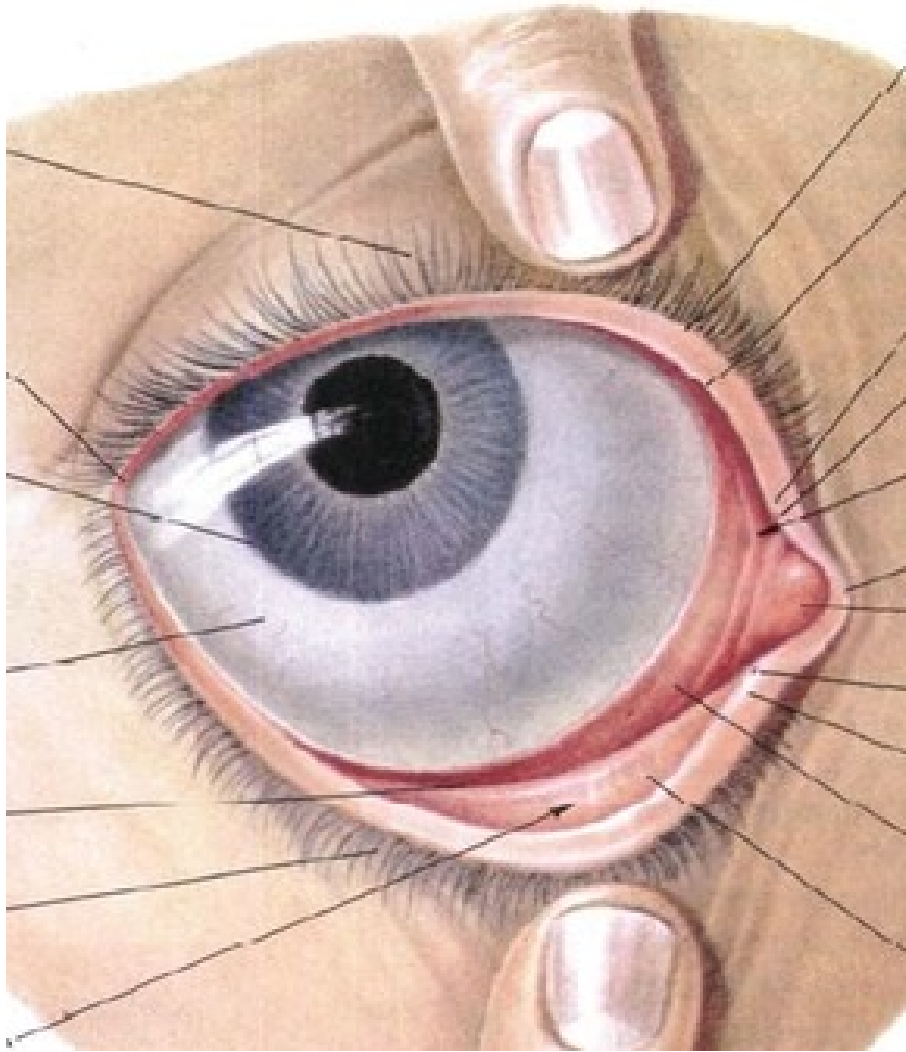
CAMERAE BULBI



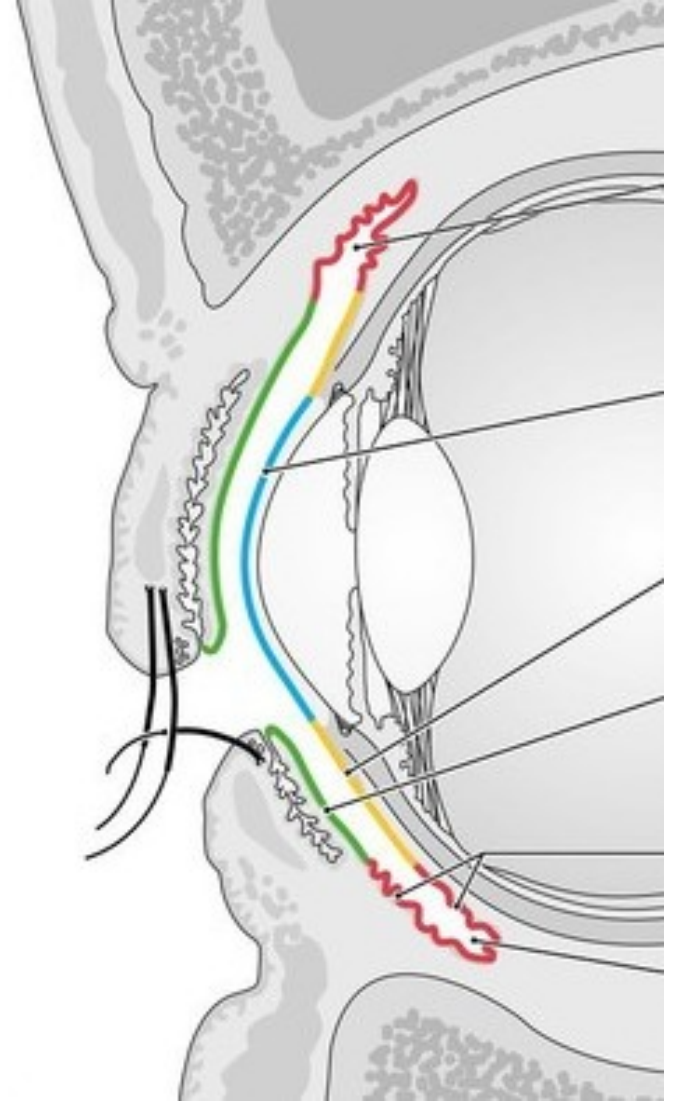
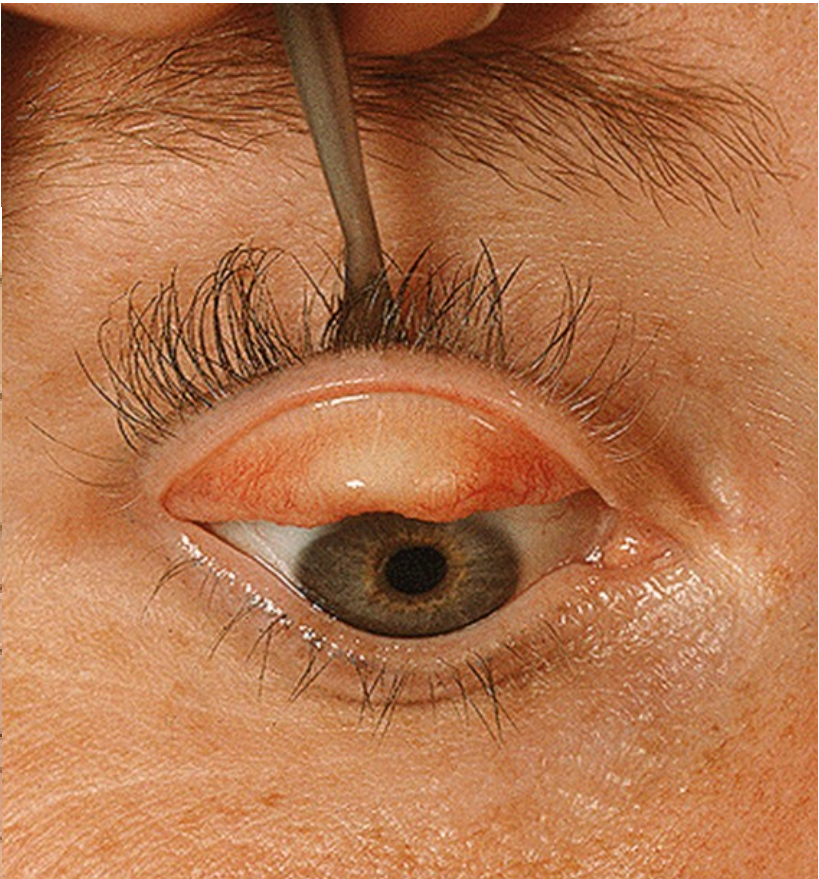
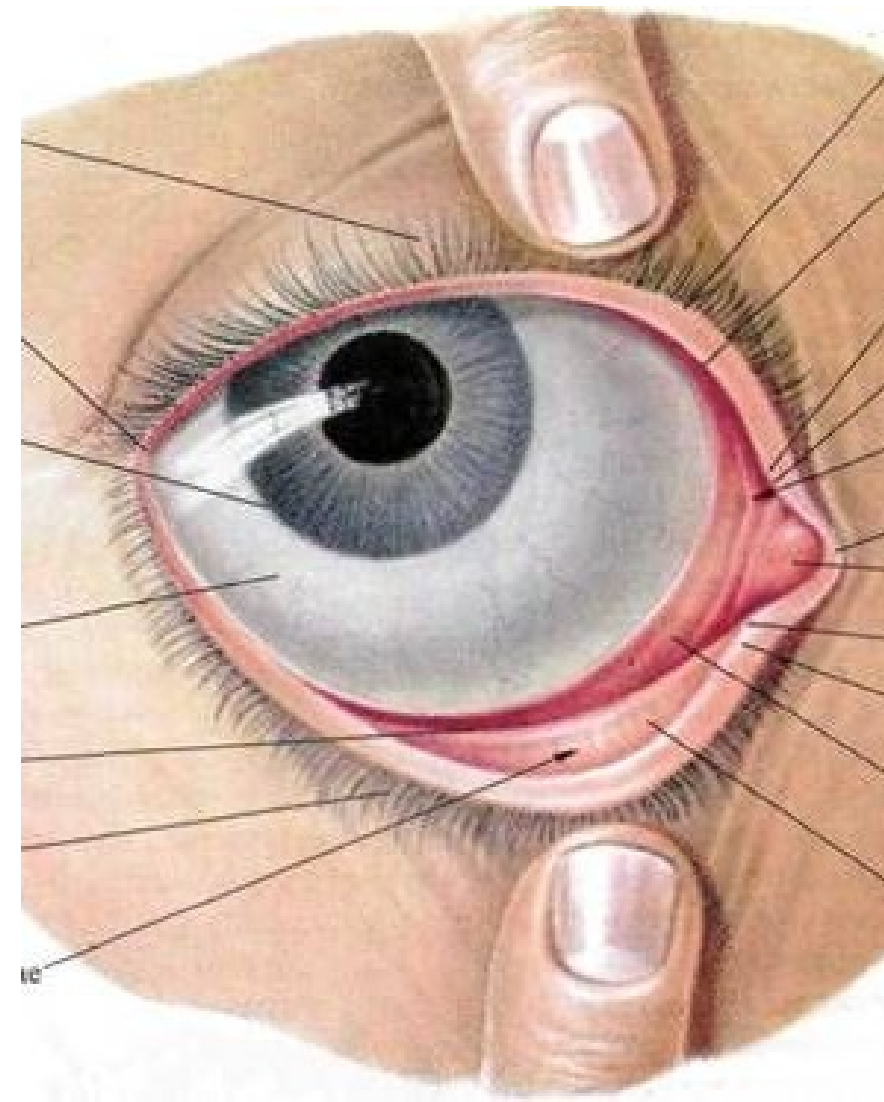
MM. BULBI



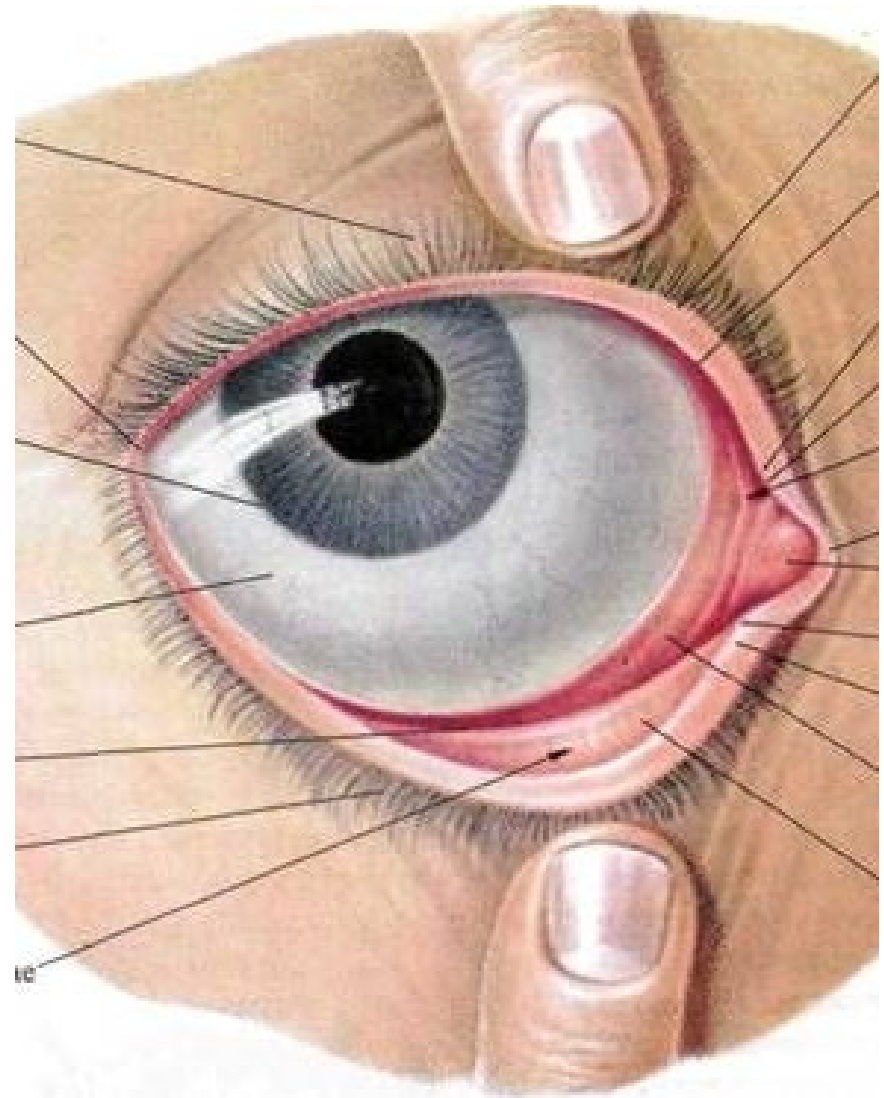
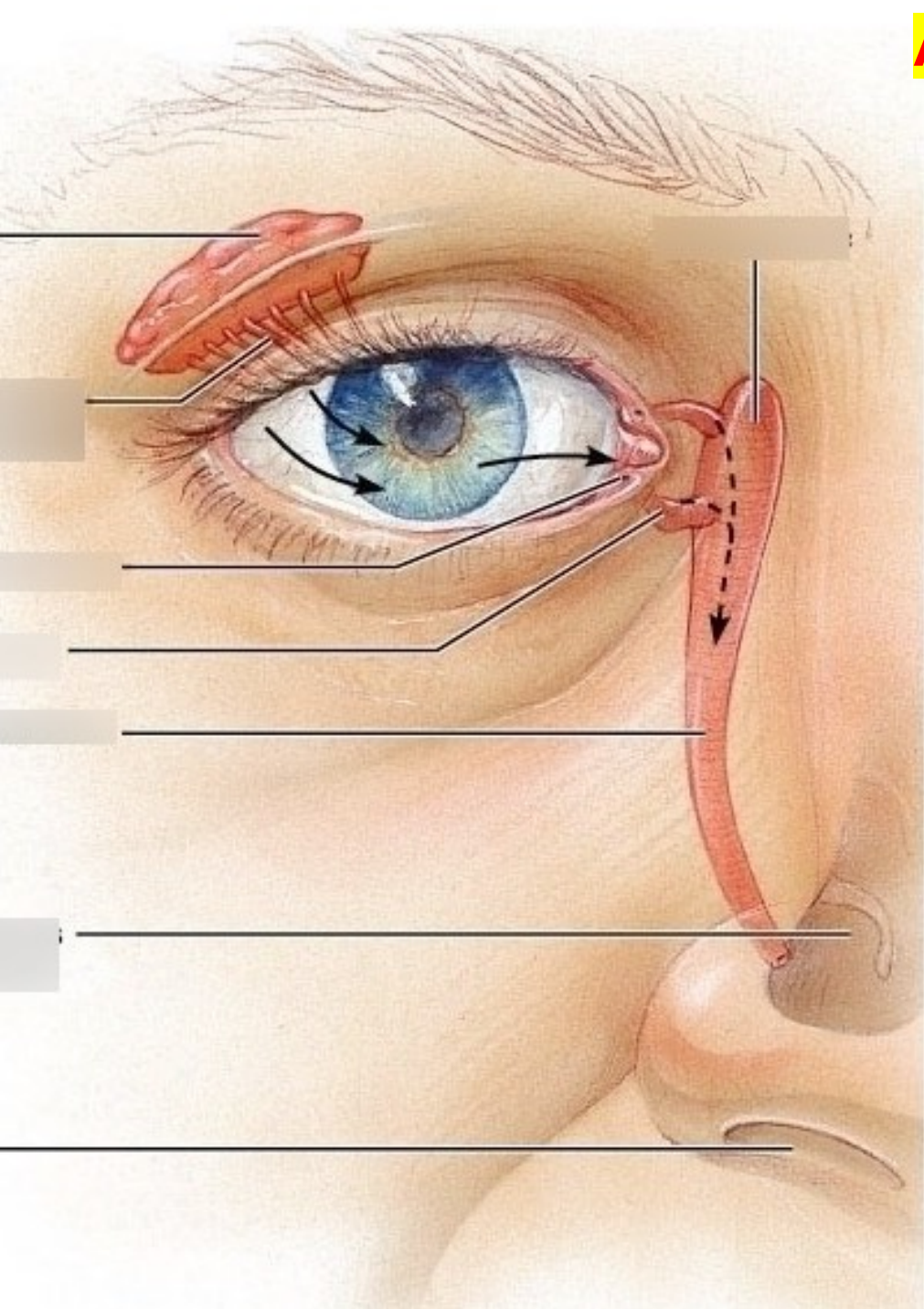
PAPEBREA



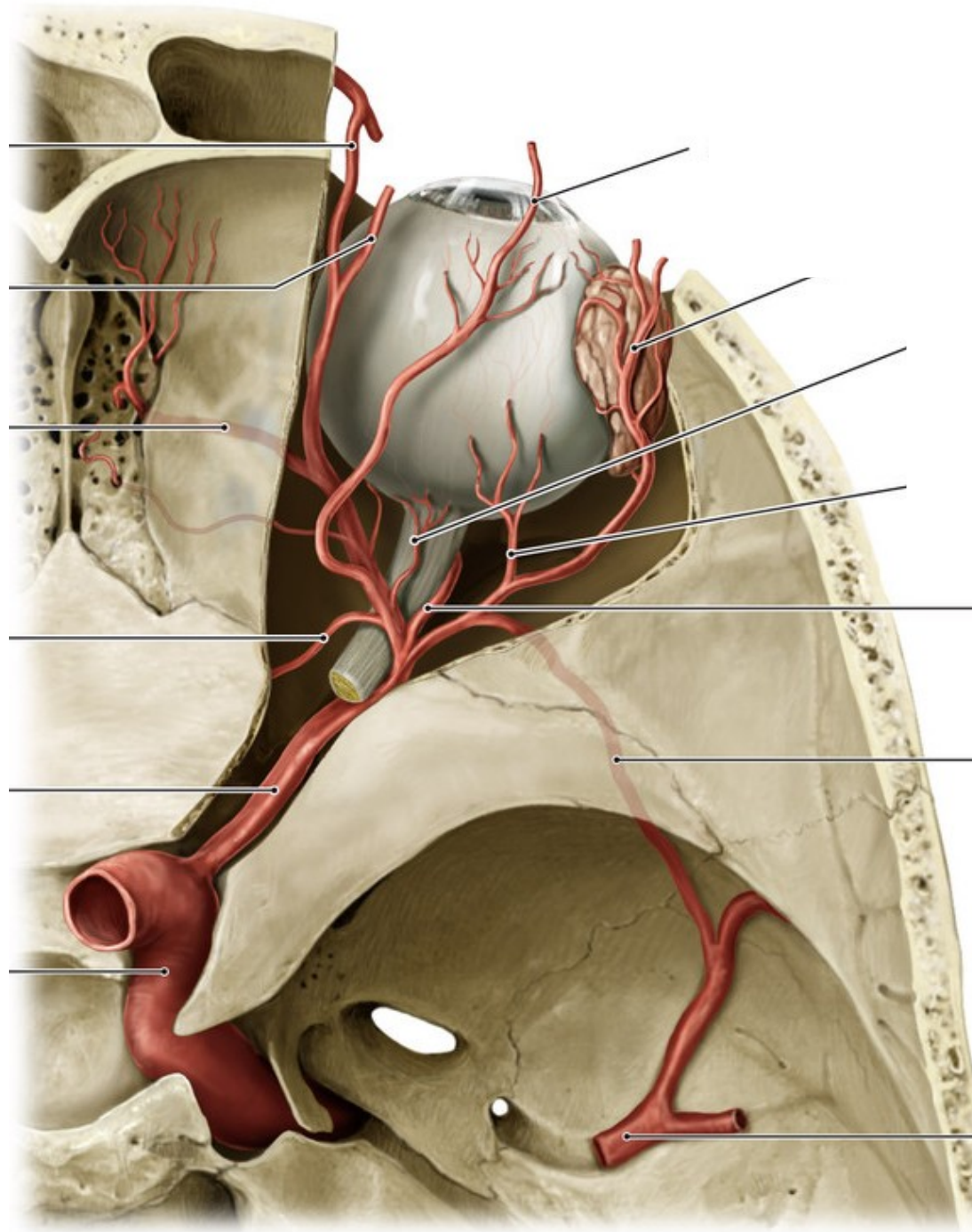
TUNICA CONJUNCTIVA



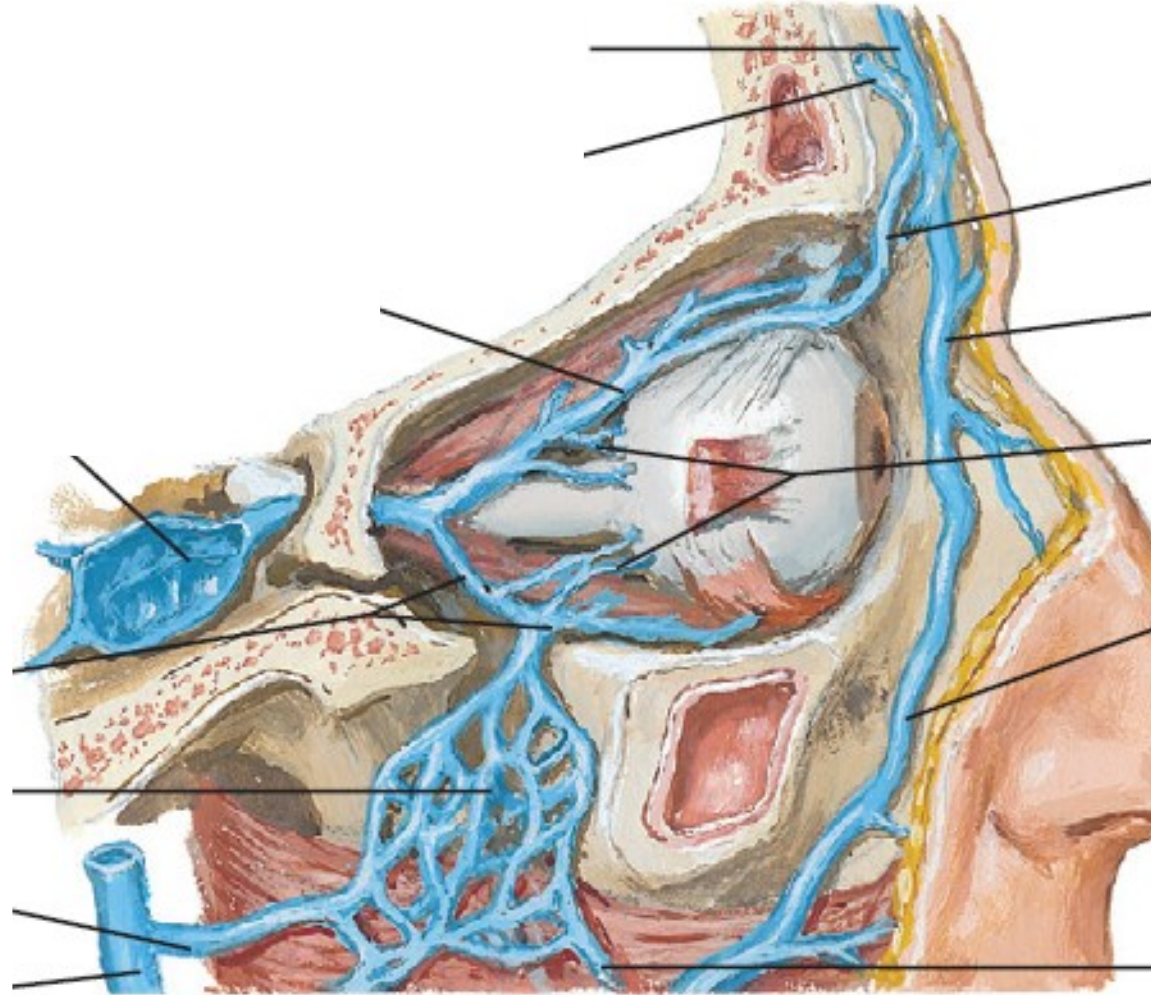
APARATUS LACRIMALIS



ARTERIA OPHTHALMICA



VENAE OPHTHALMICAE

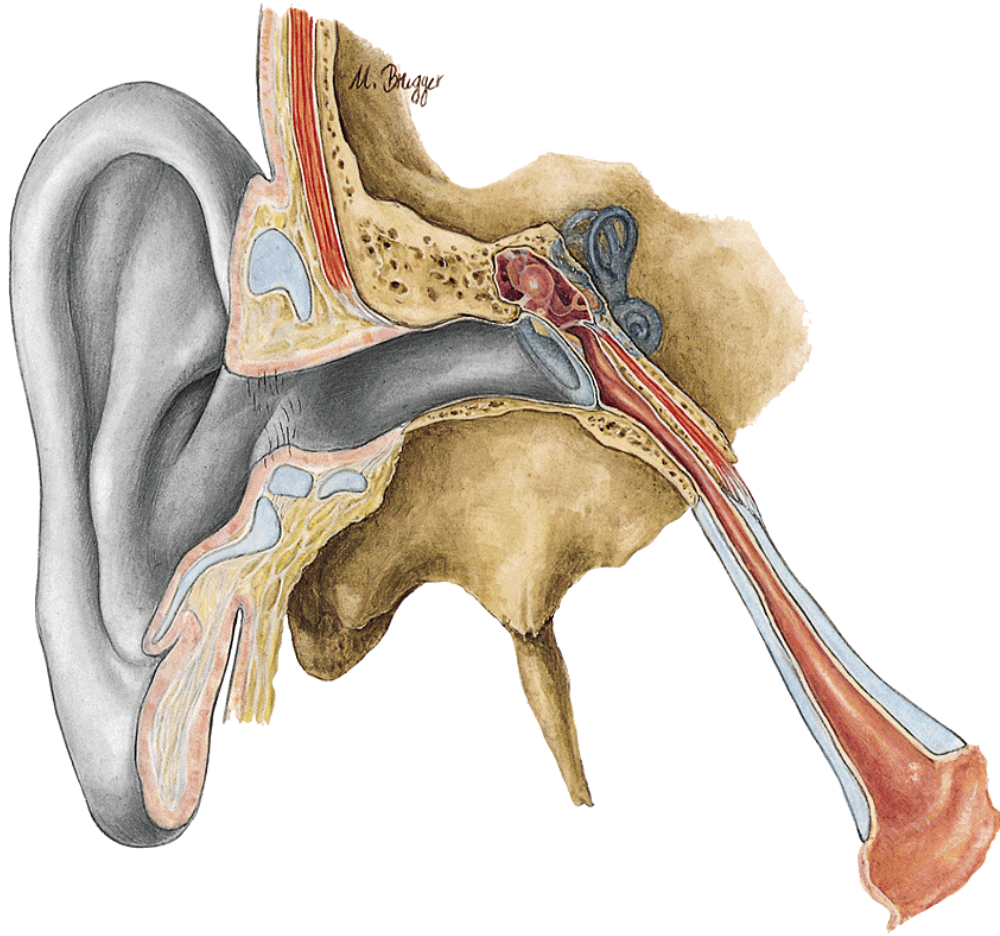


Organum vestibulocochleare



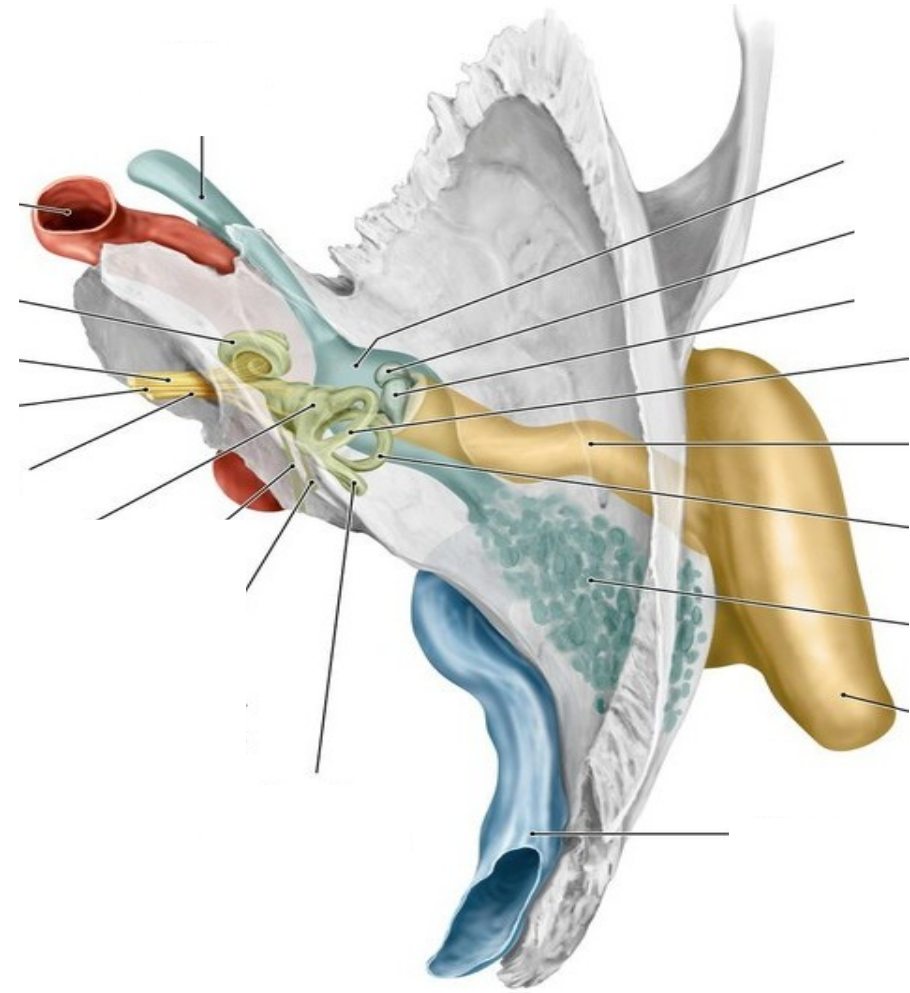
Auris ext.

Auricula
Meatus acusticus ext.
Membrana tymp.



Auris med.

Cavum tympani
Tuba auditiva
Cellulae mastoideae

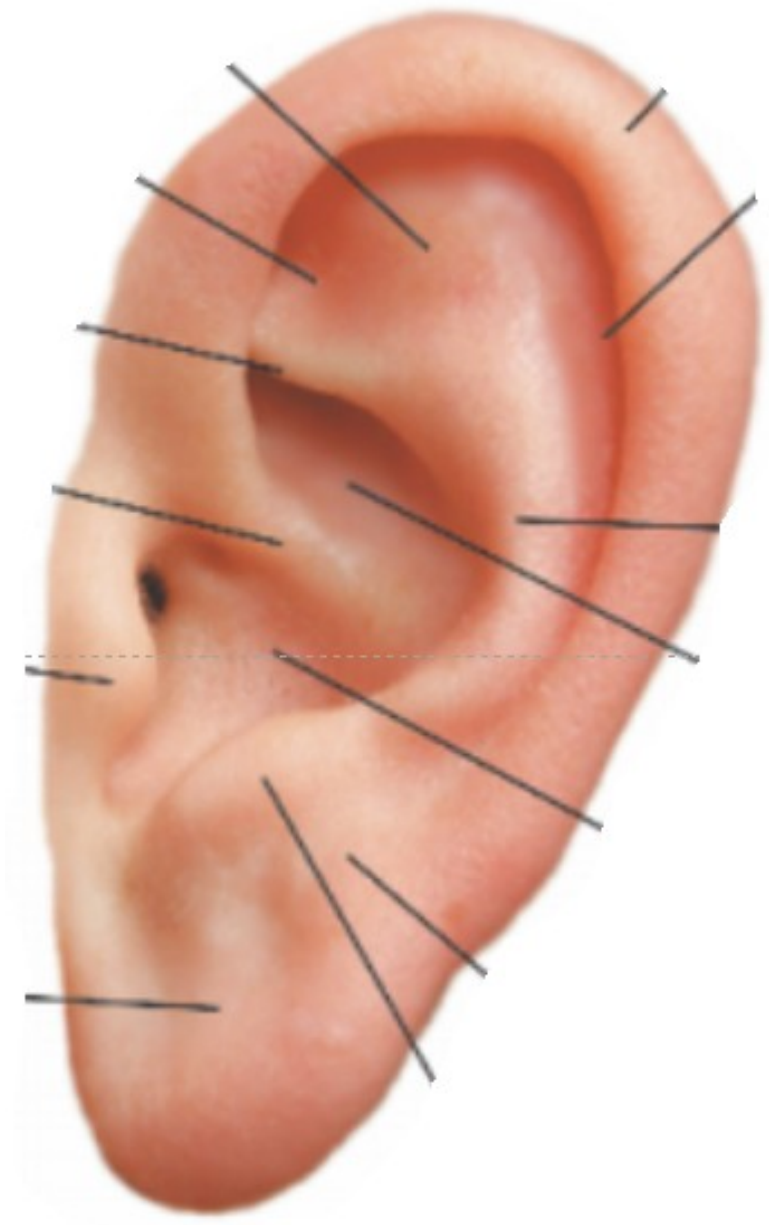
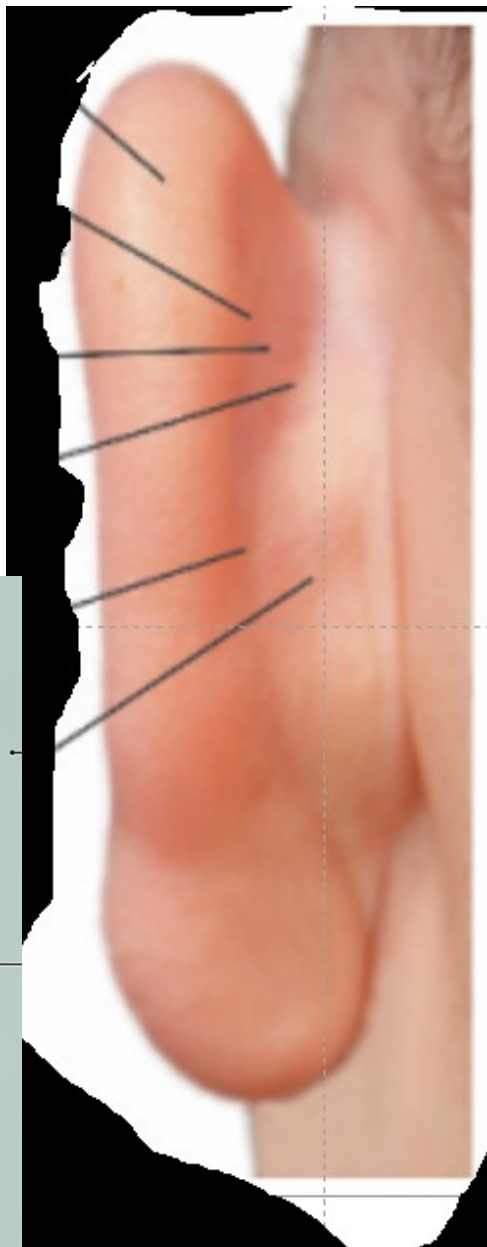
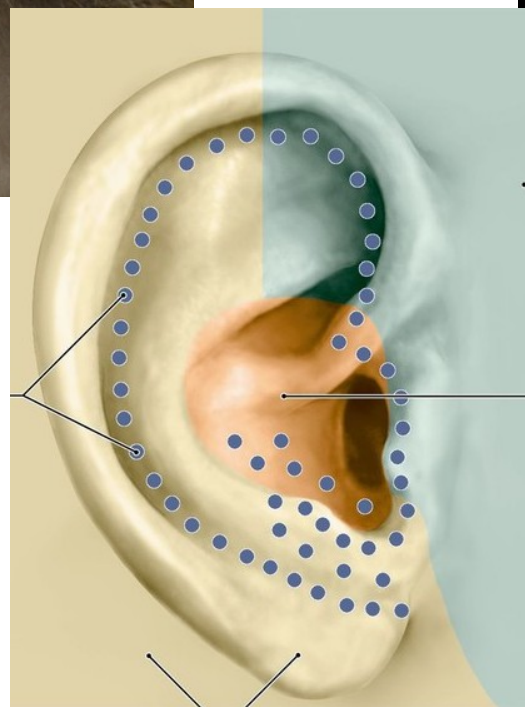


Auris int.

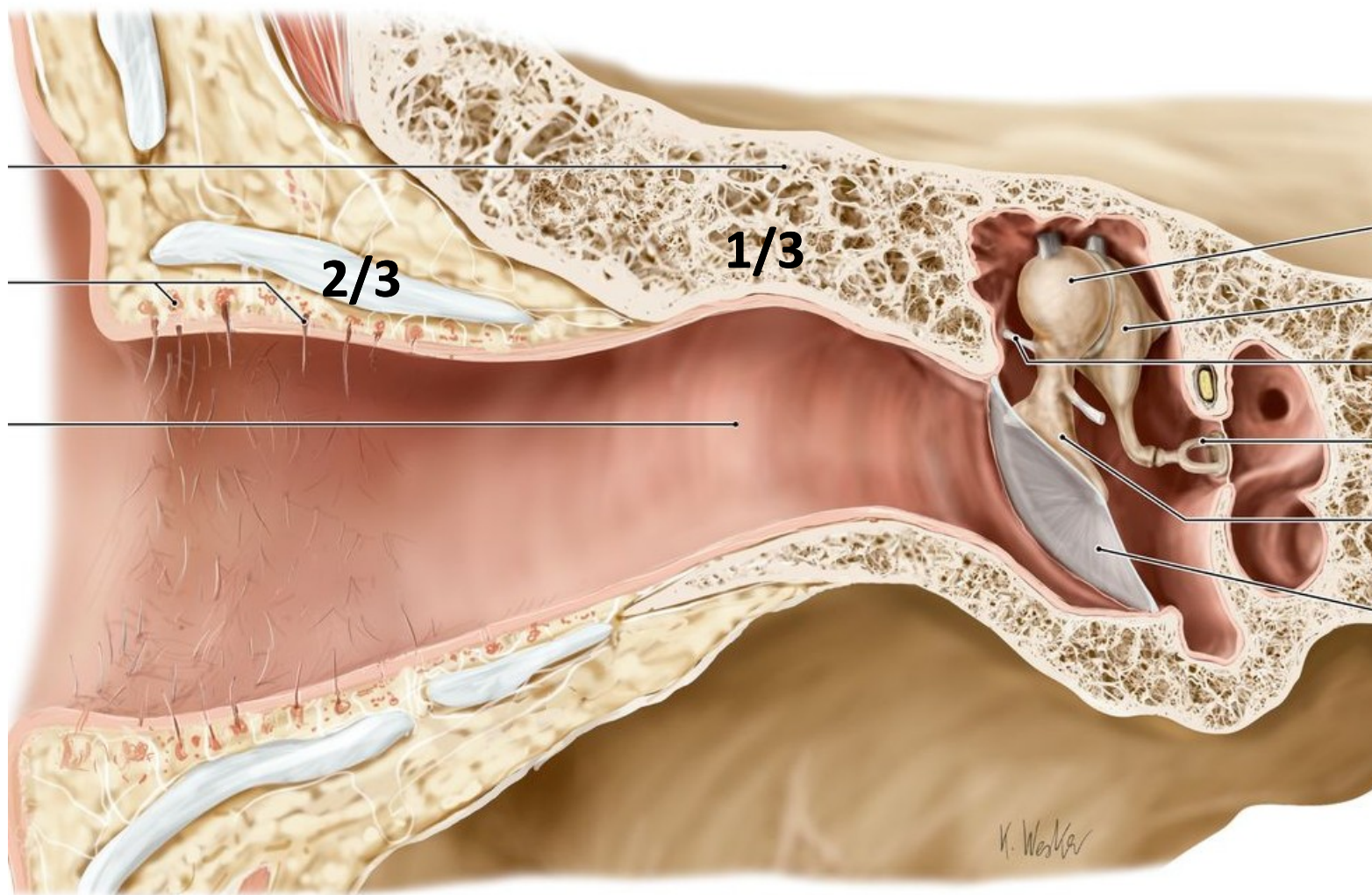
Labyrinthus
osseus et
membranaceus

A. AURIS EXTERNA

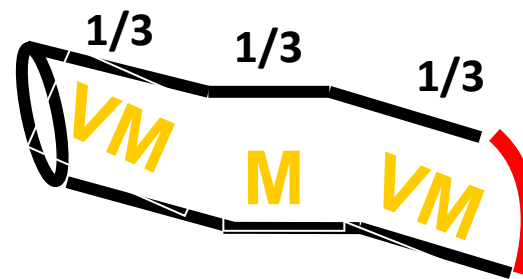
1. Auricula



2. Meatus acusticus ext.

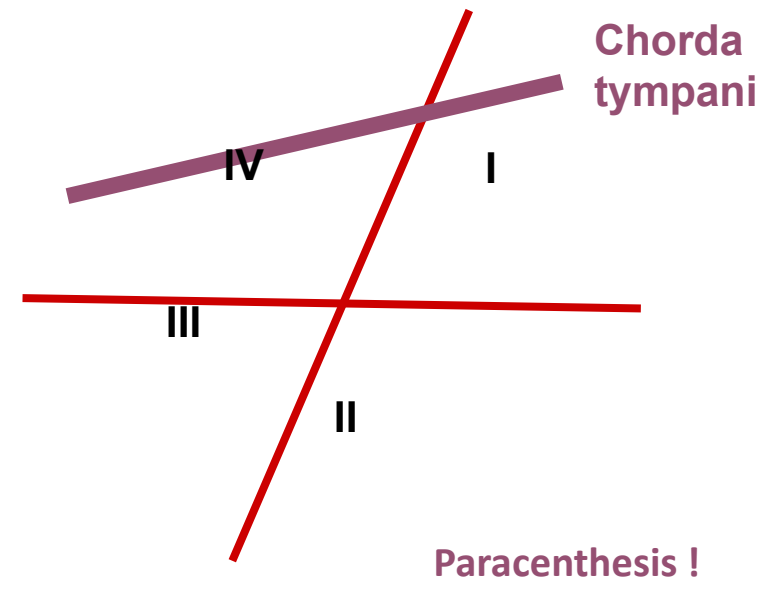
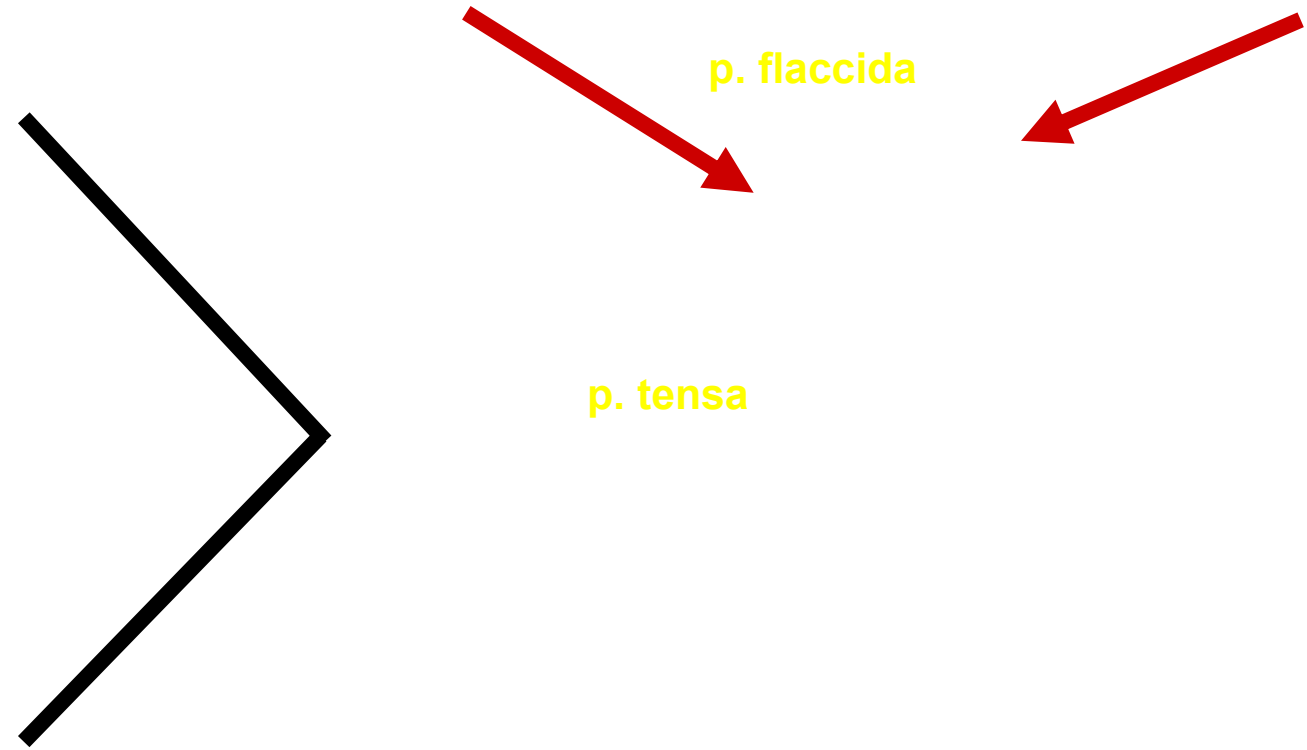


Porus
ac. ext.



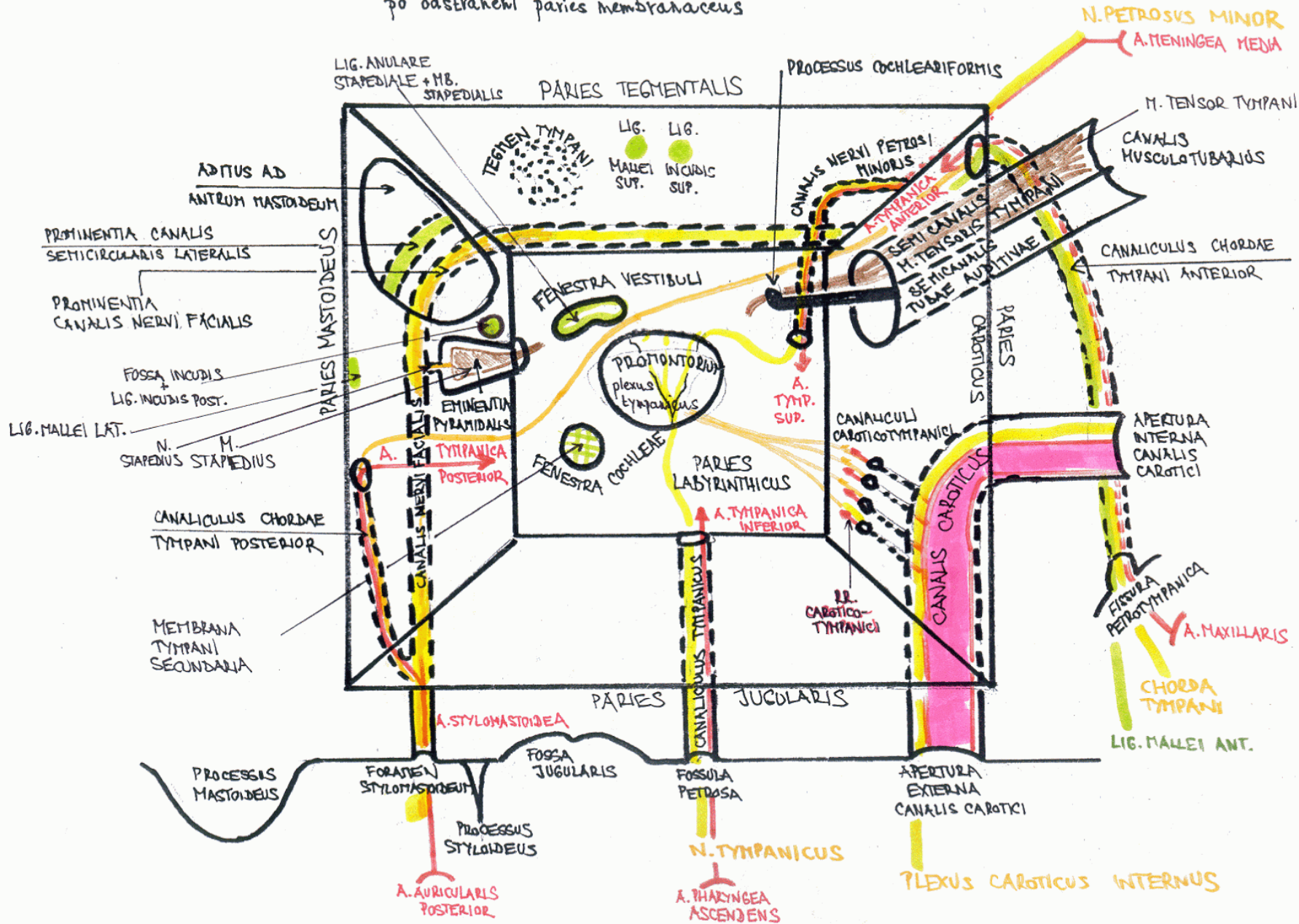
Membr.
tymp.

3. Membrana tympani



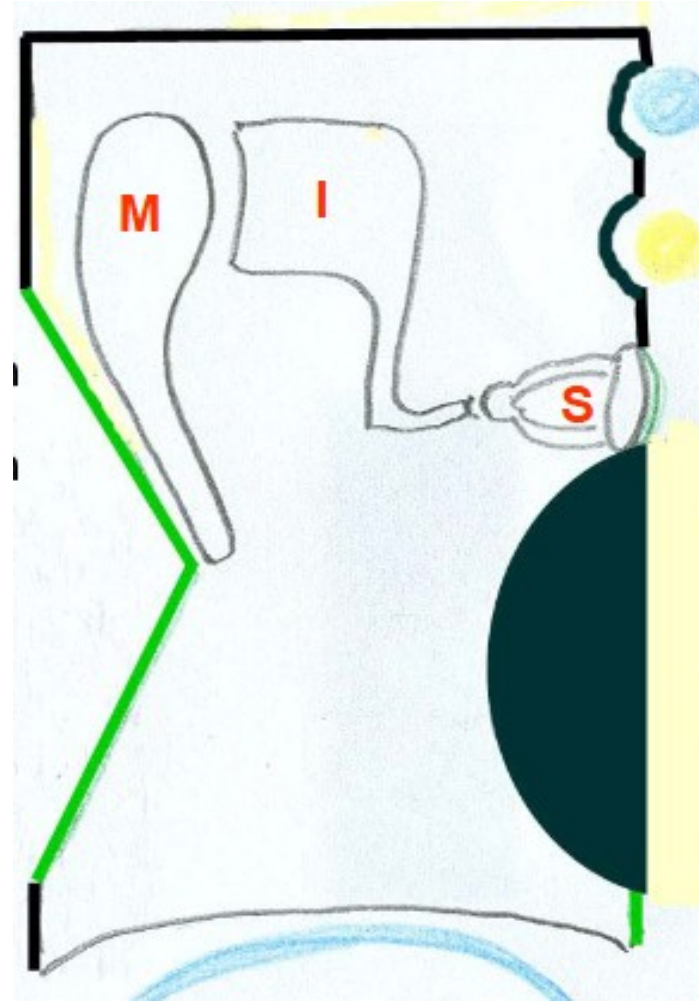
CAVITAS TYMPANI

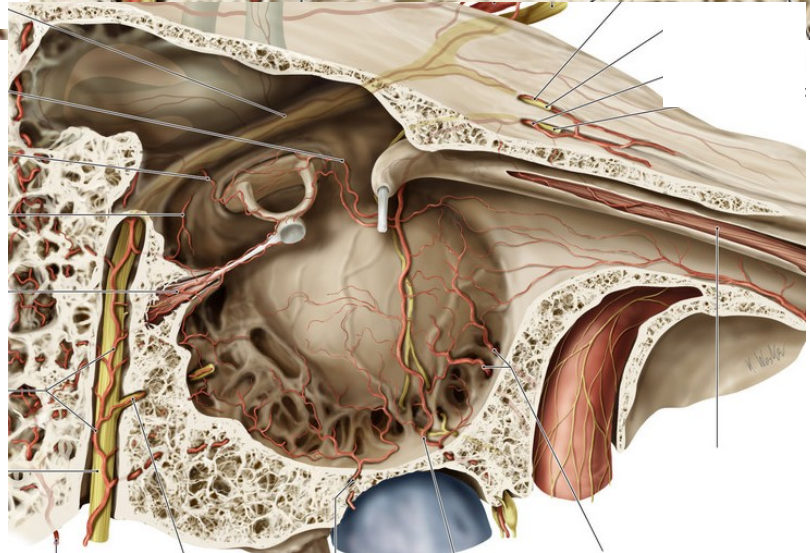
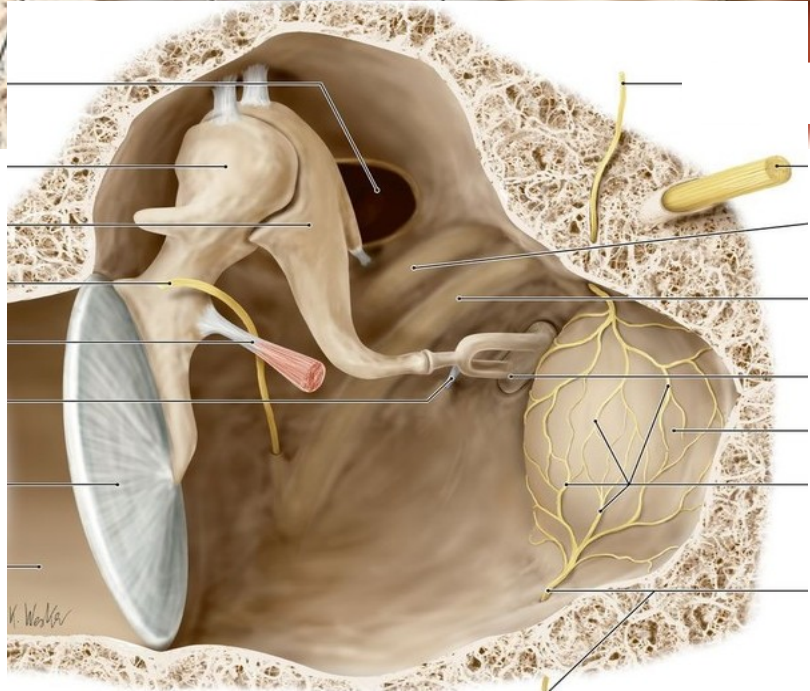
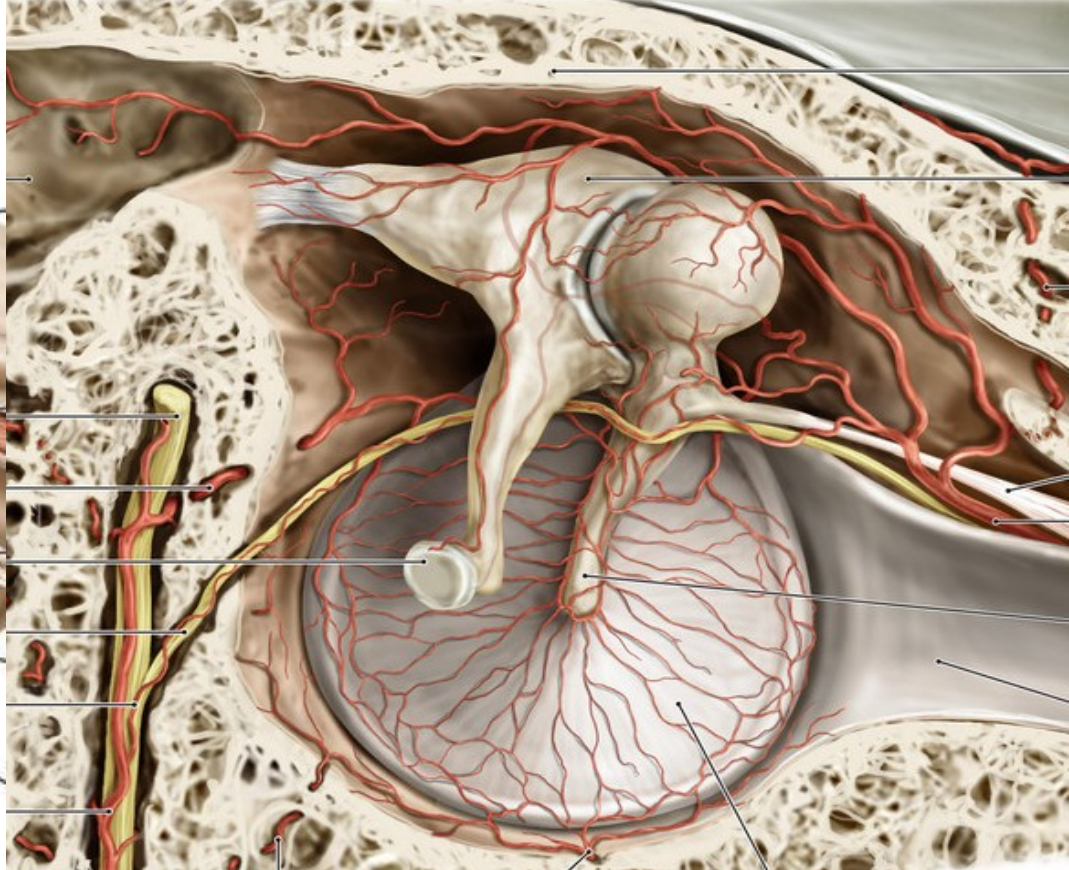
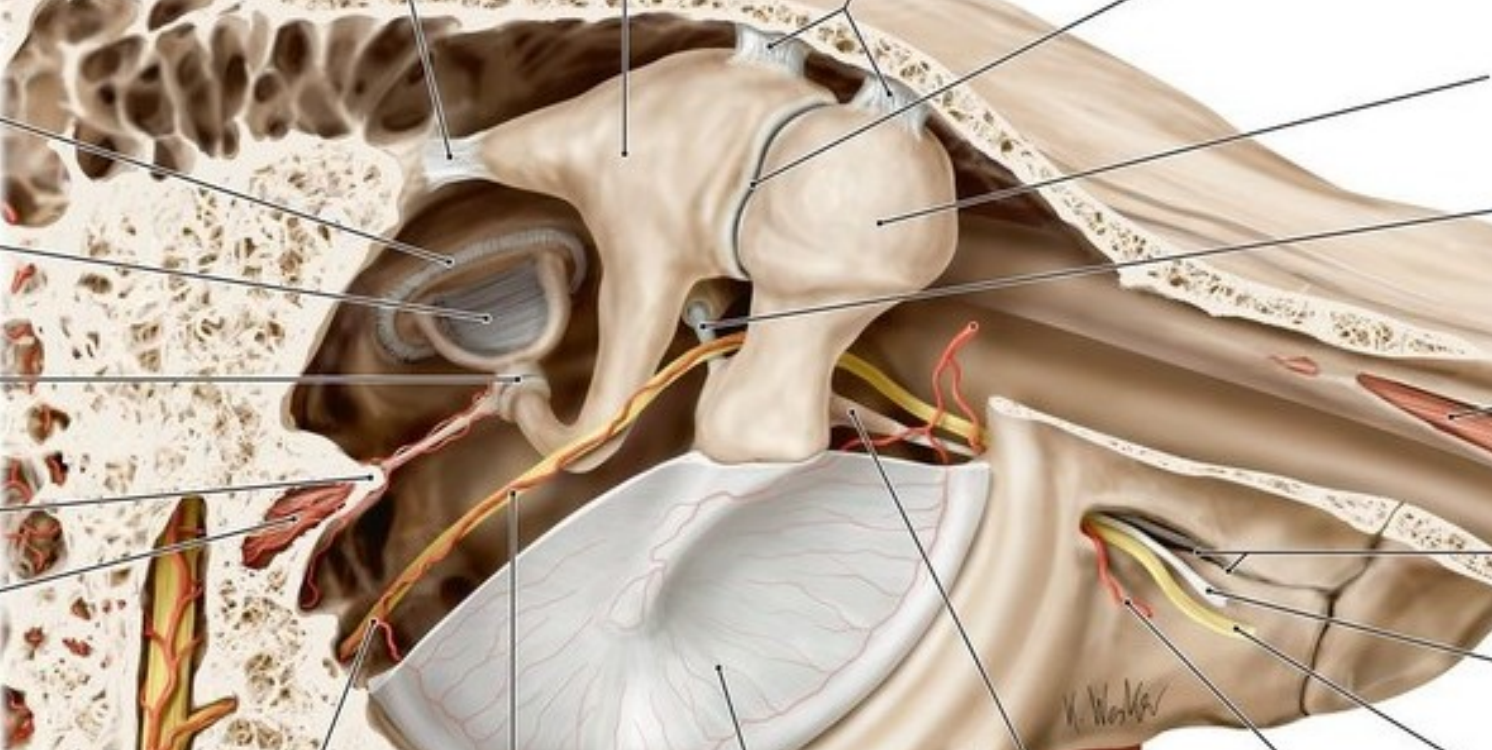
po odstranění l.d.x.
paries membranaceus



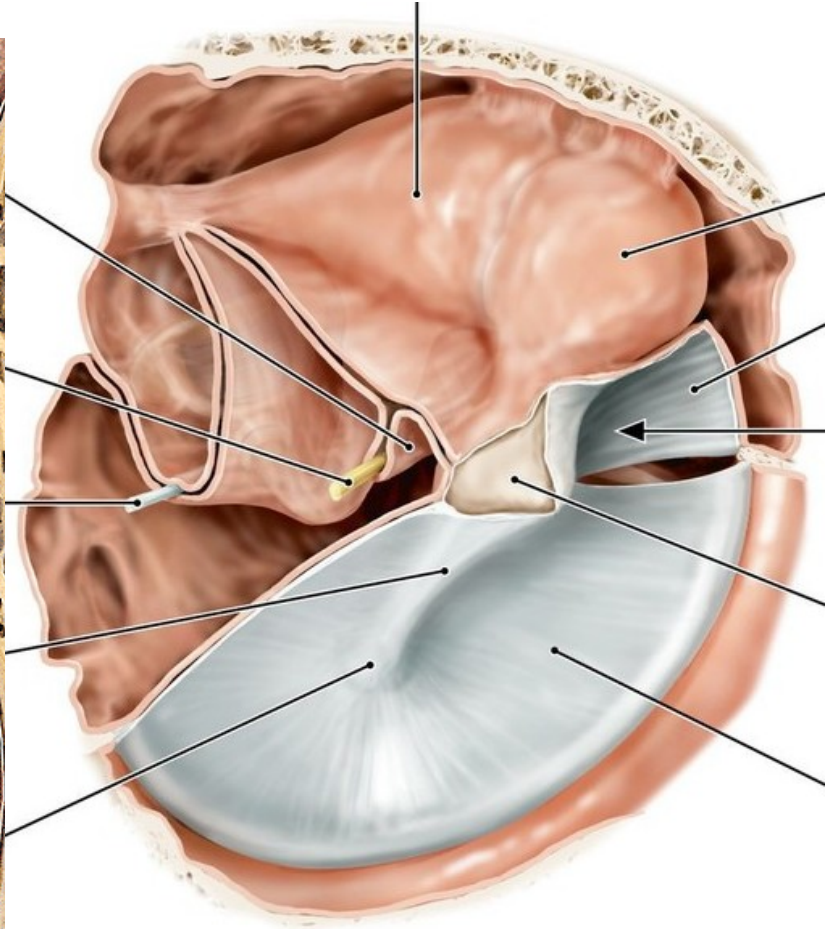
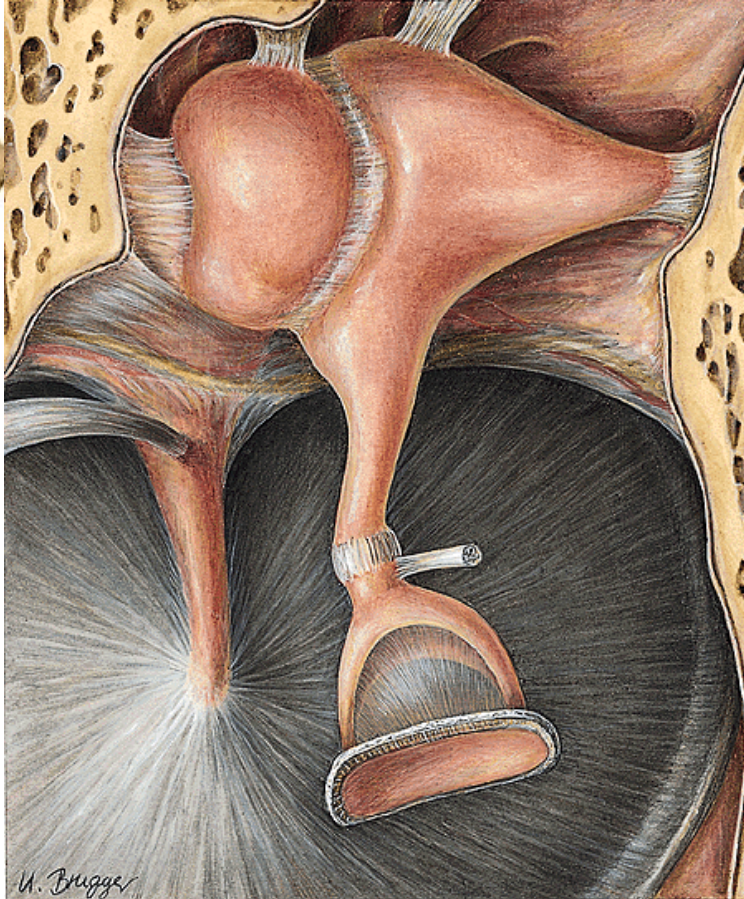
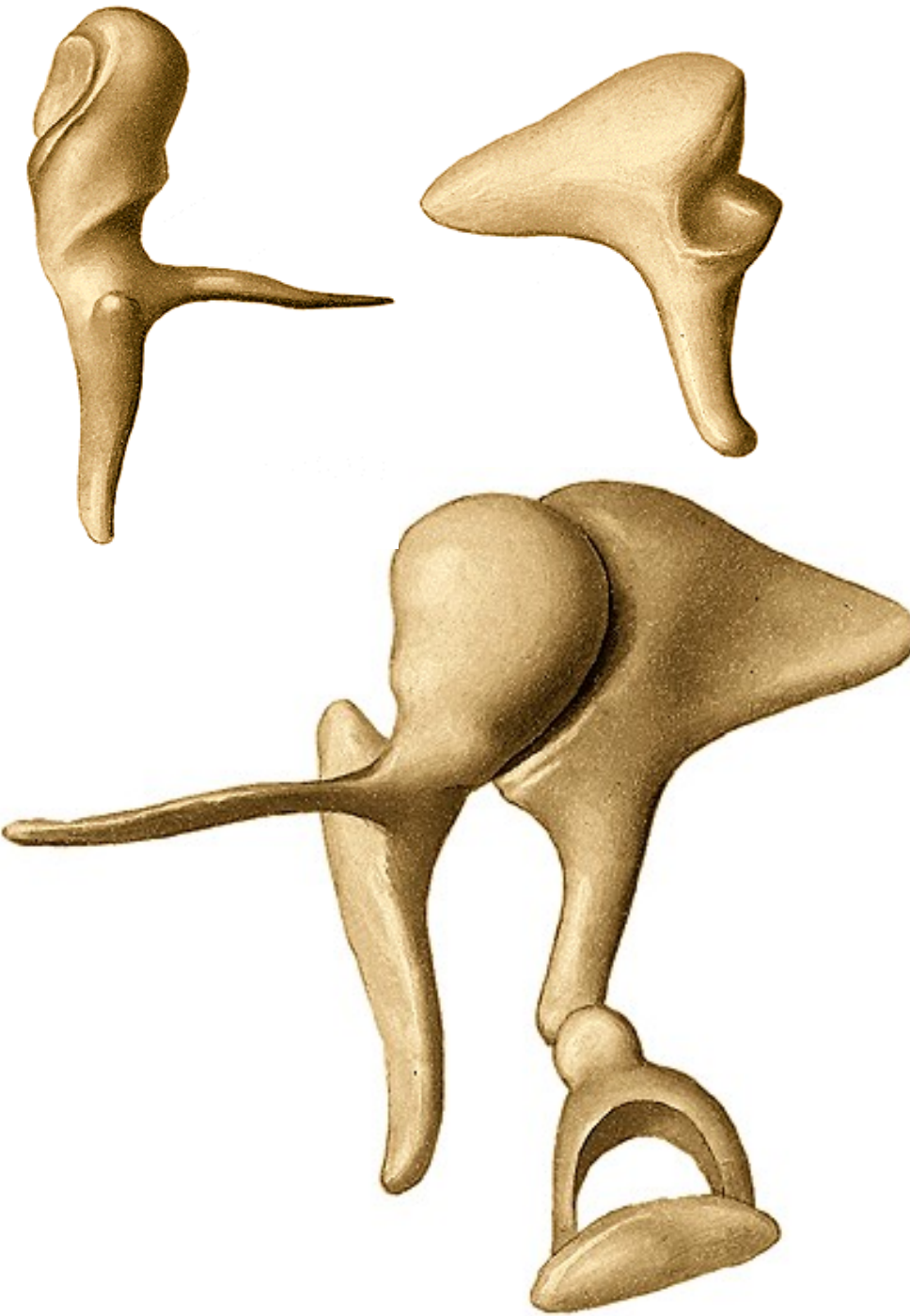
B. AURIS MEDIA

Cavum tympani

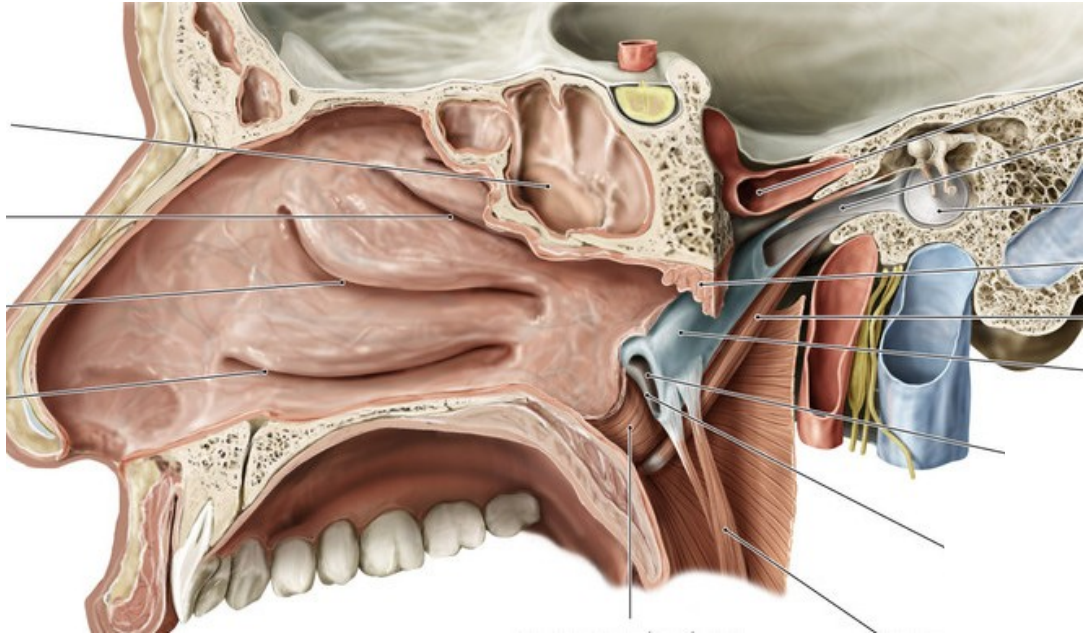
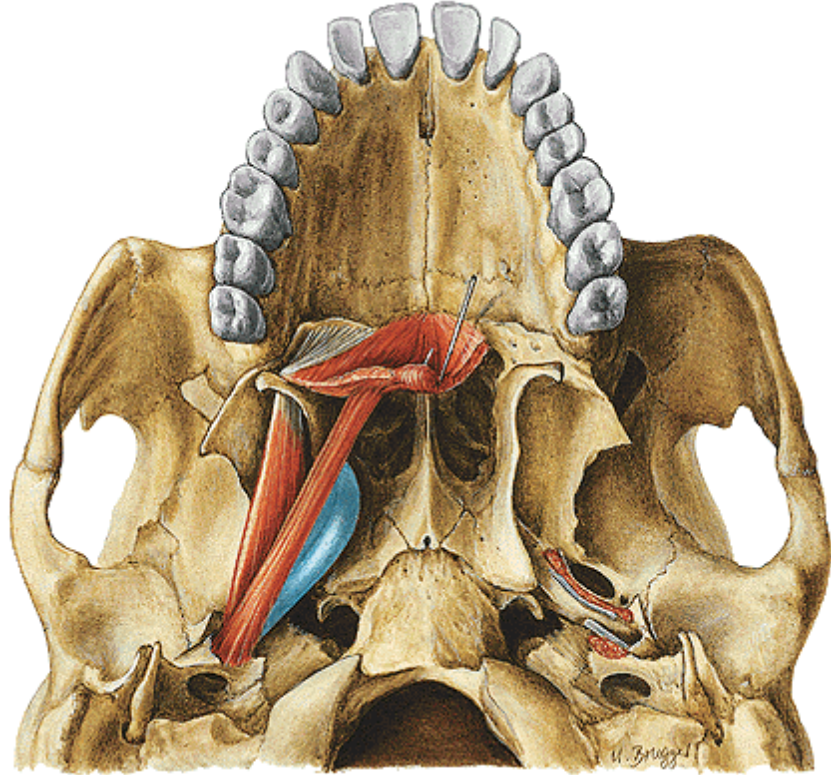




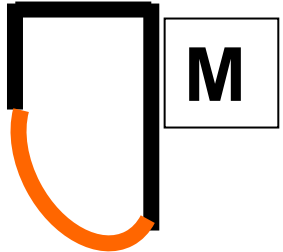
Ossicula auditus



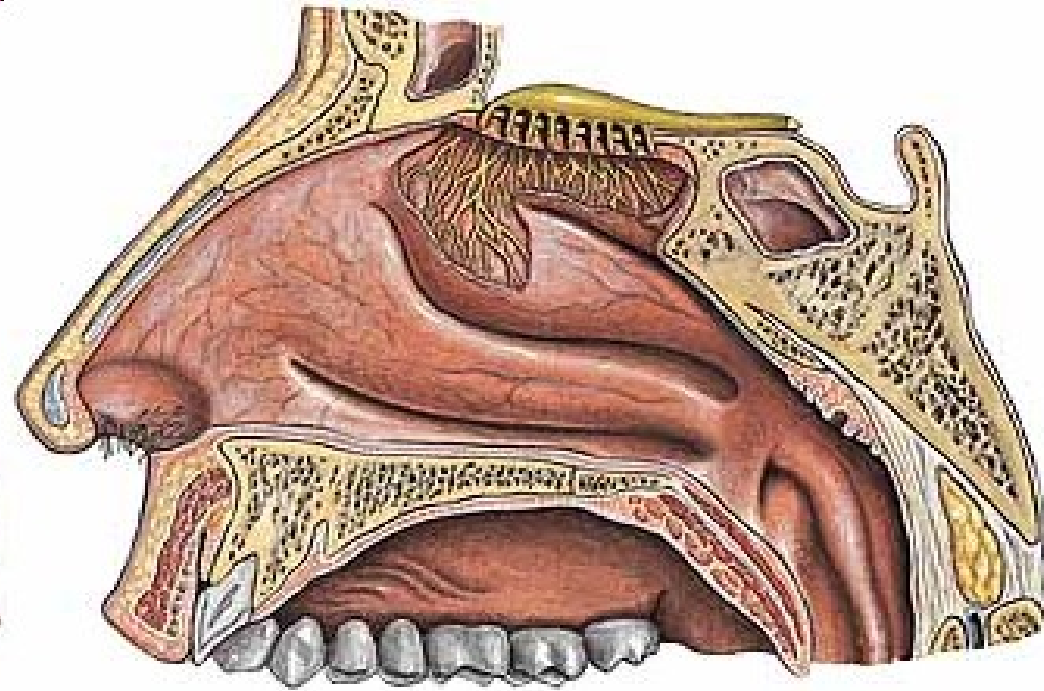
2. Tuba auditiva



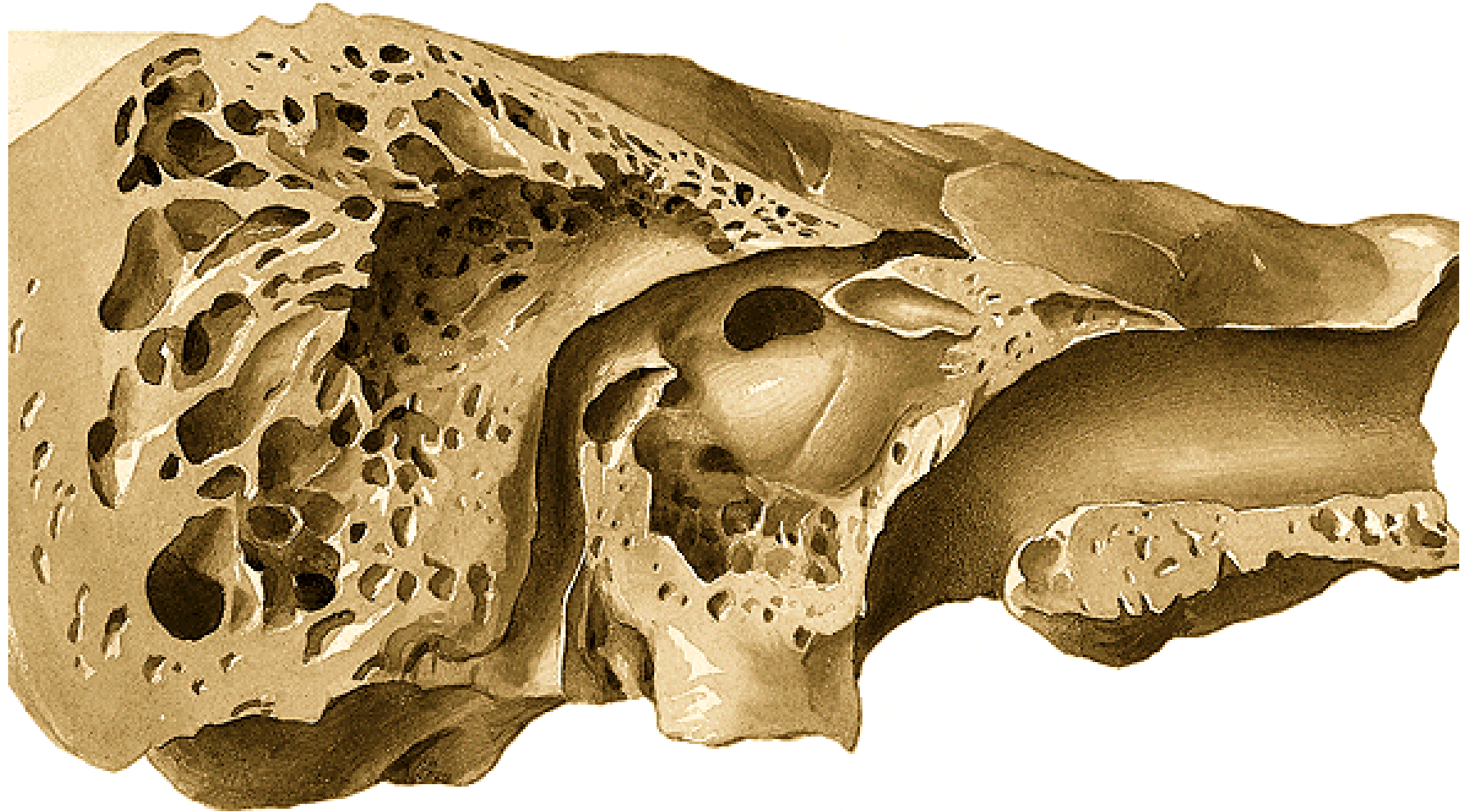
Kr



lamina membranacea



3. Cellulae mastoideae



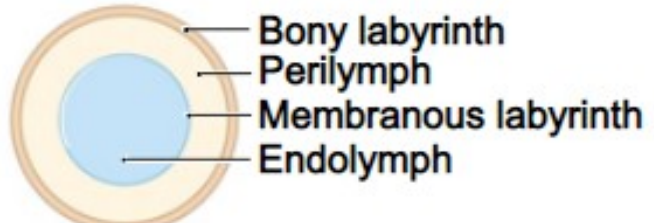
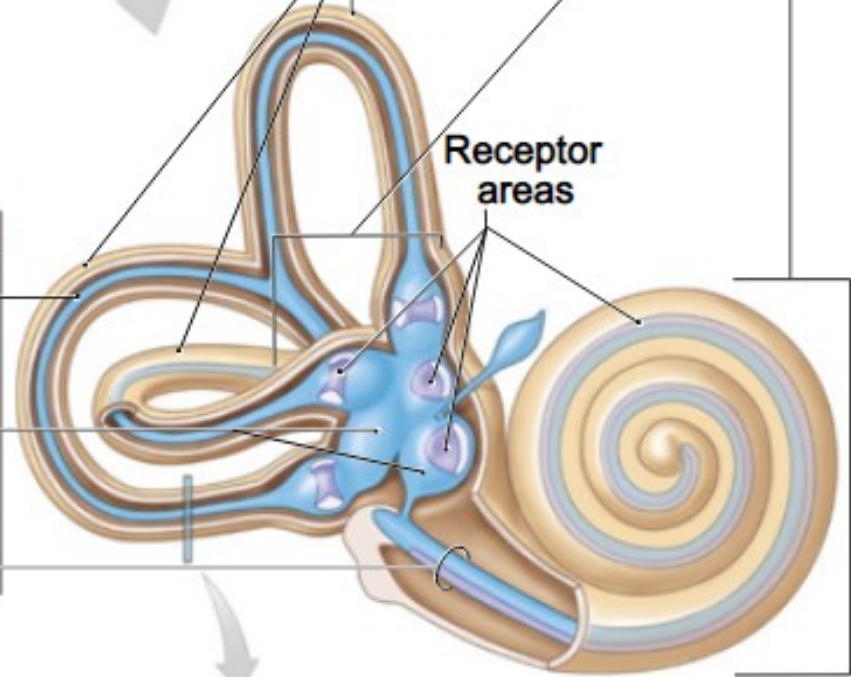
C. AURIS INTERNA

Internal ear structures

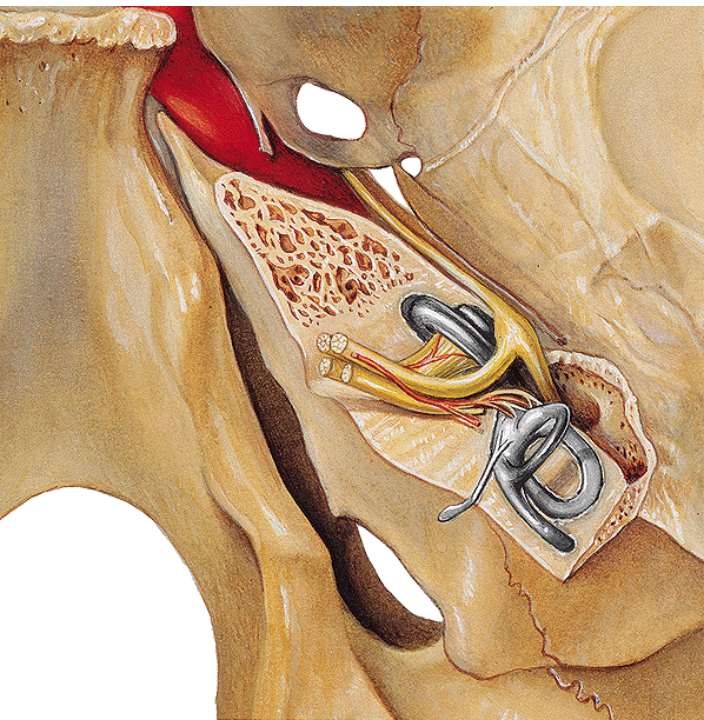


Bony Labyrinth
Semicircular canals Vestibule Cochlea

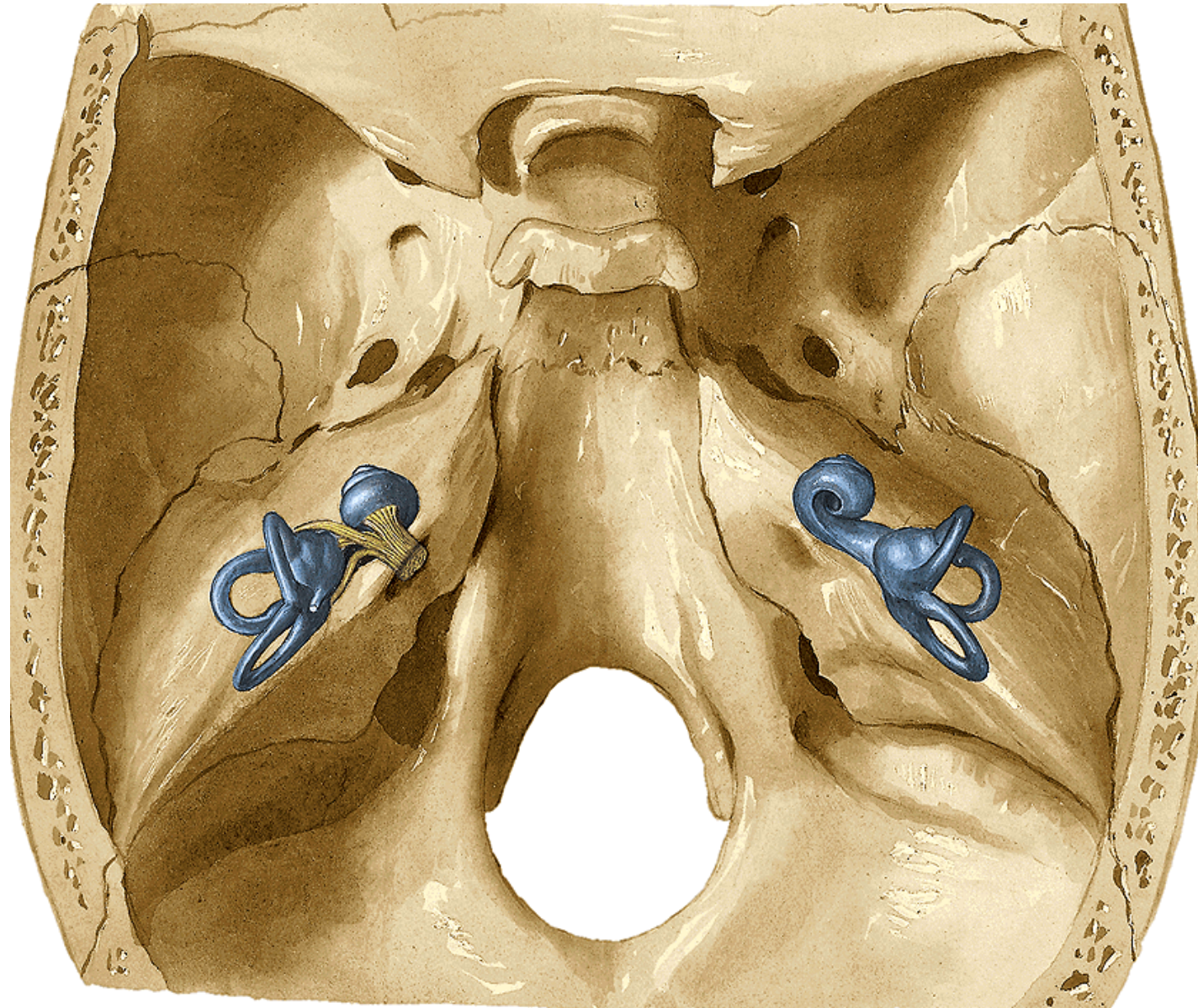
Membranous Labyrinth
Semicircular ducts
Utricle and saccule
Cochlear duct



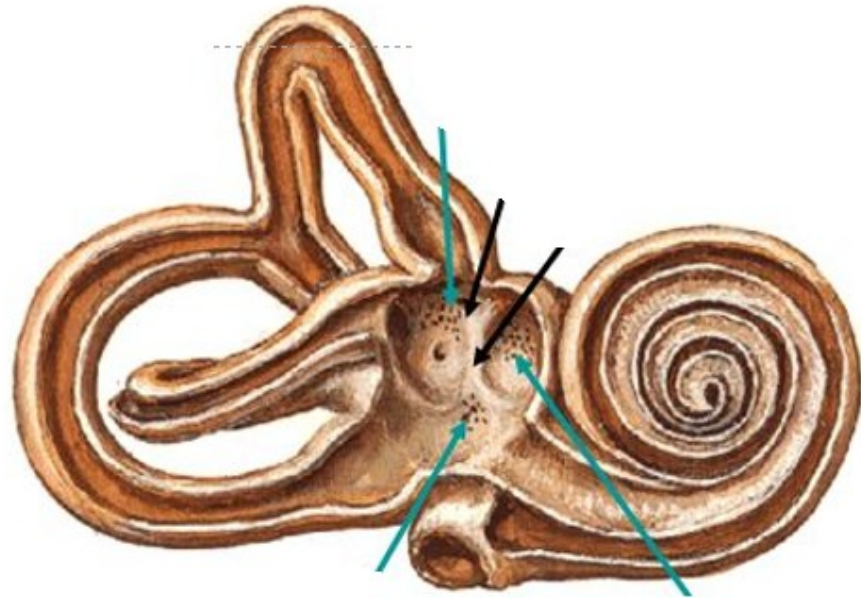
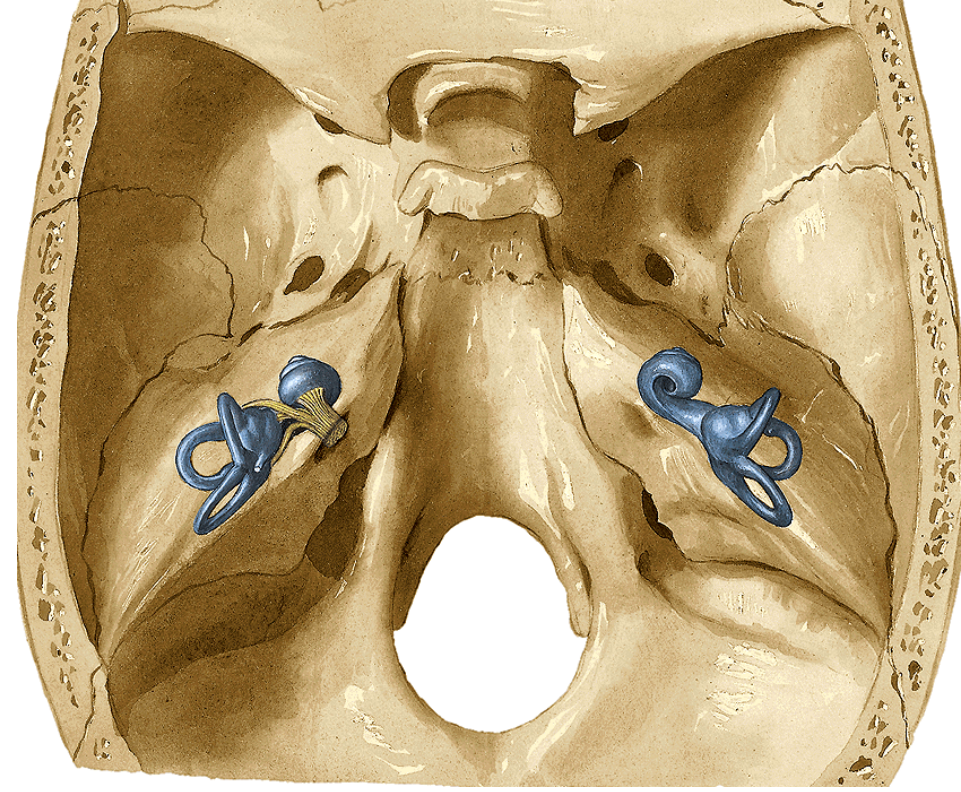
KEY
— Membranous labyrinth
— Bony labyrinth



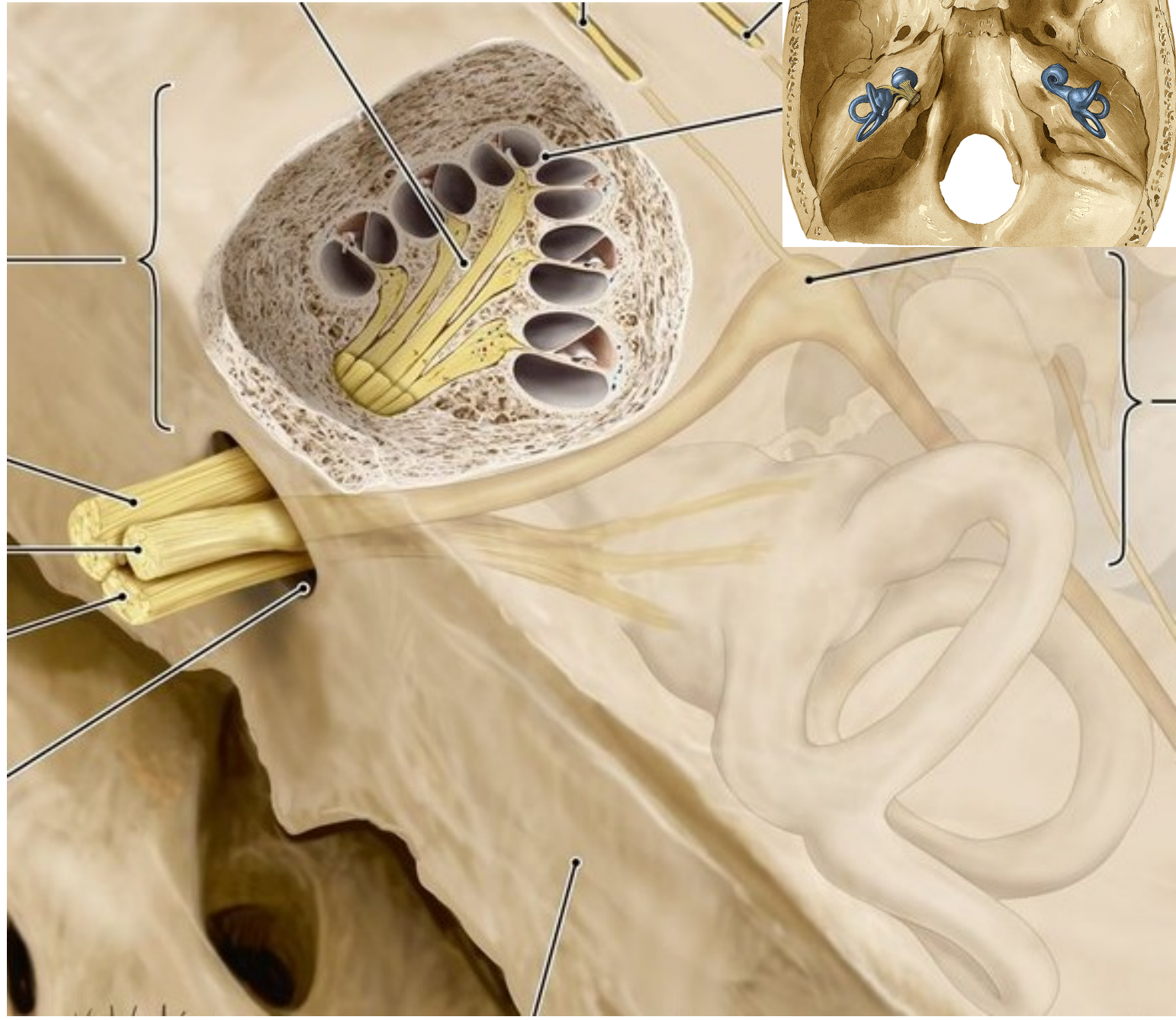
Labyrinthus osseus



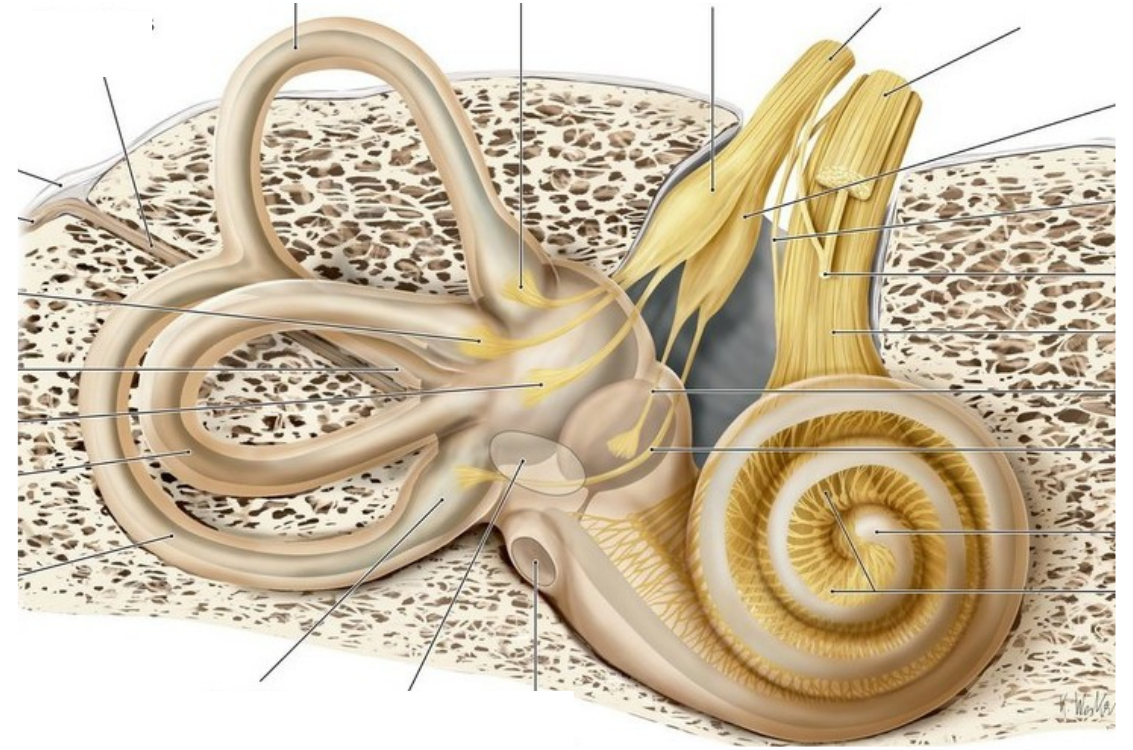
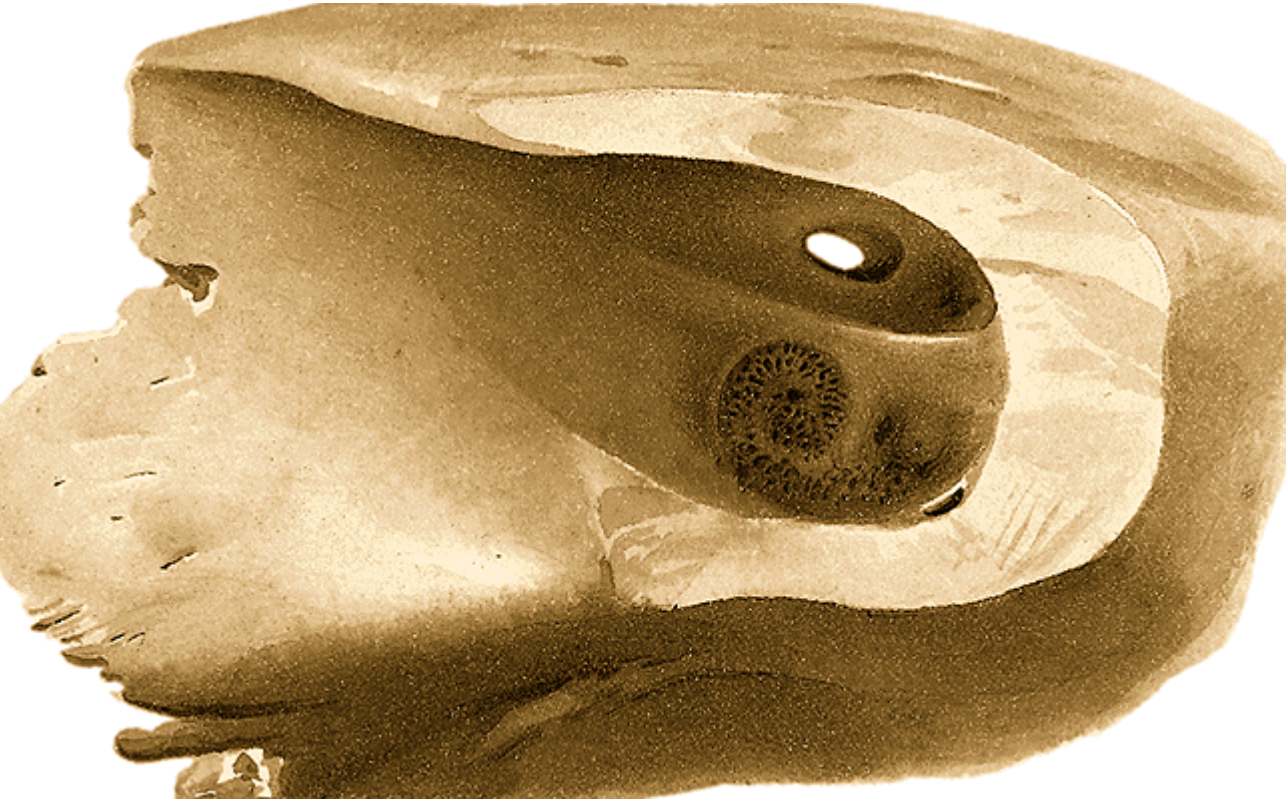
Vestibulum
Canales semicirculares ossei



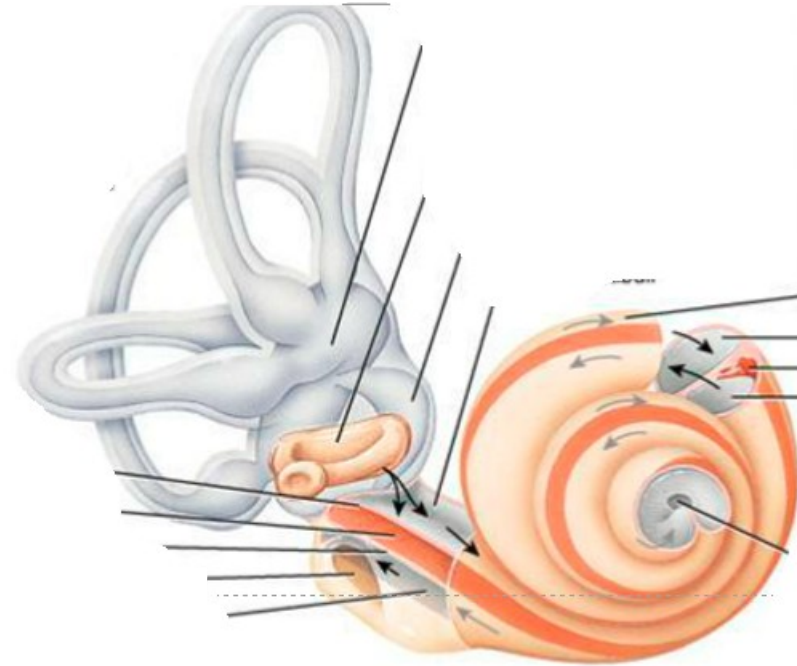
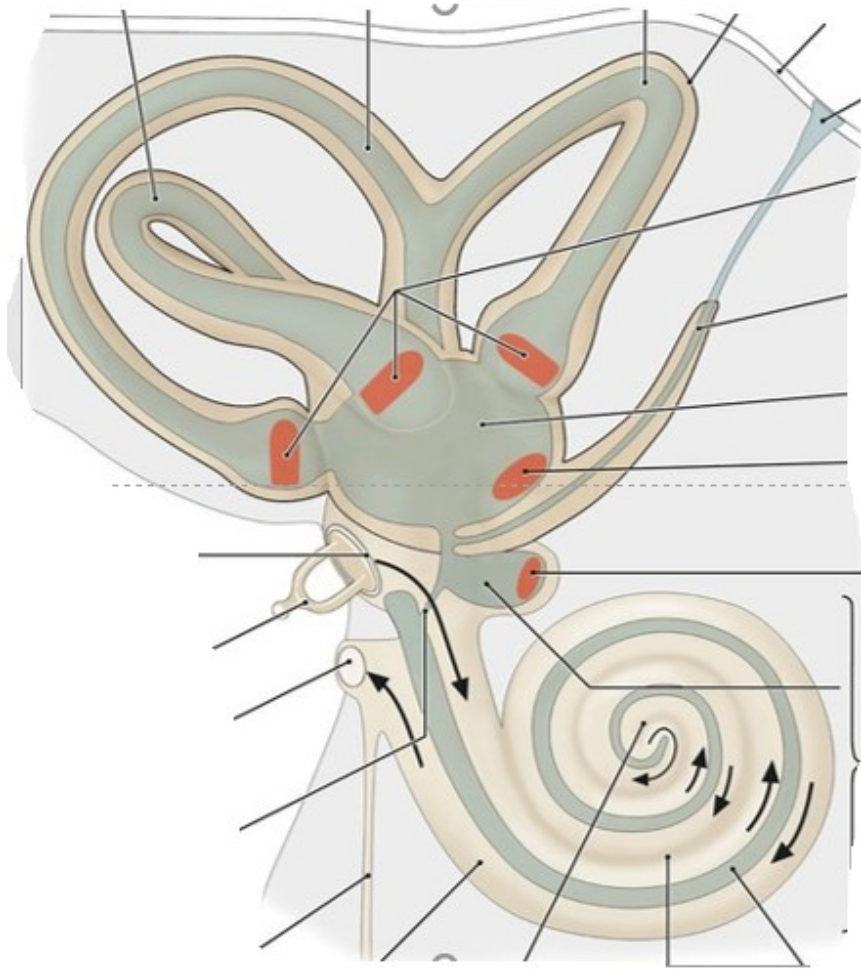
Cochlea



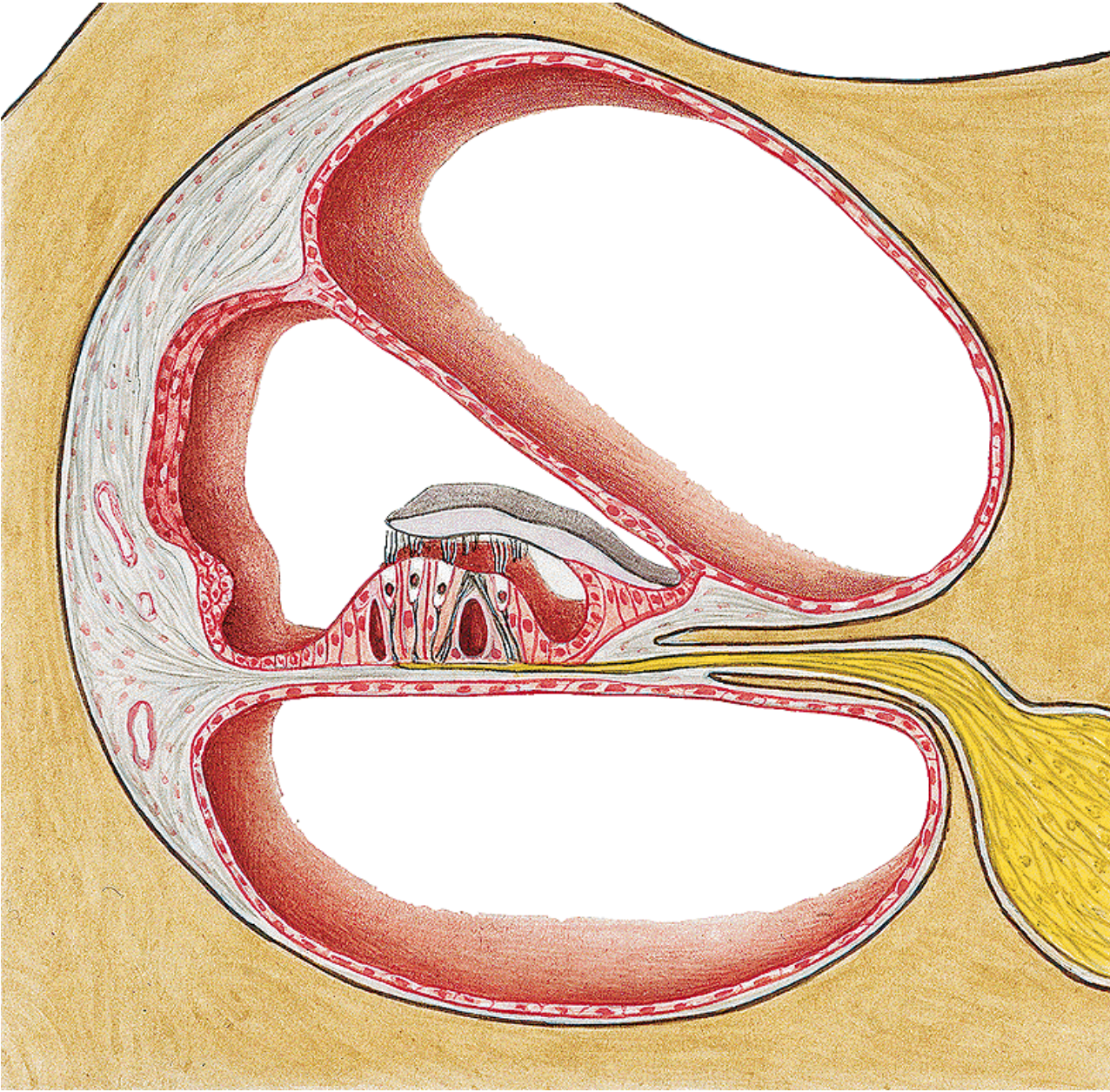
Meatus acusticus internus



Labyrinth membranaceus



Ductus cochlearis





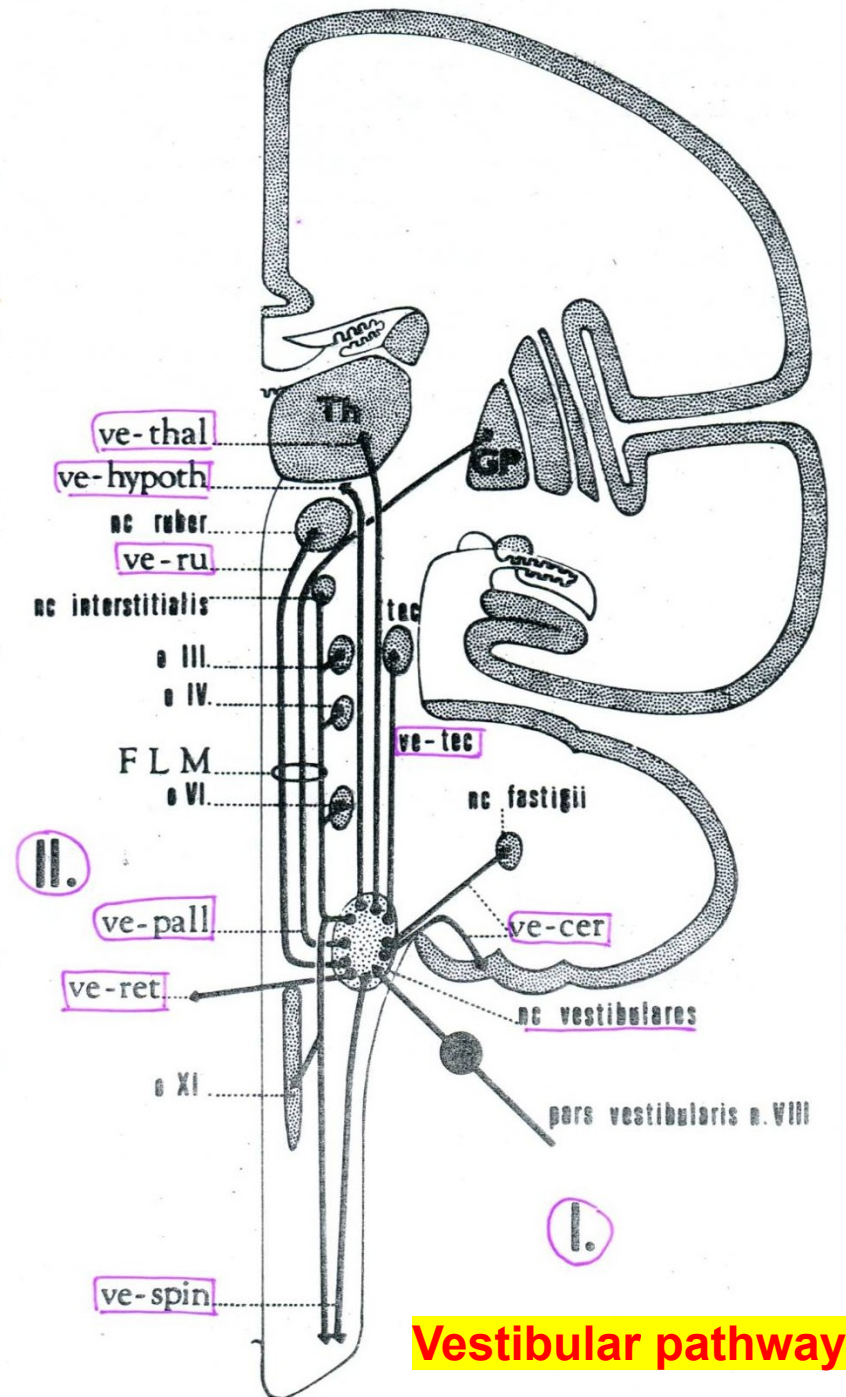
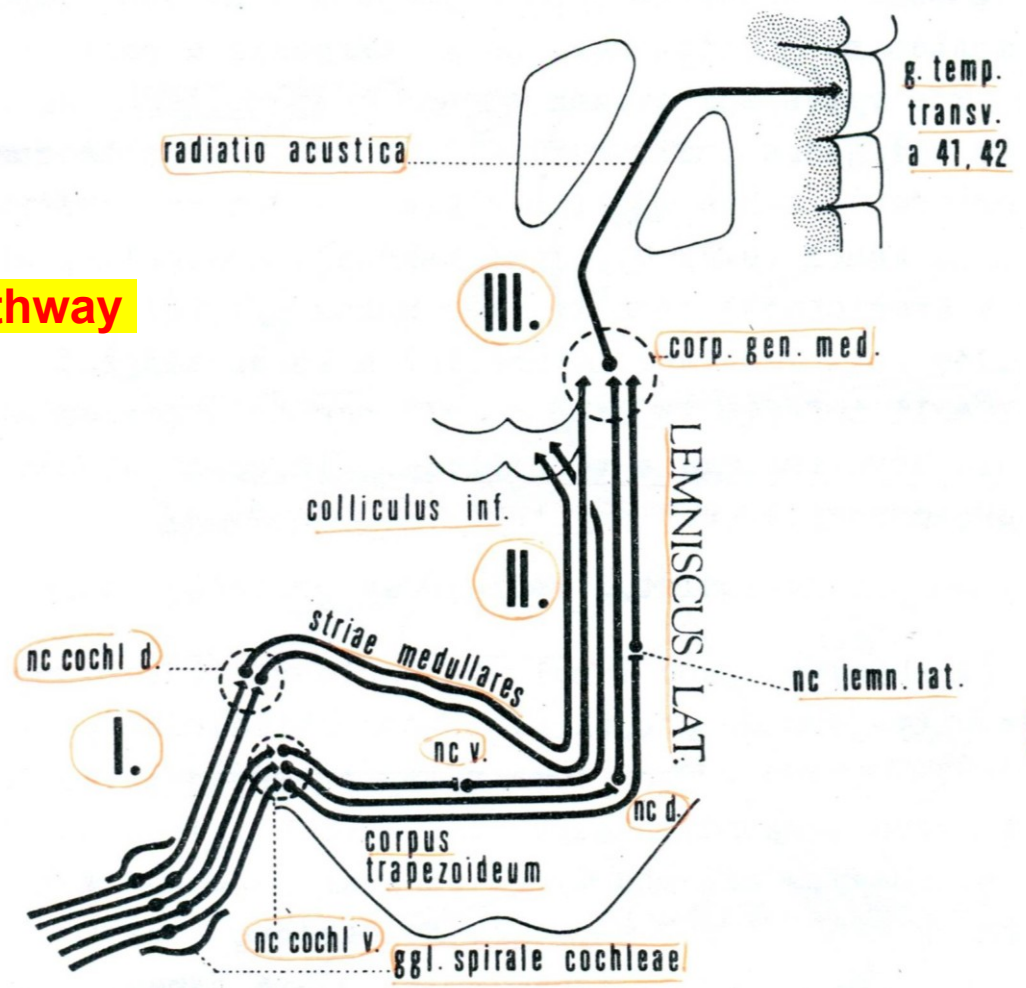
Endolymph

Perilymph

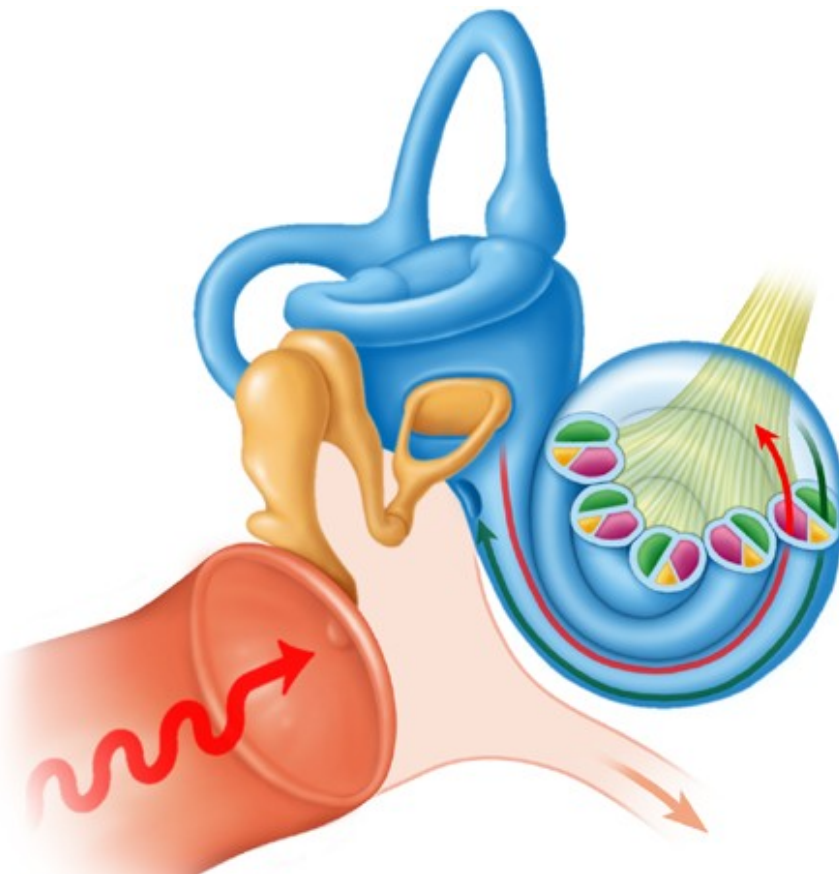


pathways

Acoustic pathway



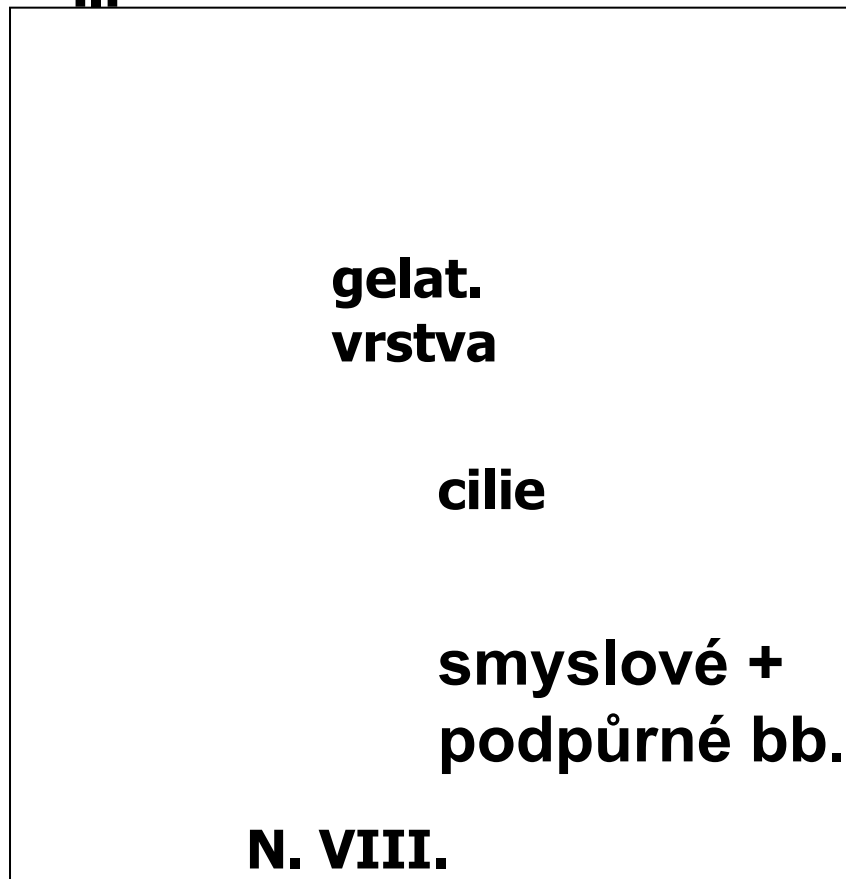
Vestibular pathway



Zvukové vlny → **ZZ a bubínek** > **rozkmitá se.**
Kmity se přenáší přes sluch. kůstky a f. vestibuli.
> **rozvlnění perilymfy** > **endolymfy** > **basil.**
membr. a membr. tectoria > **podráždění smysl.**
bb. Cortiho org. > **p. cochlearis n. VIII.** → **MK**

Registrace pohybu hlavy v prostoru

Cristae ampullares polokruhových kanálků



Při pohybu hlavy
proudící endolymfa
ohýbá gelatinosní
vrstvu s ciliemi

mechanické podněty
jsou přeměněny v
nervový vzruch

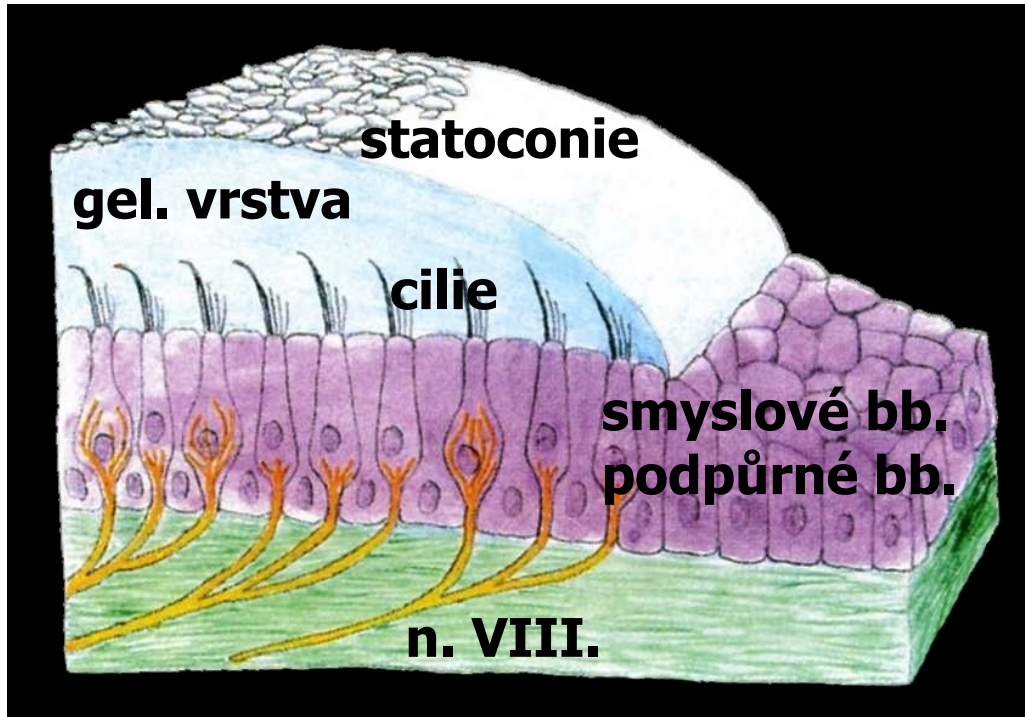
vzruchy jsou odváděny
p. vestibularis n. VIII.

Receptory gravitace

Macula statica

utriculi —

sacculi |



Změny polohy hlavy

> statokonie mění polohu

> změna tahu nebo tlaku na cilie smyslových bb.

> přeměna informace na nervový vzruch >

p. vestibularis n. VIII.