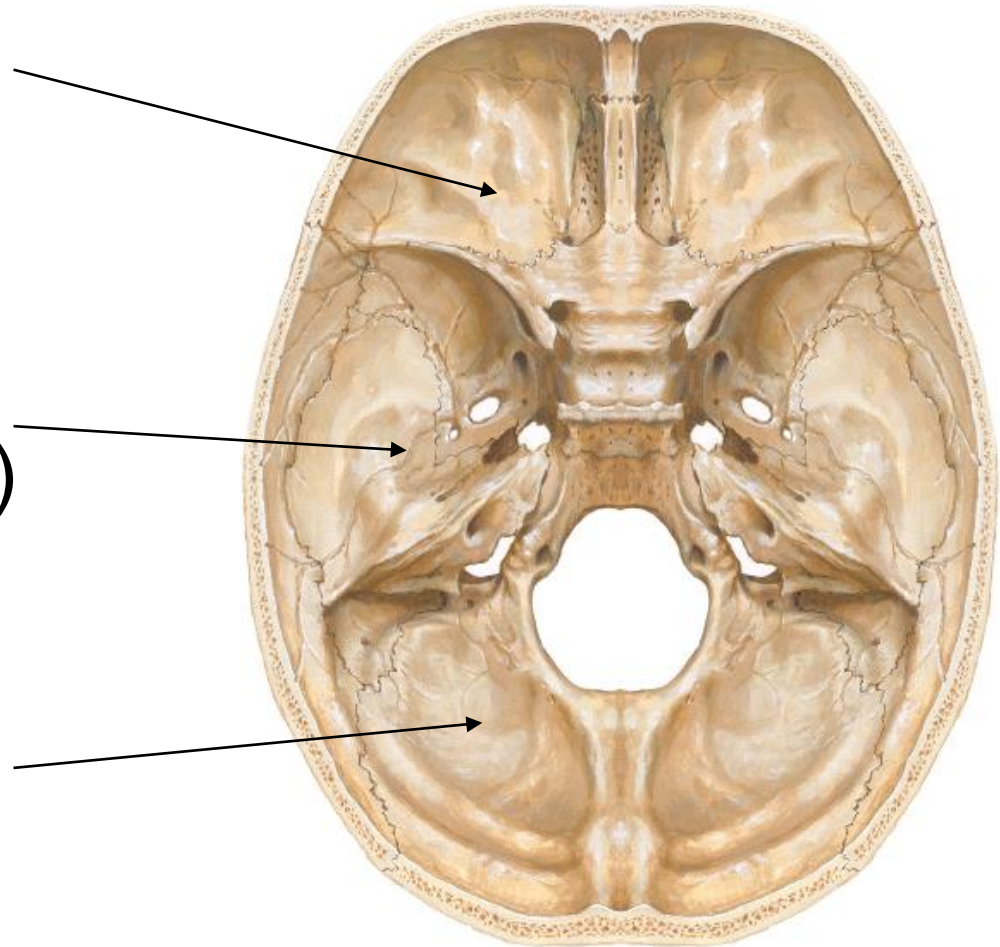


LEBKA

jámy

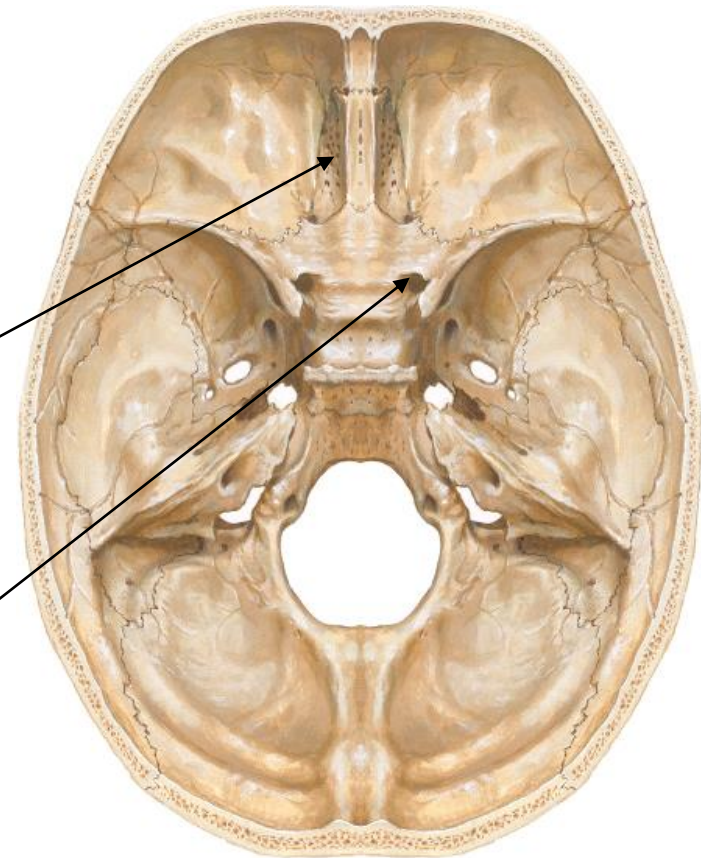
Basis cranii interna

- fossa cranii anterior
(přední lebeční jáma)
- fossa cranii media
(střední lebeční jáma)
- fossa cranii posterior
(zadní lebeční jáma)



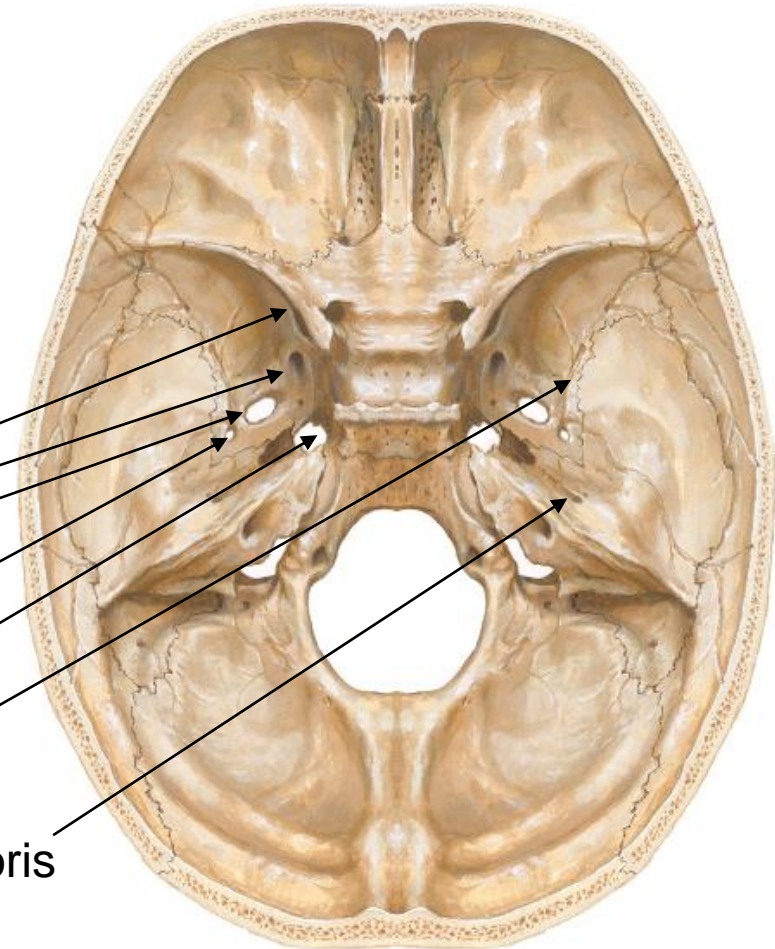
Fossa cranii anterior (přední lebeční jáma)

- hranice
 - přední obvod spodiny
 - zadní okraj alae minores ossis sphenoidalis a zadní okraj sulcus chiasmaticus
- útvary
 - partes orbitales ossis frontalis
 - crista galli
 - foramen caecum
- průchody
 - lamina cribrosa
 - foramina cribrosa
 - canalis orbitocranialis
 - canalis opticus



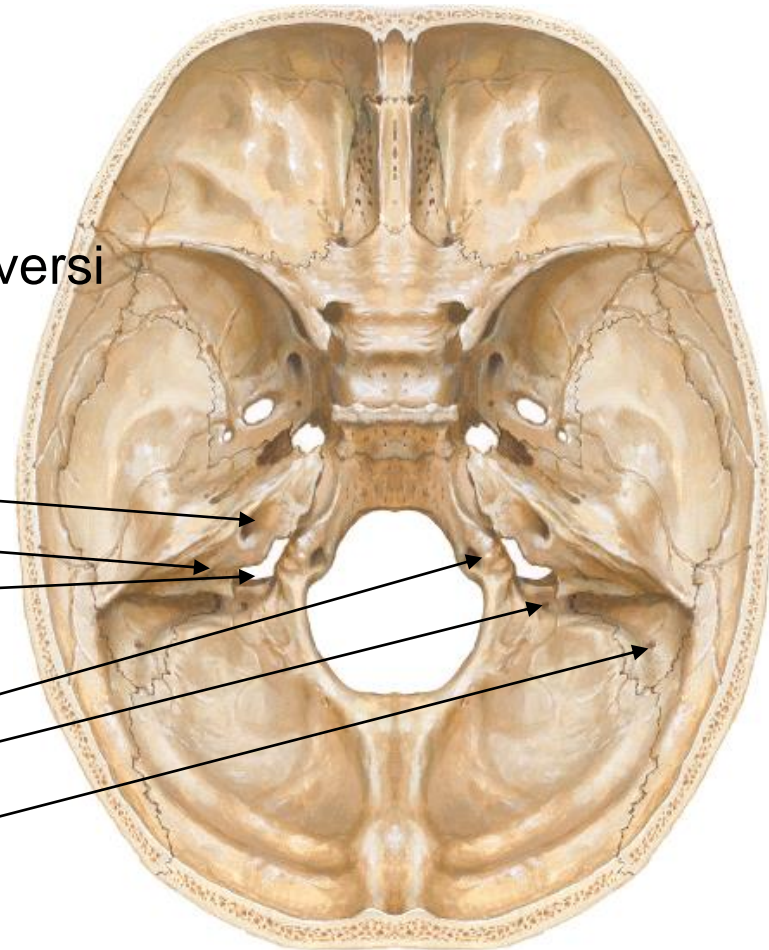
Fossa cranii media (střední lebeční jáma)

- hranice
 - zadní hranice fossa cranii anterior
 - dorsum sellae, processus clinoides posteriores, margo superior partis petrosae ossis temporalis
- útvary
 - fossa hypophysialis
 - sella turcica
 - sulcus caroticus
 - sulcus sinus petrosi superioris
 - impressio trigeminalis
 - processus clinoides posterior
 - synchondrosis sphenopetrosa
- průchody
 - fissura orbitalis superior
 - foramen rotundum, ovale, spinosum
 - foramen venosum, petrosum
 - foramen lacerum
 - sulci arteriae meningae mediae
 - hiatus canalis nervi petrosi majoris et minoris



Fossa cranii posterior (zadní lebeční jáma)

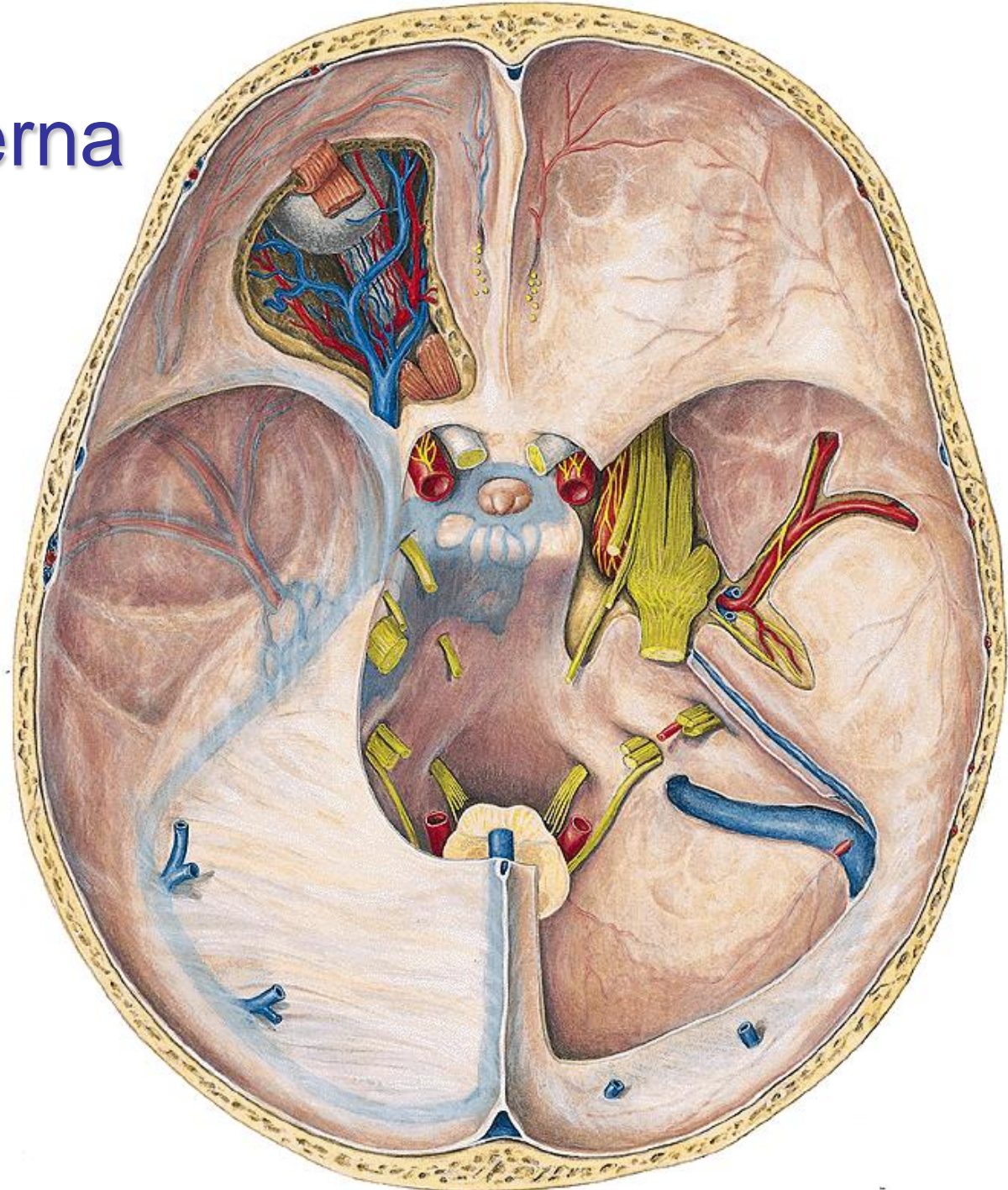
- hranice
 - zadní hranice fossa cranii media
 - laterálně a dozadu až ke obvodu spodiny
- útvary
 - synchondrosis petrooccipitalis
 - protuberantia occipitalis interna
 - eminentia cruciformis
 - sulcus sinus sagittalis superioris, transversus sigmoidei, petrosi superioris et inferioris
- průchody
 - porus acusticus internus
 - apertura externa canaliculi vestibuli
 - foramen jugulare
 - canaliculus mastoideus
 - foramen magnum
 - canalis nervi hypoglossi
 - canalis condylaris
 - foramen mastoideum



Basis cranii interna

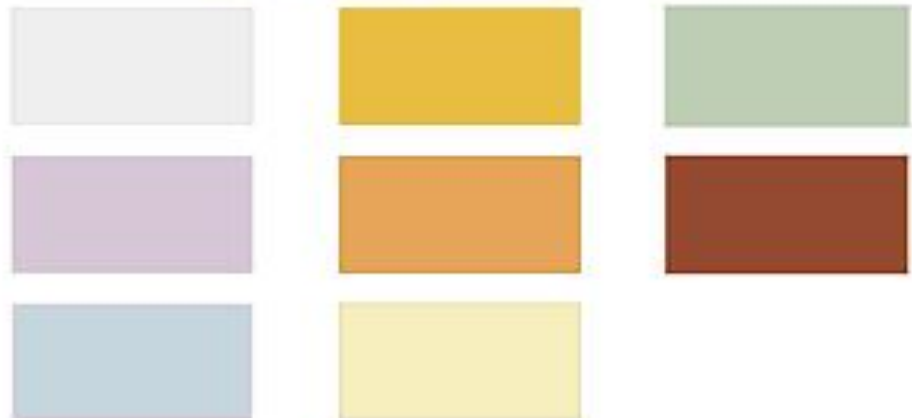
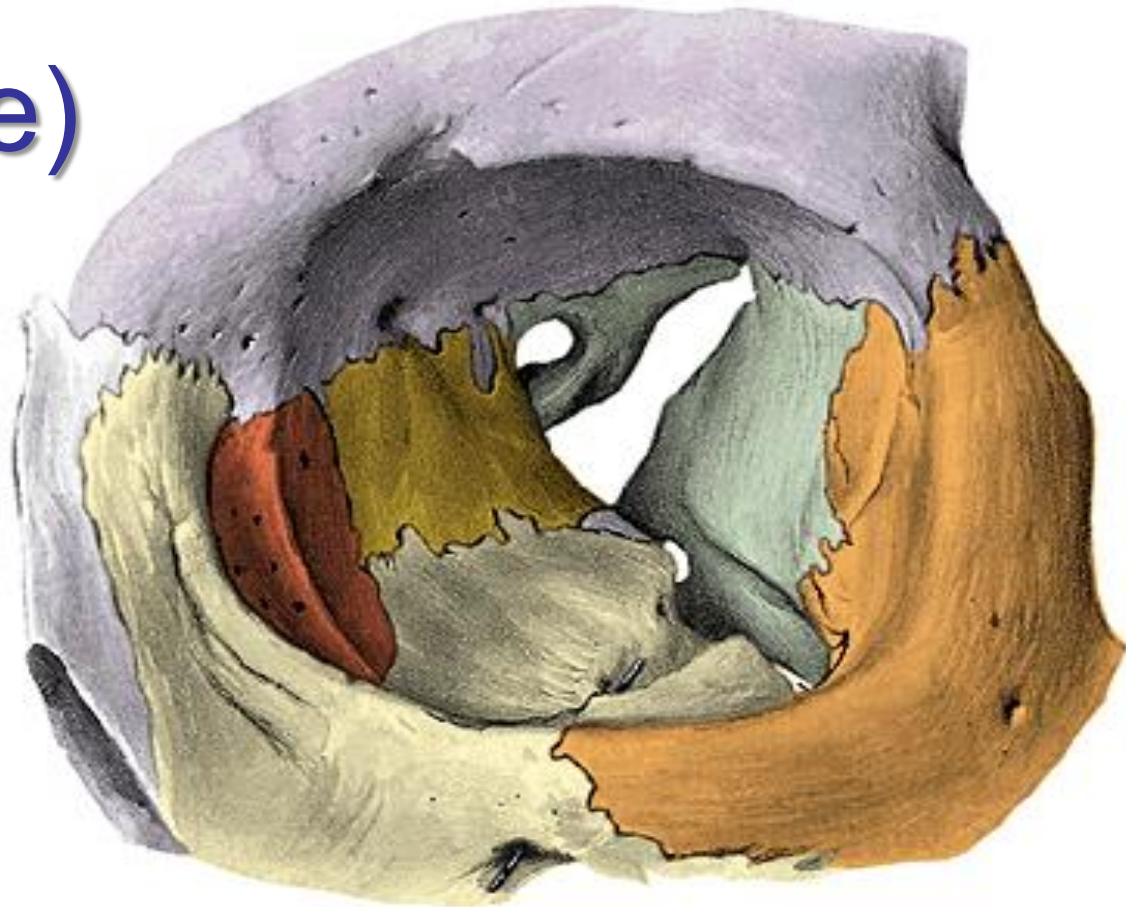
průchody

- mícha
- nervy
- tepny
- žíly (splavy)



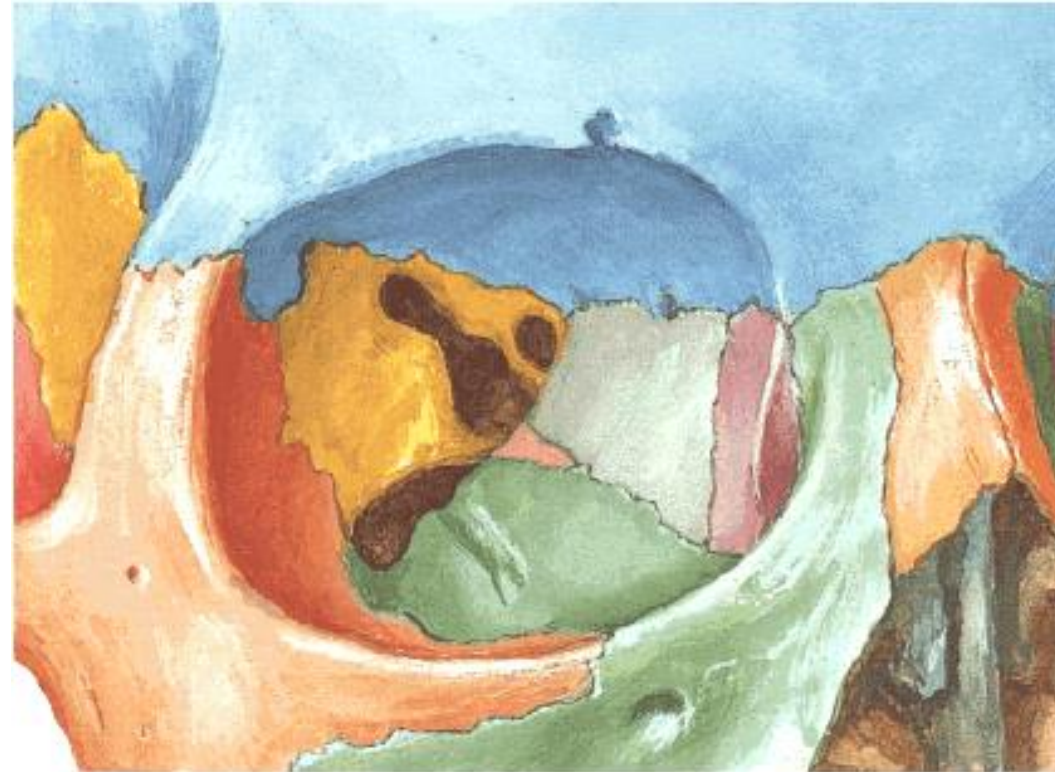
Orbita (Očnice)

- tvar 4-bokého jehlanu svrženého vzad
- aditus orbitae
- apex orbitae = canalis opticus
- 10 otvorů + obsah
- m. orbitalis *Mülleri* – hladký sval ve fissura orbitalis inferior
- obsah: oční koule, svaly, tukové těleso a přídatné orgány

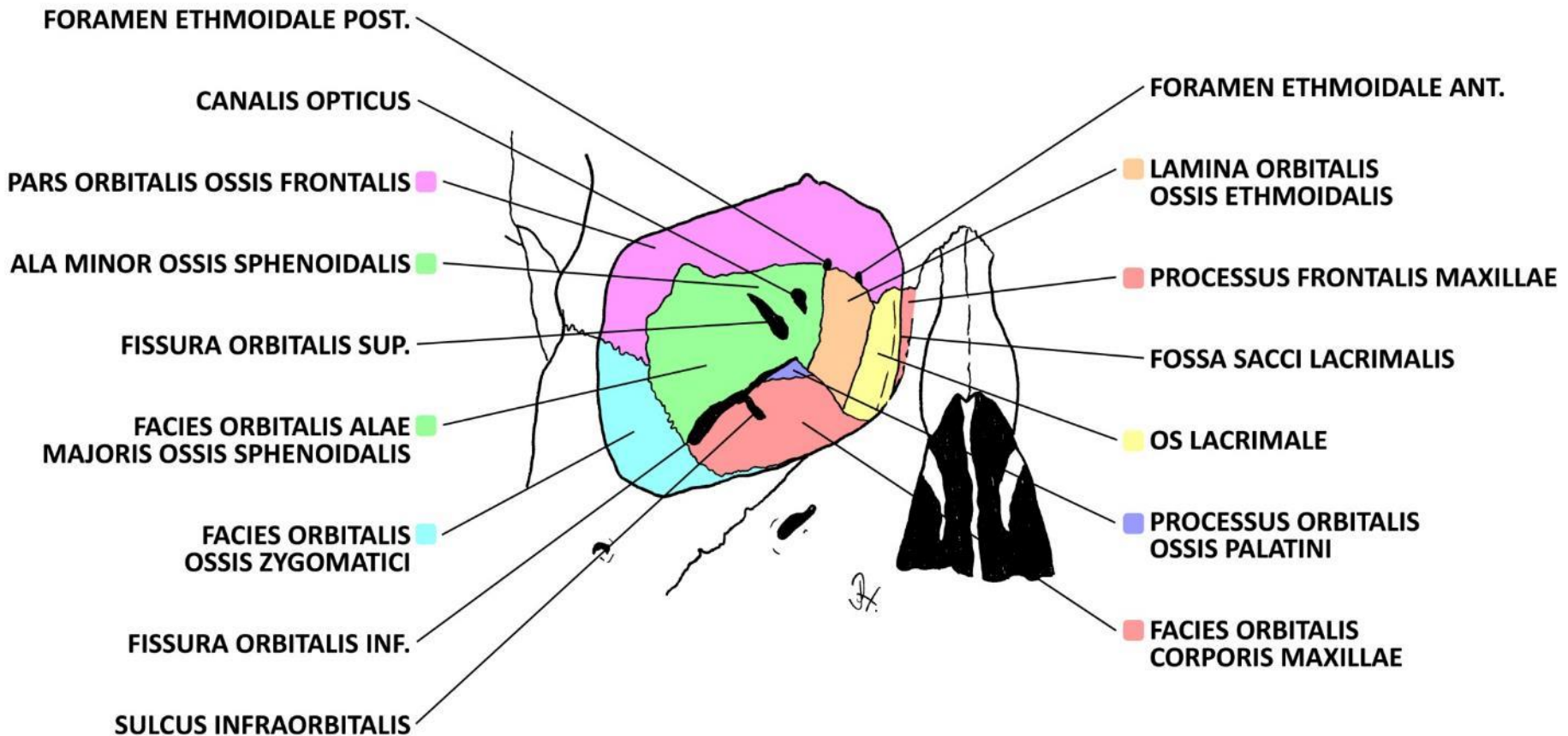


Orbita (Očnice) ohraničení

- **strop**
 - pars orbitalis ossis frontalis
 - ala minor ossis sphenoidalis
- **dno**
 - os zygomaticum
 - corpus maxillae
 - processus orbitalis ossis palatini
- **mediální stěna**
 - processus frontalis maxillae
 - os lacrimale
 - lamina orbitalis ossis ethmoidalis
 - ala minor ossis sphenoidalis
- **laterální stěna**
 - os zygomaticum
 - ala major ossis sphenoidalis

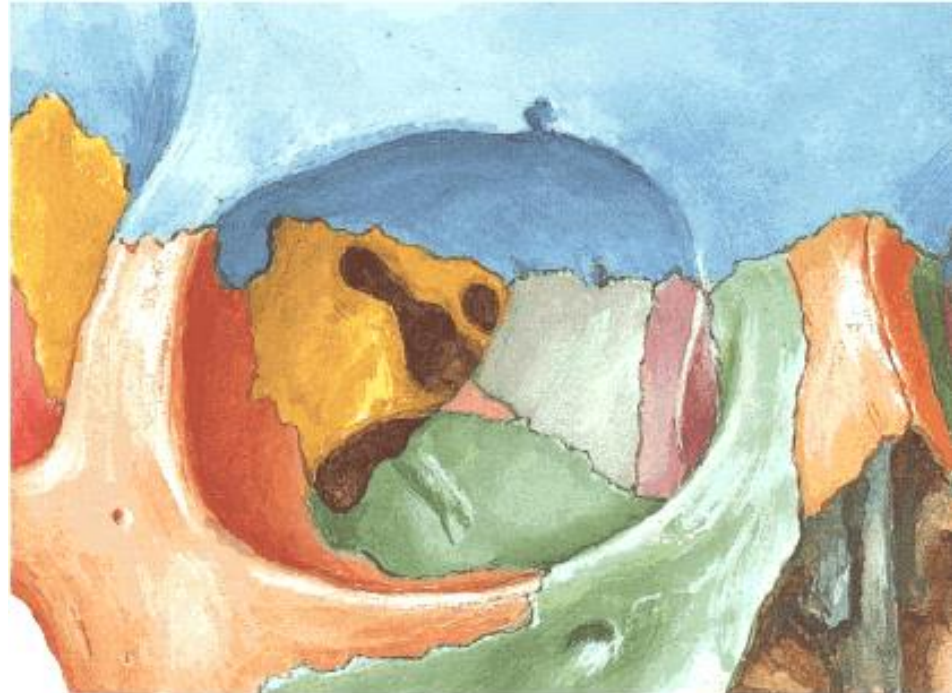


Orbita (Očnice) ohraničení a otvory



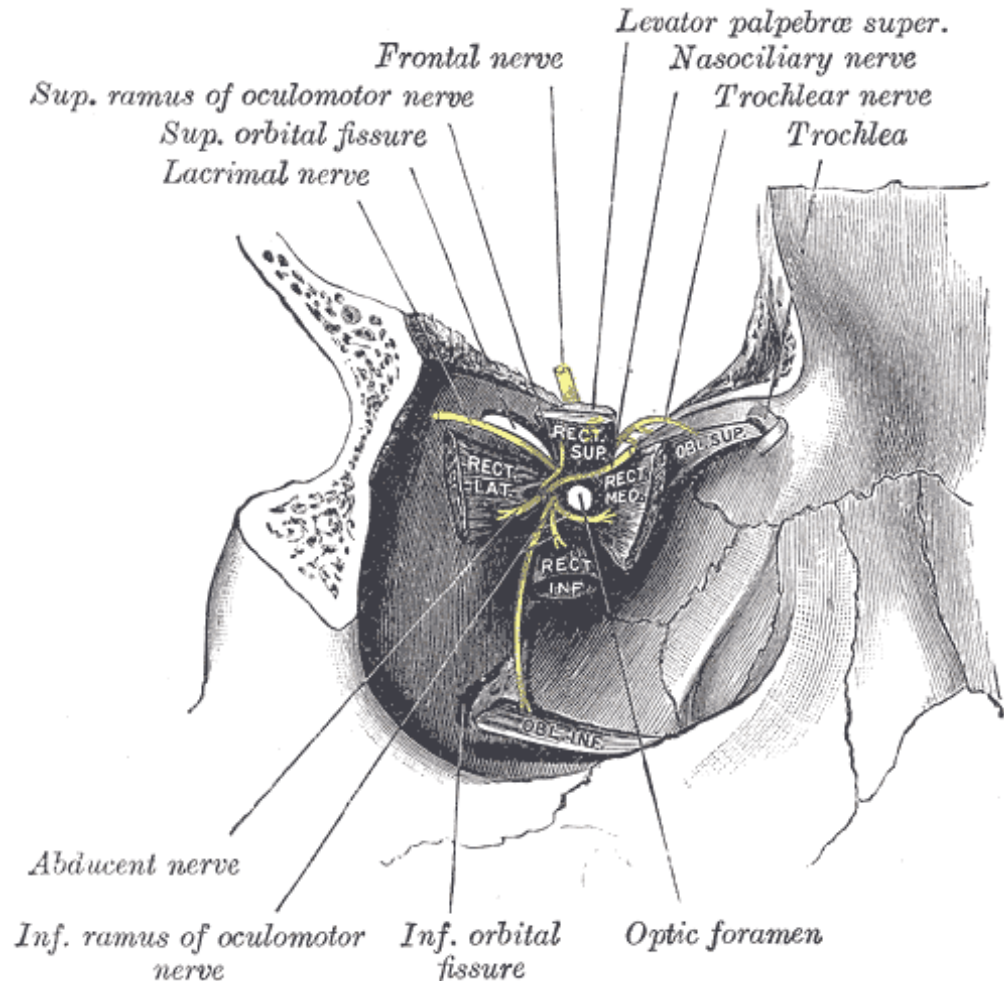
Orbita (Očnice) otvory a obsah

- aditus → apex
- otvory
 - canalis opticus
 - fissura orbitalis superior
 - fissura orbitalis inferior
 - foramen ethmoidale ant. +post.
 - sulcus + canalis infraorbitalis
 - foramen zygomaticoorbitale
 - incisura/foramen supraorbitalis/e
 - incisura/foramen frontalis/e (50 %)
 - canalis nasolacrimalis
- obsah:
 - bulbus oculi
 - mm. recti (4) et obliqui (2), m. levator palpebrae superioris
 - corpus adiposum orbitae
 - a. ophthalmica a její větve, a. infraorbitalis
 - v. ophthalmica sup. et inf. a jejich přítoky
 - n.III+IV+VI, n.V1. a jejich větve
 - ganglion ciliare
 - glandula et saccus lacrimalis



Fissura orbitalis superior (Horní očníková štěrbinina)

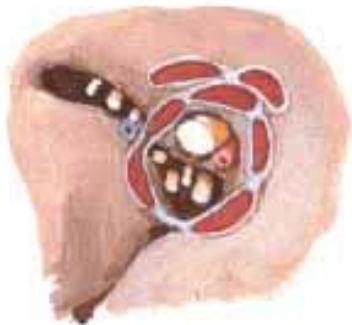
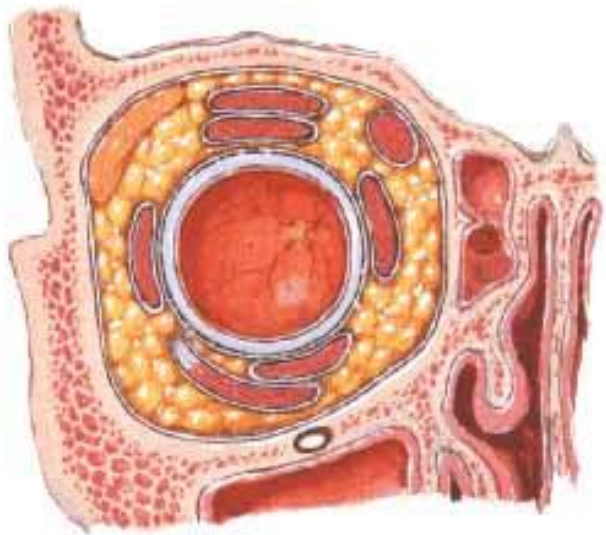
- n. oculomotorius
- n. trochlearis
- n. abducens
- n. nasociliaris
- n. lacrimalis
- n. frontalis
- v. ophthalmica sup.



Svaly očnice

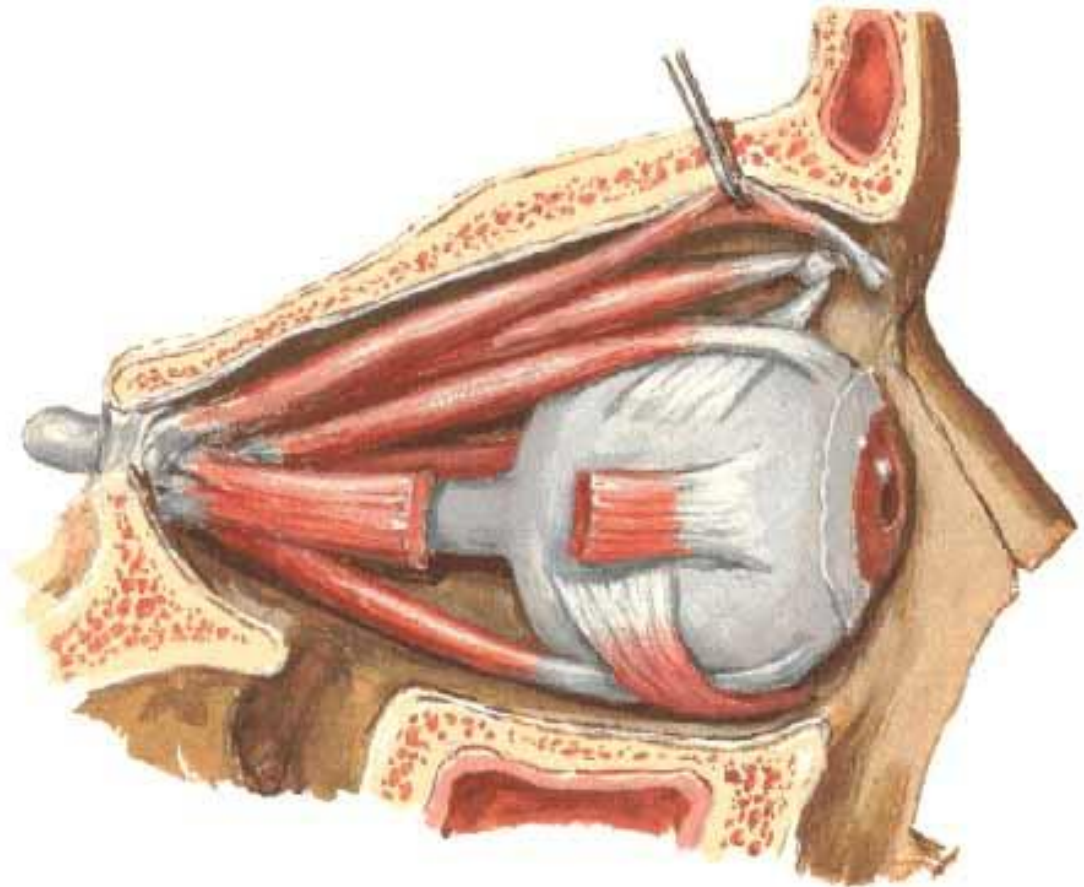
Fascia of Orbit and Eyeball

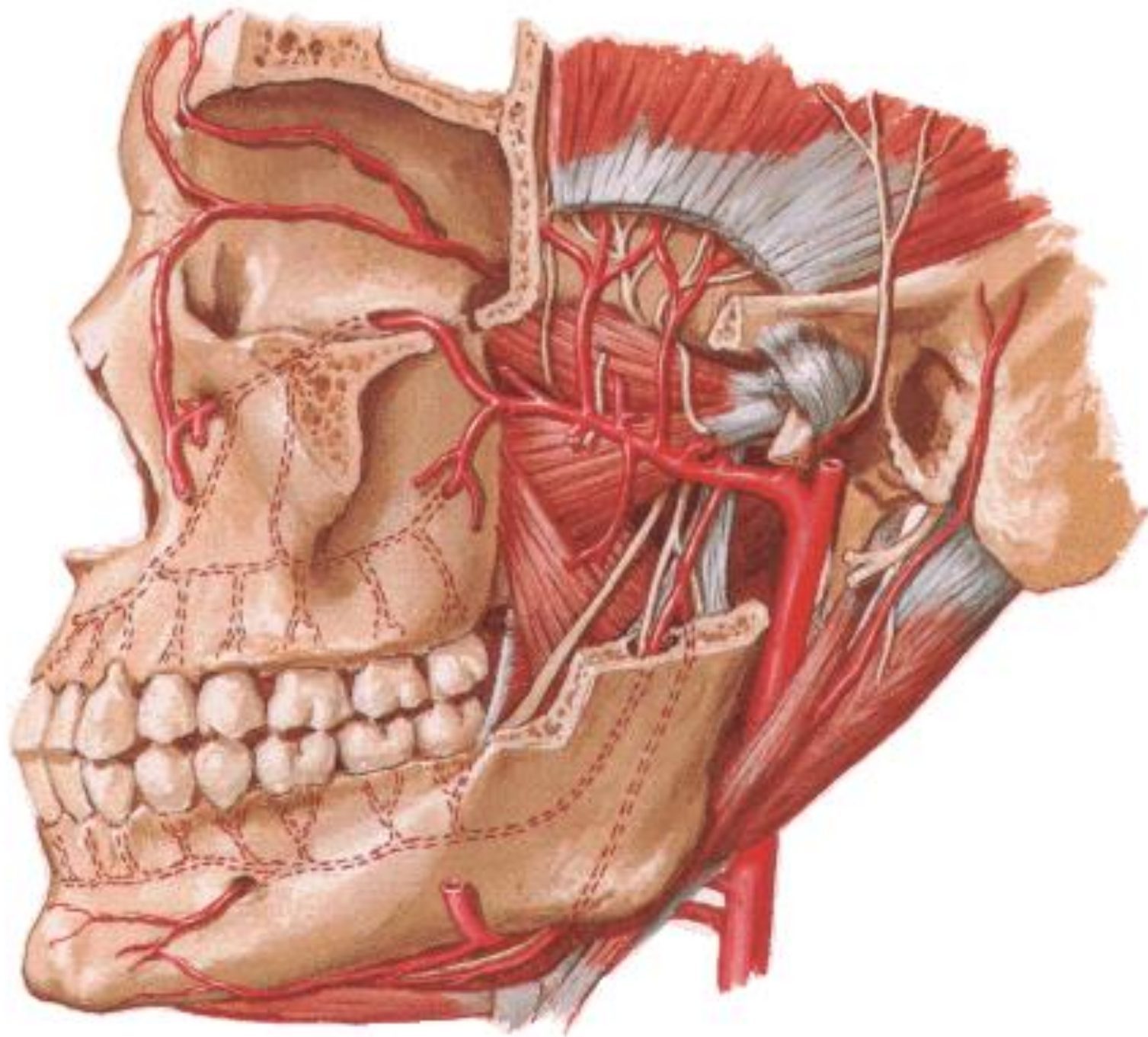
Frontal Section and Entering Structures



Extrinsic Eye Muscles

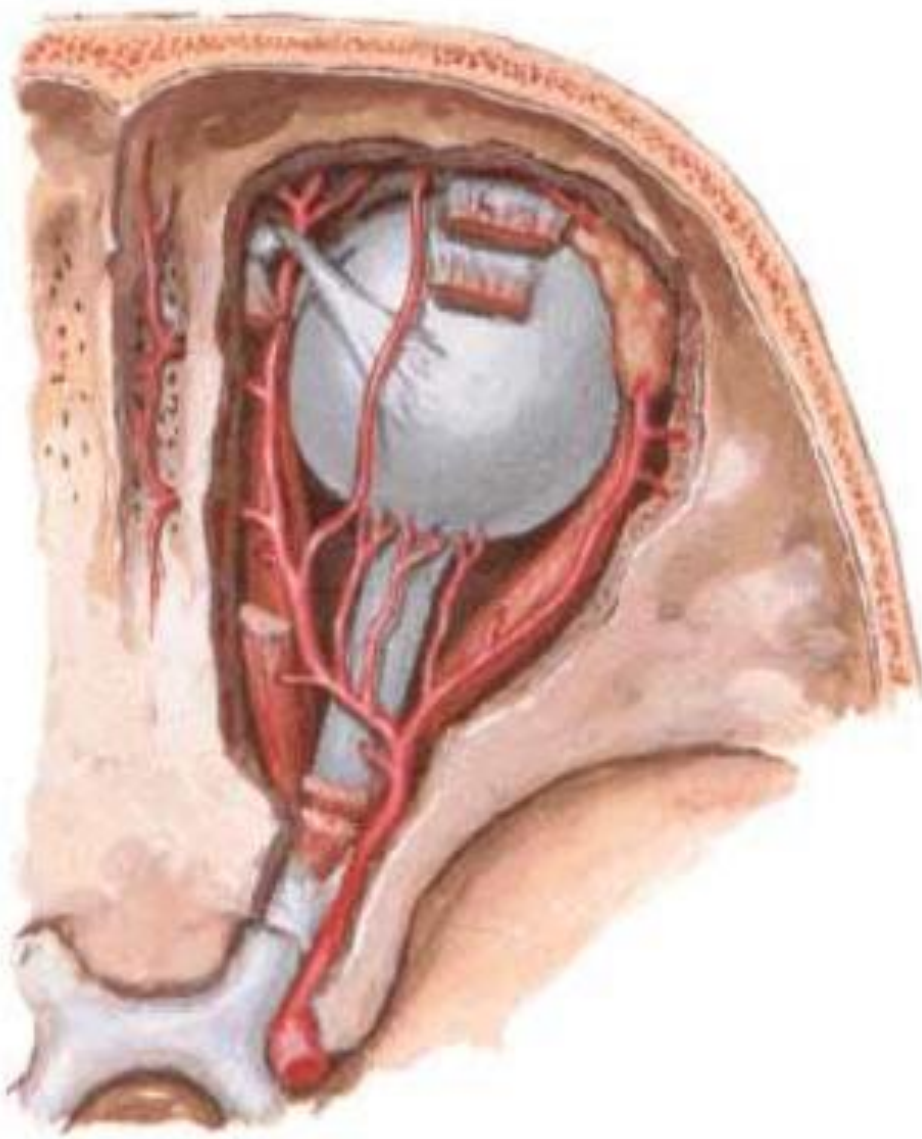
Right Lateral View



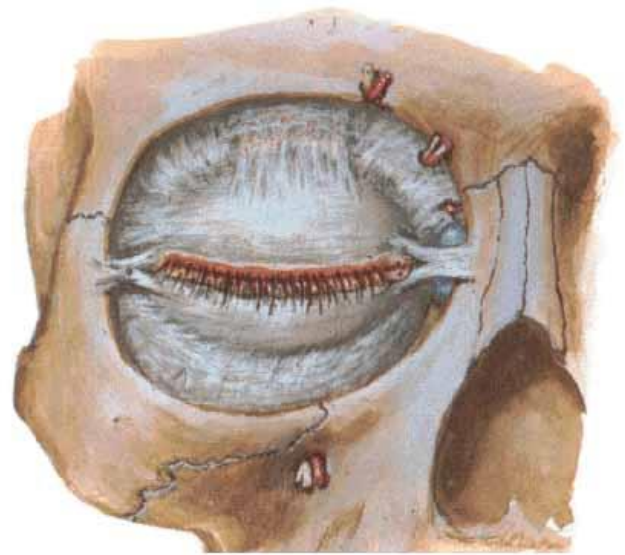


Arteries and Veins of Orbit and Eyelids

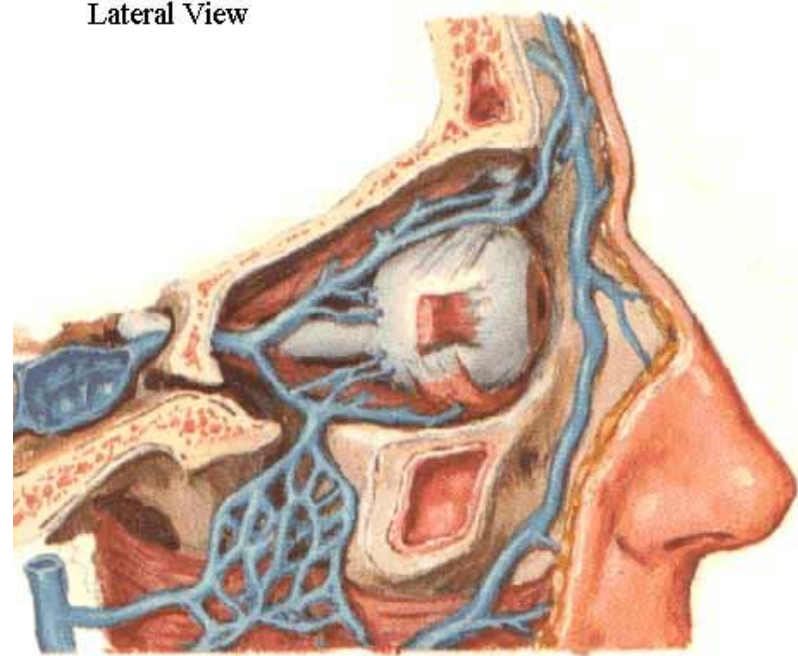
Superior View



Eyelids - Dissection Anterior View

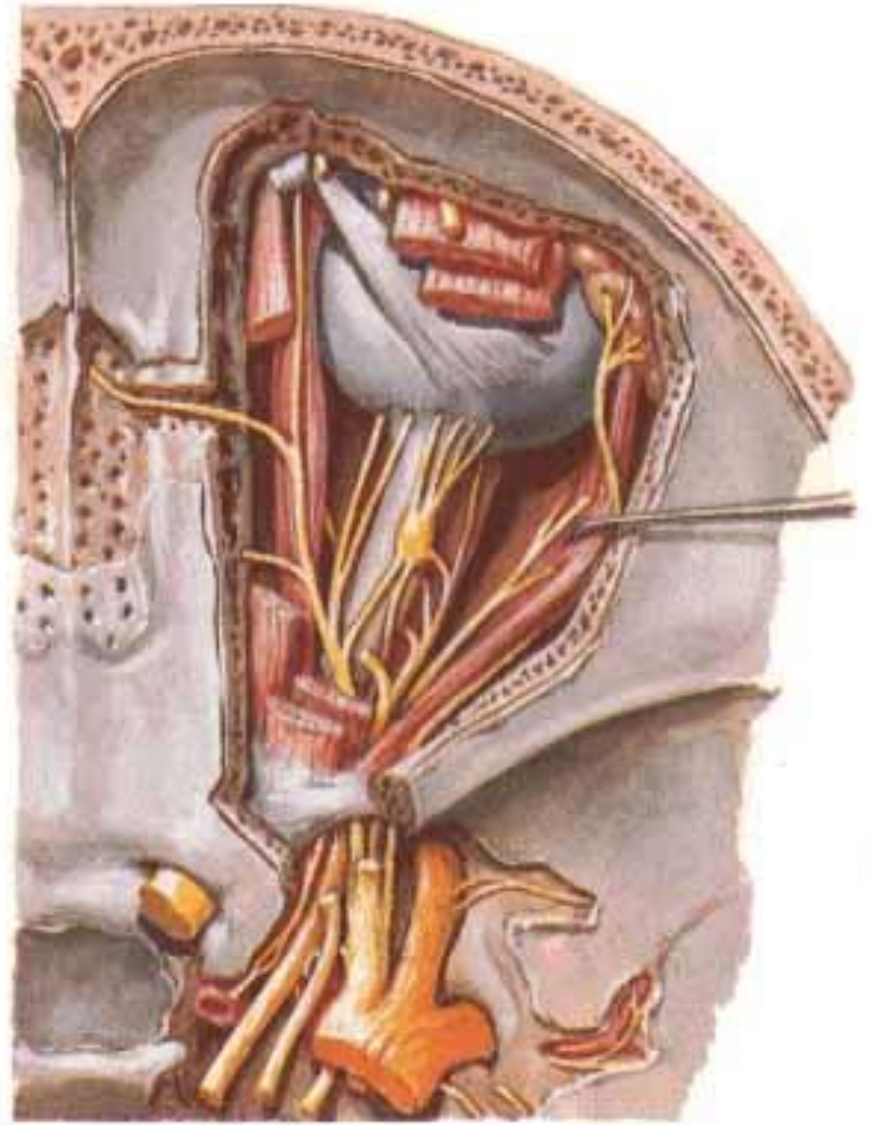
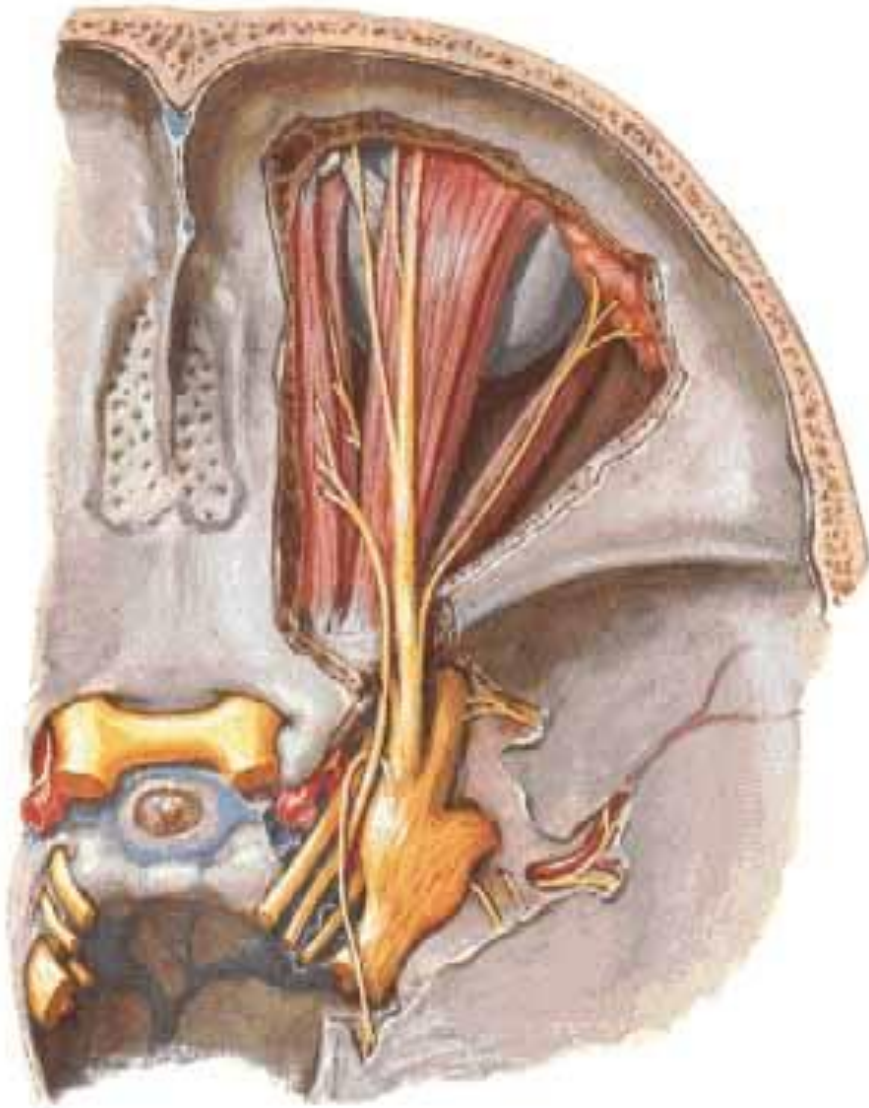


Veins of Orbit Lateral View



Nerves of Orbit

Superior View

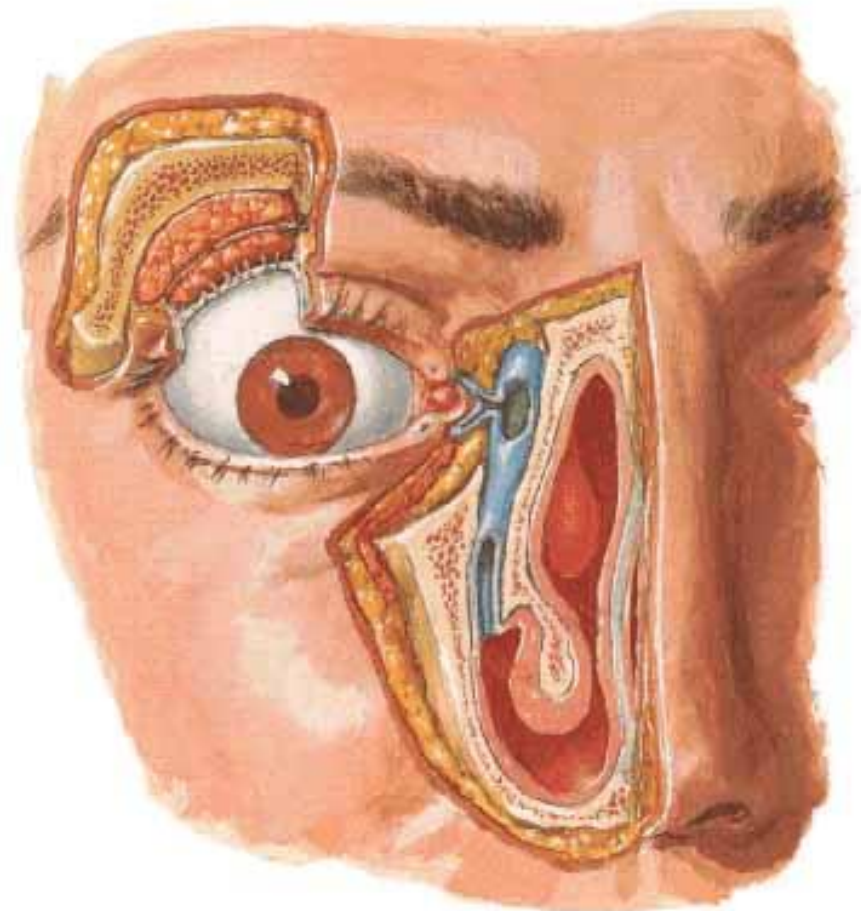


Slzná žláza a slzné cesty

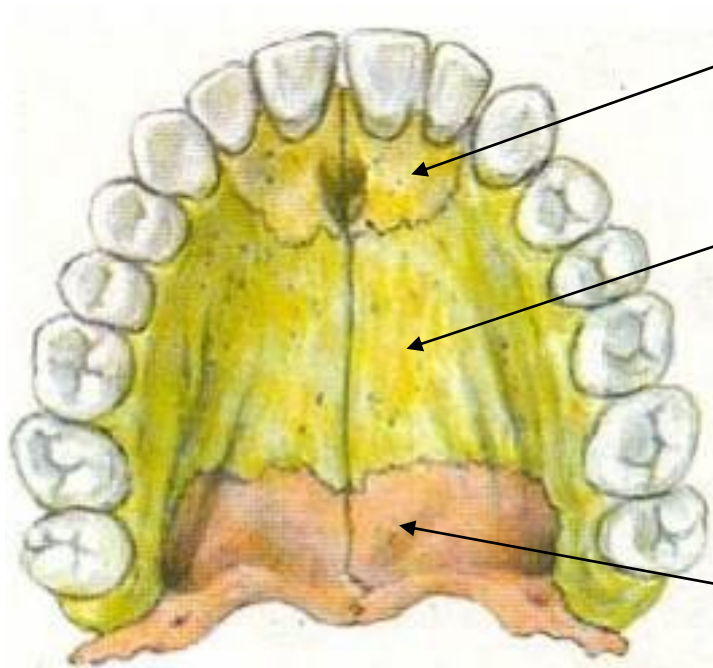
Lacrimal Apparatus in Situ



**Lacrimal Apparatus
Dissection**



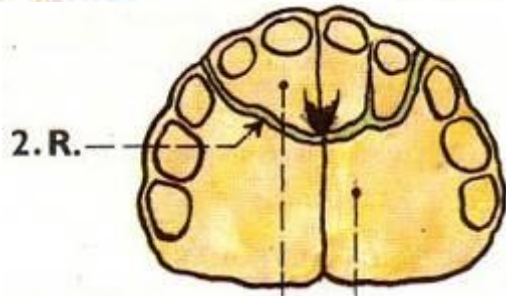
Palatum durum (tvrdé patro)



os incisivum

processus
palatinus
maxillae

lamina
horizontalis
ossis palatini

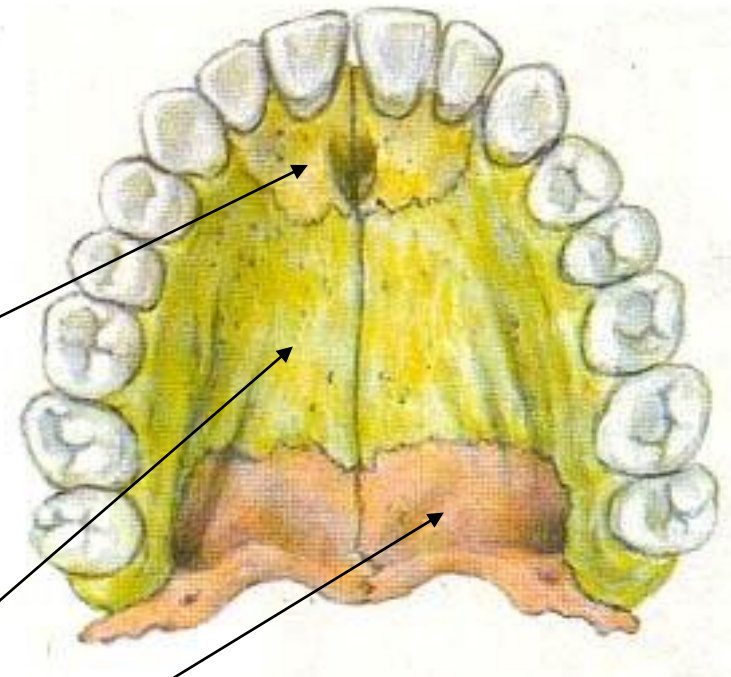
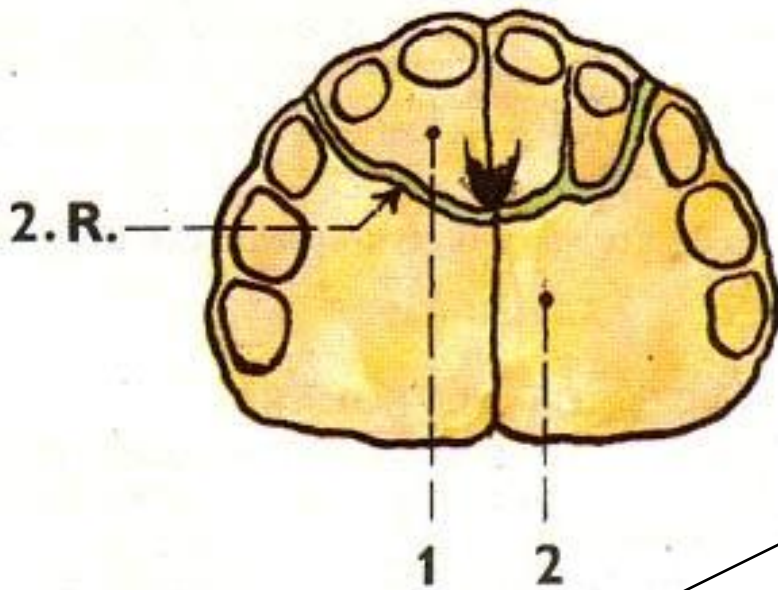


2. R.

- foramen incisivum (n. nasopalatinus)
- foramen palatinum majus (n. palatinus major, vasa palatina majora)

rozštěp rtu + čelisti:
porucha splývání
maxilárního +
frontonazálního výběžku
ret (s/bez patra) 1:1000,
patro 1:1500

Palatum durum (tvrdé patro)



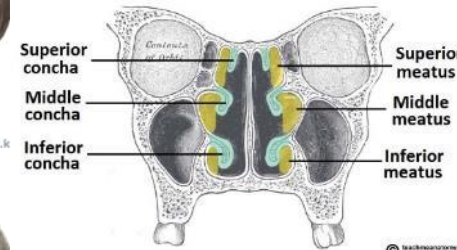
os incisivum

maxilla (processus palatinus)

os palatinum

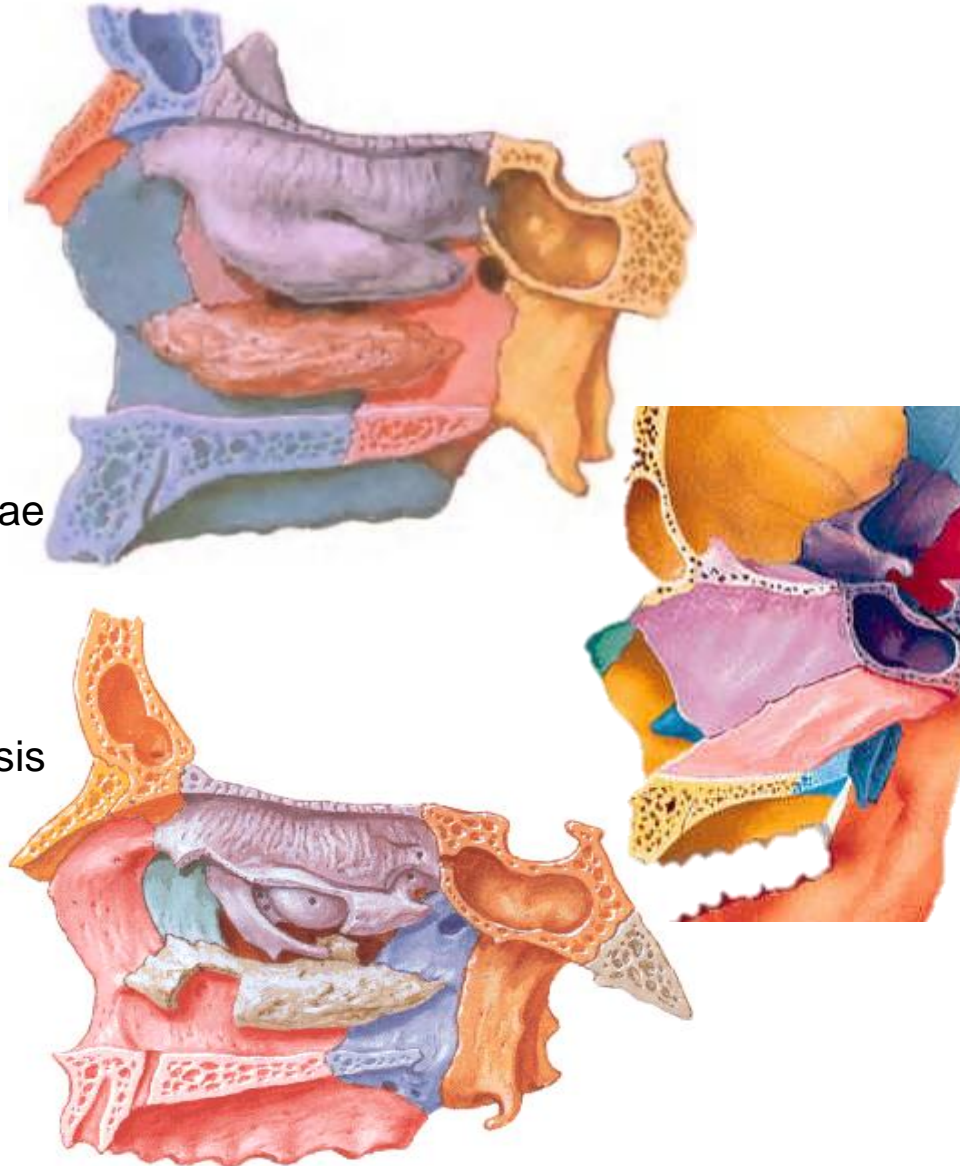
Cavitas nasi ossea (kostěná nosní dutina)

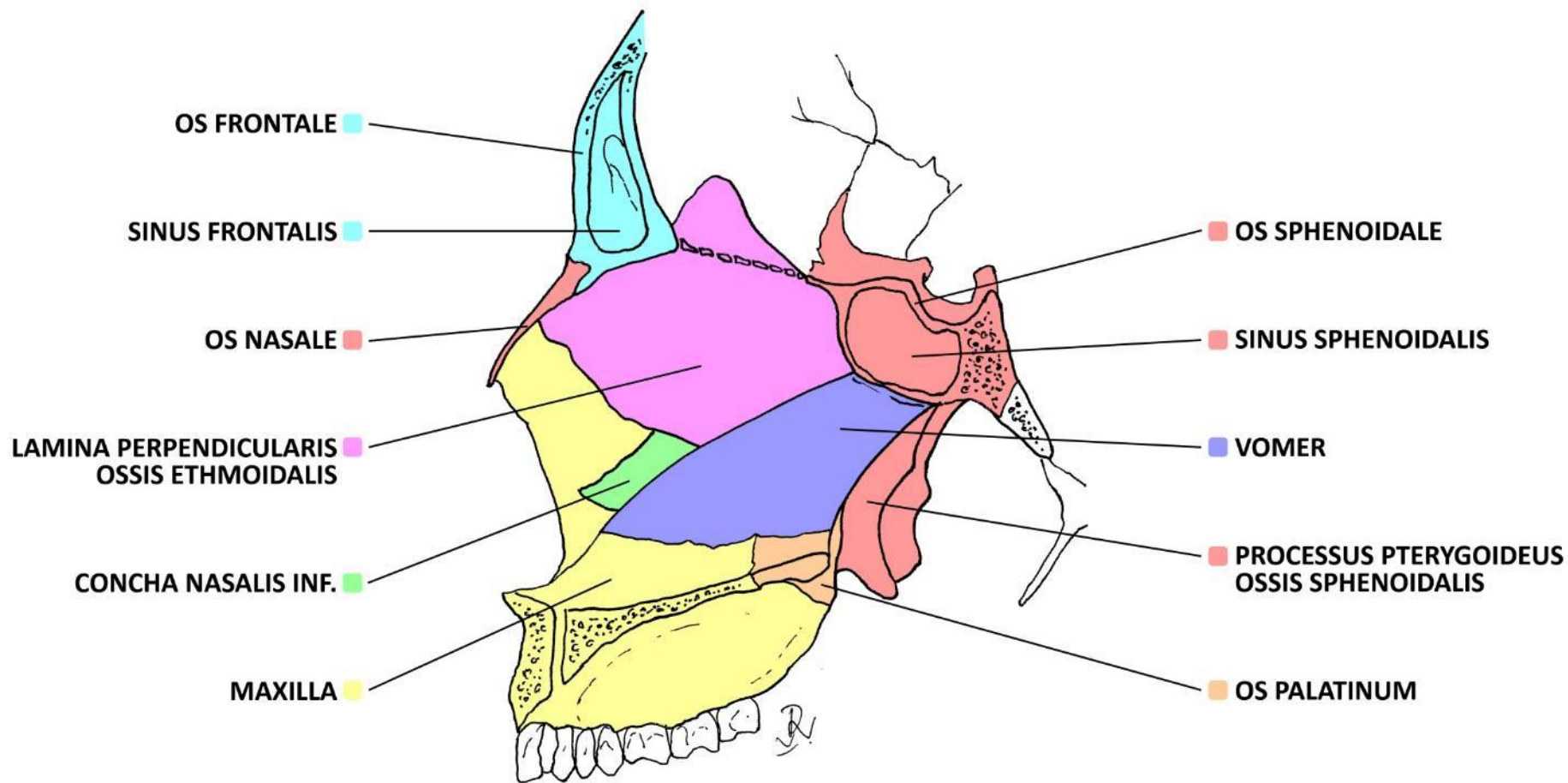
- apertura piriformis
- choanae
- septum nasi osseum
- conchae nasales
 - superior, media, inferior
 - (suprema, sphenoidalis)
- meatus nasi (nosní průduchy)
 - meatus nasi superior+ medius + inferior
 - communis, nasopharyngeus
- sinus paranasales (vedlejší nosní dutiny)
- ohřev, čištění, zvlhčování vzduchu, čich



Cavitas nasi (nosní dutina)

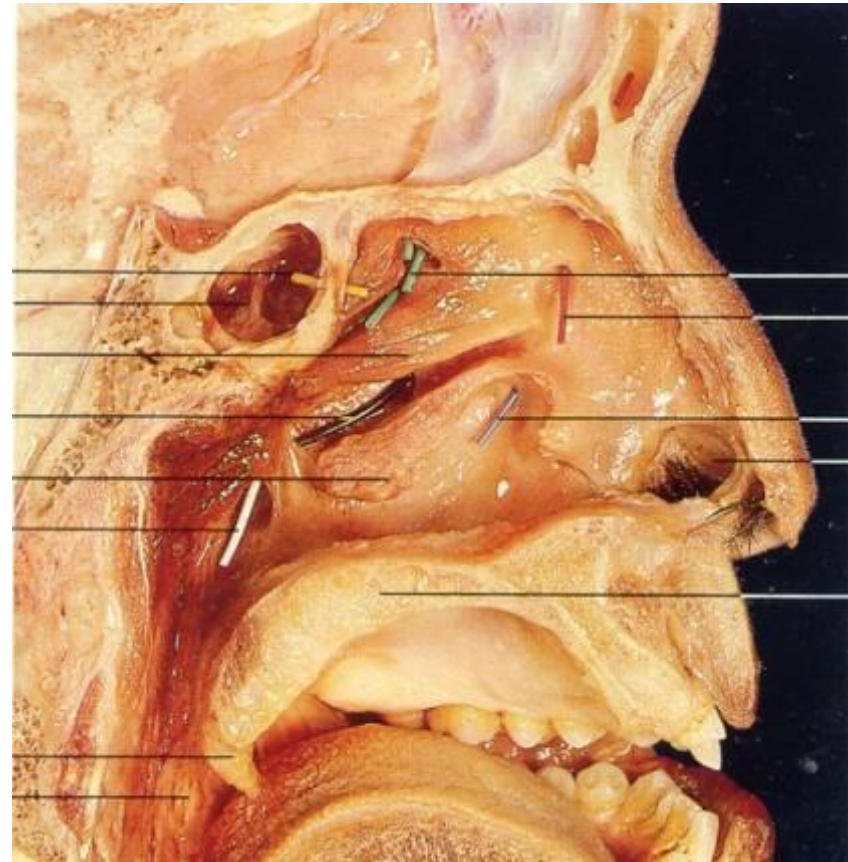
- **strop**
 - ossa nasalia
 - pars nasalis ossis frontalis
 - lamina cribrosa ossis ethmoidalis
 - corpus ossis sphenoidalis
- **dno**
 - palatum durum (+ palatum molle)
- **laterálně**
 - processus frontalis + facies nasalis maxillae
 - os lacrimale
 - labyrinthus ethmoidalis
 - lamina perpendicularis ossis palatini
 - lamina medialis processus pterygoidei ossis sphenoidalis
- **mediálně**
 - *cartilago septi nasi*
 - septum nasi (pars ossea)
 - lamina perpendicularis ossis ethmoidalis
 - vomer

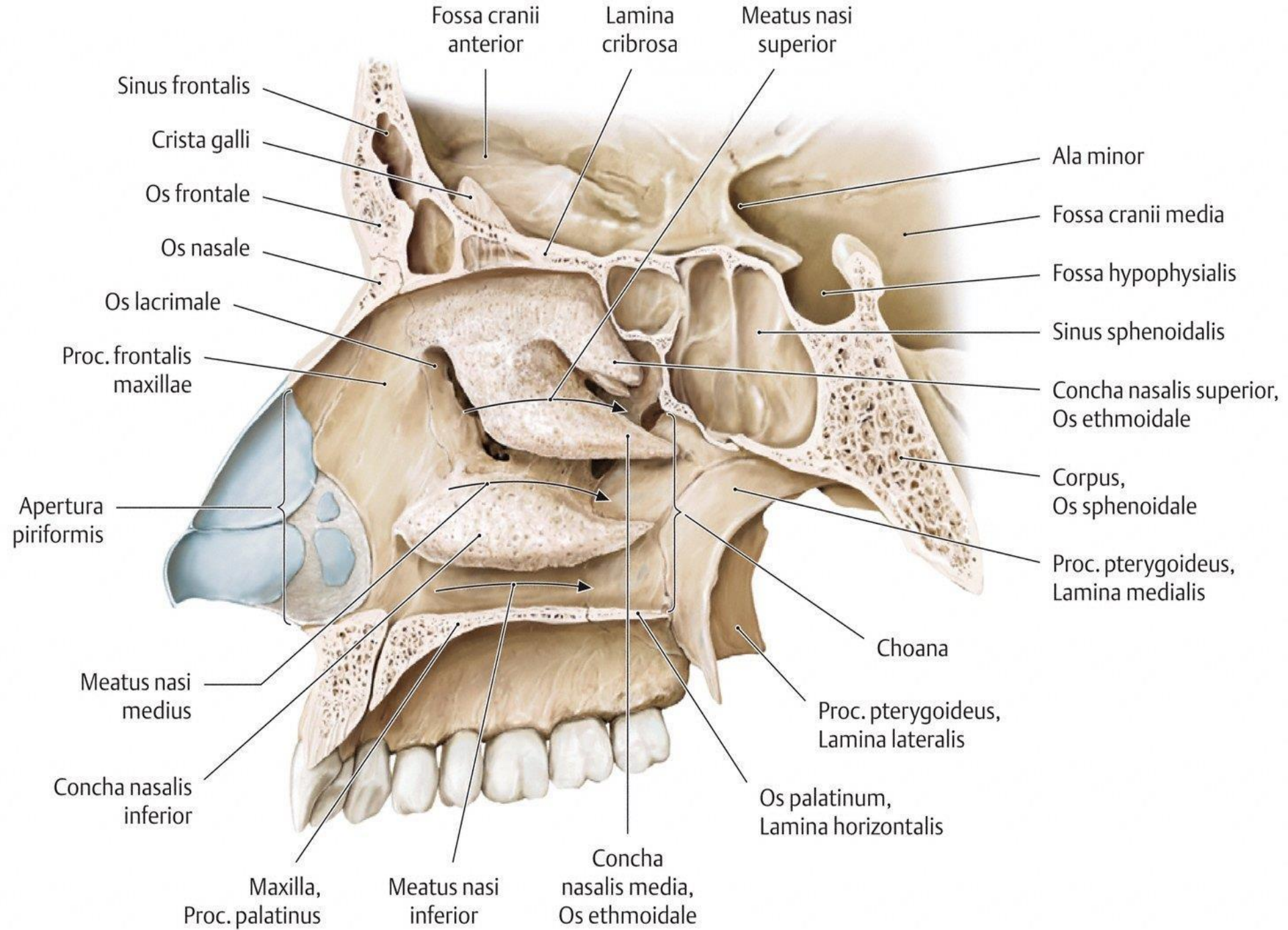


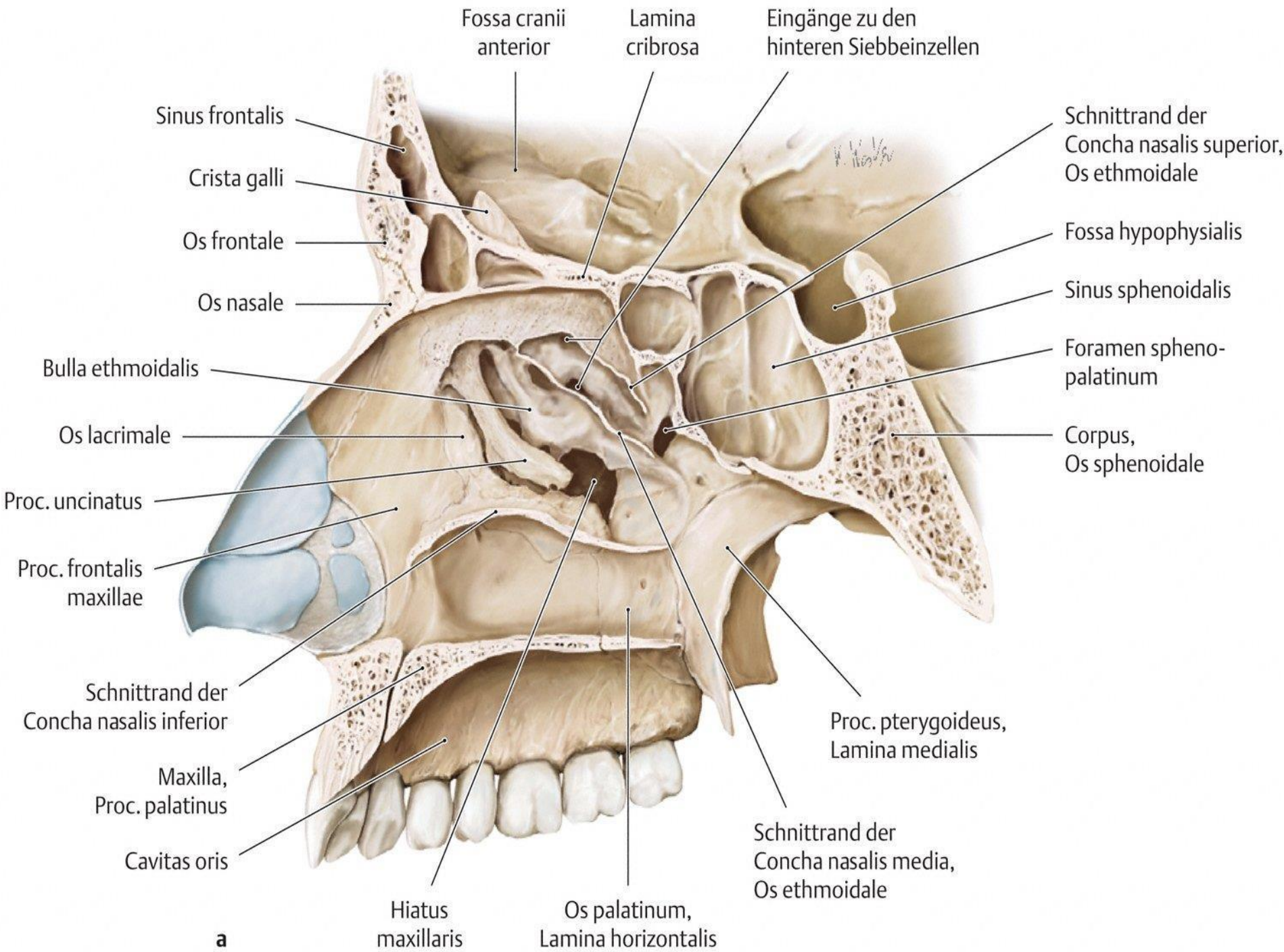


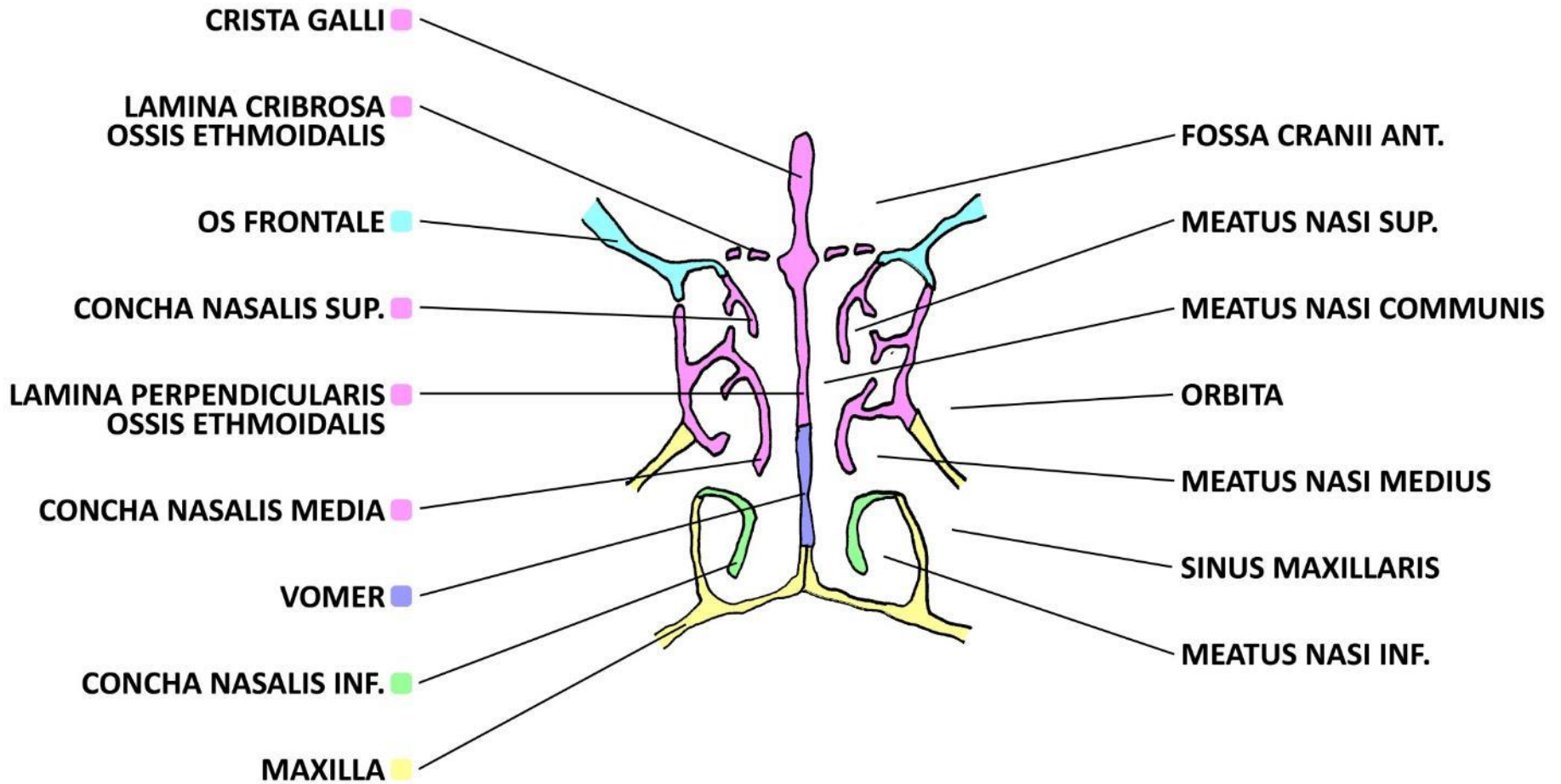
Meatus nasi (nosní průduchy)

- **meatus nasi superior**
 - nad střední nosní skořepou
 - ústí sinus sphenoidalis a cellulae ethmoidales posteriores
- **meatus nasi medius**
 - mezi střední a dolní nosní skořepou
 - ústí sinus maxillaris, sinus frontalis, sinus ethmoidales ant. (+ med.)
- **meatus nasi inferior**
 - pod dolní nosní skořepou
 - ústí ductus nasolacrimalis
- **meatus nasi communis**
 - prostor mediálně od skořep, mezi nimi a nosním přepážkou
- **meatus nasopharyngeus**
 - prostor za skořepami, dozadu až k choanám

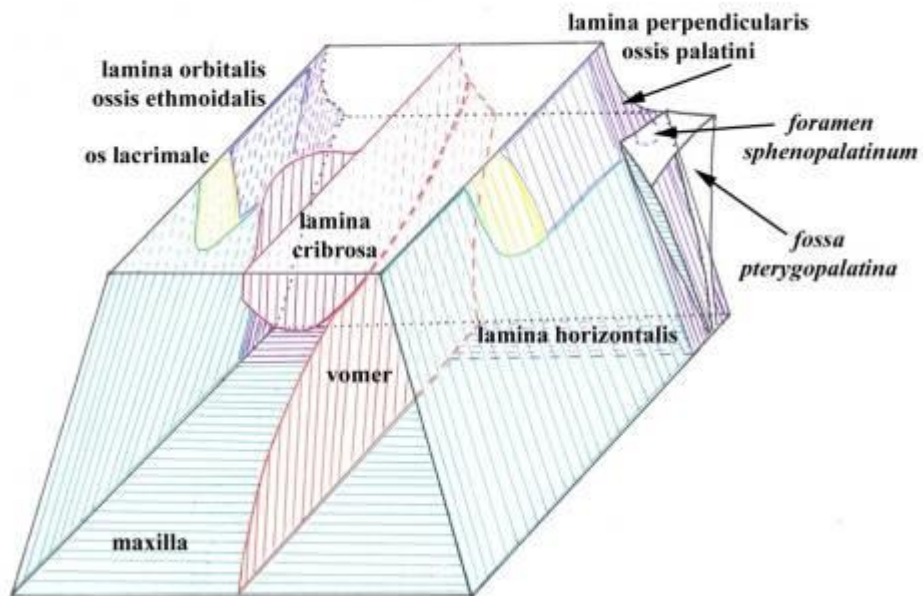




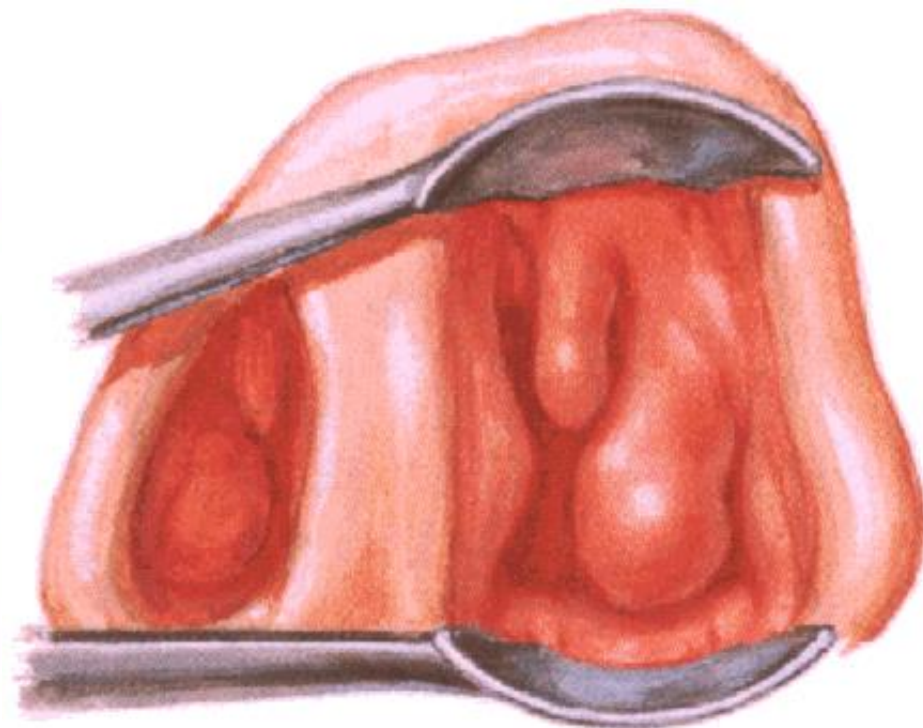
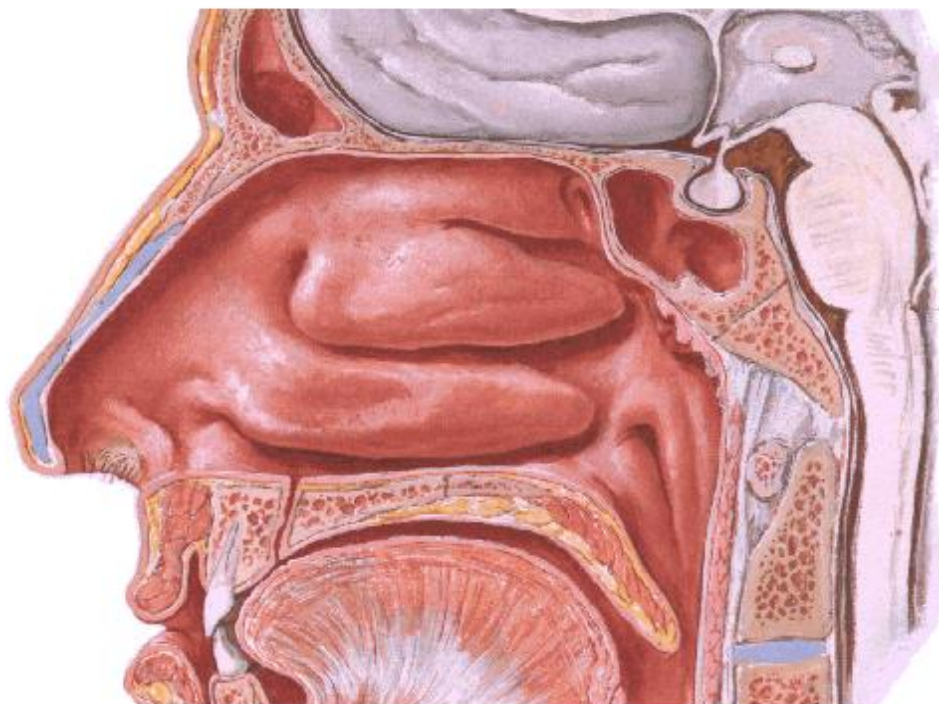
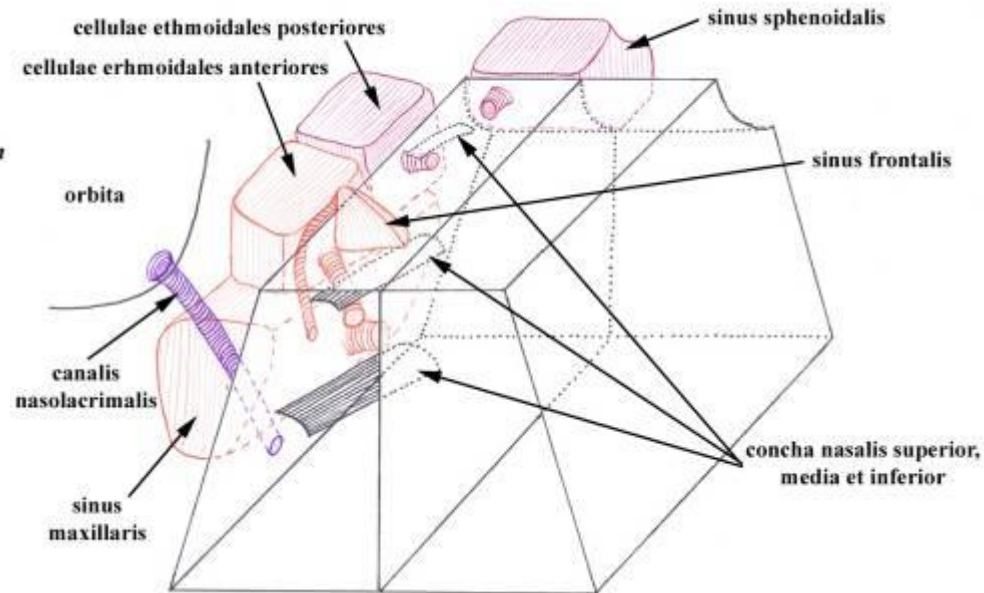




CAVITAS NASI - ohraničení



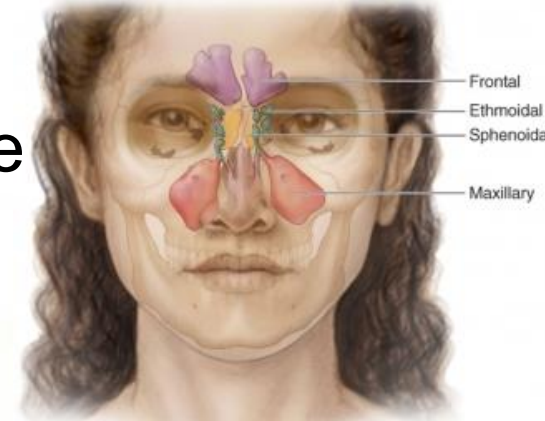
CAVITAS NASI + SINUS PARANASALES



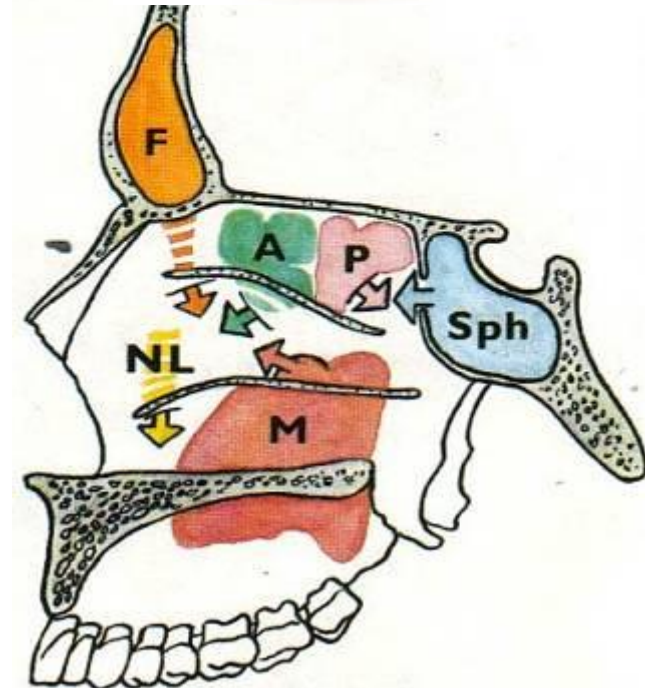
Sinus paranasales (vedlejší nosní dutiny)

- výchlípky sliznice z laterální nosní stěny
- konečné velikosti nabývají až po 20. roce
- ohřev, čištění, zvlhčování vzduchu
- rezonanční prostory při tvorbě hlasu
- dodávají hlasu osobitou barvu

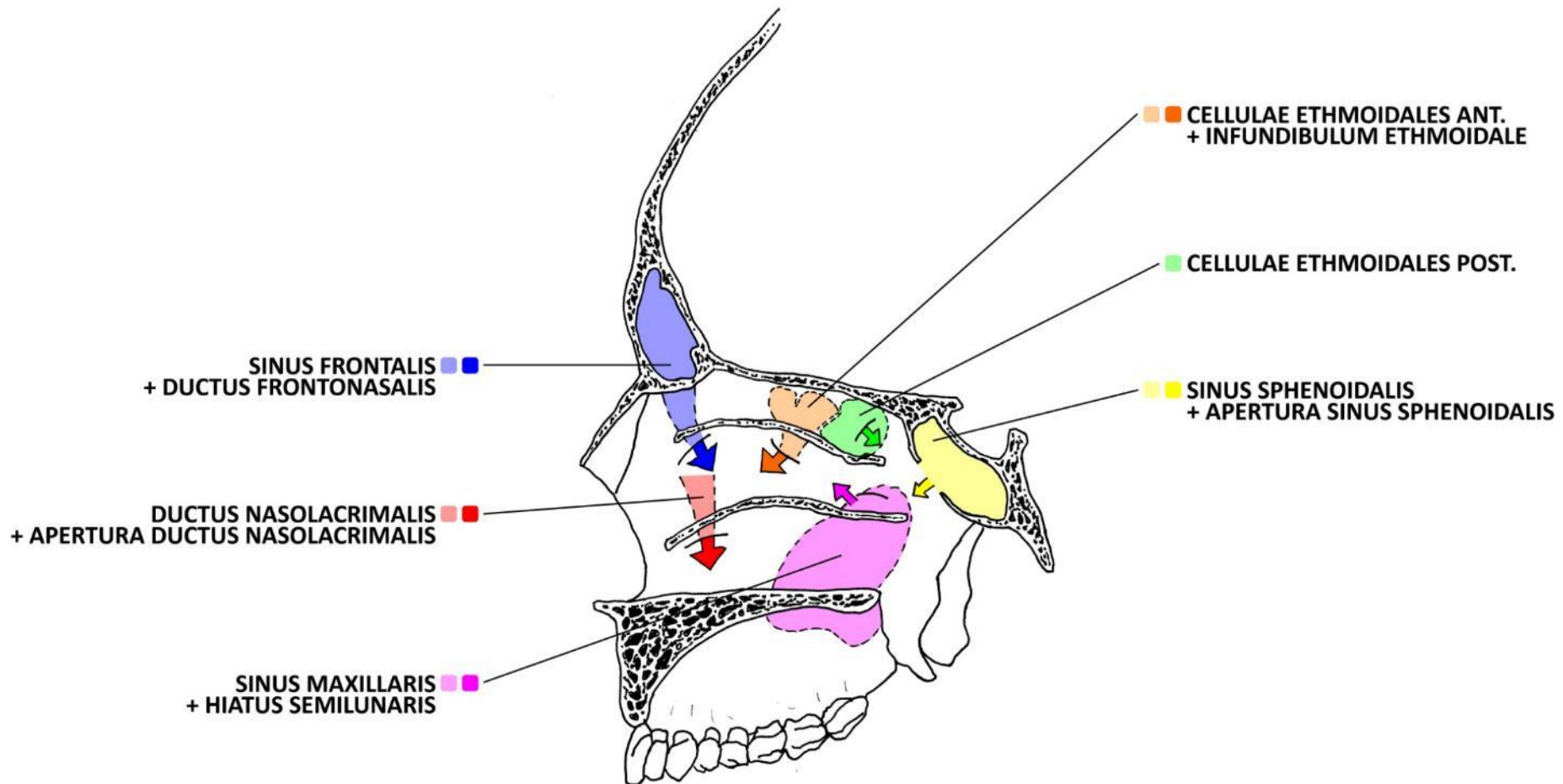
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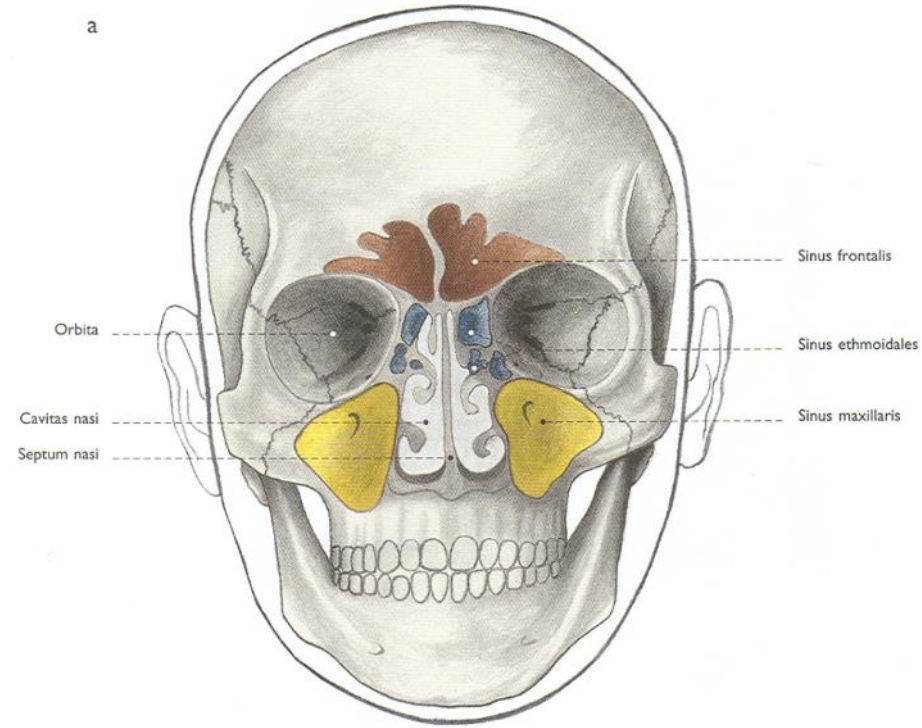
- sinus maxillaris
- sinus frontalis
- sinus sphenoidalis
- cellulae ethmoidales anteriores (+ mediae)
- cellulae ethmoidales posteriores



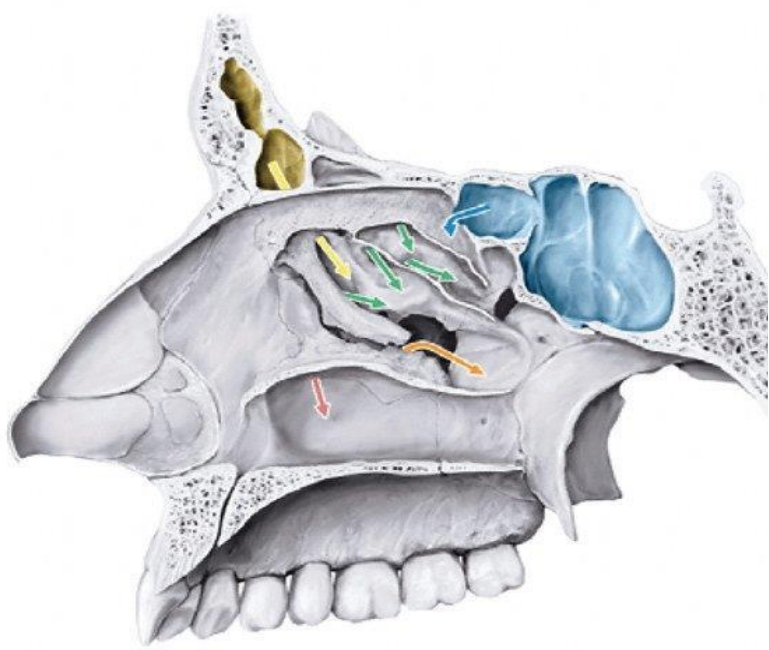
Ústí vedlejších nosních dutin



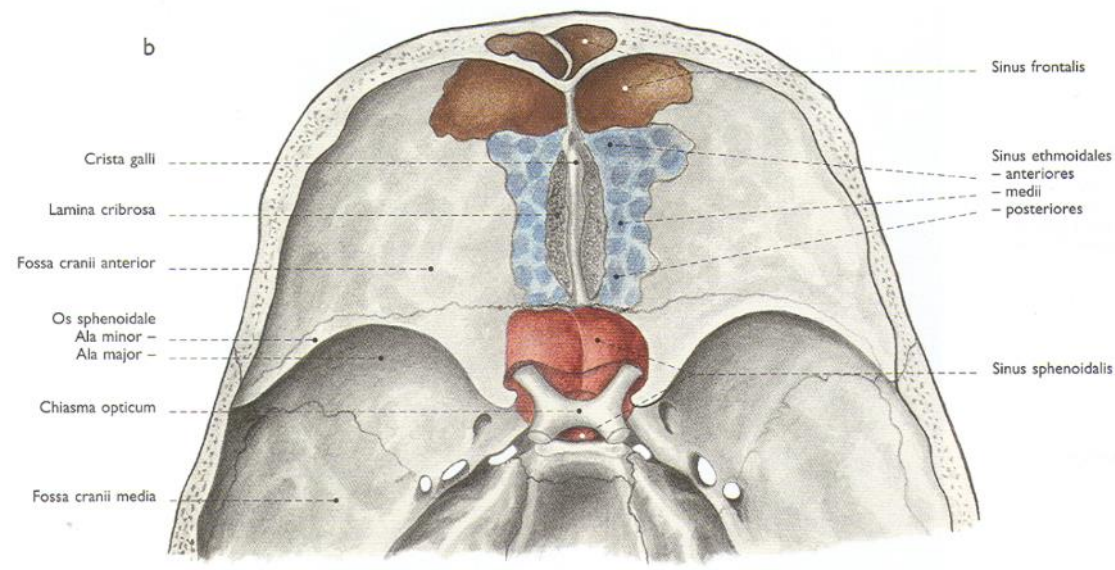
a



b



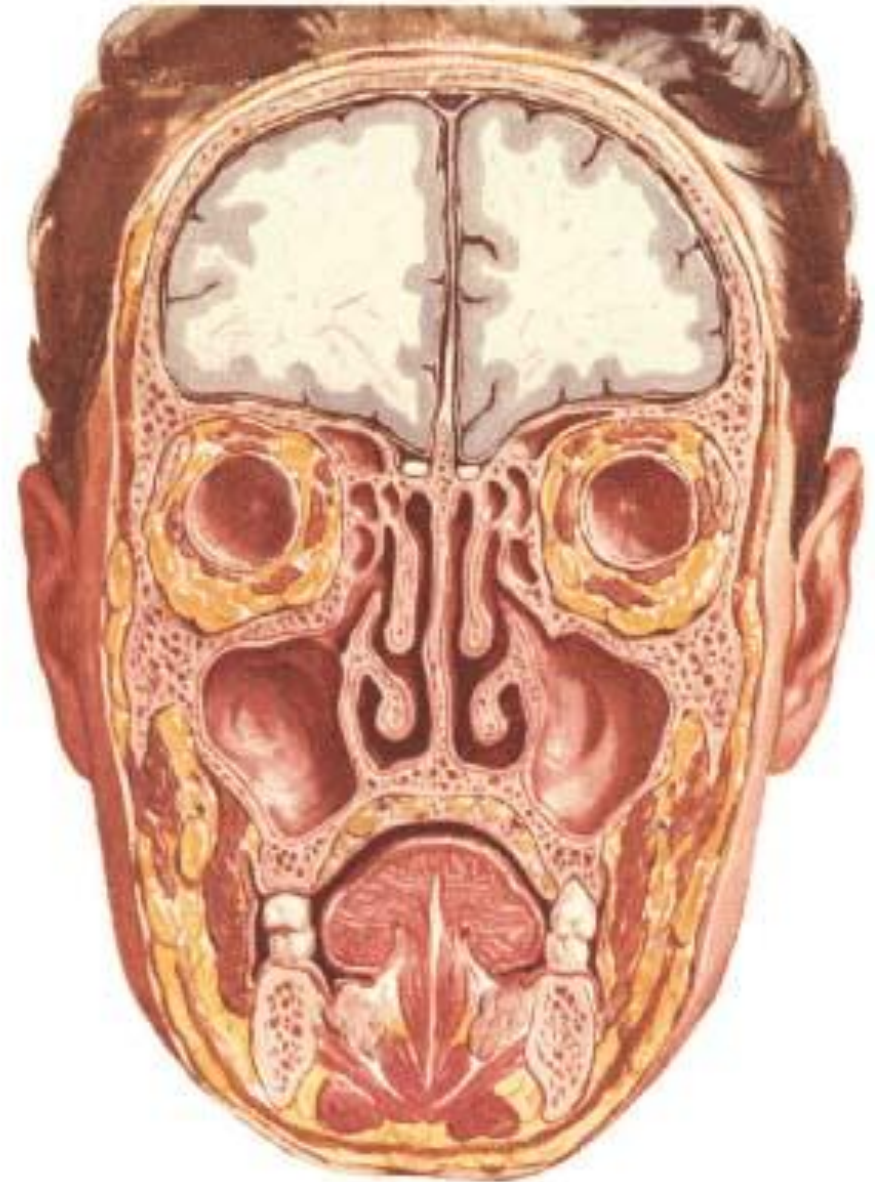
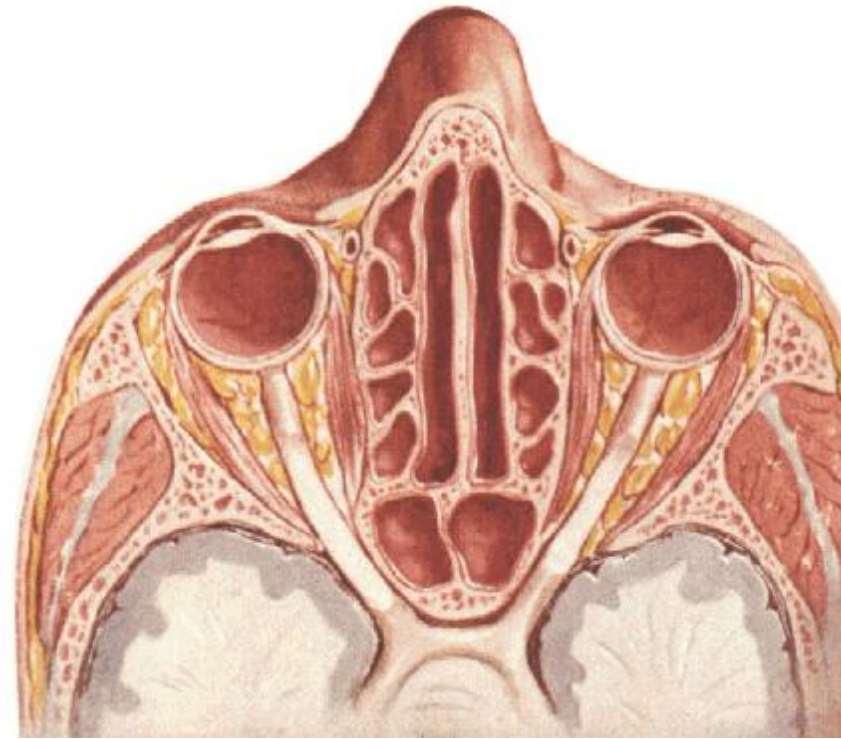
b



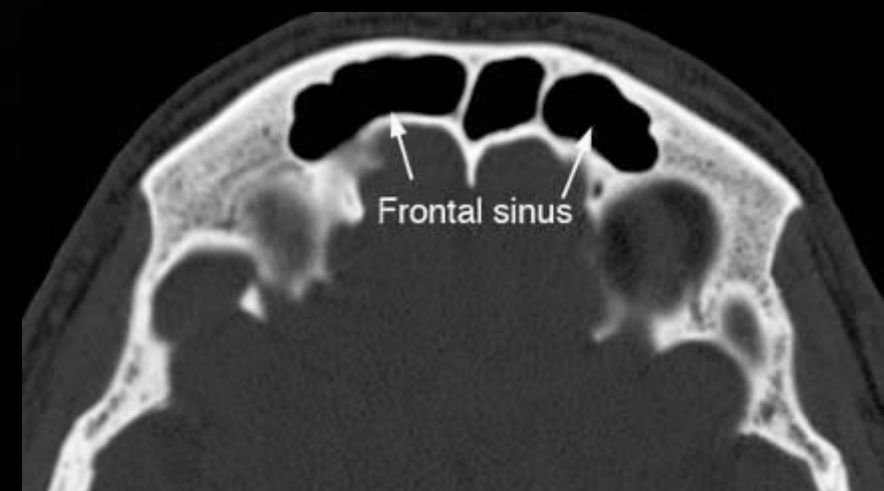
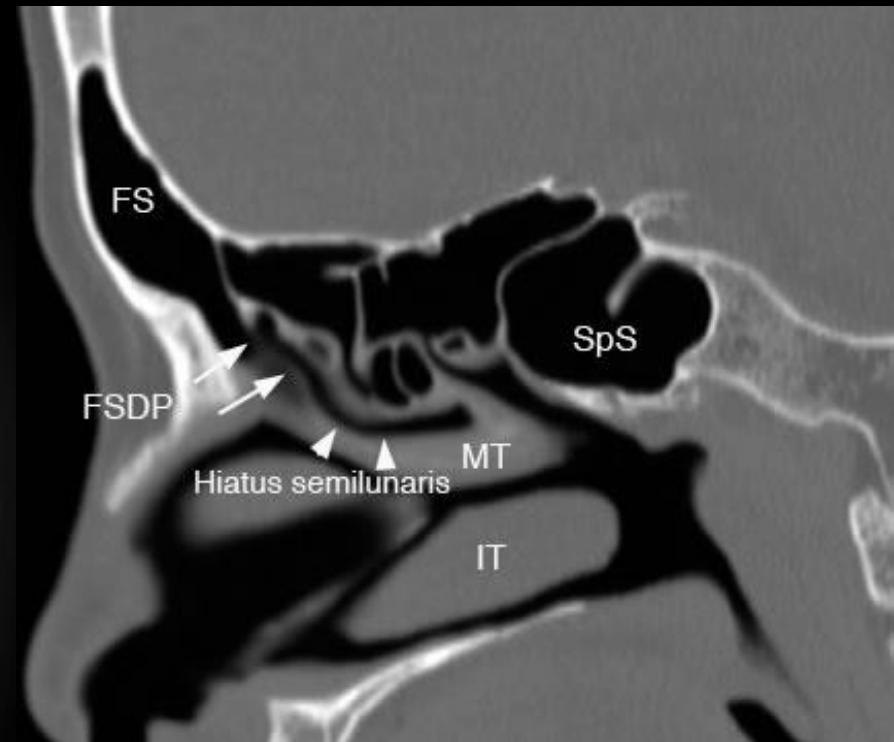
Paranasal Sinuses

Coronal Section

Sinus paranasales

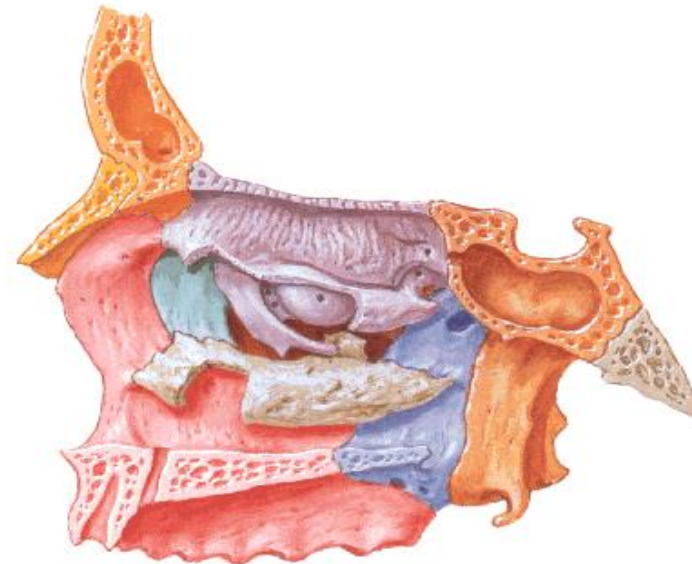
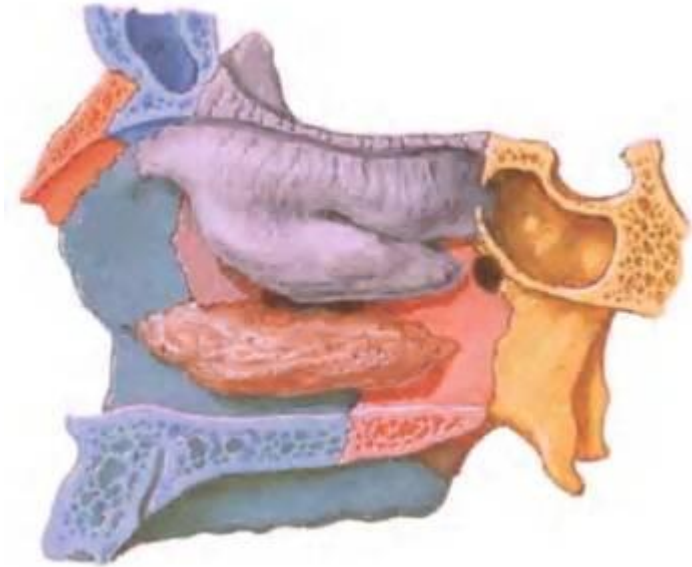


Vedlejší nosní dutiny



Cavitas nasi (nosní dutina) - otvory

- **strop**
 - foramen nasale
 - lamina cribrosa ossis ethmoidalis
 - (foramen caecum)
- **dno**
 - canalis incisivus
- **laterálně**
 - meatus nasi superior
 - apertura sinus sphenoidalis
 - aperturae cellulae ethmoidales posteriores
 - meatus nasi medius
 - hiatus semilunaris (*sinus maxillaris*)
 - infundibulum ethmoidale (*cc.ethm.ant.*)
 - ductus frontonasalis (*sinus frontalis*)
 - meatus nasi inferior
 - apertura ductus nasolacrimalis (*slzovod*)
 - meatus nasopharyngeus
 - foramen sphenopalatinum (*f.pterygopalatina*)



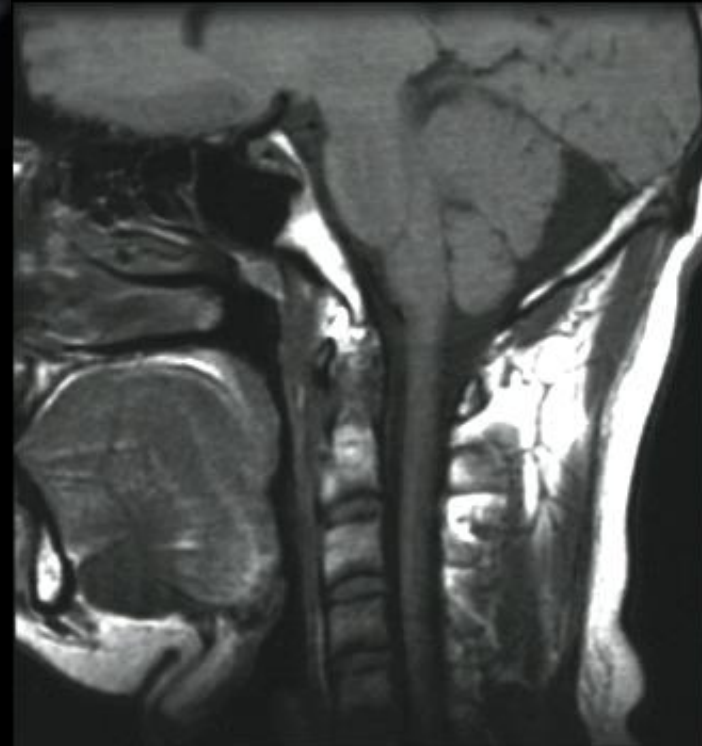
RTG snímek – okcipitofrontální pohled



CT – frontální řez



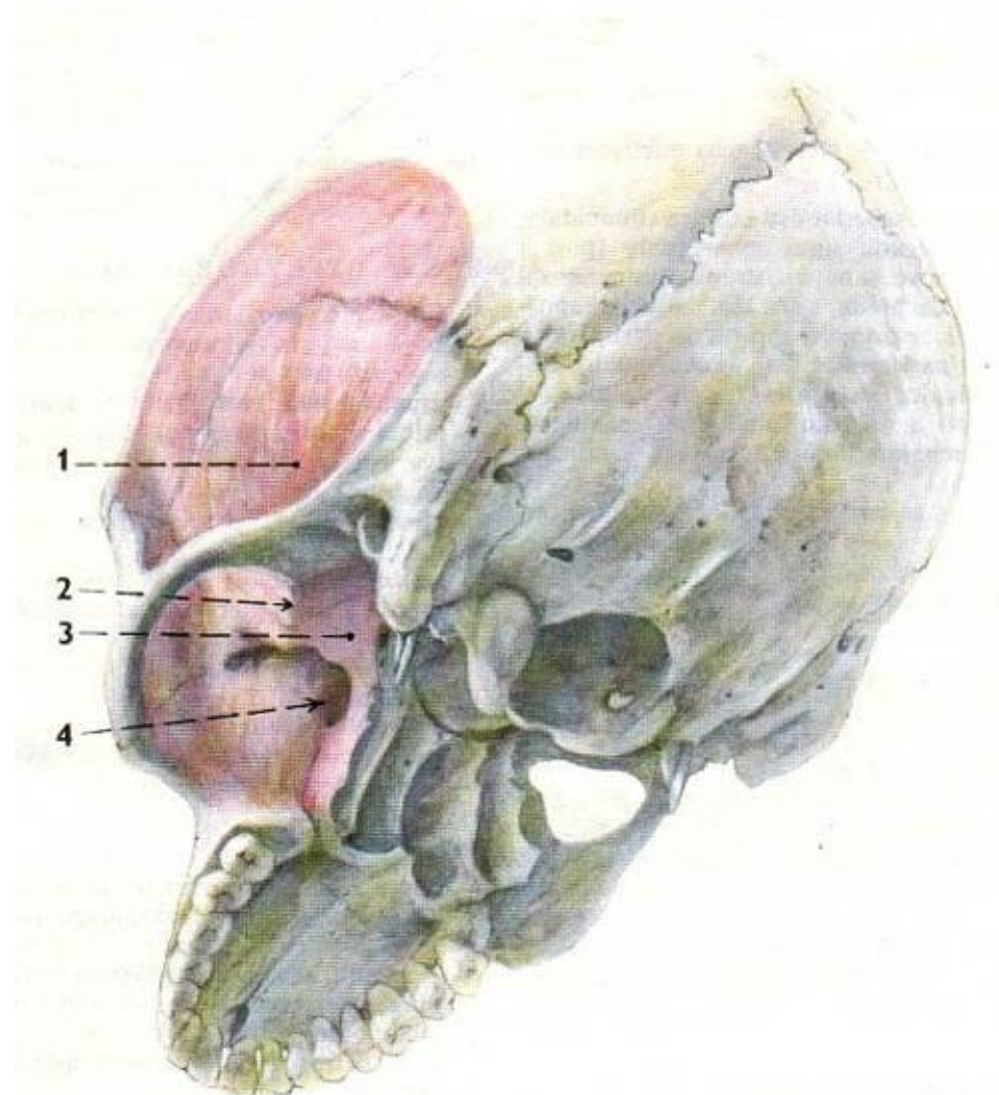
MRI – sagitální řez



Fossa temporalis (spánková jáma)

Fossa infratemporalis (podspánková jáma)

- crista infratemporalis
- žvýkácí svaly
 - m. temporalis
 - m. pterygoideus medialis
 - m. pterygoideus lateralis
- tvářové tukové těleso (*corpus adiposum buccae*)



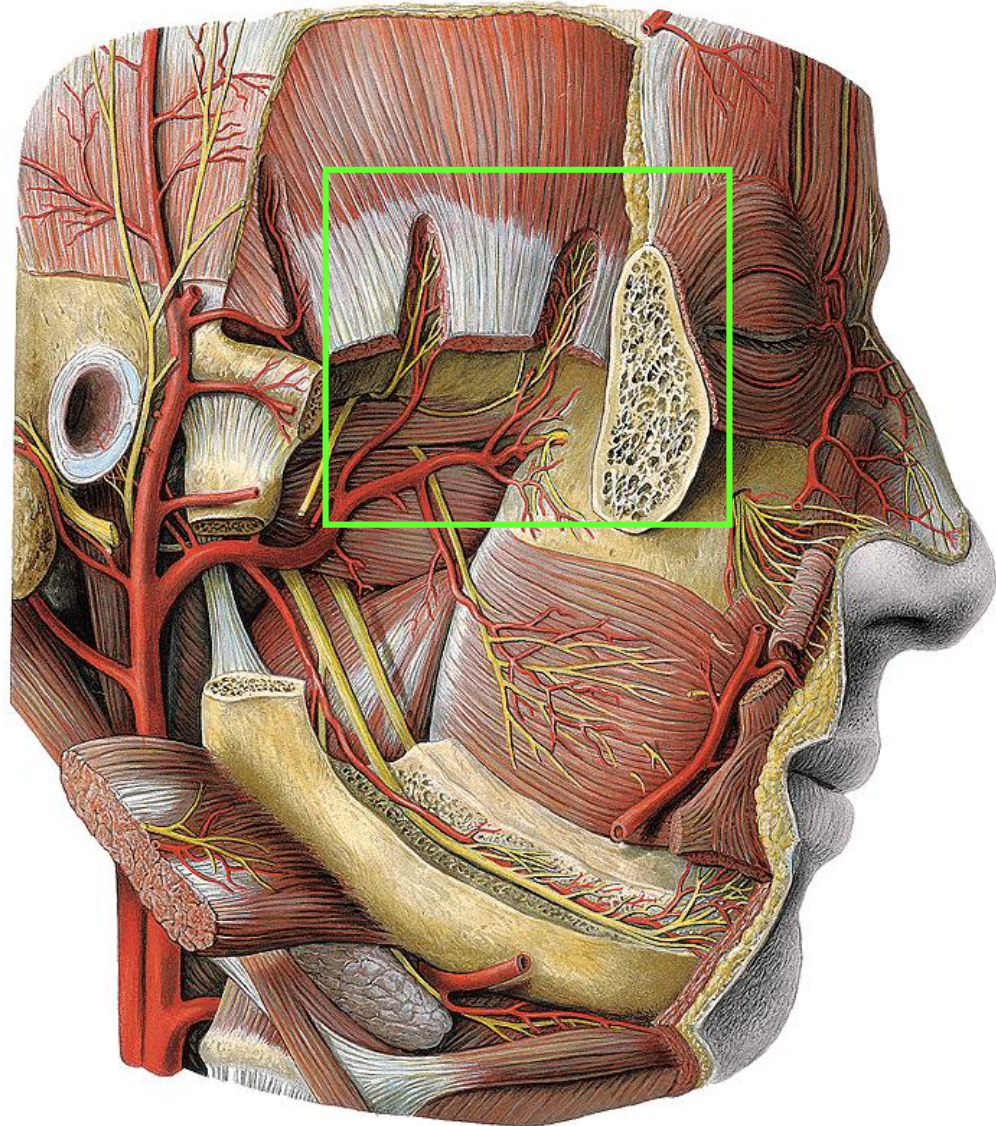
Fossa temporalis (spánková jáma)

- kraniálně
 - linea temporalis superior
- laterálně
 - arcus zygomaticus
 - fascia temporalis
- kaudálně
 - crista infratemporalis
 - ossis sphenoidalis
- mediálně
 - squama ossis temporalis
- ventrálně
 - facies temporalis ossis zygomatici



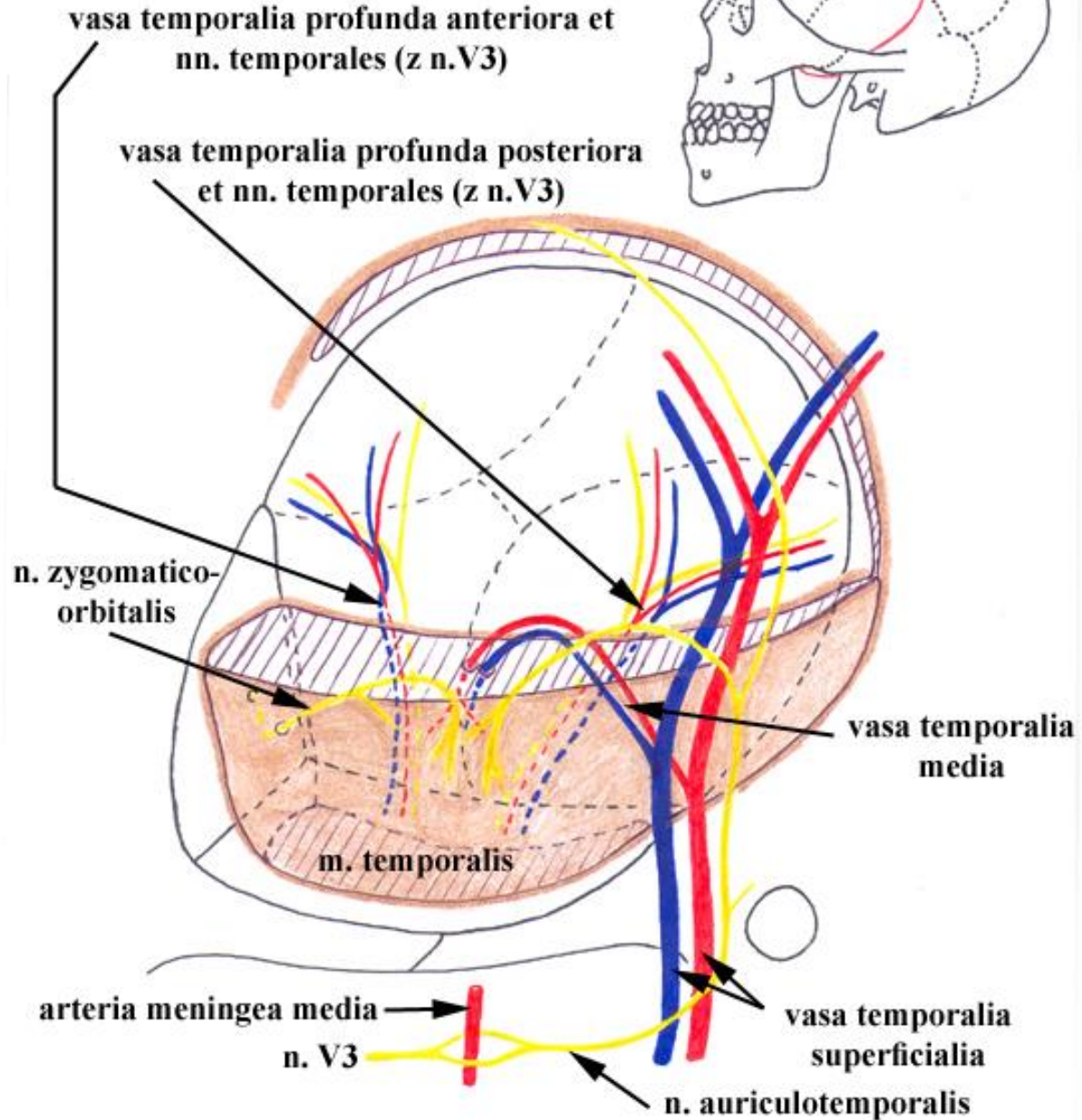
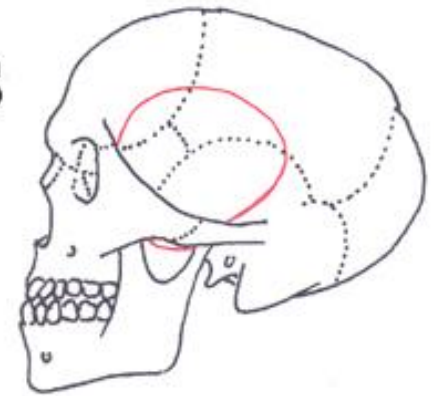
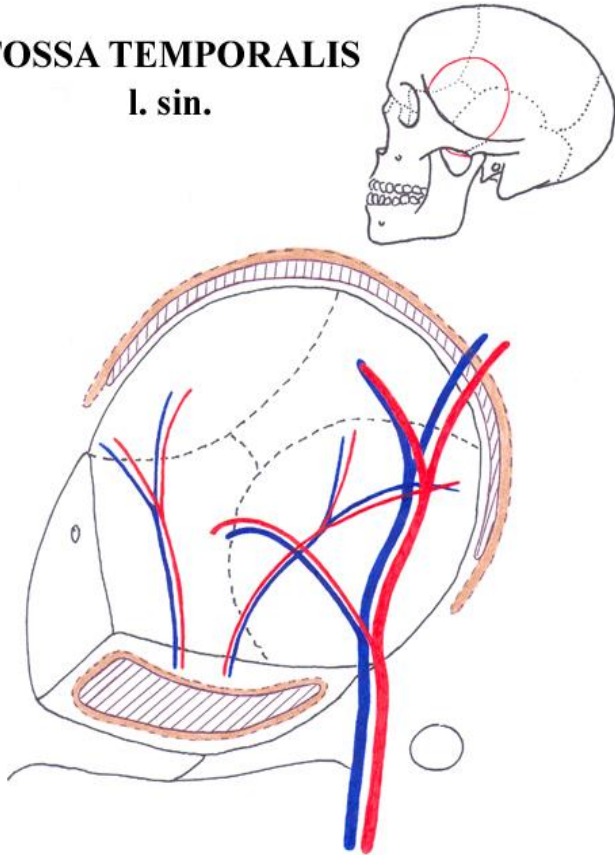
Fossa temporalis – obsah

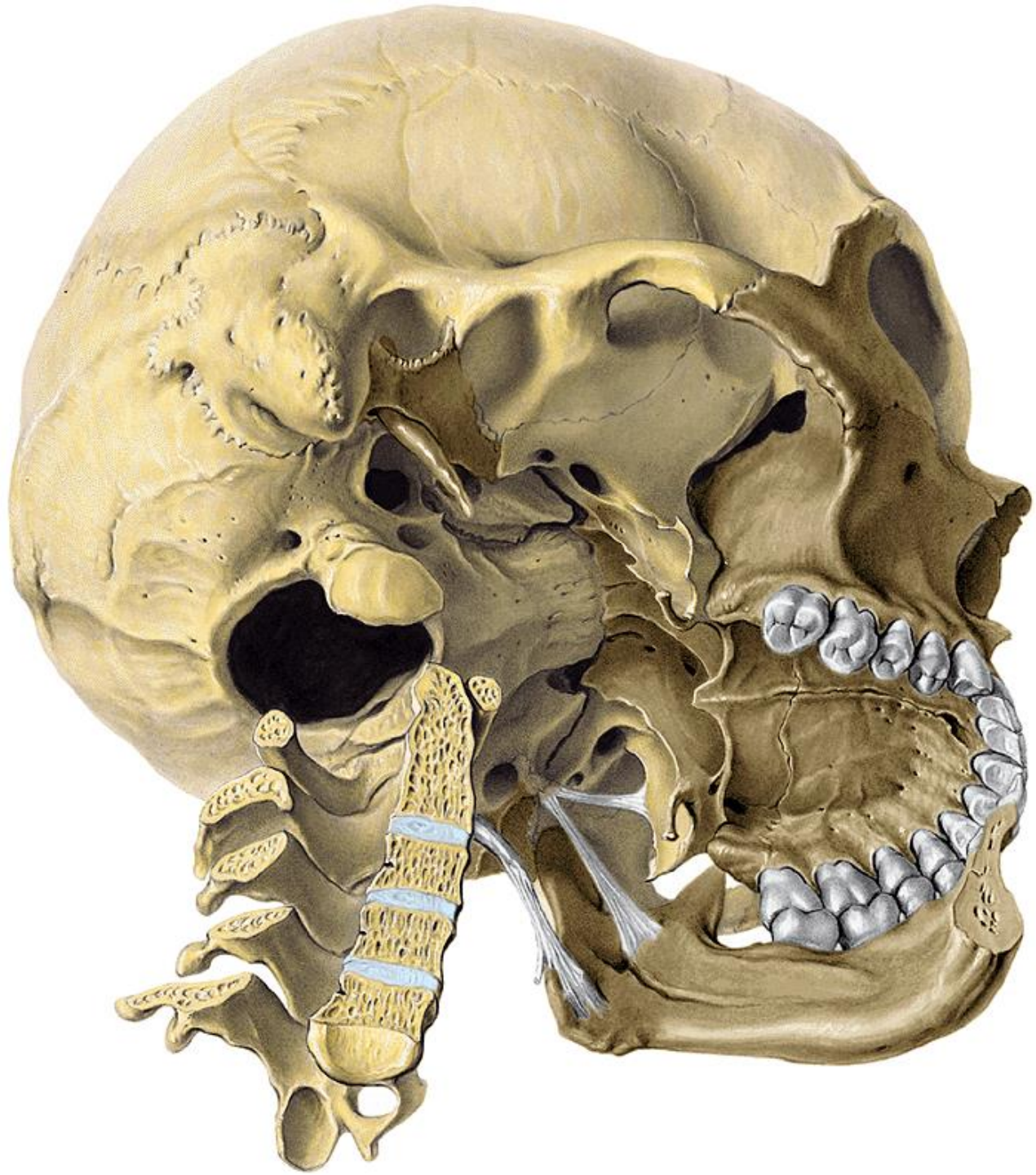
- pterion (punctum Sylvii)
- m. temporalis
- a. temporalis profunda anterior + posterior
- nn. temporales (z n. V3)
- a. temporalis media
- corpus adiposum buccae
- r. zygomaticotemporalis
n. zygomatici



FOSSA TEMPORALIS

FOSSA TEMPORALIS
l. sin.

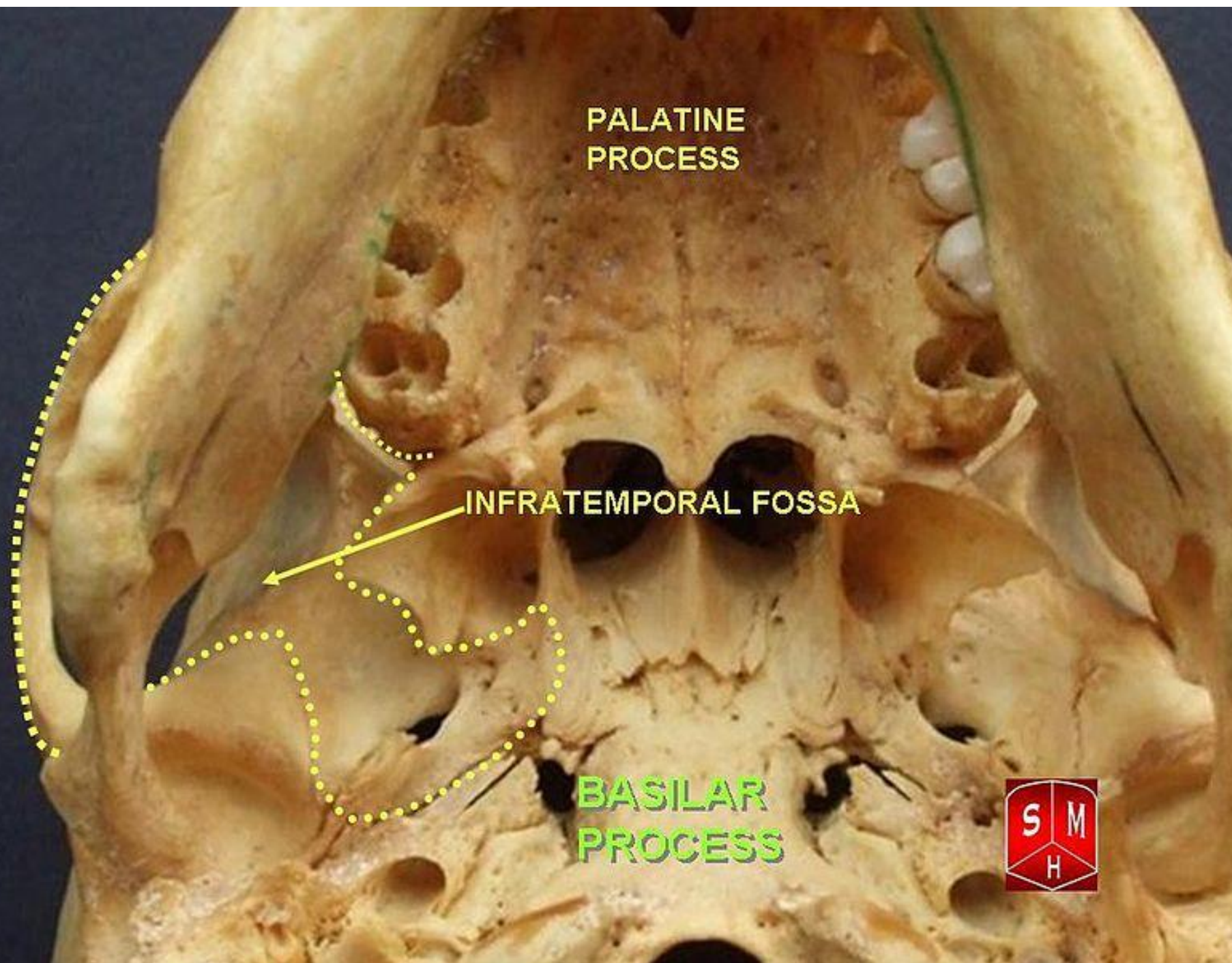




PALATINE
PROCESS

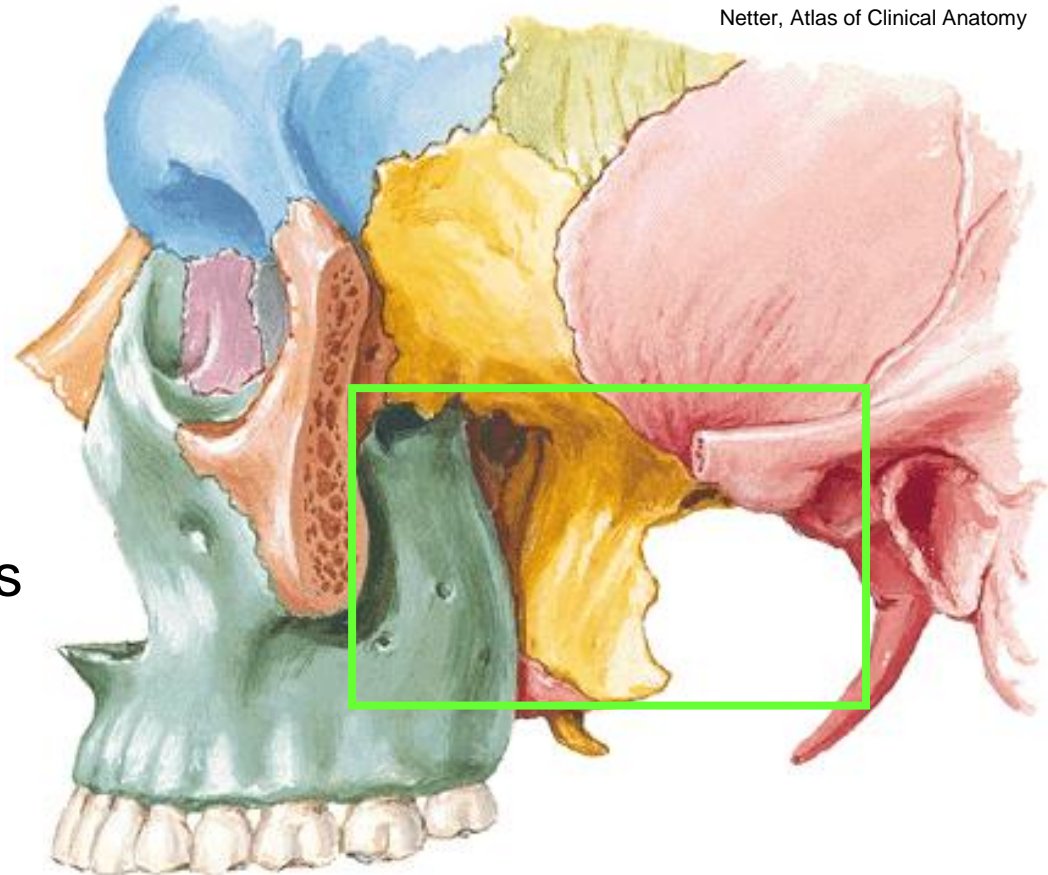
INFRATEMPORAL FOSSA

BASILAR
PROCESS



Fossa infratemporalis (podspánková jáma)

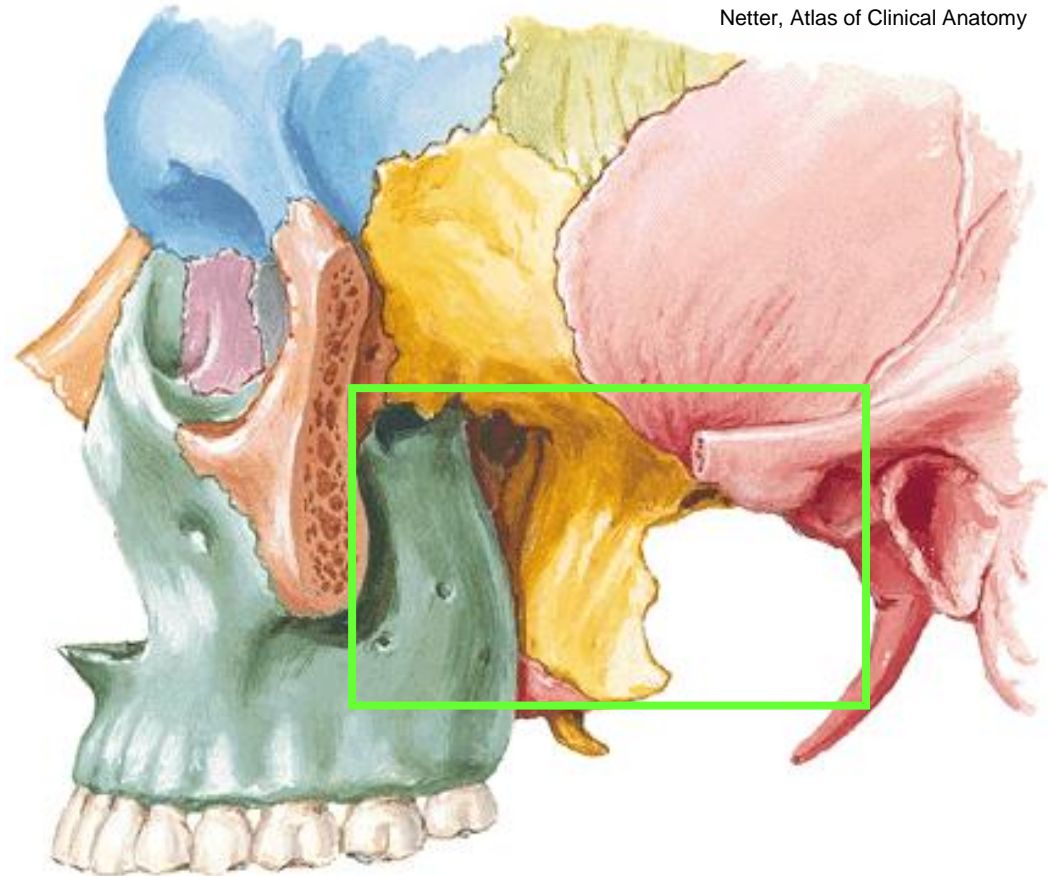
- kraniálně
 - facies infratemporalis ossis sphenoidalis
 - squama ossis temporalis
- laterálně
 - ramus mandibulae
- mediálně
 - lamina lateralis processus pterygoidei ossis sphenoidalis
 - processus pyramidalis ossis palatini
- ventrálně
 - tuber maxillae



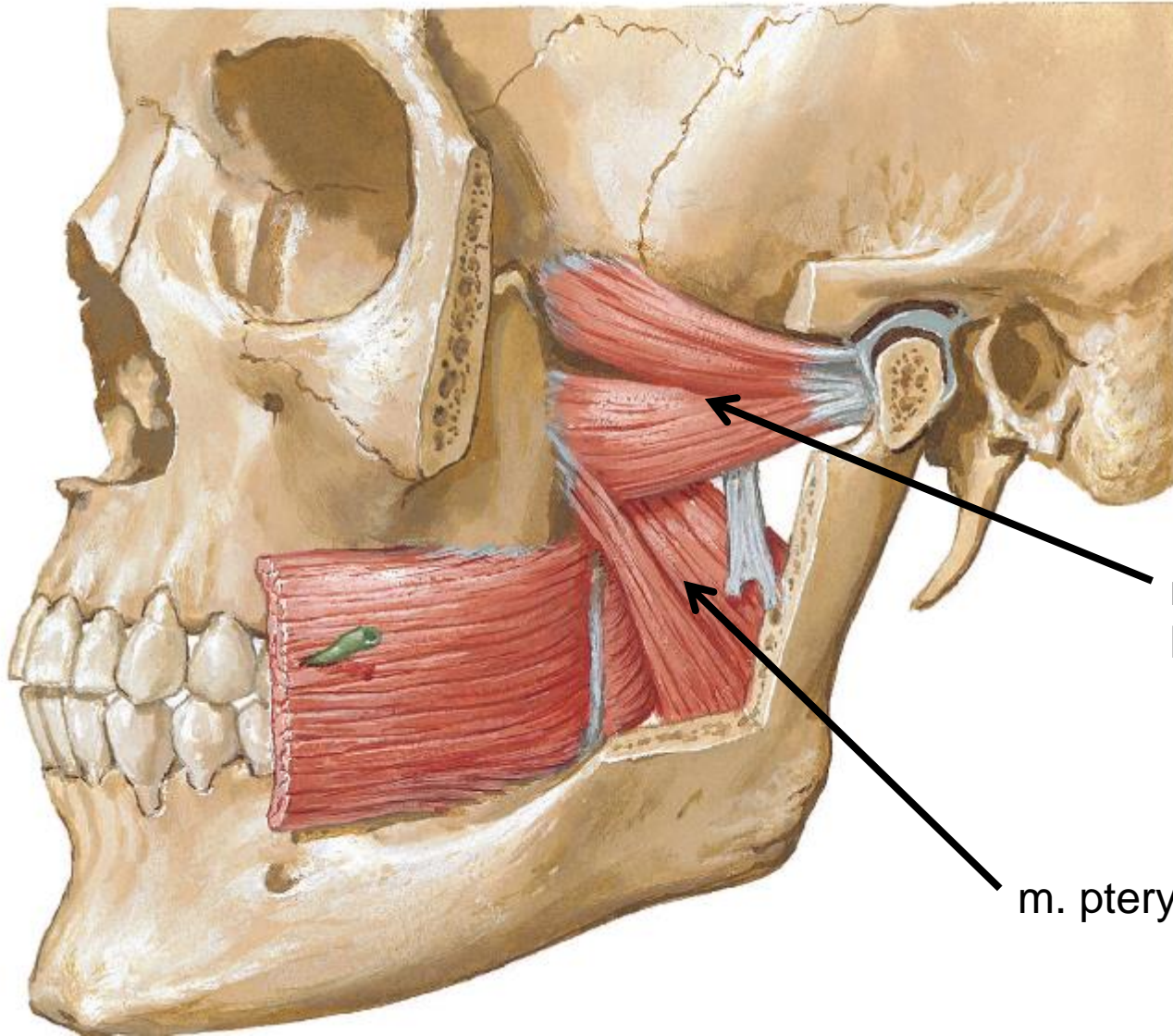
kaudálně a dorzálně otevřená
do spatium prestyloideum

Fossa infratemporalis – otvory

- kraniálně
 - foramen ovale
 - foramen spinosum
 - foramen petrosum
 - foramen lacerum
- laterálně
 - foramen mandibulae
- mediálně
 - fissura pterygomaxillaris
 - fissura petrotympanica
- ventrálně
 - foramina alveolaria

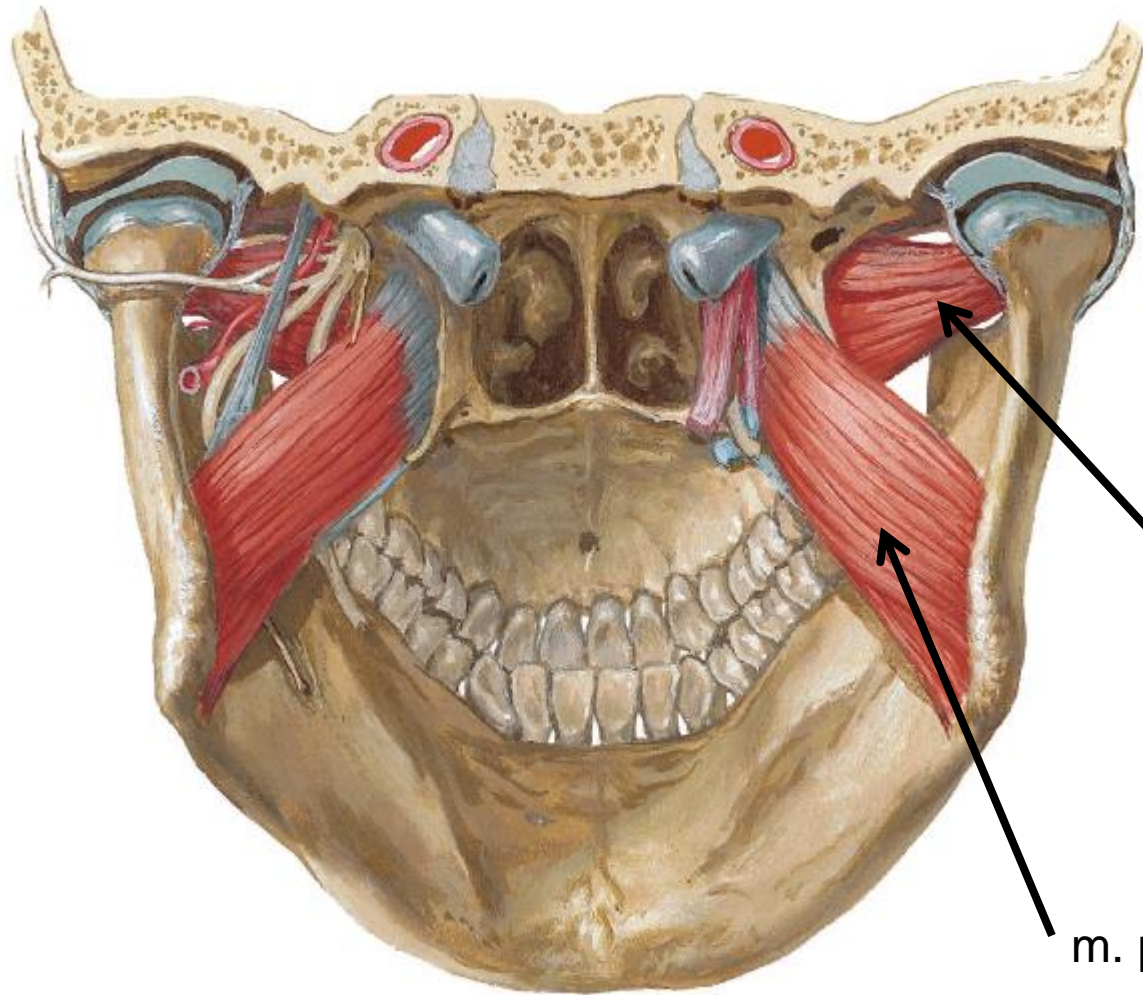


kaudálně a dorzálně otevřená
do spatium prestyloideum



m. pterygoideus lateralis

m. pterygoideus medialis

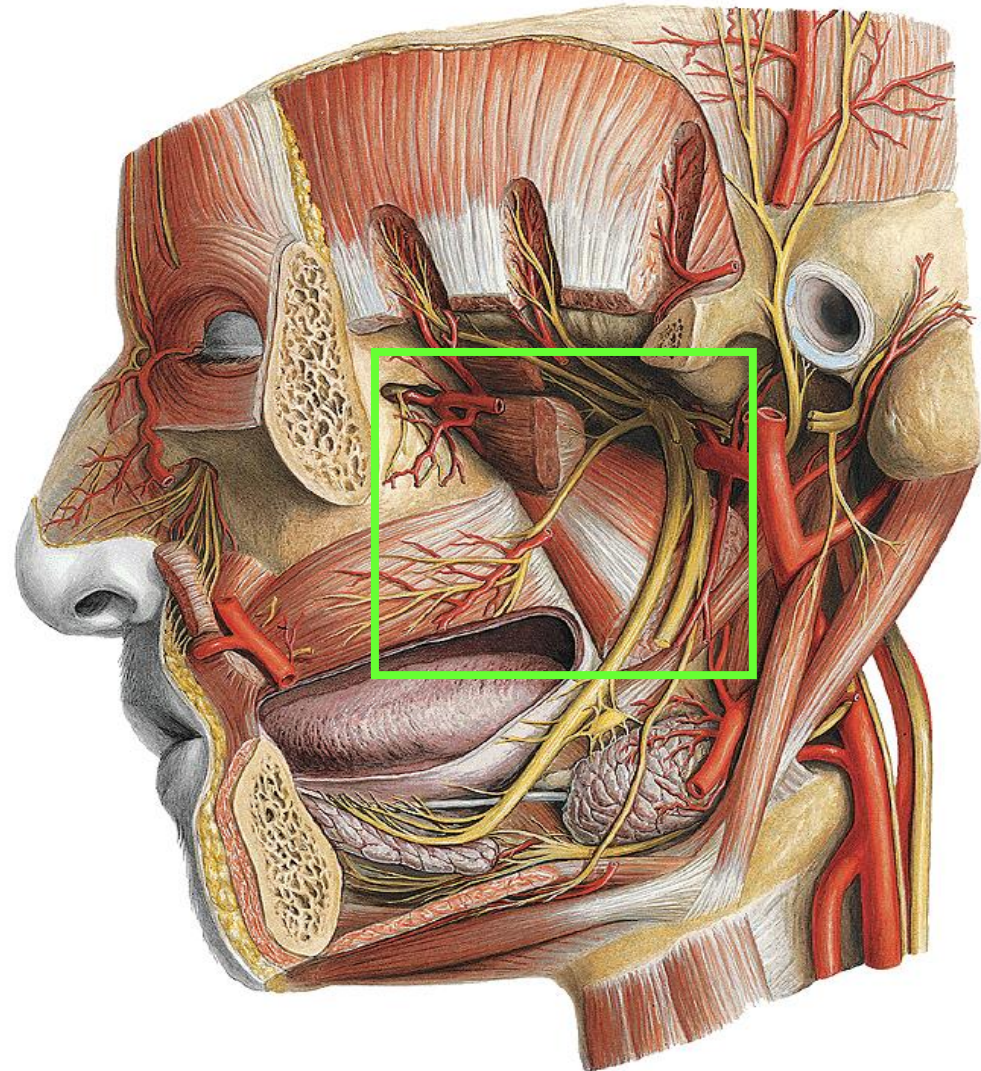


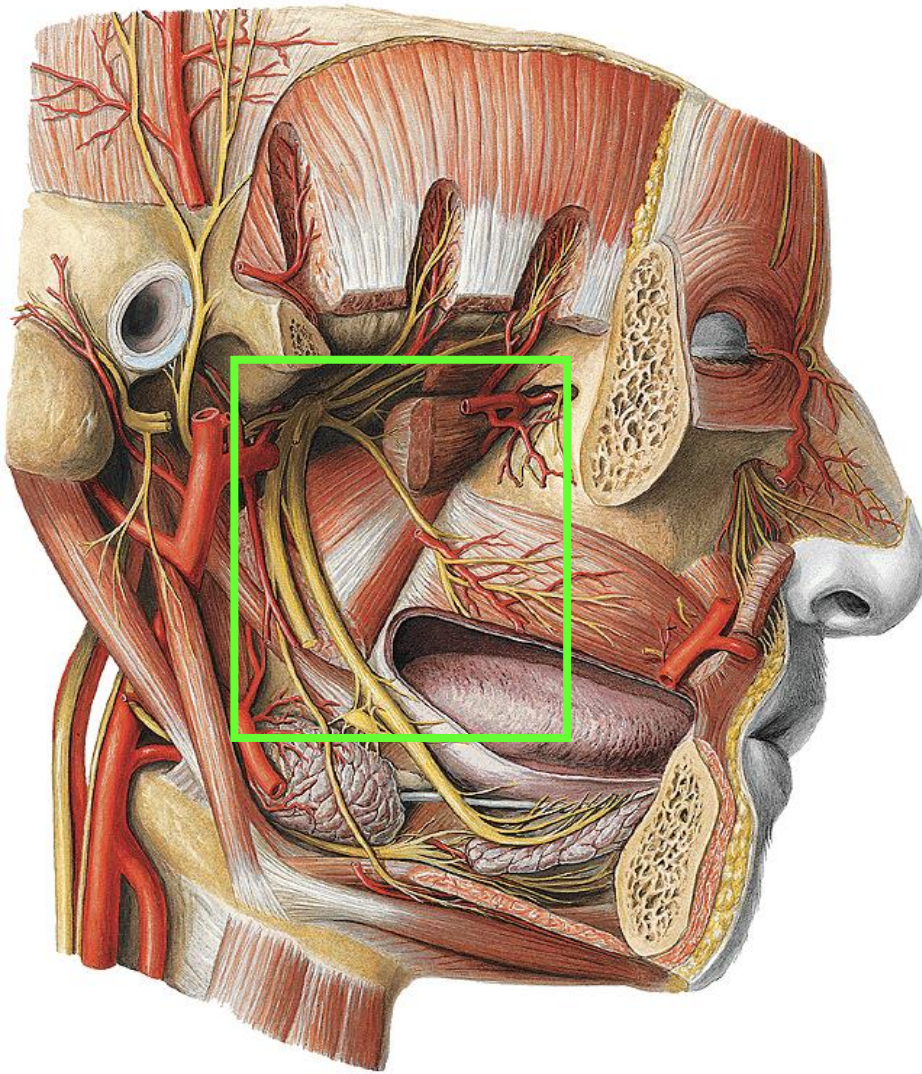
m. pterygoideus lateralis

m. pterygoideus medialis

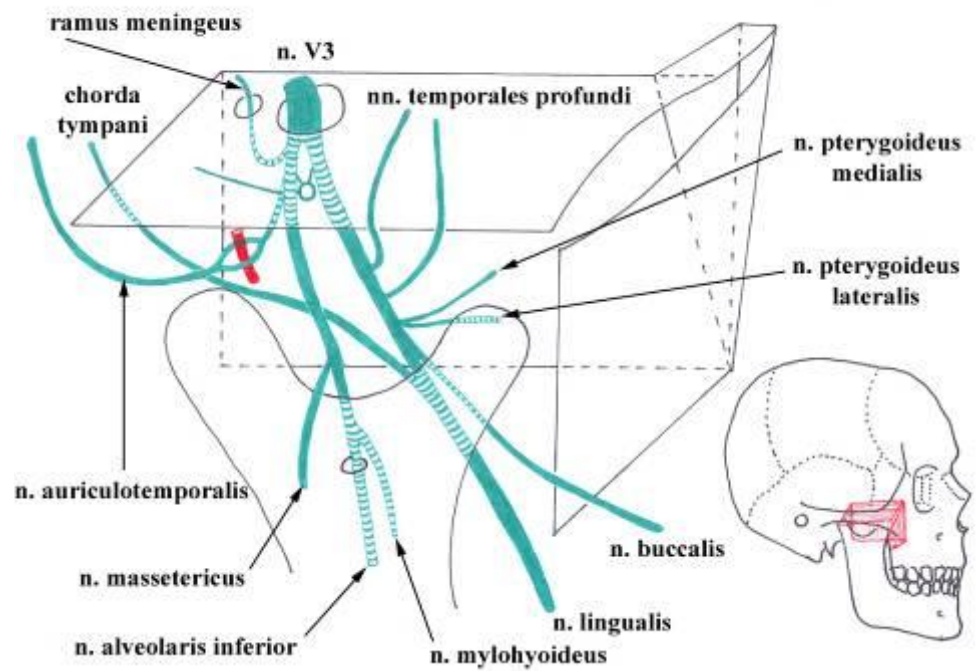
Fossa infratemporalis – obsah

- m. temporalis (úpon)
- m. pterygoideus med.+lat.
- a. maxillaris (pars pterygoidea) a její větve
- plexus pterygoideus a jeho přítoky
- n. mandibularis a jeho větve
- ggl. oticum
- n. petrosus minor
- chorda tympani
- (vasa alveolaria sup.post + nn. alveolares sup. post.)
- corpus adiposum buccae

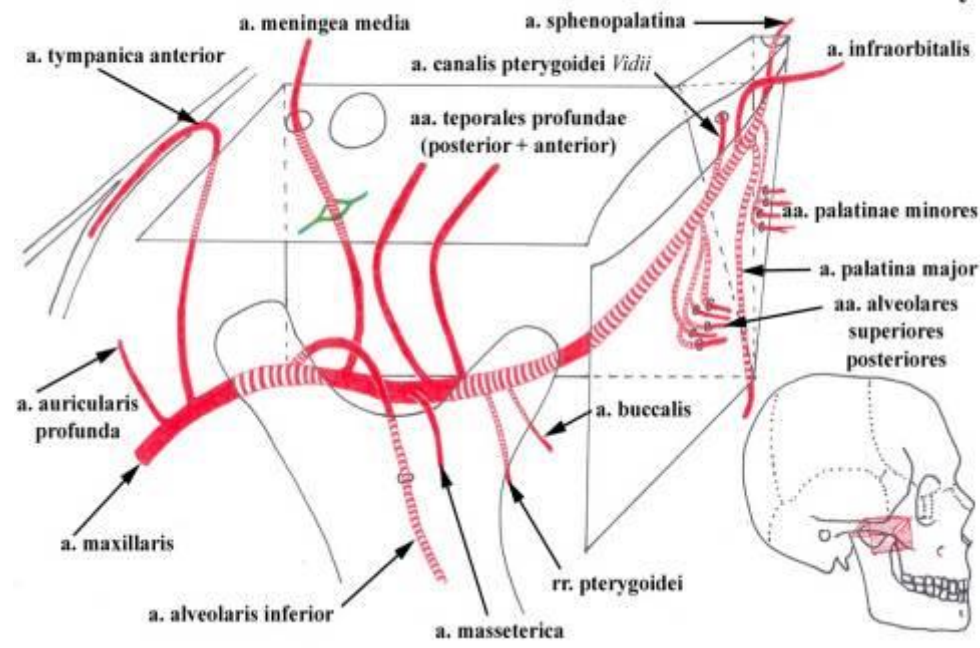




FOSSA INFRATEMPORALIS - l.dx.



FOSSA INFRATEMPORALIS + PTERYGOPALATINA l. dx. - cévy

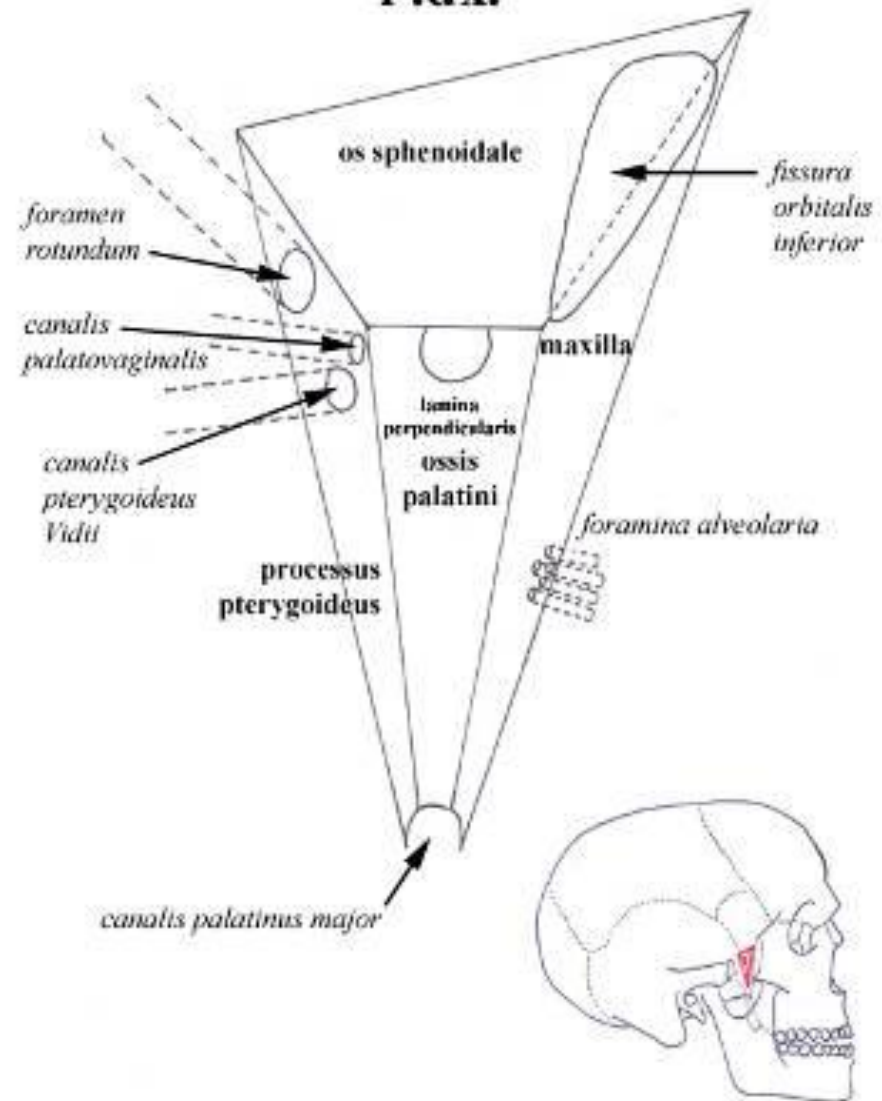


Fossa pterygopalatina

- kraniálně
 - facies maxillaris alae majoris ossis sphenoidalis
- kaudálně
 - *canalis palatinus major*
- mediálně
 - lamina perpendicularis ossis palatini (*foramen sphenopalatinum*)
- laterálně
 - *fissura pterygomaxillaris*
- ventrálně
 - facies infratemporalis maxillae (*fissura orbitalis inferior*)
- dorzálně
 - processus pterygoideus ossis sphenoidalis (*canalis pterygoideus Vidii* + *canalis palatovaginalis*)

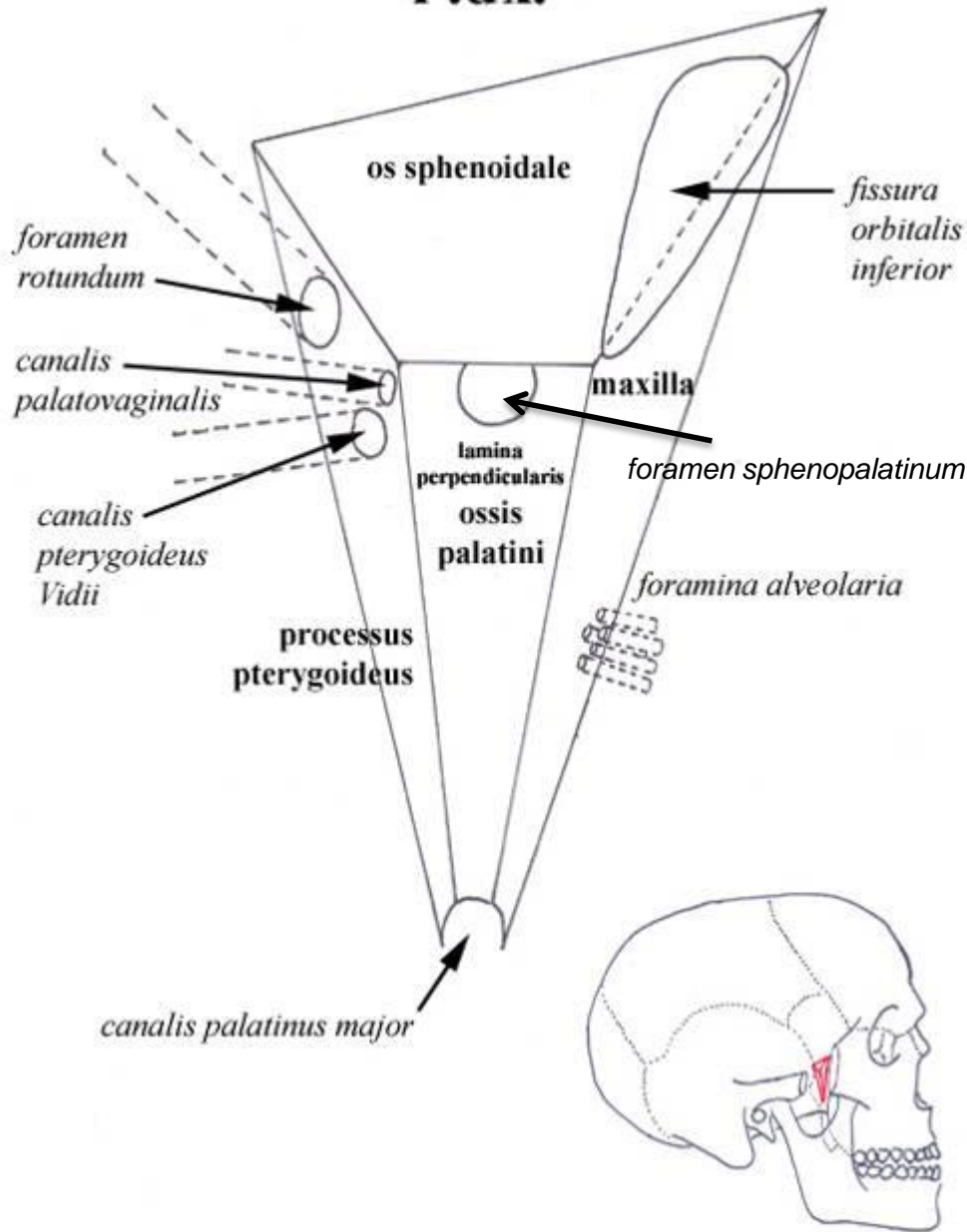
FOSSA PTERYGOPALATINA

I .dx.



FOSSA PTERYGOPALATINA

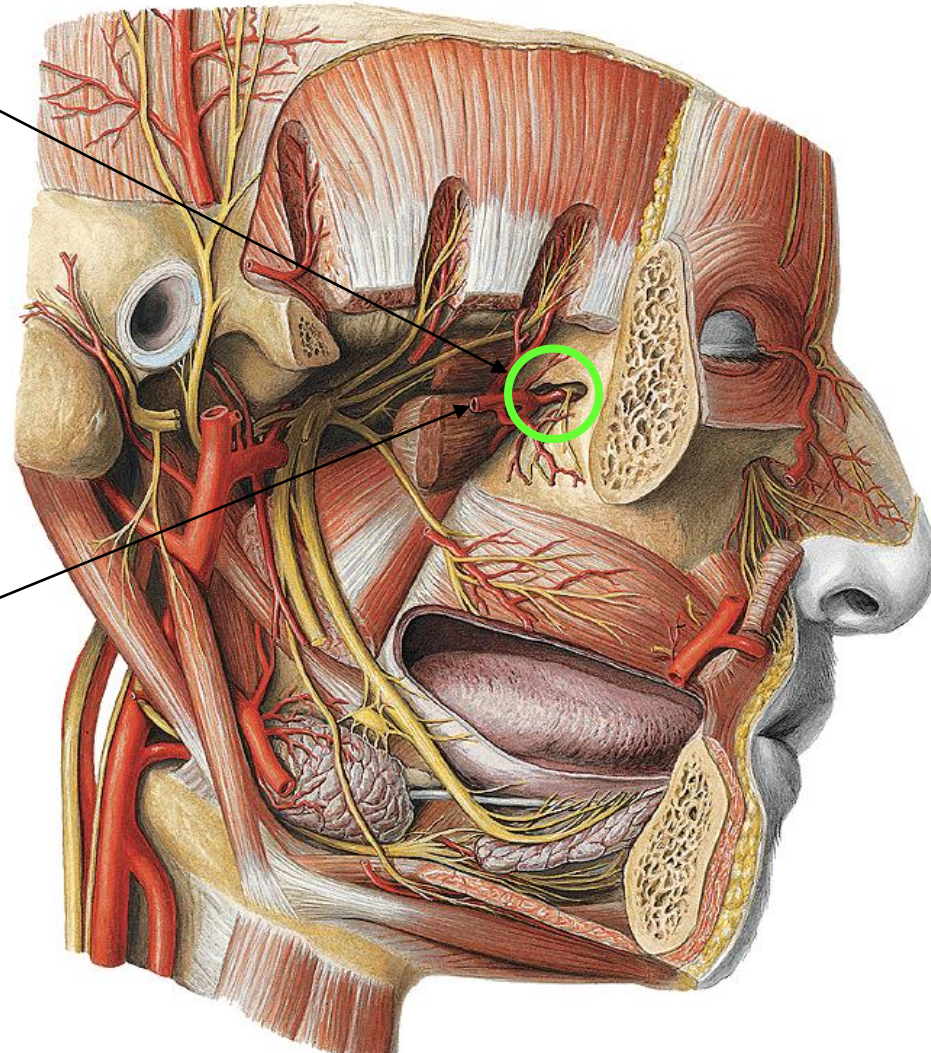
I .dx.



- fissura orbitalis inferior
 - n. infraorbitalis
 - n. zygomaticus
 - a. infraorbitalis
 - v. ophthalmica inferior
 - *m. orbitalis (hladký)*
- foramen sphenopalatinum
 - a. sphenopalatina
 - rr. nasales posteriores sup. lat. et med. (větve n. V2)
- foramen rotundum
 - n. maxillaris
- canalis pterygoideus (Vidii)
 - n. canalis pterygoidei
 - n. petrosus major (z n. VII)
 - n. petrosus profundus (z plexus caroticus int.)
 - a. canalis pterygoidei
 - v. canalis pterygoidei
- canalis palatovaginalis
 - n. pharyngeus
 - r. pharyngeus (větve a. maxillaris)
- canalis palatinus major
 - n. palatinus major
 - a. palatina major
 - v. palatina major
- (canales palatini minores)

Fossa pterygopalatina (Křídlopatrová jáma)

- **fissura pterygomaxillaris**
 - vstup
 - a. maxillaris
 - přítoky do plexus pterygoideus
- **obsah:**
 - ggl. pterygopalatinum
 - n. canalis pterygoidei
 - a. maxillaris (pars pterygopalatina) a její větve
 - žíly podél tepen
 - n. maxillaris a jeho větve



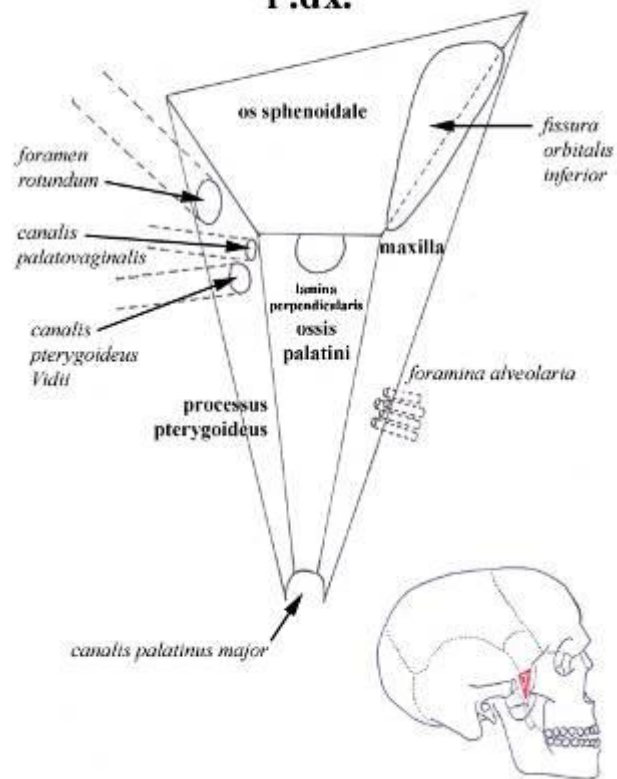
Fossa pterygopalatina

- kraniálně
 - facies maxillaris alae majoris ossis sphenoidalis
- kaudálně
 - *canalis palatinus major*
- mediálně
 - lamina perpendicularis ossis palatini (*foramen sphenopalatinum*)
- laterálně
 - *fissura pterygomaxillaris*
- ventrálně
 - facies infratemporalis maxillae (*fissura orbitalis inferior*)
- dorzálně
 - processus pterygoideus ossis sphenoidalis
 - (*canalis pterygoideus Viddii + canalis palatovaginalis*)



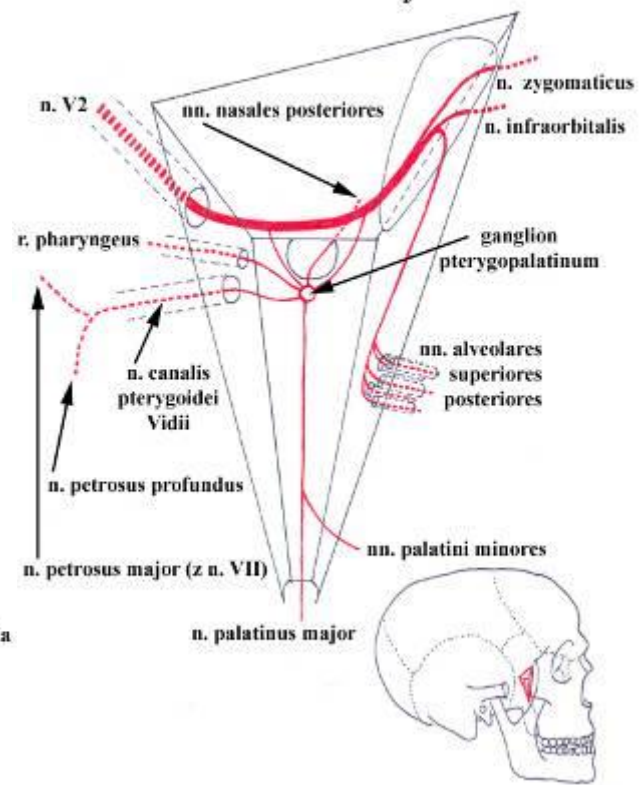
FOSSA PTERYGOPALATINA

l.dx.



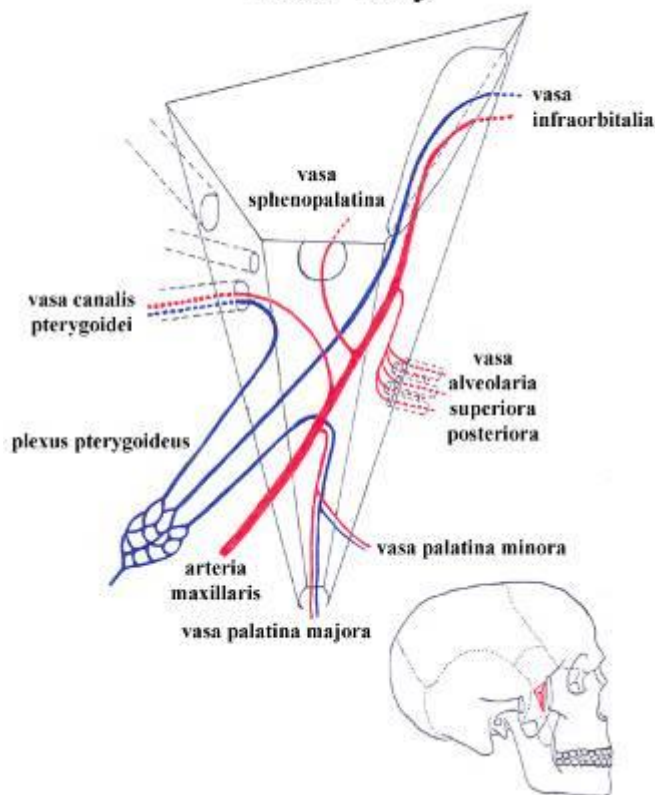
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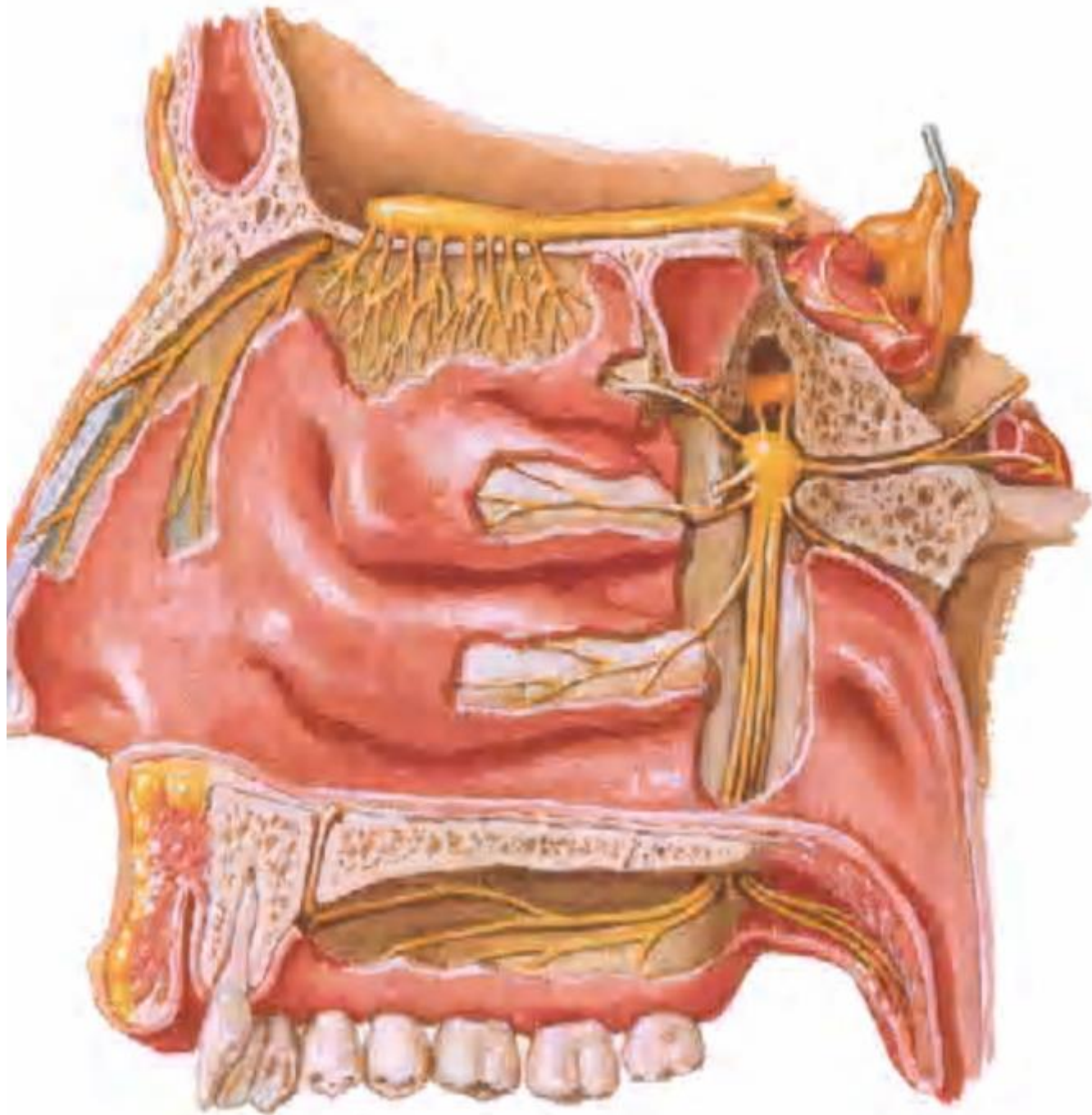
l.dx. - nervy

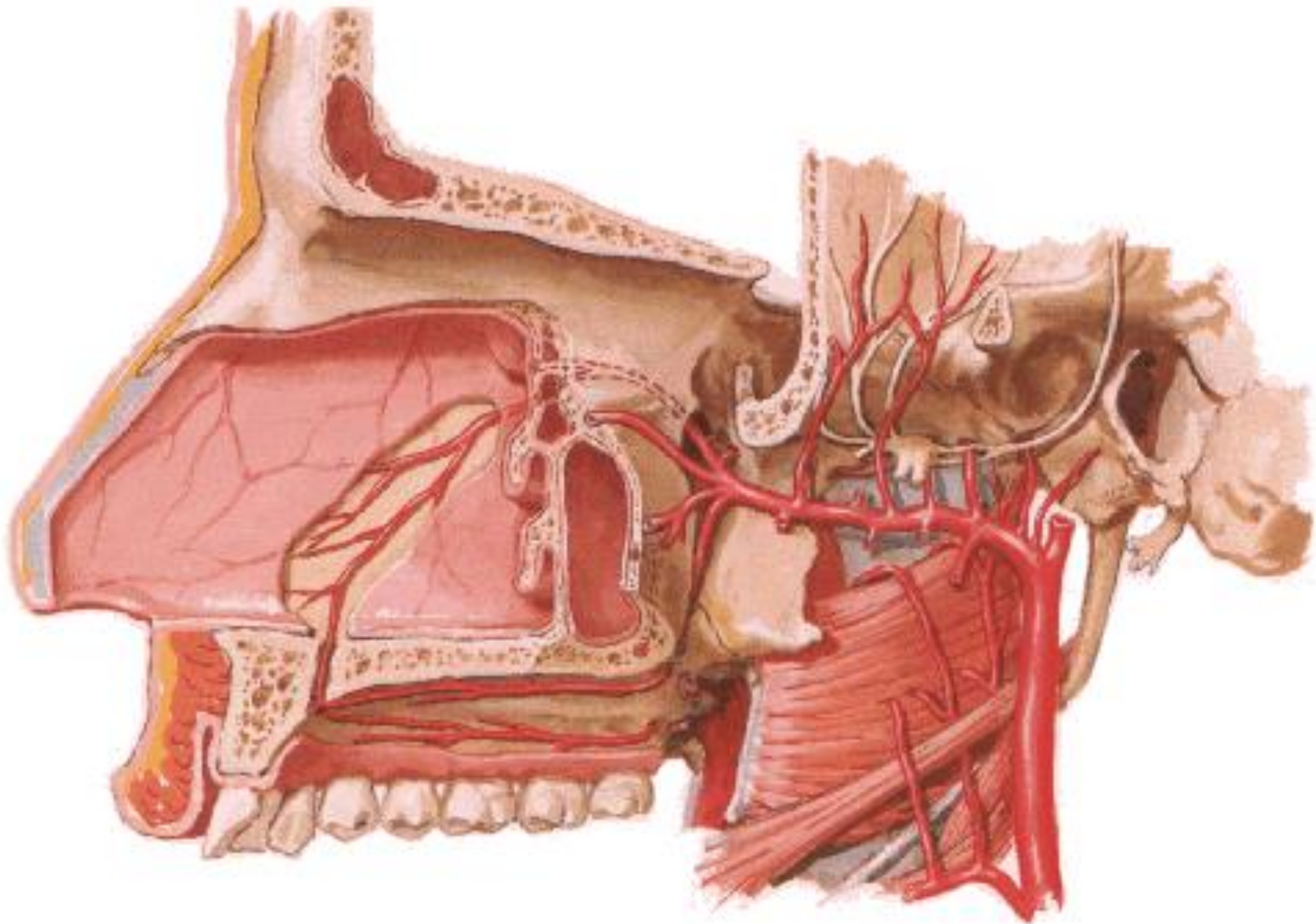


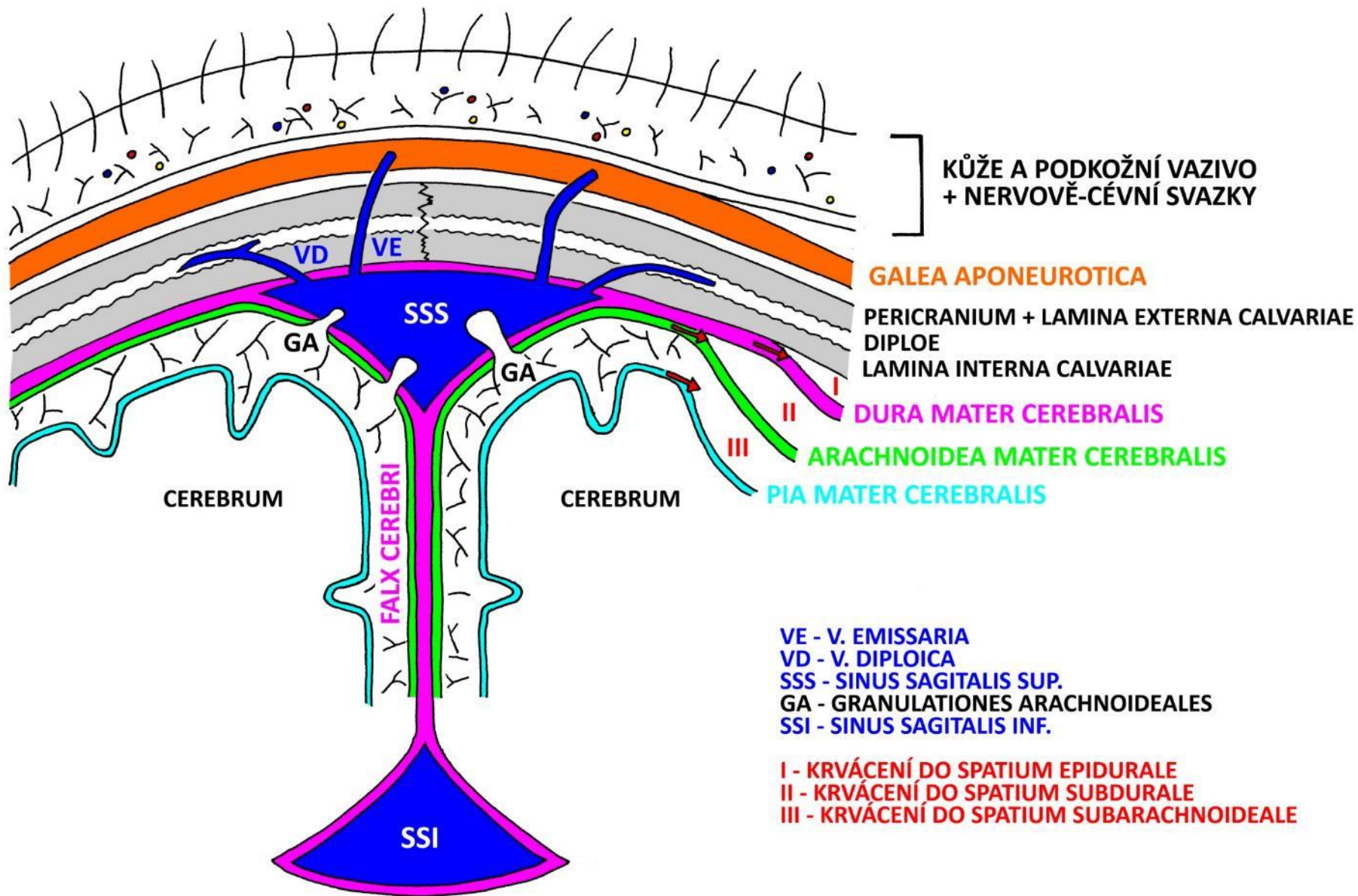
FOSSA PTERYGOPALATINA

l.dx. - cévy











NORMA BASALIS CRANII s úpony svalù dle pùvodu a inervace

