

ORGAN VIDA
ORGANUM VISUS

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ORGANI ČULA (*ORGANA SENSUUM*)

- Organ vida – *Organum visus*
- Organ sluha i ravnoteže – *Organum vestibulocochleare*
- Organ mirisa – *Organum olfactum*
- Organ ukusa – *Organum gustus*

Delovi čula su:

- receptor koji prima nadražaje iz spoljašnje sredine
- aferentno nervno vlakno koje prenosi nervni impuls do CNS-a
- odgovarajući deo CNS-a u kome se stvara čulni utisak (osećaj)

ORGAN VIDA

Prima svetlosne nadražaje i pretvara ih u nervne impulse koji se sprovode do mozga.

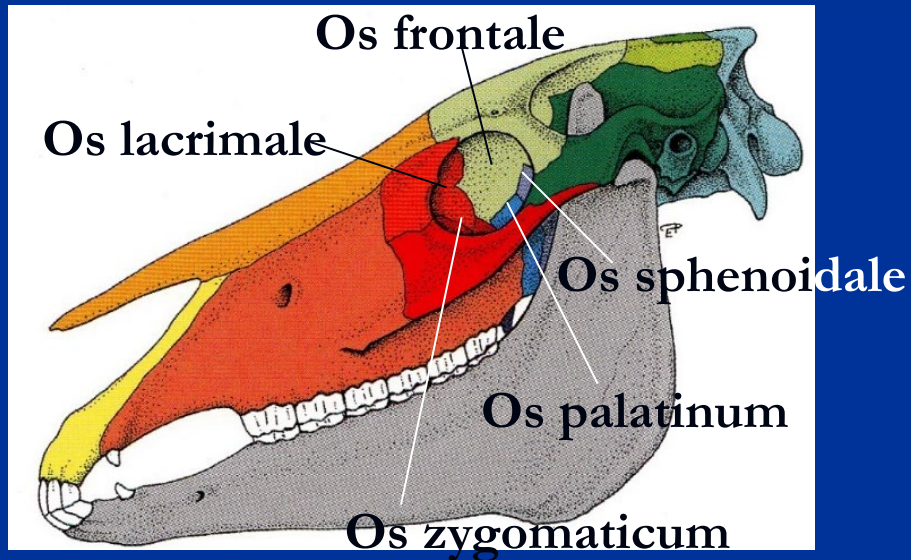
1. POMOĆNI ORGANI OKA
(*Organa oculi accessoria*)
2. OČNA JABUČICA
(*Bulbus oculi*)
3. VIDNI NERV
(*N. opticus*)

POMOĆNI ORGANI OKA–*Organa oculi accessoria*

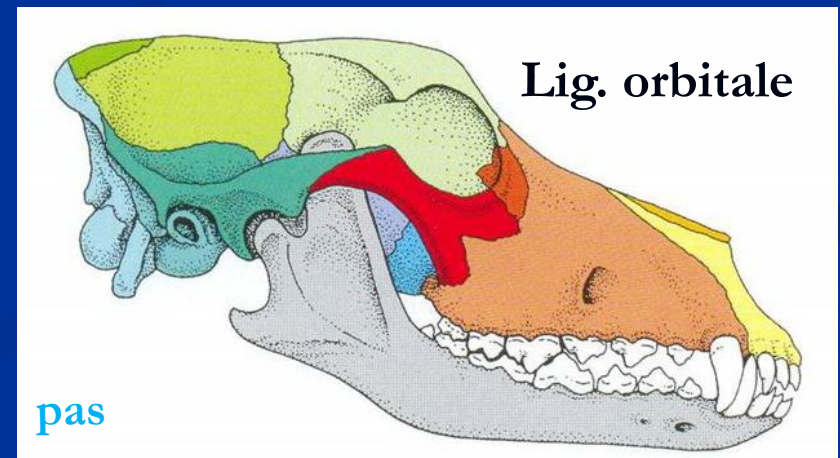
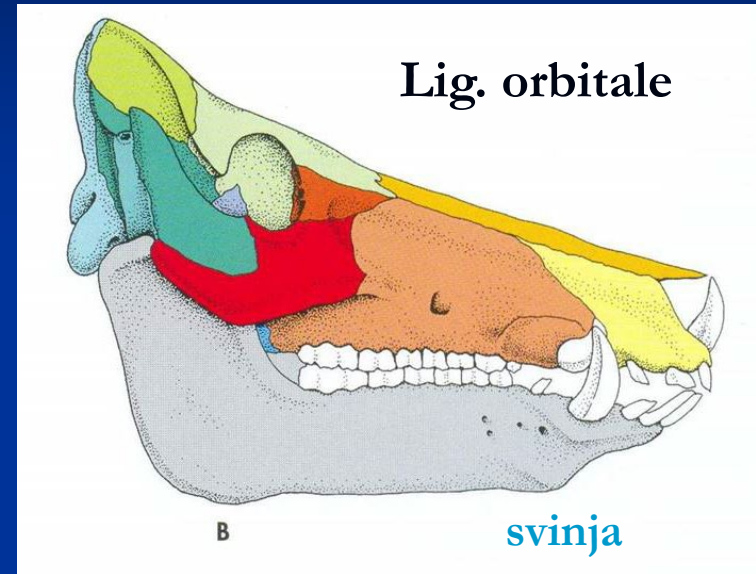
- KOŠTANA OČNA DUPLJA (*Orbita*)
- PERIORBITA (*Periorbita*)
- EKSTRAPERIORBITALNO MASNO TKIVO
(*Corpus adiposum extraperiorbitale*)
- INTRAPERIORBITALNO MASNO TKIVO
(*Corpus adiposum intraperiorbitale*)
- INTRAORBITALNI MIŠIĆI OČNE JABUČICE (*Musculi bulbi*)
- FASCIJE MIŠIĆA OČNE JABUČICE (*Fasciae musculares*)
- OČNI KAPCI (*Palpebrae*)
- VEŽNJAČA (*Tunica conjunctiva*)
- SUZNI PRIBOR (*Apparatus lacrimalis*)

KOŠTANA OČNA DUPLJA (Orbita)

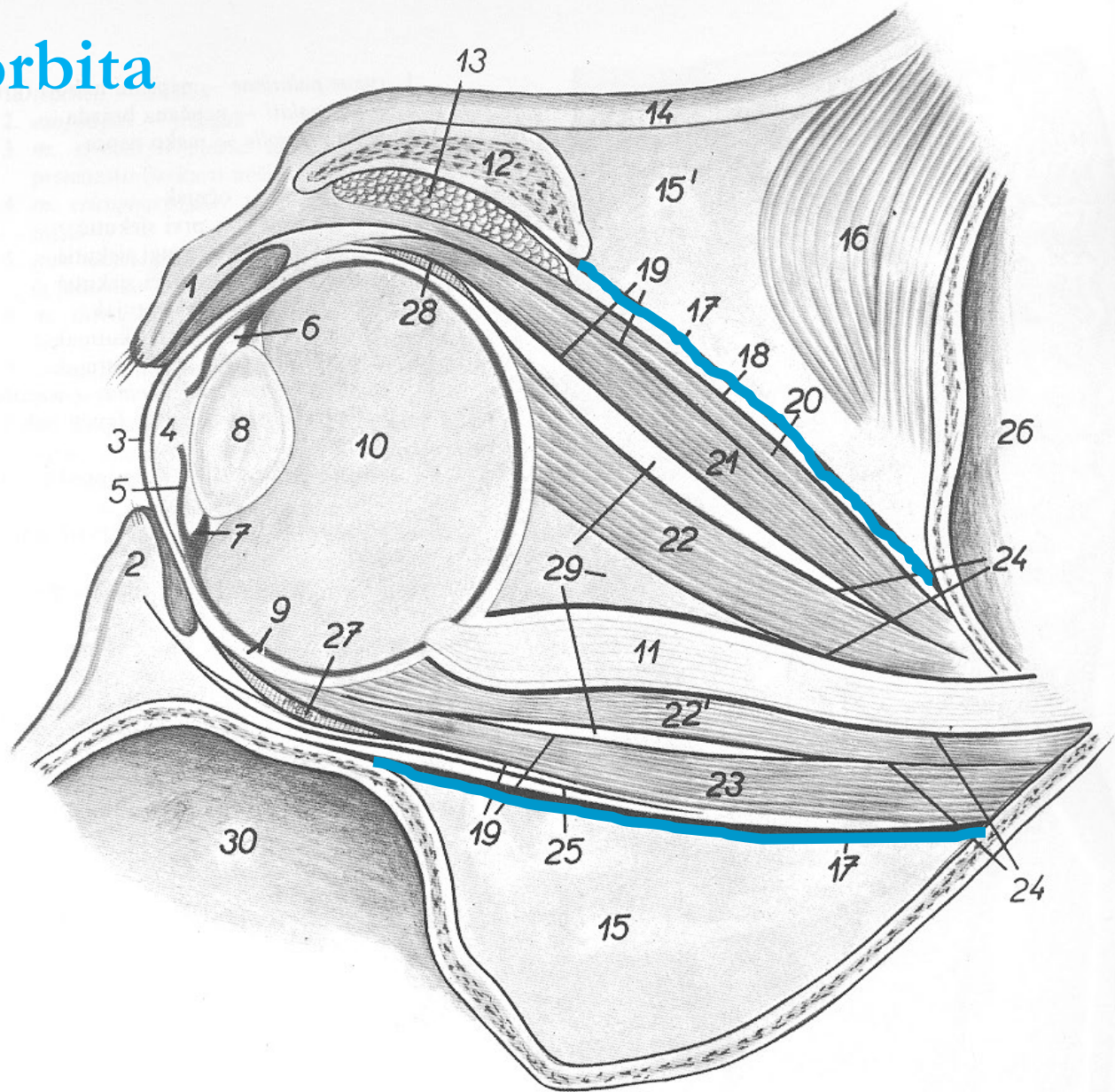
Orbitalni delovi kostiju:



konj



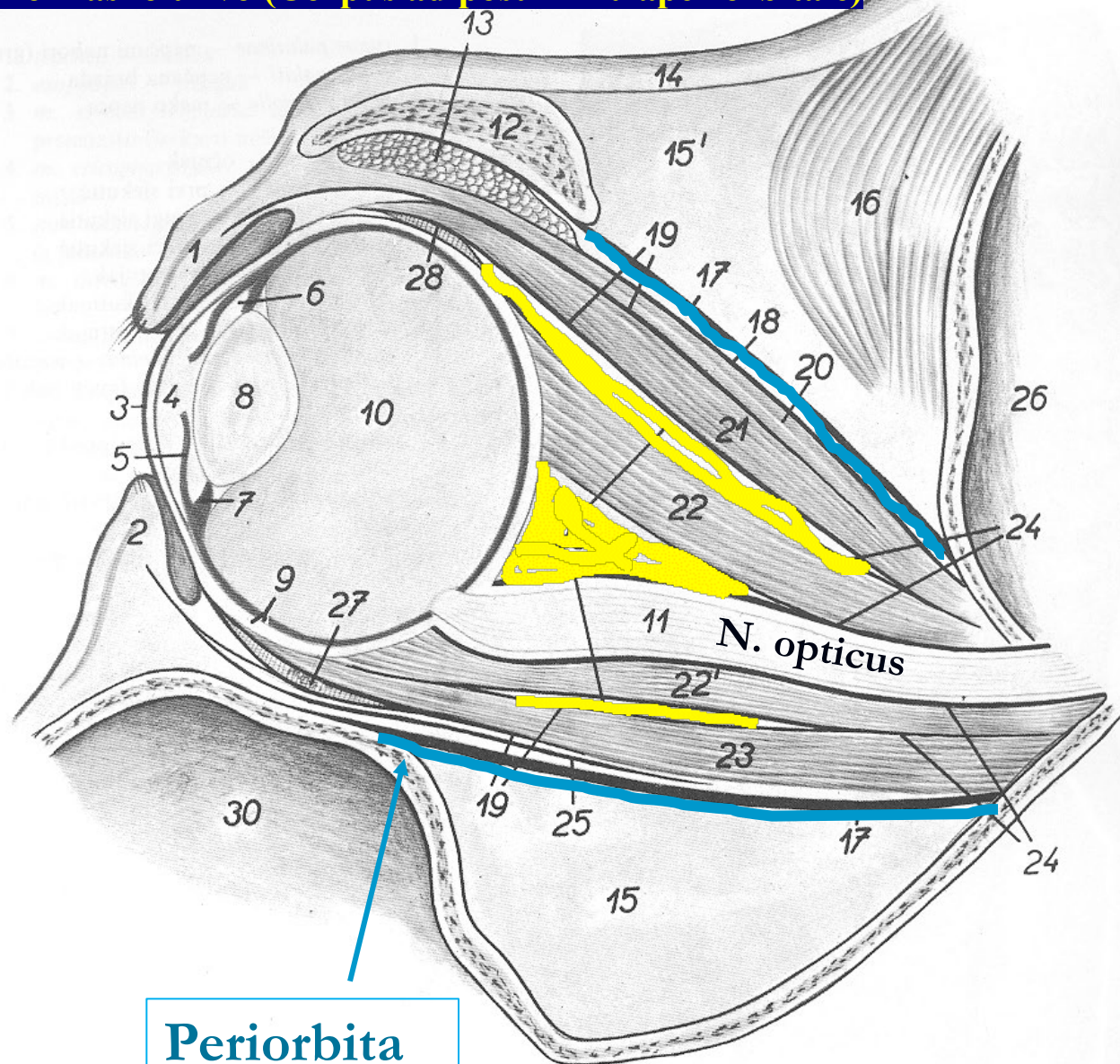
Periorbital



ORBITALNO MASNO TKIVO

-Ekstraperiorbitalno masno tkivo (Corpus adiposum extraperiorbitale)

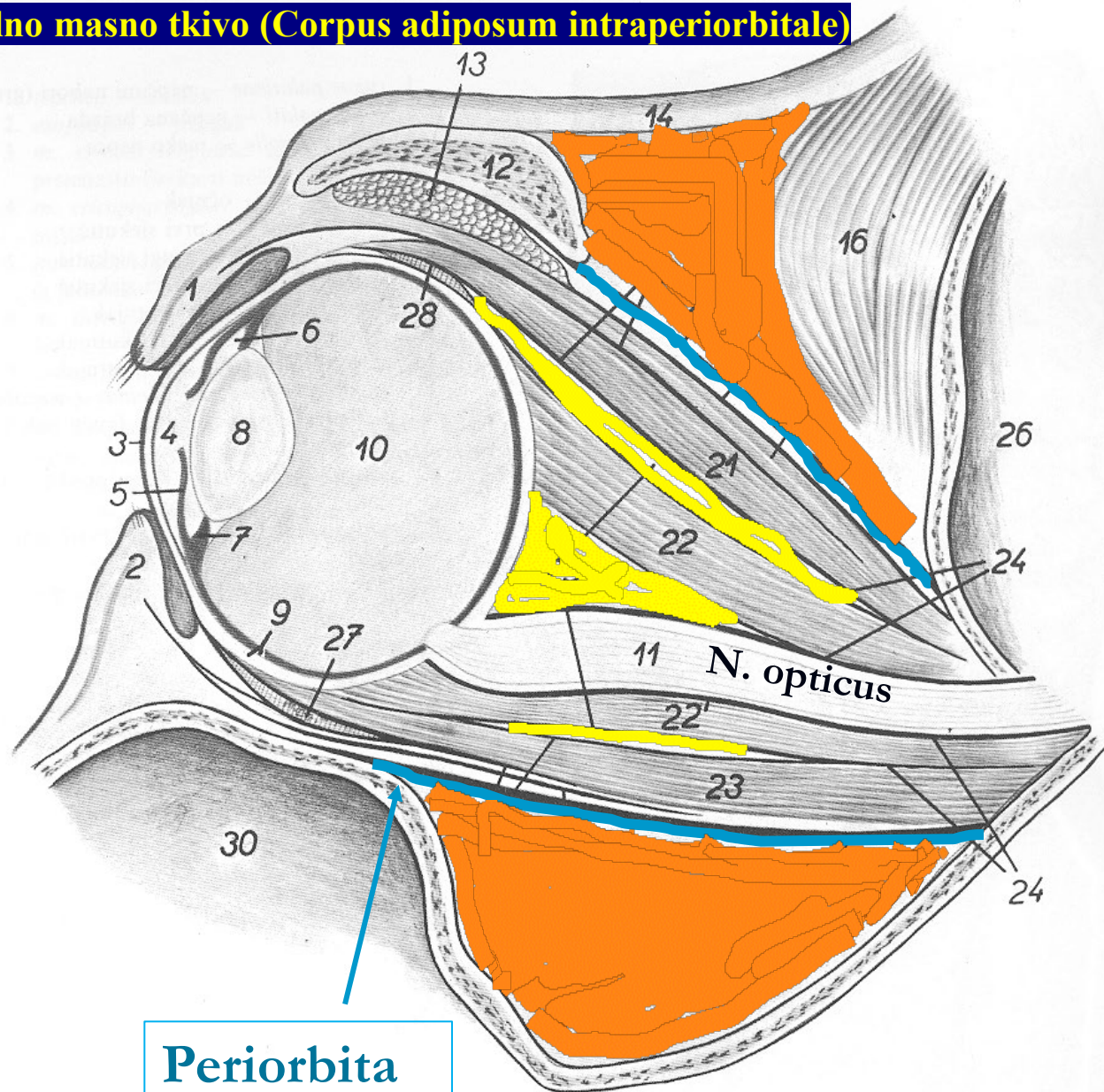
-Intraperiorbitalno masno tkivo (Corpus adiposum intraperiorbitale)



ORBITALNO MASNO TKIVO

-Ekstraperiorbitalno masno tkivo (Corpus adiposum extraperiorbitale)

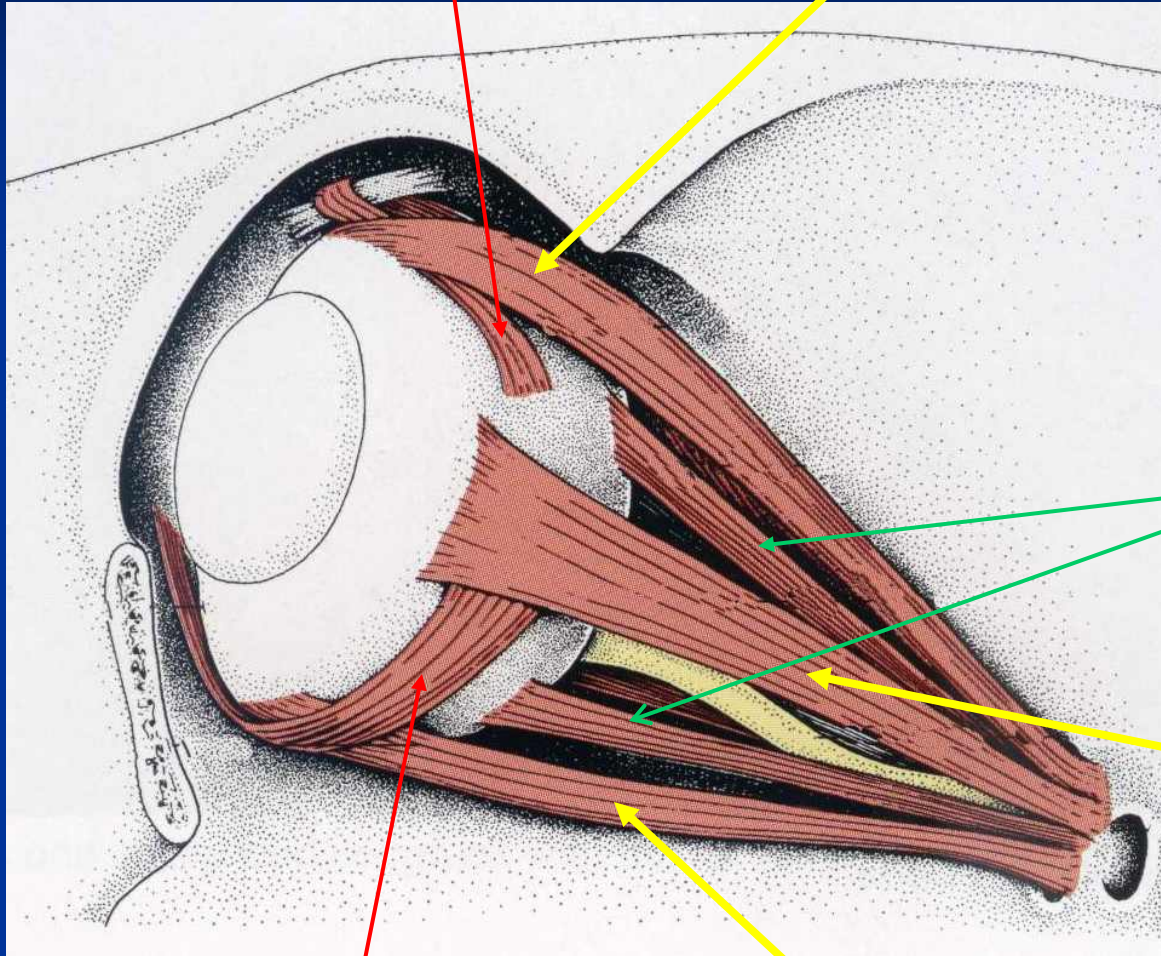
-Intraperiorbitalno masno tkivo (Corpus adiposum intraperiorbitale)



INTRAORBITALNI MIŠIĆI OČNE JABUČICE

m. obliquus dorsalis

m. rectus dorsalis

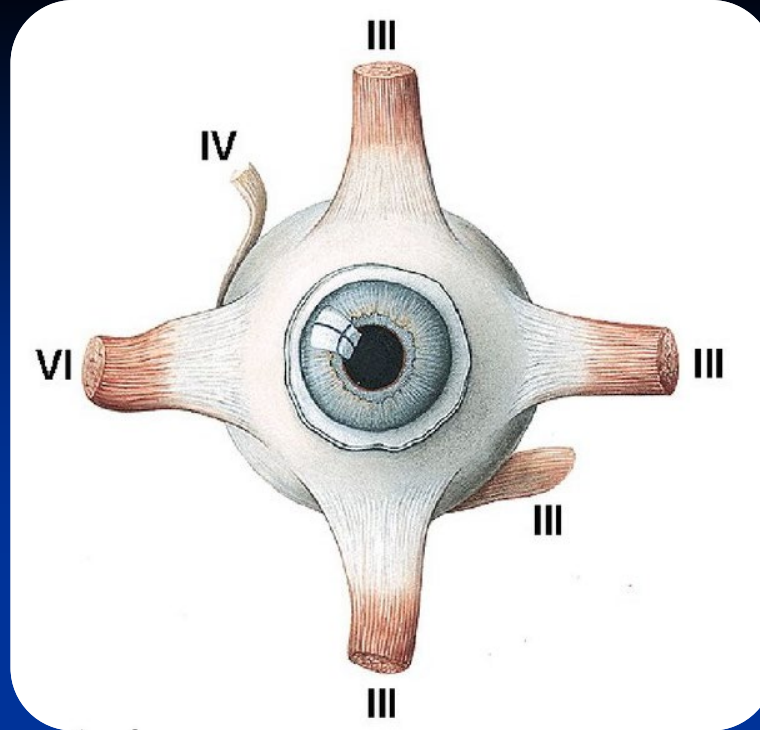


m. retractor bulbi

m. rectus lateralis

m. obliquus ventralis

m. rectus ventralis



INERVACIJA:

m. rectus dorsalis – *n. oculomotorius* (III)

m. rectus ventralis – *n. oculomotorius* (III)

m. rectus medialis – *n. oculomotorius* (III)

m. rectus lateralis – *n. abducens* (VI)

m. obliquus dorsalis – *n. trochlearis* (IV)

m. obliquus ventralis – *n. oculomotorius* (III)

m. retractor bulbi – *n. oculomotorius* (III)

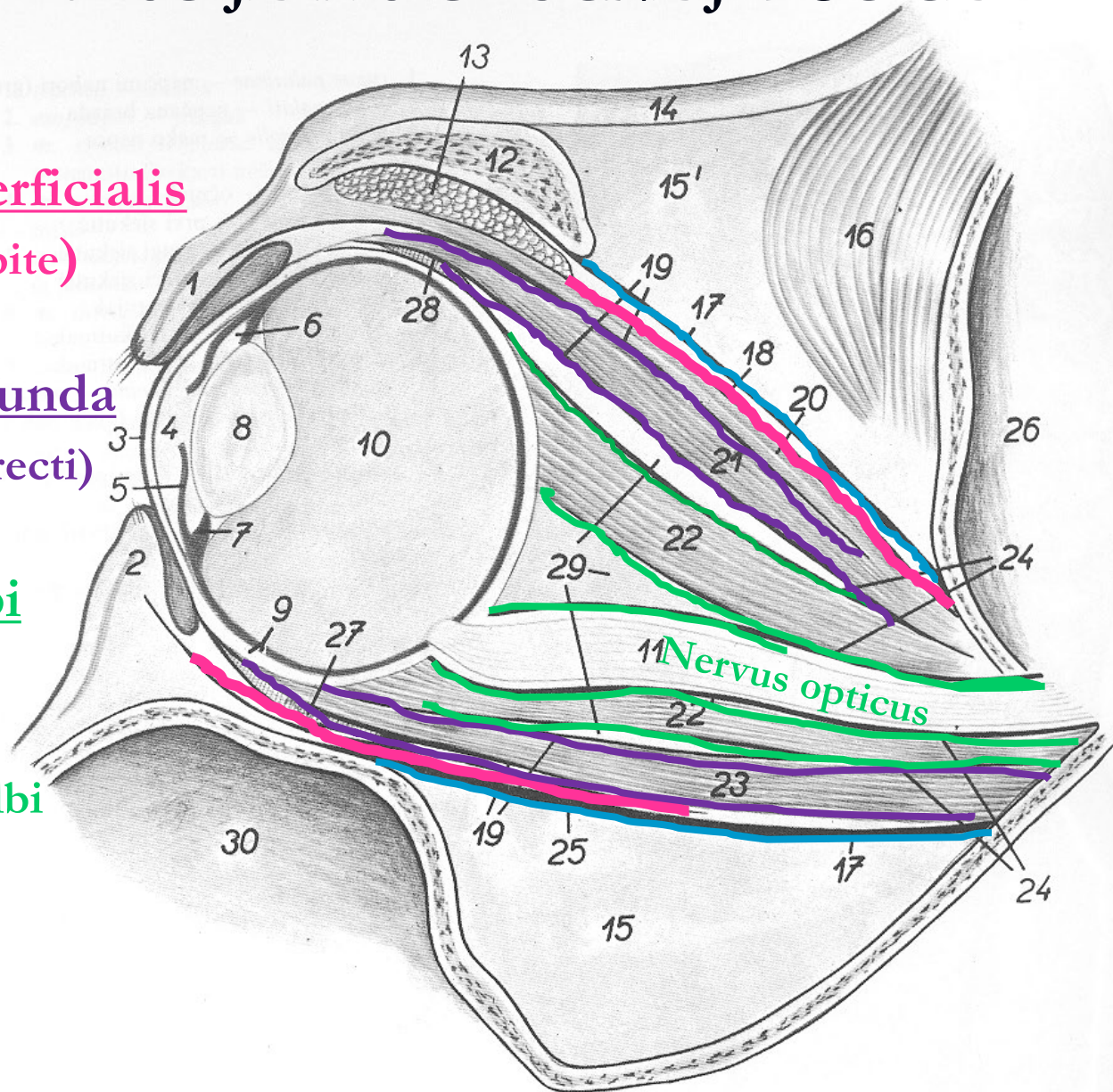
FASCIJE MIŠIĆA OČNE JABUČICE

Periorbita

➤ Fascia superficialis
(ispod periorbite)

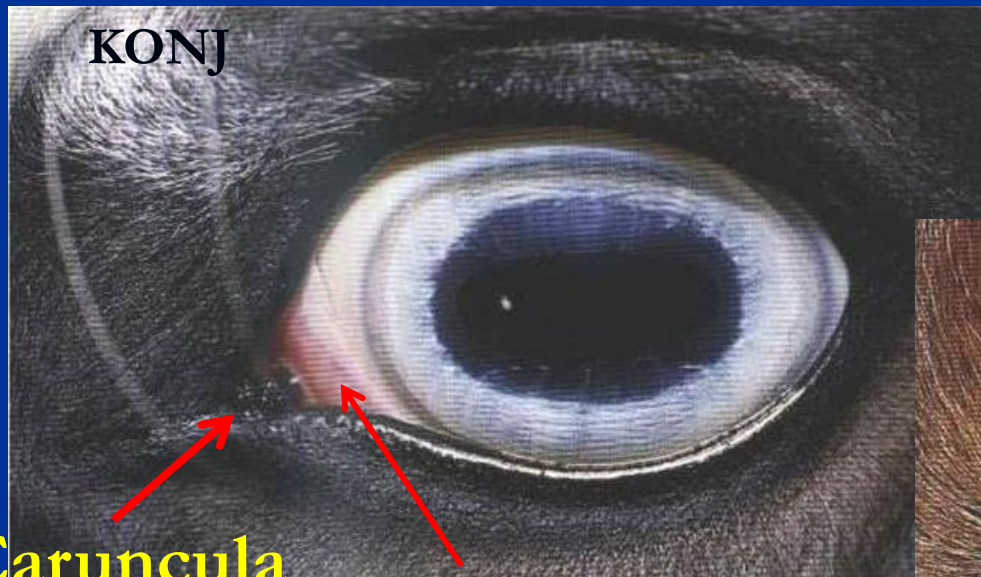
➤ Fascia profunda
(obuhvata Mm. recti)

➤ Fascia bulbi
s. Tenoni
(obuhvata
M. retractor bulbi
i N. opticus)



OČNI KAPCI (Palpebrae)

- **Gornji očni kapak (Palpebra superior):** veći, pokretljiviji, trepavice, otvori tarzalnih žlezda.
- **Donji očni kapak (Palpebra inferior):** slabiji, manje pokretan.
- **Treći očni kapak (Plica semilunaris conjunctivae, Palpebra tertia)**



Caruncula
lacrimalis

Palpebra tertia



PAS

- **Angulus oculi medialis**
- **Angulus oculi lateralis**
- **Rima palpebrarum**
- **Ciliae (trepavice)**
- **Gl. tarsalis**
- **Sebum palpebrae (krmelj)**
- **Superciliae (obrve)**
- **Caruncula lacrimalis (suzna bradavica)**



VEŽNJÁČA (Tunica conjunctiva)

- Tunica conjunctiva palpebrarum
- Tunica conjunctiva bulbi
- Saccus conjunctivae



SUZNI PRIBOR (Apparatus lacrimalis)

Suzna žleza (Glandula lacrimalis)

Odvodni kanalići suzne žlezde (Ductuli excretorii)

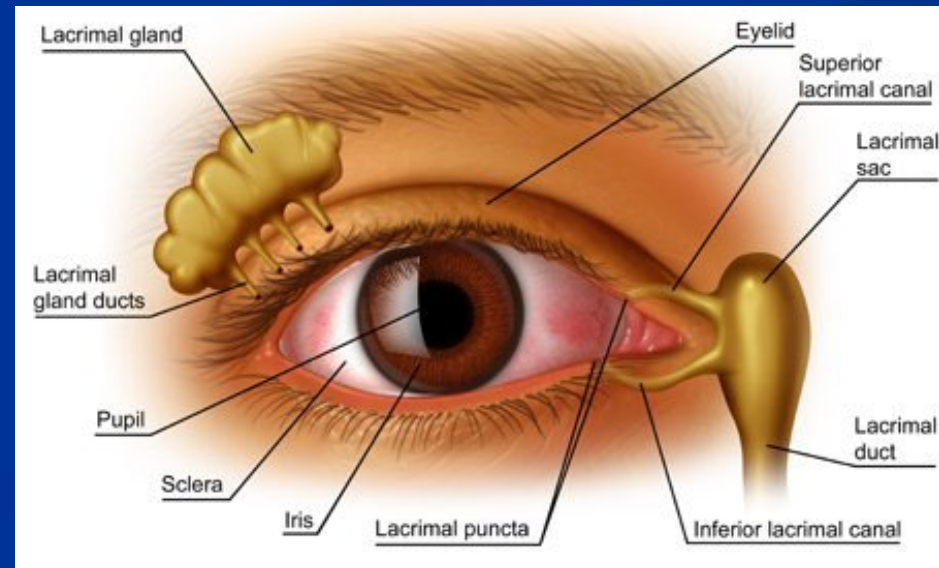
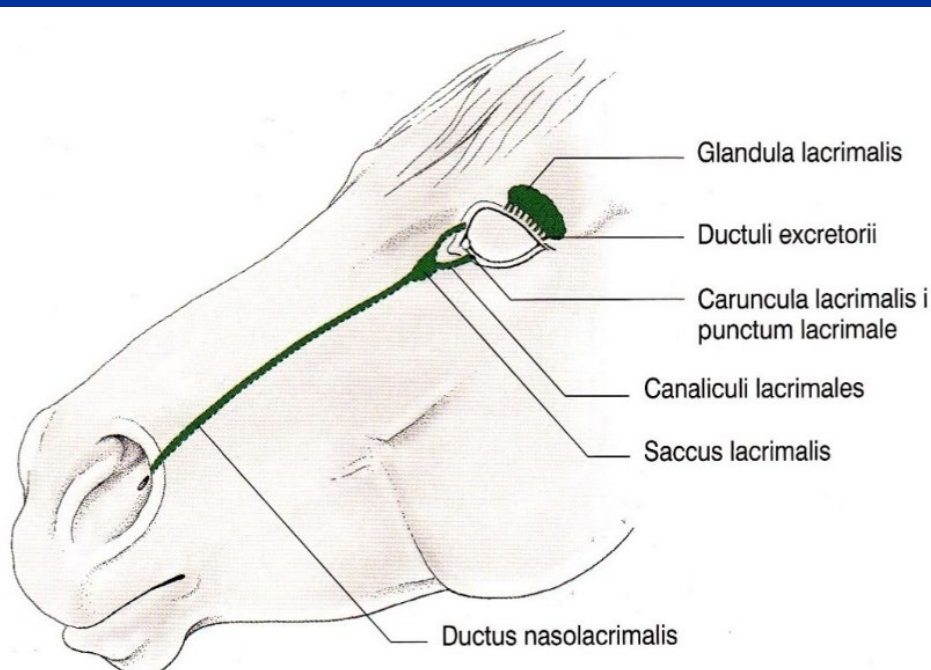
Suzno jezerce oko suzne bradavice (Lacus lacrimalis)

Tačkasti otvori (Puncta lacrimalia)

Suzni kanalići (Canaliculi lacrimales)

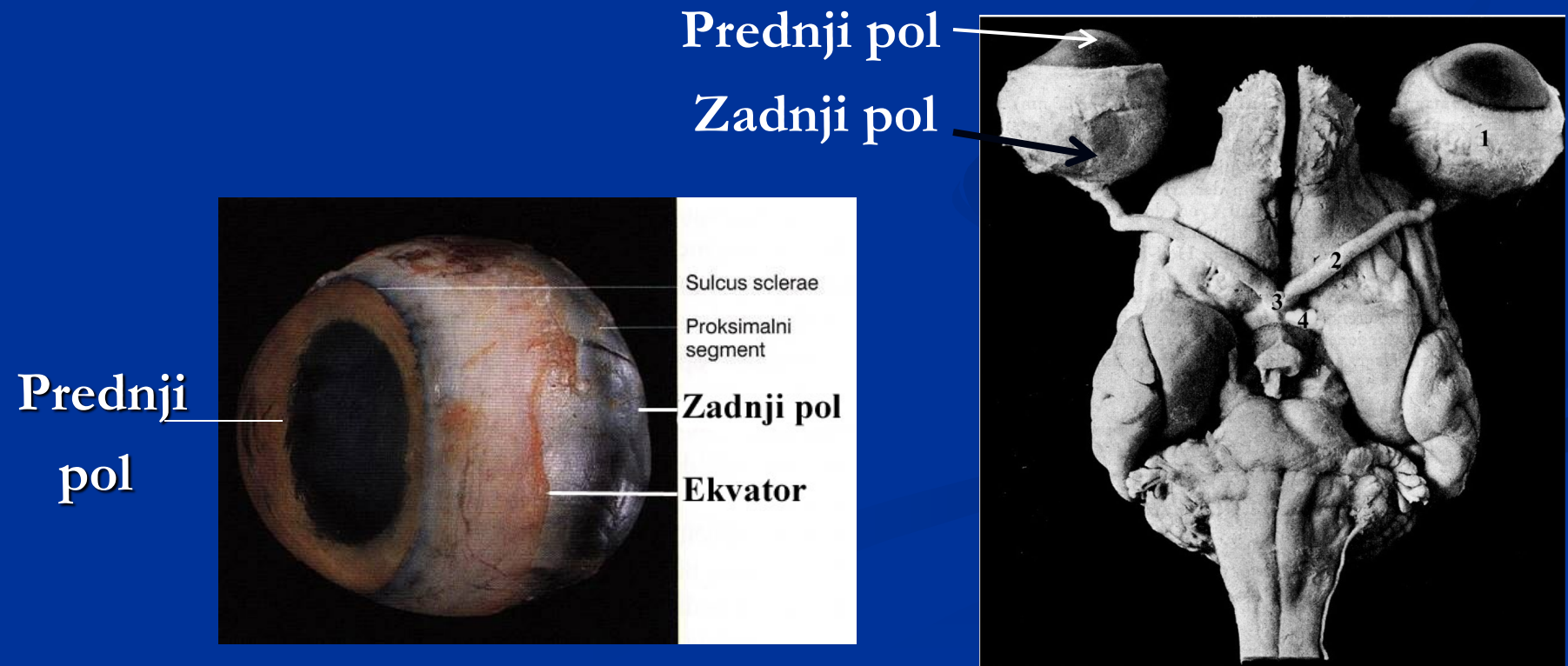
Suzna kesica (Saccus lacrimalis)

Nosno-suzni kanal (Ductus nasolacrimalis)



OČNA JABUČICA (Bulbus oculi)

- Prednji, kornealni pol (**Polus anterior**)
- Zadnji, cerebralni, skleralni pol (**Polus posterior**)
- **Ekvator** (najveća zaobljenost na sredini očne jabučice koja se nalazi između polova)



OČNA JABUČICA (*Bulbus oculi*)

➤ OMOTAČI ZIDA OČNE JABUČICE

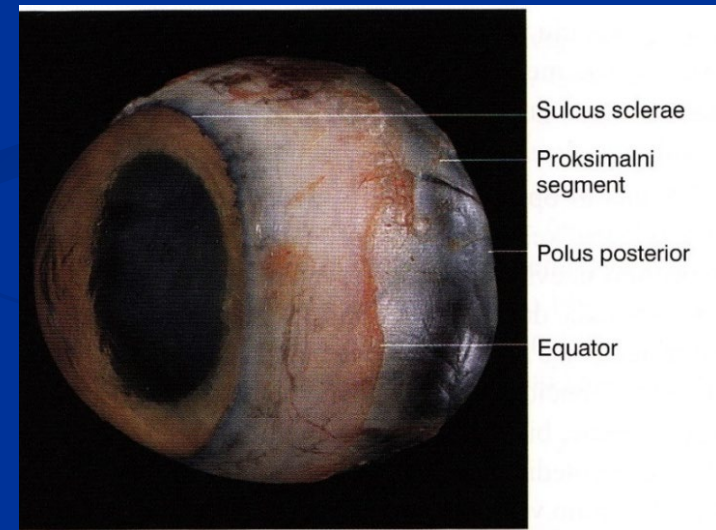
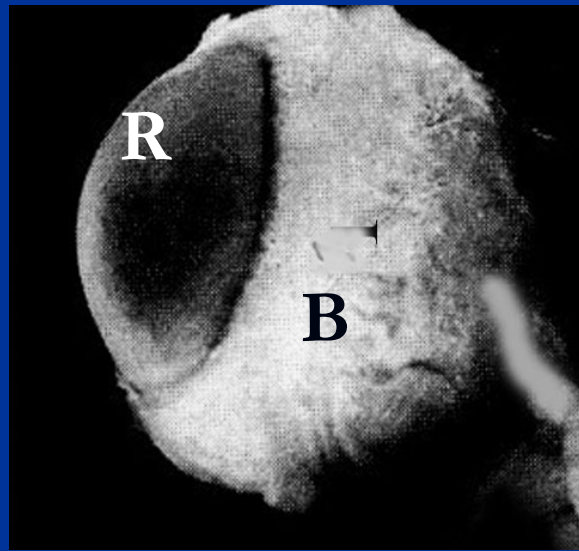
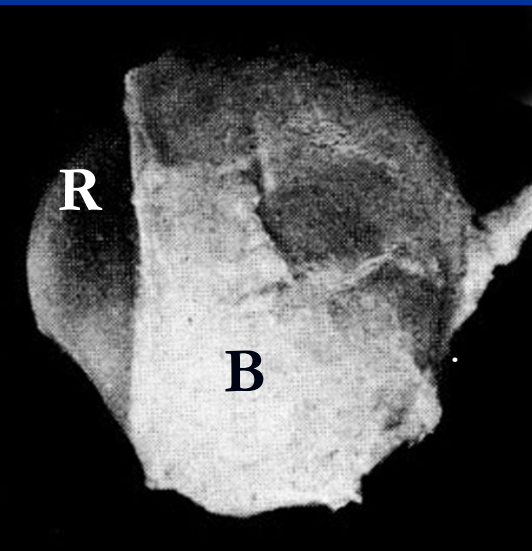
- Spoljašnji omotač (*Tunica fibrosa bulbi*)
- Srednji omotač (*Tunica vasculosa bulbi*)
- Unutrašnji omotač (*Tunica interna bulbi*)

➤ OSTALI OPTIČKI DELOVI OKA

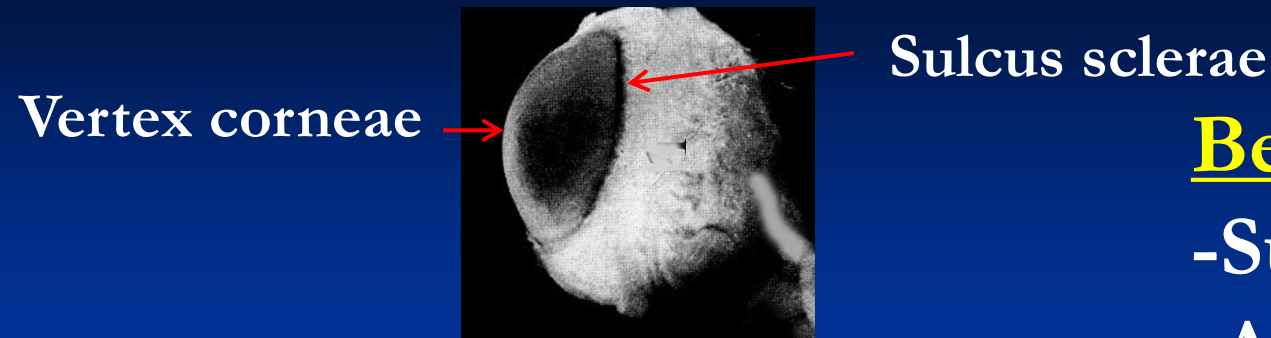
- Prednja i zadnja očna komora
(*Camera oculi anterior et posterior*)
- Očno sočivo (*Lens*)
- Staklasto telo (*Corpus vitreum*)

TUNICA FIBROSA BULBI

- Beonjača (*Sclera*)
- Rožnjača (*Cornea*)



TUNICA FIBROSA BULBI



Beonjača (*Sclera*):

-Sulcus sclerae

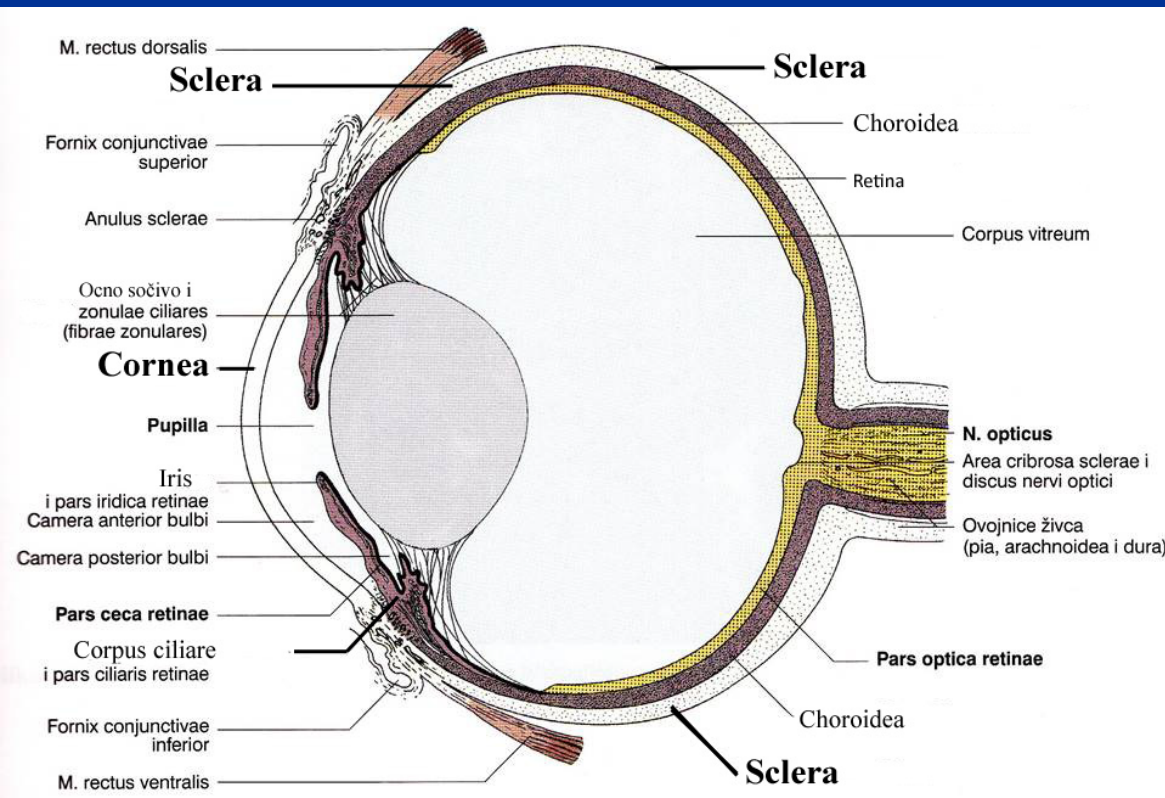
-Area cribrosa

sclerae (tačkasti otvori
za prolaz snopova (Fasciculi n.
optici))

-Fasciculi n. optici

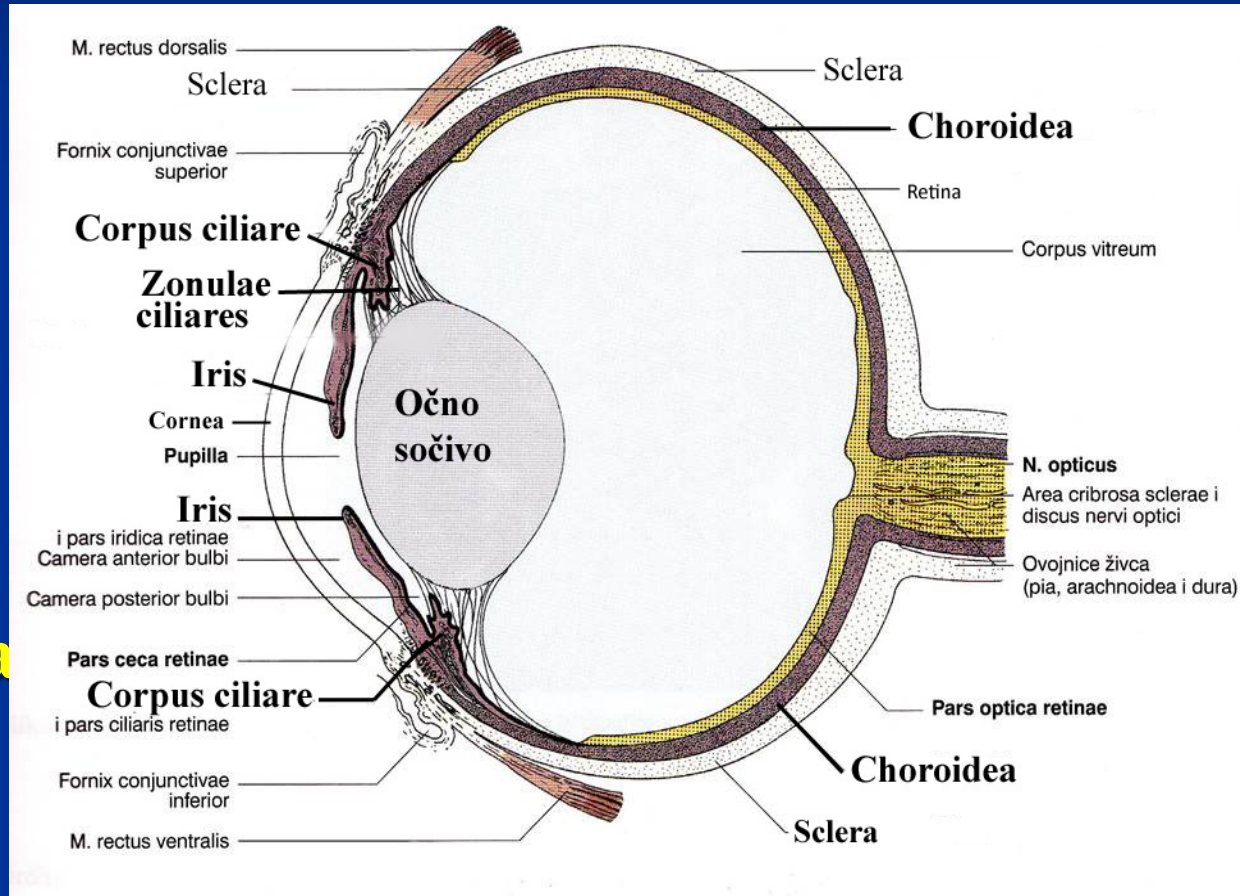
Rožnjača (*Cornea*):

-Vertex corneae



TUNICA VASCULOSA BULBI

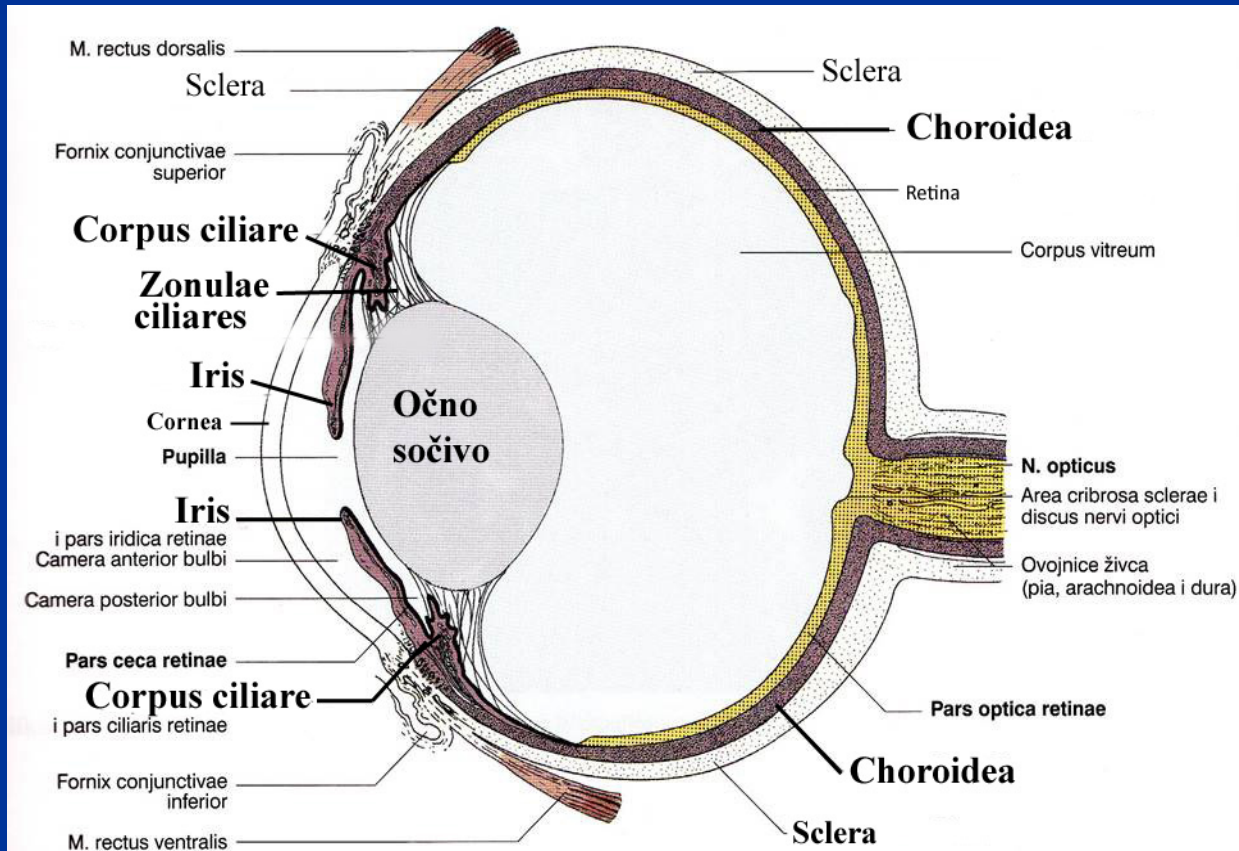
- Sudovnjača
(*Choroidea*)
- Cilijarno telo
(*Corpus ciliare*)
- Dužica, šarenica
(*Iris*)



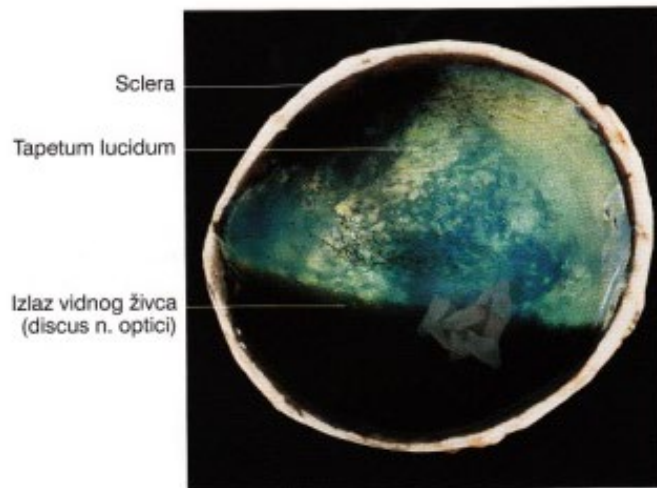
■ Sudovnjača (*Choroidea*)

-Dobro vaskularisana i pigmentisana

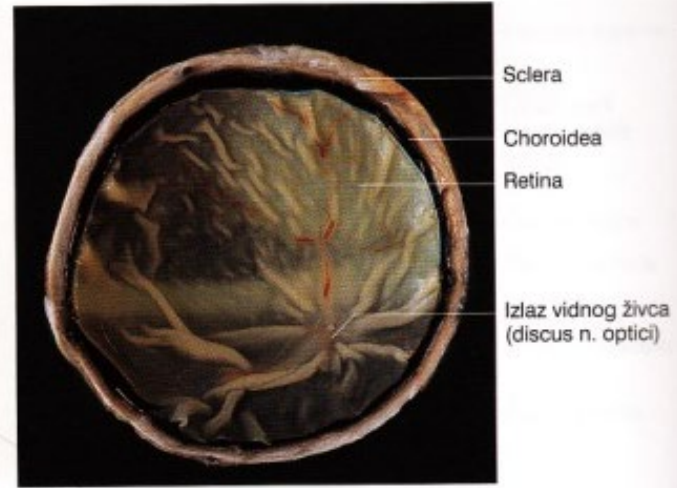
-Tapetum nigrum i Tapetum lucidum (eq,ru,ca)



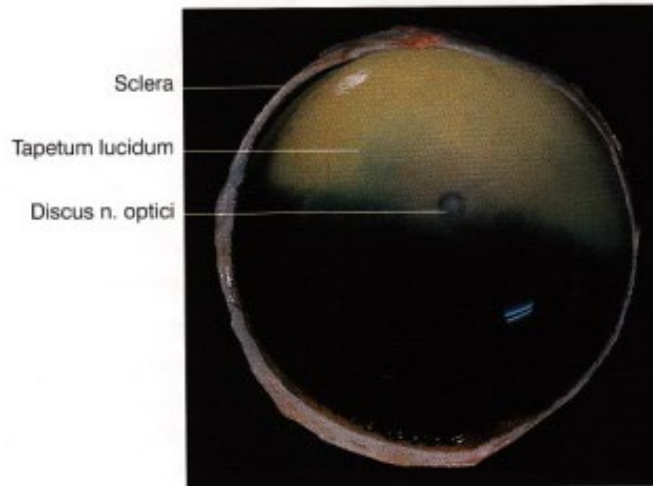
Tapetum lucidum



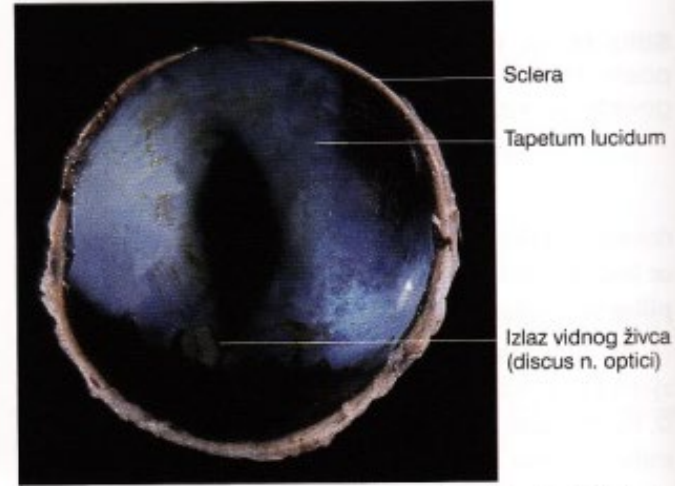
Slika 16-20. Pozadina oka goveda, mrežnica je većim dijelom uklonjena (ekvatorijalni presjek, prednja strana).



Slika 16-21. Pozadina oka goveda (ekvatorijalni presjek, prednja strana).



Slika 16-22. Tapetum lucidum mačke (ekvatorijalni presjek, prednja strana), König, 1992.



Slika 16-23. Tapetum lucidum mačke (ekvatorijalni presjek, prednja strana).

Cilijarno telo (*Corpus ciliare*)

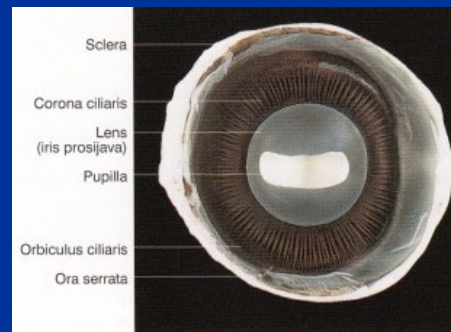
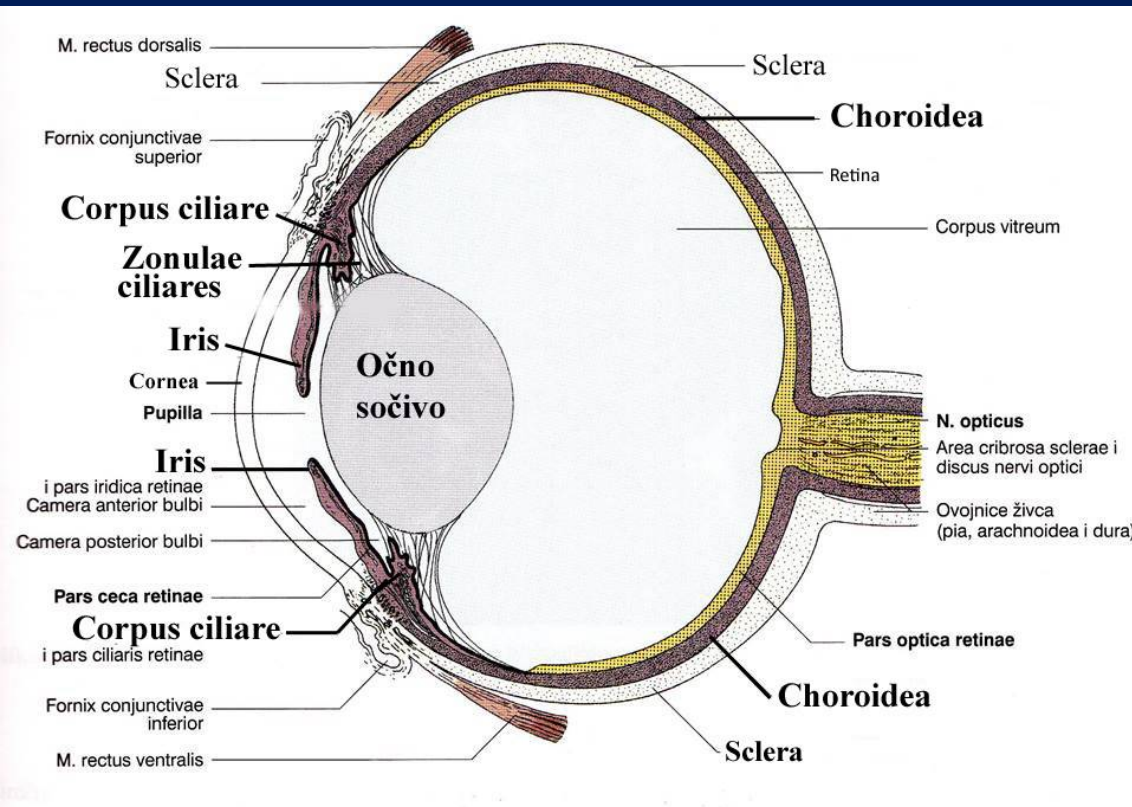
-Processus ciliares

-Fibrae zonulares

-M. ciliaris
(akomodacija oka)

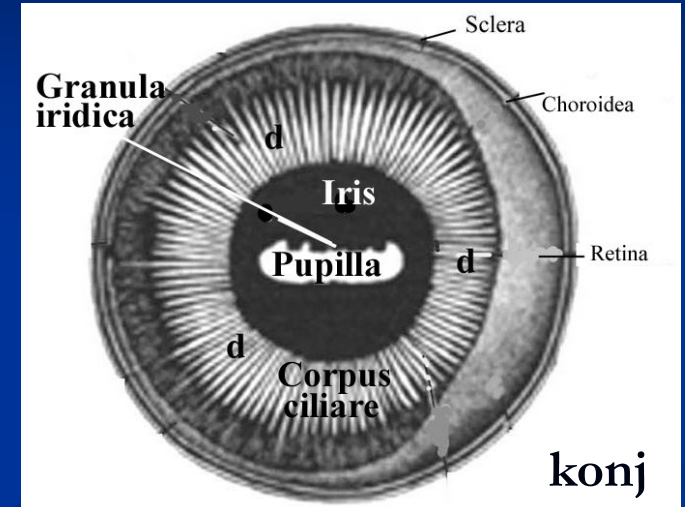
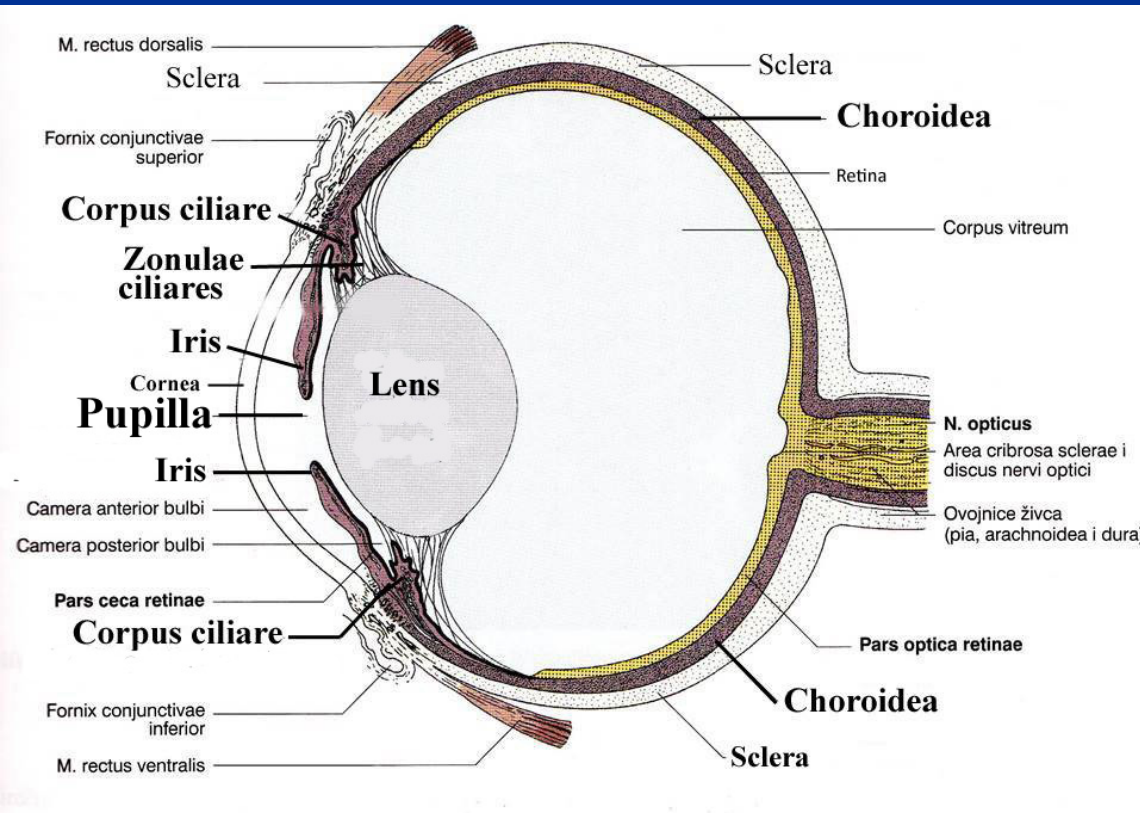
-Pars ciliaris retinae

-Ora serrata



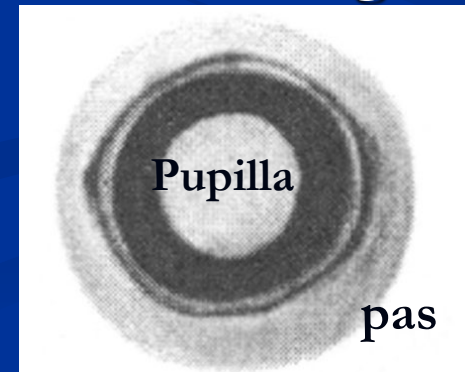
Slika 16-14. Oko goveda s cilijarnim tijelom i lećom (ekvatorijalni presjek, stražnja strana), midrijaza.

- **Dužica, šarenica (*Iris*)**, nalazi se ispred sočiva.
- **Zenica (*Pupilla*)**; M. sphincter et dilatator pupillae
- **Granula iridica (eq)**



Zenica- ovalna (eq, ru)

-skoro okrugla (ca)



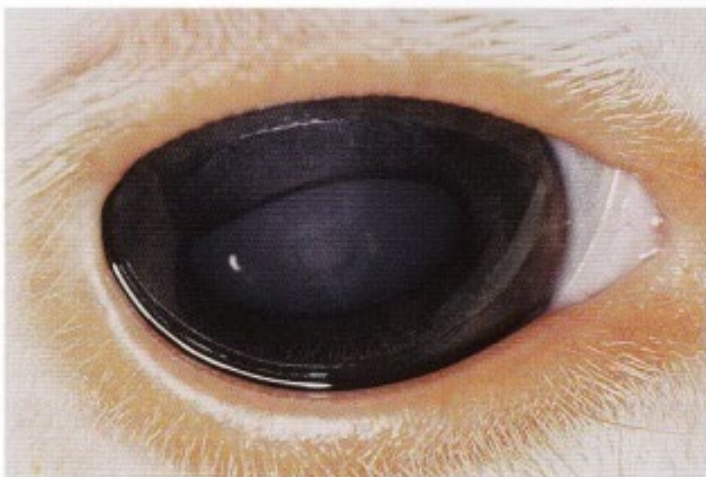
ZENICA (*Pupilla*)



Slika 16-7. Desno oko mačke.



Slika 16-8. Lijevo oko psa.

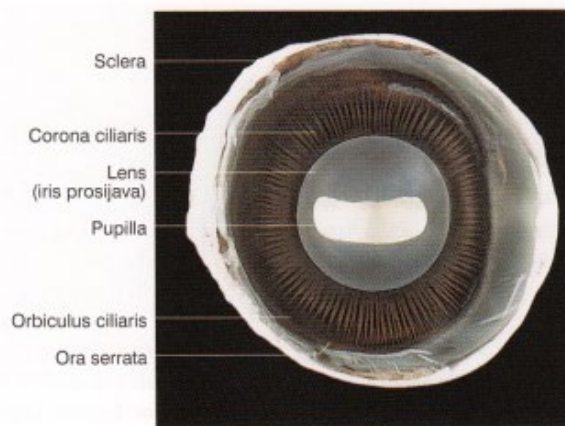


Slika 16-9. Desno oko goveda.

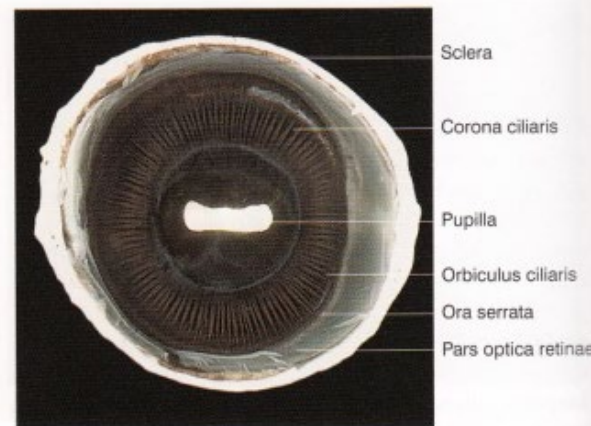


Slika 16-10. Lijevo oko konja (boje breze, riblje oko).

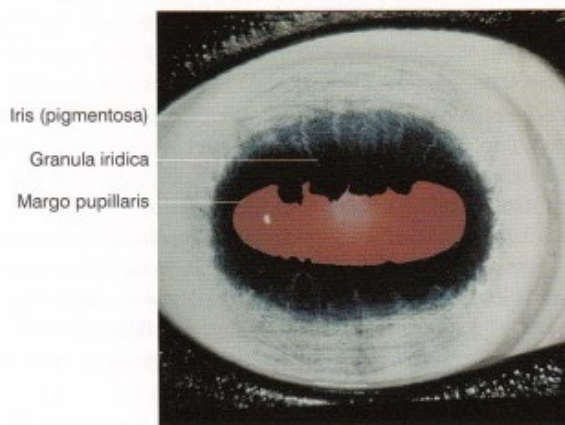
Pupilla govečeta i konja



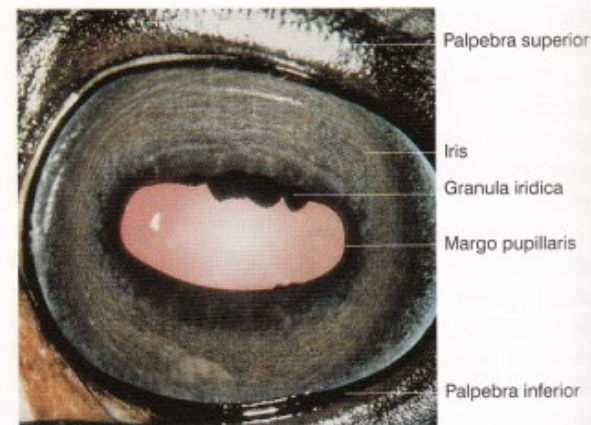
Slika 16-14. Oko goveda s cilijarnim tijelom i lećom (ekvatorijalni presjek, stražnja strana), midrijaza.



Slika 16-15. Oko goveda s cilijarnim tijelom, leća je uklonjena (ekvatorijalni presjek, stražnja strana), mioza.



Slika 16-16. Oko konja sa šarenicom, zjenicom i s granula iridica, boje breze, riblje oko (pogled sprijeda), snimio prof. dr. H. Gerhards, München.

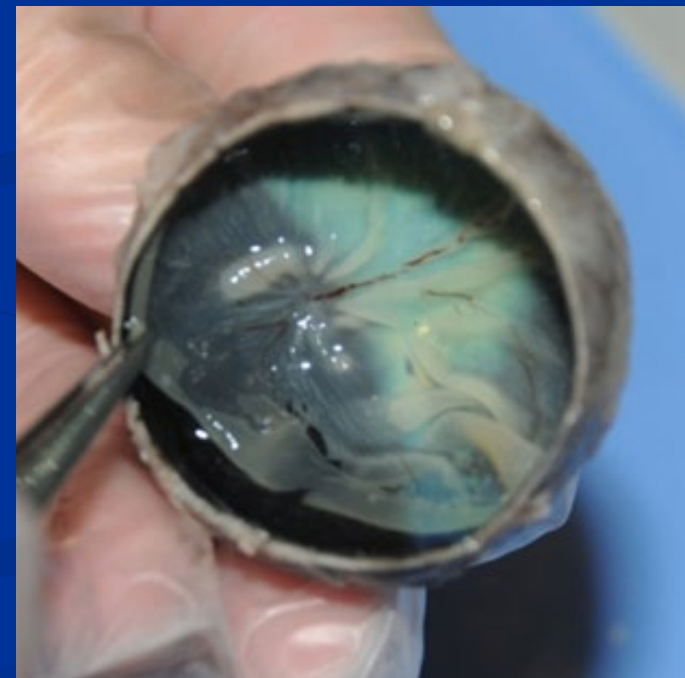
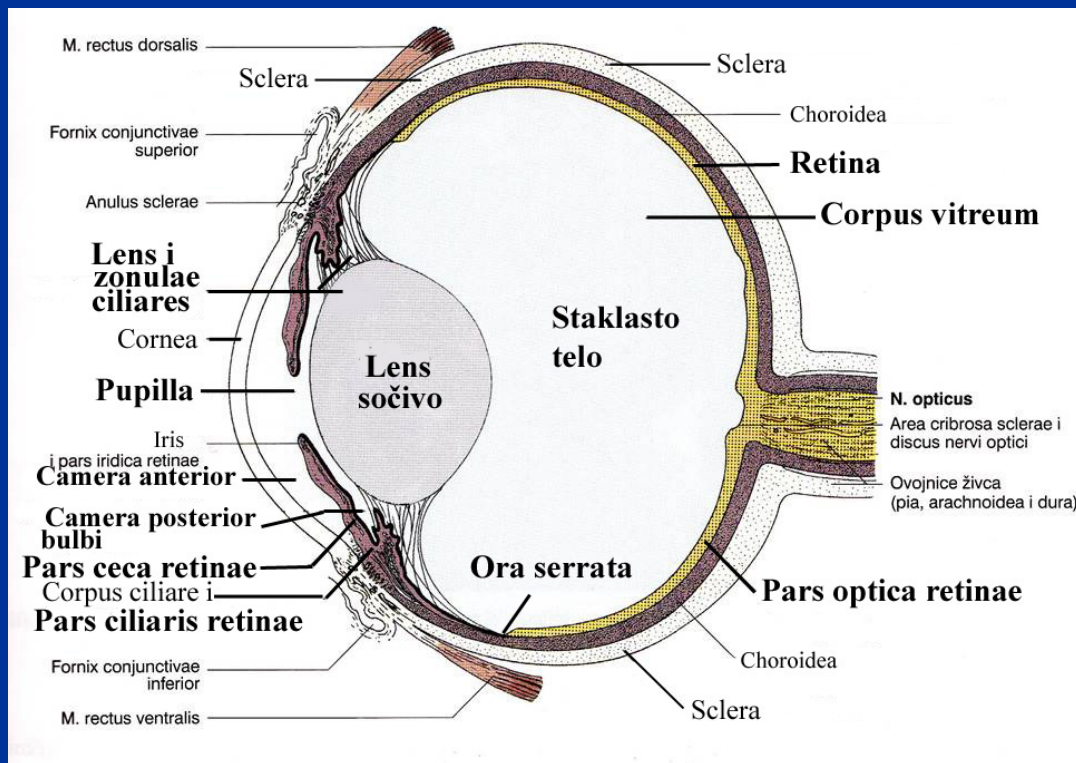


Slika 16-17. Oko konja sa šarenicom, zjenicom i s granula iridica (pogled sprijeda), snimio prof. dr. H. Gerhards, München.

TUNICA INTERNA BULBI

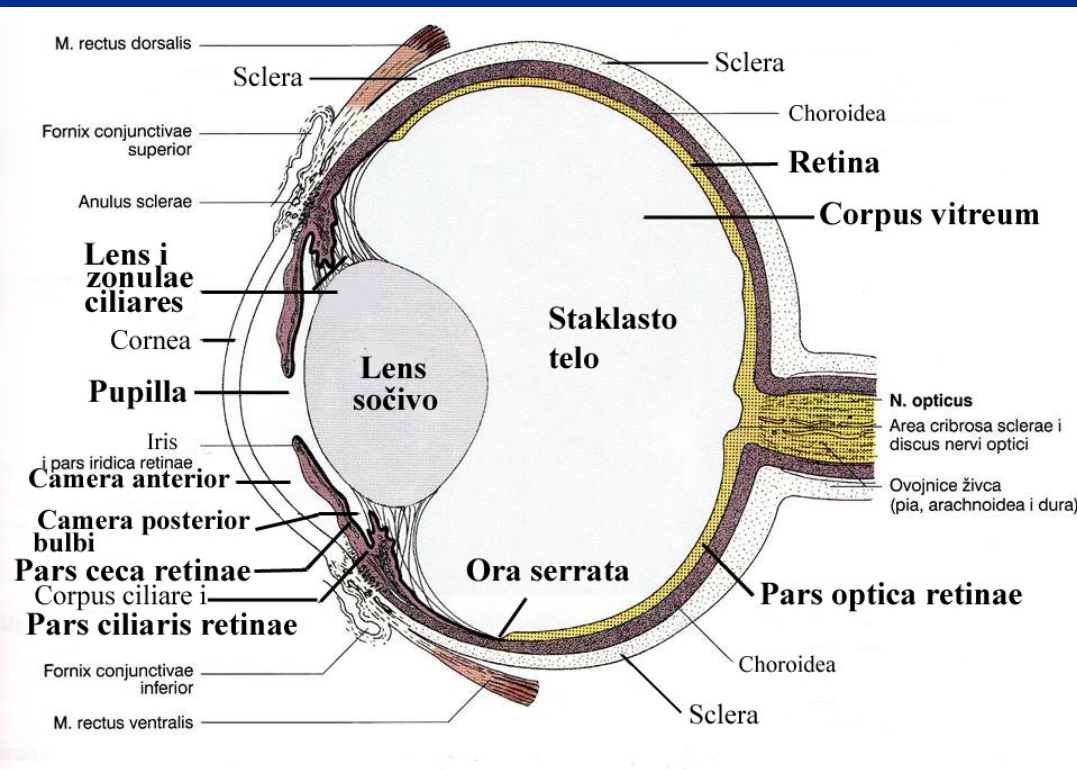
Mrežnjača (*Retina*)

- sivo-bele boje, mekana, nežna, vlažna
- građena od slojeva nervnih i fotoreceptornih ćelija i vlakana



TUNICA INTERNA BULBI

Mrežnjača (*Retina*)



Pars optica retinae

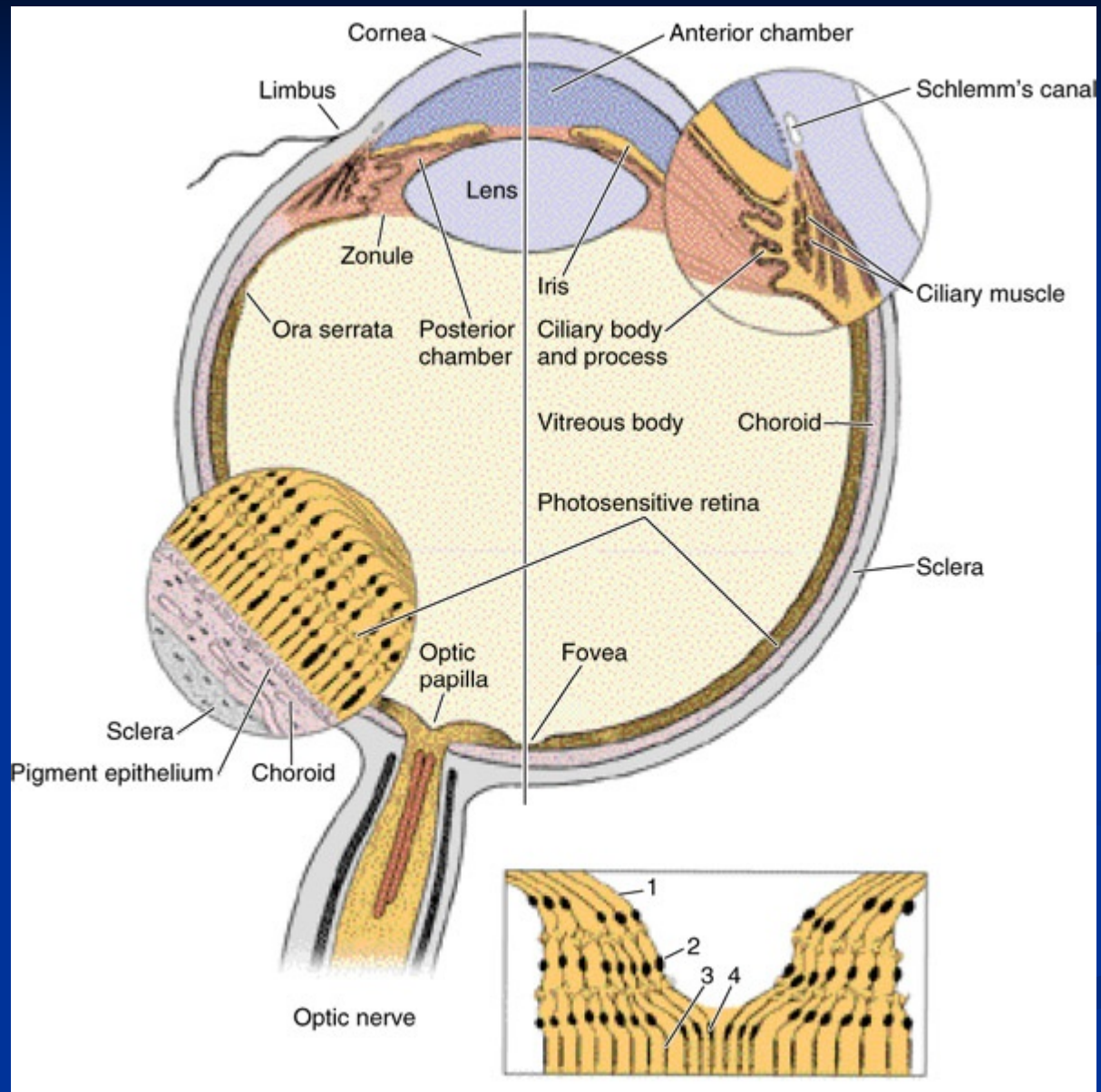
Pars ceca retinae:

-Pars ciliaris retinae

-Pars iridica retinae

Ora serrata

Papilla optica

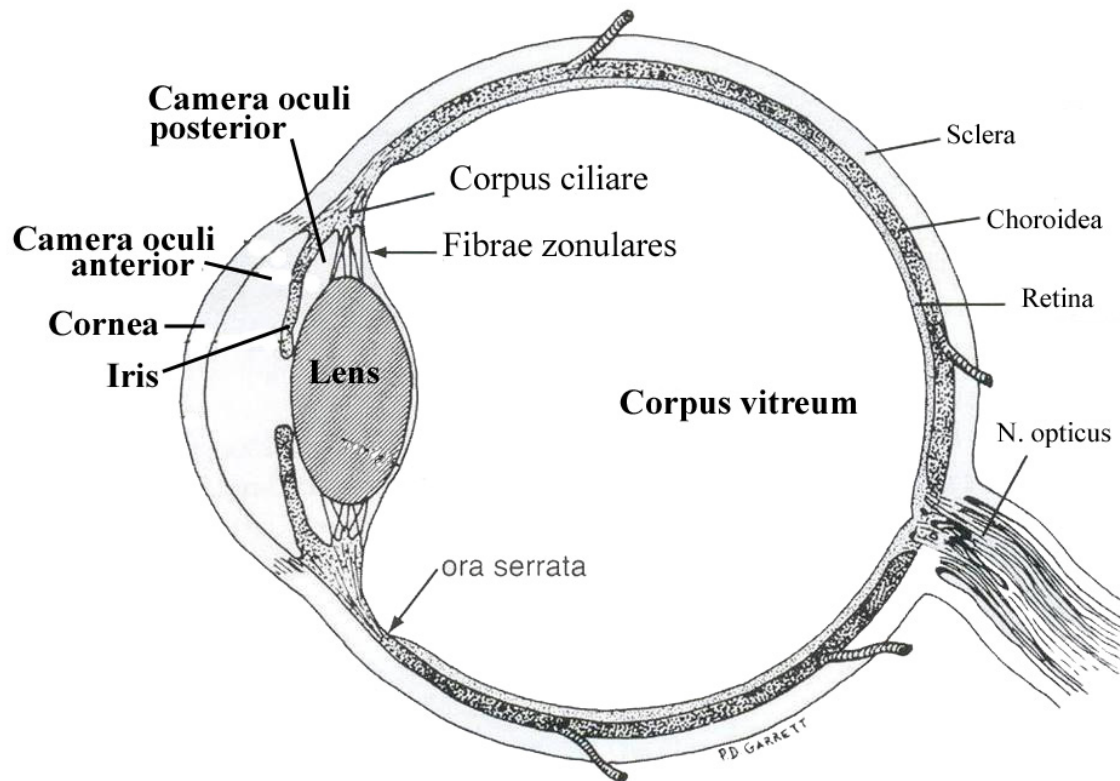


OSTALI OPTIČKI DELOVI OKA

➤ Očne komore (*Camerae oculi*):

- *Camera oculi anterior*
- *Camera oculi posterior*

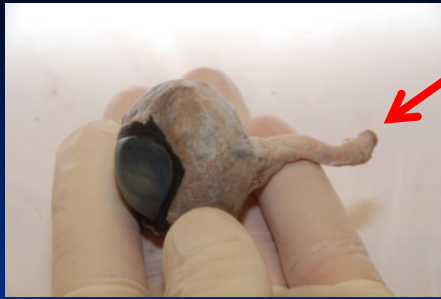
Humor aquosus (očna vodica)



➤ Očno sočivo (*Lens*)

➤ Staklasto telo (*Corpus vitreum*)

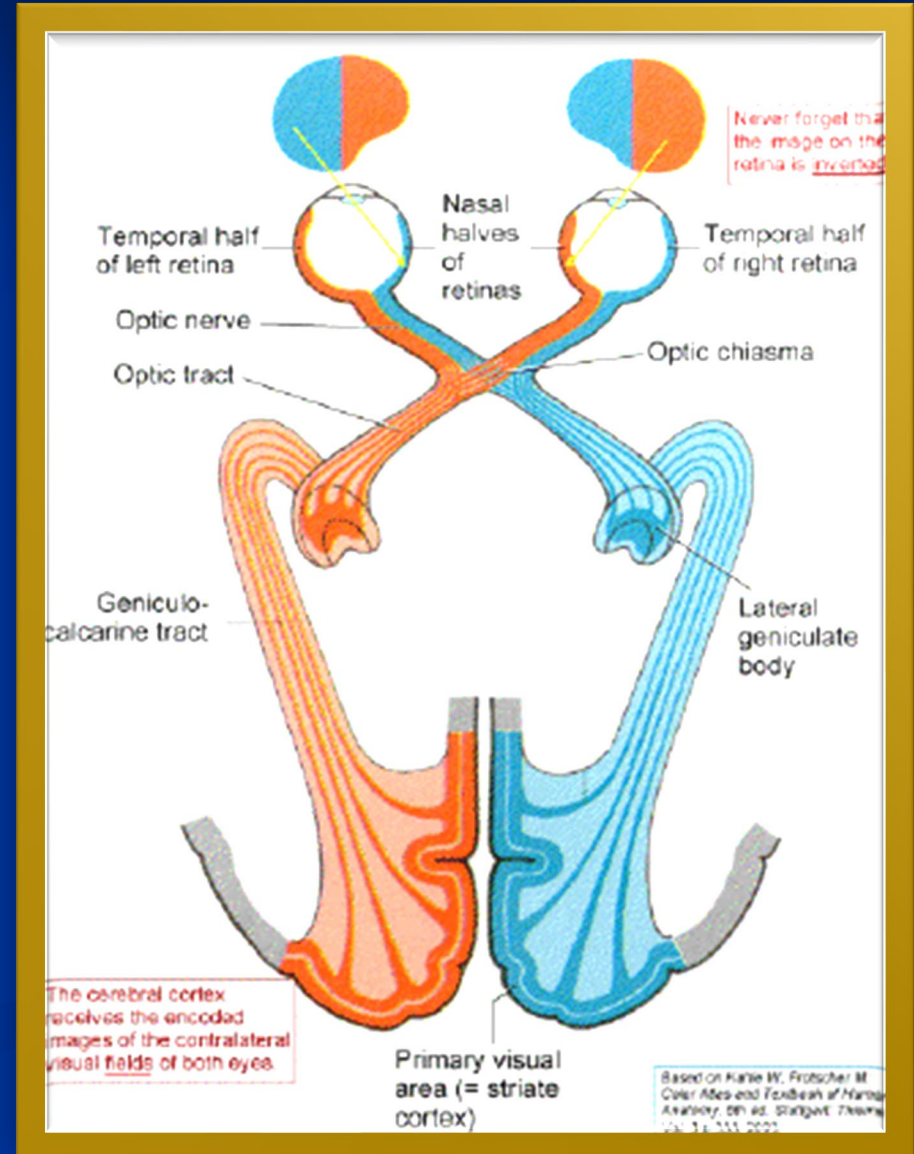
- Camera vitrea bulbi
- Humor vitreus



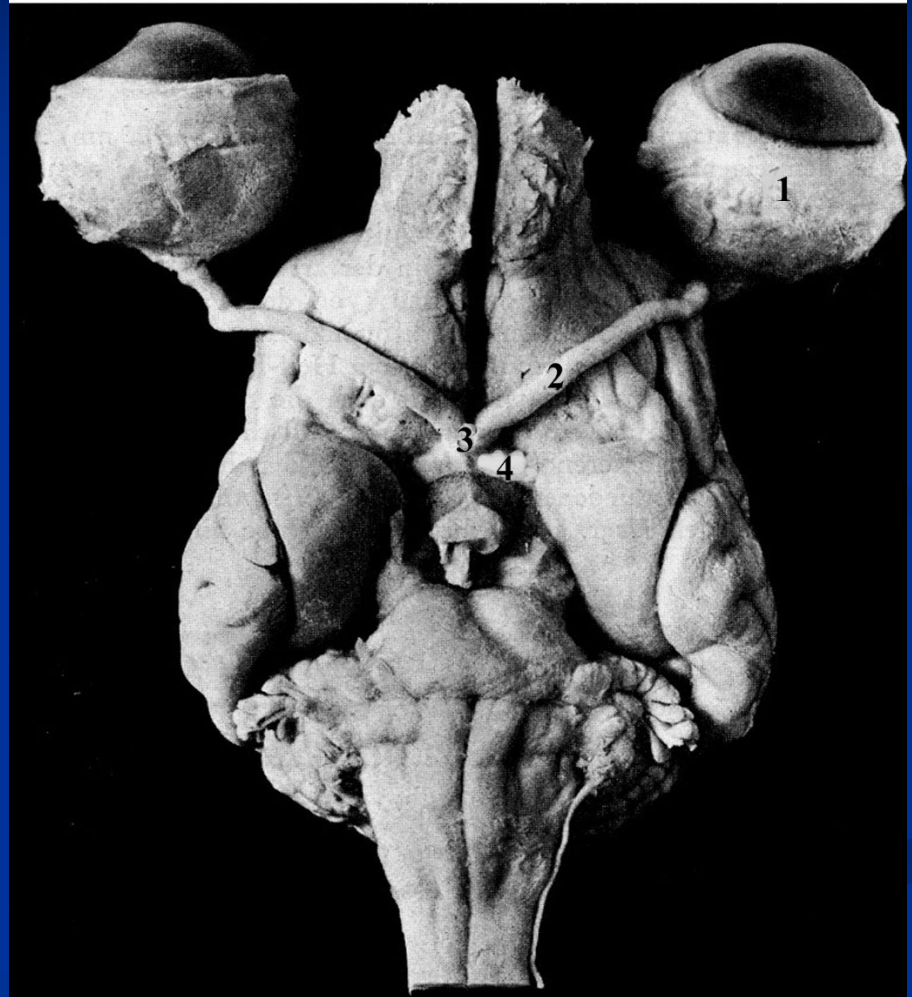
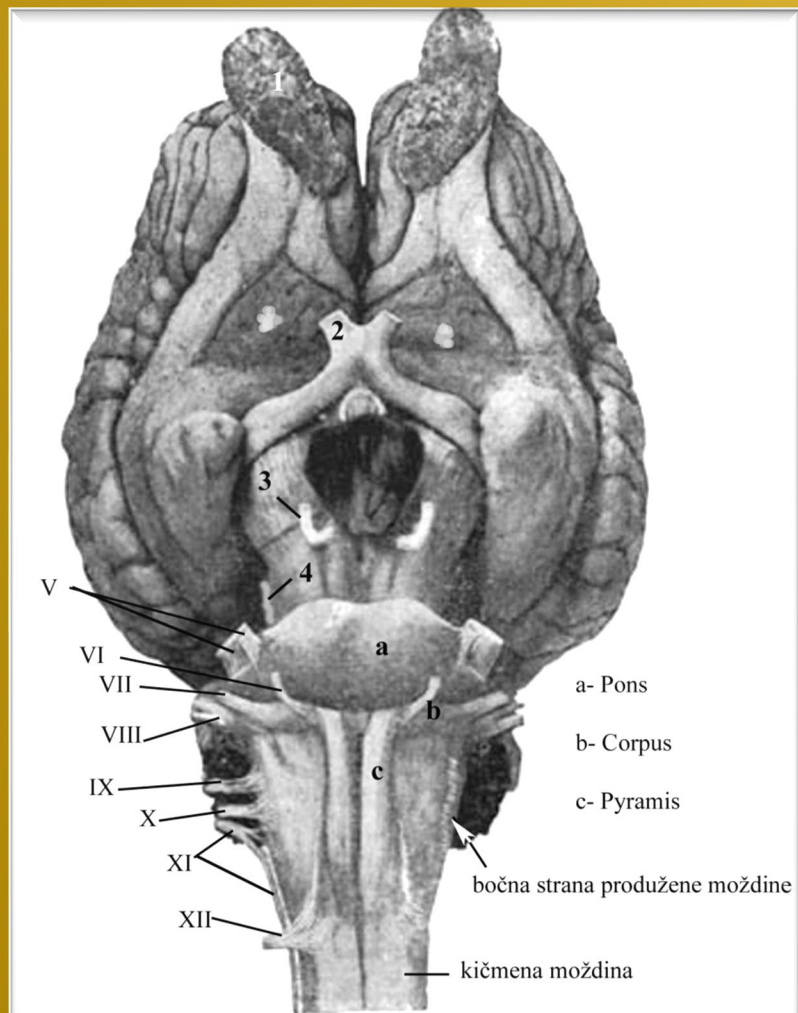
NERVUS OPTICUS (II)

(SENZORIČAN NERV)

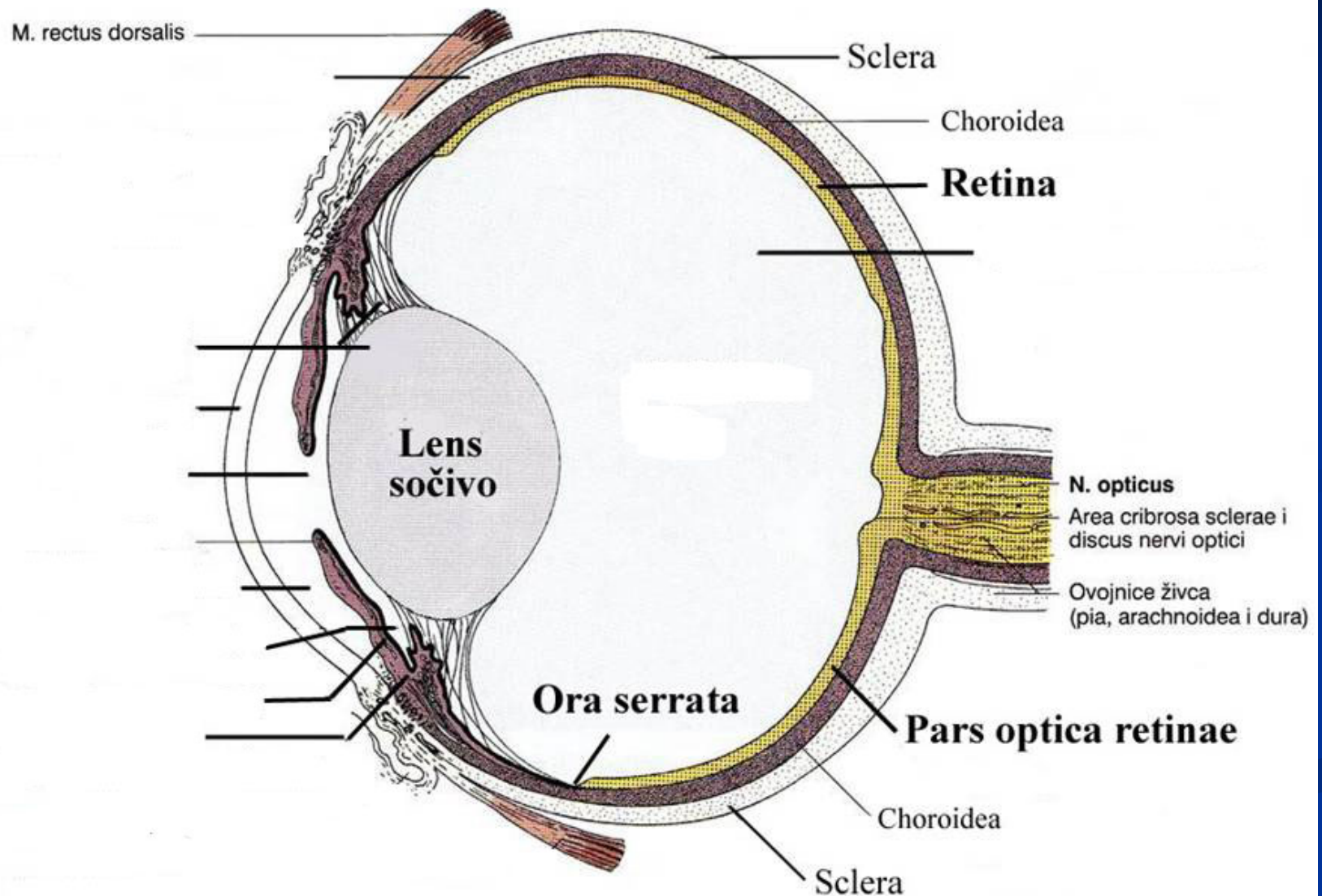
1. *Nervus opticus*
2. *Chiasma opticum*
3. *Tractus opticus*
4. *Corpus geniculatum laterale*
5. *Radiatio optica*
6. *Area striata*
(Primarni vizuelni centar cortex-a u okcipitalnom režnju velikog mozga)

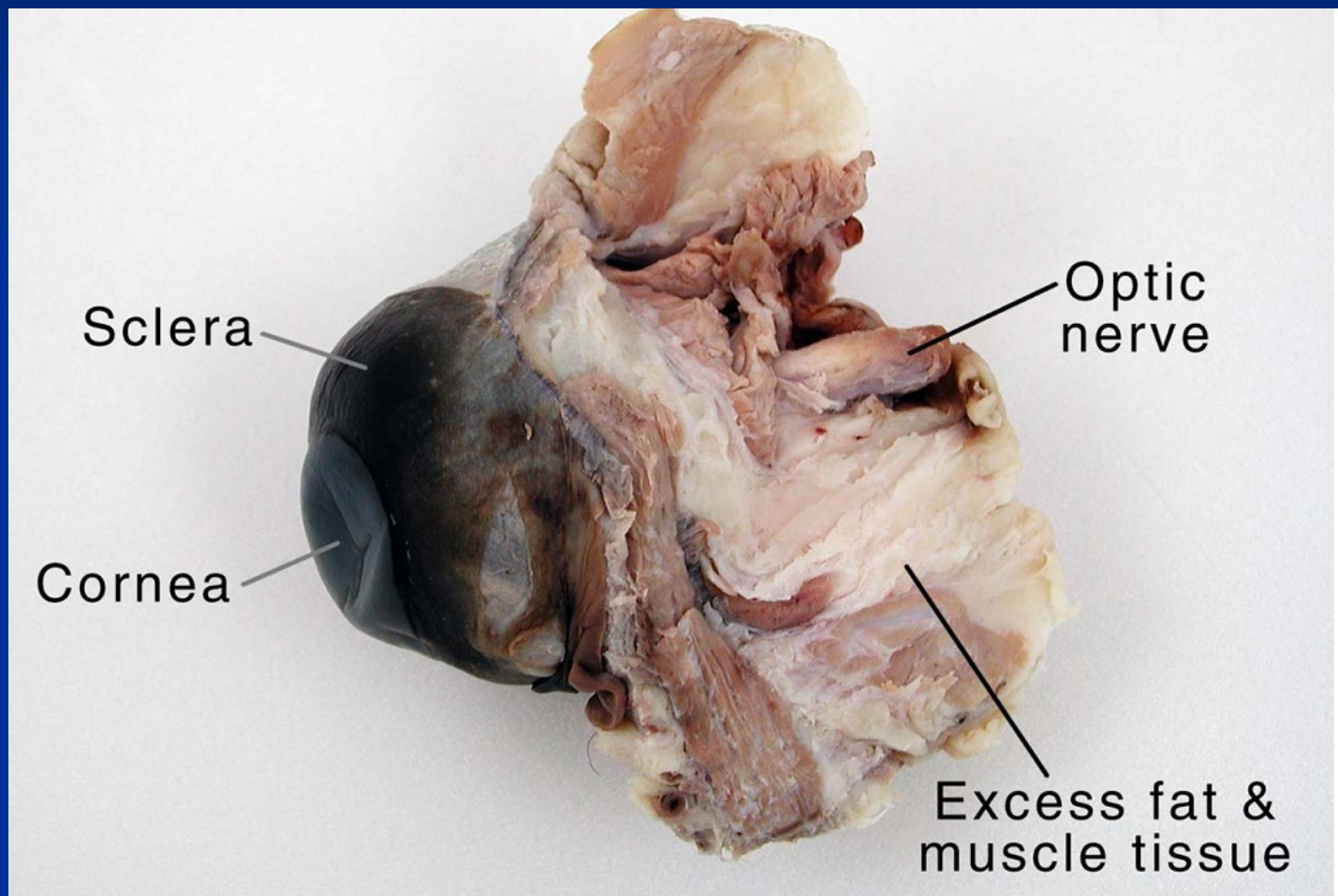


Chiasma opticum

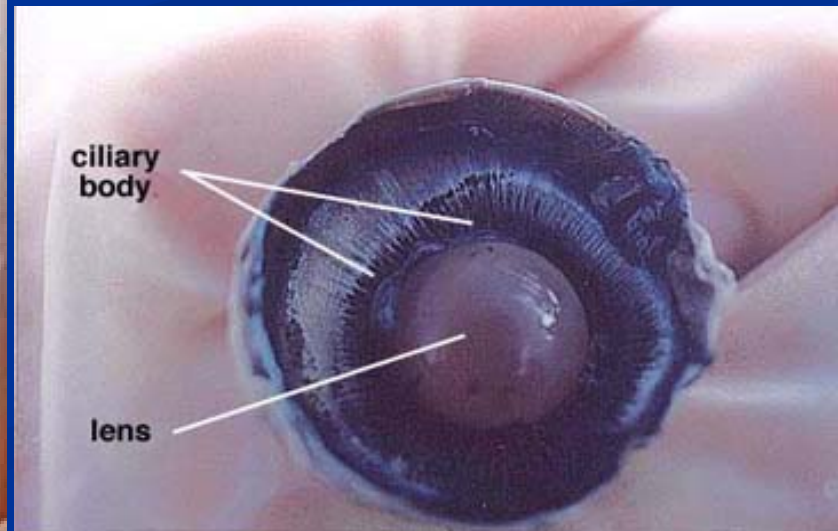
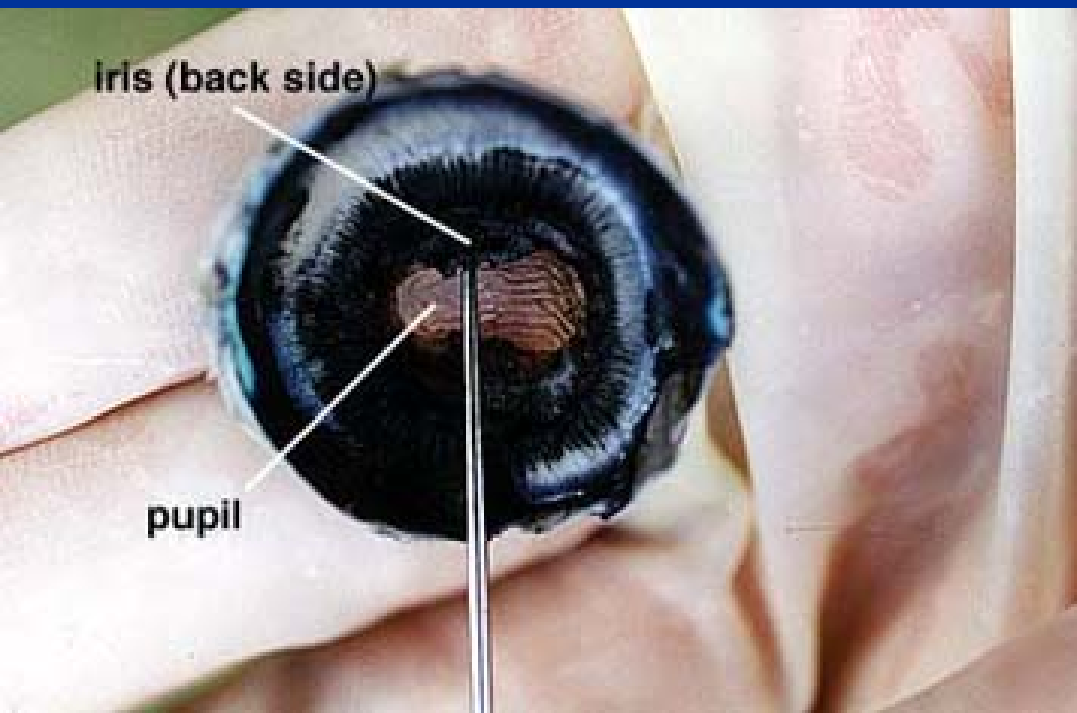
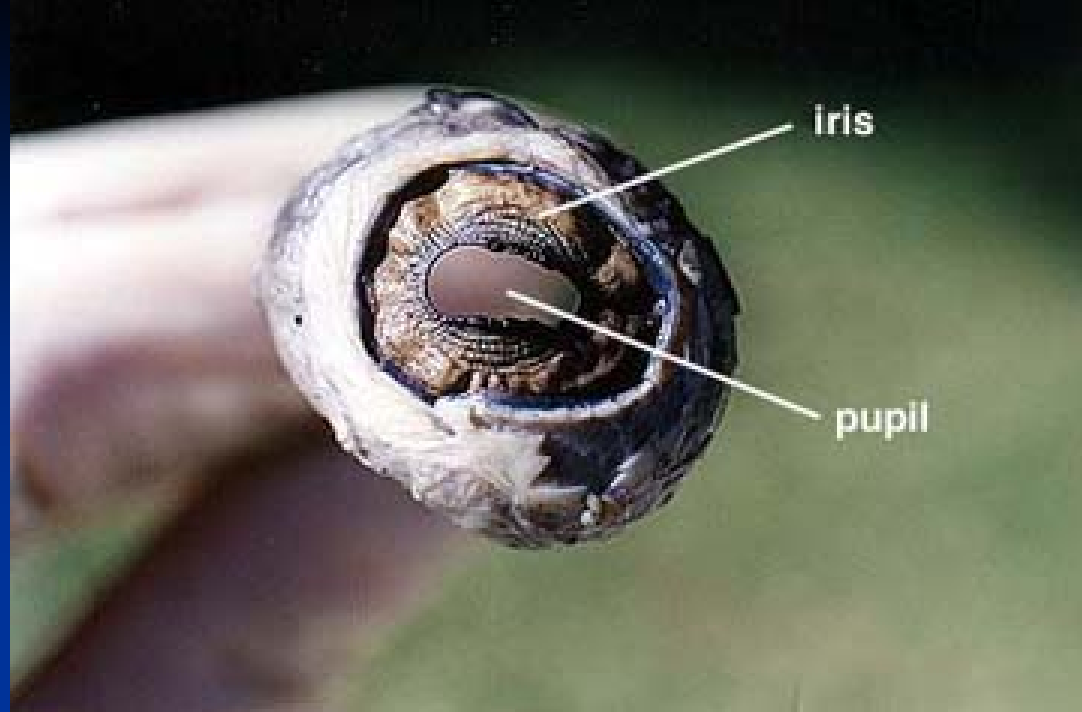


DA PONOVIAMO....



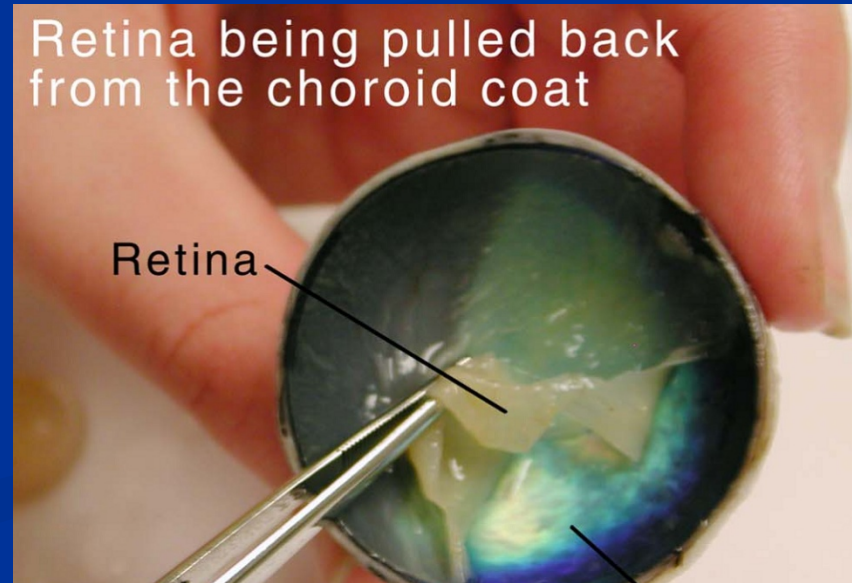


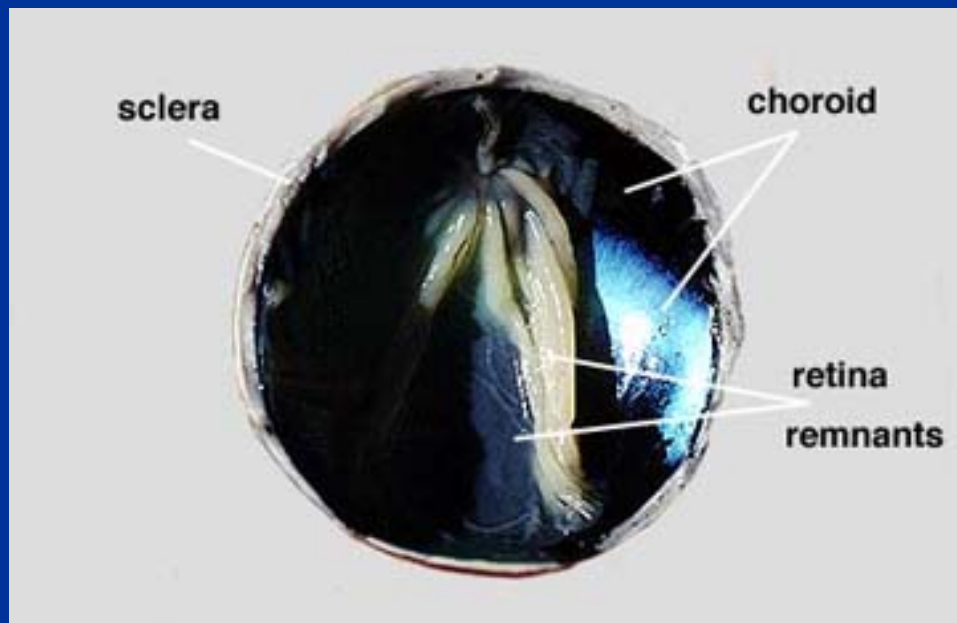




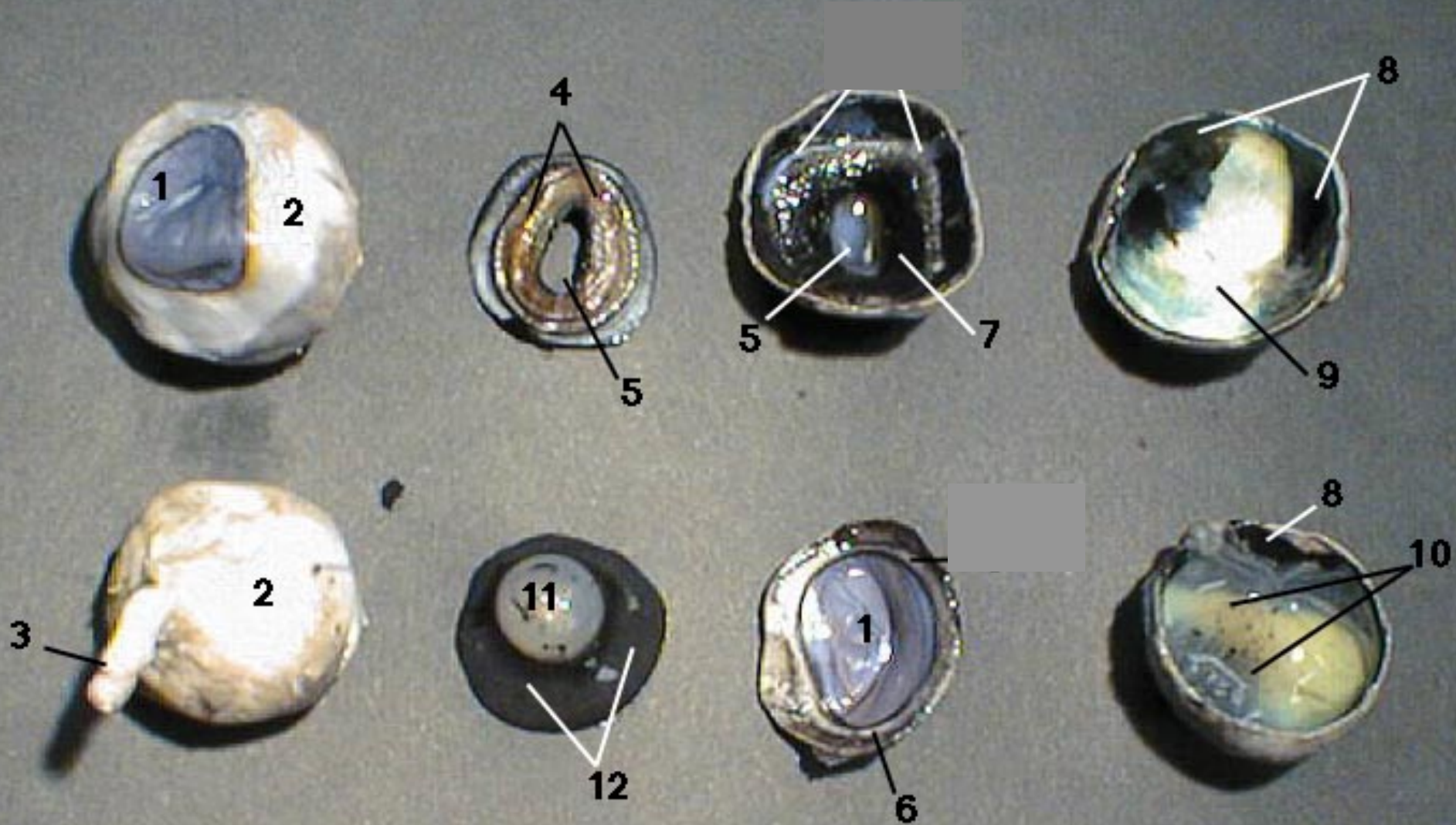


Retina being pulled back
from the choroid coat





Can you identify the parts?





1 Cornea

2 Sclera

3 Optic nerve

4 Ciliary bodies

5 Pupil

6 Limbus

7 Iris

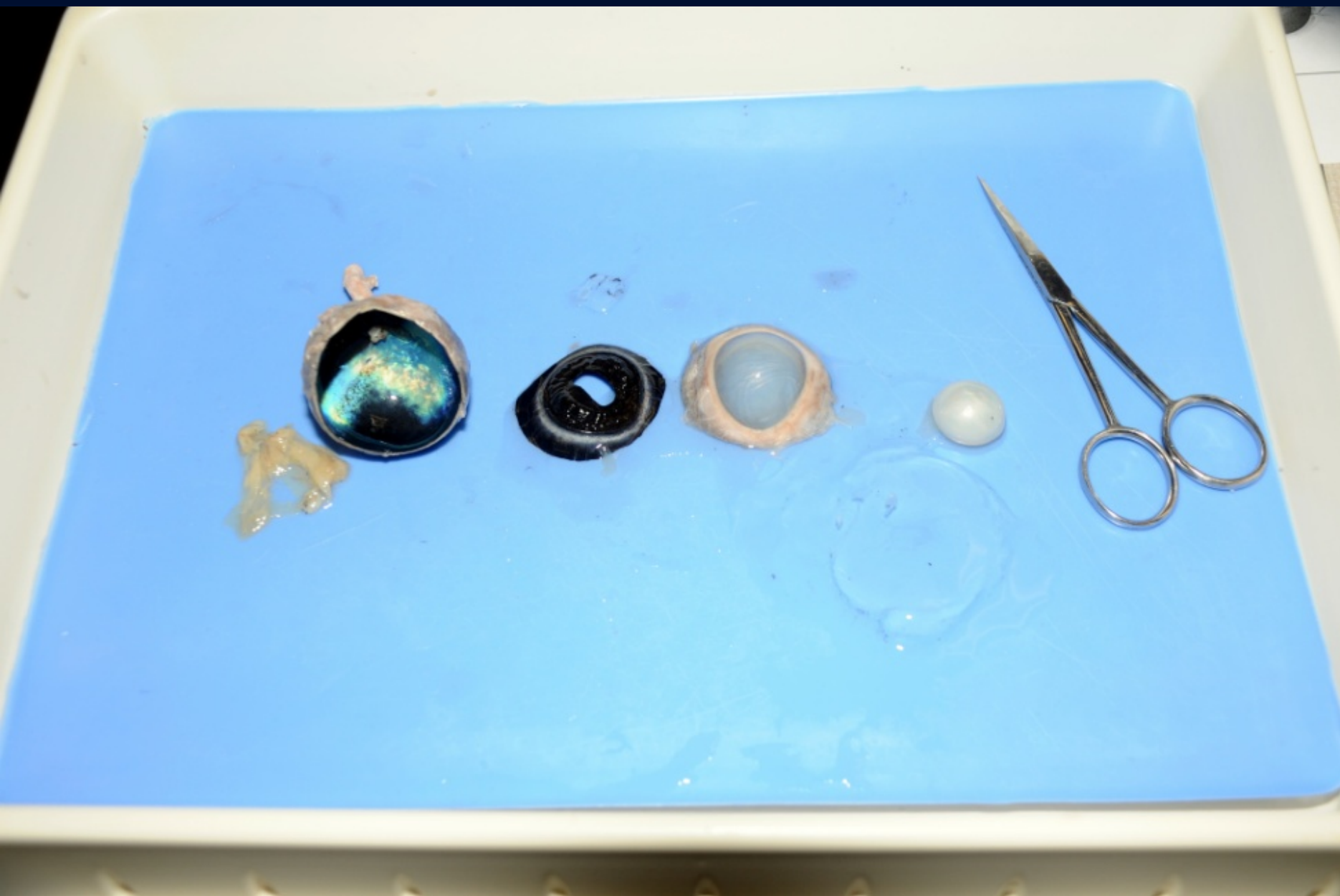
8 Choroid coat

9 Tapetum

10 Retina

11 Lens

12 Vitreous humor



HVALA NA PAŽNJI