

# GÖZ ANATOMİSİ ve FİZYOLOJİSİ

Prof. Dr. Ümit BEDEN

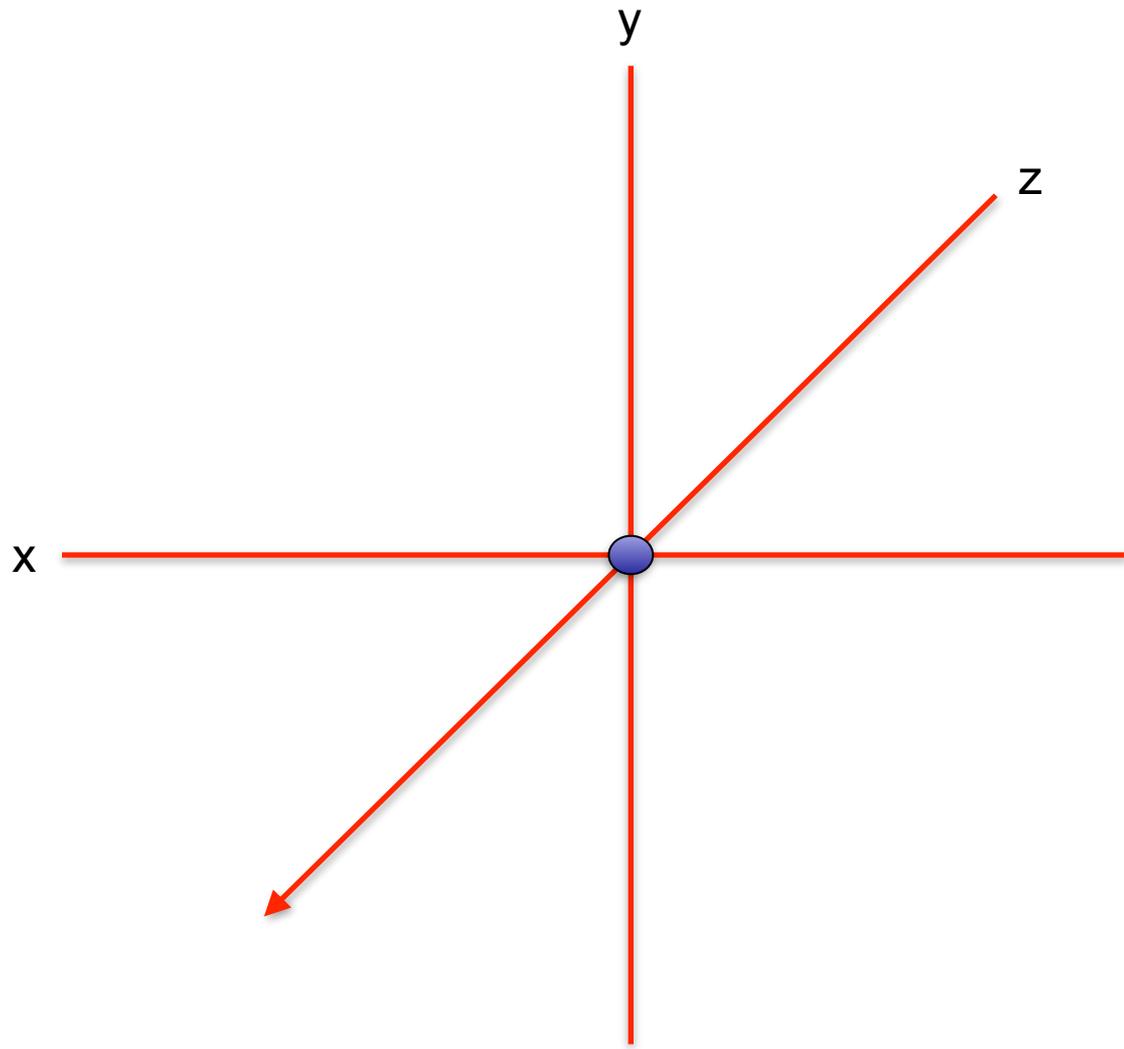
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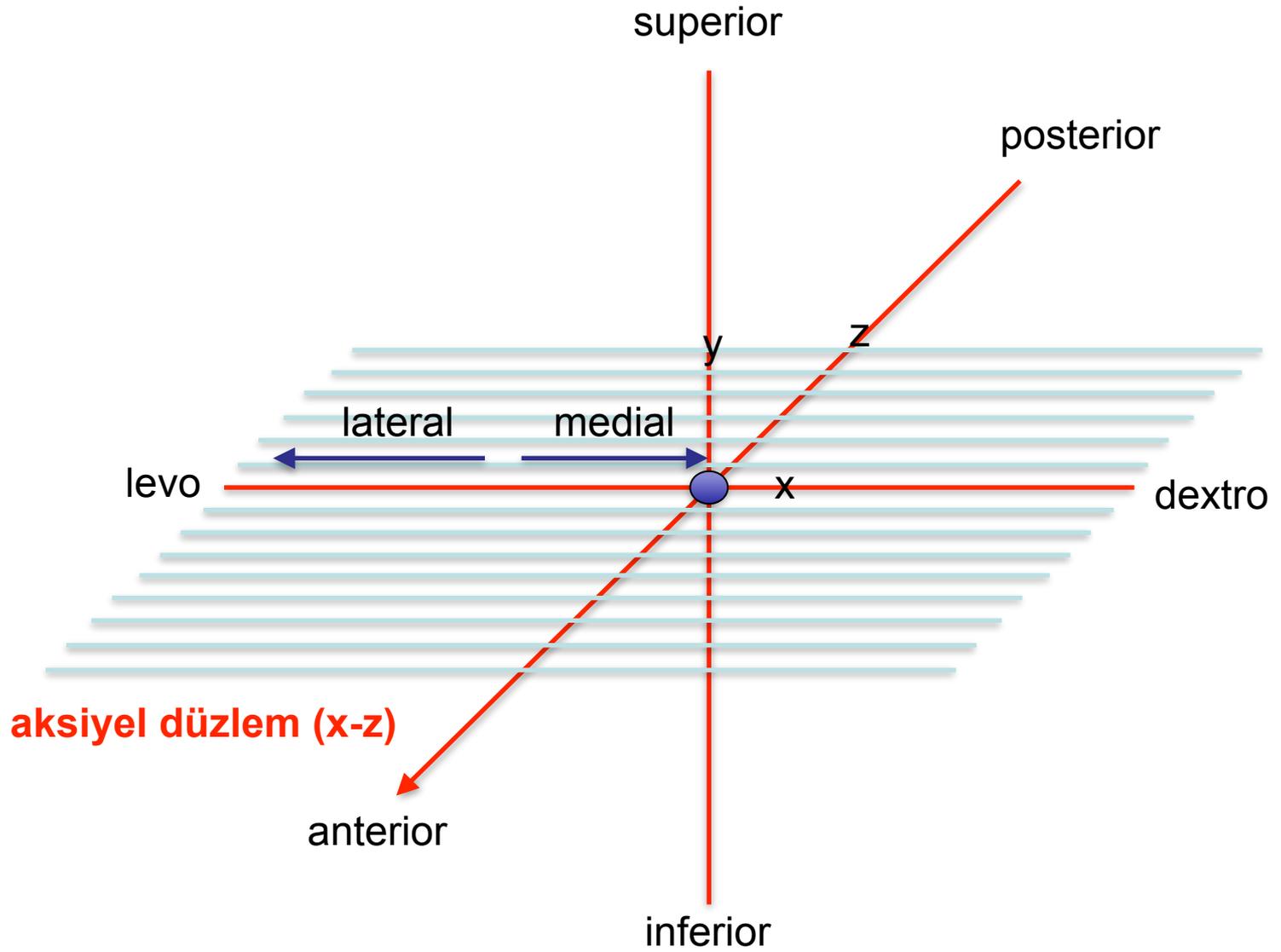
- » Orbita
- » Kas sistemi
- » Sinir sistemi
- » Damarsal sistem
- » Lakrimal sistem
- » Kornea ve Sklera
- » Lens
- » Optik ve refraksiyon
- » Akomodasyon
- » Aköz Humor
- » Vitreus

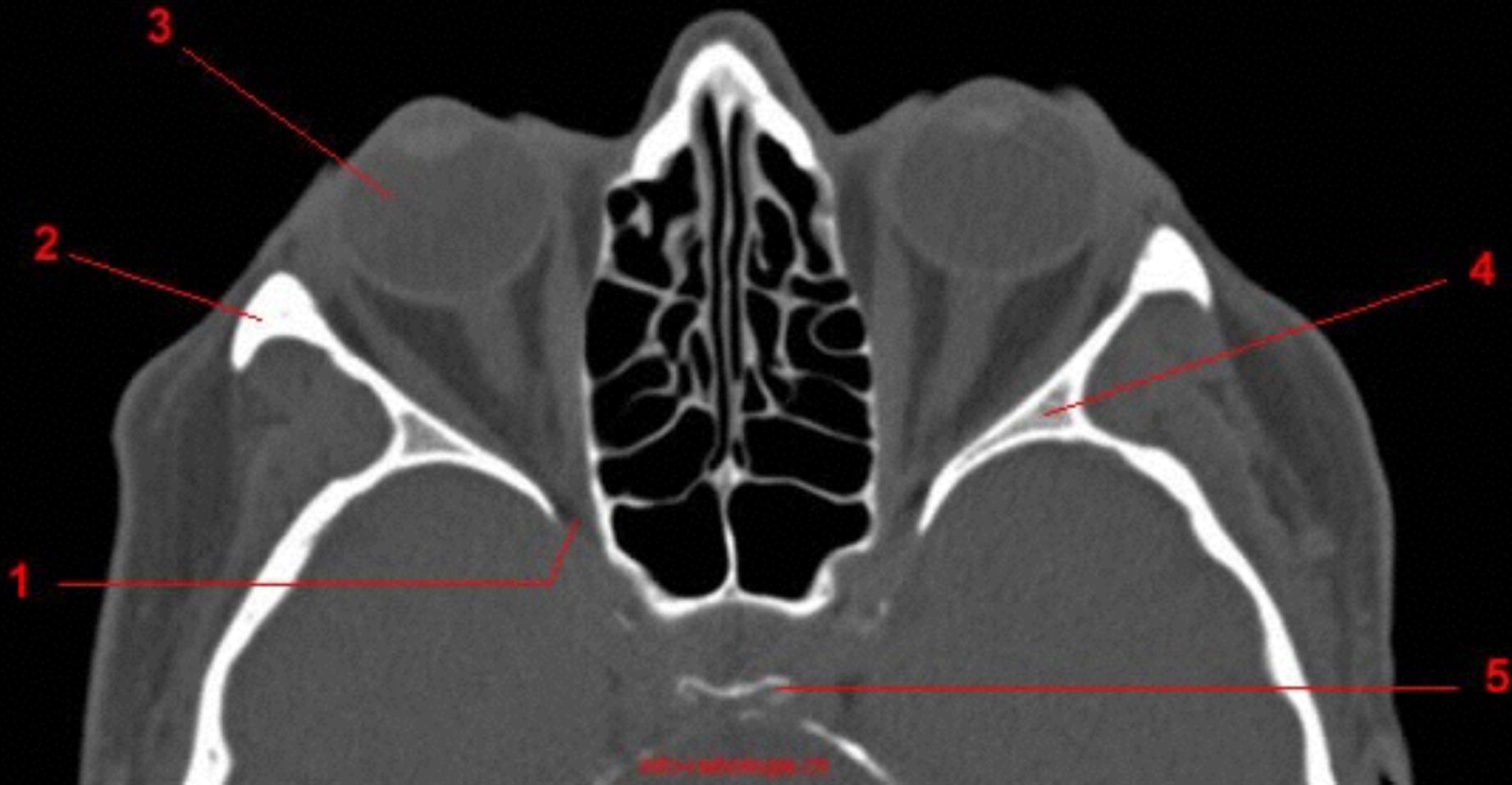
- » Üveal doku
- » Retina
- » Görsel algılama
- » Görme keskinliği
- » Binoküler görme
- » Görme gelişimi
- » Görme testleri
- » Renkli görme
- » Görsel adaptasyon
- » Optik sinir
- » Santral görme yolları

# Anatomik terimler

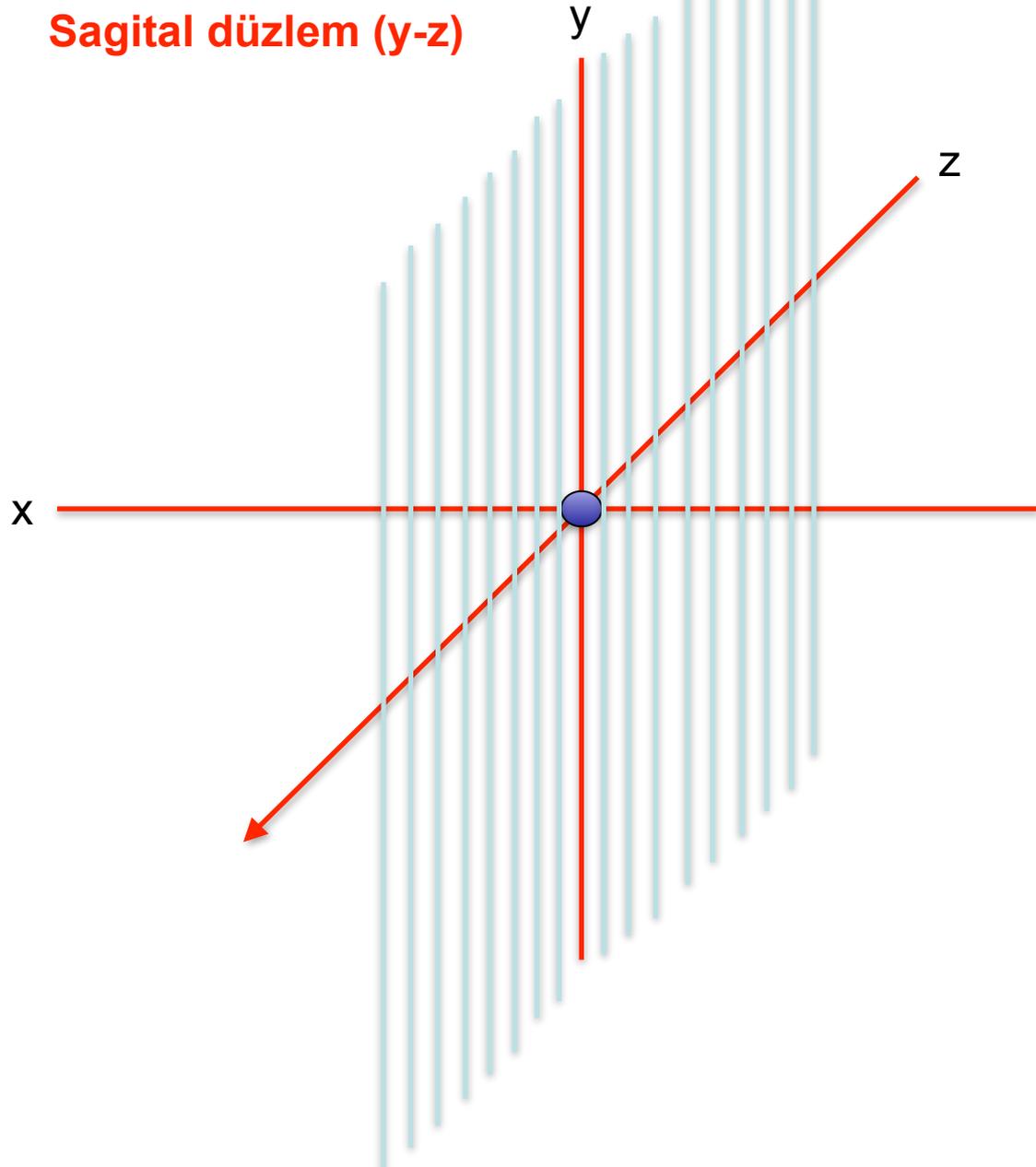
- » Anatomik terimler
  - » Medial: Orta hatta yakın
  - » Lateral: Orta hattın uzak
  - » Superior: Yukarıda
  - » Inferior: Aşağıda
  - » Anterior: Önde
  - » Posterior: Arkada
  - » Dextro: Sağ
  - » Levo: Sol

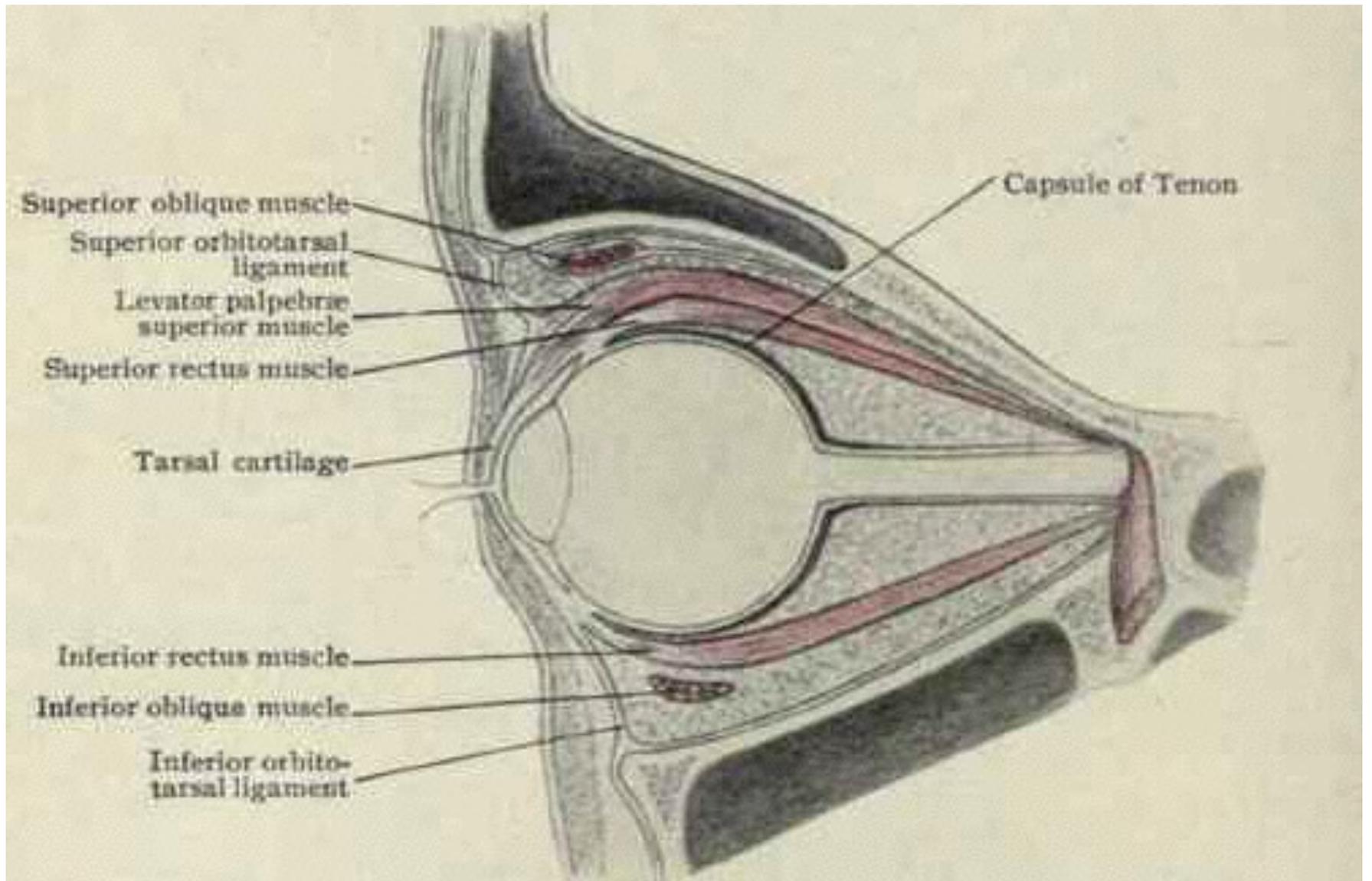


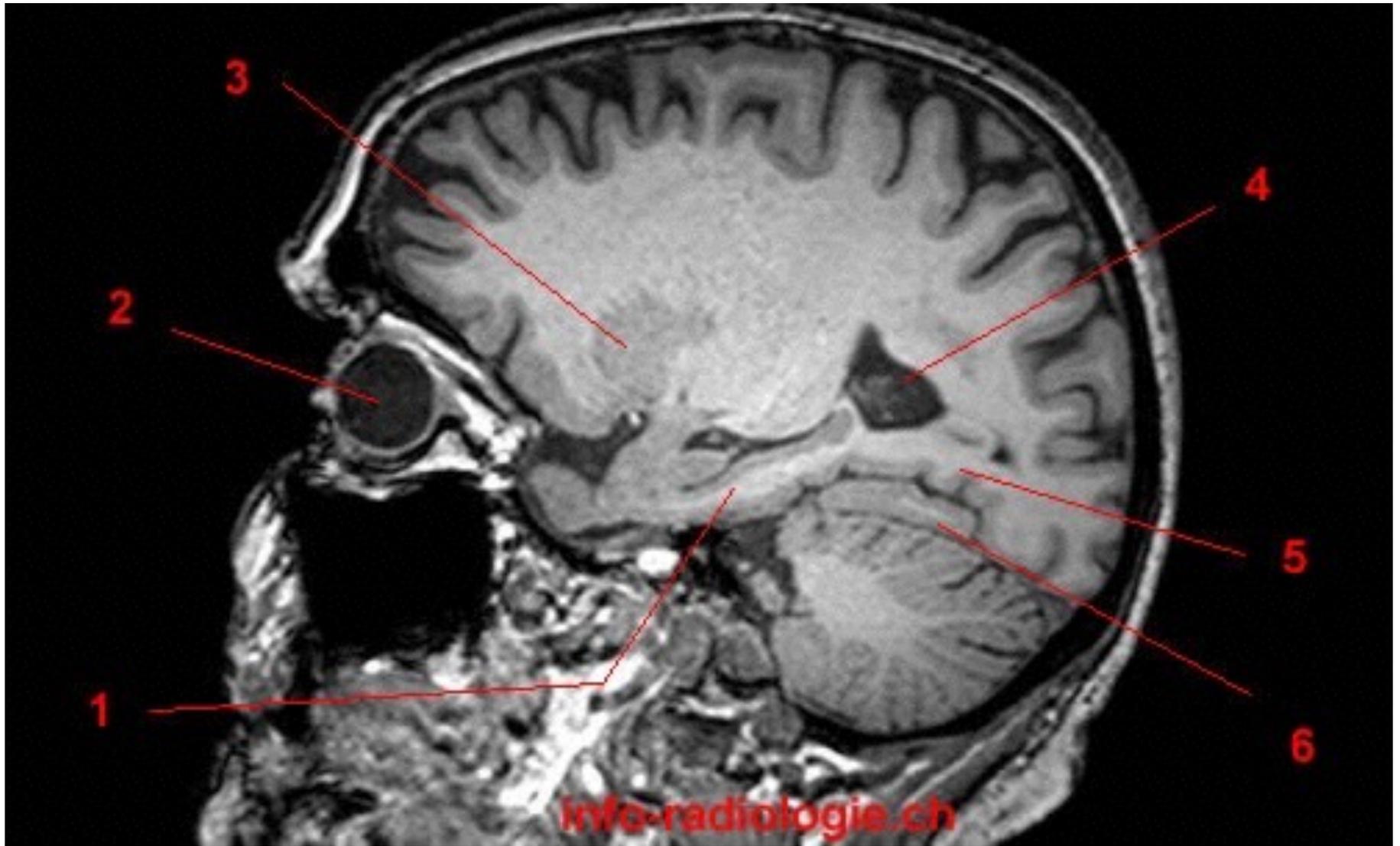


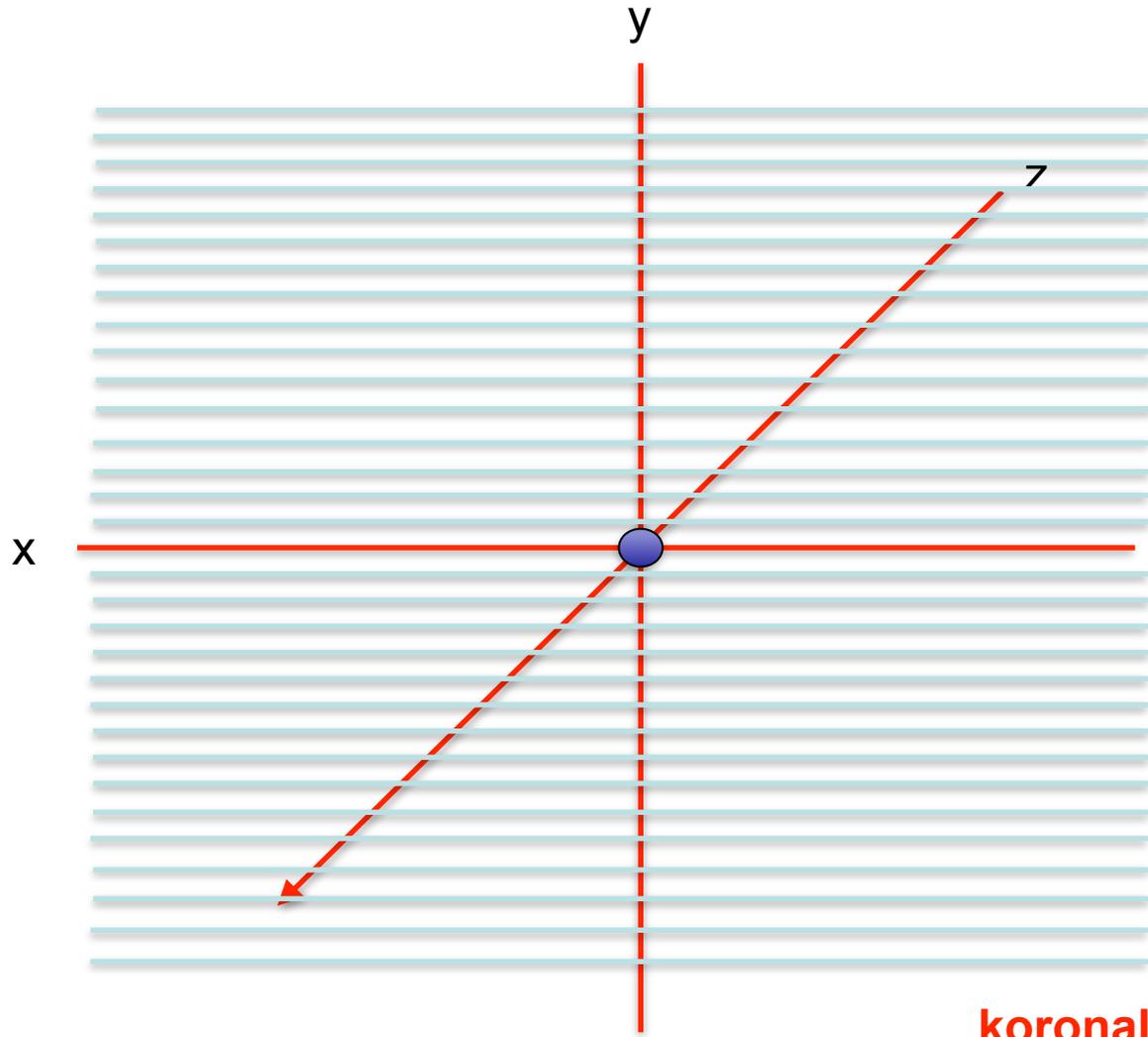


Sagittal düzlem (y-z)

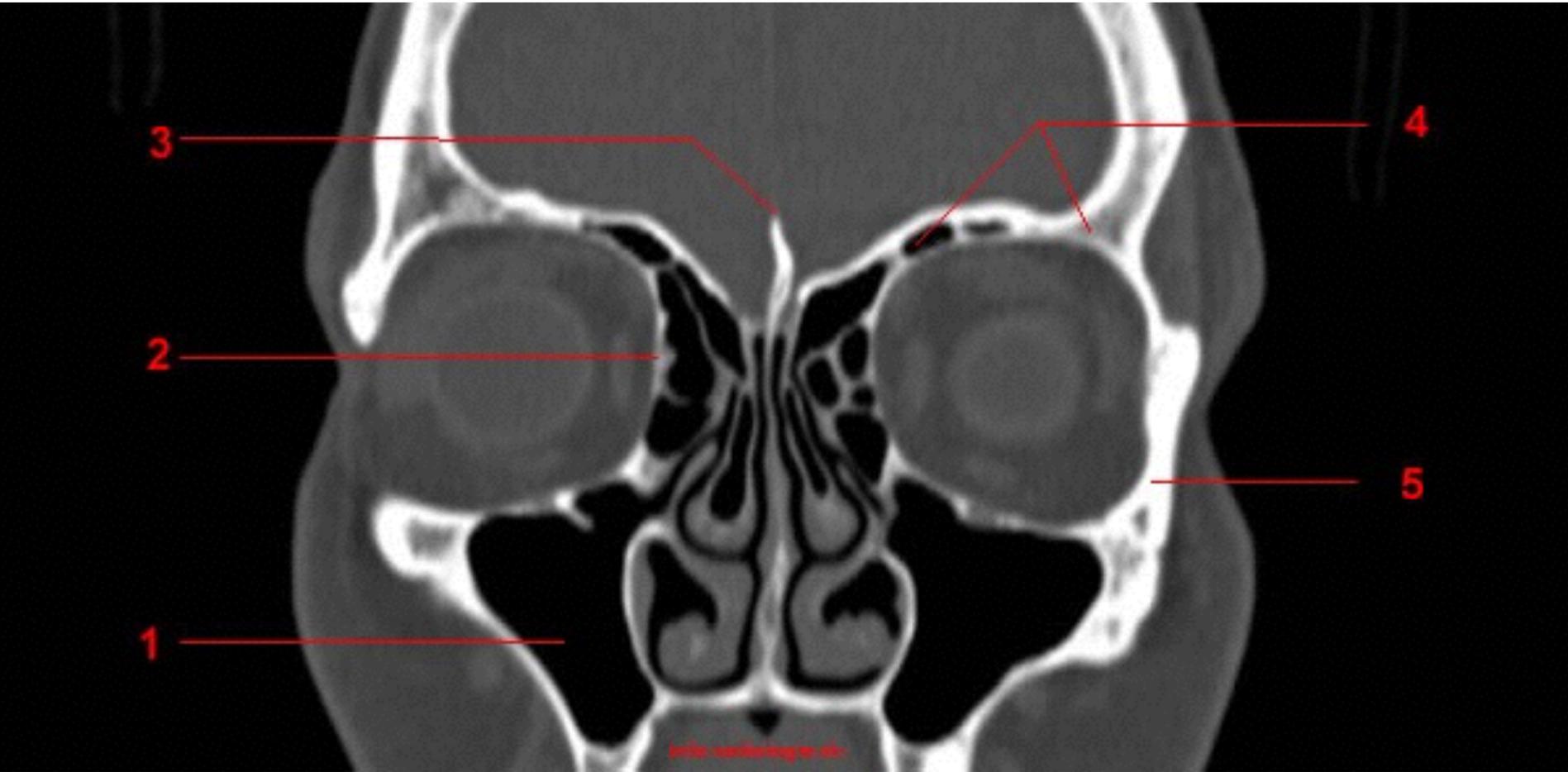


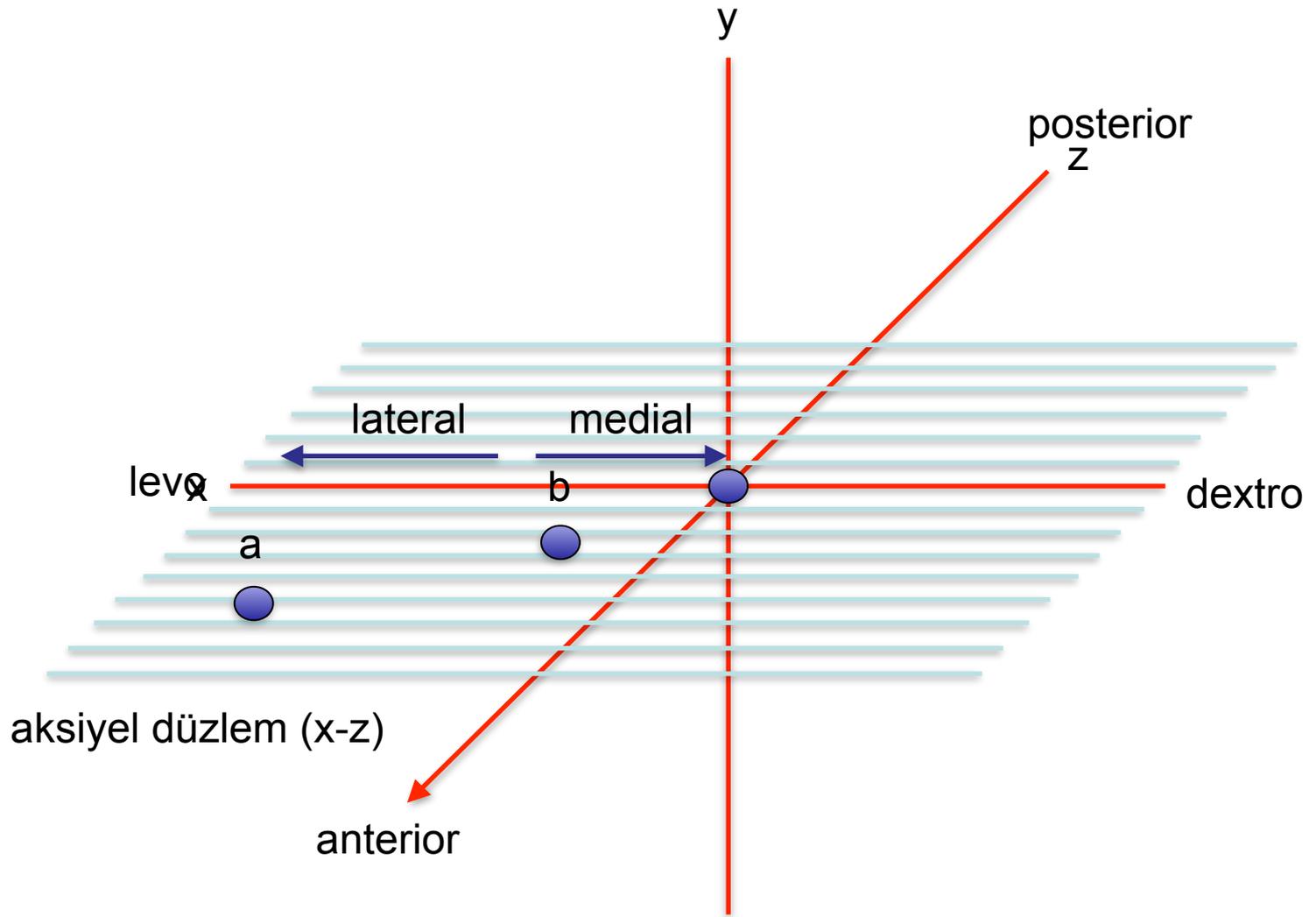


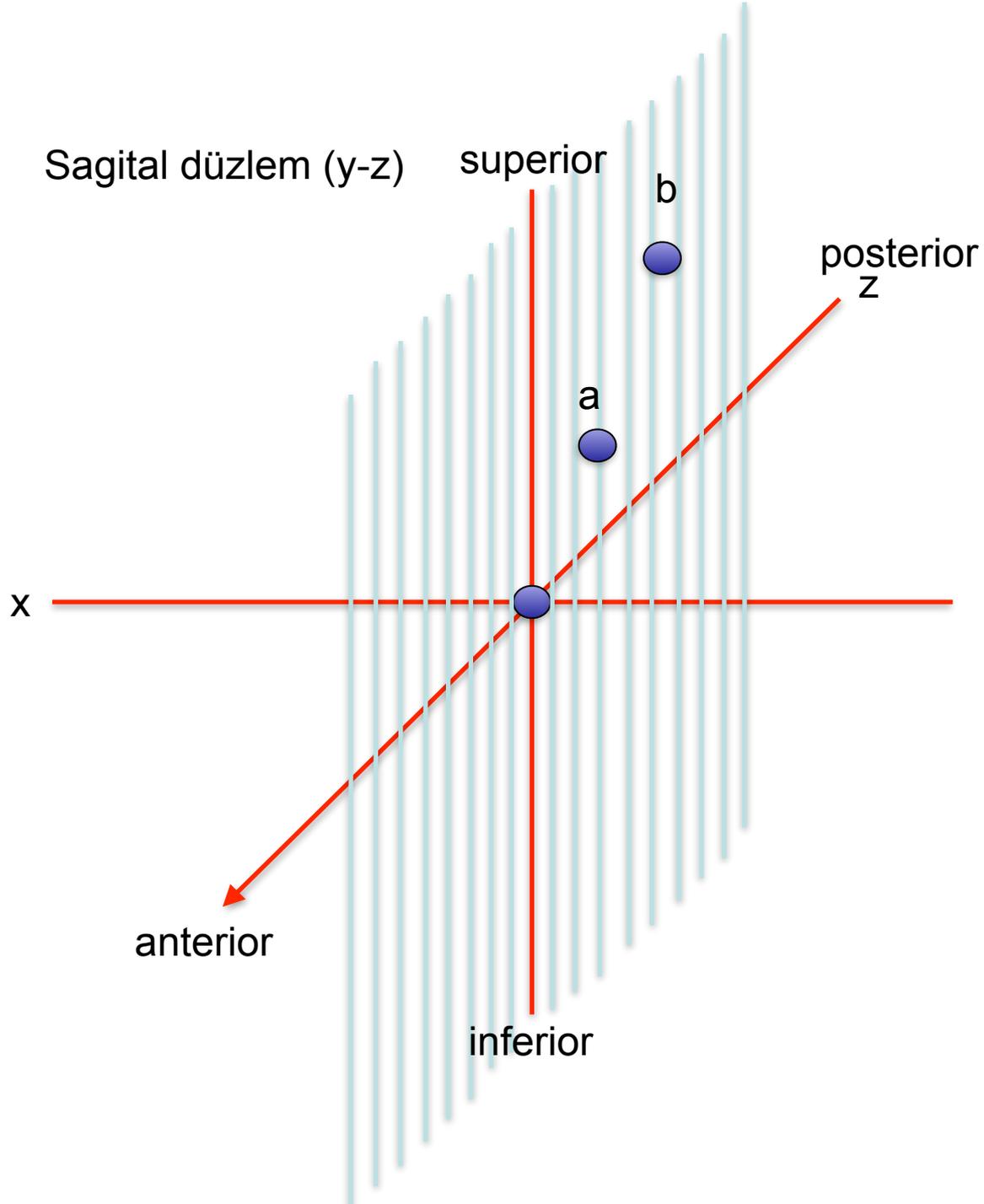


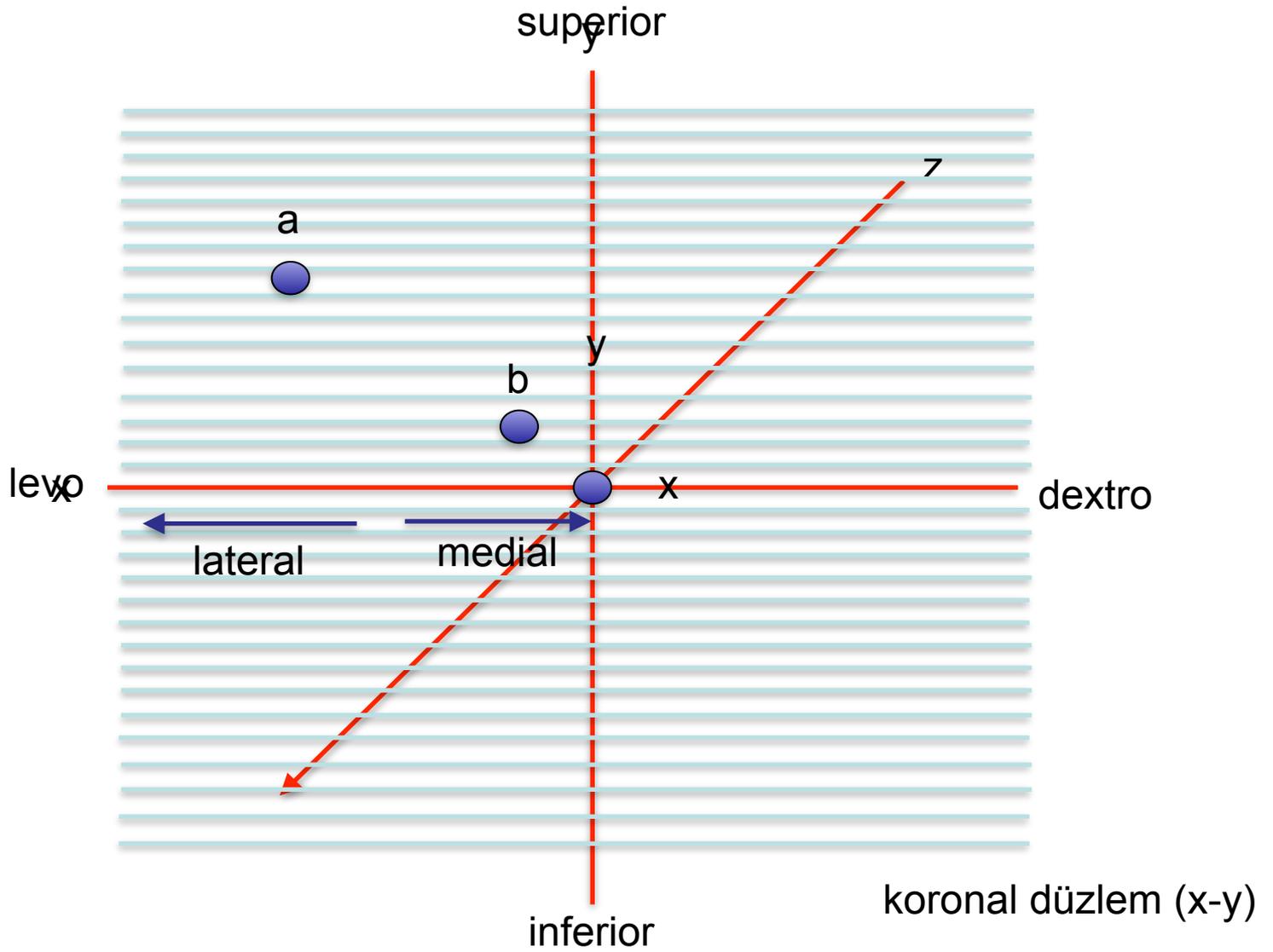


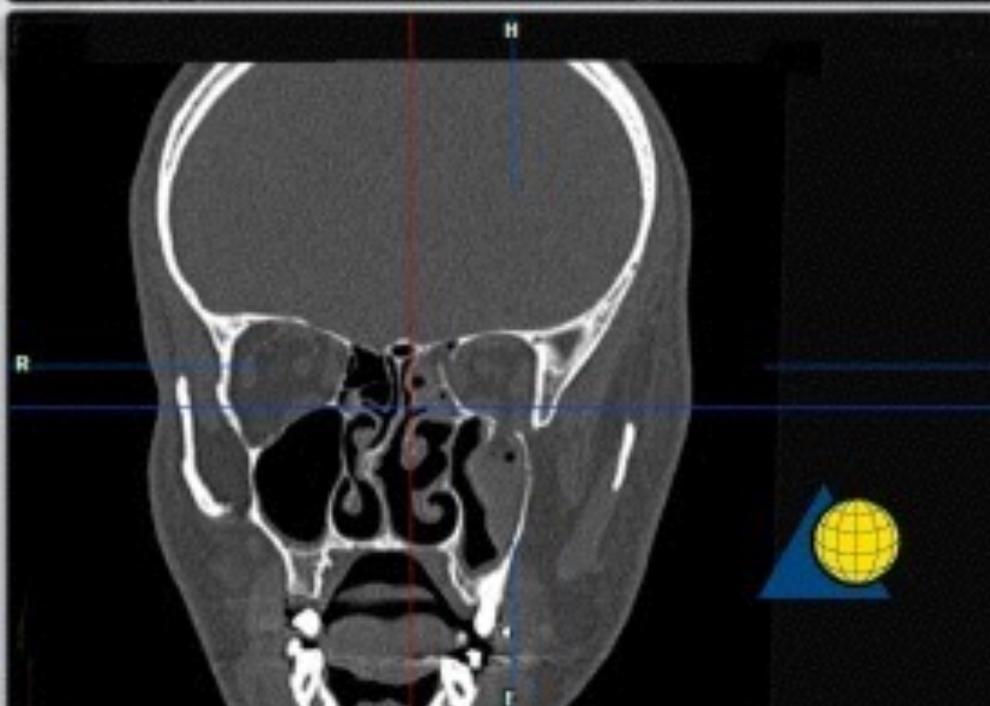
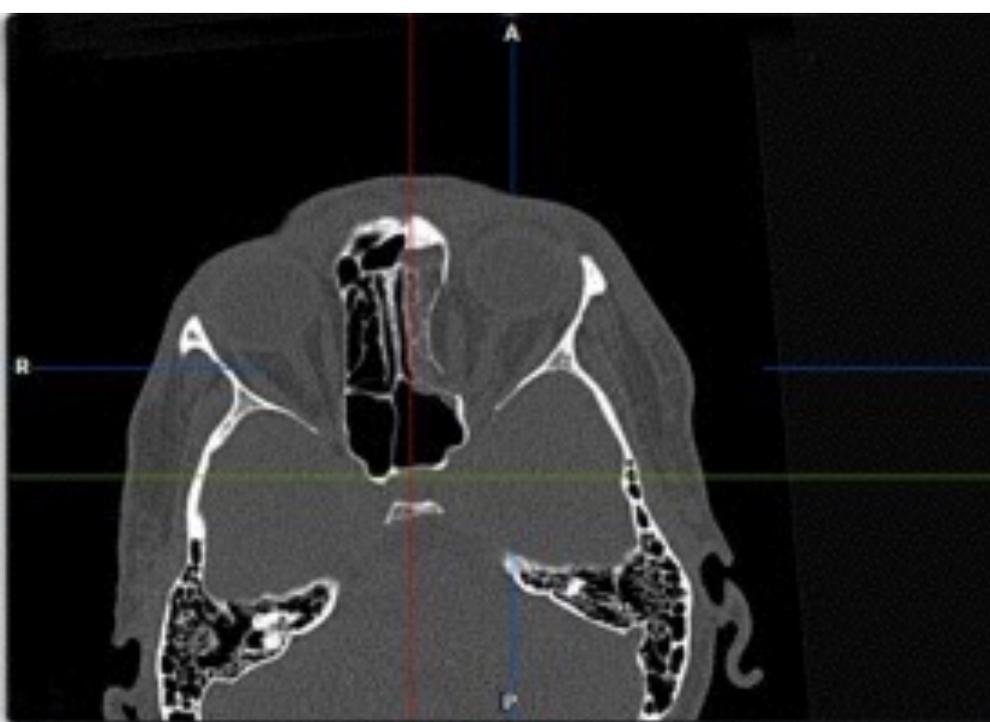
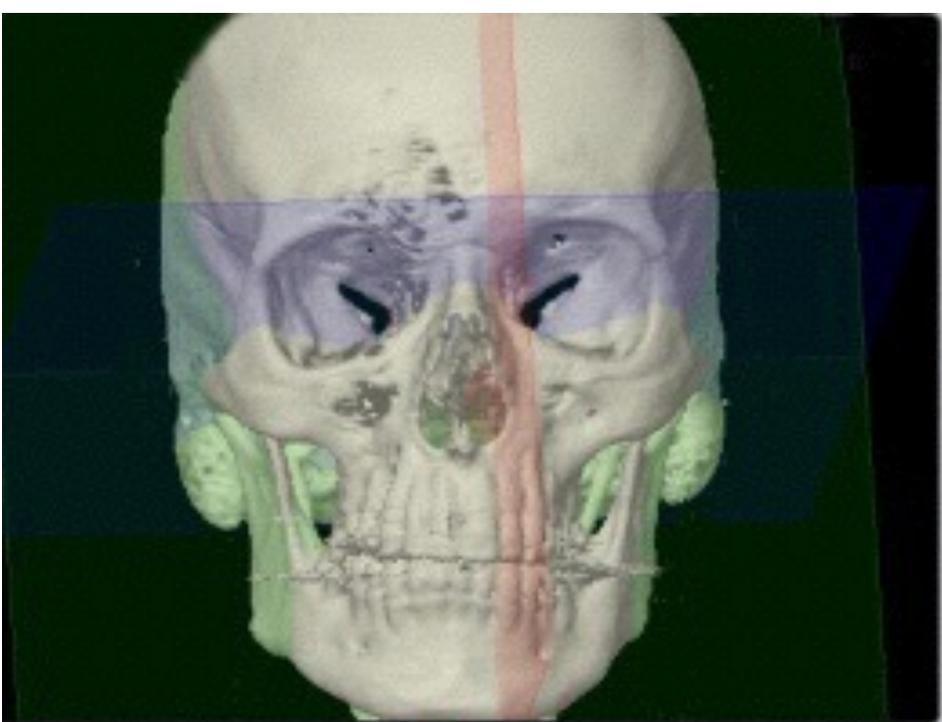
**koronal düzlem (x-y)**





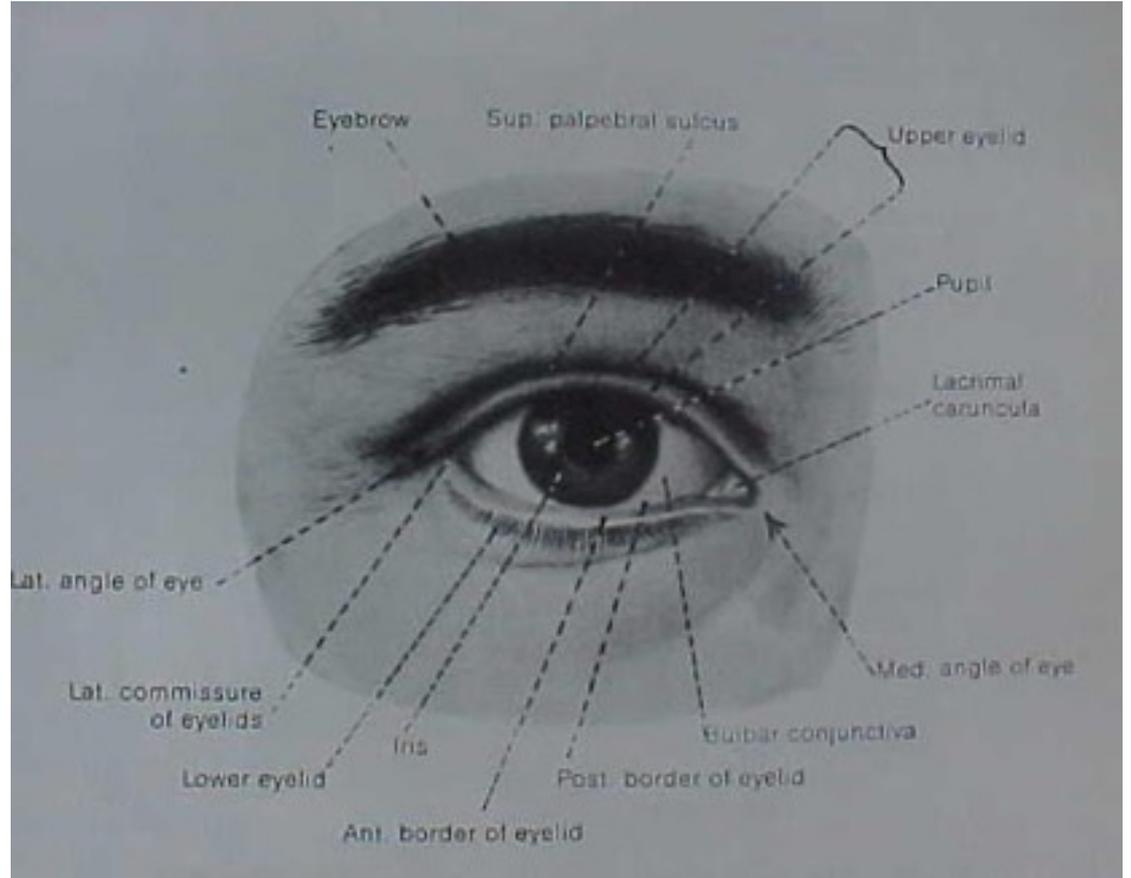






# Orbita

- KEMİKLER
- AKSESUAR YAPILAR
- KASLAR
- DAMAR-SİNİRLER
- GÖZ KÜRESİ

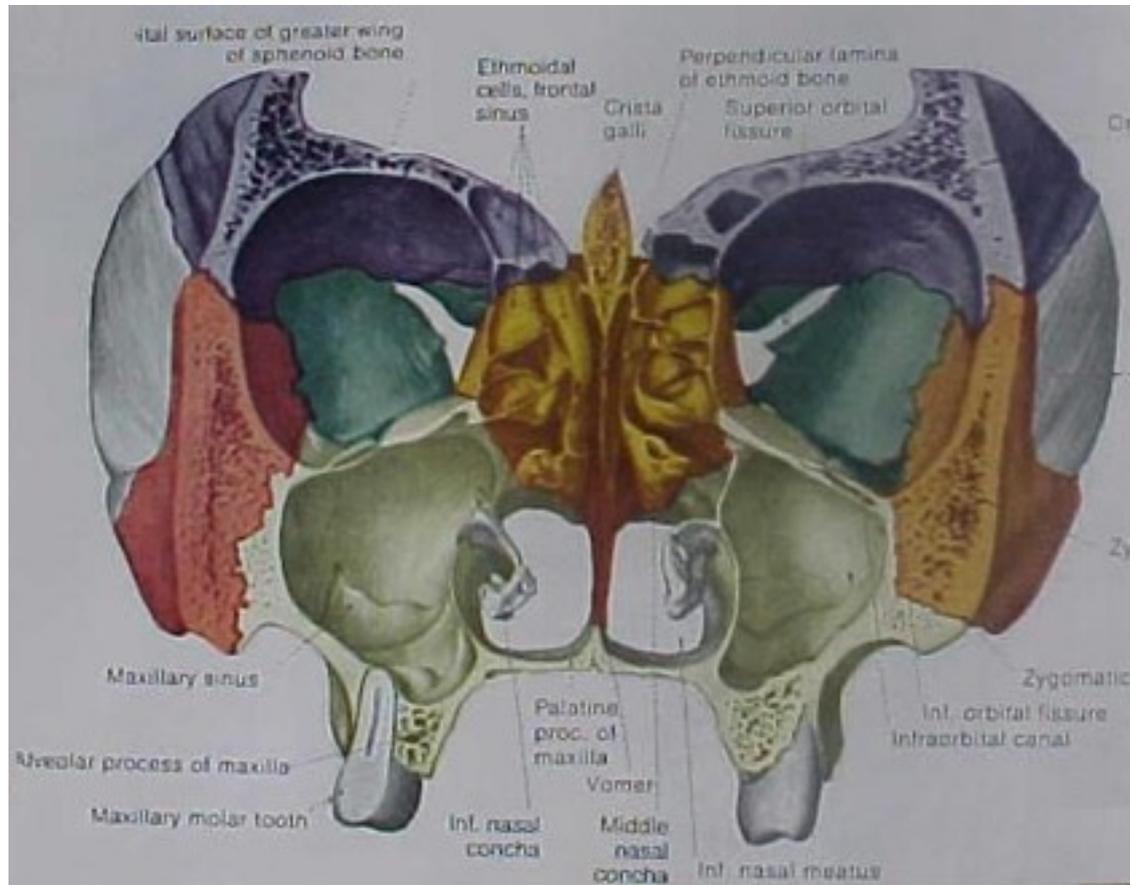


# Orbita

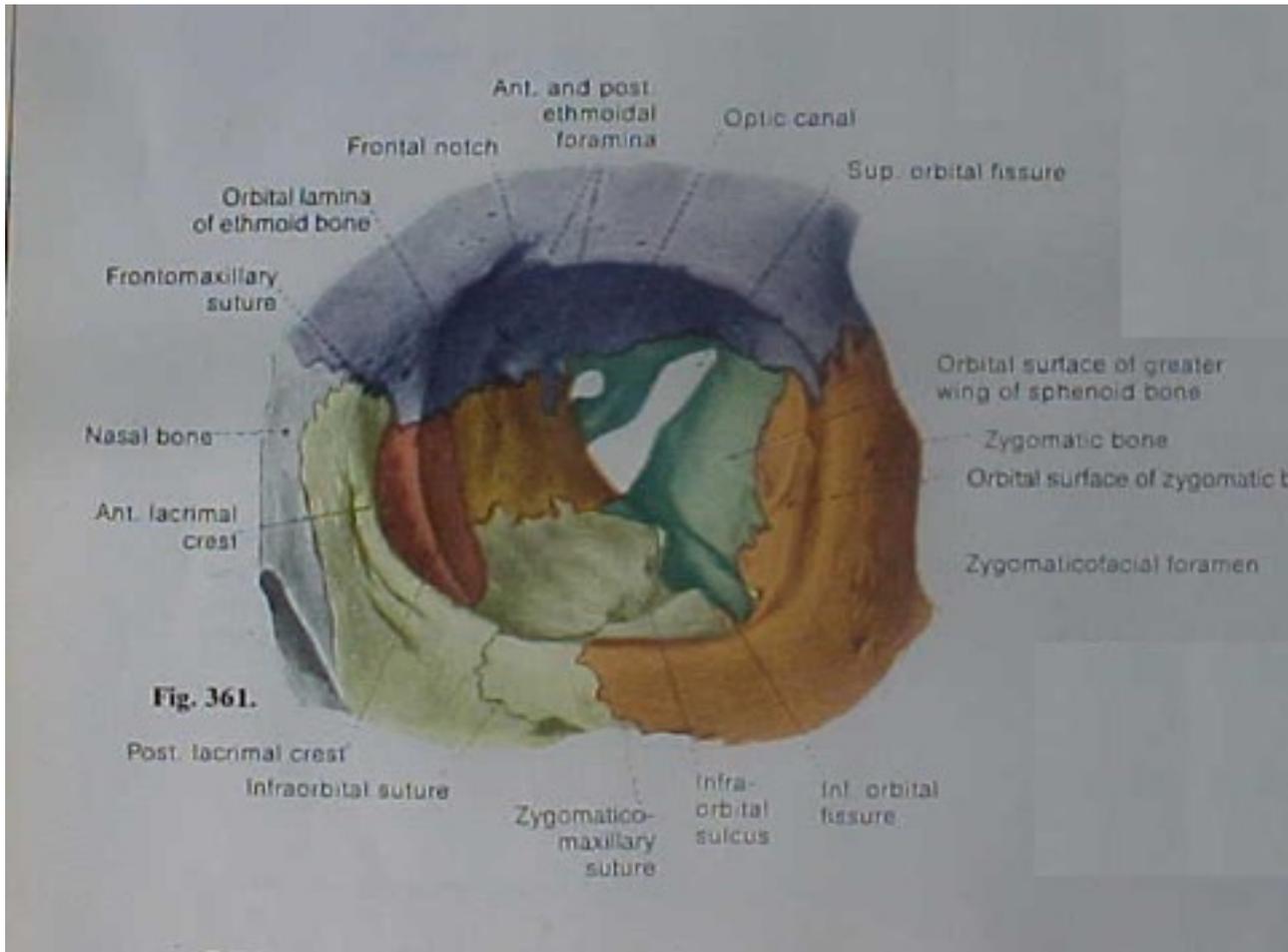
- » Göz küresinin içinde bulunduğu kemik çukur
- » Yedi adet kafa kemiğinin birleşmesi ile oluşur

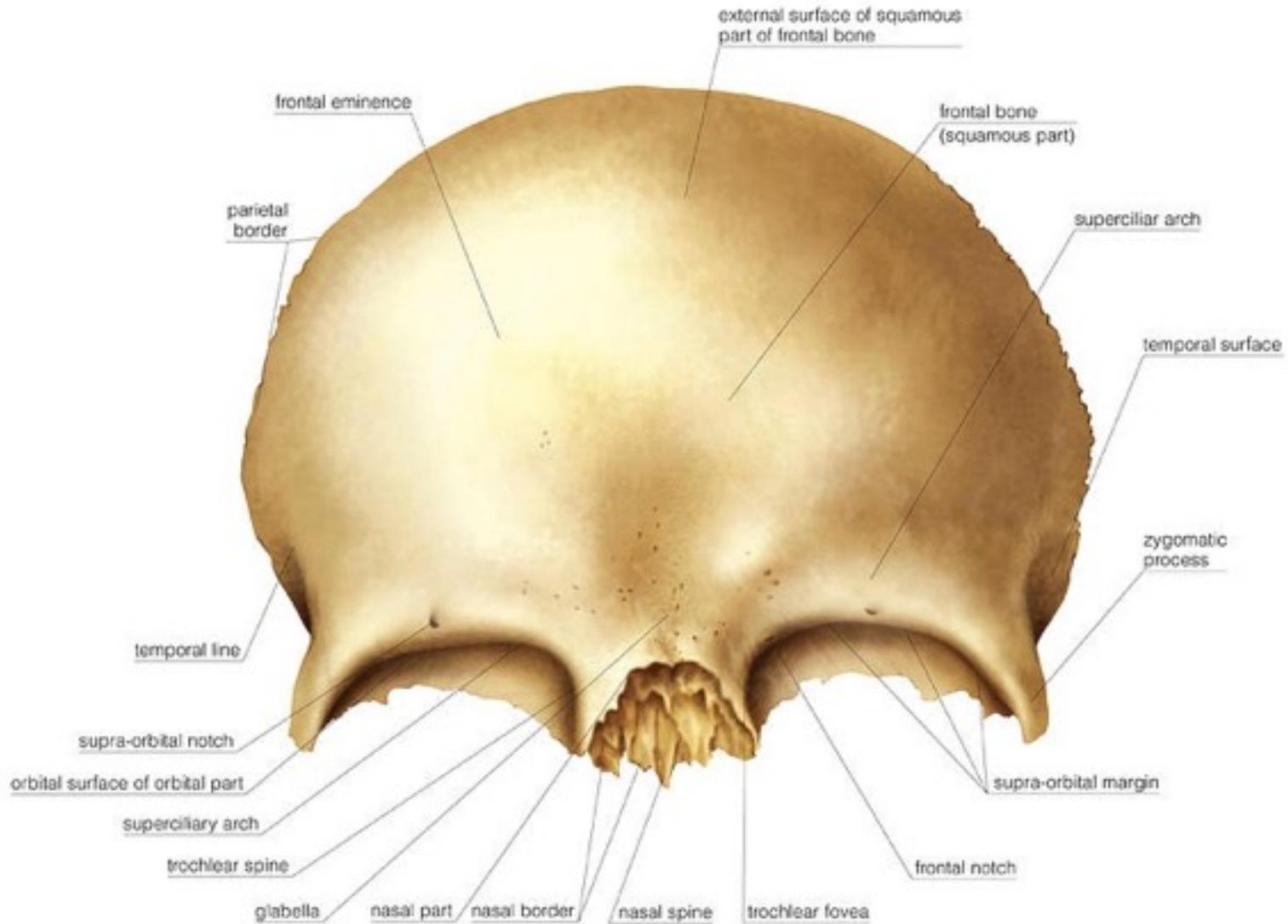
Frontal kemik  
Zigomatik kemik  
Maksiller kemik  
Lakrimal kemik  
Etmoid kemik  
Palatin Kemik  
Sfenoid kemik

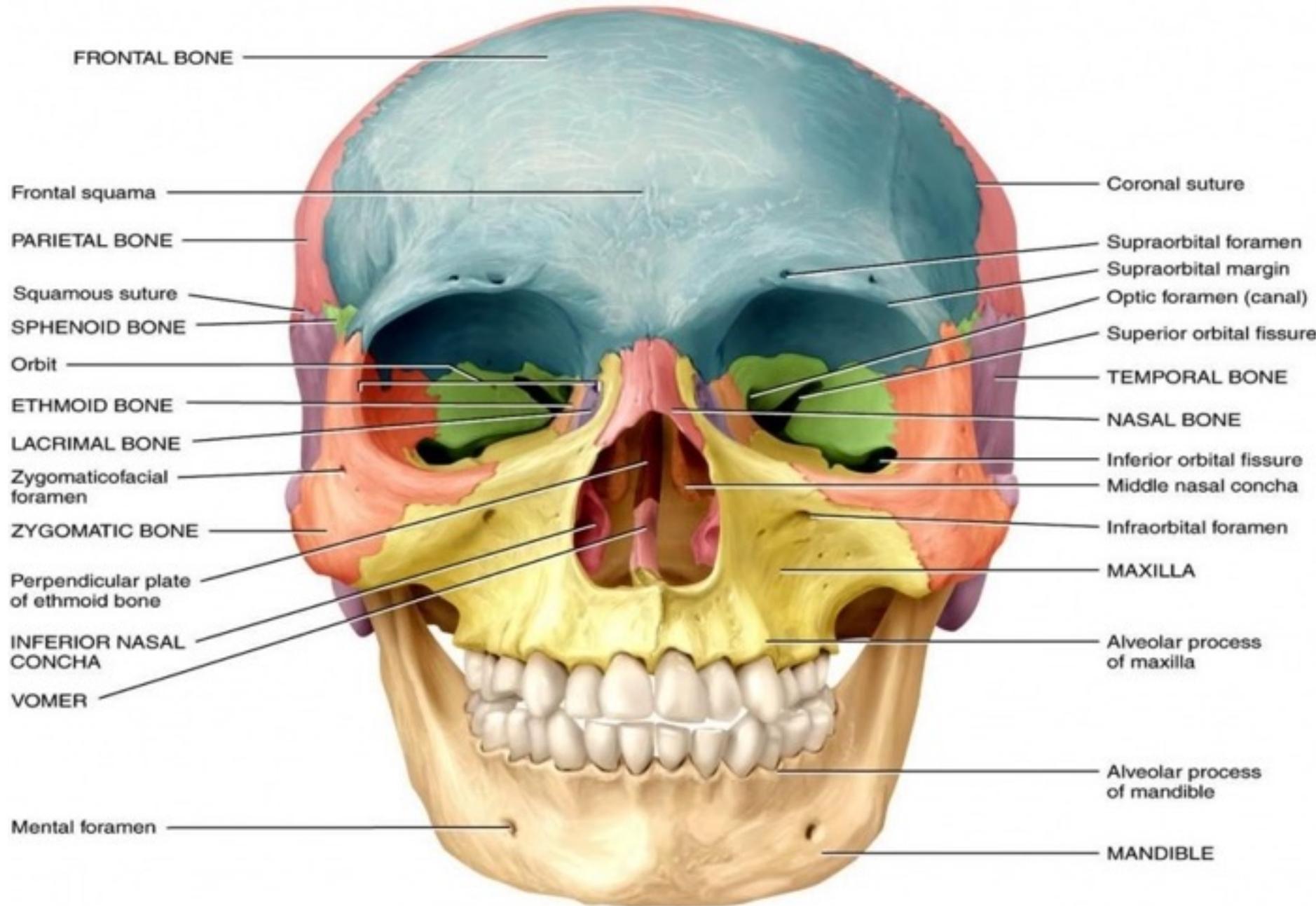
# ORBITA



# ORBITA







(a) Anterior view

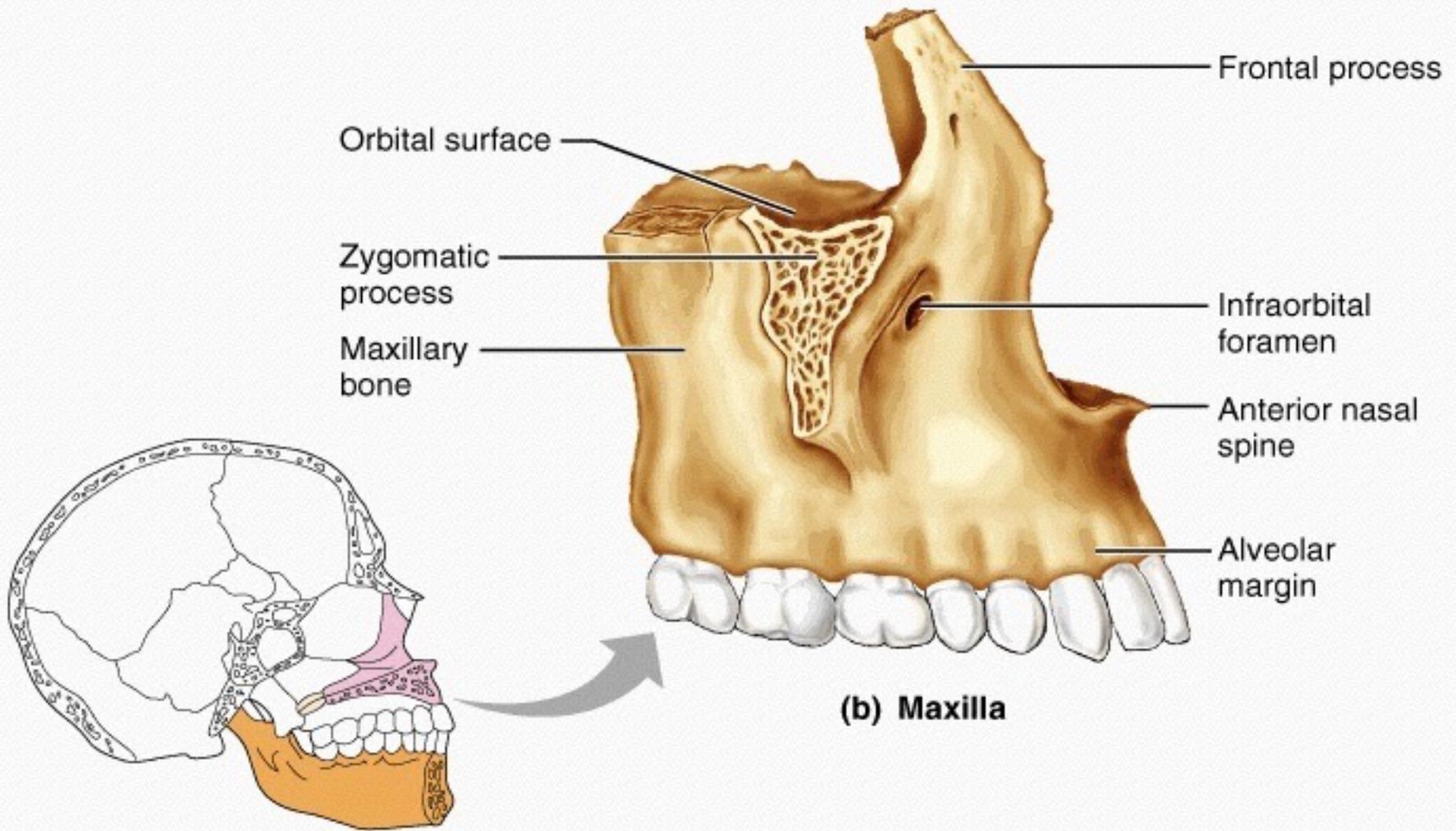
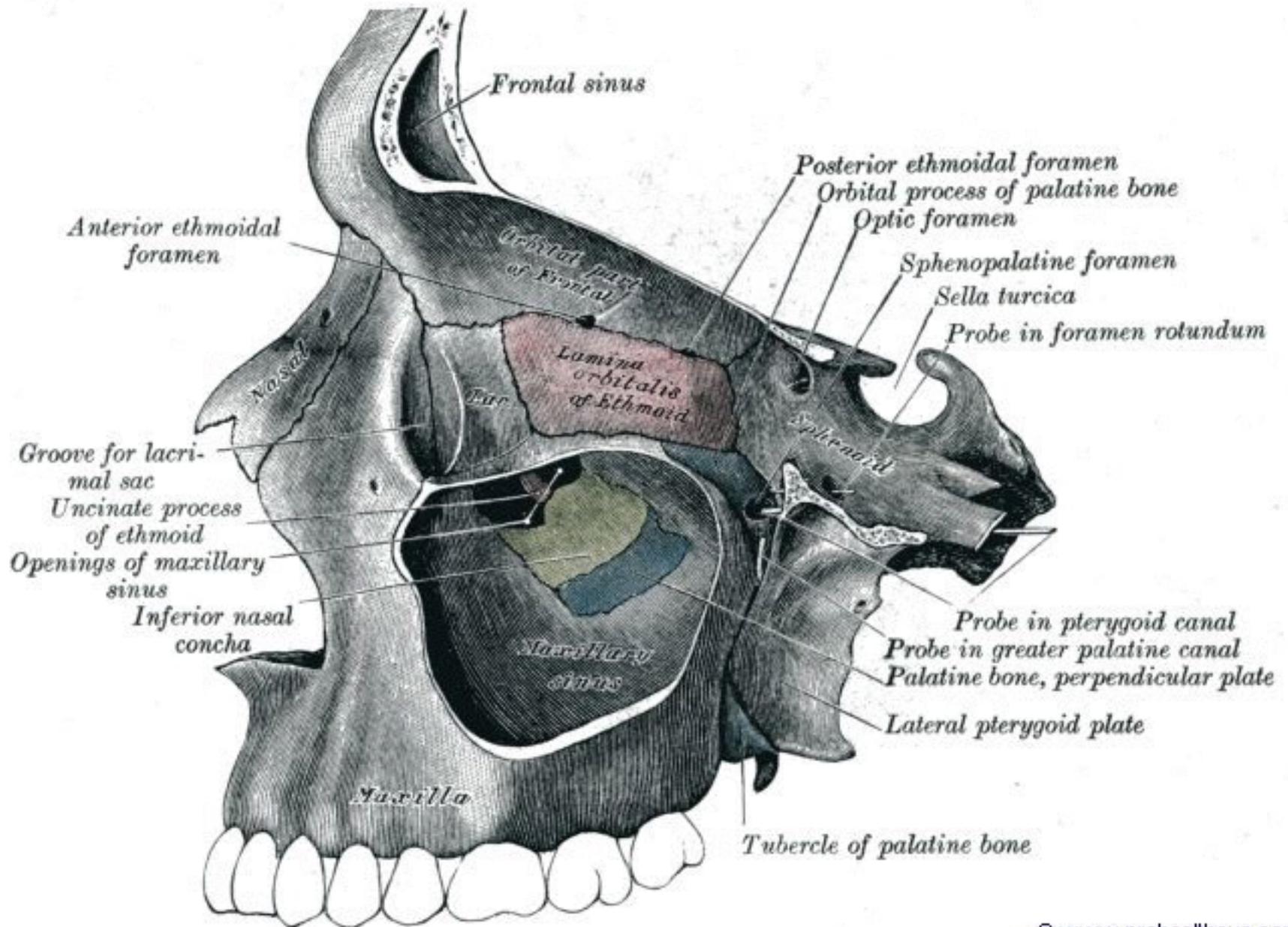
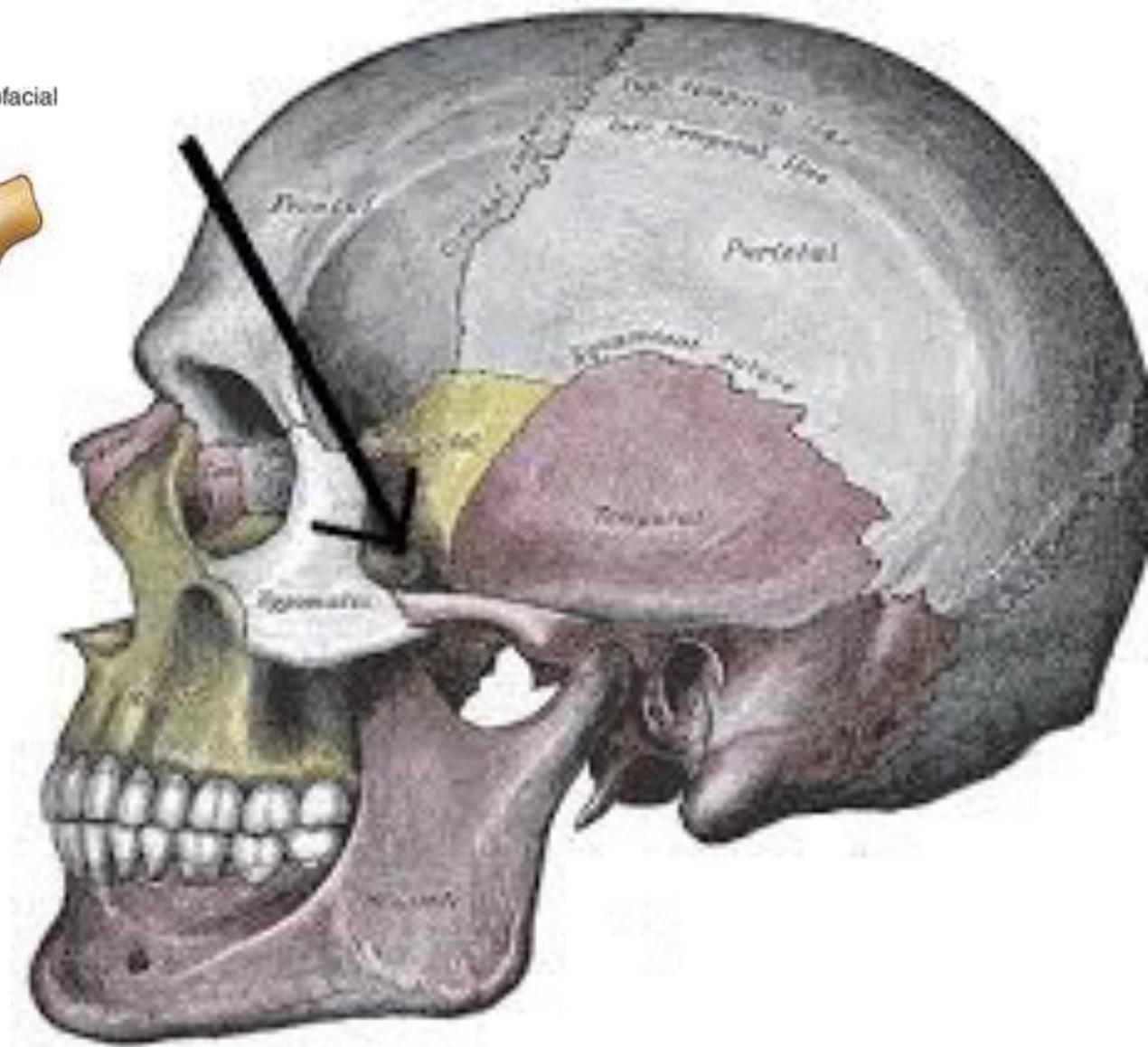
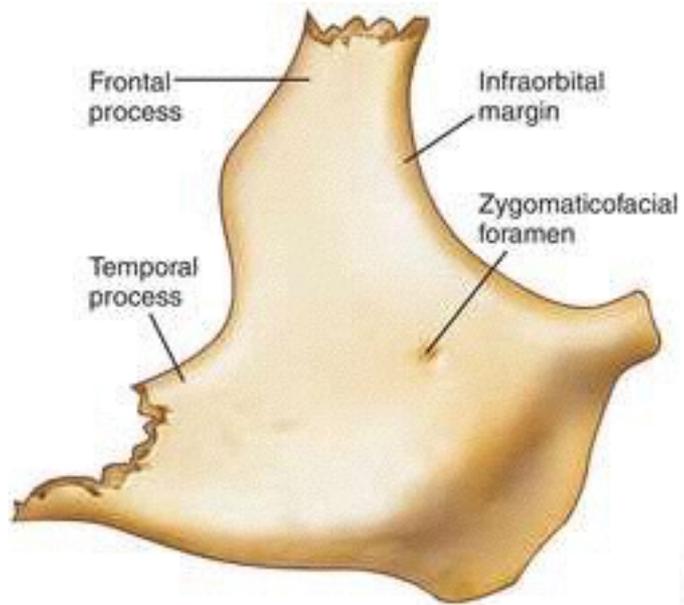
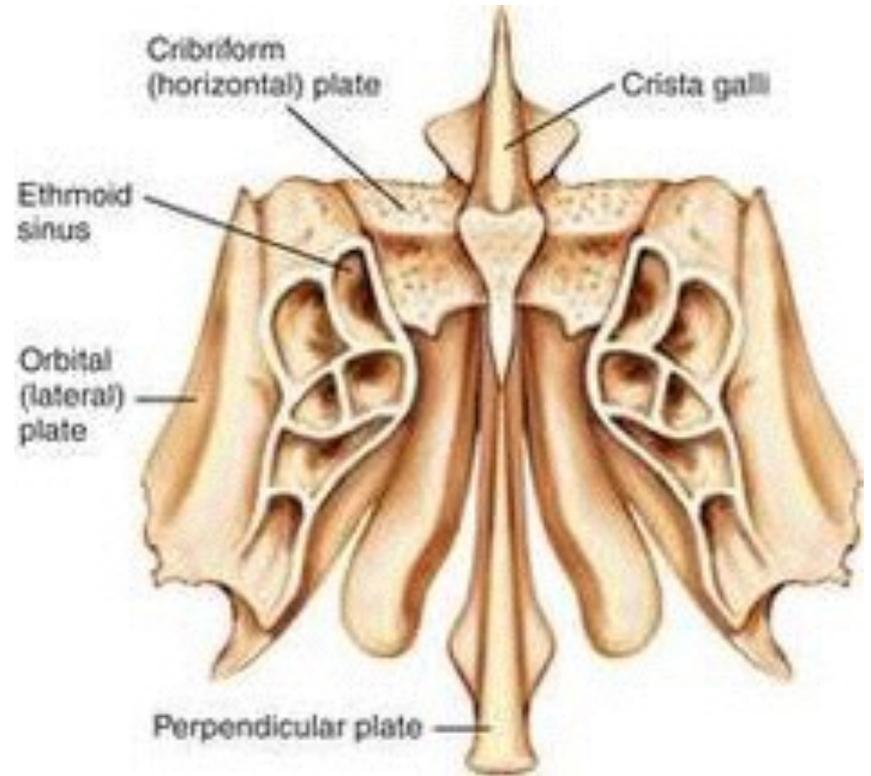
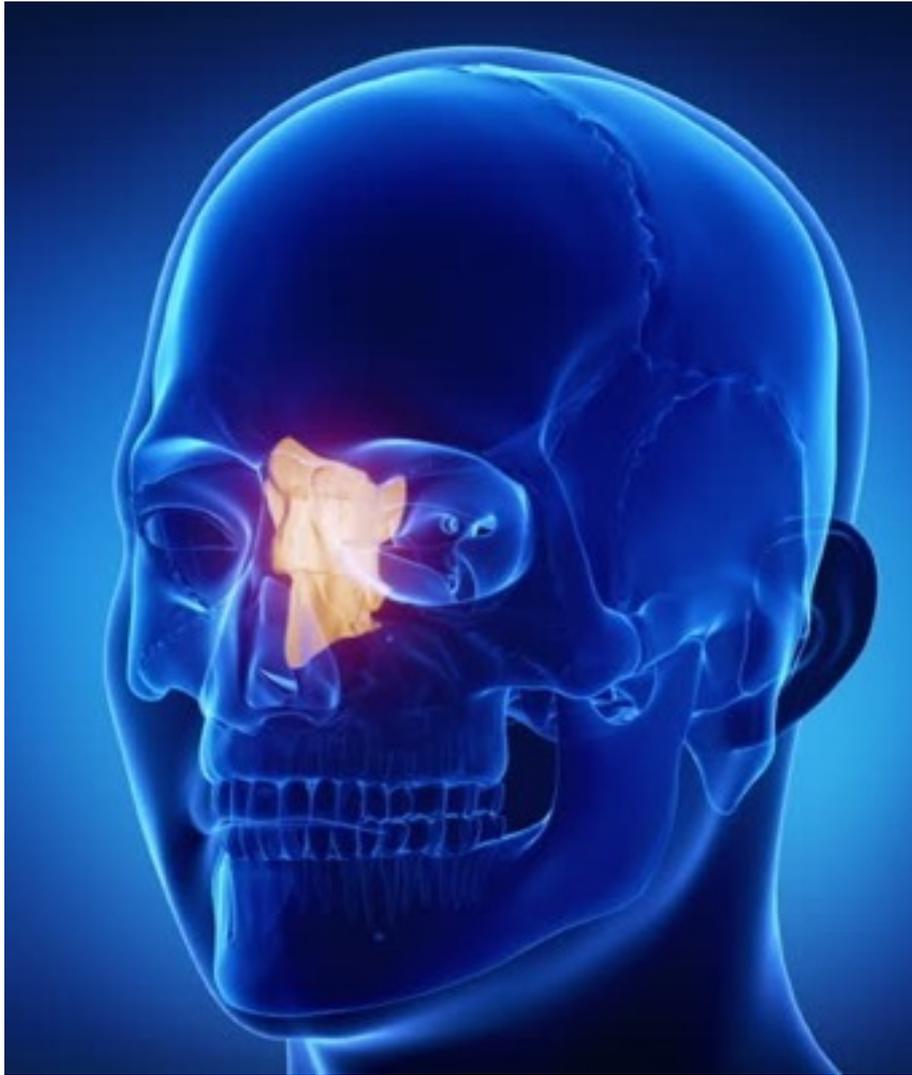


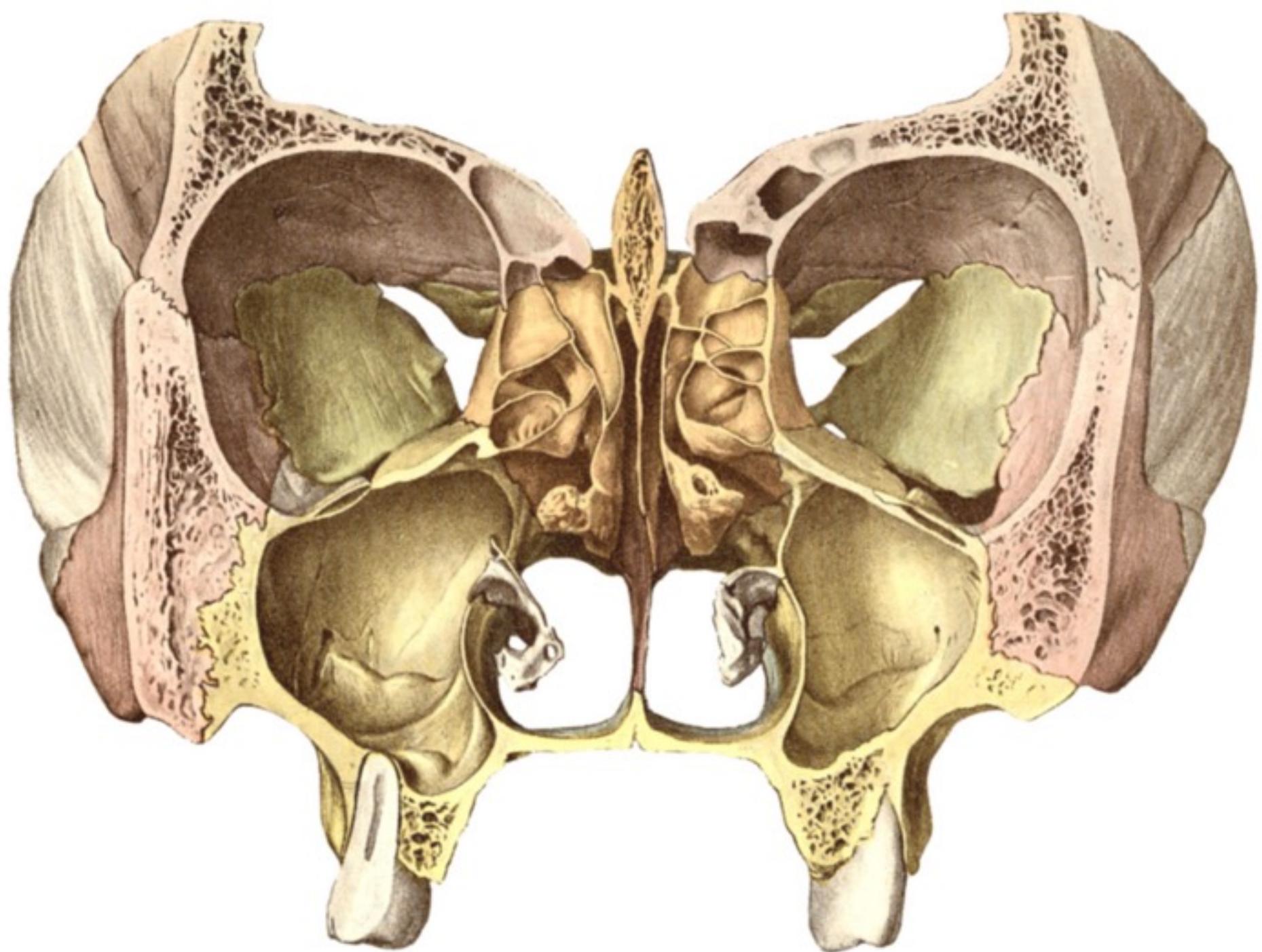
FIG. 386.—The left maxillary sinus. Opened from the lateral side.

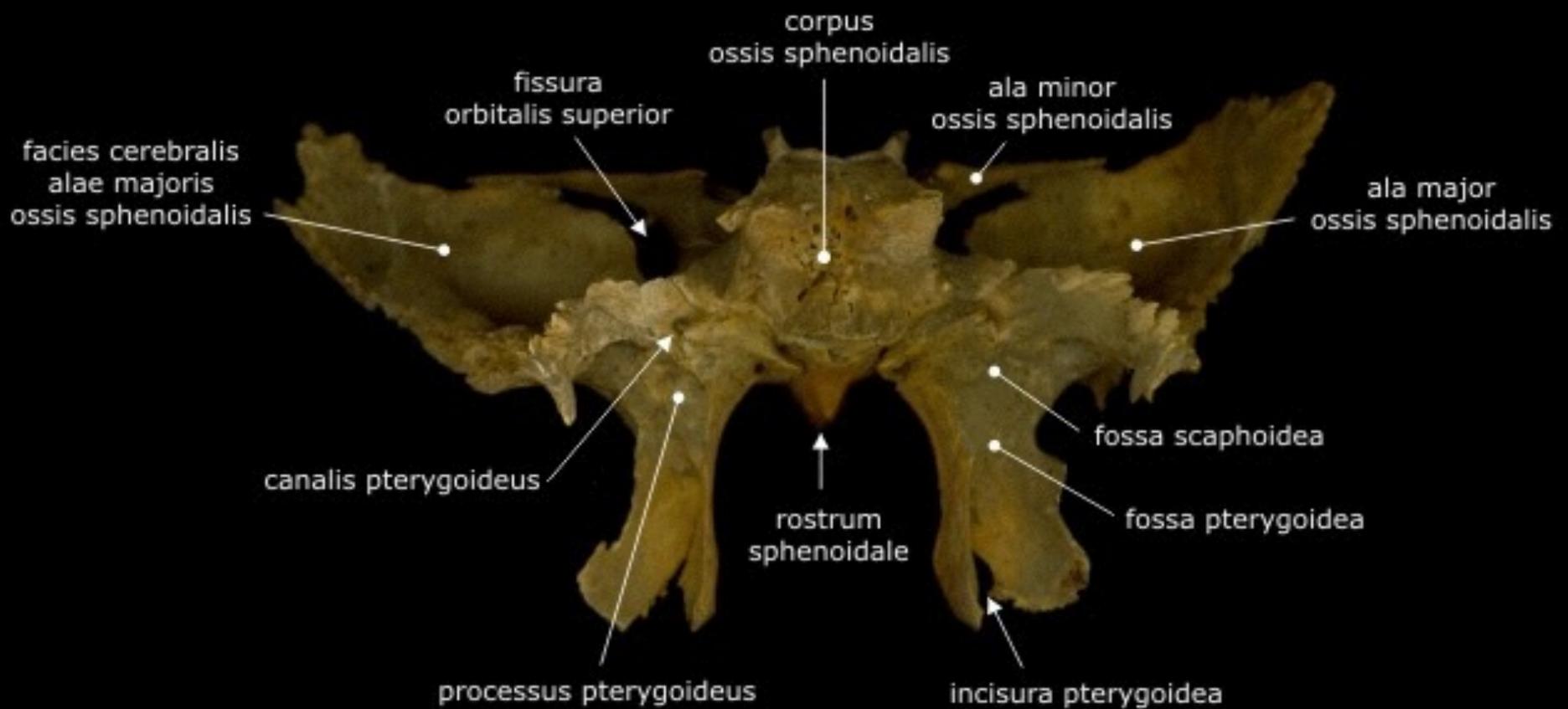






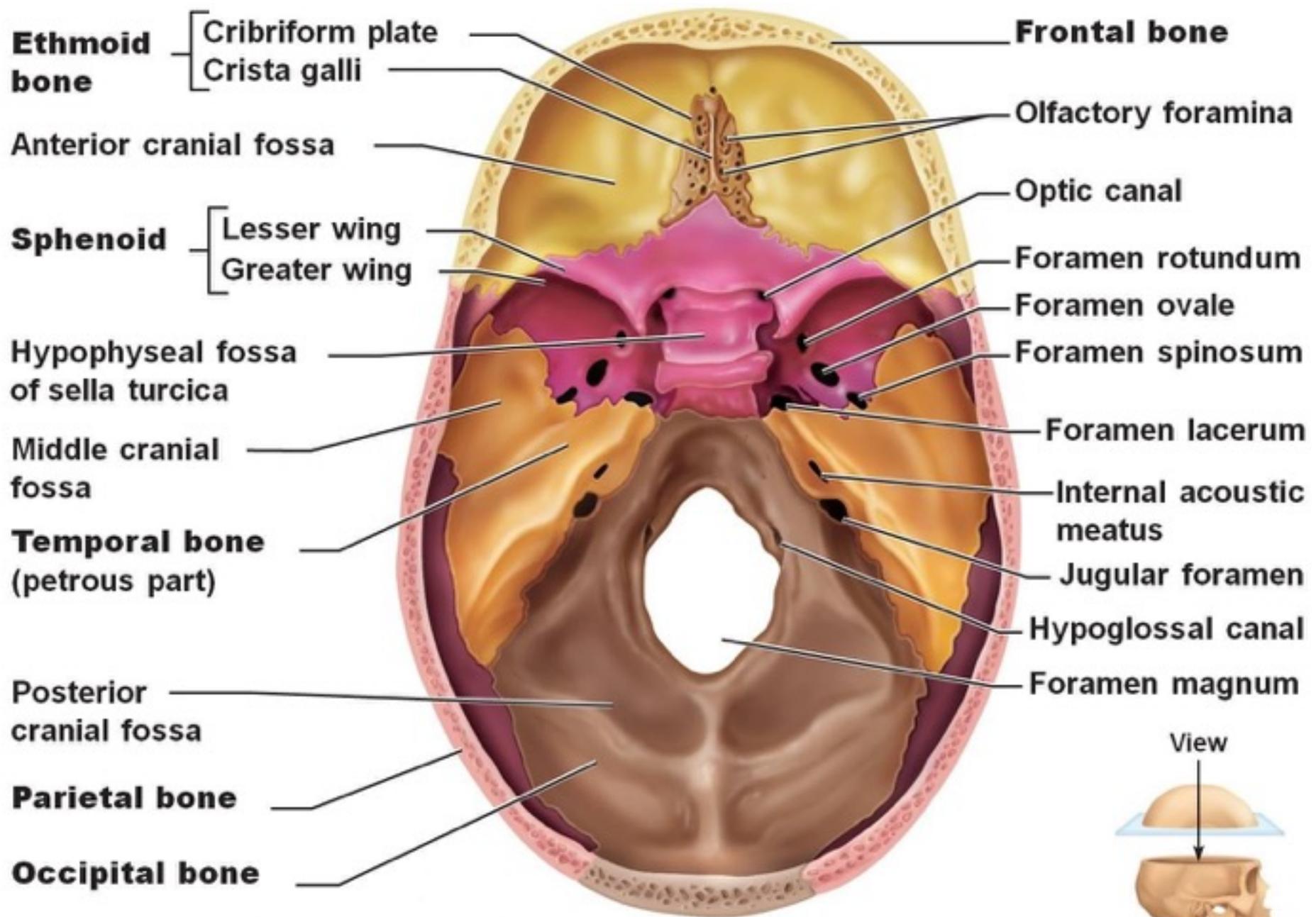




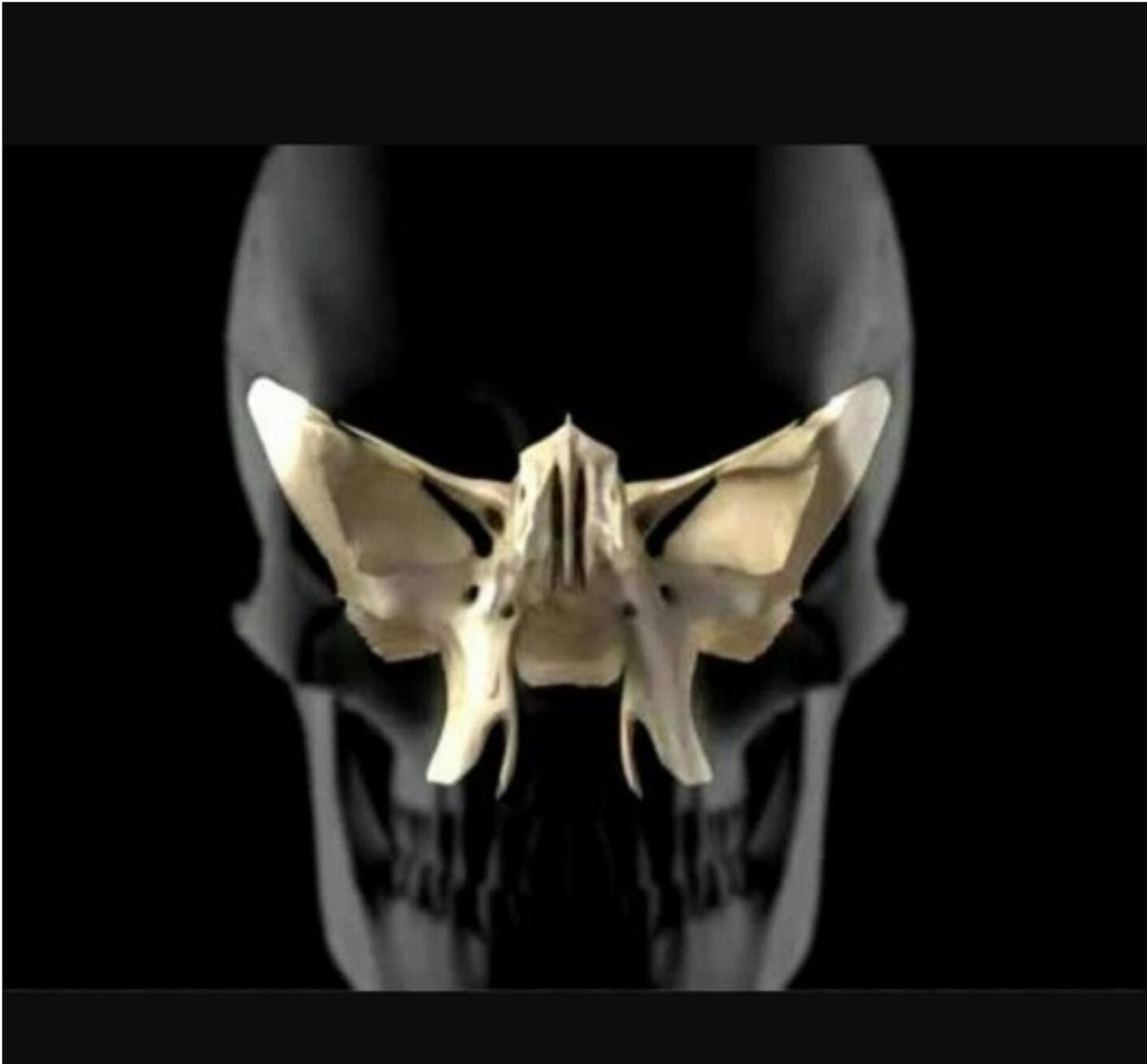


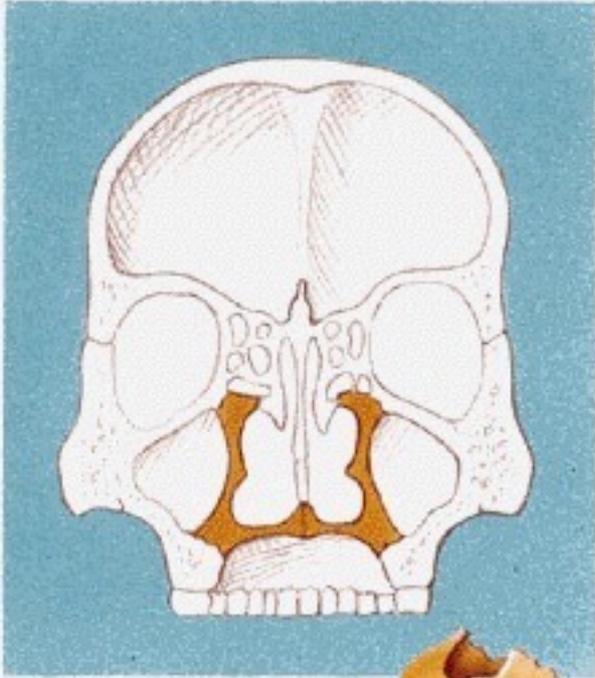


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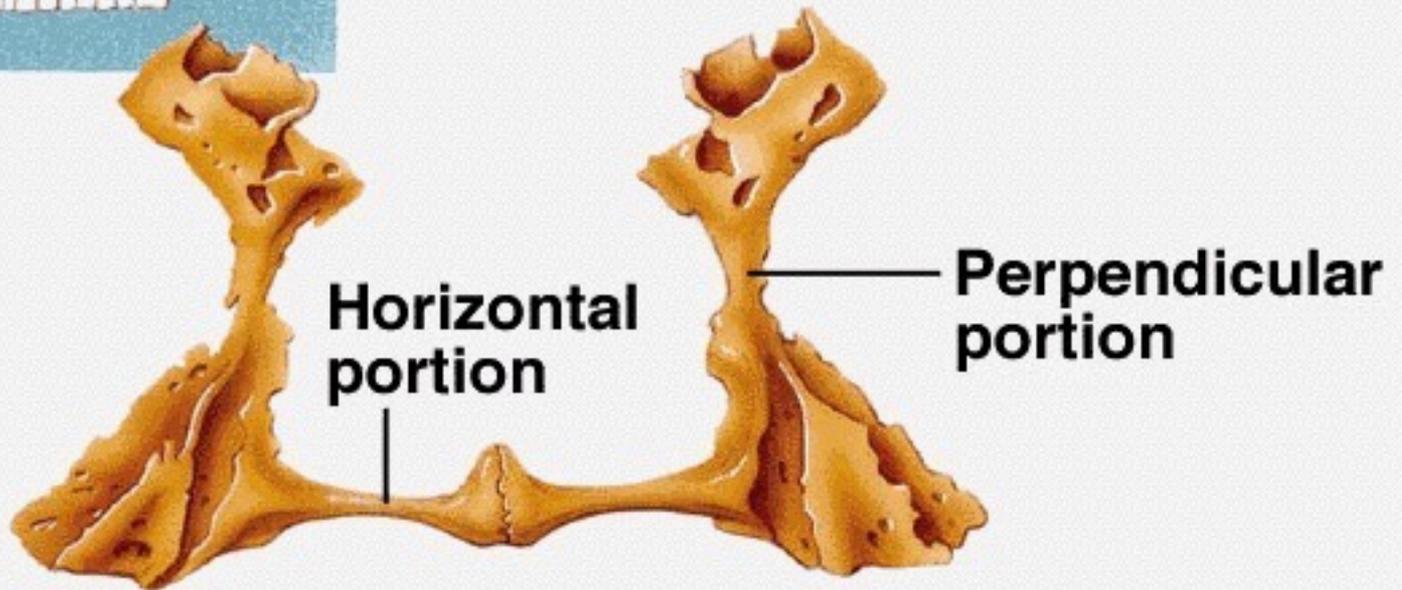
**(a) Superior view of the skull, calvaria removed**



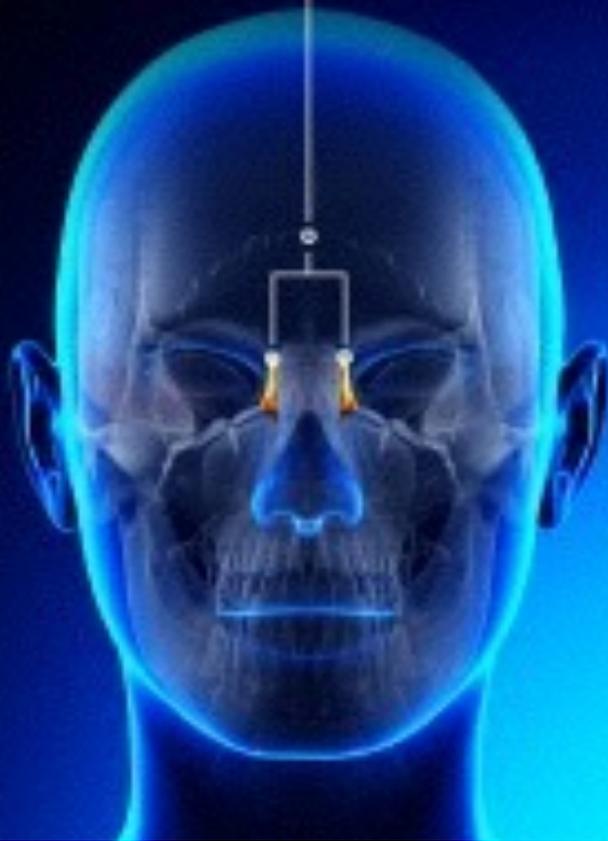


**Coronal  
section**

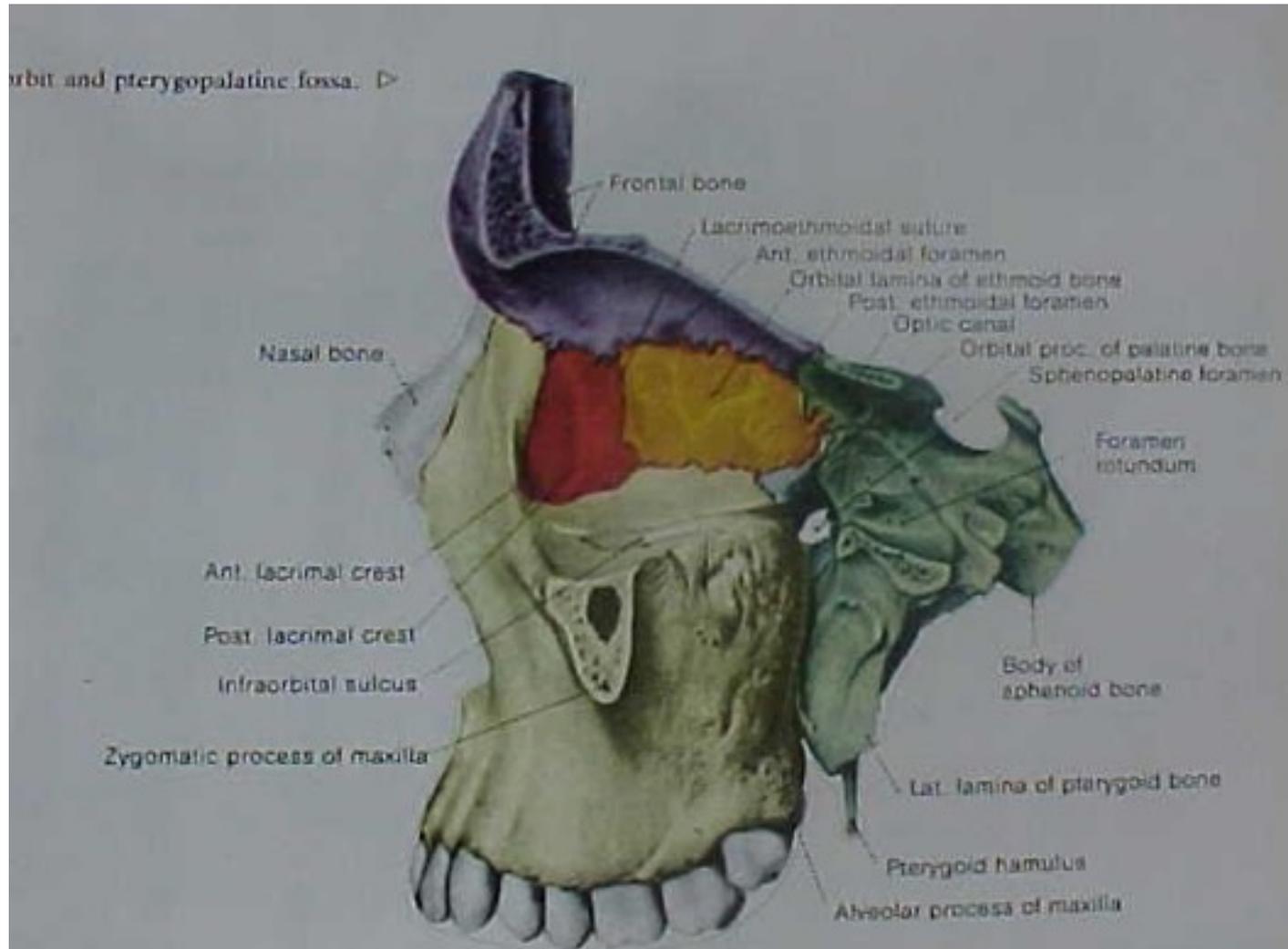
## Palatine Bones



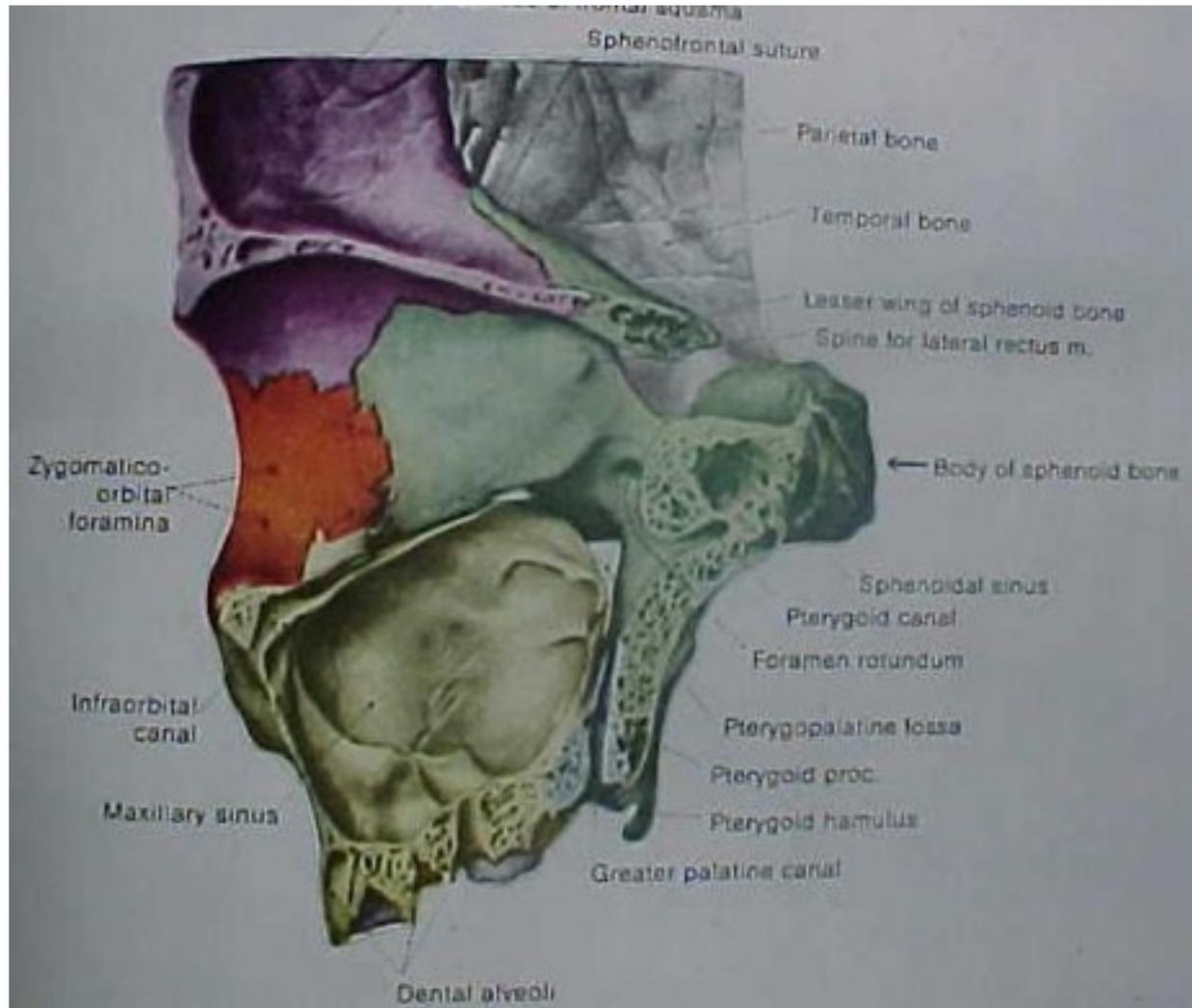
Lacrimal

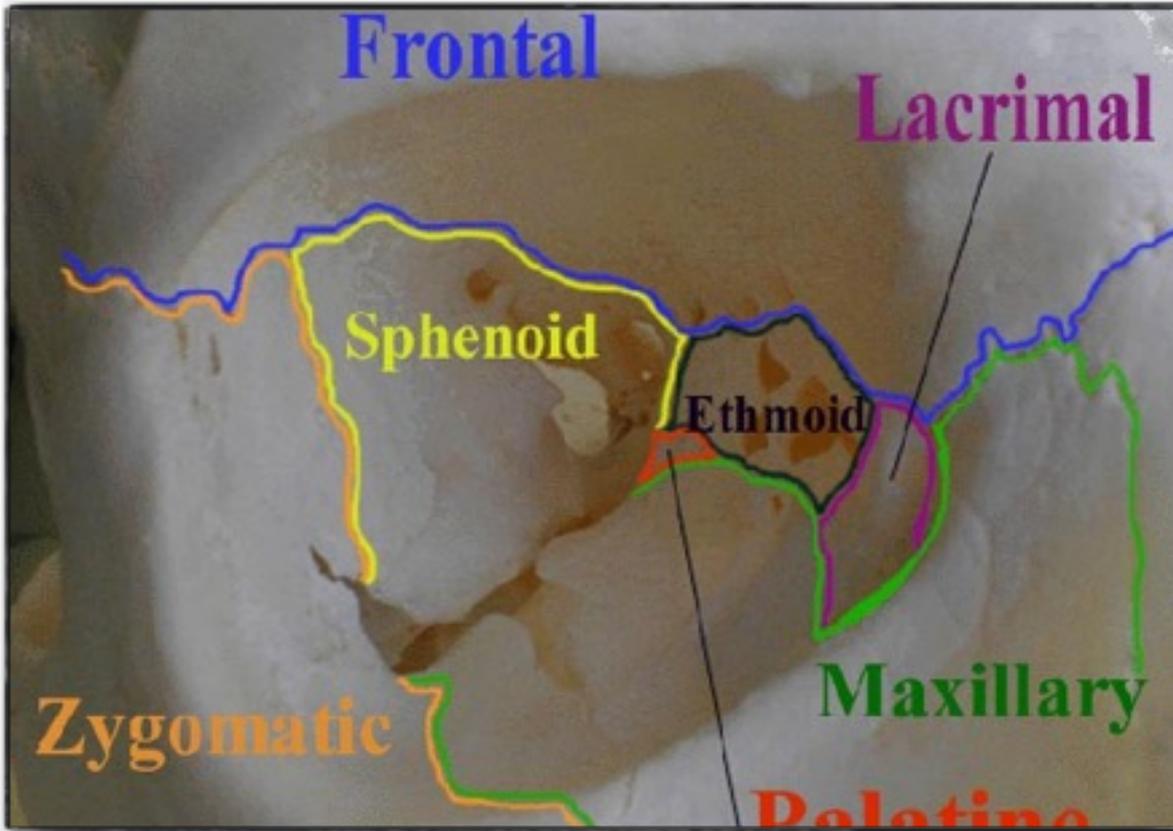


# ORBITA



# ORBITA





## ORBİTAL KEMİKLER

FRONTAL KEMİK

ZİGOMATİK KEMİK

ORBİTAL RİM

MAKSİLLA

FRONTAL KEMİK

ETMOİD

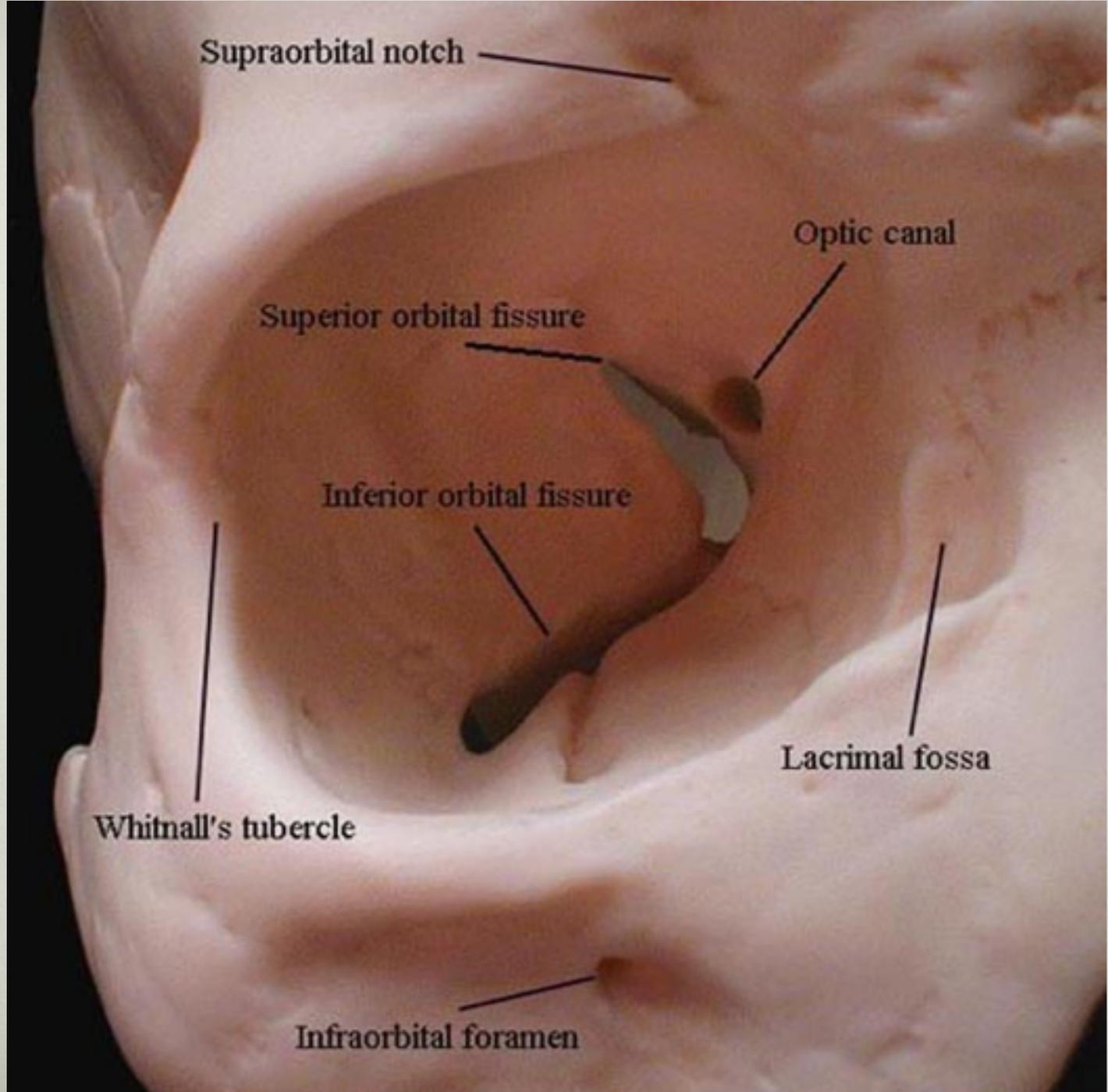
ZİGOMATİK KEMİK

LAKRİMAL

MAKSİLLA

SFENOİD

PALATİN



Supraorbital notch

Optic canal

Superior orbital fissure

Inferior orbital fissure

Whitnall's tubercle

Lacrimal fossa

Infraorbital foramen

# AKSESUAR YAPILAR

Glob

Ekstraoküler adaleler

Damarlar

Sinirler

Orbital septum, periorbita

Lakrimal bez

Yardımcı bezler

Meibomian

Goblet hücreleri

Wolfring

Krause

Moll

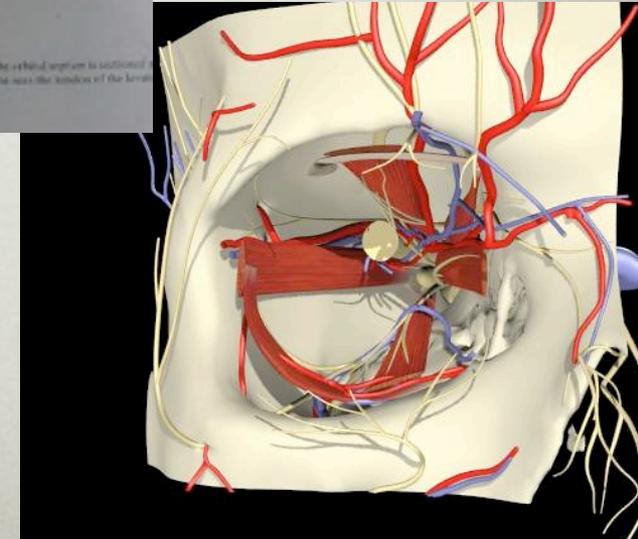
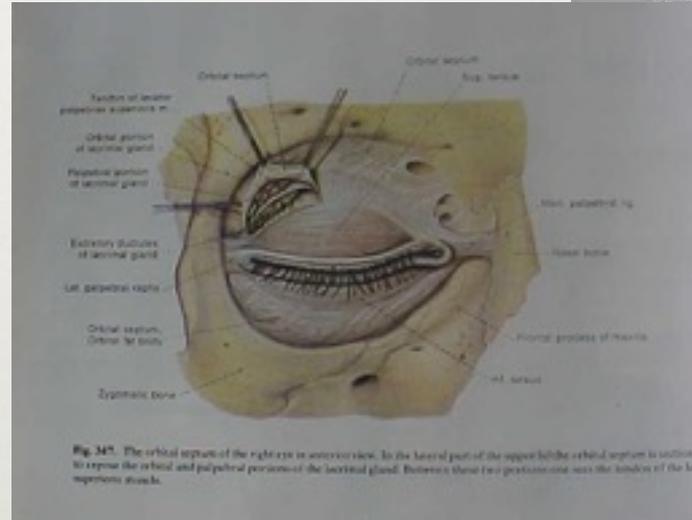
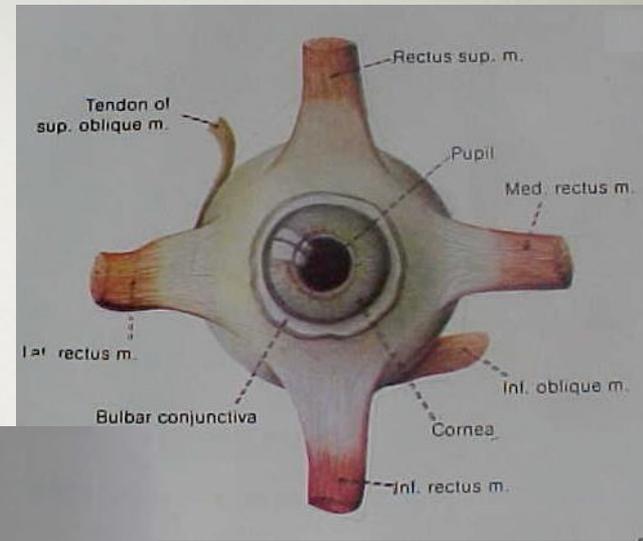
Zeiss

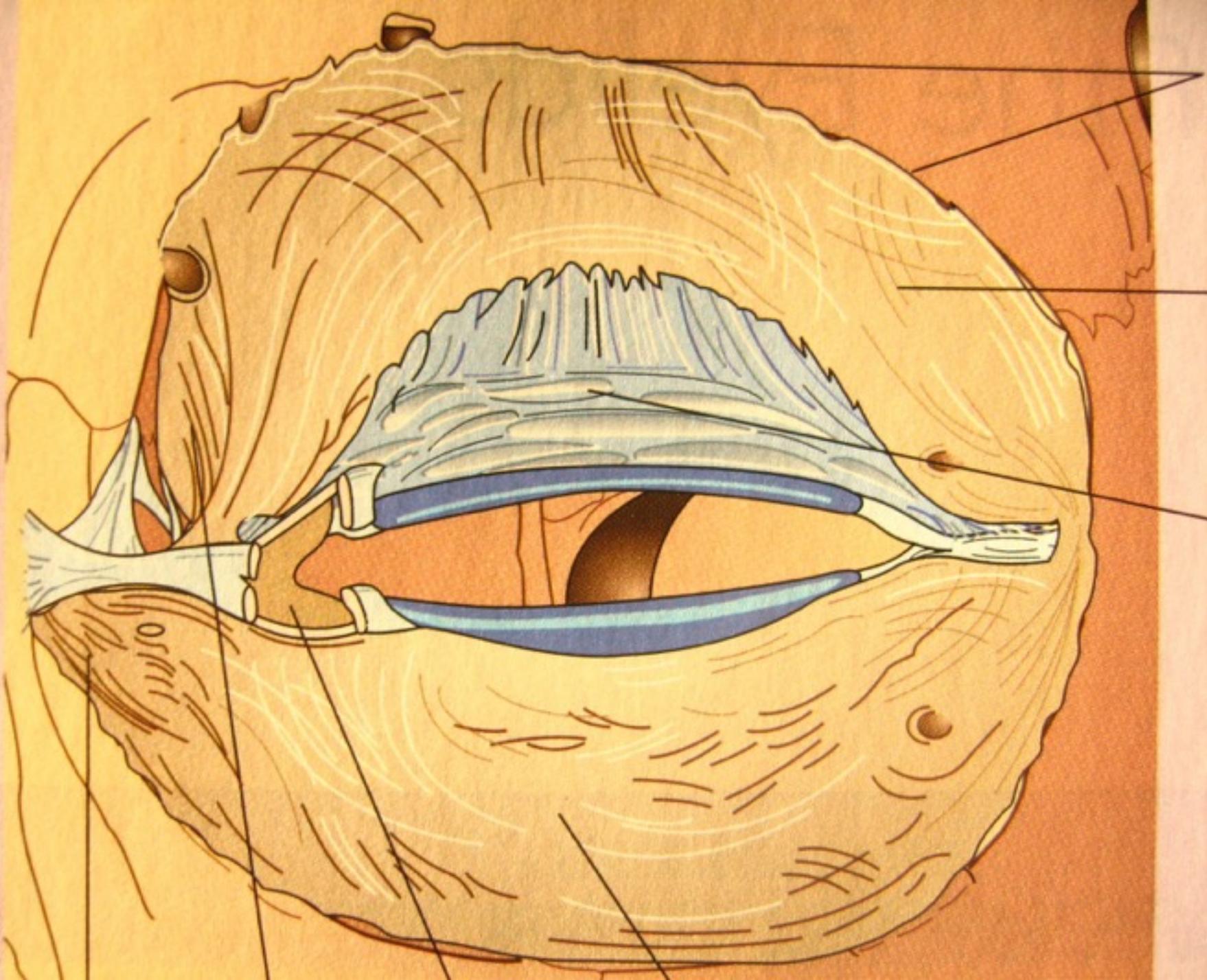
Konjonktiva

Lockwood ligamanı (hamak)

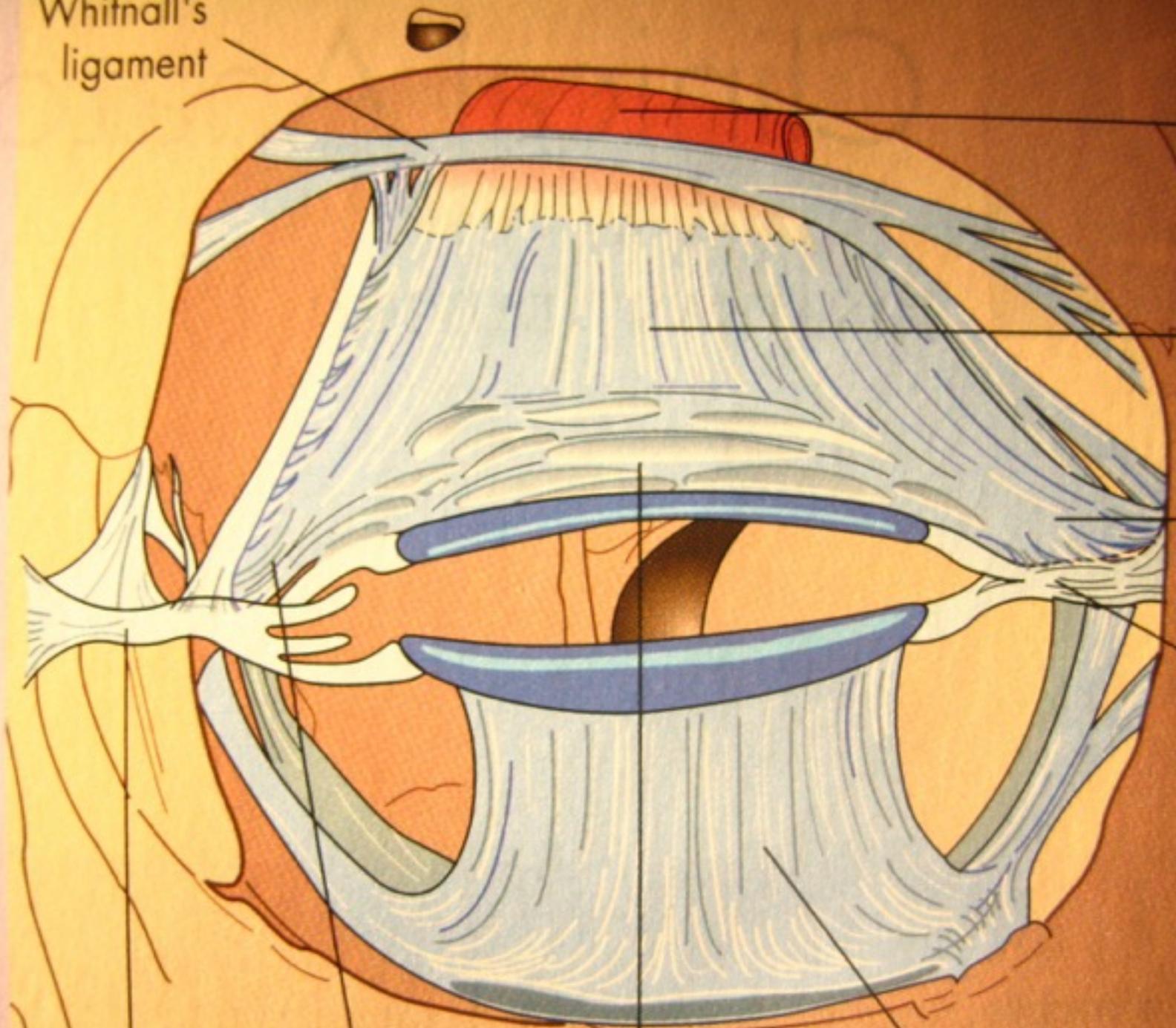
Whitnall ligamanı (askı)

Troklea



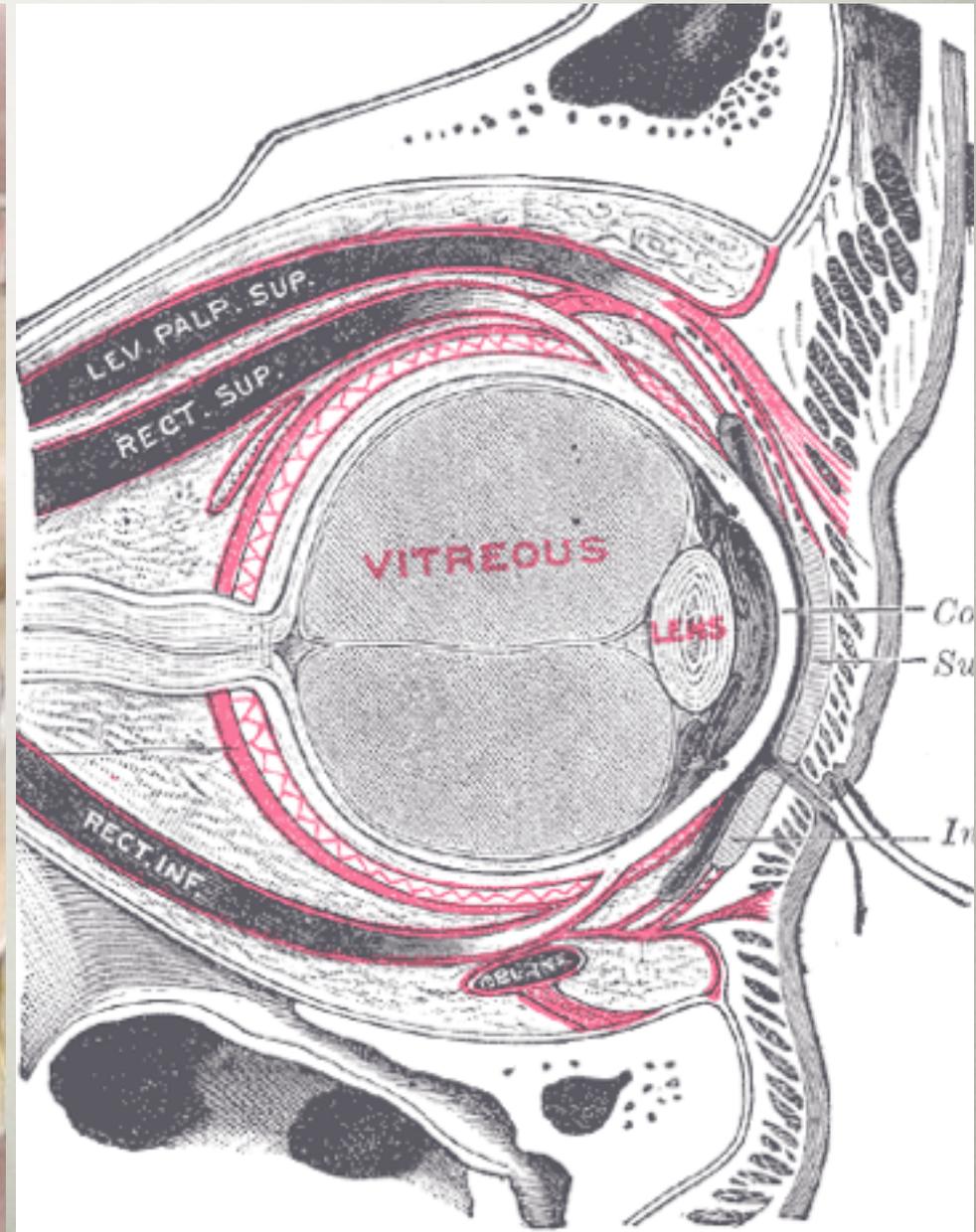
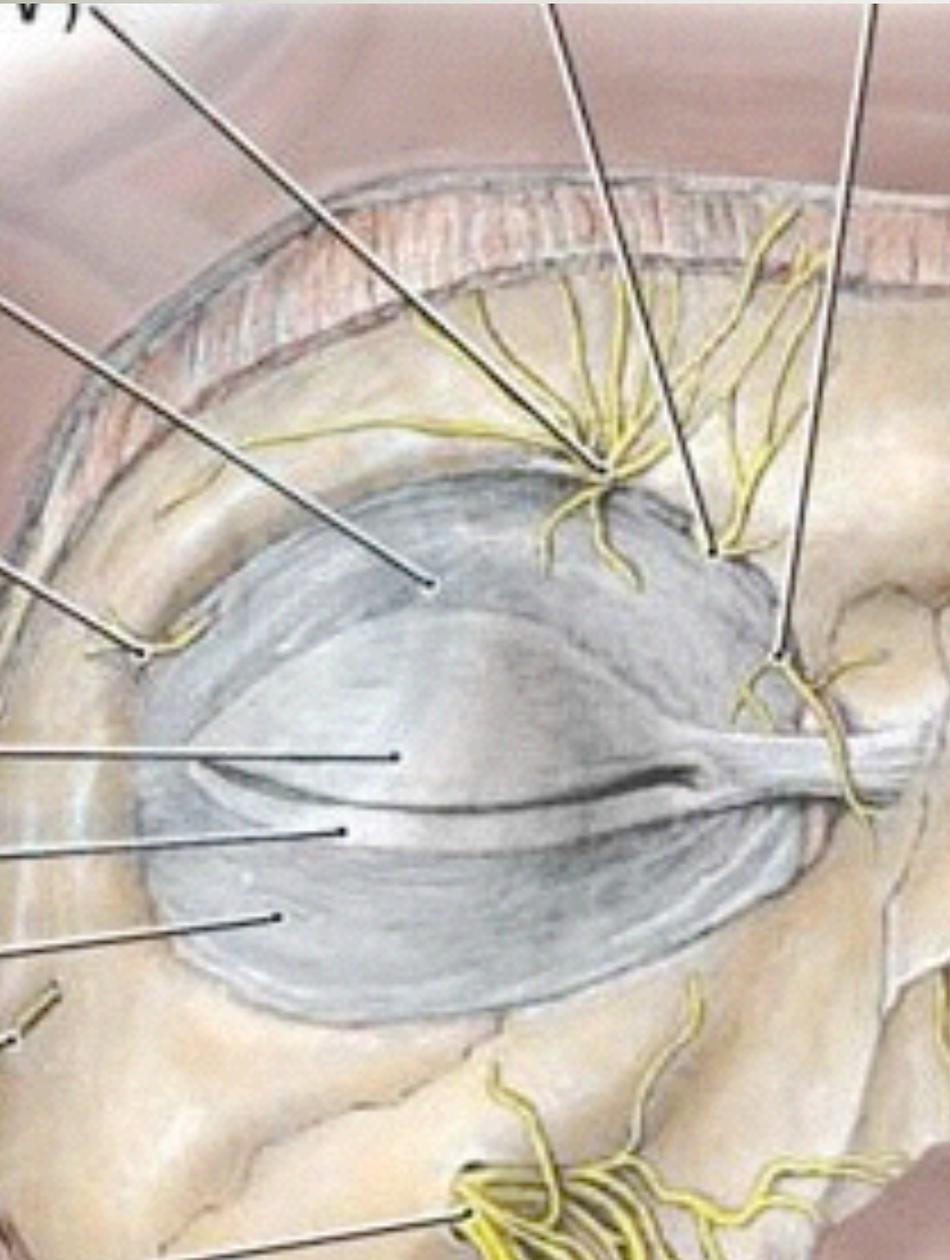


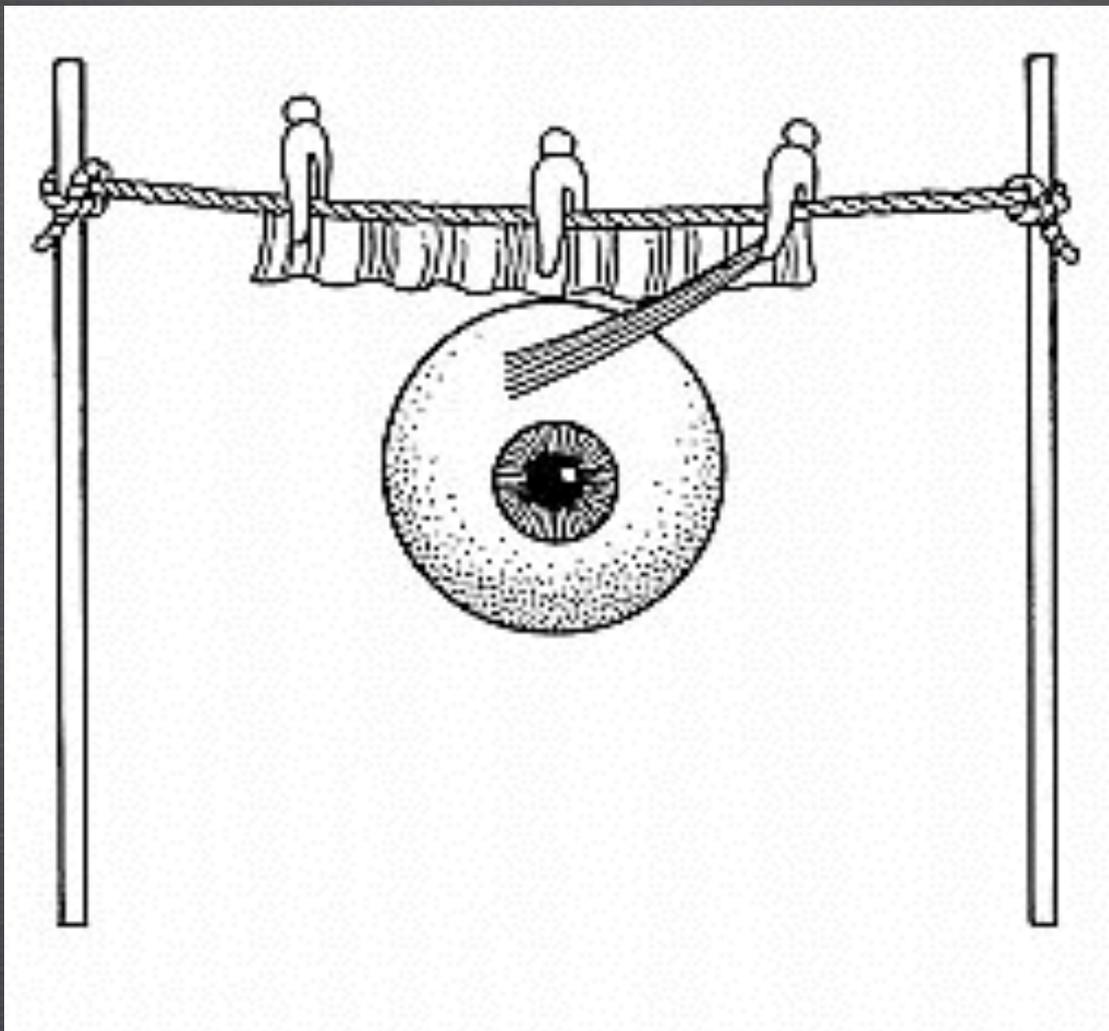
Whitnall's  
ligament



sis

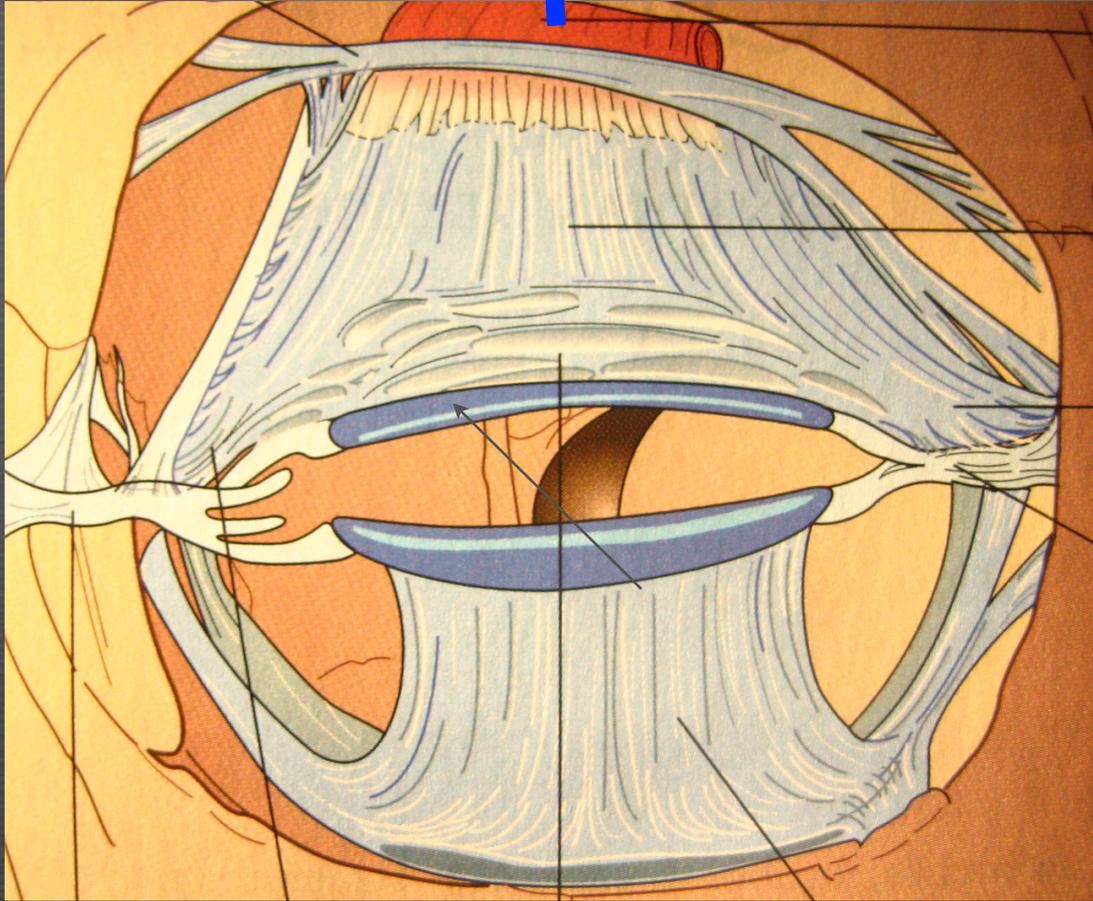
# ORBITAL SEPTUM



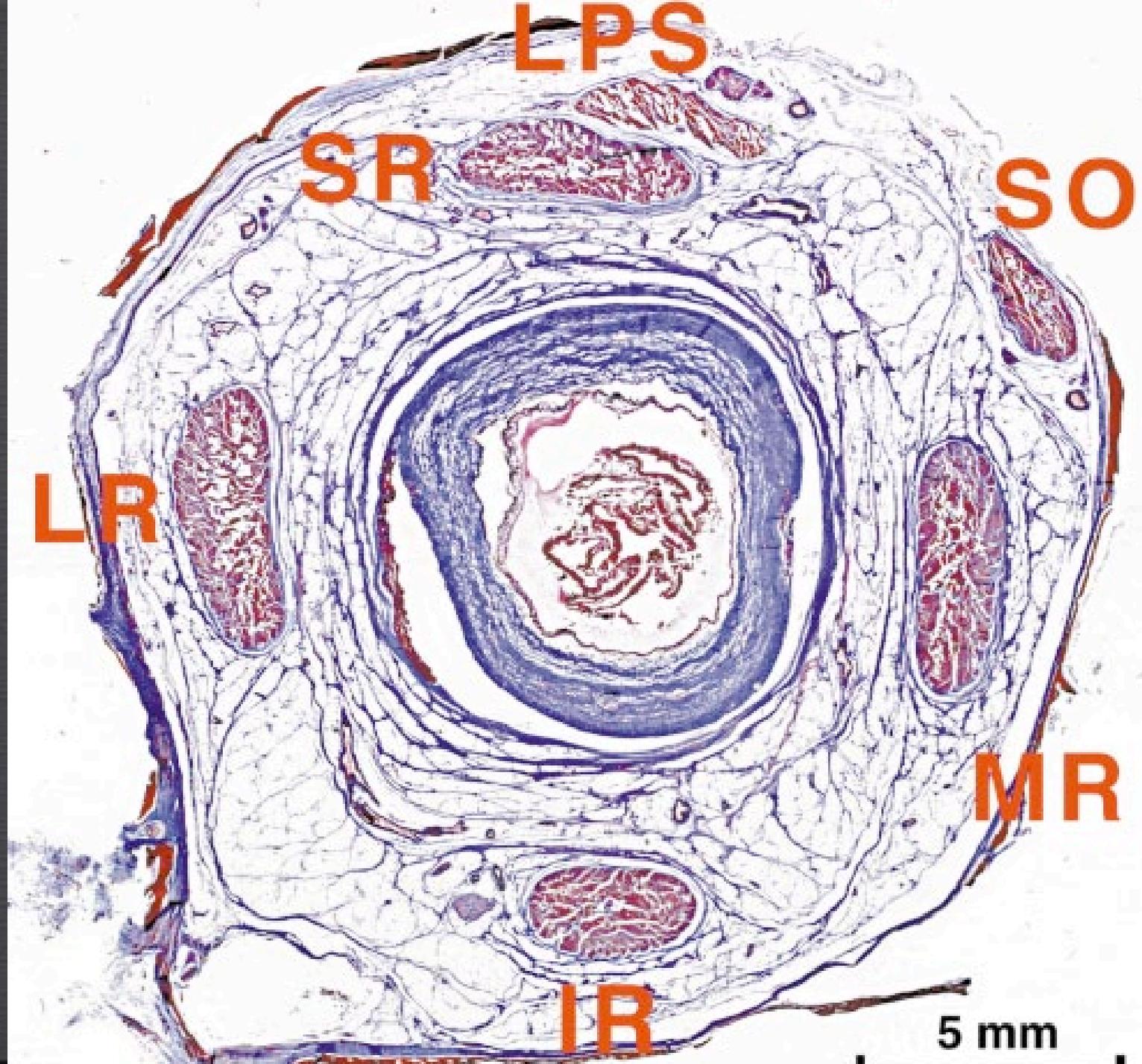


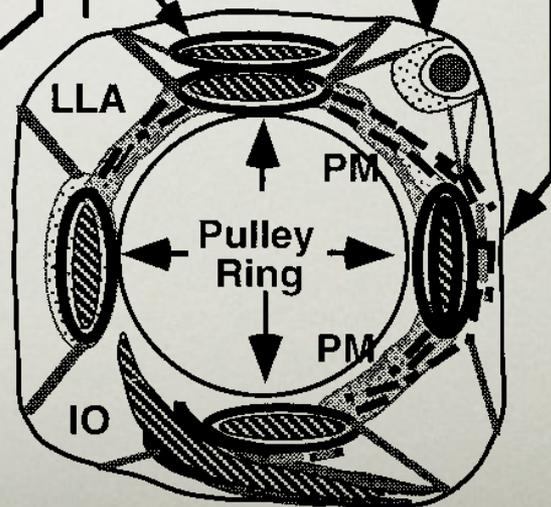
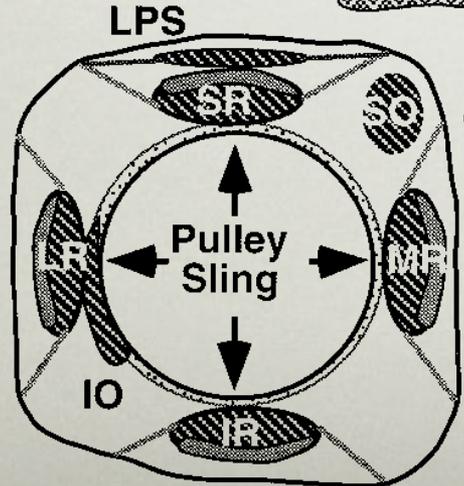
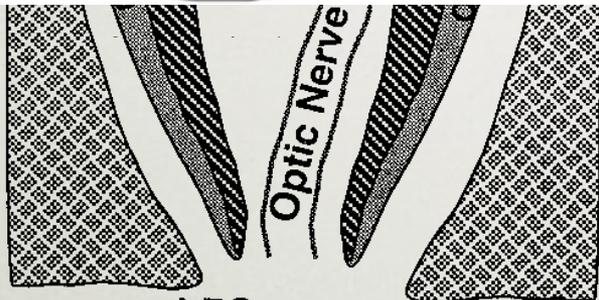
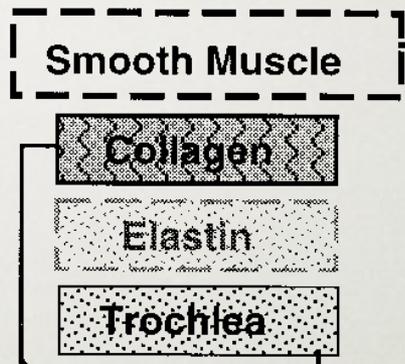
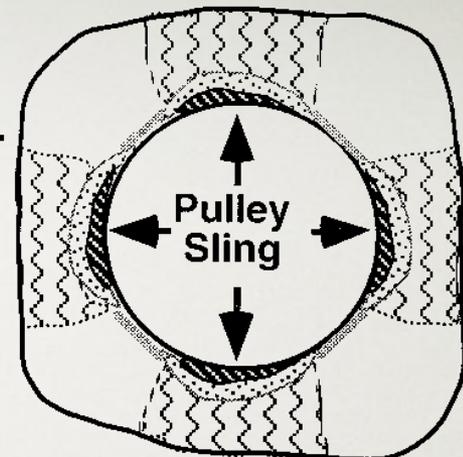
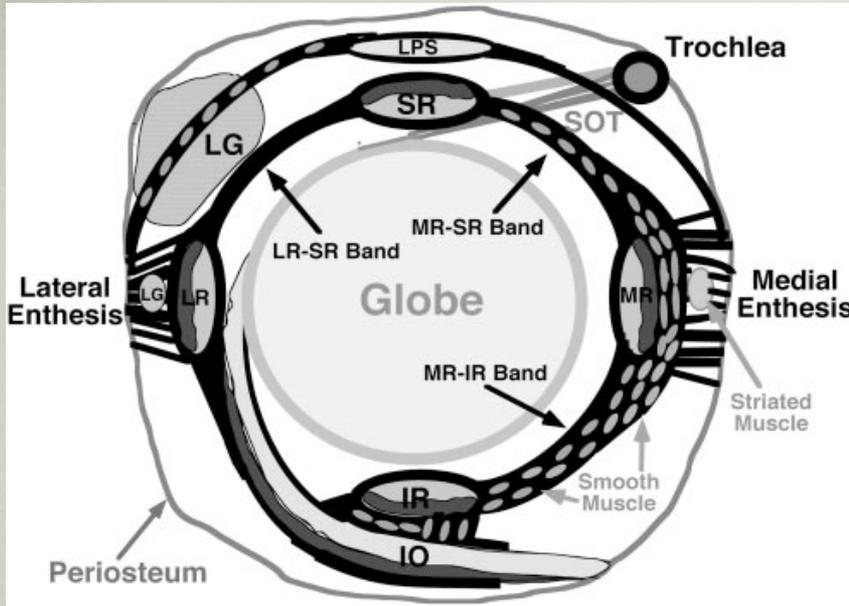
WHITNALL LIGAMANI

WHITNALL LIGAMANI

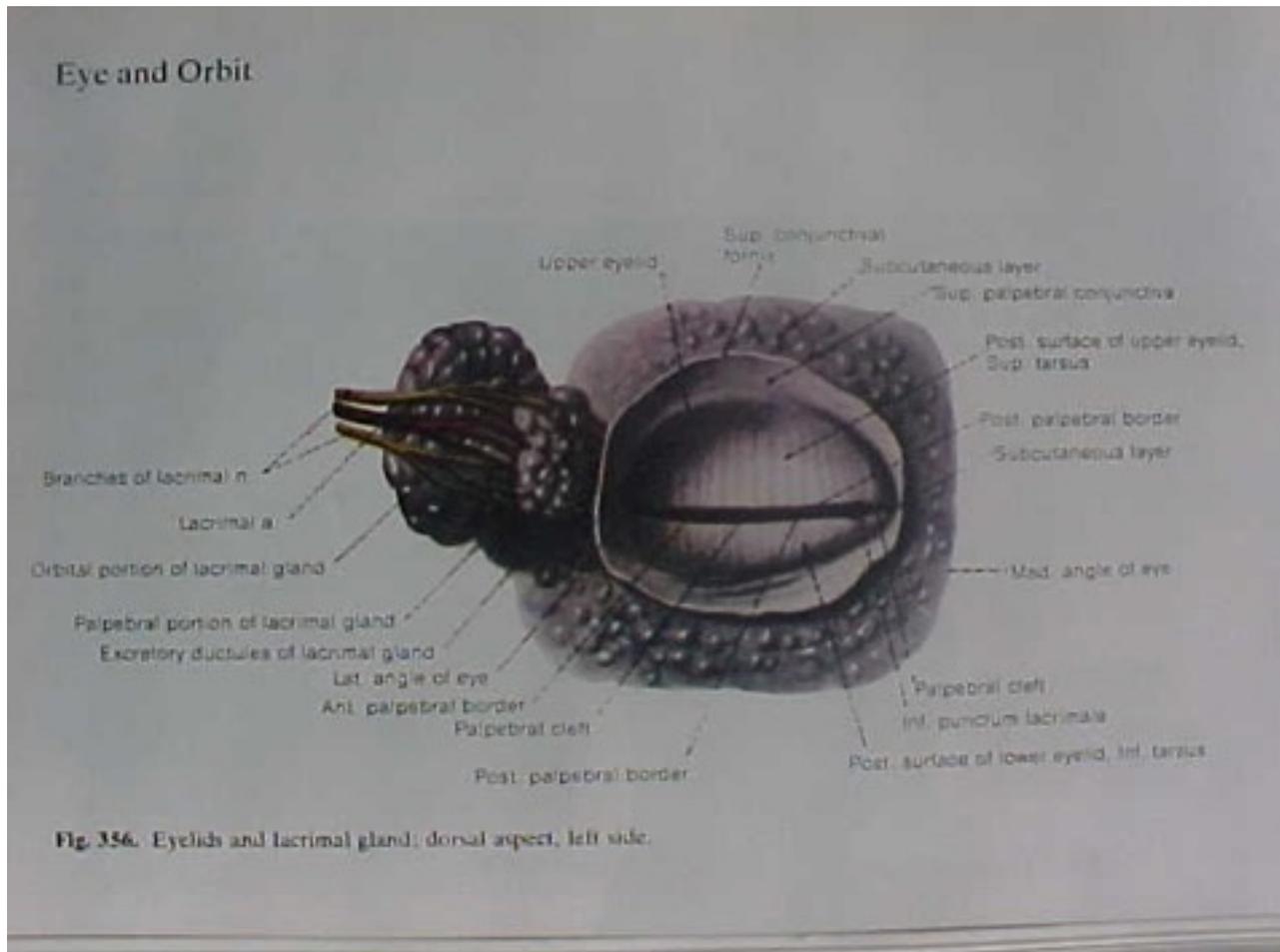


LOCKWOOD LIGAMANI





# AKSESUAR YAPILAR

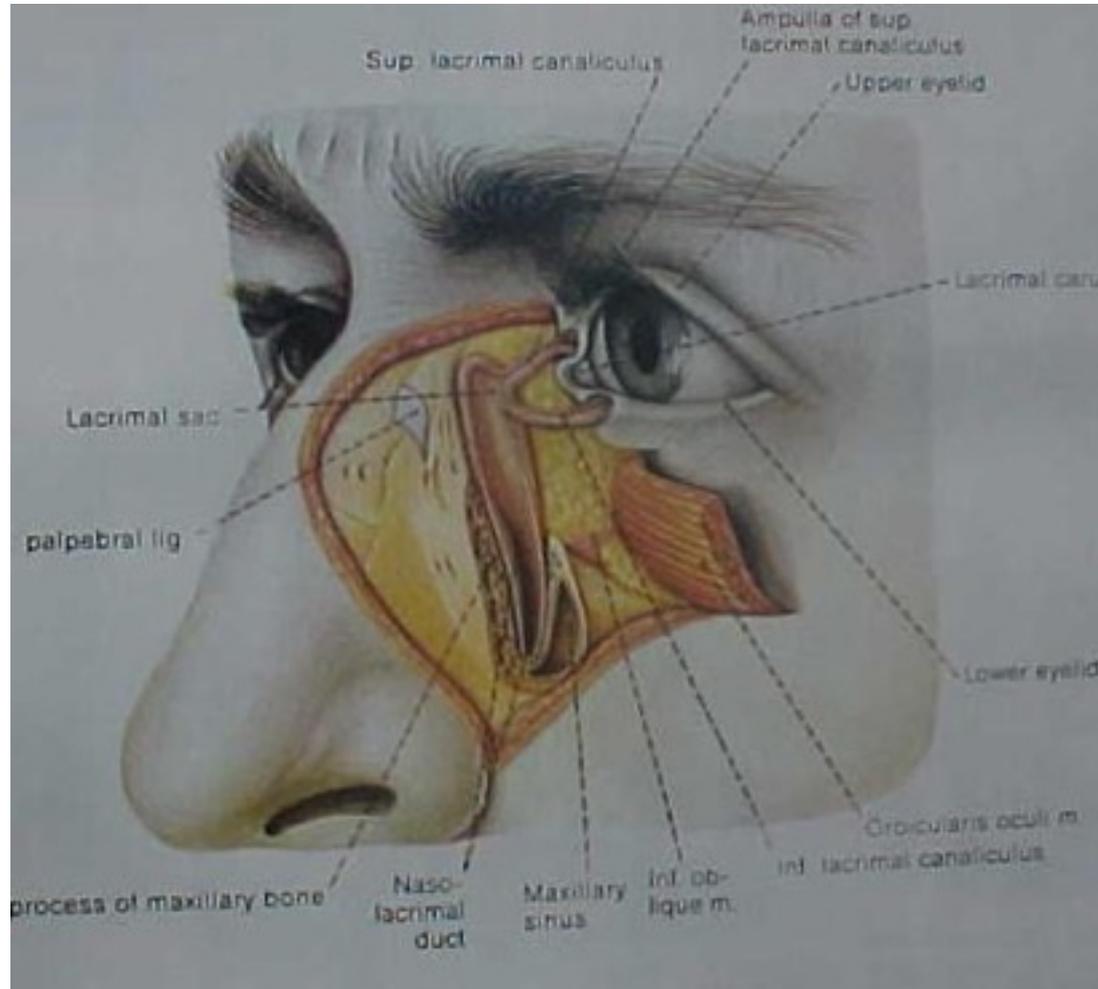




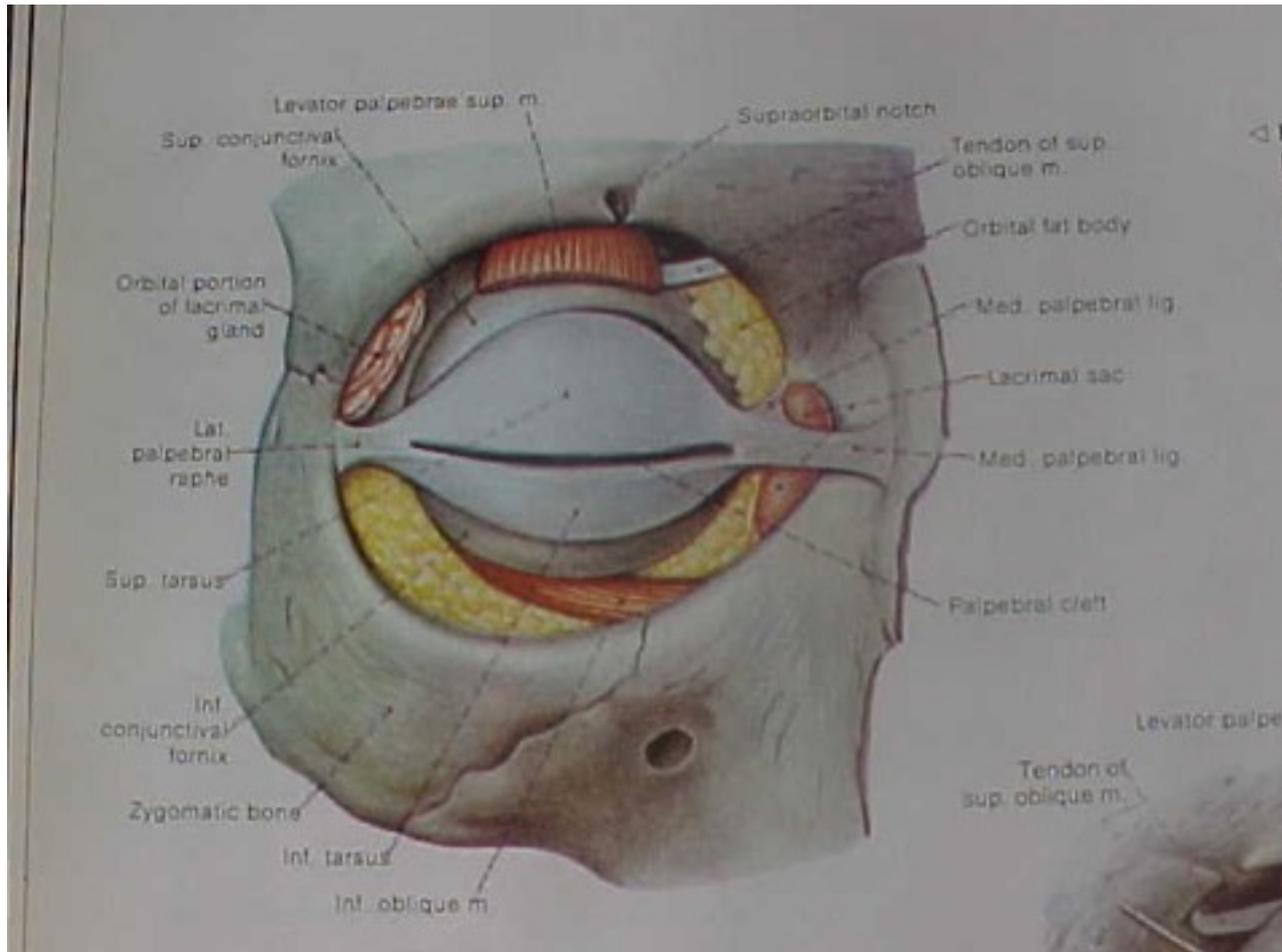
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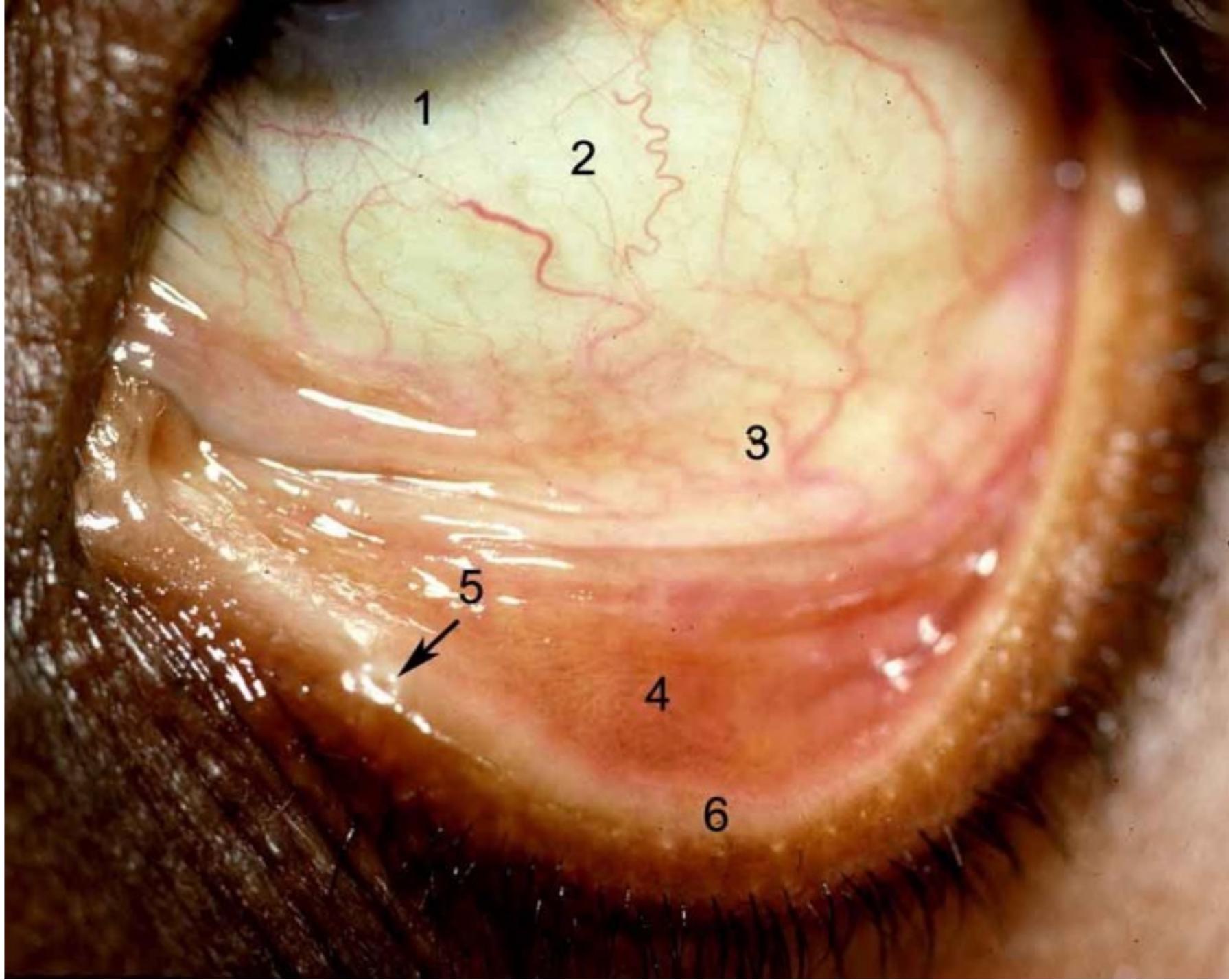
**DUKTULAR  
LEAKTOSYON**

# AKSESUAR YAPILAR



# AKSESUAR YAPILAR

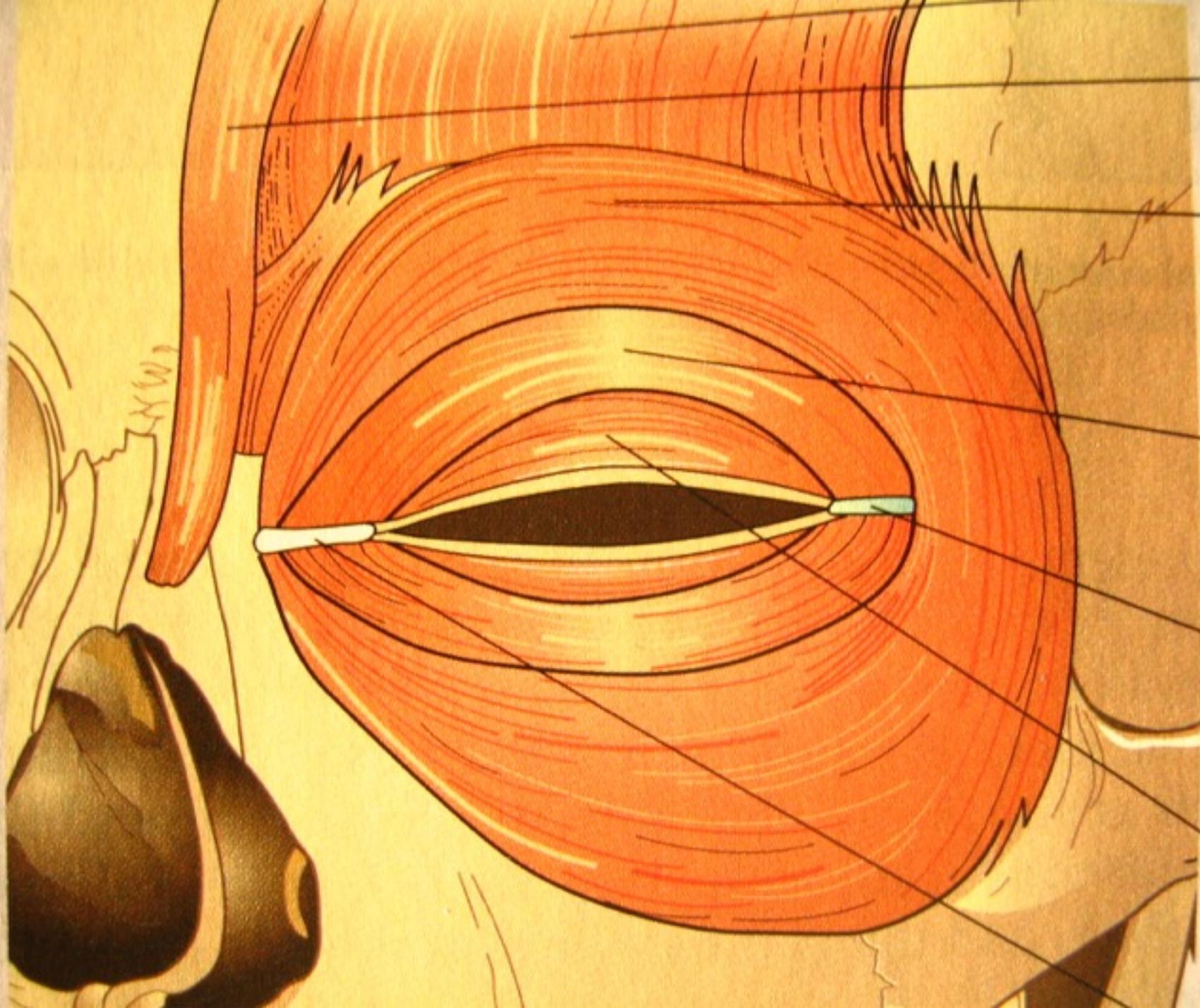




# AKSESUAR YAPILAR



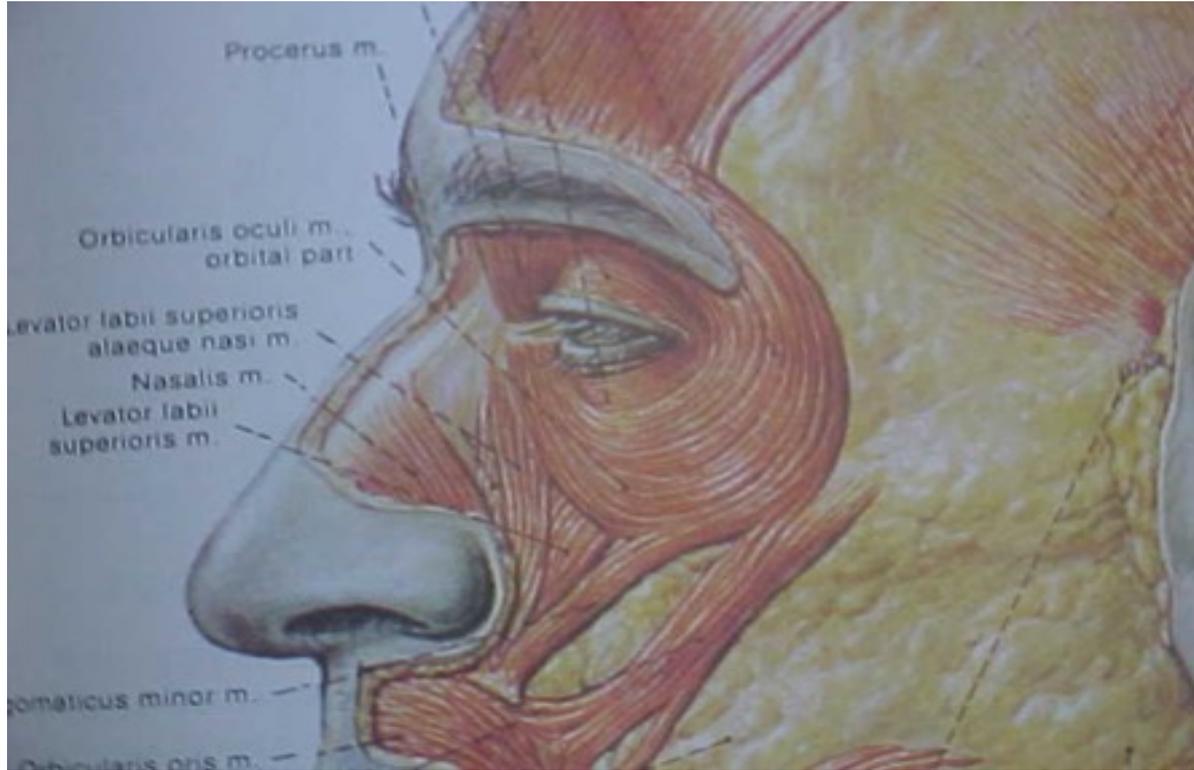




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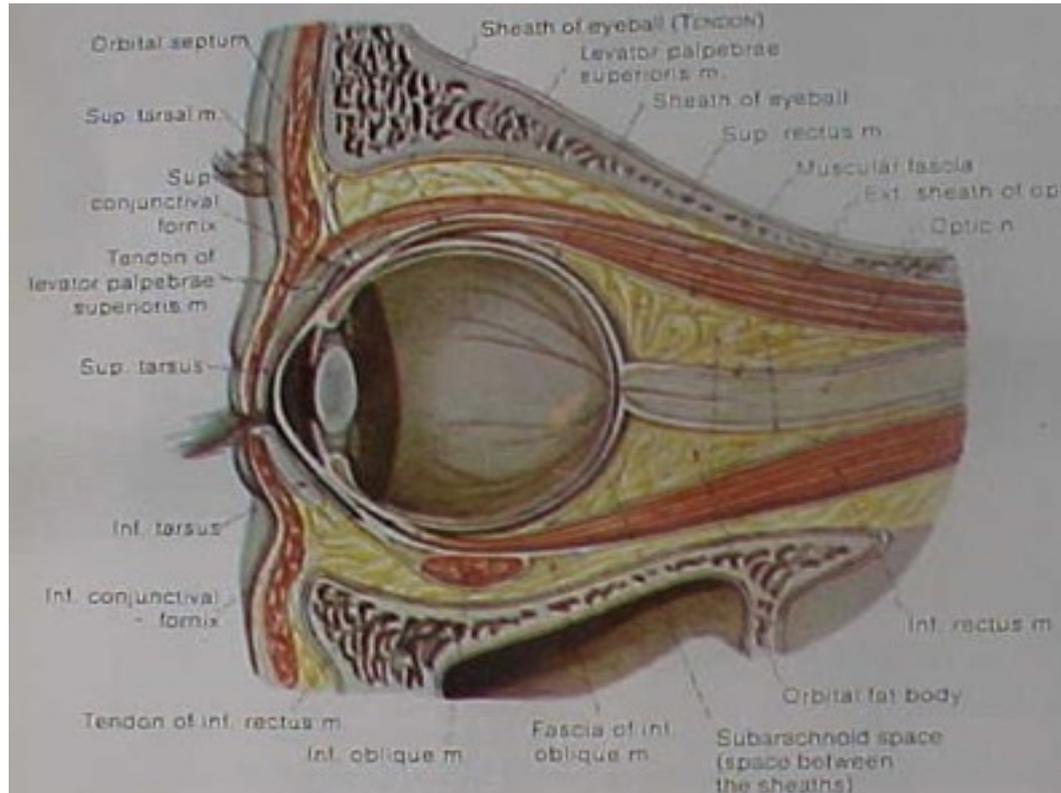
# YÜZ KASLARI

- YÜZDEKİ DİĞER KASLARINI KONTROL EDEN FASİYEL SİNİR TARAFINDAN KONTROL EDİLİR



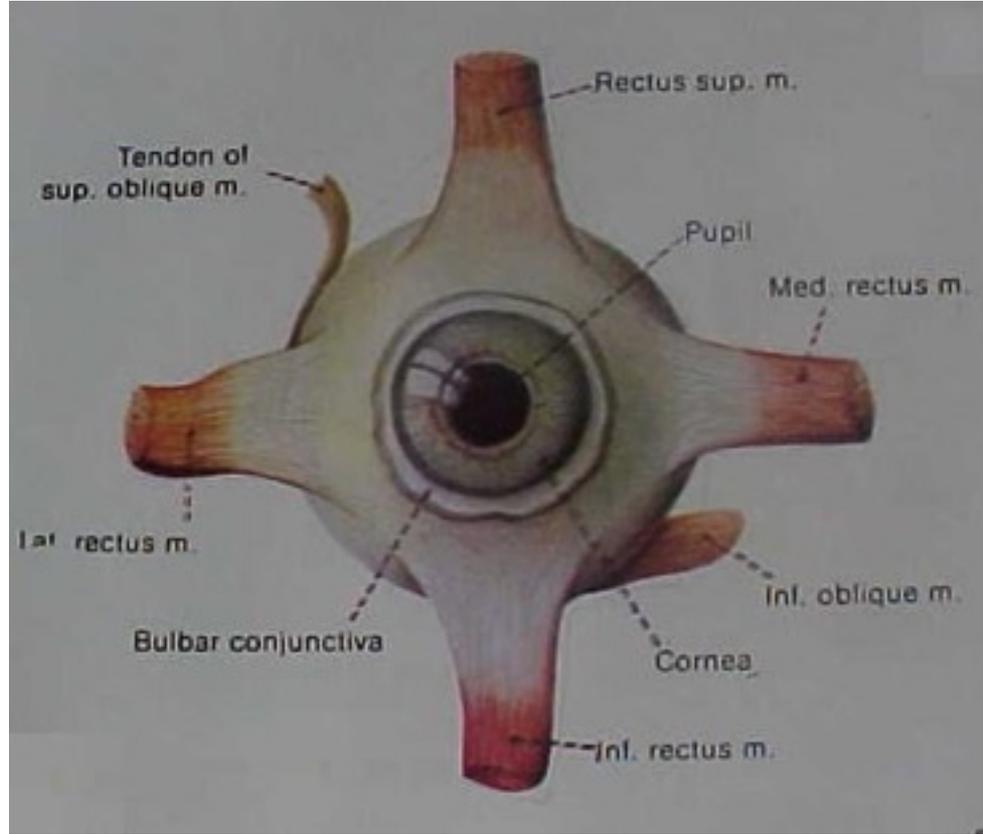
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- GÖZ HAREKETLERİNİ KONTROL EDERLER



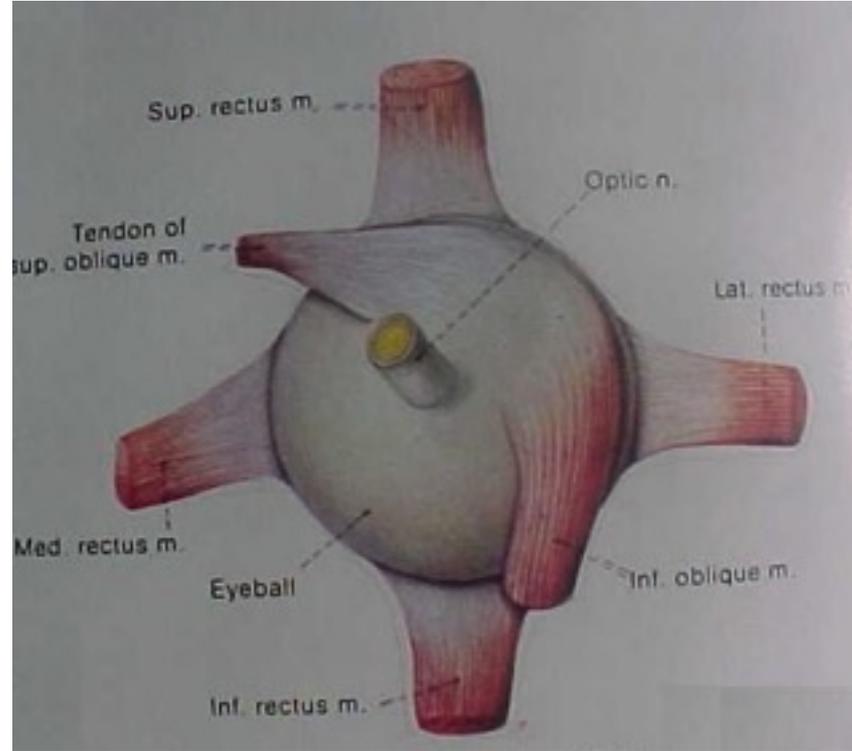
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- GÖZÜ HAREKET ETTİREN 6 KAS VARDIR



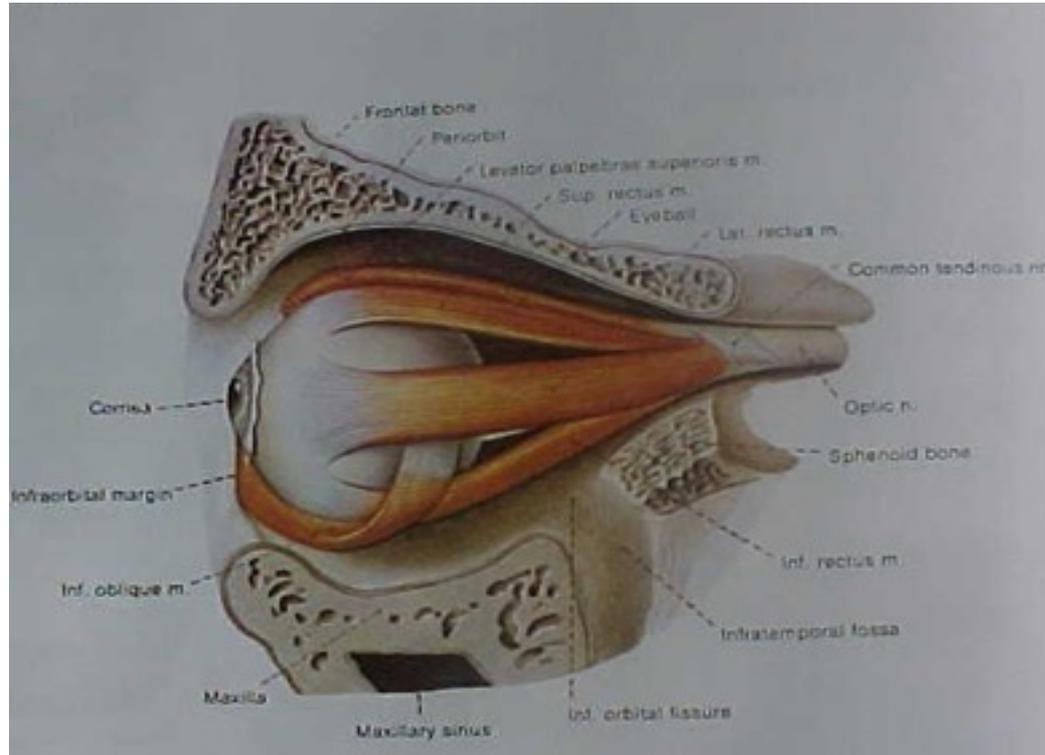
# EKSTRAOKÜLER ADELELER

- 3, 4 VE 6. KAFA SİNİRLERİ TARAFINDAN KONTROL EDİLİRLER



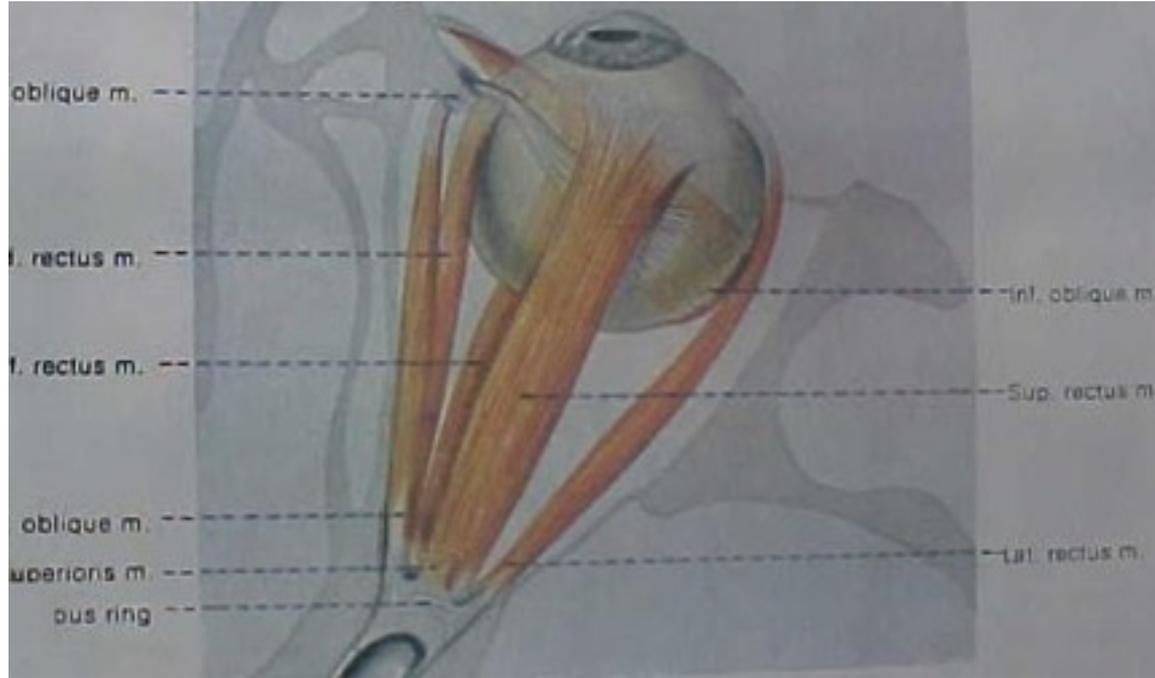
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- İKİ HORIZONTAL İKİ VERTİKAL İKİDE OBLİK KAS VARDIR



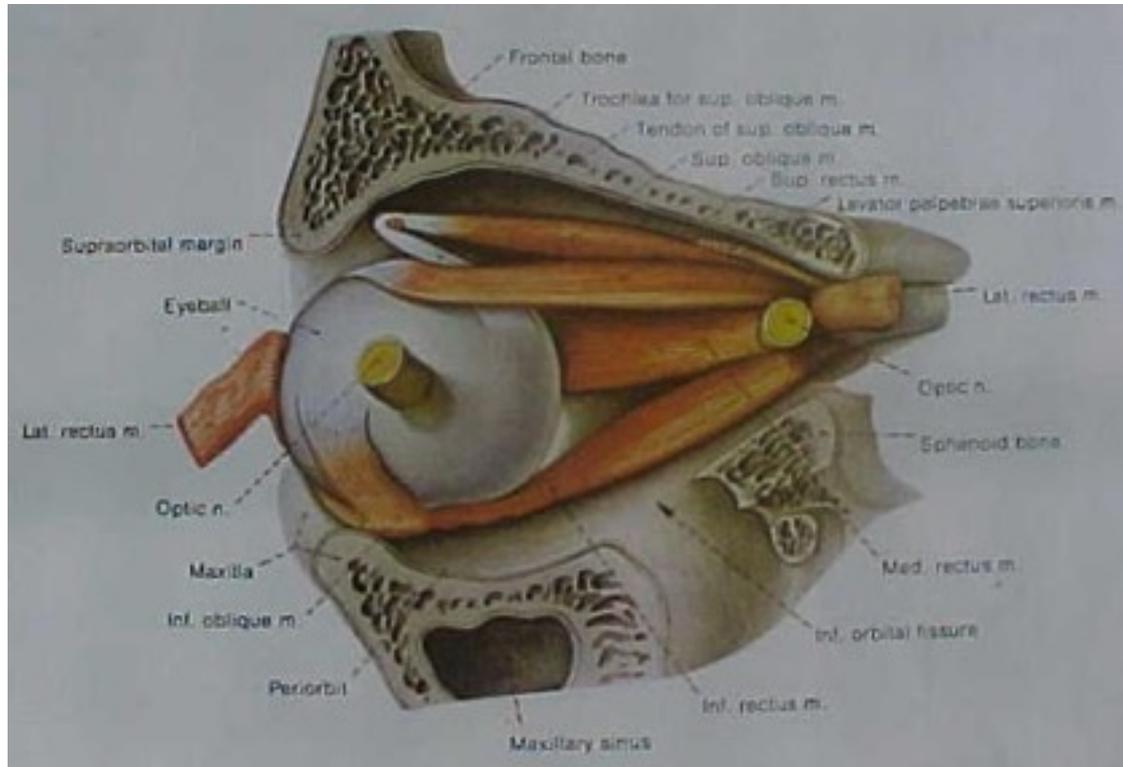
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- KASLARIN HER BİRİNİN ASIL GÖREVİ FARKLIDIR



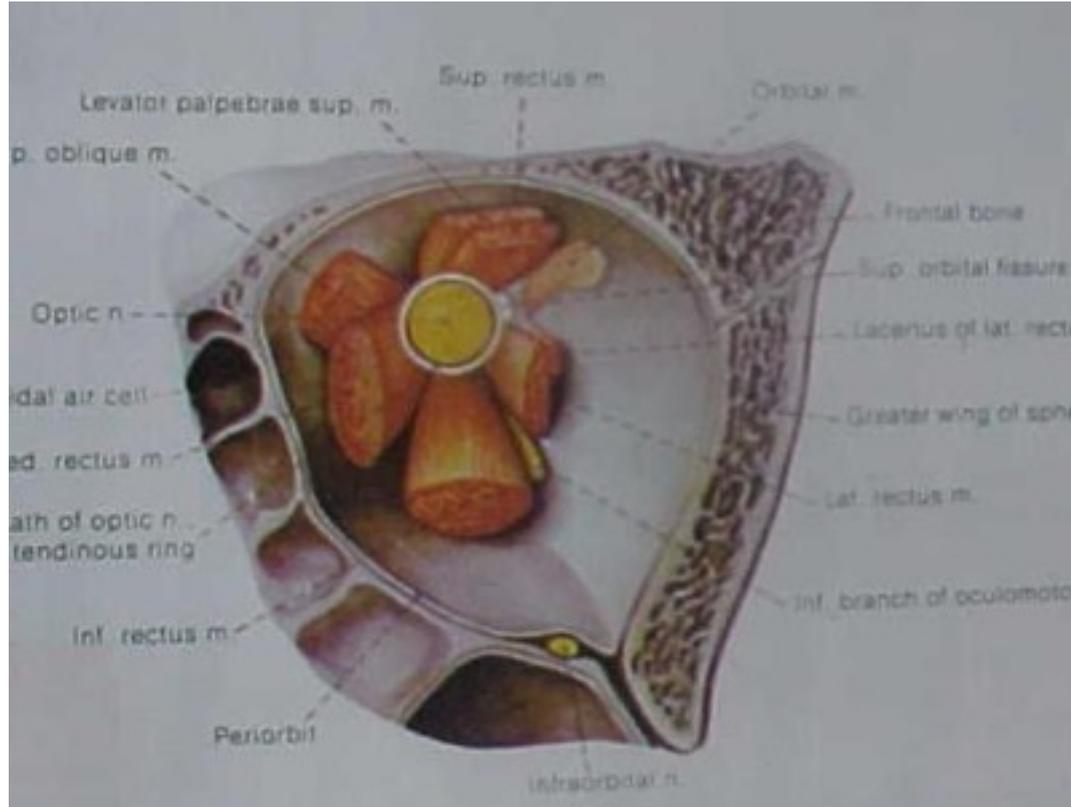
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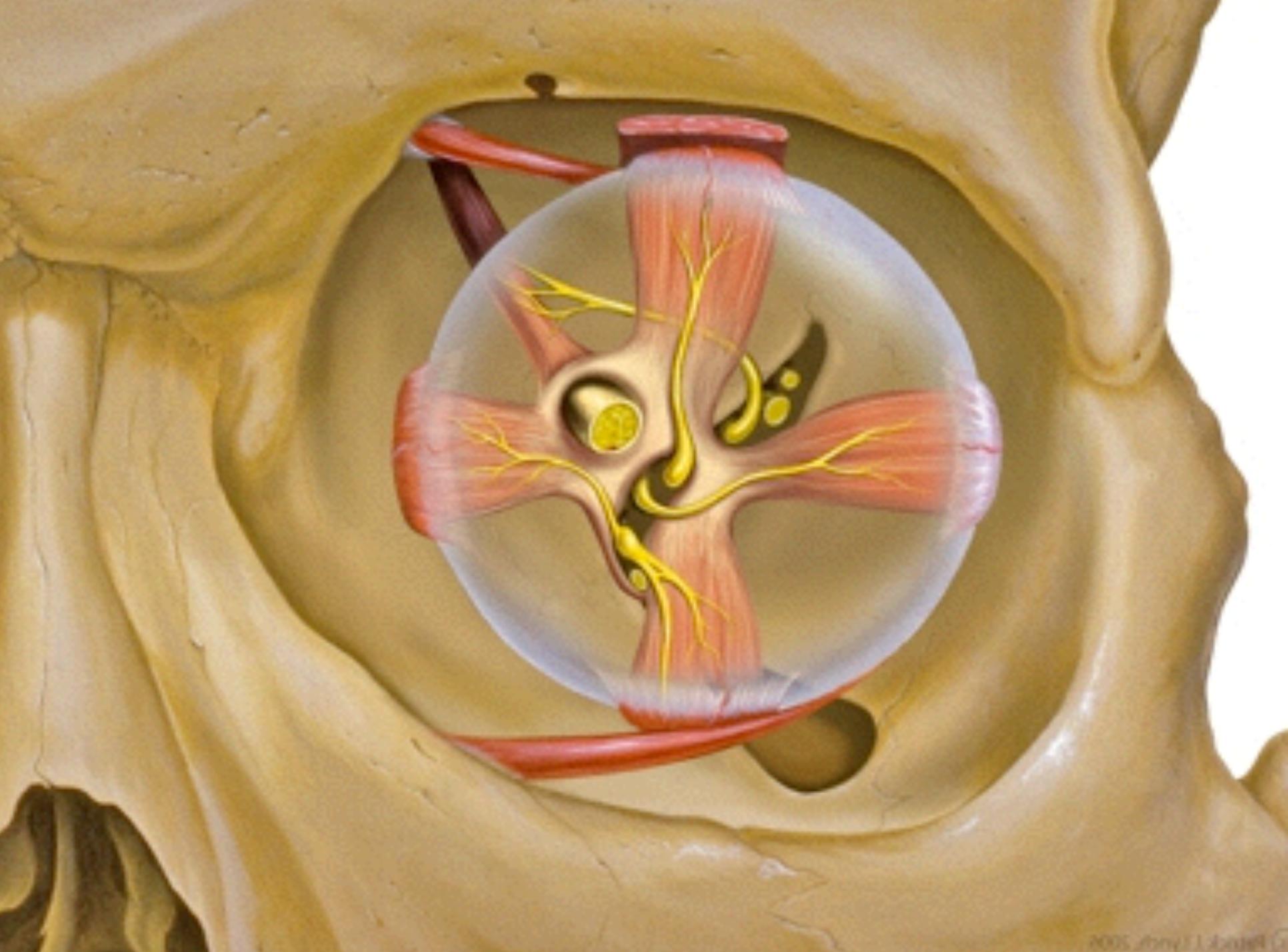
- FAKAT KASLARIN BİRDEN ÇOK GÖREVLERİ VARDIR. GÖZÜN POZİSYONUNA GÖRE ETKİLERİ DEĞİŞİR



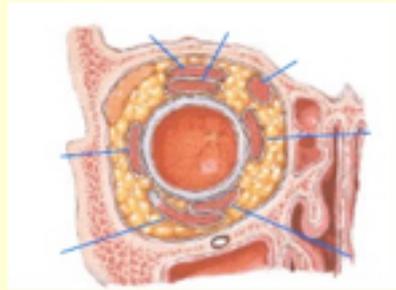
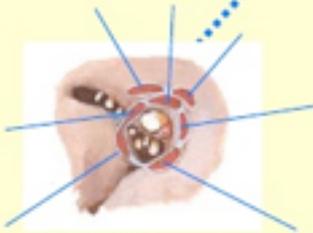
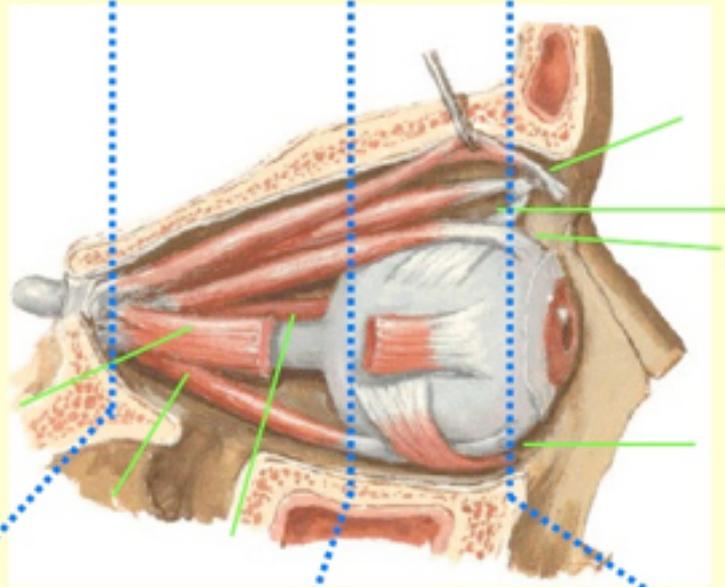
# EKSTRAOKÜLER ADELELER

- ALT OBLİK DIŞINDA KASLARIN HEPSİ ORBİTA TEPESİNDEN KÖKEN ALIR



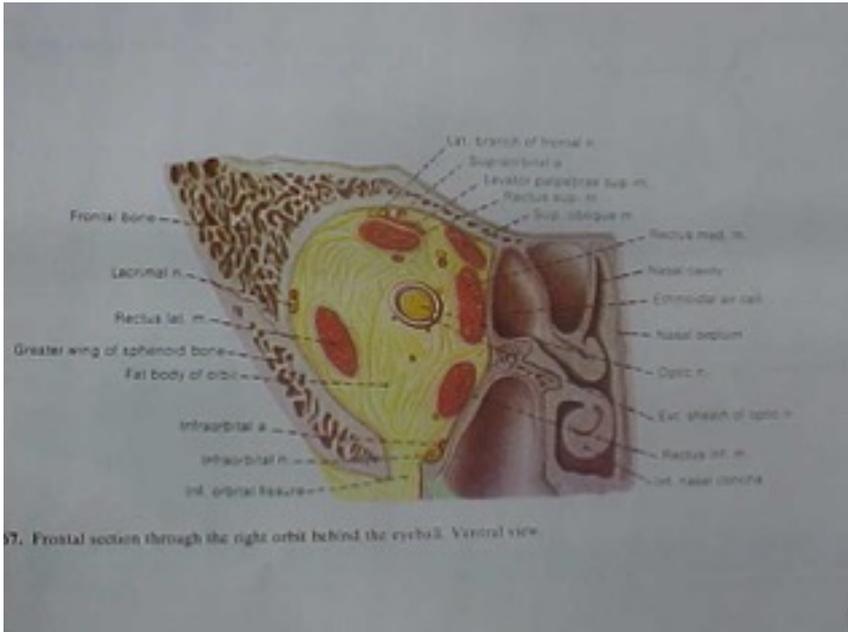
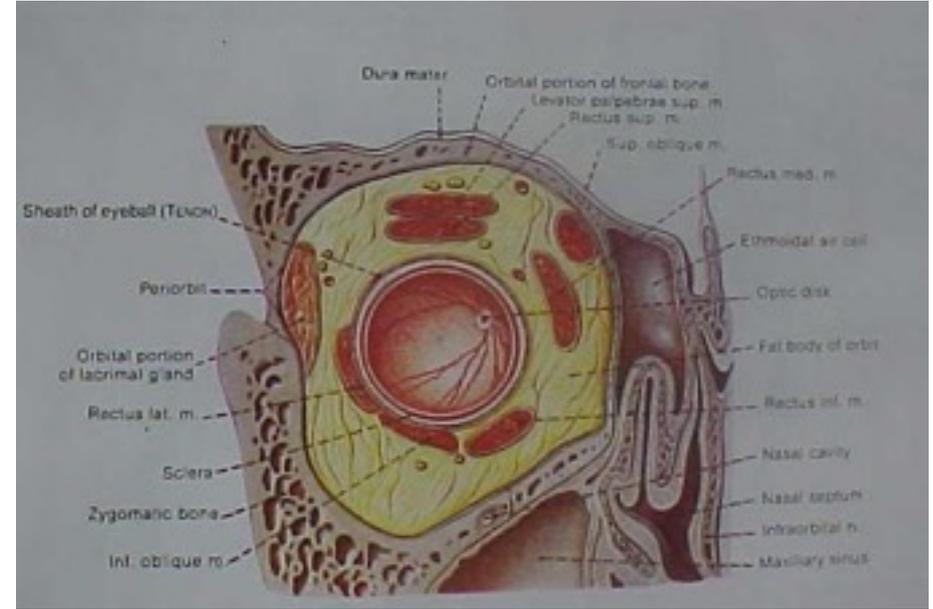


# ORBİTAL İÇERİK



# EKSTRAOKÜLER ADELELER

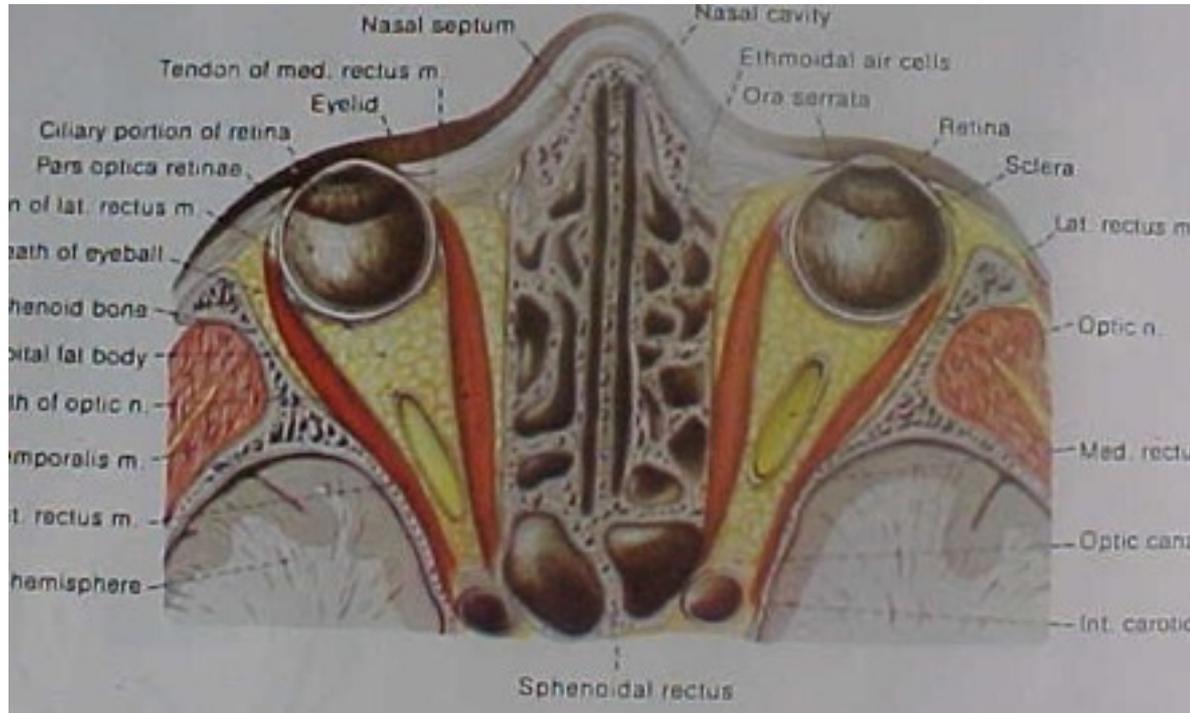
- GÖZÜN ÇEVRESİNİ SARARAK ÖNE DOĞRU UZANIRLAR



- SIKLERAYA YAPIŞIRLAR

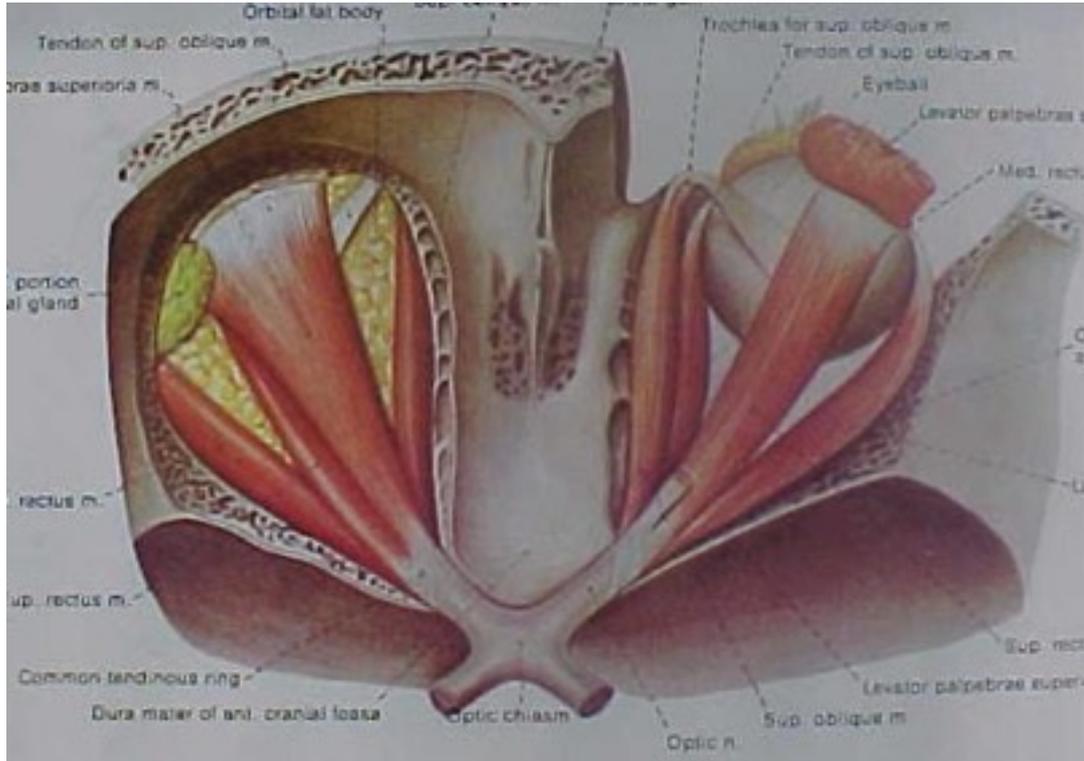
# EKSTRAOKÜLER ADELELER

- İKİ GÖZ BİRBİRİ İLE KOORDİNE OLARAK HAREKET EDER



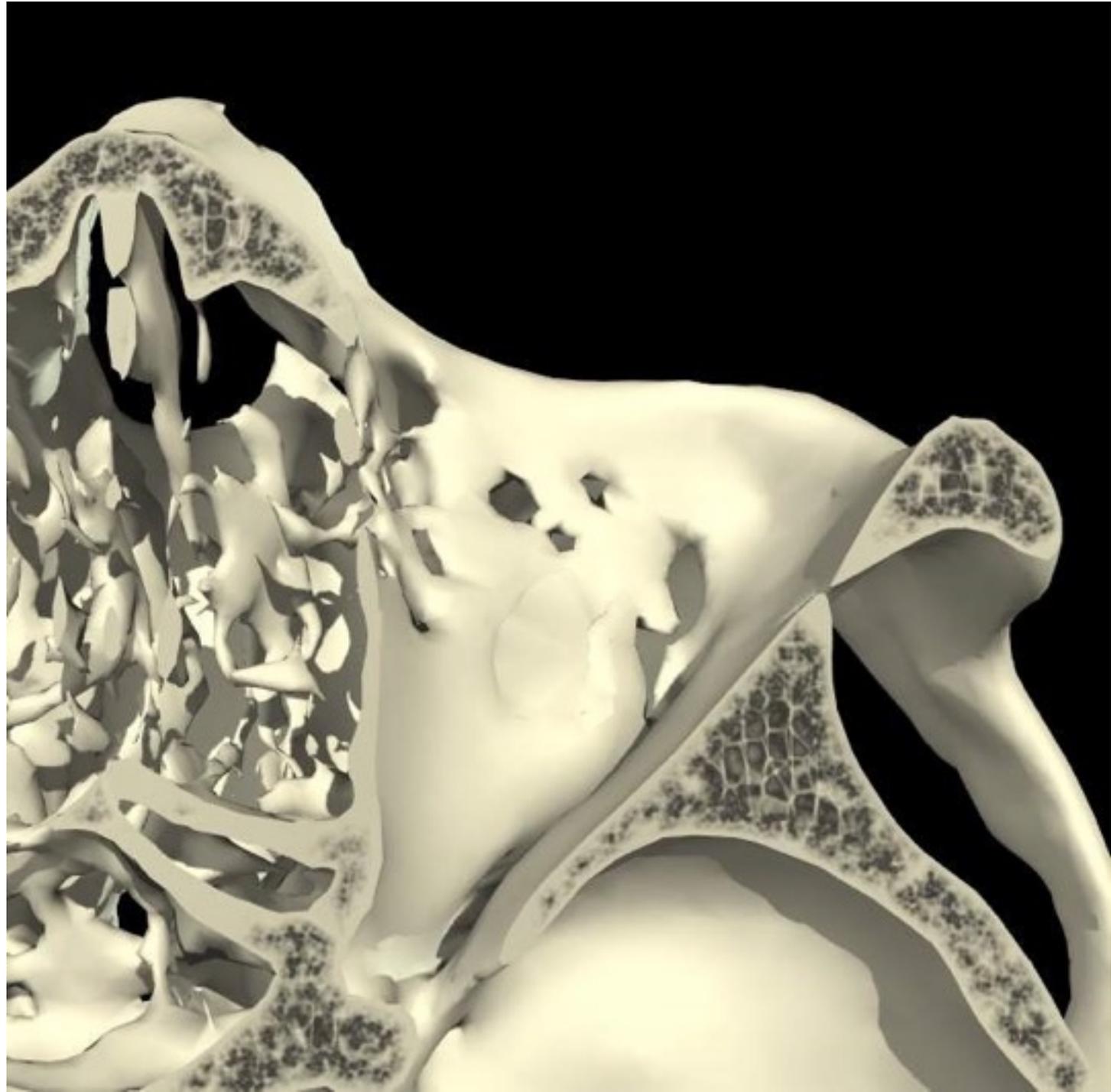
# EKSTRAOKÜLER ADELELER

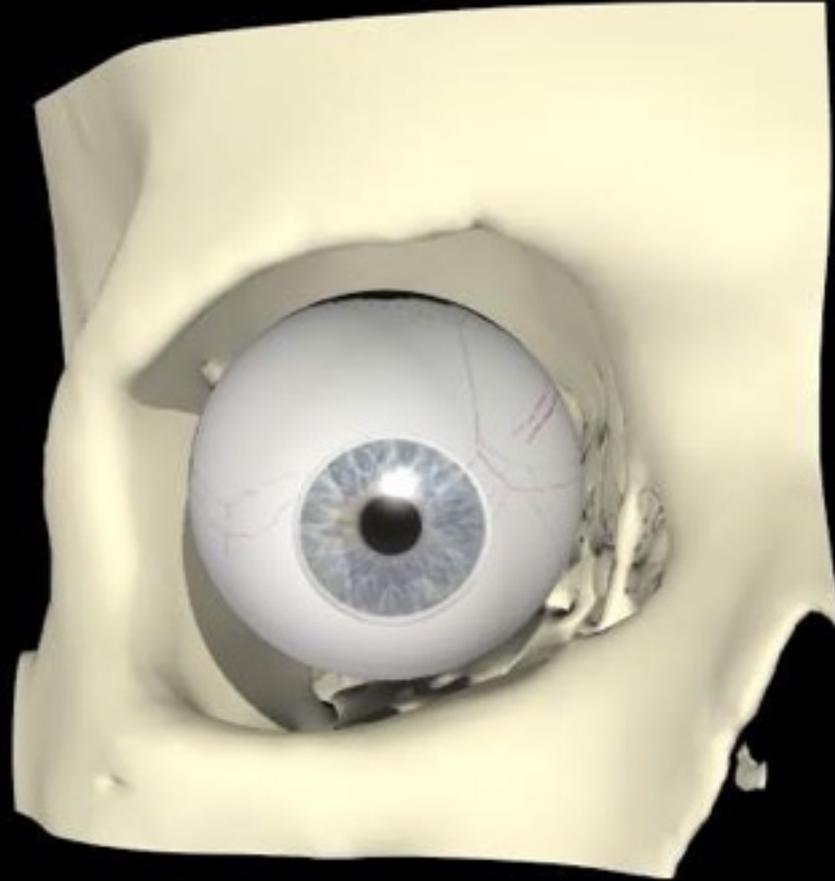
- KOORDİNASYONUN BOZULMASI ŞAŞILIĞA NEDEN OLUR

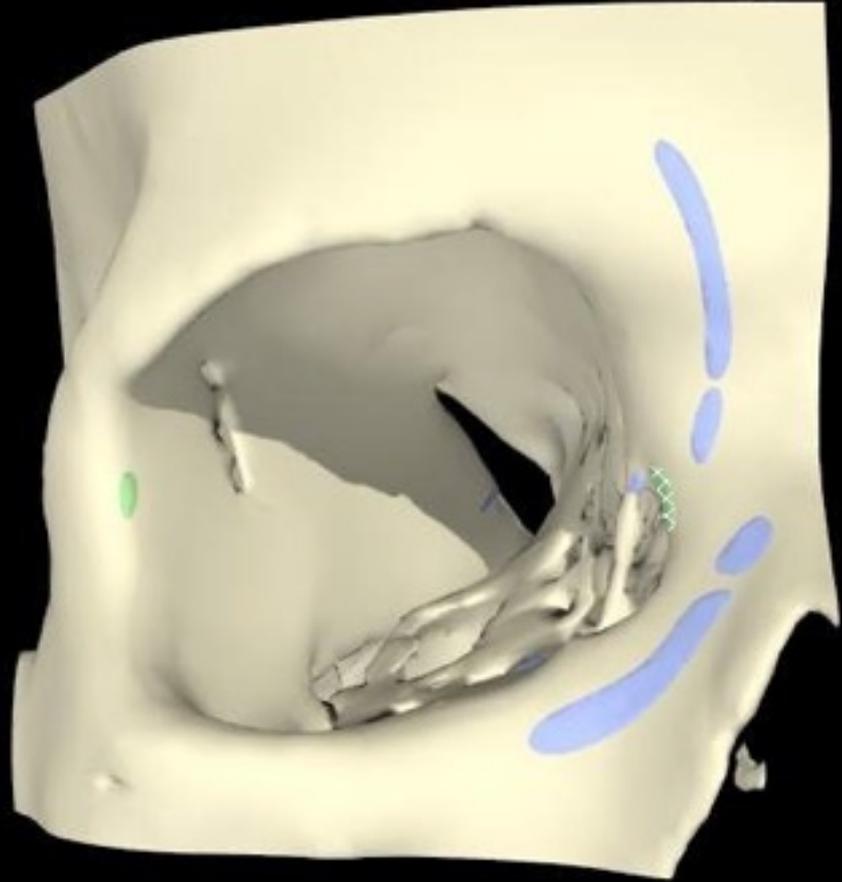


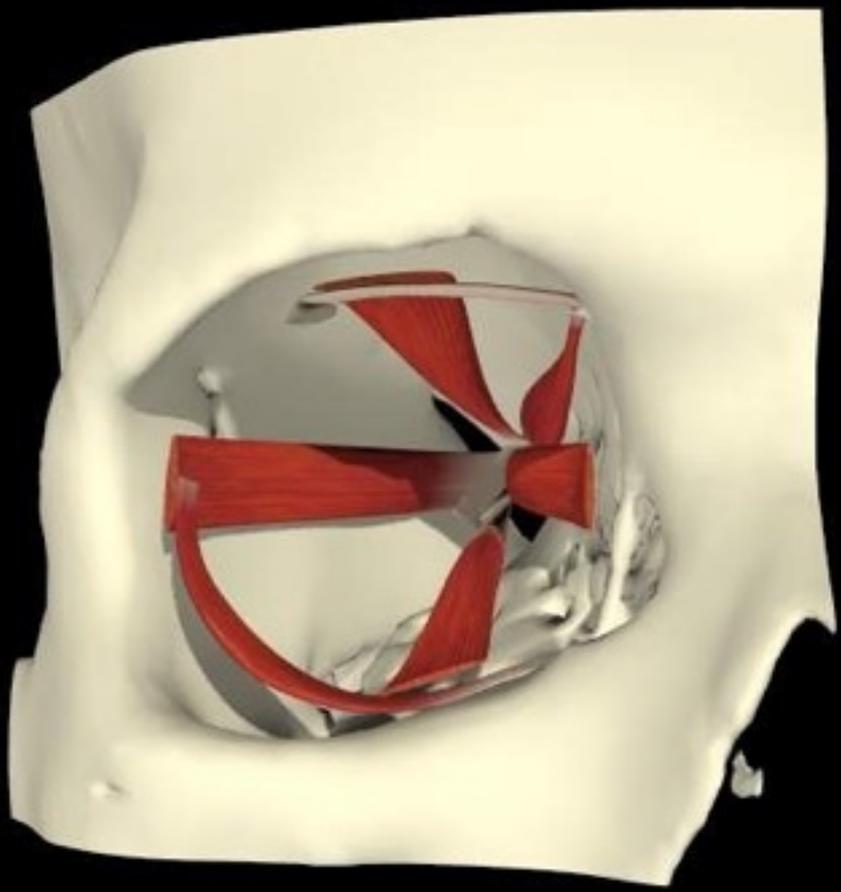
# Göz hareketleri

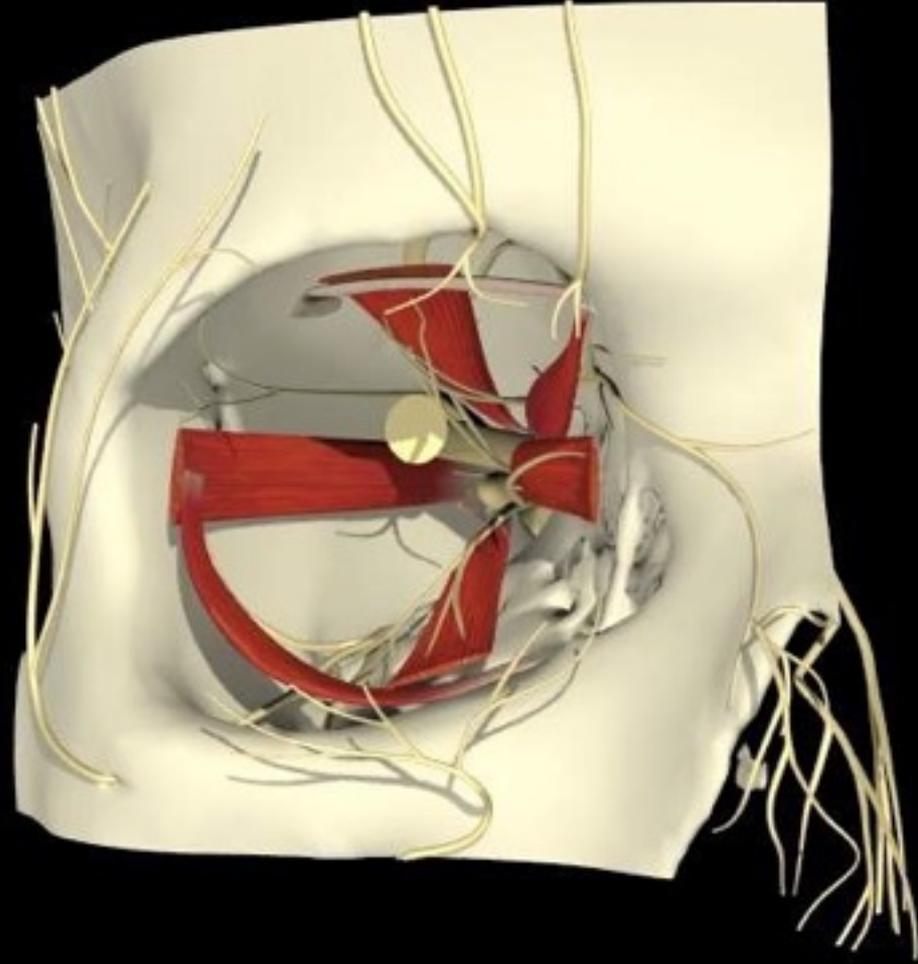
- Duksiyon: tek gözün hareketi
  - Adduksiyon-içe bakış
  - Abduksiyon-dışa bakış
- Versiyon: iki gözün aynı yöne hareketi
  - Levoversiyon –sola bakış
  - Dextroversiyon-sağa bakış
- Verjans: iki gözün ters yöne hareketi
  - Konverjans-her iki gözün içe bakması
  - Diverjans-her iki gözün dışa bakması

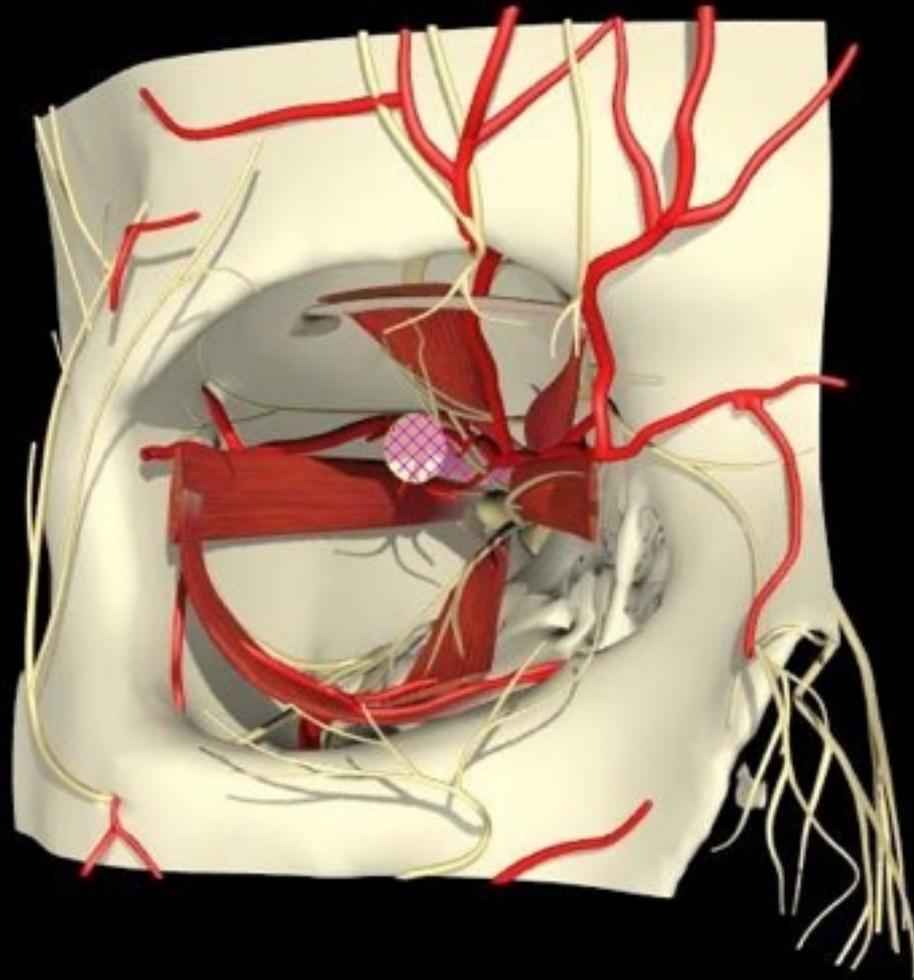


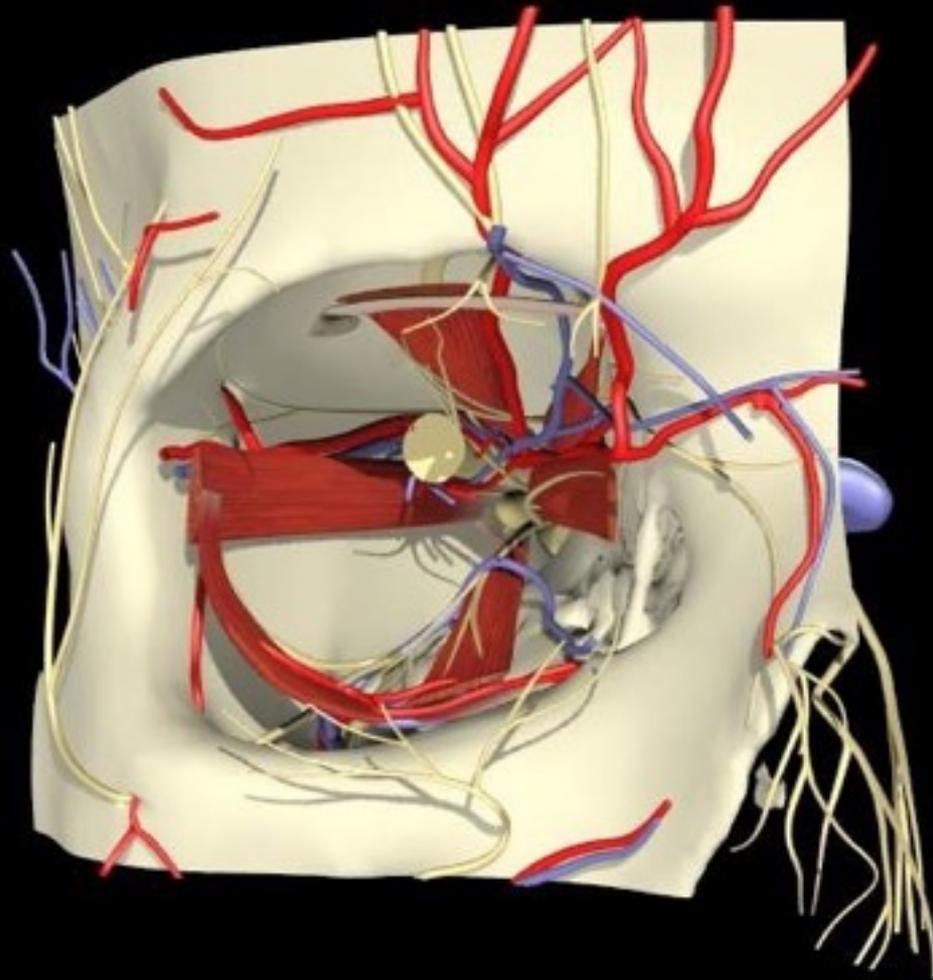


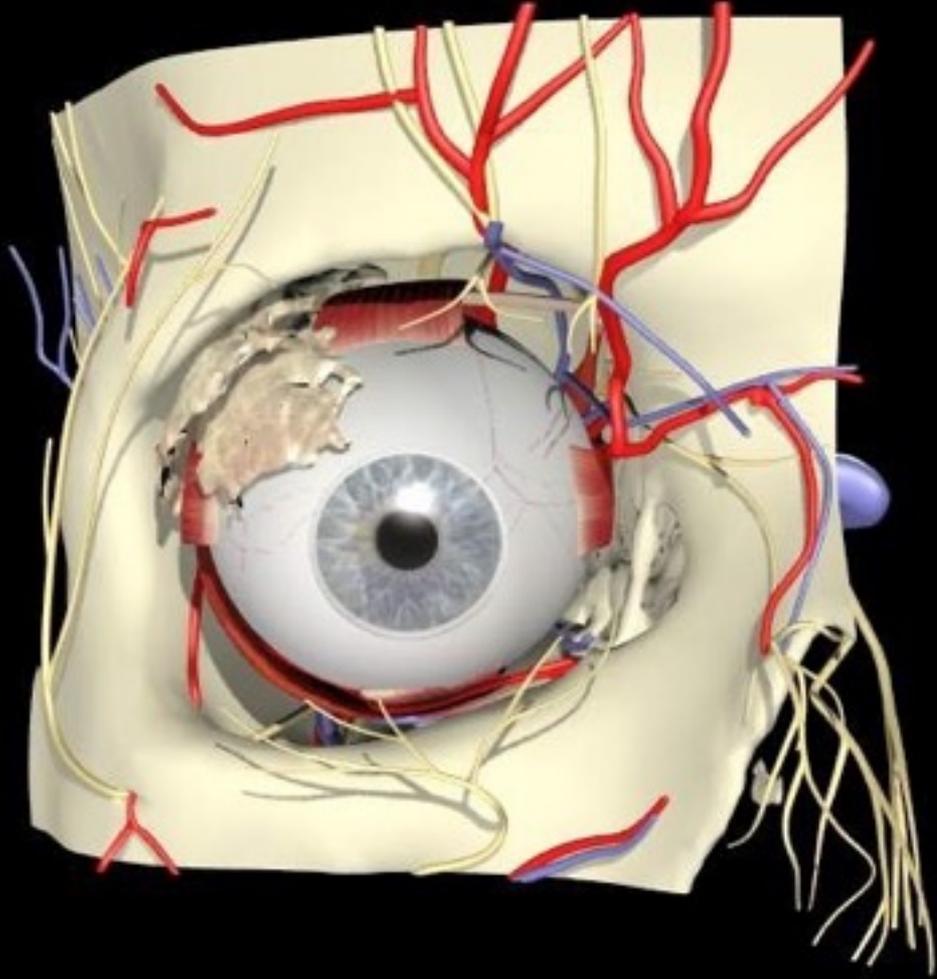


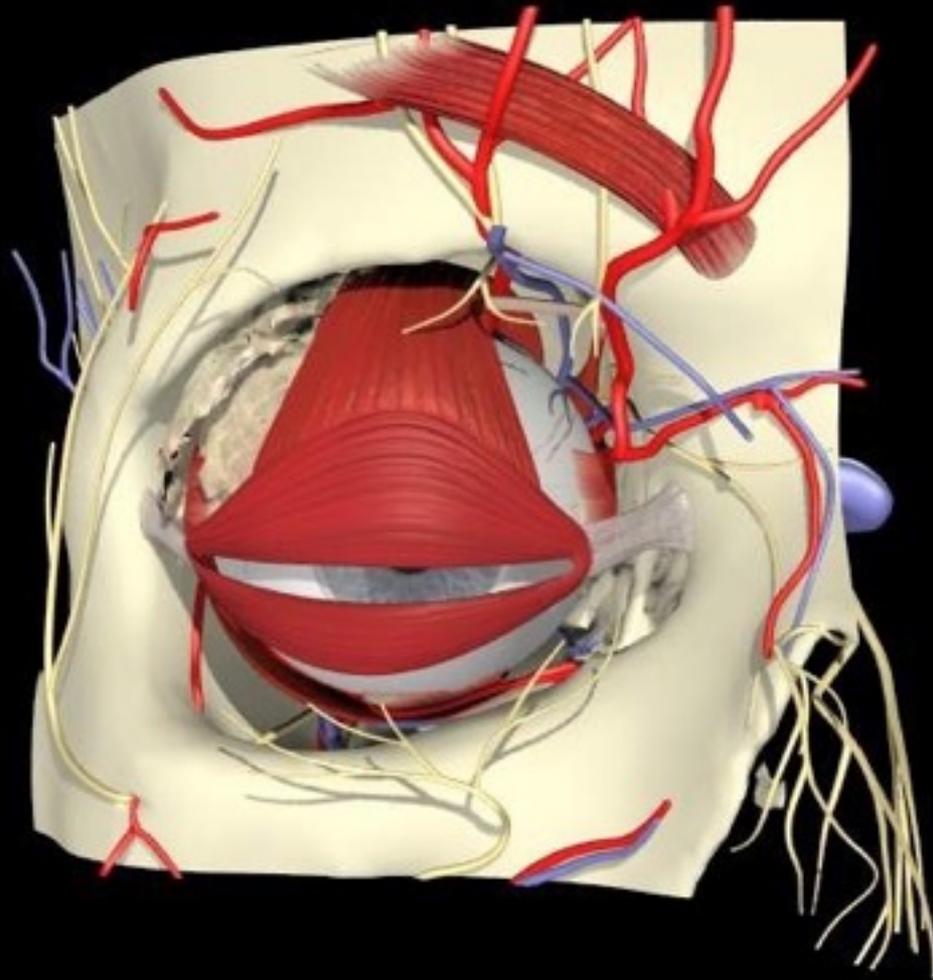


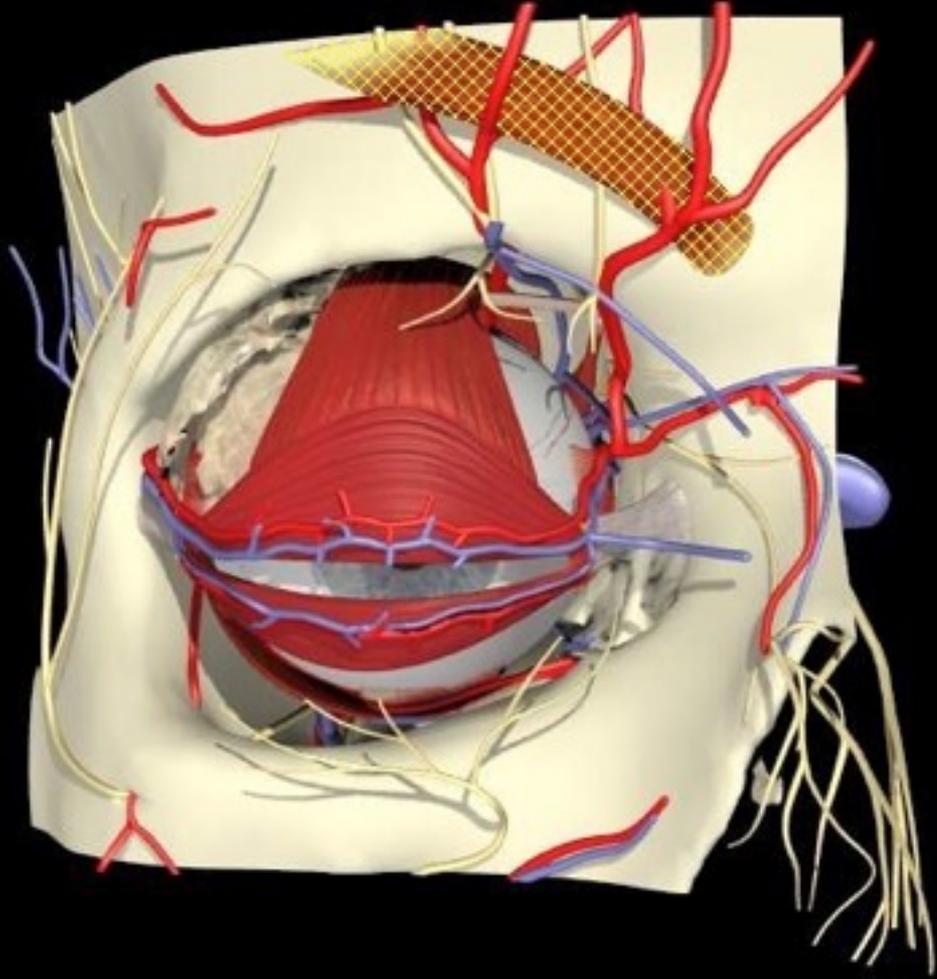


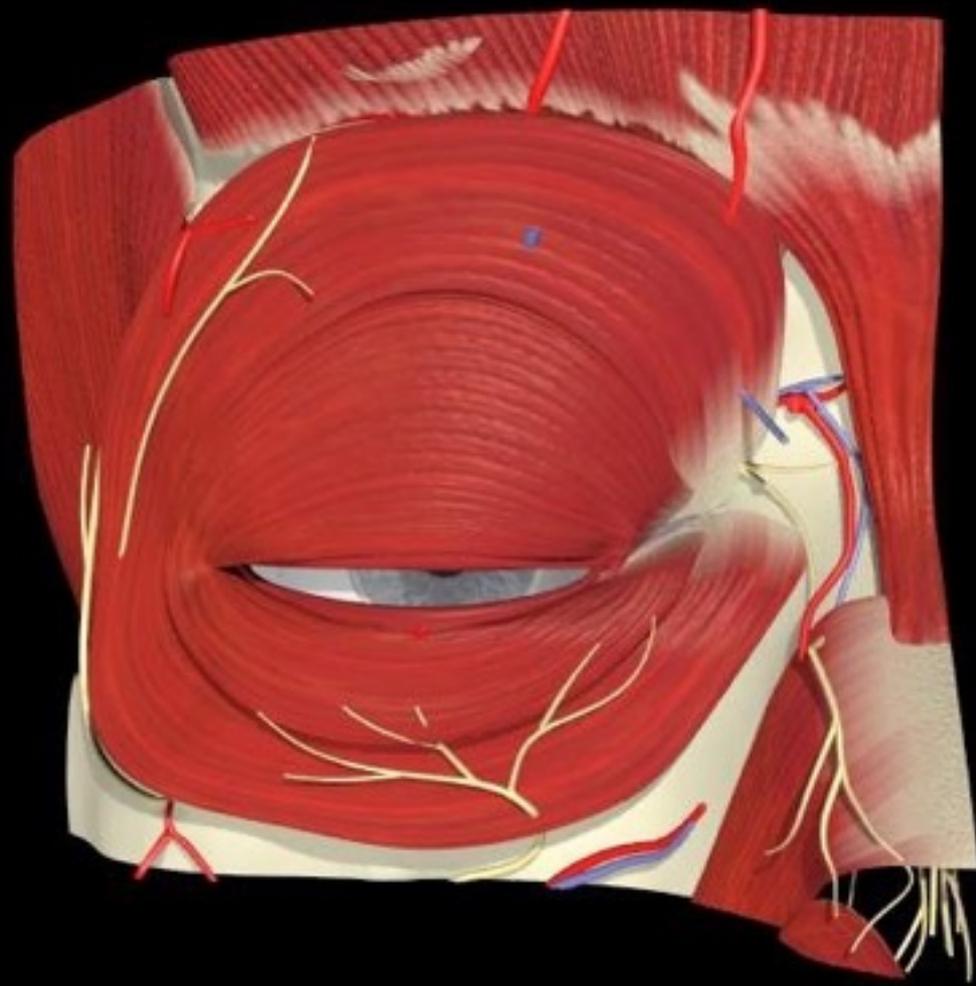


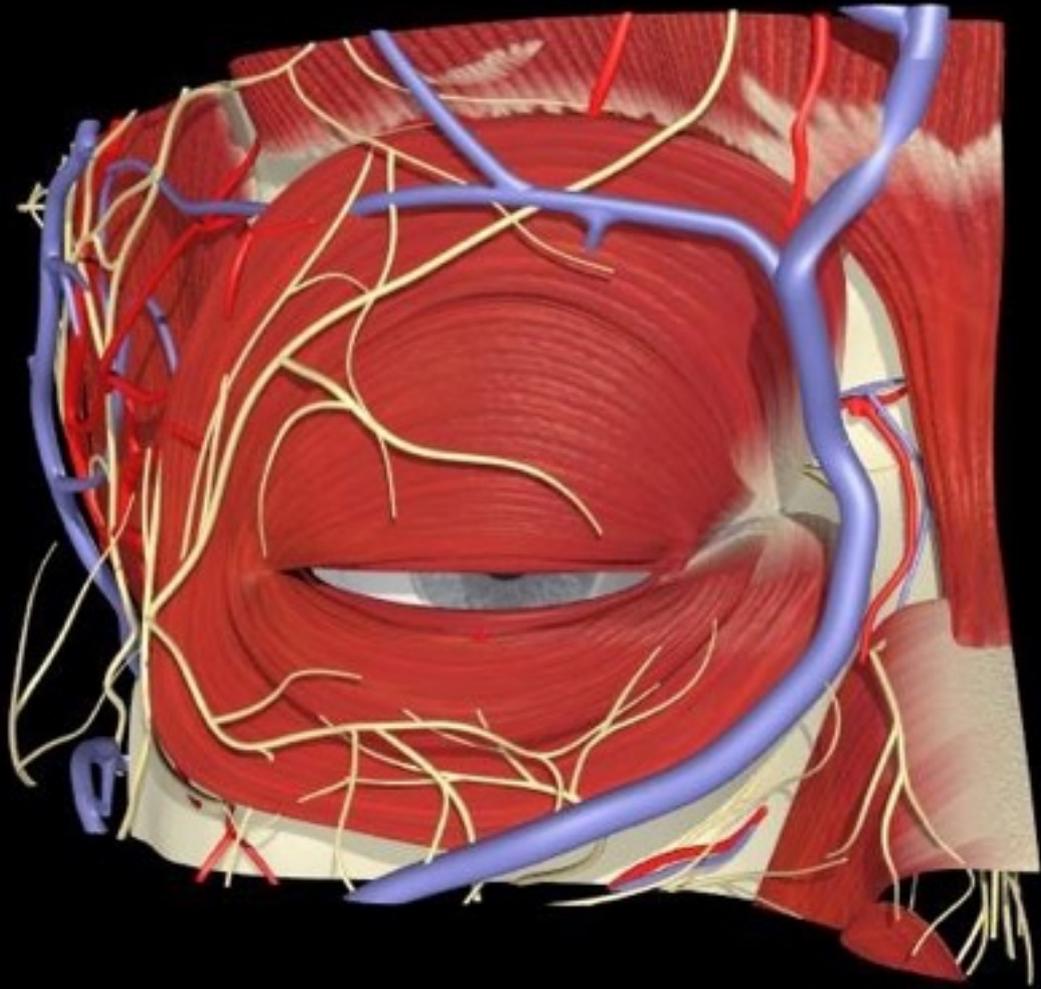








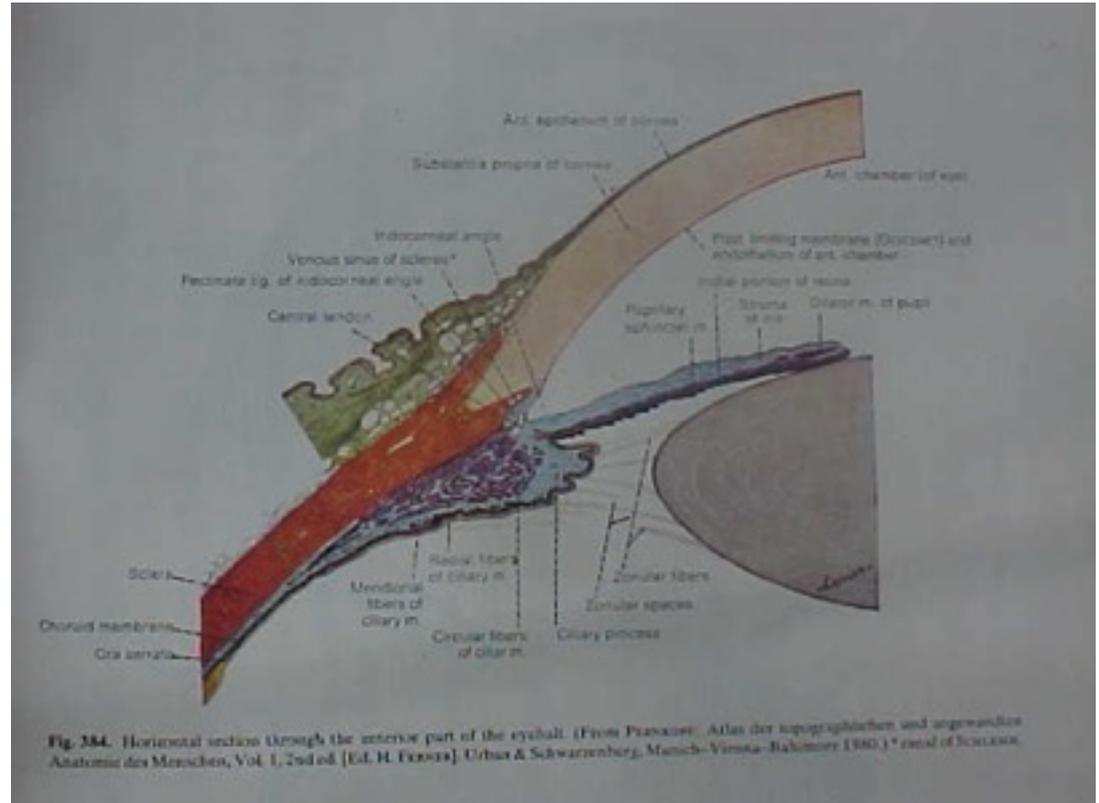






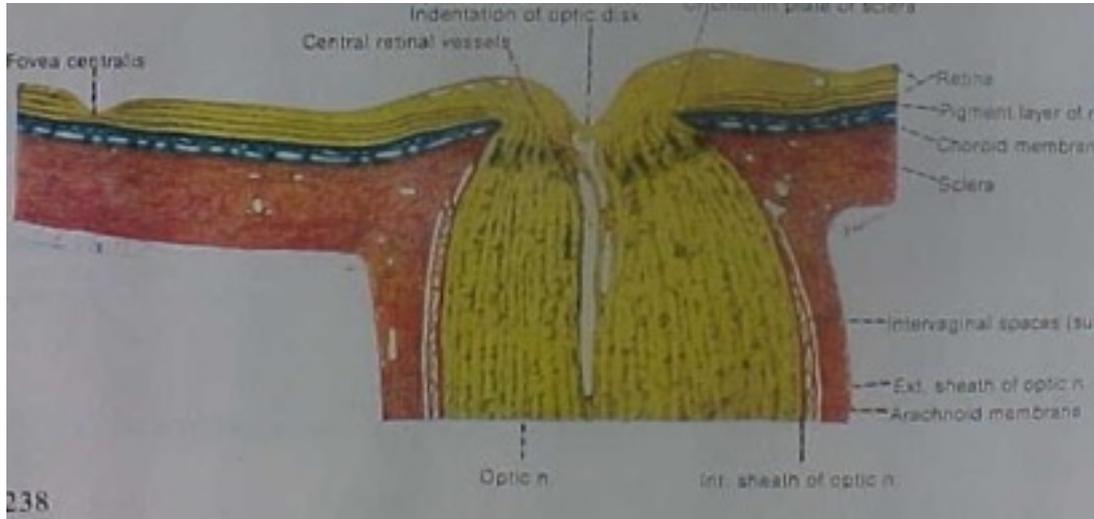
# FİBRÖZ TABAKA

- ÖNDE KORNEA, ARKADA SIKLERADAN OLUŞUR
- KORNEA SAYDAMDIR IŞIĞI GEÇİRİR
- SIKLERA OPAKTIR IŞIĞI GEÇİRMEZ



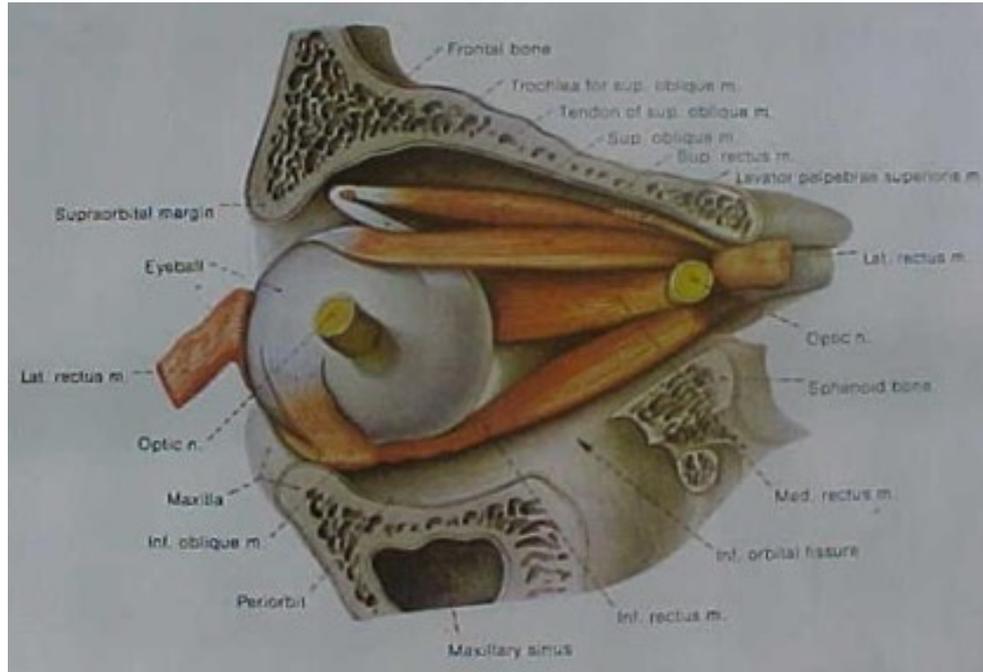
# FİBRÖZ TABAKA

- SIKLARA BEYAZDIR GÖZÜN ŞEKLİNİ VEREN DOKUDUR
- ARKADA OPTİK SİNİRİN ÇIKTIĞI OPTİK KANALI VARDIR



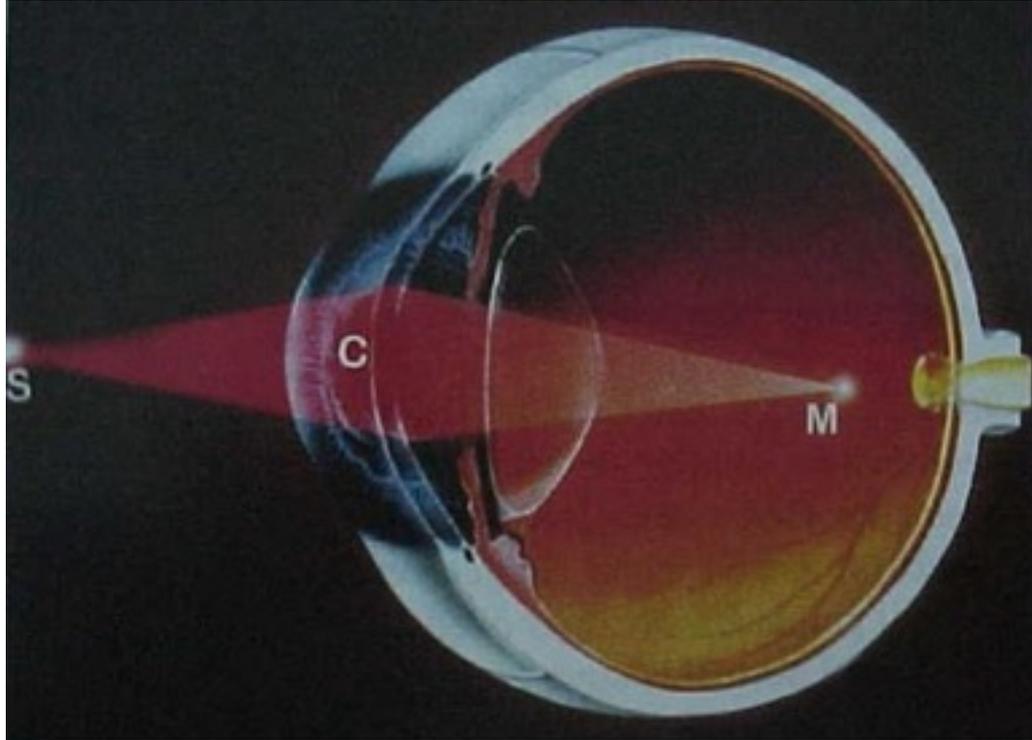
# FİBRÖZ TABAKA

- SIKLARA EKSTRAOKÜLER ADELELERİN GÖZE YAPIŞTIĞI YERDİR



# FİBRÖZ TABAKA

- KORNEA GÖZ KÜRESİNİN IŞIĞI KIRAN EN ÖNDEKİ SAYDAM TABAKASIDIR

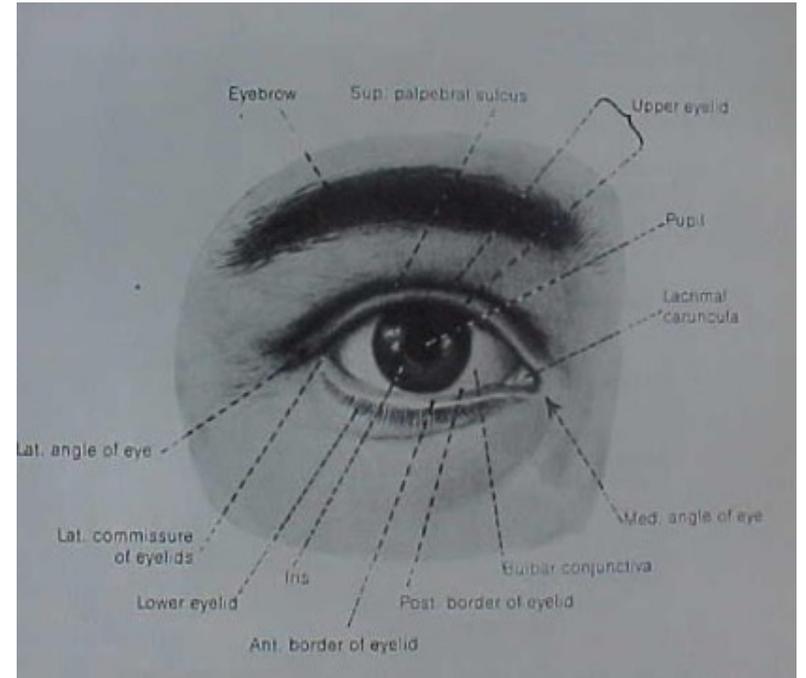


# FİBRÖZ TABAKA

- KORNEA SAYDAMLIĞI İÇERDİĞİ LİFLERİN PARALELLİĞİNE VE SU İÇERİĞİNDEKİ HASSAS DENGELERE BAĞLIDIR. AYRICA İÇERİSİNDE DAMAR VE SİNİR OLMAMASI GEÇİRGENLİĞİ AÇISINDAN ÖNEMLİDİR.
- KORNEA BESLENMESİNİ GÖZYAŞI VE HÜMÖR AKÖZDEN SAĞLAR

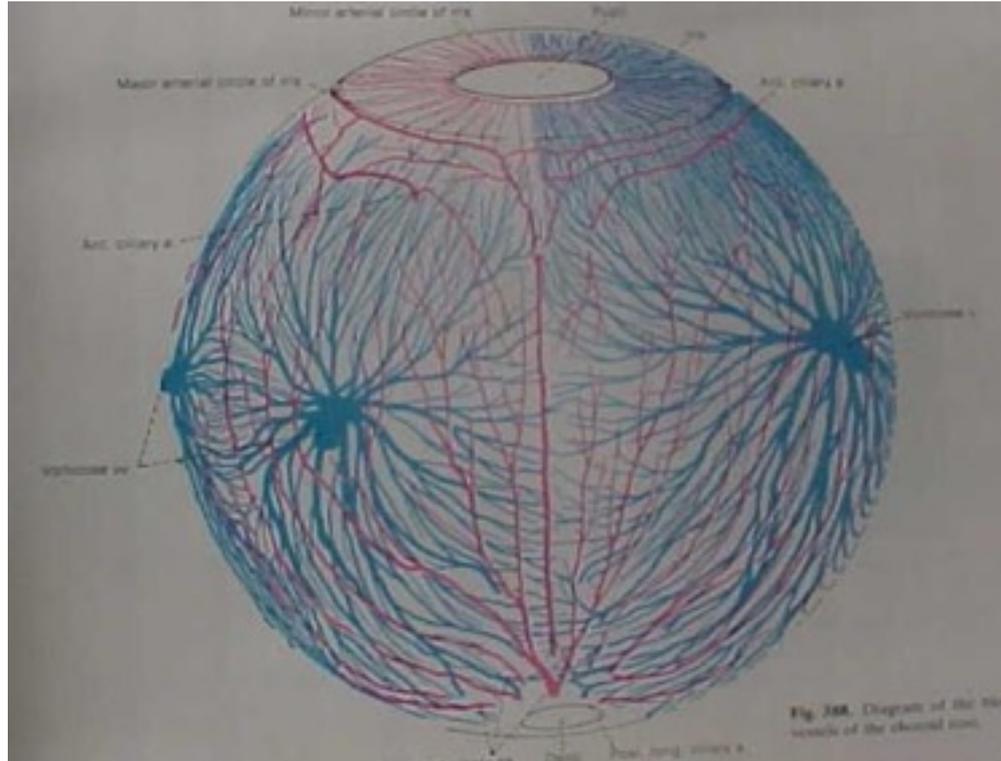
# FİBRÖZ TABAKA

- KORNEA VE SIKLERANIN BİRLEŞTİĞİ YER LİMBUS'tur
- LİMBUS KORNEAYI 360 DERECE ÇEVRELER
- LİMBUS SIKLERANIN ÖN SINIRI KORNEANIN İSE ARKA SINIRIDIR



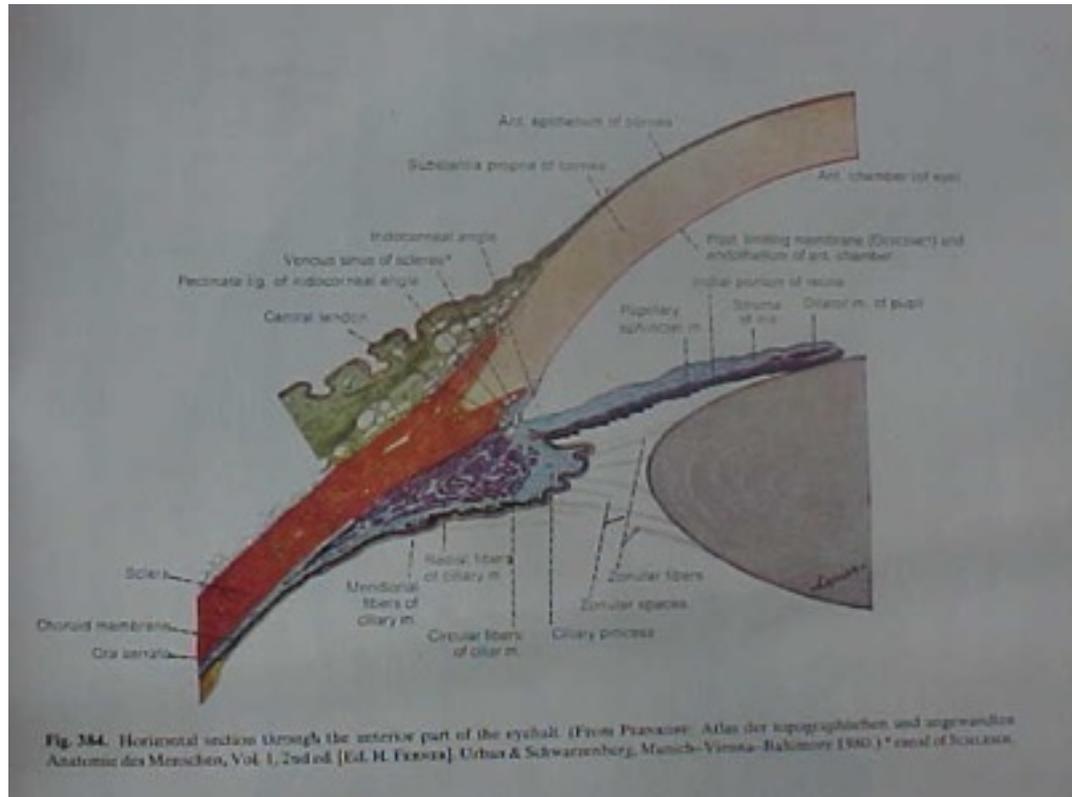
# DAMARSAI TABAKA

- UVEA ÜÇ KISIMDAN OLUŐUR



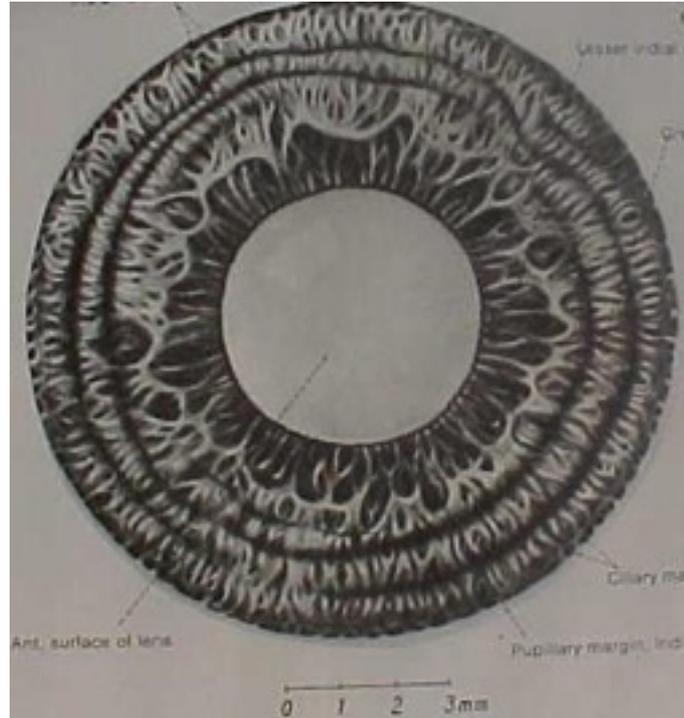
# DAMARSAL TABAKA

- İRİS ÖNDEKİ KISIMDIR
- GÖZÜN RENGİNİ VEREN TABAKADIR



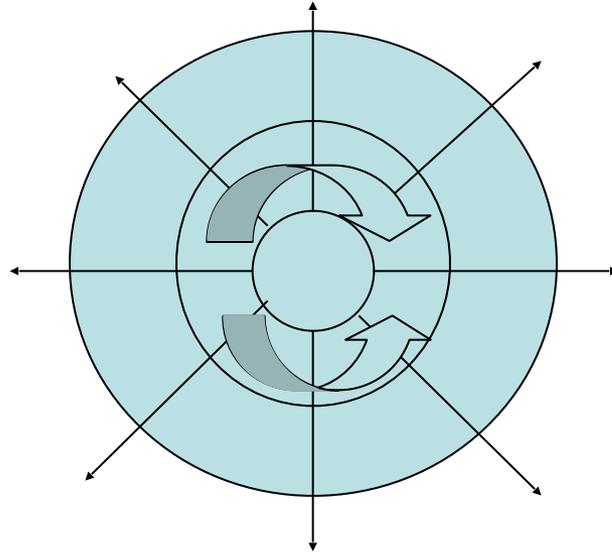
# DAMARSAI TABAKA

- PUPİLLA BİR HIÇTİR (2-6 mm)
- İRİSİN ORTASINDAKİ BOŞLUKTUR



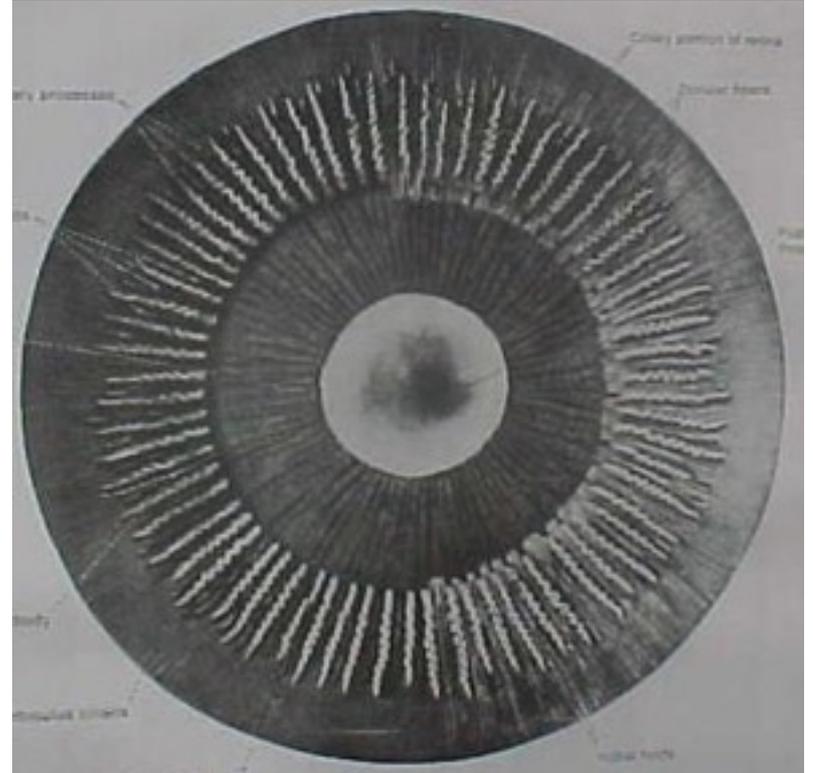
# DAMARSAL TABAKA

- HER İKİ GÖZÜN PUPİLLASI EŞİT OLMALIDIR
- PUPİLLA BÜYÜKLÜĞÜ İKİ TİP KAS TARAFINDAN KONTROL EDİLİR



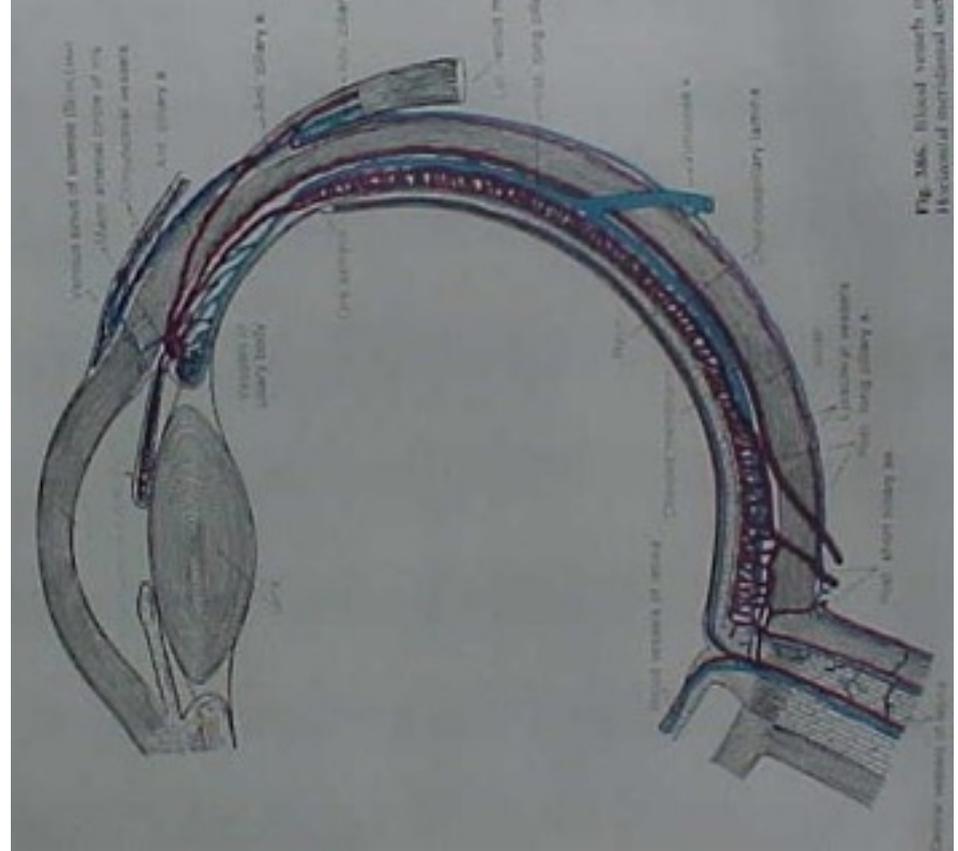
# DAMARSAL TABAKA

- DAMARSAL TABAKANIN İKİNCİ KISMI SİLİYER CİSİMDİR
  - AKOMODASYONU SAĞLAR
  - HÜMÖR AKÖZ ÜRETİMİNİ SAĞLAR



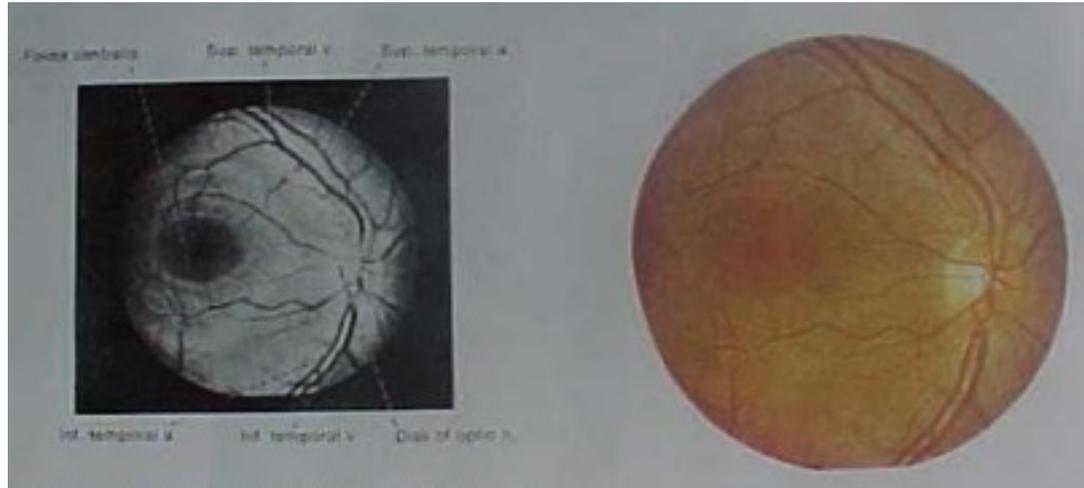
# DAMARSAL TABAKA

- EN ARKADAKI KISIM KOROİDEADIR
- RETİNANIN DIŞ TABAKALARININ BESLENMESİNİ SAĞLAR
- BOL PİGMENTLİ DAMARSAL AĞDAN OLUŞUR



# RETİNA

- GÖRSEL ALGILAMANIN OLDUĞU VE SİNİR HÜCRELERİNİN BULUNDUĞU EN İÇ TABAKADIR
- ÖNDE PARS PLANANIN BAŞLADIĞI YERE KADAR UZANIR



# RETINA

