Luftröhre, Lunge, Pleura.

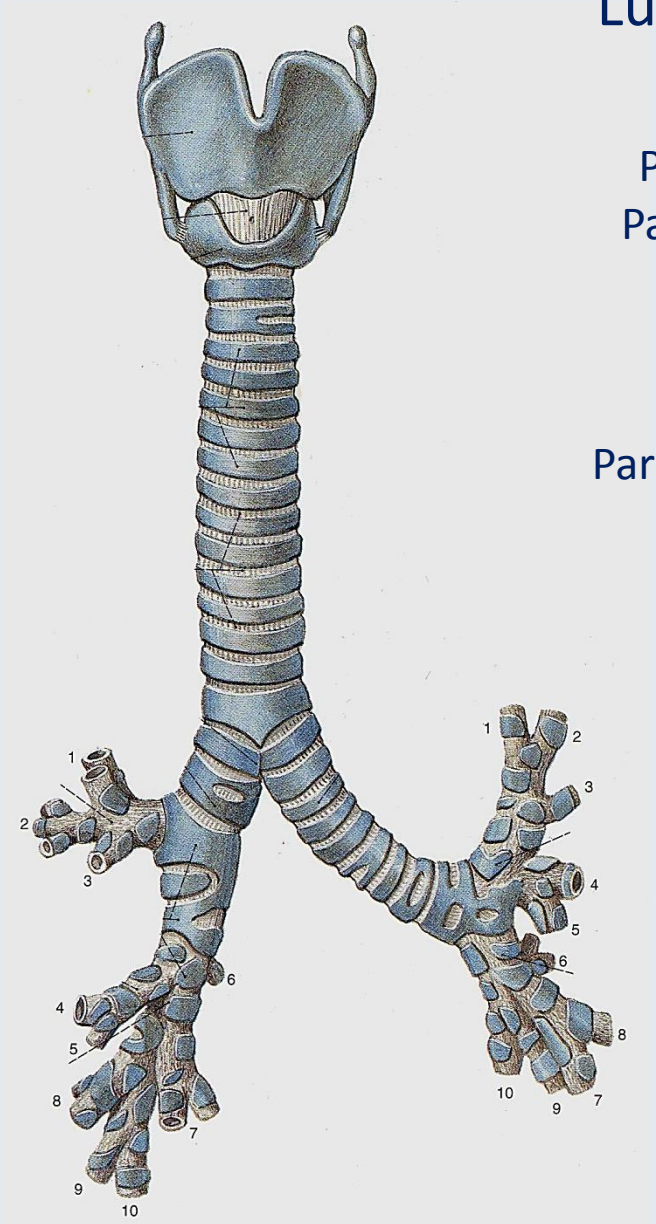
Ph.D., Dr. Dávid Lendvai (Dr. Gábor Baksa)
Anatomisches, Histologisches und Embryologisches Institut
2018.

Bild: Pernkopf

Luftröhre (Trachea)

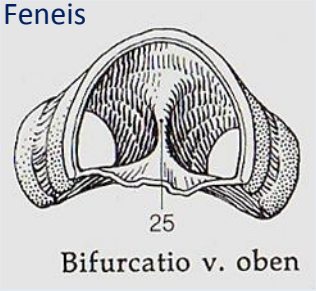
Pars cervicalis (C6 – Th1)
Pars thoracalis (Th1 – Th5)

Paries membranaceus mit
M. trachealis

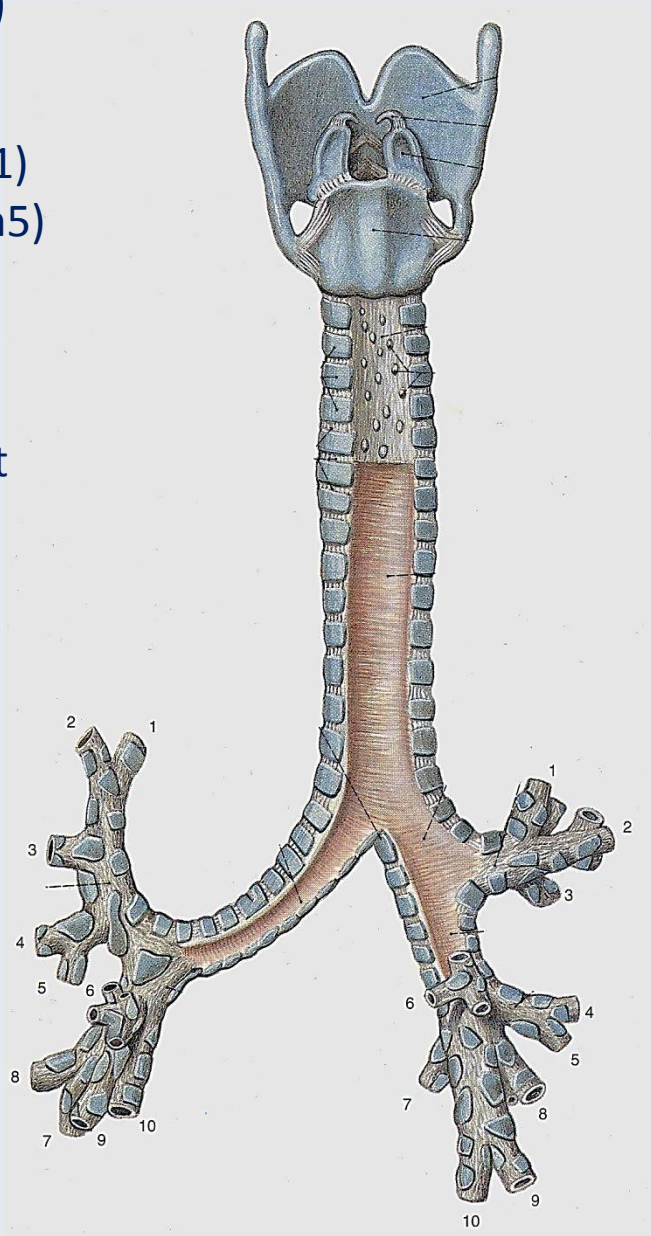


Sobotta

Feneis



Bifurkatio:
Carina tracheae
Th 4-5



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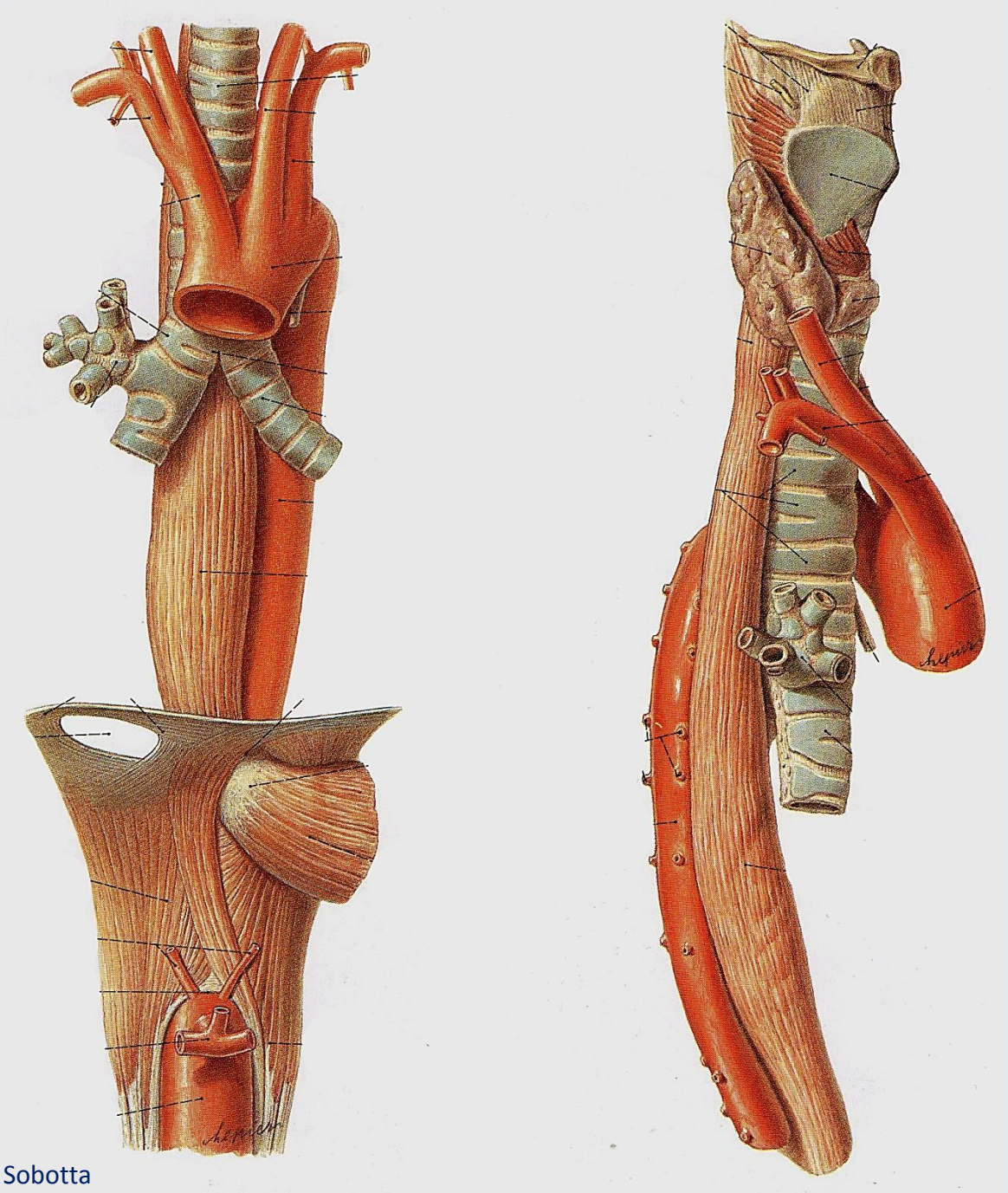

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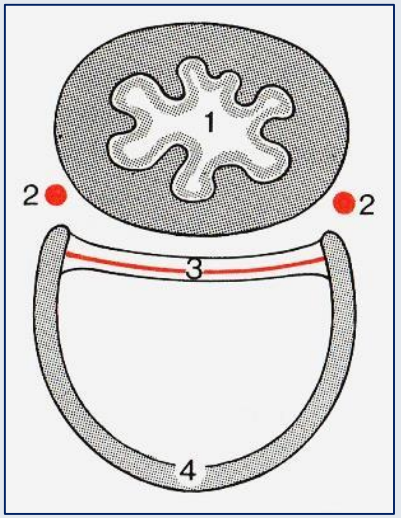

Faller

Sulcus oesophagotrachealis:
N. laryngeus recurrens dexter et sinister

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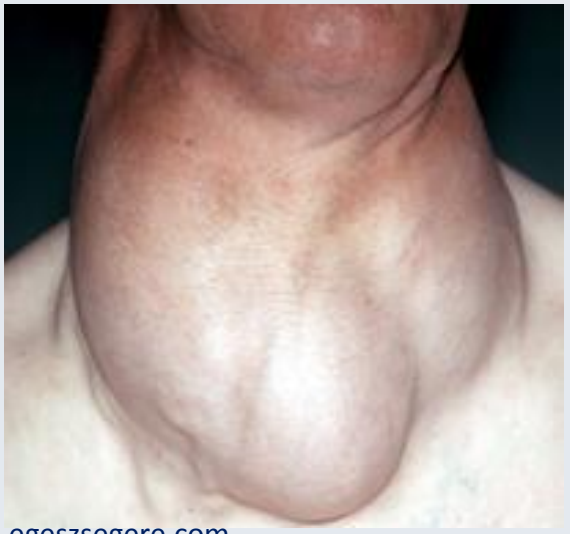

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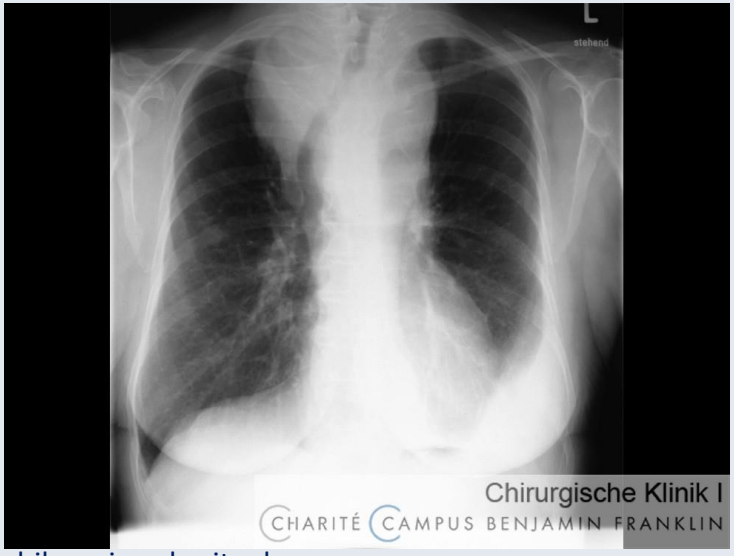

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rechte Lunge (Pulmo dexter)

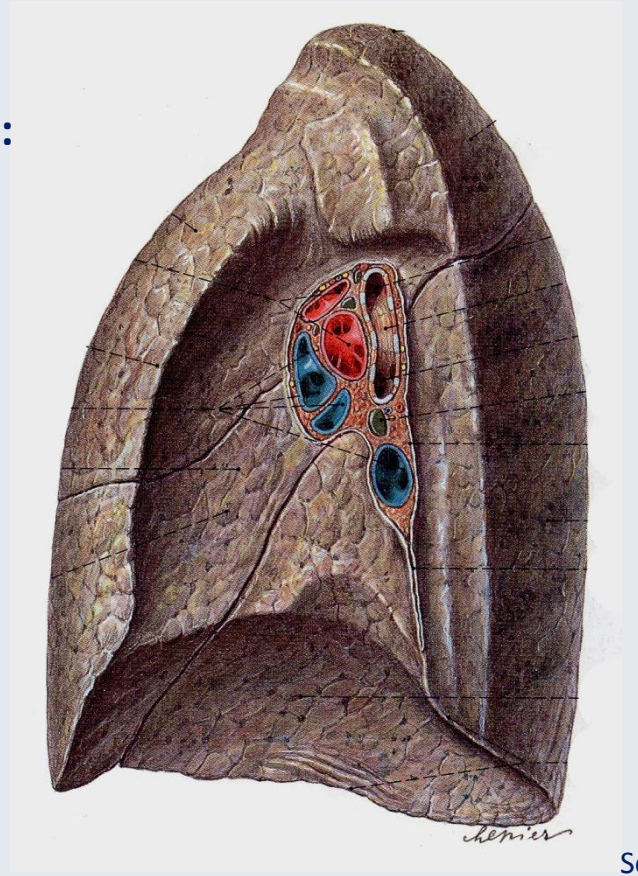
Sobotta

Drei Lappen (Lobi):

- superior
- medius
- inferior

Apex - Basis

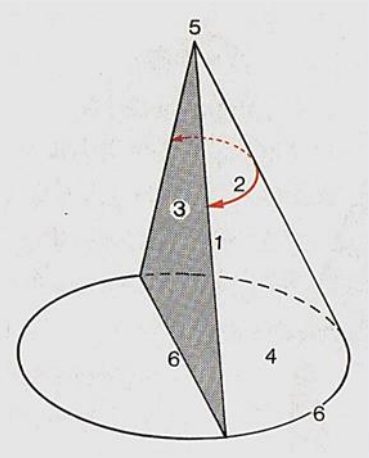
Fissura horizontalis
Fissura obliqua



Sobotta

Facies costalis

Margo anterior
Margo inferior



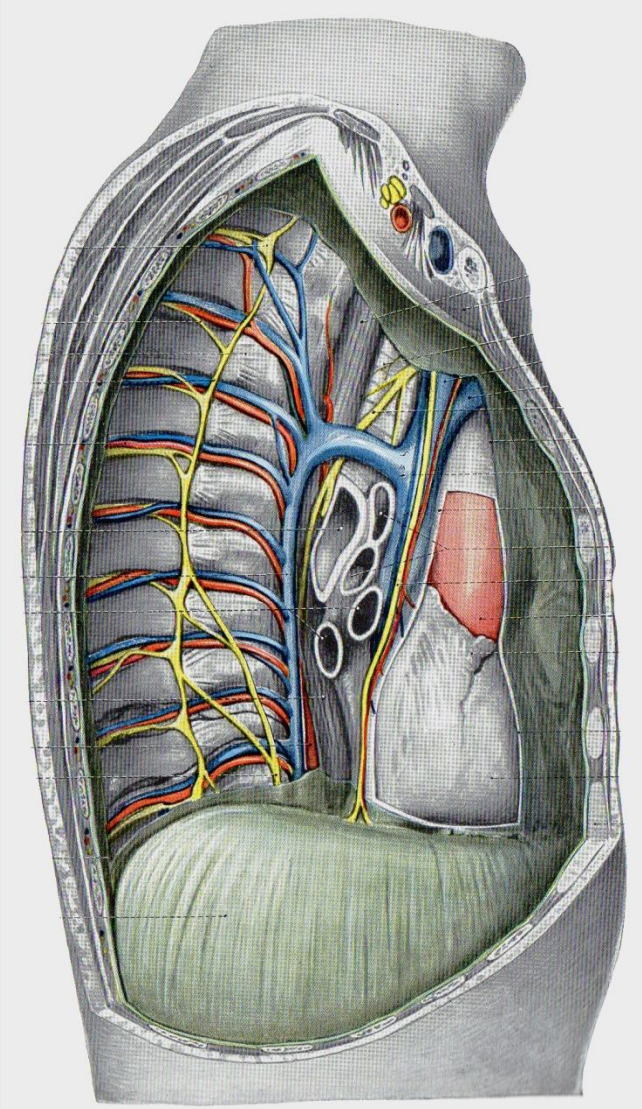
Faller

Facies medialis:

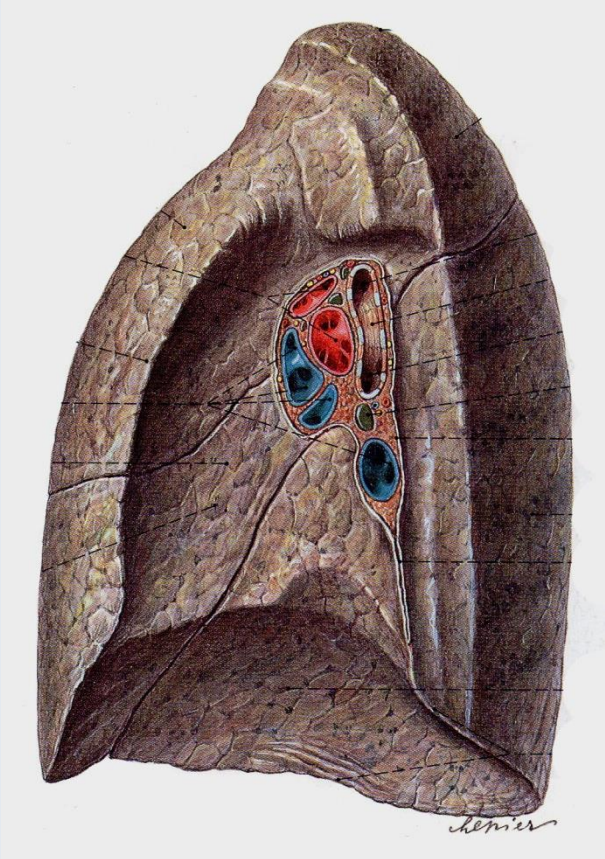
- Pars mediastinalis
- Pars vertebralis

Facies diaphragmatica

rechte Lunge (Pulmo dexter)



Hafferl



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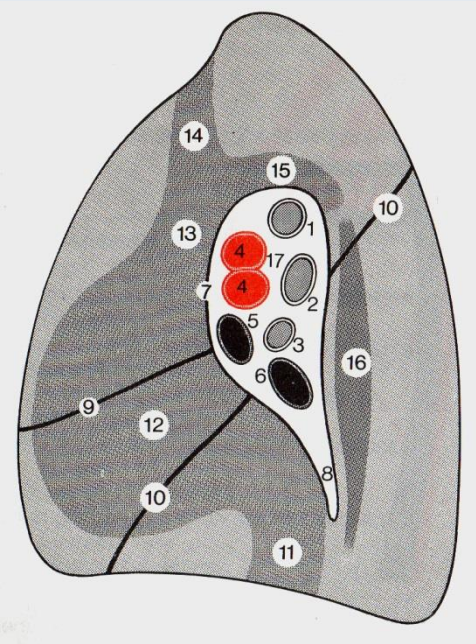


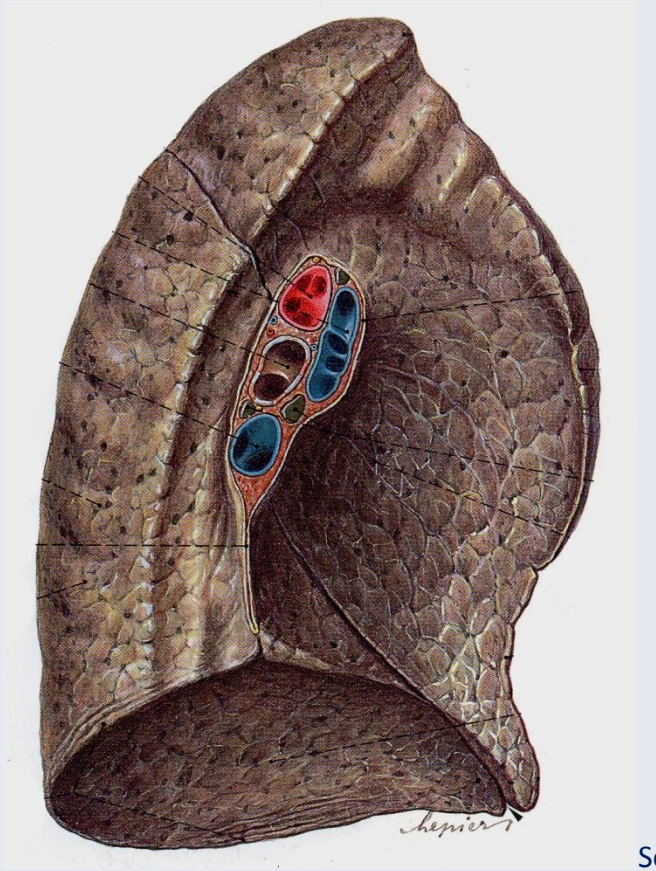
Faller

Impressio ~:

(12) cardiaca (Auricula dextra)
(11) venae cavae inferioris
(13) venae cavae superioris
(14) venae brachiocephalicae
(15) der Vena azygos
(16) oesophagei

linke Lunge (Pulmo sinister)

Sobotta

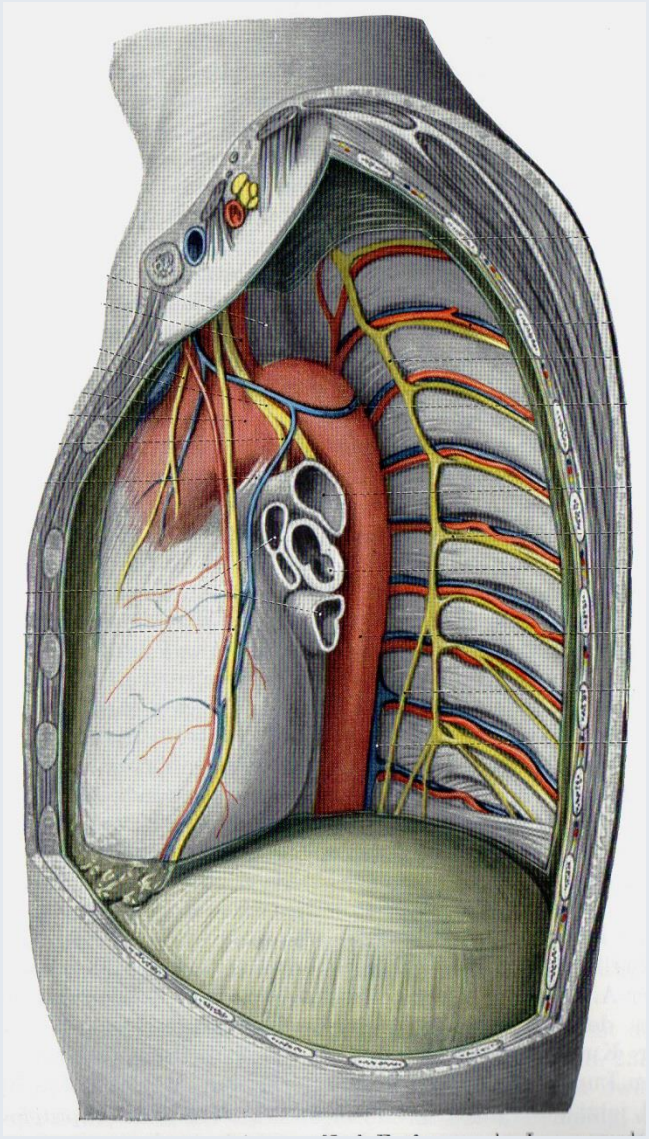


Sobotta

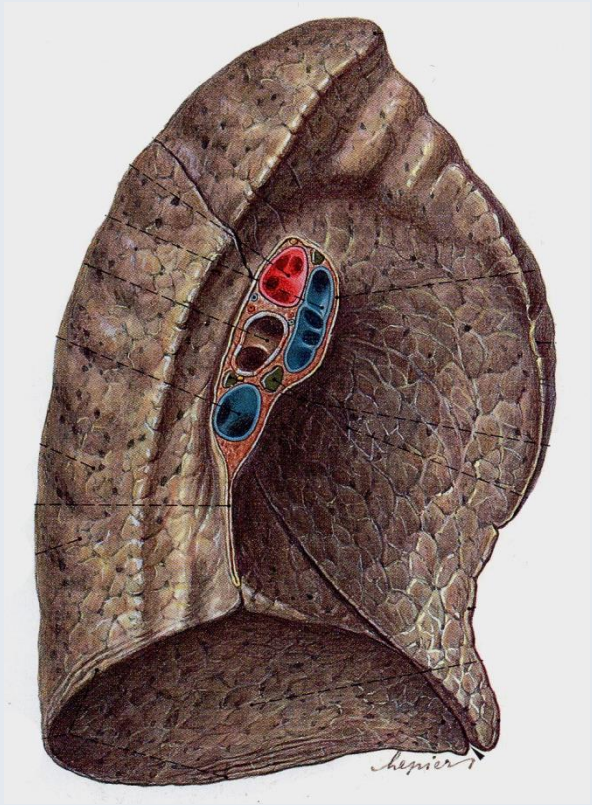
verfügt über zwei Lappen: Lobus superior et inferior
Trennung: Fissura obliqua

Incisura cardiaca
Lingula pulmonis

linke Lunge (Pulmo sinister)



Hafferl



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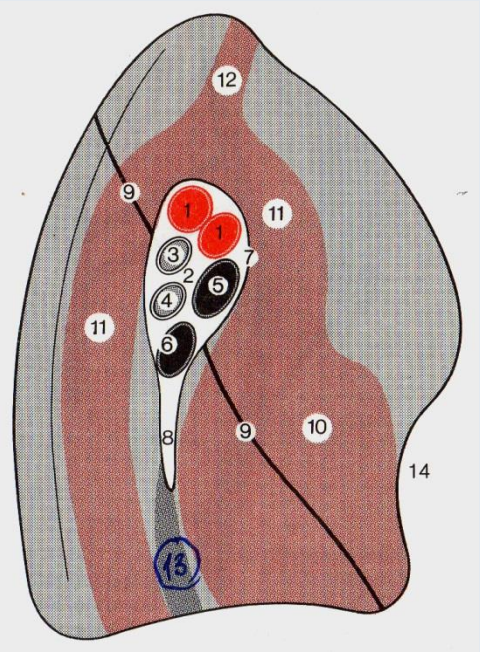
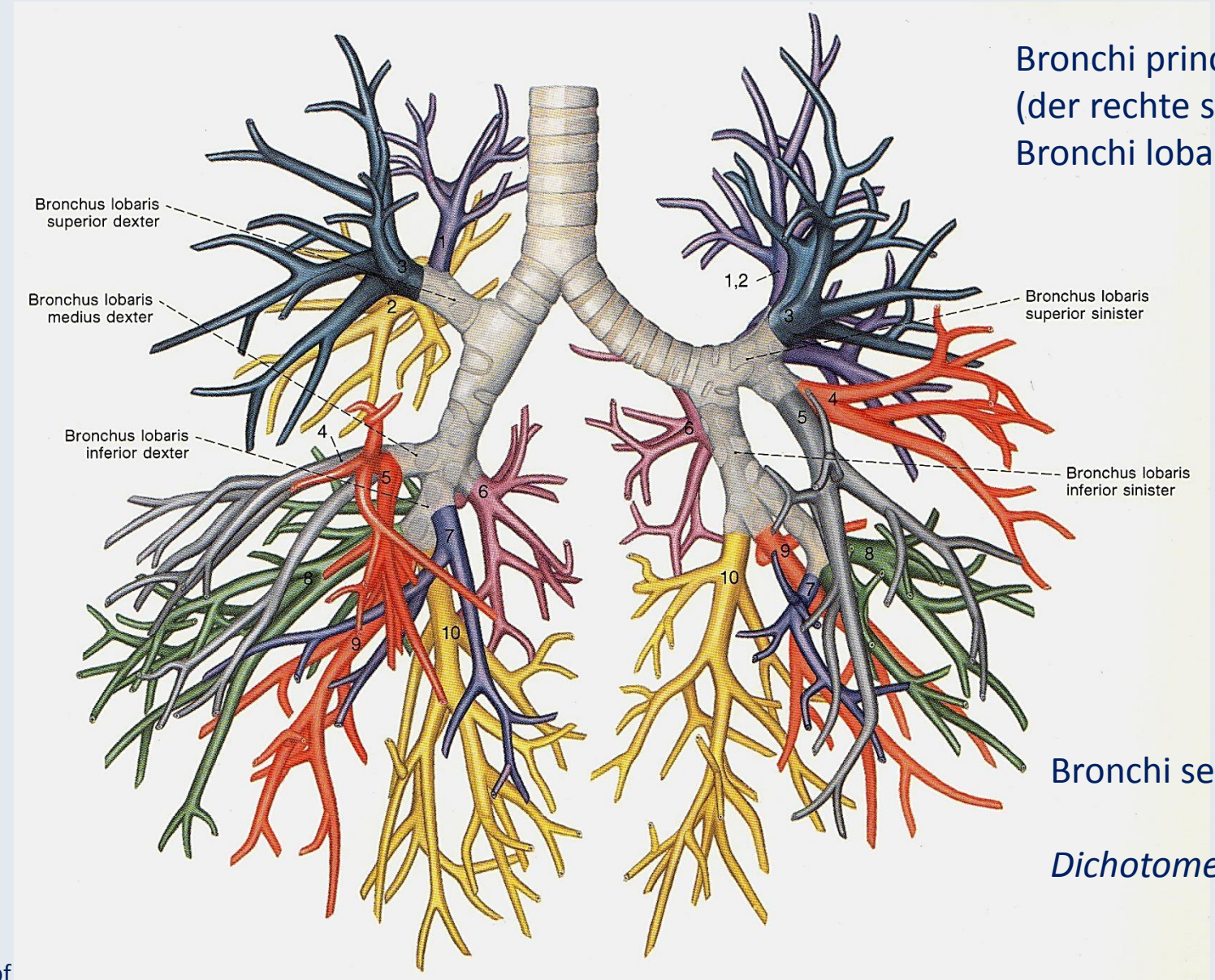


Faller

Impressio ~:

(10) cardiaca (Ventr. sin.)
(11) aortae
(12) A. subclaviae sinistrae
(13) oesophagei

Bronchen



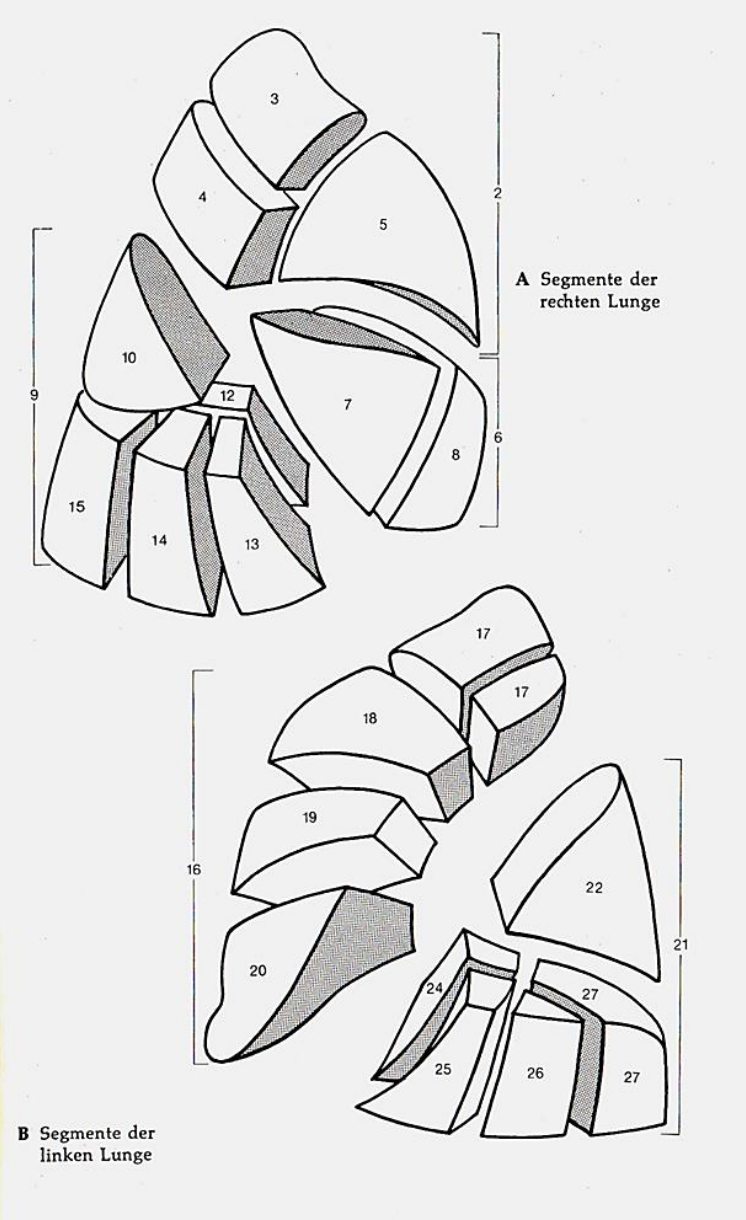
Bronchi principales
(der rechte steiler!!)
Bronchi lobares

Bronchi segmentales

Dichotome Teilung

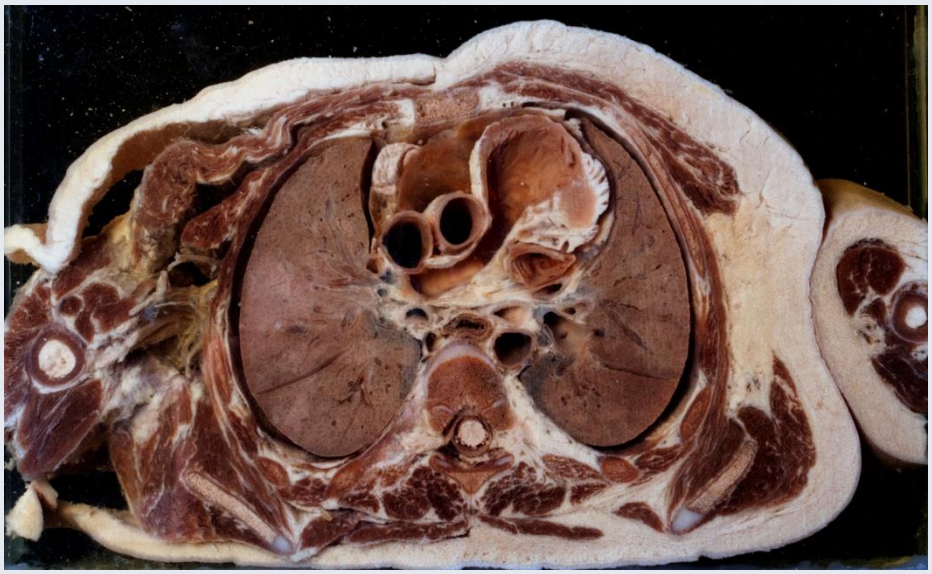
Pernkopf

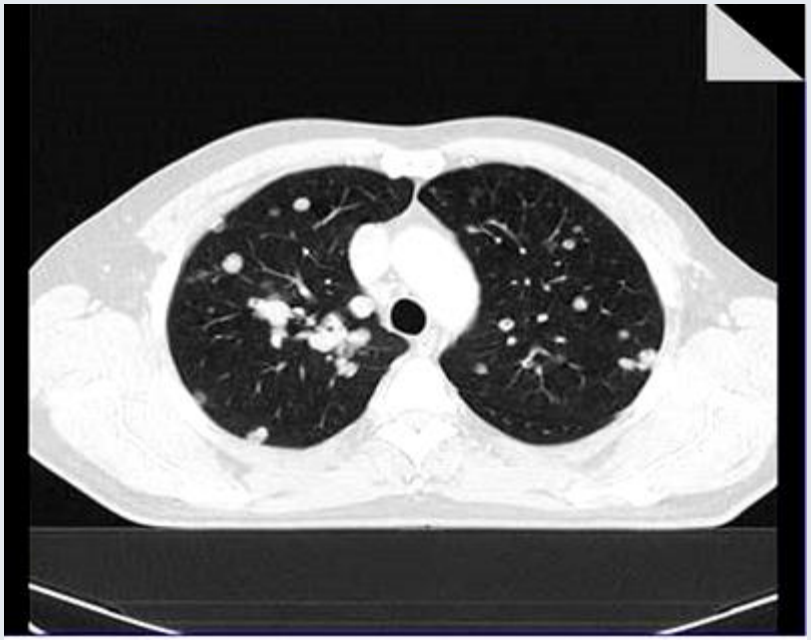
Segmente



rechts: 3 + 2 + 5 (+ evt. „Azygos –Lappe”)
links: 5 + 5

Feneis





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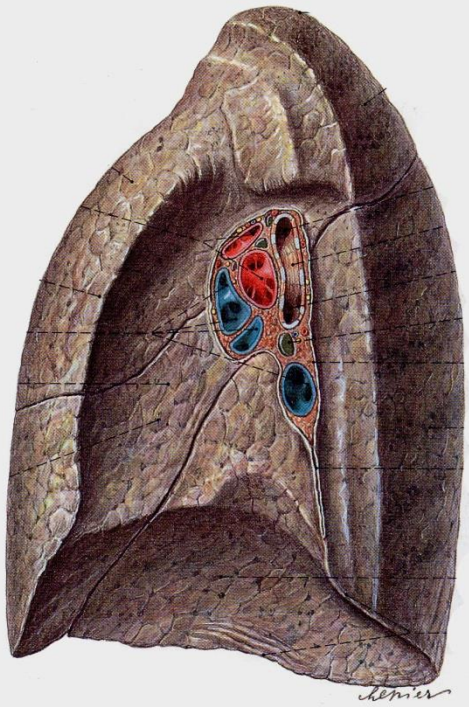
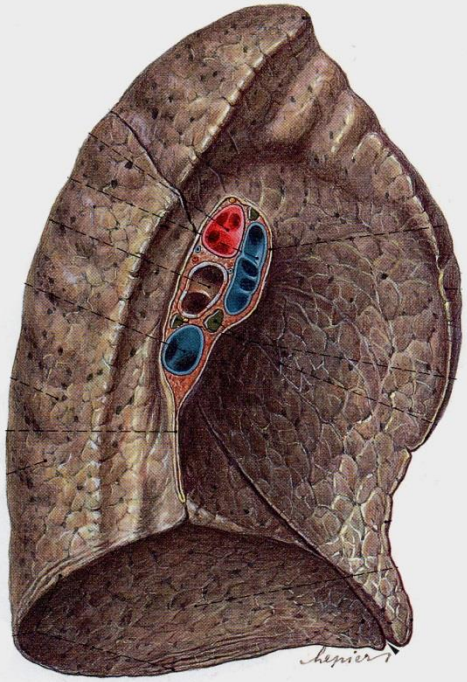
hu.wikipedia.org

Sobotta





Hilus – Radix pulmonis

rechts:

Venen vorne unten

Arterien hinter denen („hypobronchial”)

Bronchus oben („ep(i)arterielle” Lage)

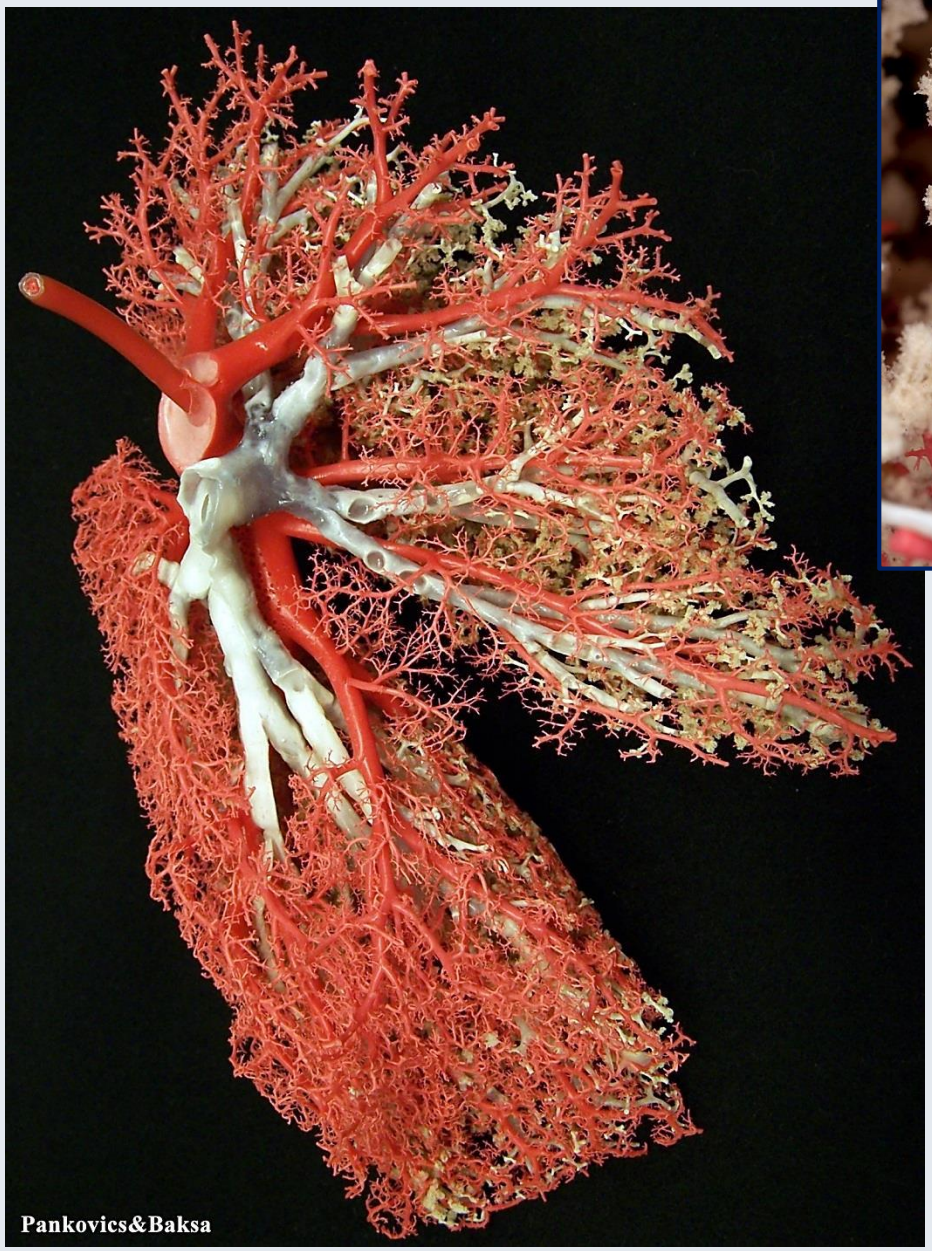
links:

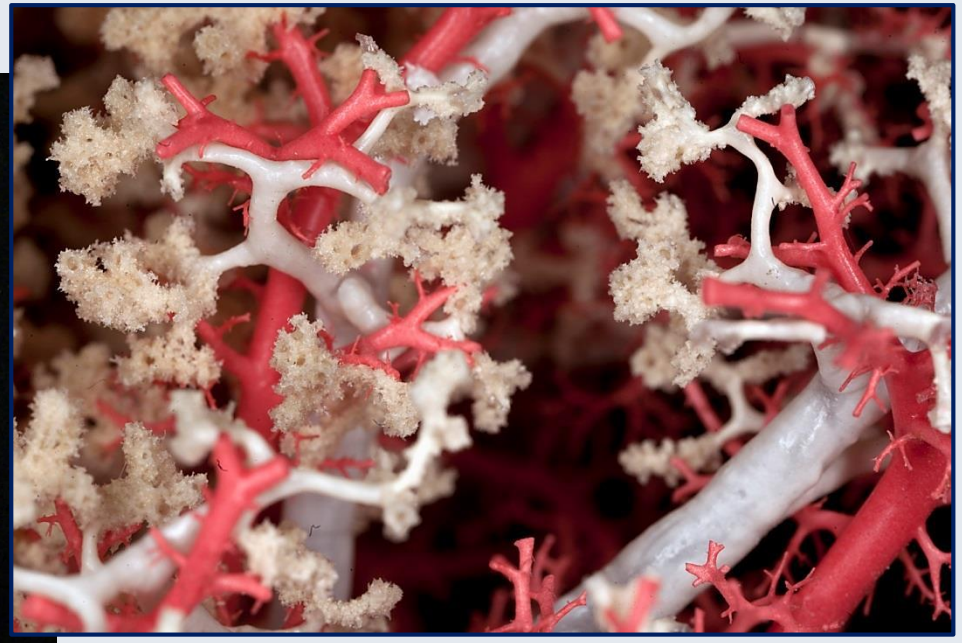
Venen vorne

Arterien hinter denen und oben („epibronchial”)

Bronchus darunter („hyp(o)arterielle” Lage)

Ligamentum pulmonale





Blutgefäße:
Vasa publica (Aa. et Vv. pulmonales)
Vasa privata (Aa. bronchiales)

Arterien den Bronchen und Bronchien parallel

Venen an den Läppchengrenzen

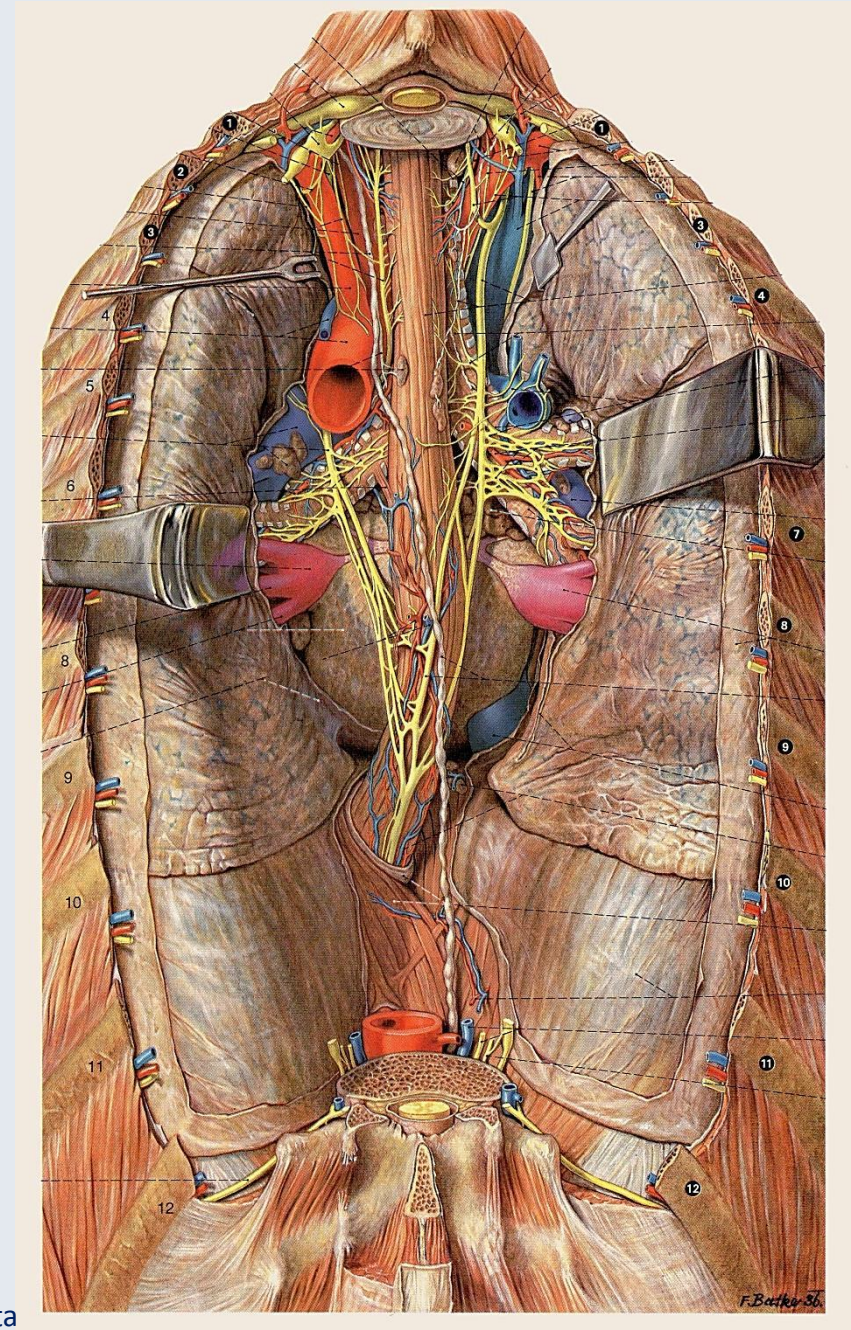
Nerven:

Parasympathische ~ aus
dem Nervus vagus (N. X.)

Bronchokonstriktion!
Sekretion!
(siehe
Asthma bronchiale)

Plexus pulmonalis
anterior
et
posterior

Rr. bronhiales

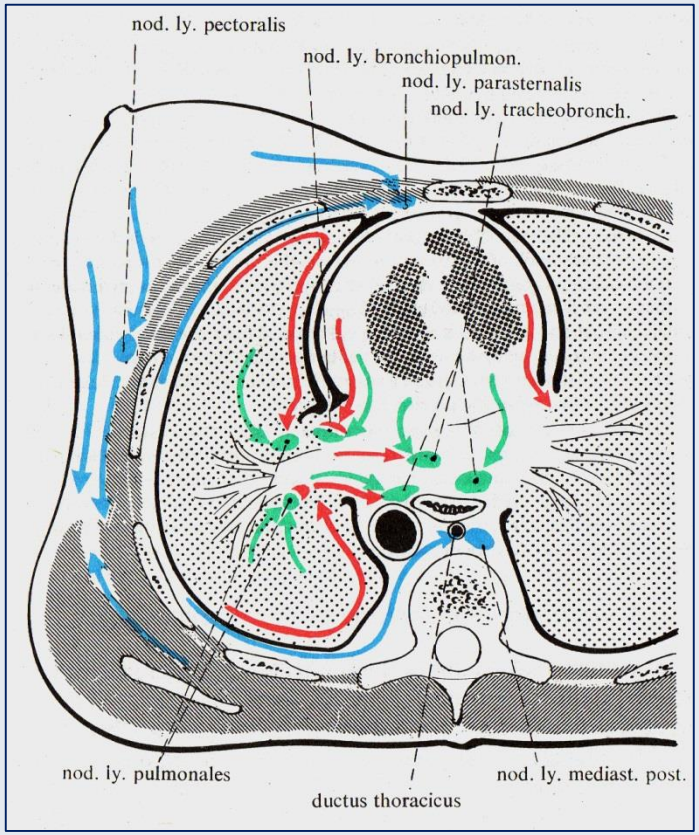


Sobotta

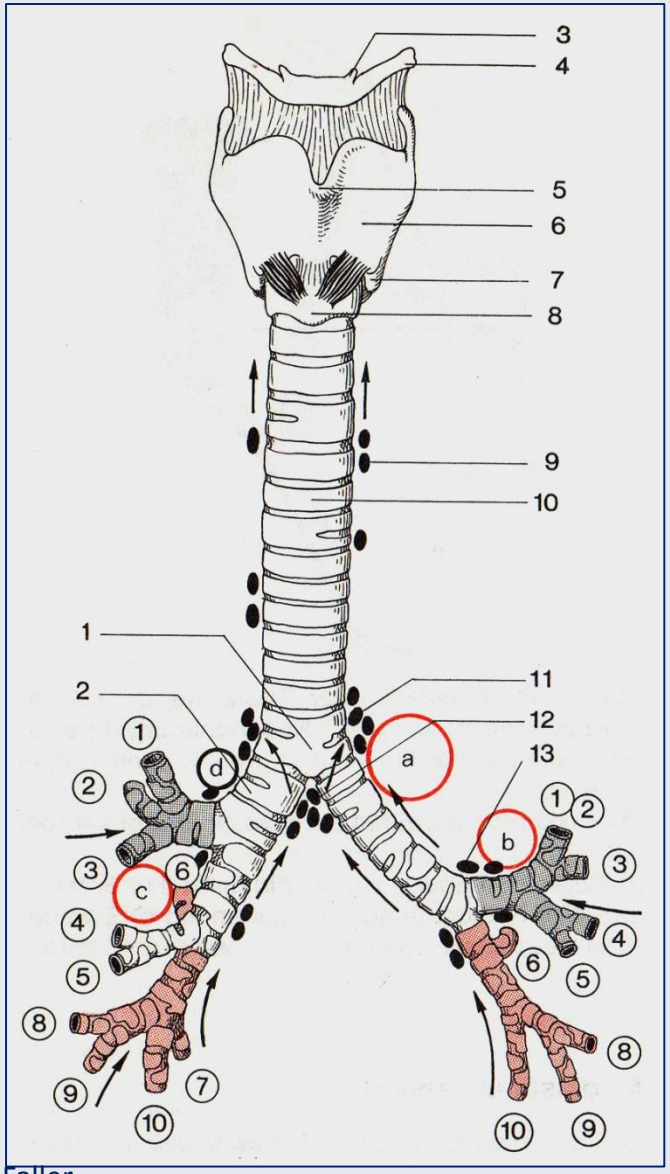
Sympathische ~ aus
dem Truncus sympathicus

Bronchodilatation!
siehe Pharmakologie
(Sympathomimmetika,
selektive ß-Agonisten)

Lymphabfluß



Szentágothai&Réthelyi



Faller

Nodi lymphatici ~
- pulmonales
- bronchopulmonales

(einige: hilares)
- tracheobronchiales

(sup. et inf.)
- (para)tracheales

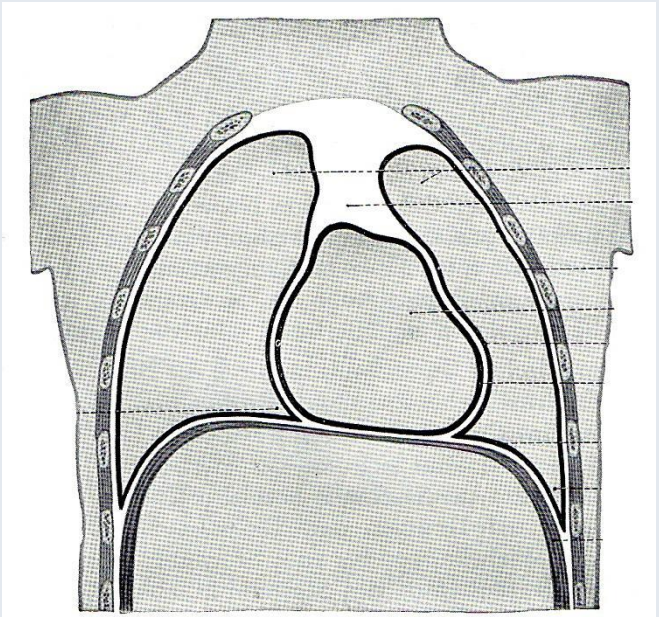
Nodi lymphatici ~
- parasternales
- mediastinales anteriores
- mediastinales posteriores

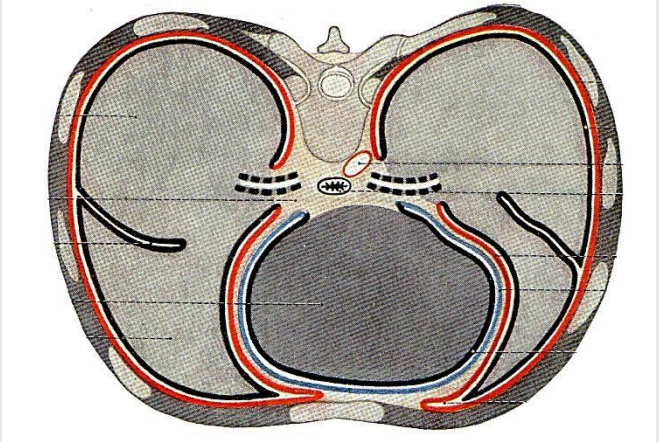
viszerales subseröses
und
perikanalikuläres System

Truncus bronchomediast.
Ductus thoracicus
Truncus lymphaticus dext.

Parietales subseröses System:
Lungenmetastasen von Brustkarzinomen!

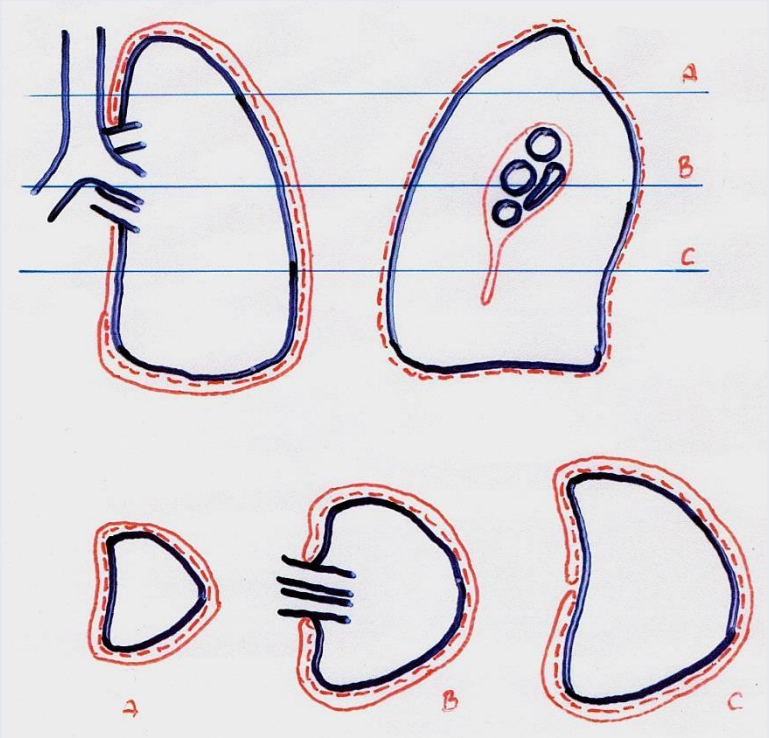
Hafferl





Pleura

Szél



– – – Pleura visceralis ——— Pleura parietalis

——— Lunge

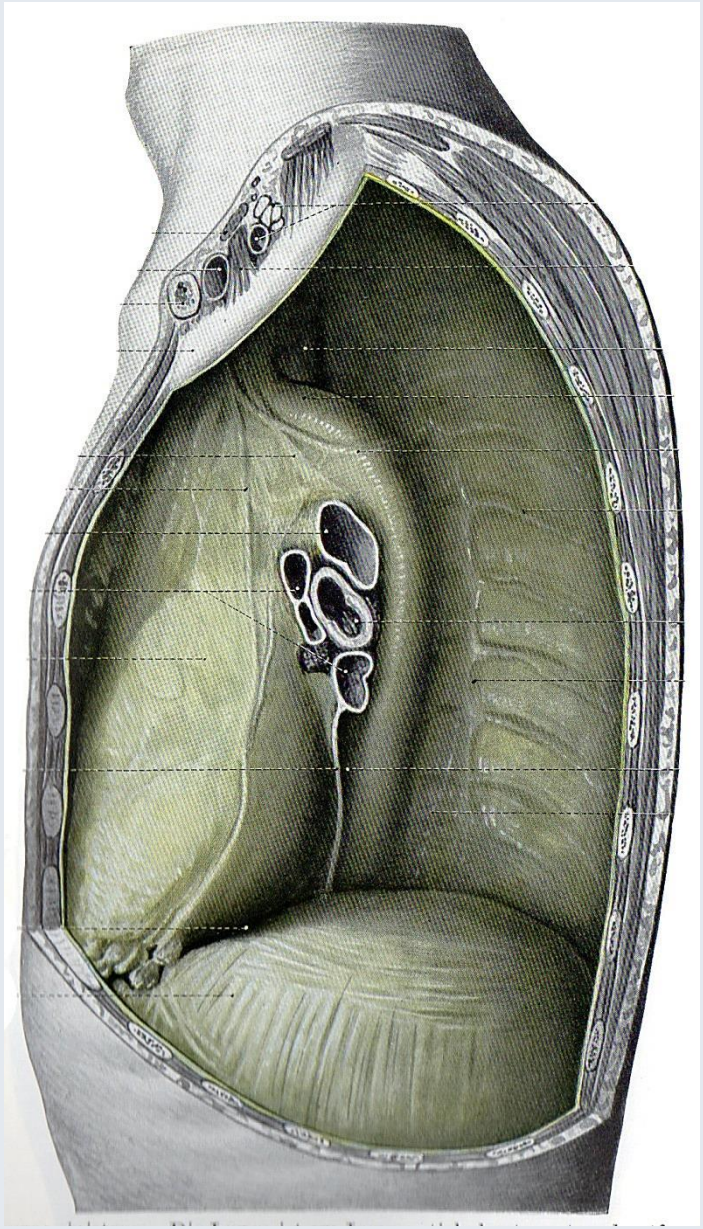
parietales Blatt

viscerales Blatt (Pleura pulmonalis)

Umschlaglinie beim Hilus und Lig. pulmonale

Cavum pleurae

Ligamentum pulmonale



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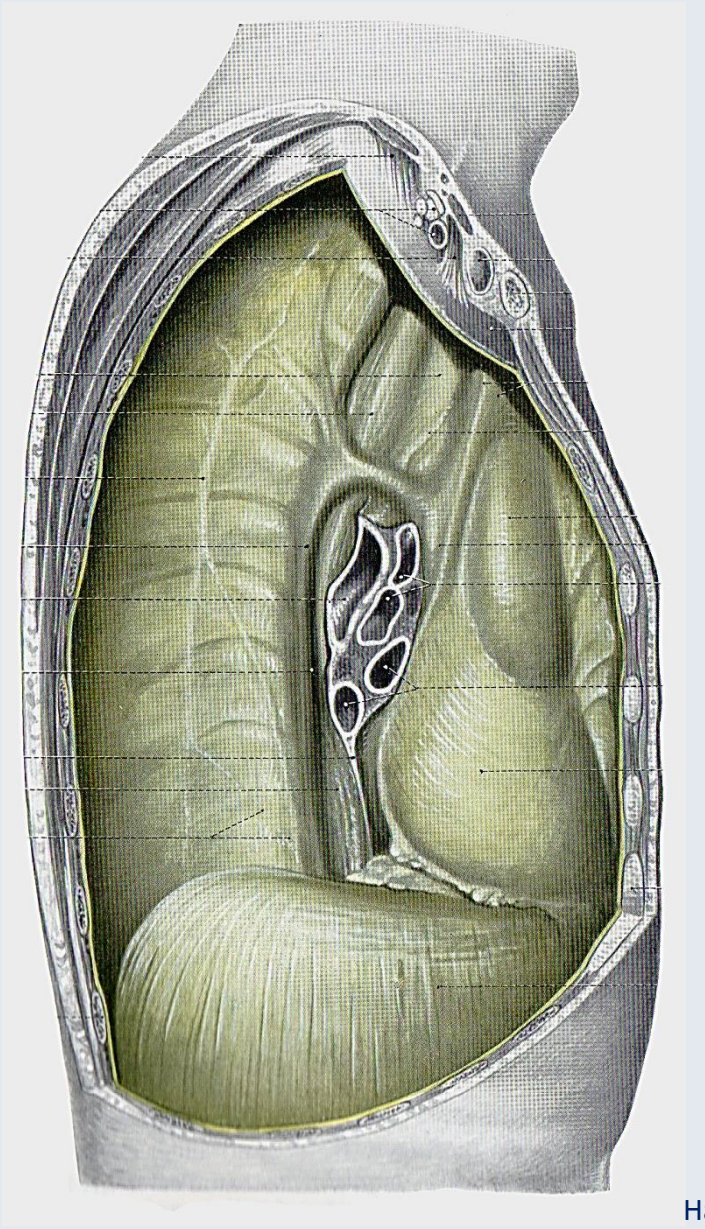
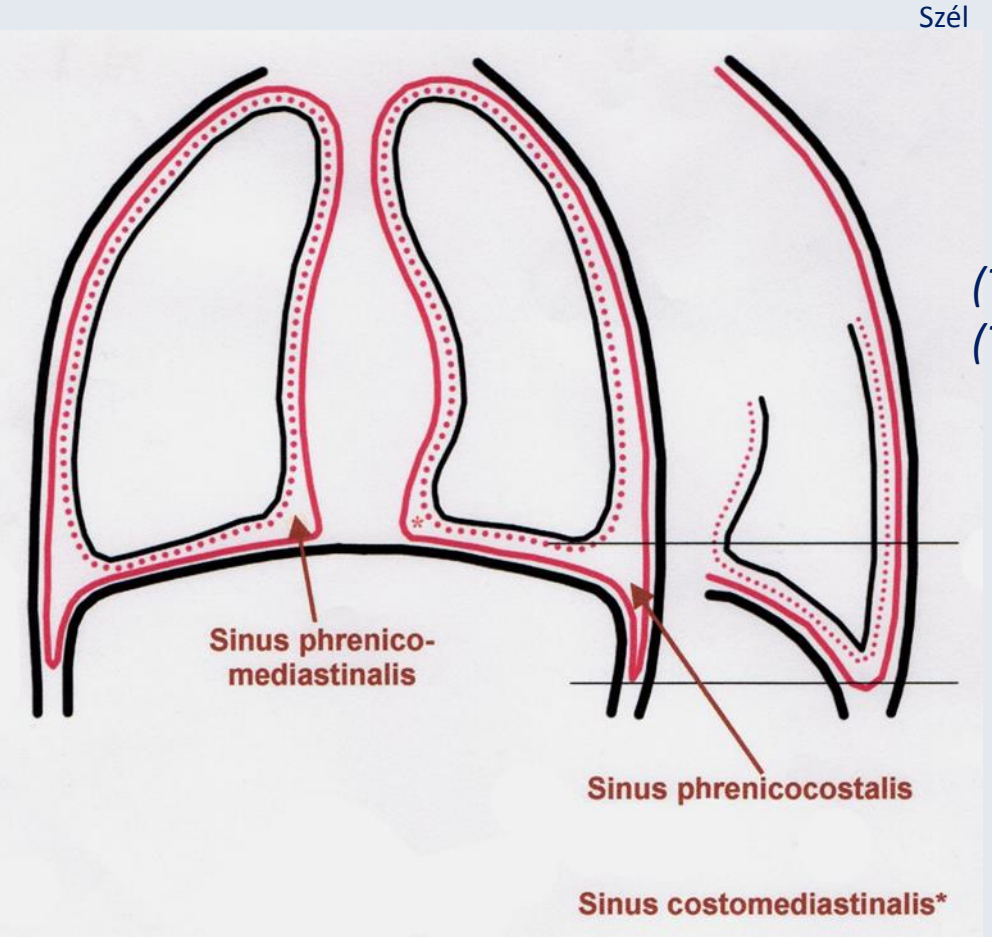


Hafferl

Sinus pleurae (Recessi)

Pleura ~

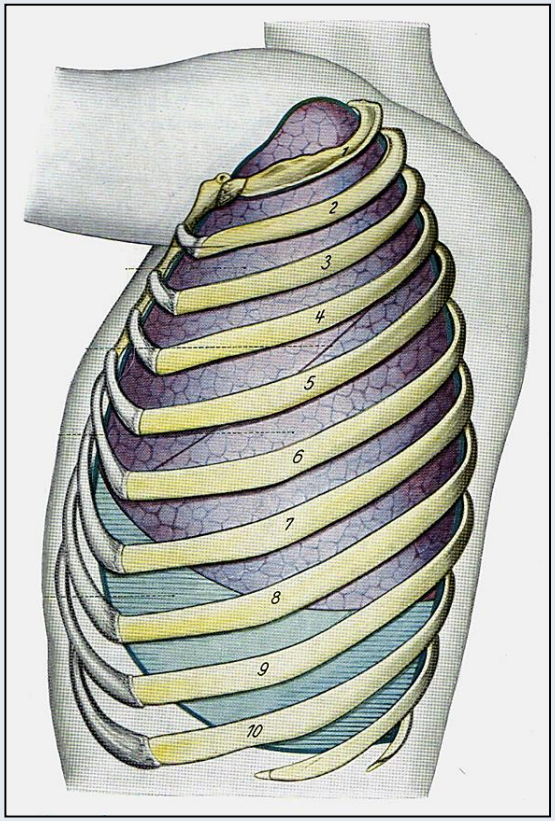
- costalis
- diaphragmatica
- mediastinalis
- (pericardiaca)

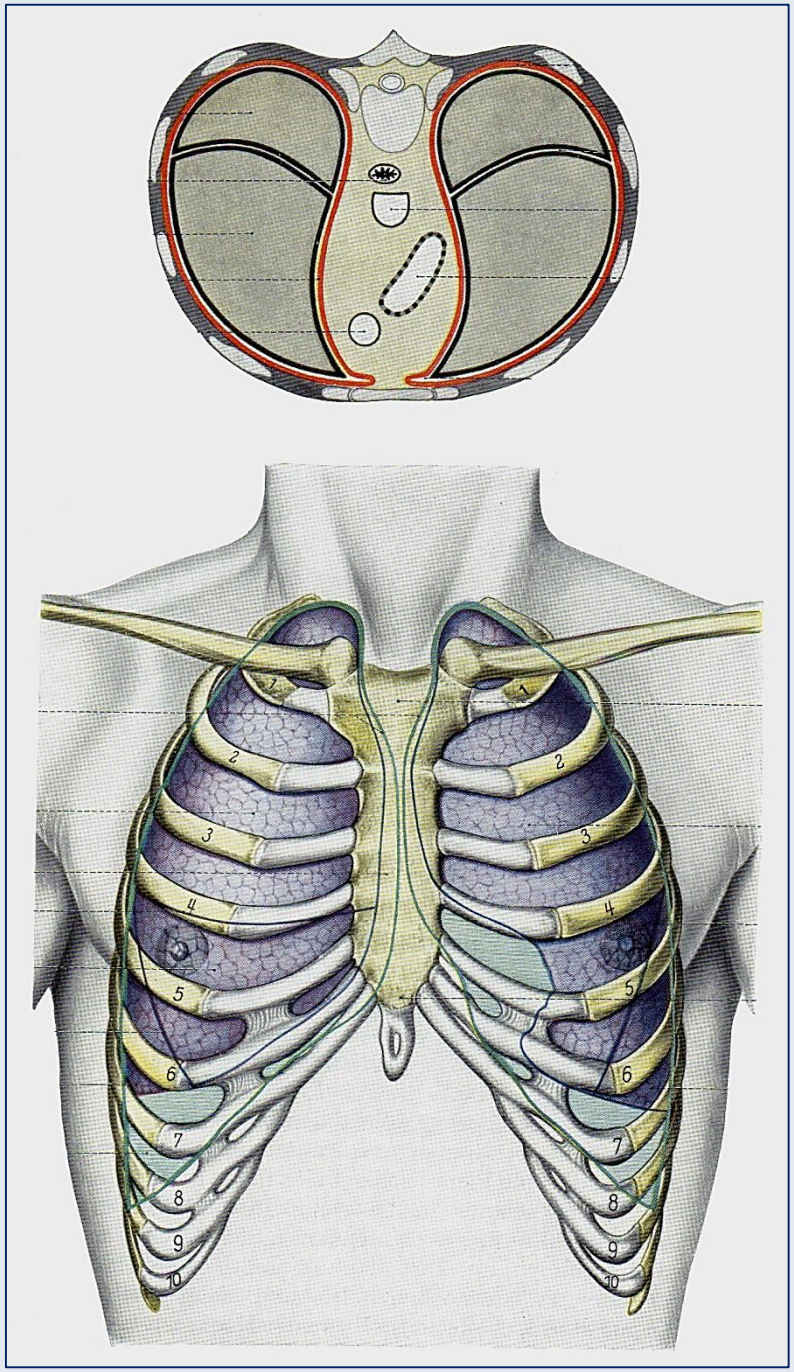


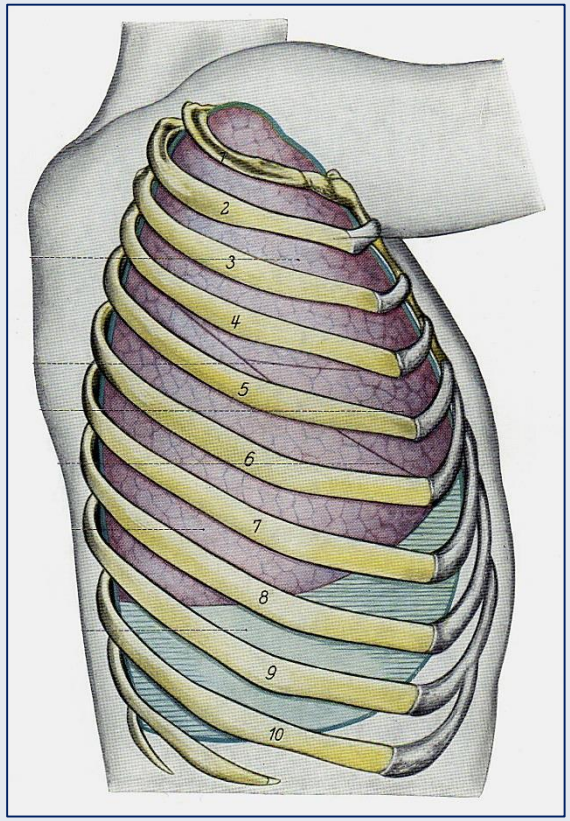
(Trigonum thymicum)
(Trigonum pericardiacum)

Sinus phrenicocostalis: erste Auftrittsstelle von Pleuraergüssen

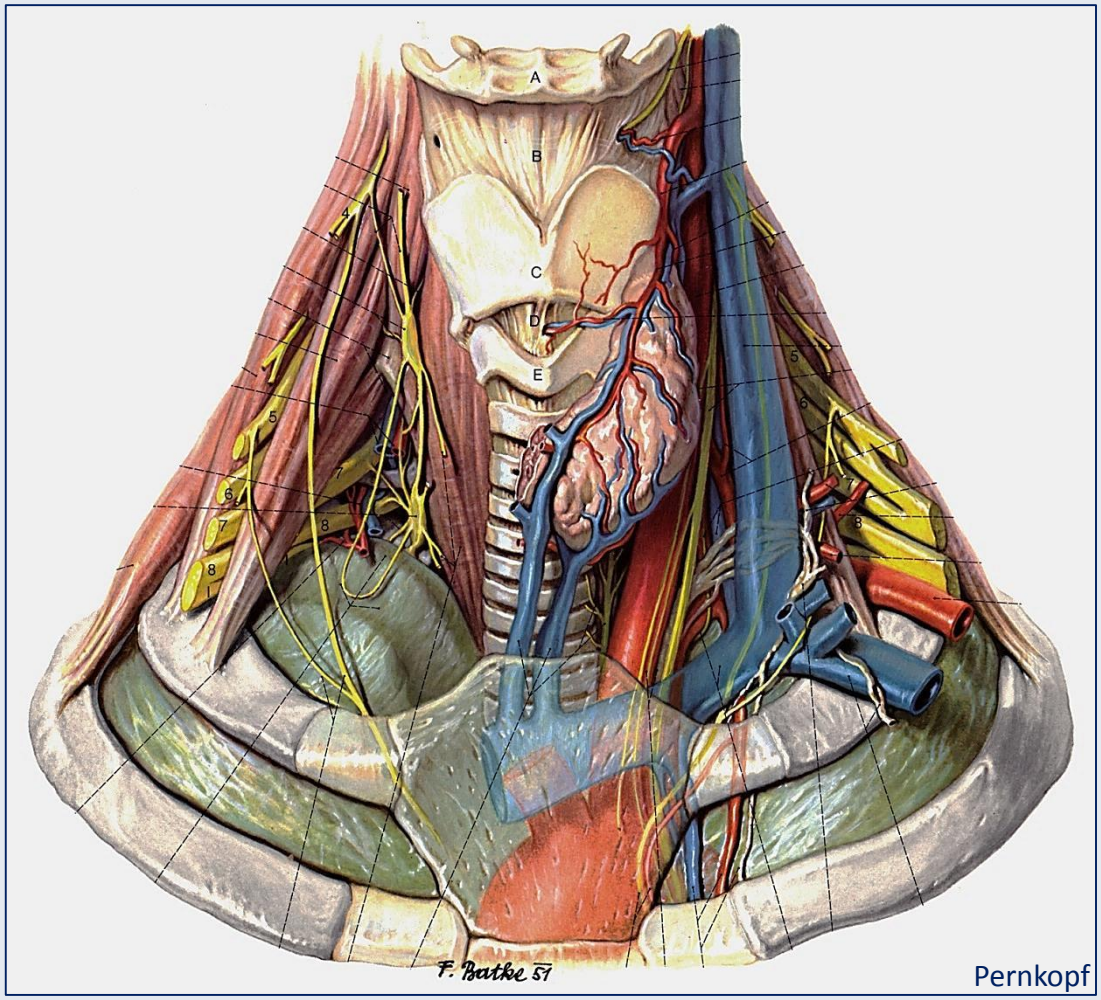
Sinus costovertebralis







Hafferl



Pernkopf

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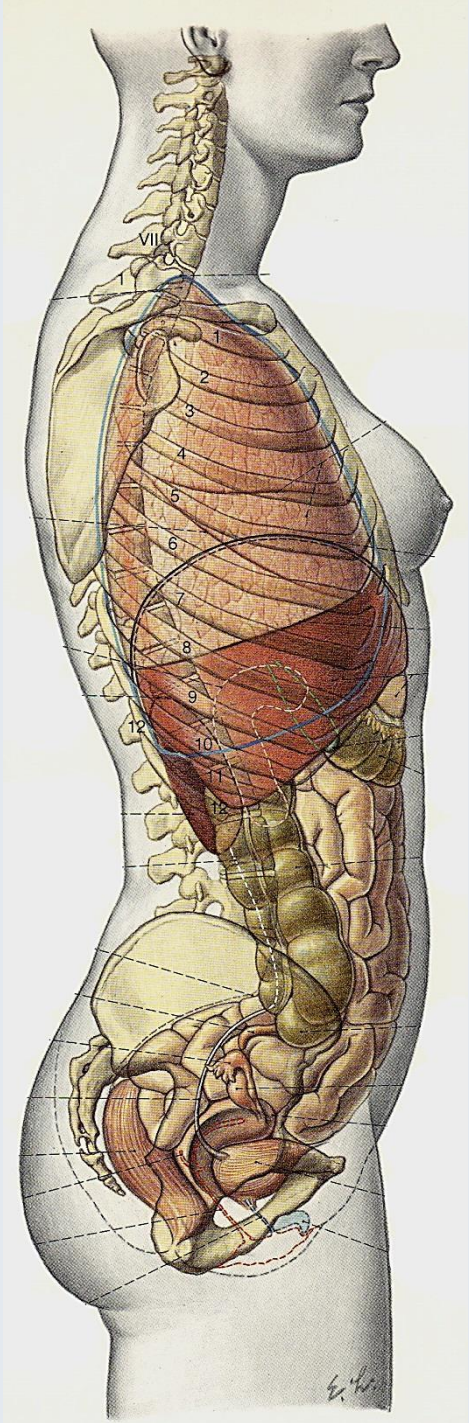
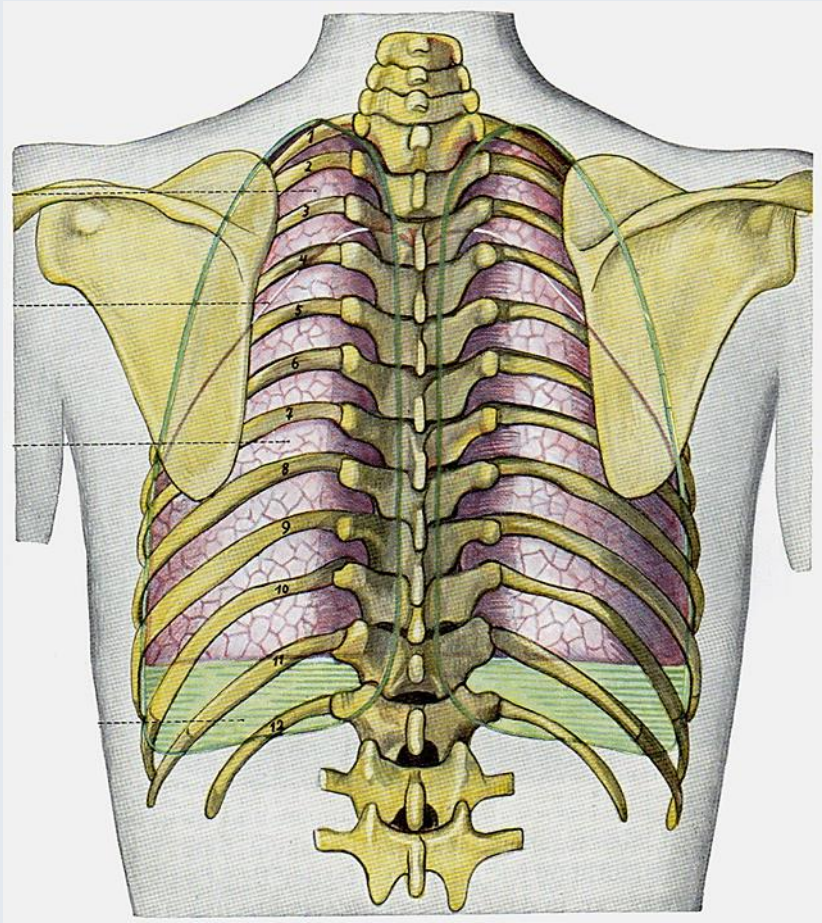
Cupula pleura unter den Scalenus-Muskeln

A. et V. subclavia und Plexus brachialis



Pernkopf

Punktionsstelle:
zw. Linea scapularis und Linea axillaris posterior

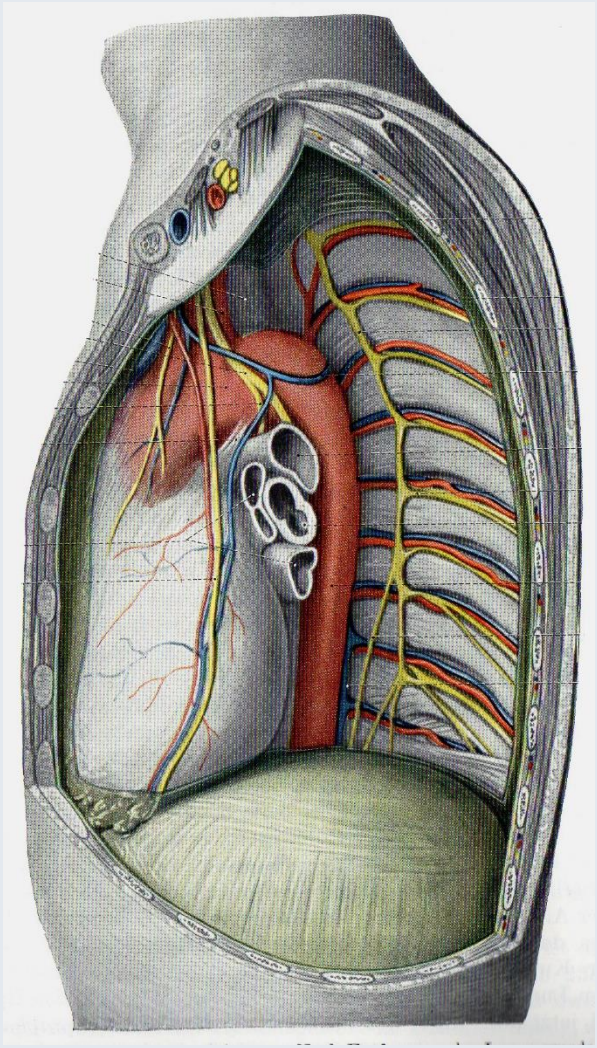


Hafferl

Durch Recessus phrenicocostalis auch Leber- und Nierenbiopsien möglich (bei Ausatmung steht die Pleura auch hier eine Rippe tiefer als die Lunge)

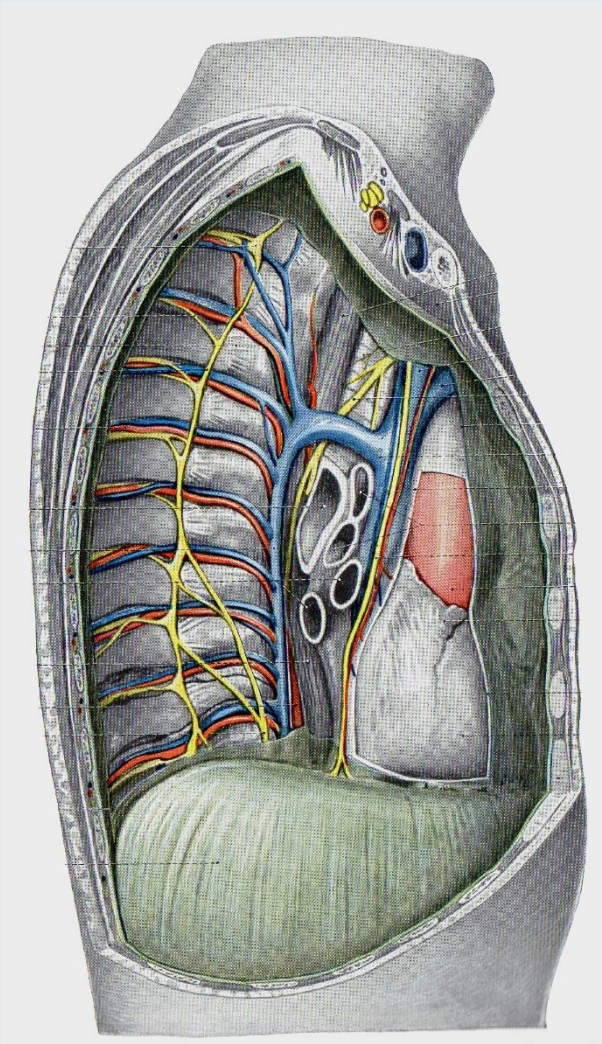
Mediastinum

Hafferl



Pernkopf

Hafferl

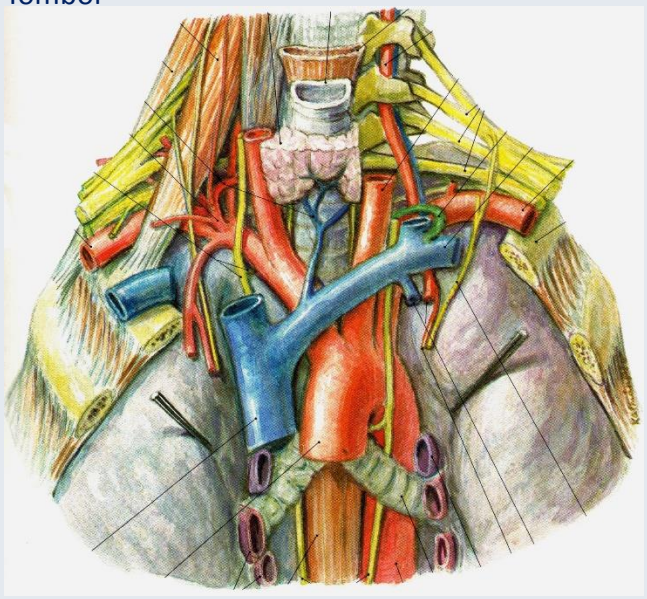


Grenzen:

- Sternum, Rippenknorpel
- Wirbel
- Apertura thoracis sup. *et inf.*
- Pleurae mediastinales
- Diaphragma

Mediastinum

Tömböl

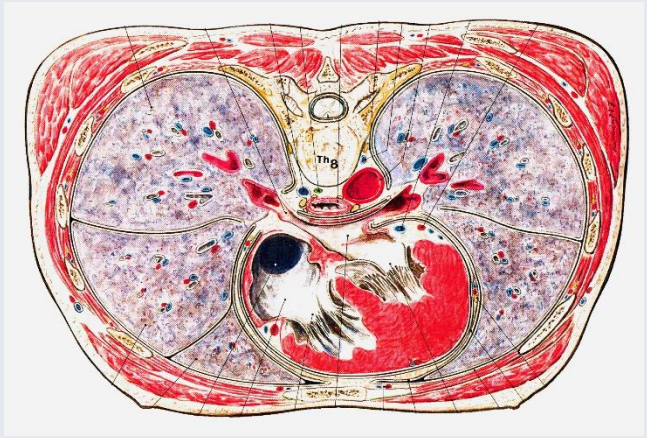


Mediastinum **anterius** (***cardiacum*** et ***supracardiacum***)

posterius

Mediastinum supracardiacum: 5 „Schichten”

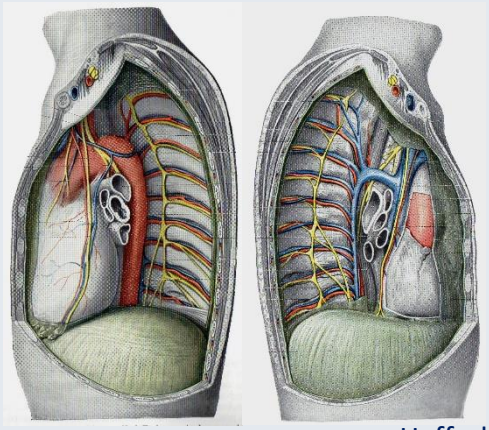
- Corpus adiposum retrosternale (Rest vom Thymus)
- Venen (VCS, Vv. brachiocephalicae)
- Nerven (Nn. vagi et phrenici)
- Arterien (Truncus et Aa. pulmonales, Arcus aortae)
- Trachea et bronchi principales



Tömböl

Mediastinum posterius:

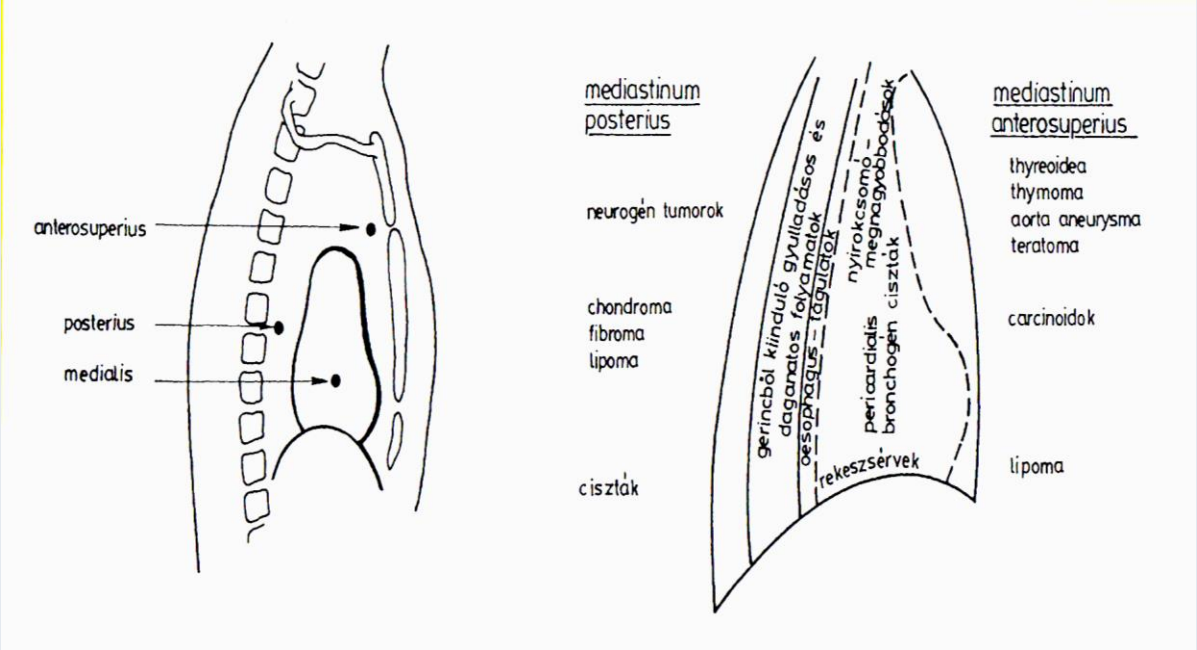
- Oseophagus
- Aorta thoracica
- VCI; v. azygos, hemiazygos
- Tr. sympathicus
- …



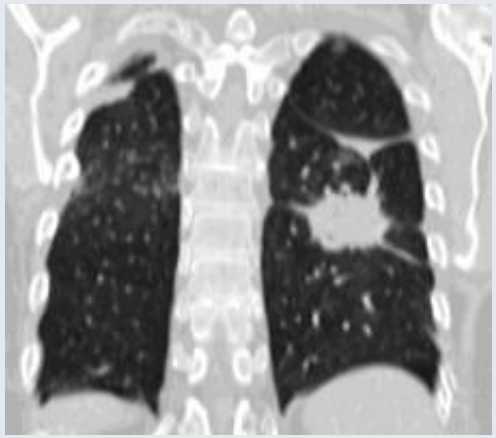
Hafferl

Mediastinum

Magyar



Gliederung vom Mediastinum sieht in der klinischen Praxis anders aus.



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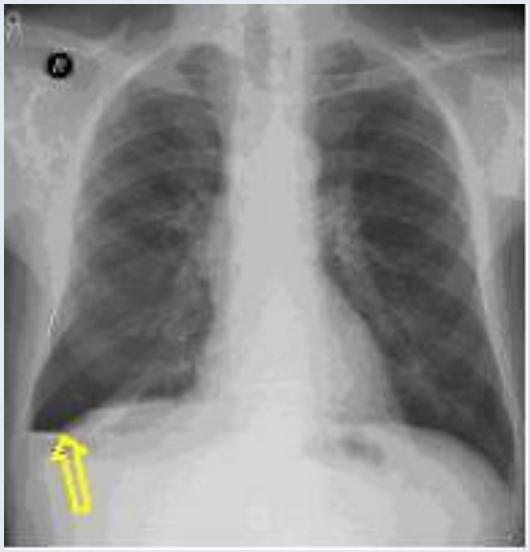

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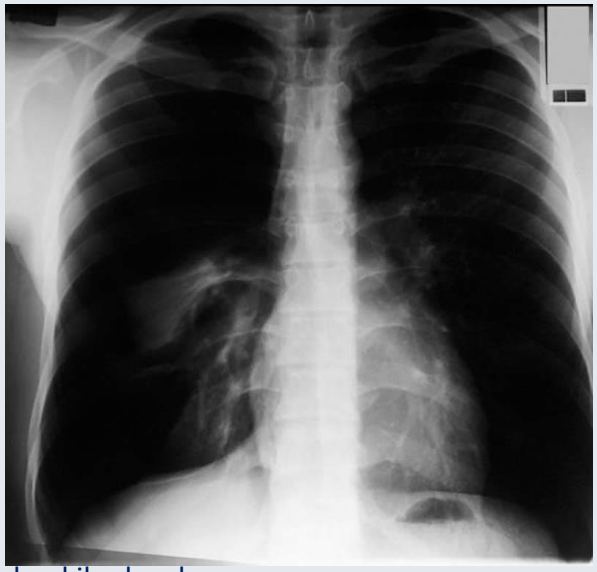

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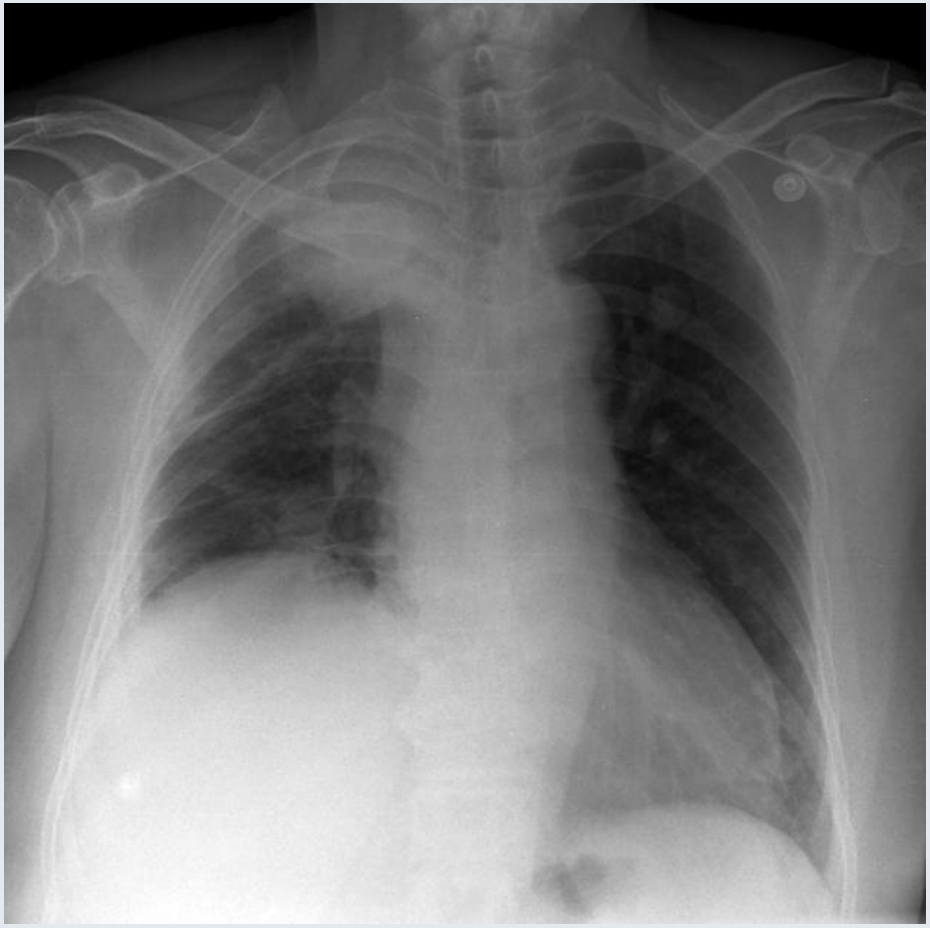

Literatur

Faller: Anatomie in Stichworten (Enke 1980.)

Feneis: Anatomisches Bildwörterbuch (Thieme 1982.)

Hafferl: Lehrbuch der topographischen Anatomie (Springer 1957.)

Pernkopf: Atlas der topographischen und angewandten Anatomie des Menschen (Urban & Schwarzenberg 1991.)

Sobotta: Az ember anatómiájának atlasza (Urban & Fischer 2000.)

Szentágothai – Réthelyi: Funkcionális anatómia (Semmelweis 1996.)

Szél: Klinikai anatómia (SOTE Képzéskutató 1999.)

www.oftankonyv.reak.bme.hu
www.deszkikorhaz.hu
www.bronchotraining.org
www.chilearning.charite.de
www.kepalkotas.hu
www.egeszsegere.com
www.radgray.com
www.klinikaikozpont.u-szeged.hu
www.wikipedia.org