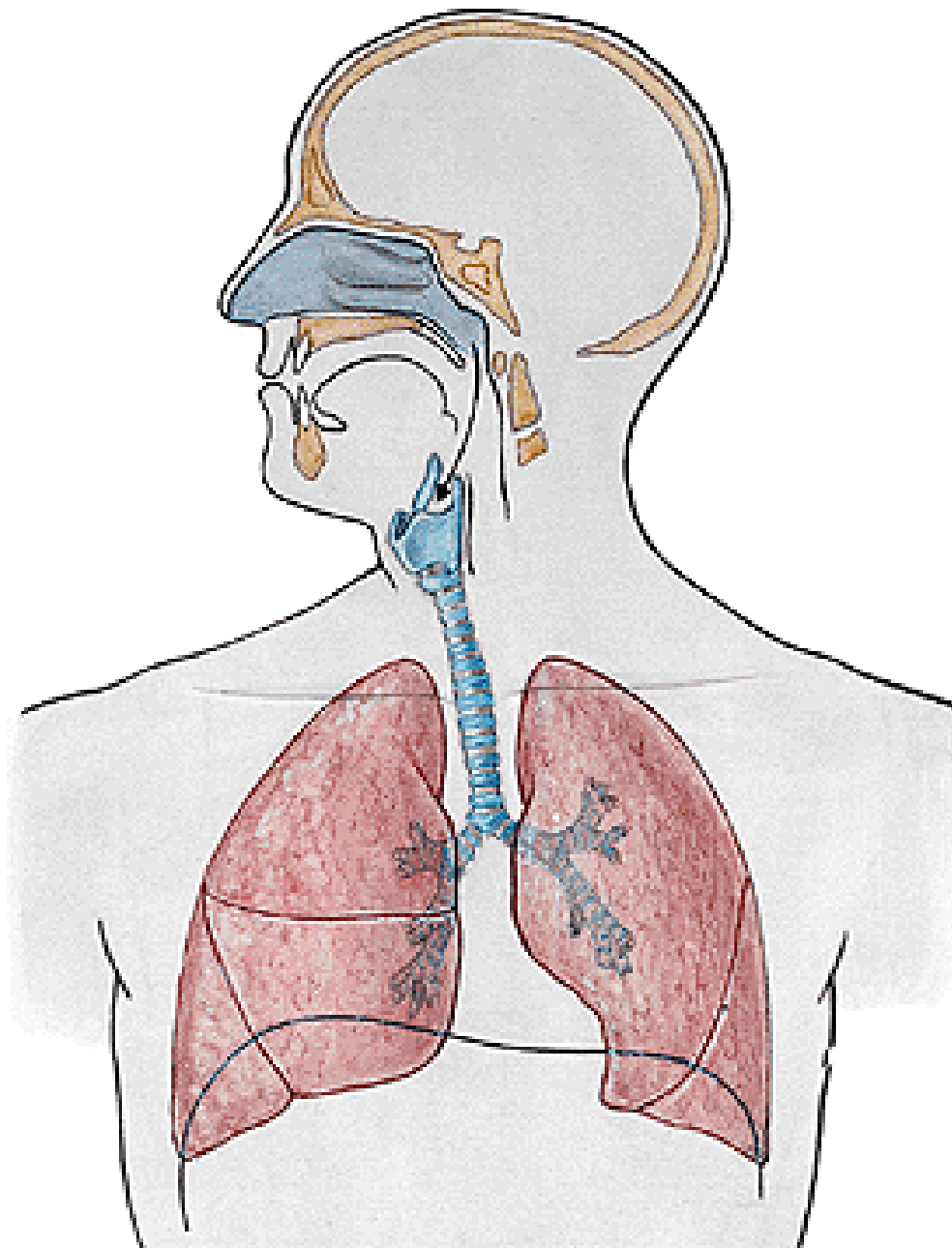


RESPIRATORY SYSTEM



NASUS EXTERNUS

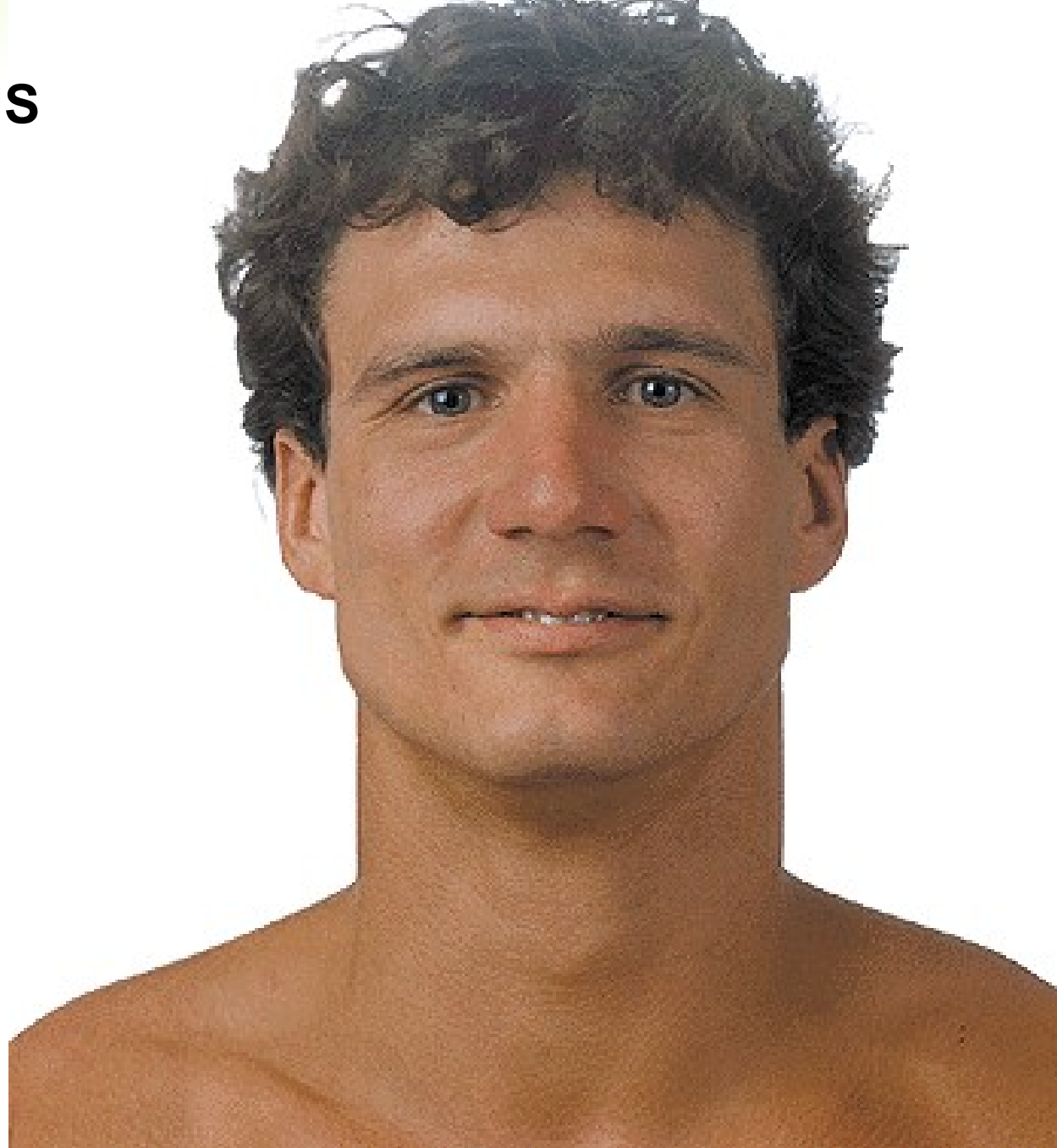
Radix nasi

Dorsum nasi

Apex nasi

Nares

Alae nasi



Cartilago nasi lateralis

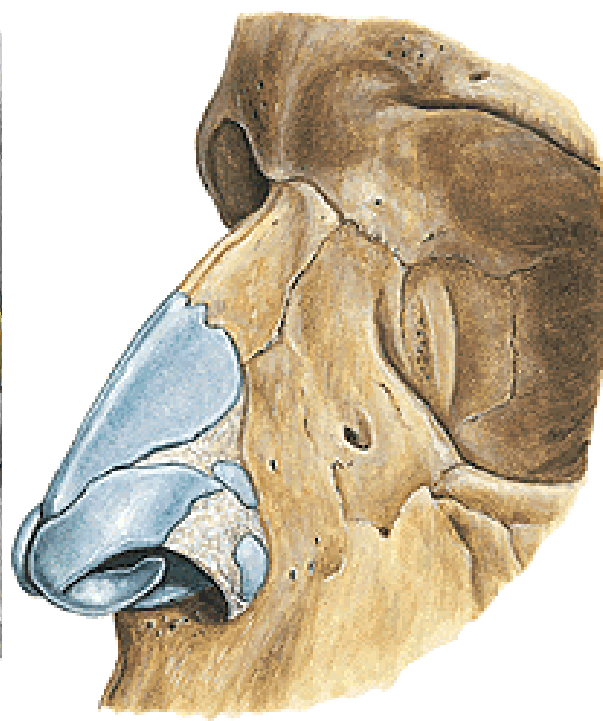
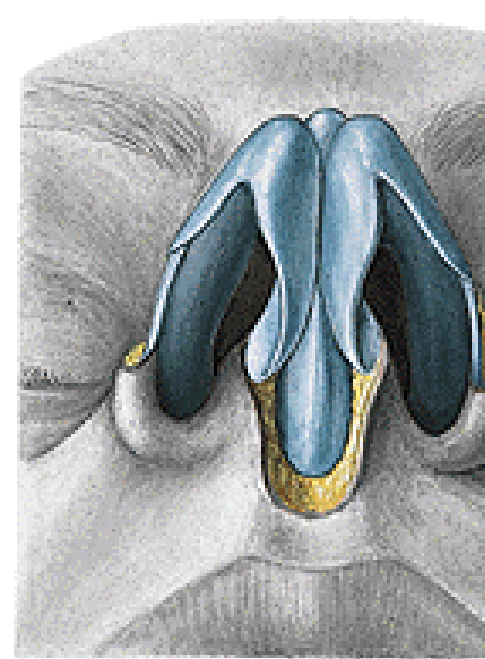
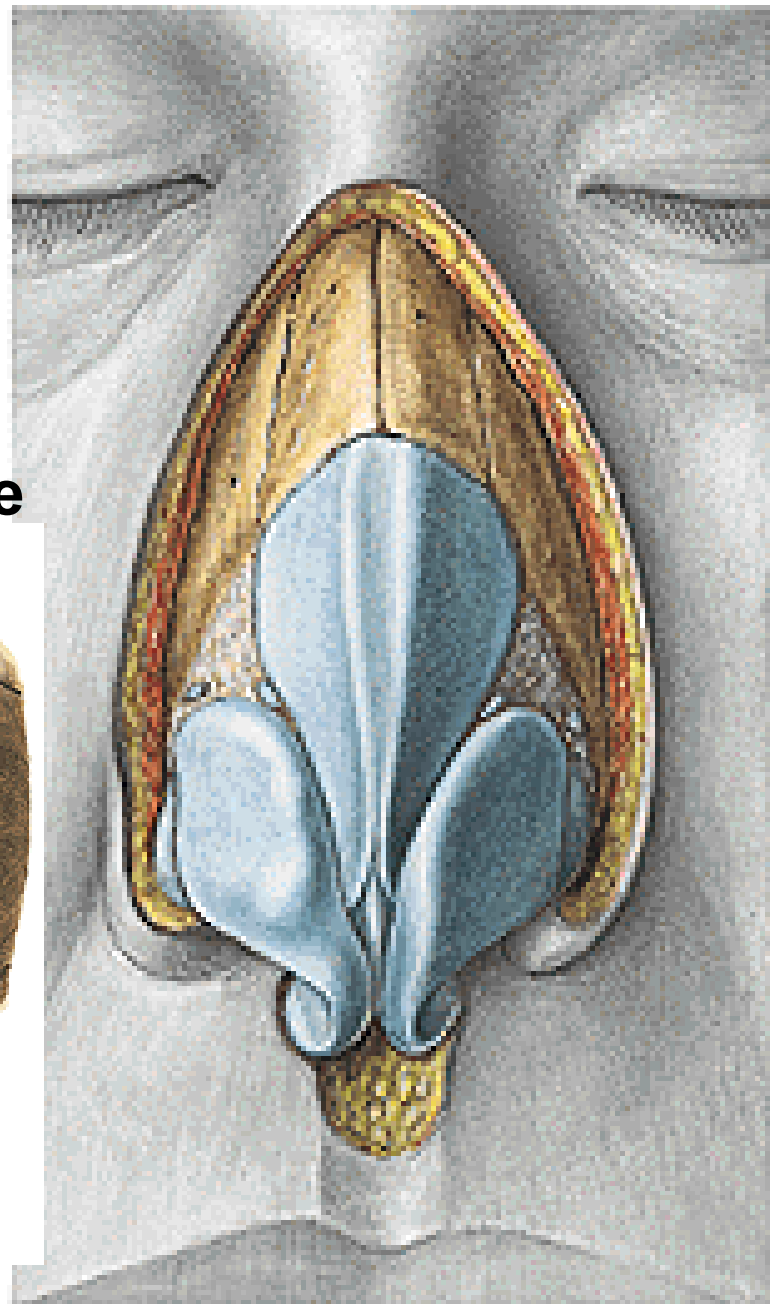
Cartilago alaris major

- crus laterale

- crus mediale

Cartilagine alares minores

Cartilagine nasales accessoriae



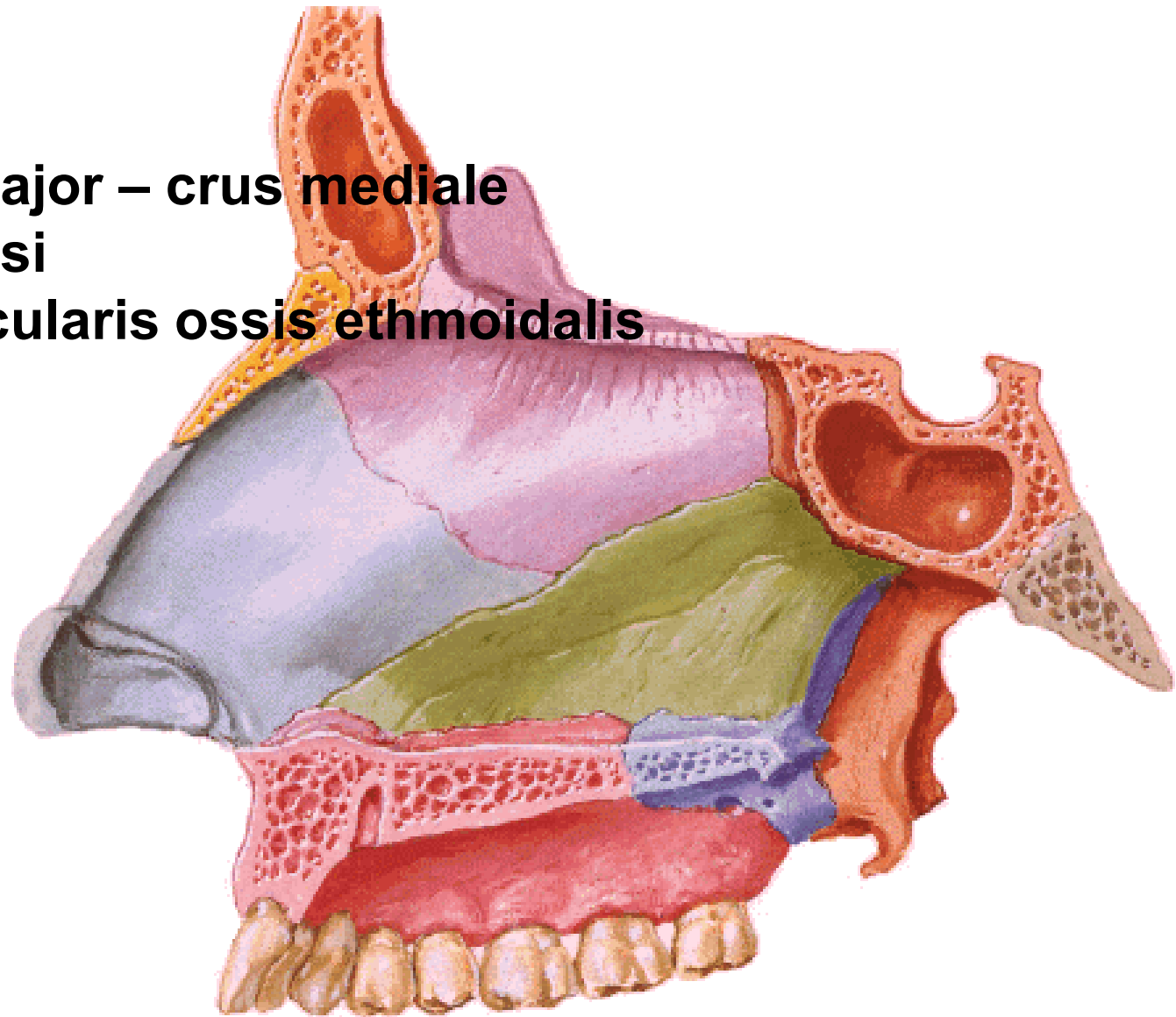
SEPTUM NASI

Cartilago alaris major – crus mediale

Cartilago septi nasi

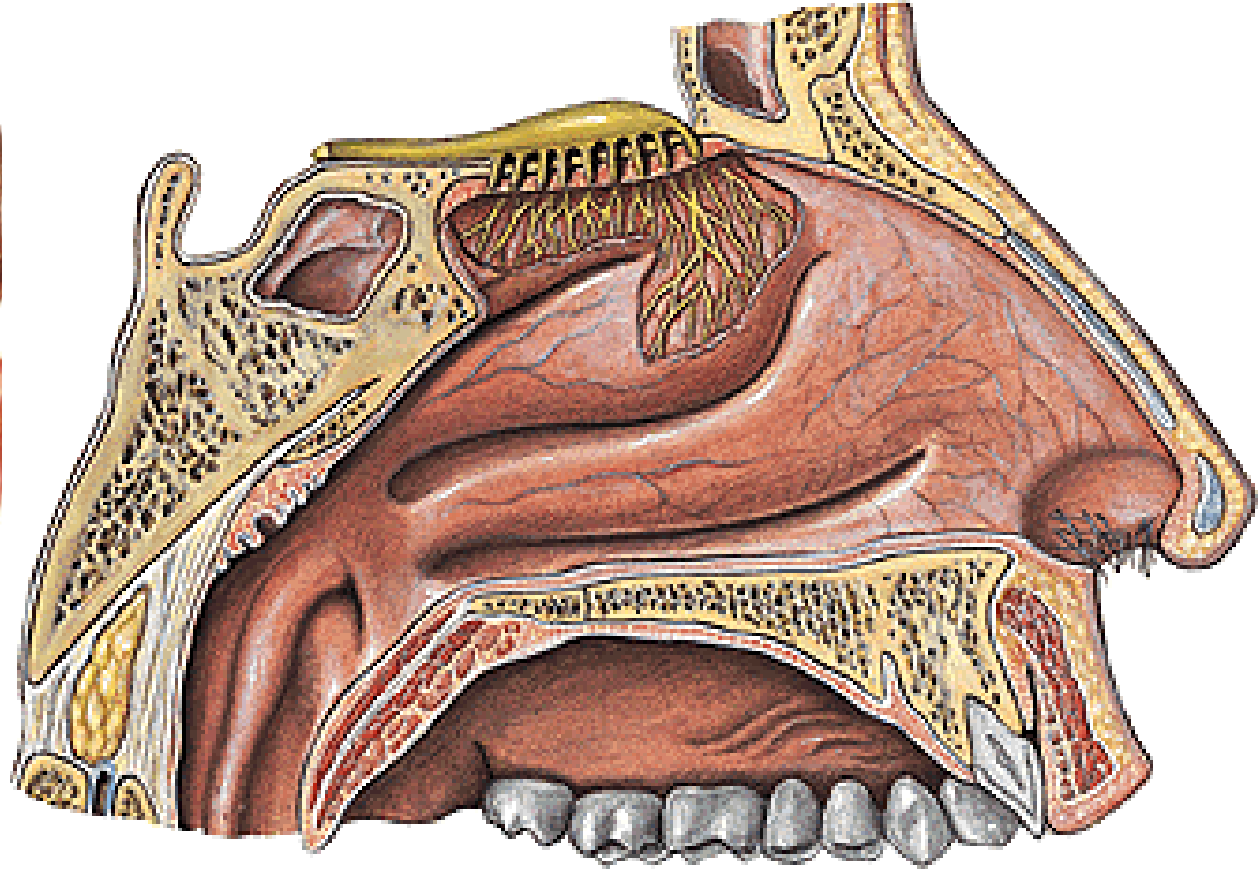
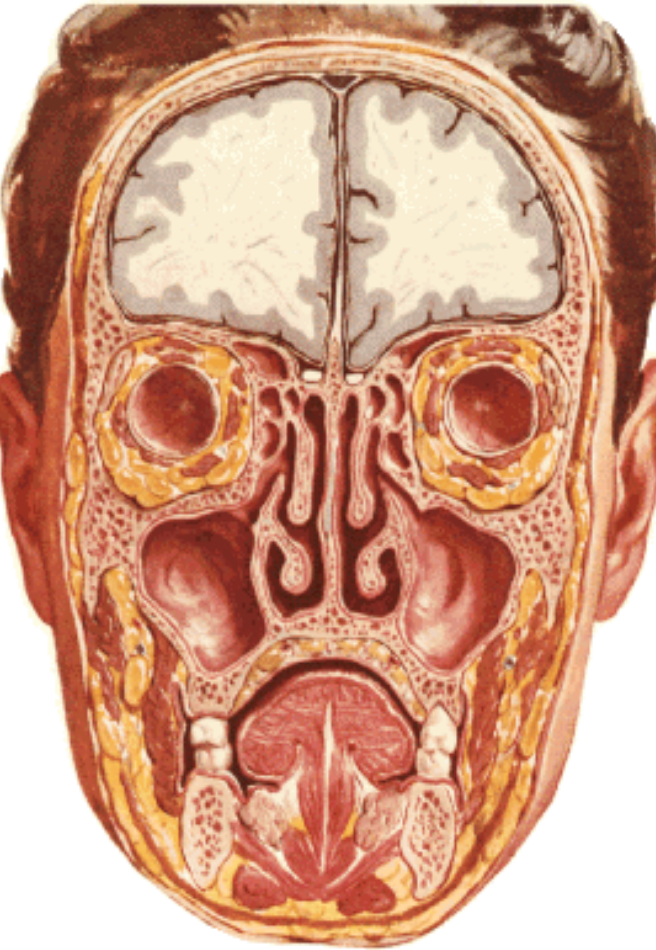
Lamina perpendicularis ossis ethmoidalis

Vomer



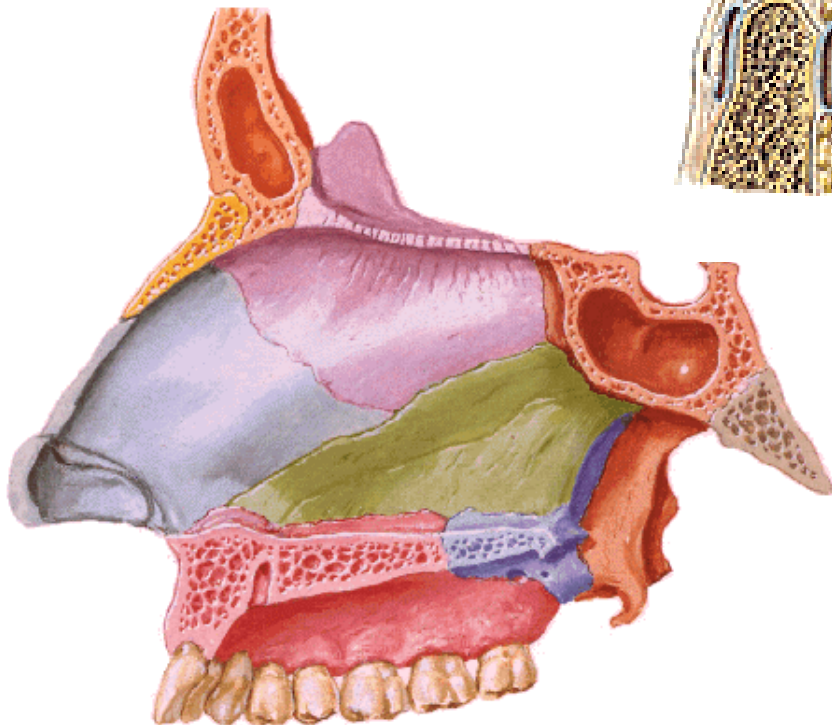
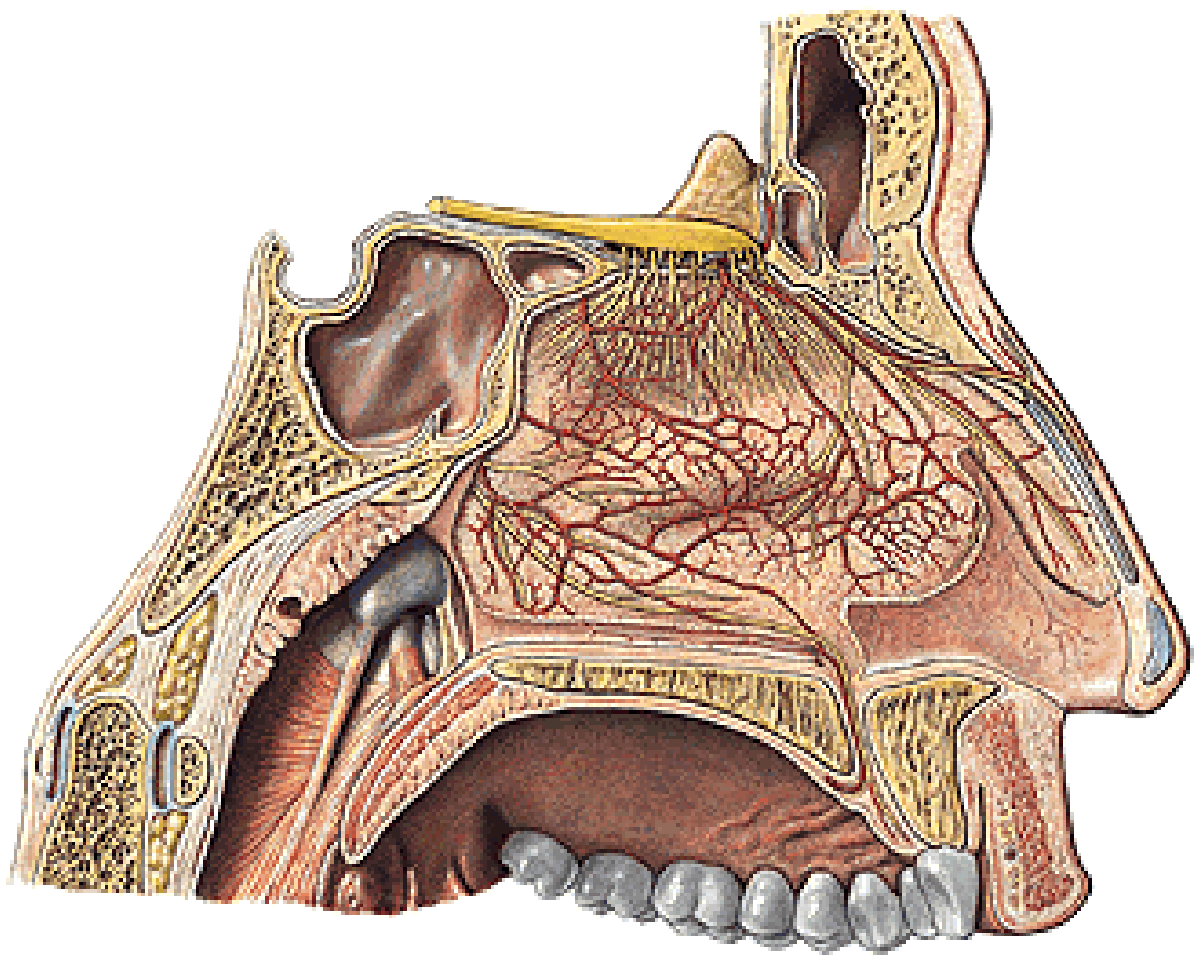
CAVITAS NASI

- vestibulum – limen, vibrisae, recessus apicis nasi
- cavitas nasi propria – meatus nasi sup., medius, inf.
meatus nasi communis, meatus nasopharyngeus, choanae



SEPTUM NASI

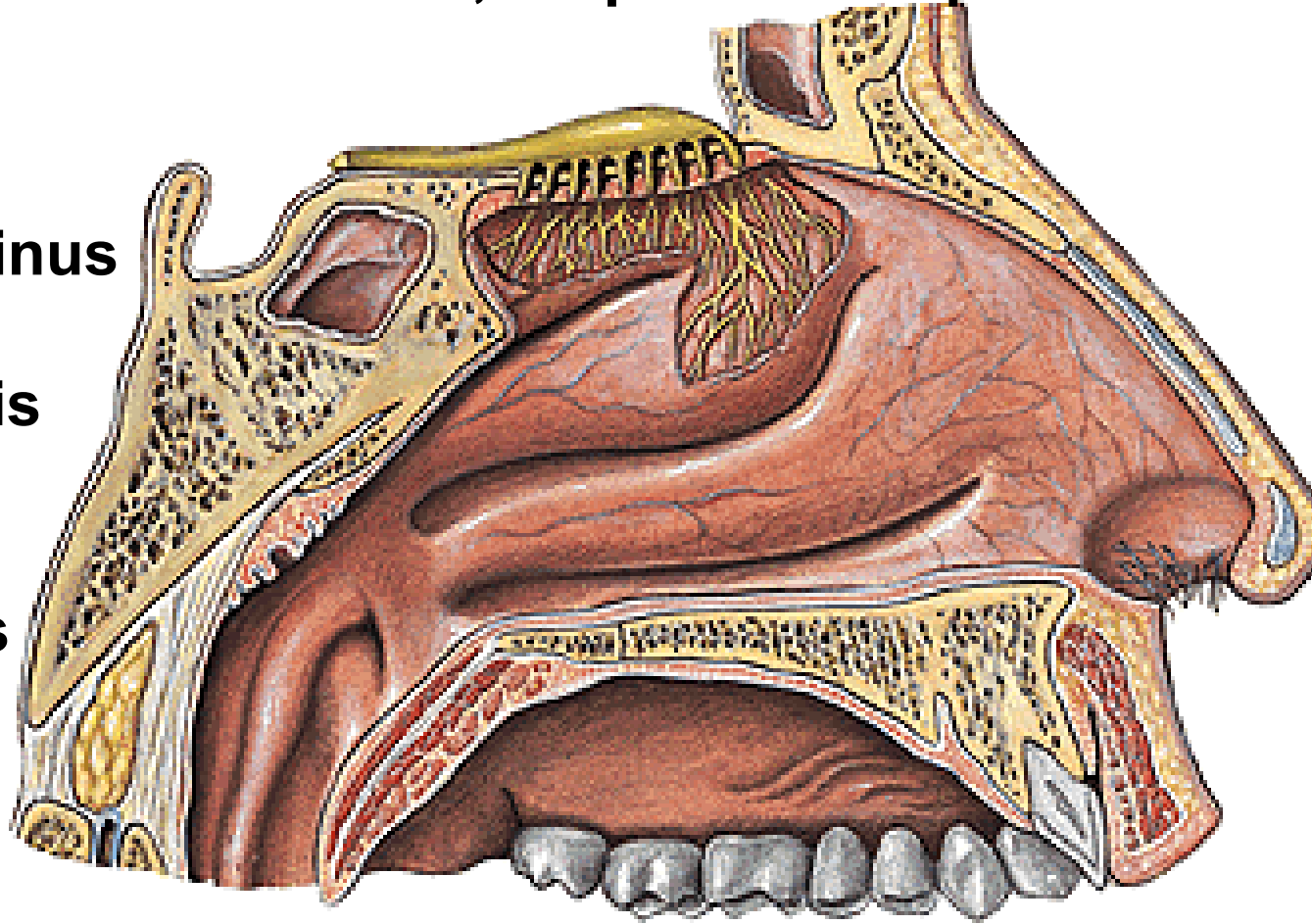
- pars membranacea
- pars cartilaginea
- pars ossea



**Superior wall: cartilago nasi lateralis, os nasale,
pars nasalis ossis frontalis, lamina cribrosa
ossis ethmoidalis, corpus ossis sphenoidalis**

**Inferior wall:
processus palatinus
maxillae, lamina
horizontalis ossis
palatini**

canalis incisivus

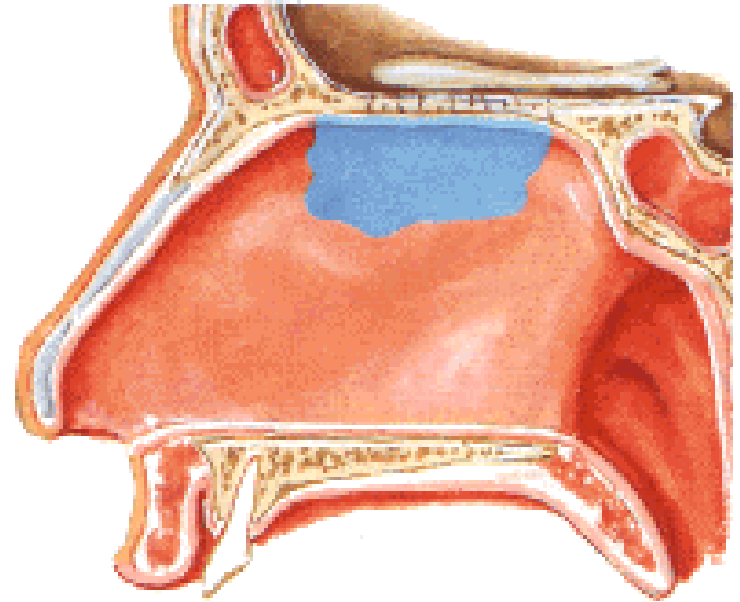
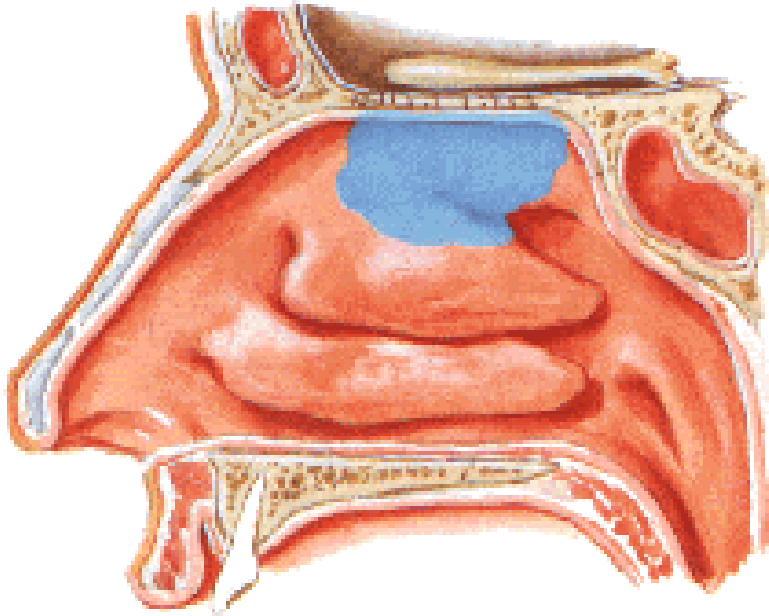


NASAL MUCOSA

Regio respiratoria

plexus cavernosi - epistaxis

Regio olfactoria



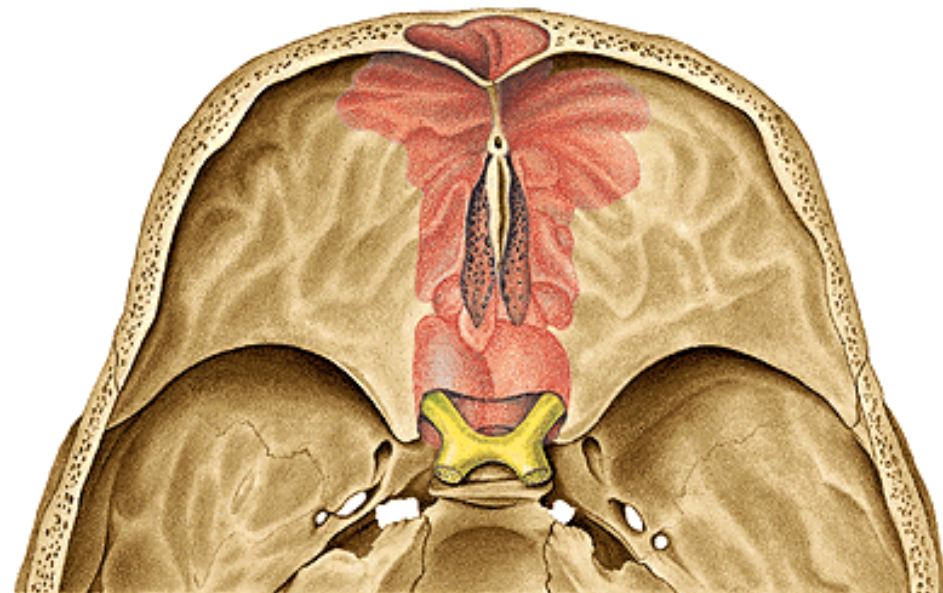
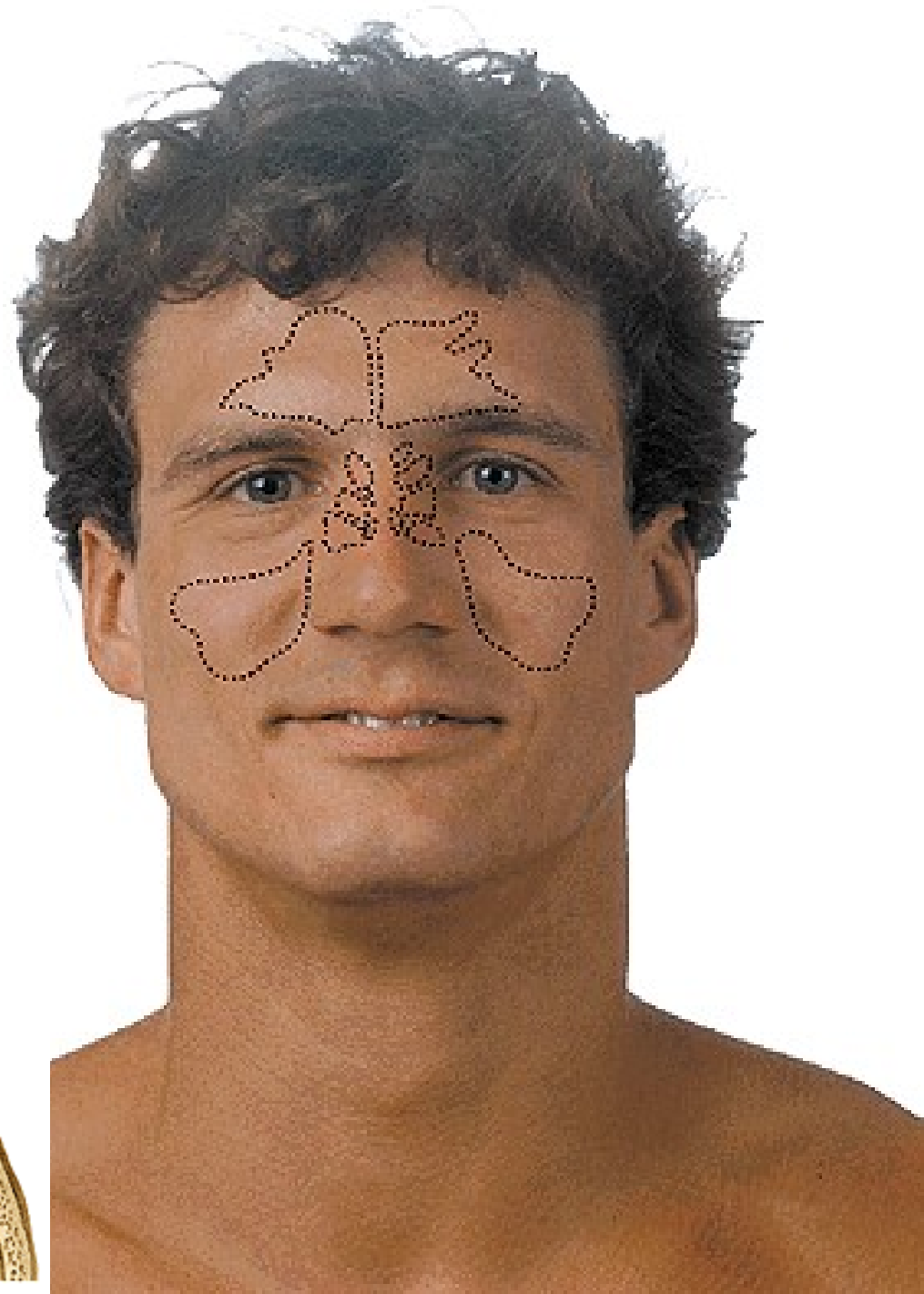
SINUS PARANASALES

Sinus maxillaris

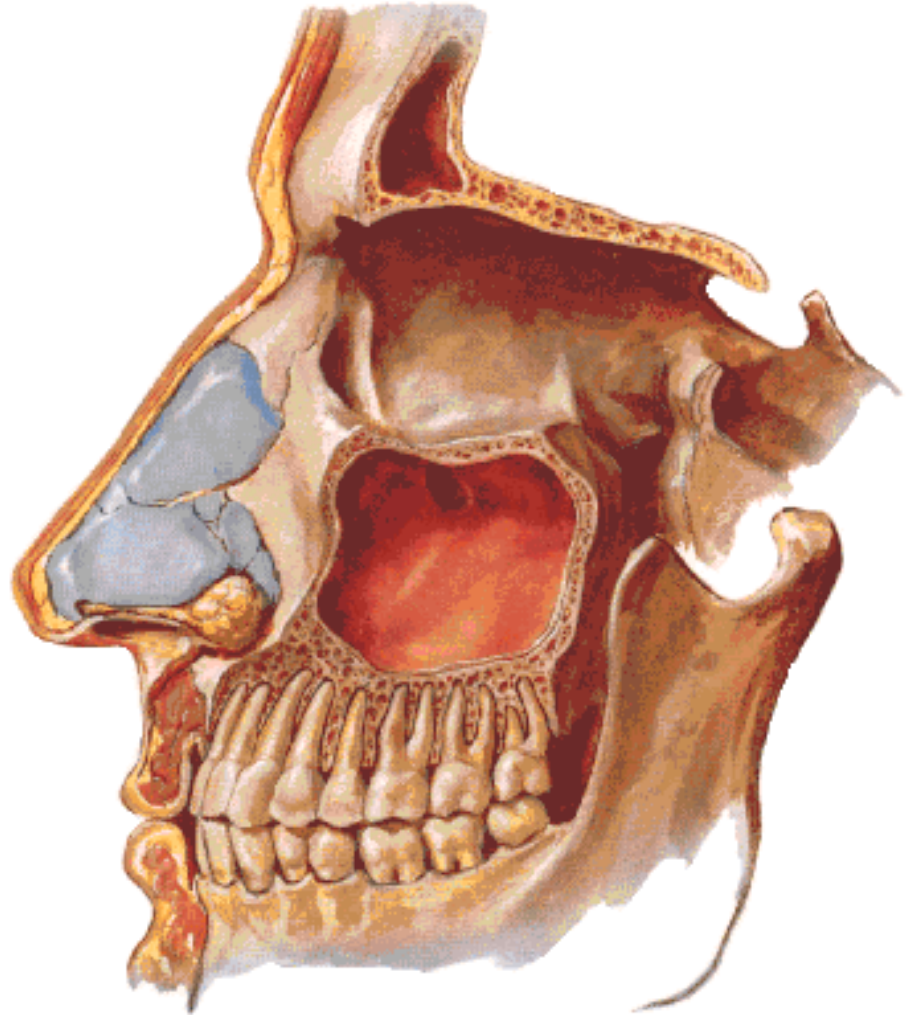
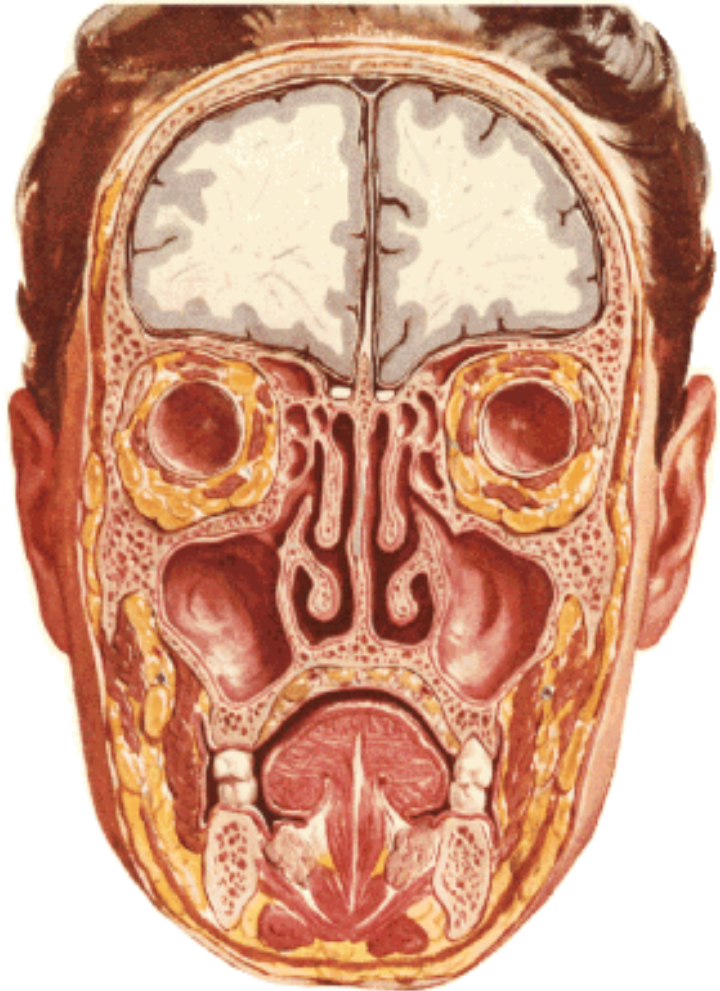
Sinus frontalis

Sinus ethmoidales

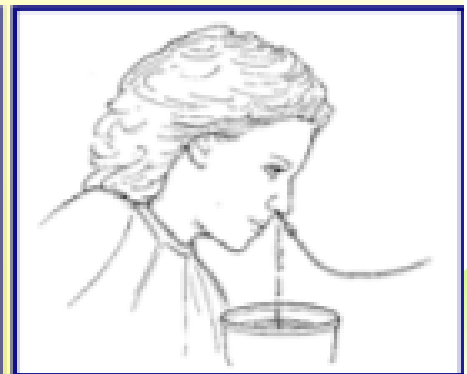
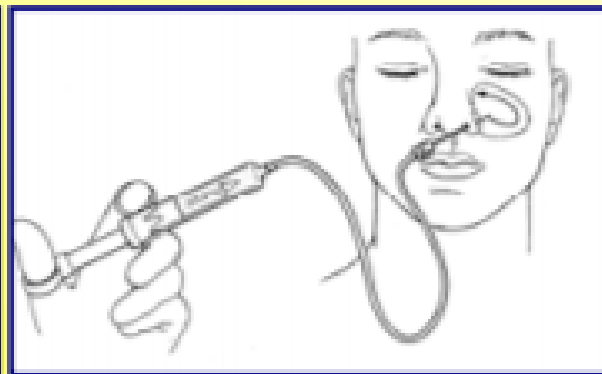
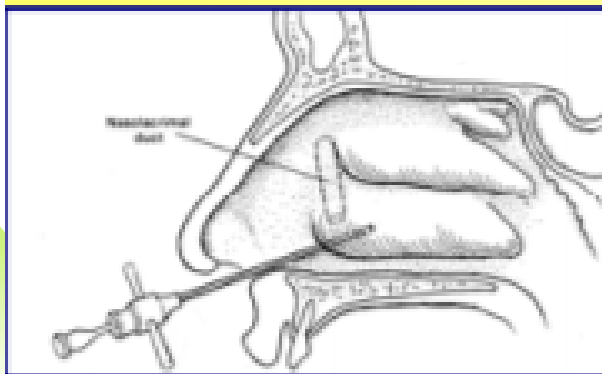
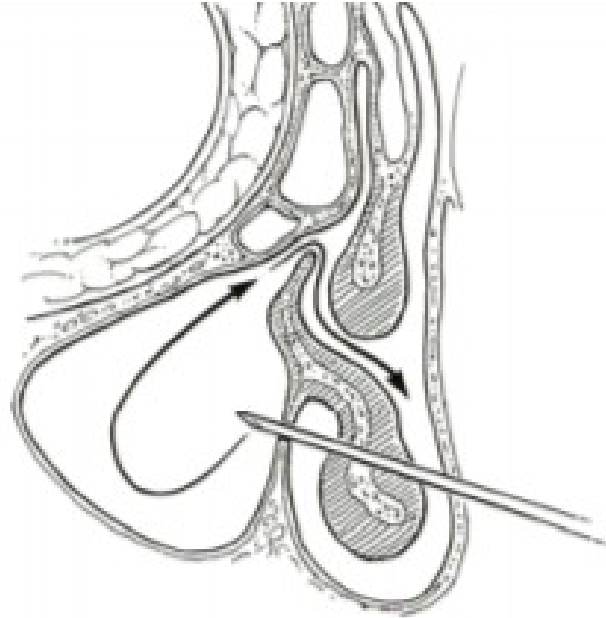
Sinus sphenoidalis



SINUS MAXILLARIS (Antrum of Highmore)



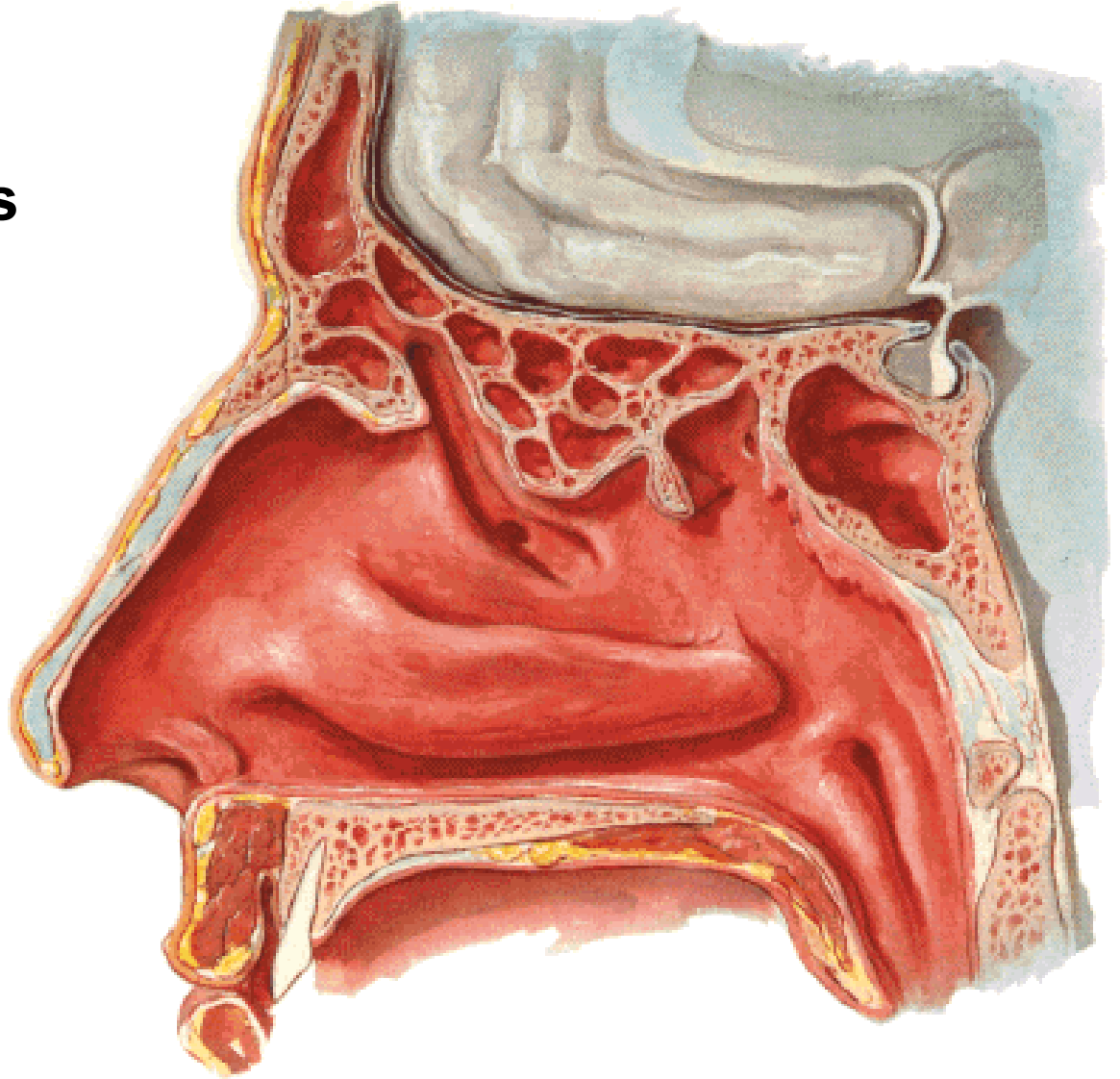
Maxillary sinus puncture (Antral washout)

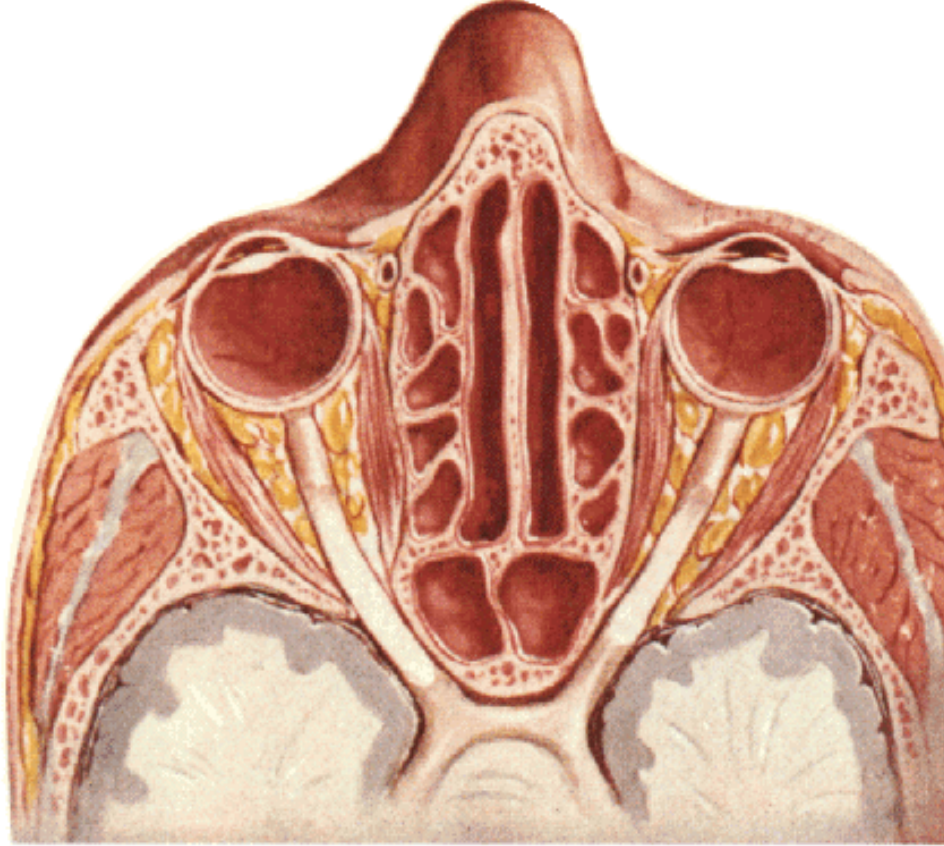


SINUS FRONTALIS

septum sinuum frontaliu

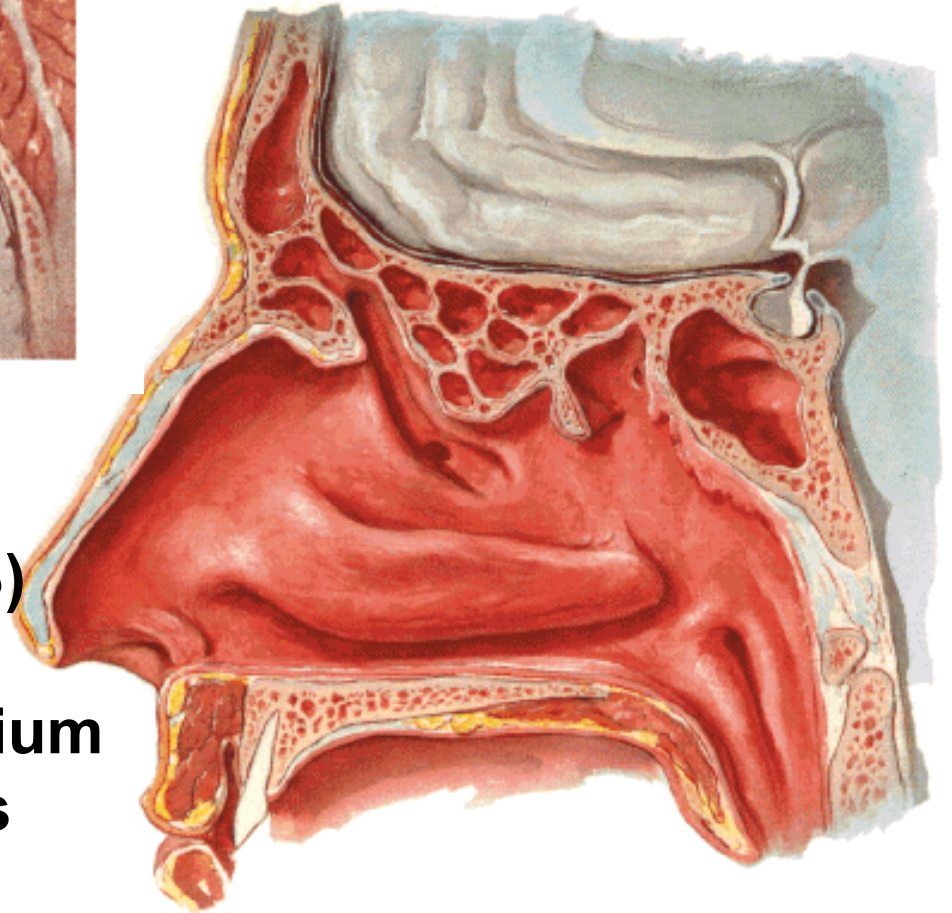
Hiatus semilunaris





Hiatus semilunaris

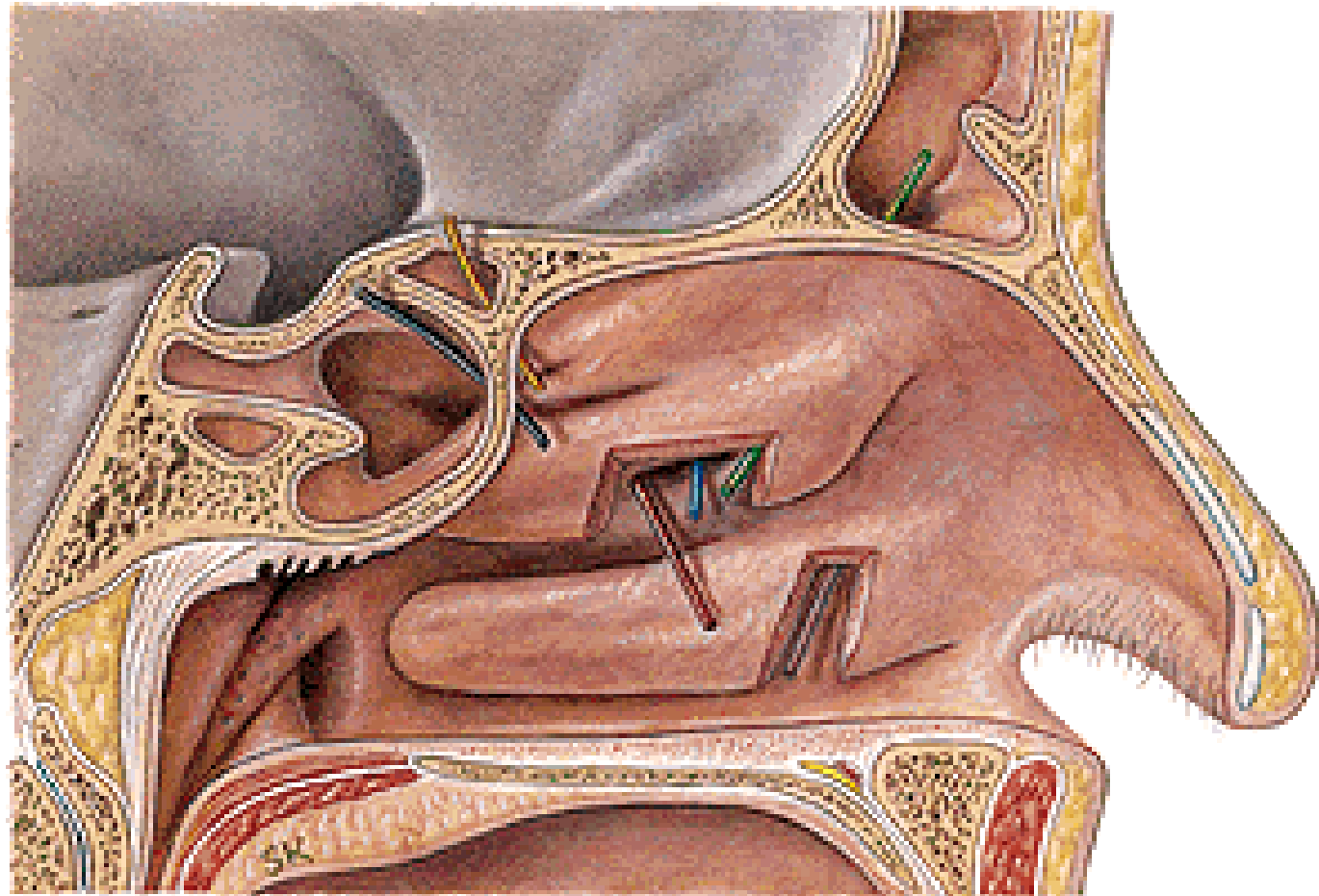
**SINUS ETHMOIDALES
(CELLULAE ETHMOIDALES)
SINUS SPHENOIDALIS
septum sinuum sphenoidalium
apertura sinus sphenoidalis**



Meatus nasi inf. – ductus nasolacrimalis

**Meatus nasi medius – hiatus semilunaris – sinus maxillaris,
sinus frontalis, cellulae ethmoidales anteriores**

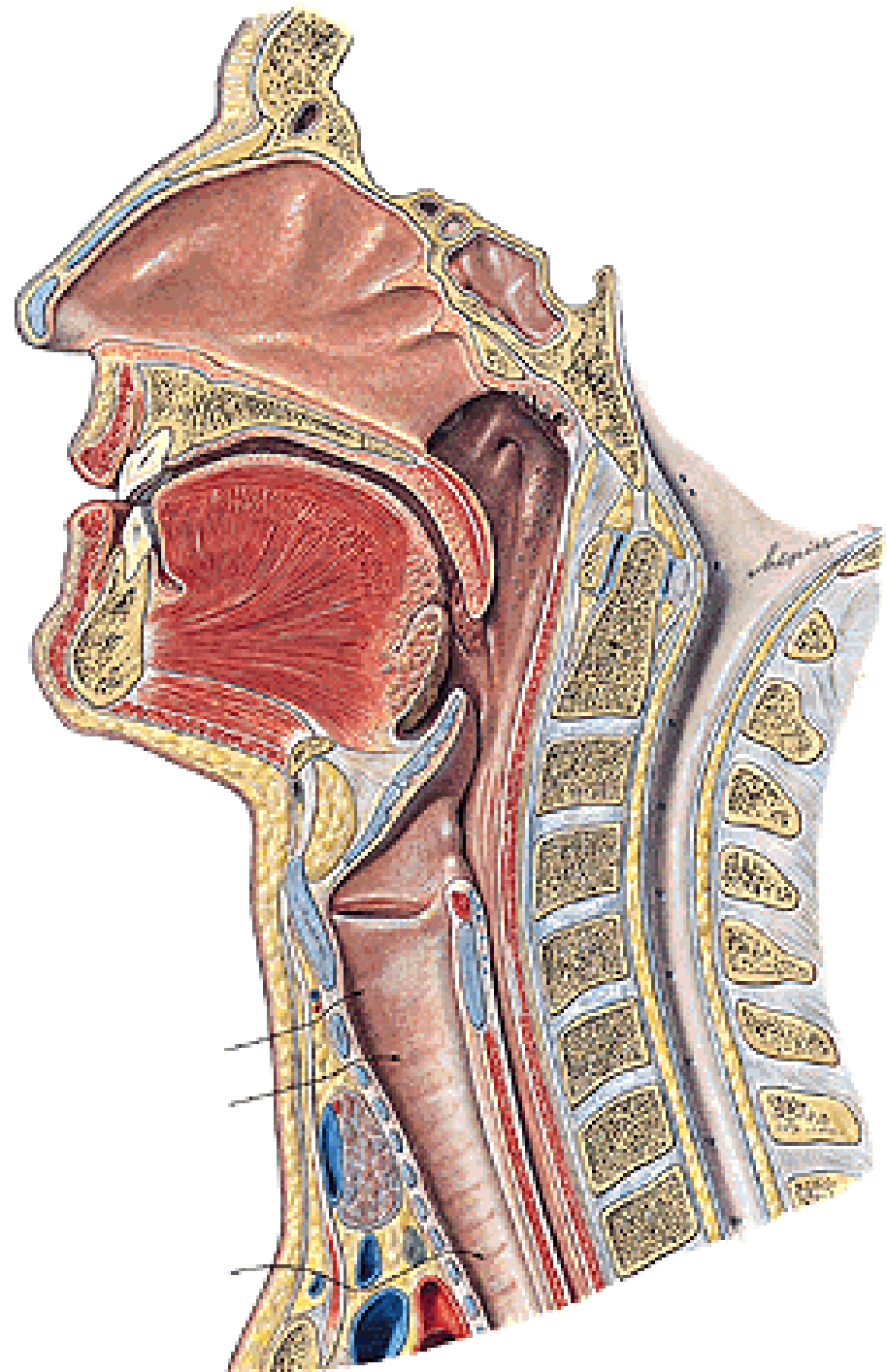
**Meatus nasi sup. – cellulae ethmoidales posteriores, sinus
sphenoidalis**



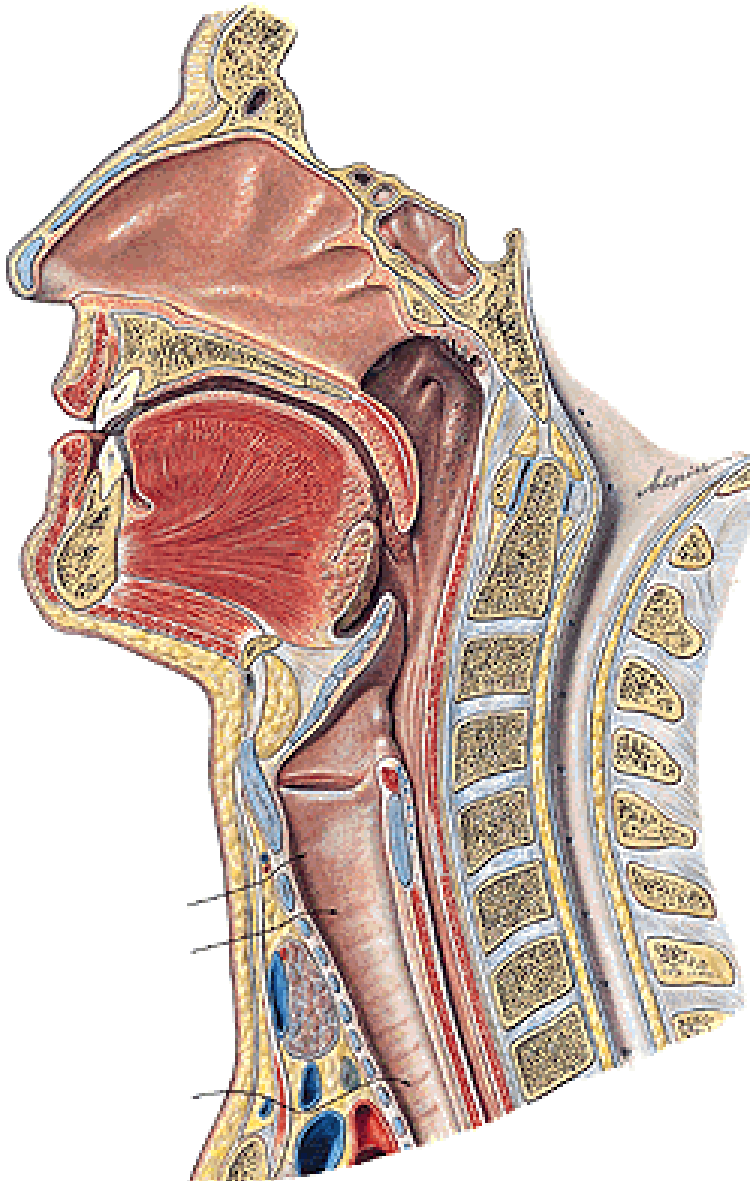
Waters' (Occipitomenal) view



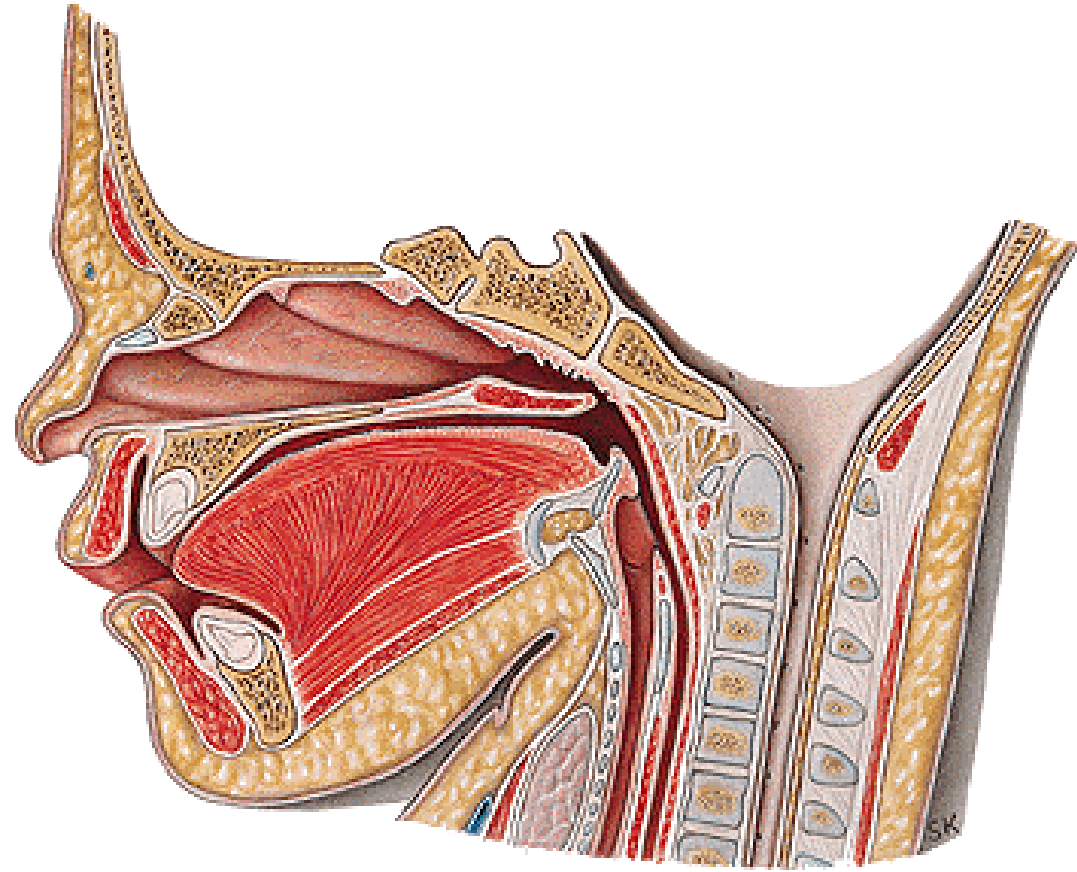
PHARYNX



LARYNX

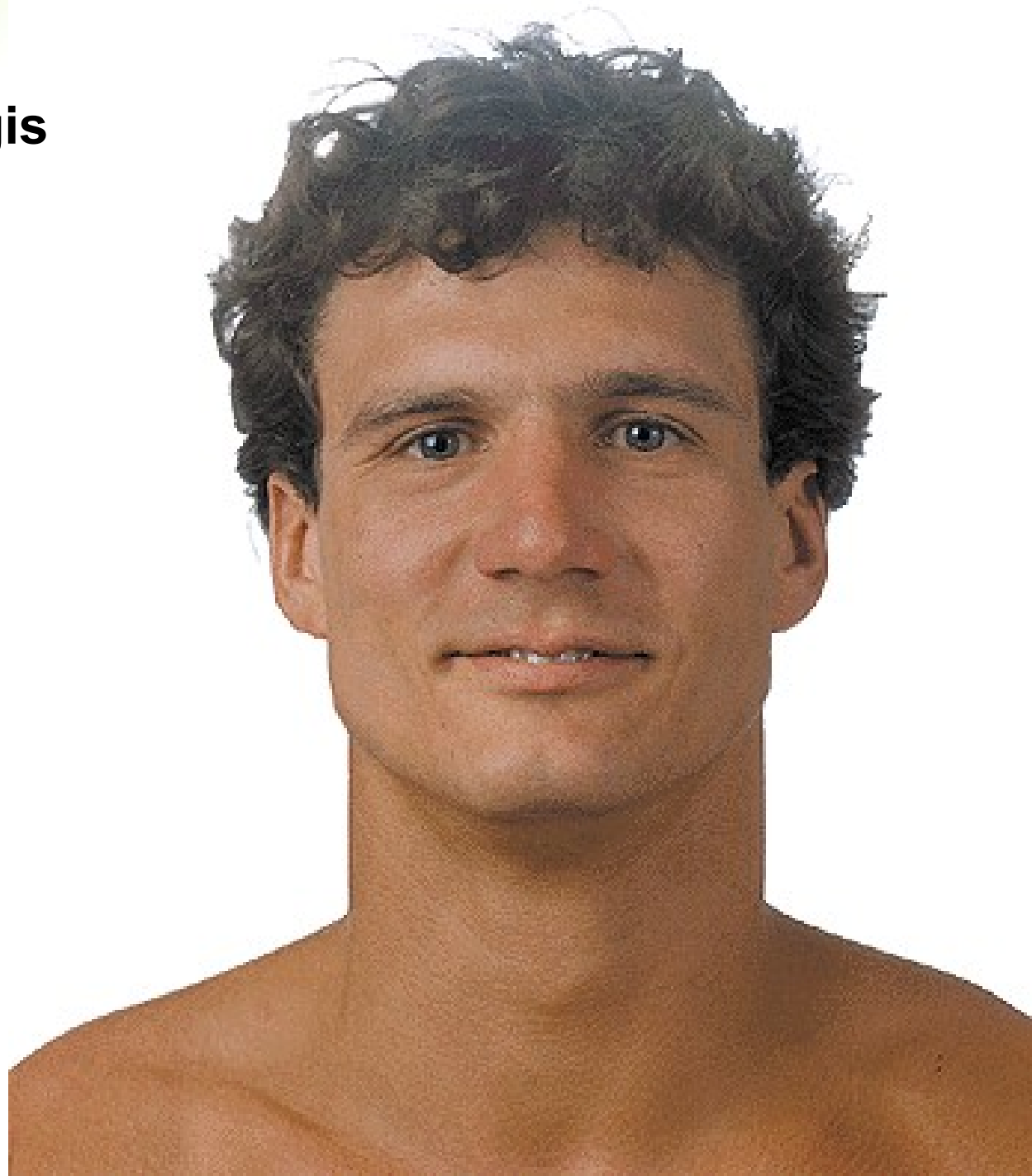


← ADULT



↑
NEONATE

Prominentia laryngis



CARTILAGINES LARYNGIS:

Cartilago thyroidea

Cartilago cricoidea

Cartilago epiglottica

Cartilago arytenoidea

Cartilago corniculata

Cartilago cuneiformis

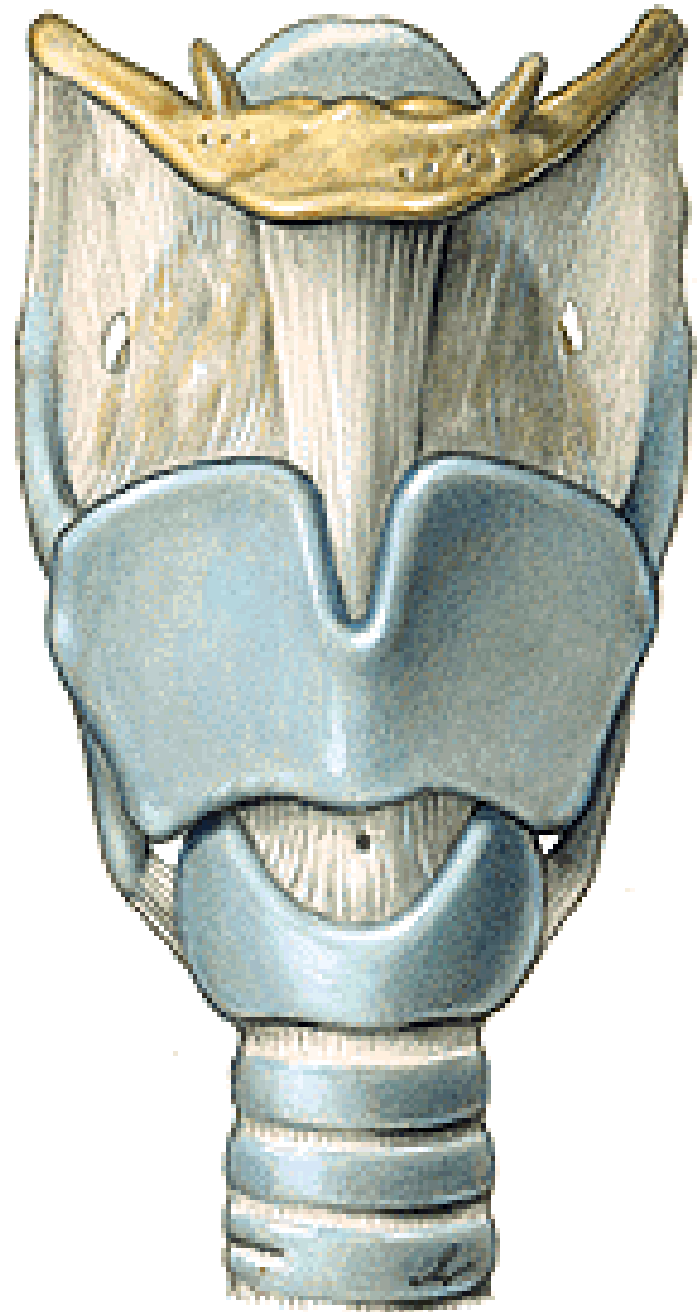


LARYNX

Membrana thyrohyoidea

Cartilago thyroidea

- lamina dextra
- lamina sinistra
- incisura thyroidea sup.
- incisura thyroidea inf.
- cornua superiora
- cornua inferiora
- facies art. cricoidea
- linea obliqua

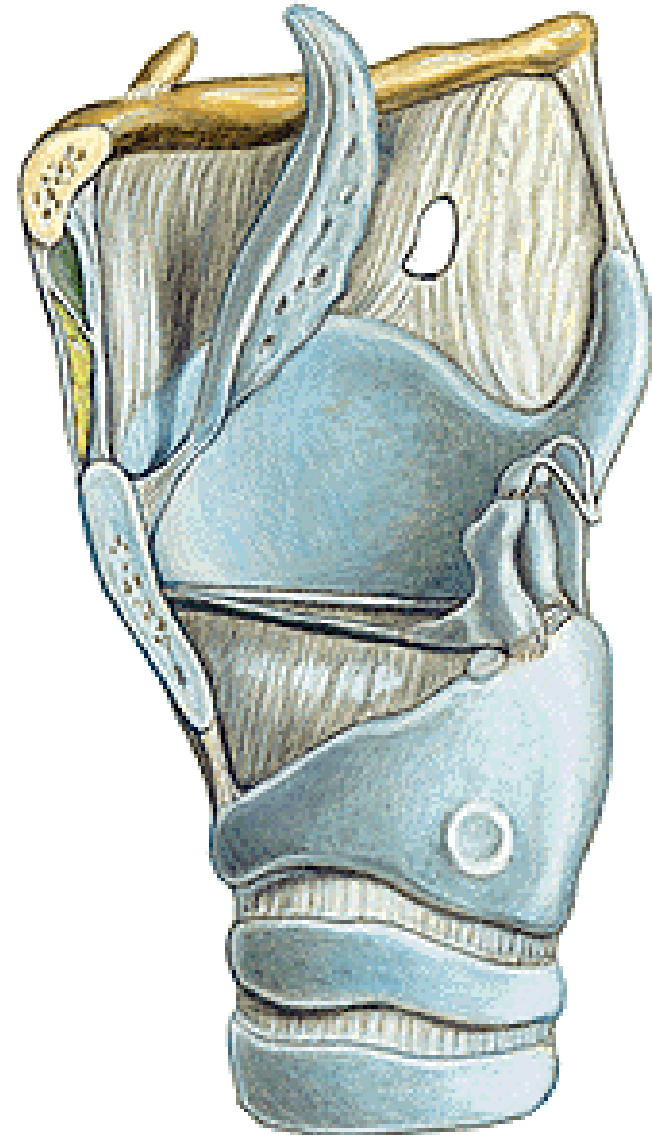
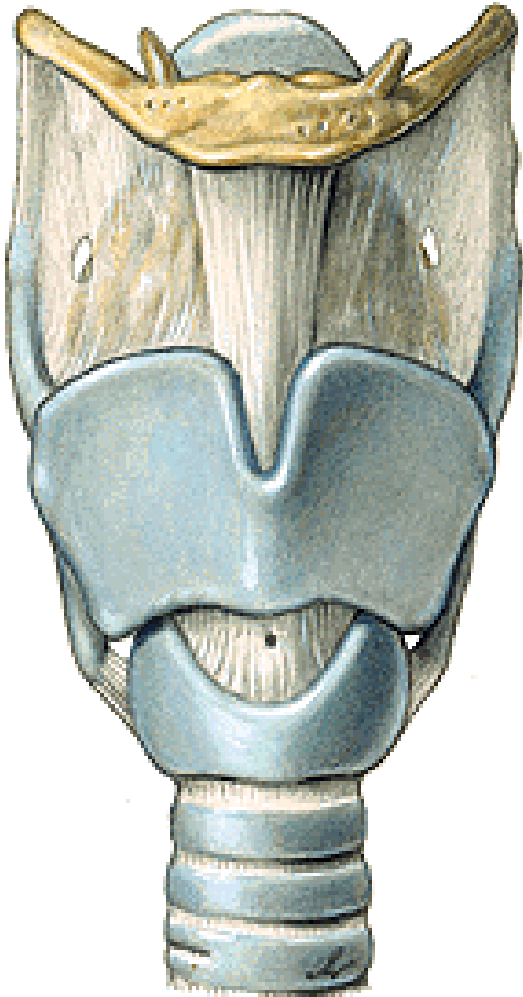


- linea obliqua



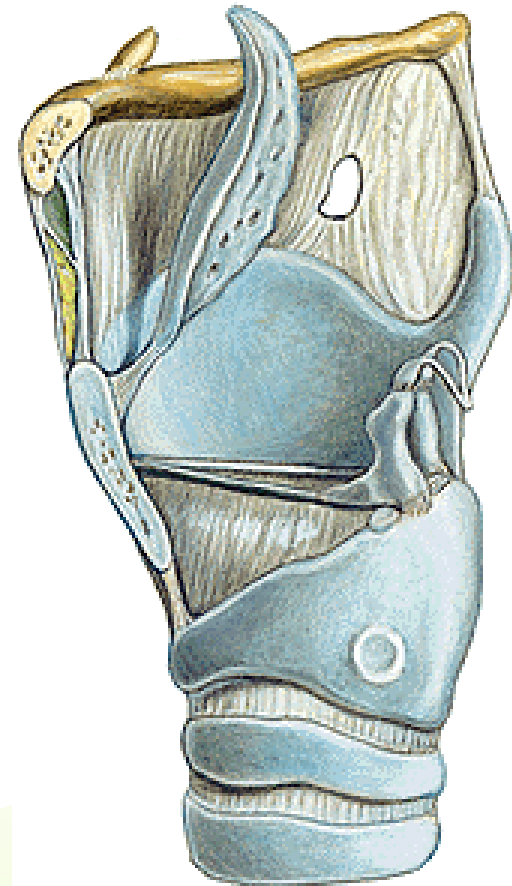
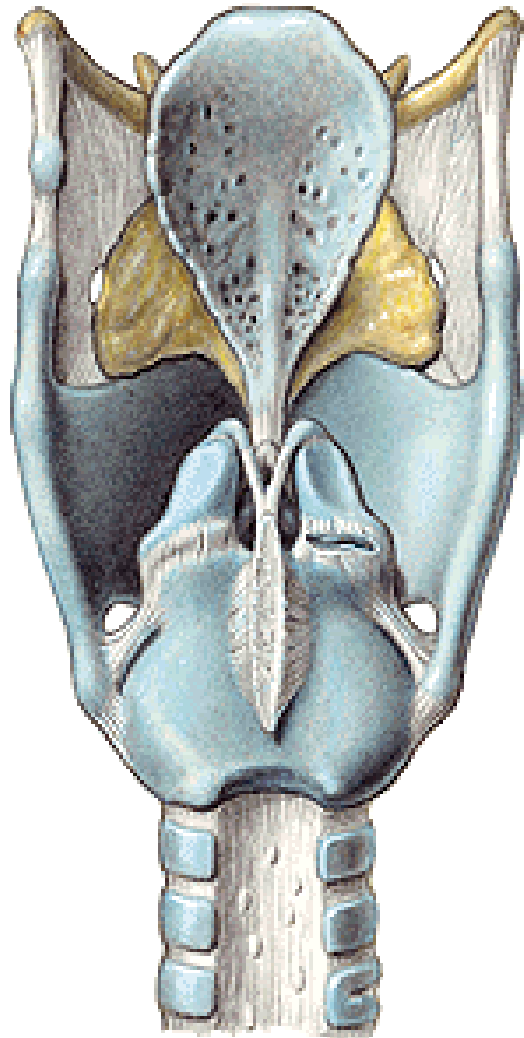
CARTILAGO CRICOIDEA

- arcus
- lamina
- facies articularis arytenoidea
- facies articularis thyroidea



CARTILAGO ARYTENOIDEA

- apex
- basis
 - facies art. cricoidea
 - processus vocalis
 - processus muscularis
- facies medialis
- facies posterior
- facies anterolateralis



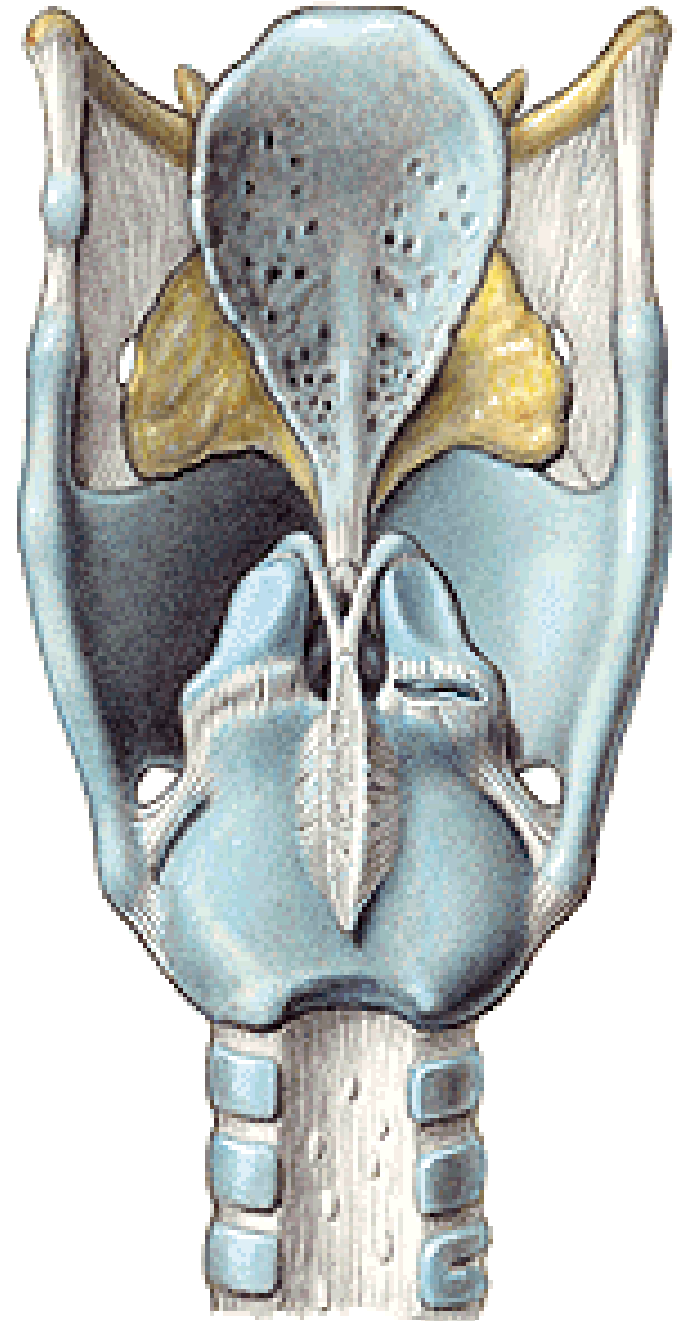
CARTILAGO EPIGLOTTICA

-petiolus epiglottidis

-lamina

CARTILAGO CORNICULATA

CARTILAGO CUNEIFORMIS



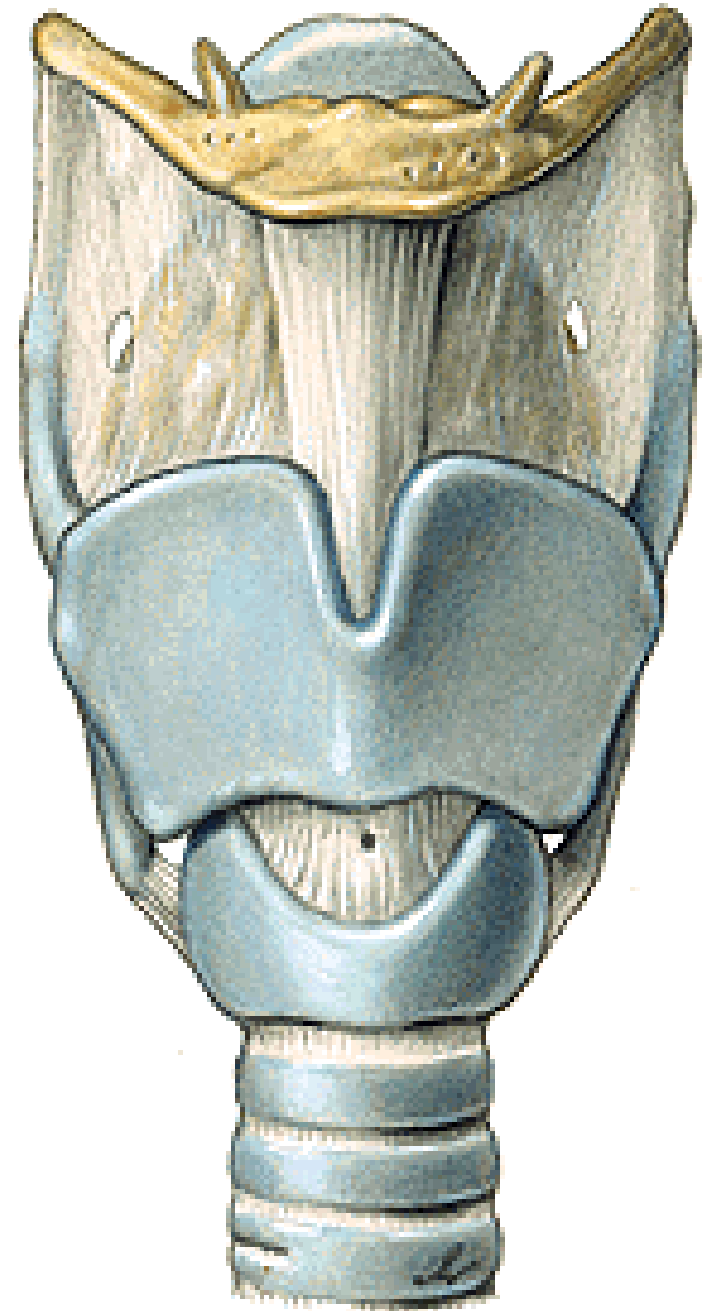


CONUS ELASTICUS

-lig. cricothyroideum- coniotomy

-lig. vocale – plica vocalis

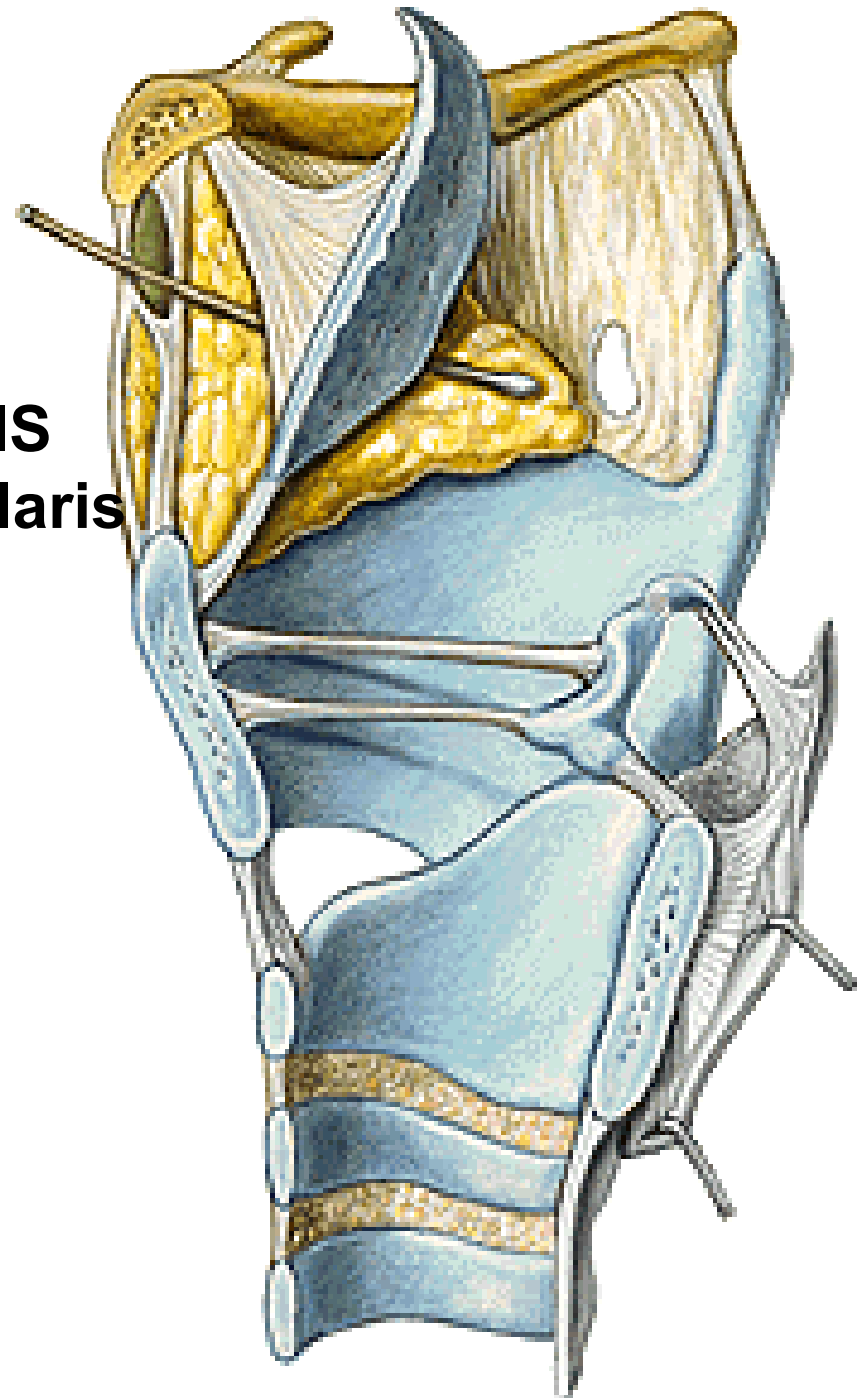
Lig. cricotracheale



Lig thyroepiglotticum
Lig. hyoepiglotticum
Spatium praeepiglotticum

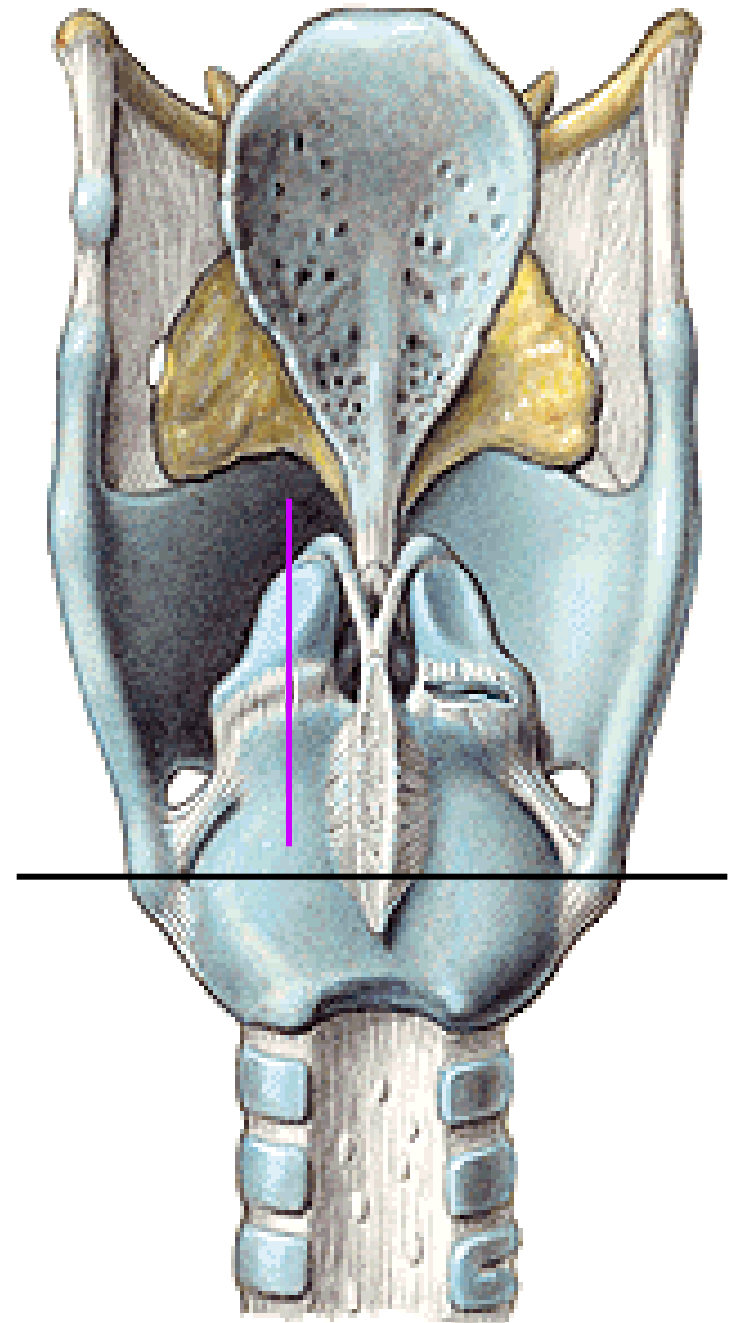
MEMBRANA QUADRANGULARIS
-lig. ventriculare – plica vestibularis

MEMBRANA FIBROELASTICA
LARYNGIS = conus elasticus +
membrana quadrangularis



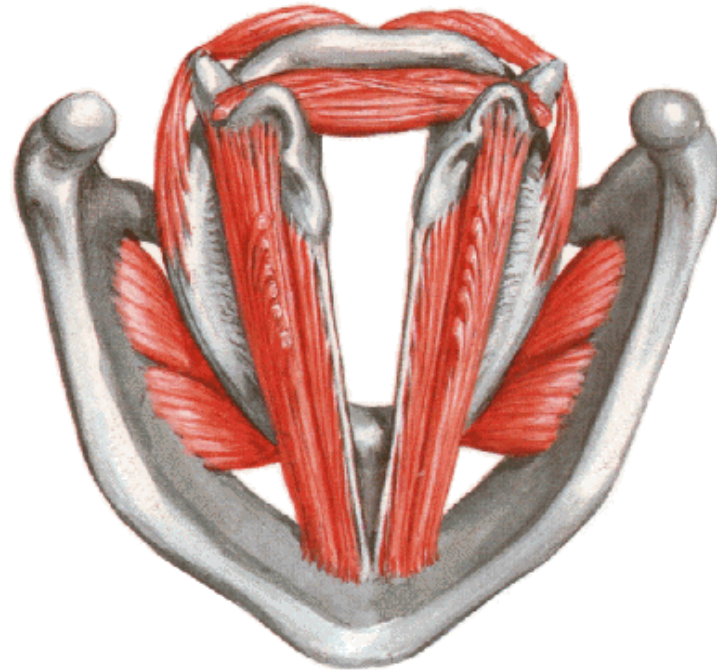
ARTICULATIO CRICOARYTENOIDEA

ARTICULATIO CRICOTHYROIDEA

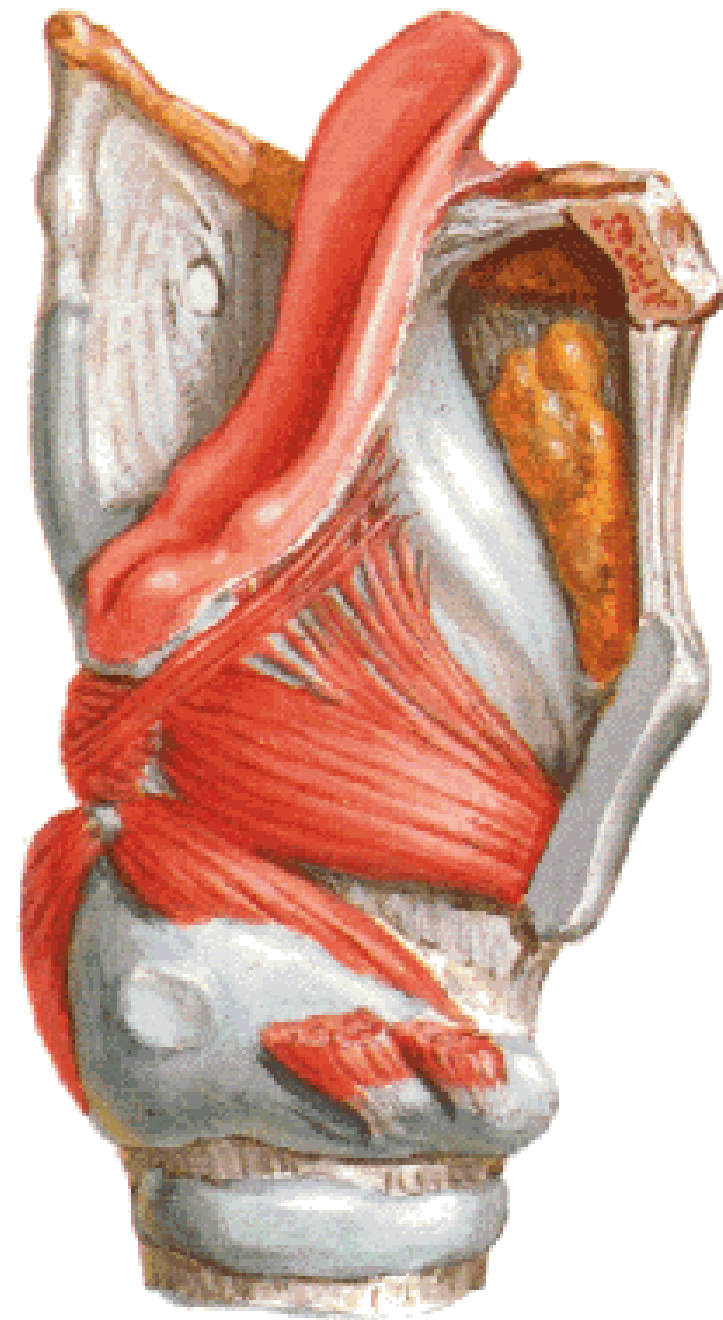
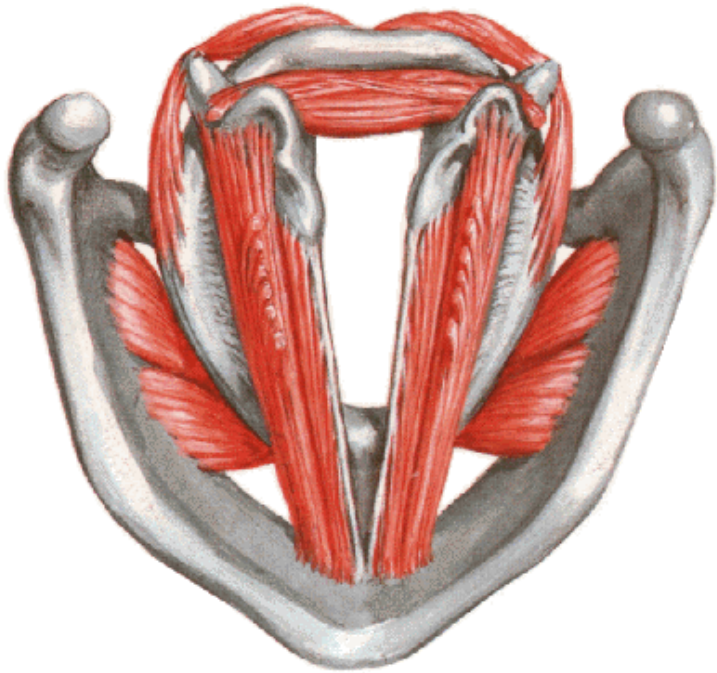


MUSCULI LARYNGIS

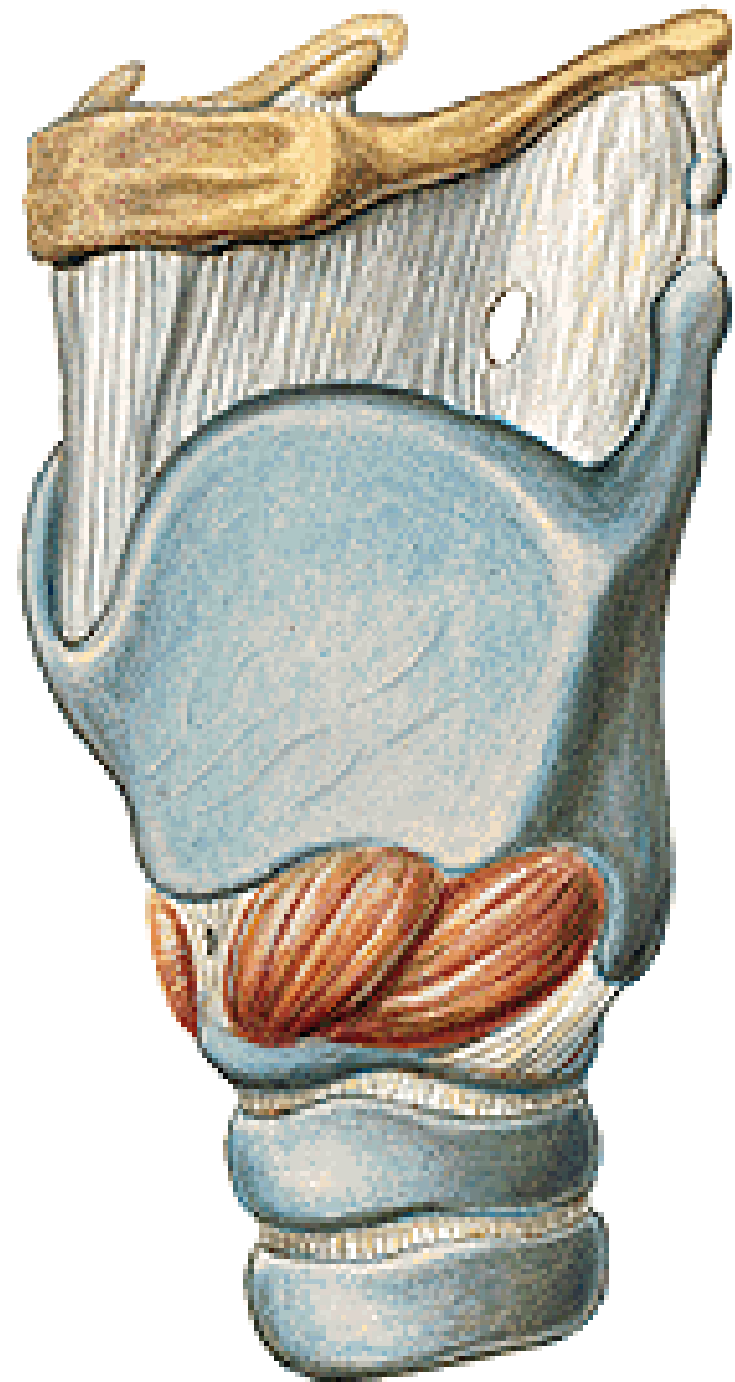
**Rima glottidis – pars intermembranacea
– pars intercartilaginea**



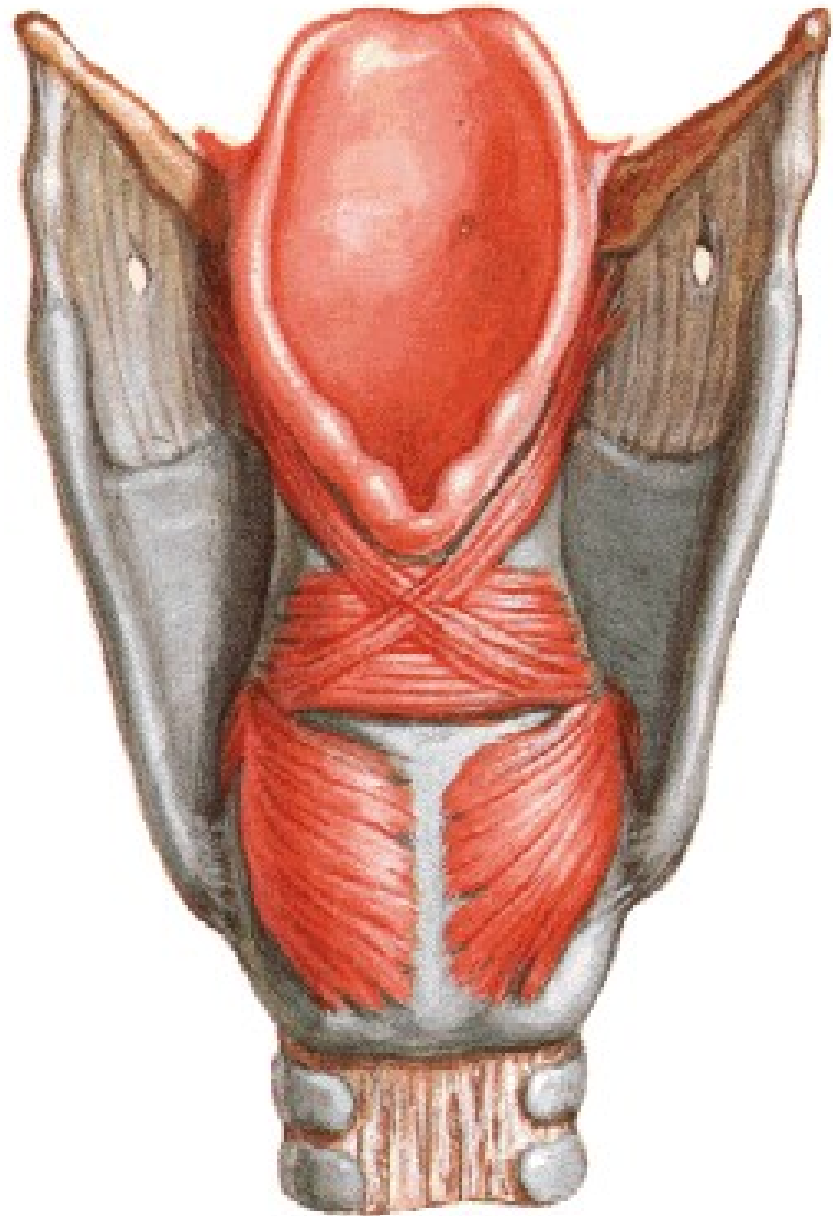
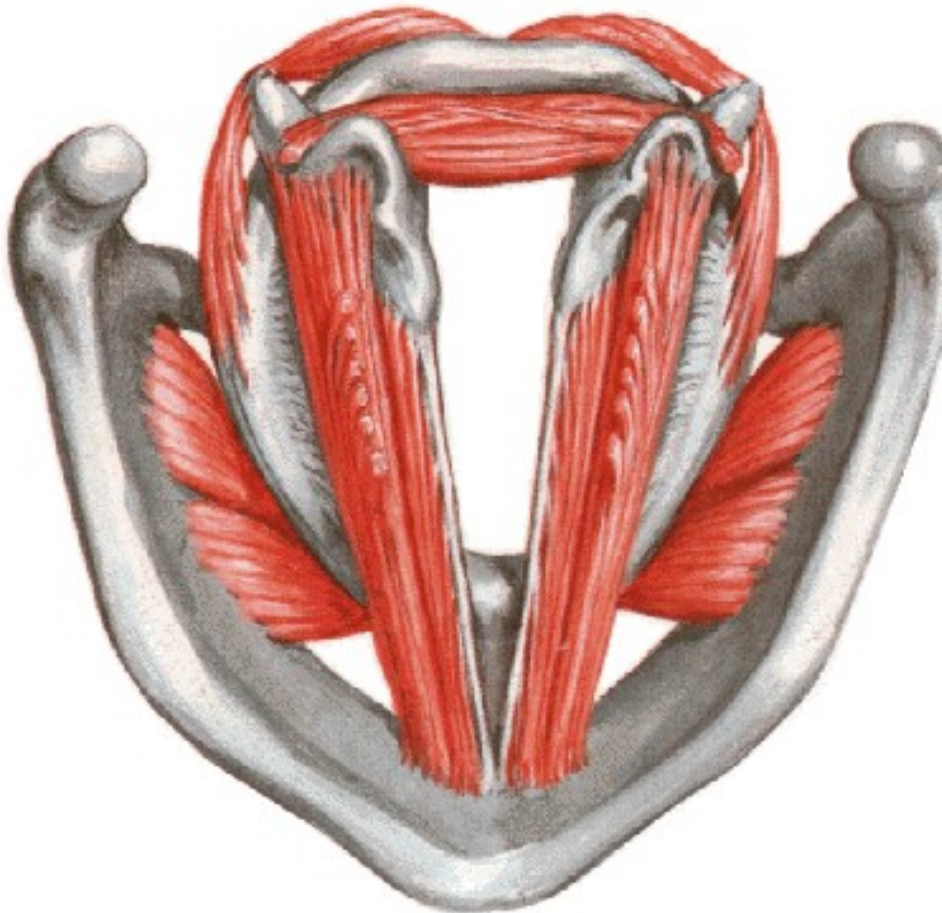
**M. thyroarytenoideus - m. vocalis
(m. thyroepiglotticus)**



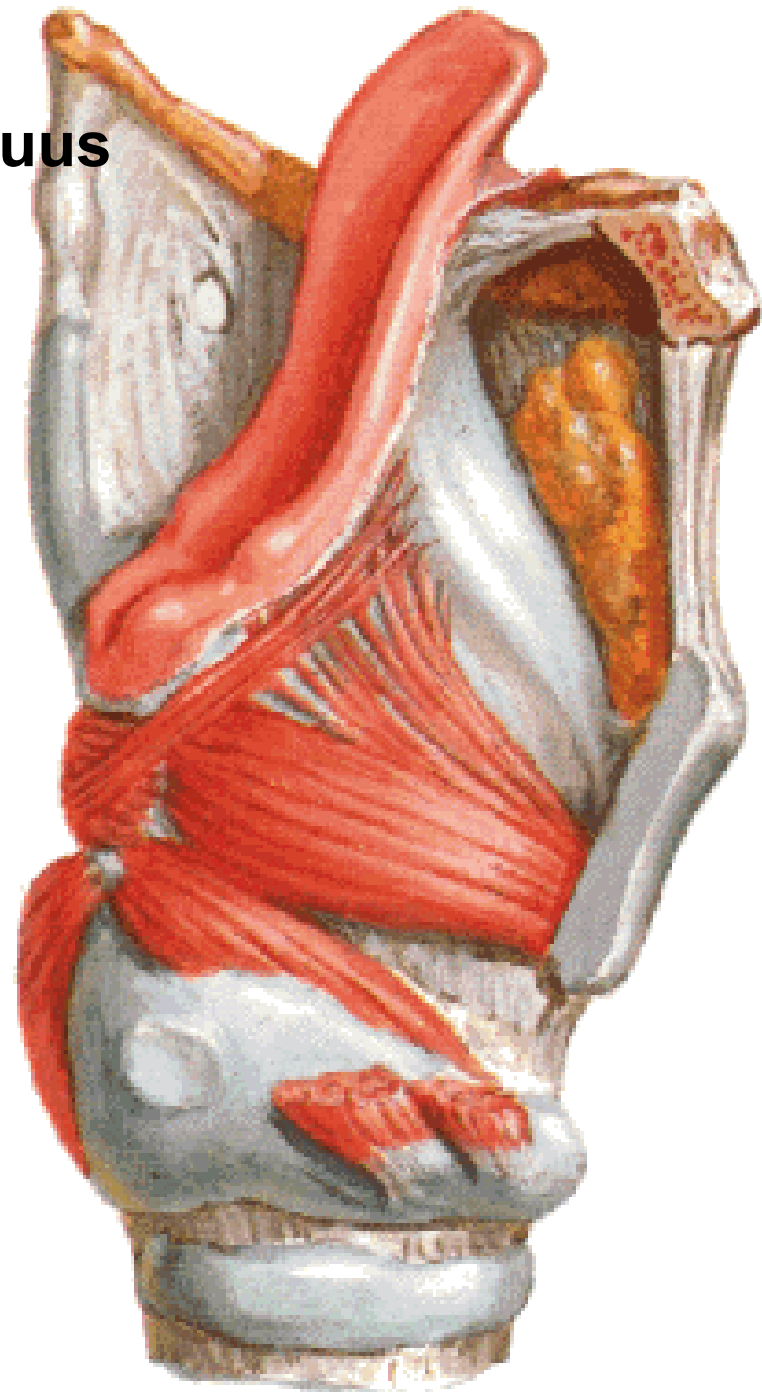
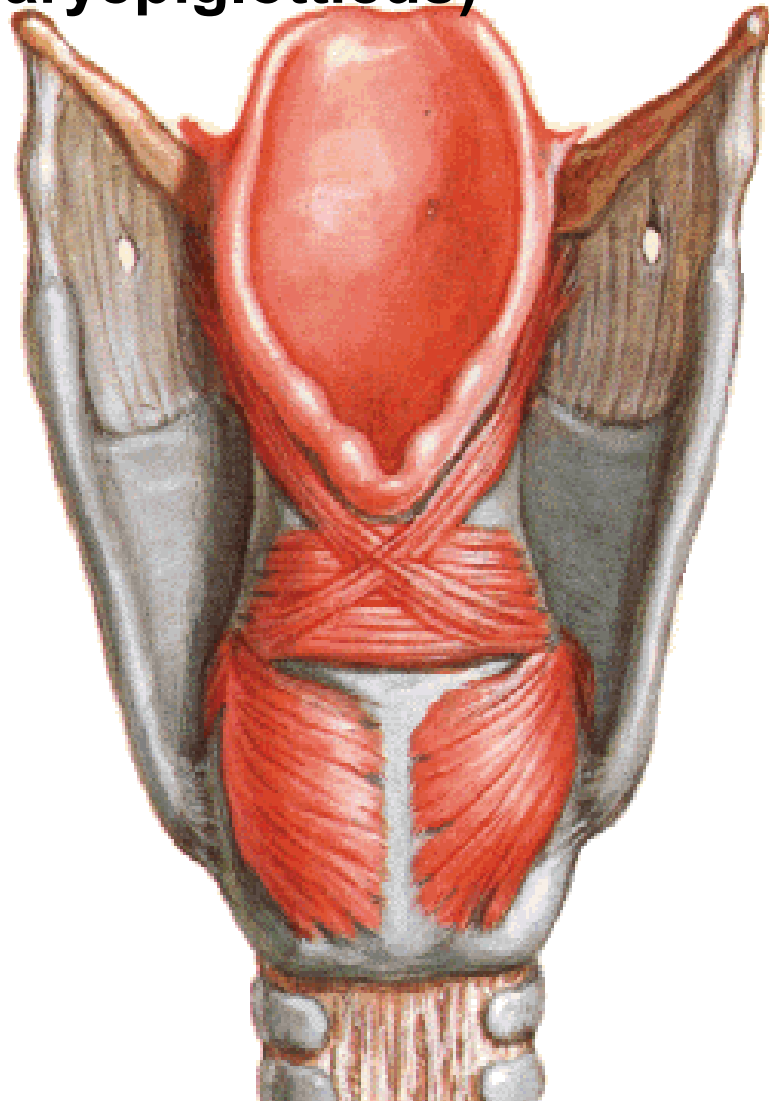
M. cricothyroideus



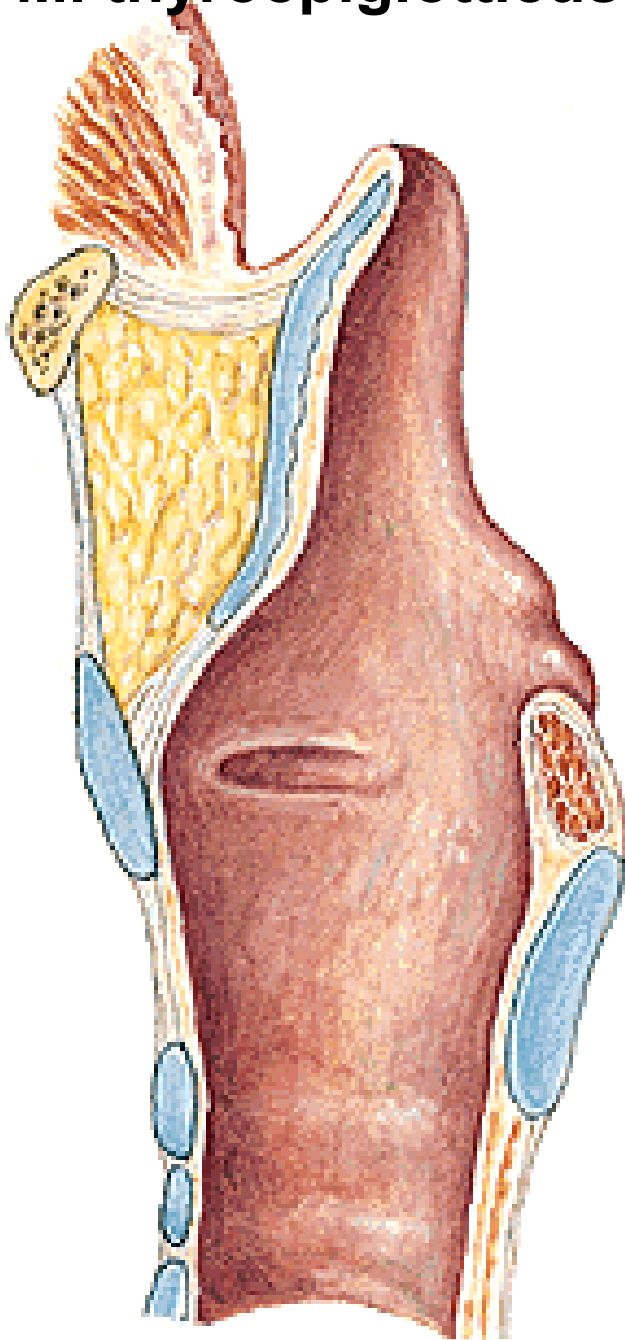
**M. cricoarytenoideus post.
(posticus) - respiration**



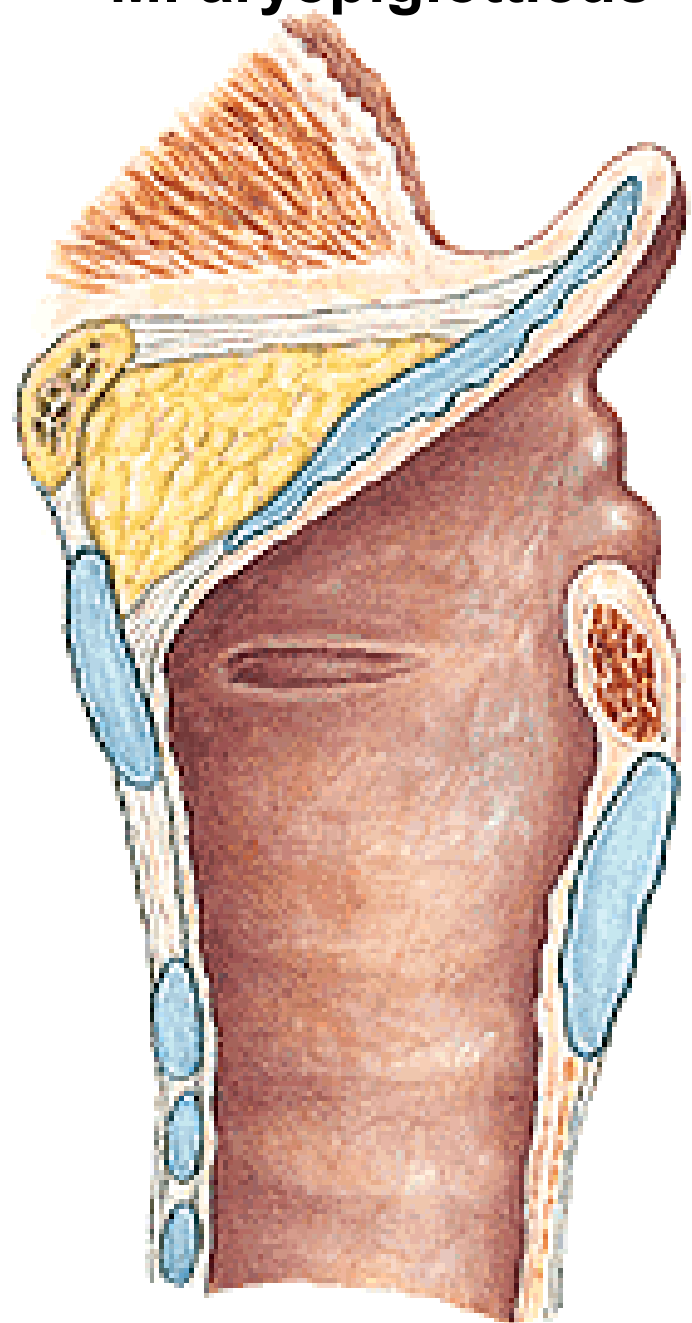
M. cricoarytenoideus lateralis
M. arytenoideus transversus et obliquus
– phonation
(m. aryepiglotticus)



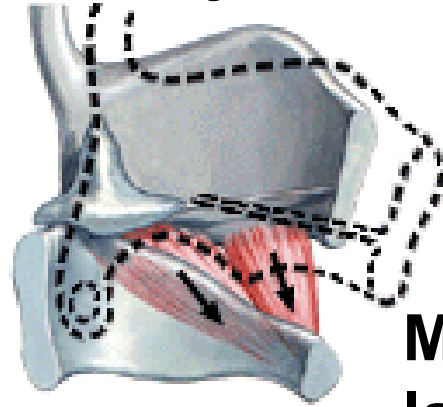
M. thyroepiglotticus



M. aryepiglotticus



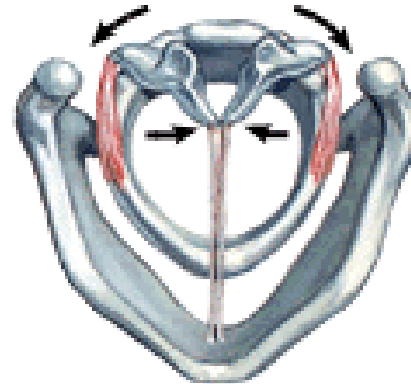
M. cricothyroideus



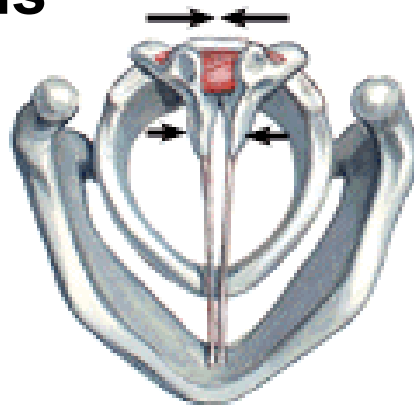
M. cricoarytenoideus post.



M. cricoarytenoideus lateralis



M. arytenoideus - transversus - obliquus

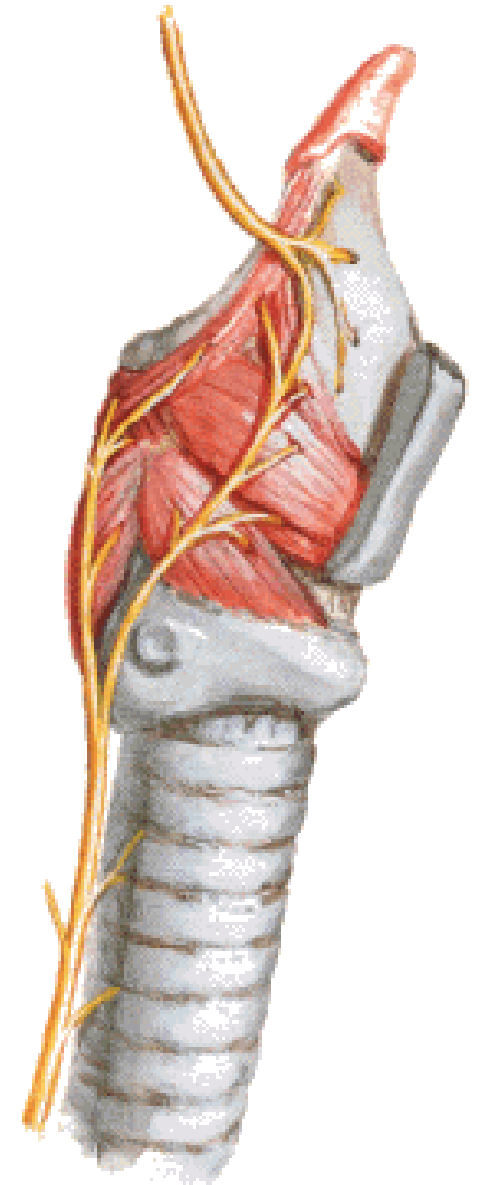
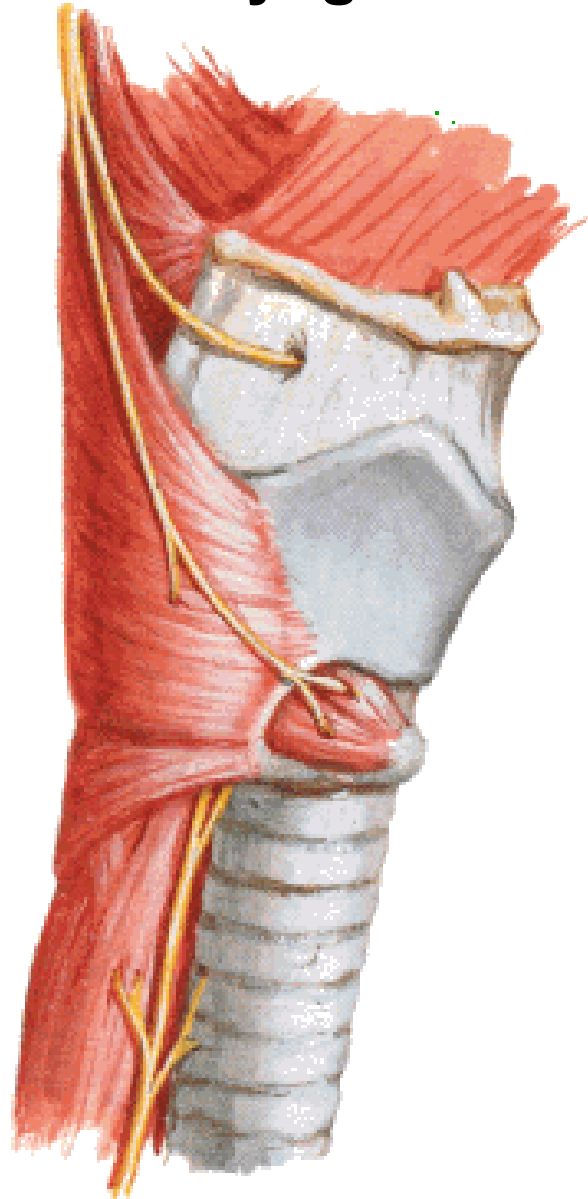


M. thyroarytenoideus



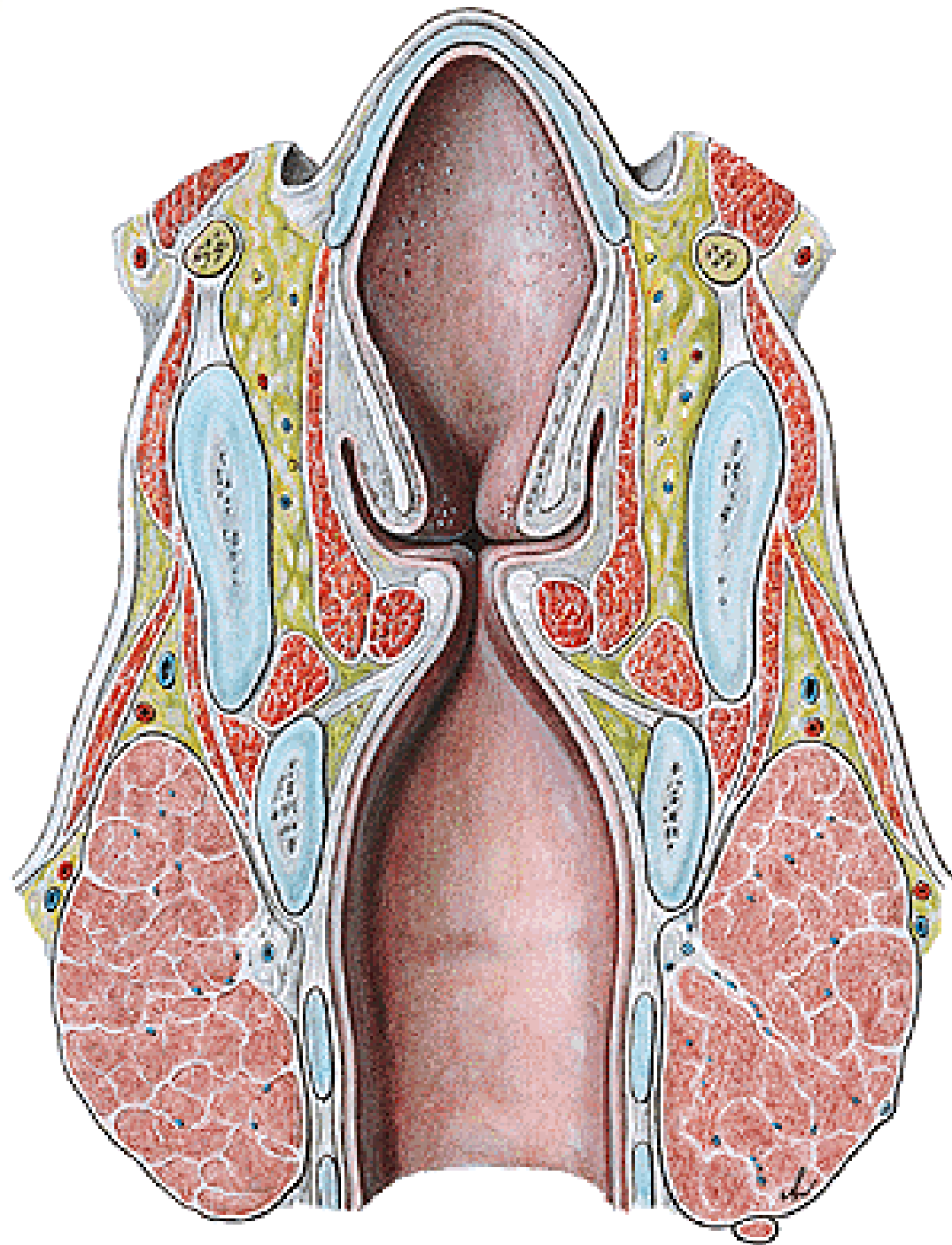
N. laryngeus sup.

N. laryngeus inf. – N. laryngeus recurrens



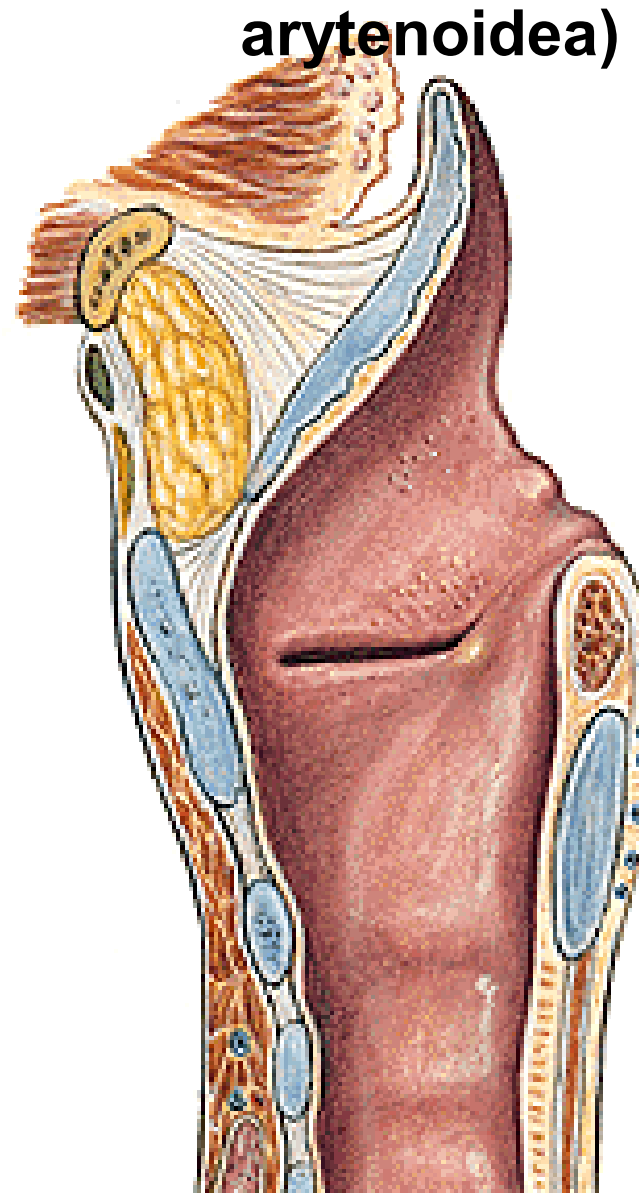
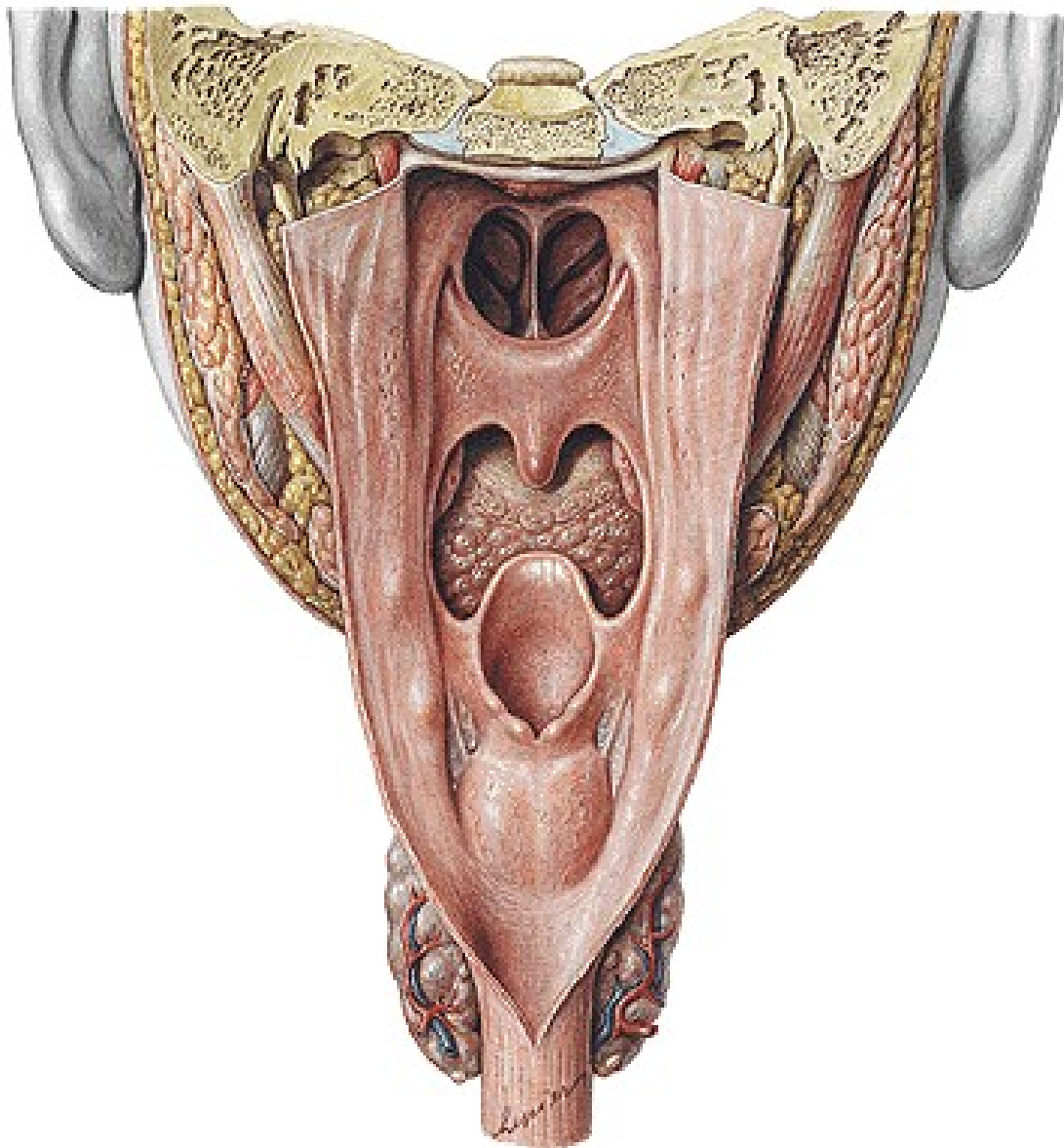
CAVITAS LARYNGIS

- vestibulum laryngis
- plicae vestibulares
- rima vestibuli
- ventriculus laryngis
- sacculus laryngis
- plicae vocales
- rima glottidis (glottis)
- cavum infraglotticum



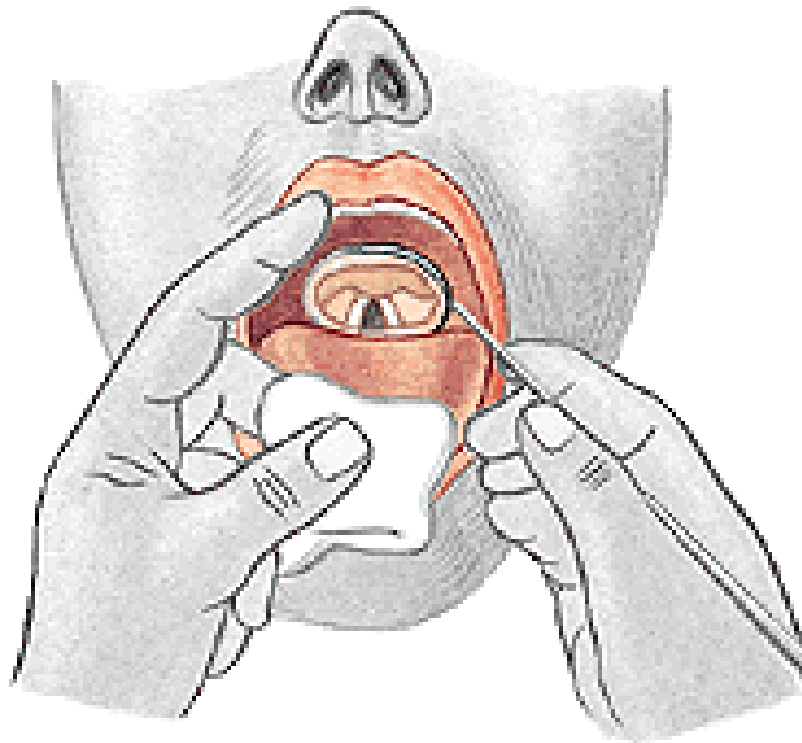
CAVITAS LARYNGIS

-aditus laryngis-plicae aryepiglotticae (tuberculum cuneiforme et corniculatum), plica interarytenoidea, (incisura interarytenoidea)

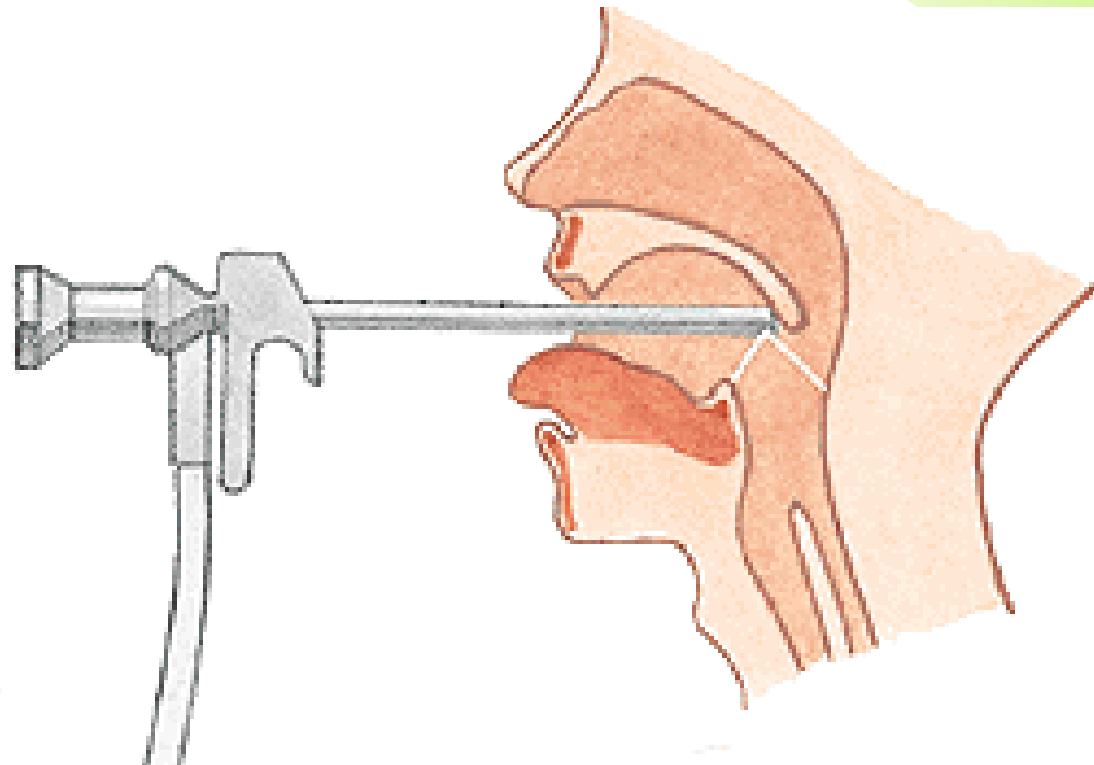


LARYNGOSCOPY

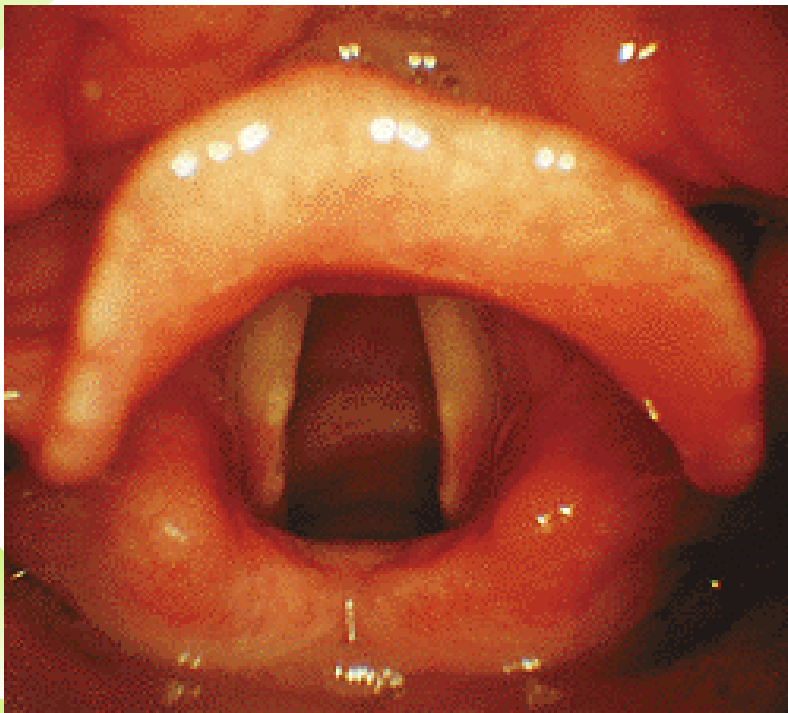
indirect



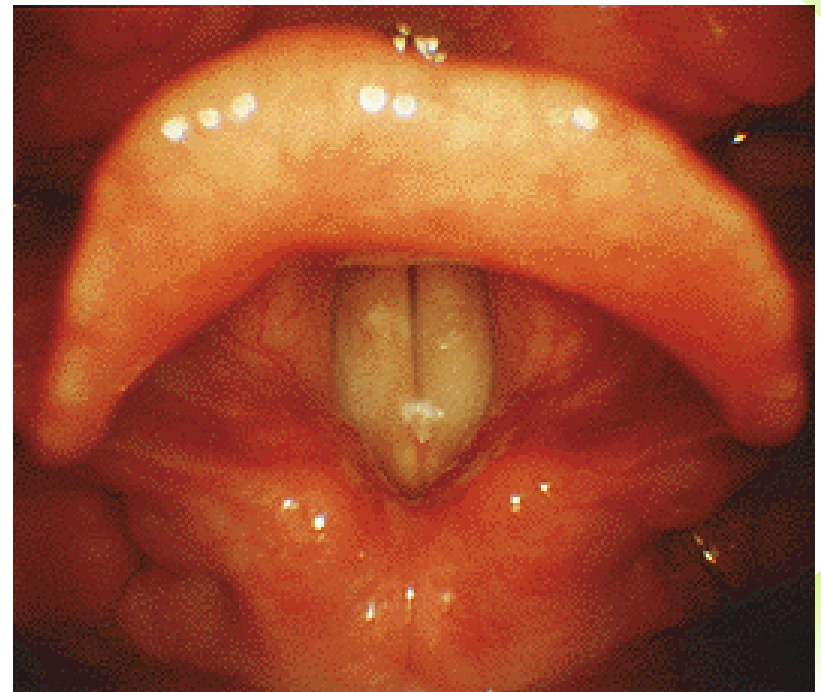
direct



RESPIRATION

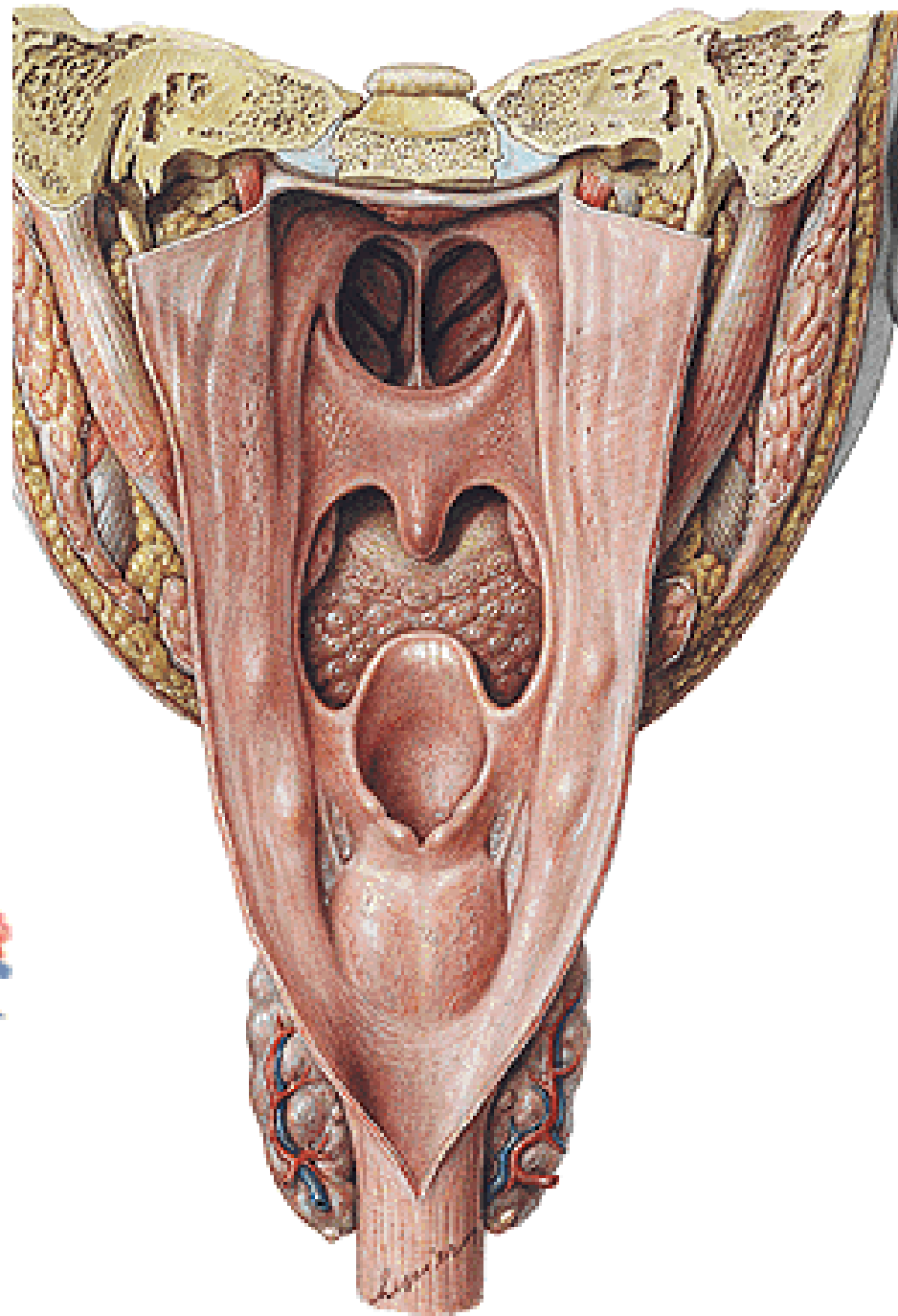
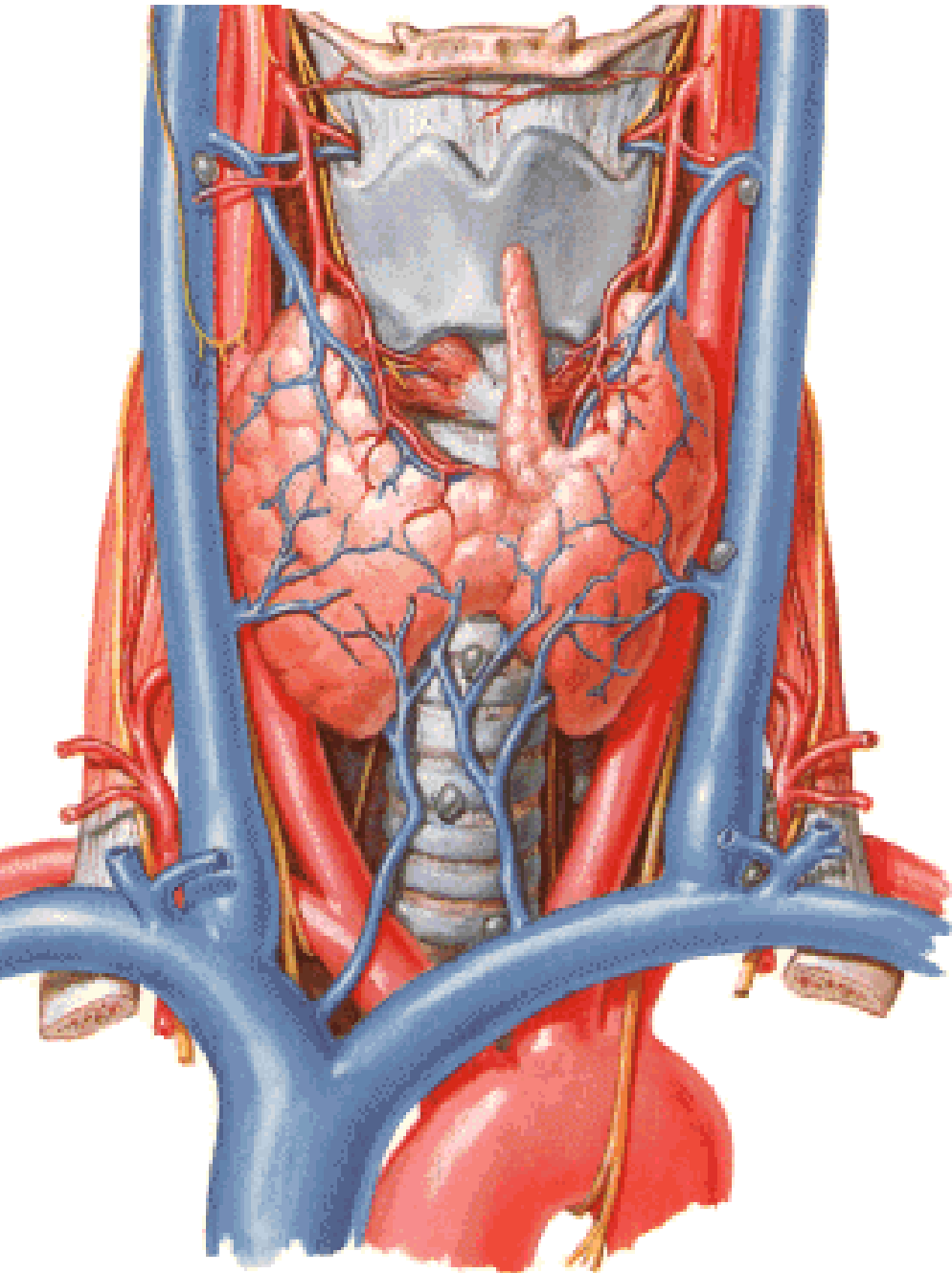


PHONATION



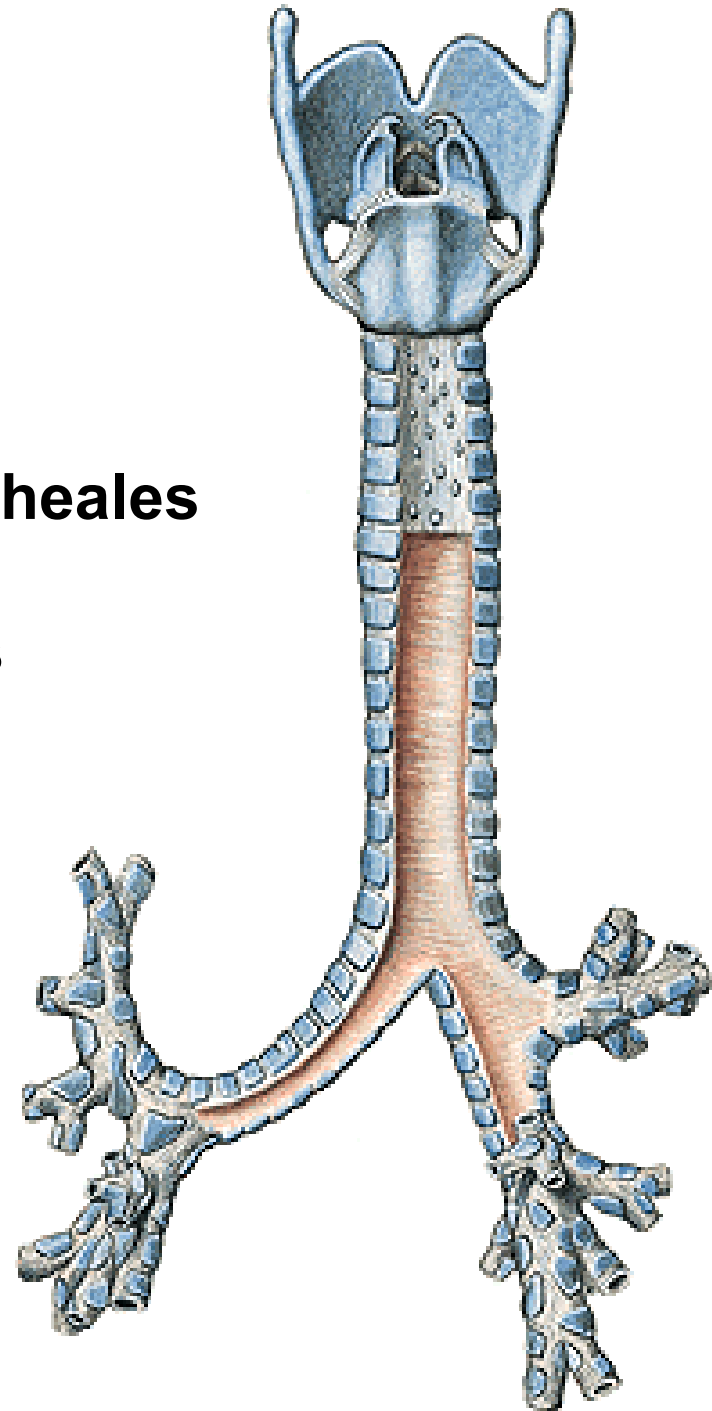
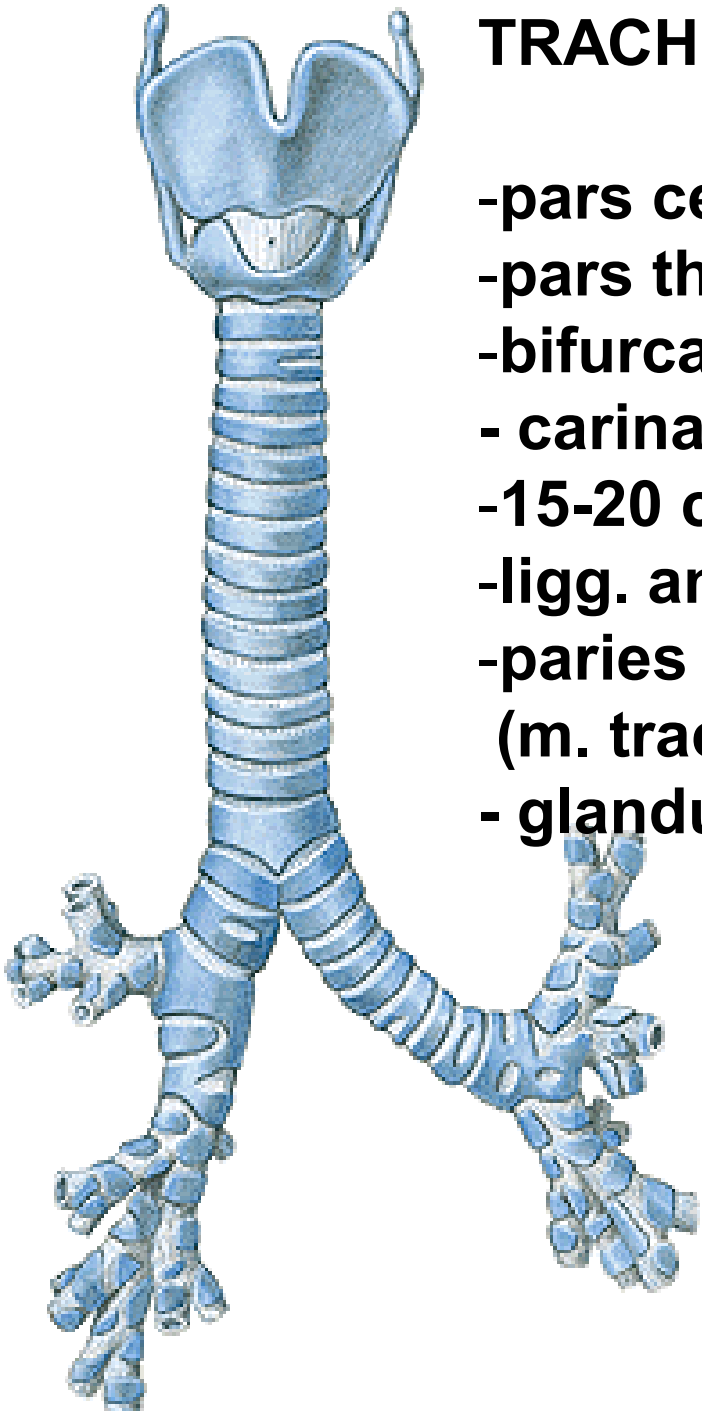
Vocal Cords up close while singing

<http://www.youtube.com/watch?v=-XGds2GAvGQ>



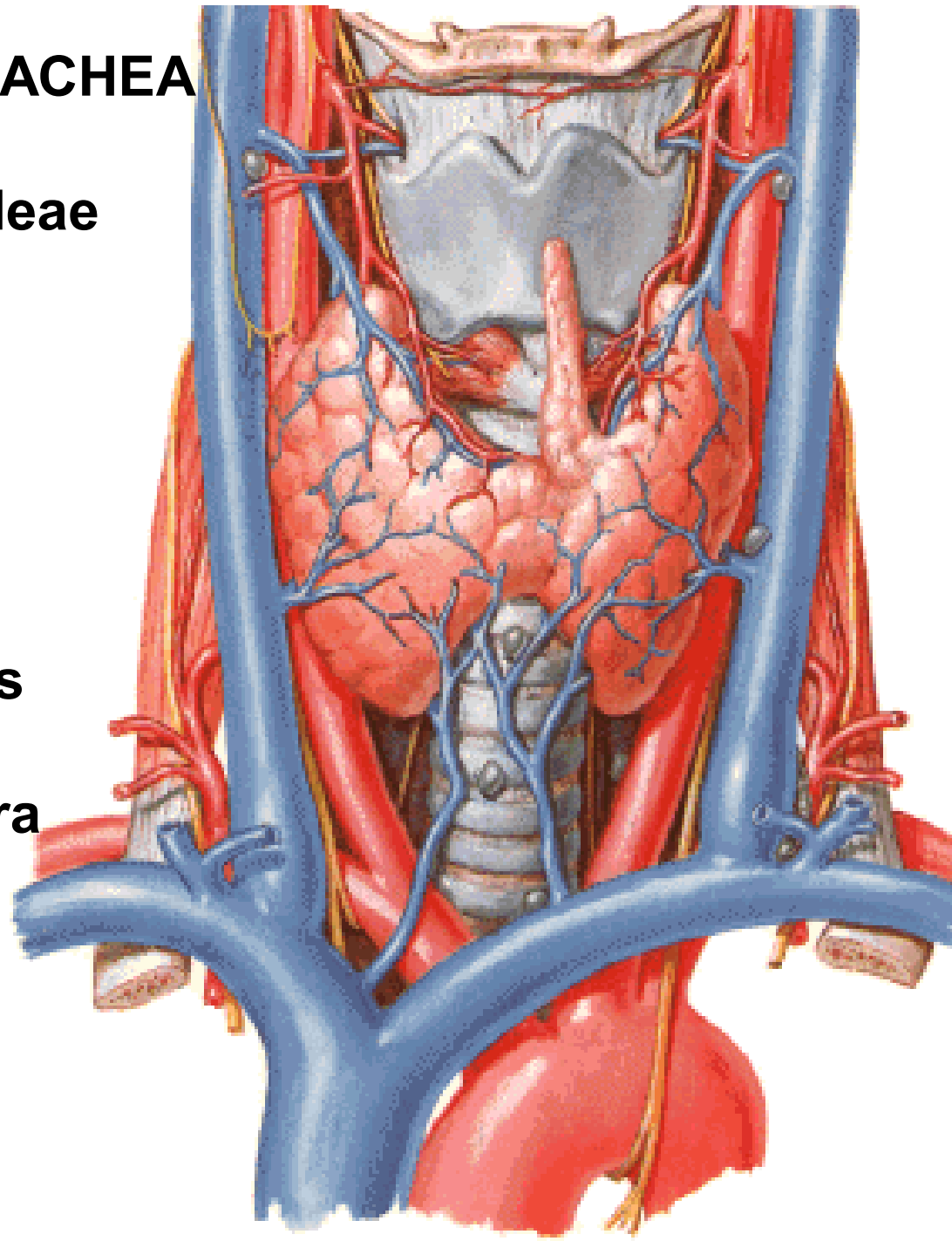
TRACHEA

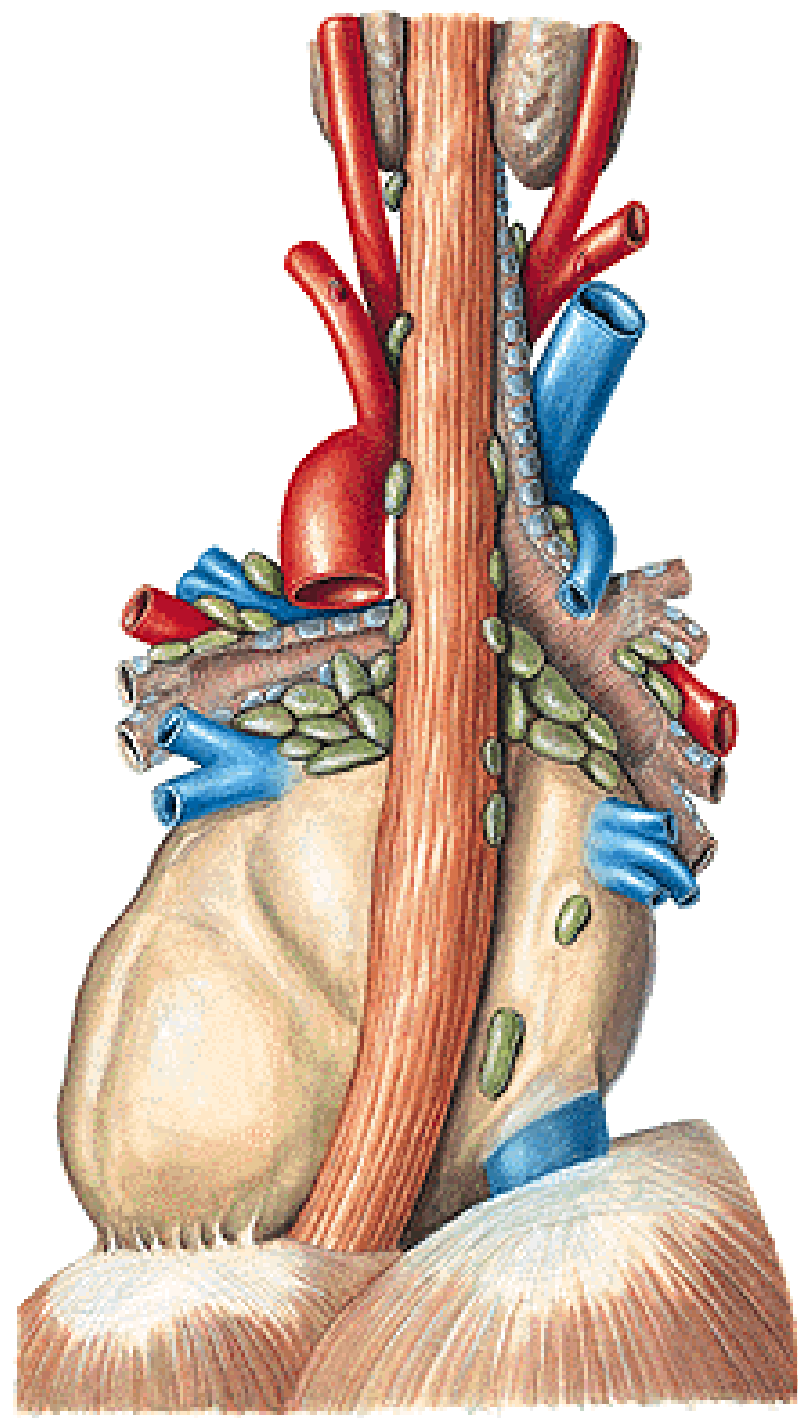
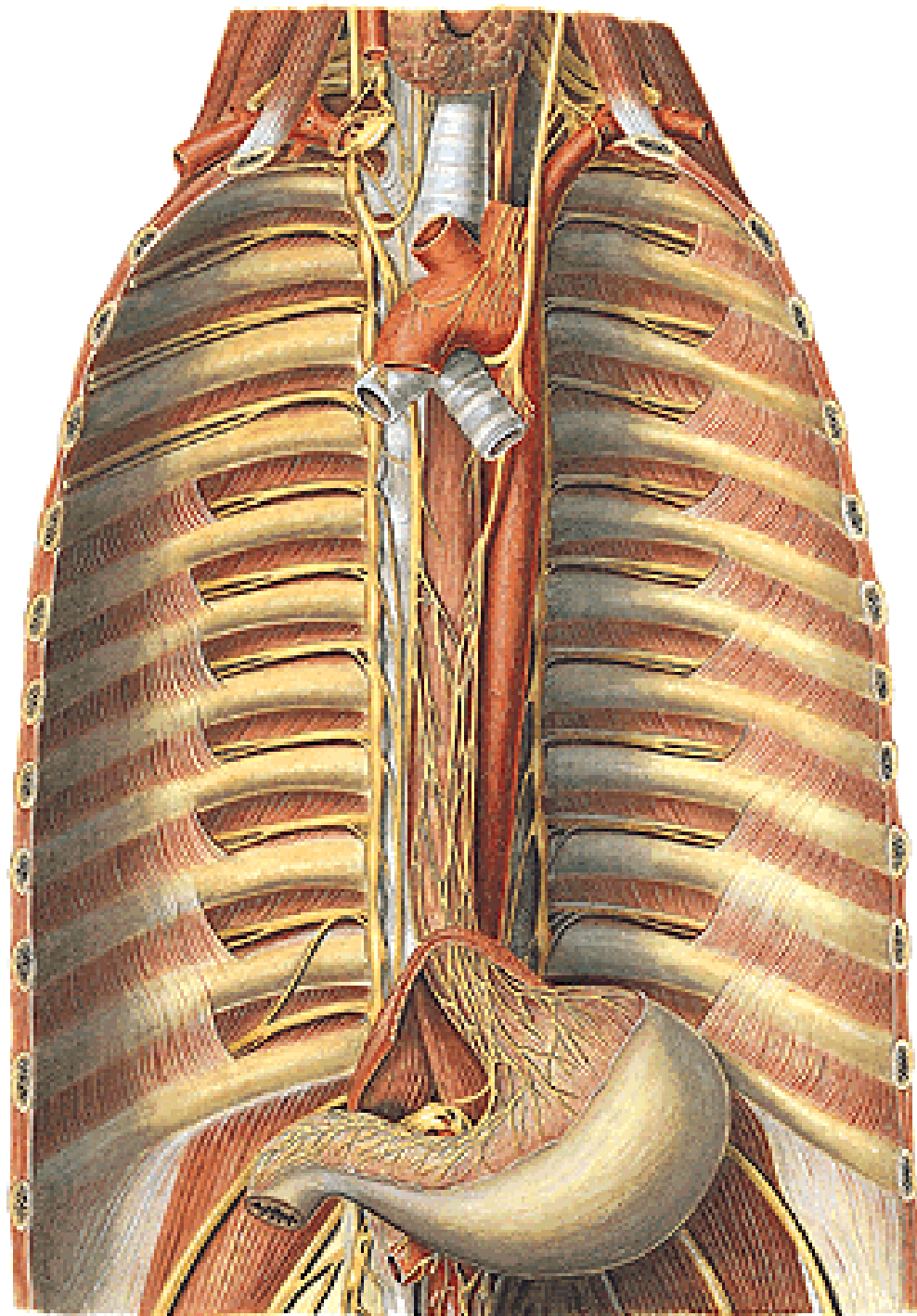
- pars cervicalis
- pars thoracica
- bifurcatio tracheae
- carina tracheae
- 15-20 cartilagineae tracheales
- ligg. anularia
- paries membranaceus (m. trachealis)
- glandulae tracheales



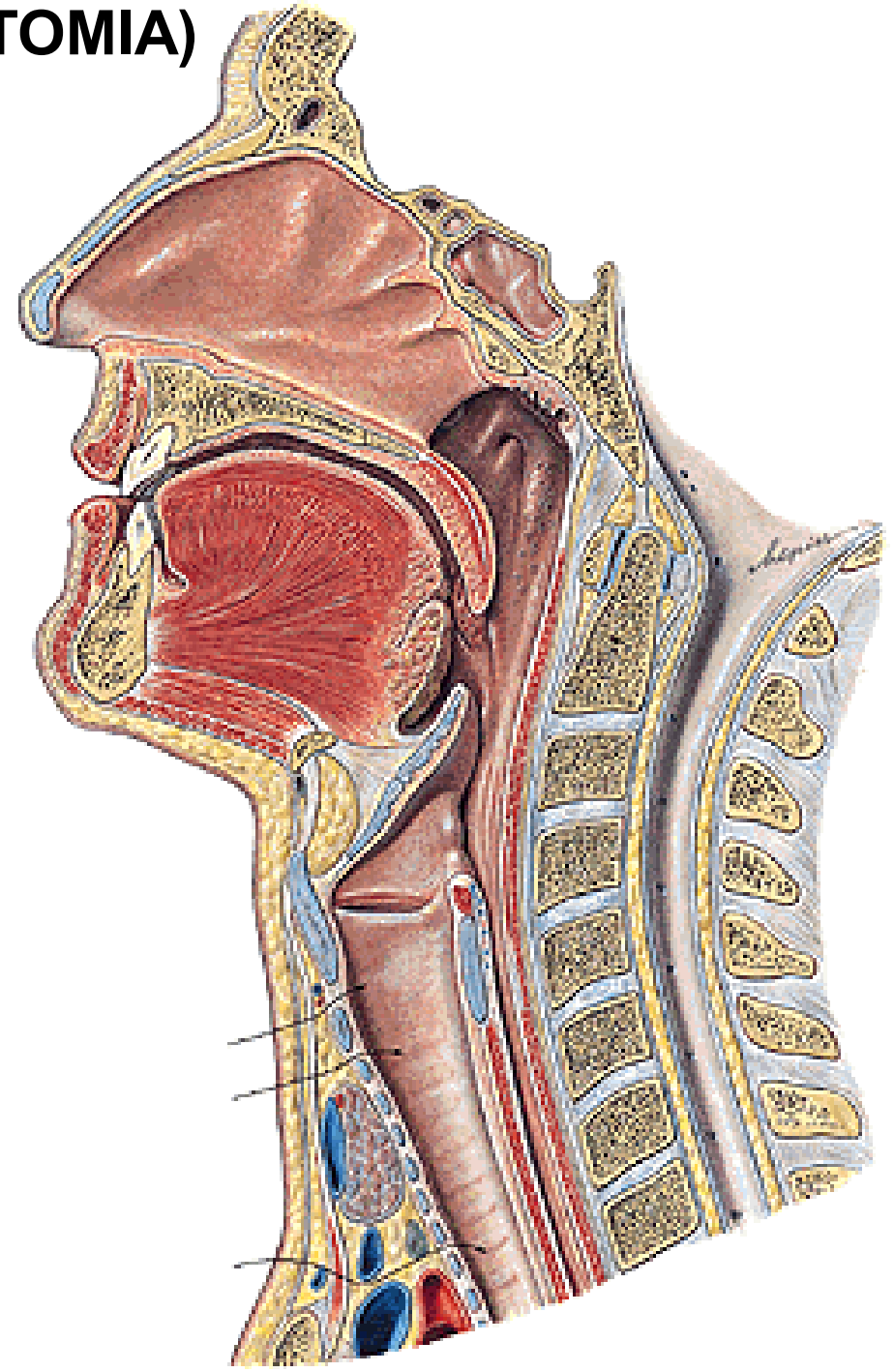
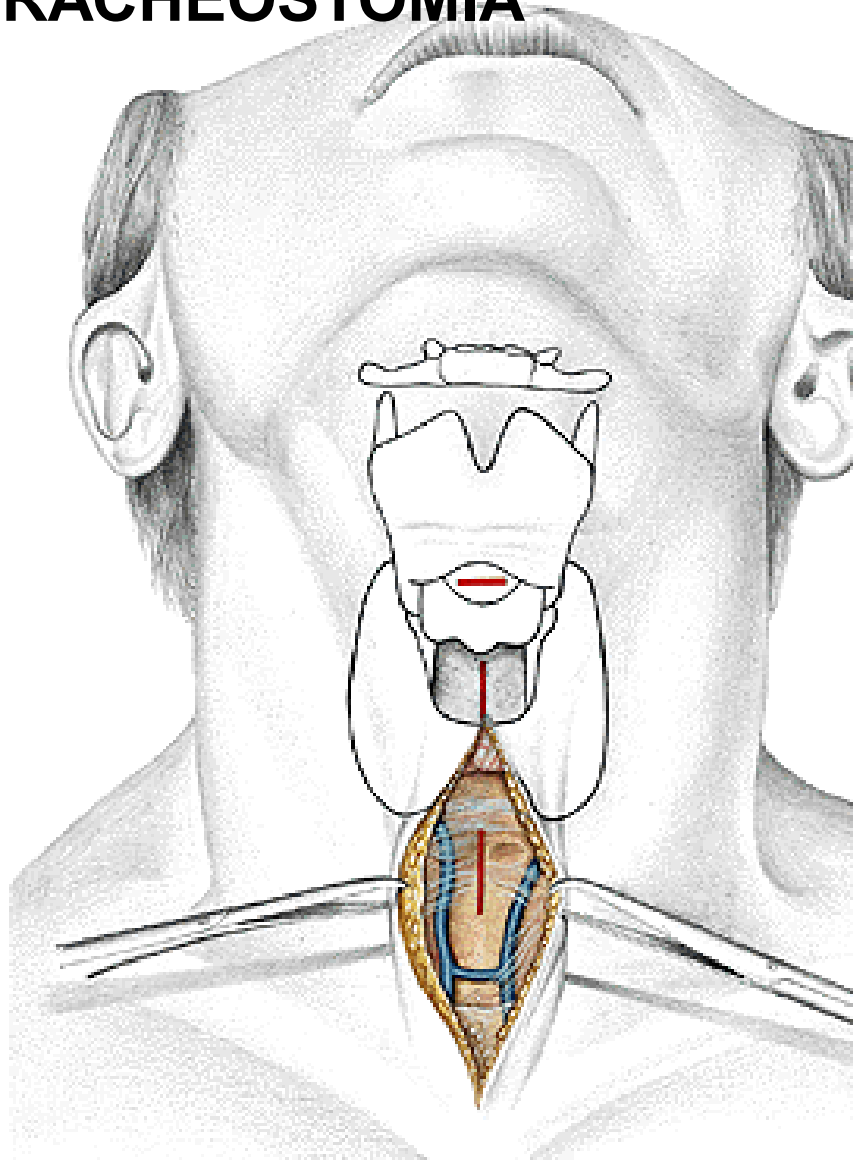
TOPOGRAPHY OF THE TRACHEA

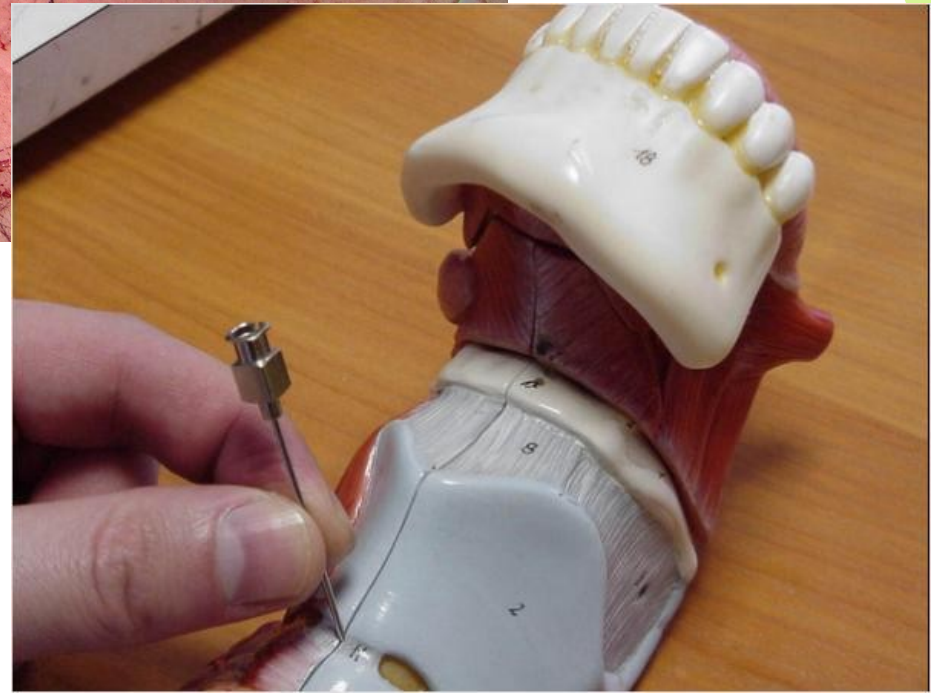
- isthmus glandulae thyroideae
- vv. thyroideae inferiores
- a. carotis communis
- v. jugularis int.
- n. vagus
- oesophagus
- n. laryngeus recurrens
- truncus brachiocephalicus
- v. cava sup.
- v. brachiocephalica sinistra
- arcus aortae





**CONIOTOMIA (CRICOTHYROTOMIA)
TRACHEOTOMIA SUPERIOR
TRACHEOTOMIA INFERIOR
TRACHEOSTOMIA**

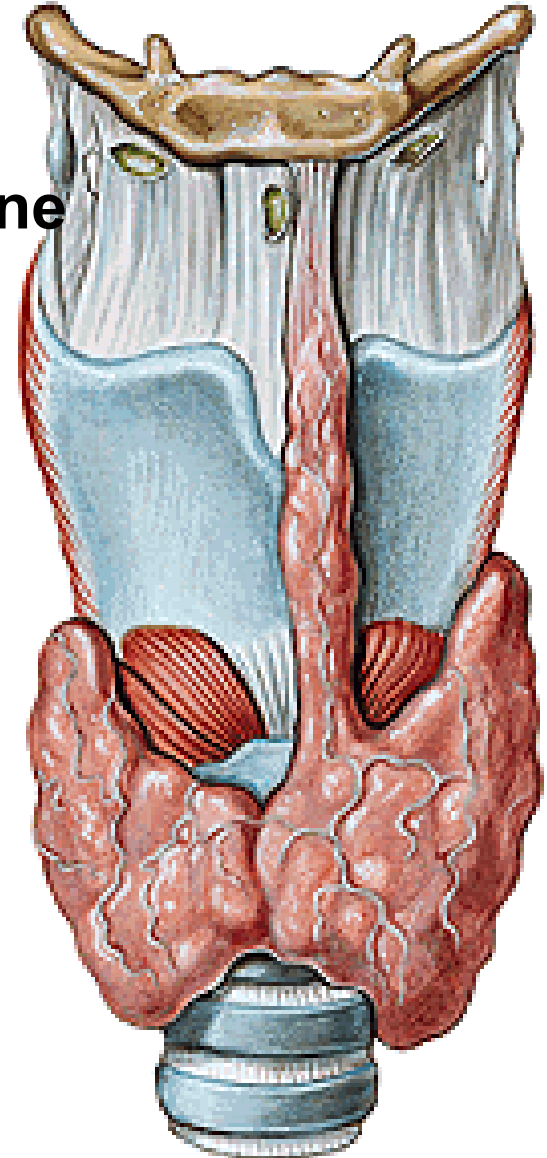
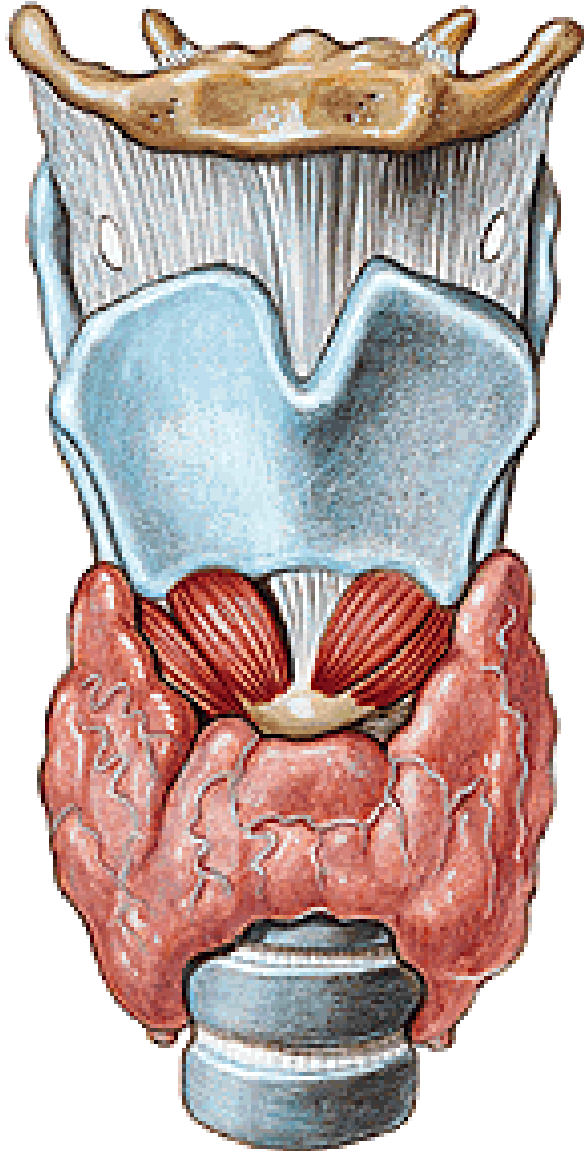


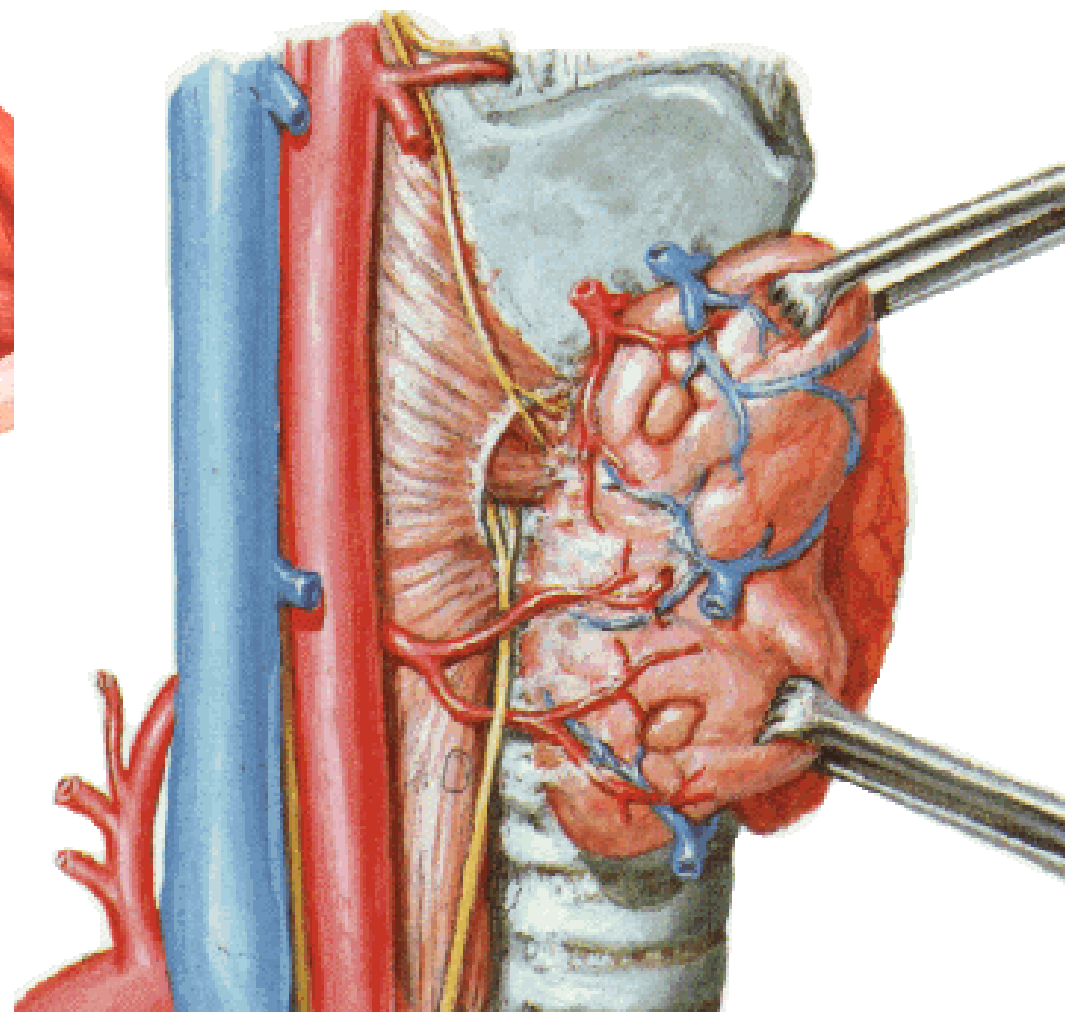
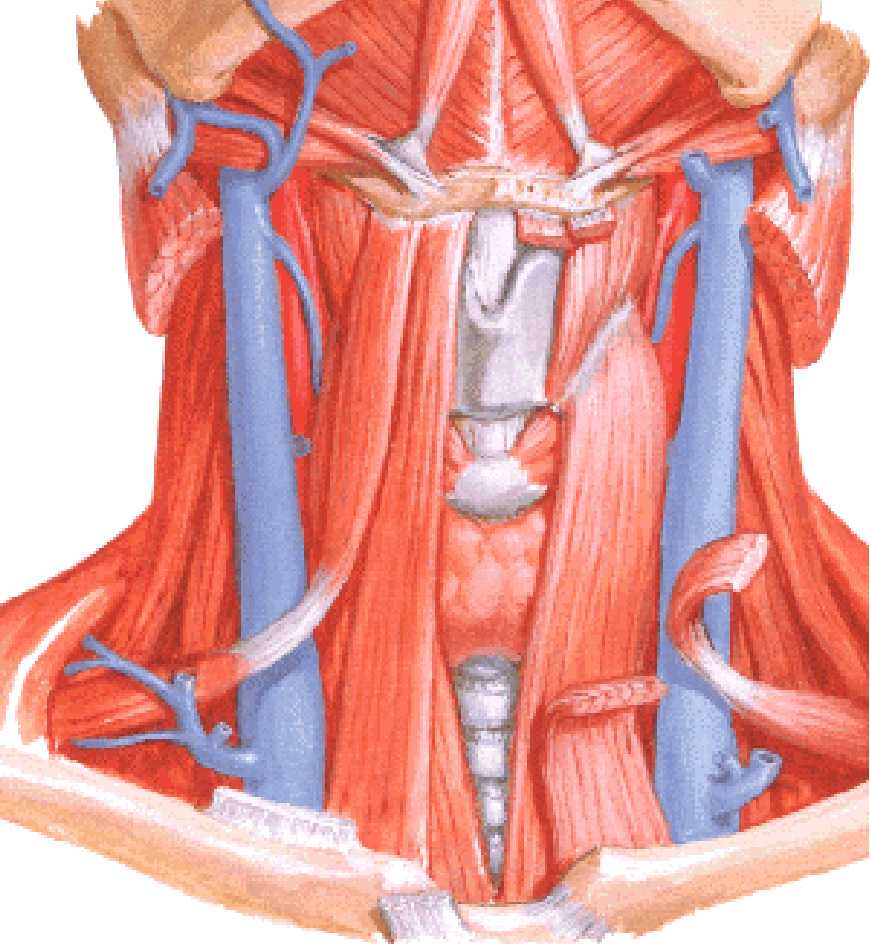


GLANDULA THYROIDEA – lobus dexter

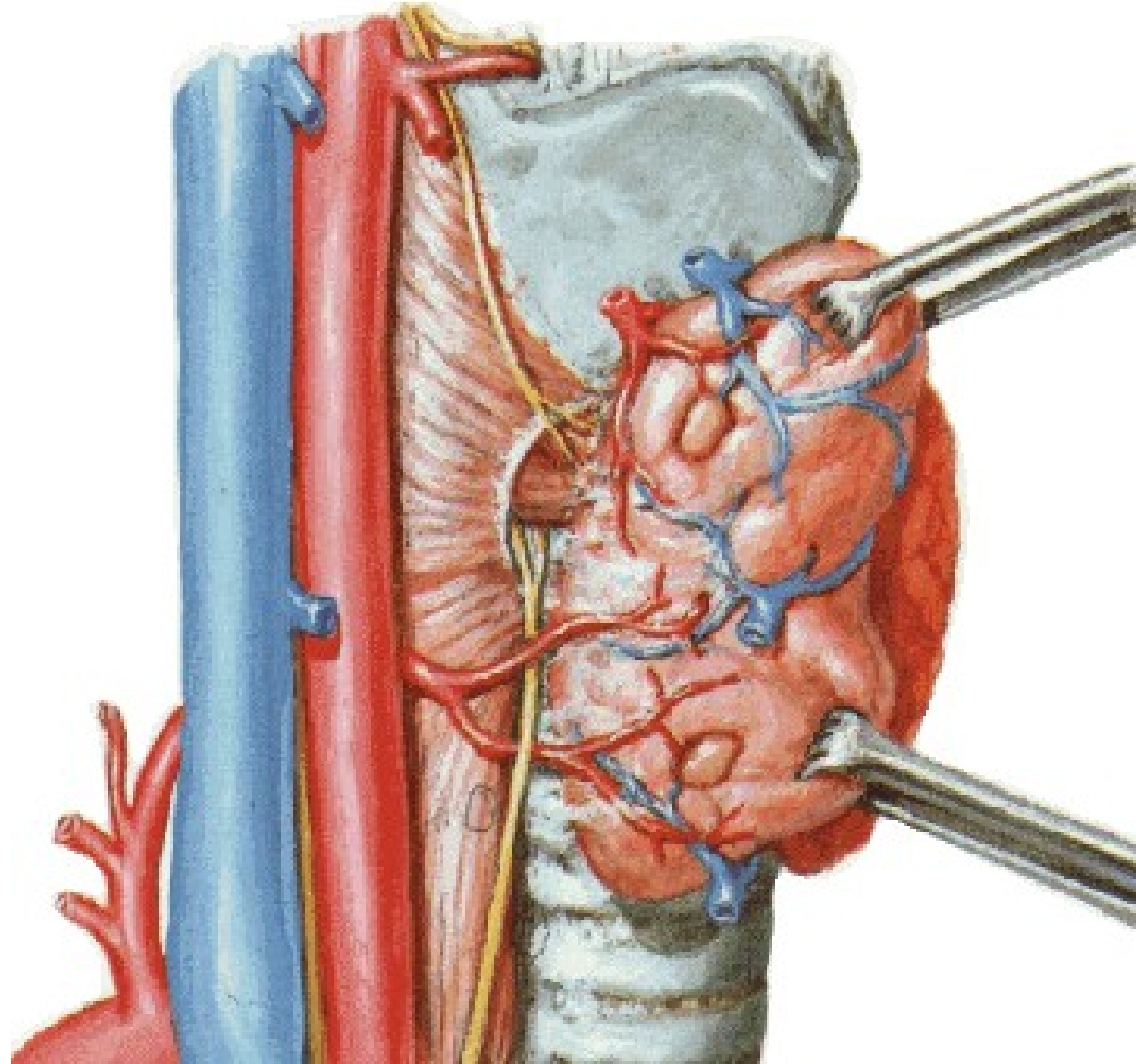
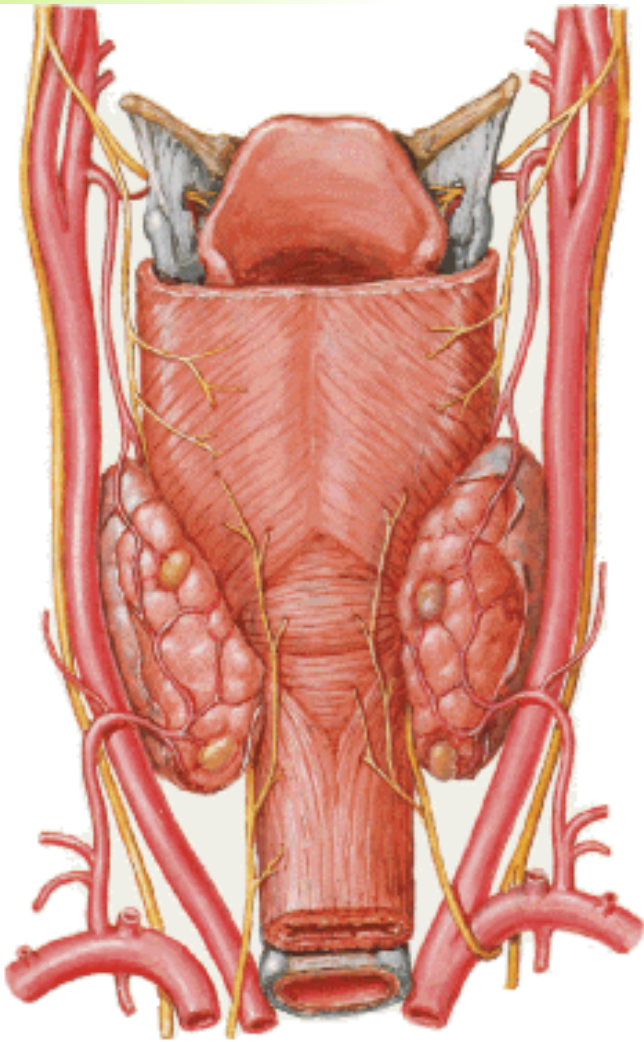
- lobus sinister
- isthmus
- lobus

- pyramidalis
- thyroid hormone
- calcitonin





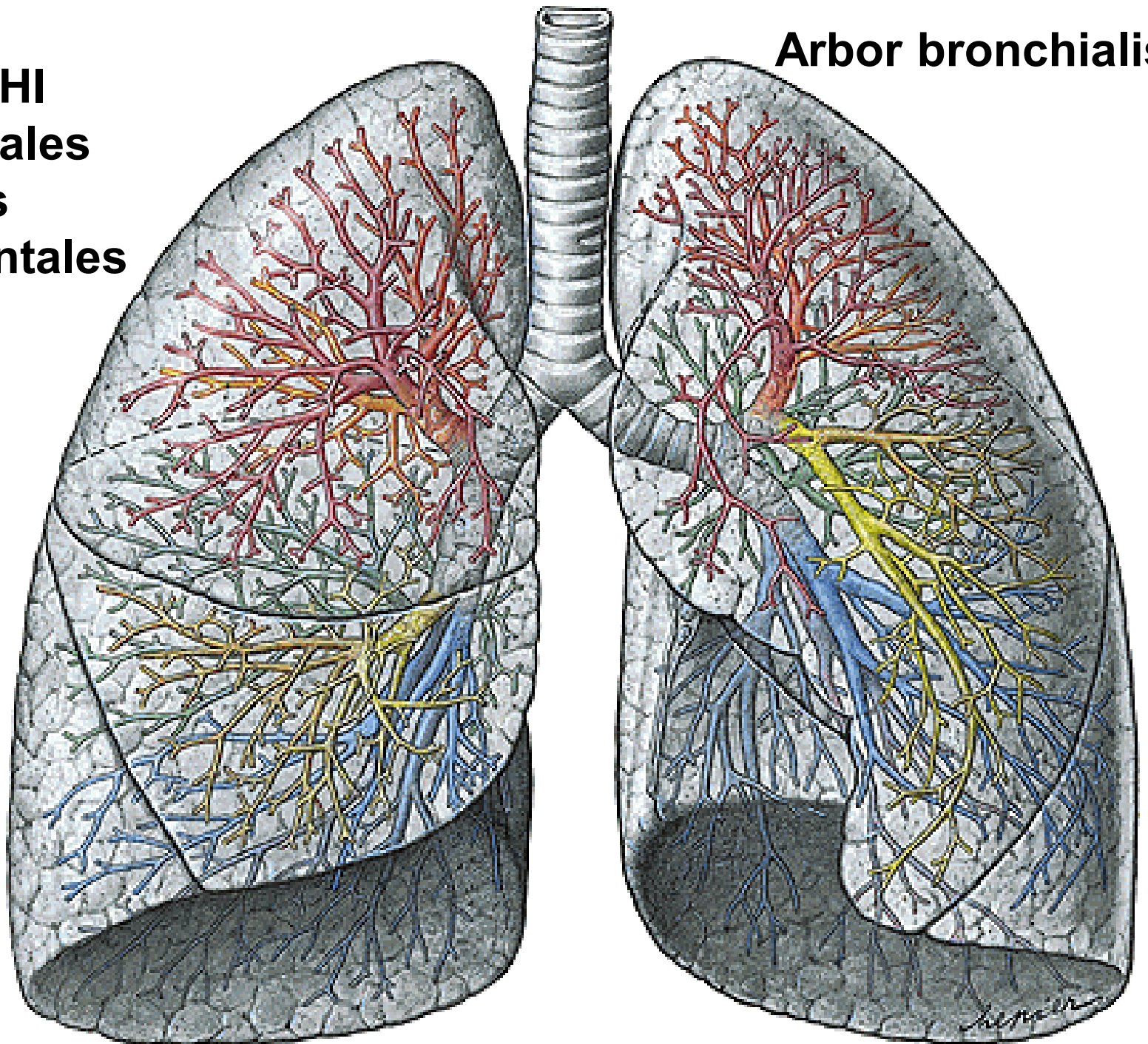
GLANDULAE PARATHYROIDEAE –sup. et inf. Parathormone (parathyroid hormone; PTH)



BRONCHI

- principales
- lobares
- segmentales

Arbor bronchialis



PULMO DEXTER

lobus superior

medius

inferior

fissura obliqua

fissura horizontalis



apex pulmonis

basis pulmonis

(facies diaphragmatica)

facies costalis

margo anterior

inferior

posterior

PULMO SINISTER

lobus superior

inferior

fissura obliqua

incisura cardiaca

lingula pulmonis sinistri



FACIES MEDIALIS

hilum pulmonis

radix pulmonis

lig. pulmonale

sulcus a. subclaviae

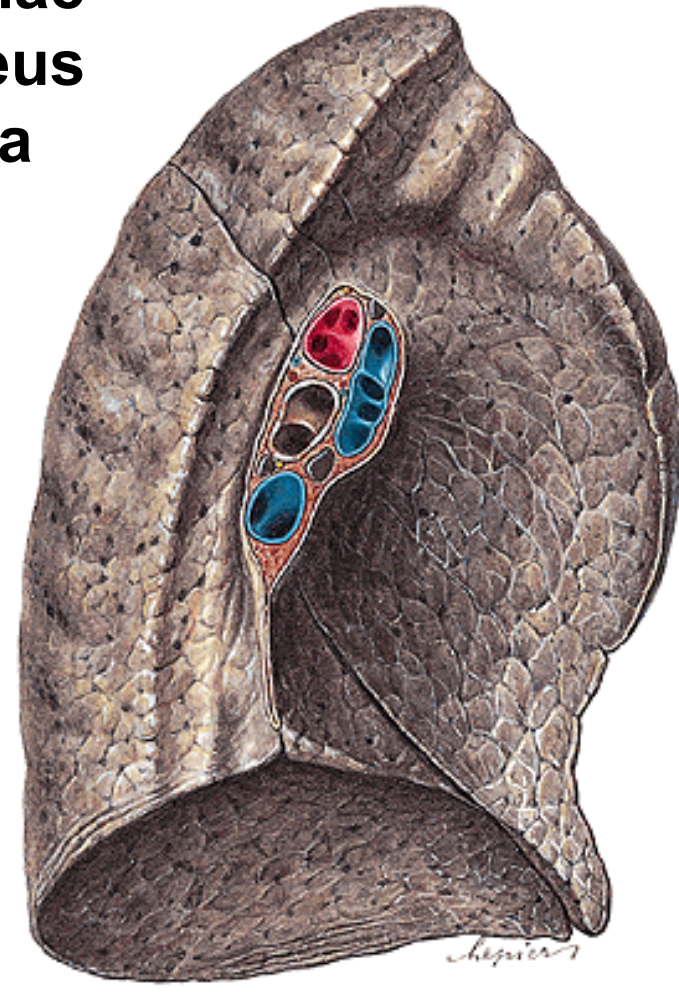
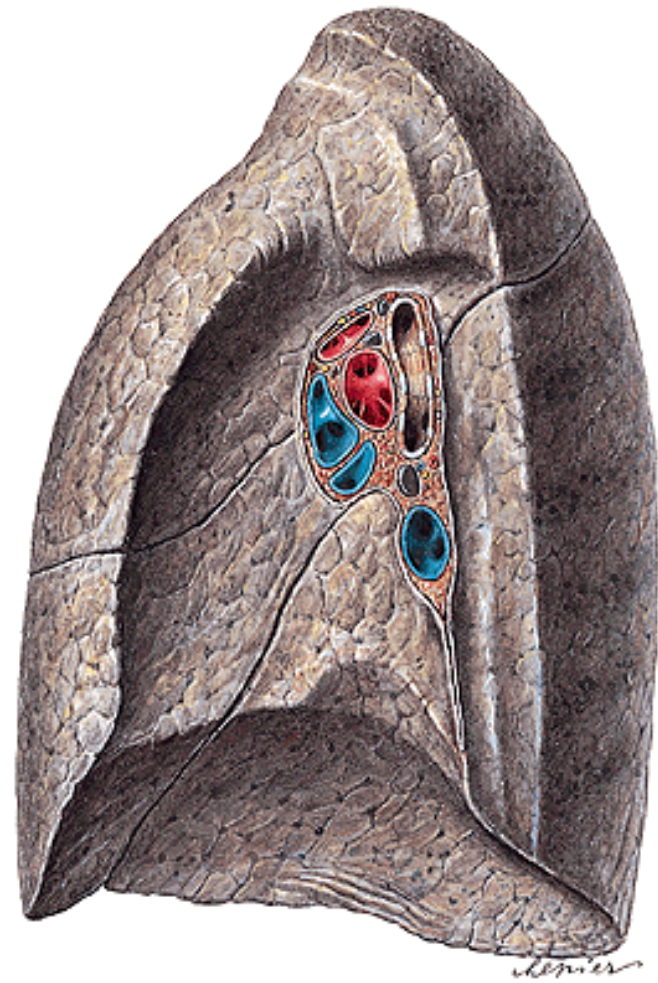
sulcus costae primae

sulcus oesophageus

impressio cardiaca

sulcus aorticus

sulcus v. cavae sup.
sulcus v. azygos



SEGMENTA BRONCHOPULMONALIA DEXTRA

1. s. apicale

2. s. posterius

3. s. anteriorus

4. s. laterale

5. s. mediale

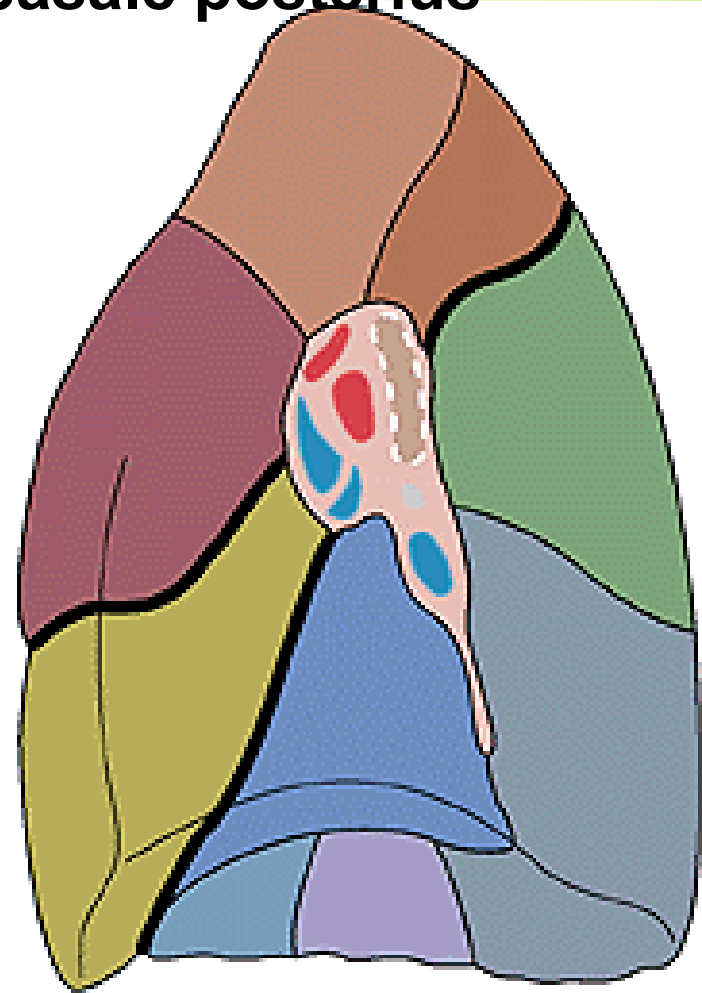
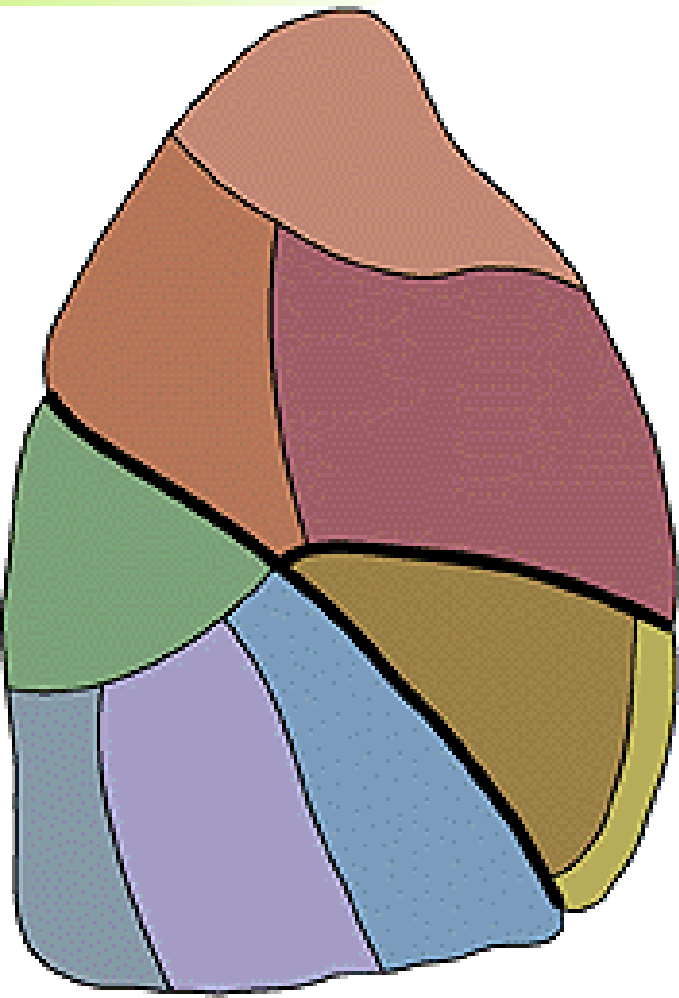
6. s. apicale

7. s. basale mediale

8. s. basale anteriorus

9. s. basale laterale

10. s. basale posterius



SEGMENTA BRONCHOPULMONALIA SINISTRA

1. s. apicoposterius

2. s. anterior

3. s. linguare superius

4. s. linguare inferius

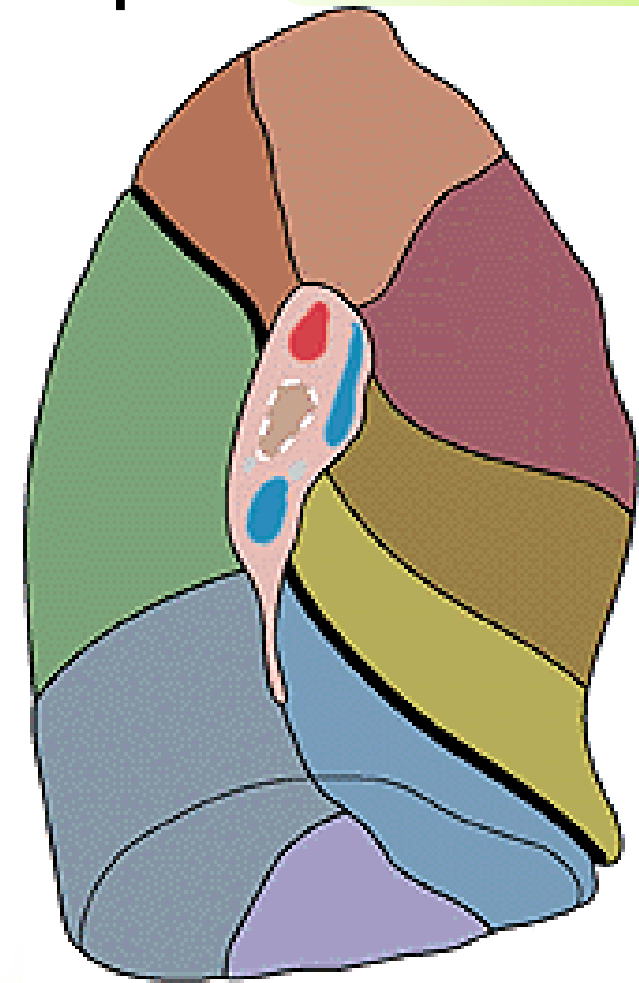
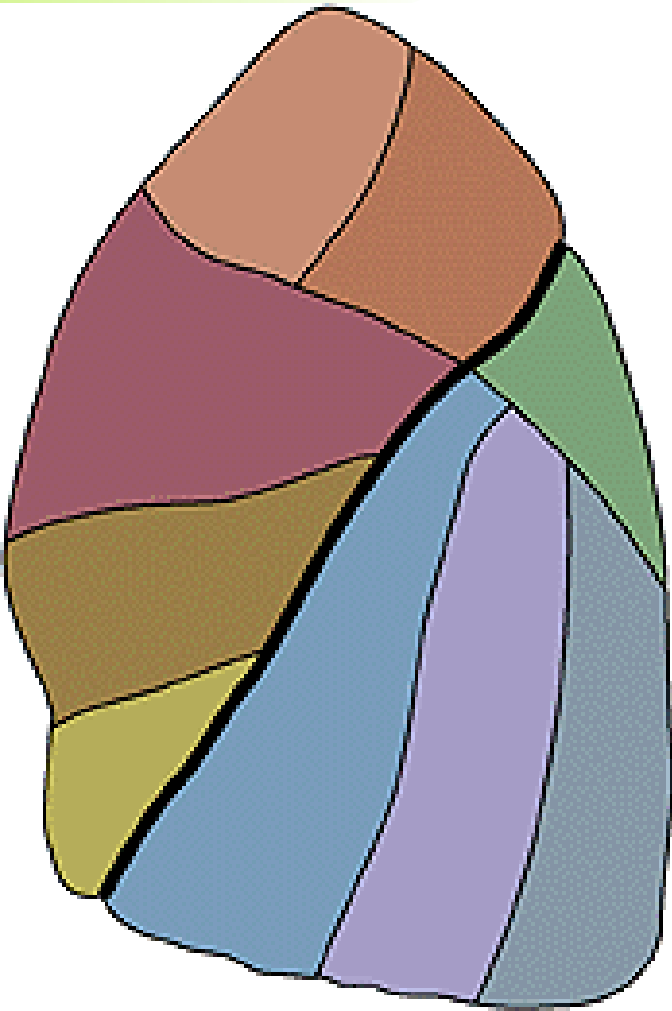
6. s. apicale

(7. s. basale mediale)

8. s. basale anterior

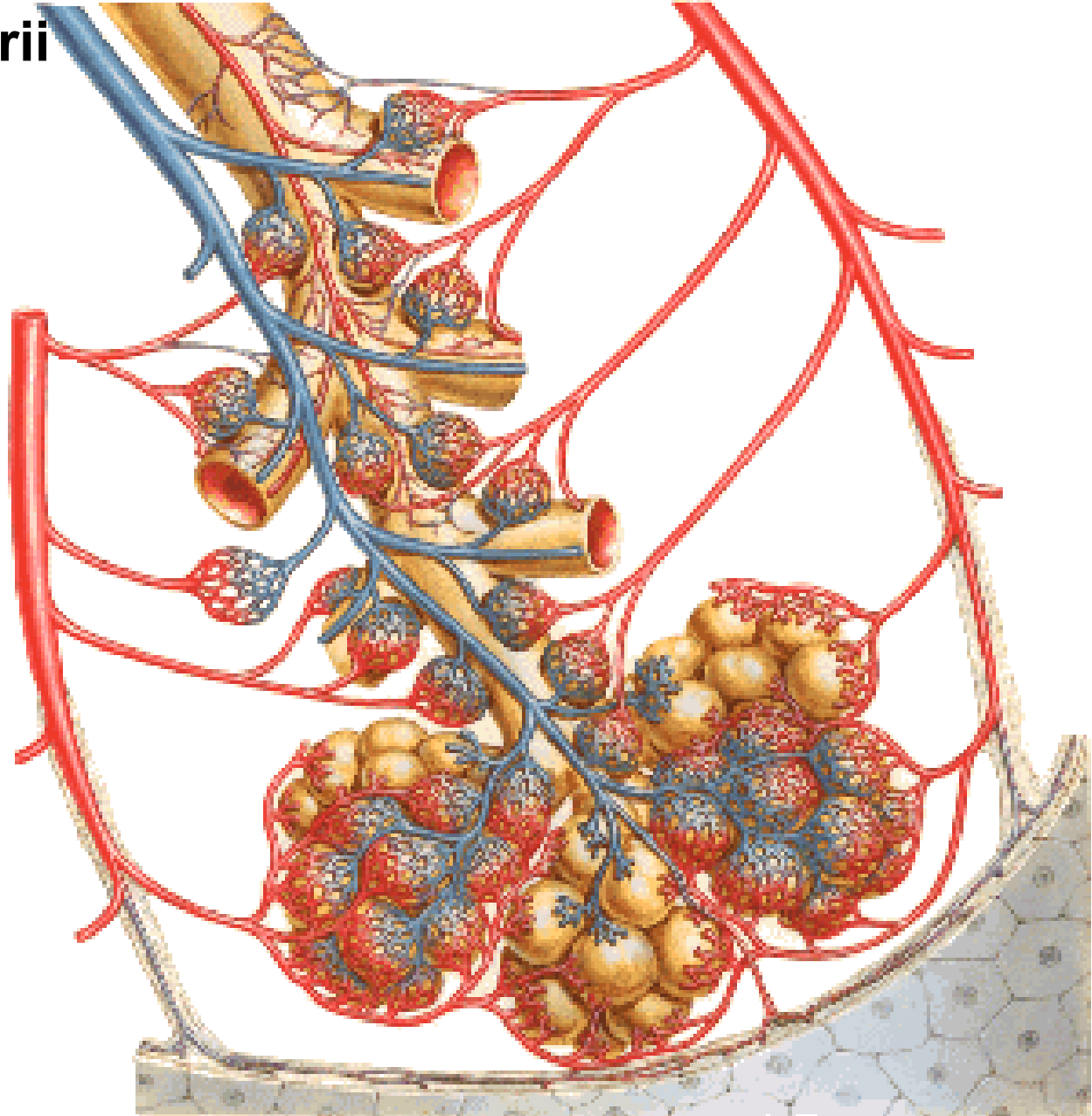
9. s. basale laterale

10. s. basale posterius



Bronchioli terminales
Bronchioli respiratorii
Ductuli alveolares
Sacculi alveolares
Alveoli pulmonis

Asthma bronchiale

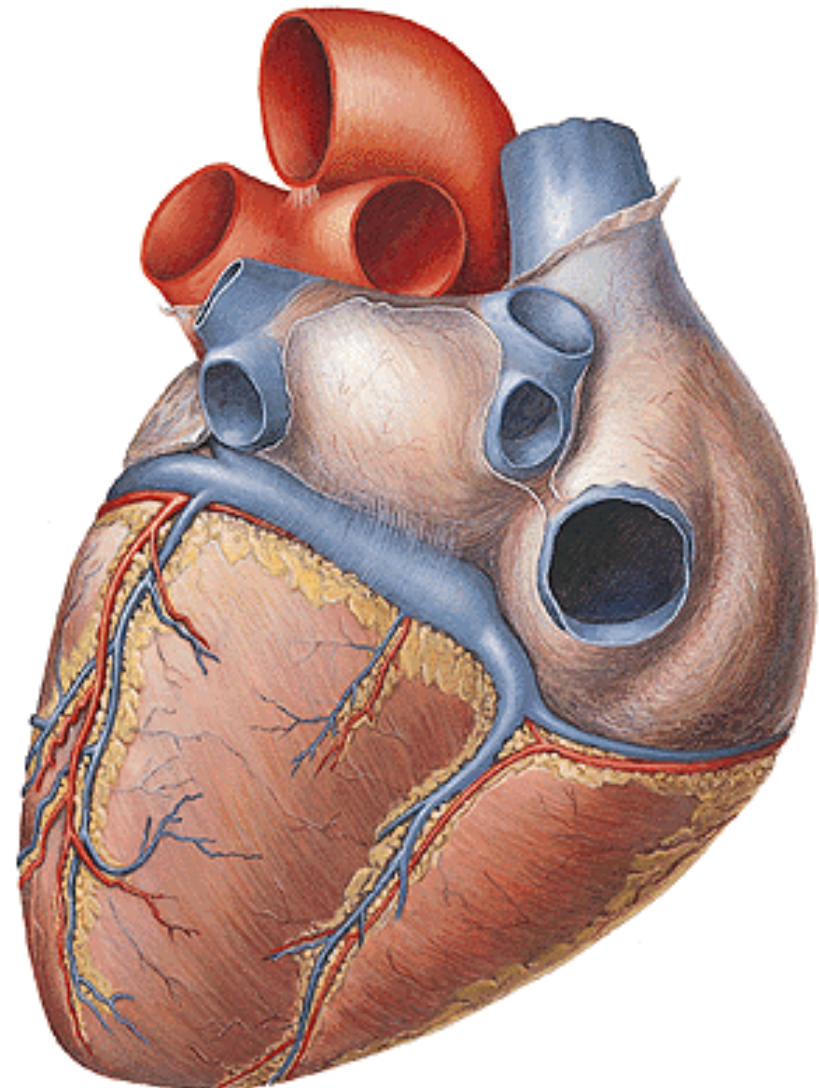
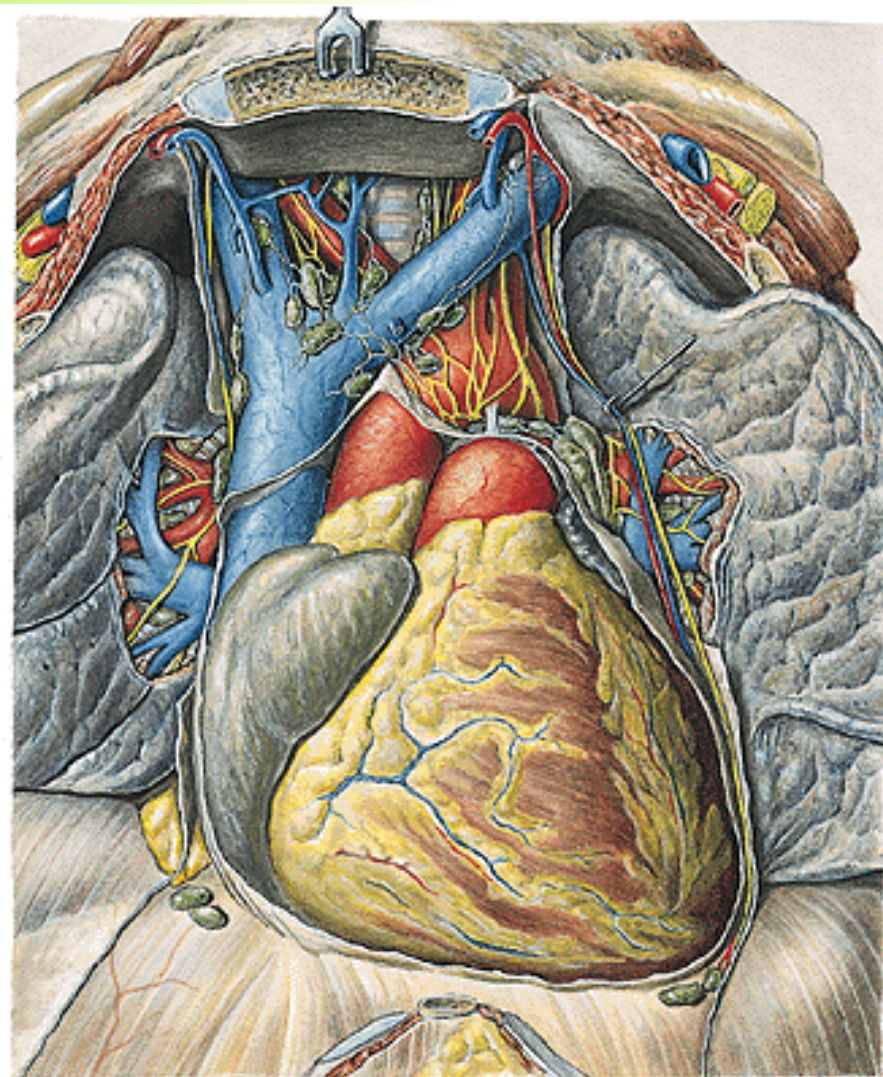


Truncus pulmonalis → a. pulmonalis dx. et sin.

Vv. pulmonales → atrium sinistrum

Aorta thoracica → aa. bronchiales

Vv. bronchiales → v. azygos, v. hemiazygos accessoria



PLEURA - visceralis

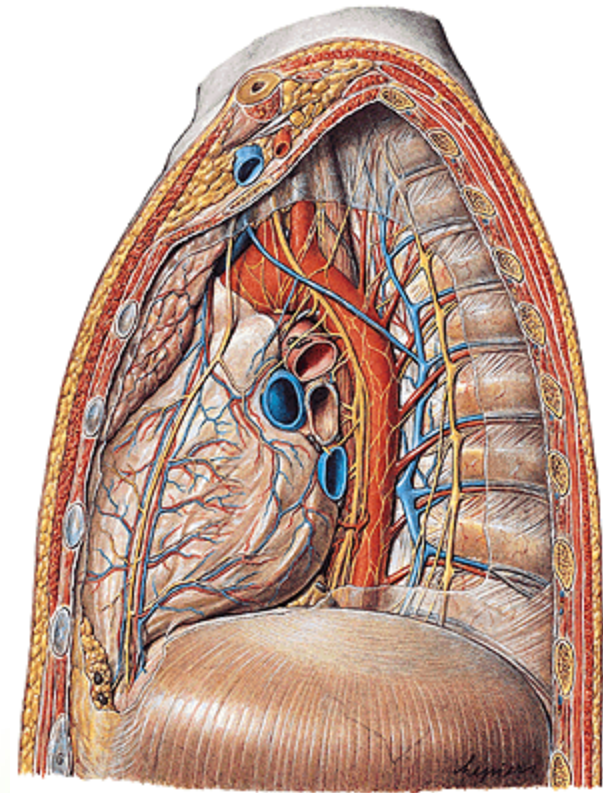
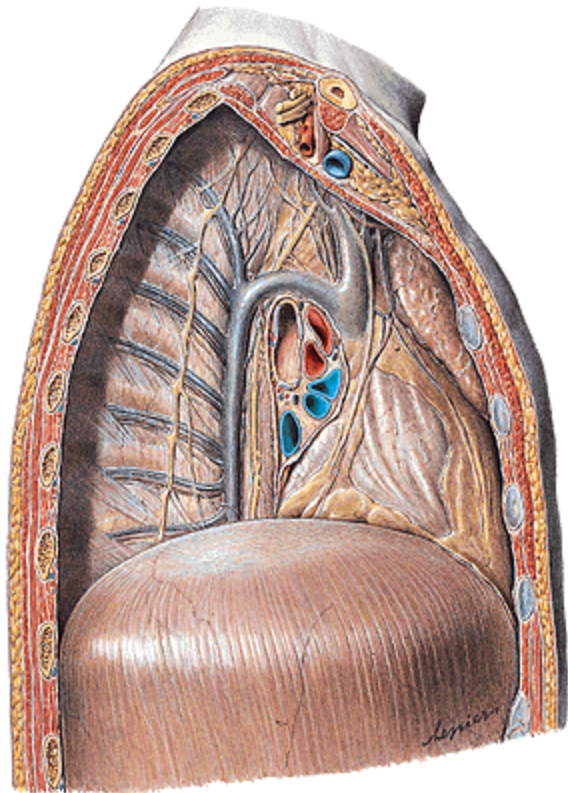
- parietalis - costalis

- diaphragmatica

- mediastinalis

Cavitas pleuralis

Cupula pleurae – lig. scaleno-, vertebro-, costopleurale



Recessus pleurae:

r. costodiaphragmaticus

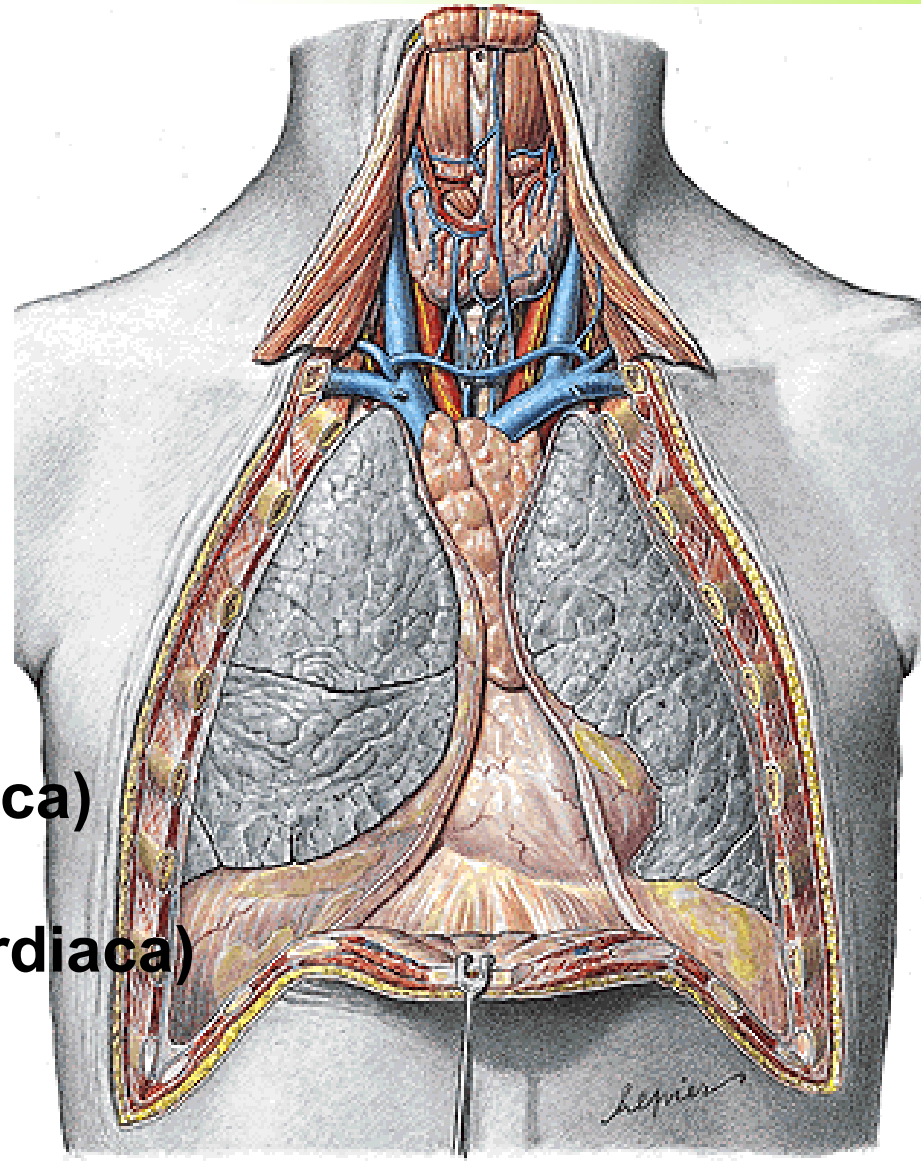
r. costomediastinalis

r. phrenicomediastinalis

Pneumothorax

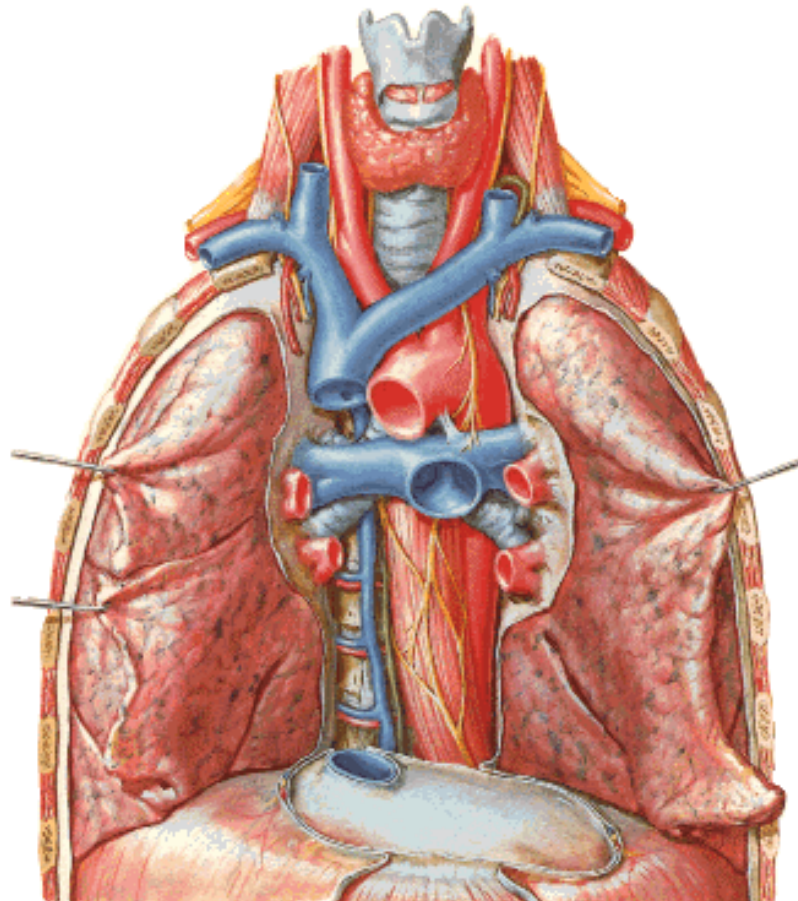
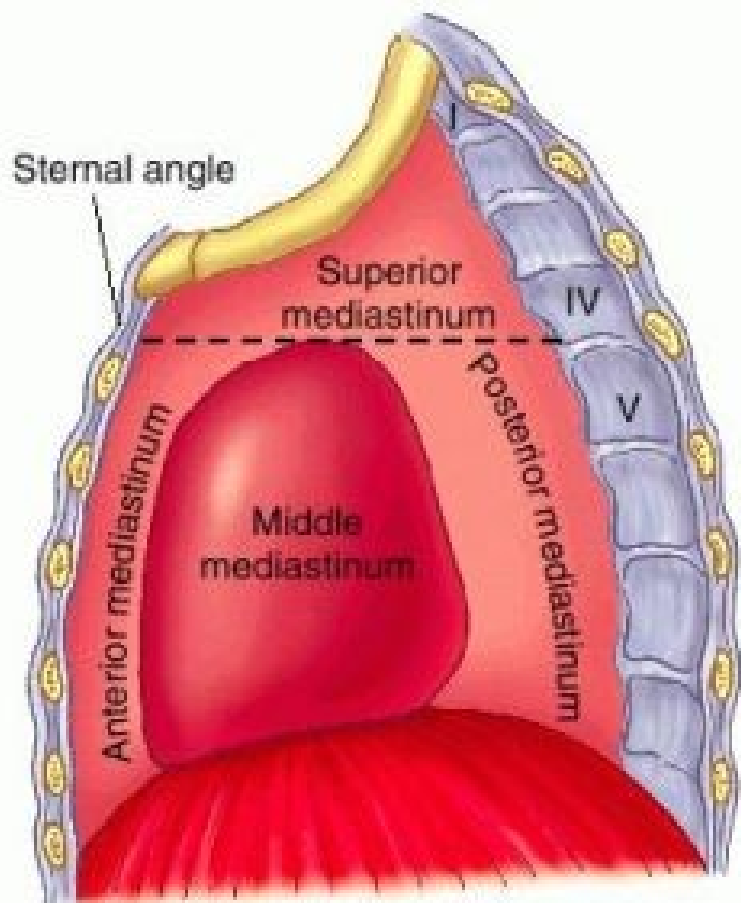
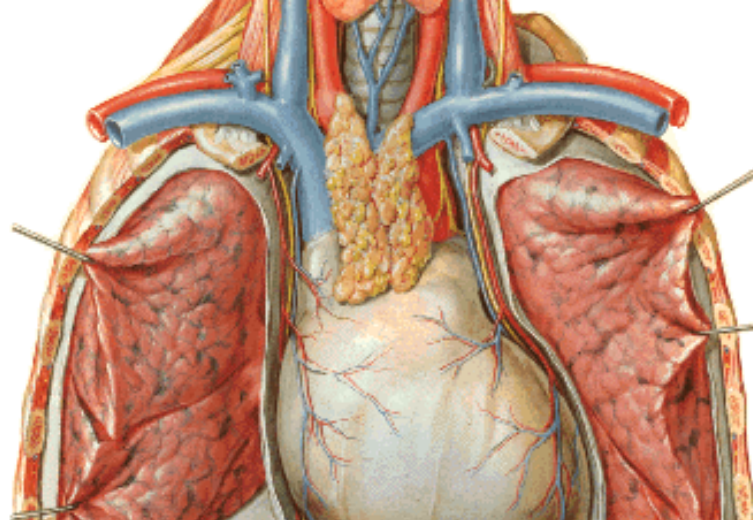
Area interpleuralis sup. (thymica)

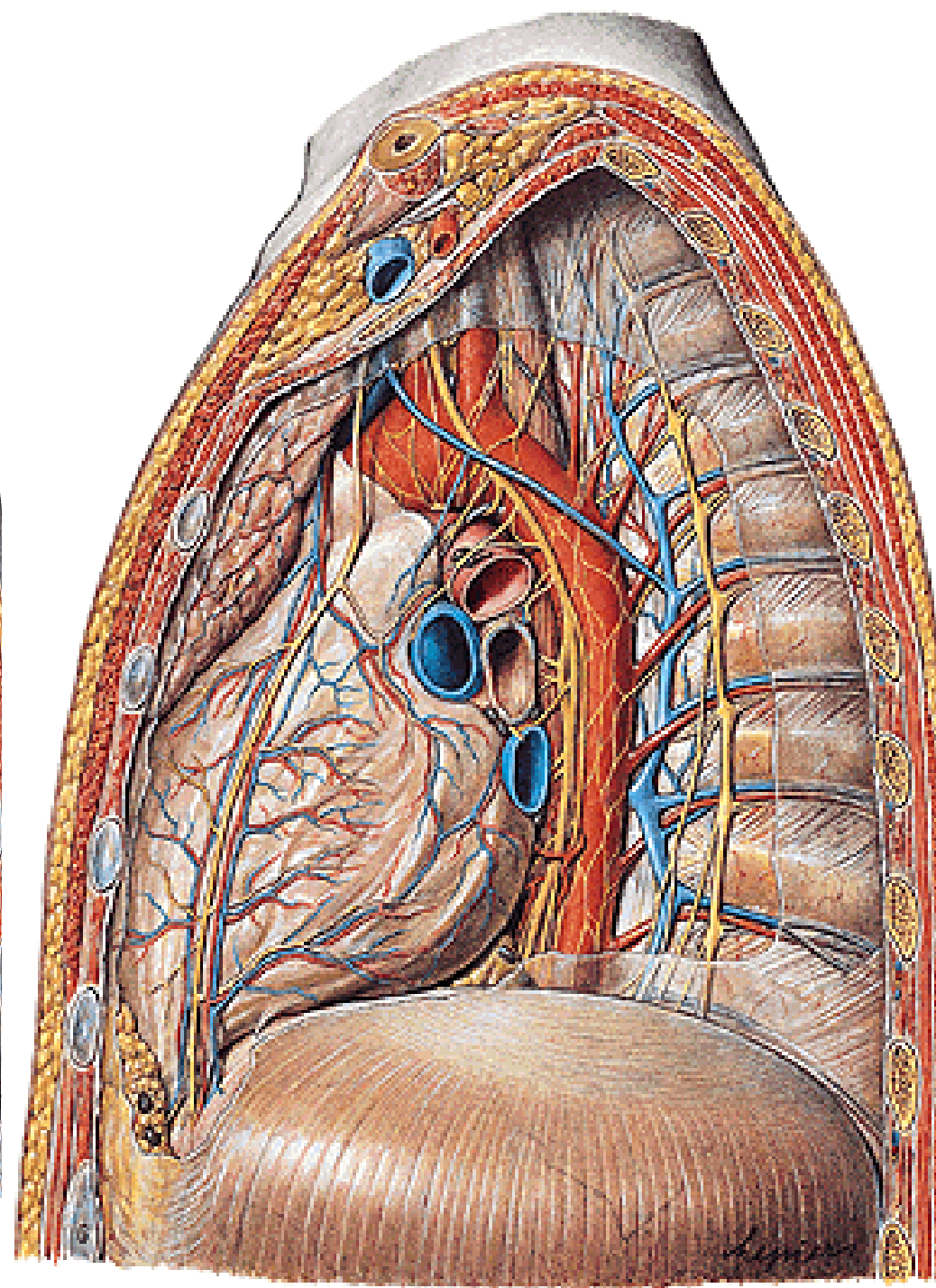
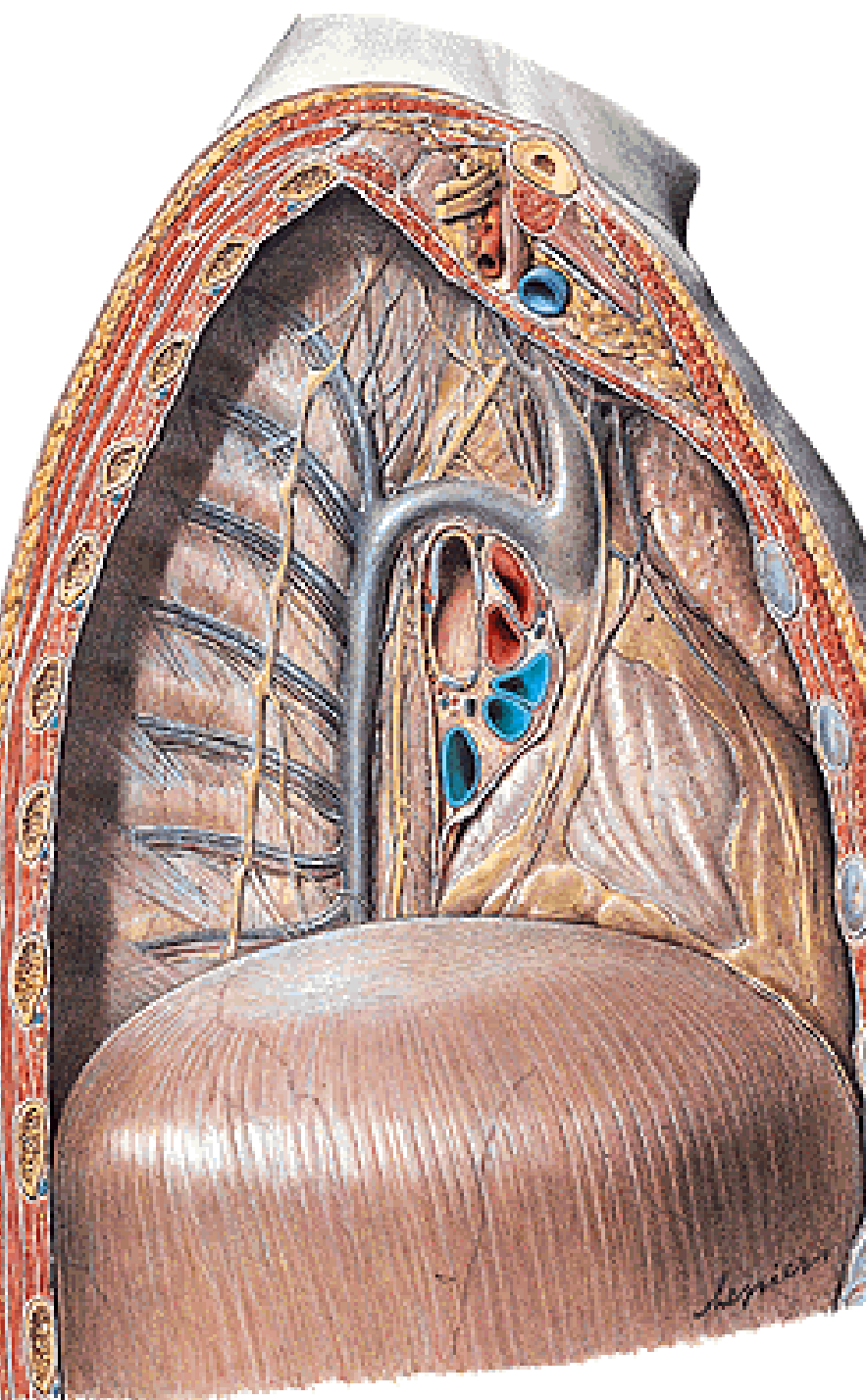
Area interpleuralis inf. (pericardiaca)

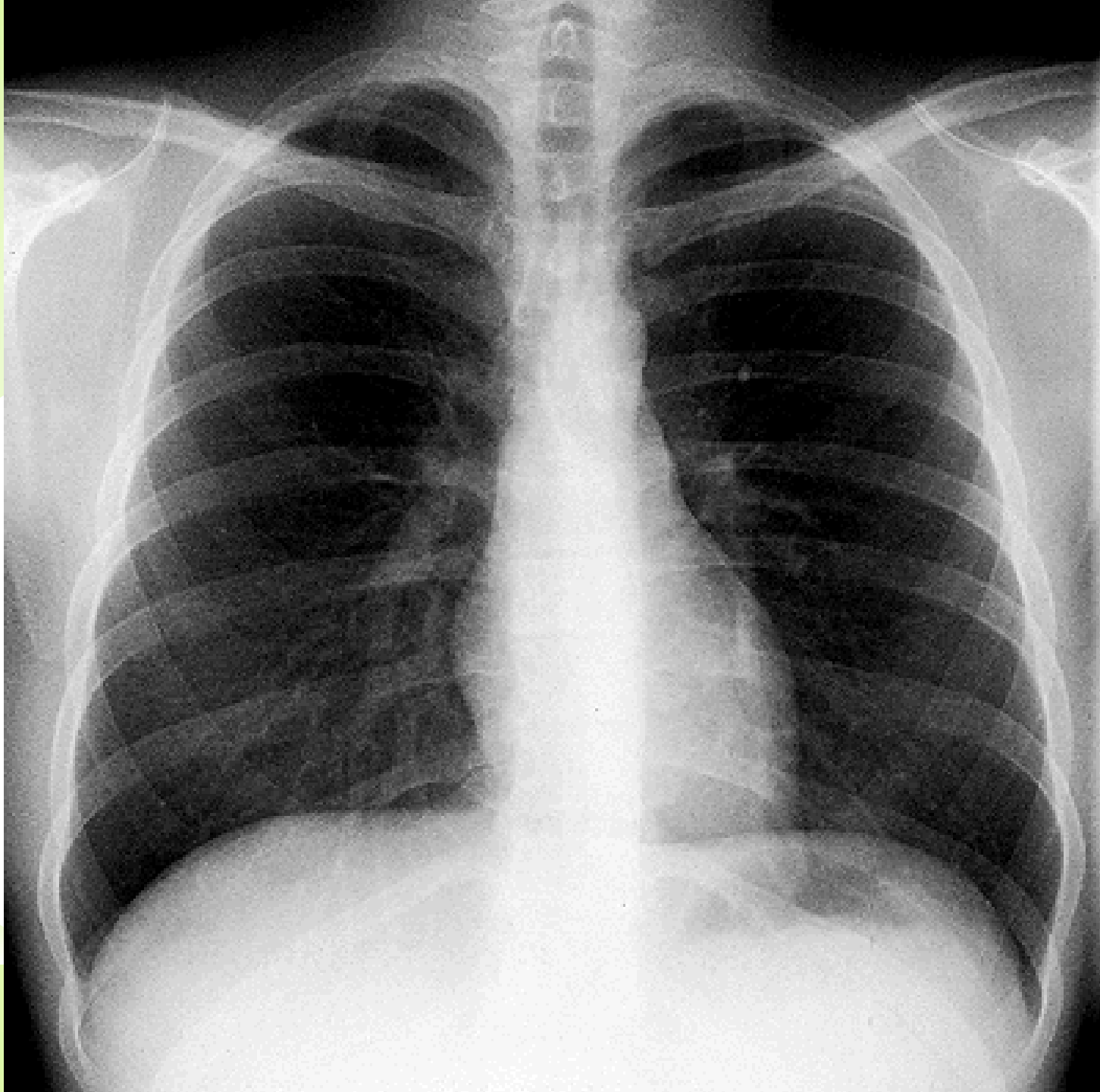


MEDIASTINUM

- superius
- inferius - anterius
 - medium
 - posterius



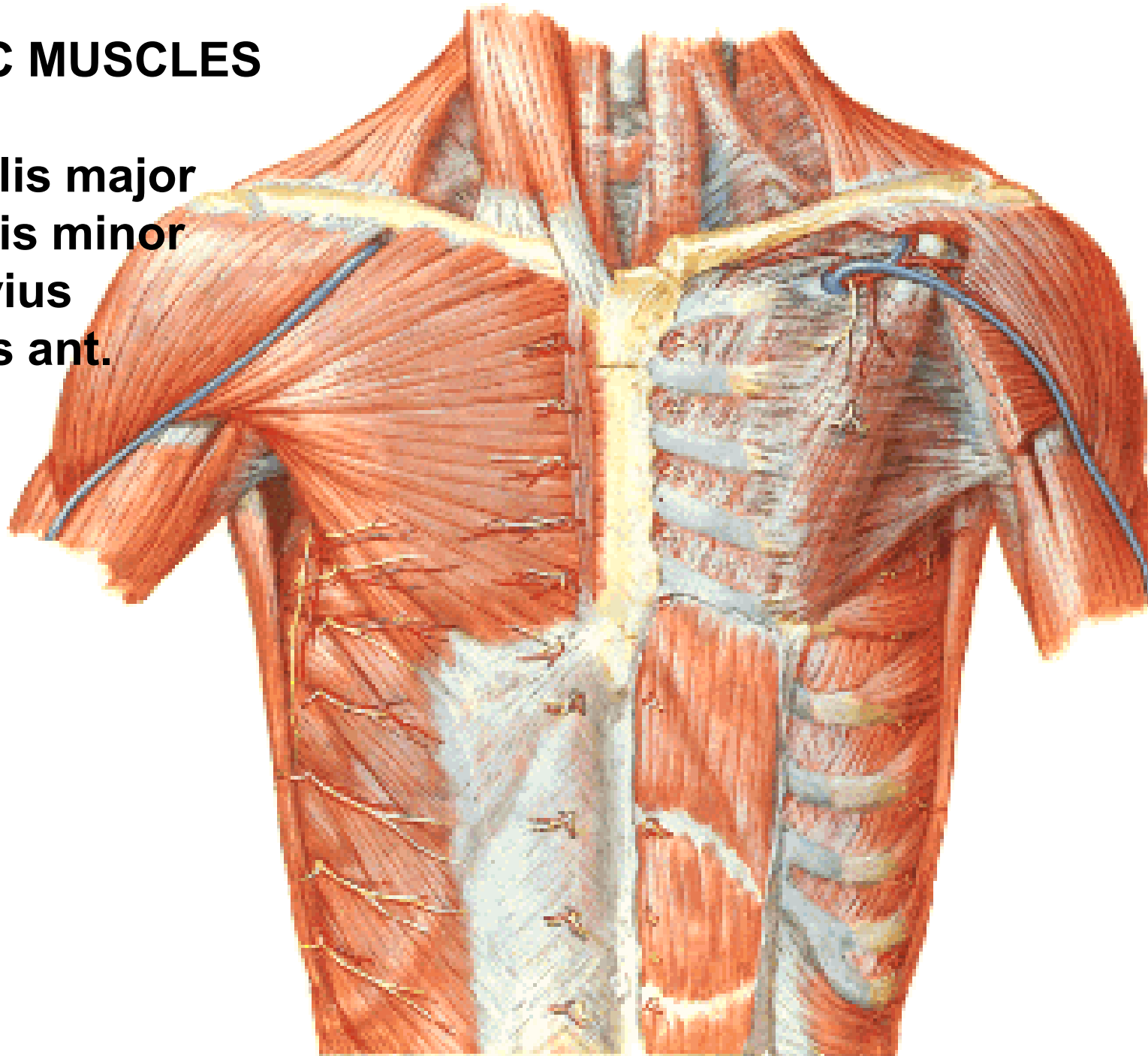


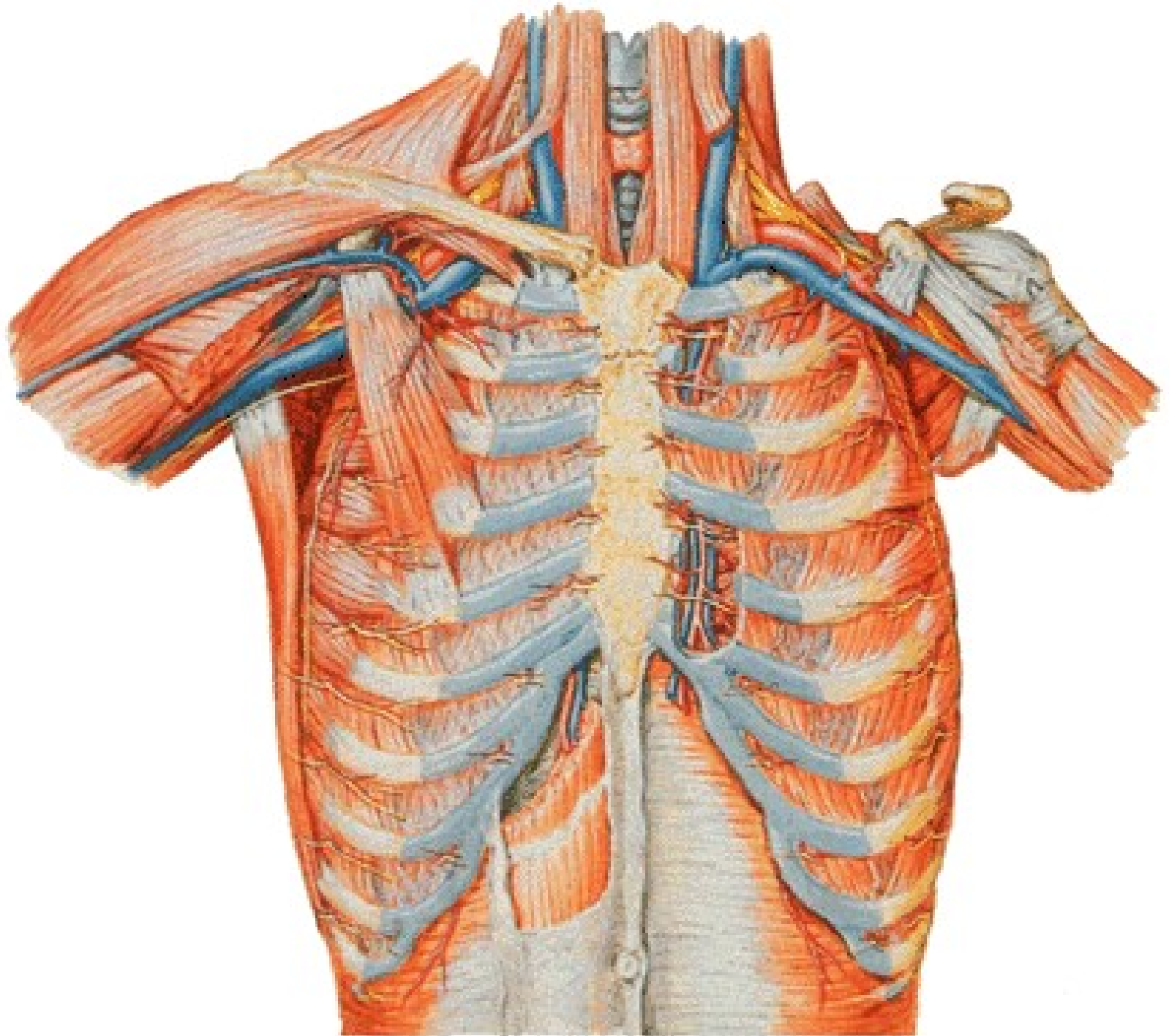


MUSCULI THORACIS

EXTRINSIC MUSCLES

- M. pectoralis major**
- M. pectoralis minor**
- M. subclavius**
- M. serratus ant.**





INTRINSIC MUSCLES

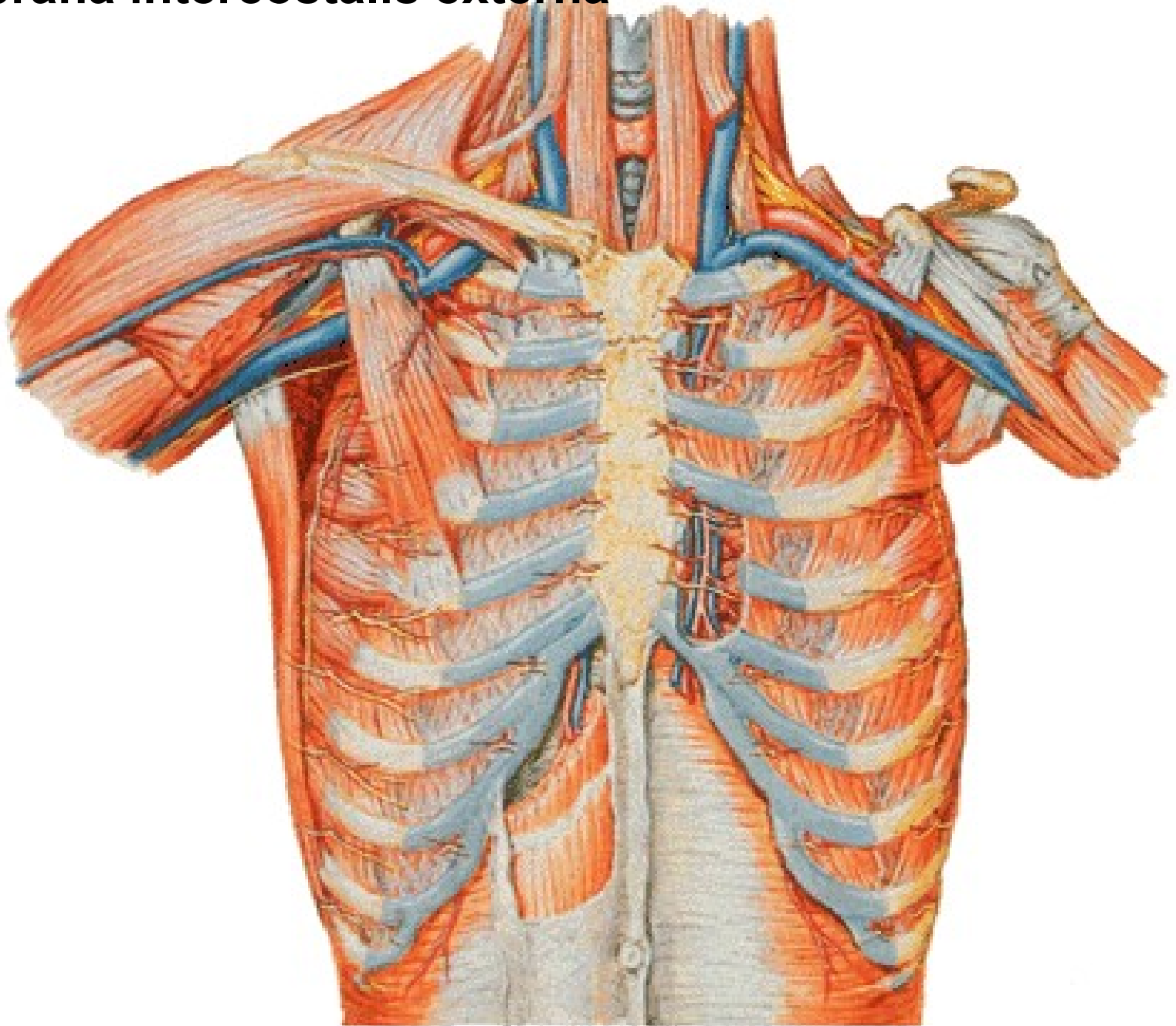
M. intercostales externi

M. intercostales interni

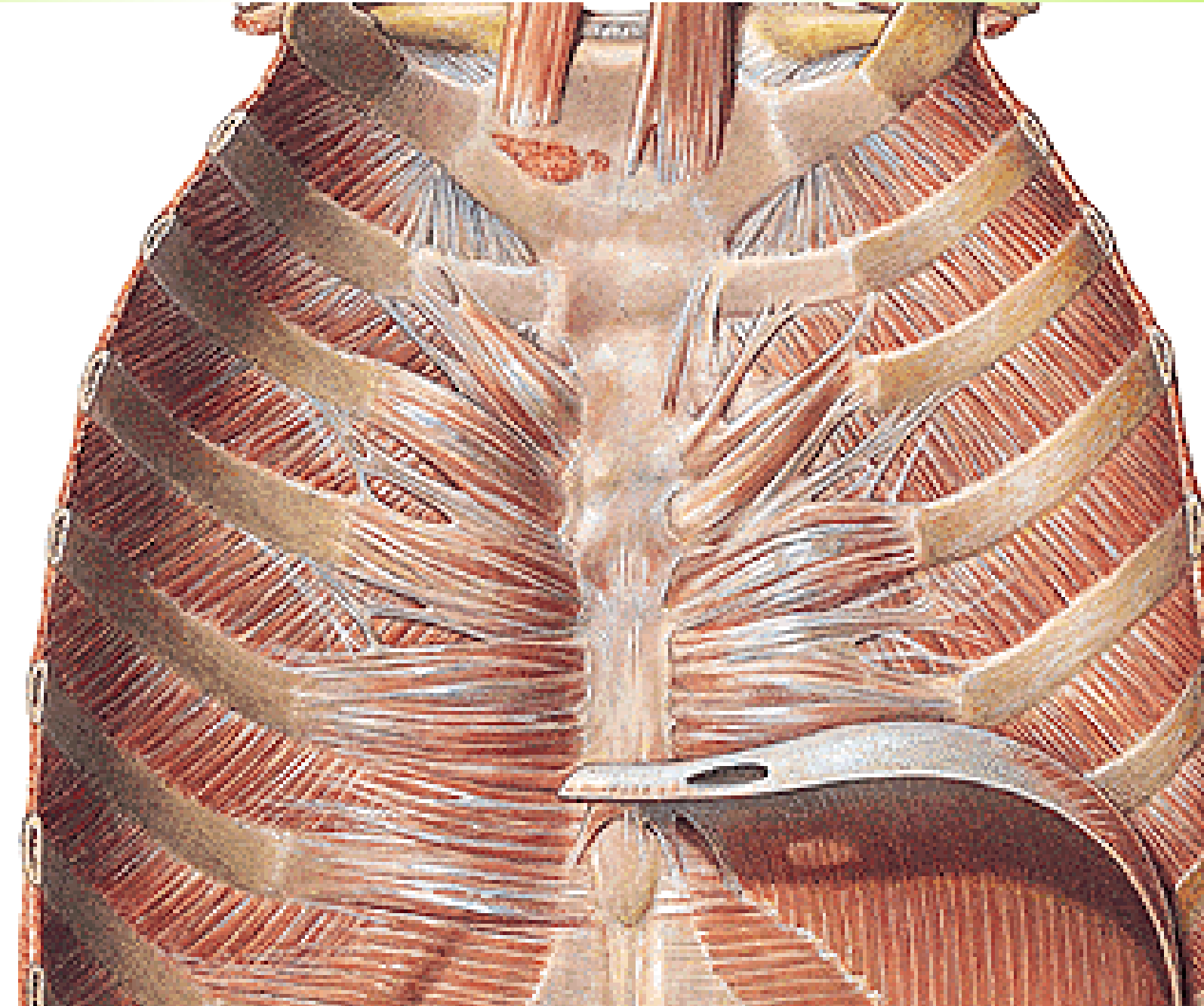
M. intercostales intimi



Membrana intercostalis externa



M. transversus thoracis



DIAPHRAGM

Centrum tendineum

- foramen VCI

Pars sternalis

Pars costalis

Pars lumbalis

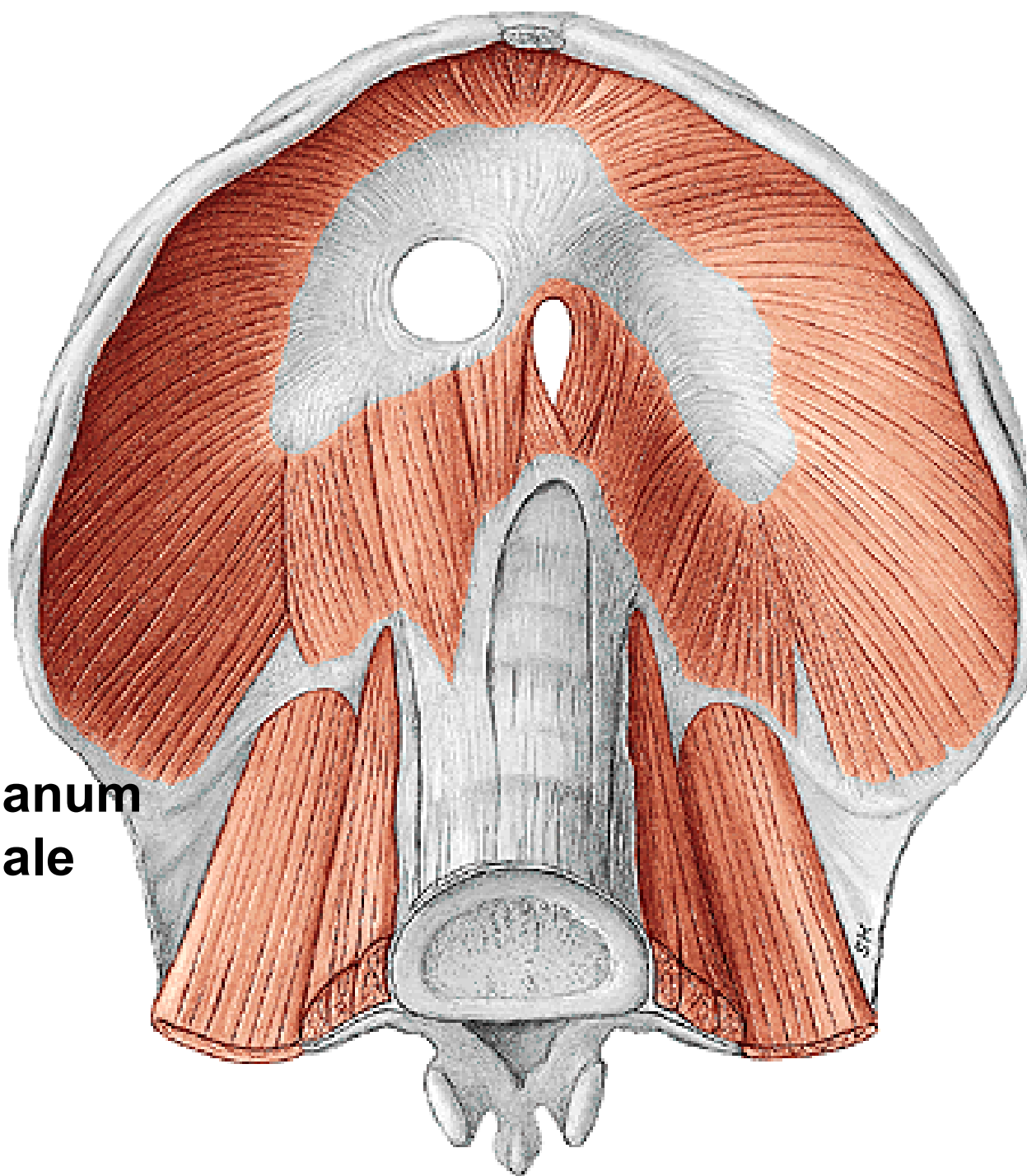
- crus dextrum

- crus sinistrum

- lig. arcuatum medianum

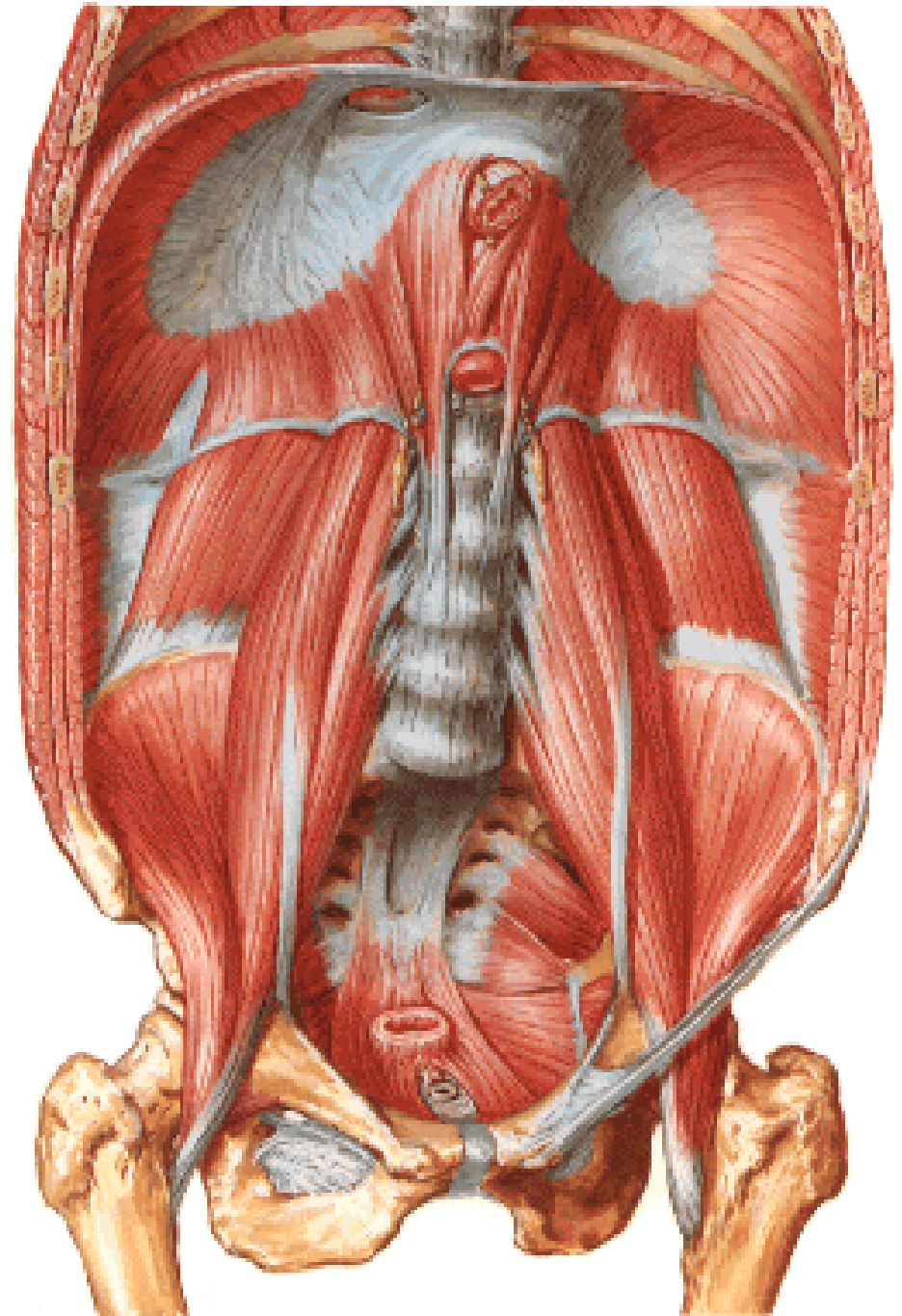
- lig. arcuatum mediale

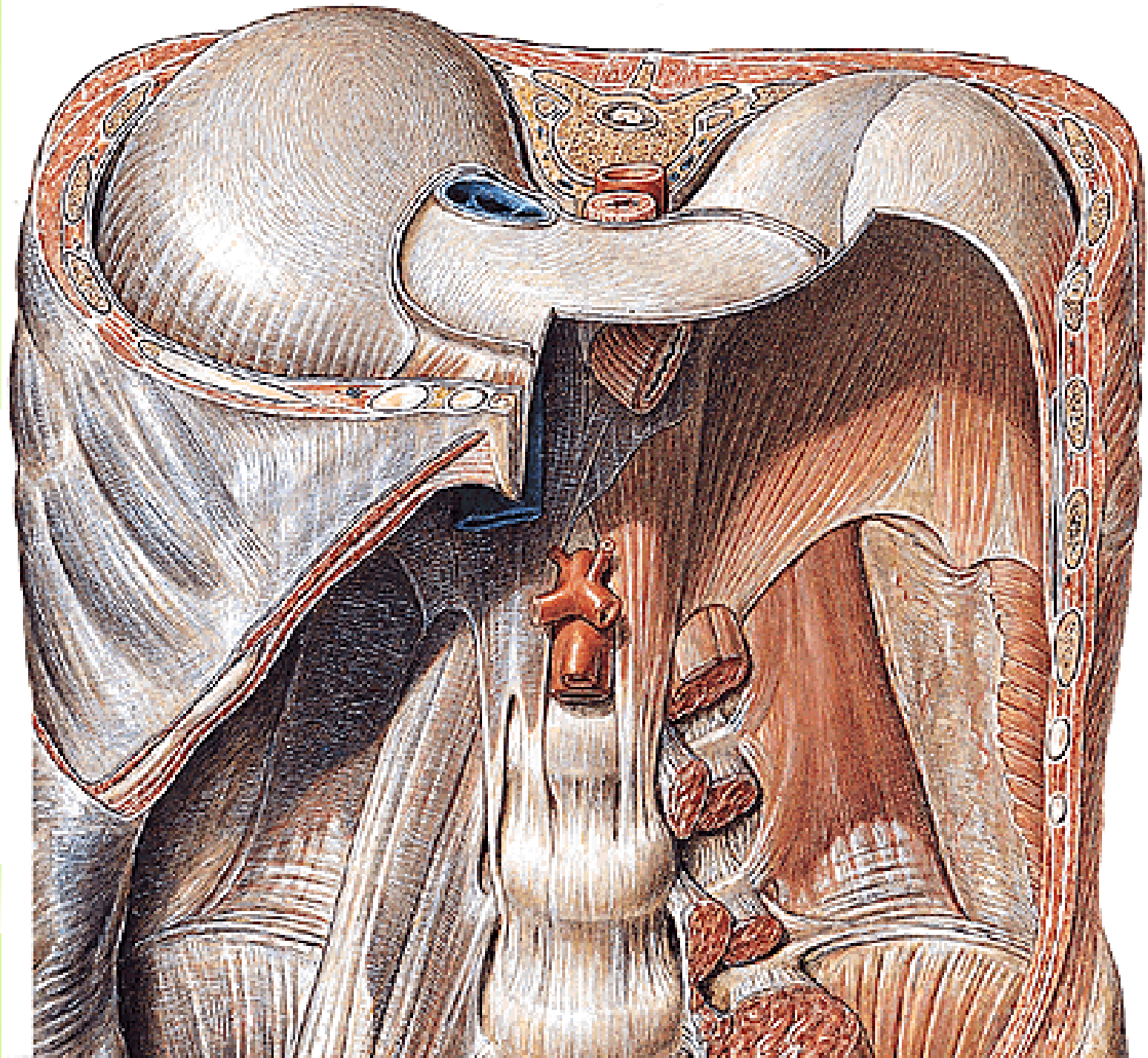
- lig. arcuatum lat.



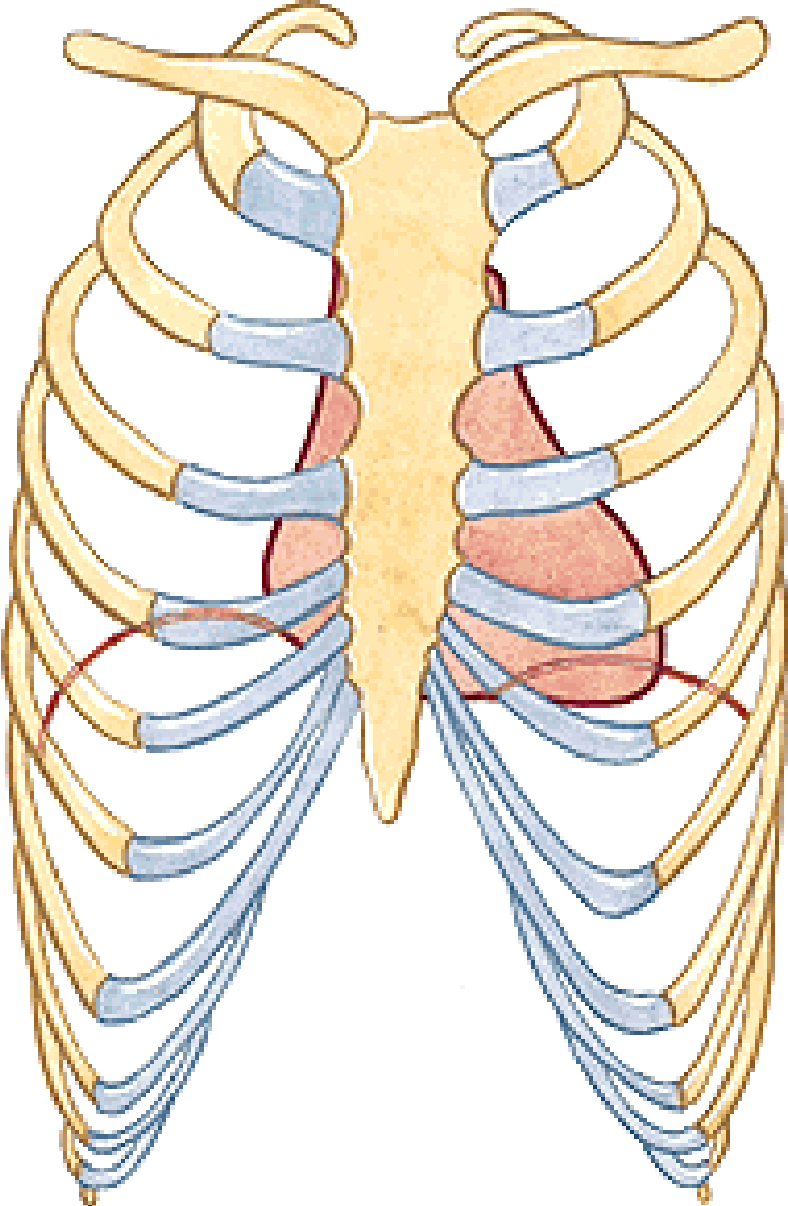
Hiatus esophageus

Hiatus aorticus

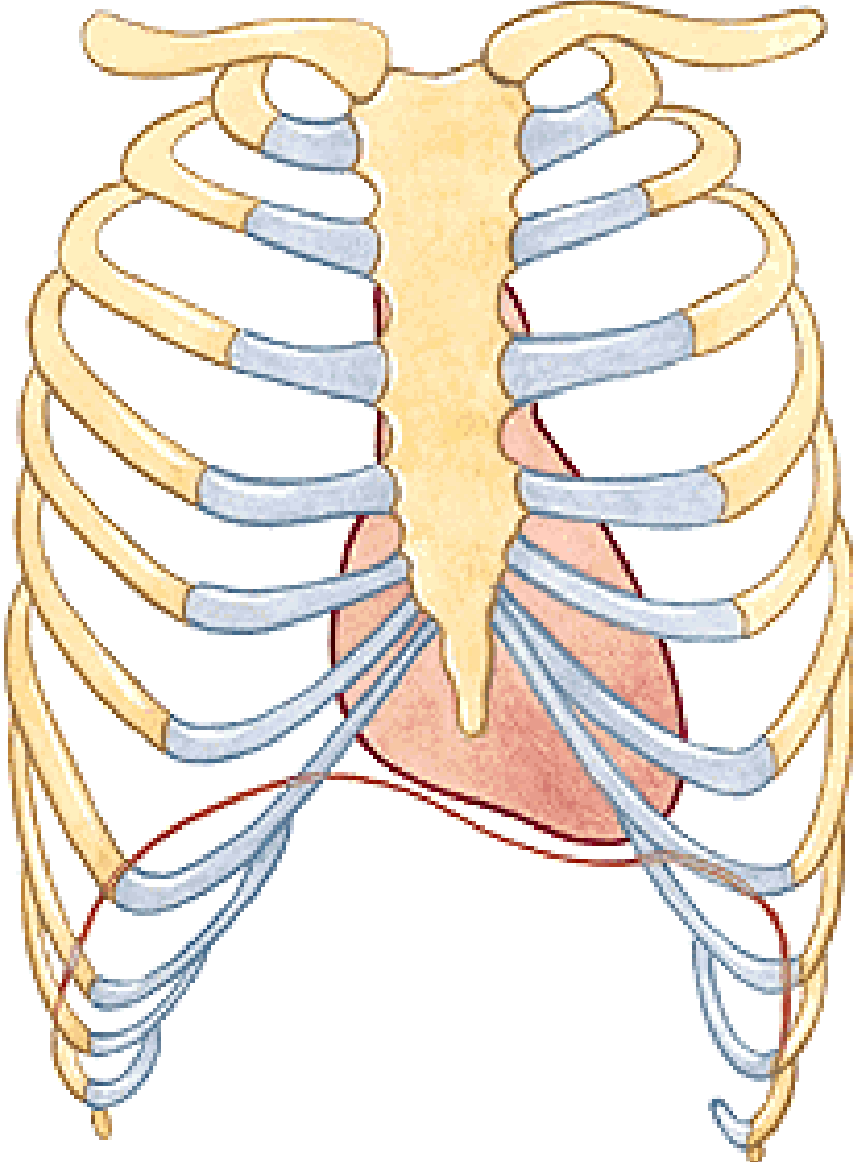




EXPIRATION



INSPIRATION



Illustrations and photographs were copied from:
Atlas der Anatomie des Menschen/Sobotta.
Putz,R., und Pabst,R. 20. Auflage. München:
Urban & Schwarzenberg, 1993
Netter: Interactive Atlas of Human Anatomy.
Windows Version 2.0