

ANATOMIE RADIOLOGIQUE

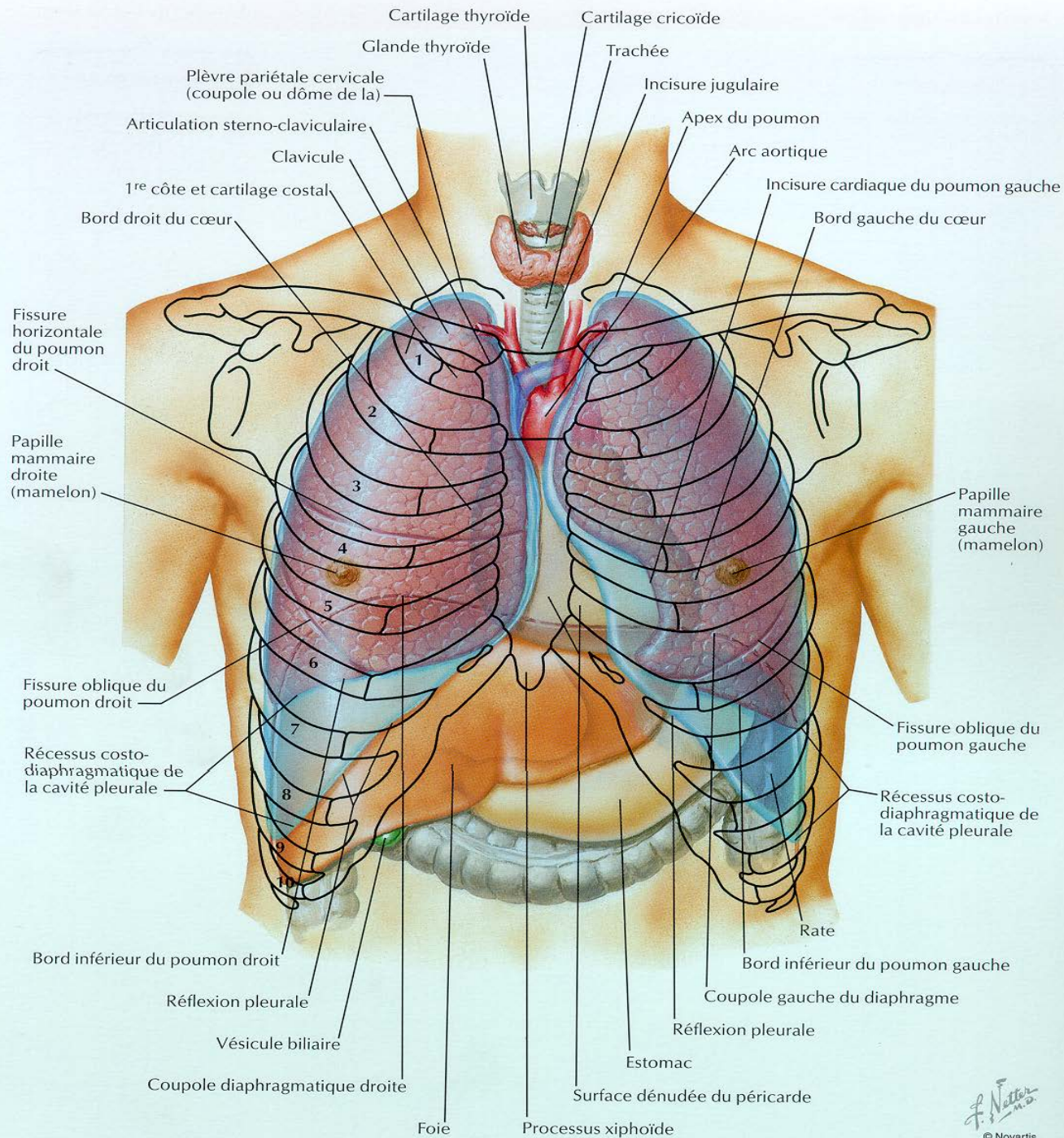
DU THORAX

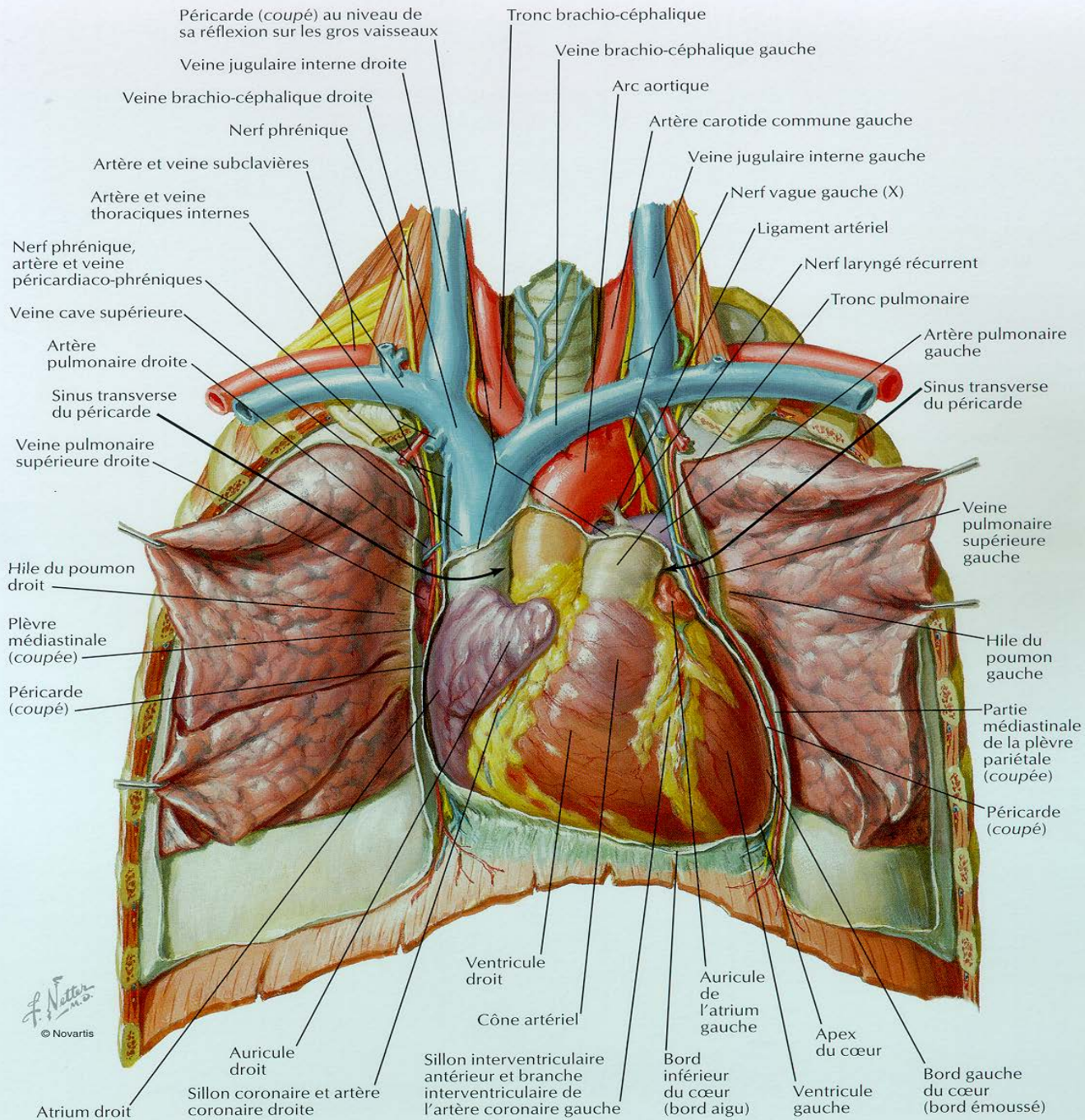
Cours 1370

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- Département d'Imagerie Médicale
- Cliniques Universitaires St-Luc
- E-mail: emmanuel.coche@uclouvain.be

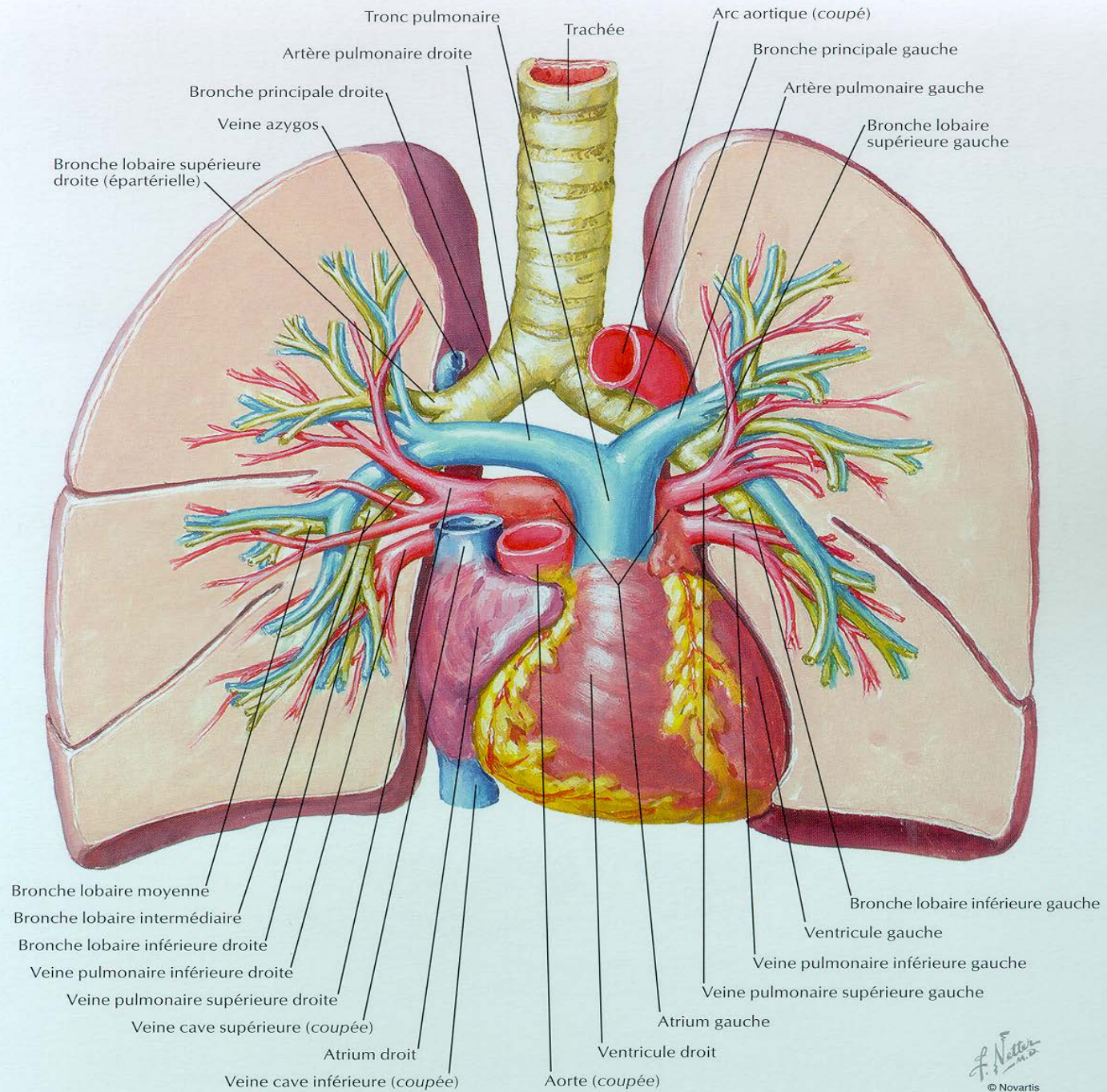
THORAX

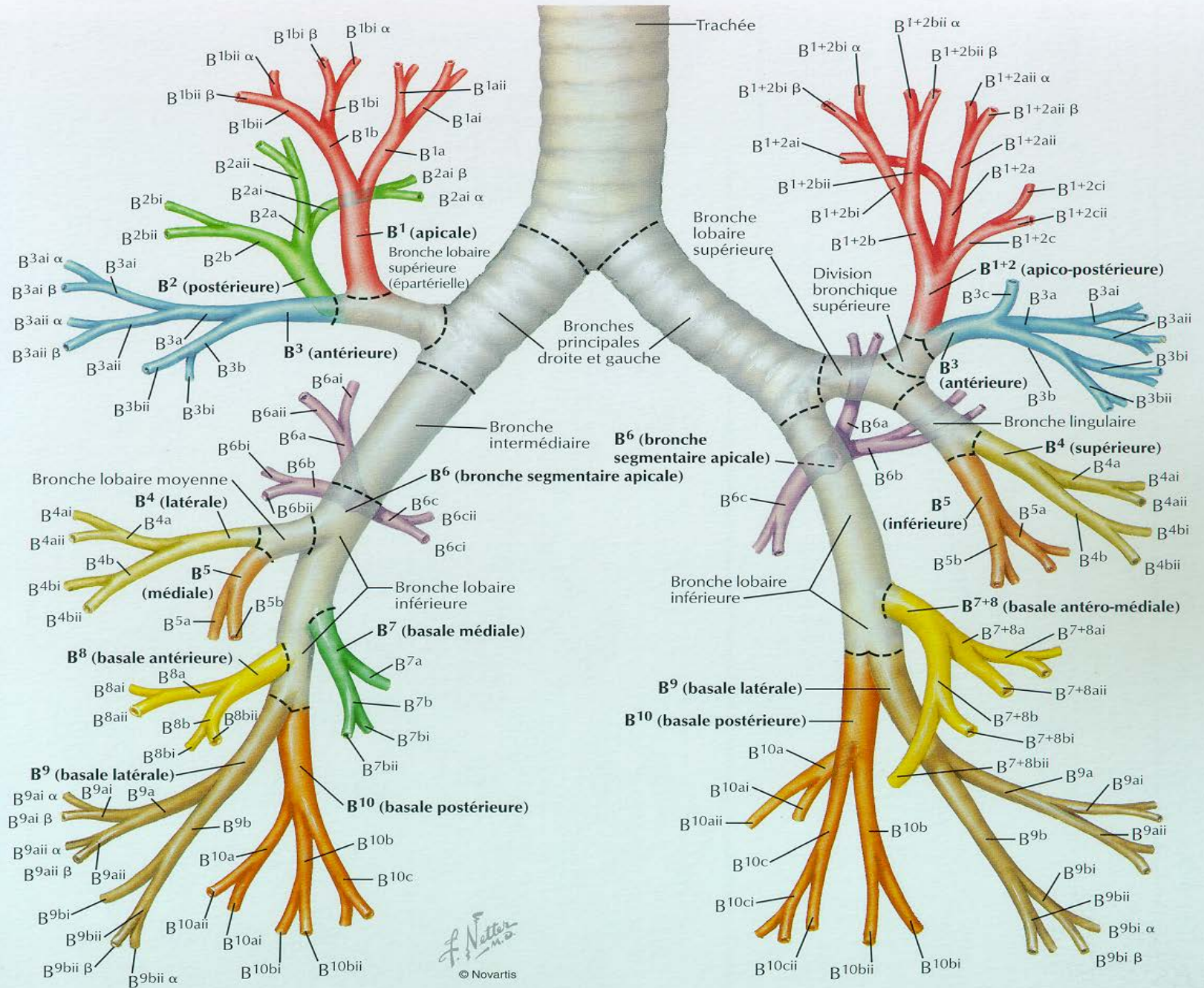
1. Savoir interpréter une radiographie du thorax normale ou non ???

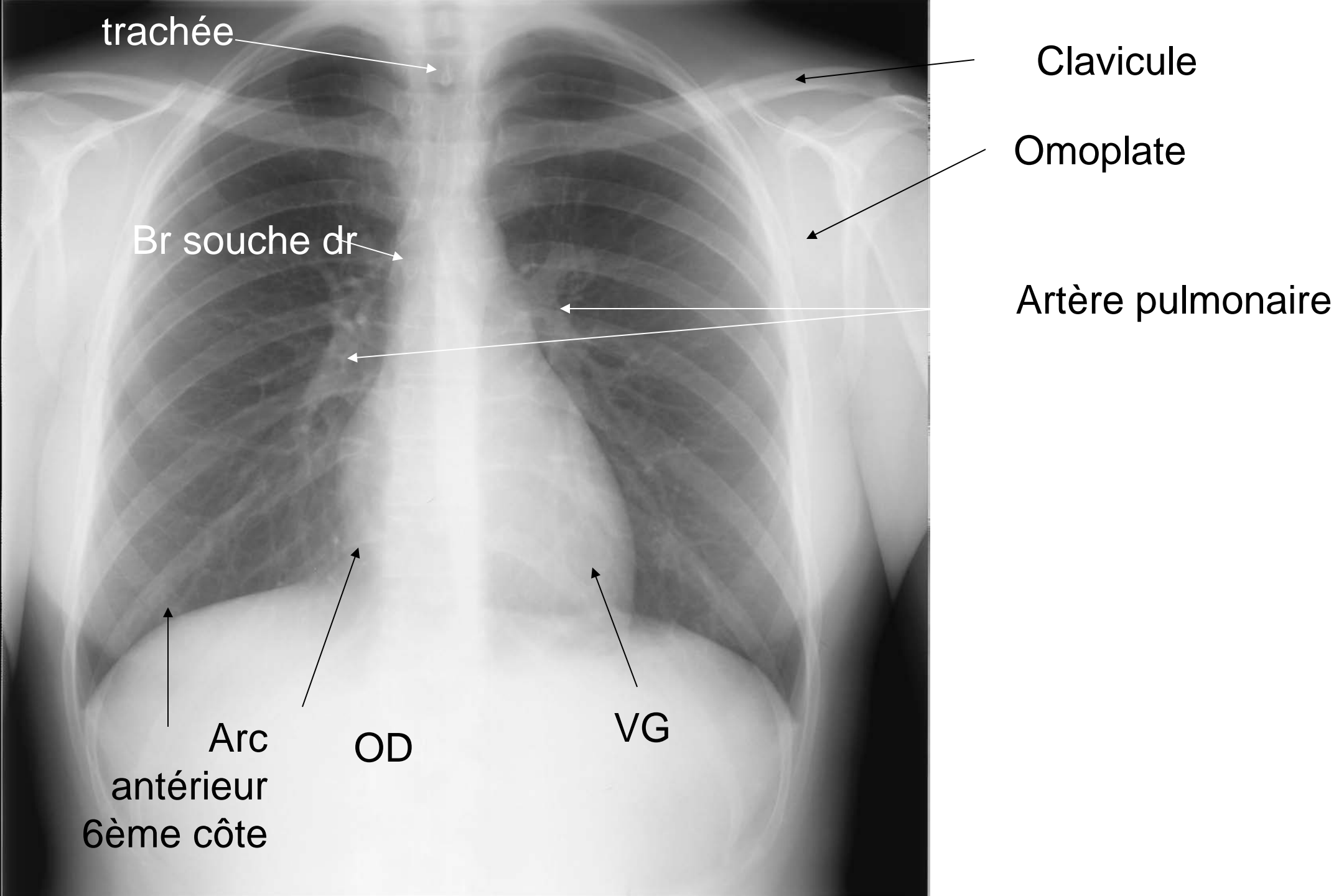




F. Netter M.D.
 © Novartis







trachée

Clavicule

Omoplate

Br souche dr

Artère pulmonaire

Arc antérieur
6ème côte

OD

VG

Sternum

Trachée

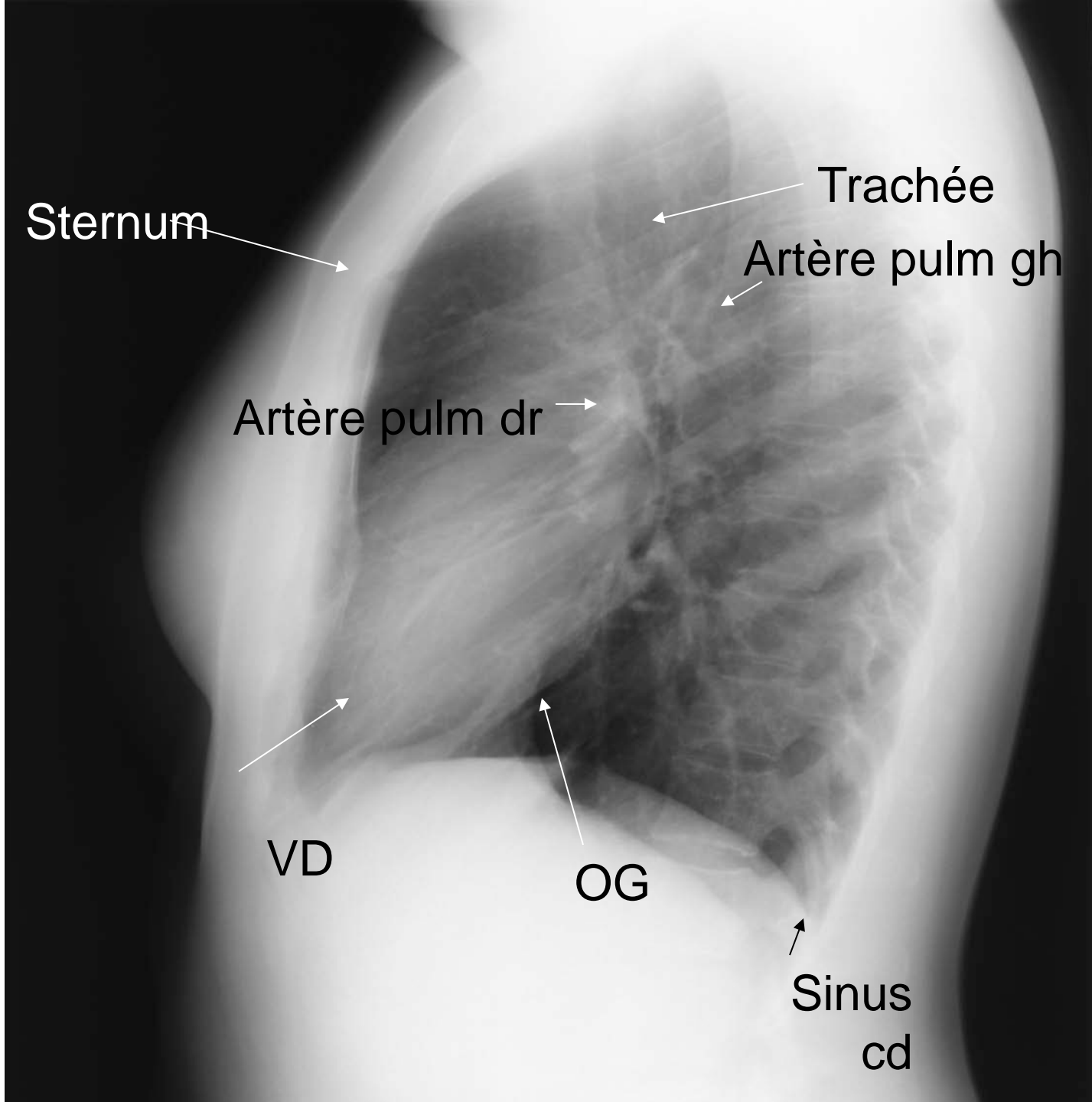
Artère pulm gh

Artère pulm dr

VD

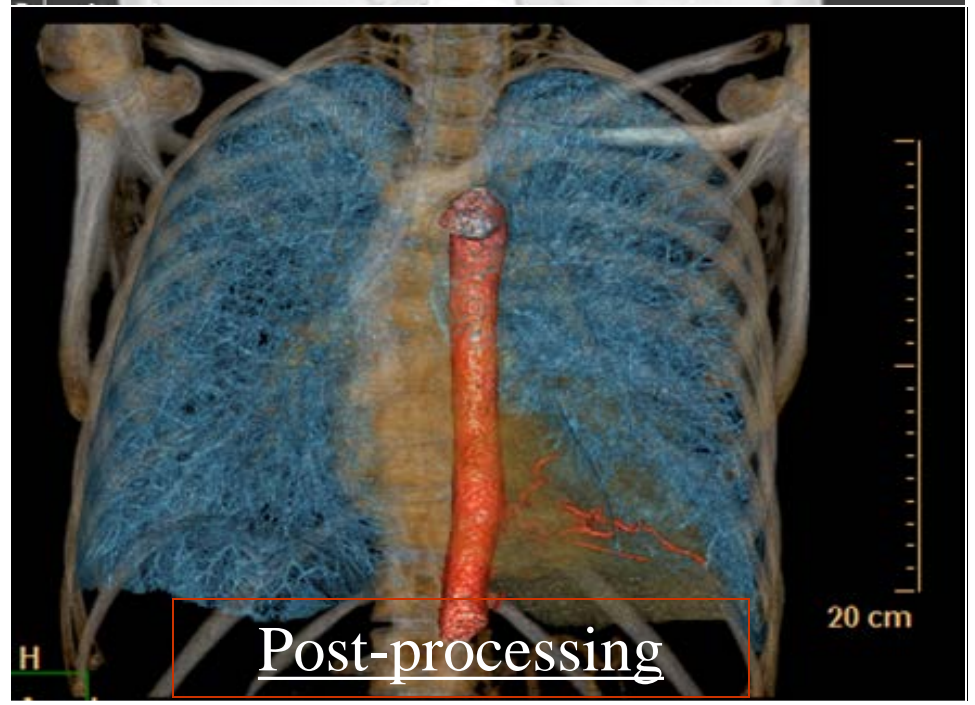
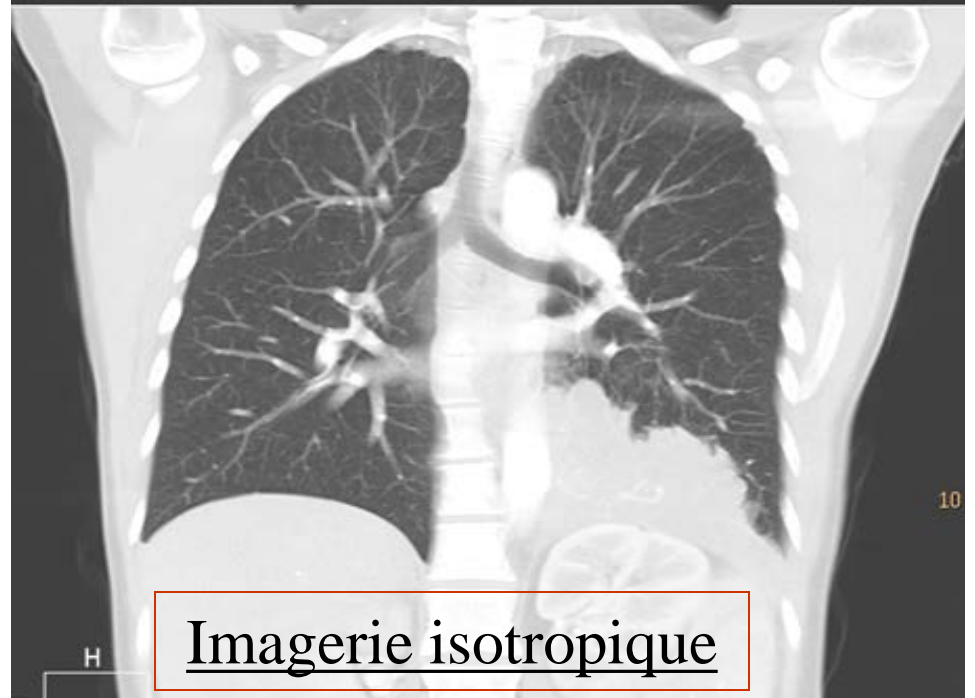
OG

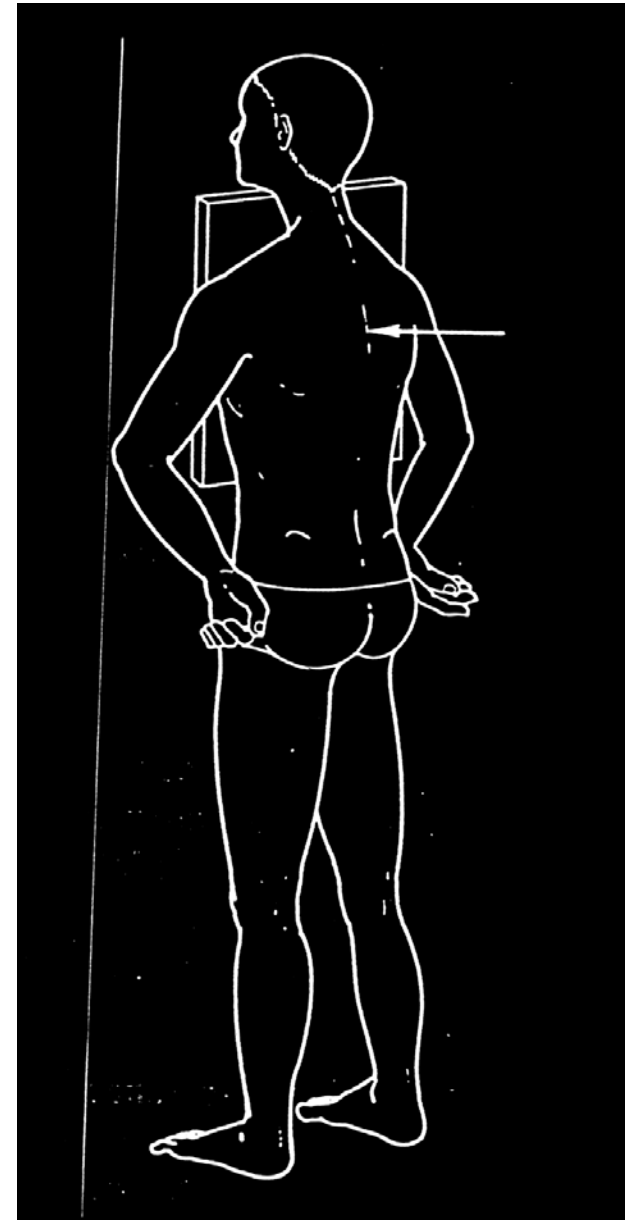
Sinus
cd



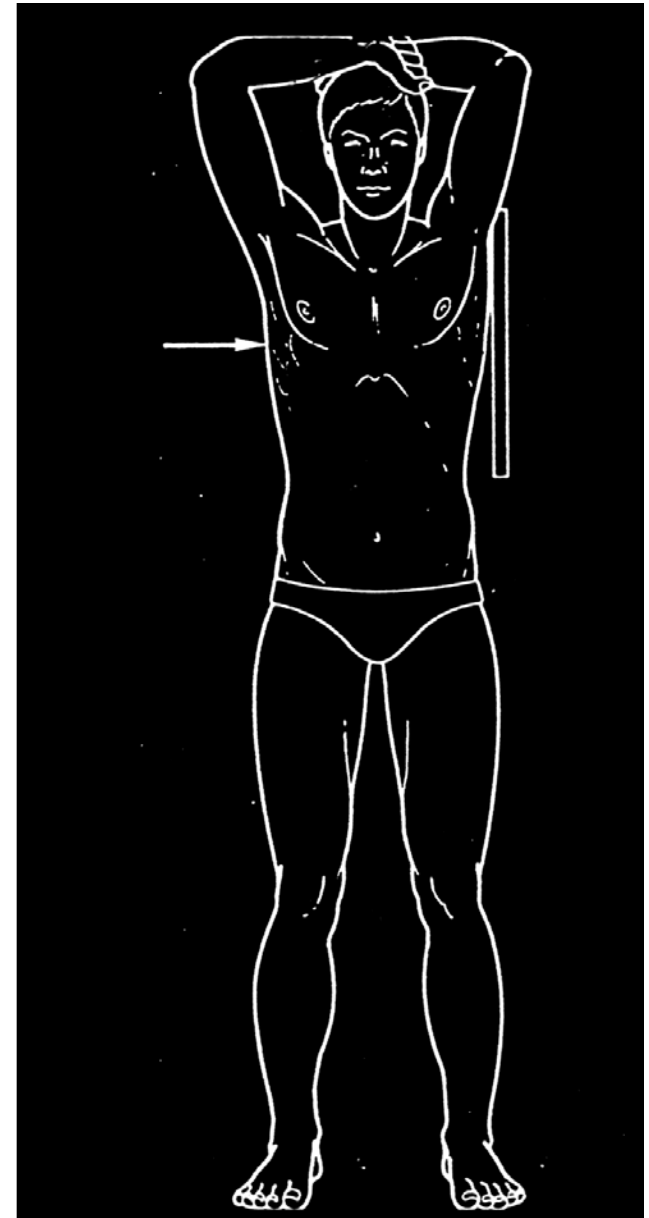


Densité air < densité graisse < densité eau < densité os

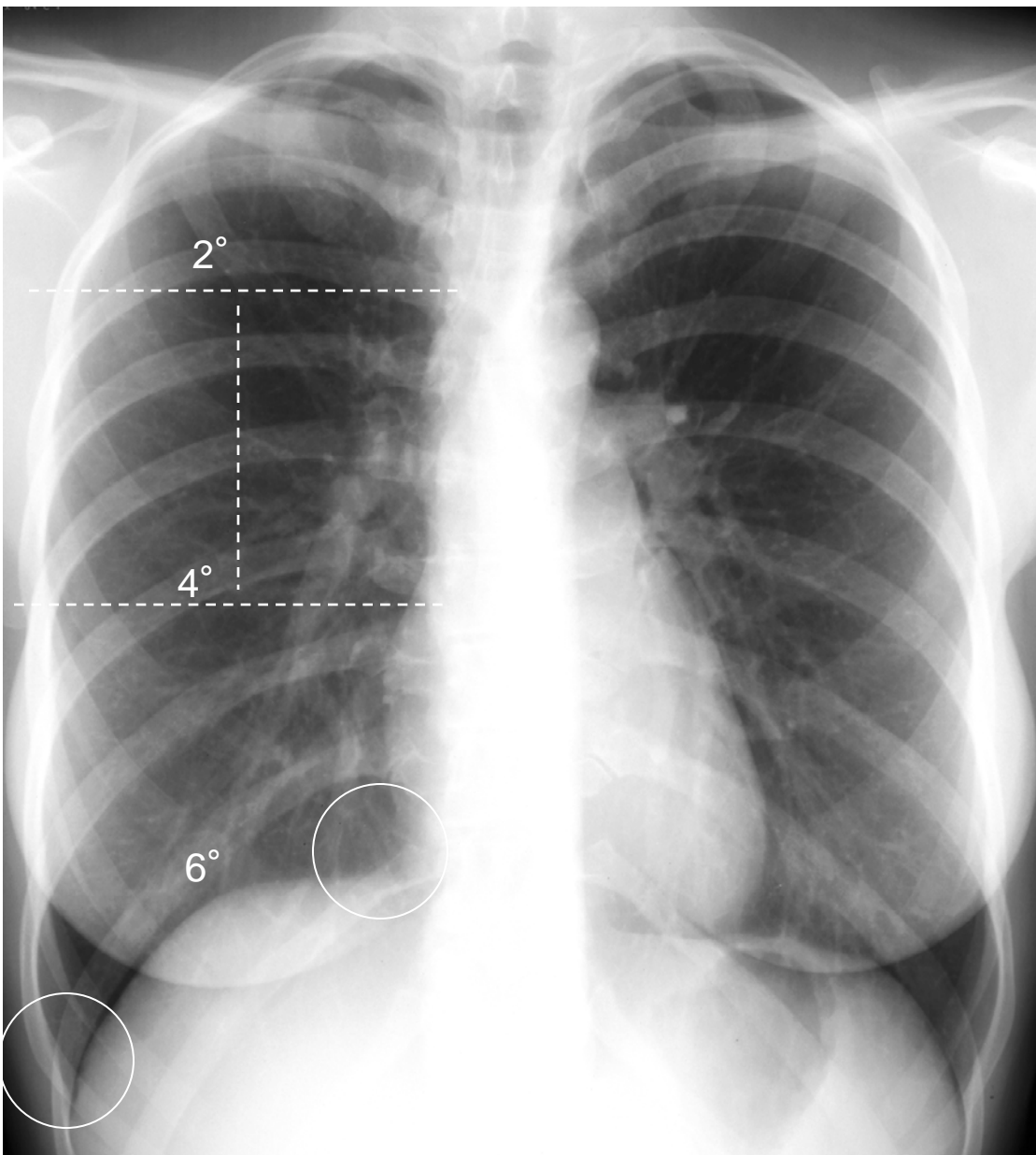




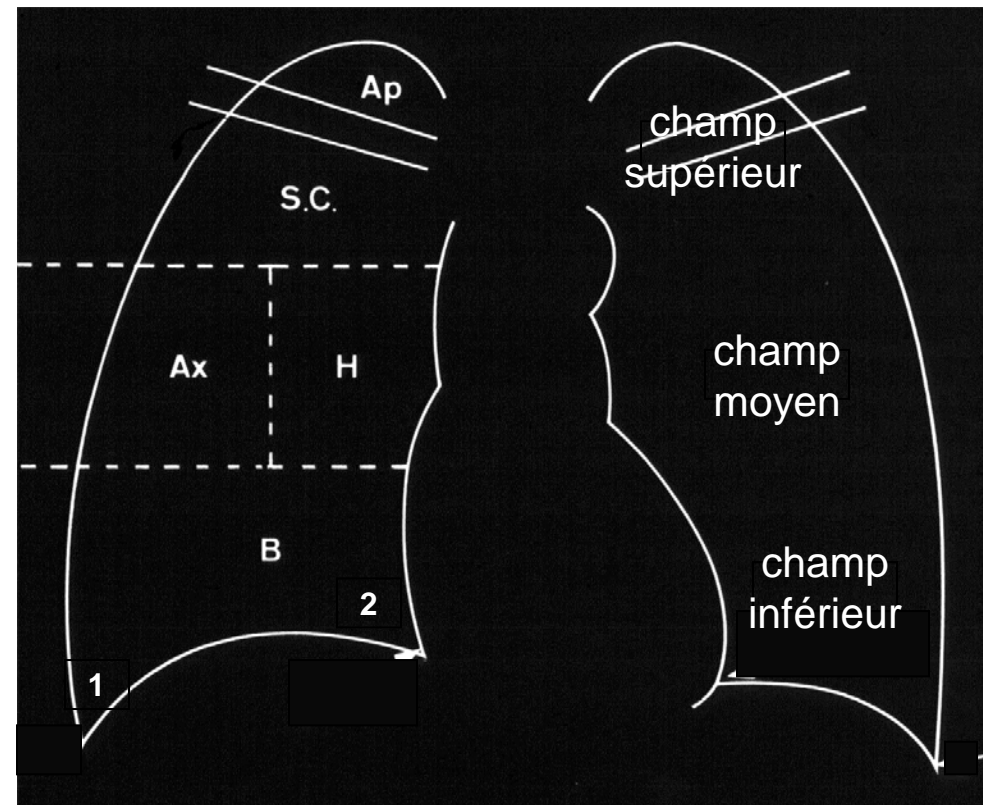
thorax de face (rayonnement postéro-antérieur , pourquoi ?)



thorax de profil (gauche , pourquoi ?)



régions pulmonaires /
cliché de face



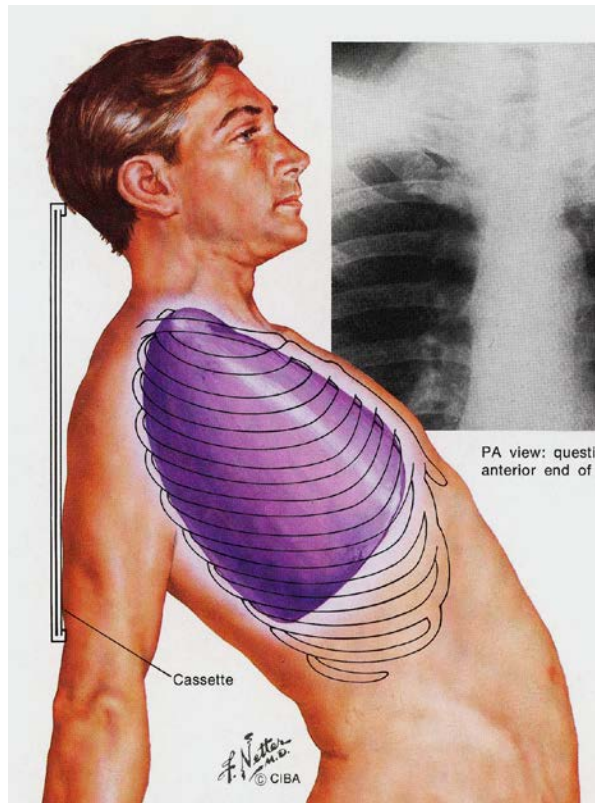
Ap : apex (sommet) ou région sus-claviculaire

S.C. : région sous-claviculaire

Ax : région axillaire

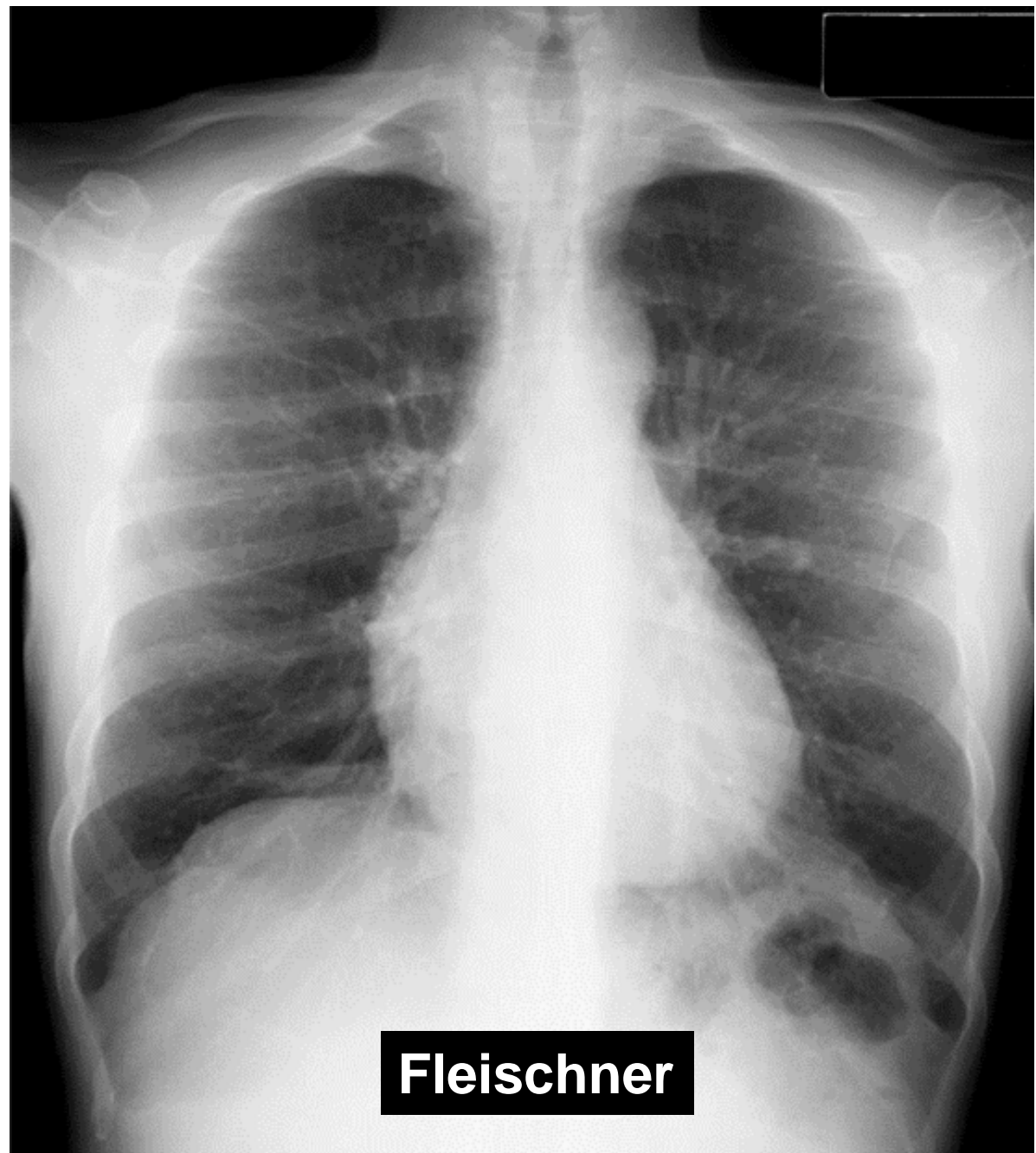
H : région hilare

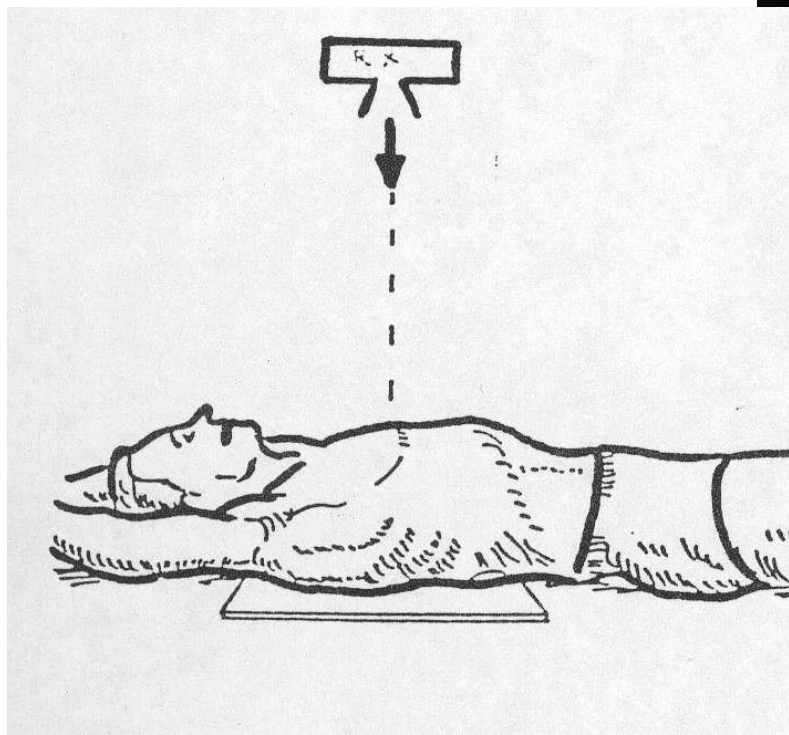
B : base - 1 : sinus costo-diaphragmatique
- 2 : sinus cardio-phrénique



incidence en hyperlordose
(de Fleischner)

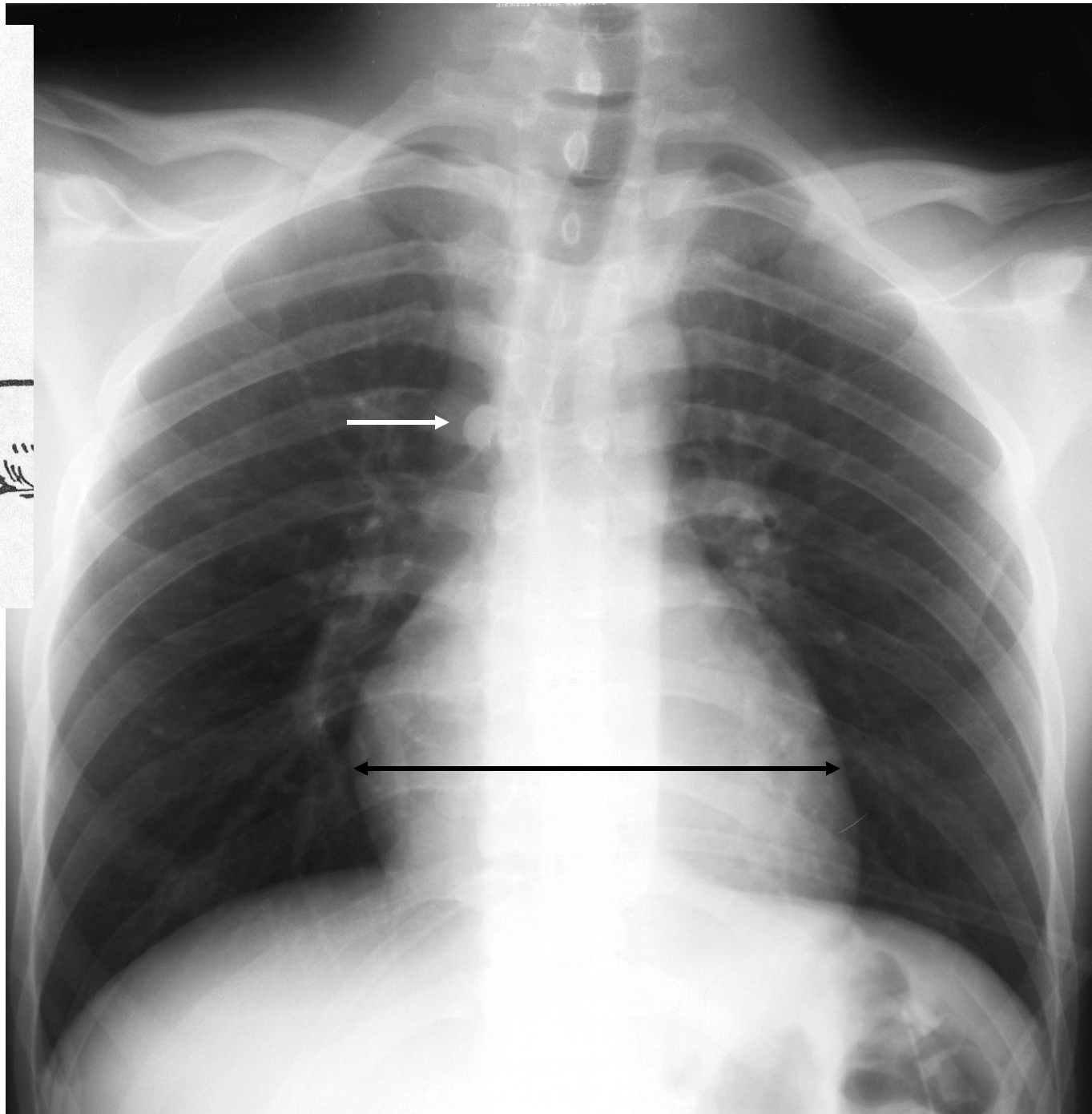
(projection des clavicules
en dehors des poumons)

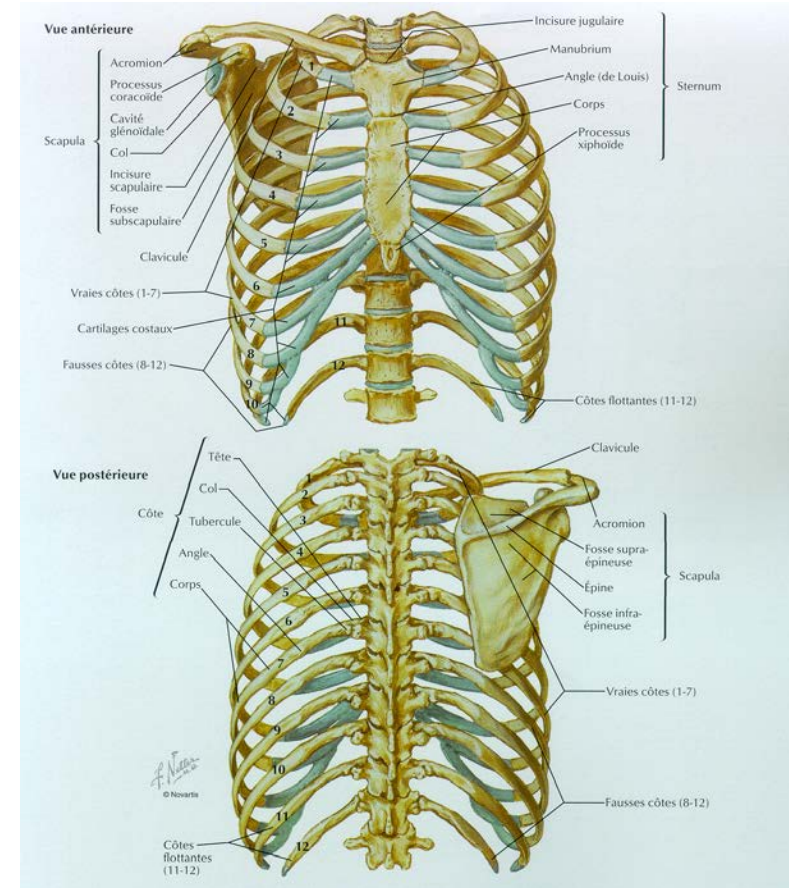
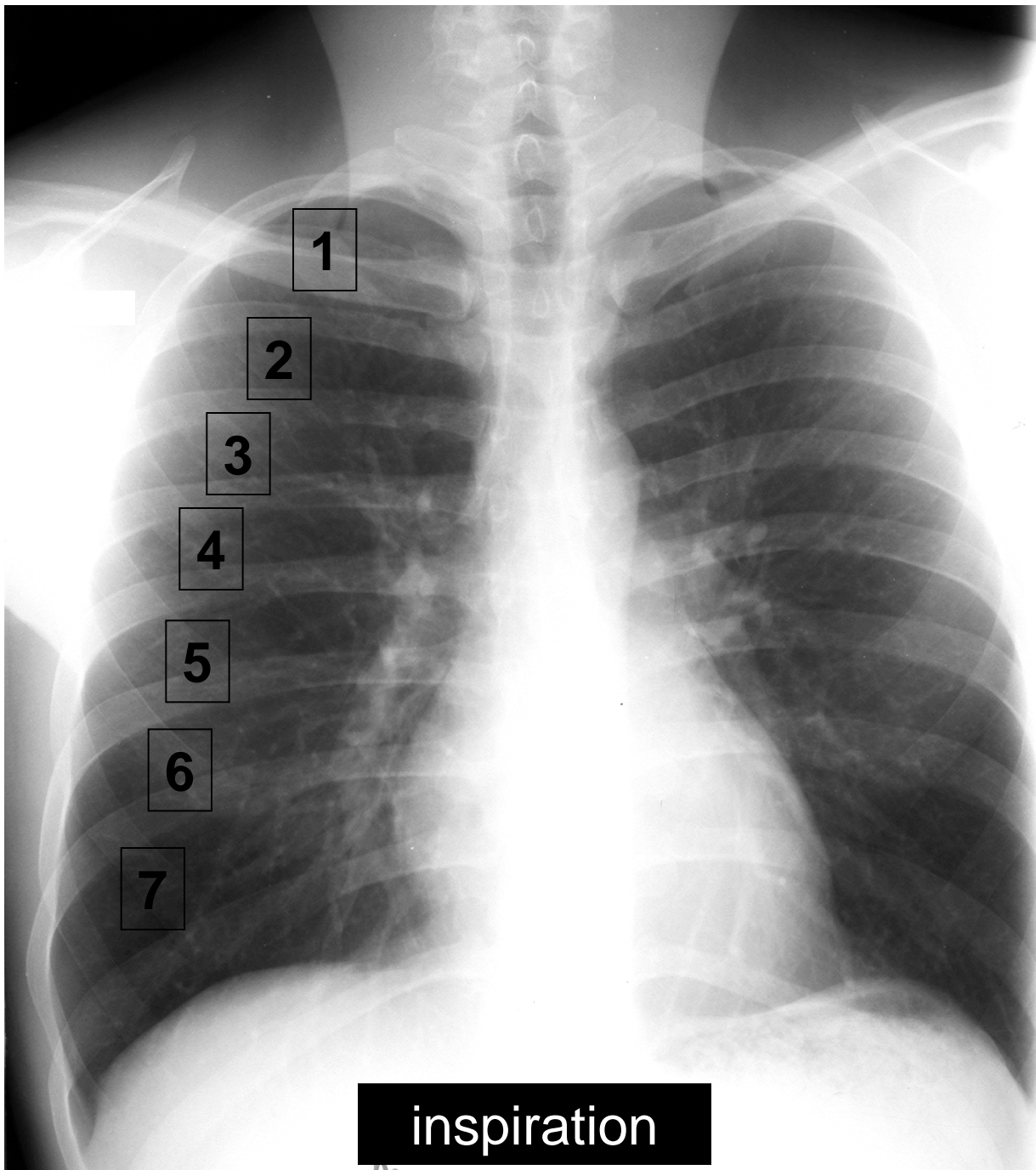




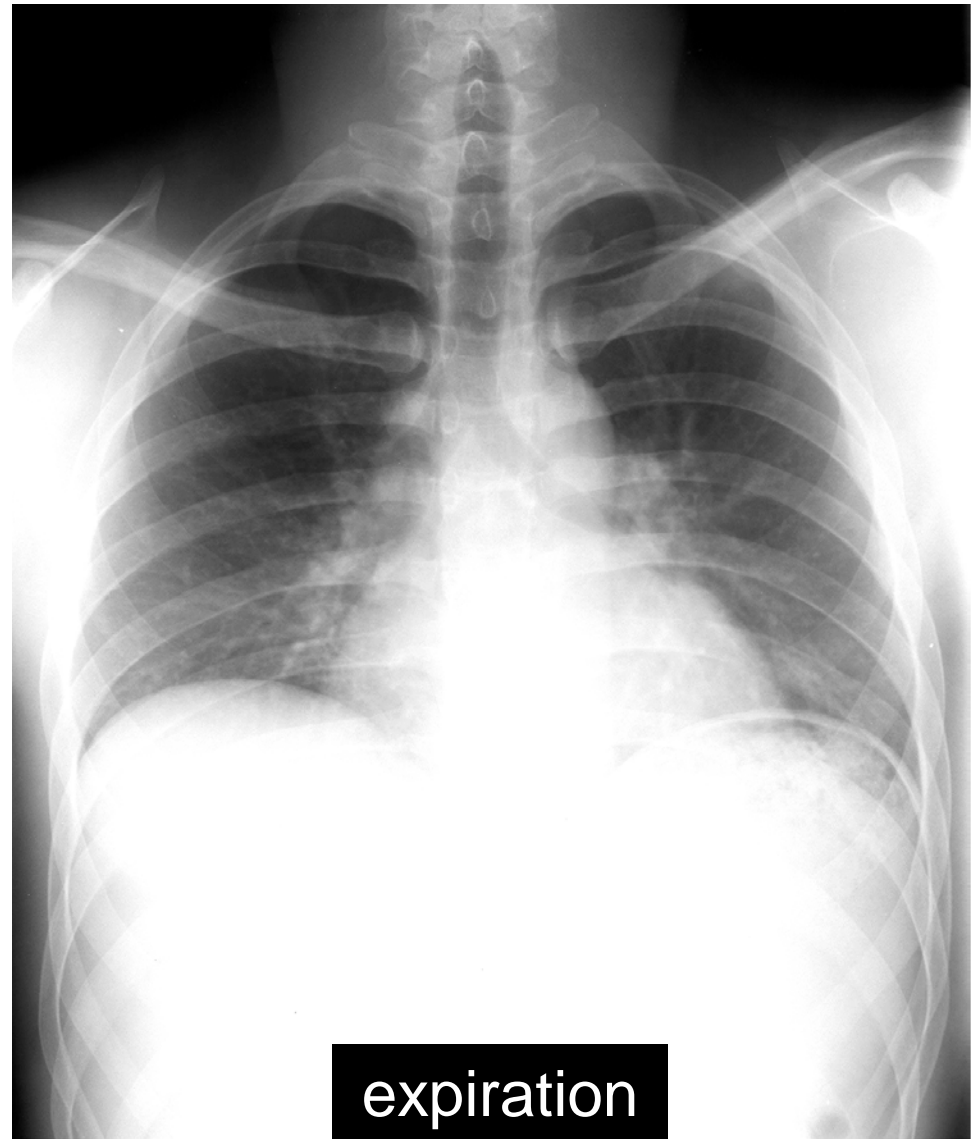
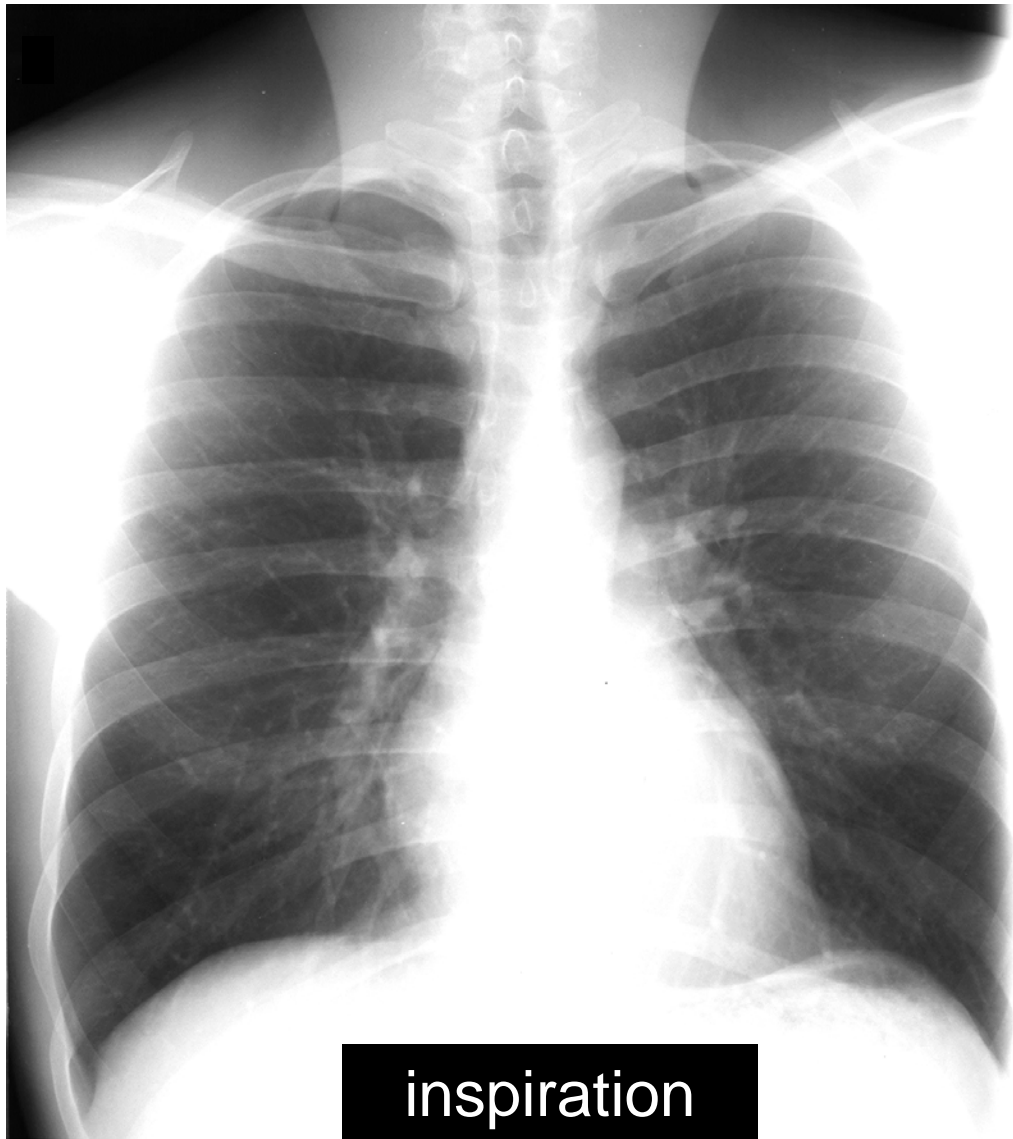
decubitus dorsal
(rayonnement
antéro-postérieur)

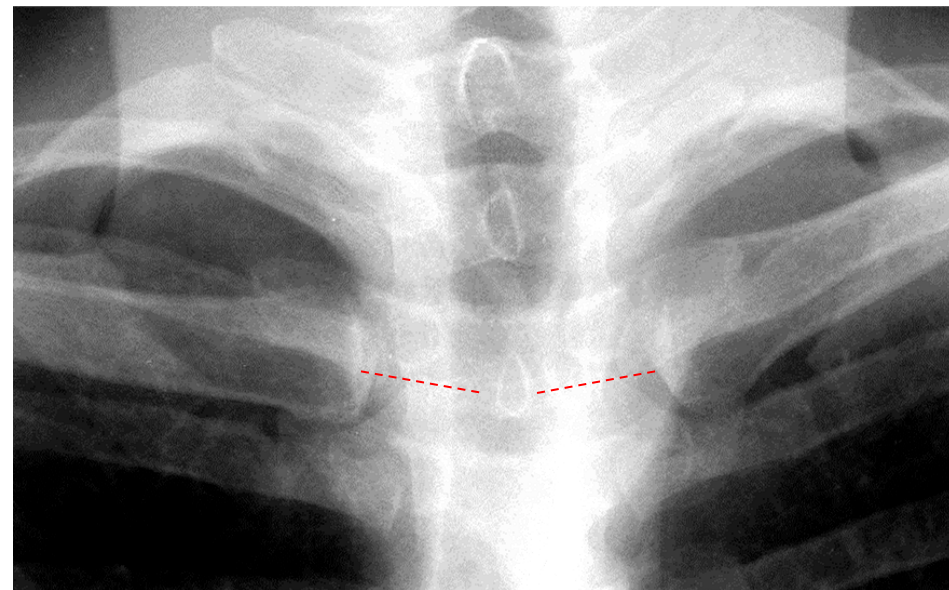
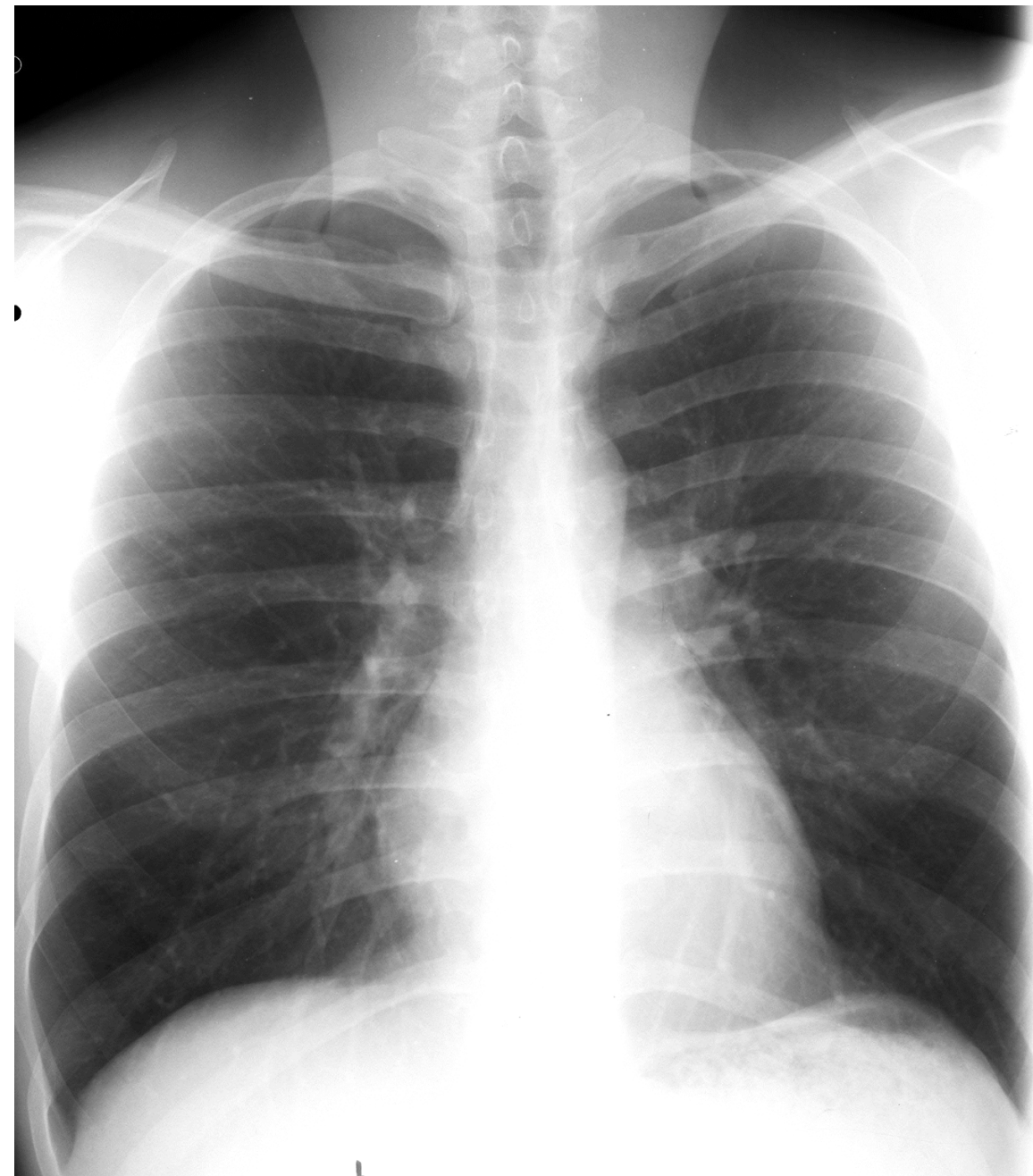
augmentation du diamètre
transverse du coeur





coupole diaphragmatique droite
 au niveau de la
 6^e / 7^e côte antérieure



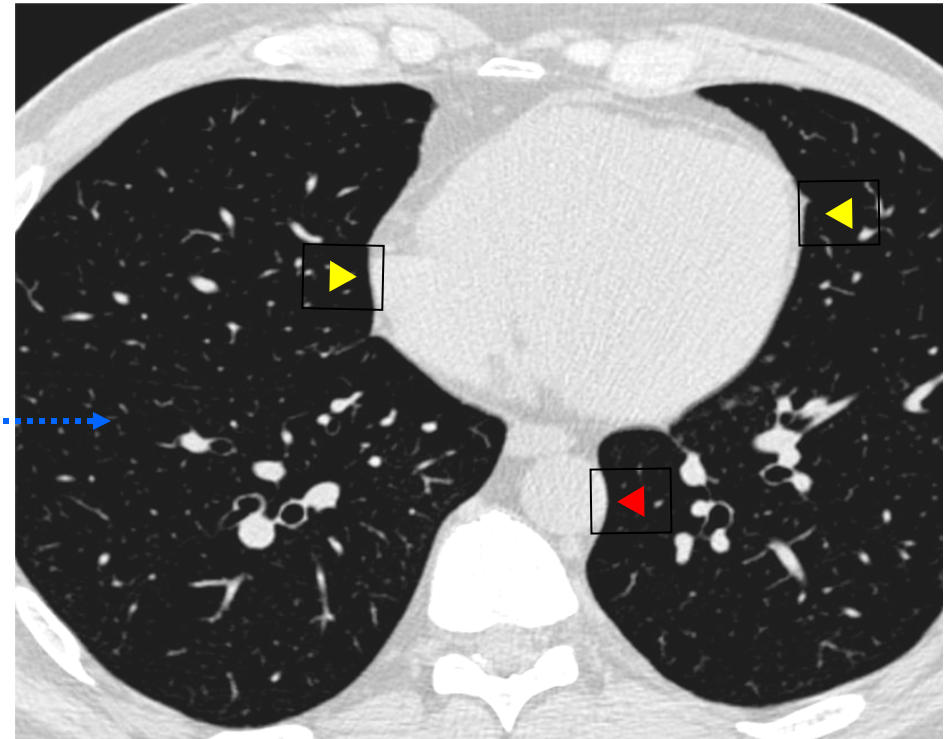
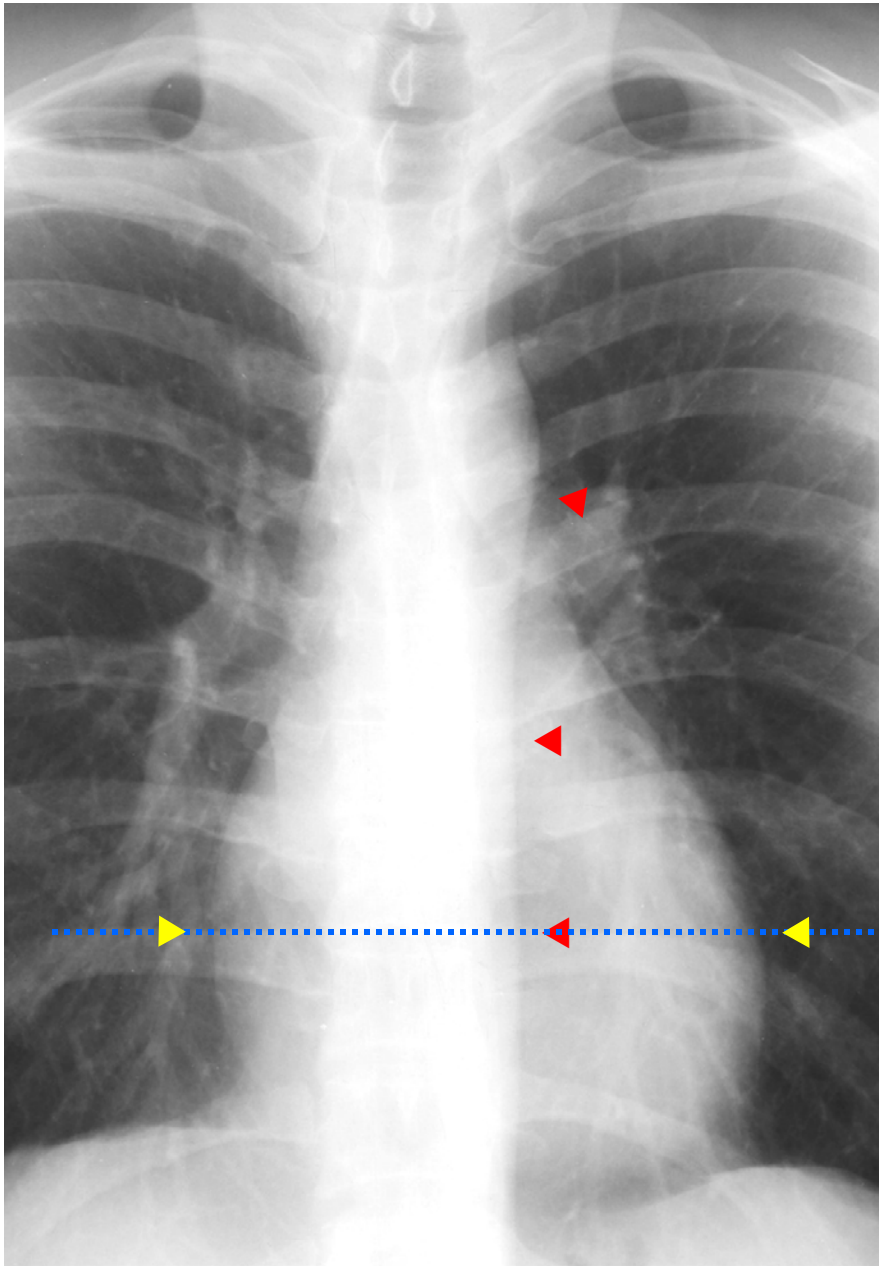


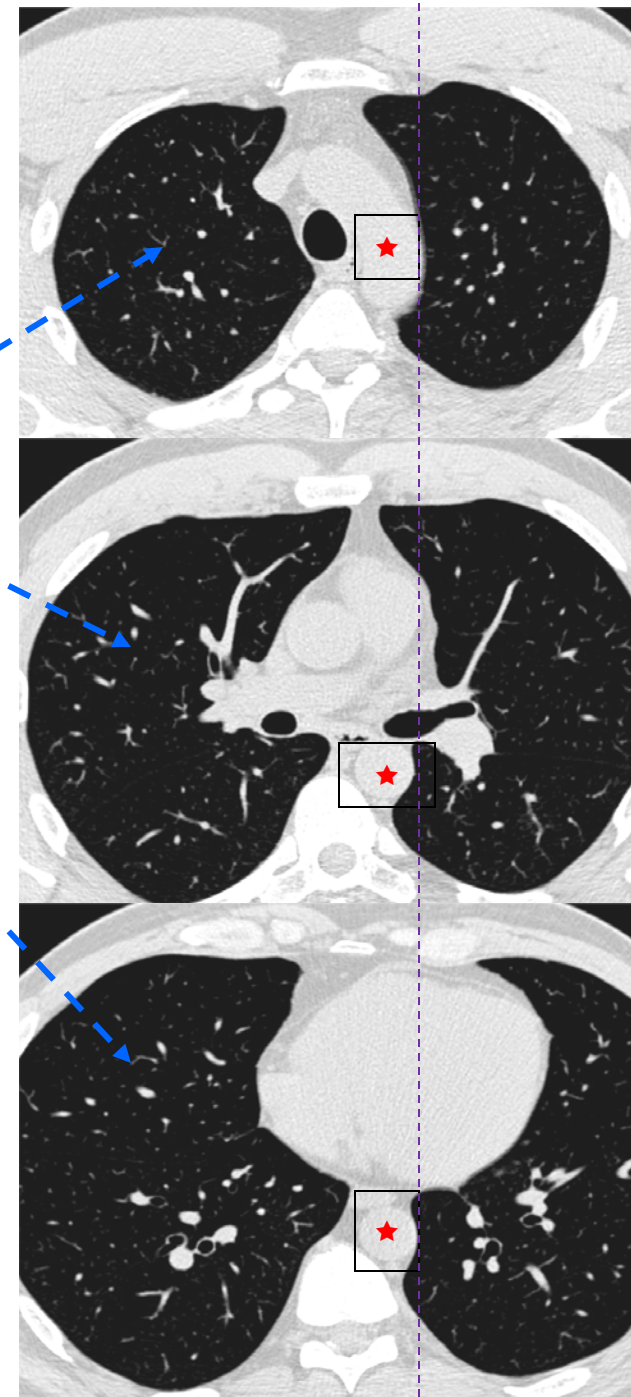
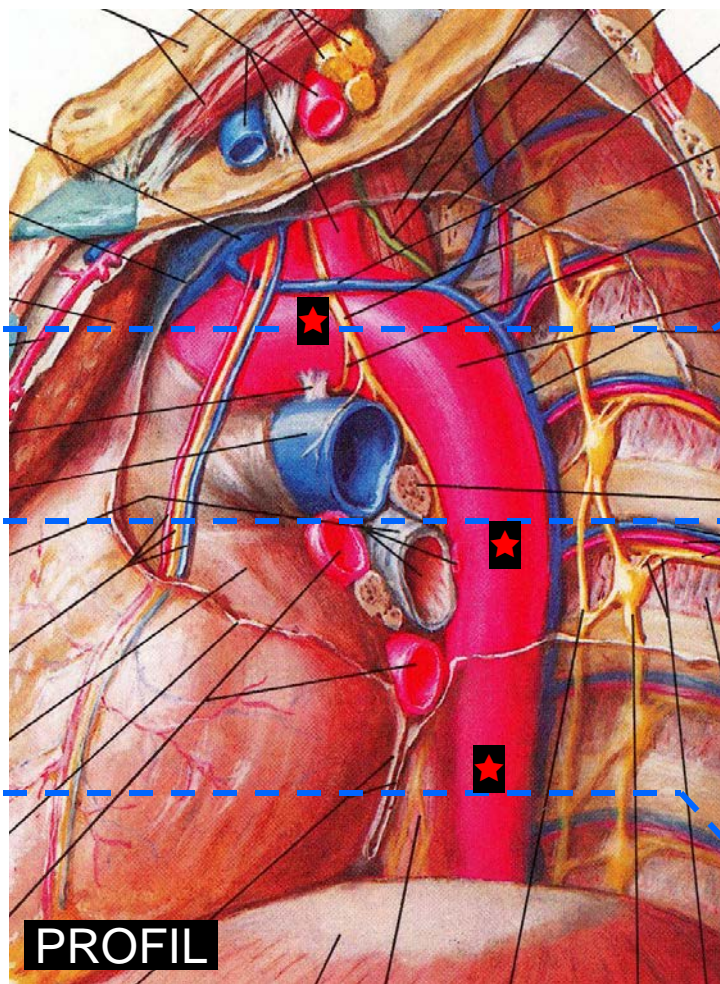
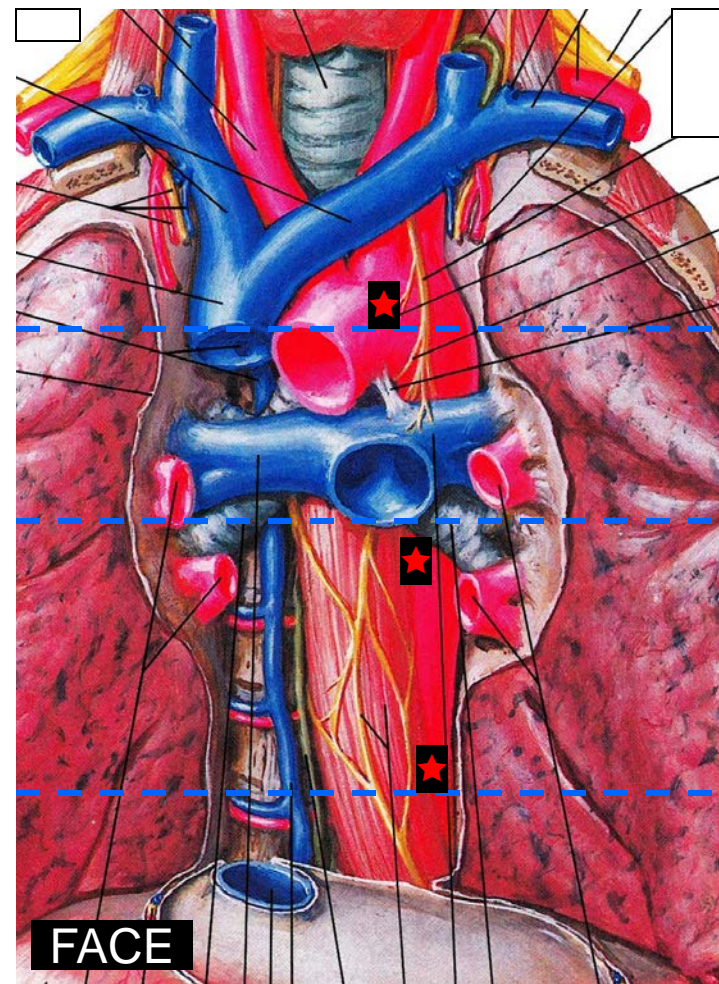
CRITERES DE QUALITE

- **totalité du thorax** (y compris sinus costo-diaphragmatiques)
- **inspiration profonde**
(6^e- 7^e côte antérieure droite)
- **face stricte**
(clavicule-ap. épineuse-clavicule)
- **exposition correcte**
(visibilité des vaisseaux pulmonaires, cœur " transparent ")

sur une radiographie, les contours des structures anatomiques sont visibles et nets, si 2 conditions existent :

- tangence aux RX
- contraste (aérique) adjacent

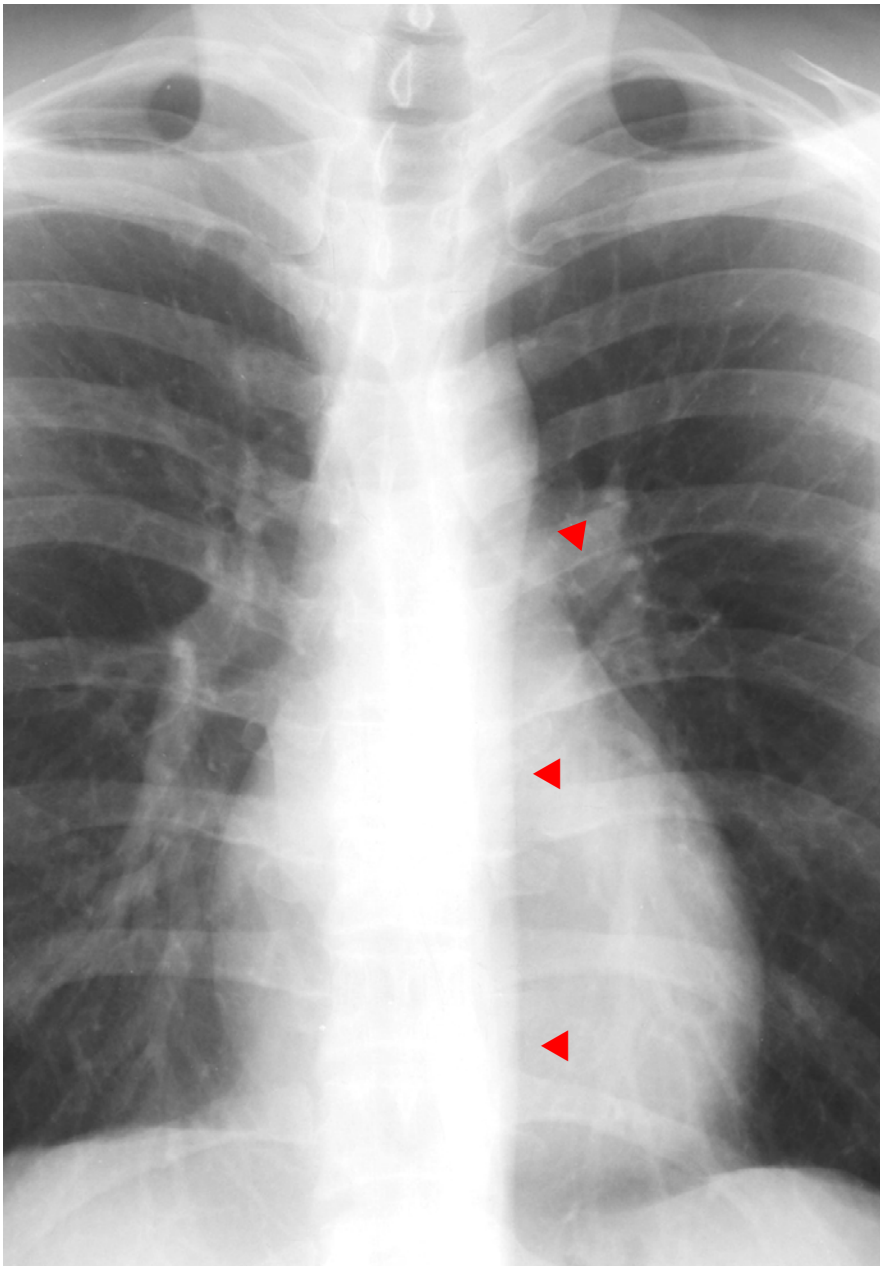




tangence aérique
(pulmonaire)
uniquement sur
le bord latéral gauche

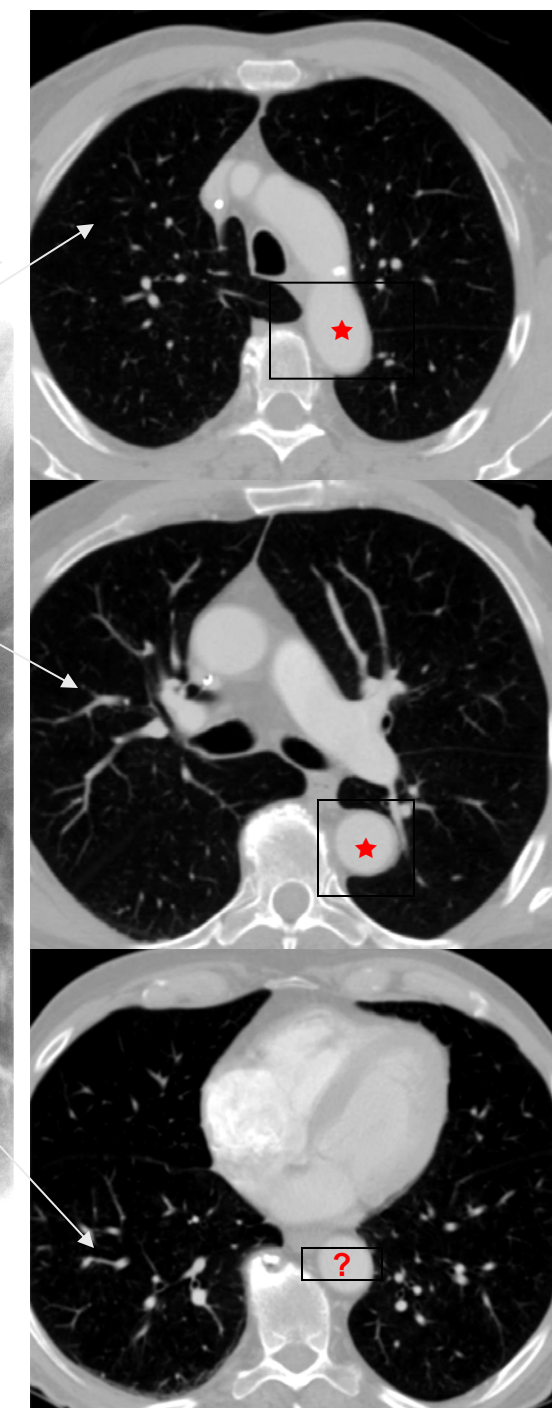
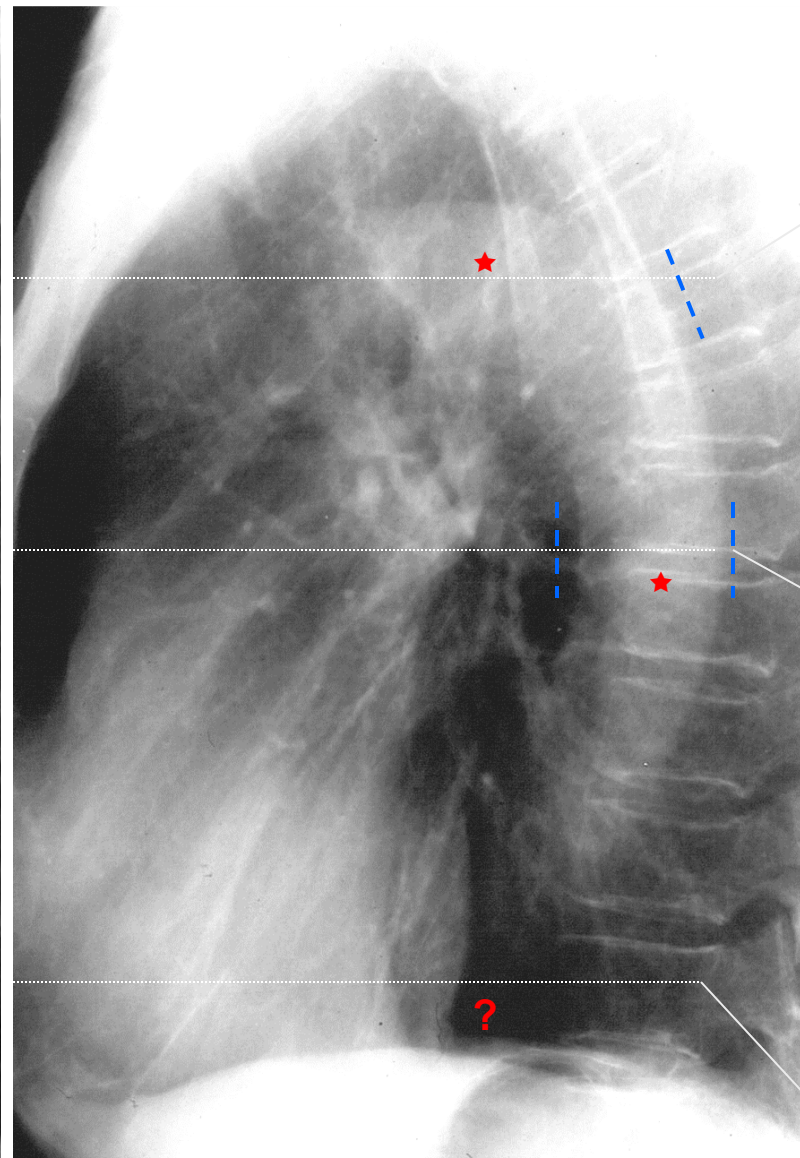
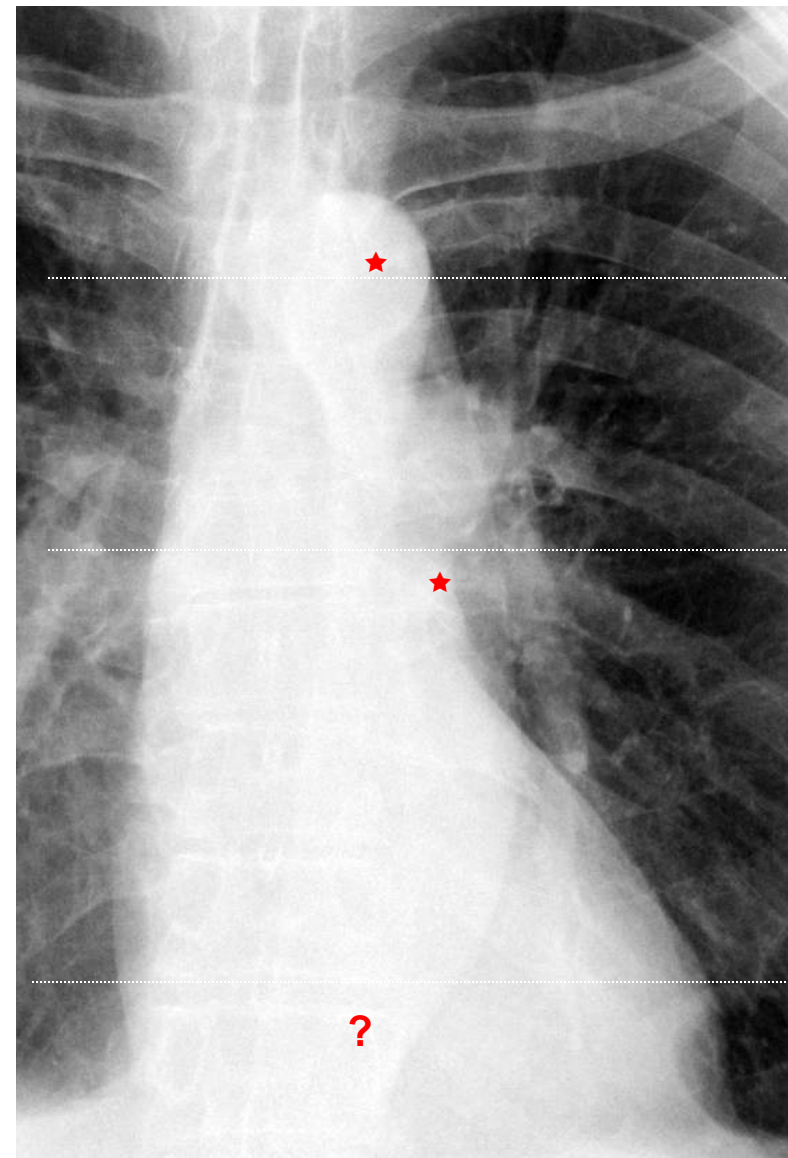
pas de tangence aérique sur
les bords antérieur et postérieur

★ aorte thoracique



aorte descendante normale

→ bord gauche ◀ visible en face
→ non visible en profil



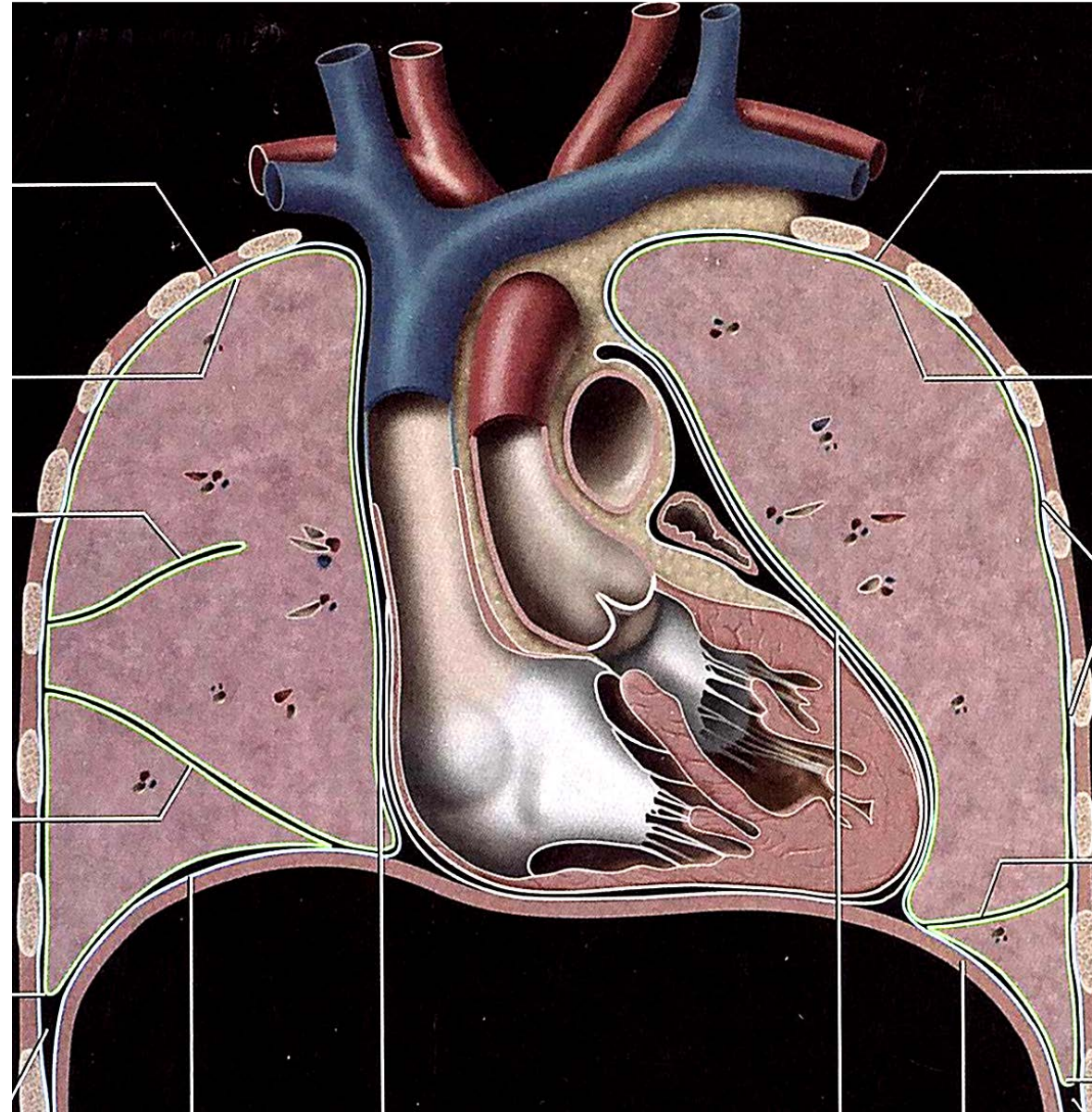
sujet âgé

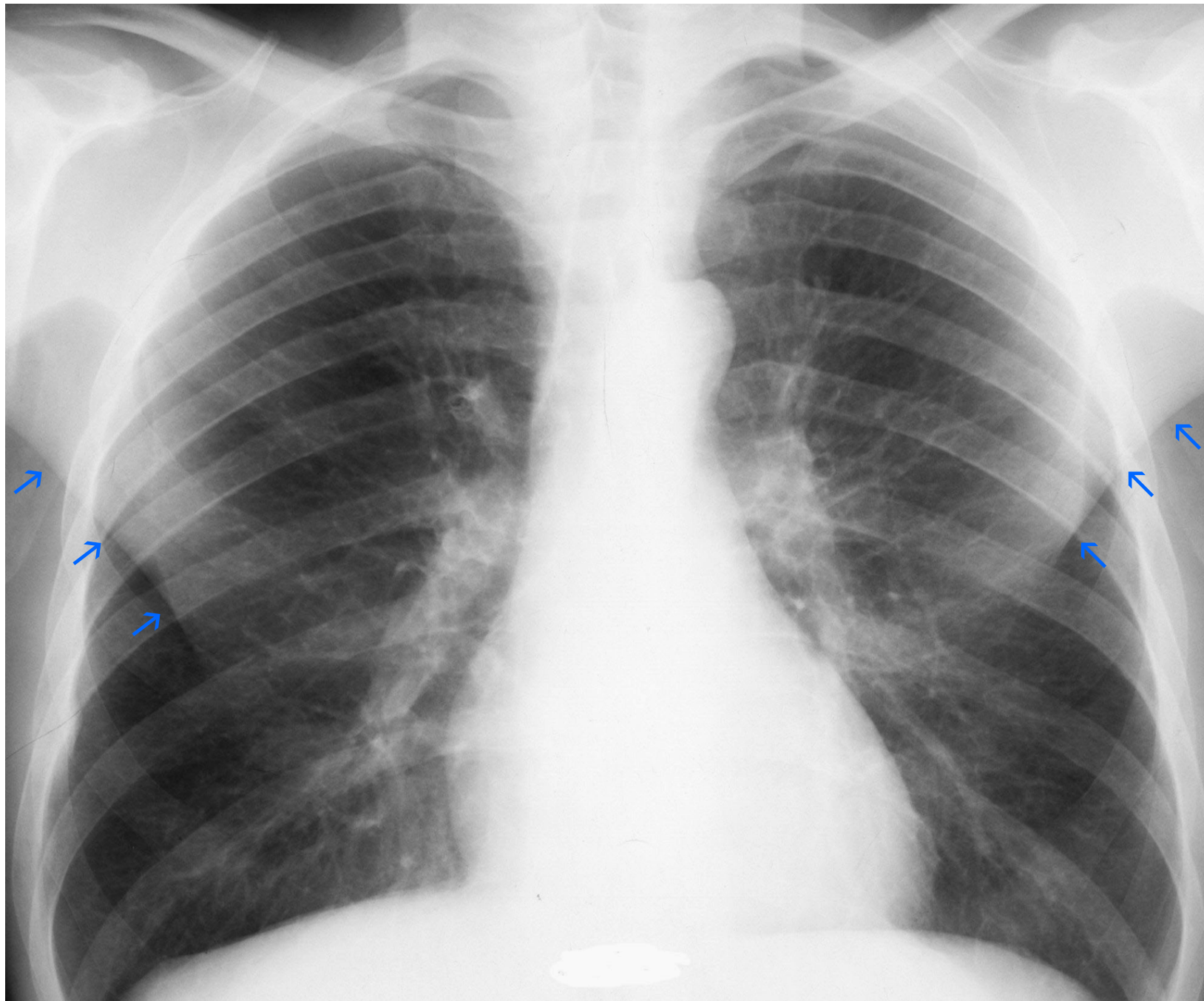
aorte allongée (déroulée)
le segment "encastré" dans le poumon gauche est visible en profil

Plan d'analyse d'un cliché du thorax

De la périphérie vers le centre :

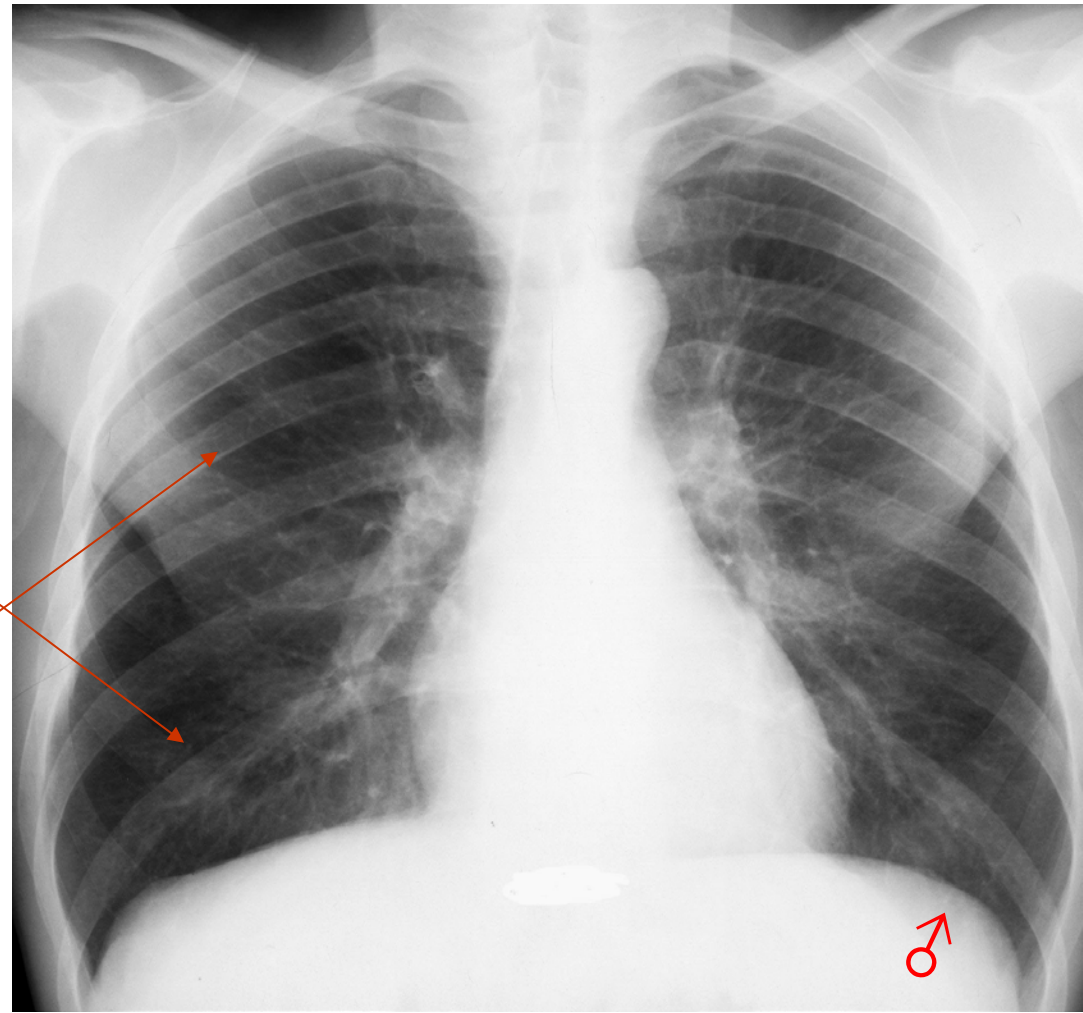
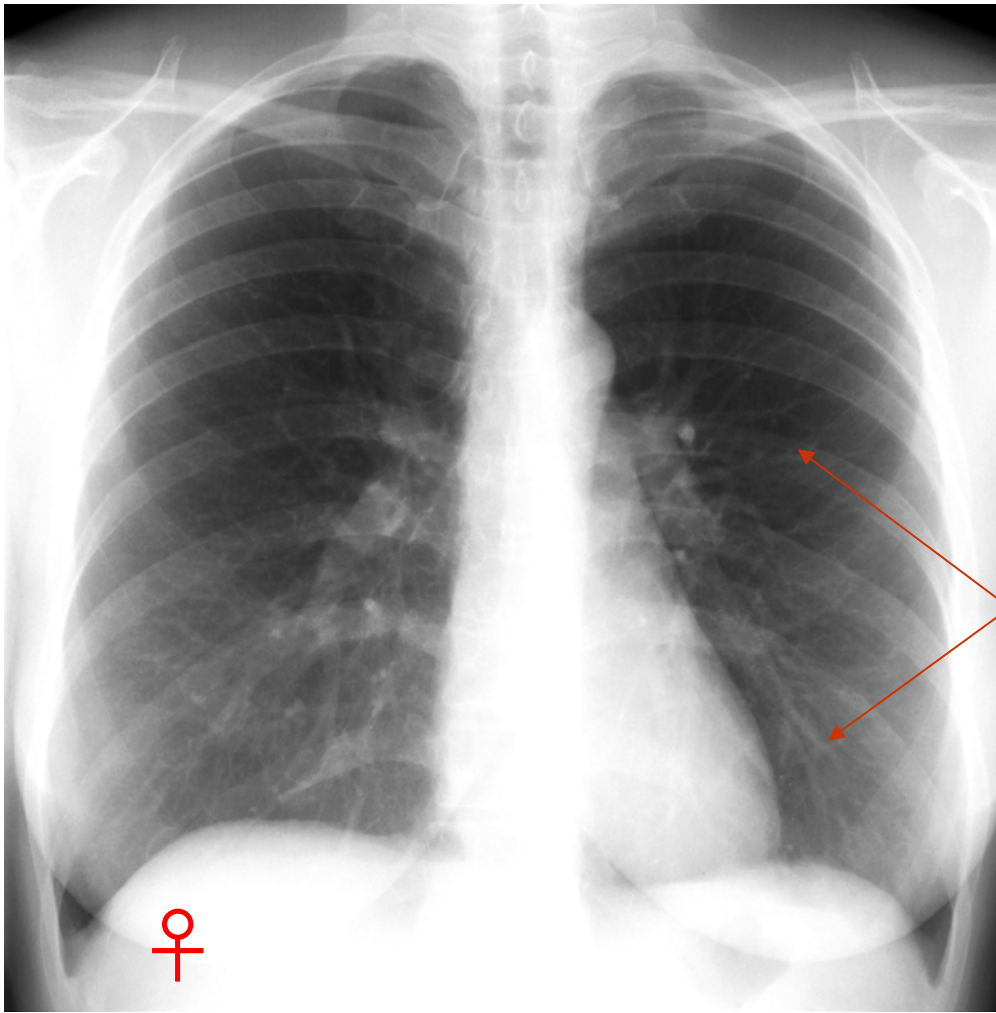
1. paroi, inclus diaphragme
2. plèvre : sinus et scissures
3. parenchymes pulmonaires
4. coeur et médiastin



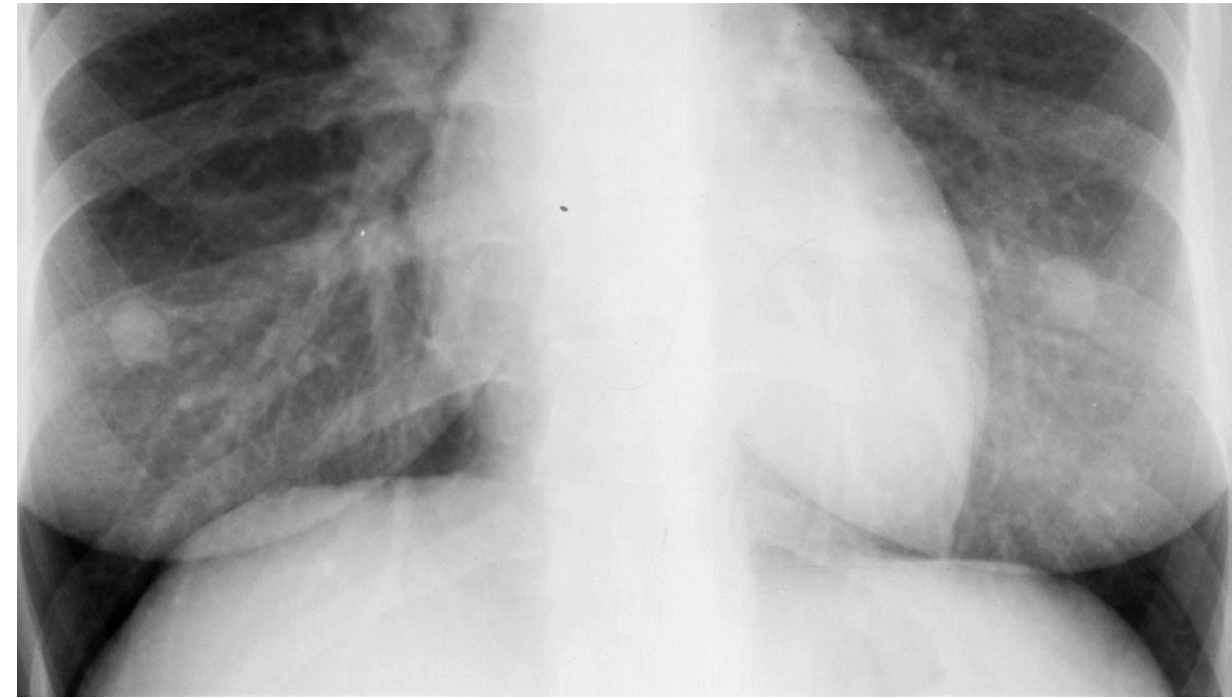
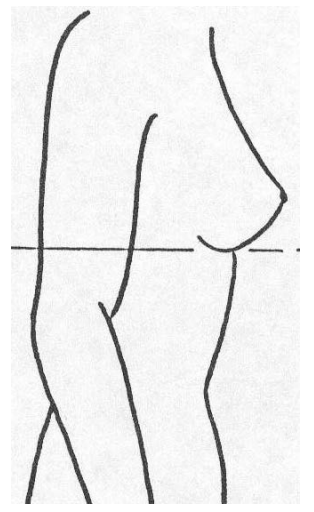
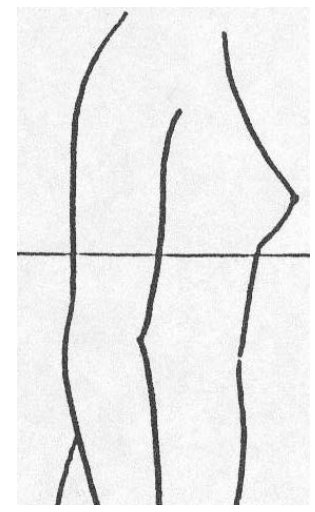
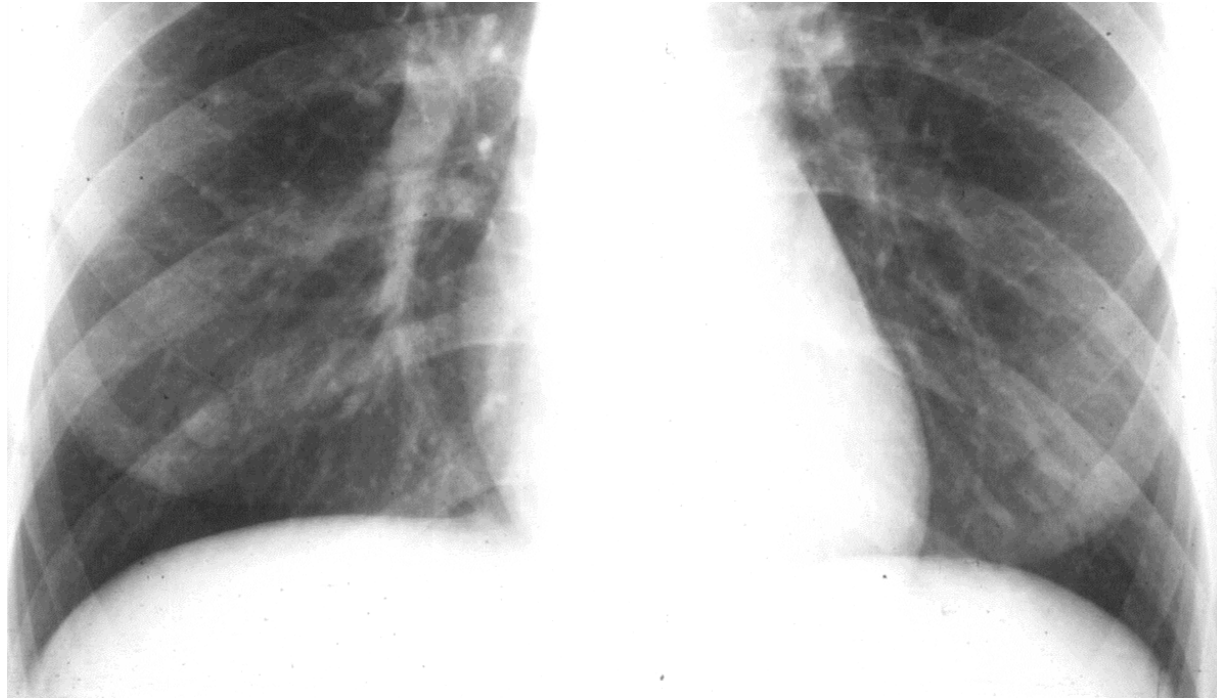


muscles grands pectoraux

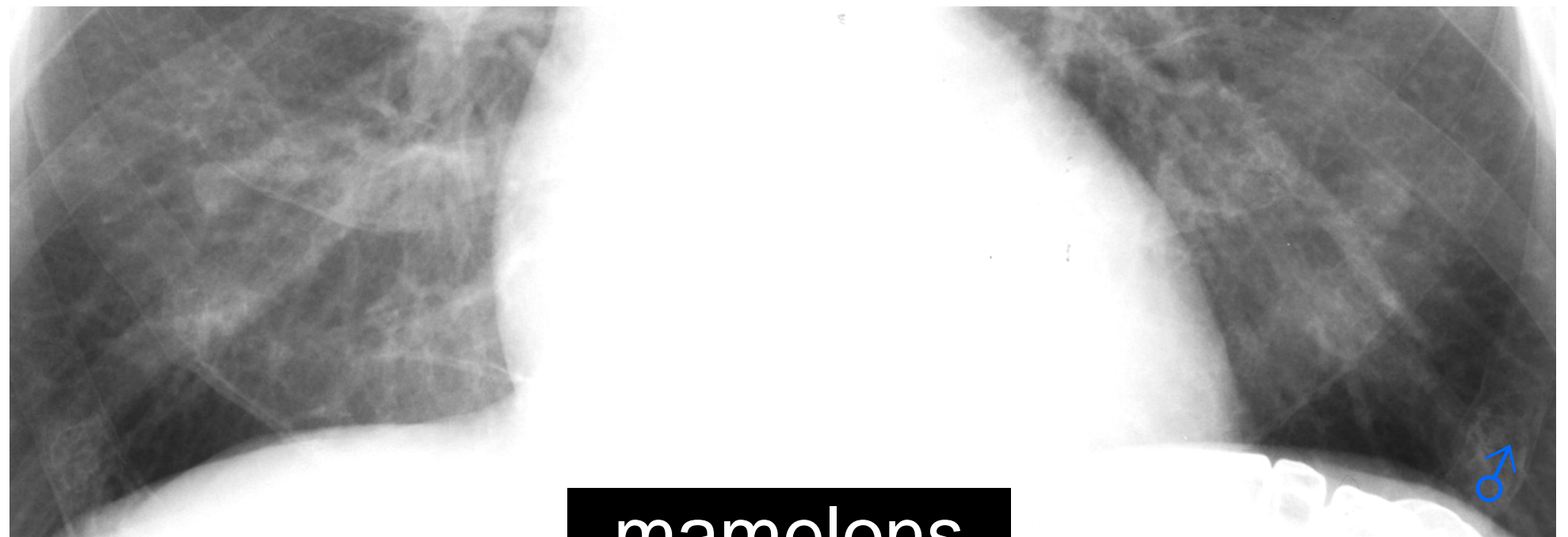
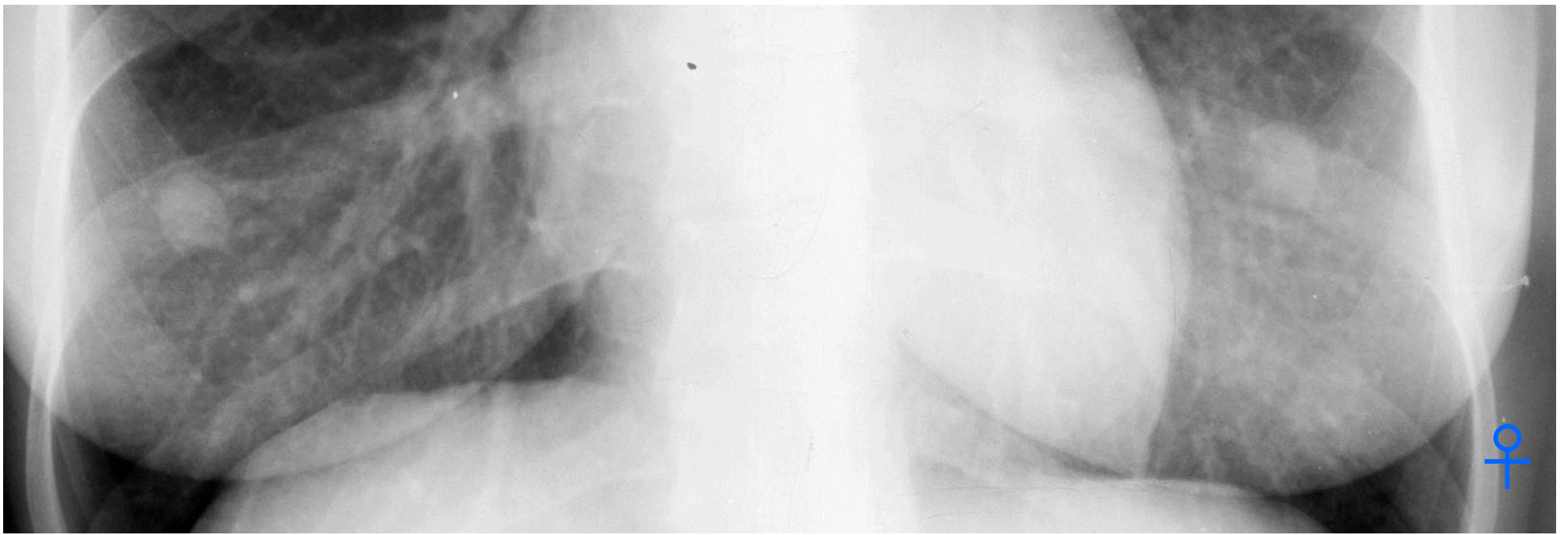
↑↑↑ la limite inférieure
du muscle "sort" de la
limite latérale des
côtes, c'est donc
une
**structure
pariétale**



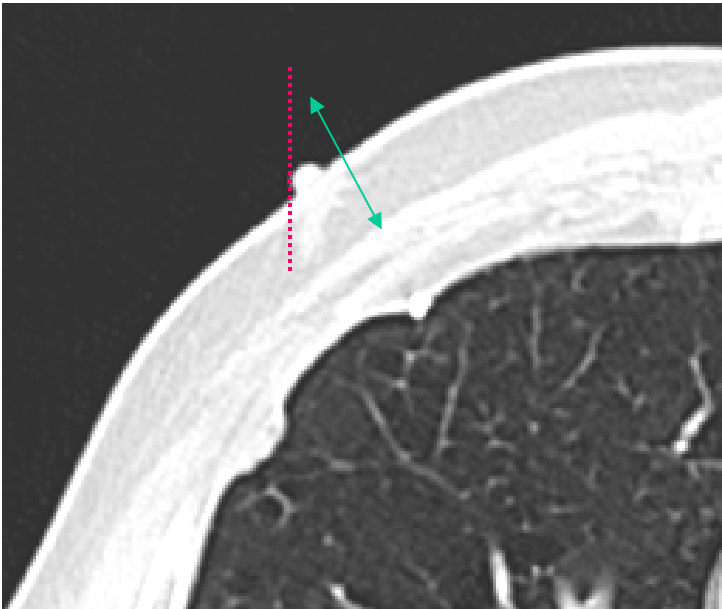
la différence de l'opacité pariétale chez ♀ et ♂
explique l'inversion de la clarté pulmonaire



contour(s) d'une structure
anatomique
visible(s) ou non
si
tangent(s) ou non
aux RX incidents

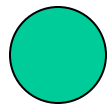


mamelons



mamelon

(pseudo-nodule)



axe du mamelon

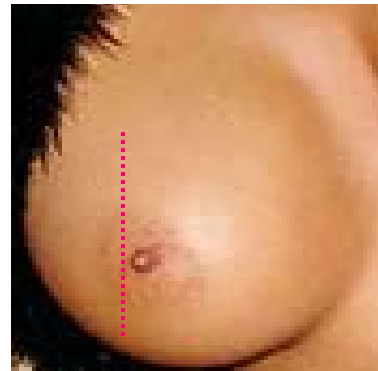
tangence sur
le contour
externe
du mamelon

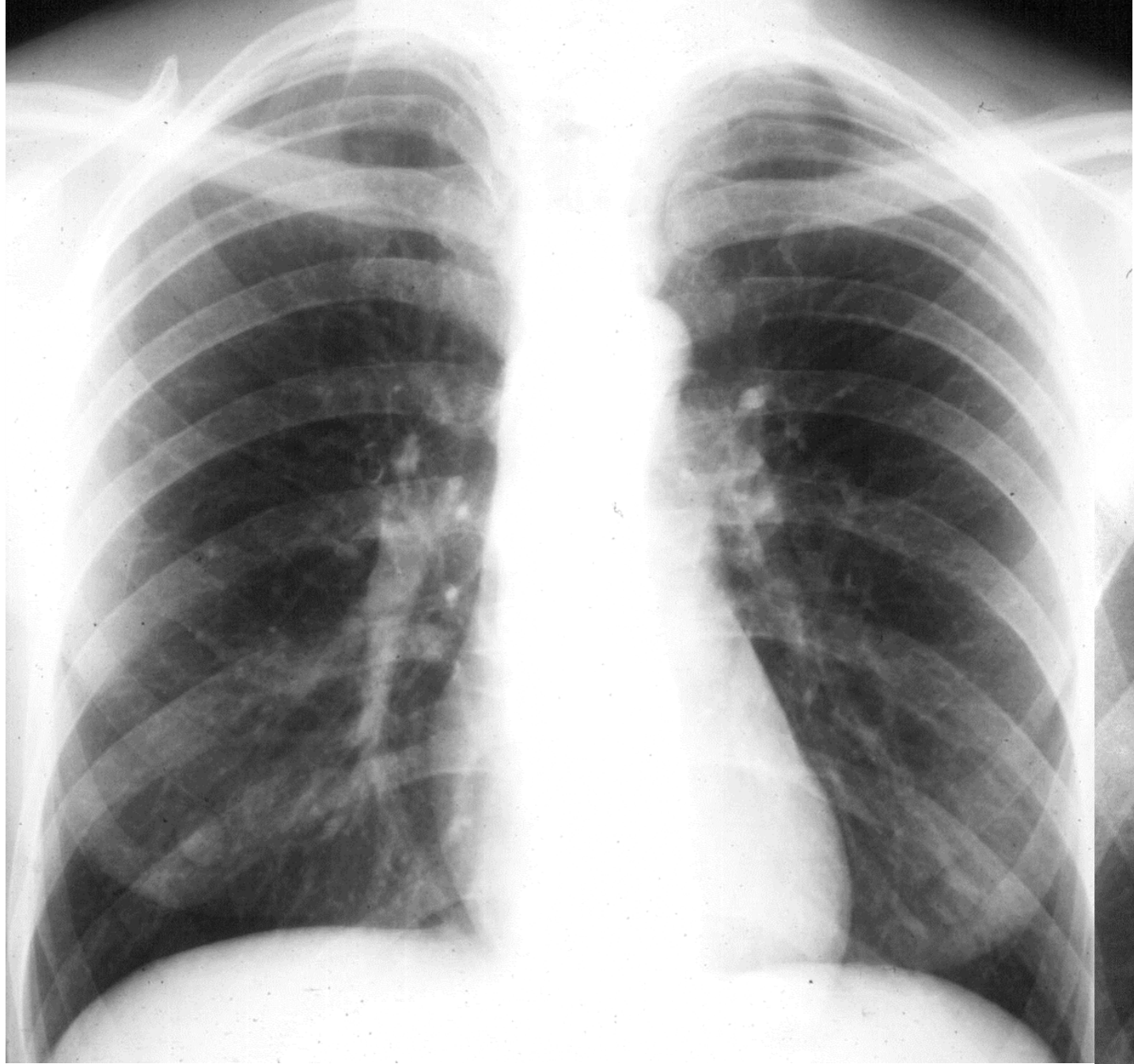
contours

- externe > net

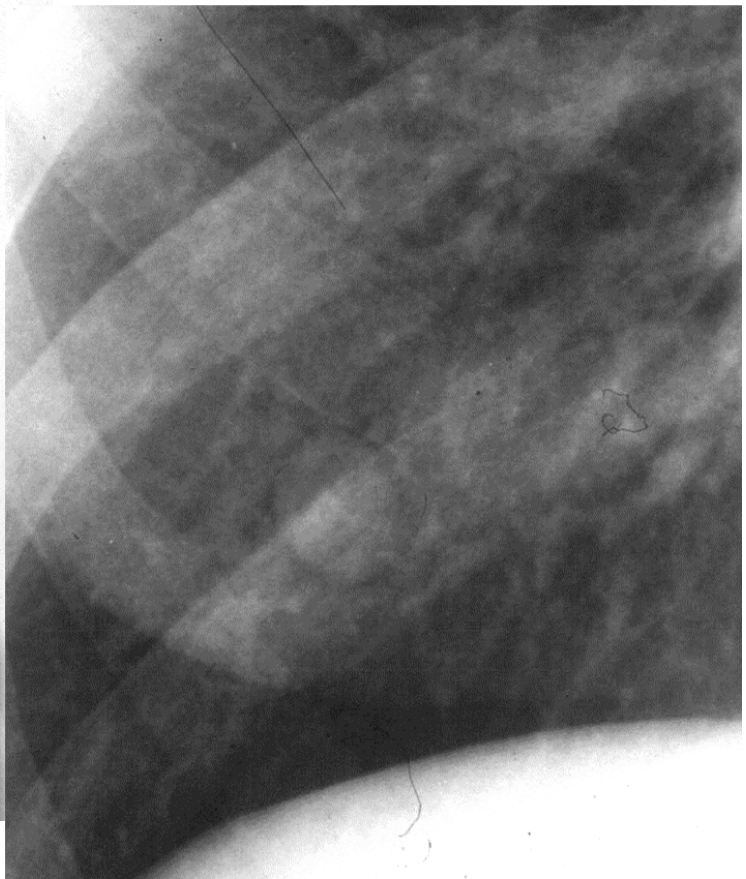
- interne > flou

→ **signe du mamelon**





mamelon
(pseudo-nodule
= opacité ronde
pariétale)
parfois à confirmer
par une radioscopie !!





nodules
multiples



mammectomie gauche

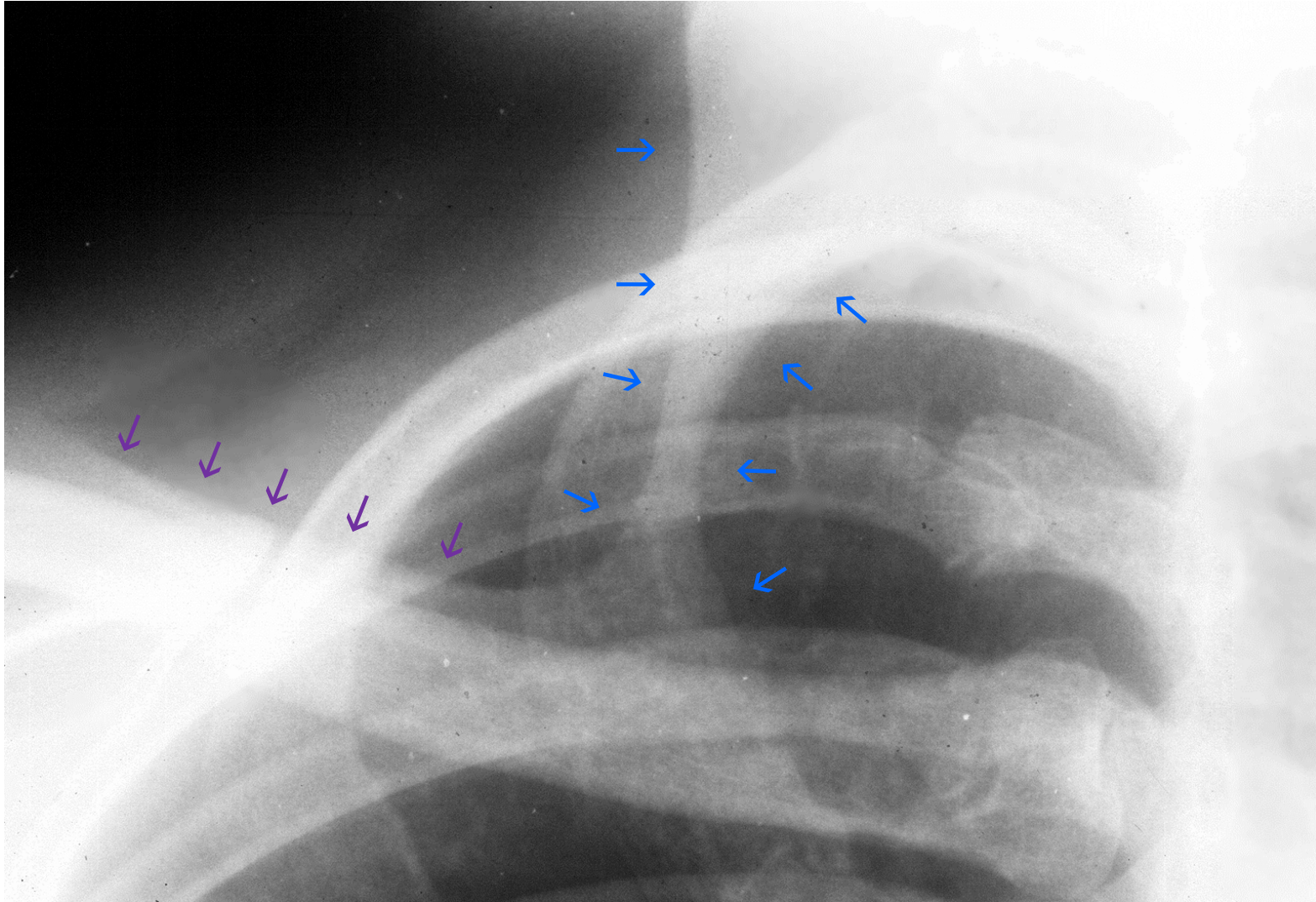


prothèses mammaires calcifiées

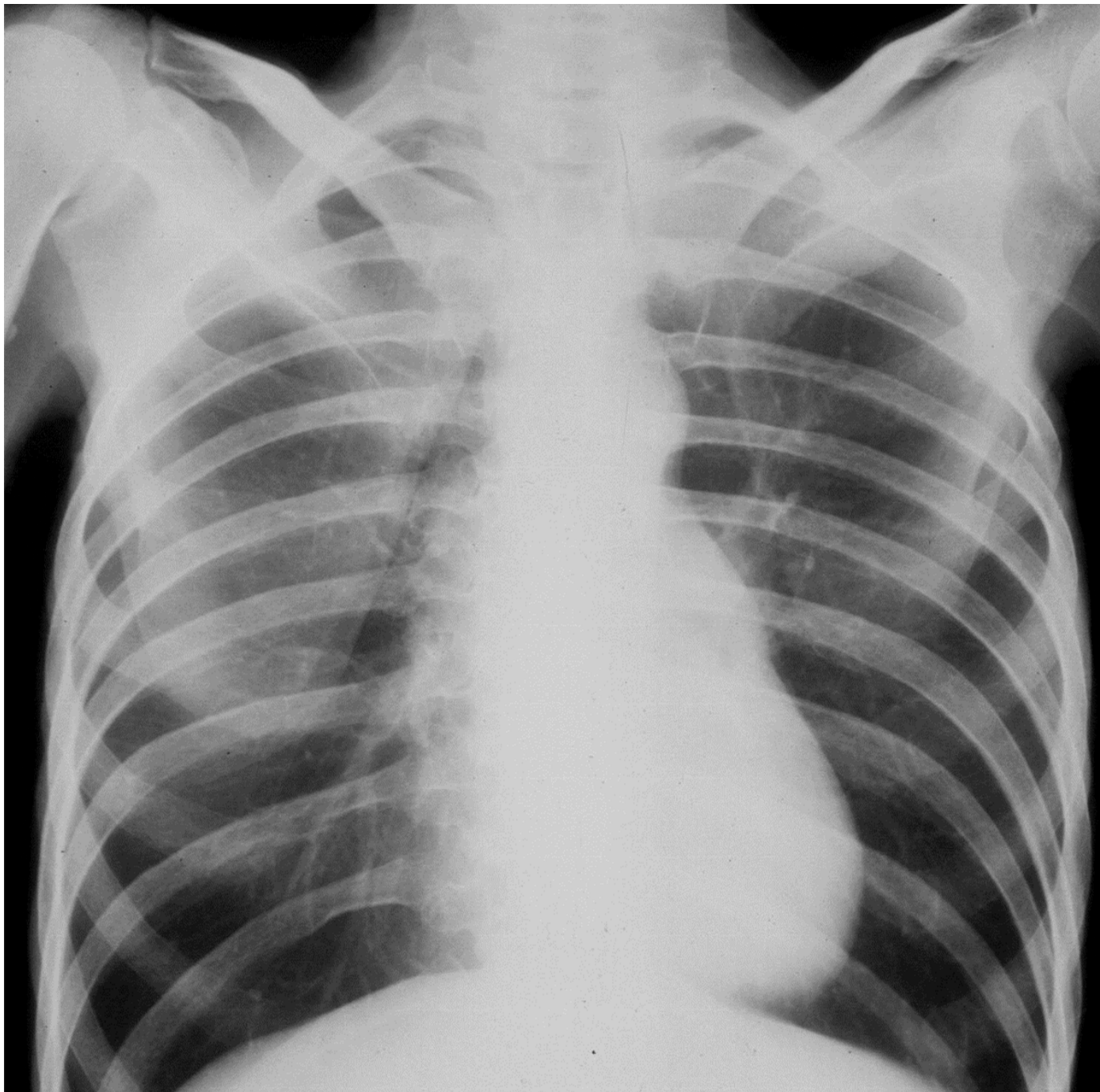


piercings des mamelons

→ image en "sablier" construite par



↓ bande compagne du bord supérieur de la clavicule (peau)



structures
squelettiques

arcs postérieurs

1

2

3

4

5

6

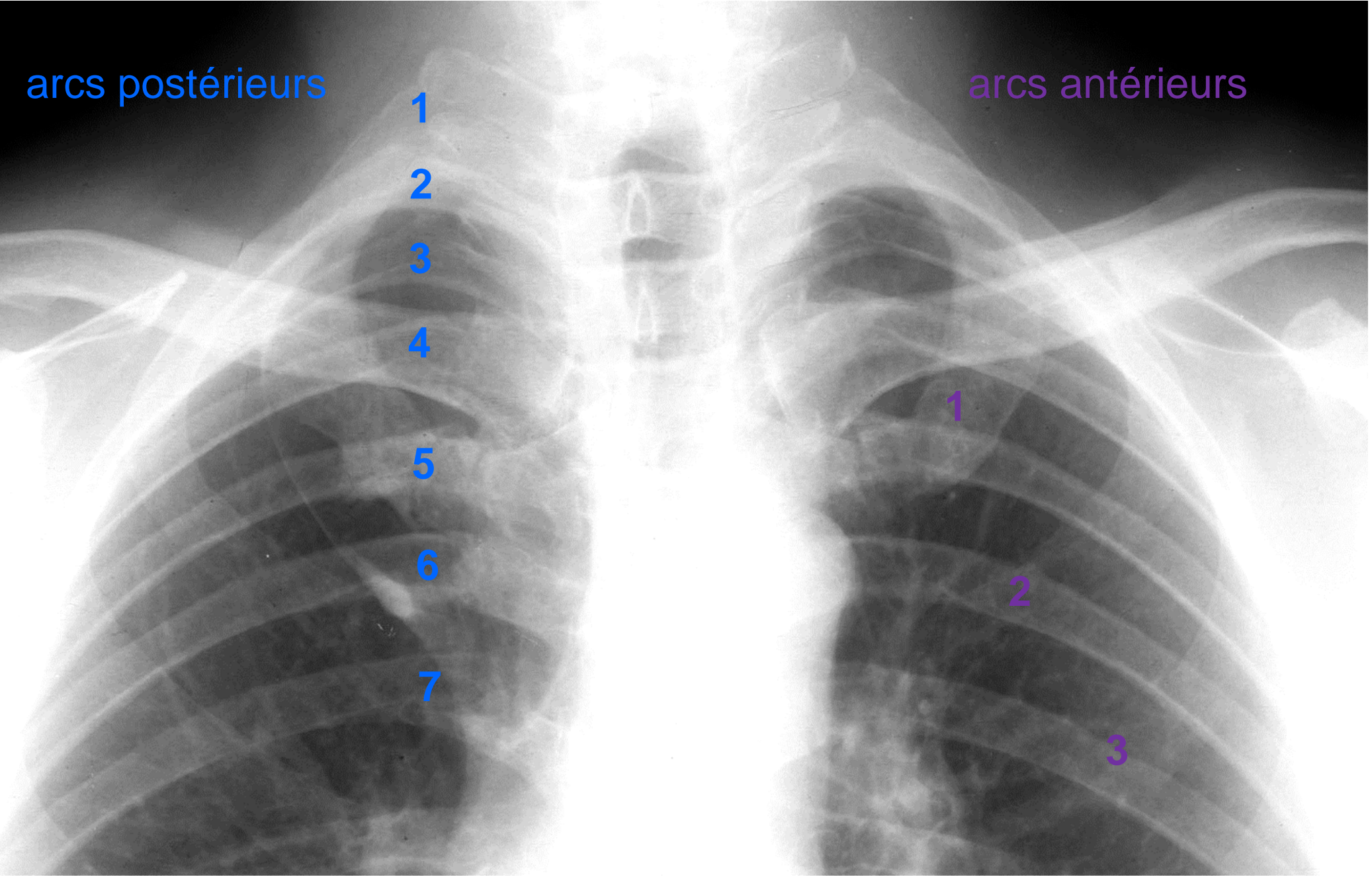
7

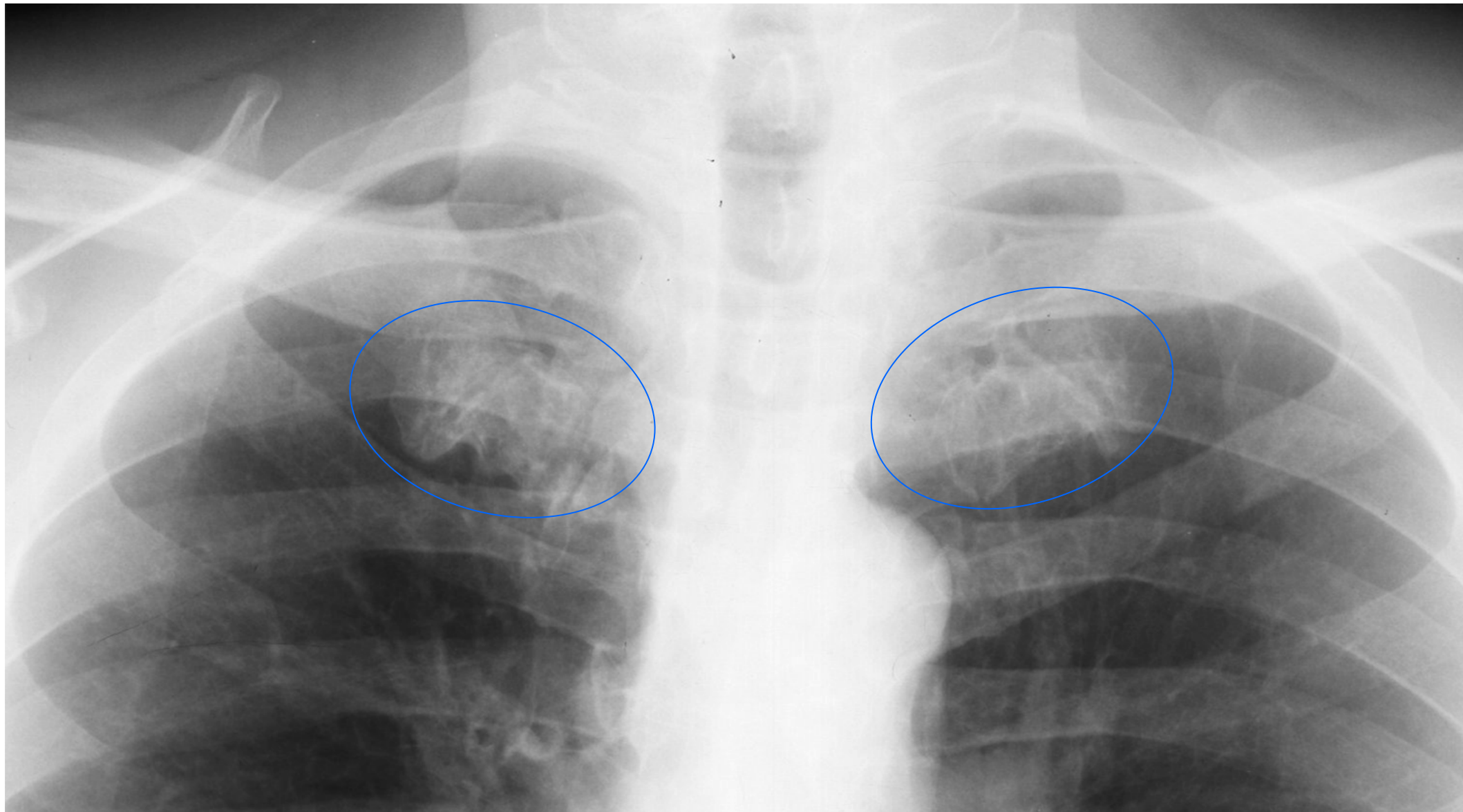
arcs antérieurs

1

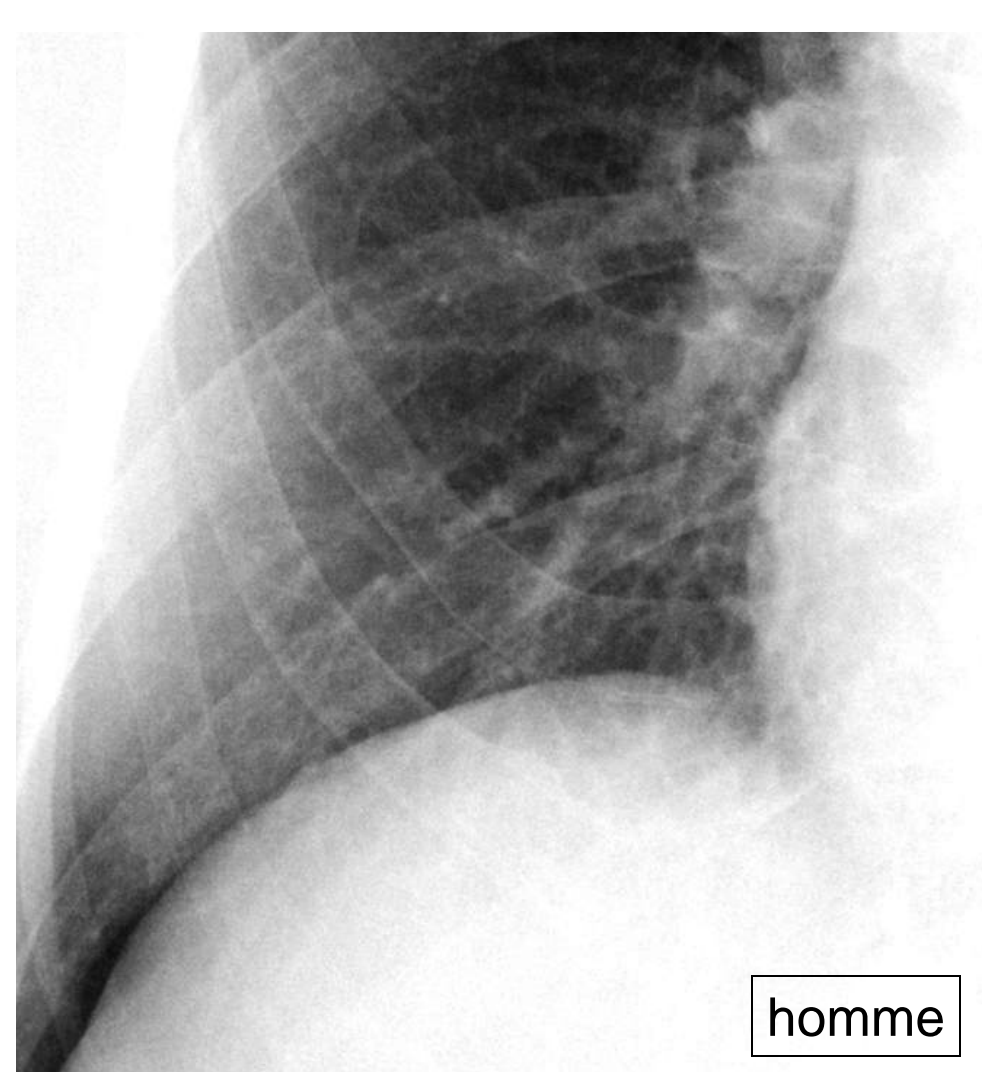
2

3





calcification du cartilage des 1ères côtes

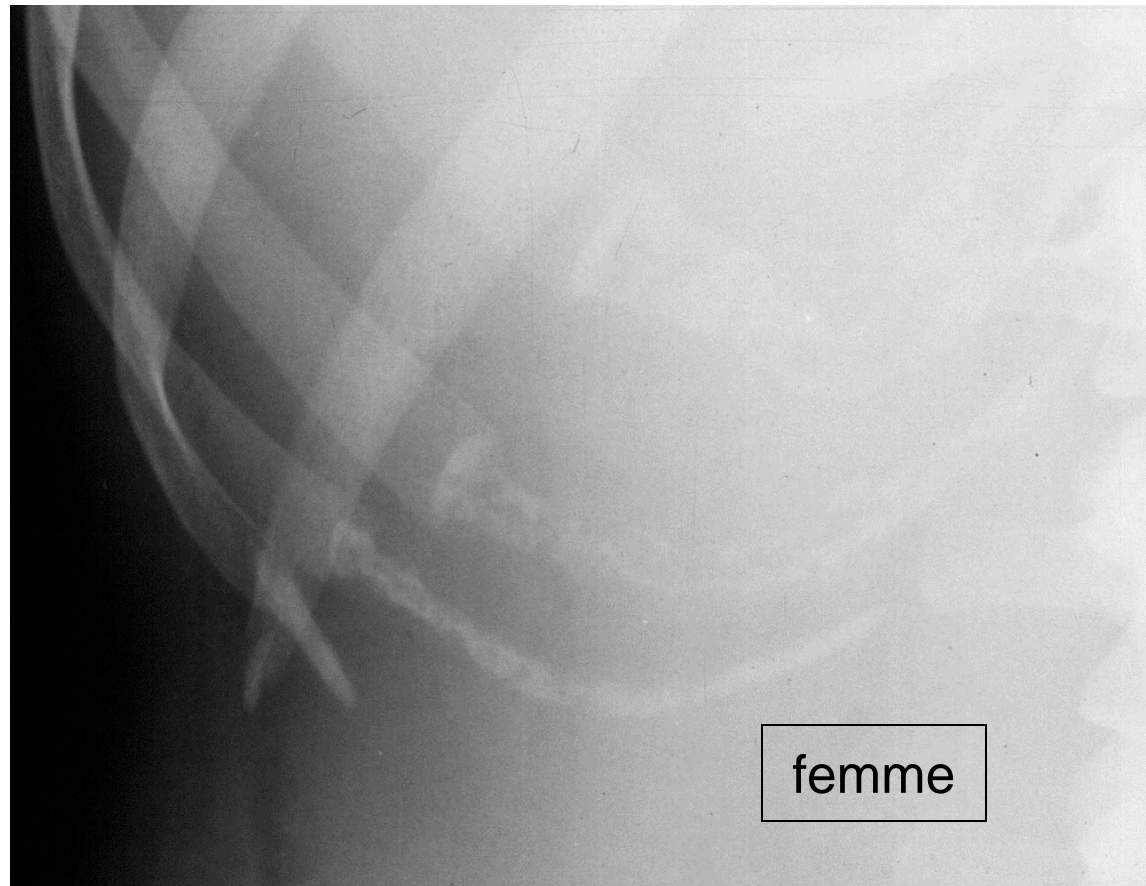


homme

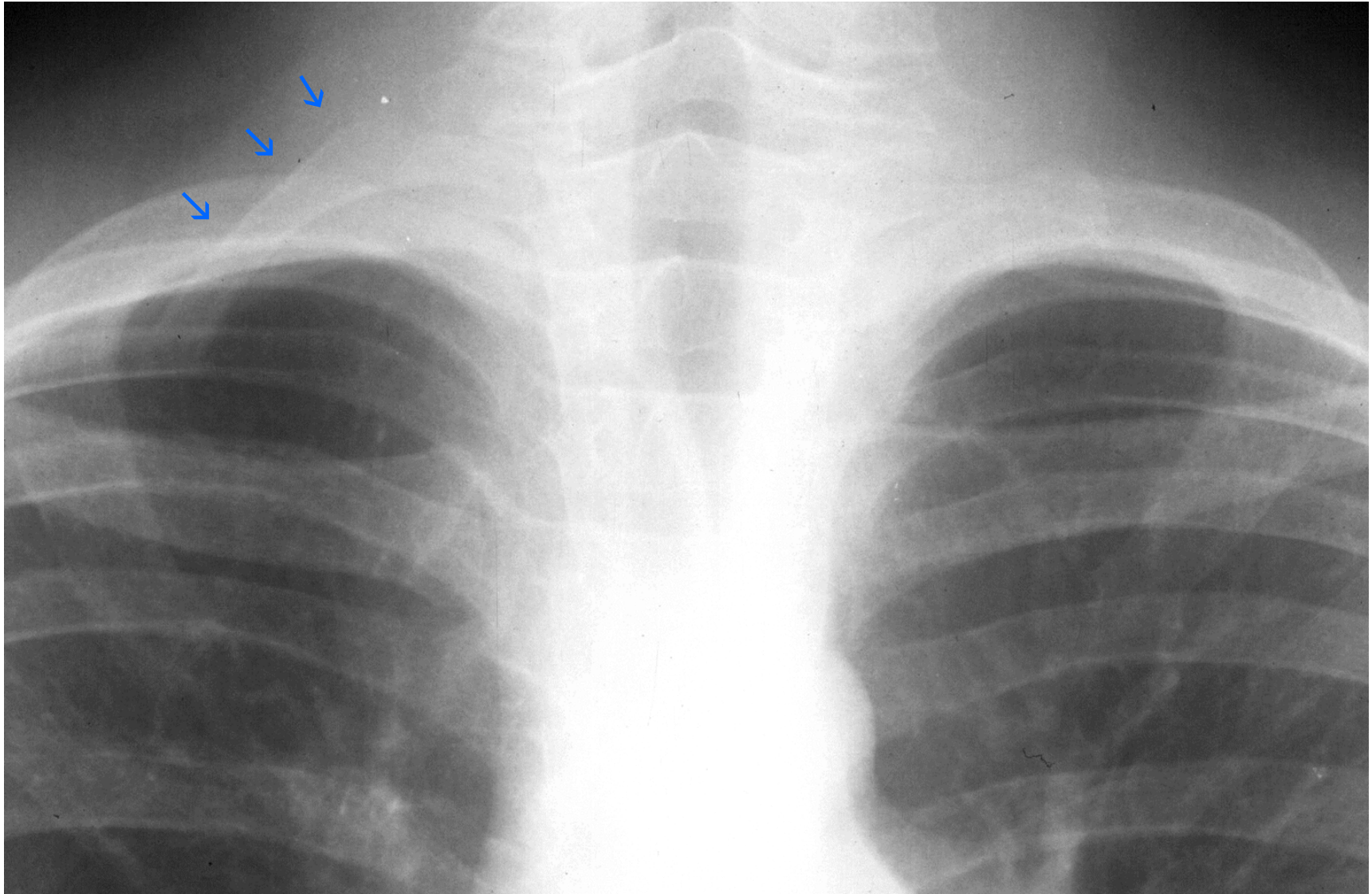
♂ marginales

♀ centrales

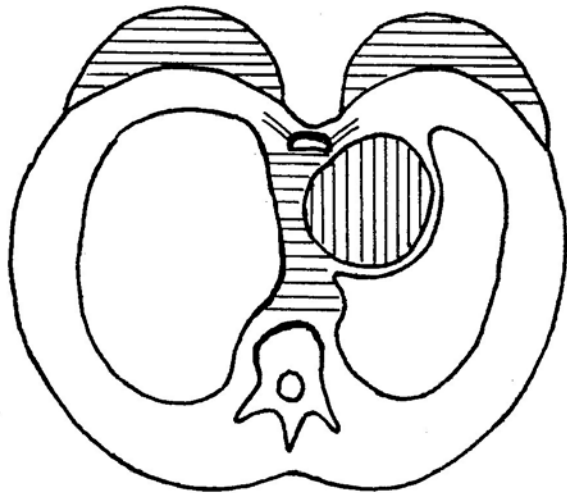
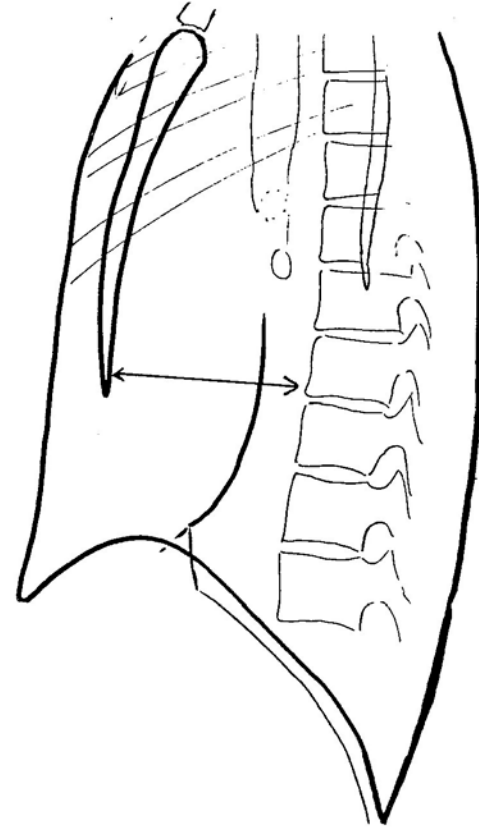
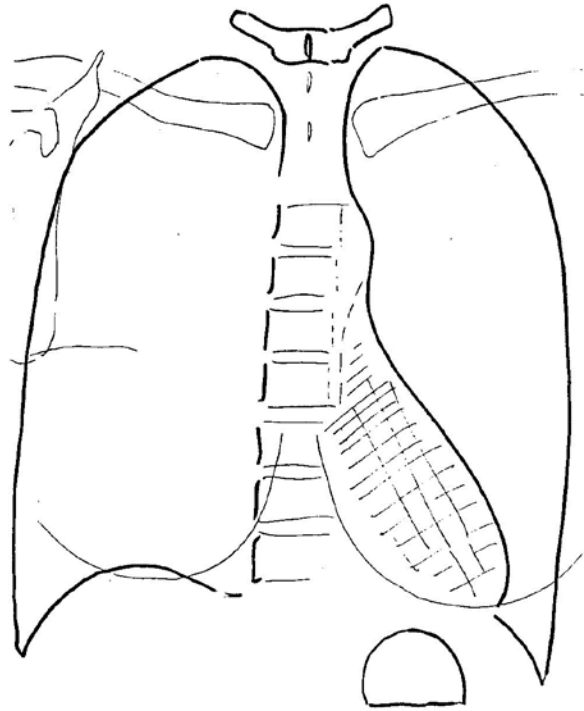
calcifications de
cartilages costaux



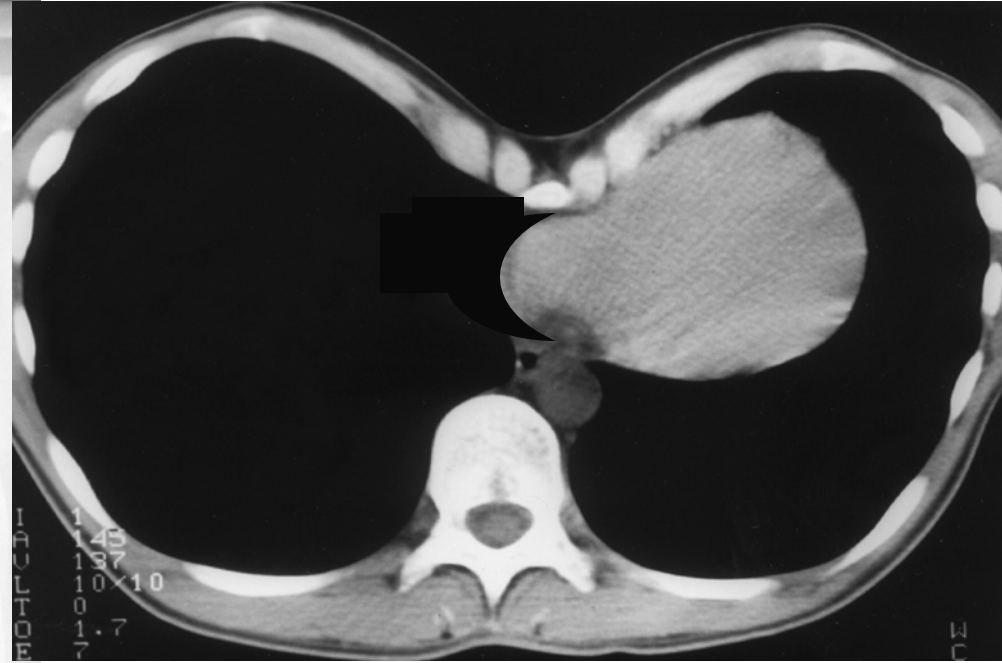
femme



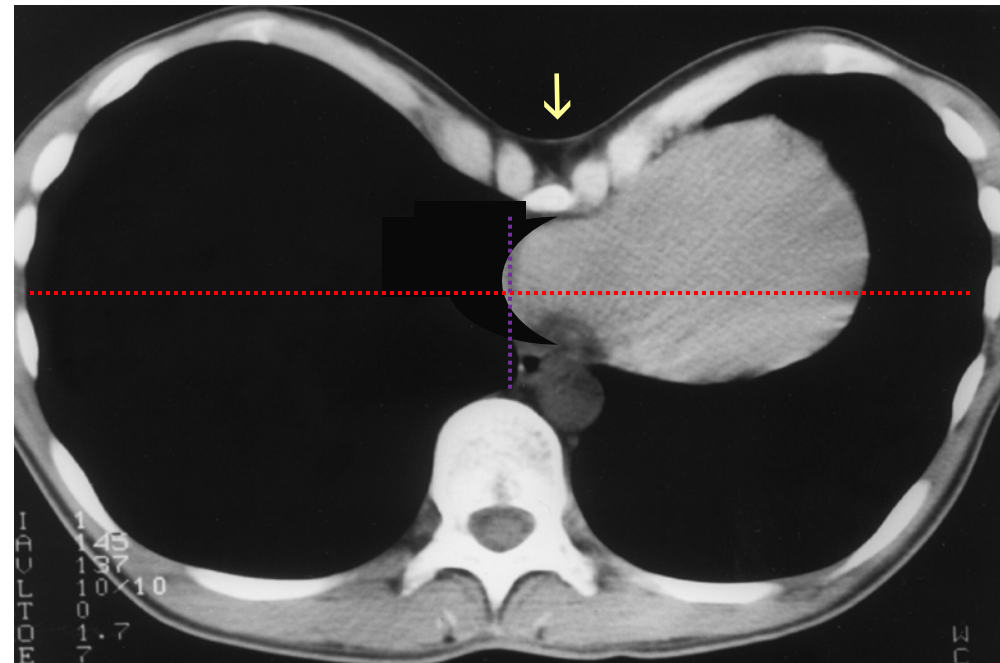
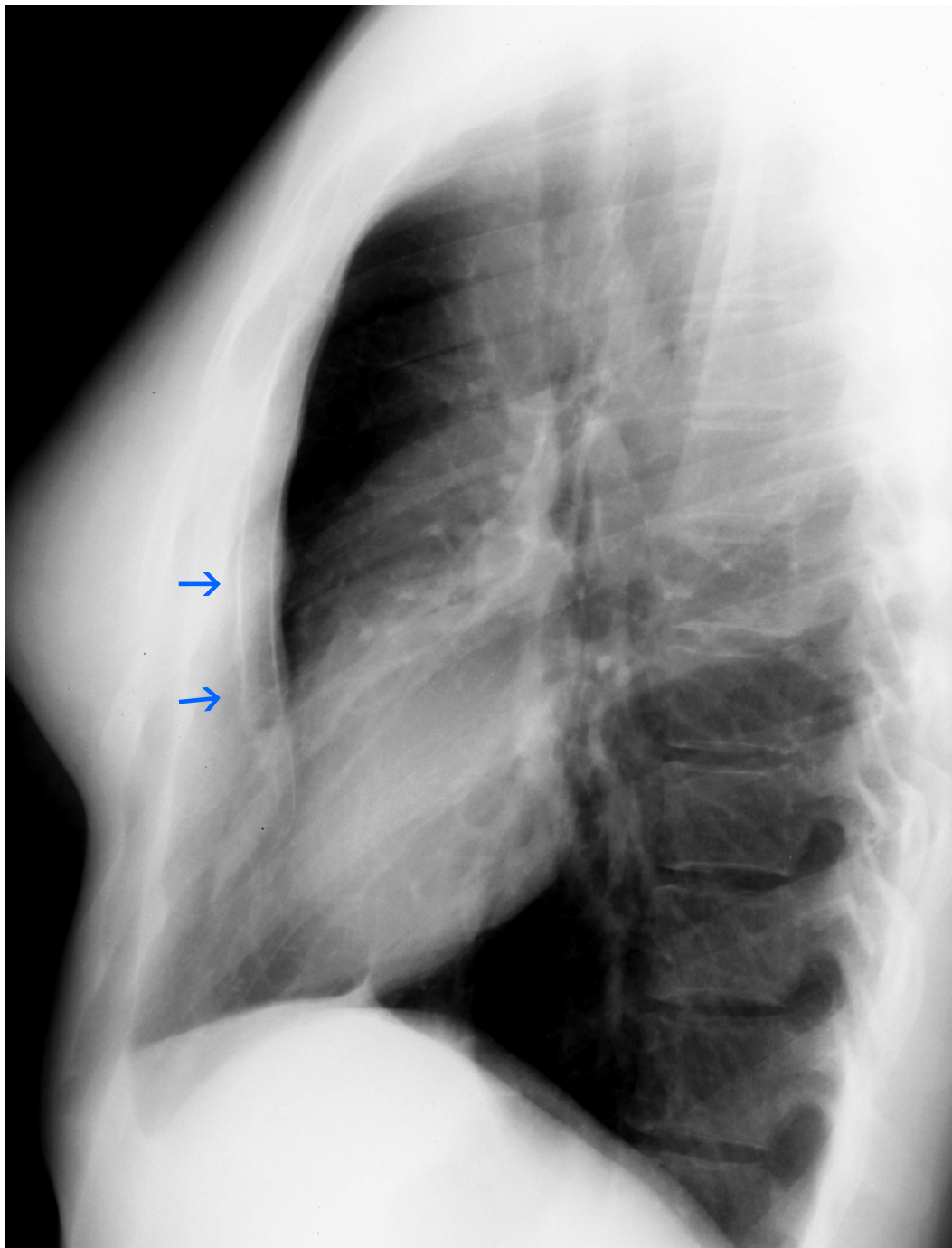
côte surnuméraire cervicale



pectus excavatum



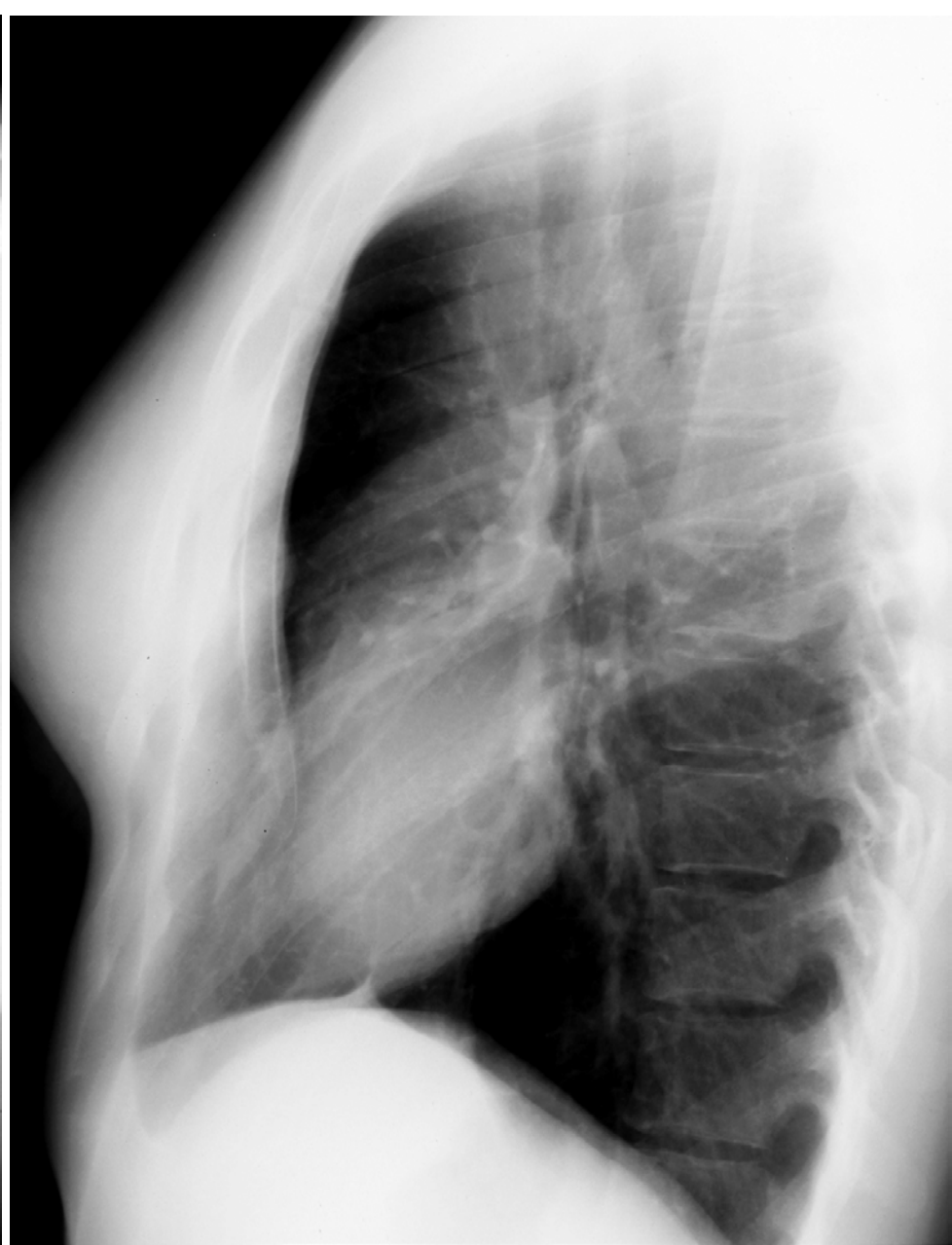
thorax en "entonnoir" (pectus excavatum)



index de Haller = **diamètre** / diamètre

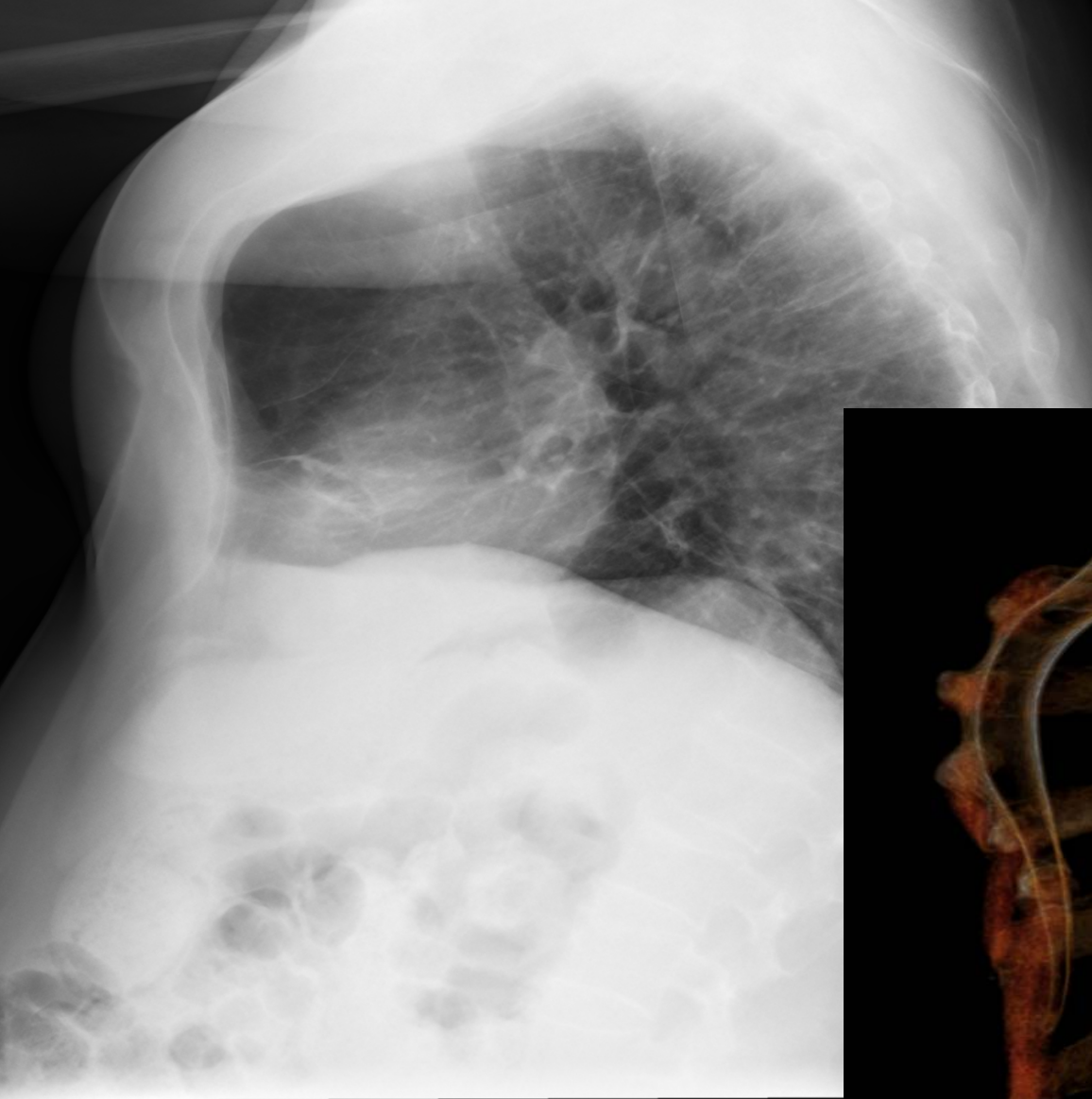
si $\geq 3,25$, cliniquement significatif
(fatigue, malaise, palpitations ...)

thorax en "entonnoir"
(pectus excavatum)

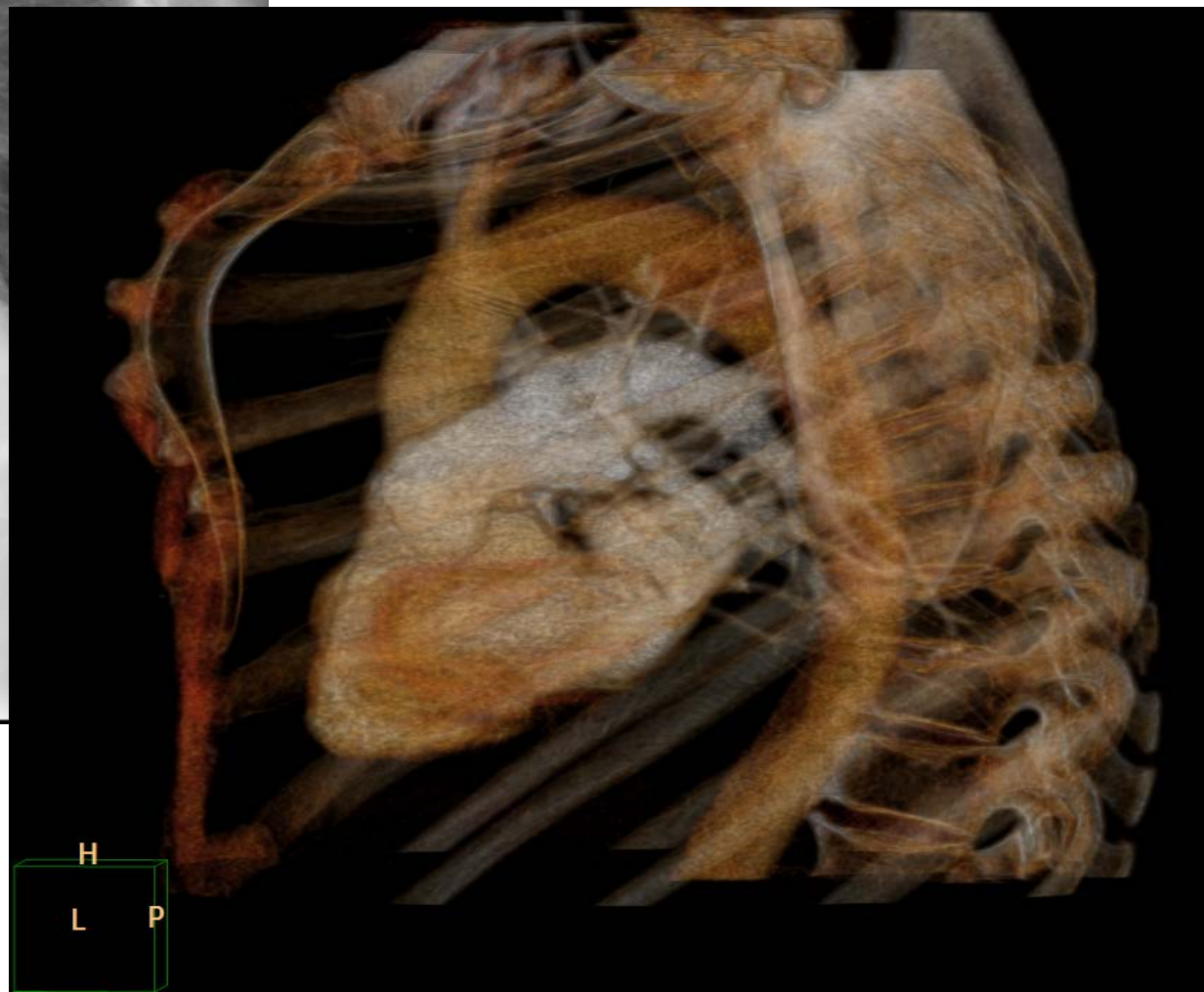


thorax en "entonnoir" (pectus excavatum)

Thorax en carène

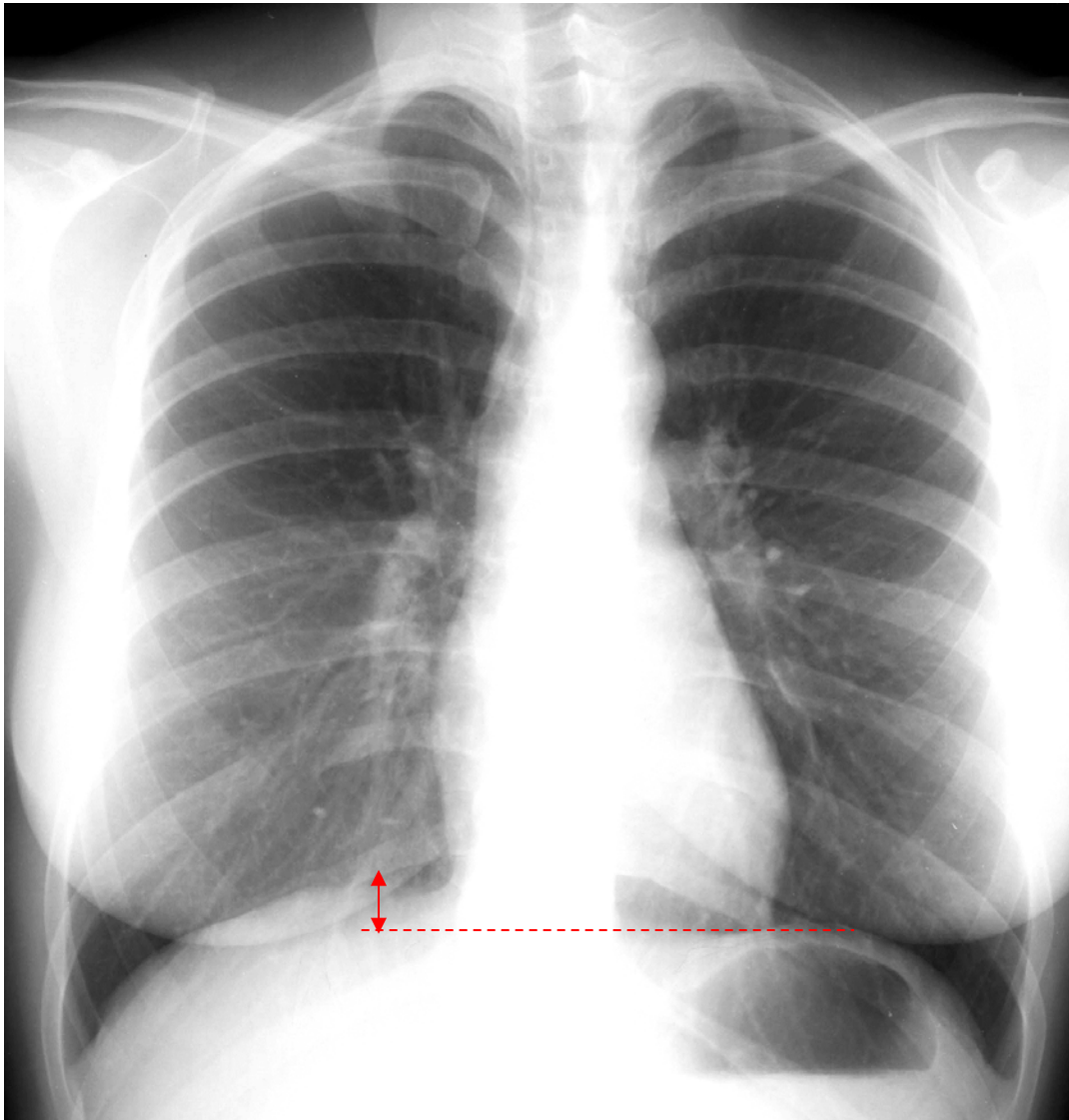


Pectus carinatum



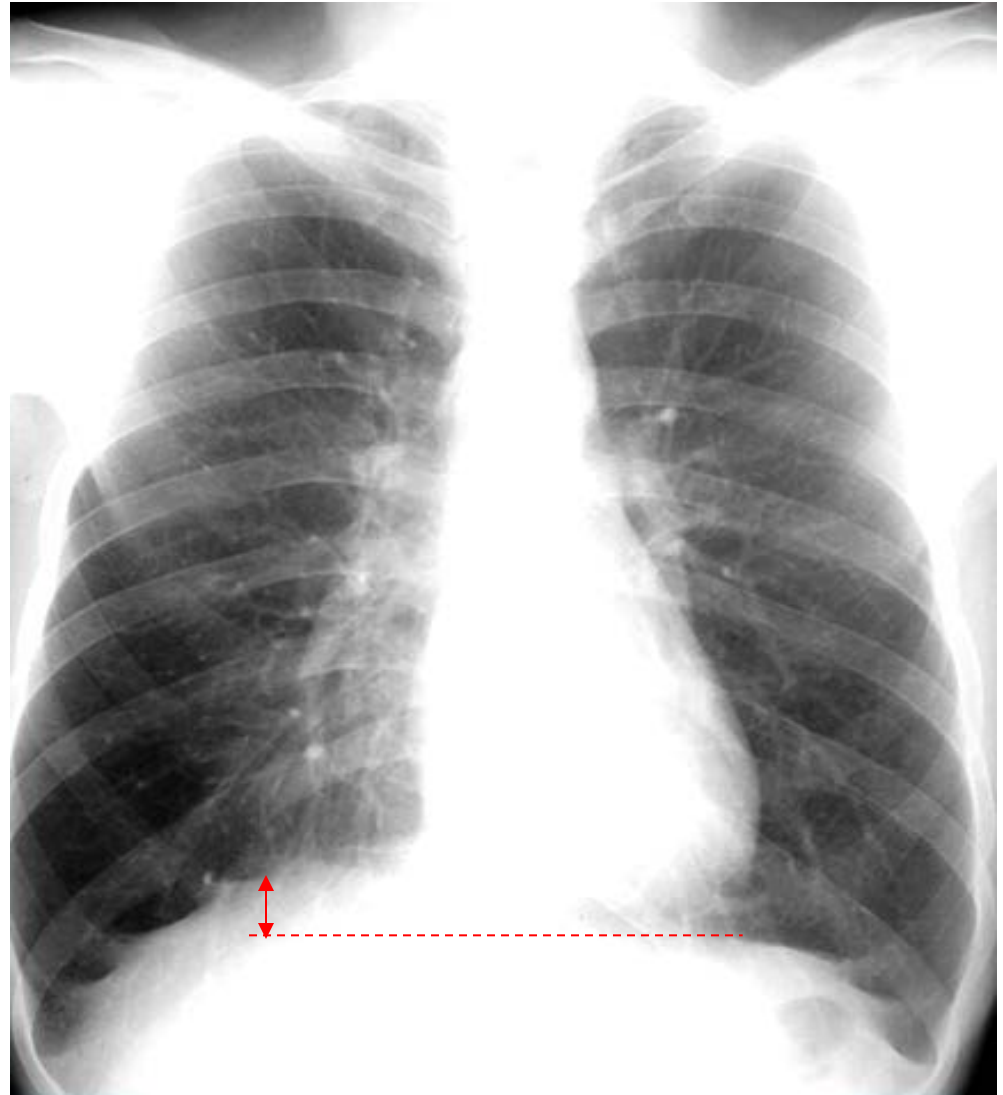
Diaphragme et sinus costo diaphragmatiques

- Diaphragme : 2 coupoles
 - Sinus costo diaphragmatiques
 - de profil : postérieurs

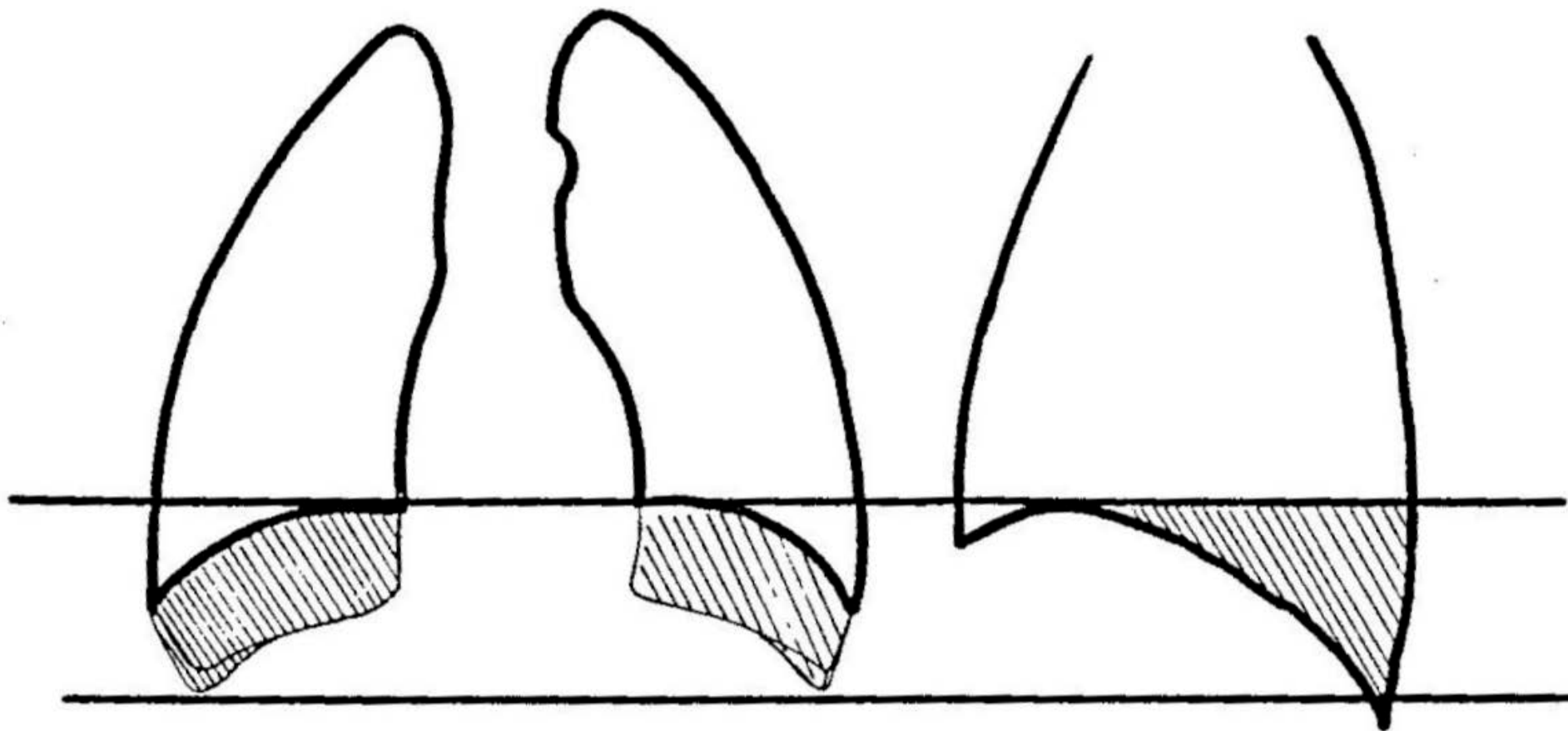


inspiration profonde

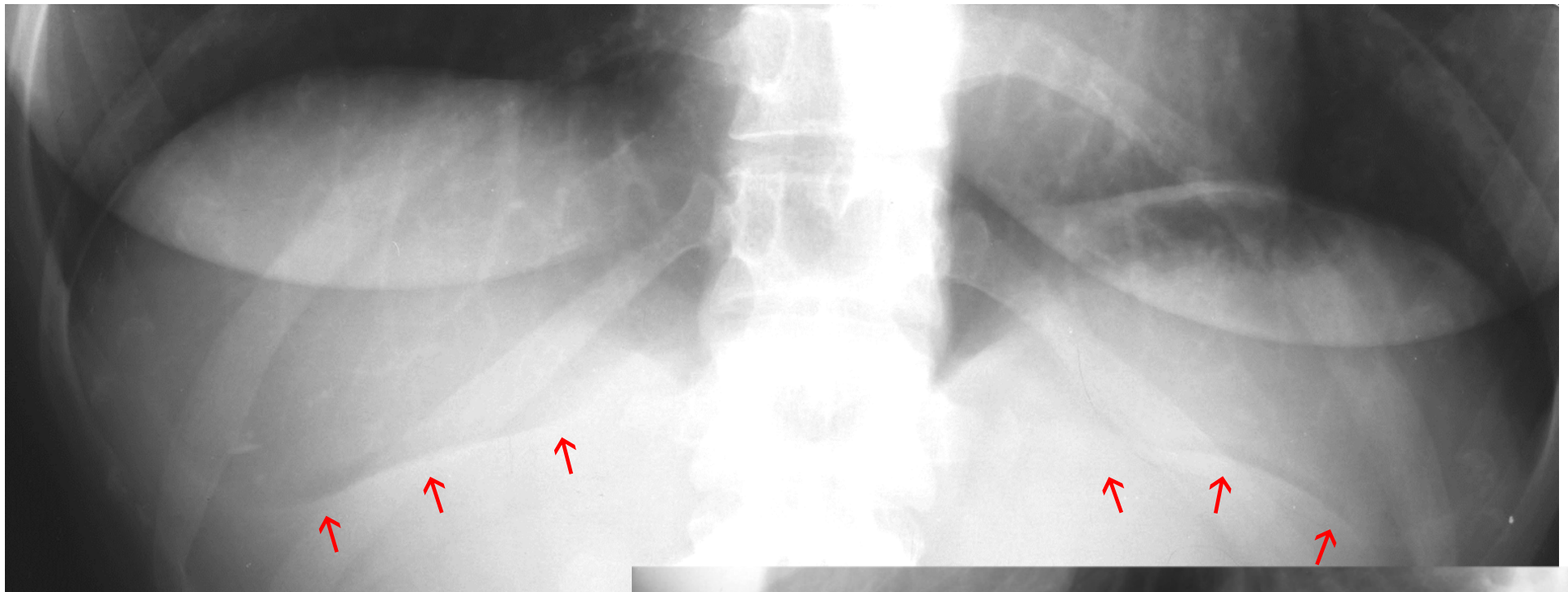
↕ 1 à 2 cm



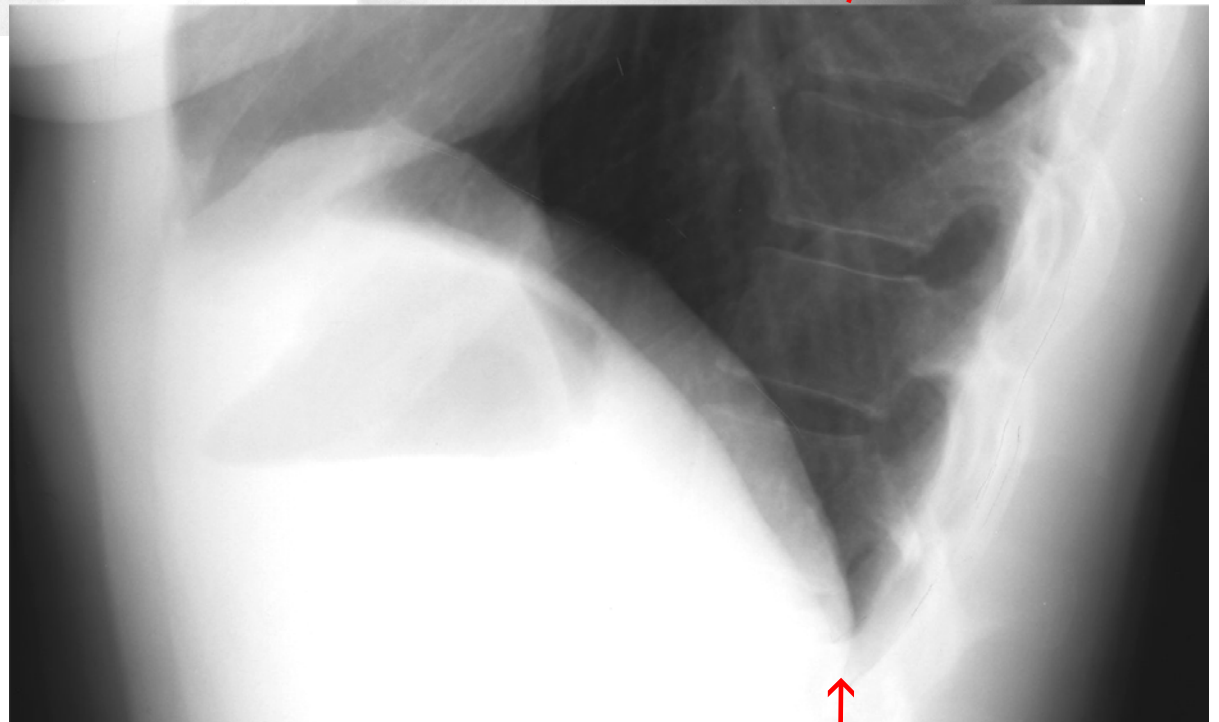
inspiration très profonde
coupoles en "escalier"
(insertions costales)

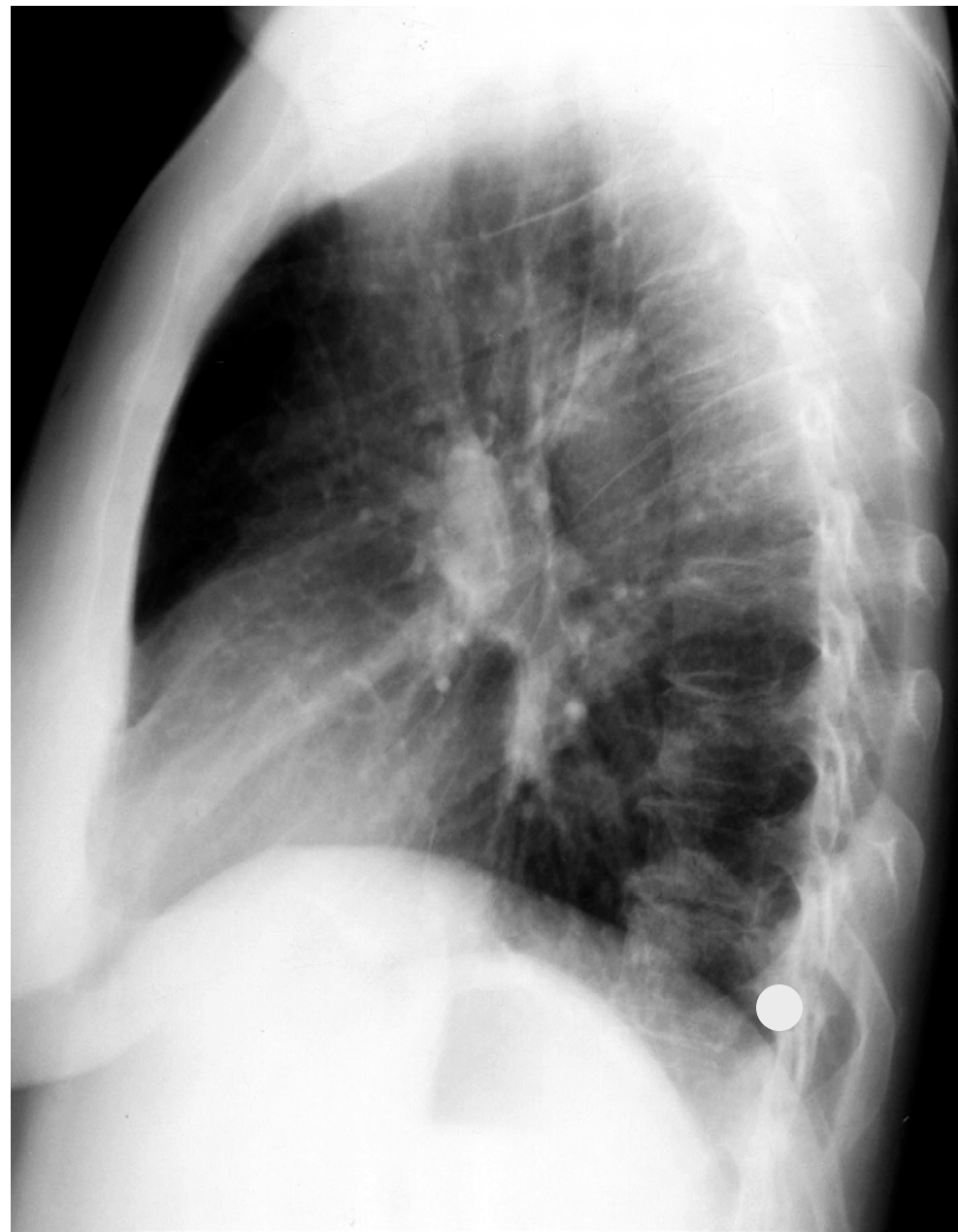
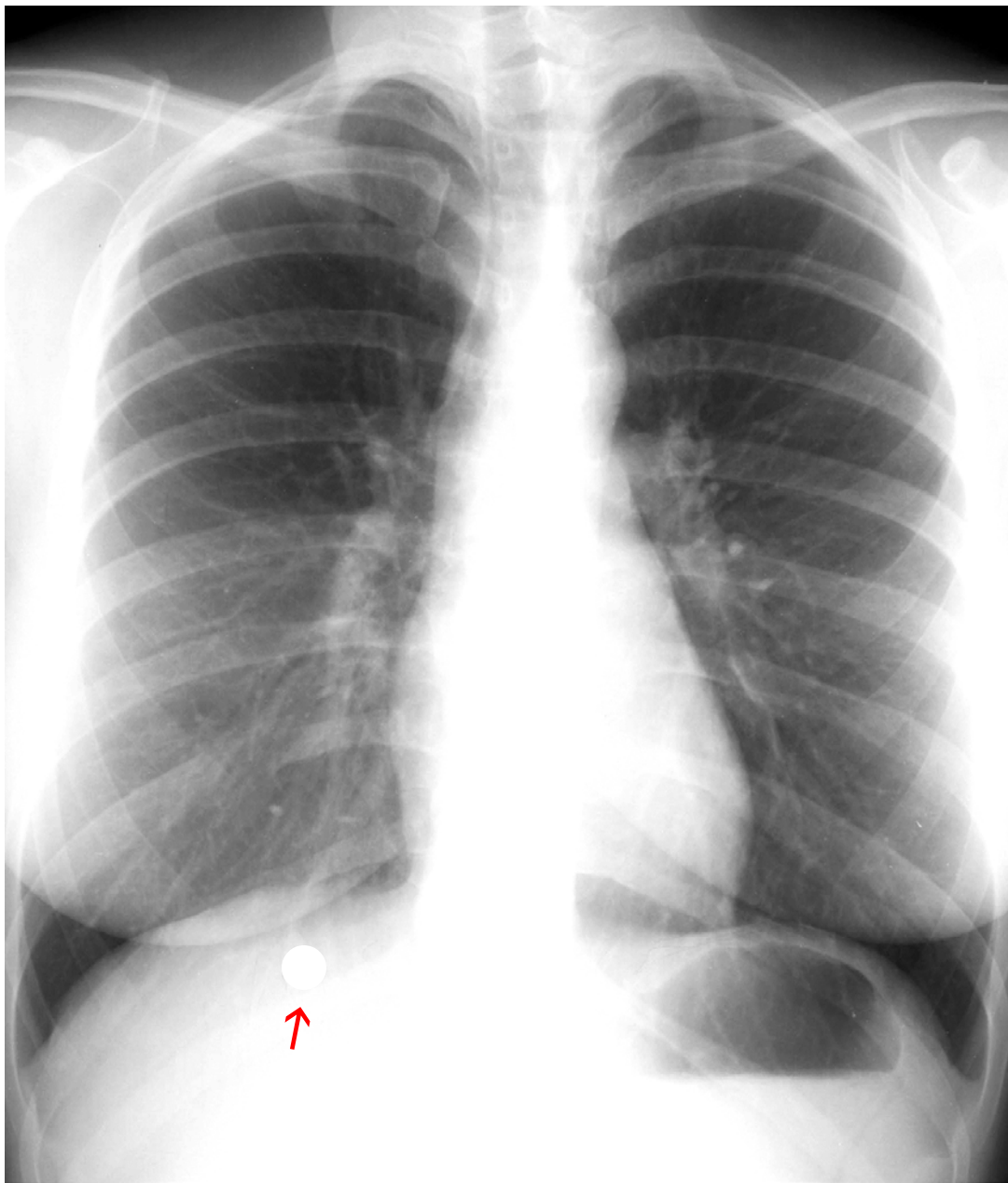


portions hachurées projetées sous la limite radiologique
des coupes diaphragmatiques sur le cliché de face et
donc peu visibles sur le cliché de face



**sinus costo-
diaphragmatiques
postérieurs**
(mieux visibles en profil)



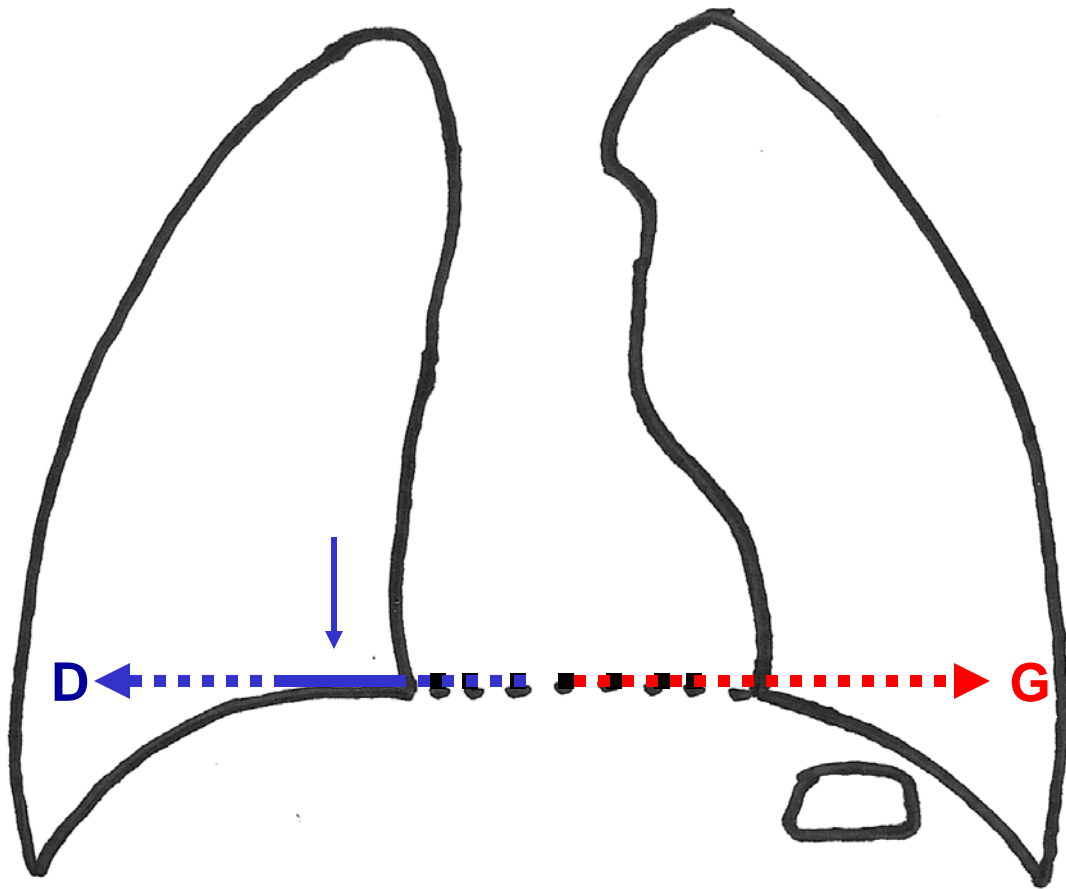


pseudo-lésion dans le sinus costo-diaphragmatique postérieur droit (valeur du cliché de profil)

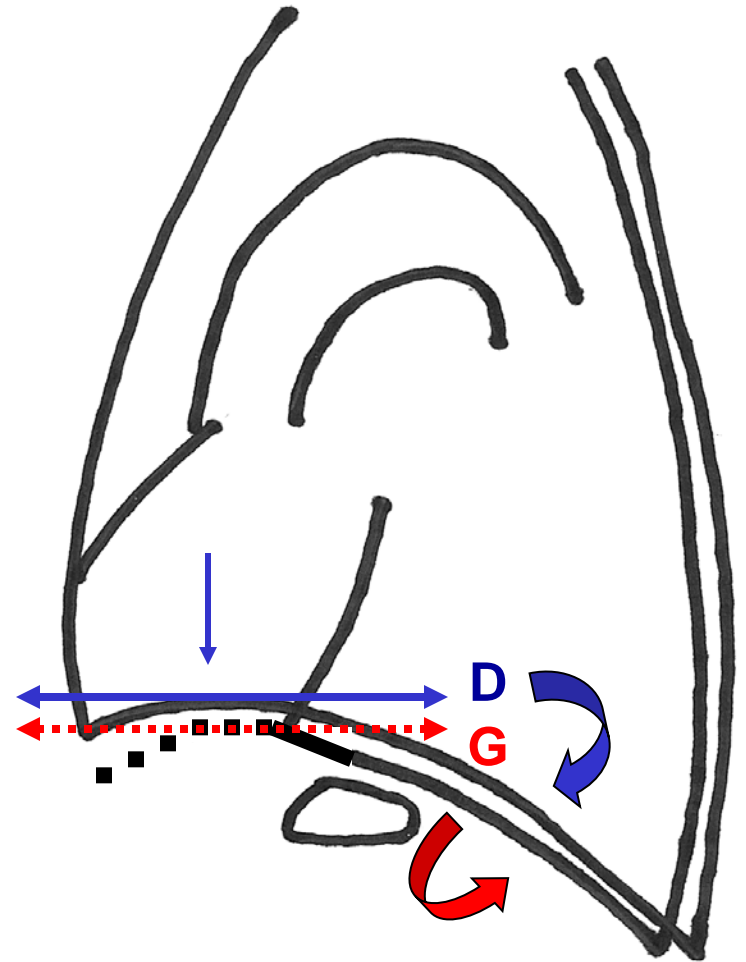
Diaphragme et sinus costo diaphragmatiques

Sinus costo diaphragmatiques

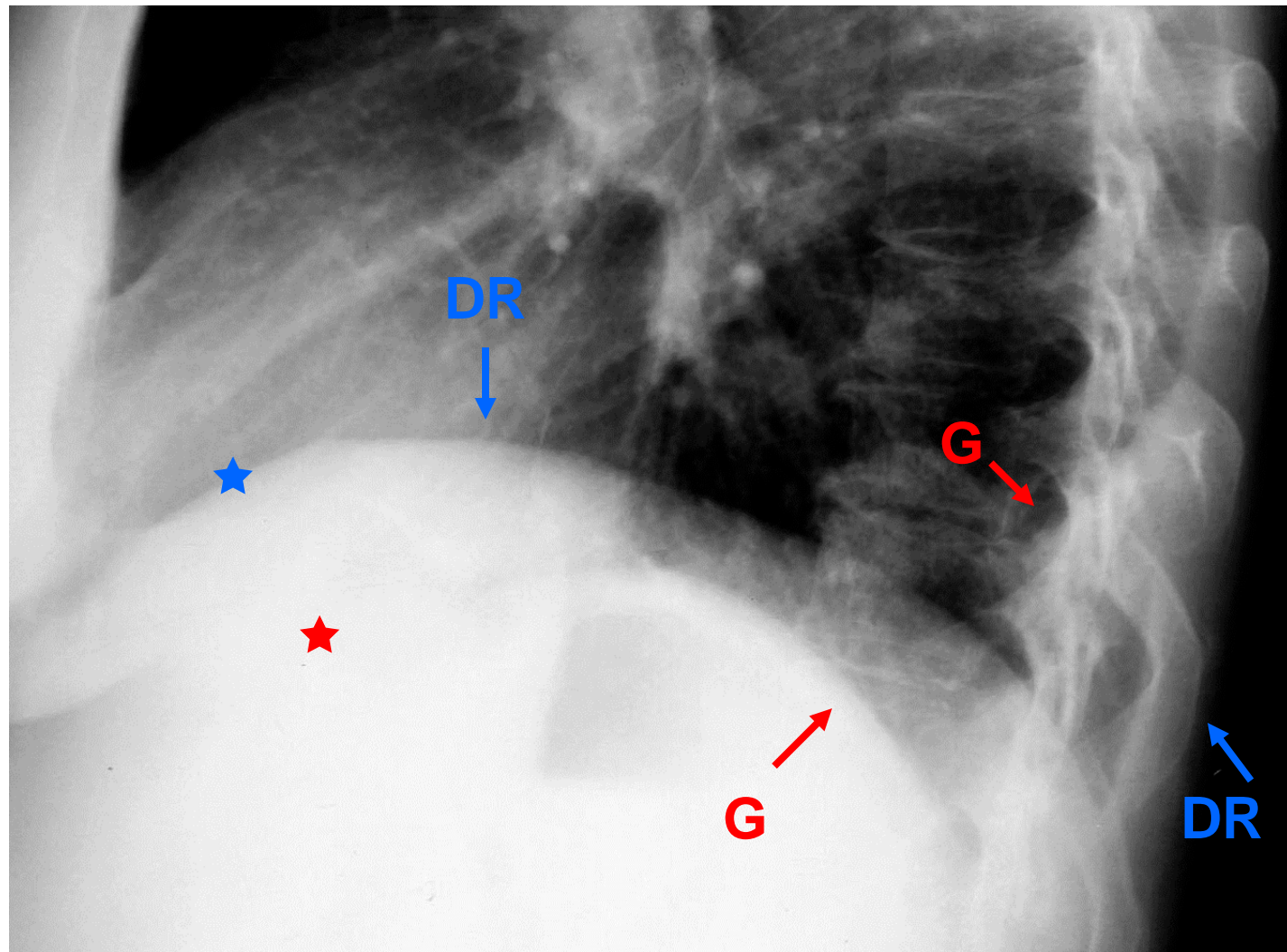
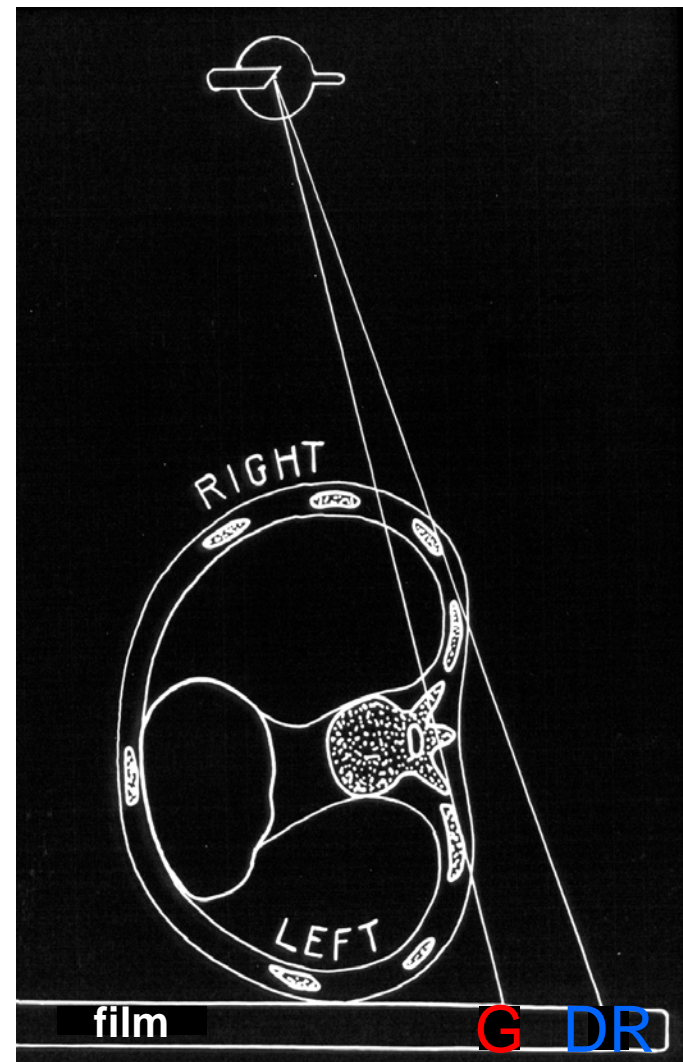
- de face : OK
- de profil : identifier les 2 coupoles
diaphragmatiques



coudes diaphragmatiques



portions antérieures et internes :
 ↓ tangence aérique uniquement sur la droite

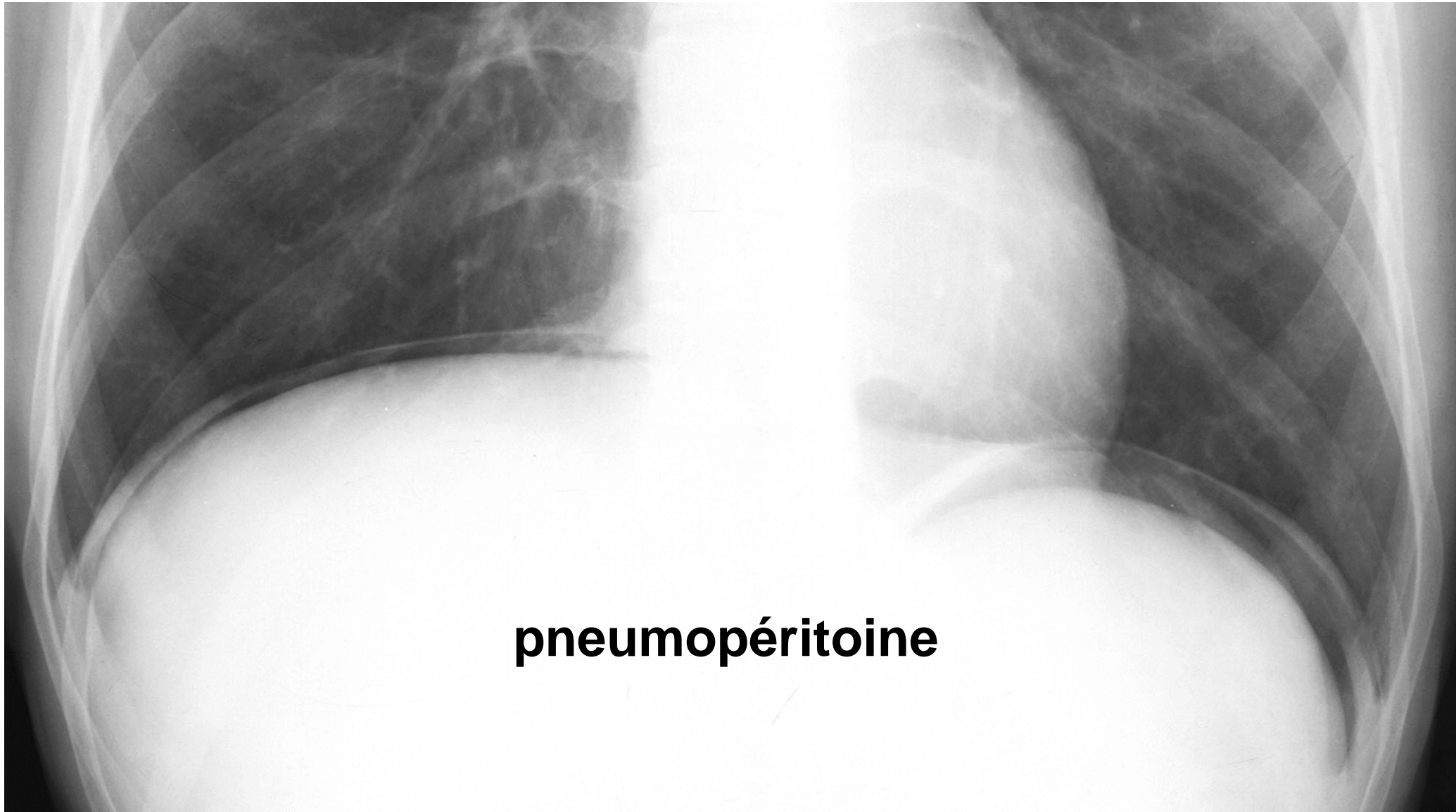


G DR

coupole DR → "grandes" côtes

coupole G → "petites" côtes

★ portion antérieure de la coupole G non visible



pneumopéritoine

Plèvre

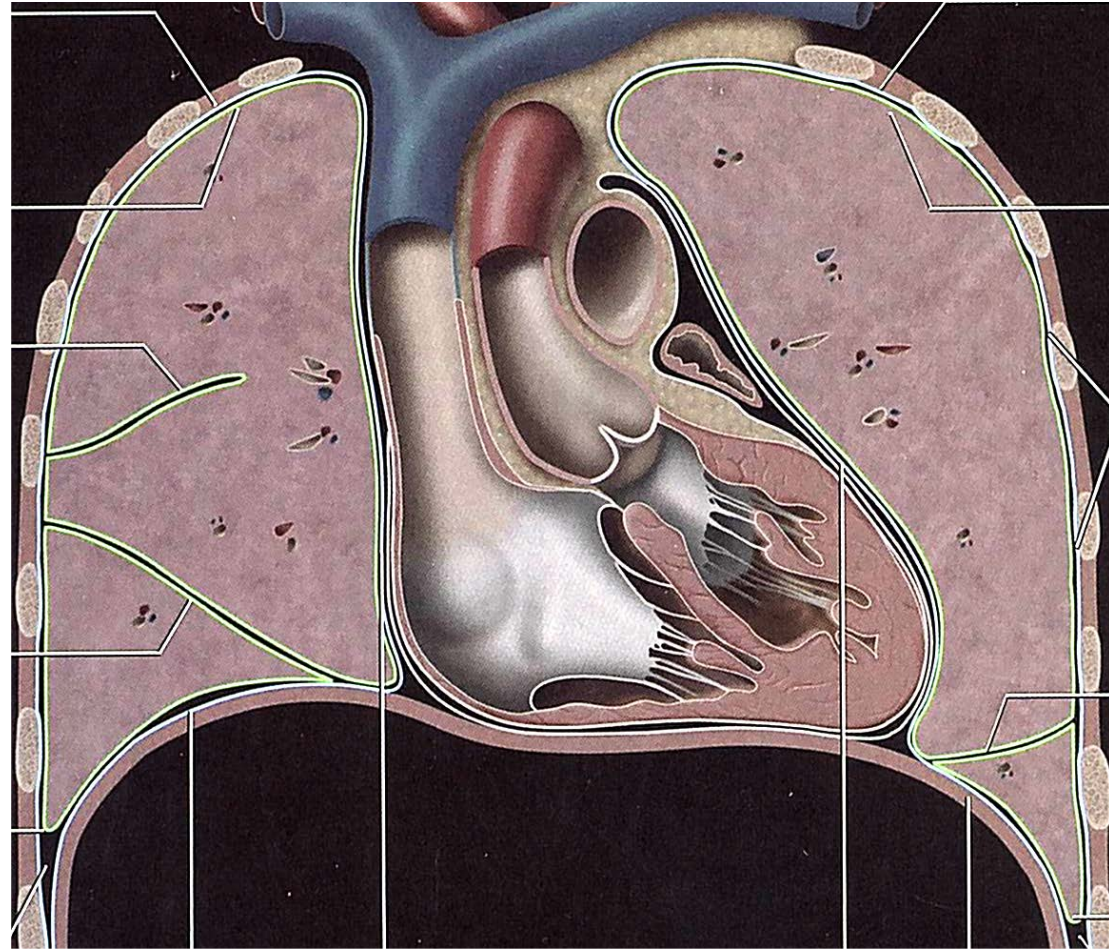
Scissures

Scissures accessoires

Azygos

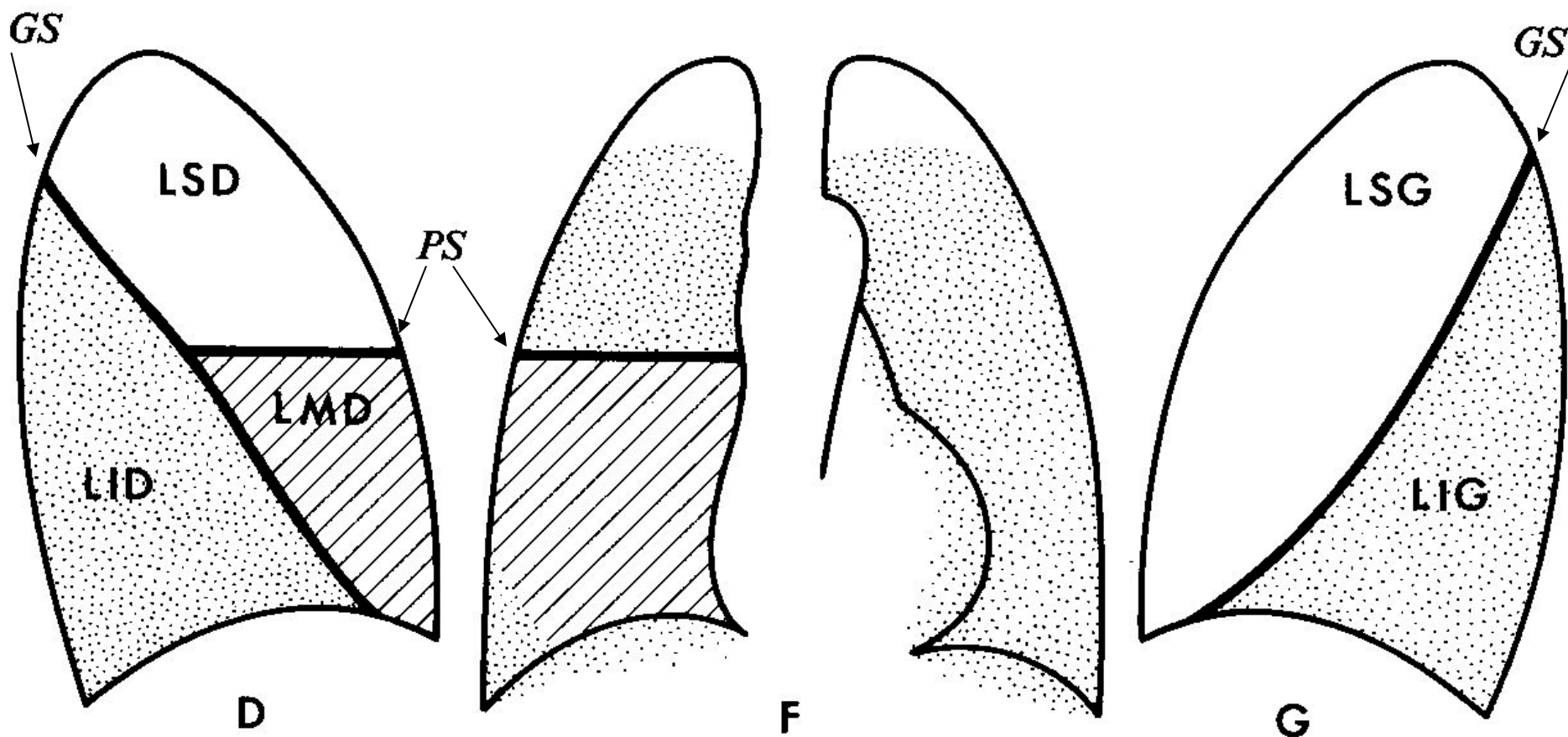
(Paracardiaque)

Lésions élémentaires



plèvre périphérique - 1 feuillet pariétal
- 1 feuillet viscéral

scissures - 2 feuillets viscéraux

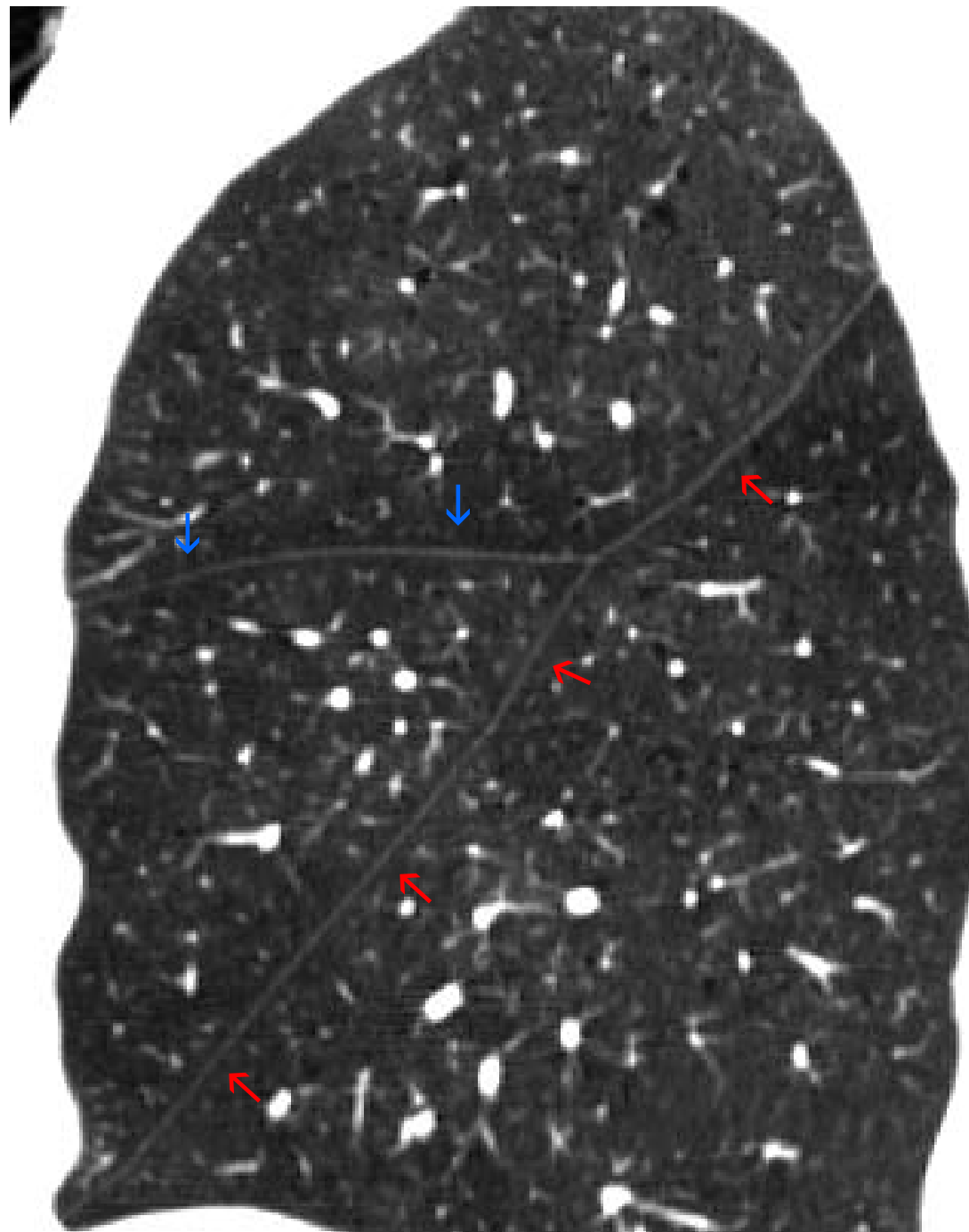


Projection des lobes et des scissures

F, *de face* ; D, poumon droit (profil), G, poumon gauche (profil).

PS : petite scissure ; *GS* : grande scissure.

scissures
et
lobes
droits



↓ petite scissure

↖ grande scissure

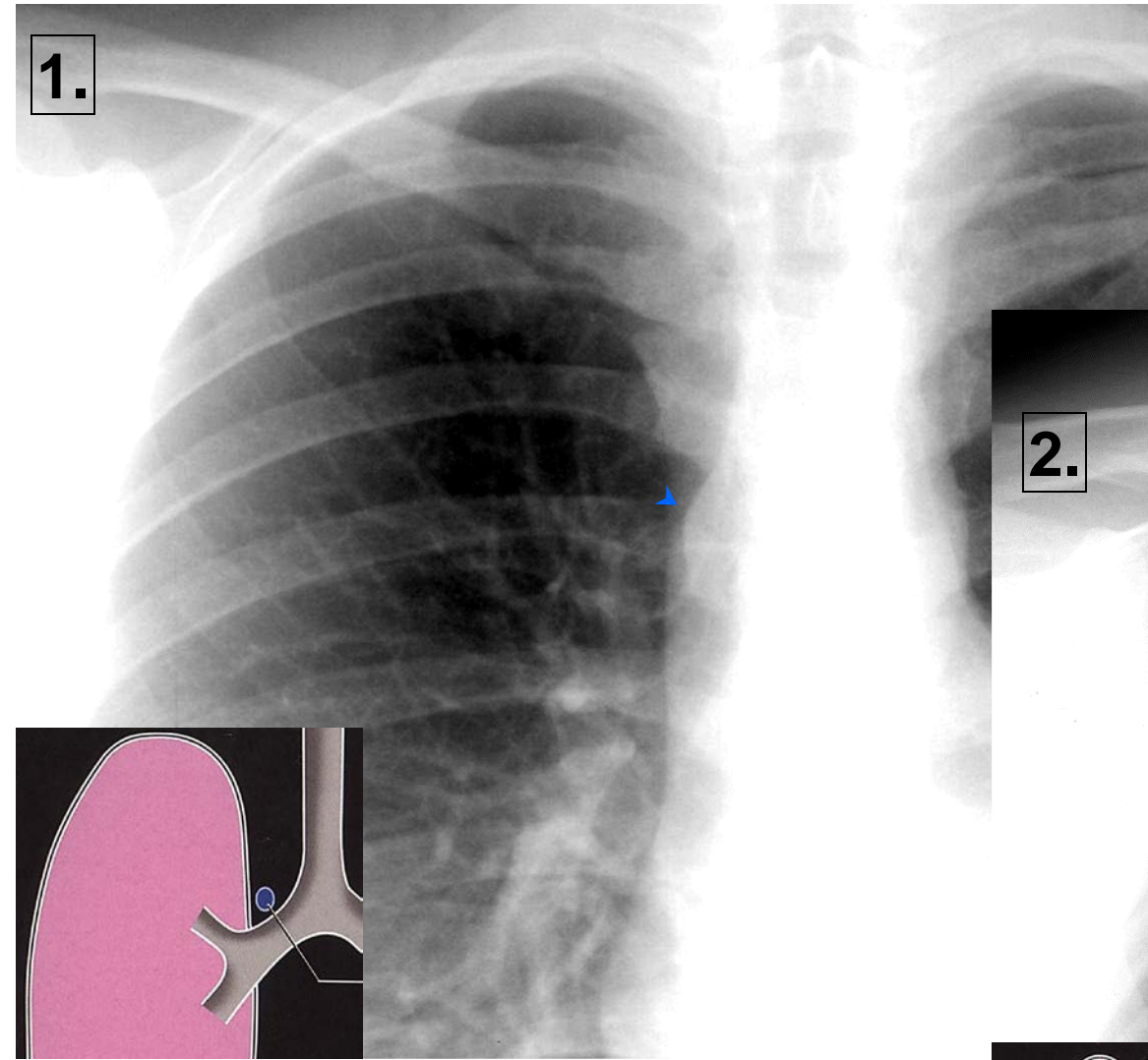
TDM
coupe sagittale
du poumon
droit



petite
scissure

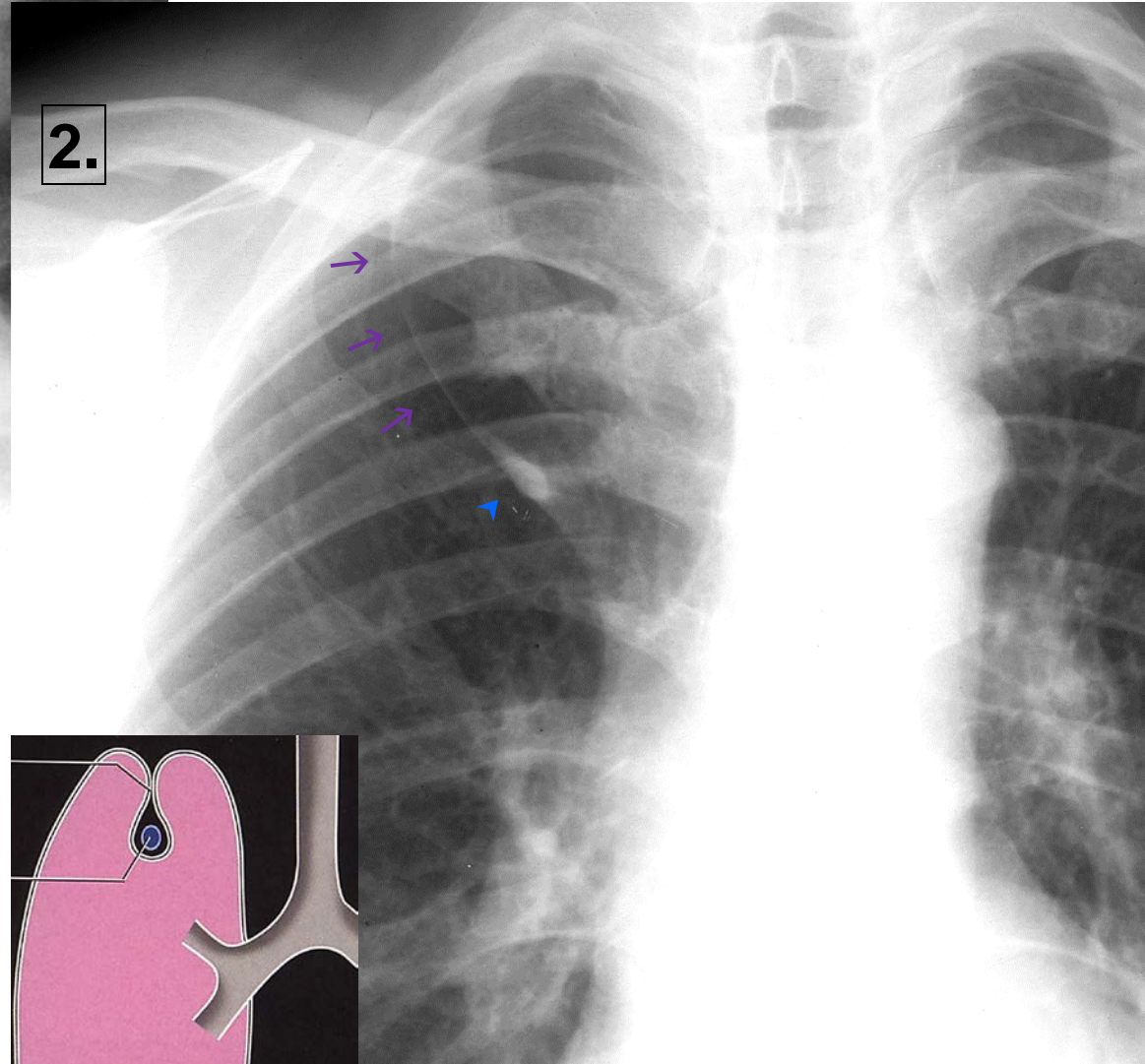
↓
↑ pseudo-dédoublement = une ondulation de la scissure permet une double tangence

1.



↗ scissure
azygos
(4 feuillets pleuraux)

2.



- ▶ crosse de la veine azygos :
 - 1. dans l'angle trachéo-bronchique
 - 2. dans une scissure azygos (0.4 %)

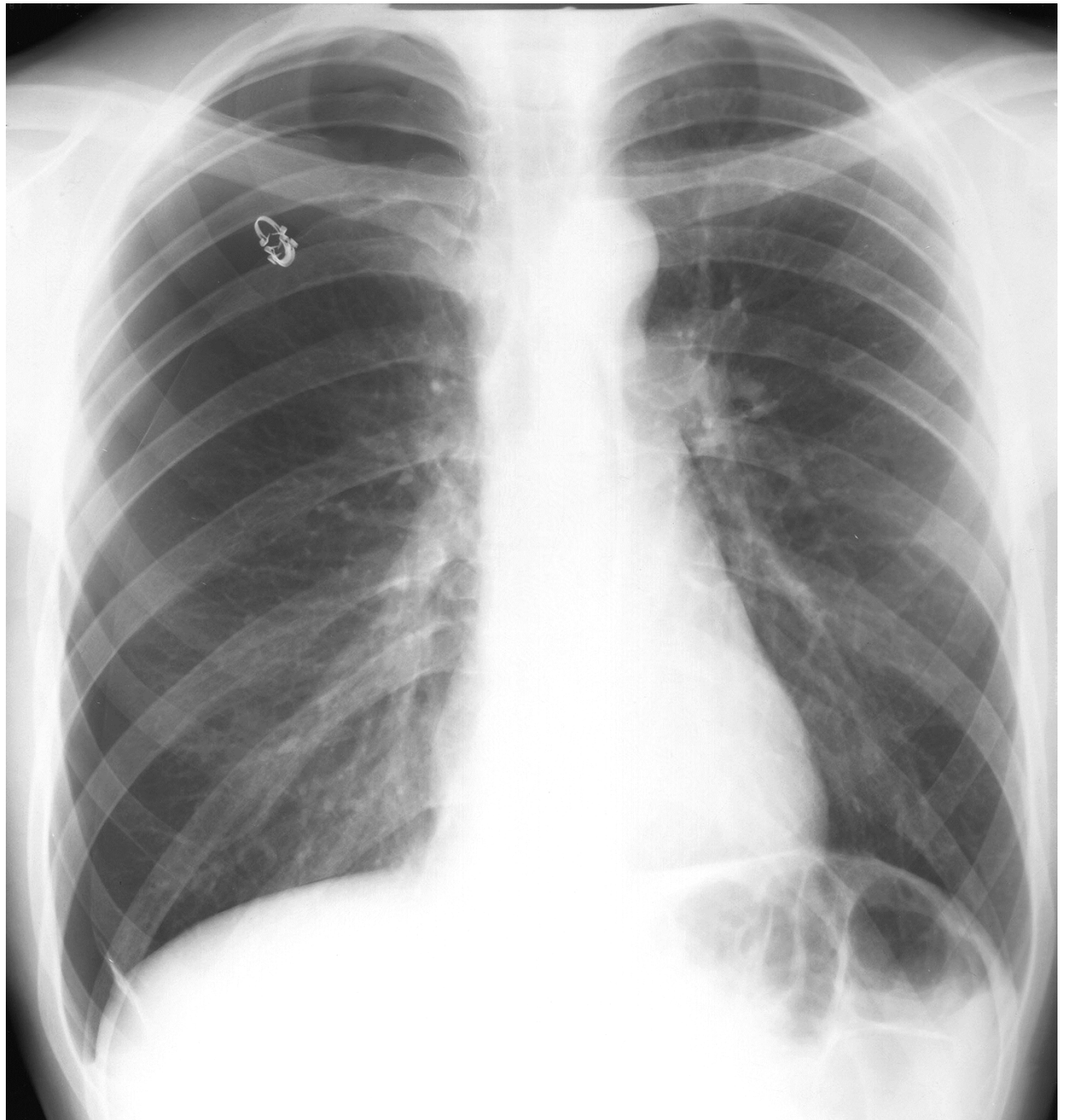
Plèvre

Lésions élémentaires

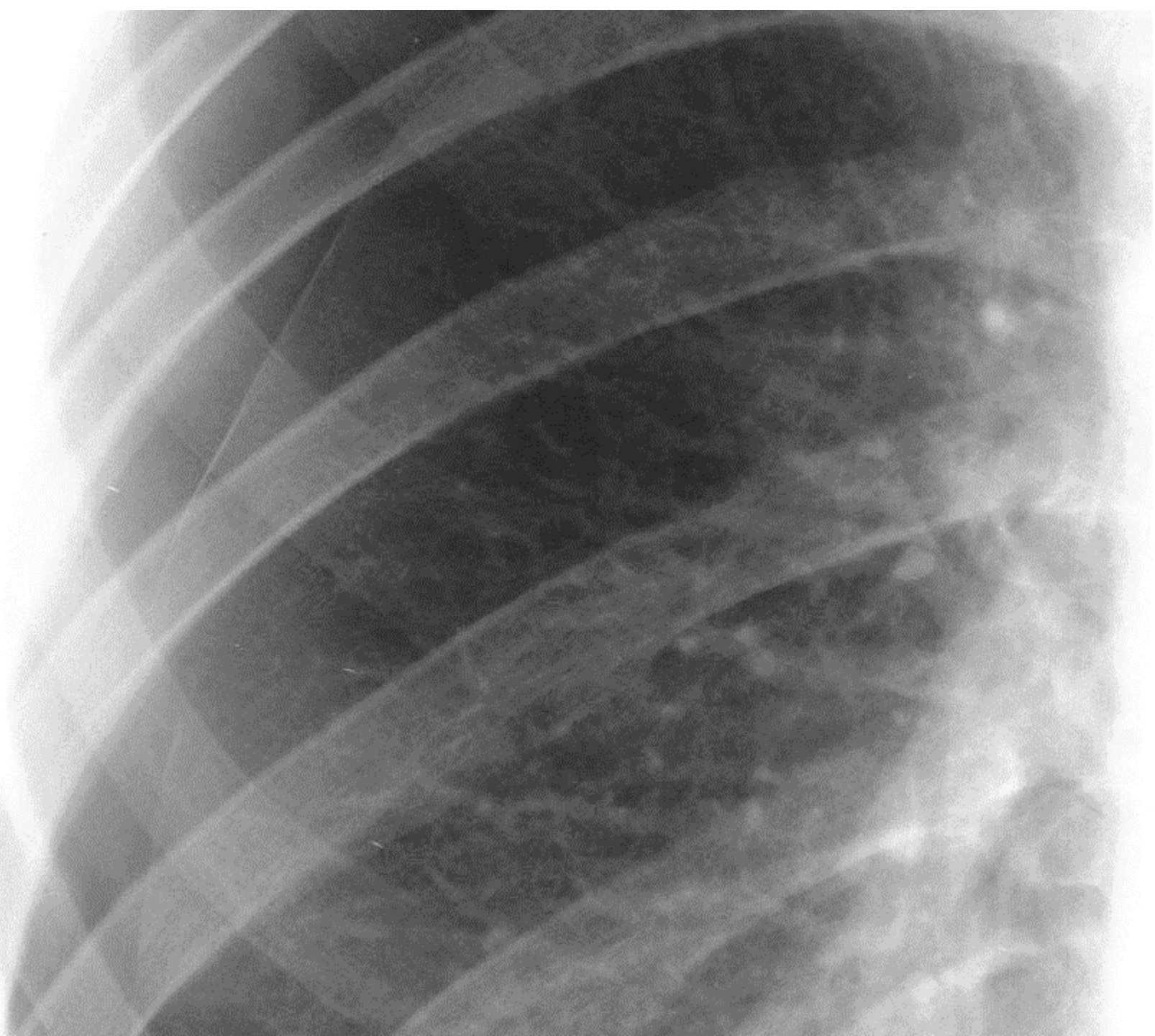
1. Pneumothorax
2. Epanchement liquide

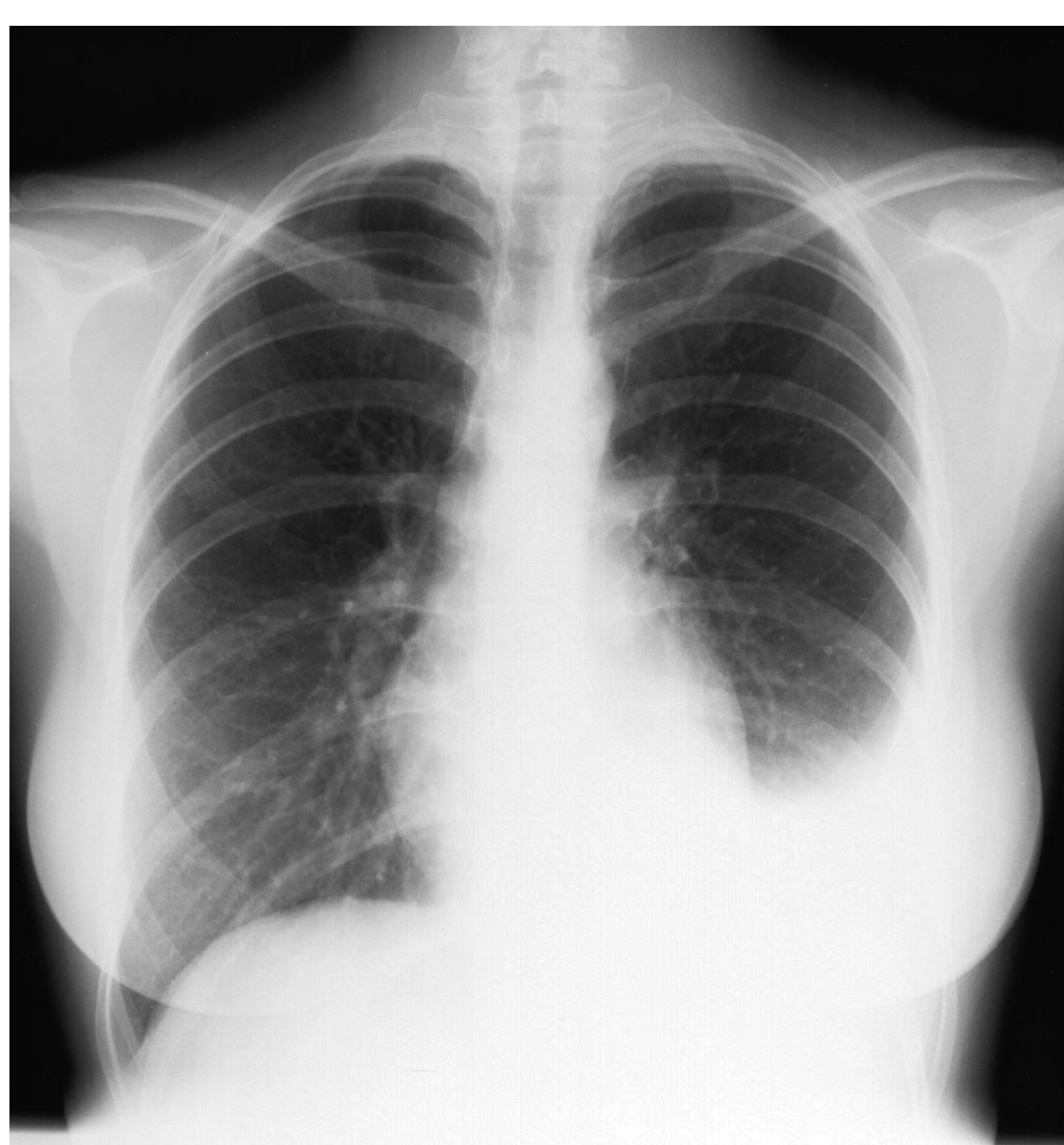
douleur brutale
hémithorax droit
avec

dyspnée
++



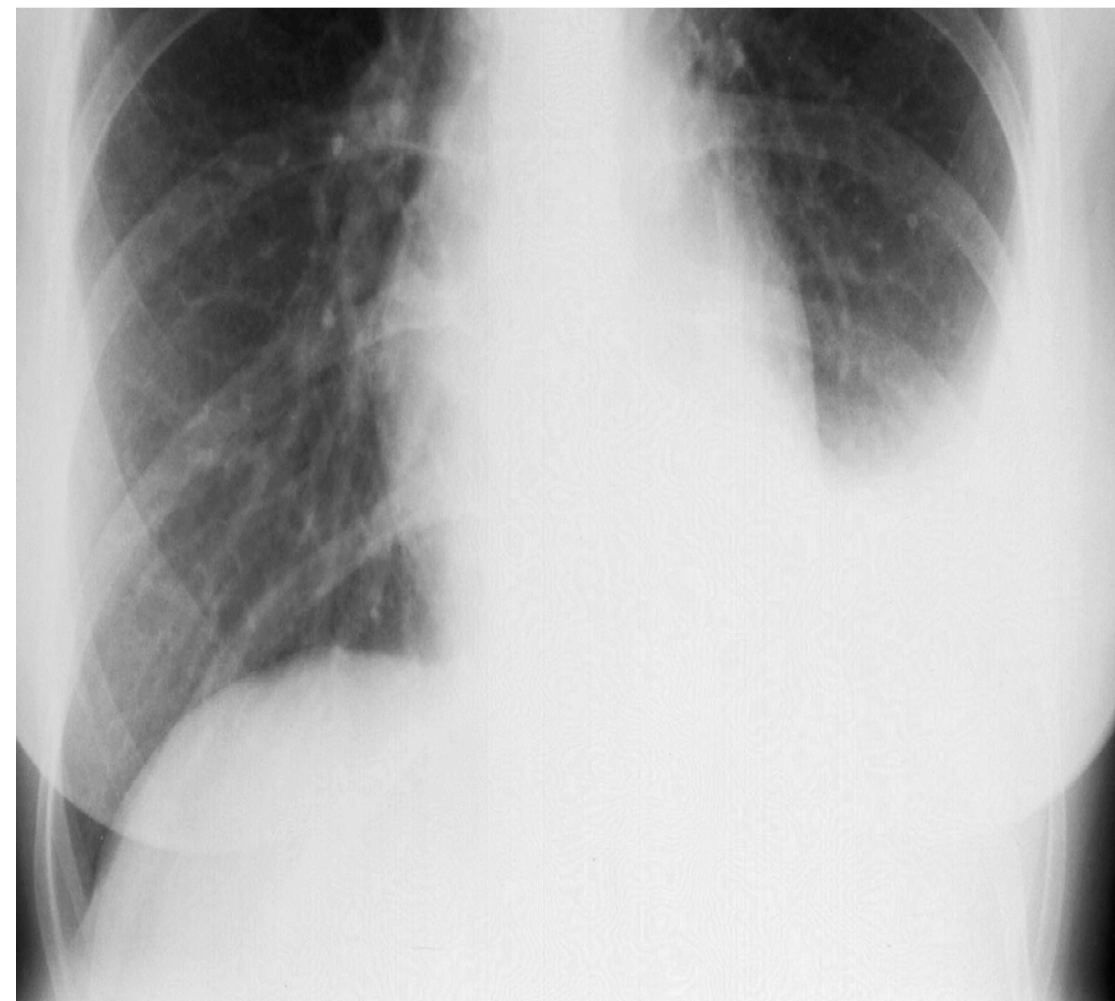
**P
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A
X**





douleur
hémithorax
gauche
avec
frottement
pleural

épanchement pleural (ligne de Damoiseau)



THORAX

Coeur

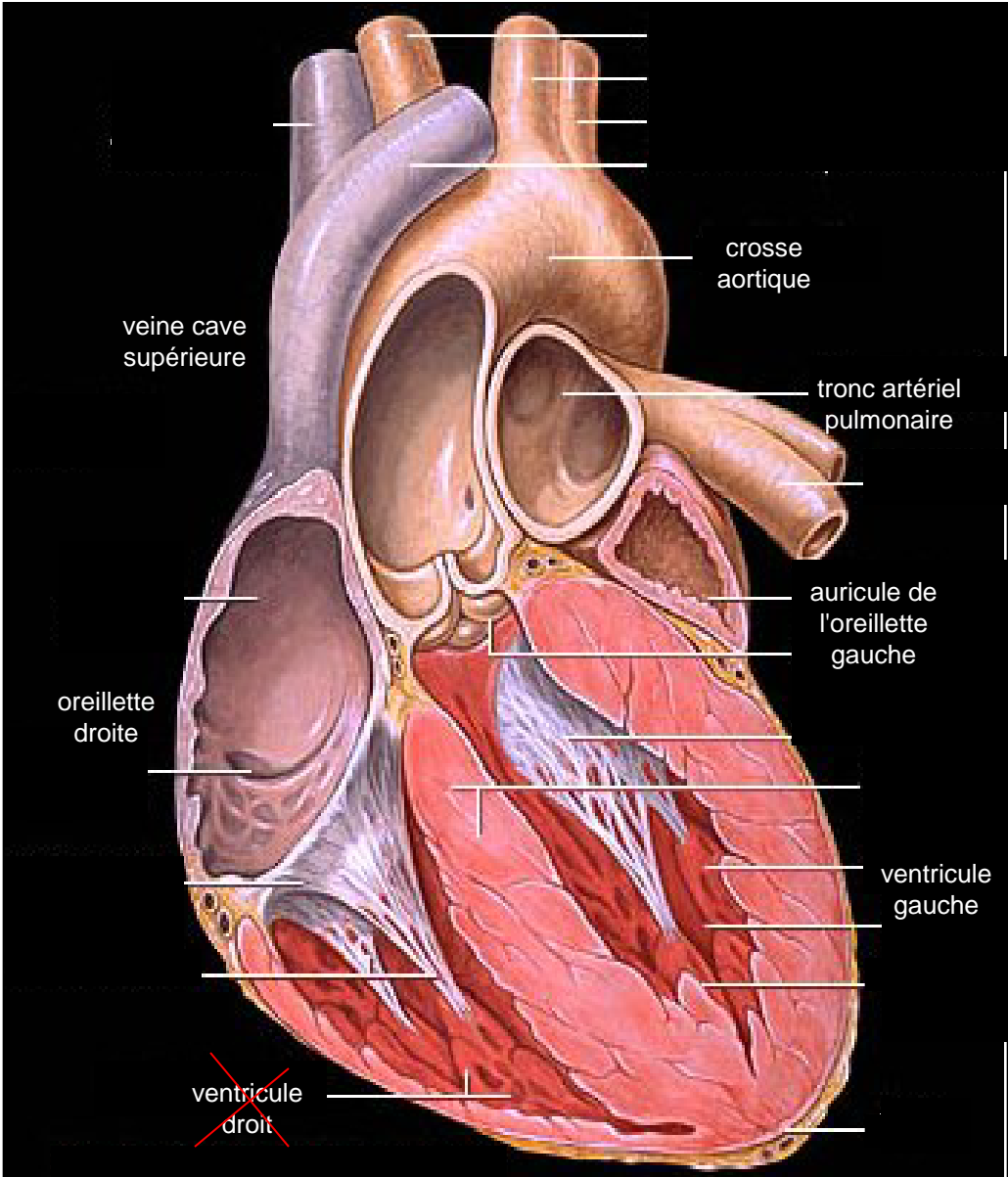
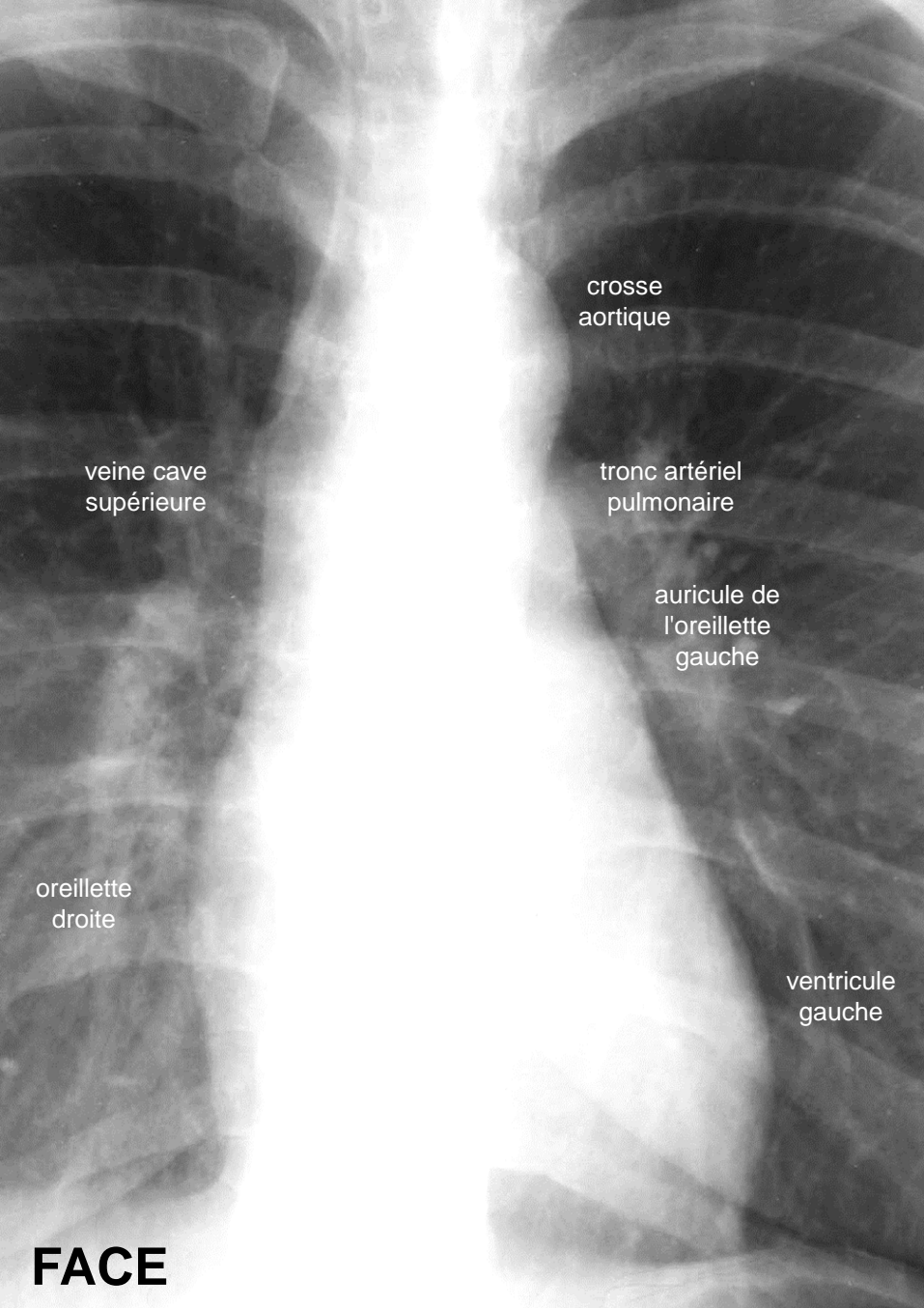
Hiles pulmonaires

Vaisseaux pulmonaires

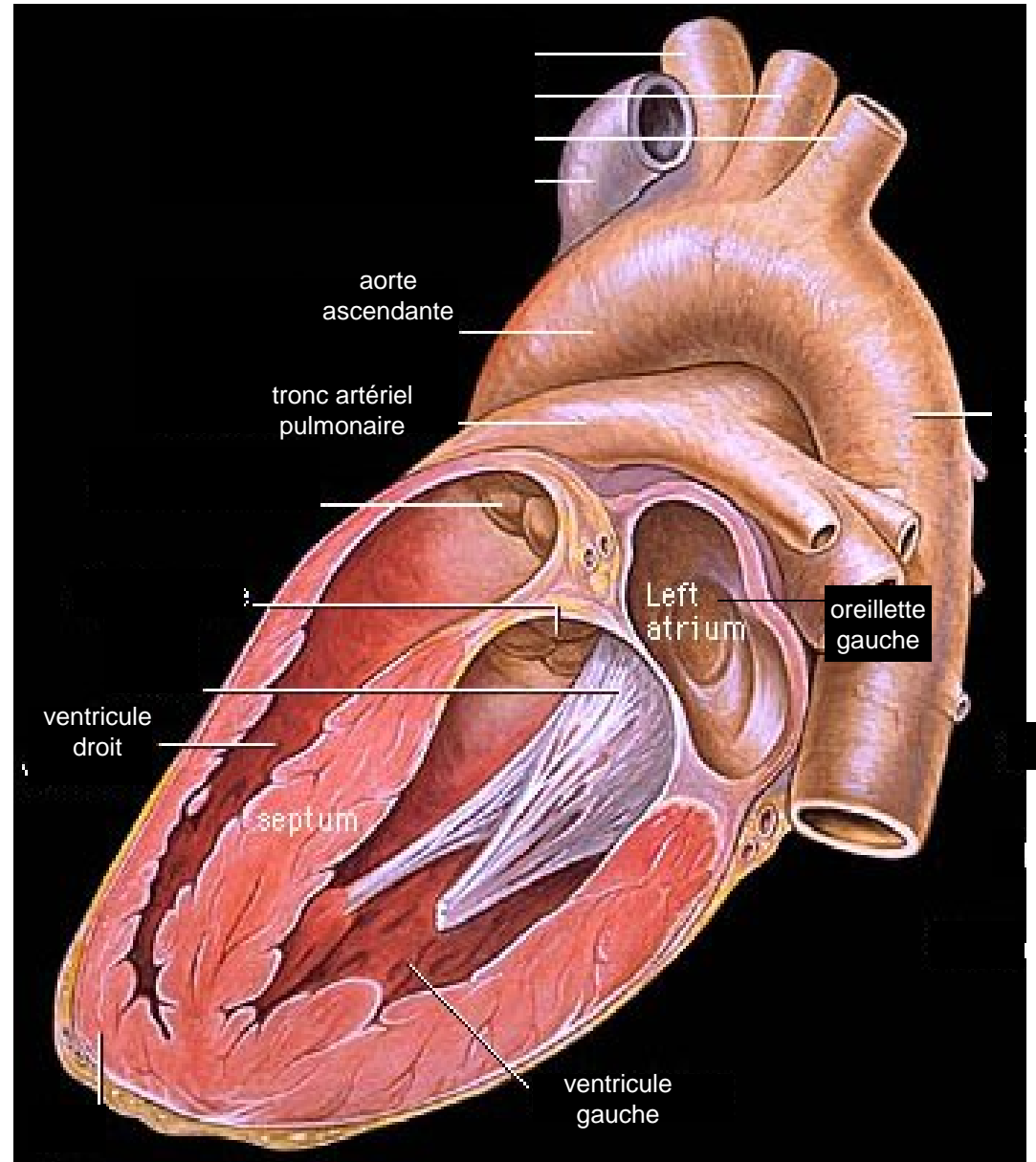
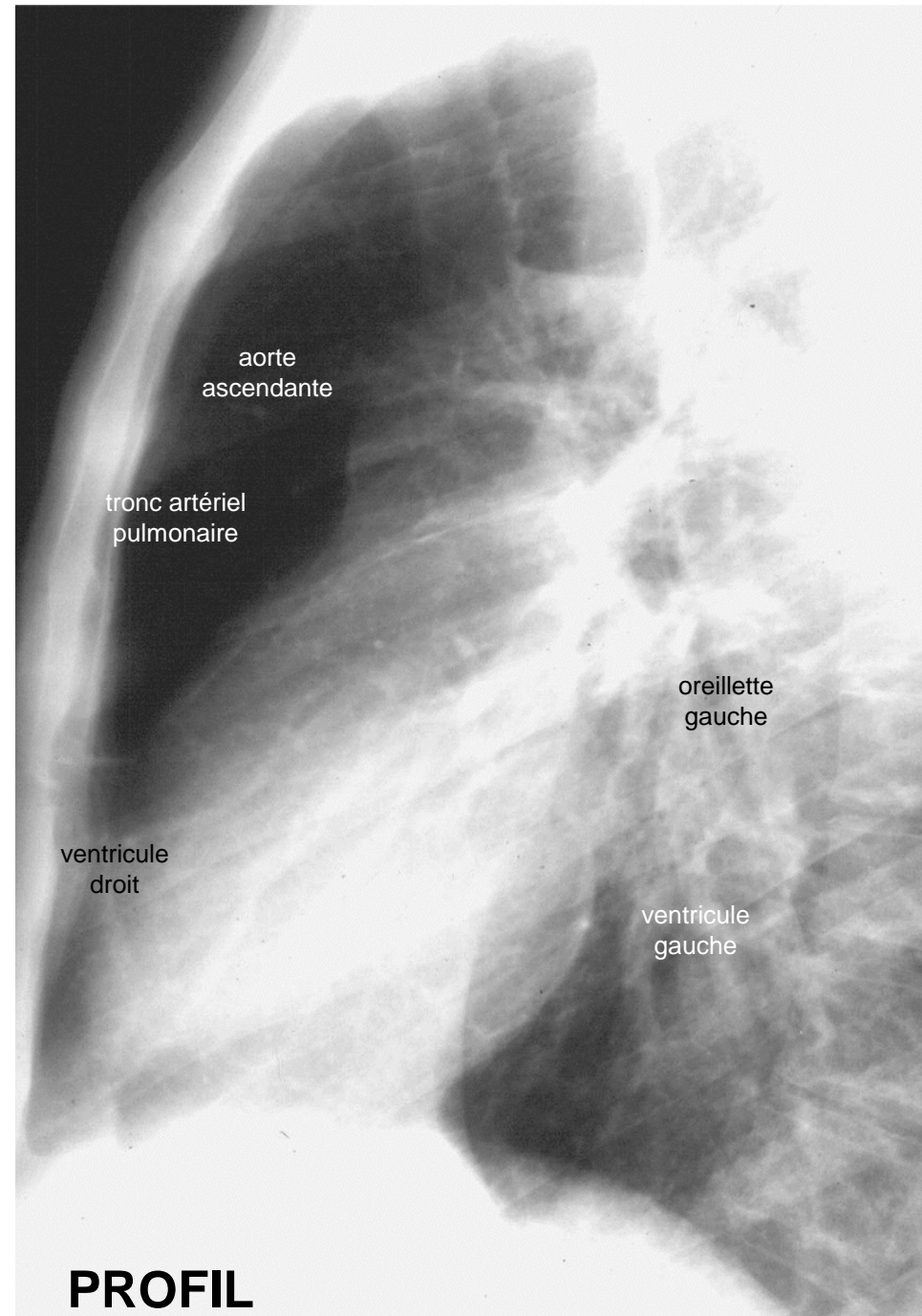
Bronches

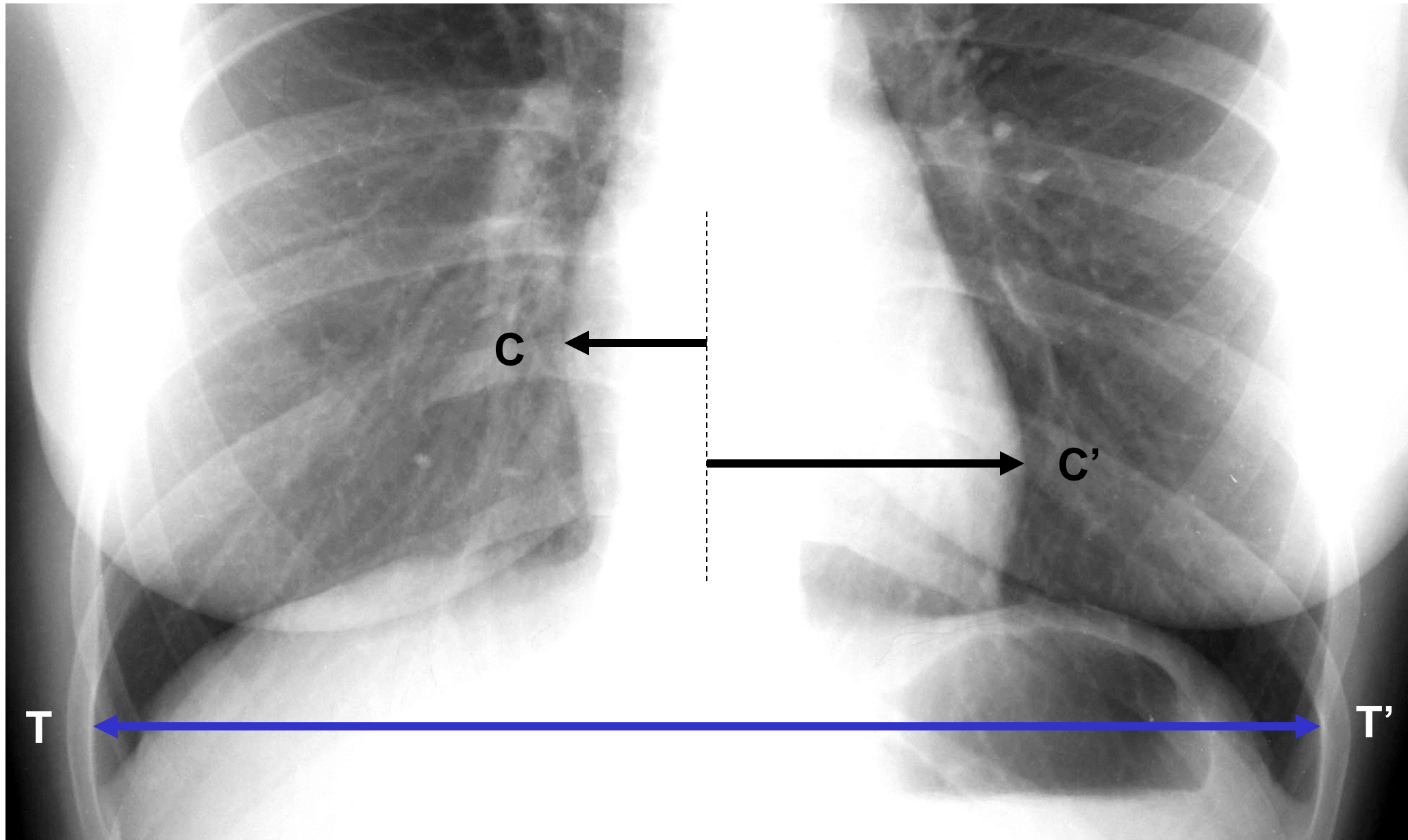


coeur et gros vaisseaux

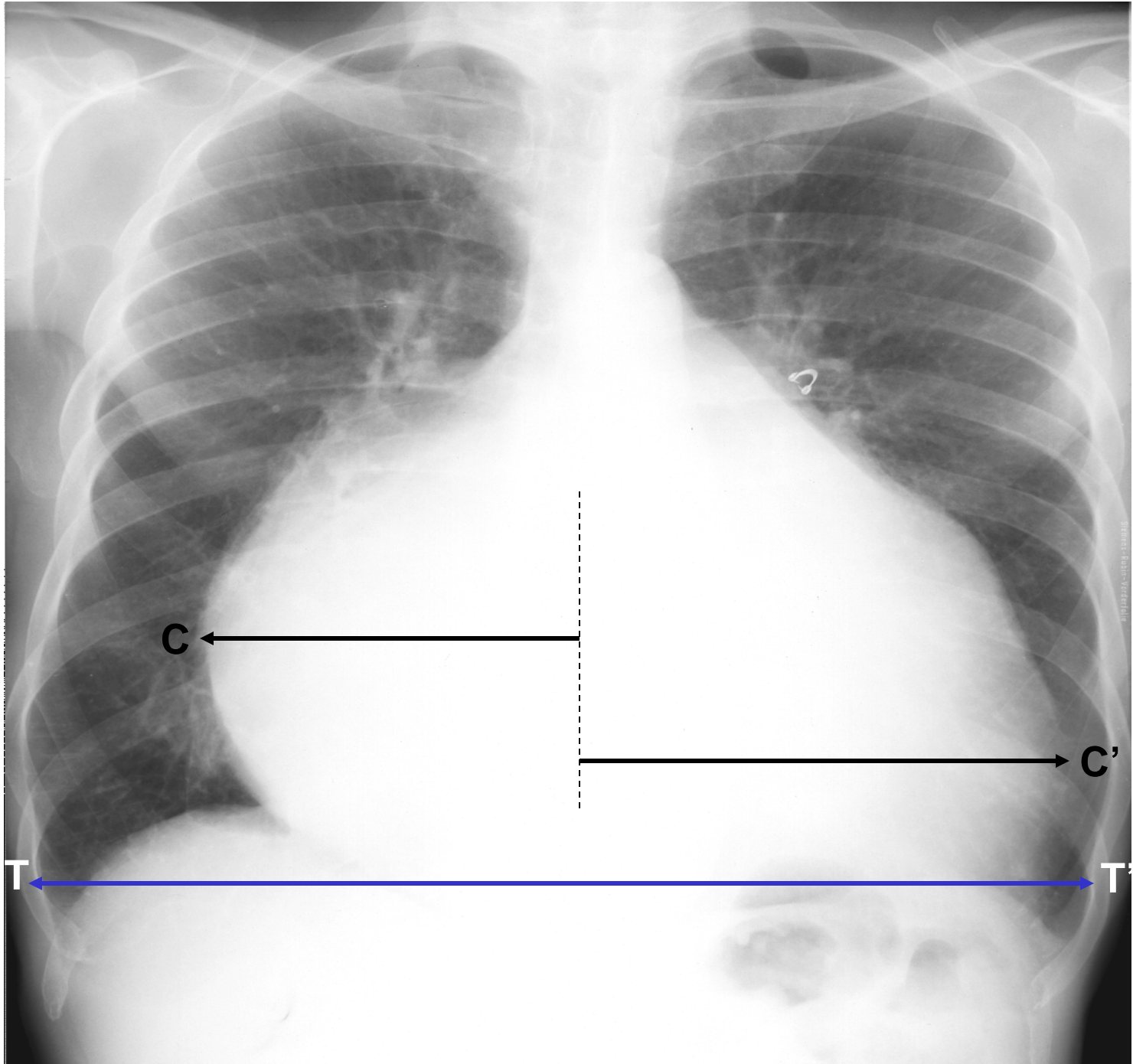


coeur et gros vaisseaux



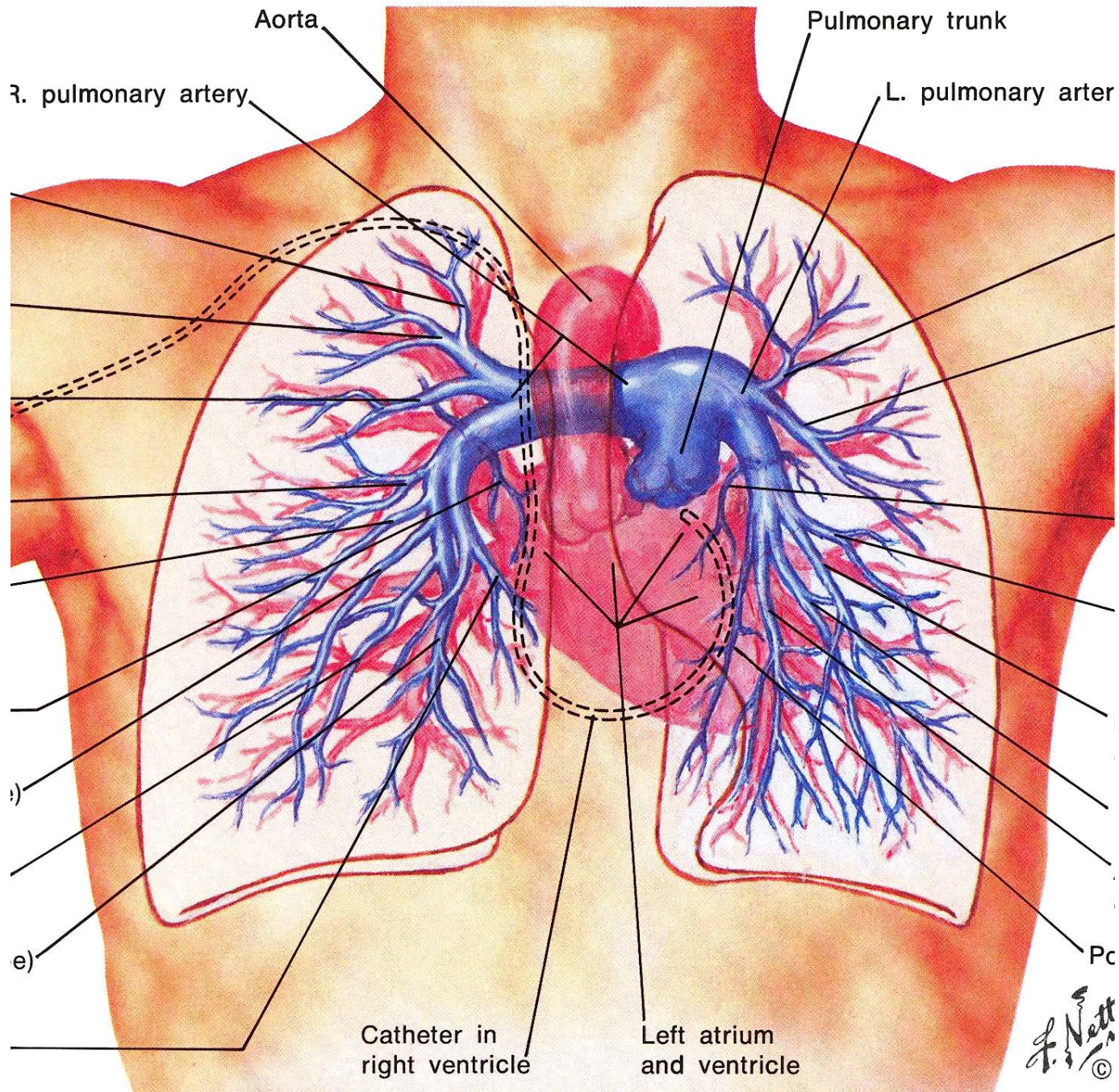


Rapport (index) cardio-thoracique normal : $CC' / TT' \leq 0.5$



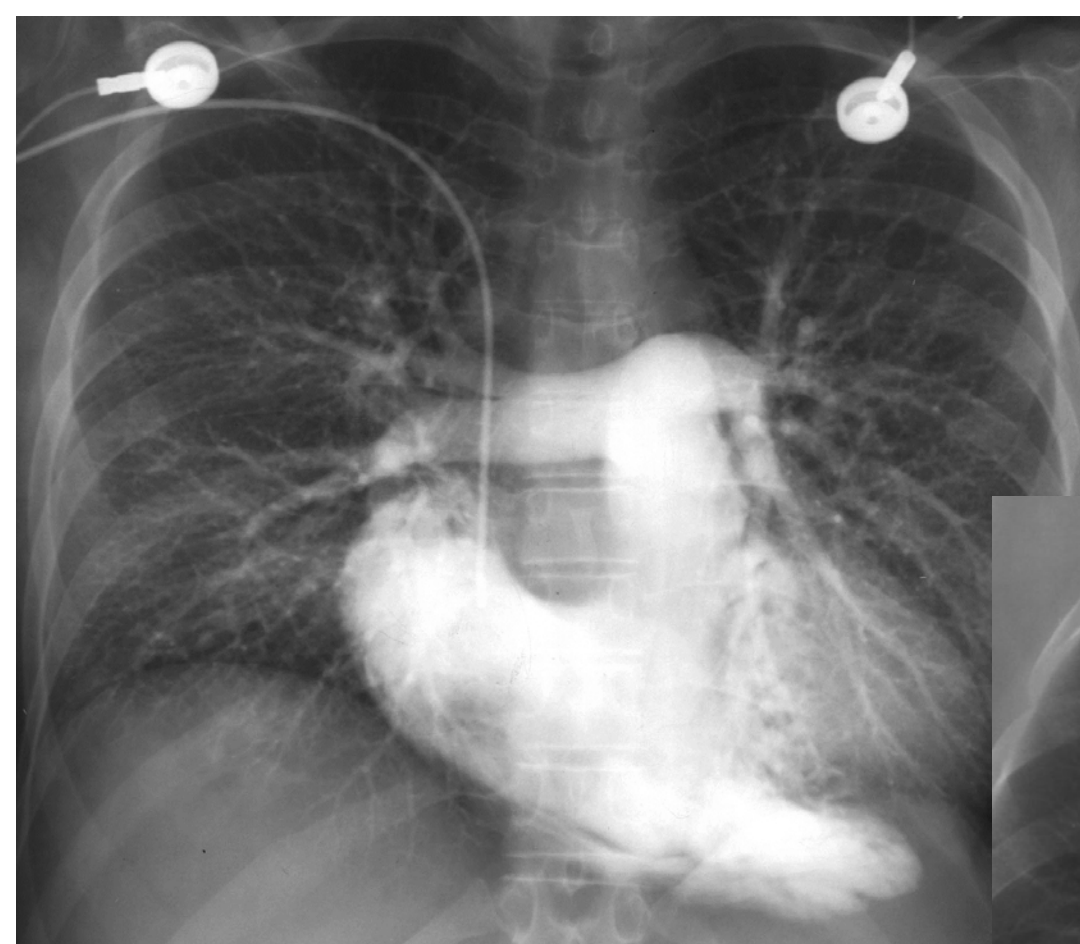
cardiomégalie
majeure

index
cardio-thoracique
0.8



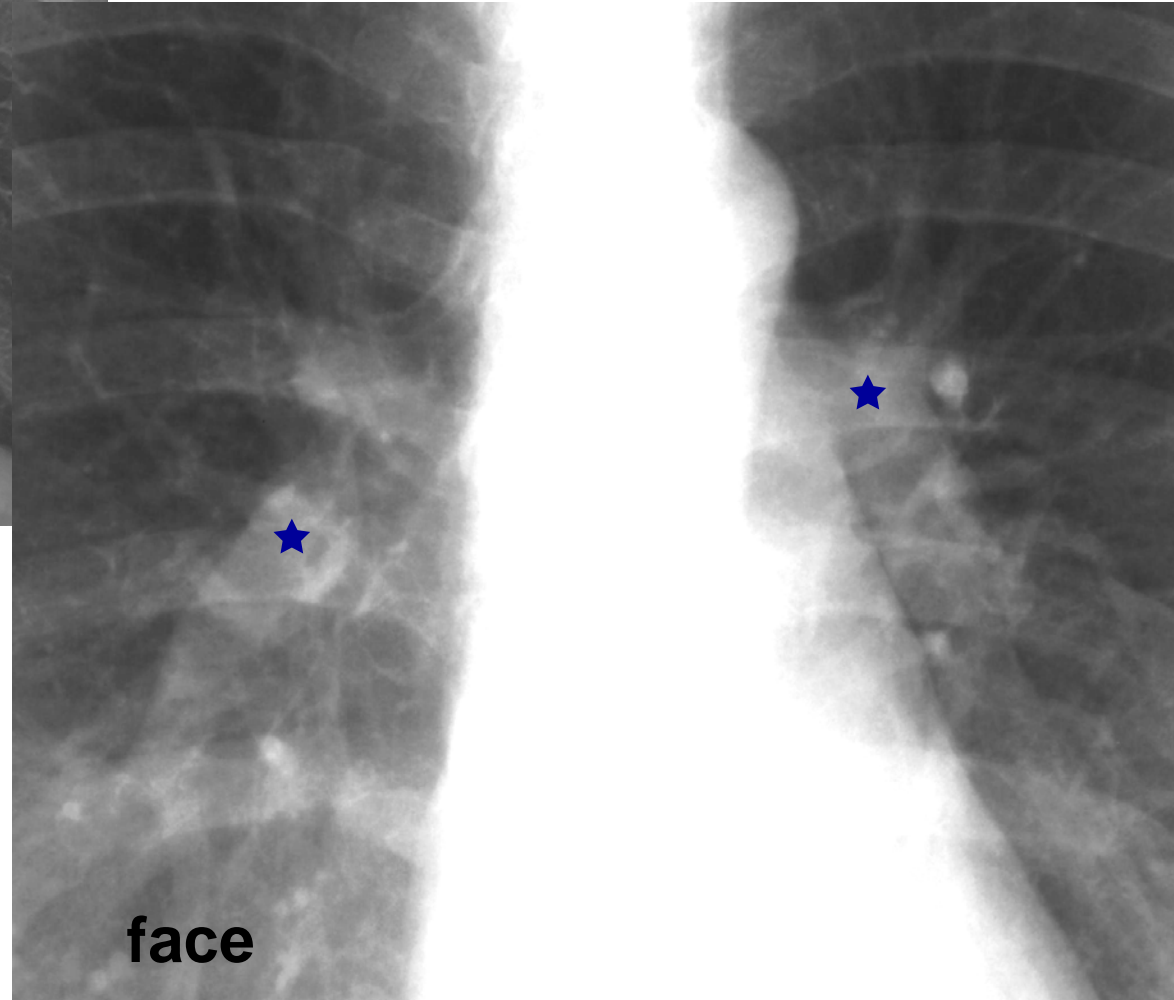
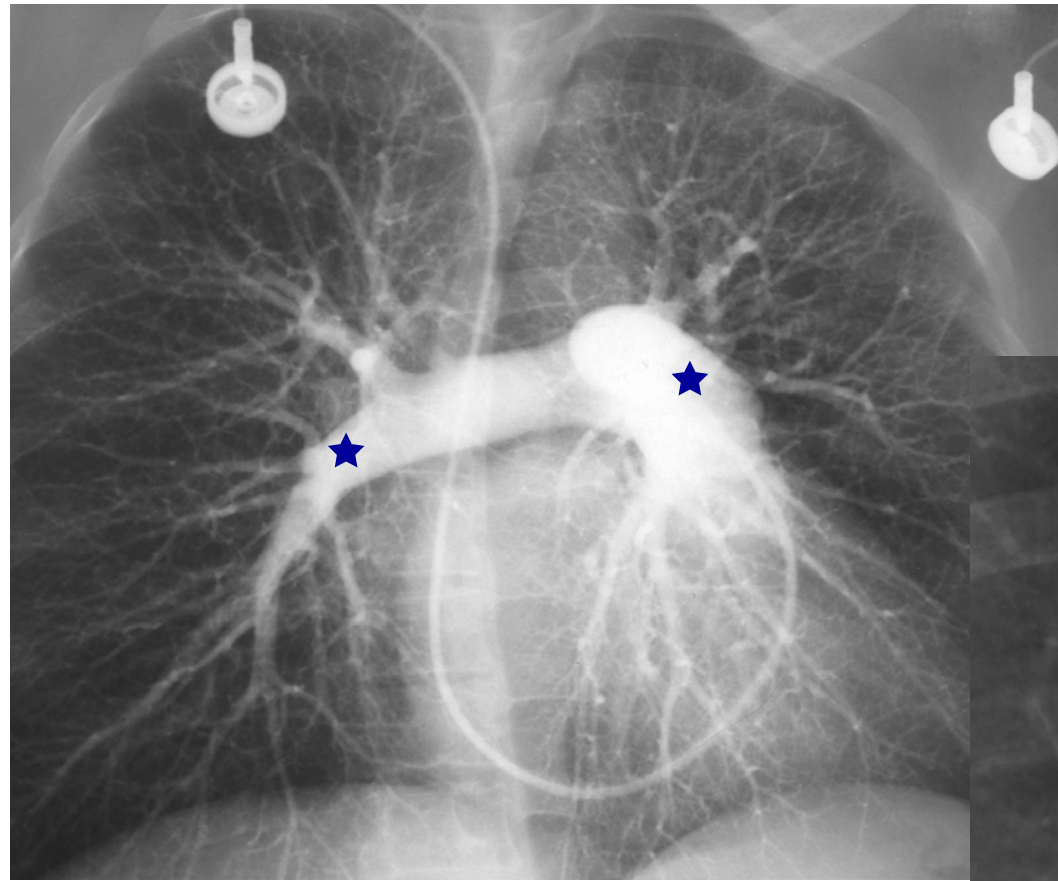
artères

veines



angiopneumographie

le gauche + haut que le droit

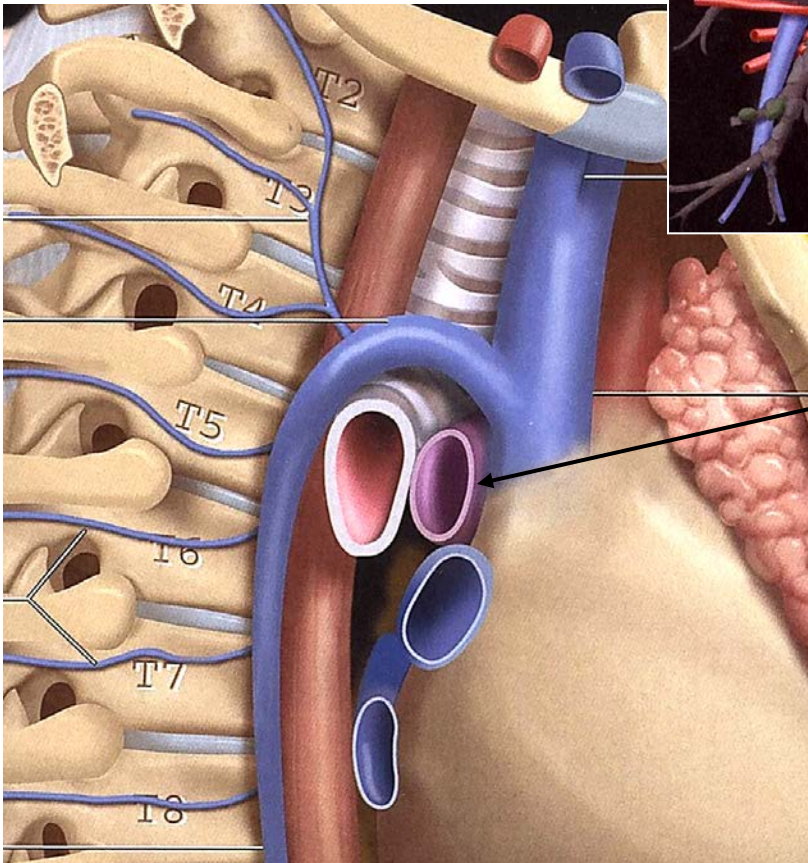
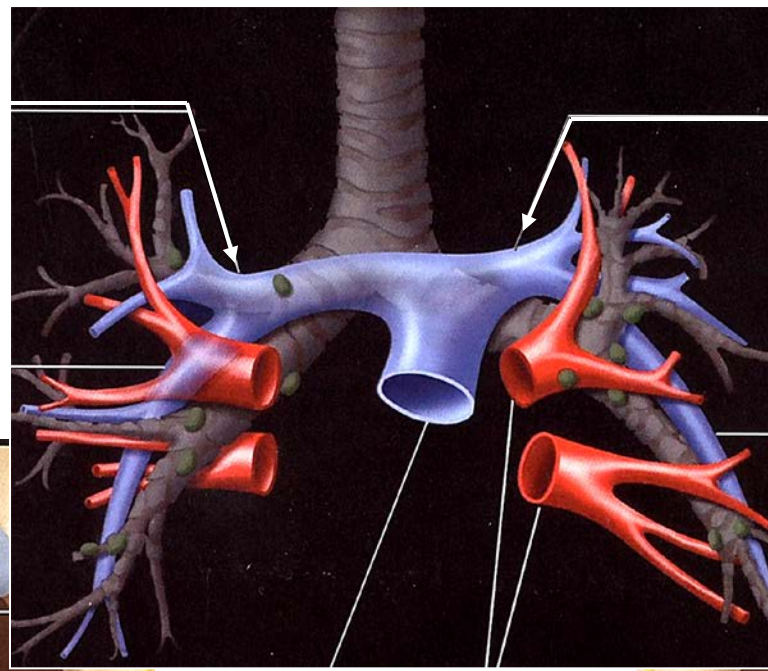


hiles pulmonaires
(vasculaires
artériels)

face

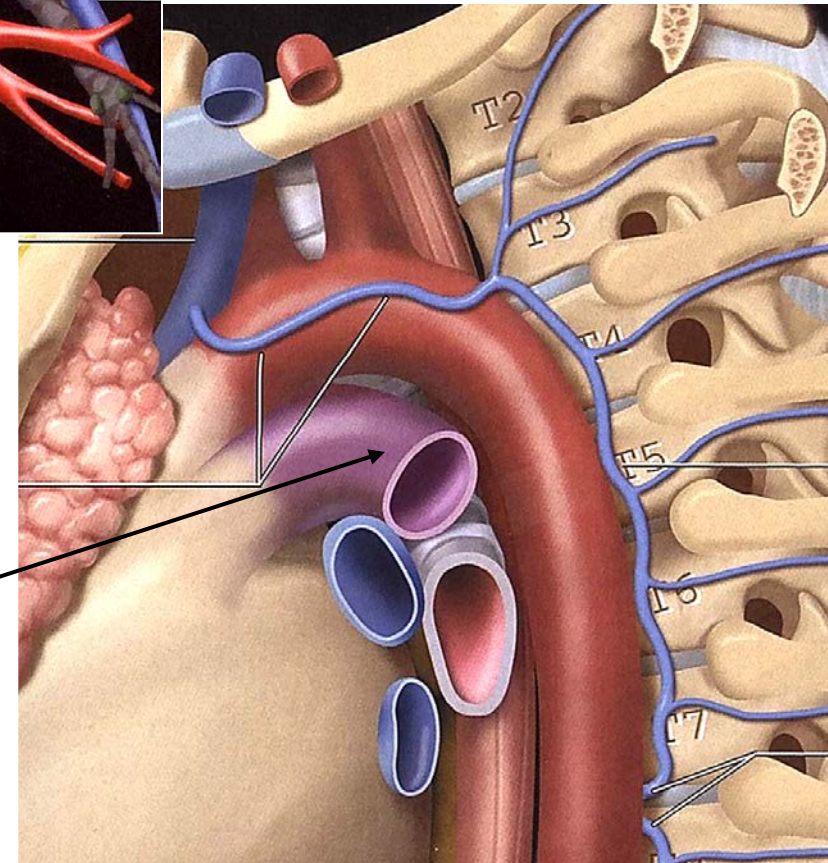
artère pulmonaire droite
pré-bronchique

artère pulmonaire gauche
sus- et rétro-bronchique



artère pulmonaire
droite

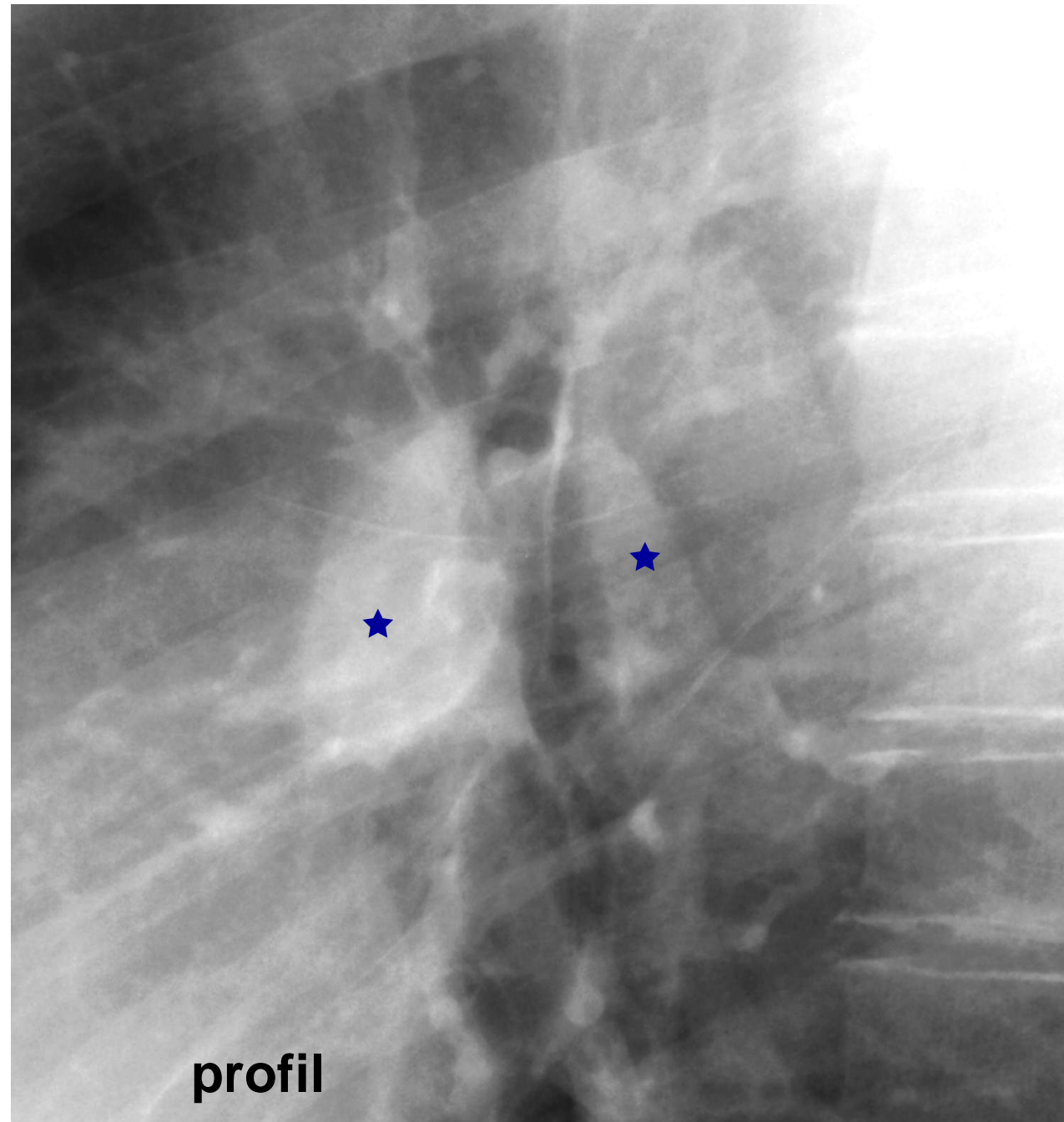
artère pulmonaire
gauche



hile droit (vue de profil)

hile gauche (vue de profil)

hiles pulmonaires
(vasculaires
artériels)

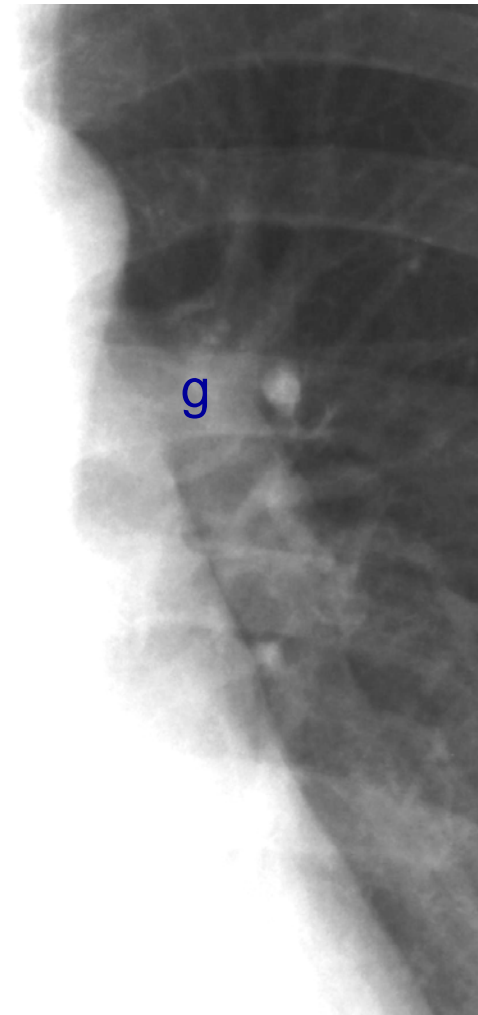
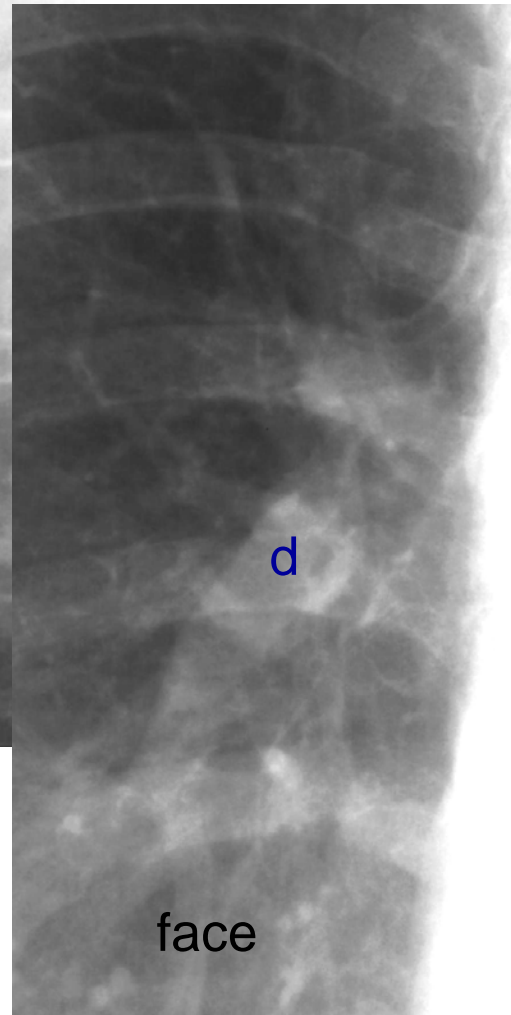
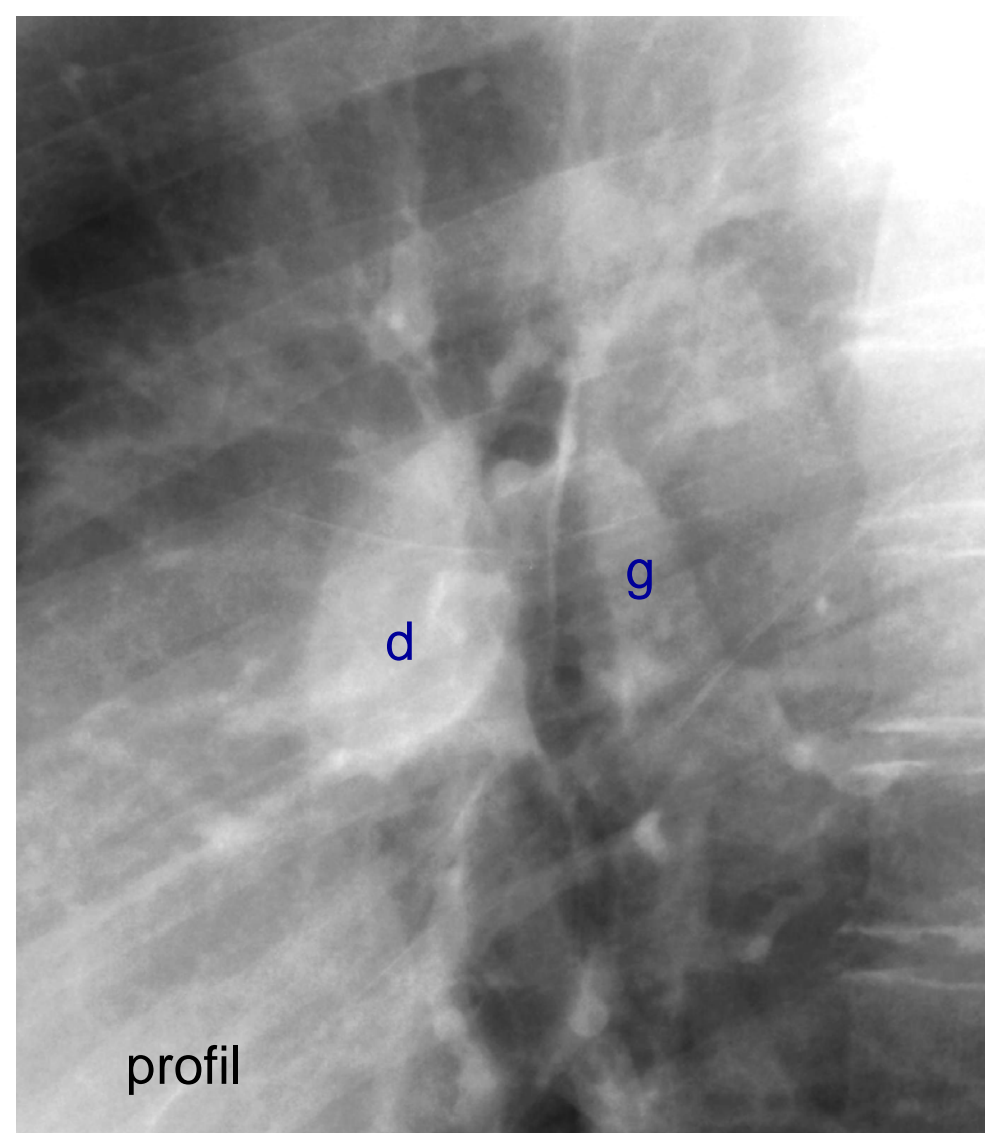


profil

le gauche + haut que le droit

le gauche en arrière
le droit en avant

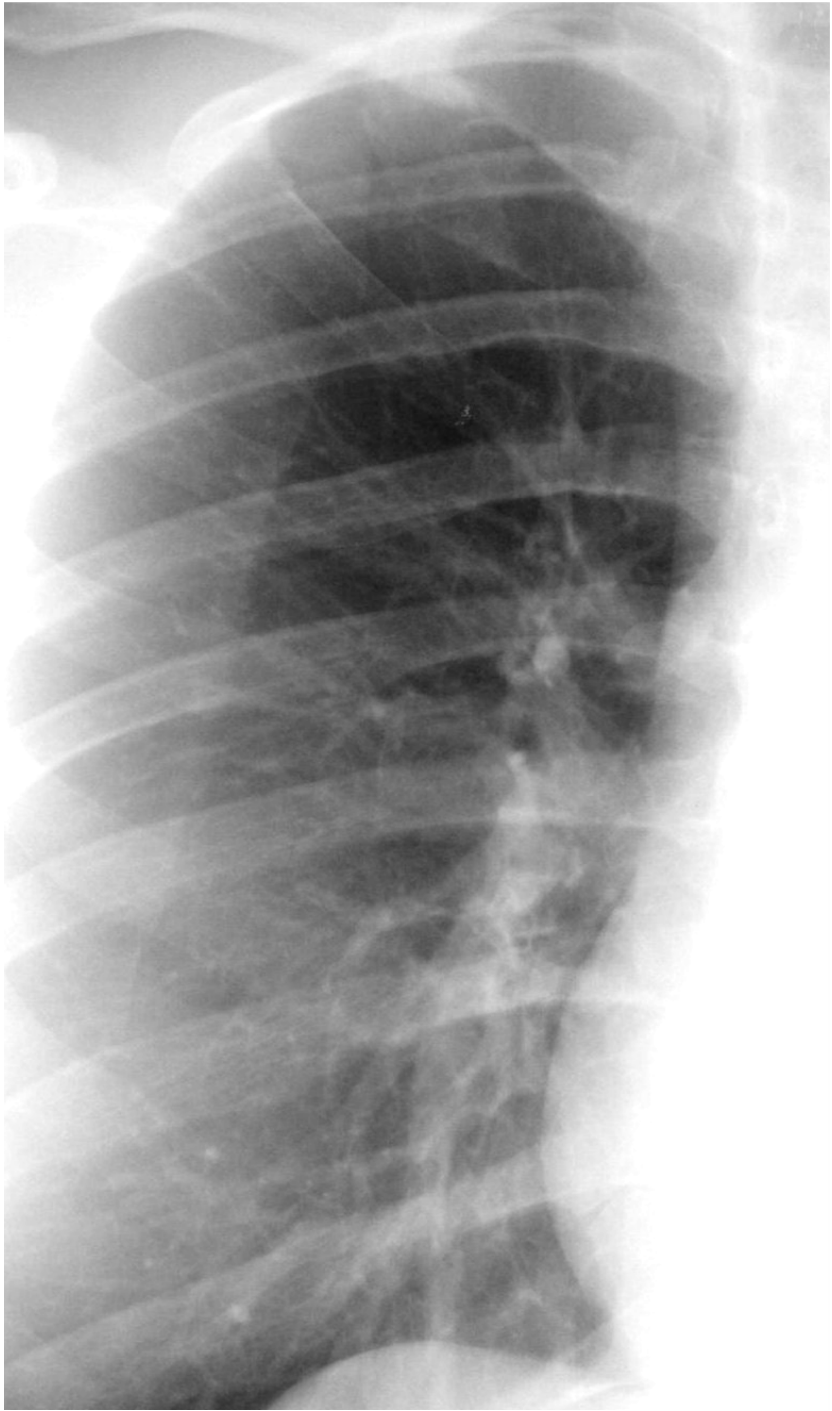
du plan bronchique



hiles pulmonaires
(vasculaires
artériels)

V
A
I
S
S
E
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X

P
U
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M
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S



3 mm Hg



étroit

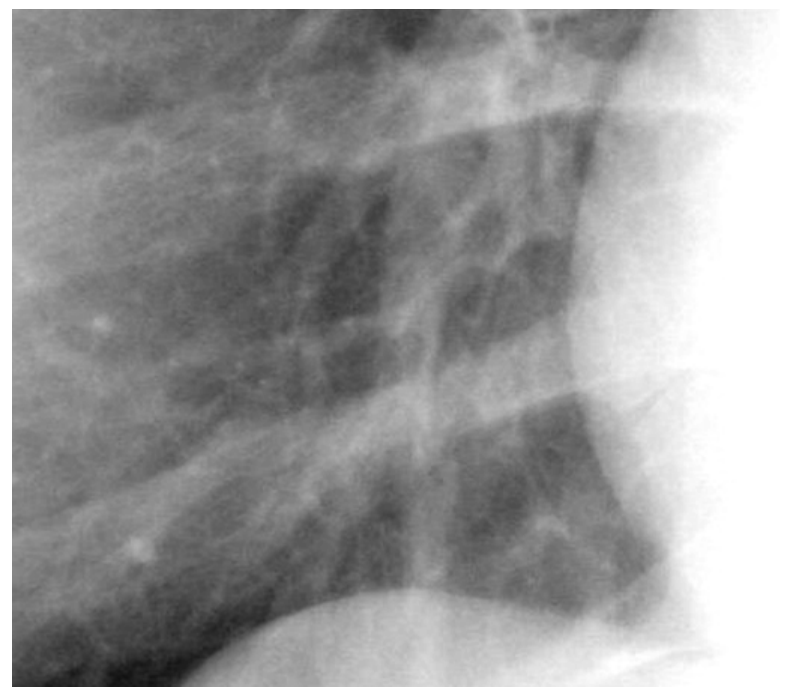
pression
artérielle
moyenne

14 mm Hg



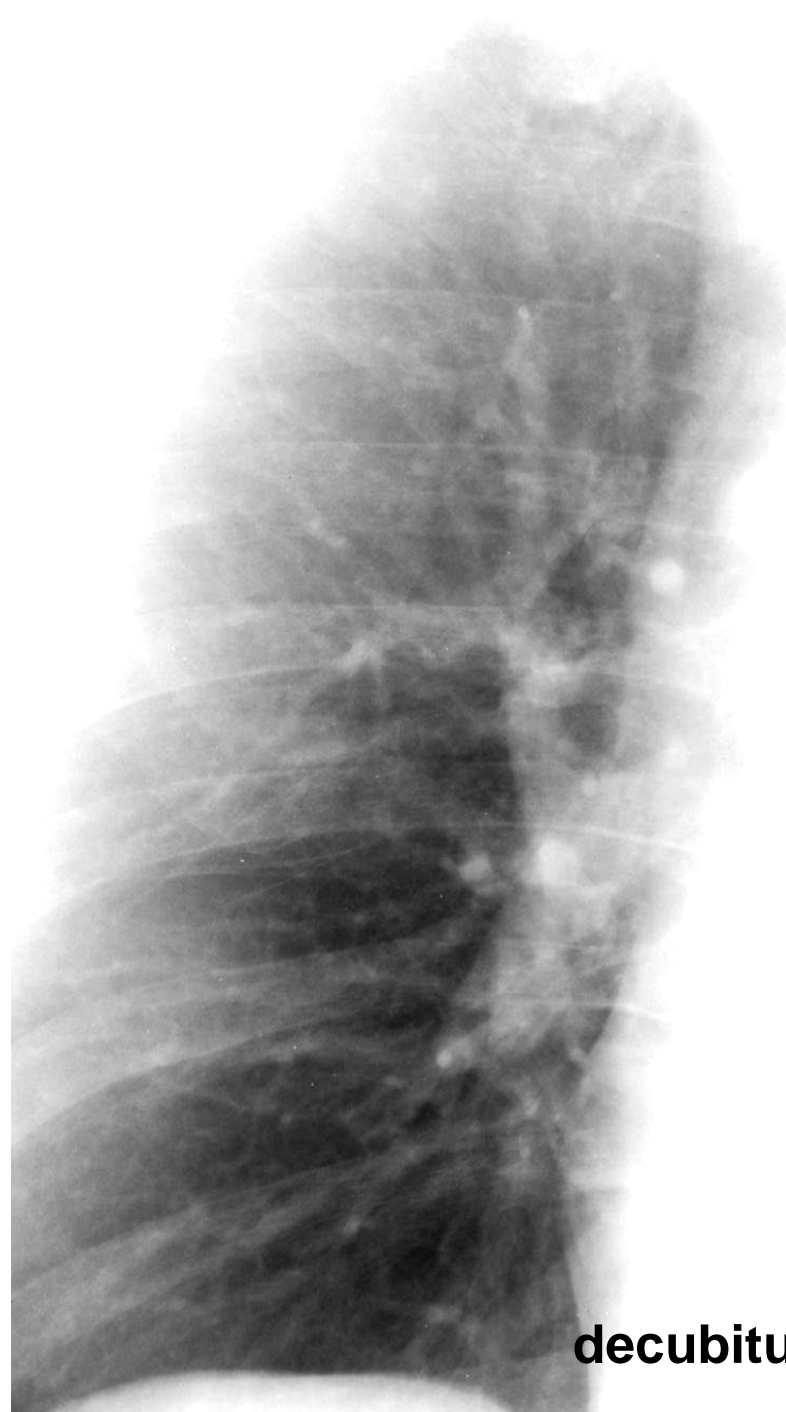
+ large

25 mm Hg





debout

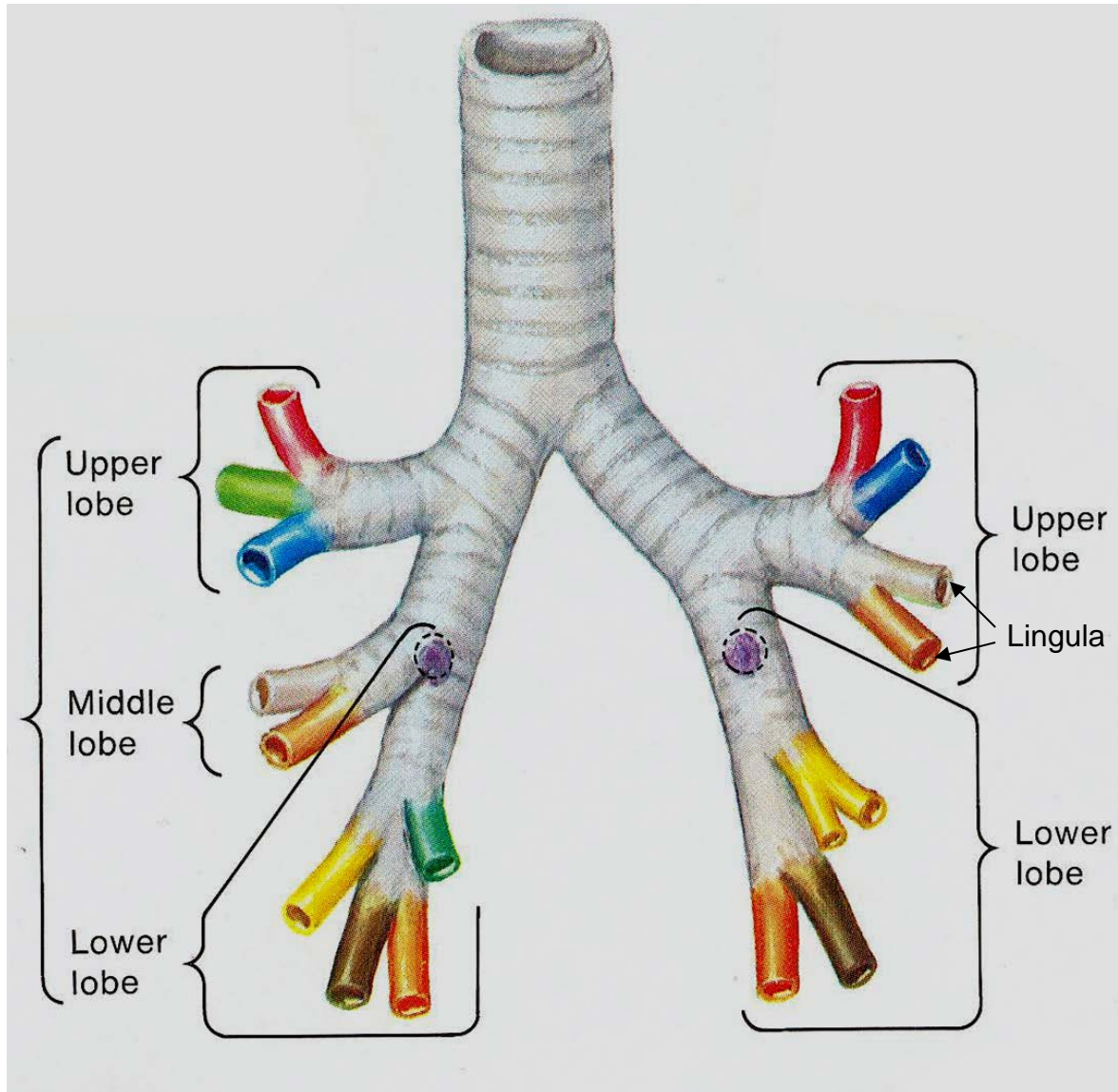


decubitus

**vaisseaux
pulmonaires**

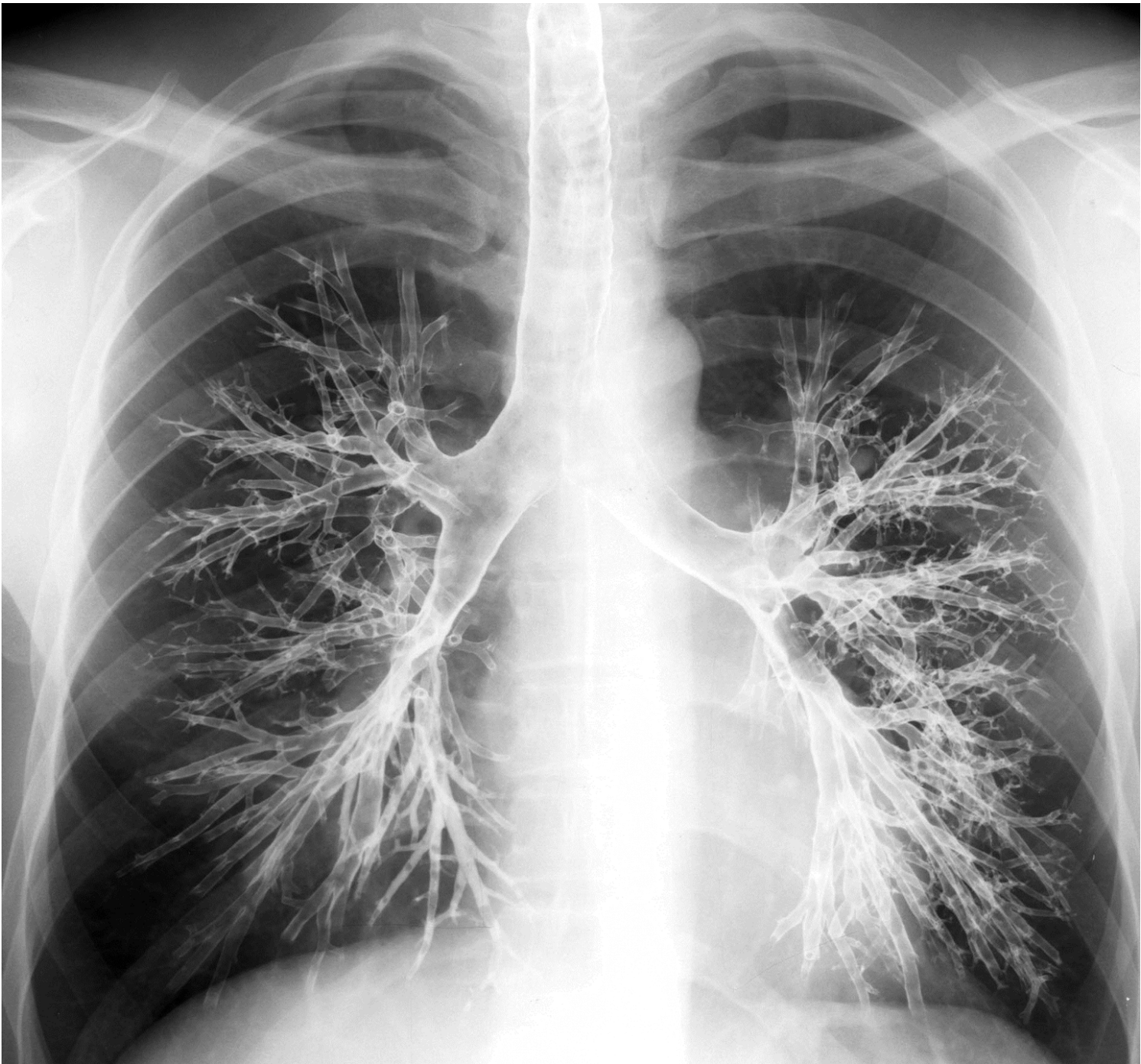
en decubitus,
égalisation
des

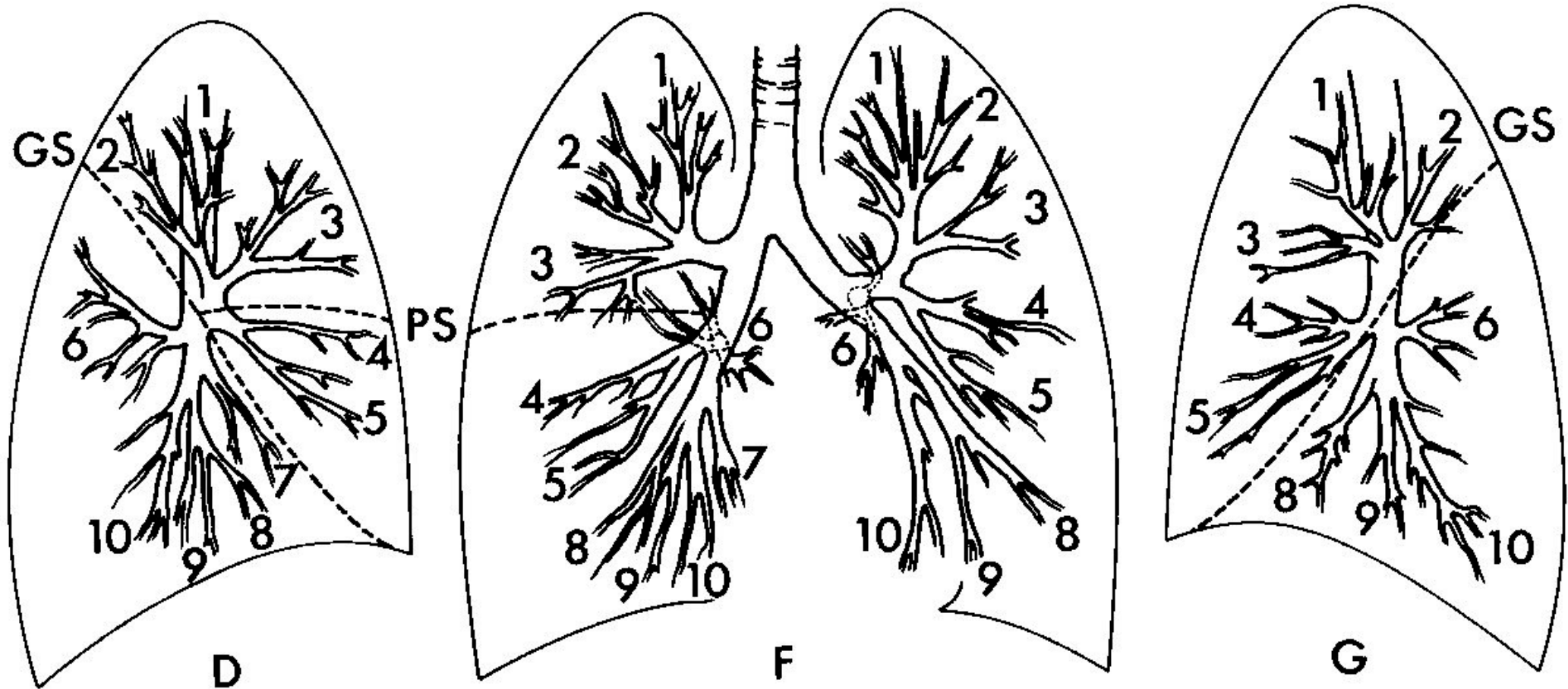
Bronches



la lingula fait
partie du lobe
supérieur
gauche

**B
R
O
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P
H
I
E**





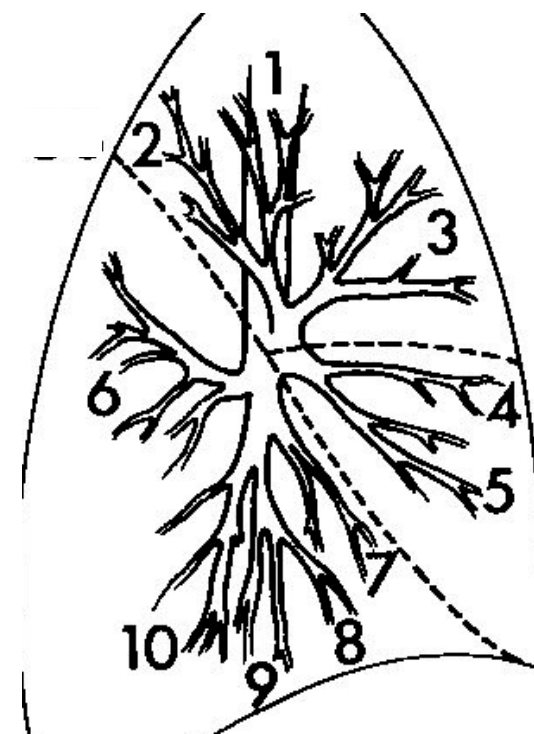
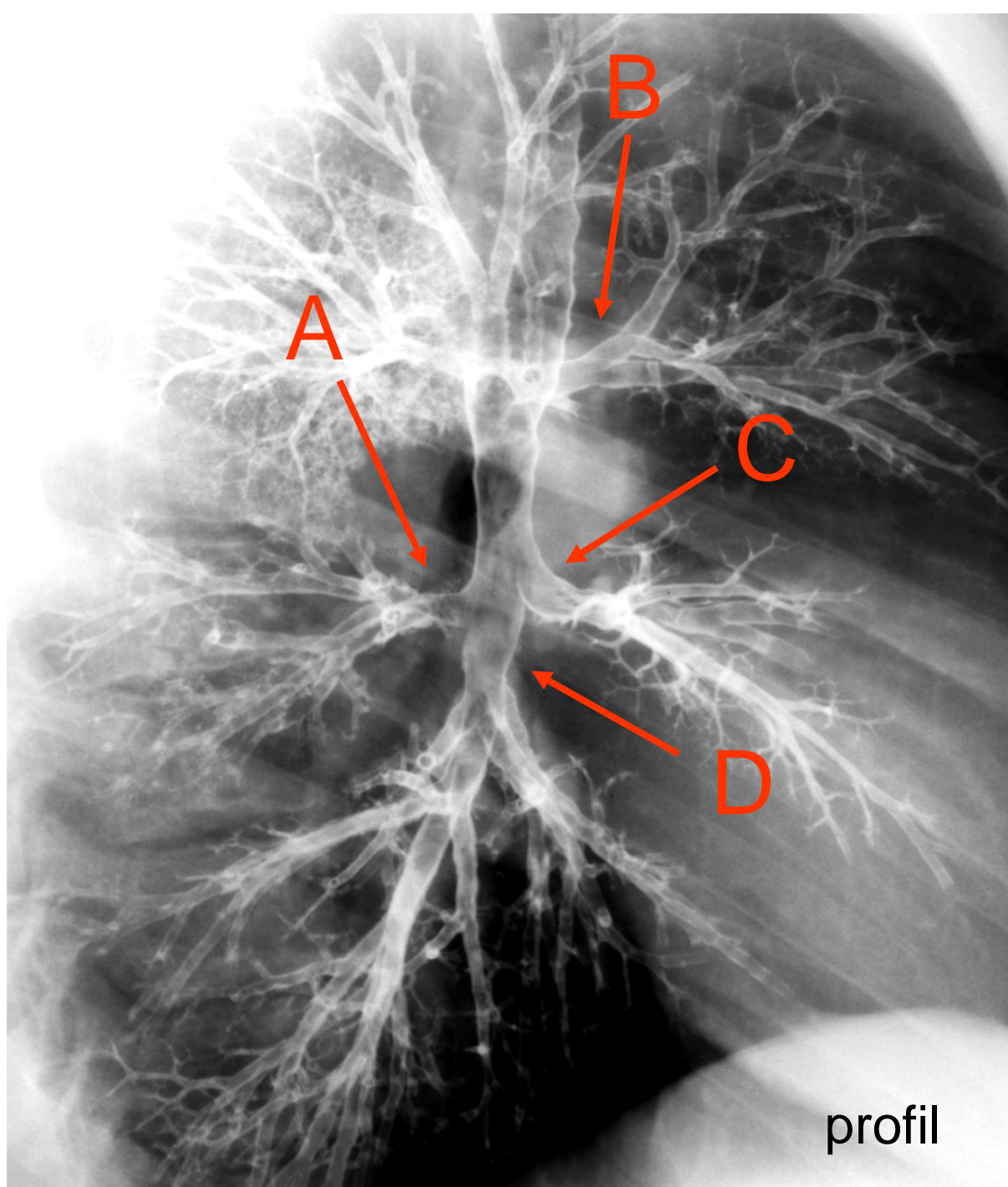
3 lobes

bronches

2 lobes

**B
R
O
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C
H
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G
R
A
P
H
I
E**

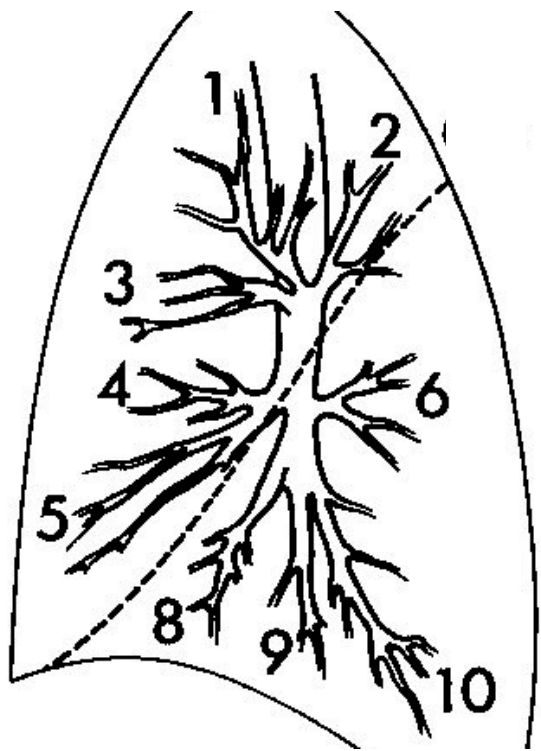
**D
R
O
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T
E**



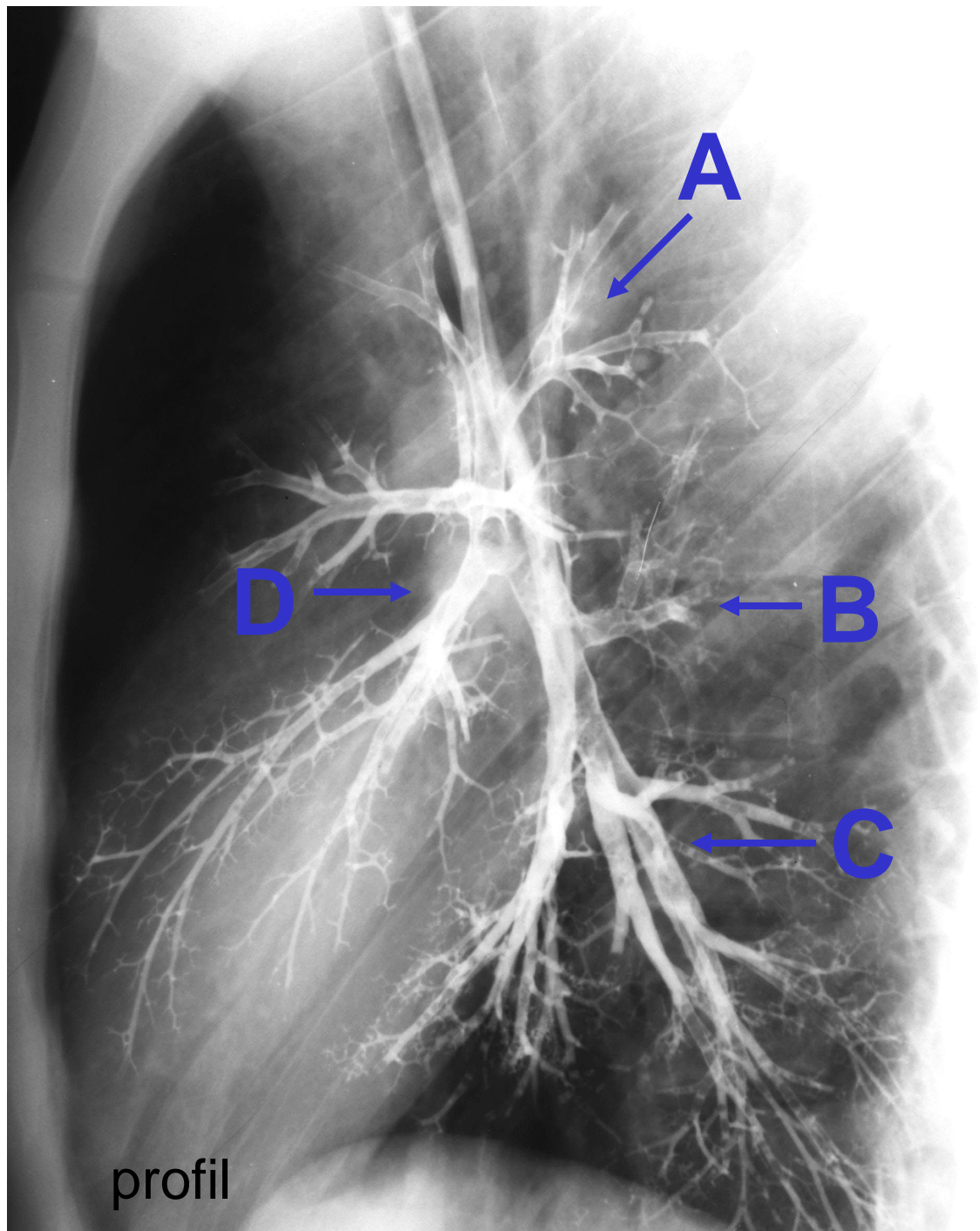
dorsal

profil

ventral



ventral

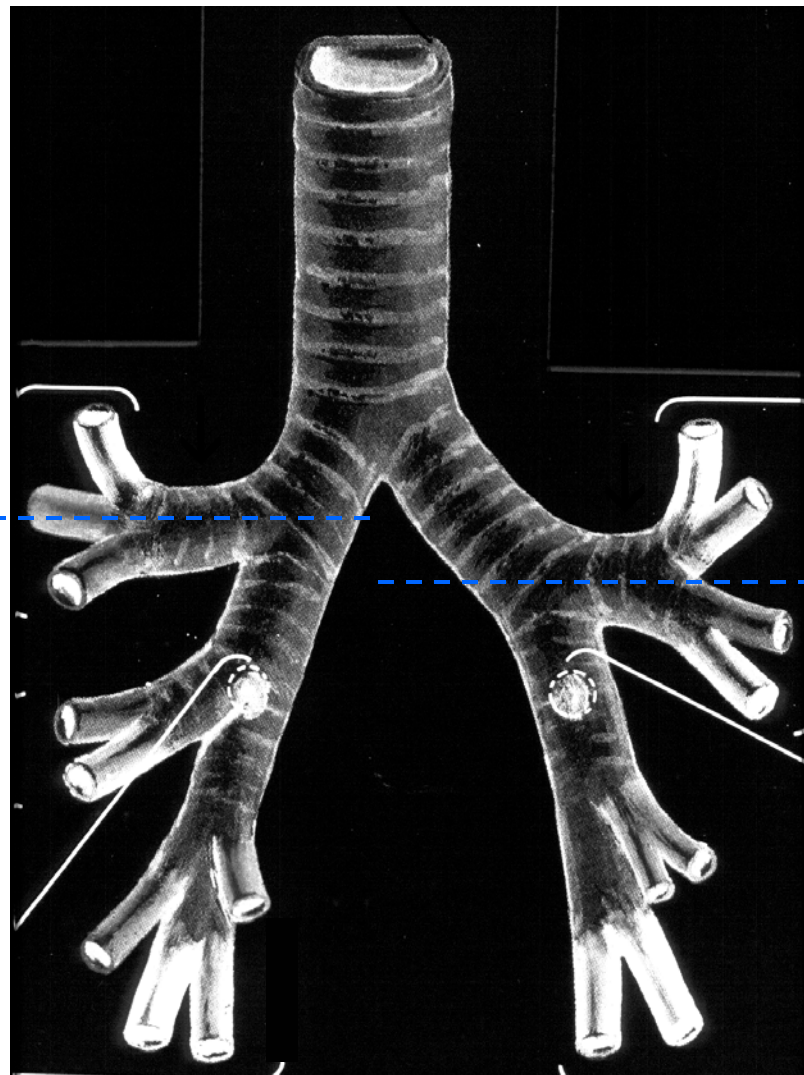
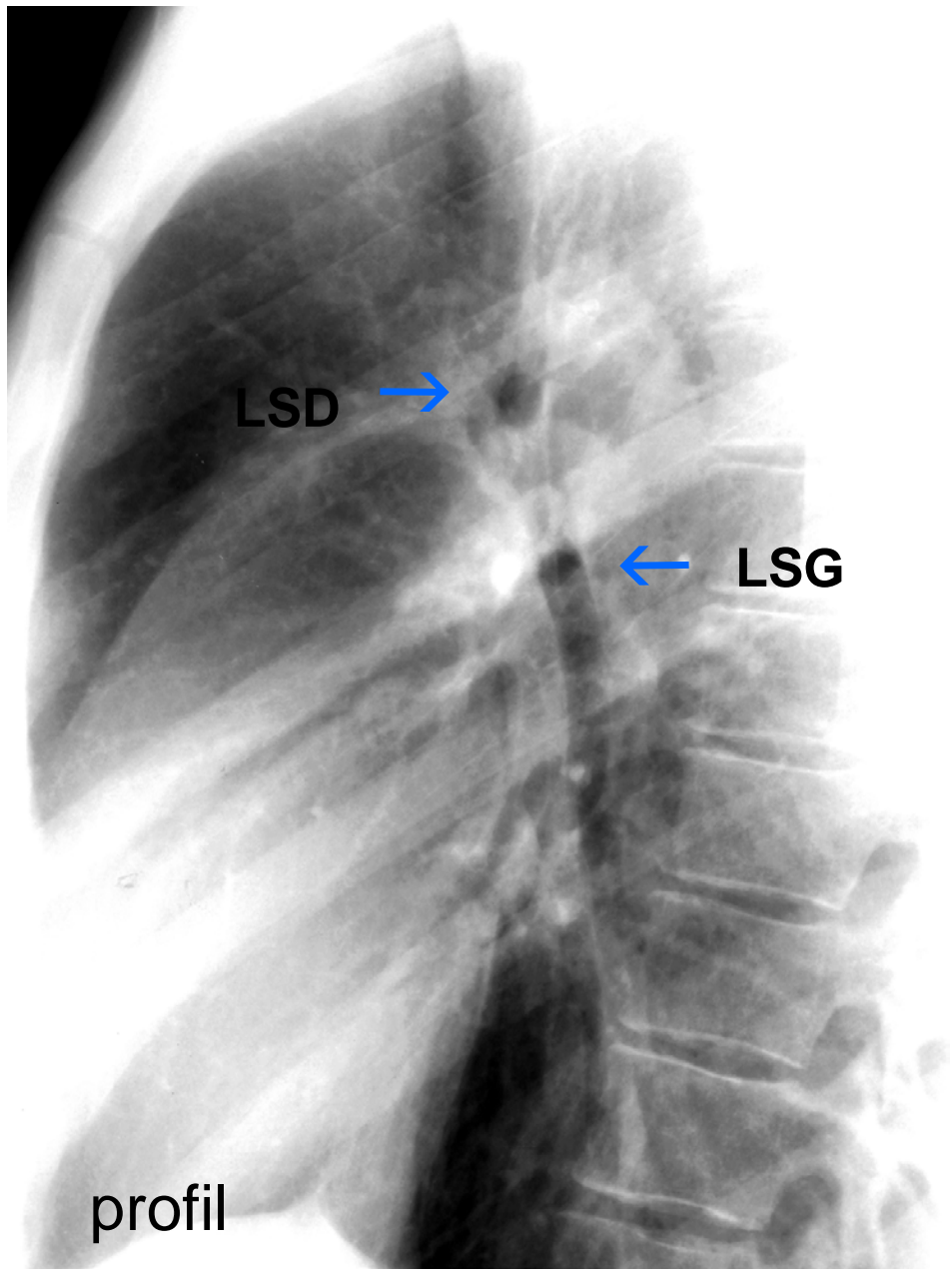


profil

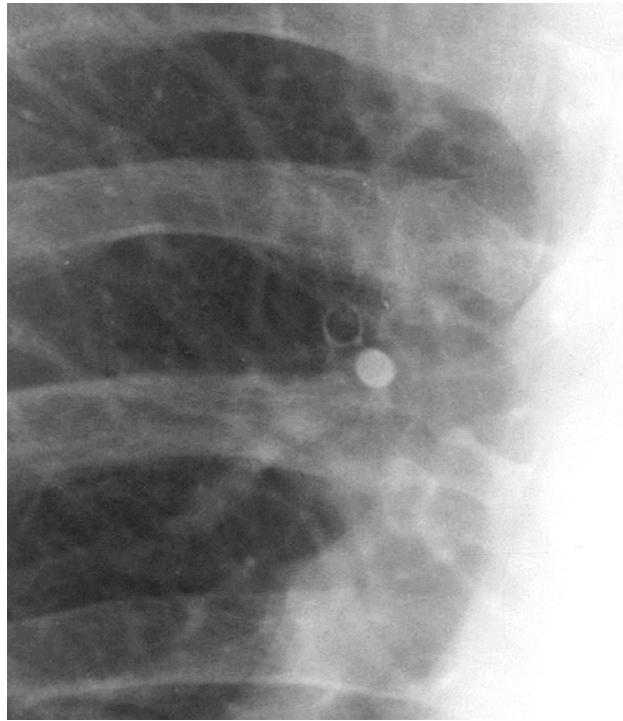
B
R
O
N
C
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H
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E

G
A
U
C
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E

dorsal



↙ bronches lobaires supérieures



bronche et
artère pulmonaire
(vue axiale)

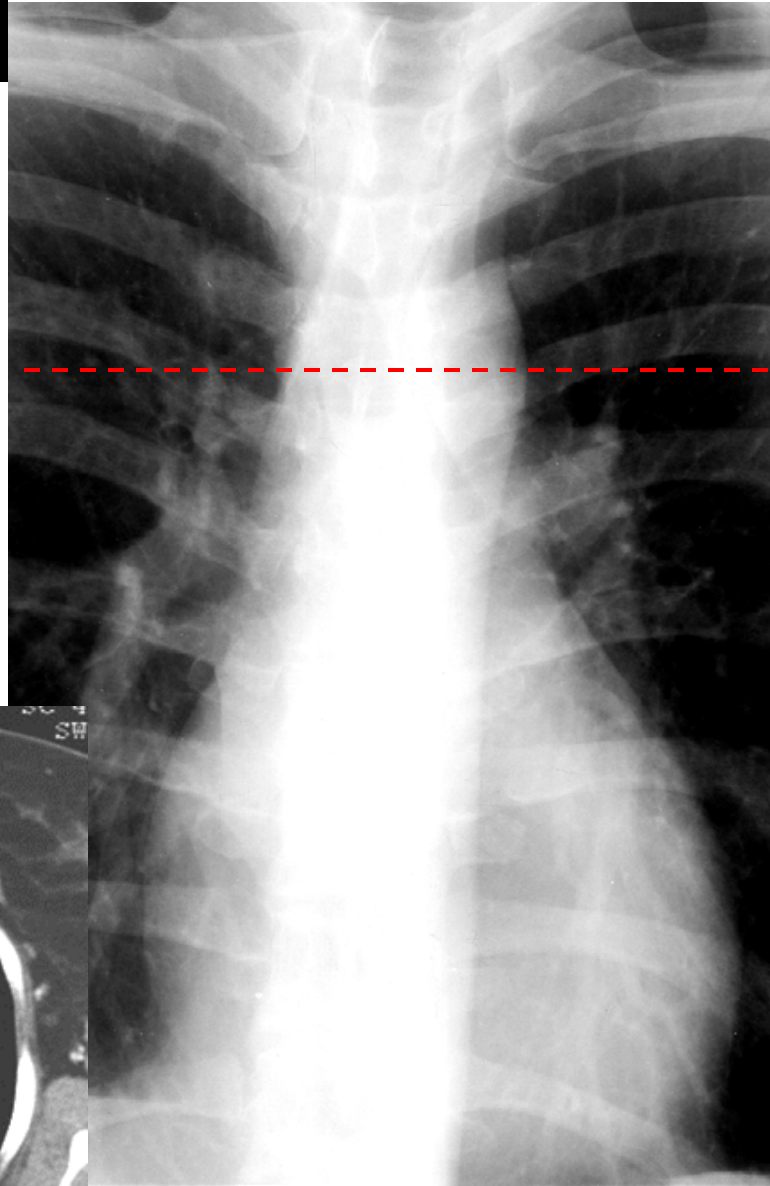
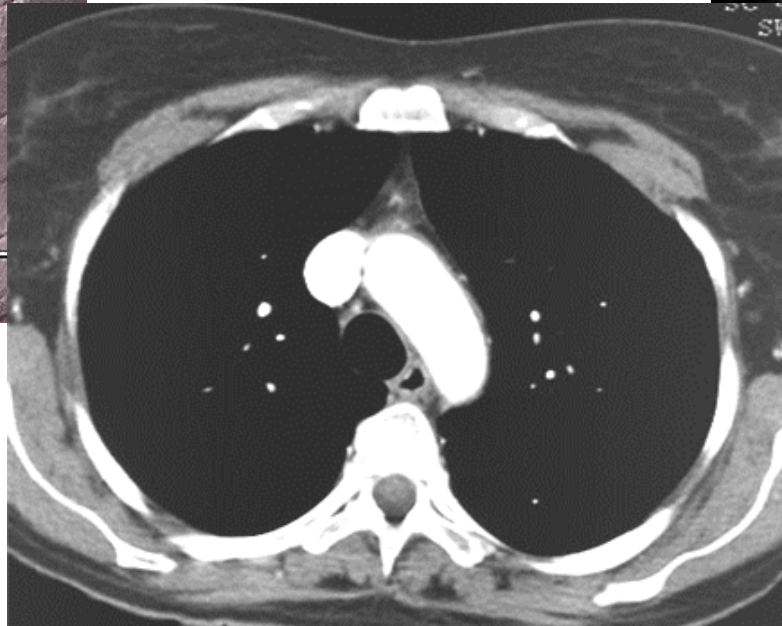
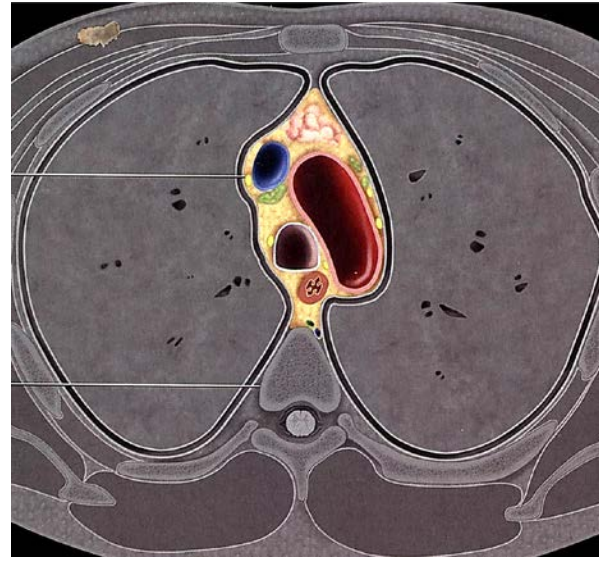
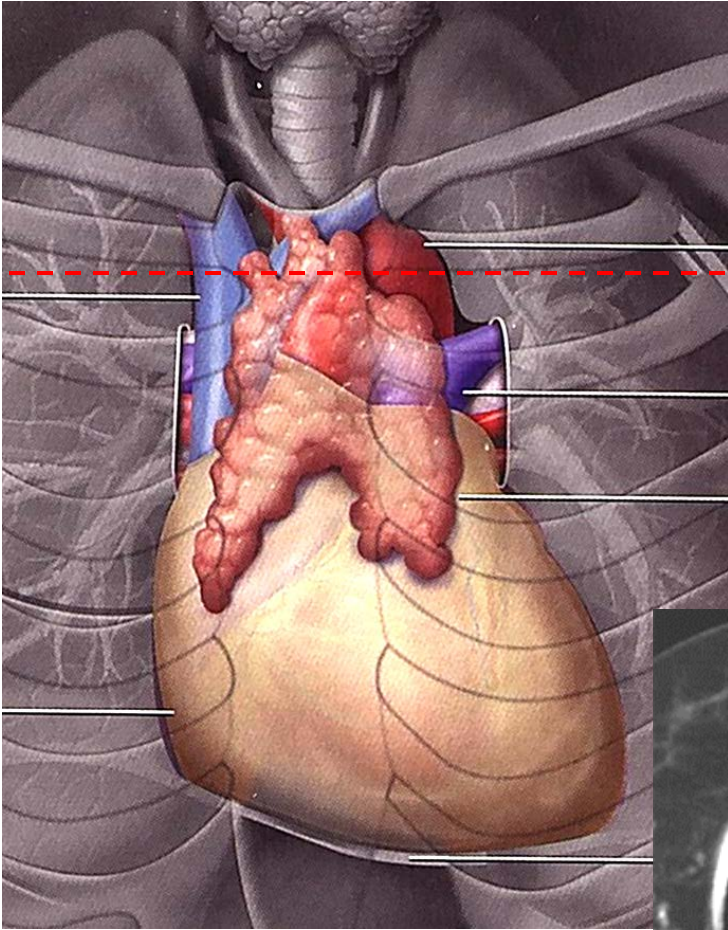


TOMODENSITOMETRIE THORACIQUE

Structures médiastinales

(Poumons)

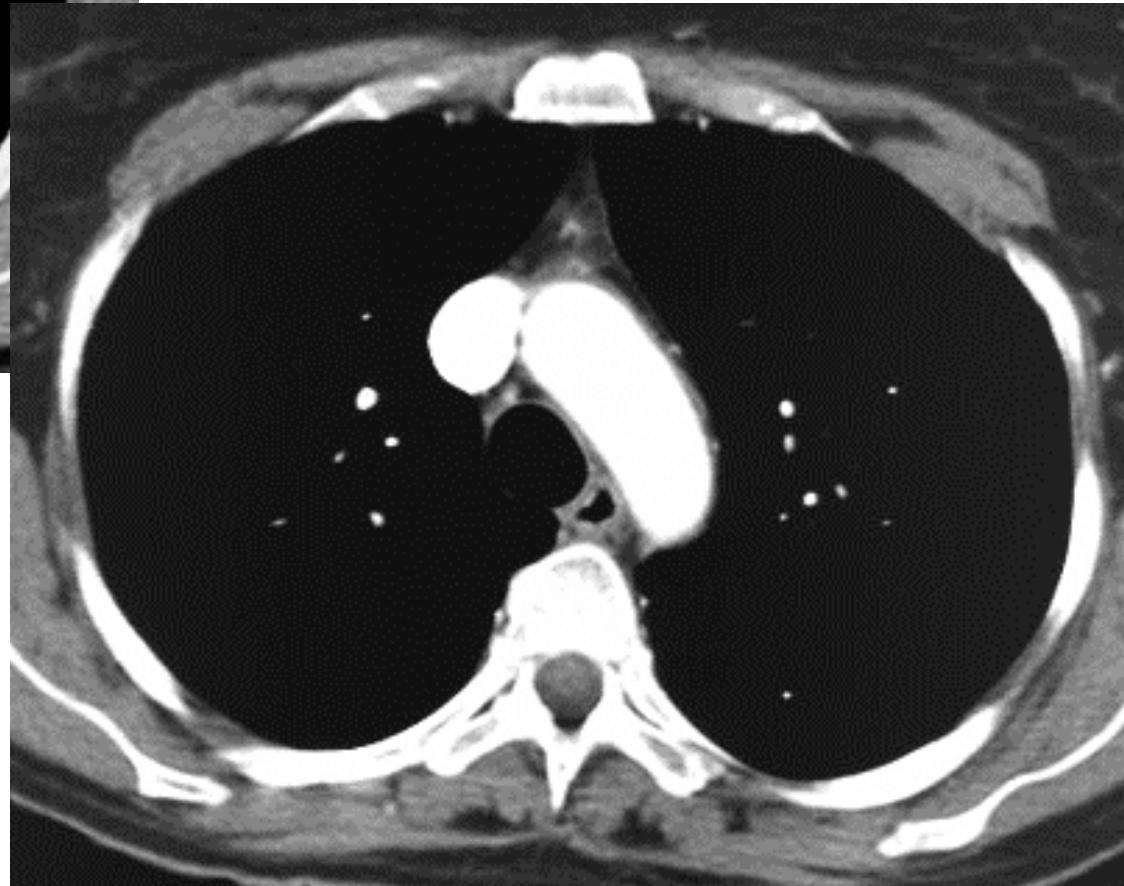
MEDIASTIN





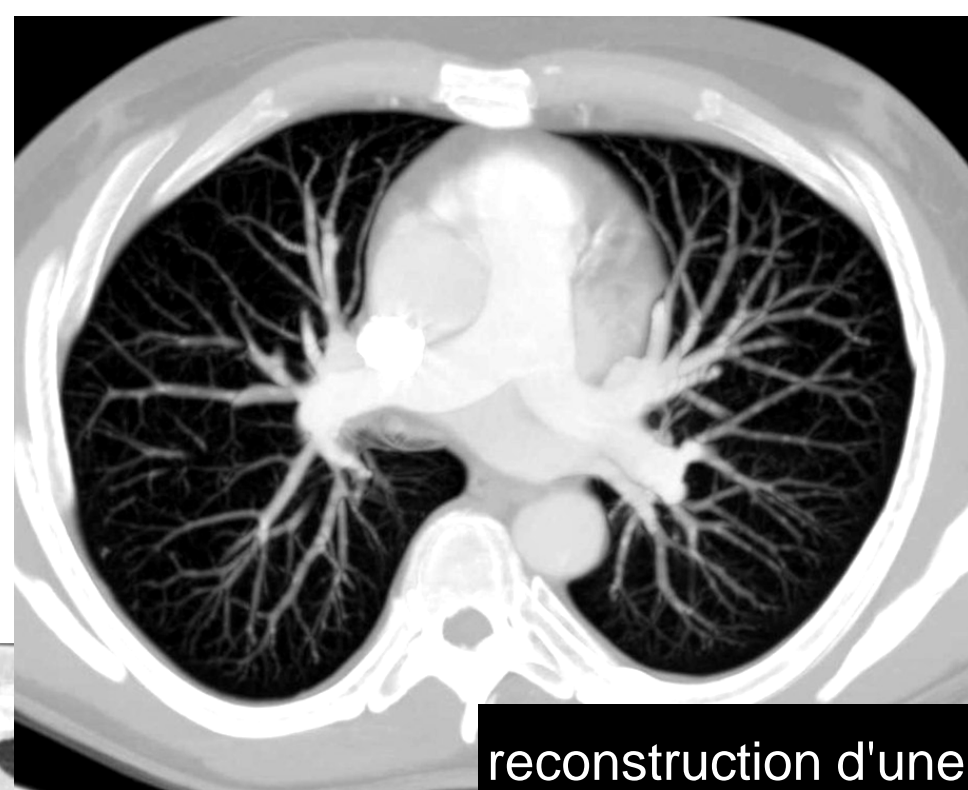
sans contraste IV

avec contraste IV



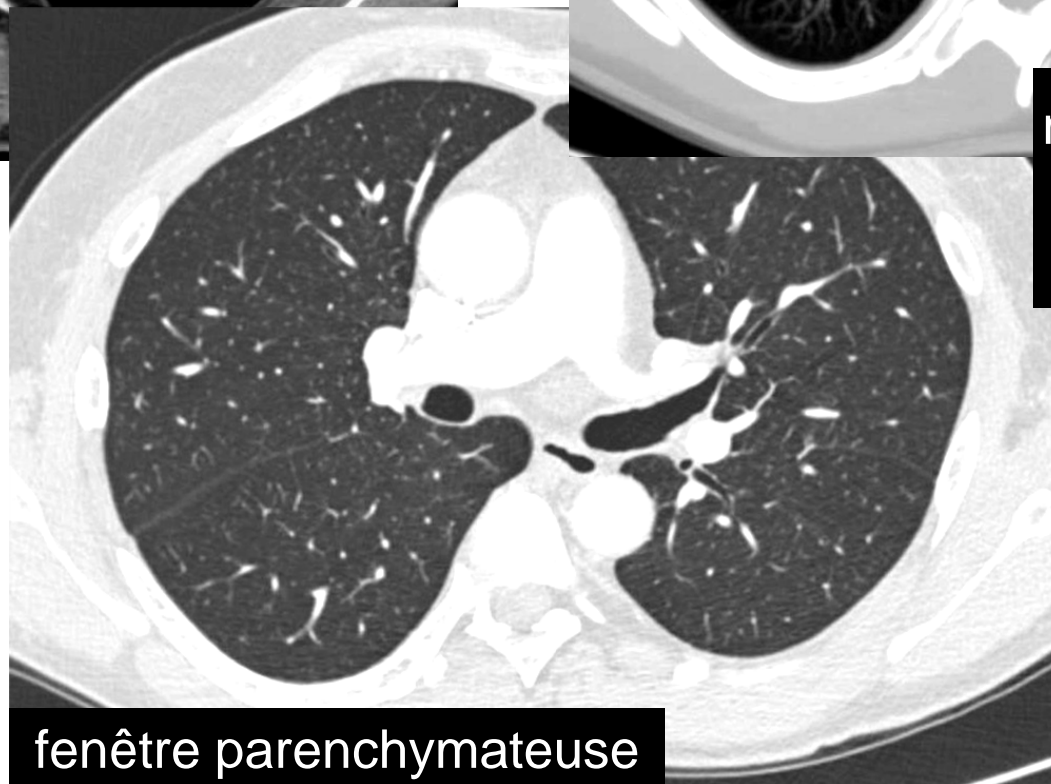


fenêtre médiastinale

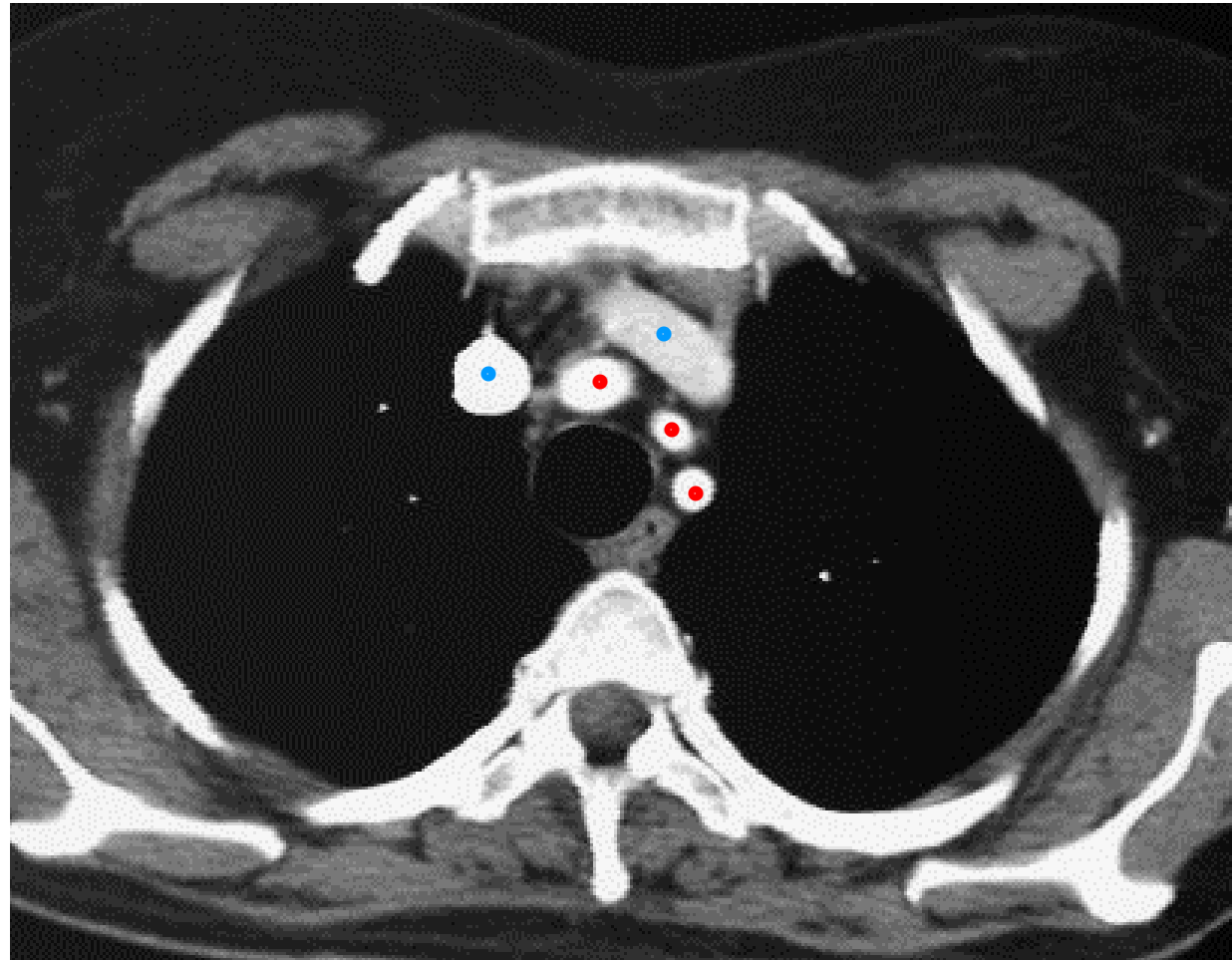
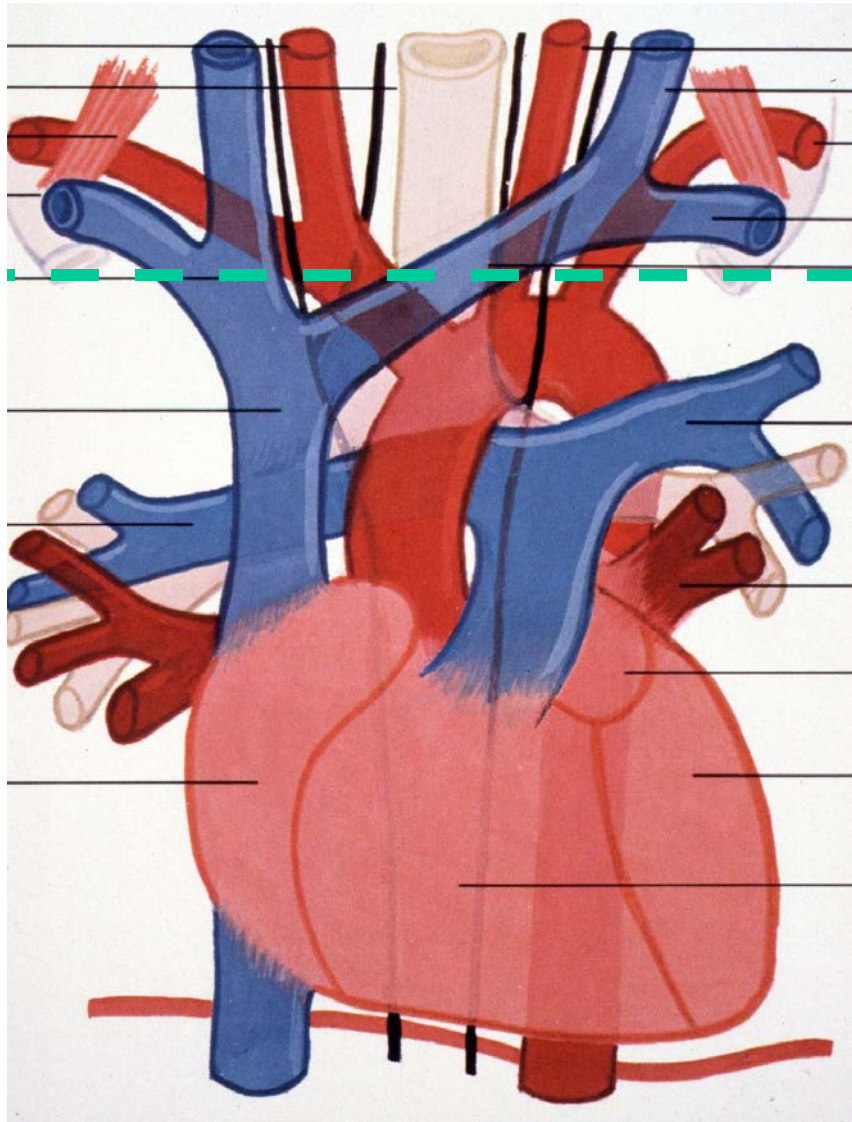


reconstruction d'une
coupe de 30 mm
d'épaisseur

coupes de 3 mm
d'épaisseur



fenêtre parenchymateuse



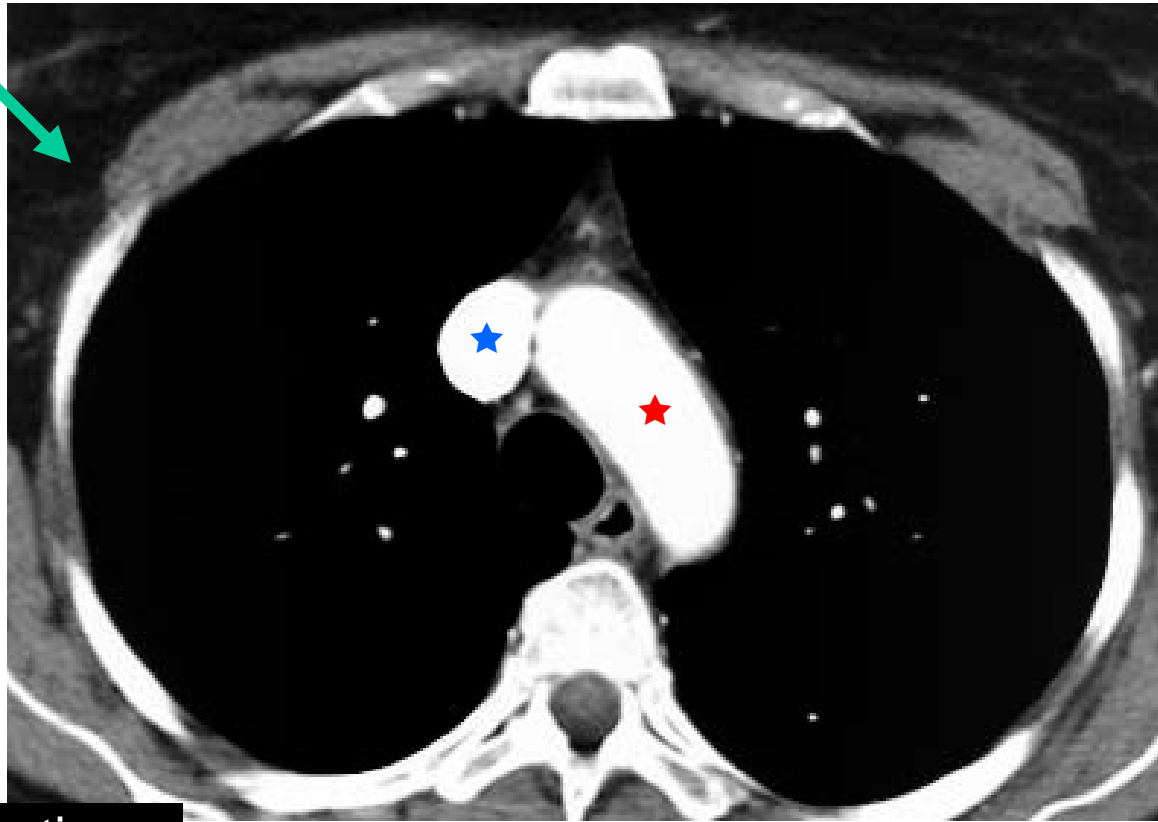
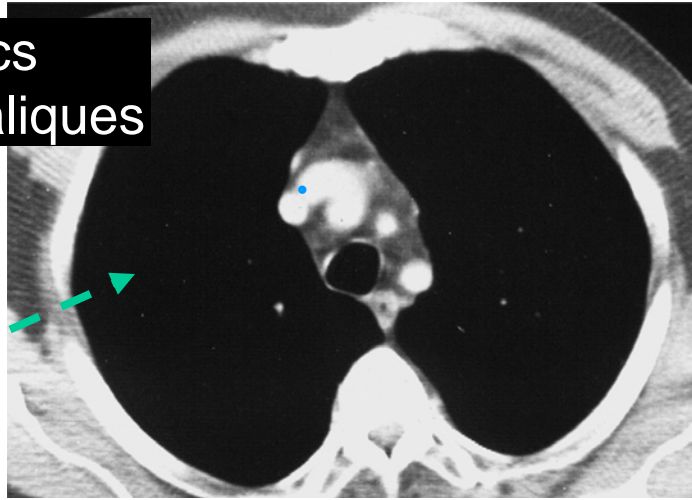
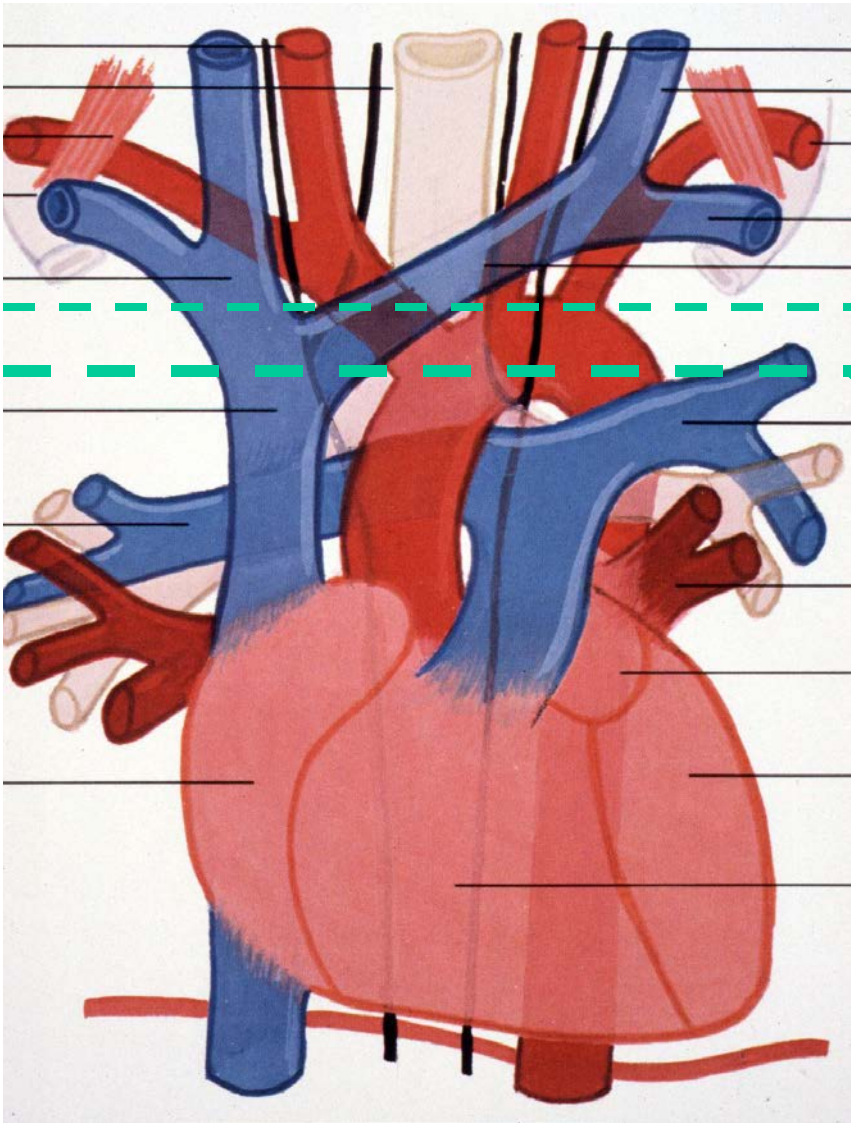
vaisseaux supra-aortiques

- plan veineux
en avant du
- plan artériel

troncs veineux brachio-céphaliques
(innominés) droit et gauche

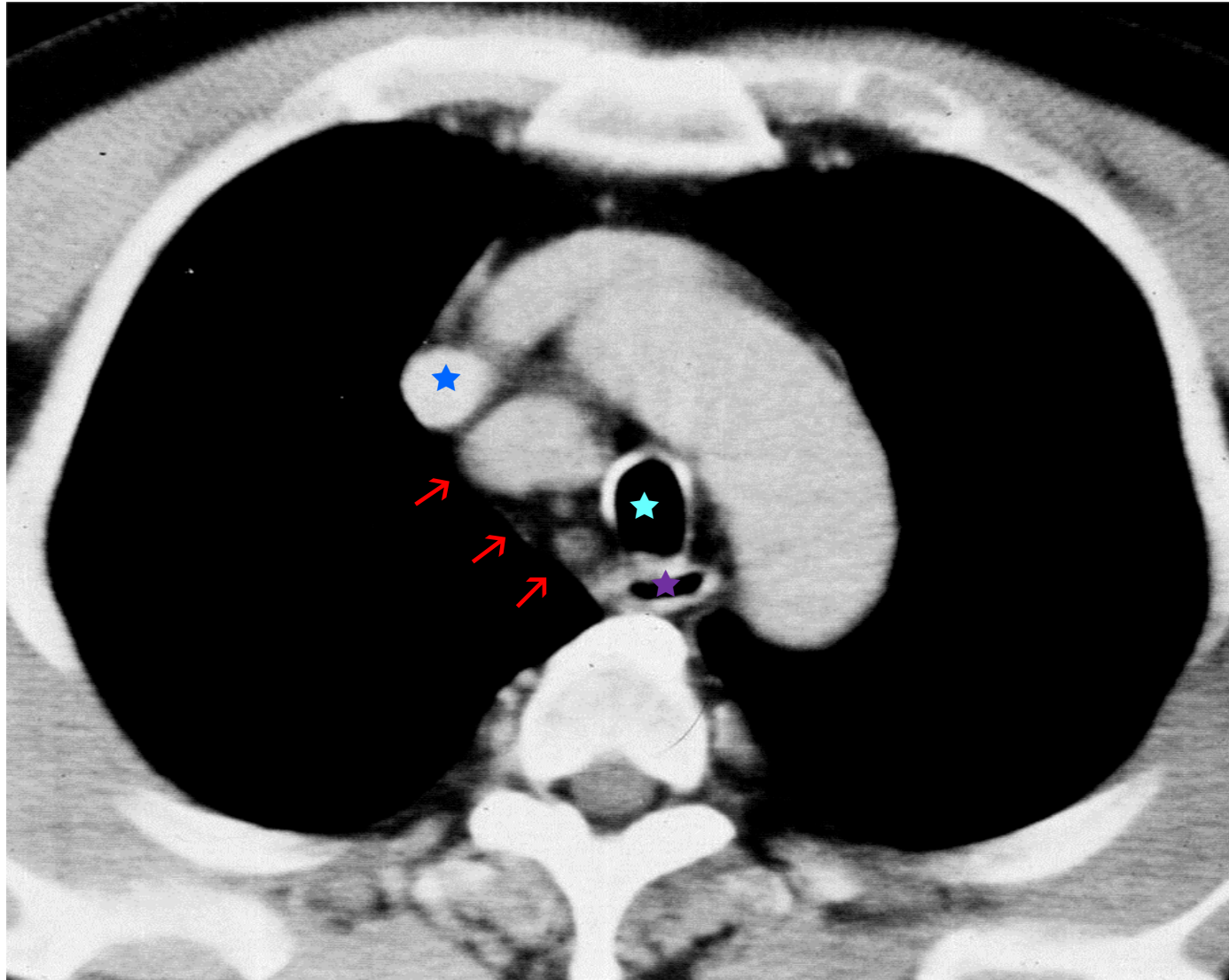
trunc artériel brachio-céphalique
artère carotide primitive gauche
artère sous-clavière gauche

• confluent des troncs veineux brachio-céphaliques



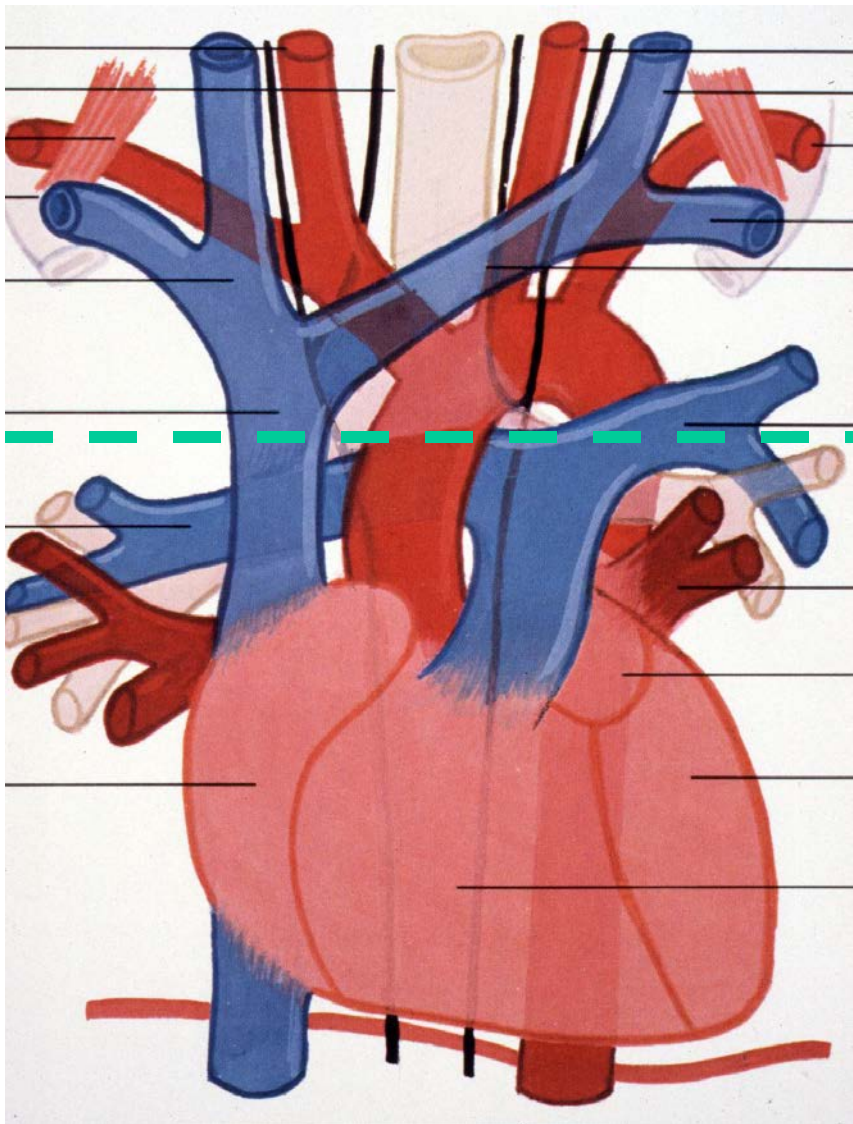
★ crosse aortique

★ veine cave supérieure

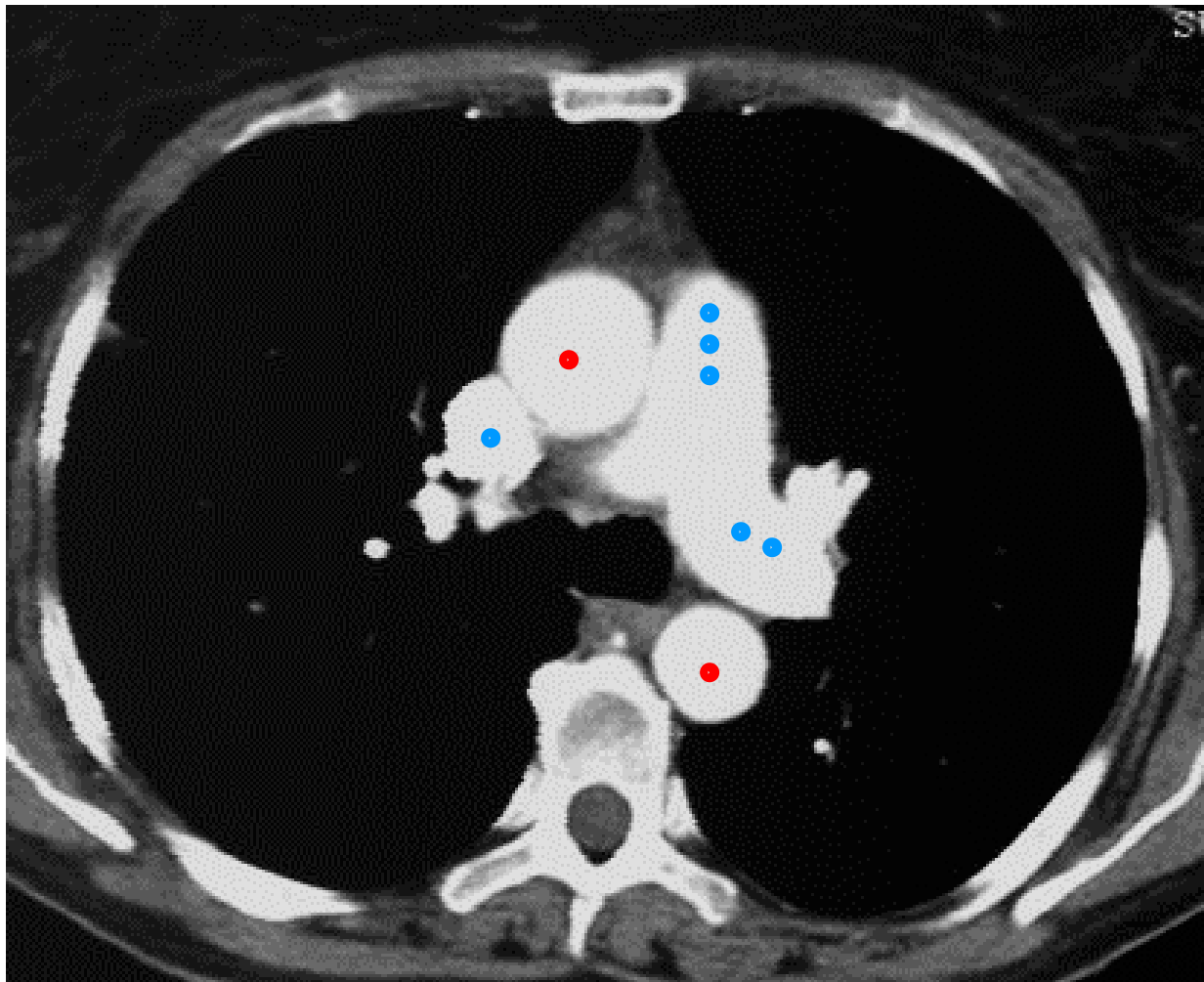


↗ ganglions dans la **loge de Baret**
(espace para-trachéal droit)

★ veine cave supérieure
★ trachée
★ oesophage

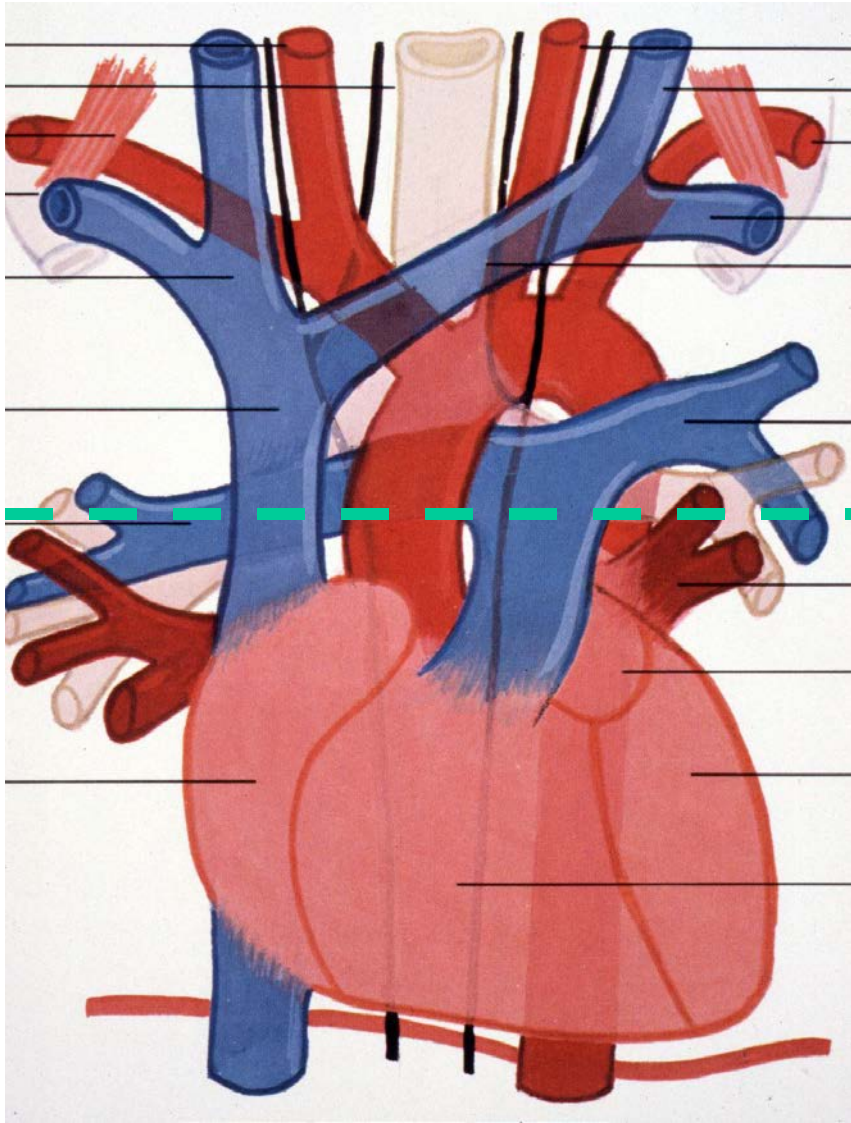


• artère pulm. gauche

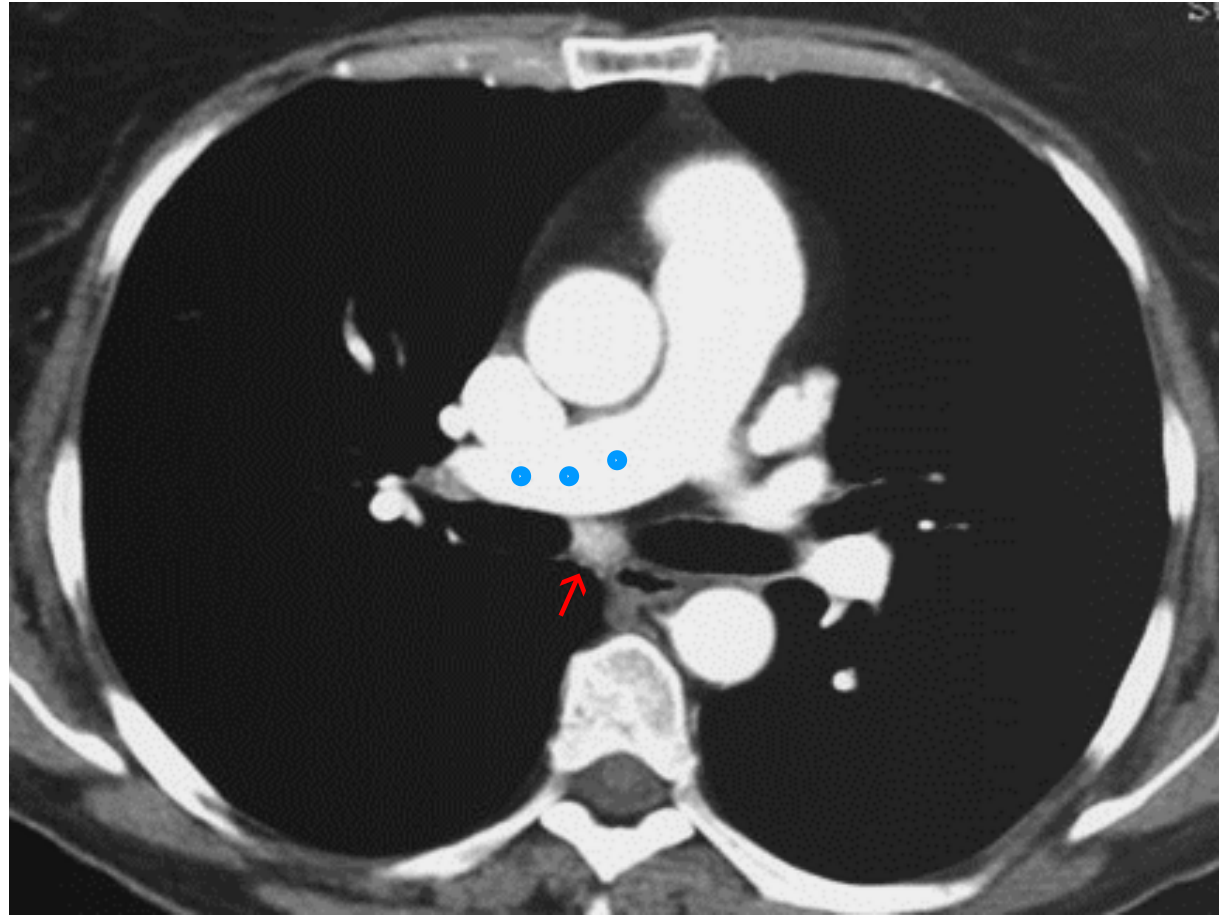


• aorte (asc. et desc.)
• veine cave supérieure

• tronc artériel pulm.



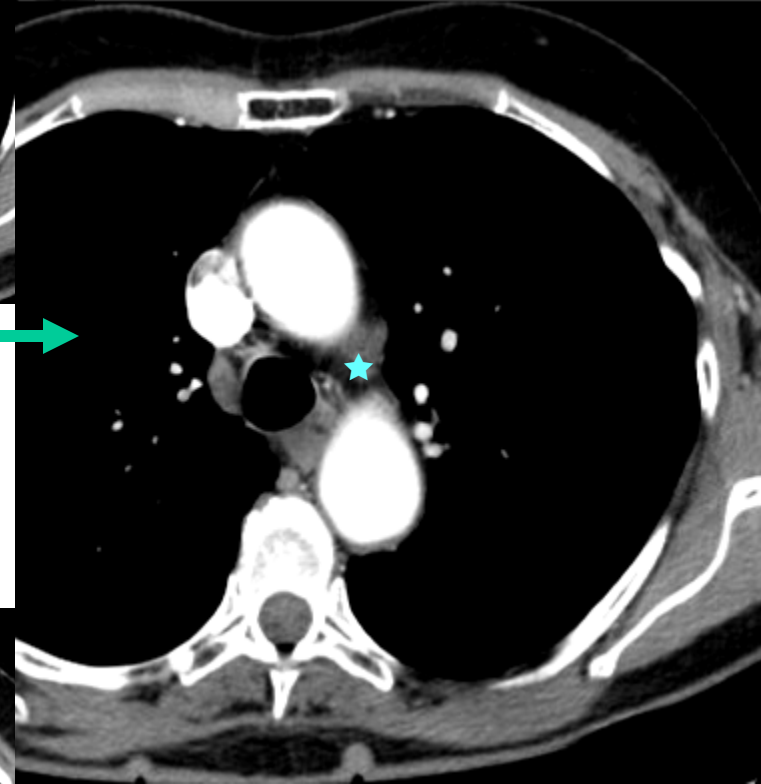
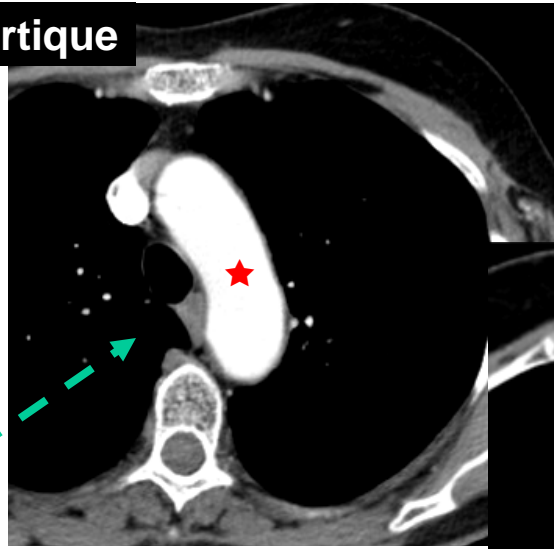
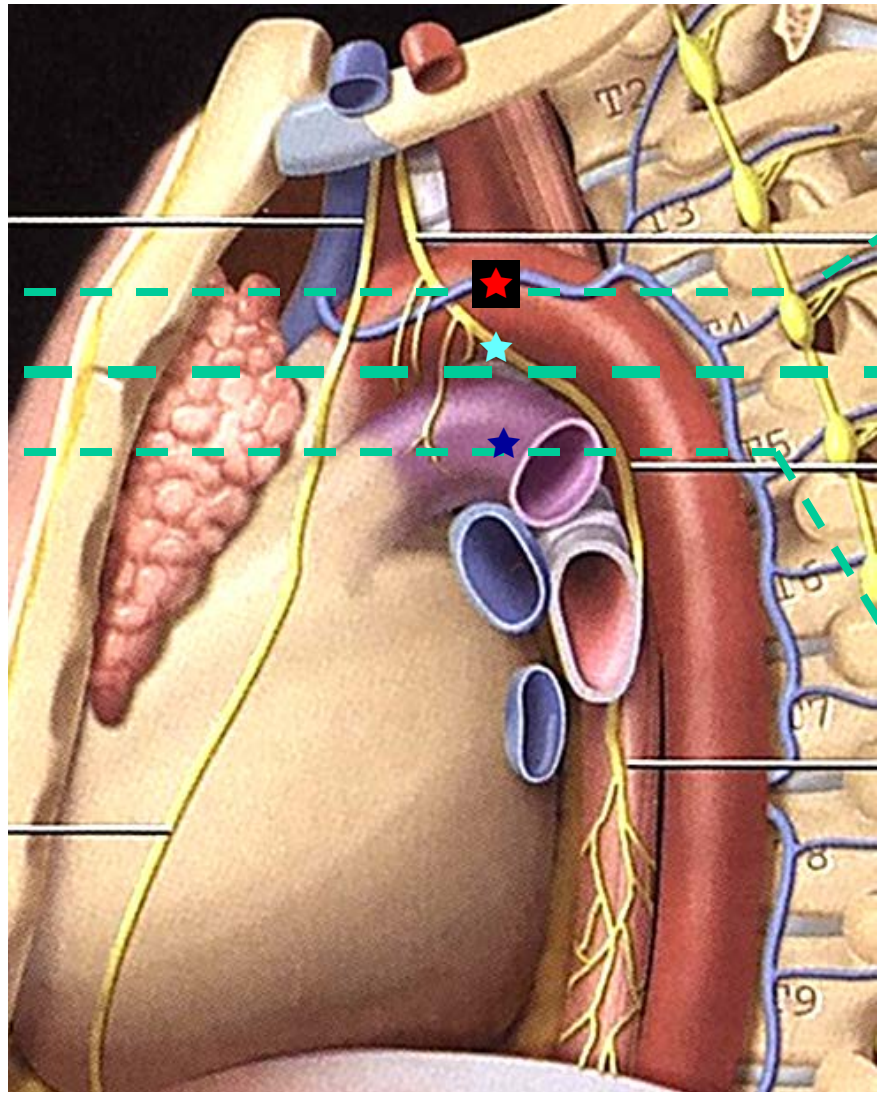
• • • artère pulm. droite



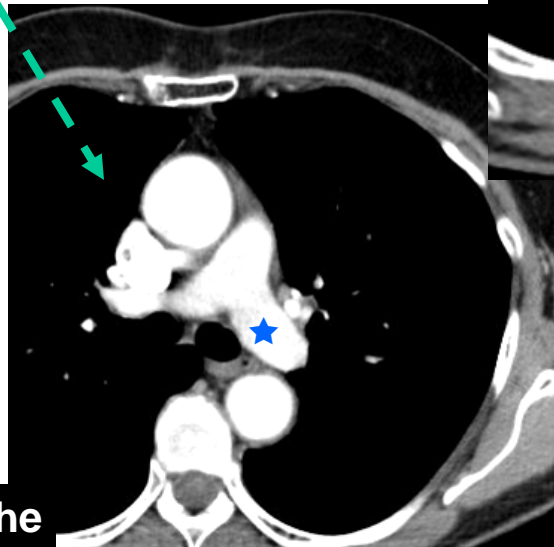
↗ ganglion sous-carinaire

★ **croisse aortique**

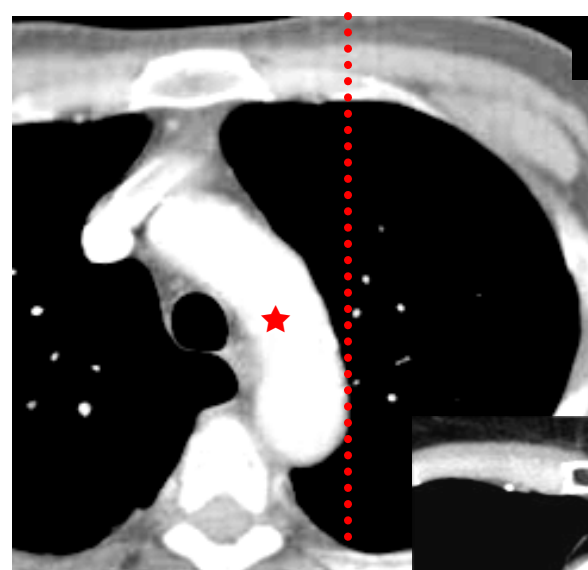
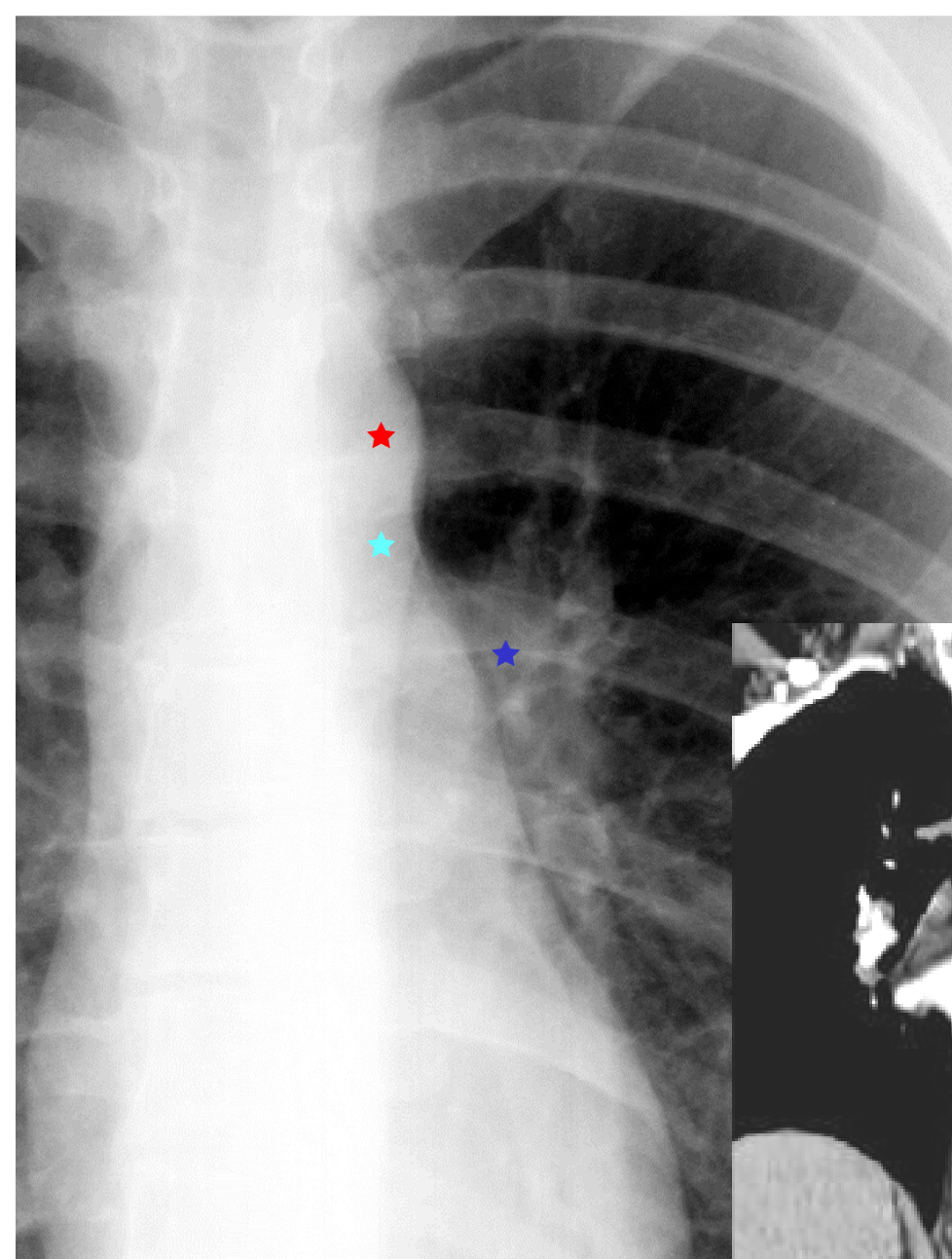
vue profil gauche



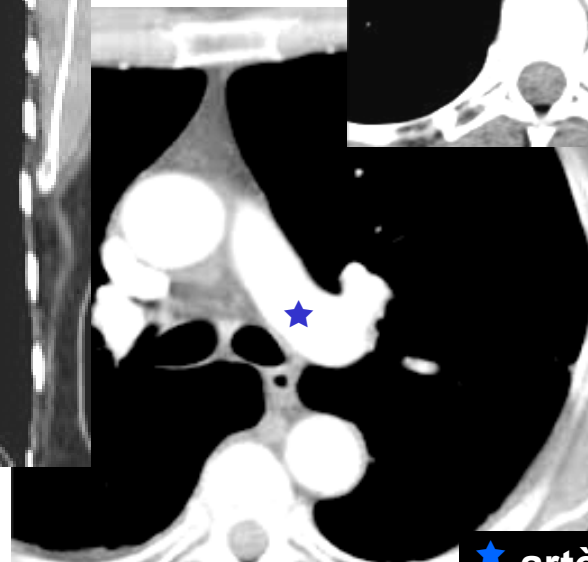
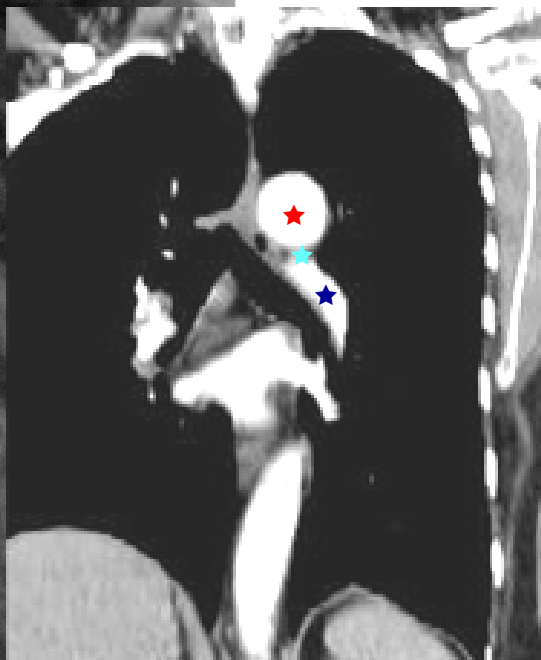
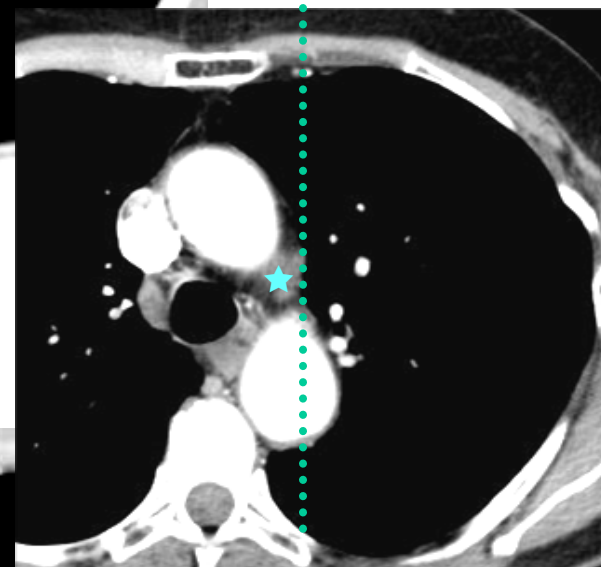
fenêtre aorto-pulmonaire



★ **artère pulm. gauche**

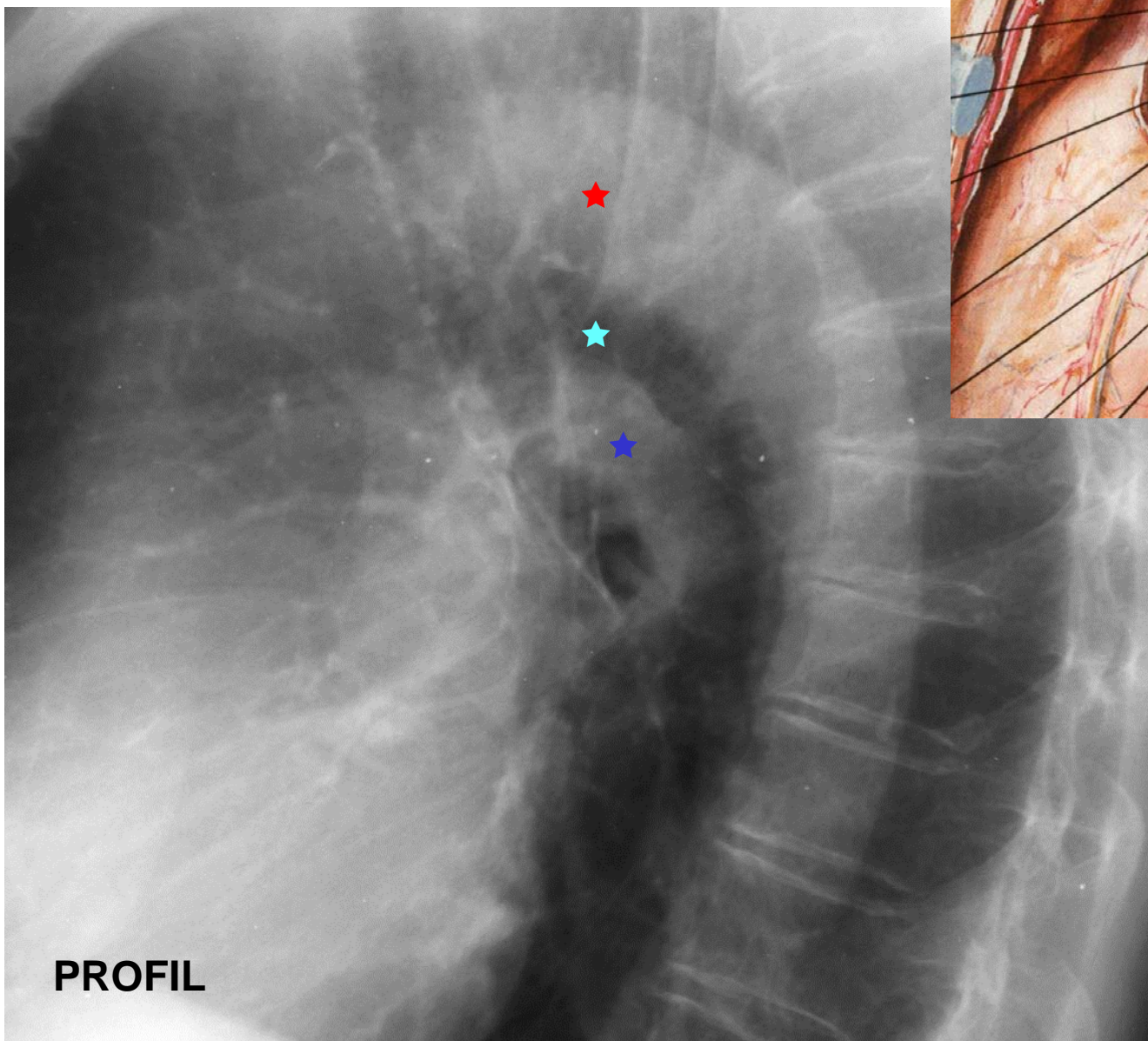


★ **croisse aortique**

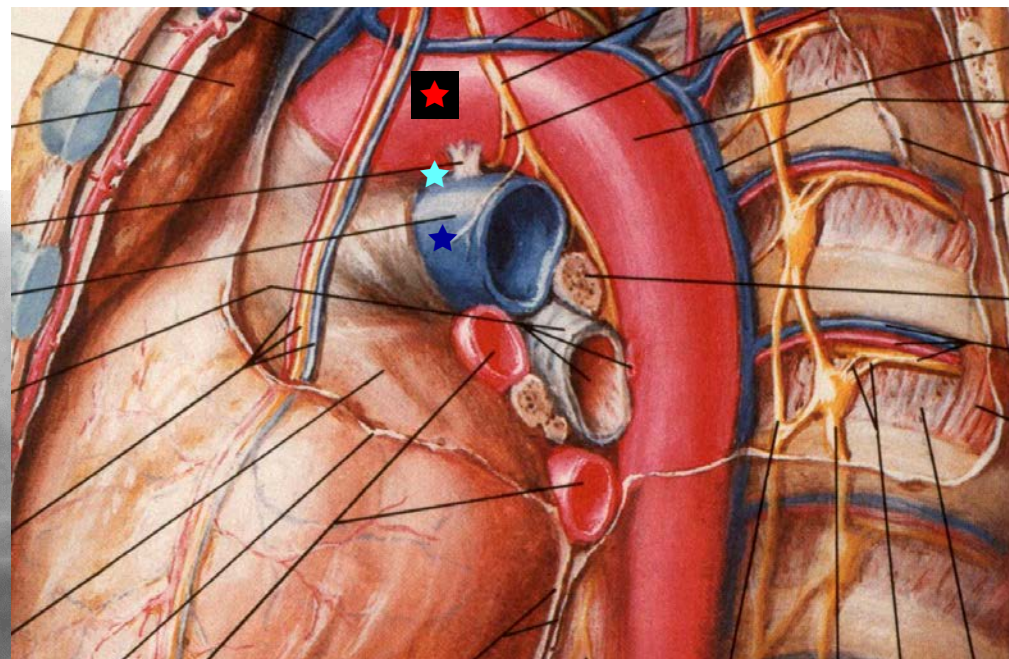


★ **fenêtre aorto-pulmonaire**

★ **artère pulm. gauche**

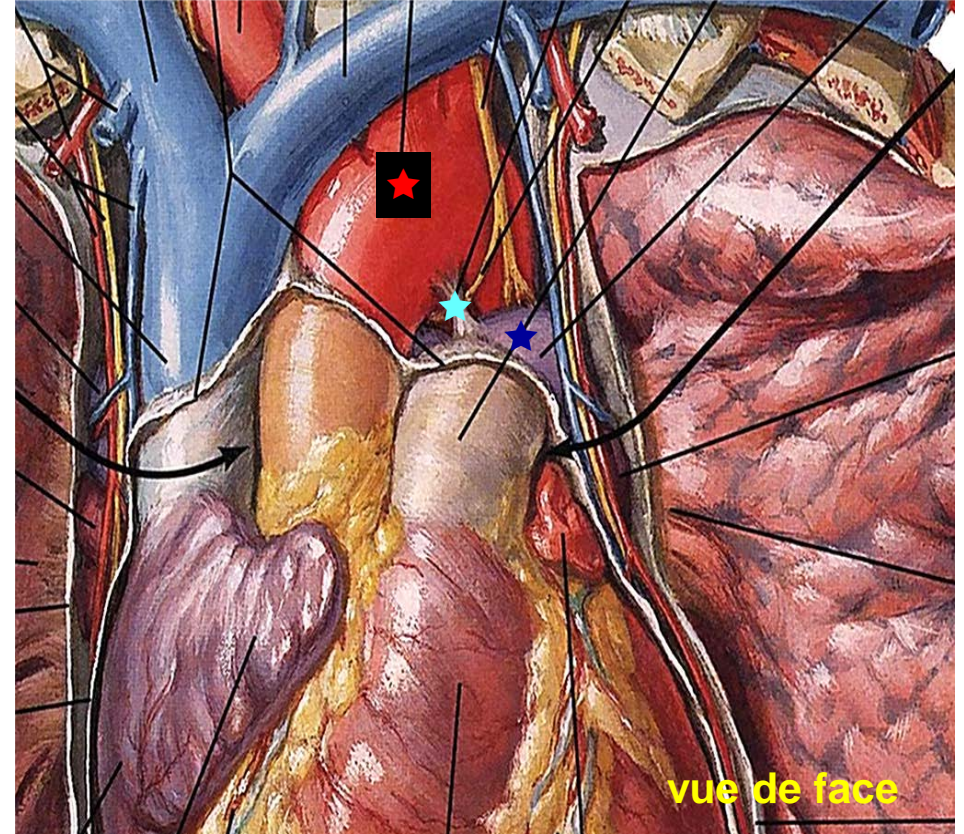
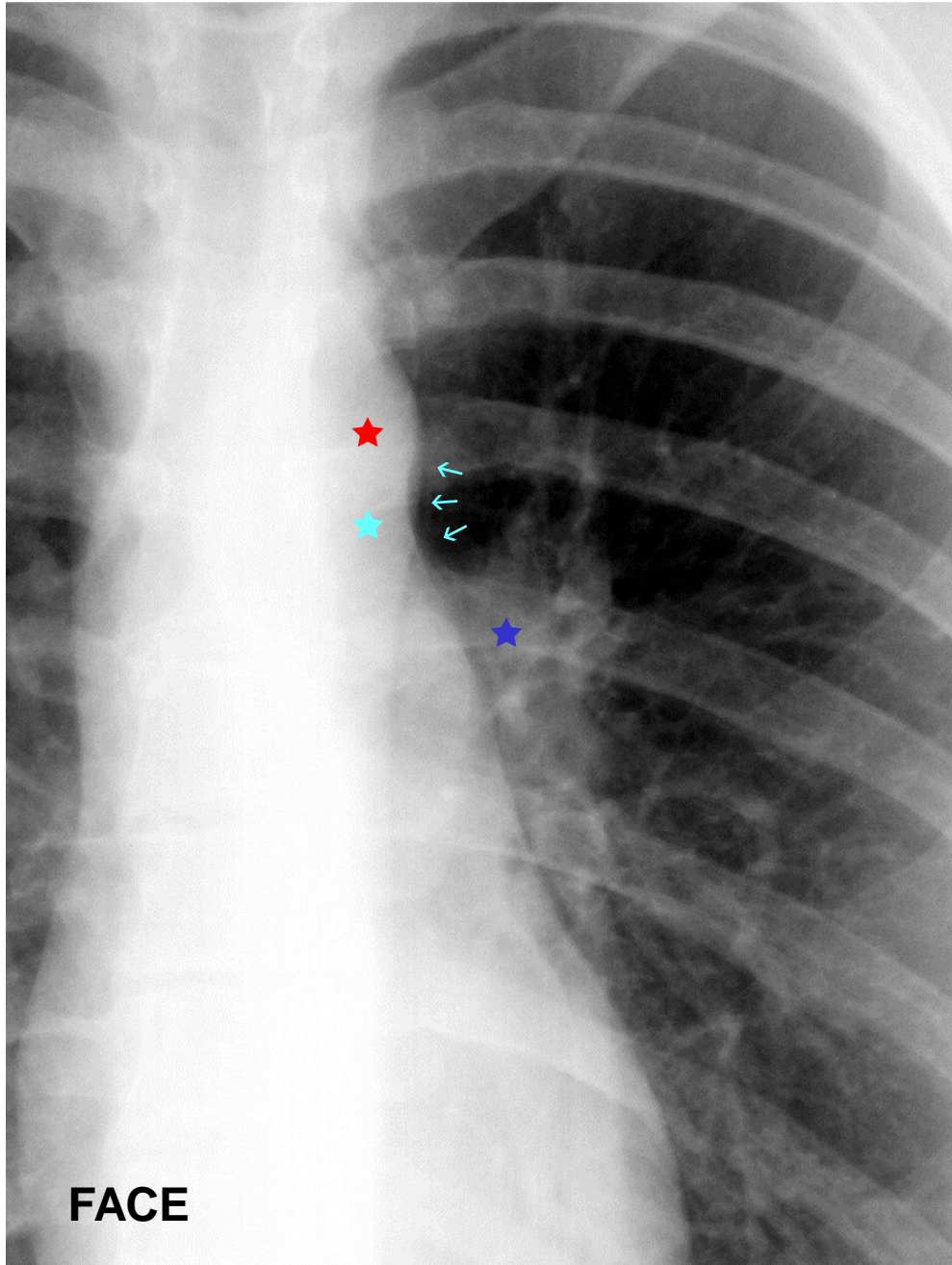


PROFIL



★ fenêtre
aorto-pulmonaire
(profil)

★ crosse aortique
★ artère pulm. gauche



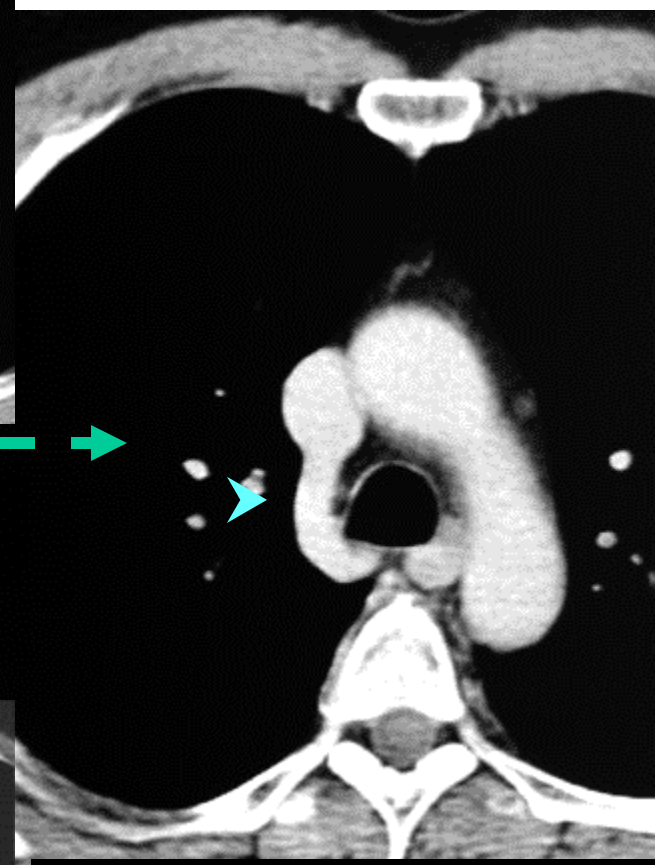
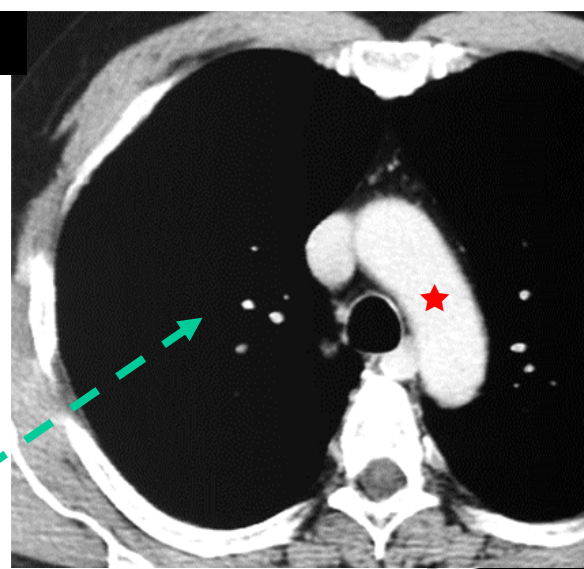
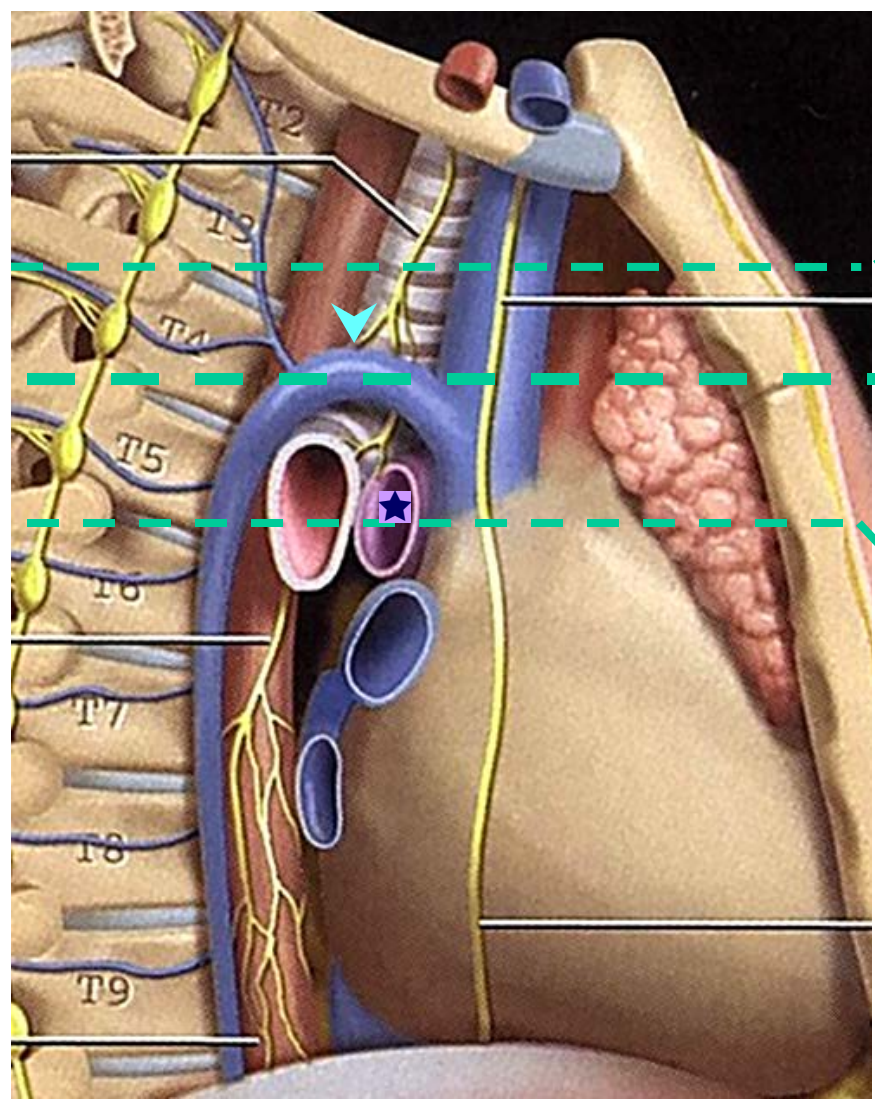
FACE

★ fenêtre aorto-pulmonaire normale

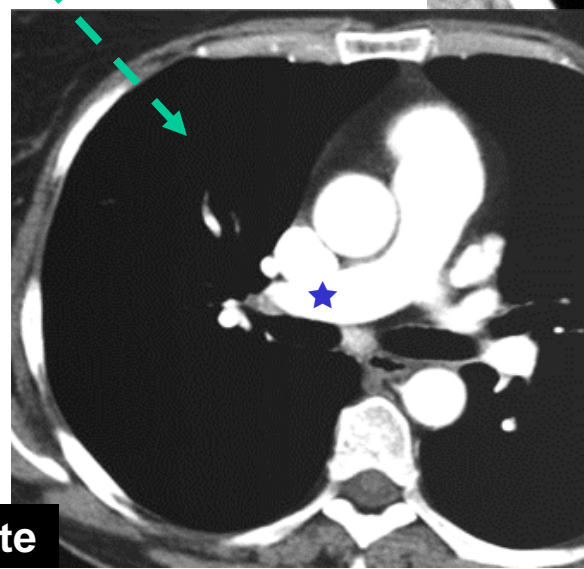
↑↑↑ jamais convexe vers le poumon
sur le cliché de face !!!

★ **croisse aortique**

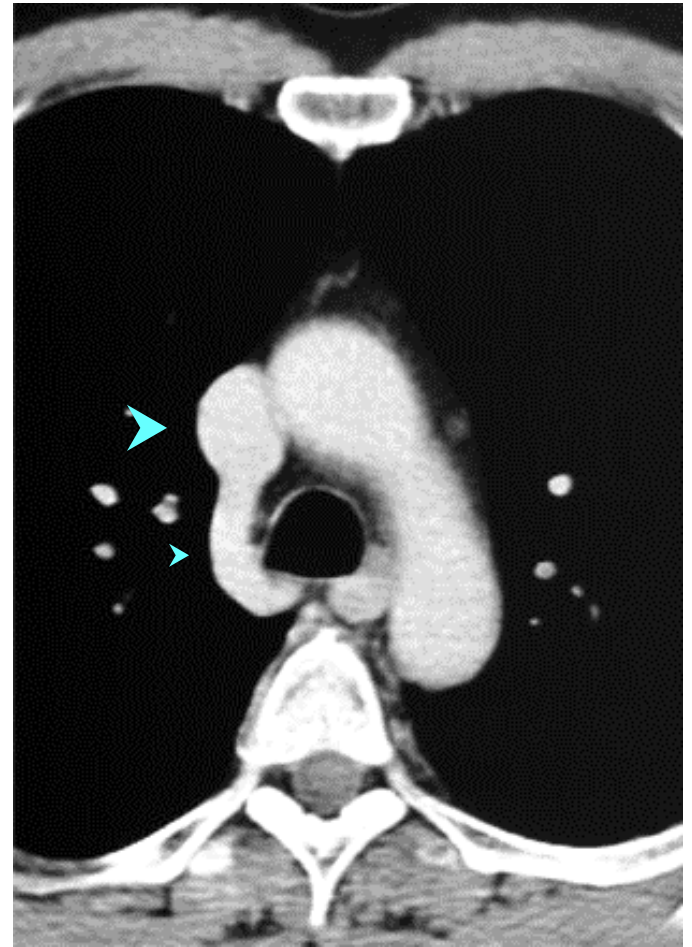
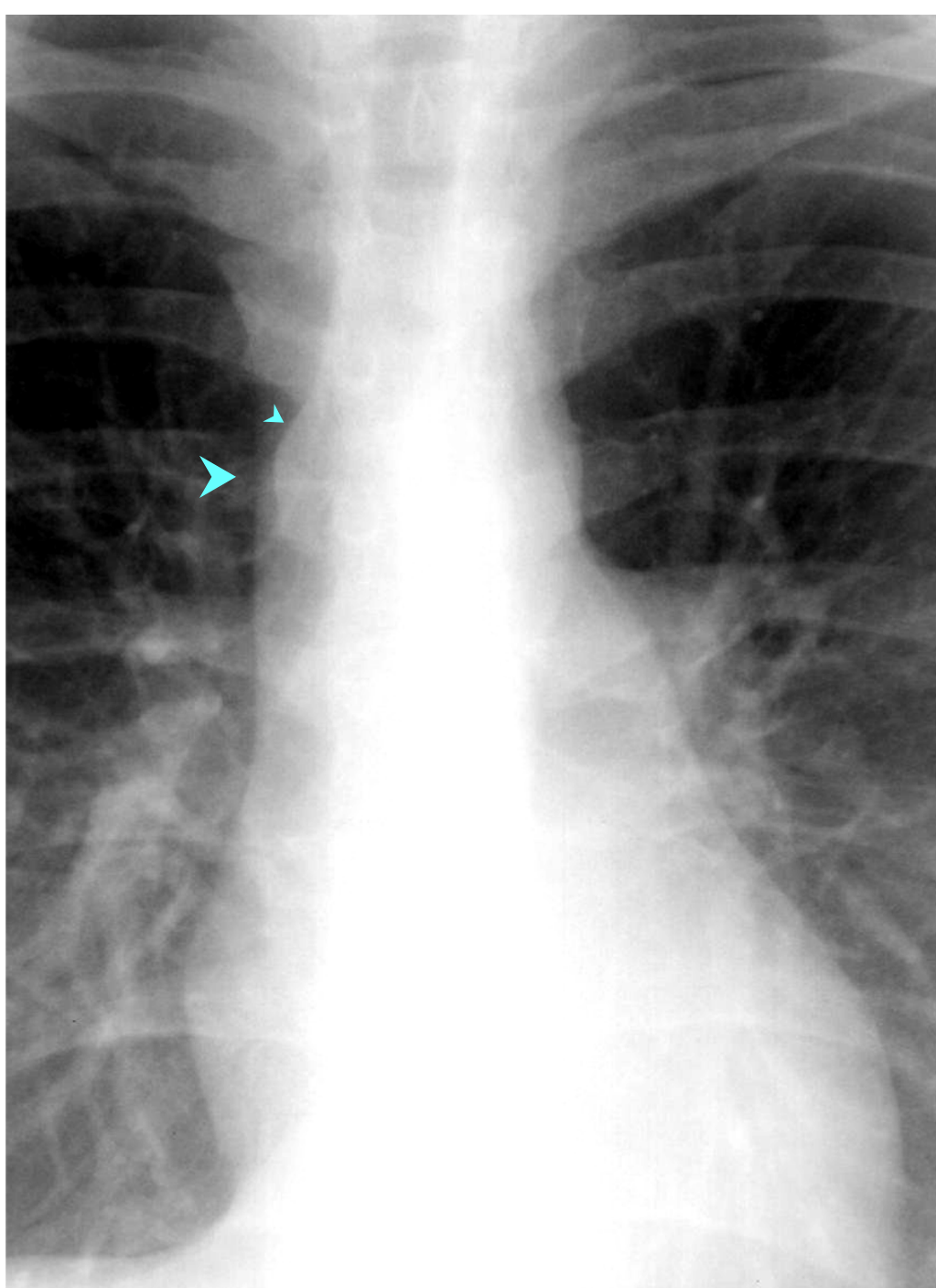
vue profil droit



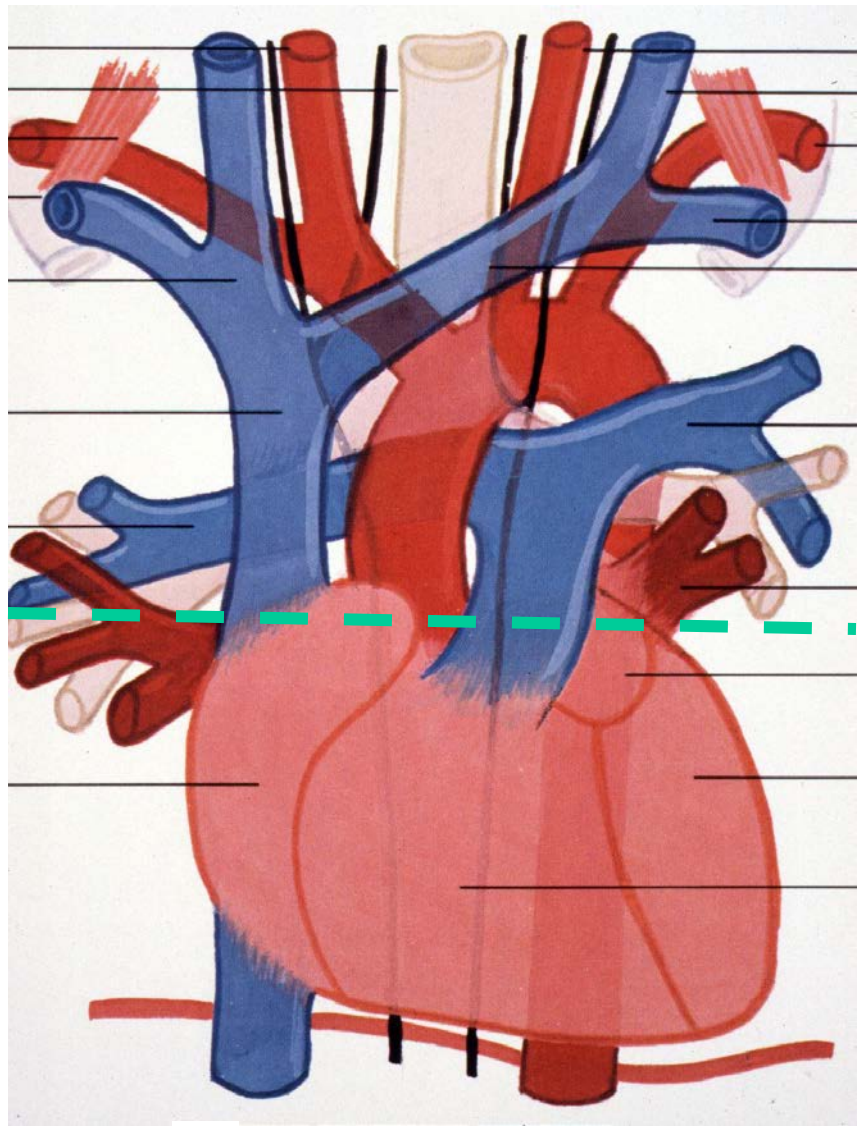
croisse de la veine azygos



★ **artère pulm. droite**

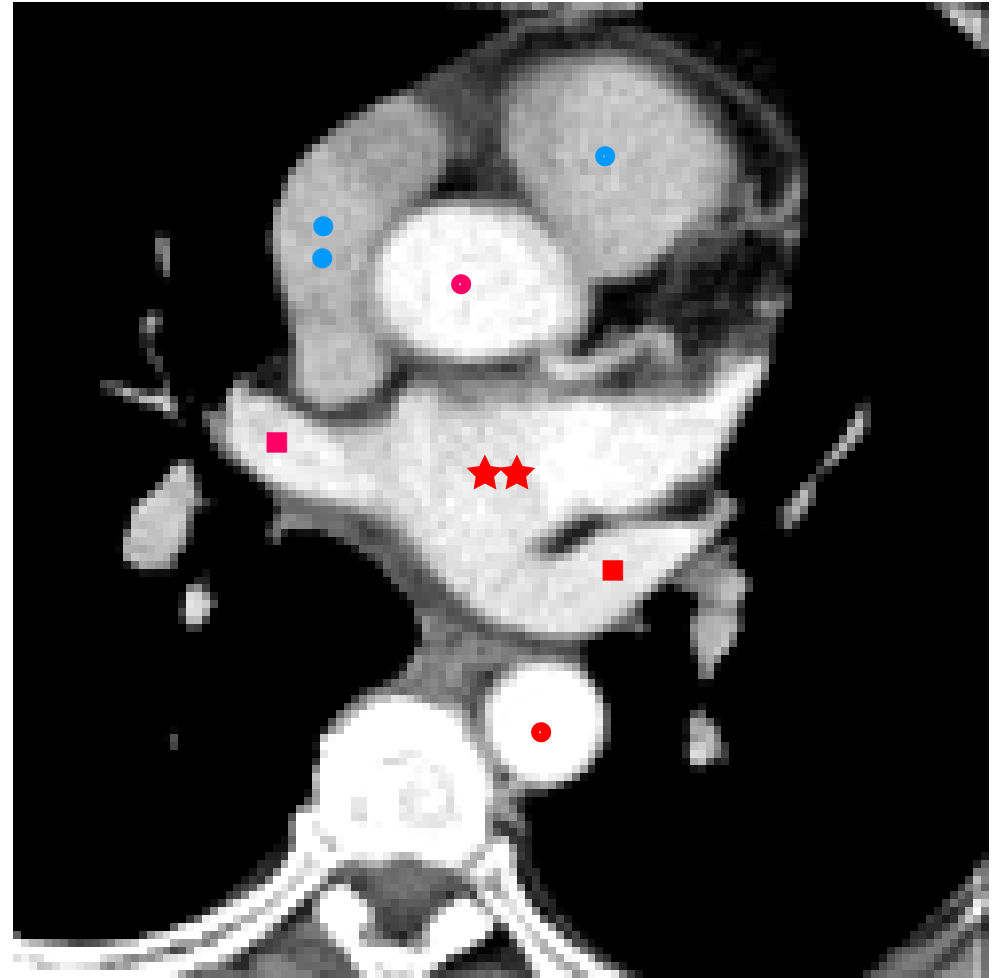


➤ crosse de la veine azygos
et ➤ veine cave supérieure

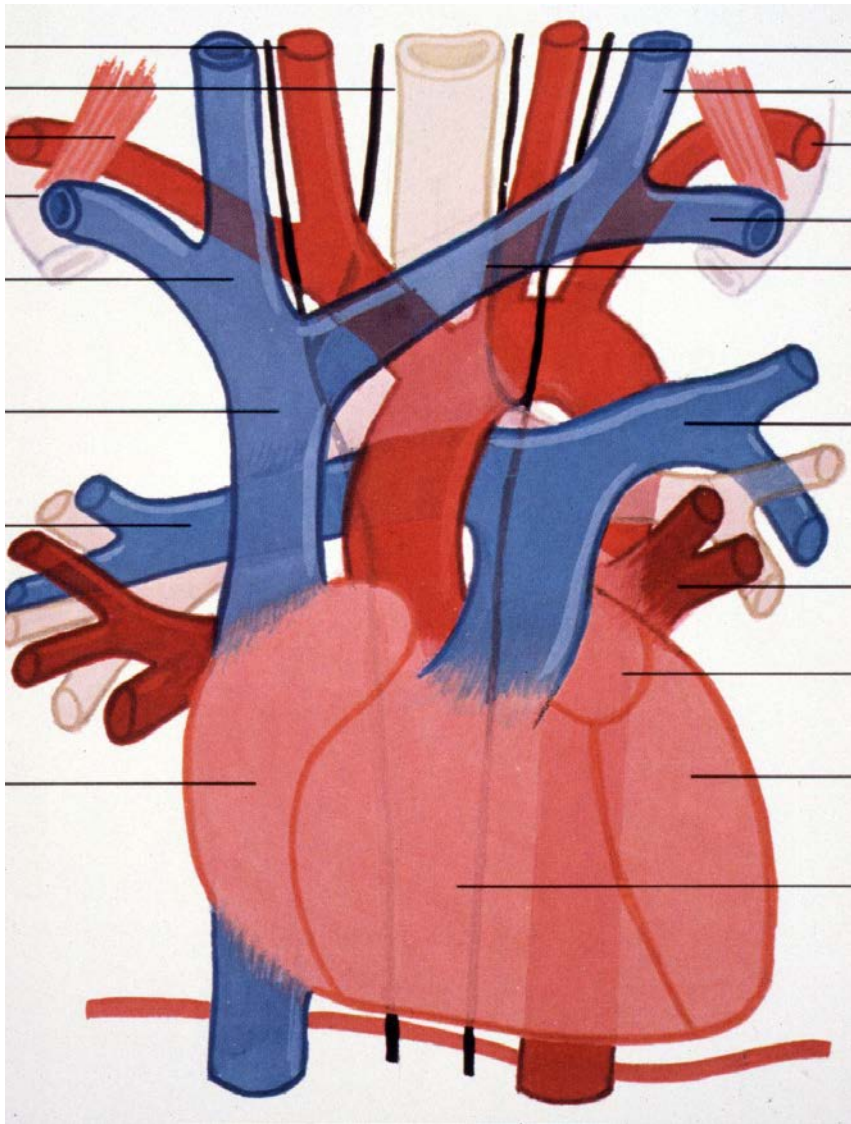


- oreillette droite (auricule)
- aorte (asc. et desc.)

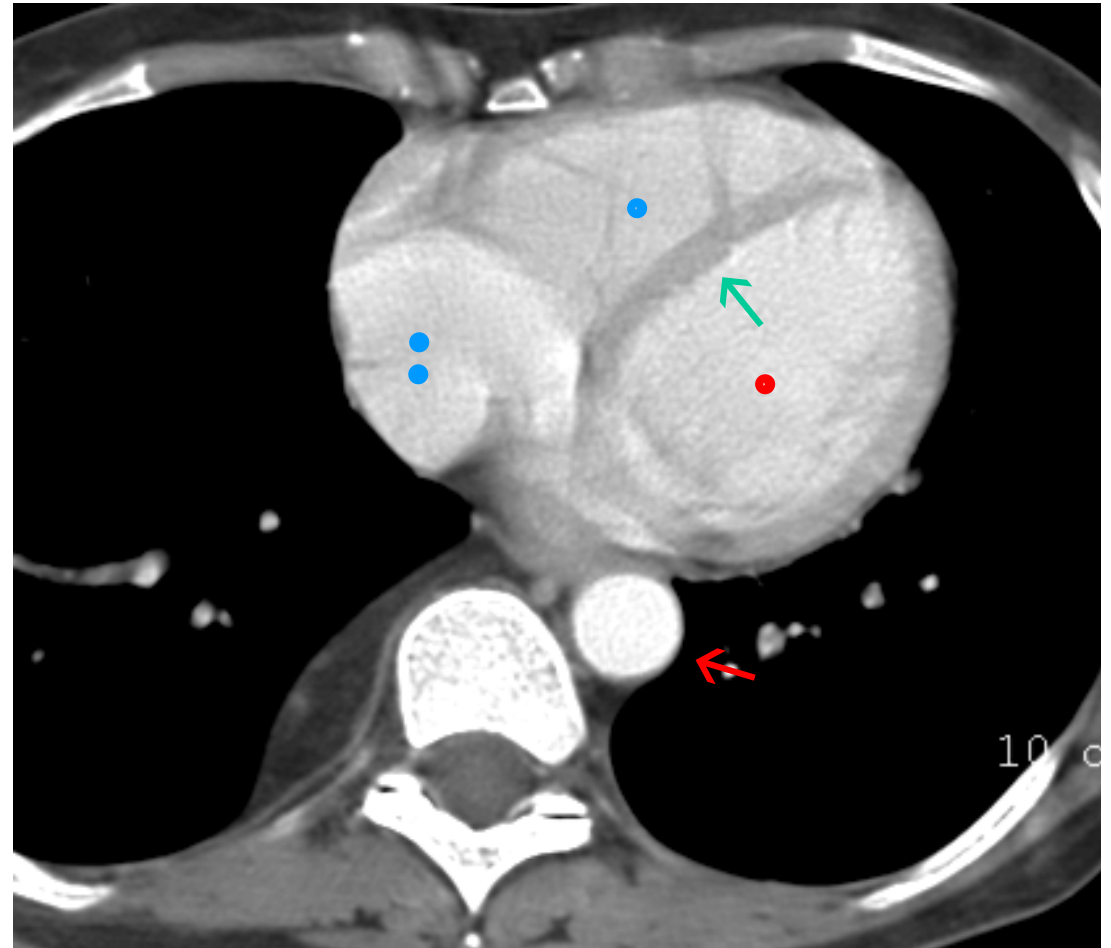
★★ oreillette gauche



- tronc artériel pulm.
- veines pulmonaires



↖ septum interventriculaire
↖ aorte descendante



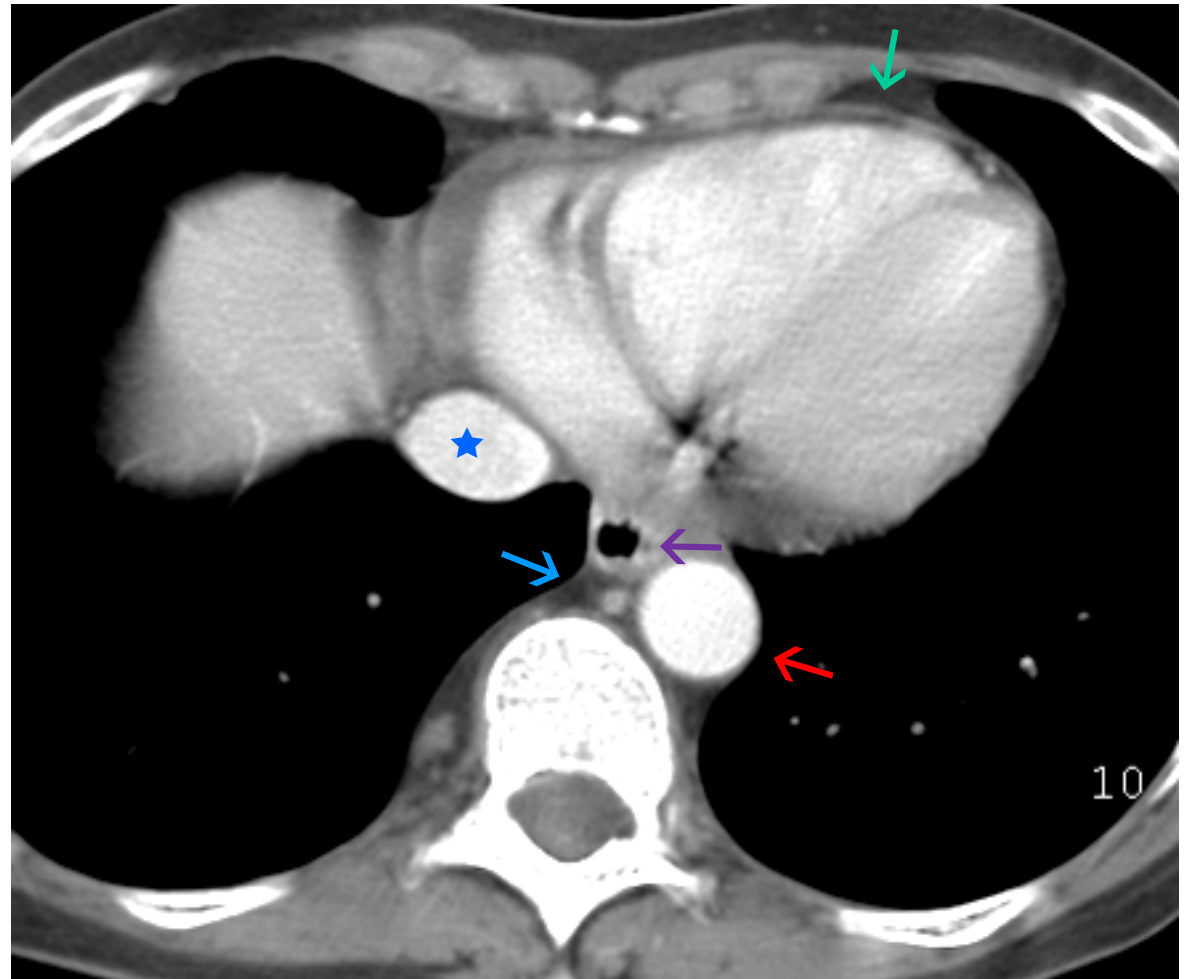
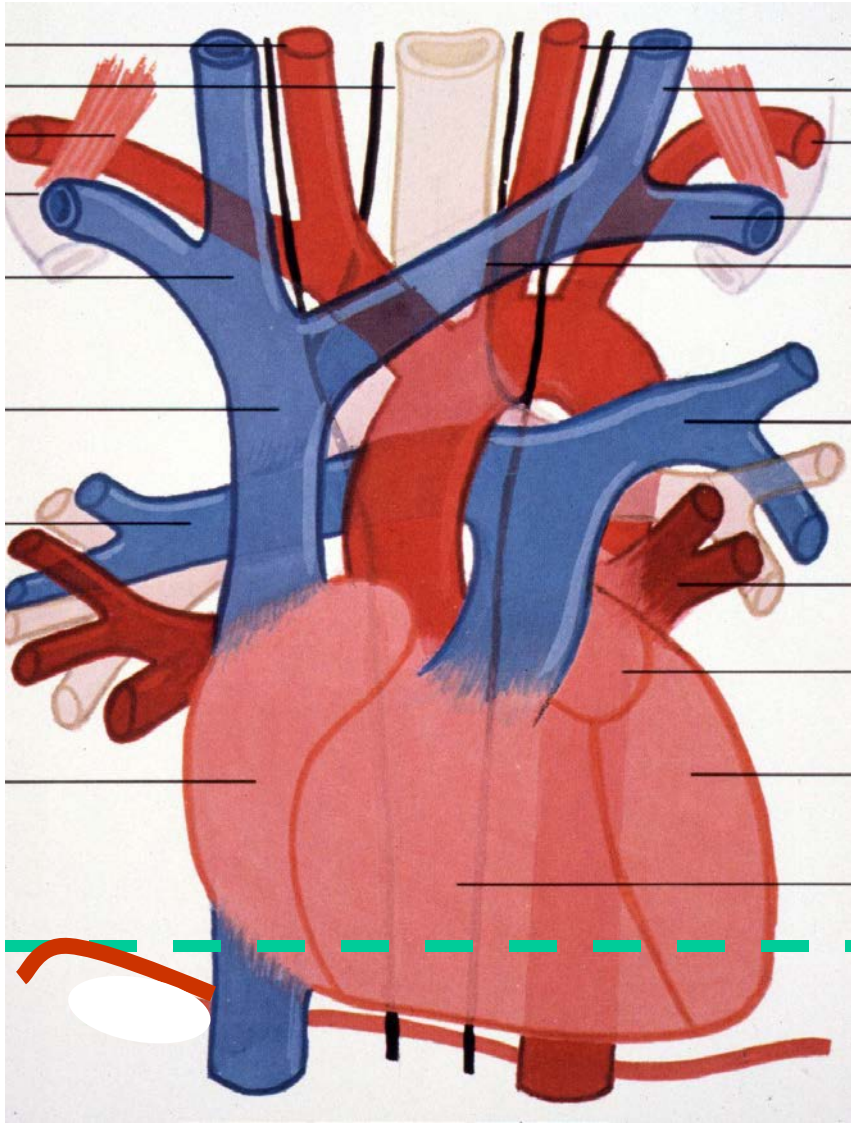
3 autres cavités cardiaques

• ventricule droit

•• oreillette droite

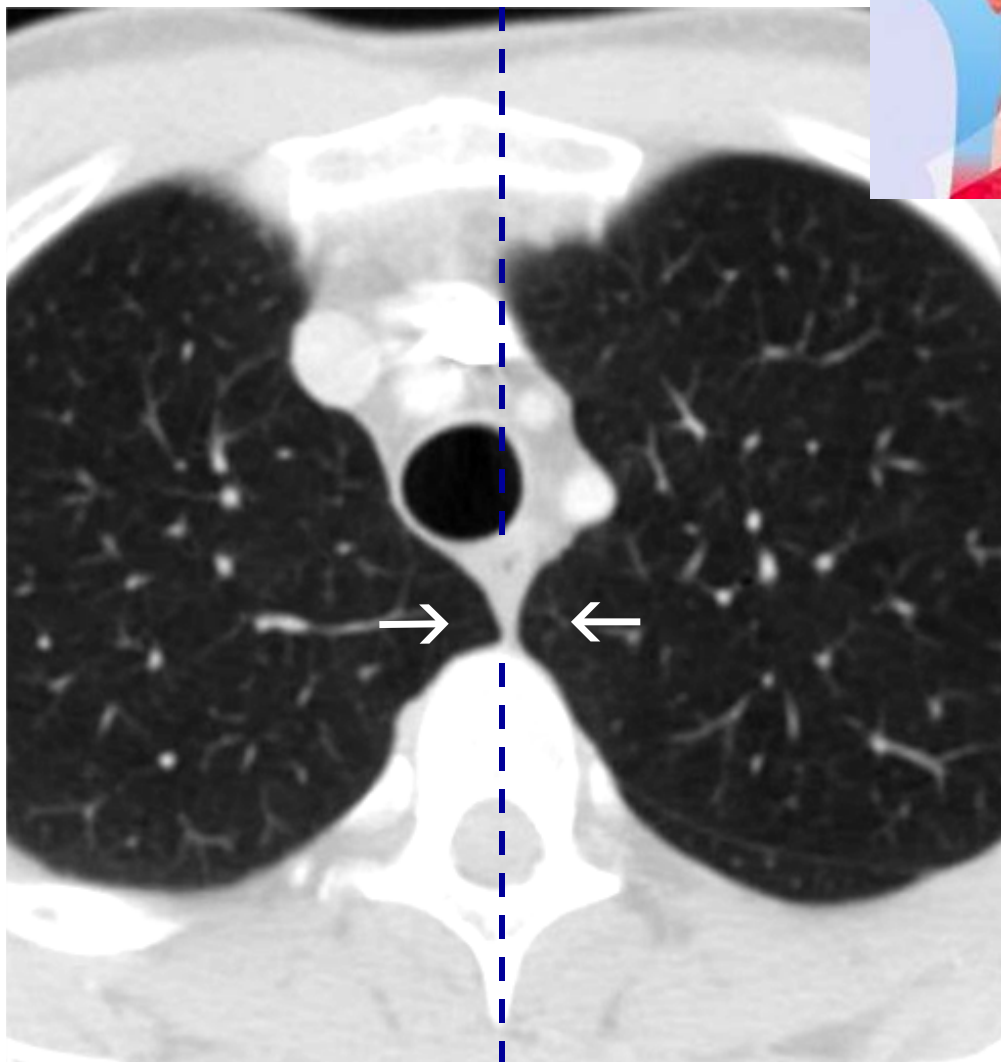
• ventricule gauche

base du coeur

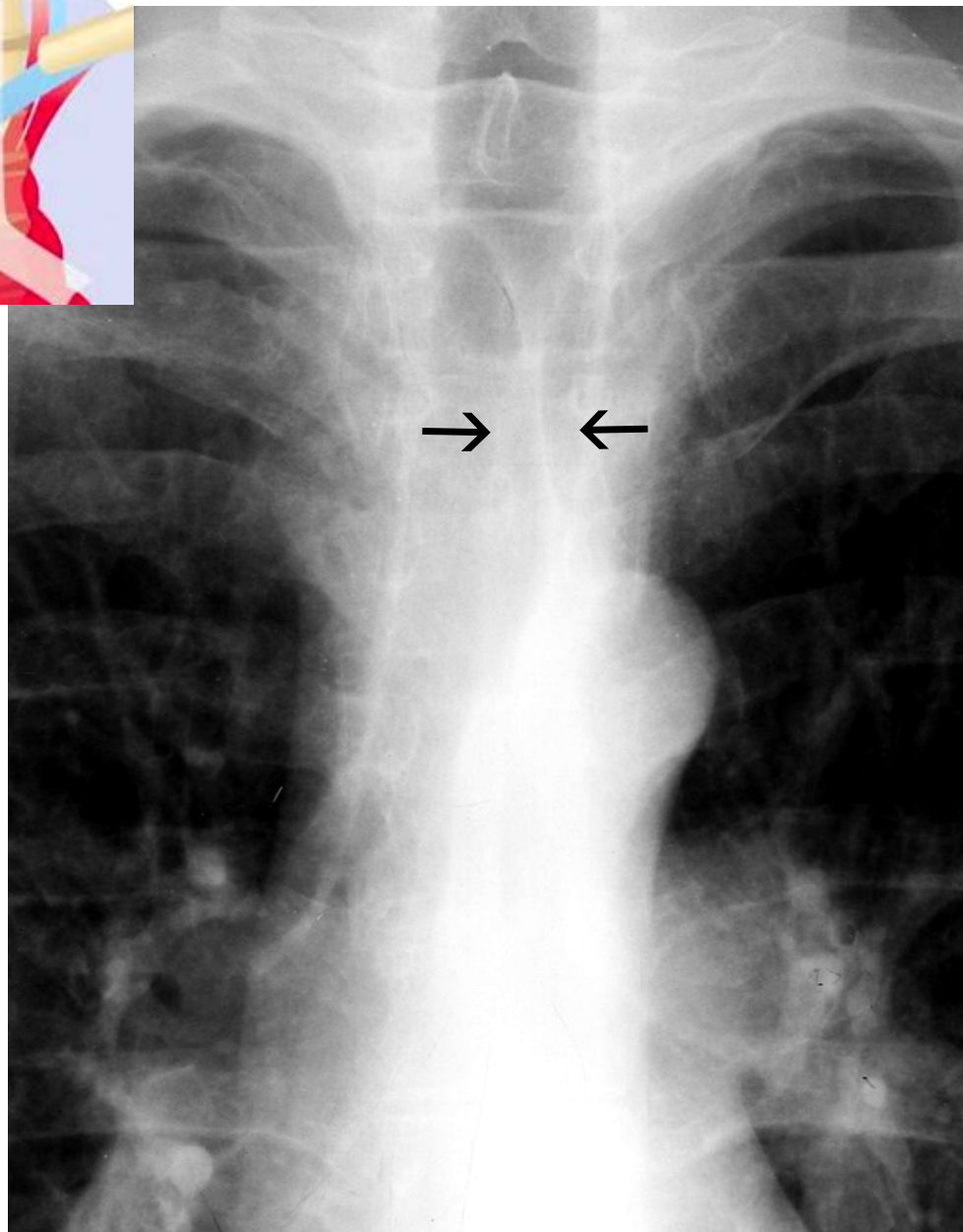


- ★ veine cave inférieure
- veine azygos

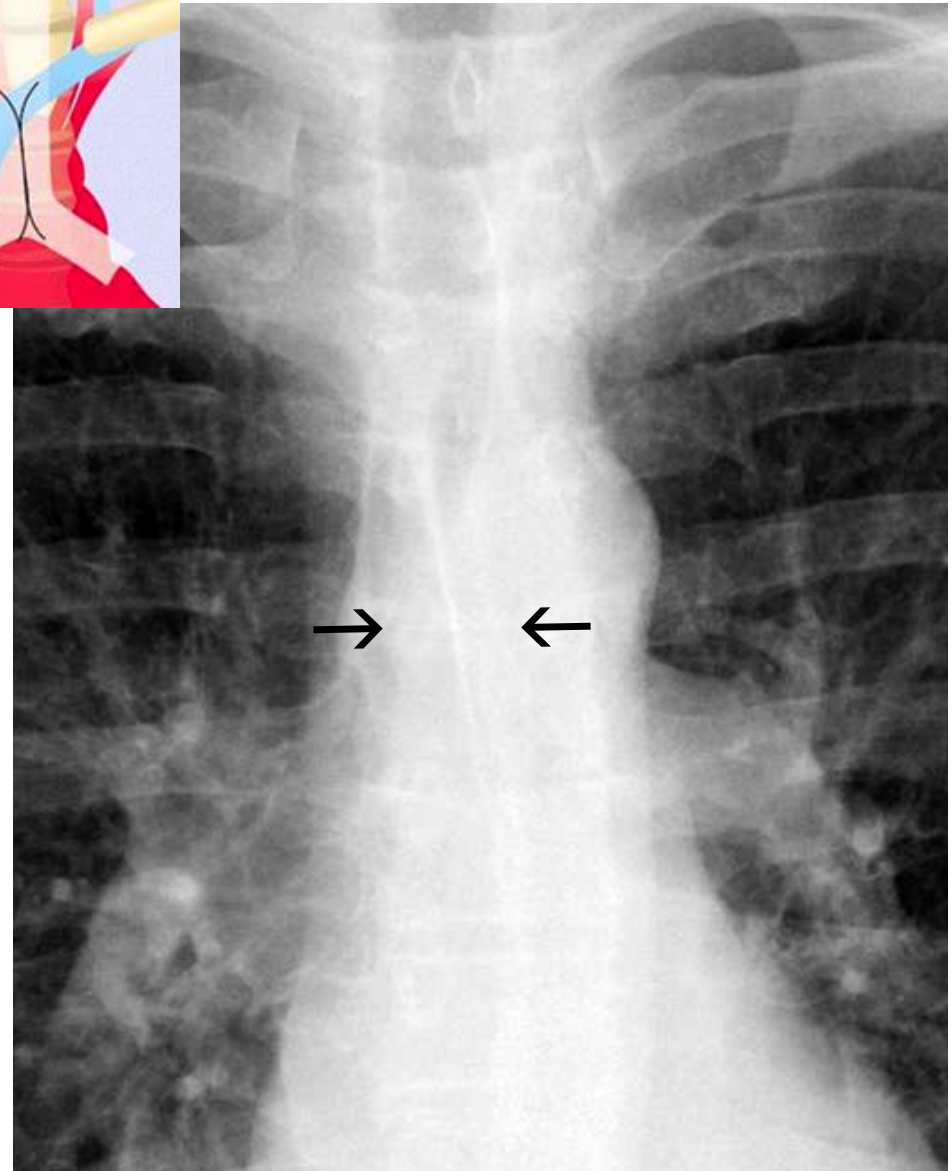
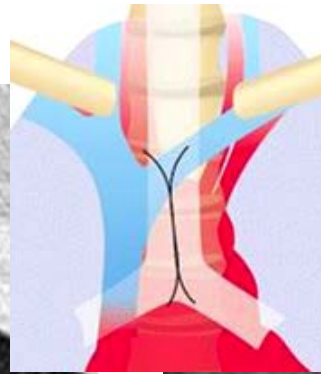
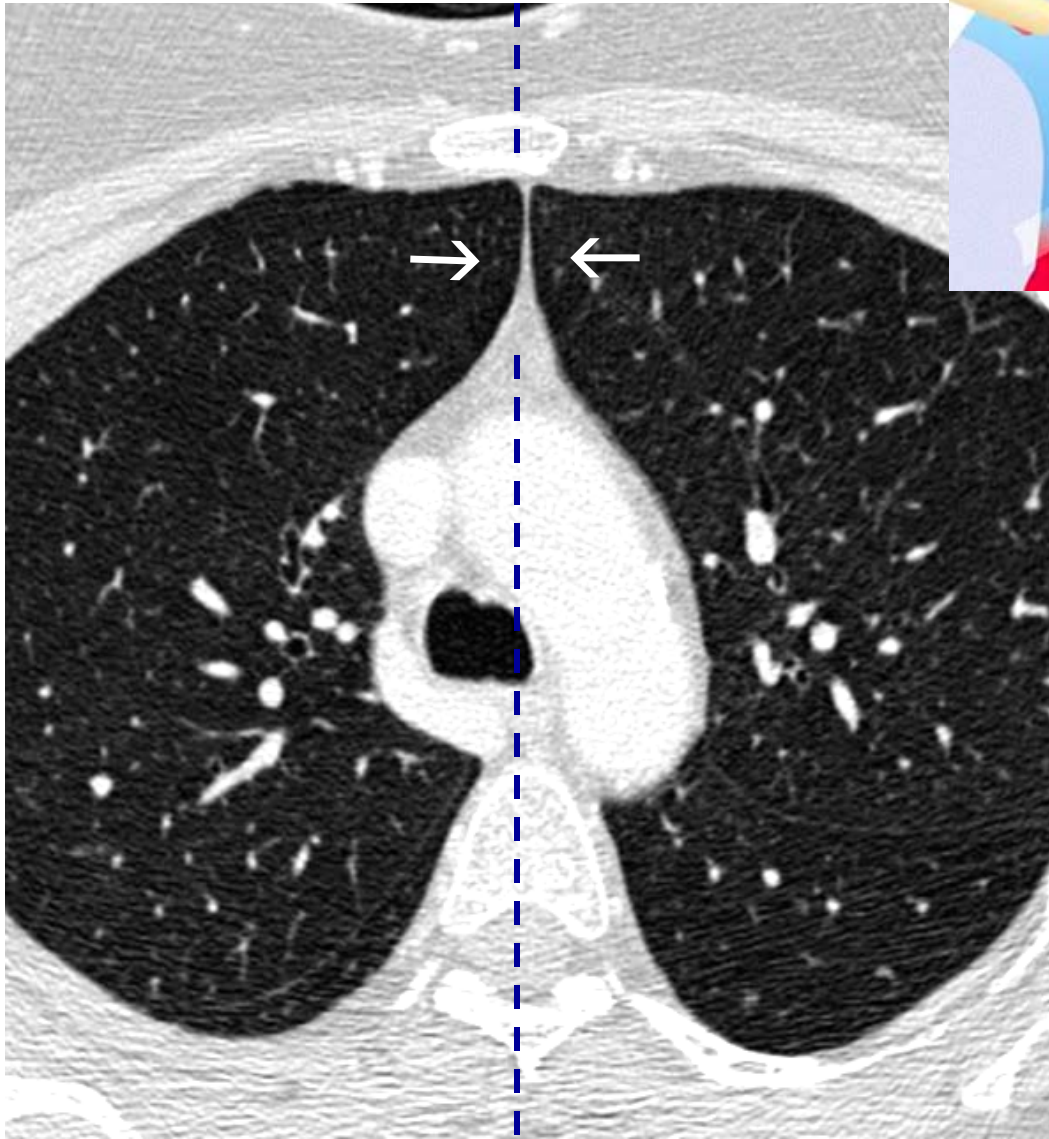
- ↙ péricarde
- ← oesophage
- ↖ aorte (desc.)



(tangence à la plèvre oesophago-vertébrale)

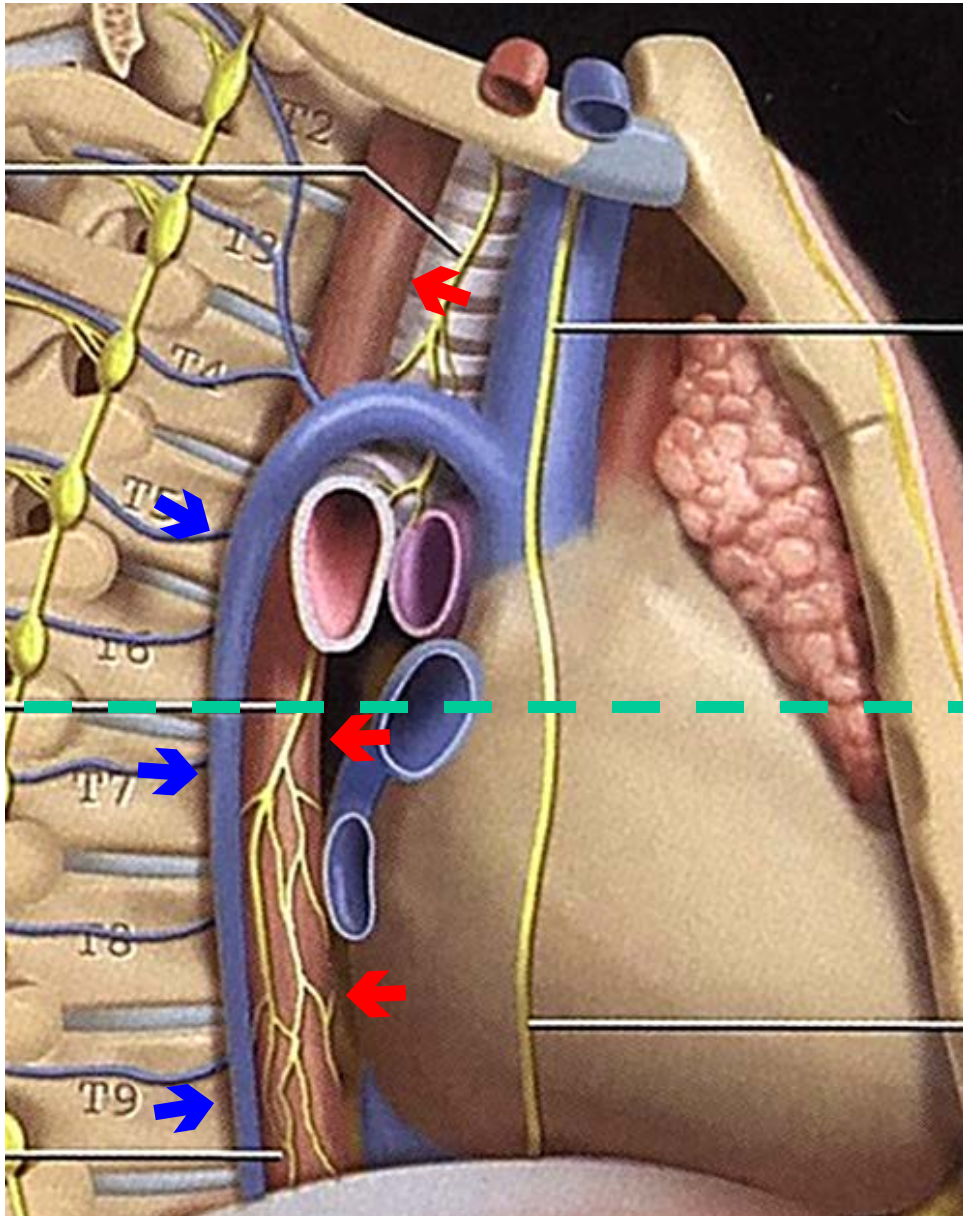


ligne médiastinale postérieure

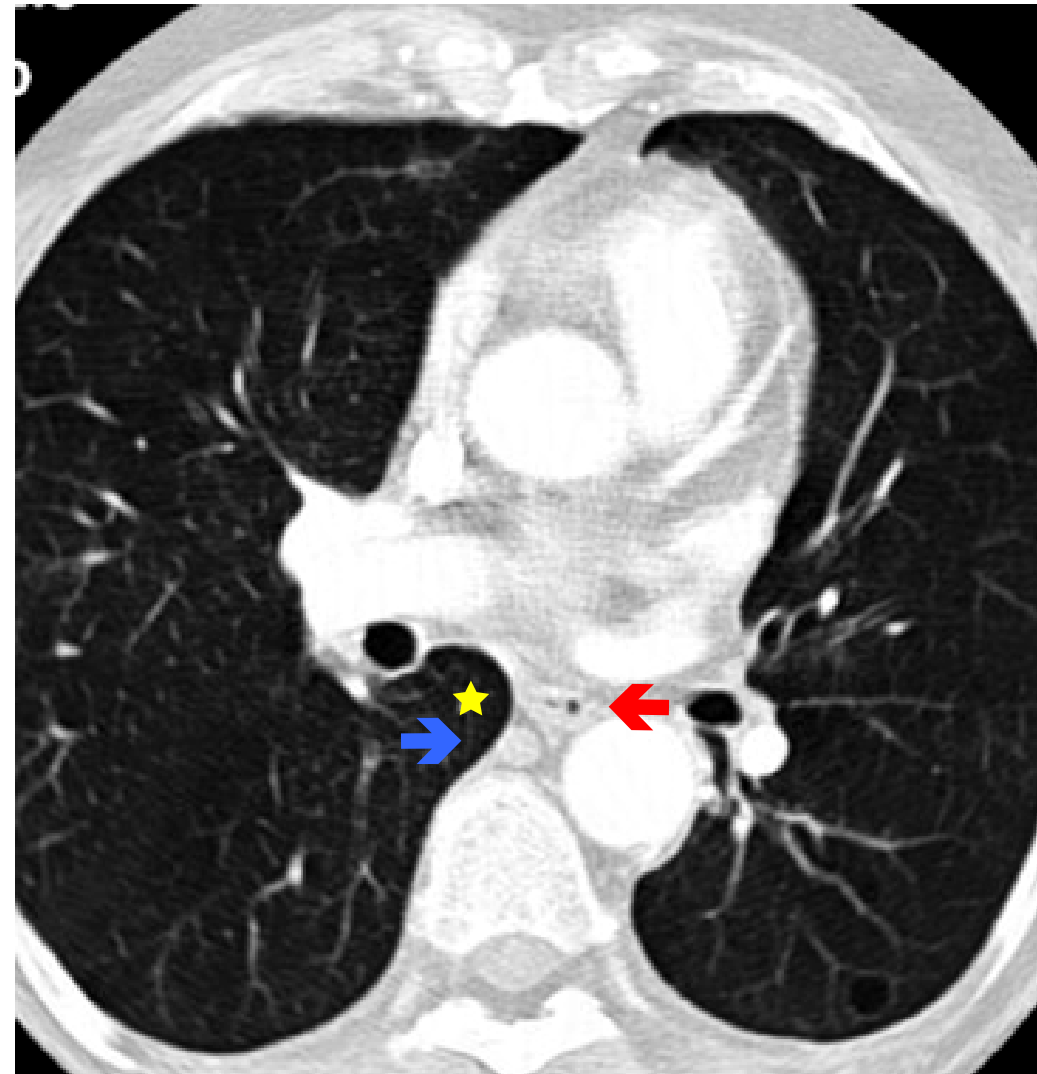


(tangence à la plèvre sterno-aortique)

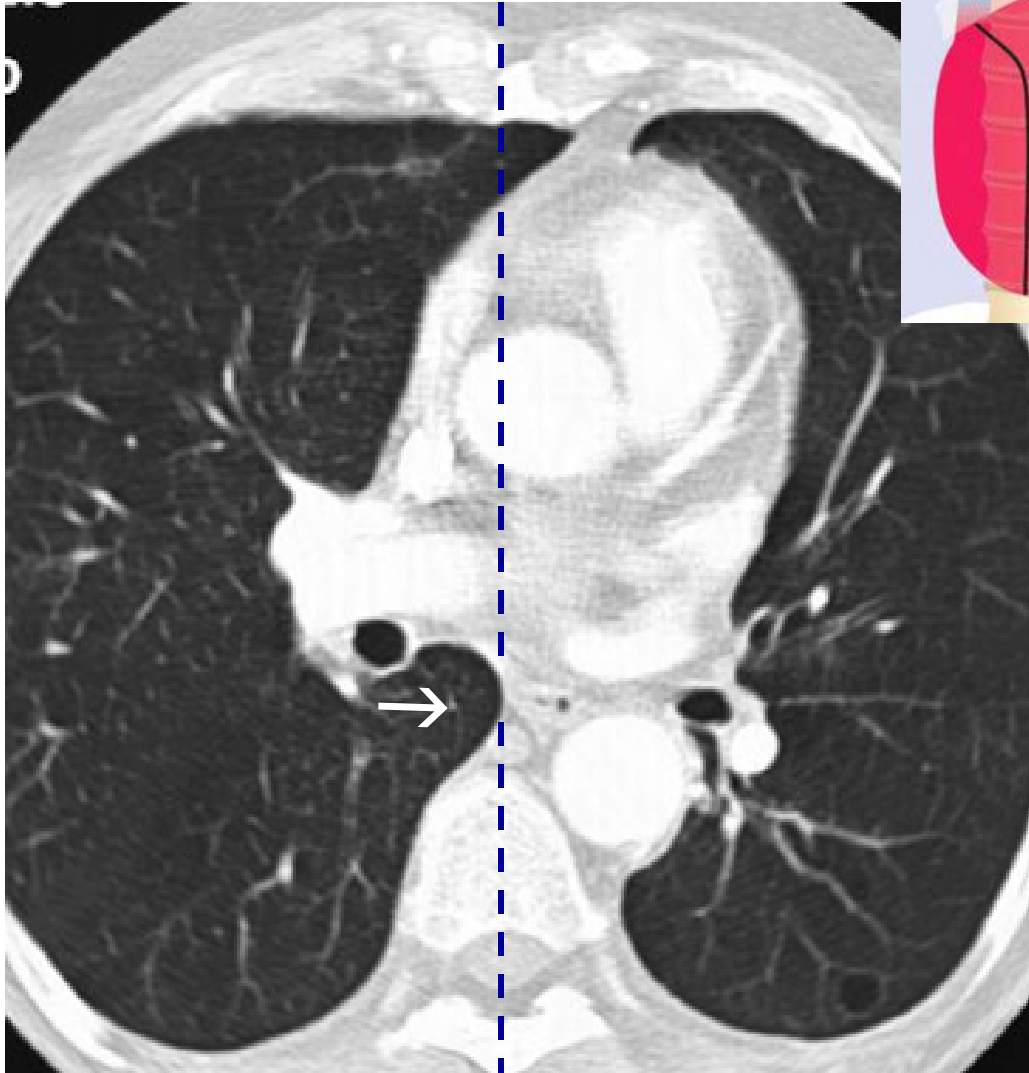
ligne médiastinale antérieure



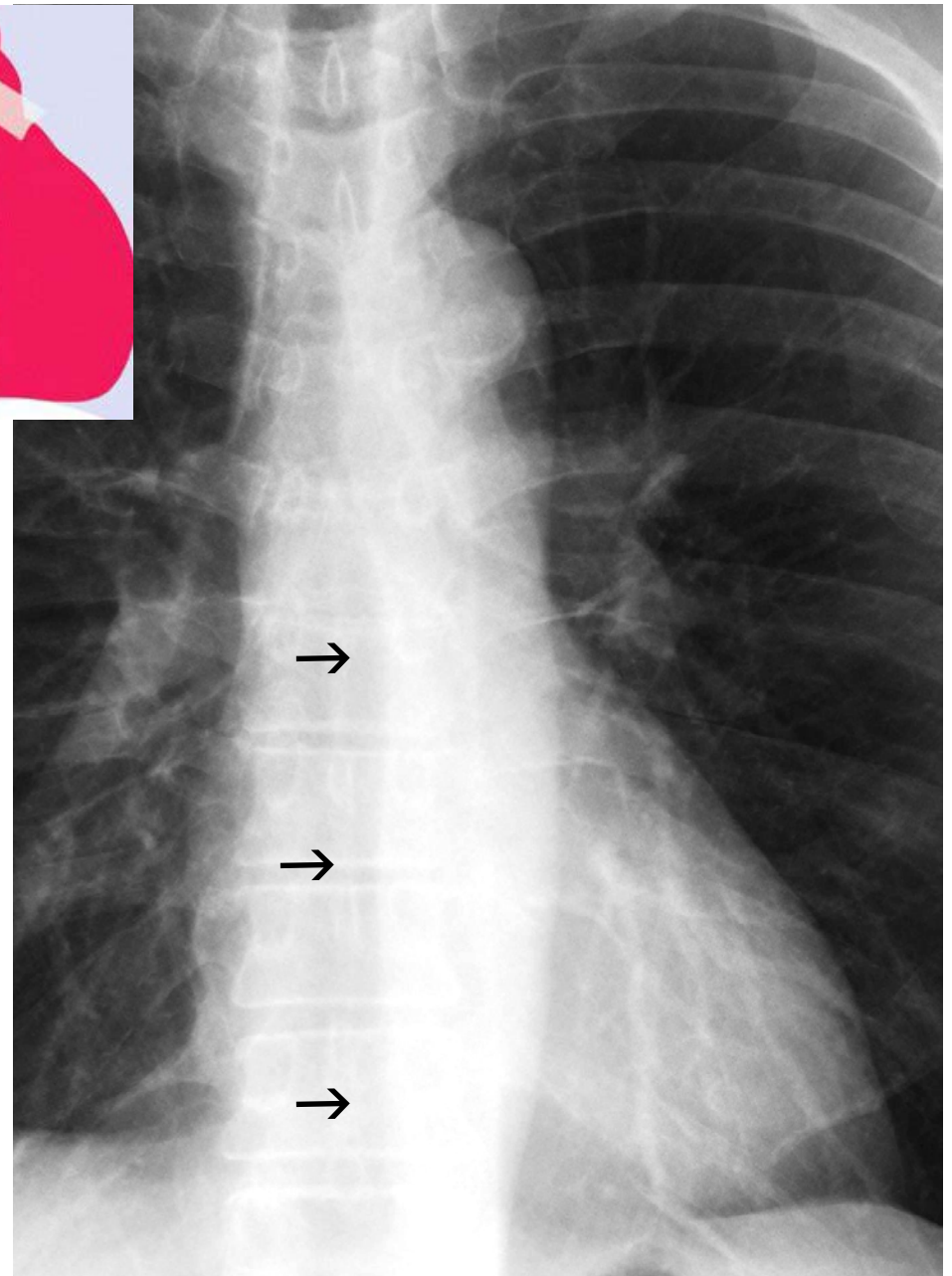
vue profil droit



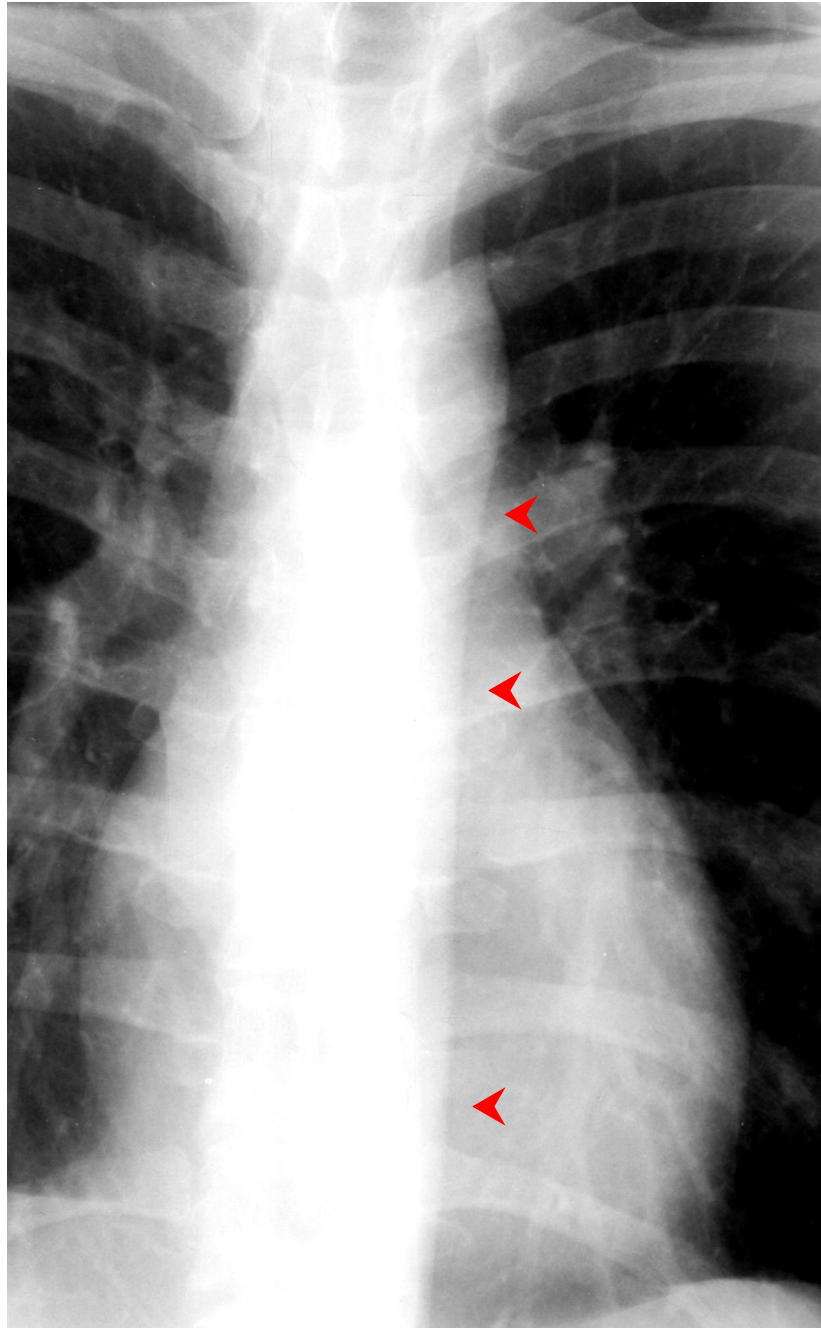
- ★ recessus para-azygo-oesophagien
- ➔ veine azygos
- ← oesophage



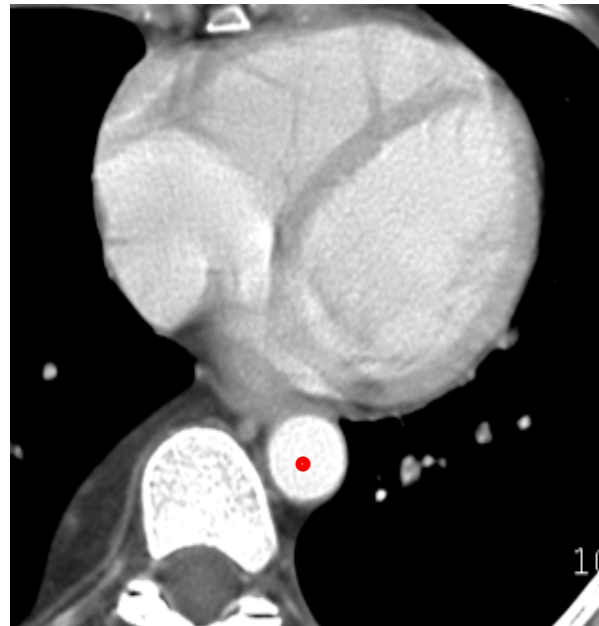
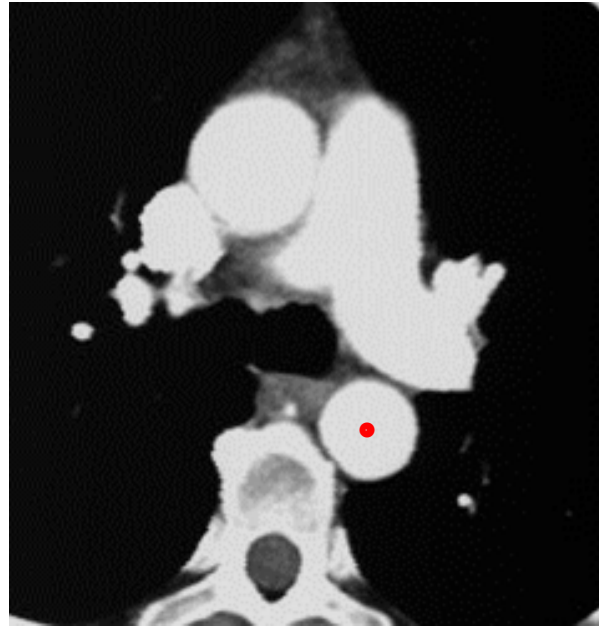
(tangence au bord droit de l'œsophage)



ligne médiastinale para-oesophagienne



ligne médiastinale para-aortique

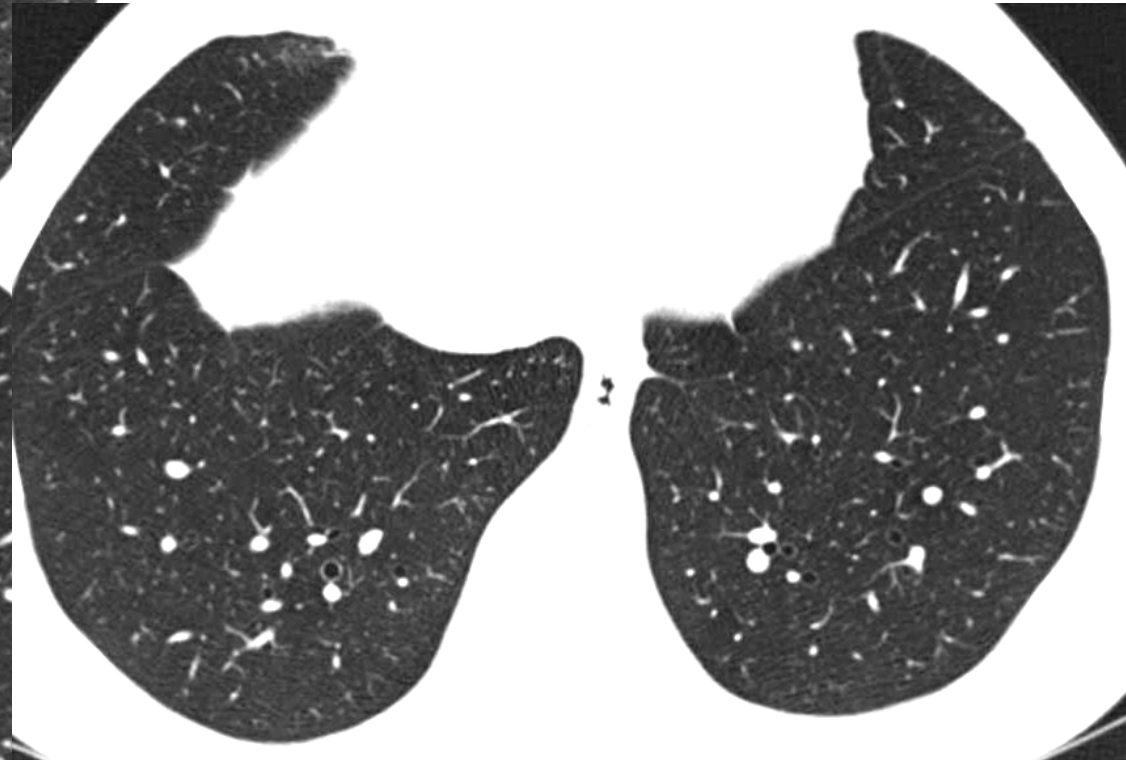
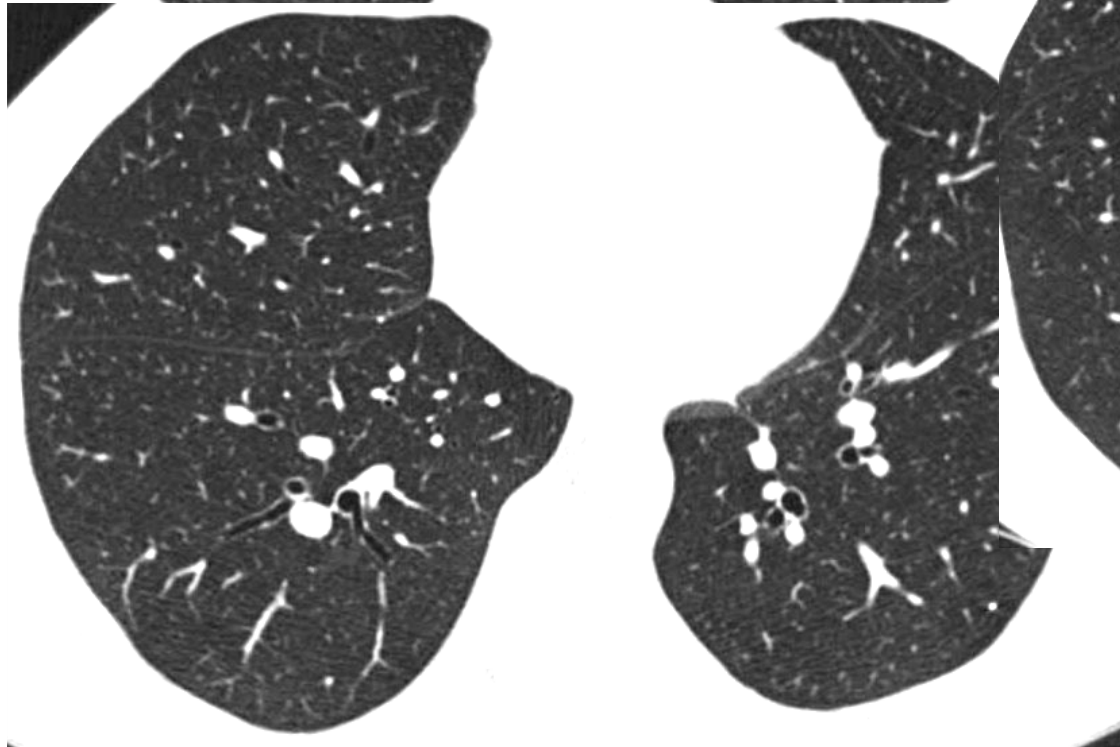
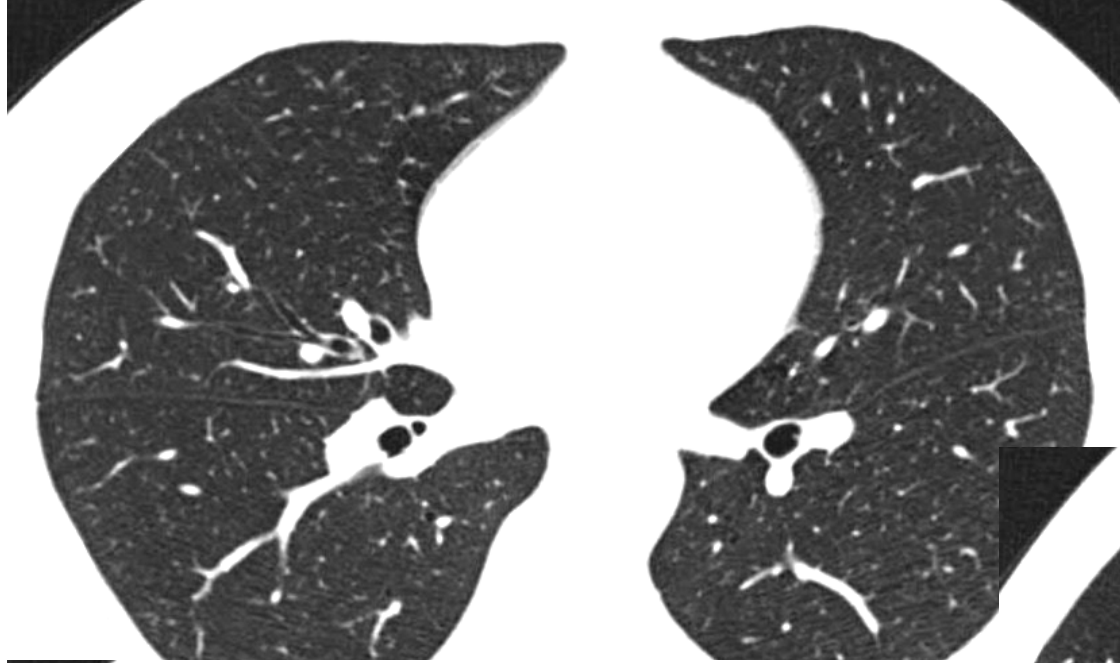


descendante

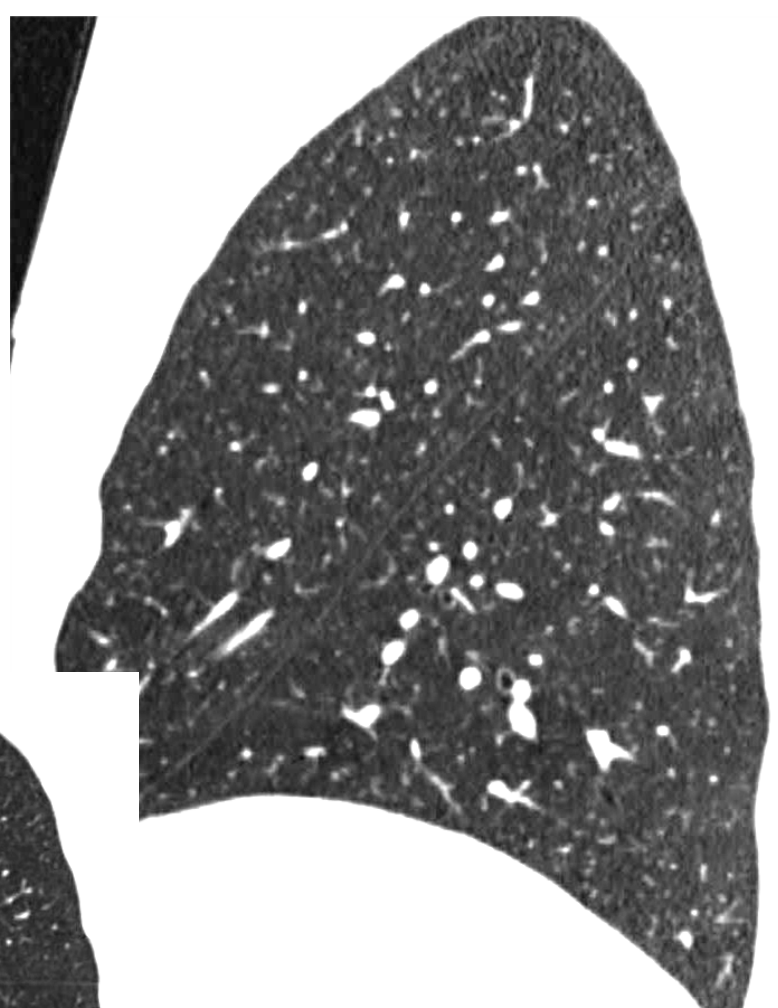
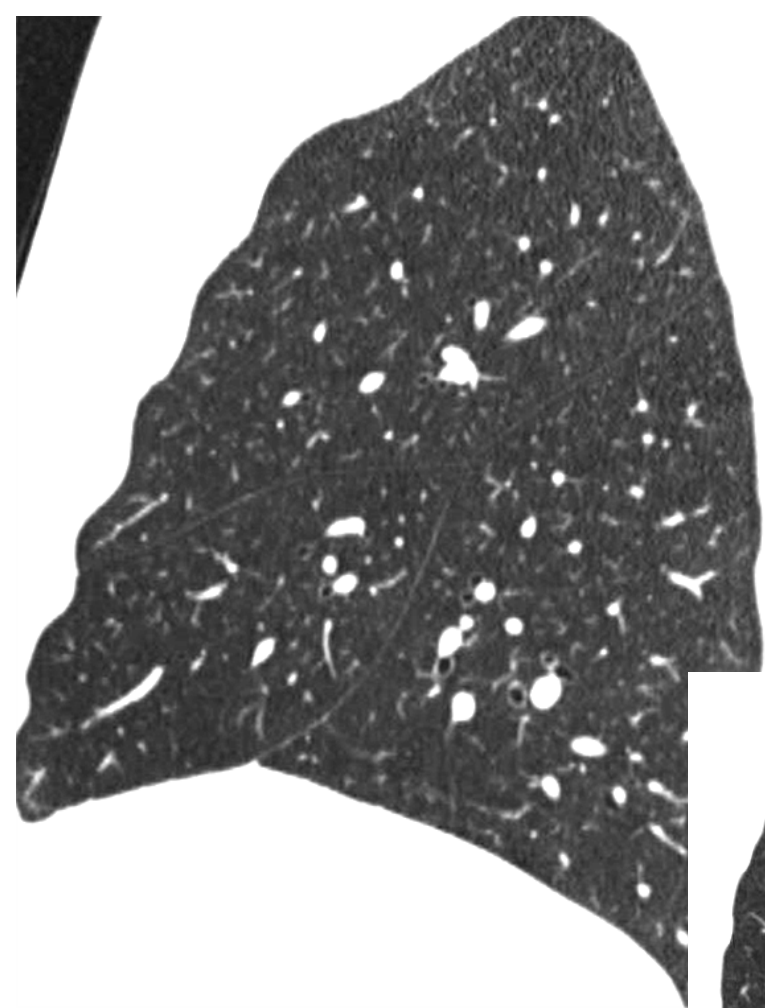
TDM (CT) en haute résolution

CTHR

pour l'étude du parenchyme
pulmonaire



reconnaitre - scissures
- bronches
- vaisseaux



reconstructions
multi-planaires

MPR

sagittales et
frontales

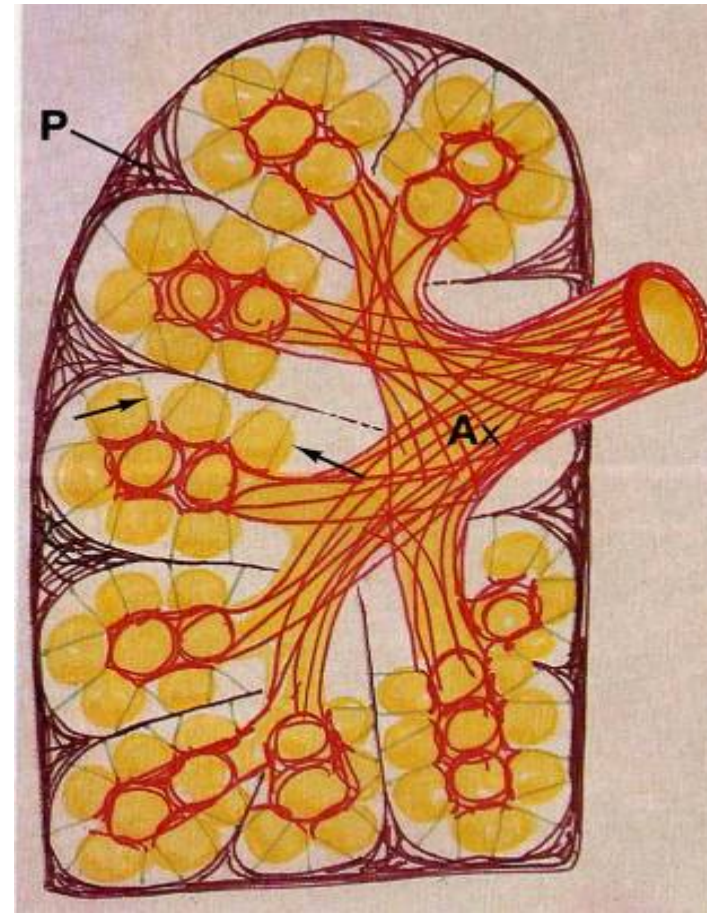
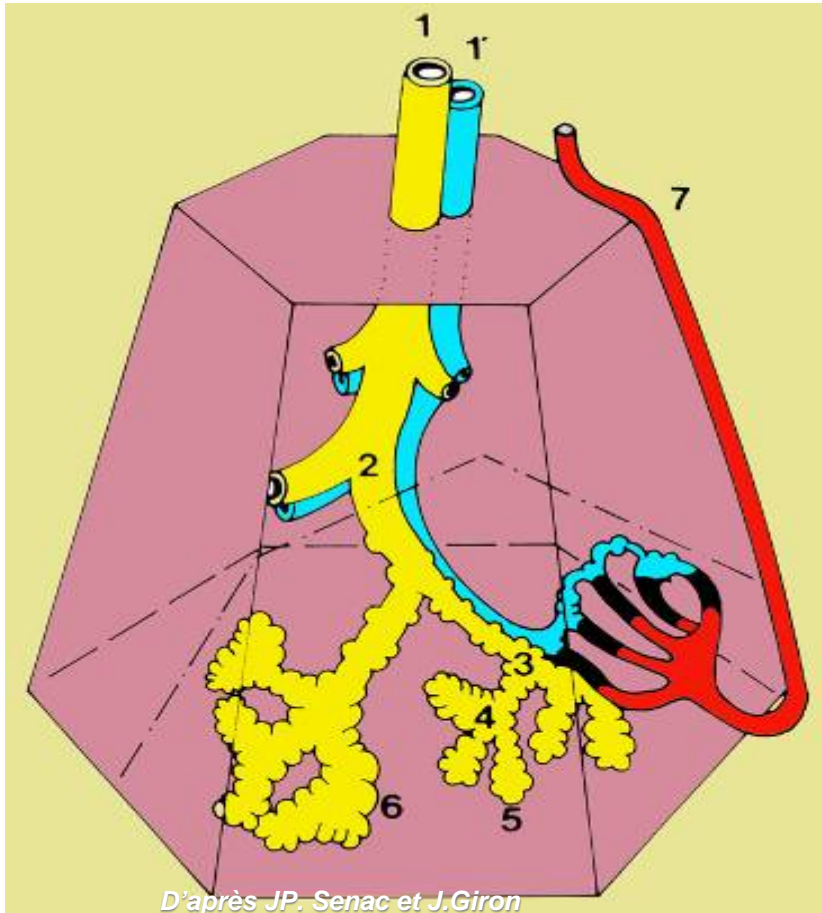


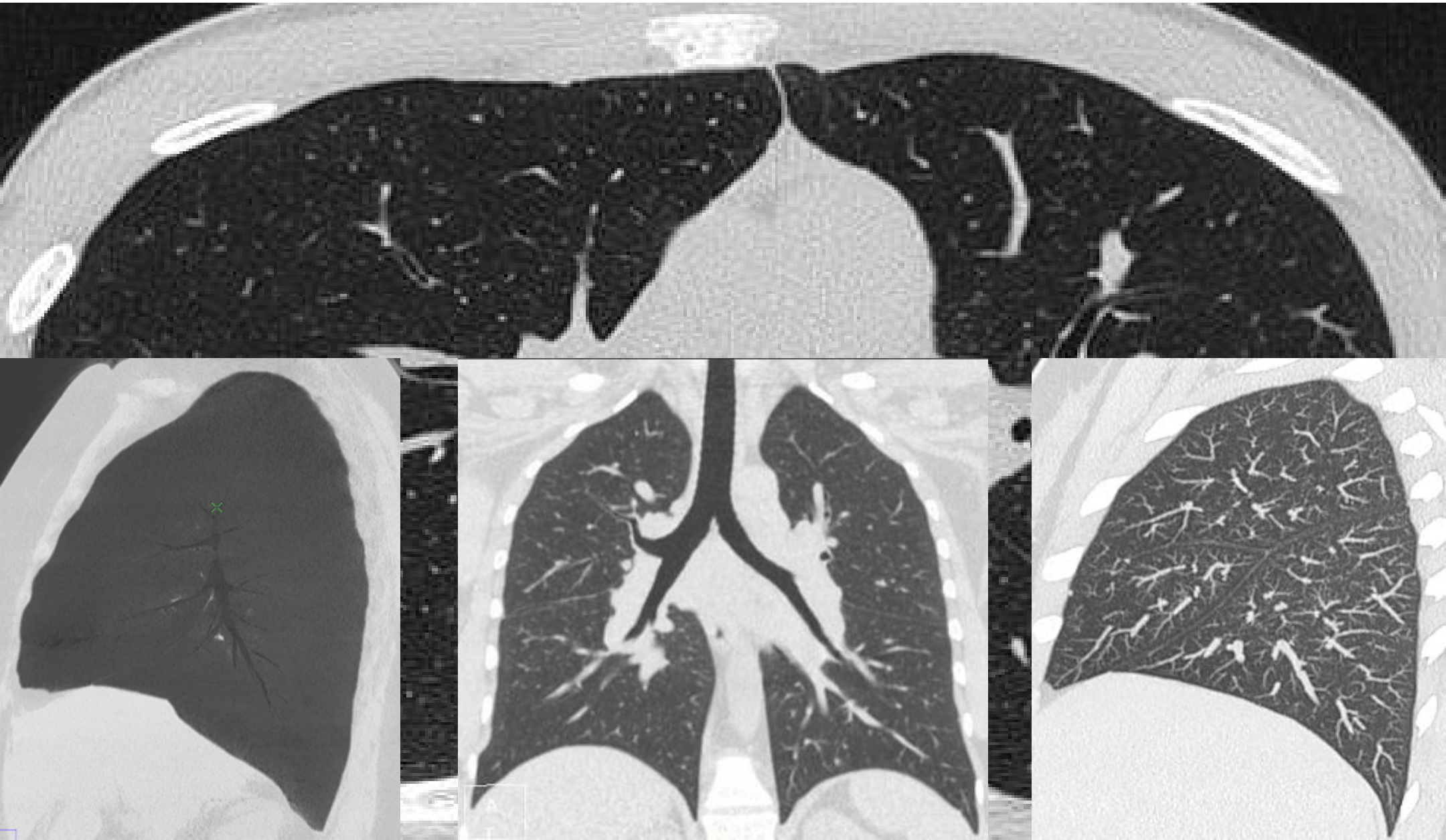
Schéma de Webbel

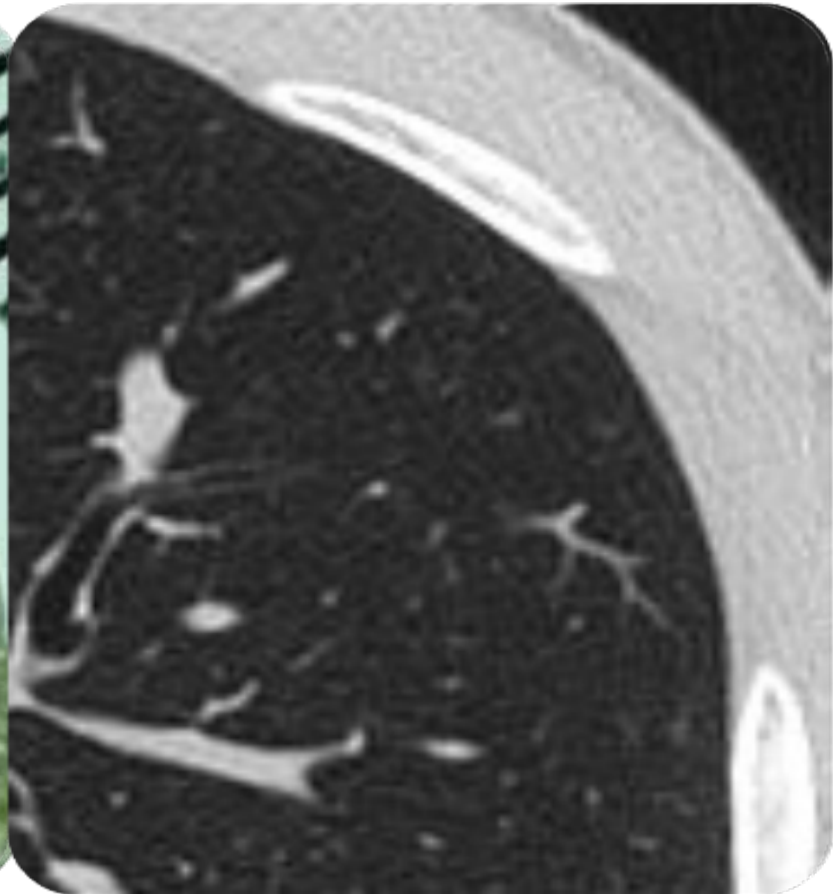
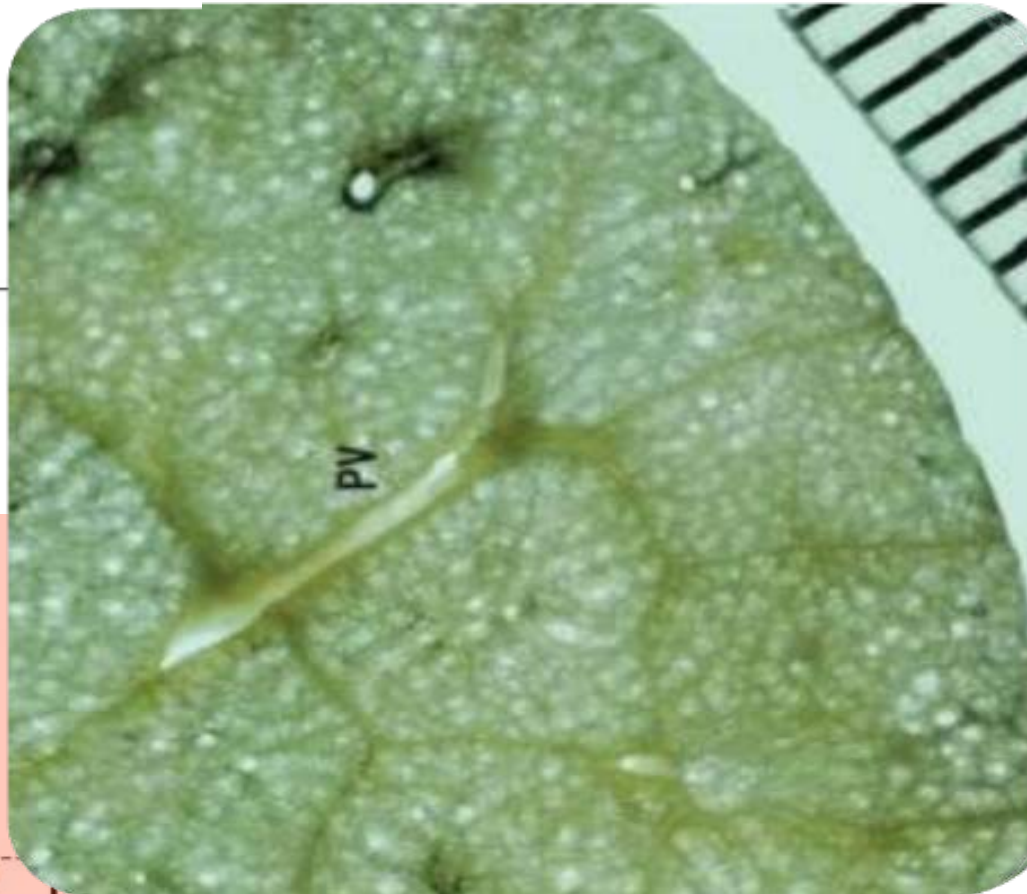
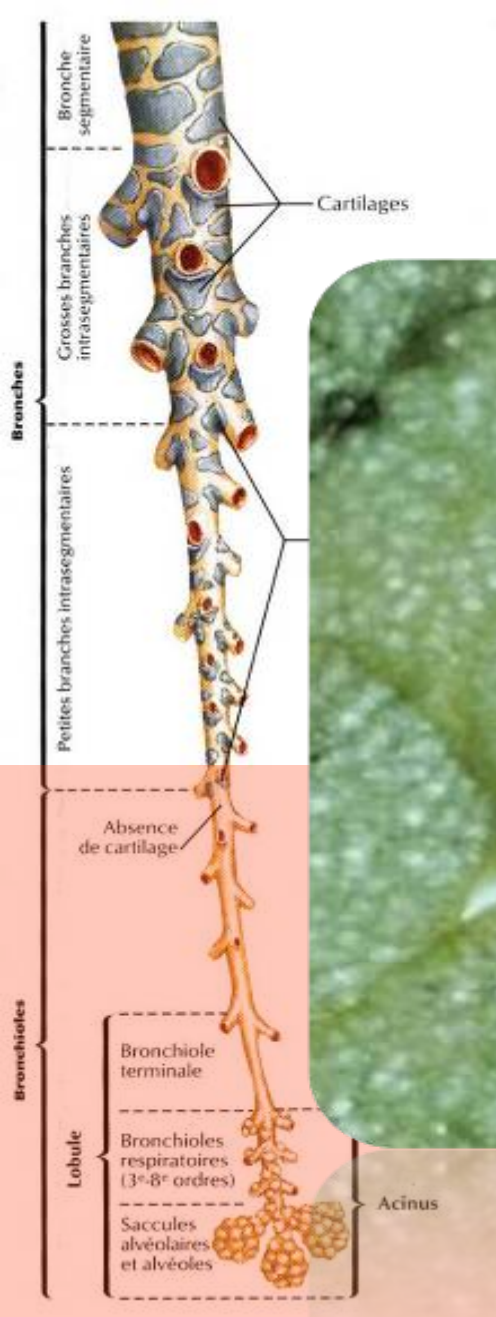
Dimensions des structures lobulaires (en mm)

Largeur du lobule		10 à 25
Largeur de l'acinus terminale (diamètre)	7 à 8	Artériole
Septum interlobulaire (épaisseur) d'un alvéole	0,1	Largeur
Paroi alvéolaire (épaisseur)		0,030
Bronchiole terminale (diamètre)	1	0,6

Le tissu interstitiel
On décrit trois compartiments :
 - Compartiment axial (Ax),
 - Compartiment pariéto-alvéolaire
 - Compartiment périphérique (P)

Technique





Avantages de la TDM-HRV

Exhaustivité de l'exploration

- Accès aux techniques de rendu volumique
 - ✓ reconstructions MPR
 - ✓ reconstruction minIP
 - ✓ reconstruction MIP
 - ✓ VR et 3D surface



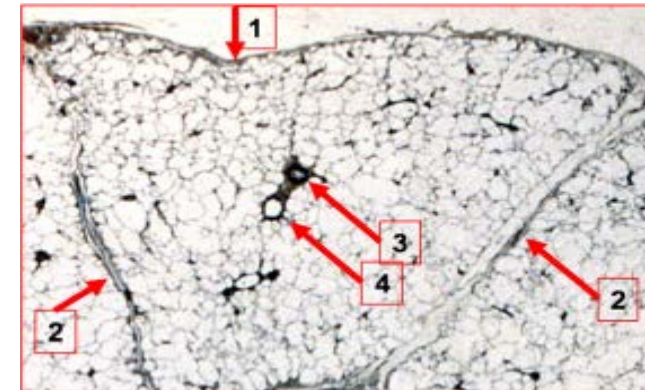
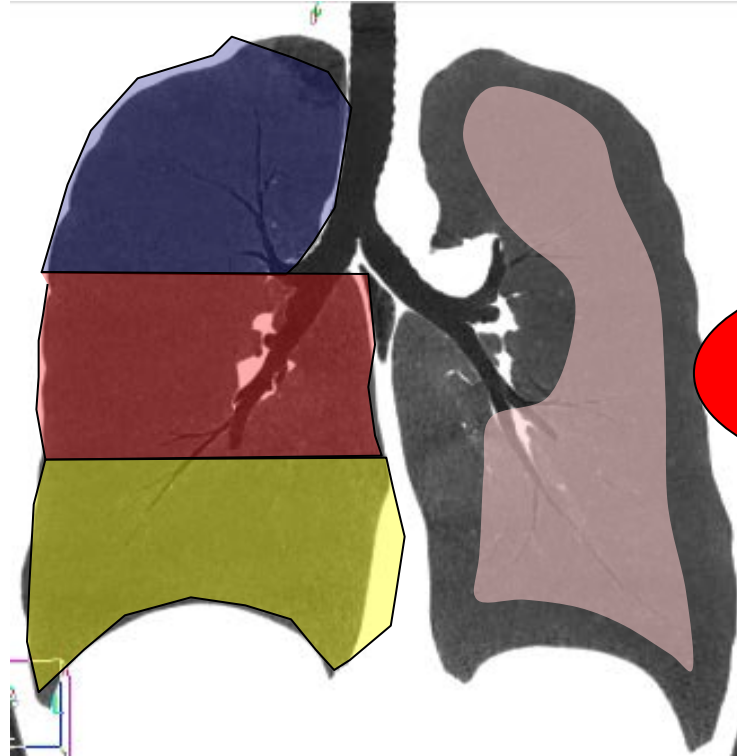
Détection
Caractérisation
Localisation
Quantification

Diagnostic des PID par TDM-HR

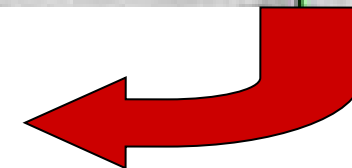
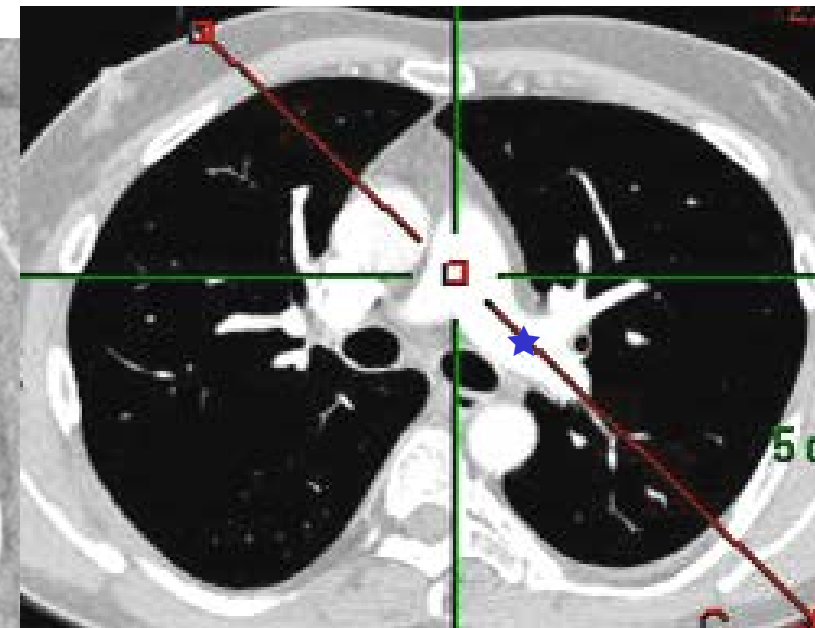
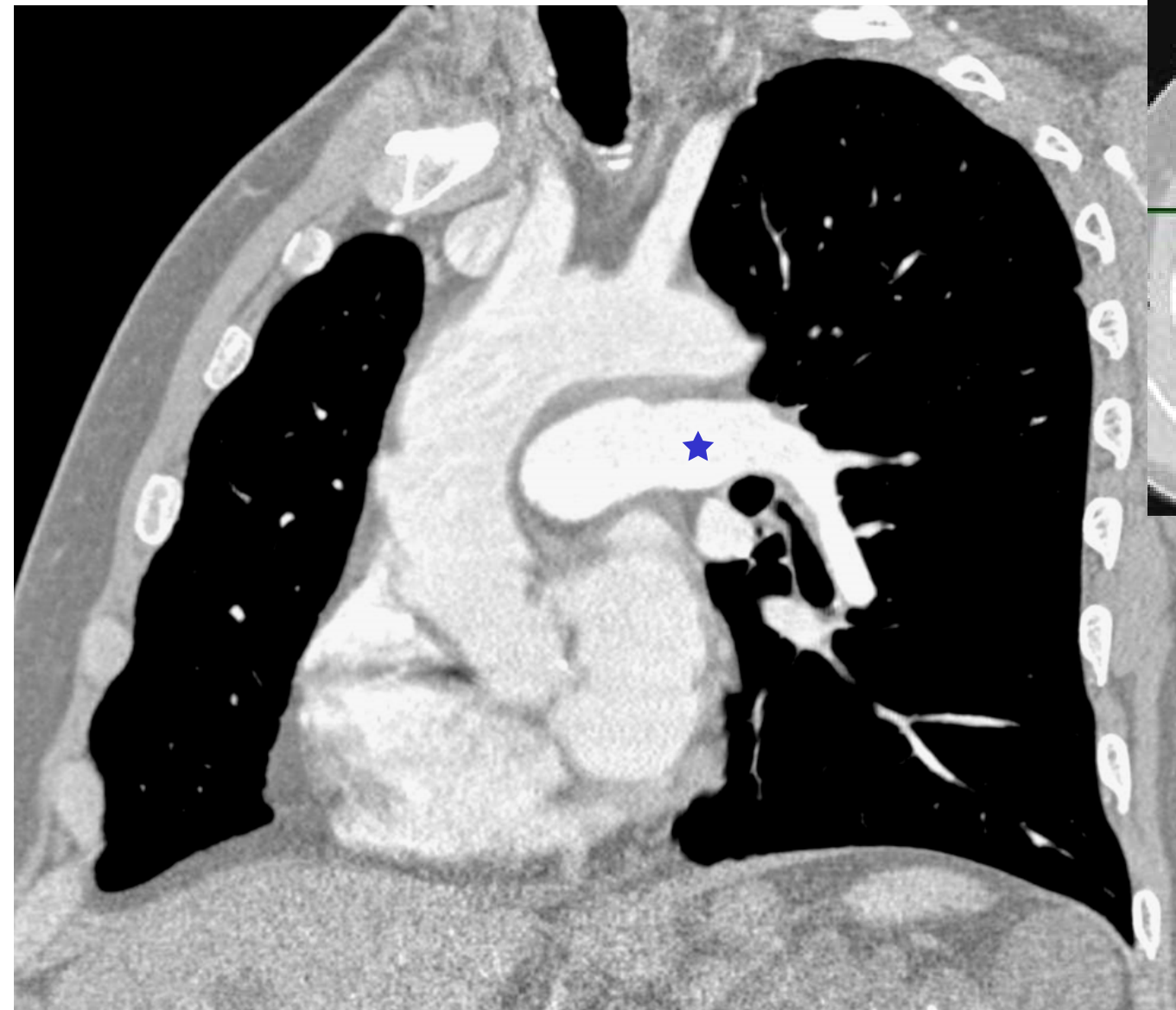
Signe prédominant

Signes associés

distribution

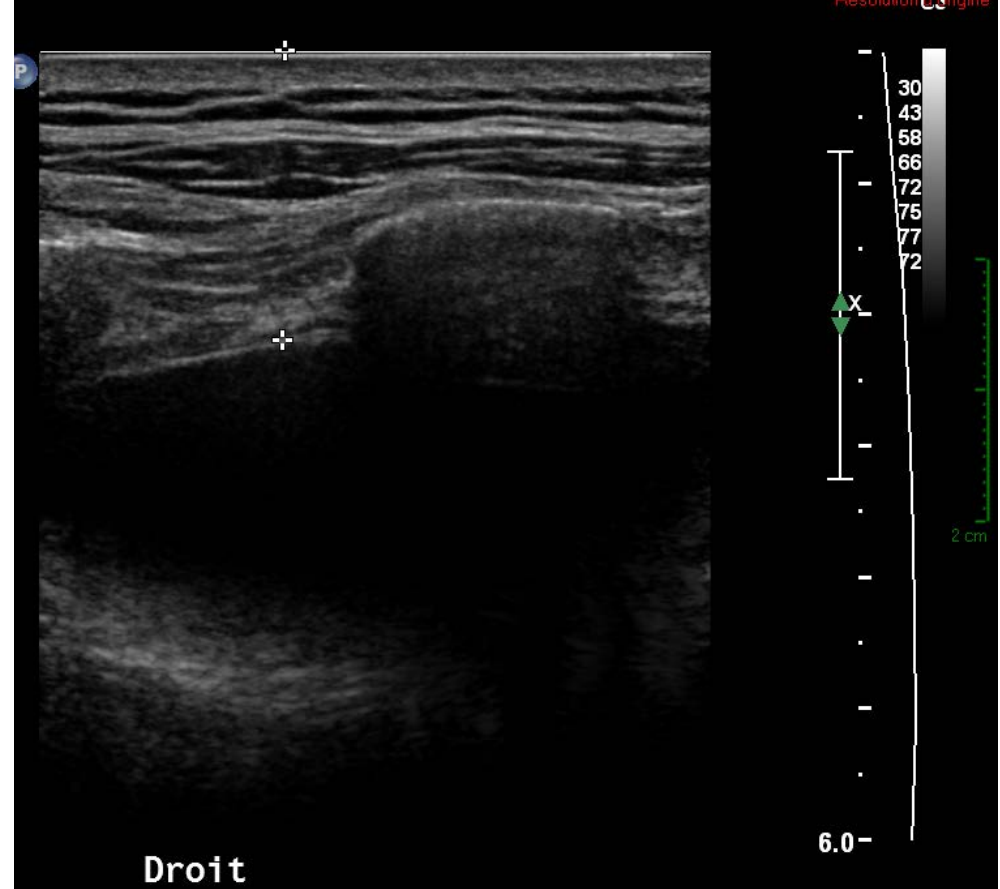


temps

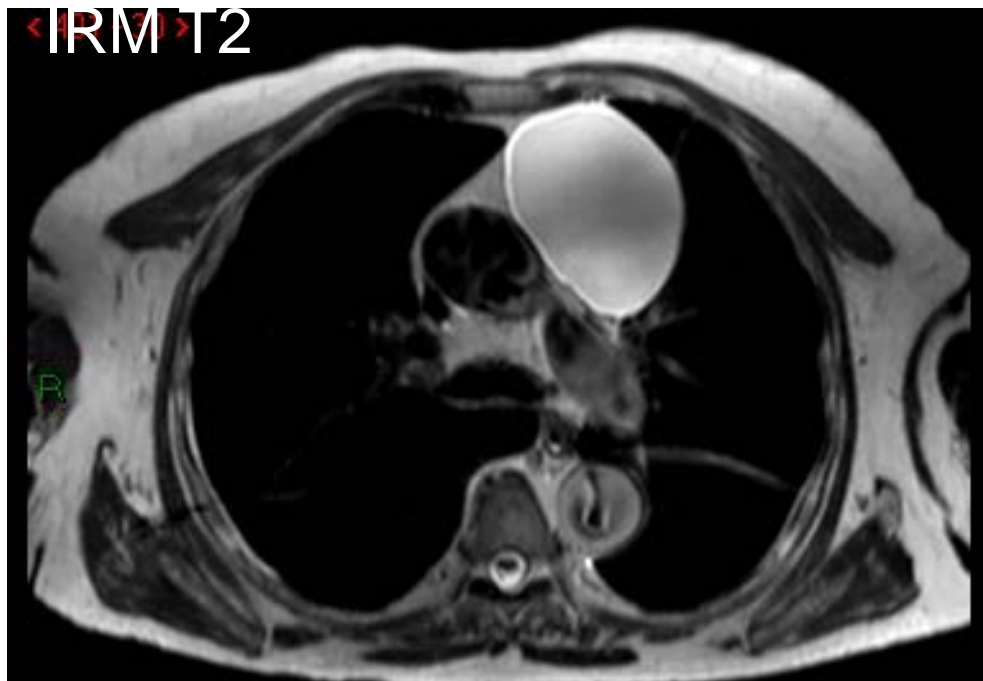
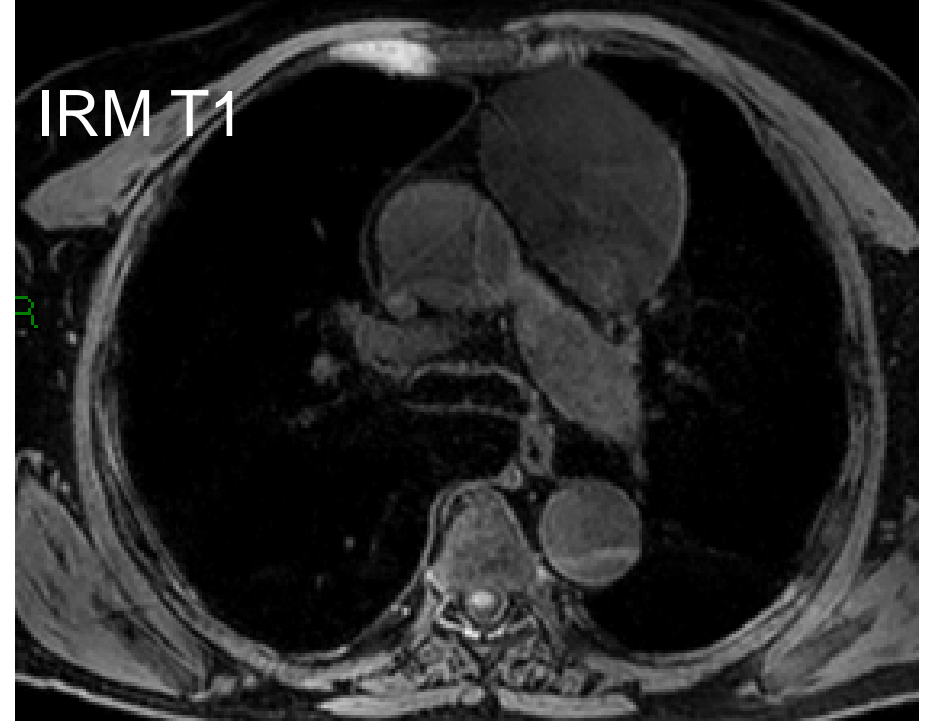
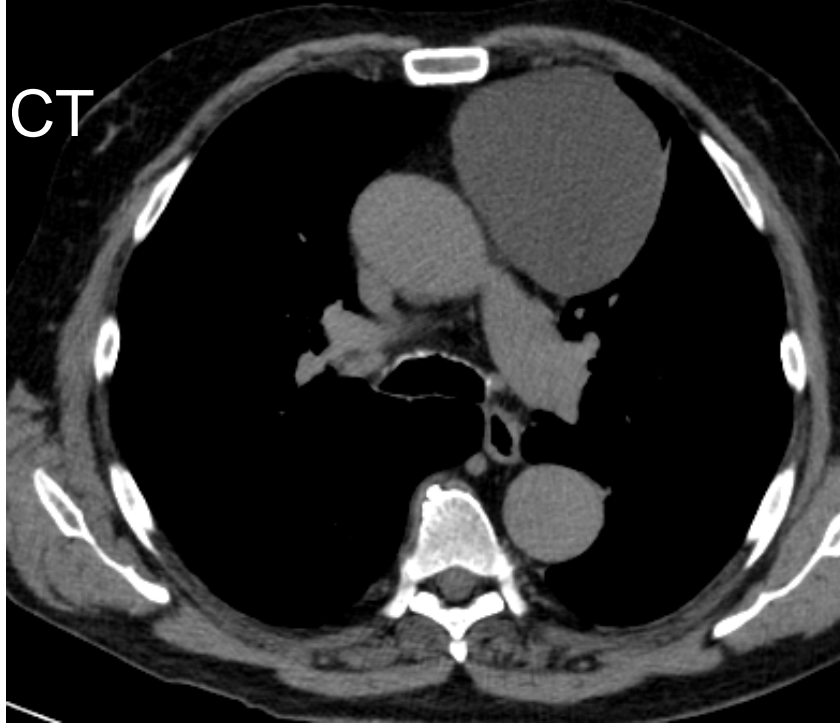


reconstruction multi-planaire
(MPR)

— sagittale-oblique
de l'★ artère pulmonaire gauche



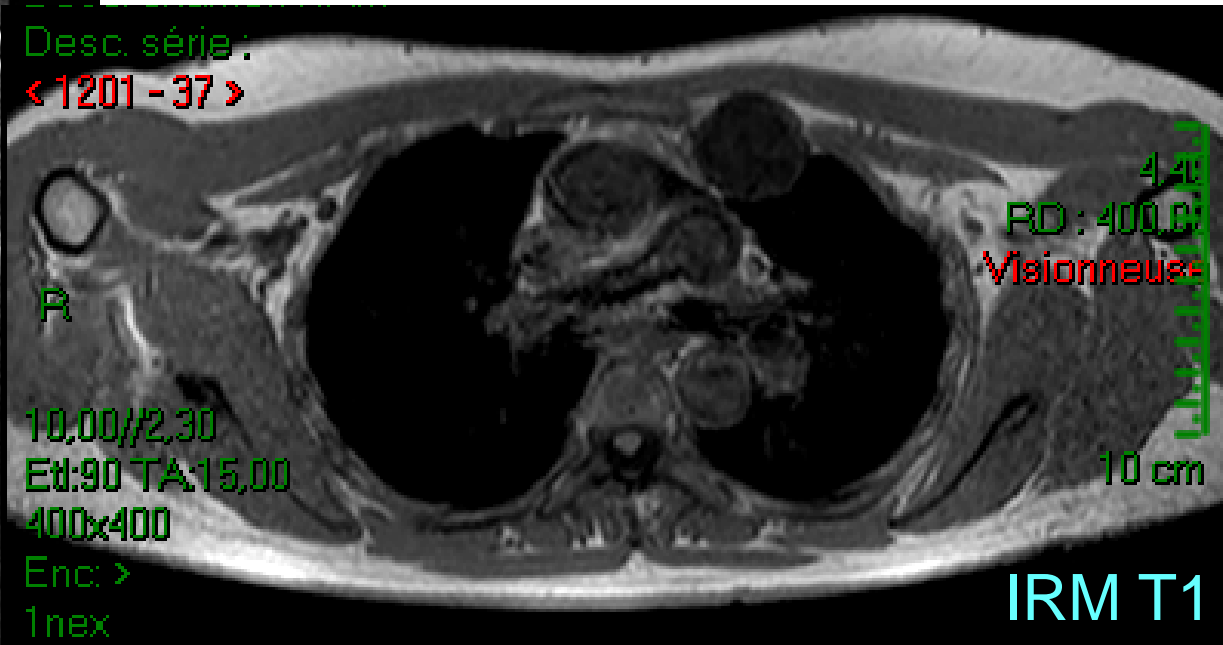
ECHO THORACIQUE
Epanchement pleural
Caractérisation anomalie superficielle
Ponction échoguidée



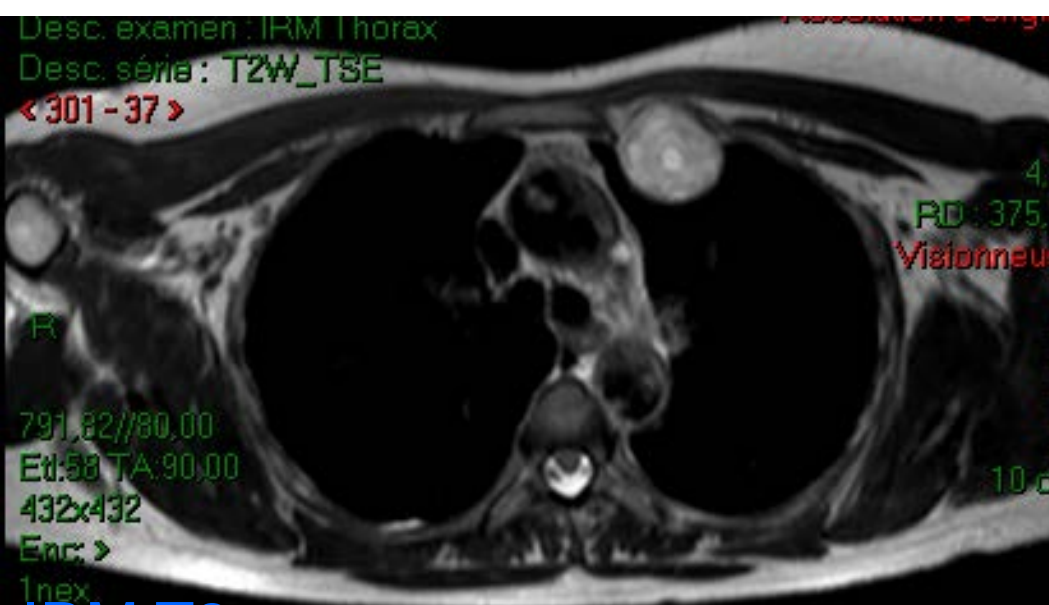
IRM Thoracique
Caractérisation masse médiastinale
Caractérisation masse pariétale
Bilan extension tumeur apex
(Pancoast)
Embolie pulmonaire
Mucoviscidose



Echo



IRM T1

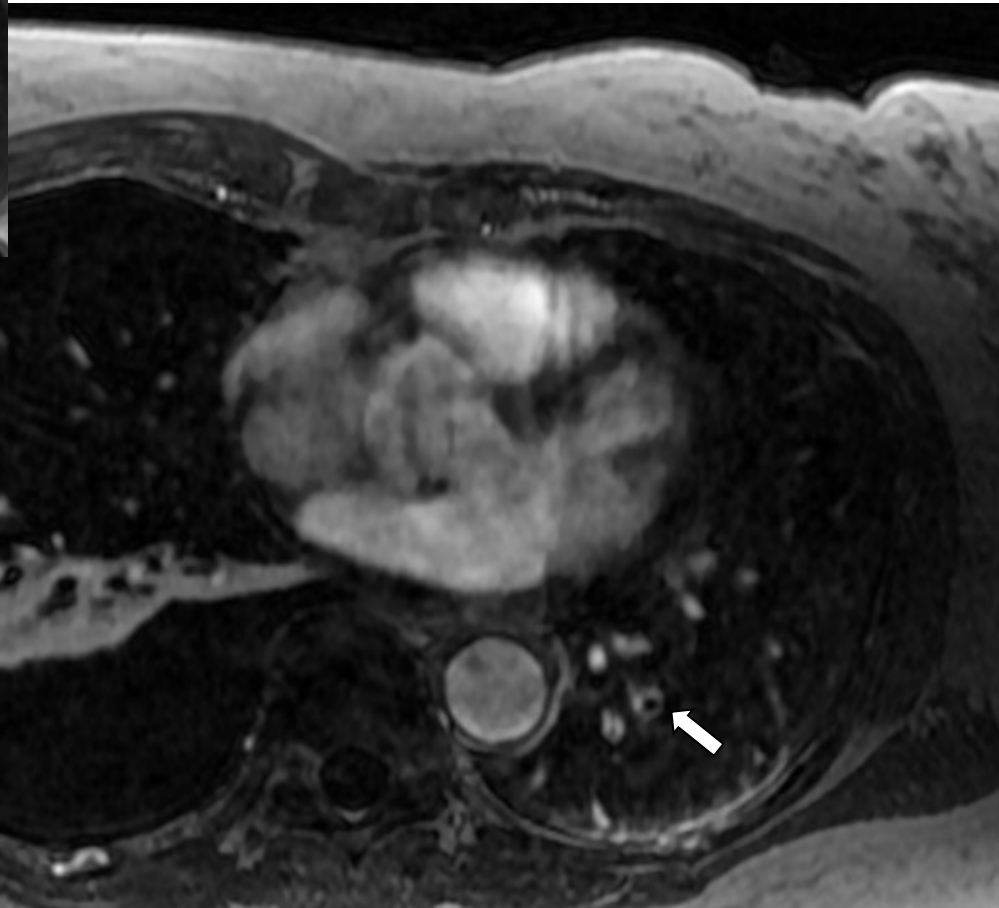
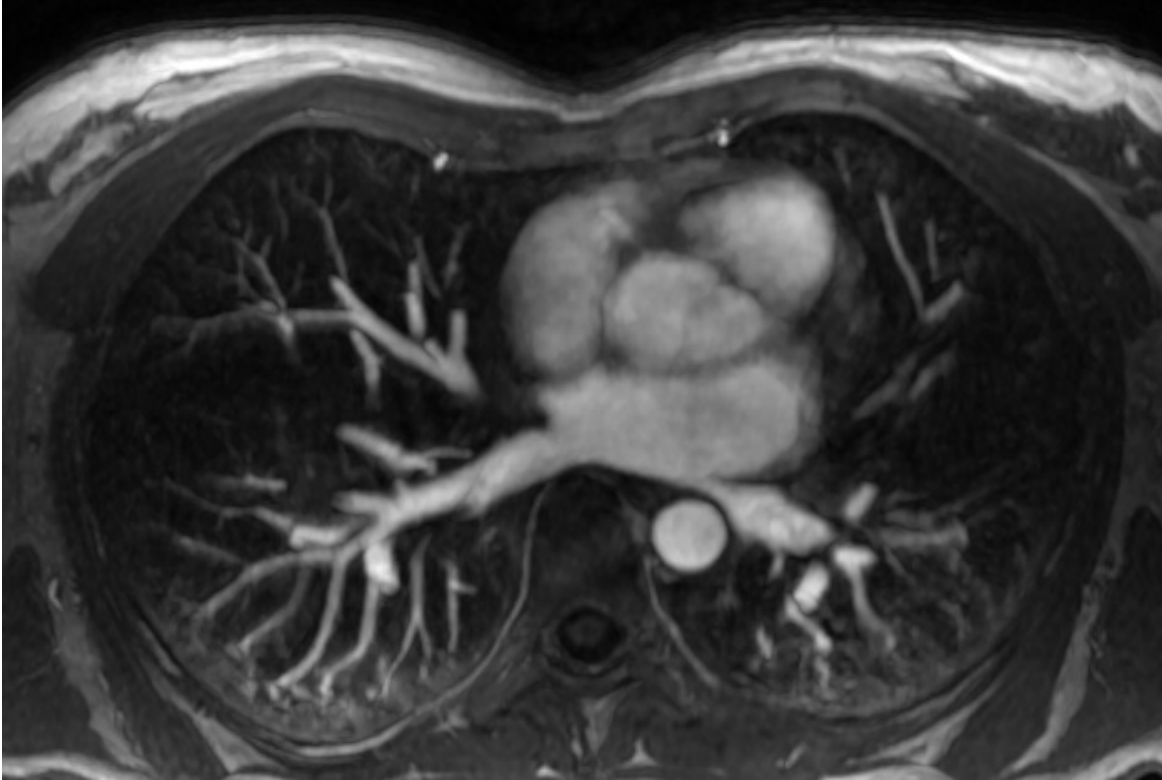


IRM T2



IRM T1Gd

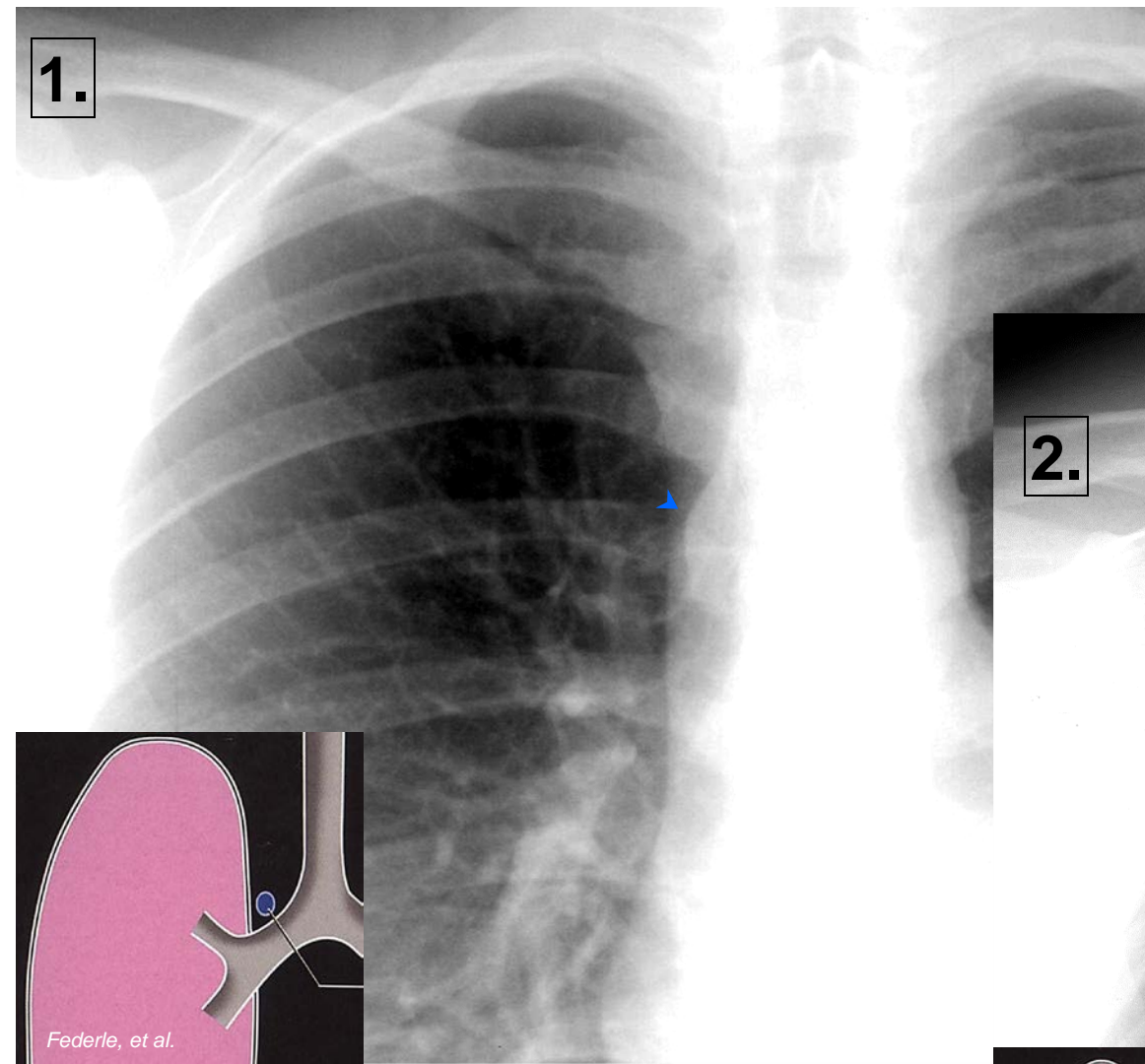
Séquences Angio IRM 3D



↖ Embolie pulmonaire segmentaire

Variantes du Normal

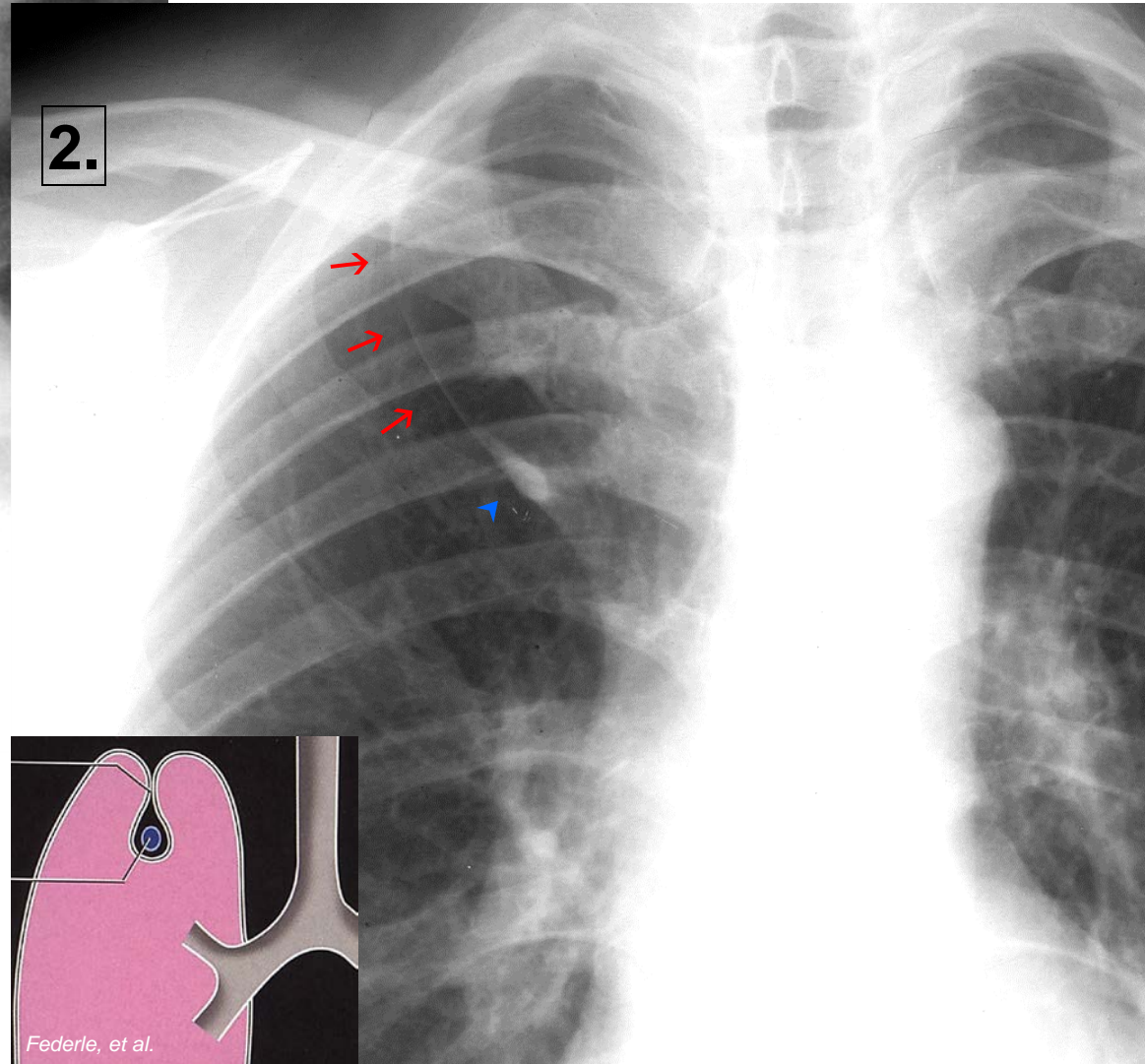
1.



↗ (pseudo)scissure azygos

(4 feuillets pleuraux)

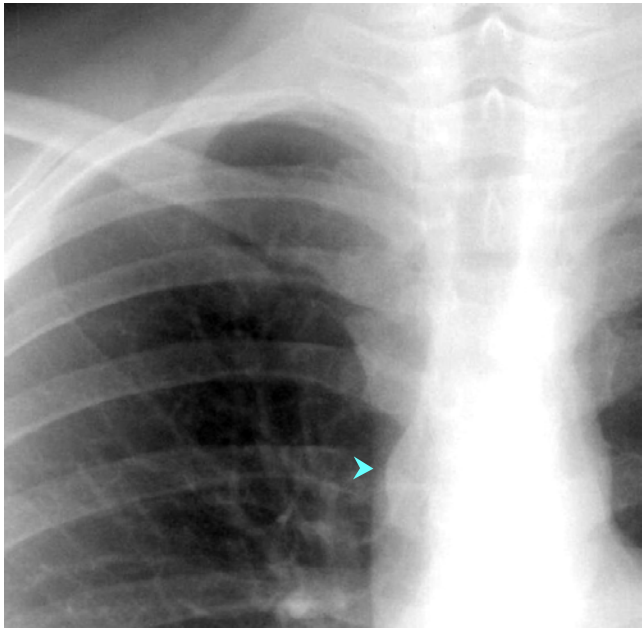
2.



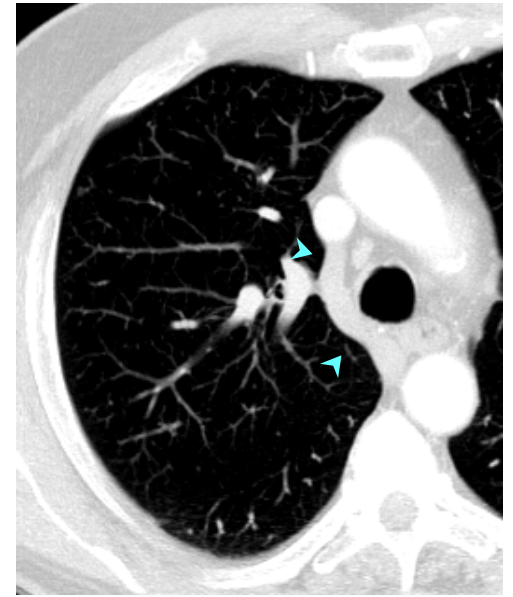
▶ crosse de la veine azygos :

1. - dans l'angle trachéo-bronchique

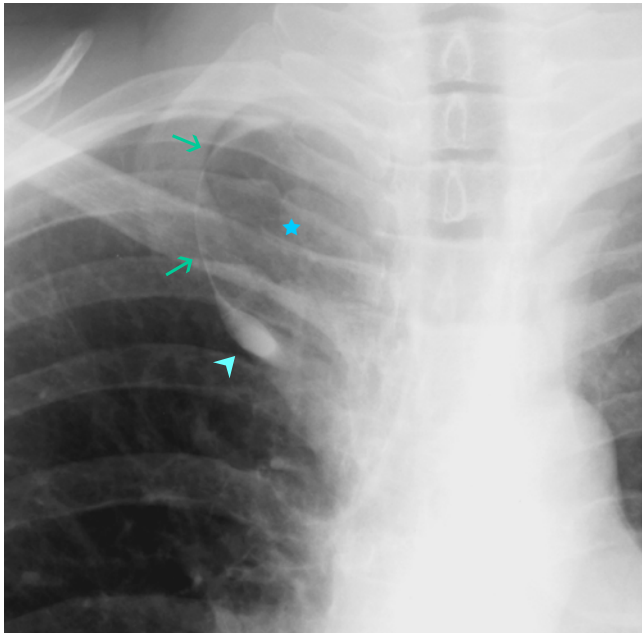
2. - dans une scissure azygos (0.4-1 %)



normal



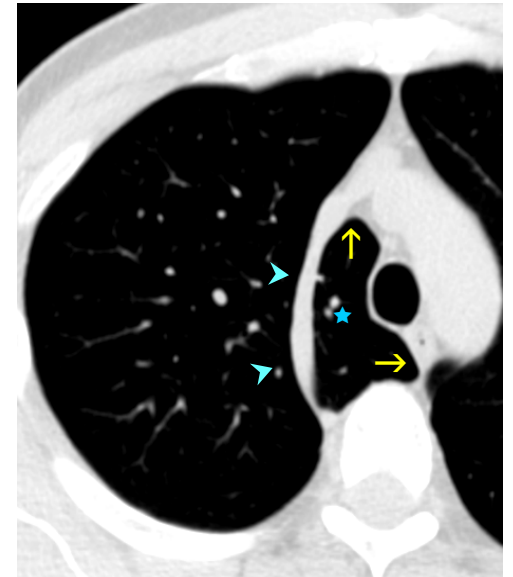
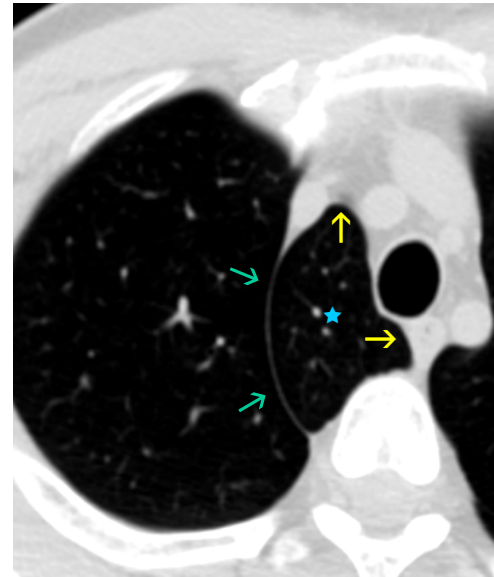
▶ crosse de la
veine azygos



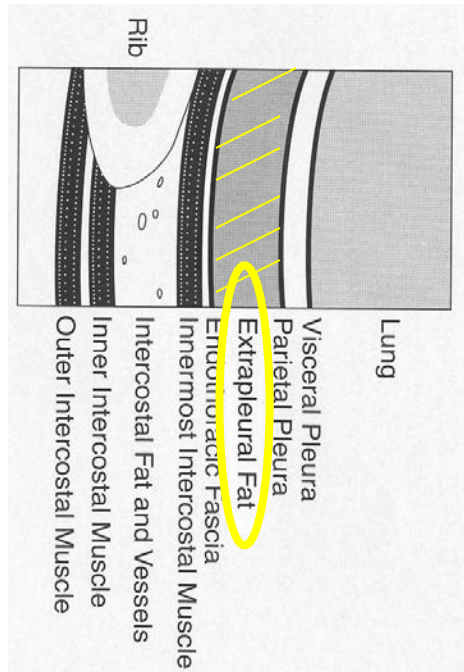
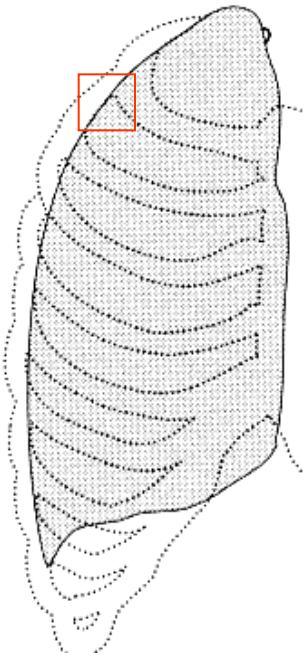
→ scissure
★ lobe
azygos

↑ recessus
antérieur
(inter-vasculaire)

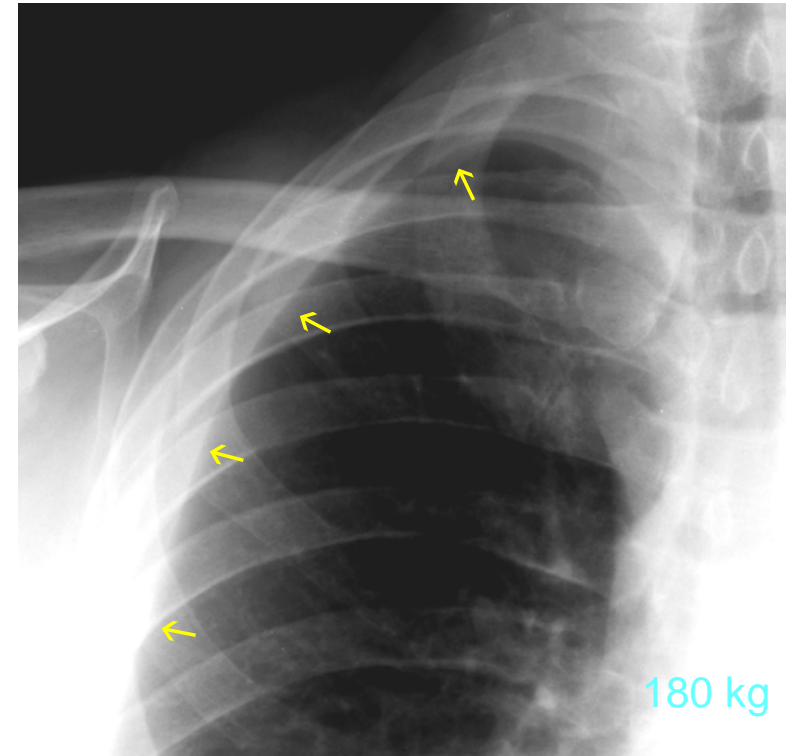
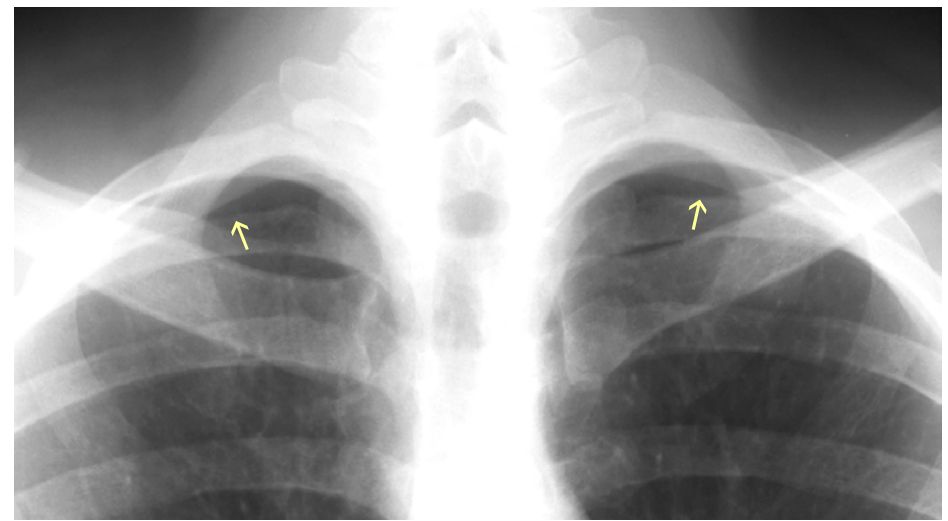
→ recessus
médian
(para-oesophagien)



graisse extra-pleurale



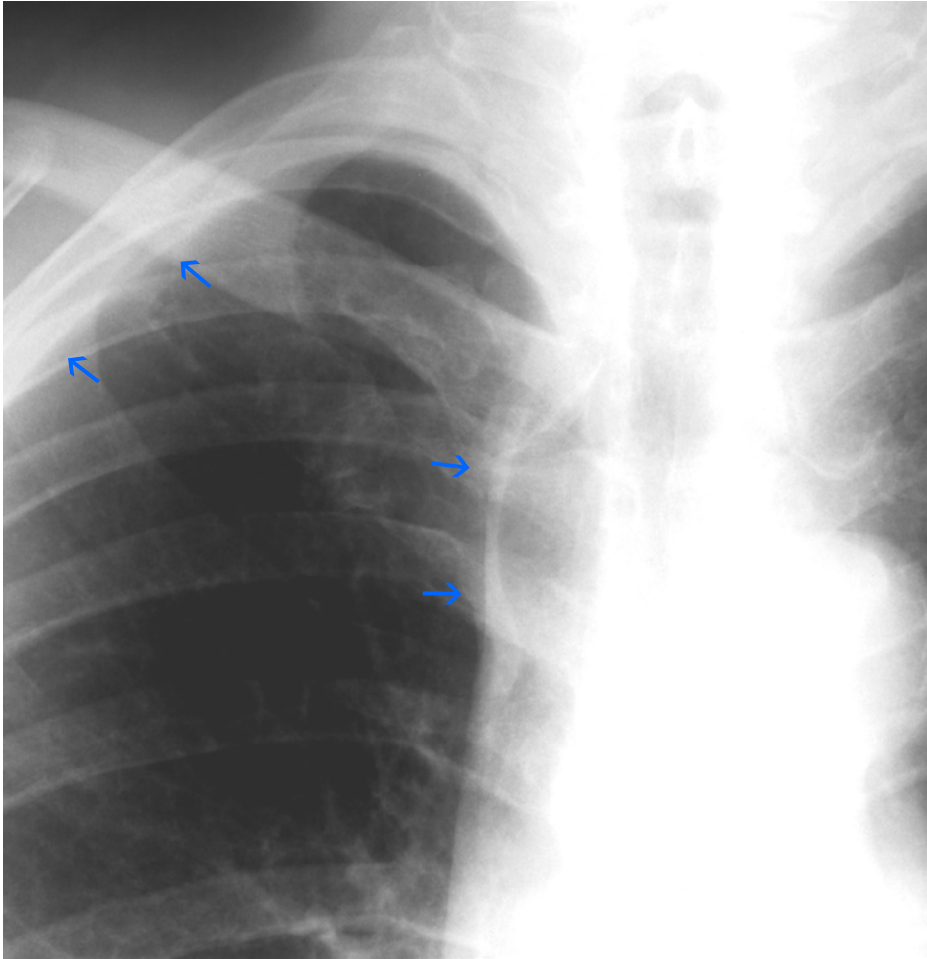
Collins ,et al. Chest radiology. The essentials. LWW 1999



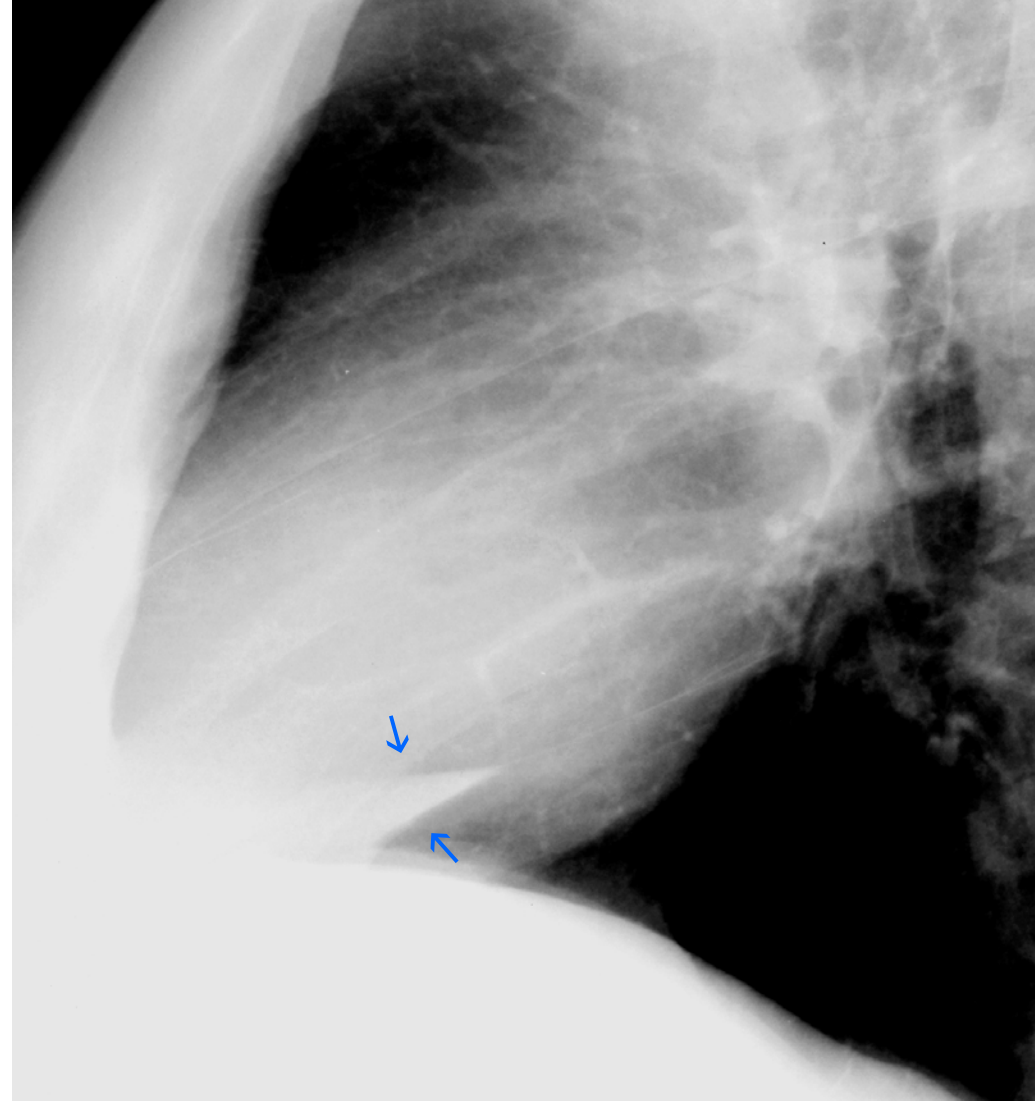
accumulation

- sous-costale
- scissure azygos
- grande scissure (pied et extrémité latérale)
 - sillon du nerf phrénique
 - sinus cardio-phréniques

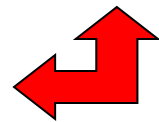
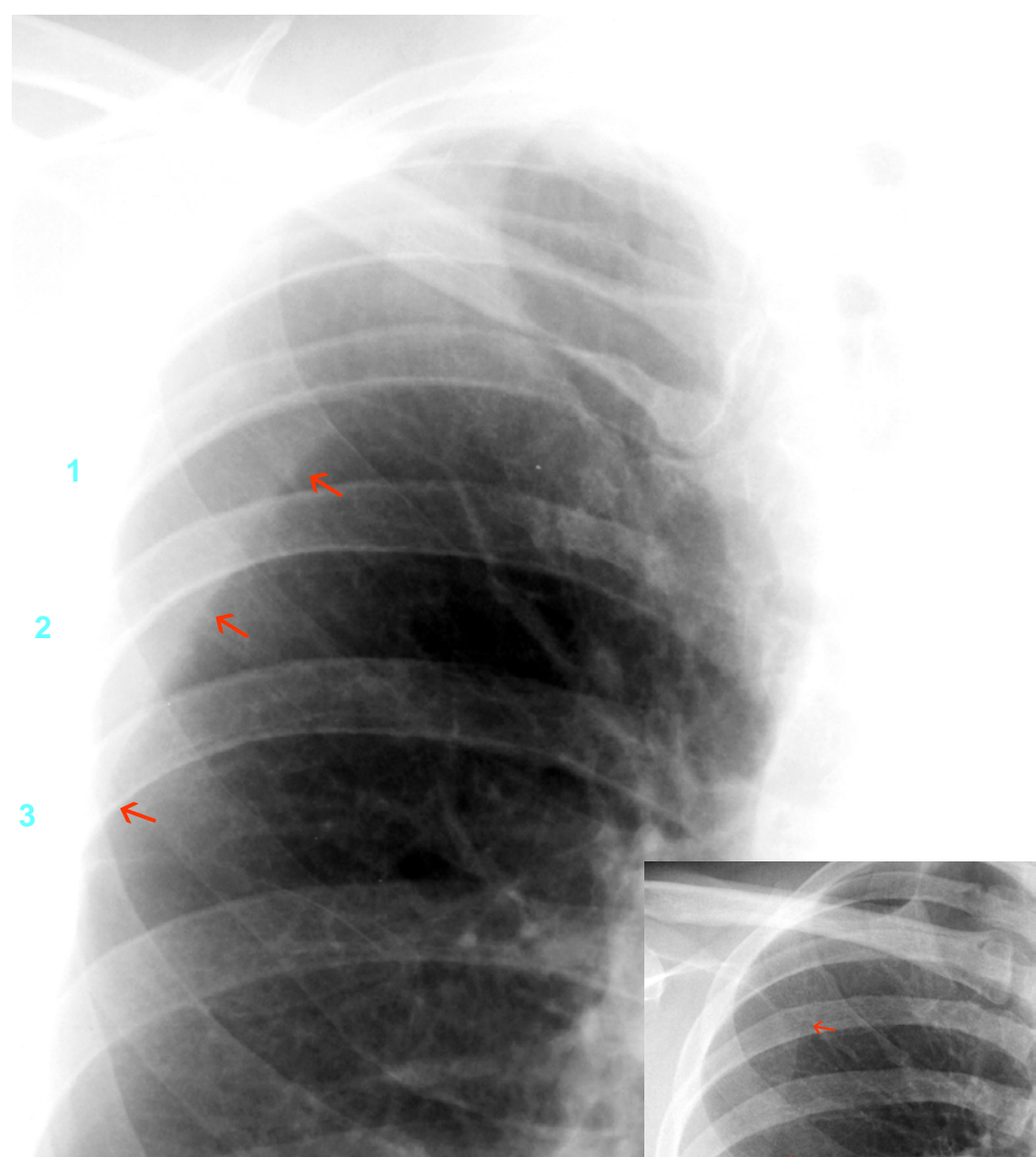
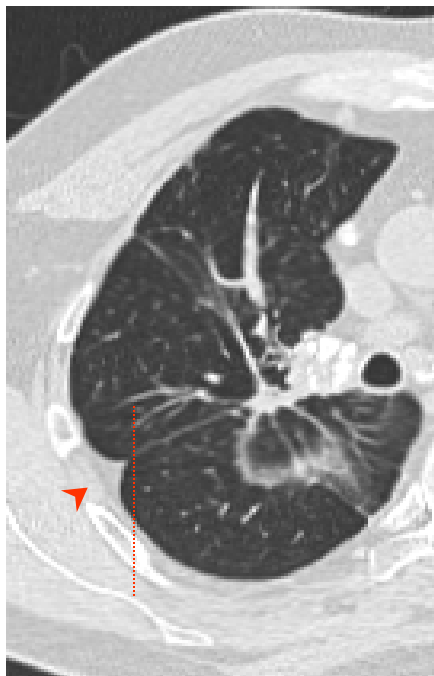
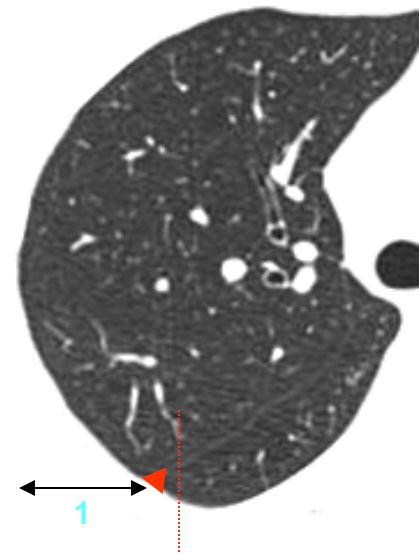
graisse extra-pleurale



- sous-costale
- intra-scissurale (scissure azygos)

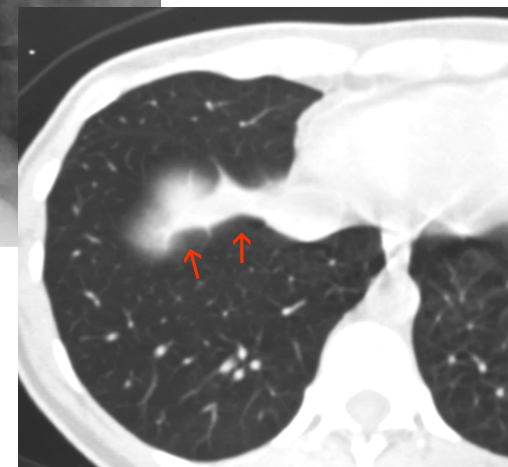
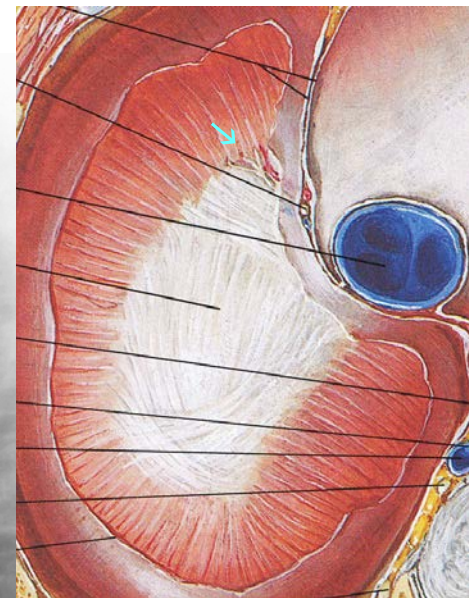
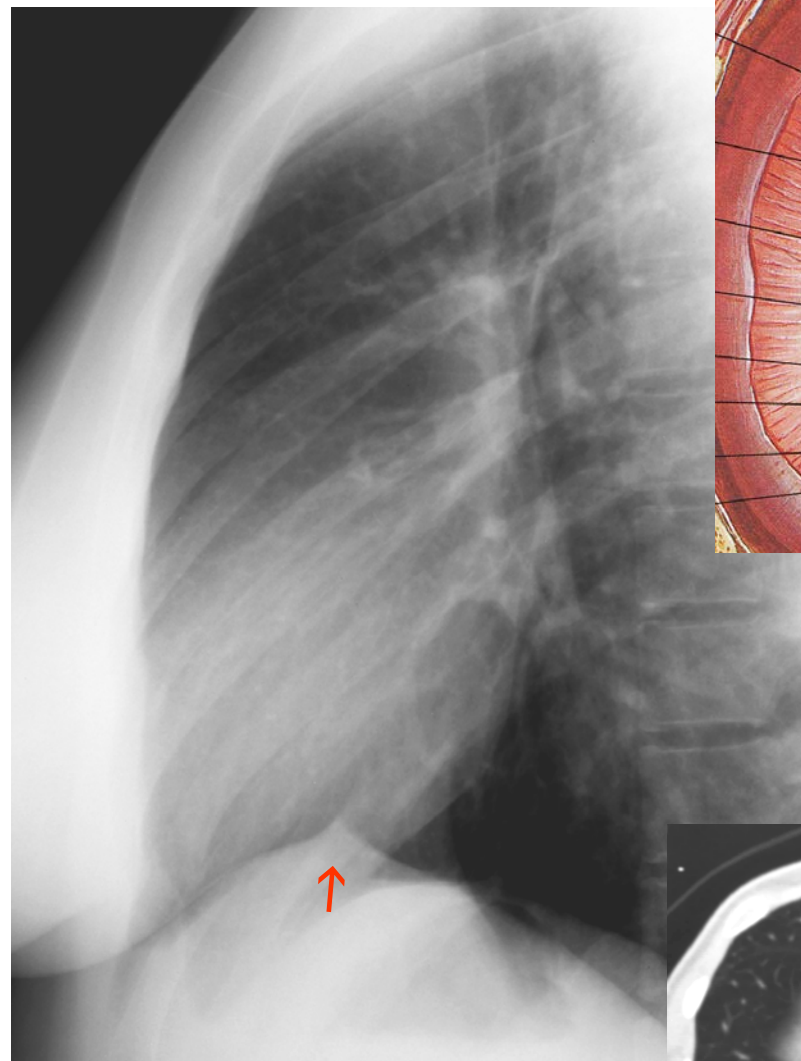
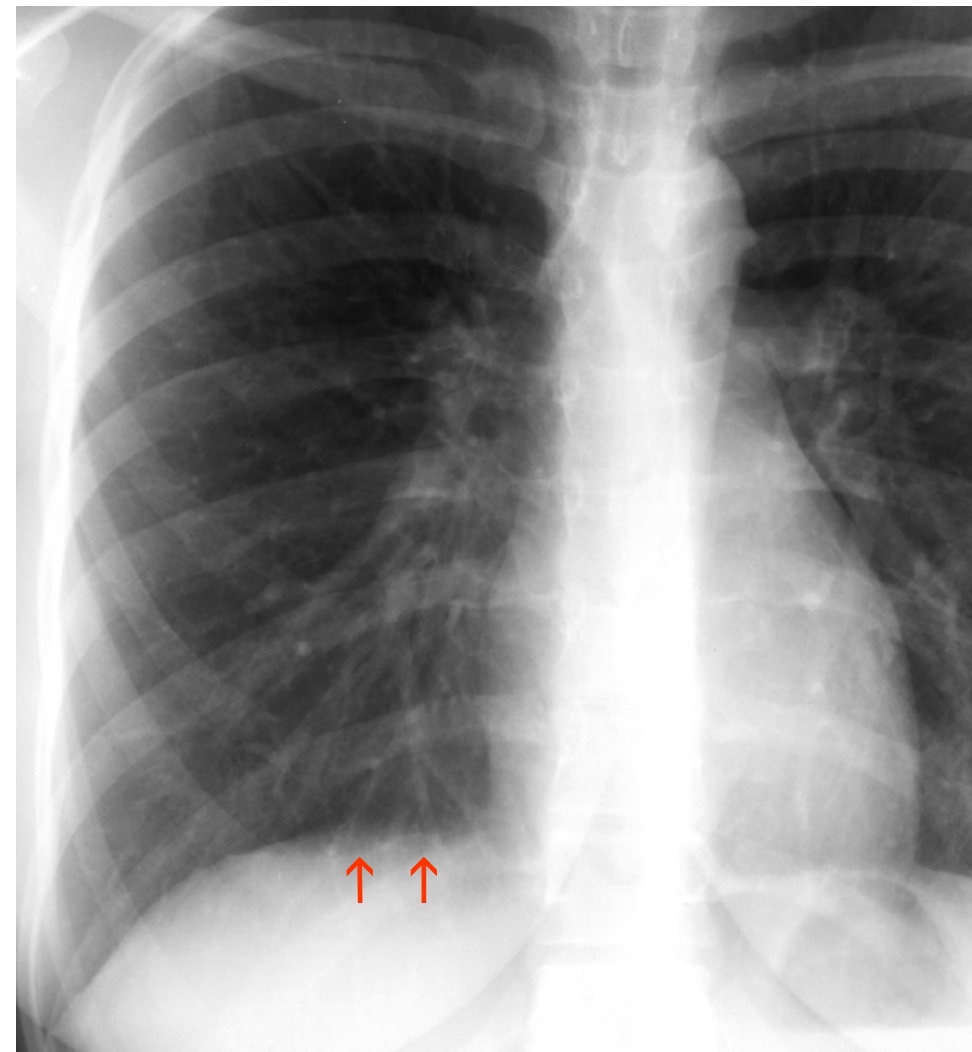


intra-scissurale (pied de la grande scissure)



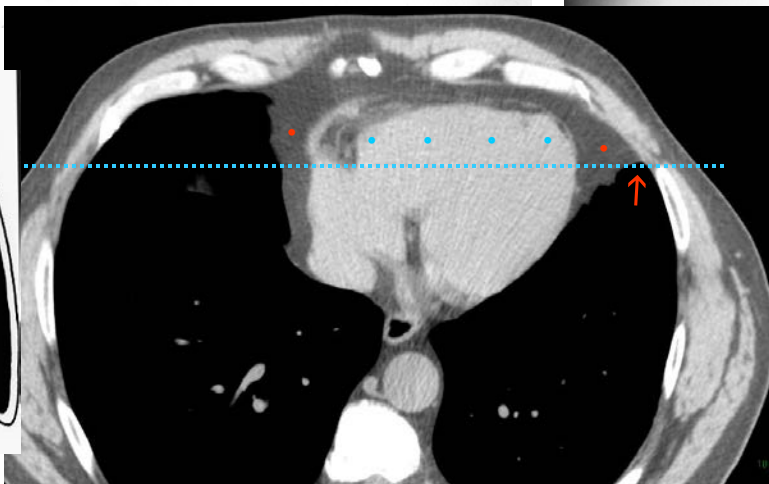
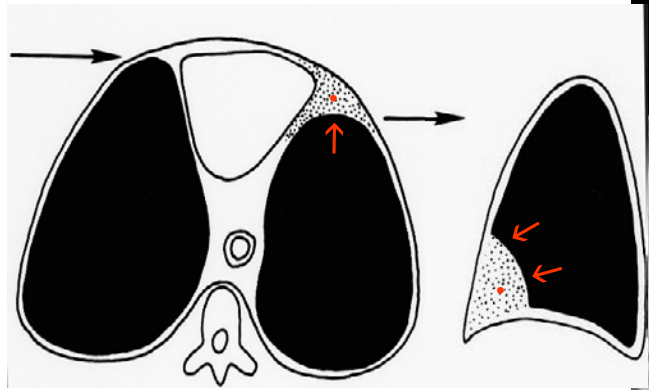
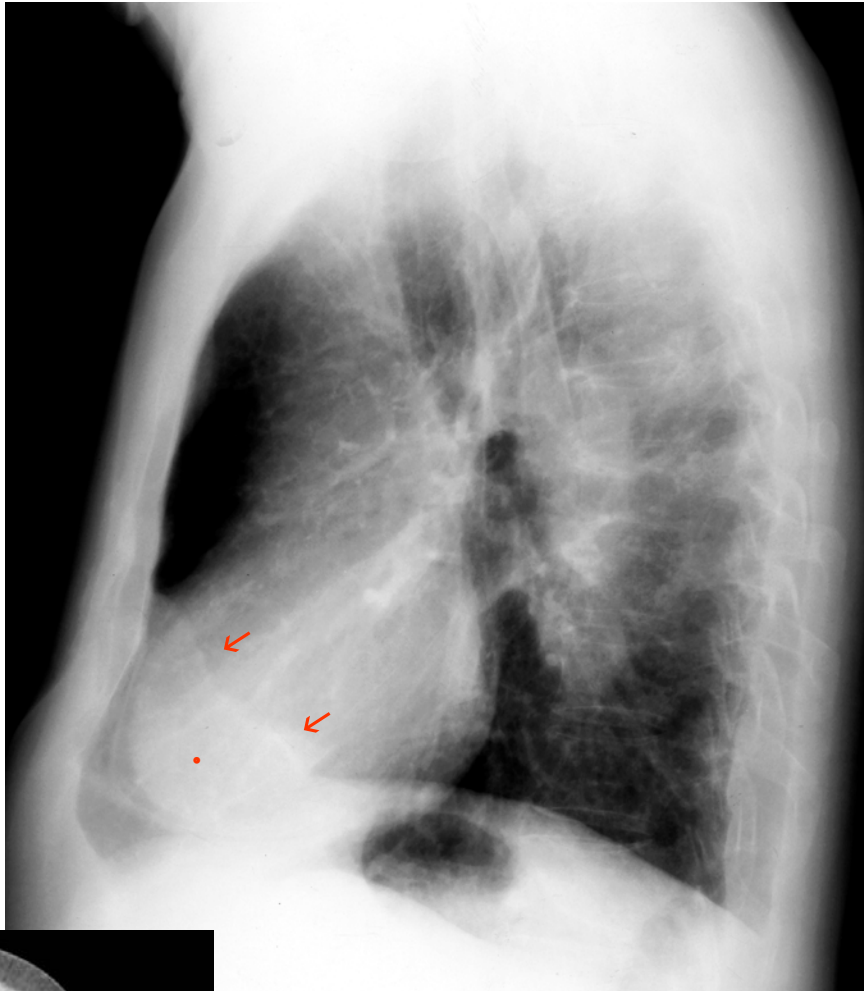
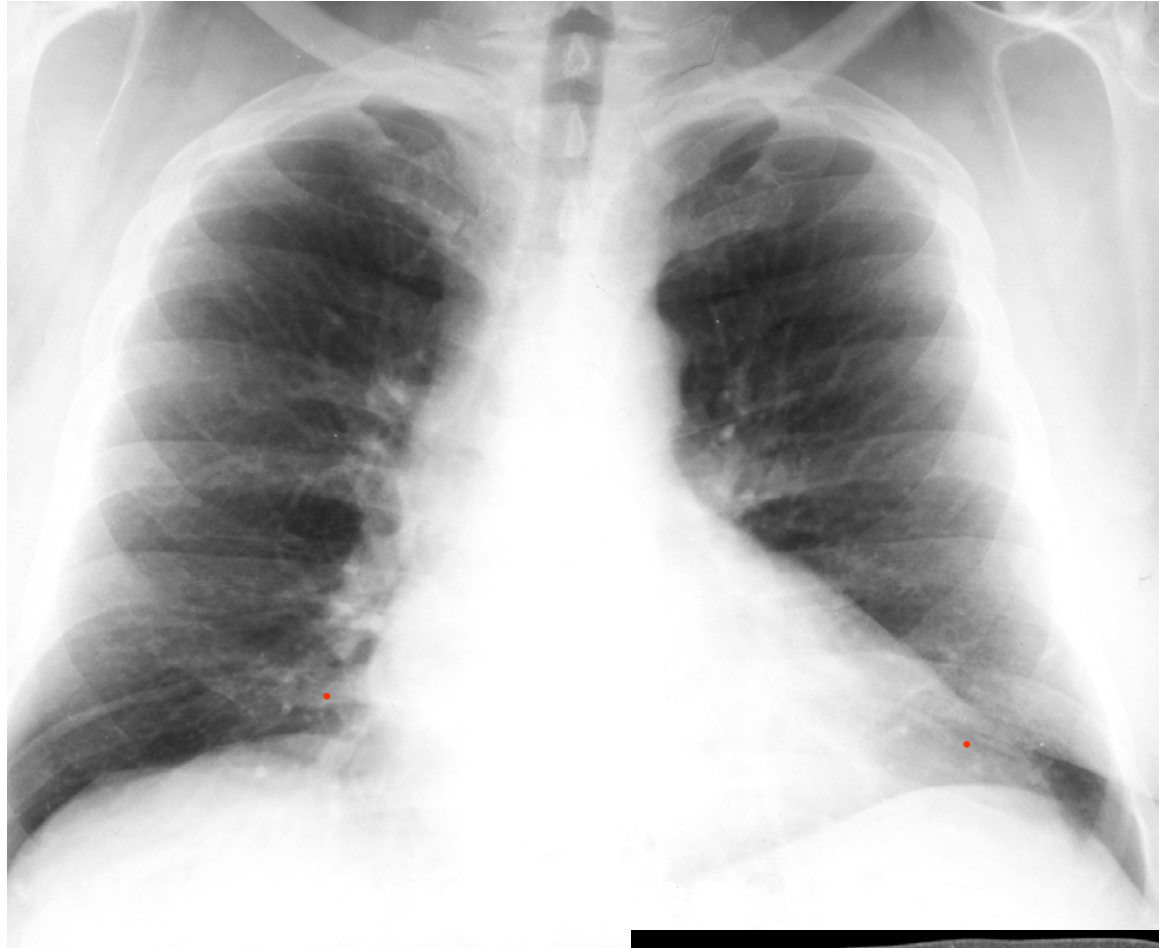
graisse extra-pleurale dans
l'extrémité supéro-latérale
de la grande scissure

omoplate

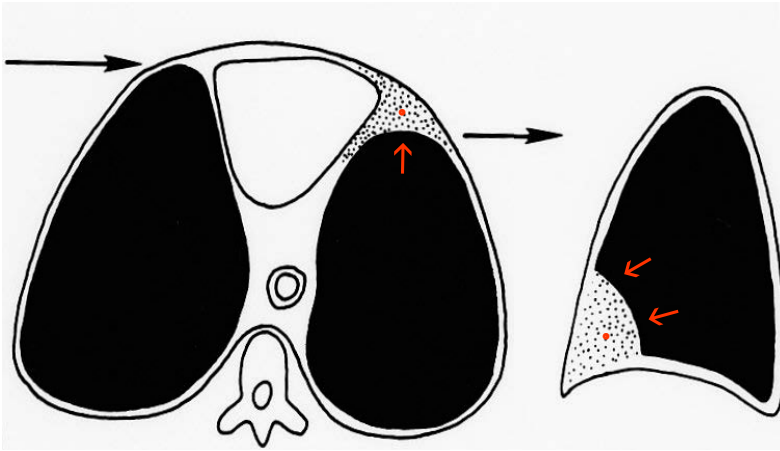


"PIC" DIAPHRAGMATIQUE
graisse extra-pleurale insinuée dans
le sillon du nerf phrénique

(aspect ramifié en coupe axiale)



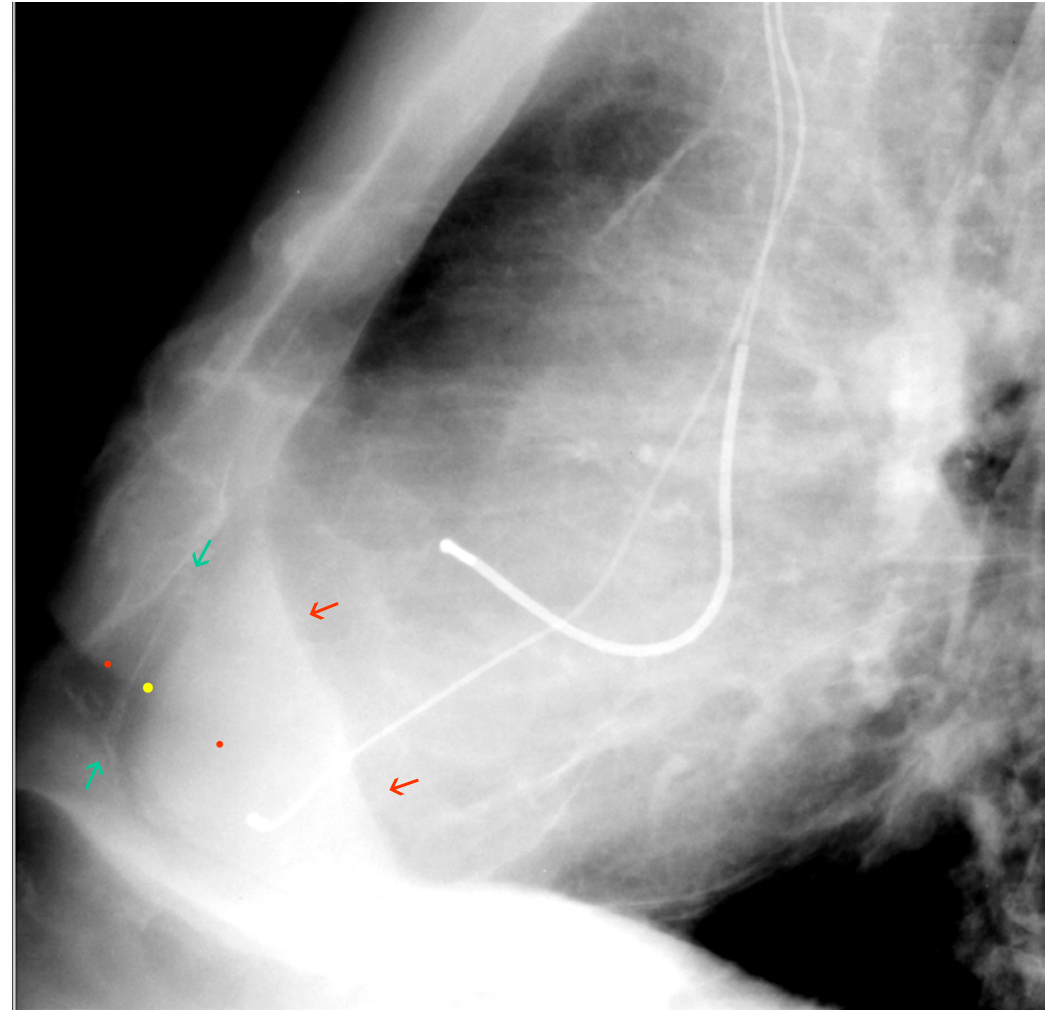
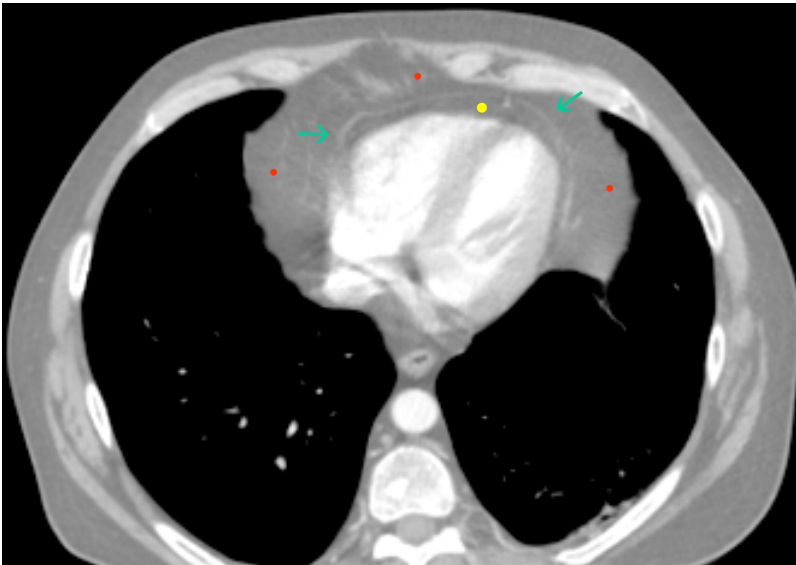
lipomatose cardio-phrénique

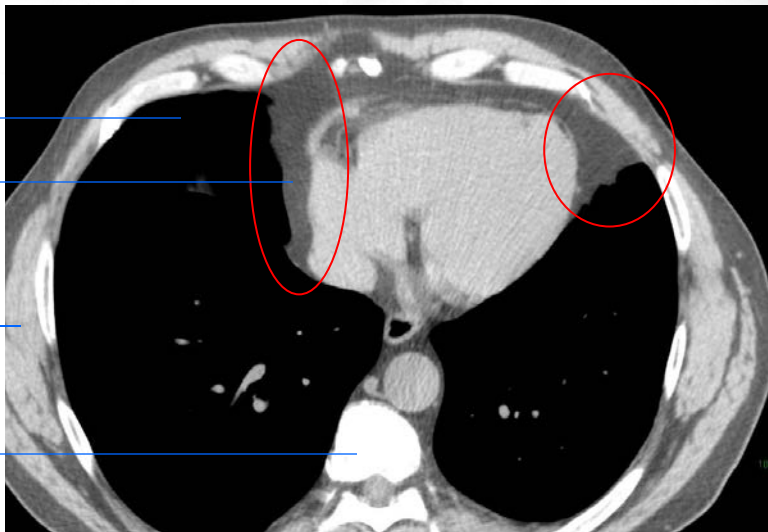
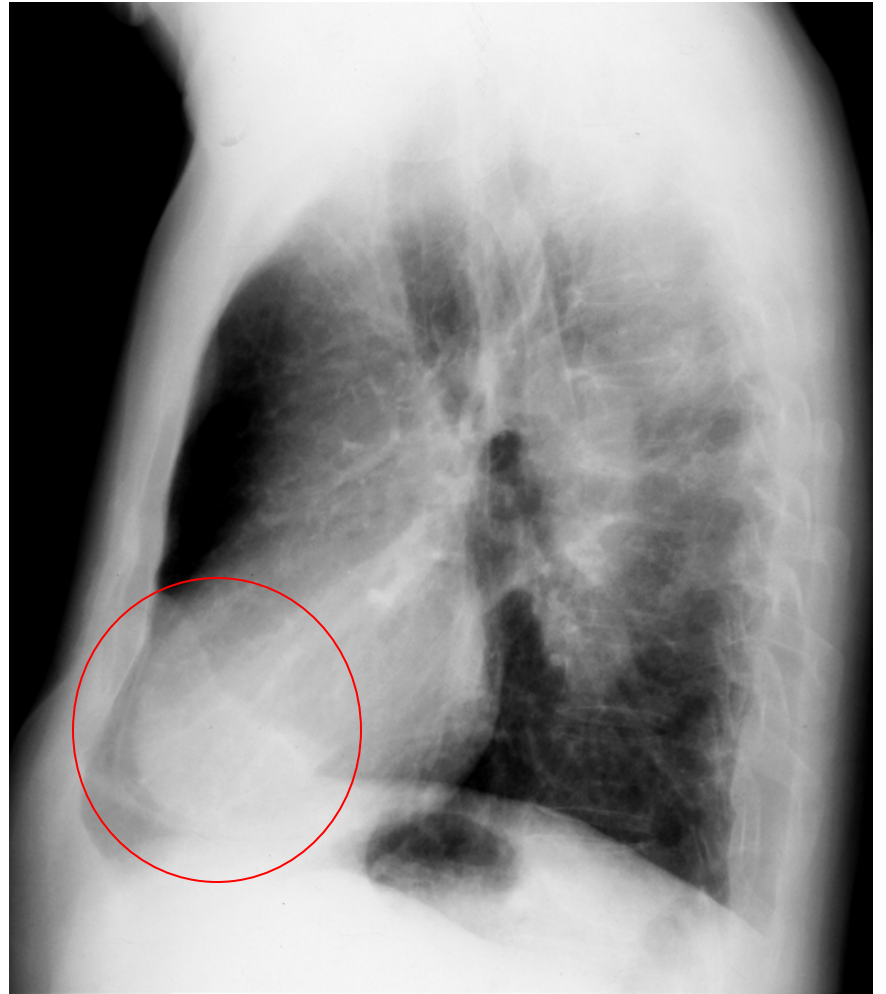
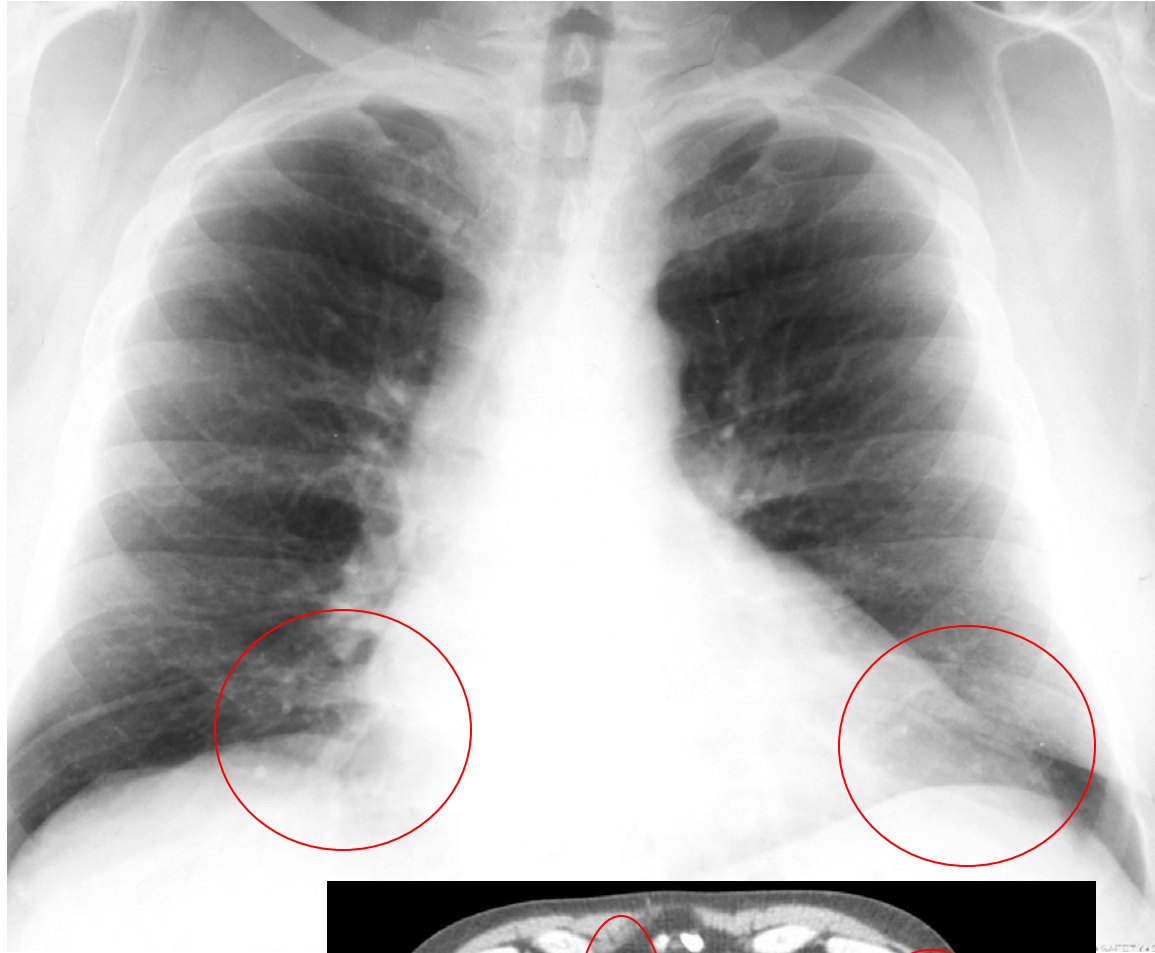


- graisse épipéricardique (extra-pleurale)

→ péricarde ←

- graisse épocardique





air : -800 UH

graisse : -80
à -100 UH

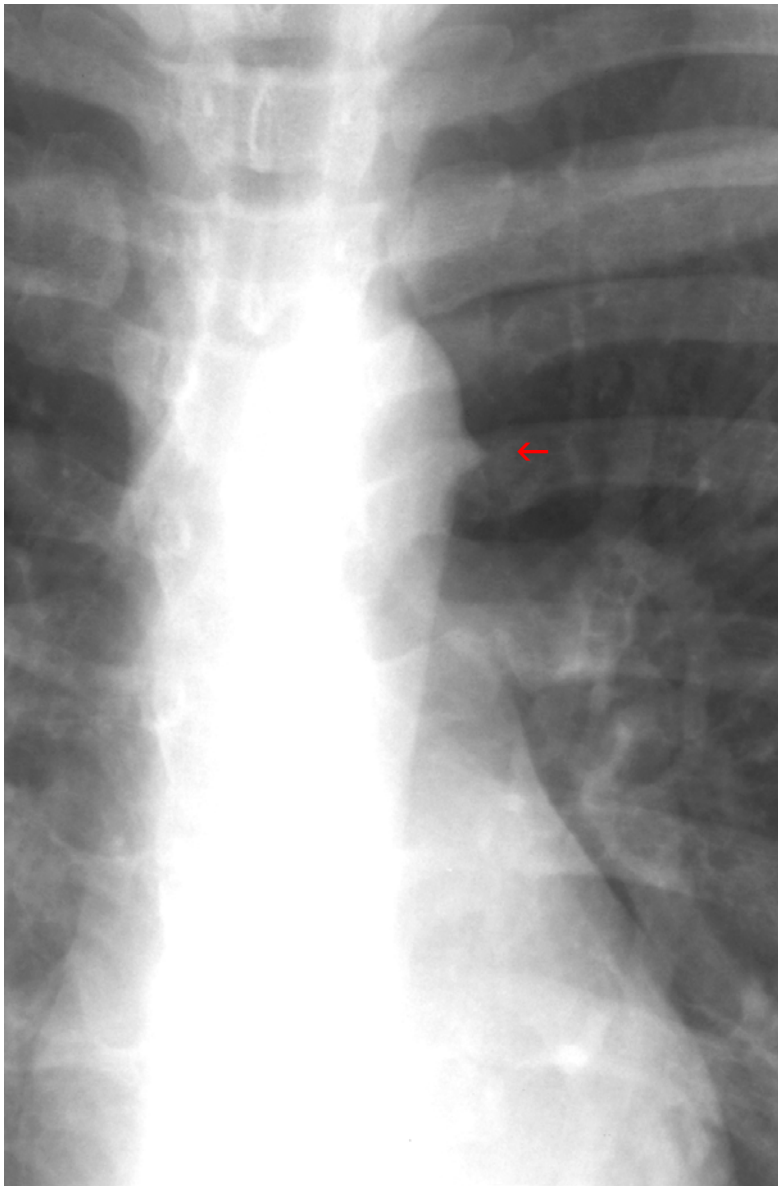
muscle : 40
à 60 UH

os : 250
à 800 UH

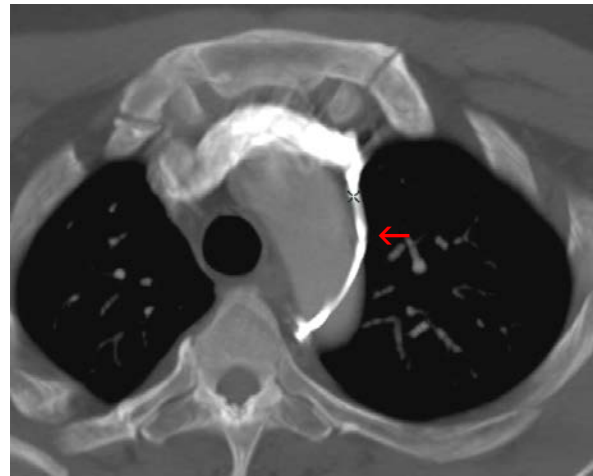
lipomatose cardio-phrénique

sinus cardio-phréniques comblés

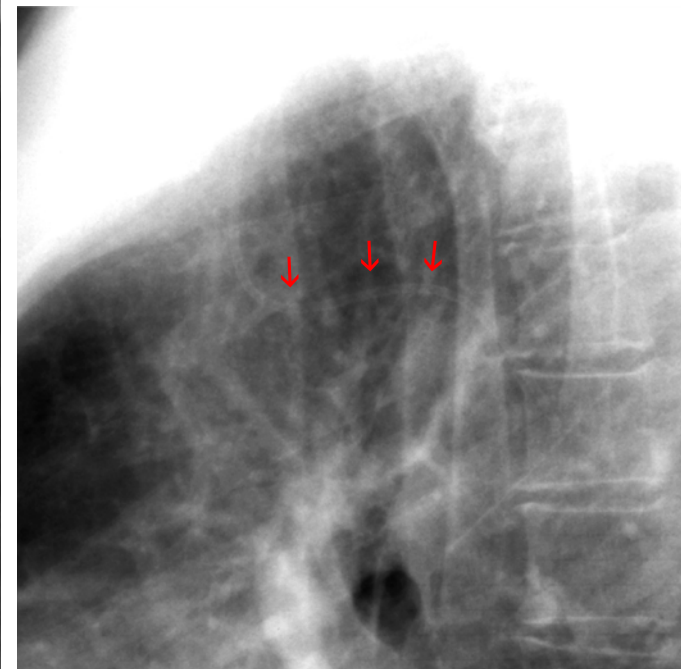
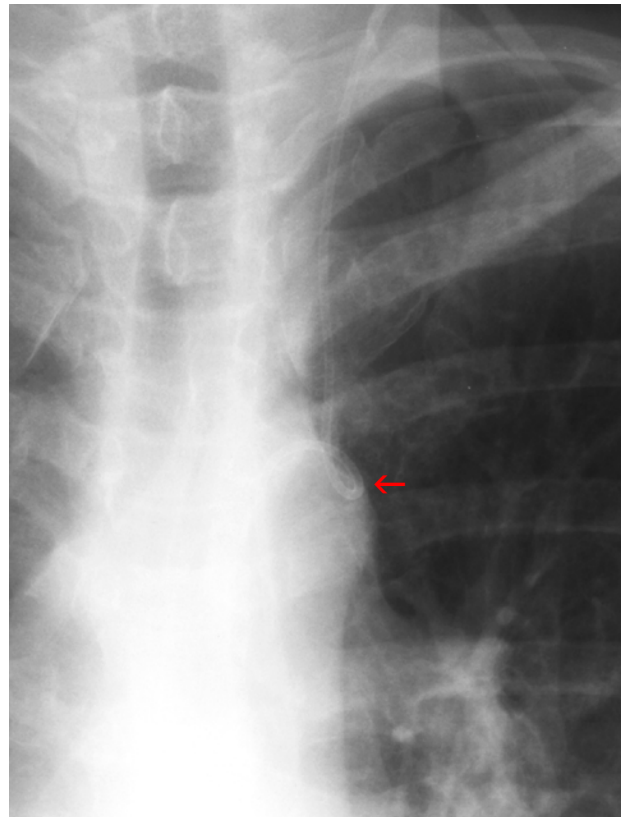
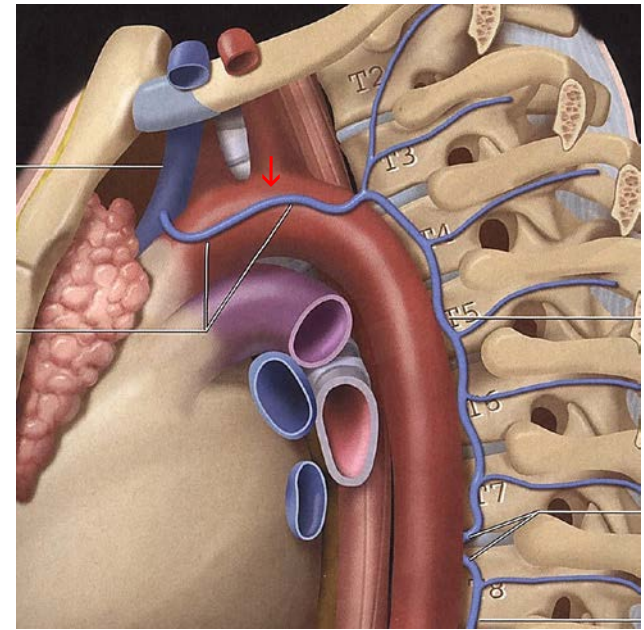
UH = unités Hounsfield

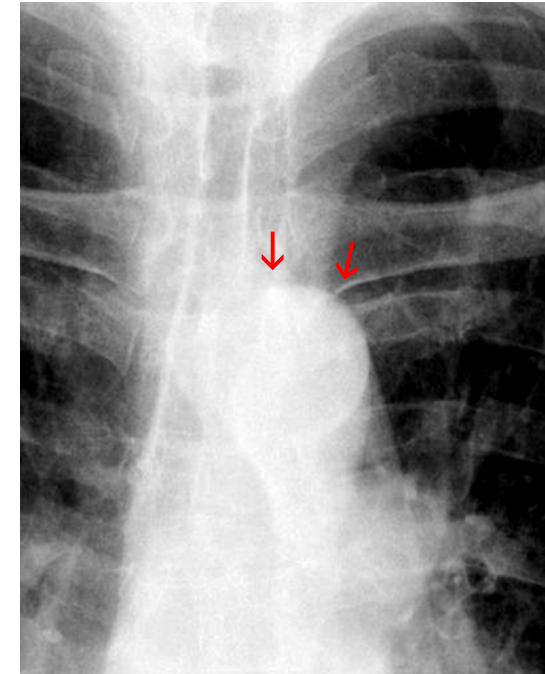
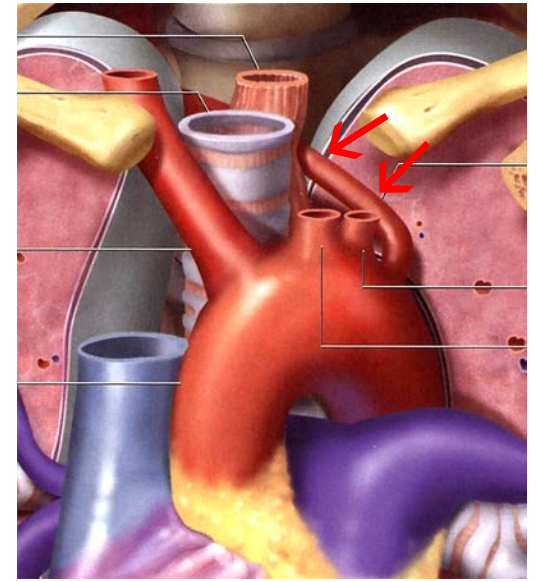
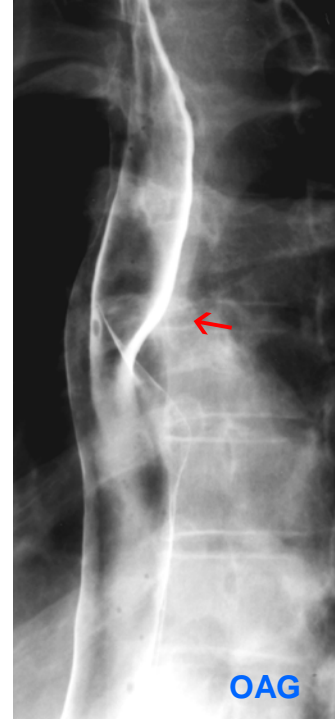
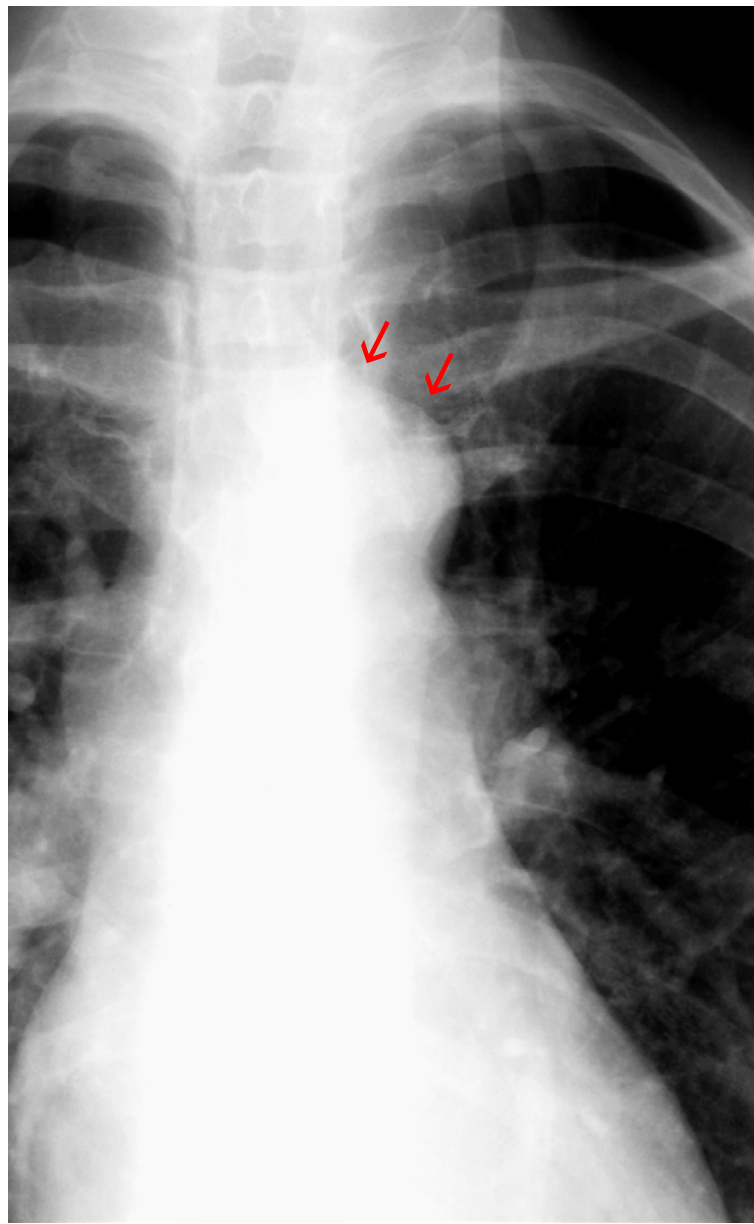
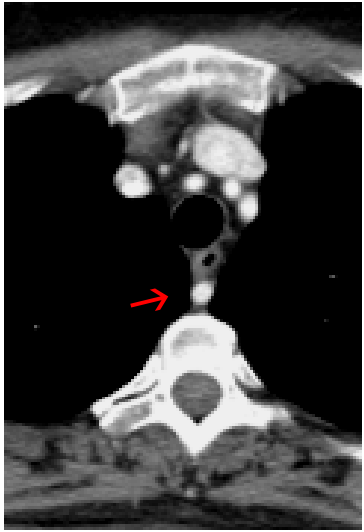


veine intercostale
supérieure gauche
(1.5%)



"AORTIC NIPPLE"





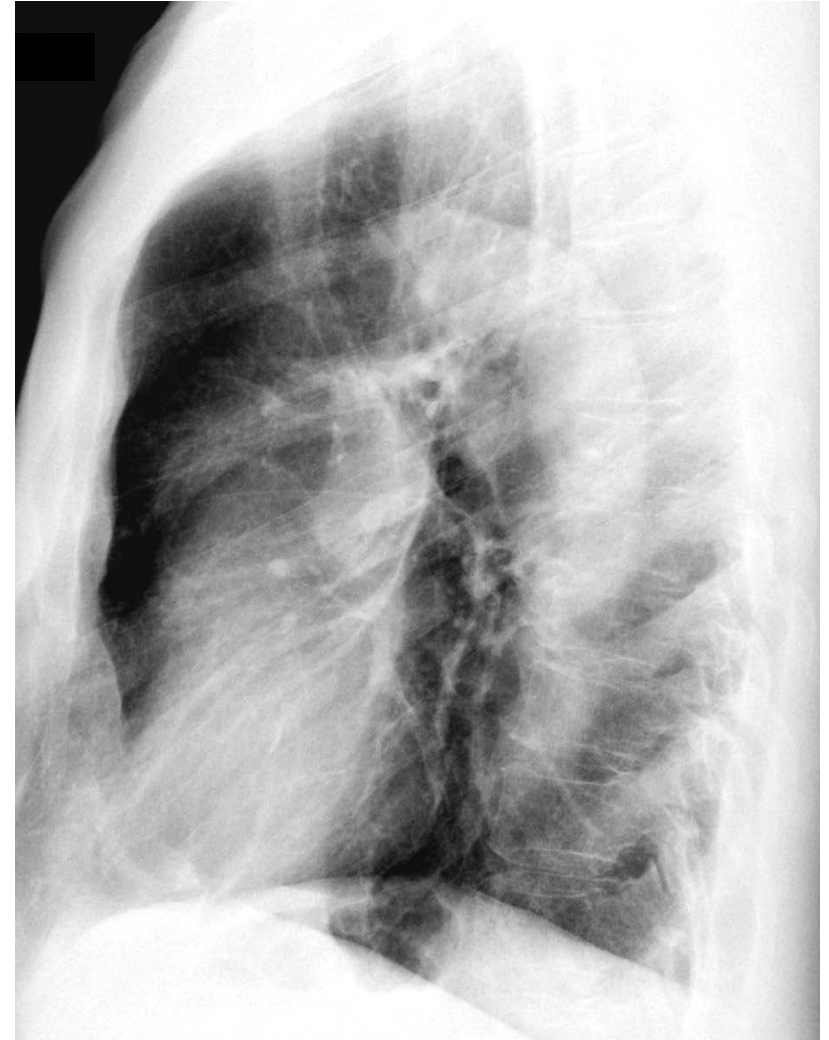
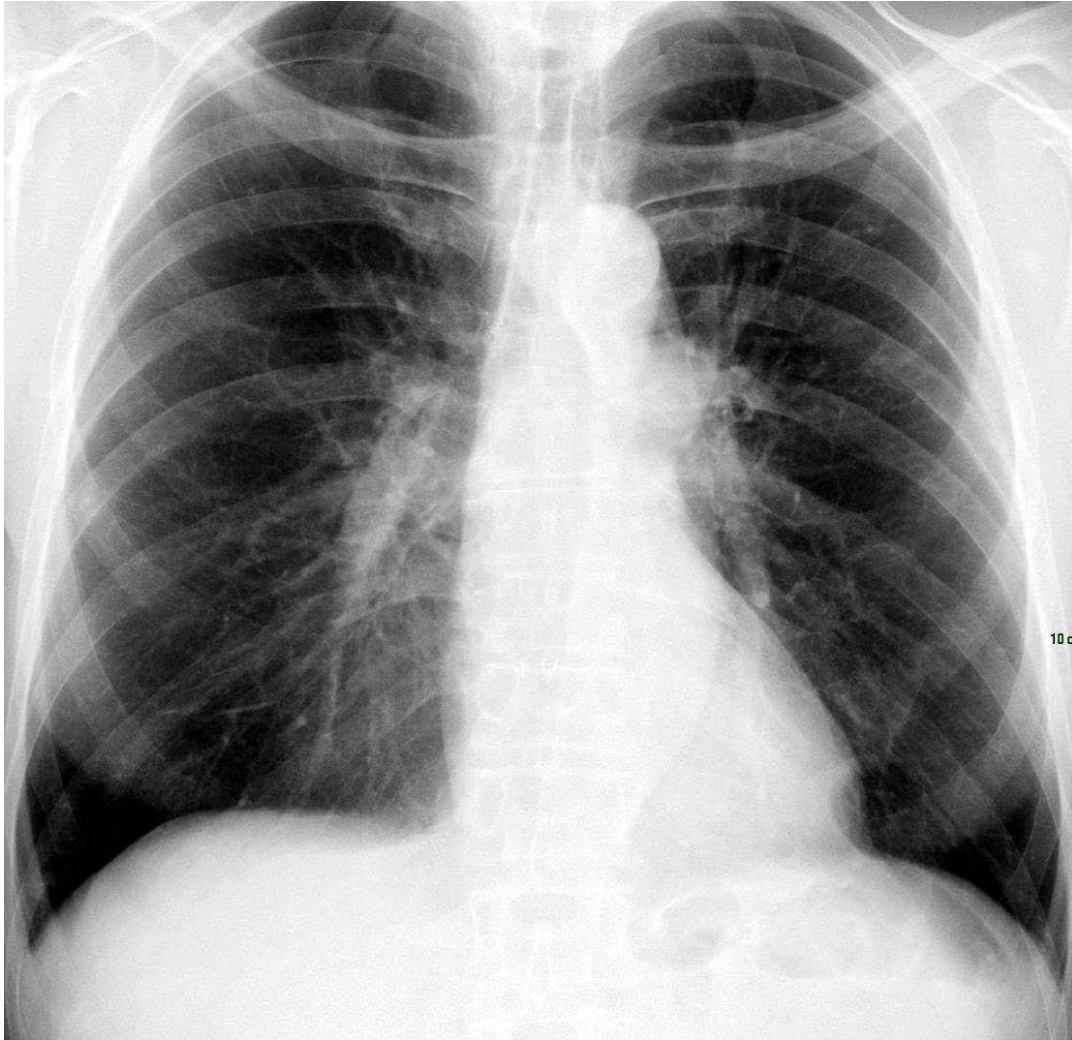
artère sous-clavière droite aberrante
(arteria lusoria*) (0.5 %)

contour supérieur de la crosse aortique → oblique (60%)

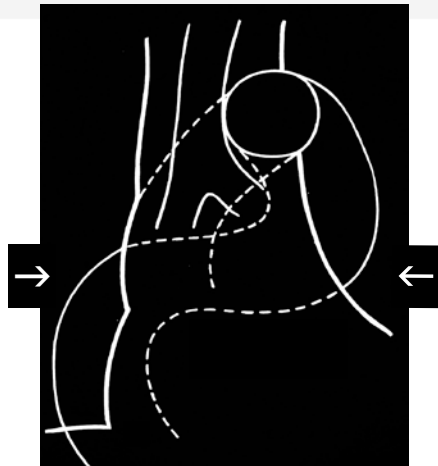
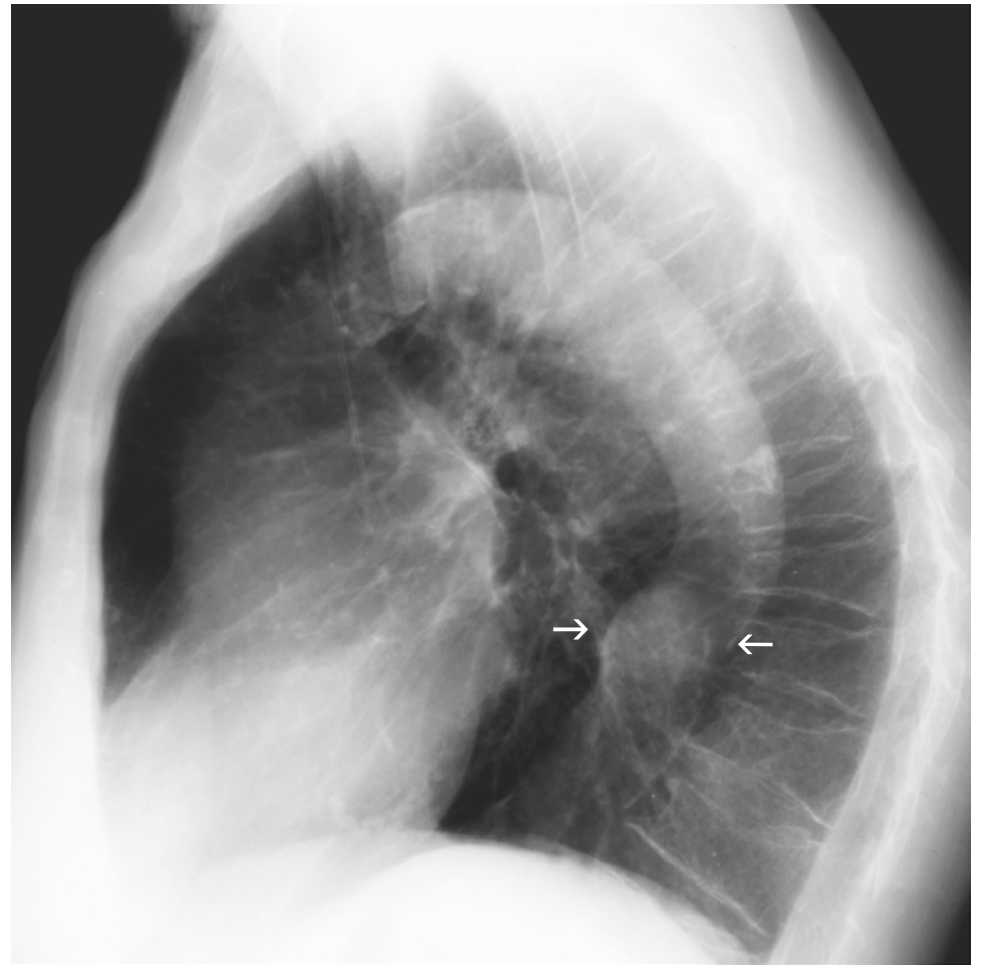
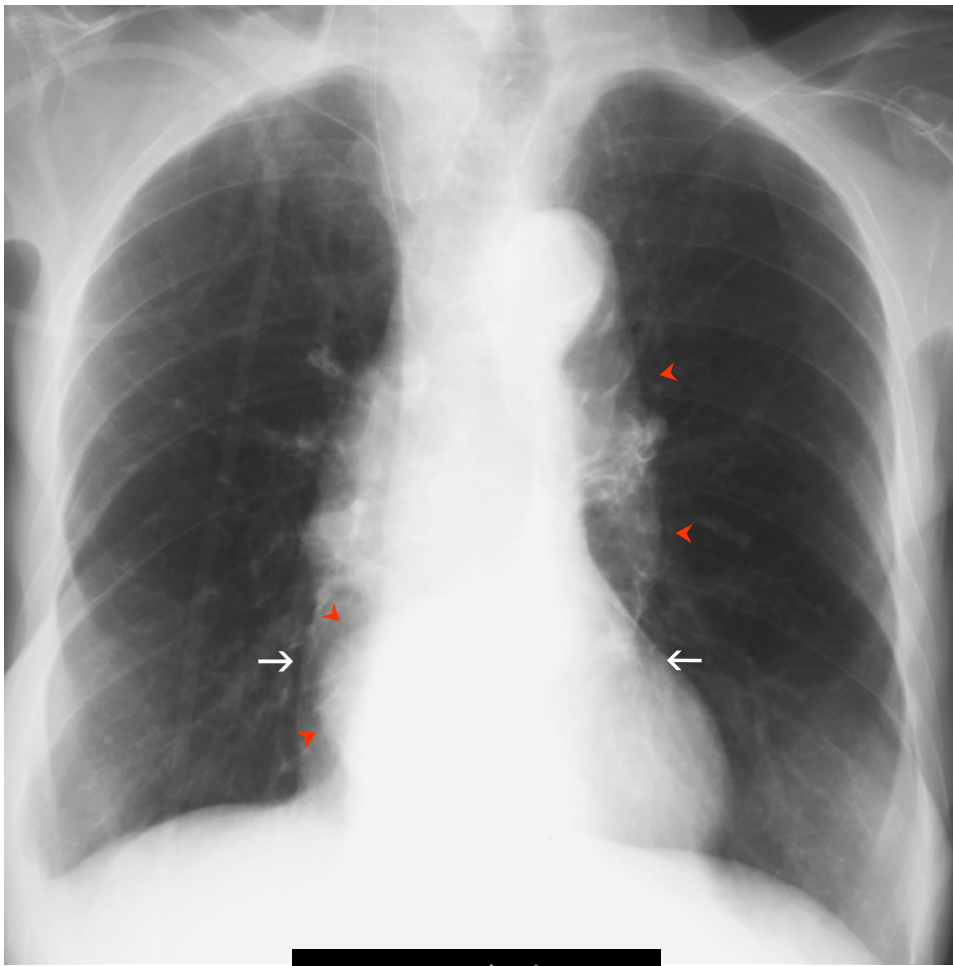
* lusus naturae = curiosité de la nature

Variations du normal

sujet âgé

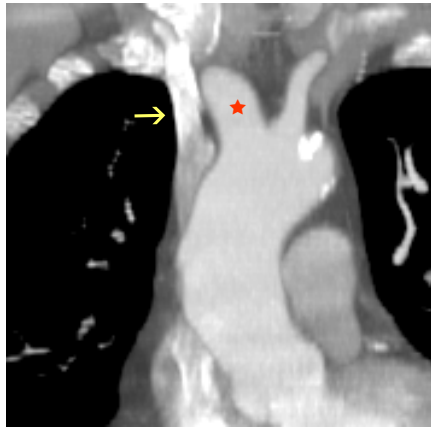
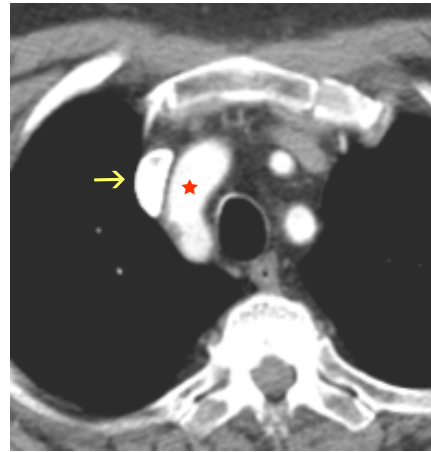
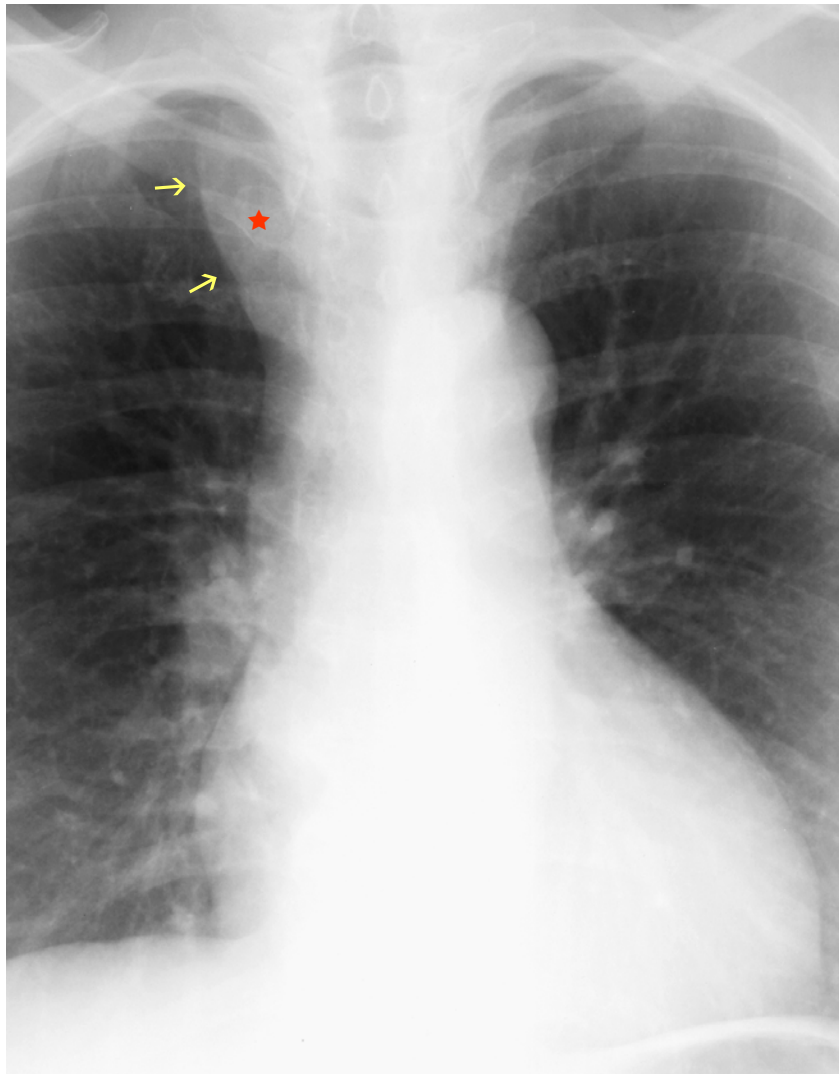


aorte allongée (déroulée)

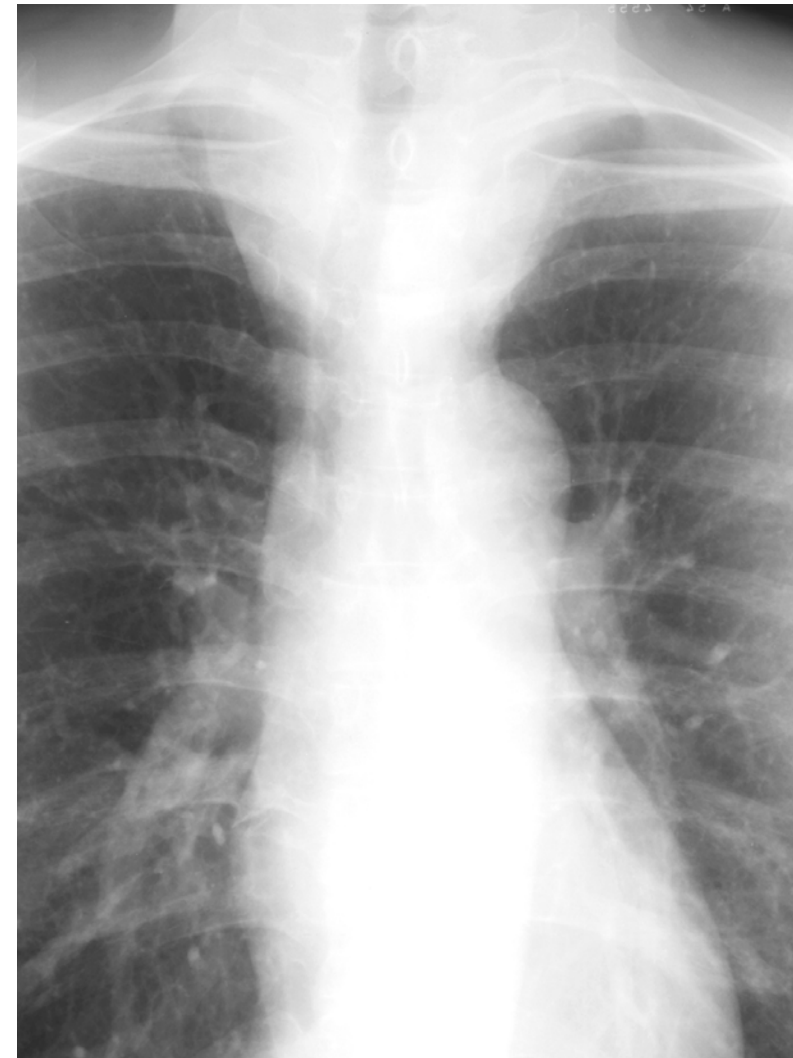


aorte dilatée, allongée et sinueuse
(double coudure de l'aorte)

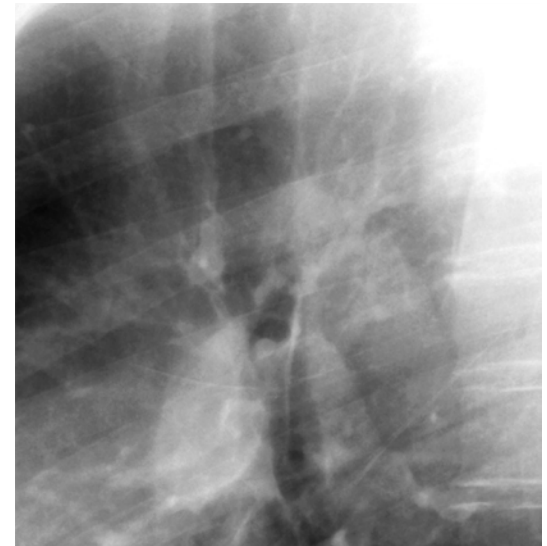
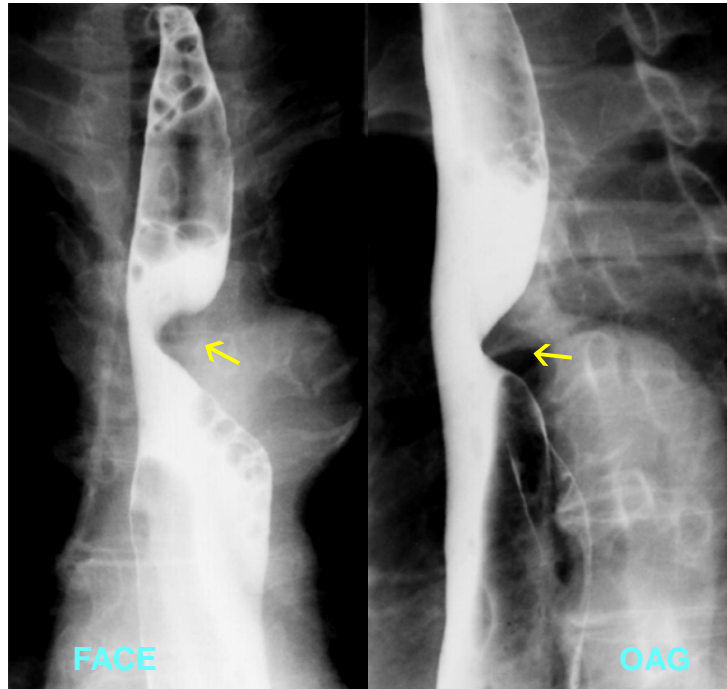
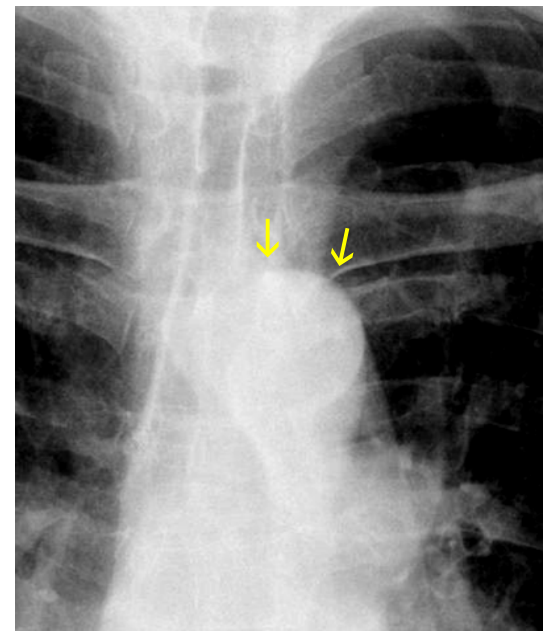
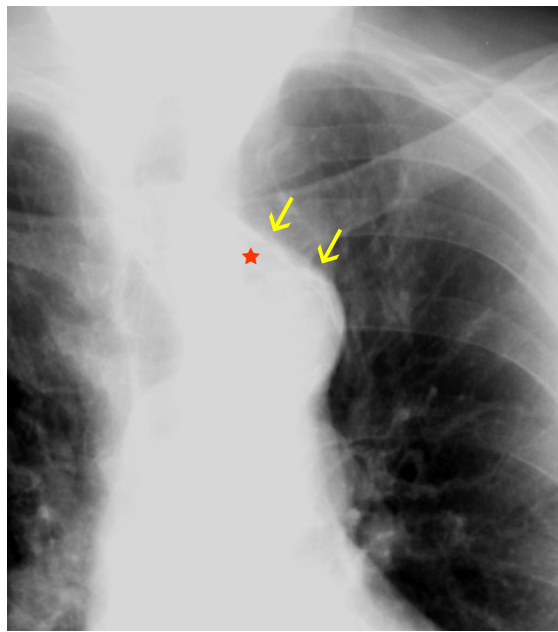
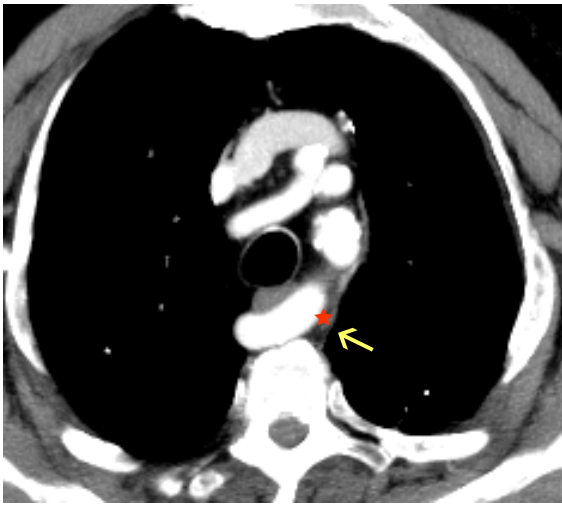
segment horizontal → pseudo-tumeur vasculaire (profil)



★ dolicho-méga
tronc artériel brachio-céphalique



goitre endo-thoracique
(compression et déviation trachéale)

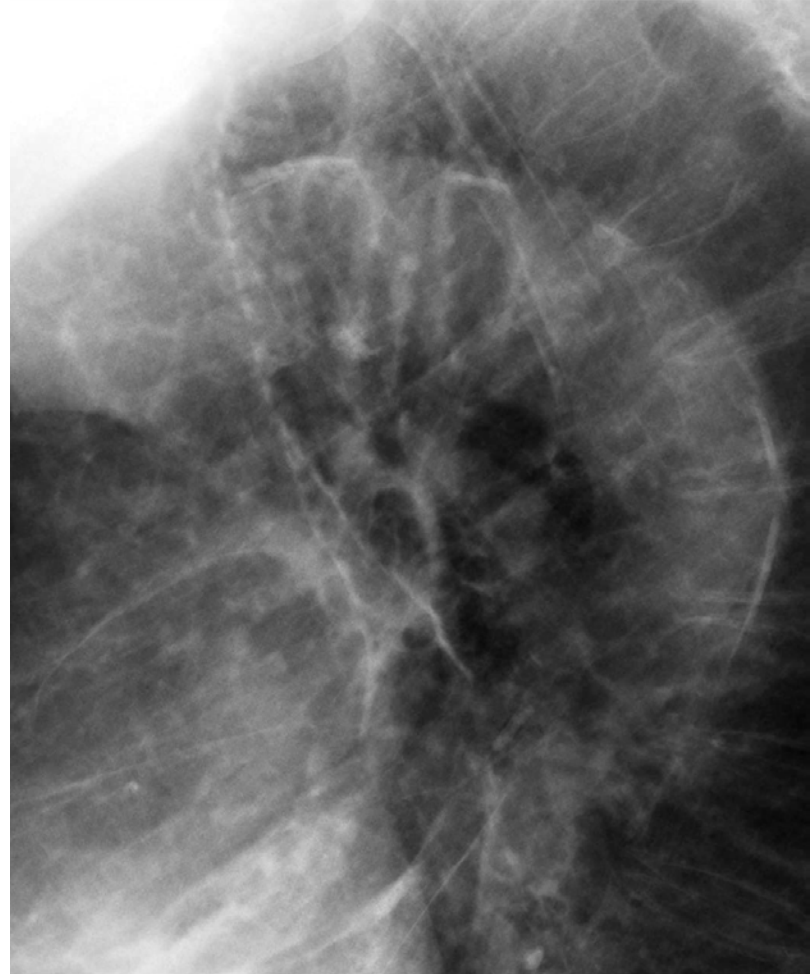


★ artère sous-clavière droite aberrante dilatée
 (arteria lusoria) (0.5 %)
 contour supérieur de la crosse aortique → oblique (60%)
 ★ opacité rétrotrachéale (80%)

normal

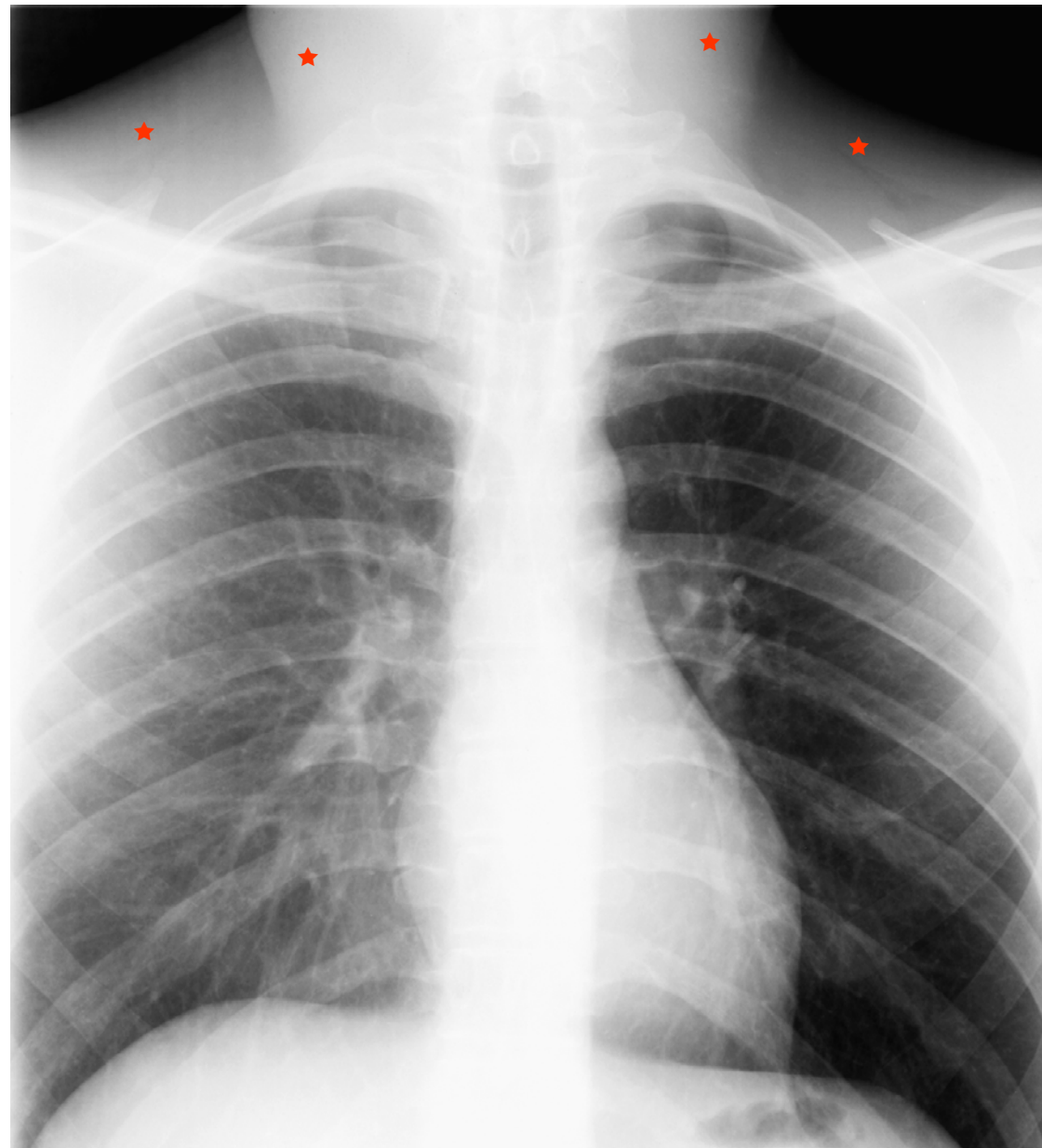
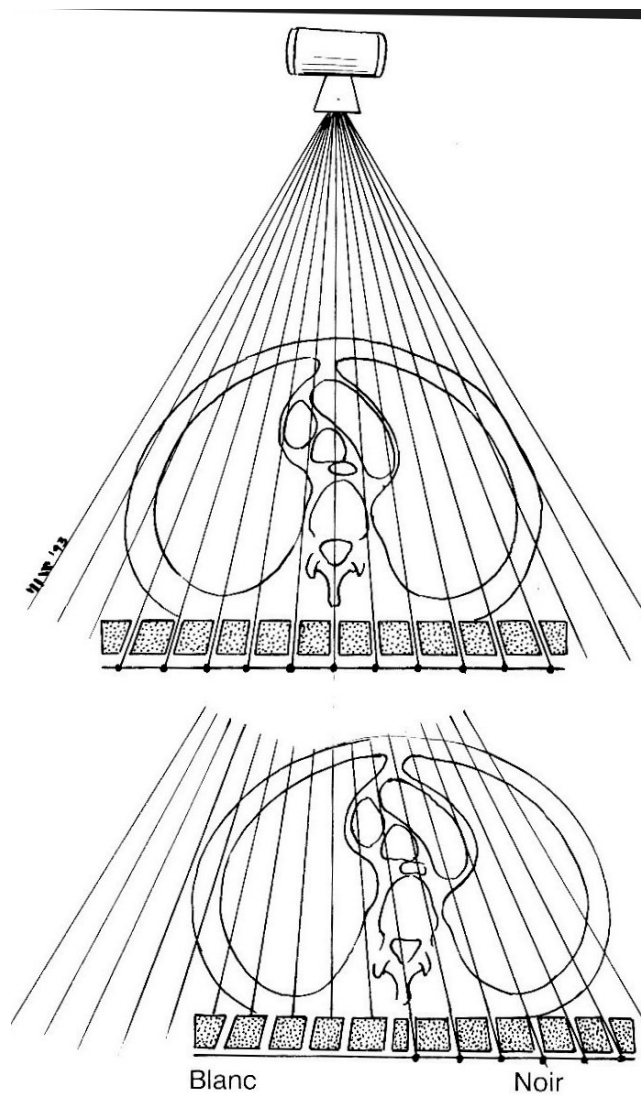
trachée / bronches : calcification des anneaux cartilagineux

(presque exclusivement chez les femmes âgées)



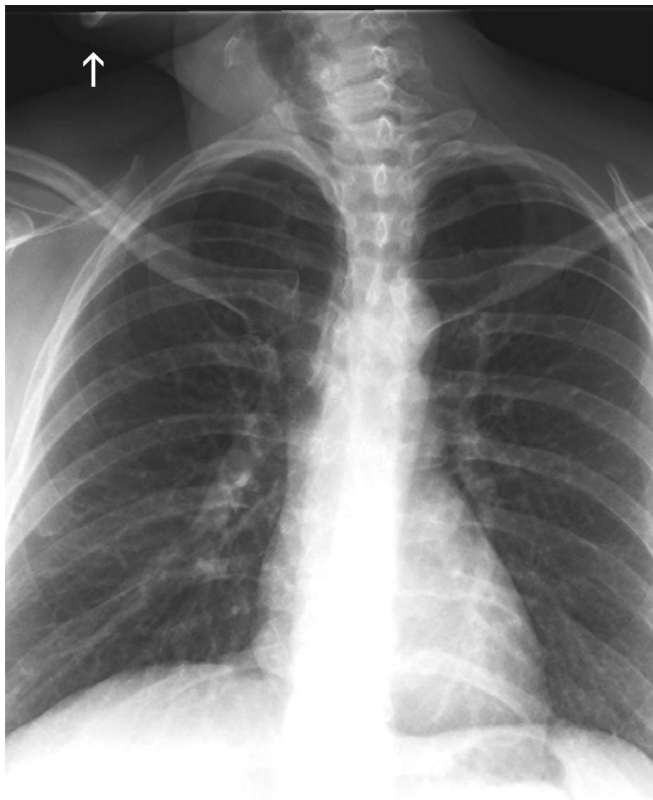
Technique incorrecte / Pièges

- bas KV, temps d'exposition long
 - artéfacts de mouvement
- centrage RX-grille incorrect
 - hypertransparence unilatérale
- inspiration insuffisante
 - pseudoinfiltrats, pseudocardiomégalie
- faux face, faux profil, rotation de la tête
 - pseudocardiomégalie, pseudotumeur,
 - ...
- tresses → pseudo-infiltrat
- vêtements → pseudo-pneumothorax
- ...

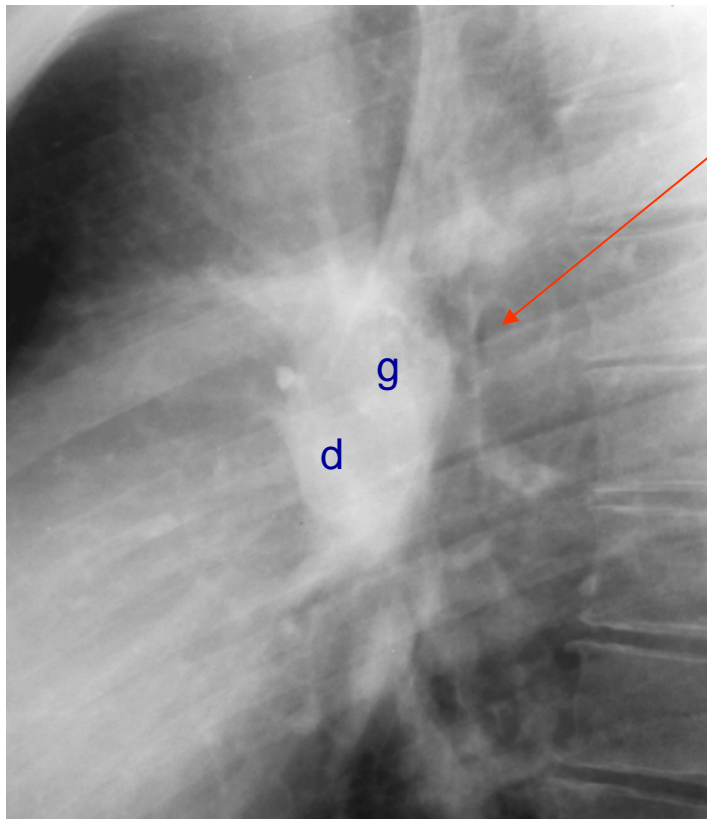


→ ★ voir les tissus mous
de la paroi

positions incorrectes du patient



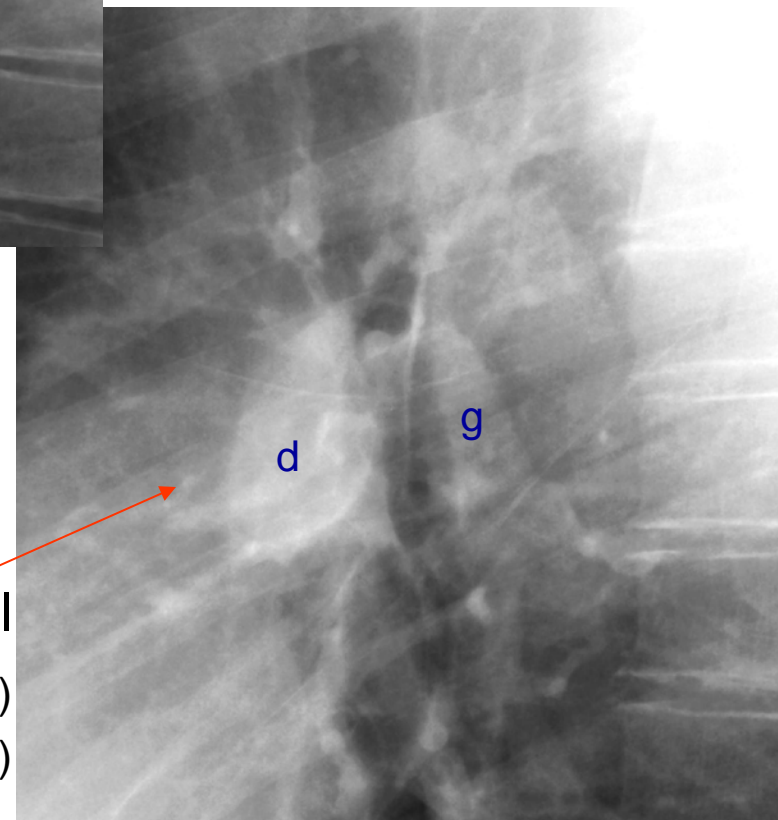
tête tournée / trachée déviée



faux profil (antérieur gauche)

superposition des 2 artères

→ pseudotumeur hilare



vrai profil

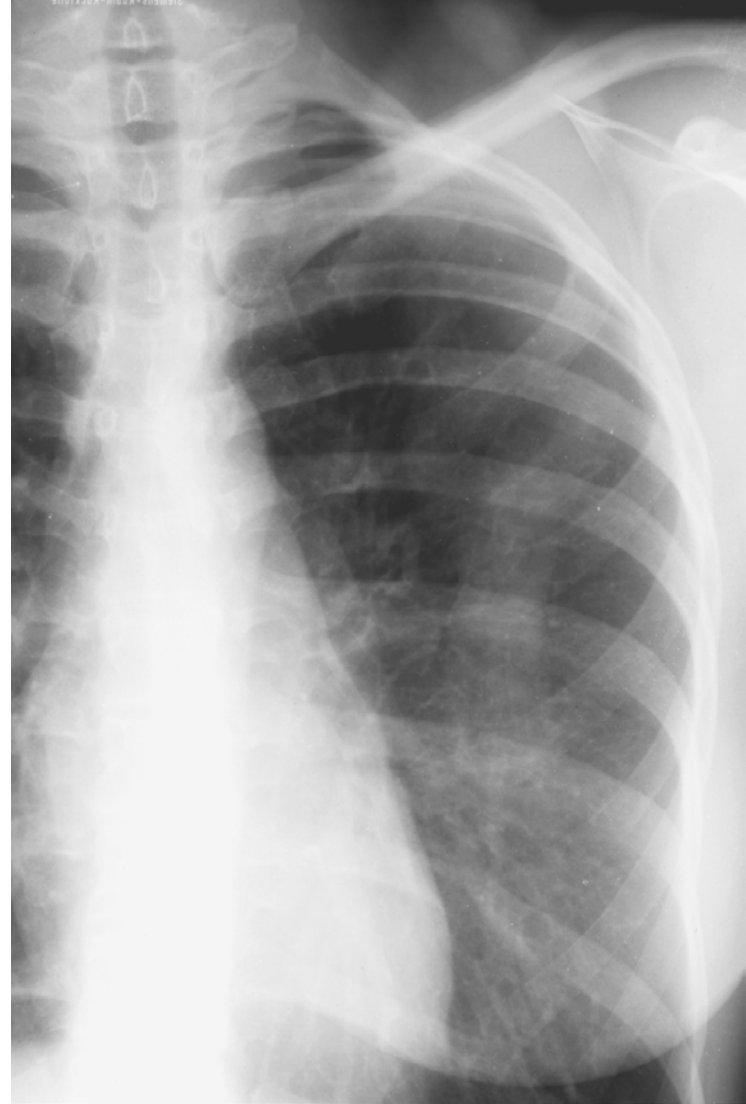
artère pulm. droite (d)

artère pulm. gauche (g)

superposition d'objets divers (1)



fines tresses

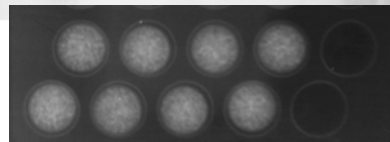


tresse en queue de cheval

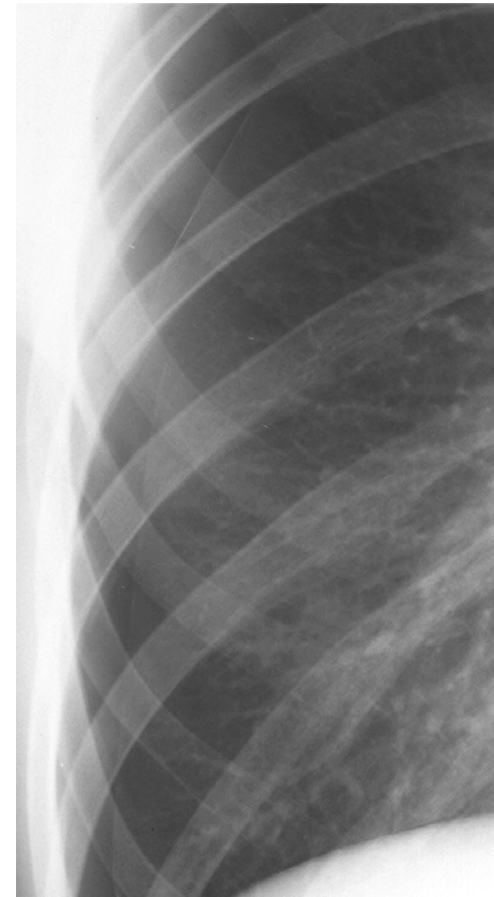
superposition d'objets divers (2)



comprimés



plis de vêtement
→ pseudo-pneumothorax



pneumothorax

Techniques conventionnelles complémentaires et leurs indications

- Clichés à *bas Kv*: côtes
- Clichés en *expiration*: petit pneumothorax et mobilité des coupes diaphragmatiques
- Cliché en *décubitus latéral*: épanchement pleural
- Incidence de *Fleischner* (hyperlordose): lésions rétroclaviculaires
- Clichés en *oblique* : dégager une lésion

Cliché à basse tension

- 30-80 kV
- Augmente les contrastes
- Squelette bien visible
- Médiastin= opacité uniforme
- Moins de renseignements que le cliché à haute tension





PHOTODISCORPORA BILIMBI

PHOTODISCORPORA BILIMBI

Cliché en expiration

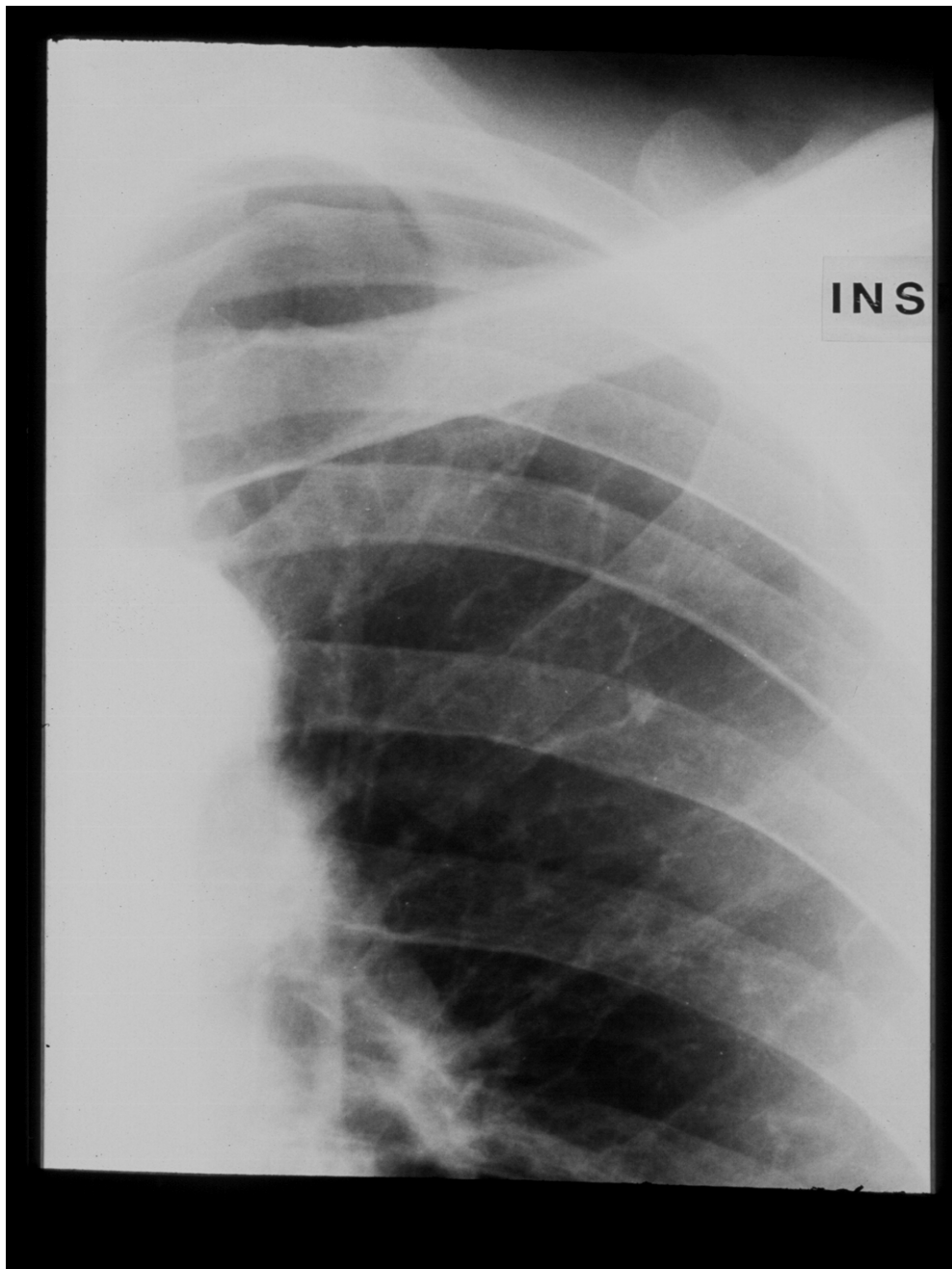
- Apprécie la mobilité des coupoles
- Utile dans l'exploration des hyperclartés pulmonaires
- Recherche de petits pneumothorax

INSP

12 78

EXP

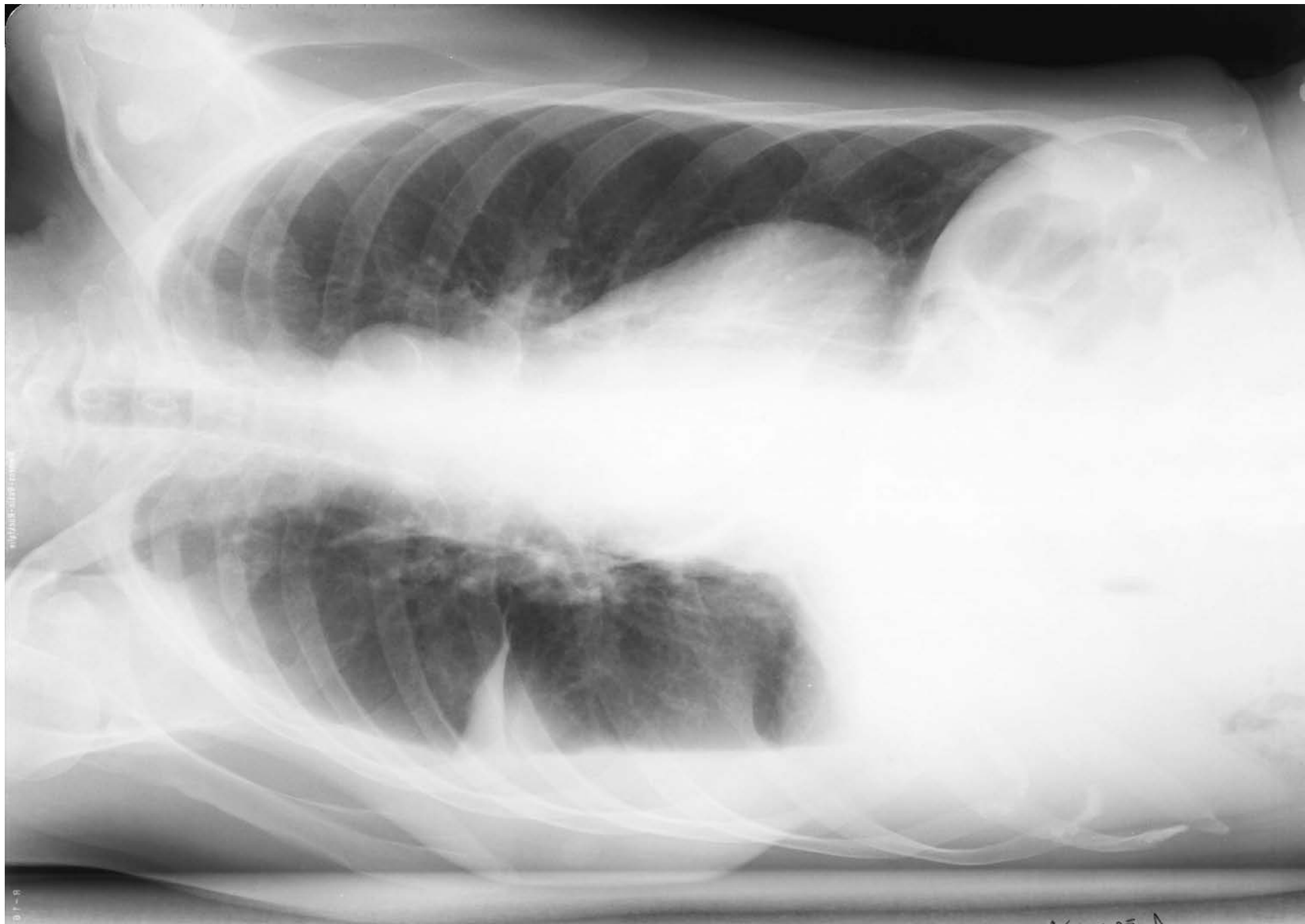
12 78



Cliché en décubitus latéral

- Du côté où le patient est couché, il mobilise un épanchement minime sous la forme d'une ligne bordante
- Dans le champ pulmonaire opposé, le flux sanguin diminue et les opacités pulmonaires sont mieux mises en évidence

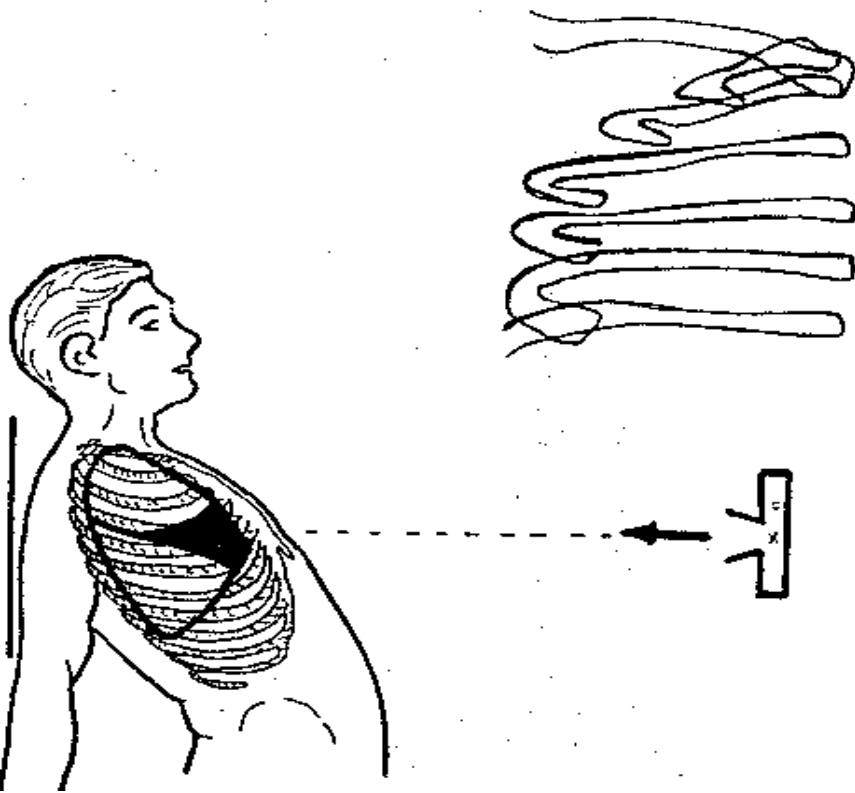




11/15/01 10:00 AM

01-8

DEC. 15 10.



FACE A-P EN LORDOSE

ou incidence de FLEISCHNER :

- dégage les sommets de la surprojection des clavicules et
- est tangentielle au grand axe du lobe moyen ainsi que du segment cranial de la grande scissure.



Exercices

arc postérieur
de la 3ème
côte

=



A



B



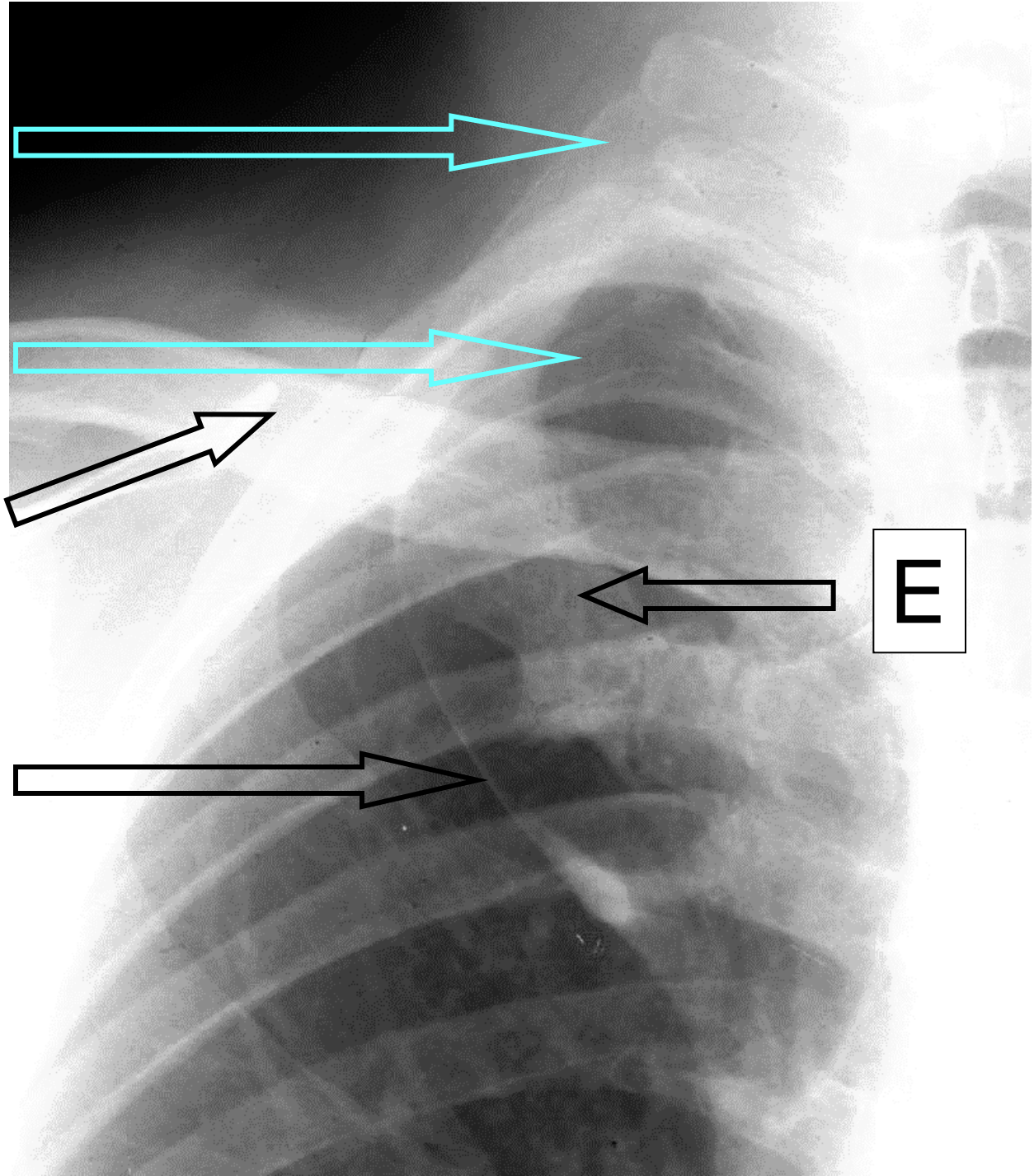
C

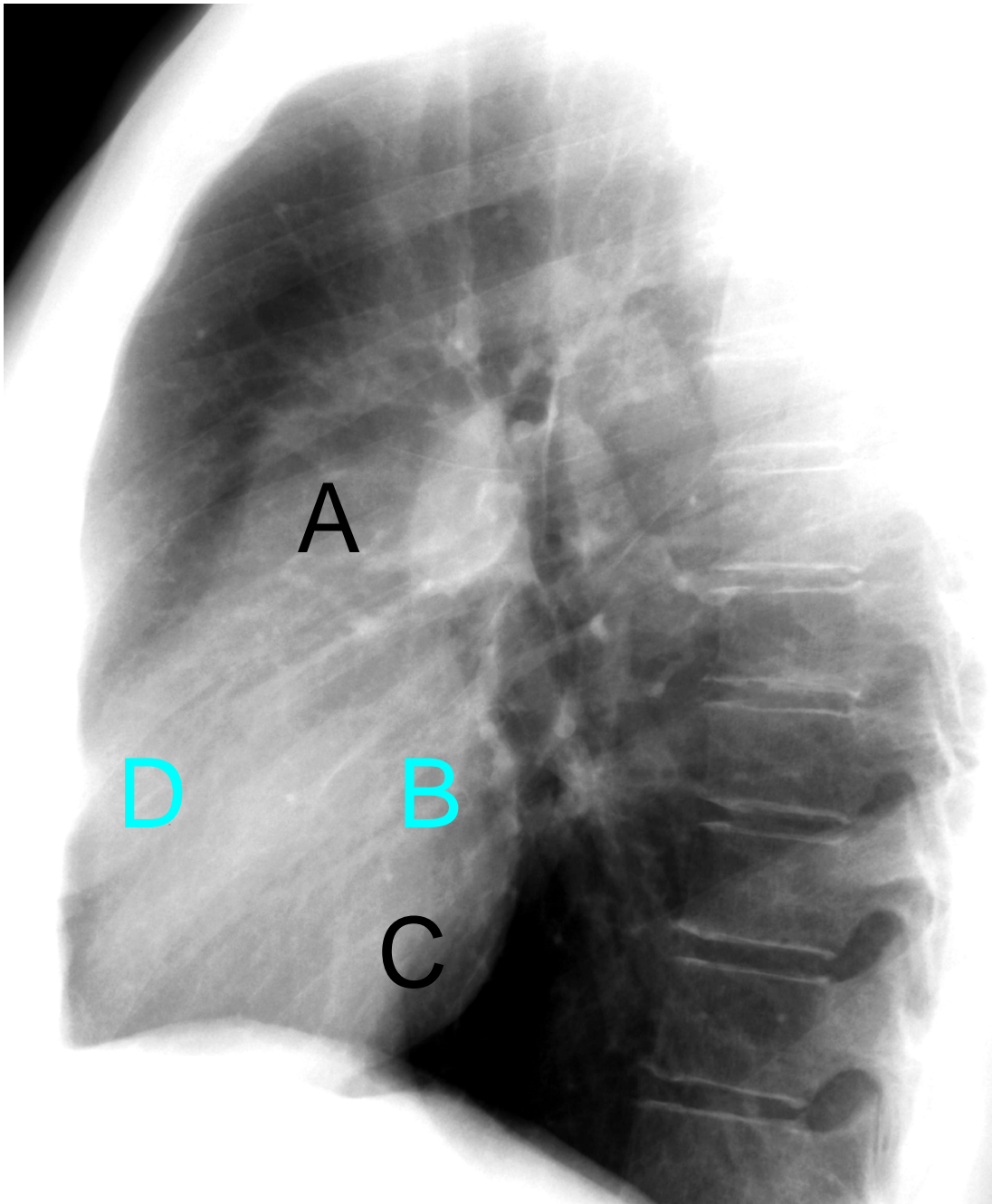


D



E

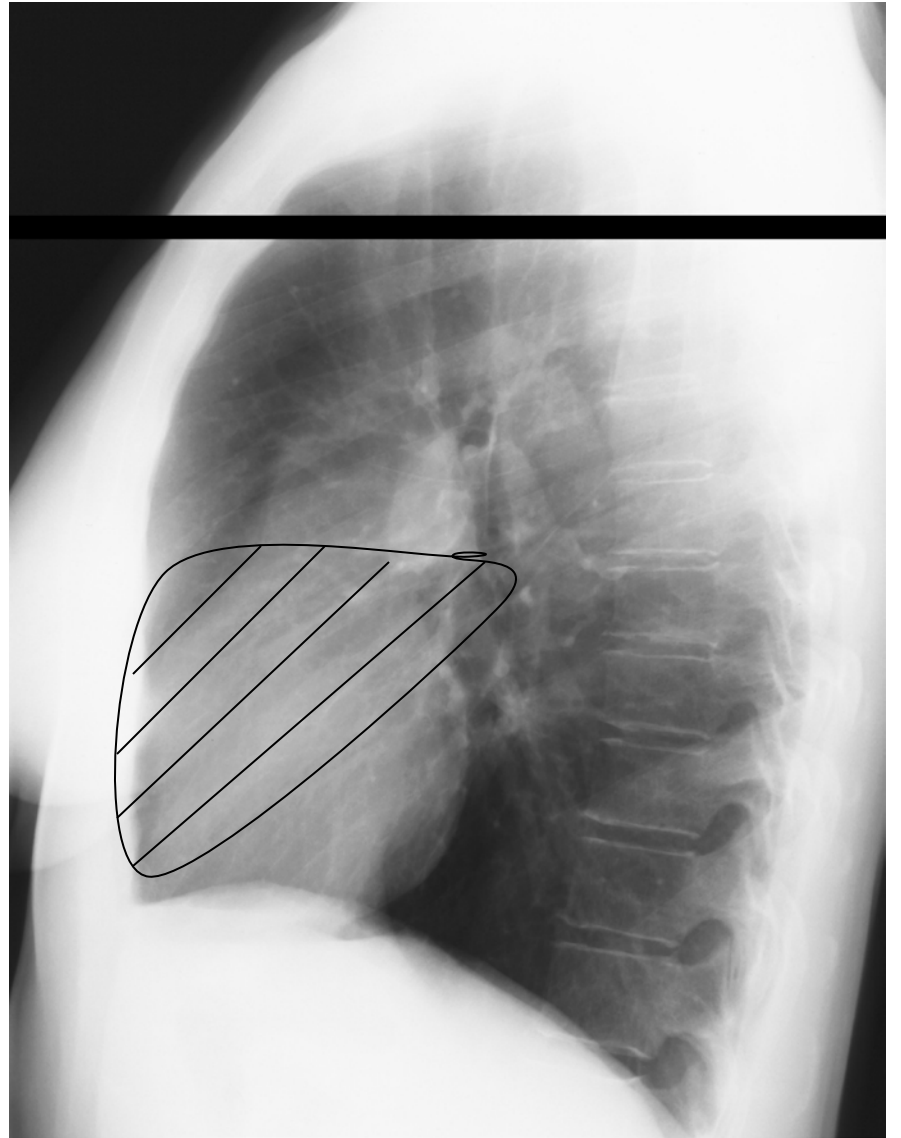
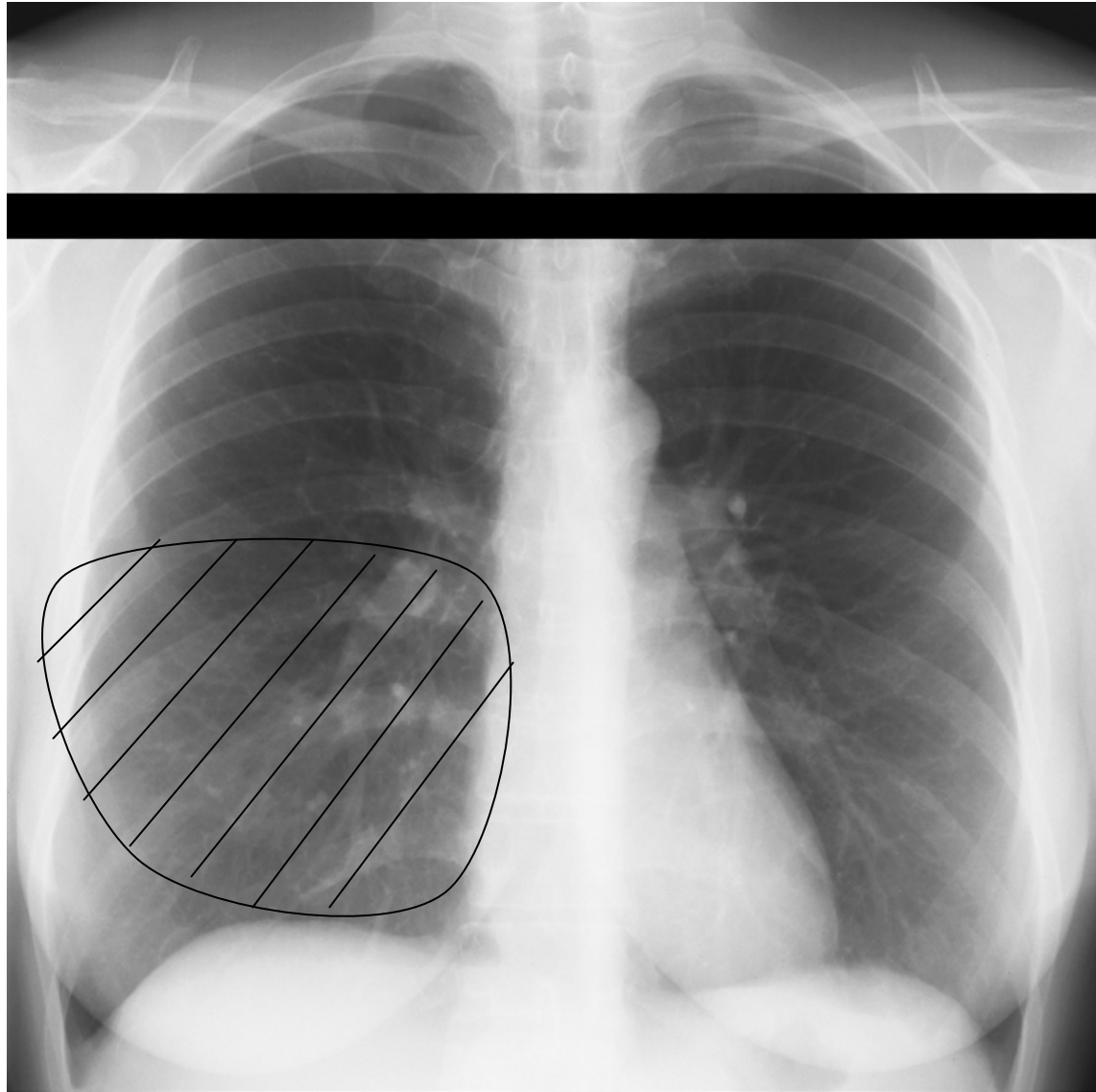




thorax, profil droit

ventricule droit
projeté en ?



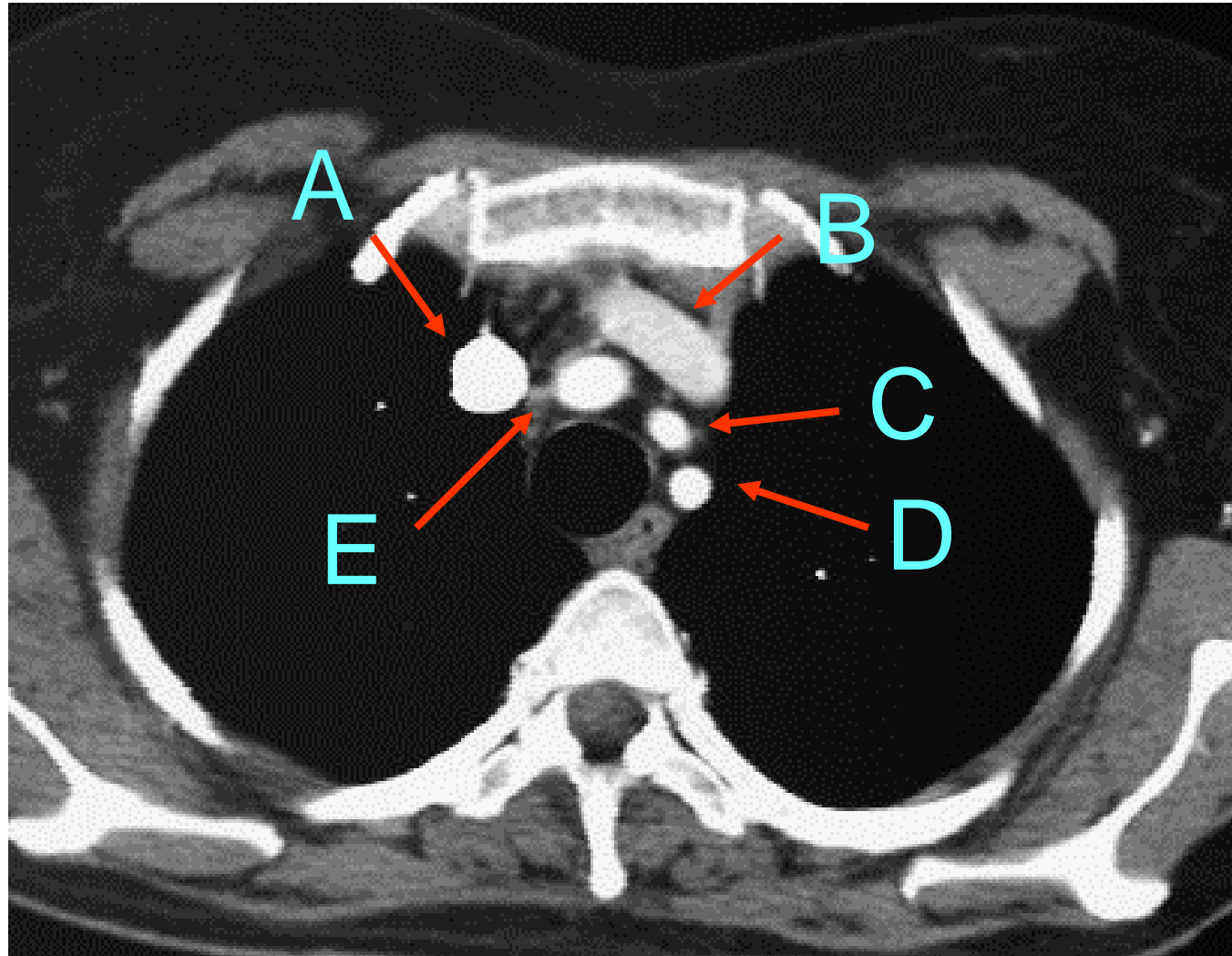


quel est le lobe hachuré ?

le lobe moyen

Scanner médiastin

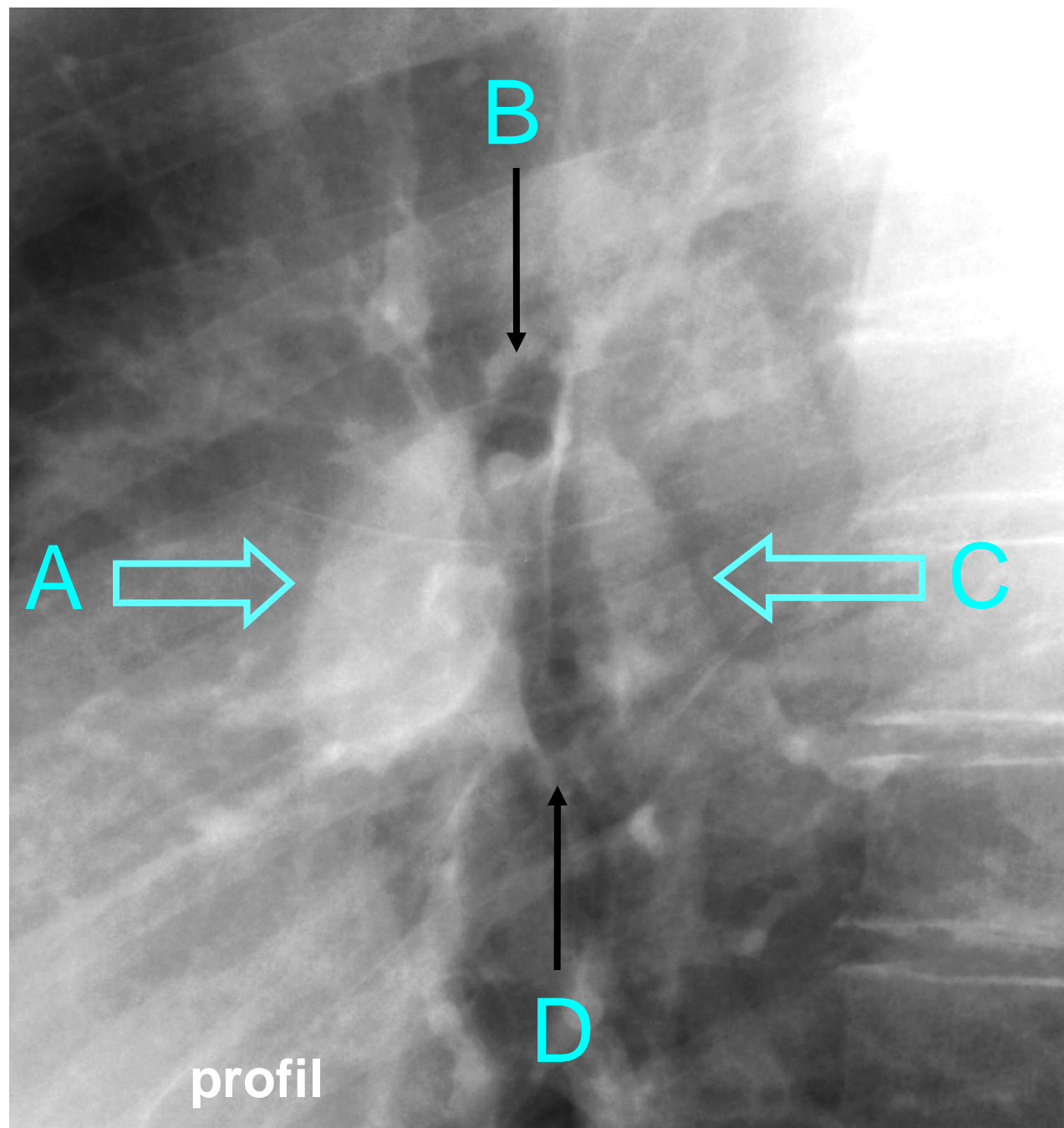
artère
sous-clavière
gauche



hiles
pulmonaires
en profil

artère
pulmonaire
droite

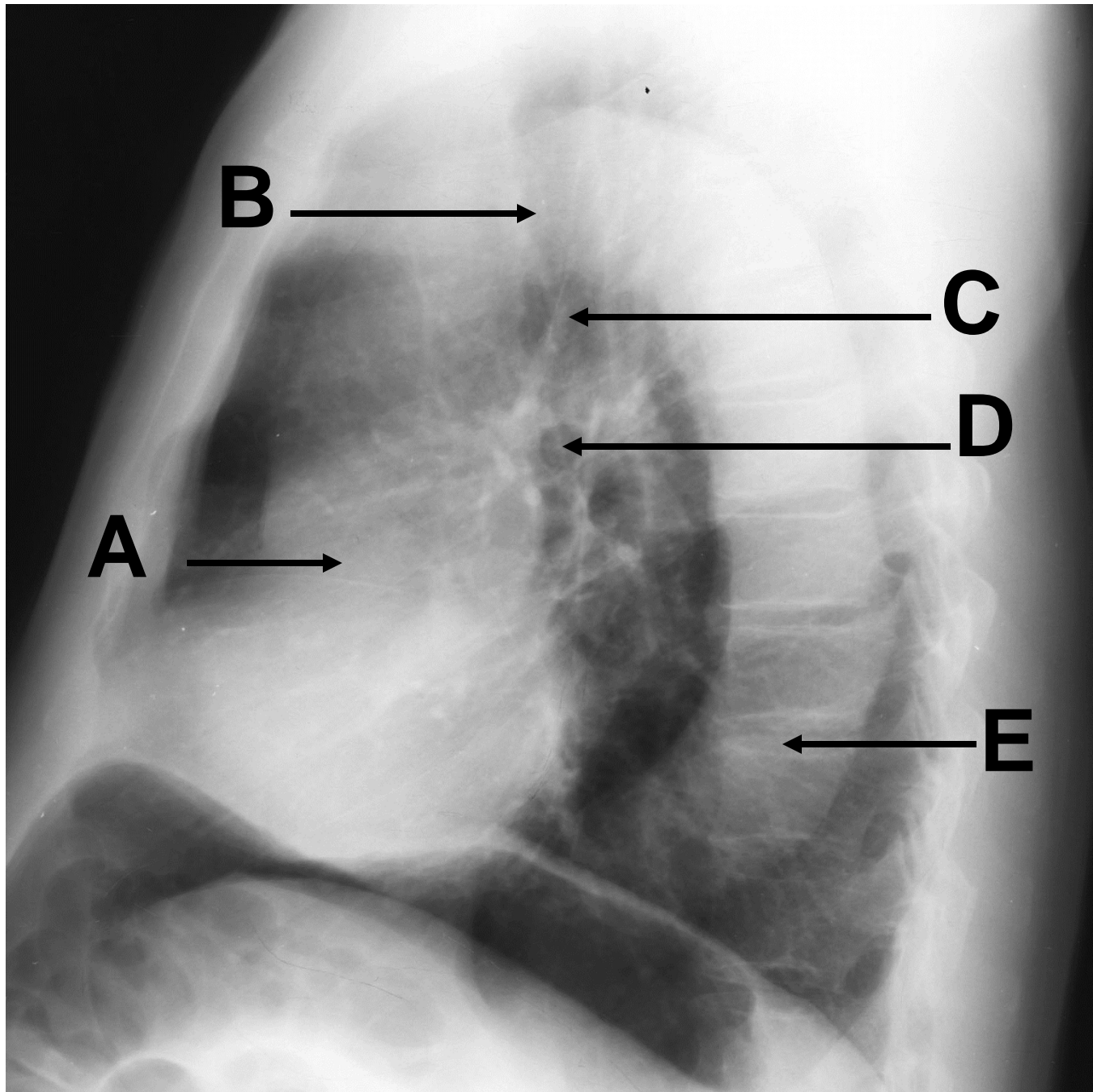
=



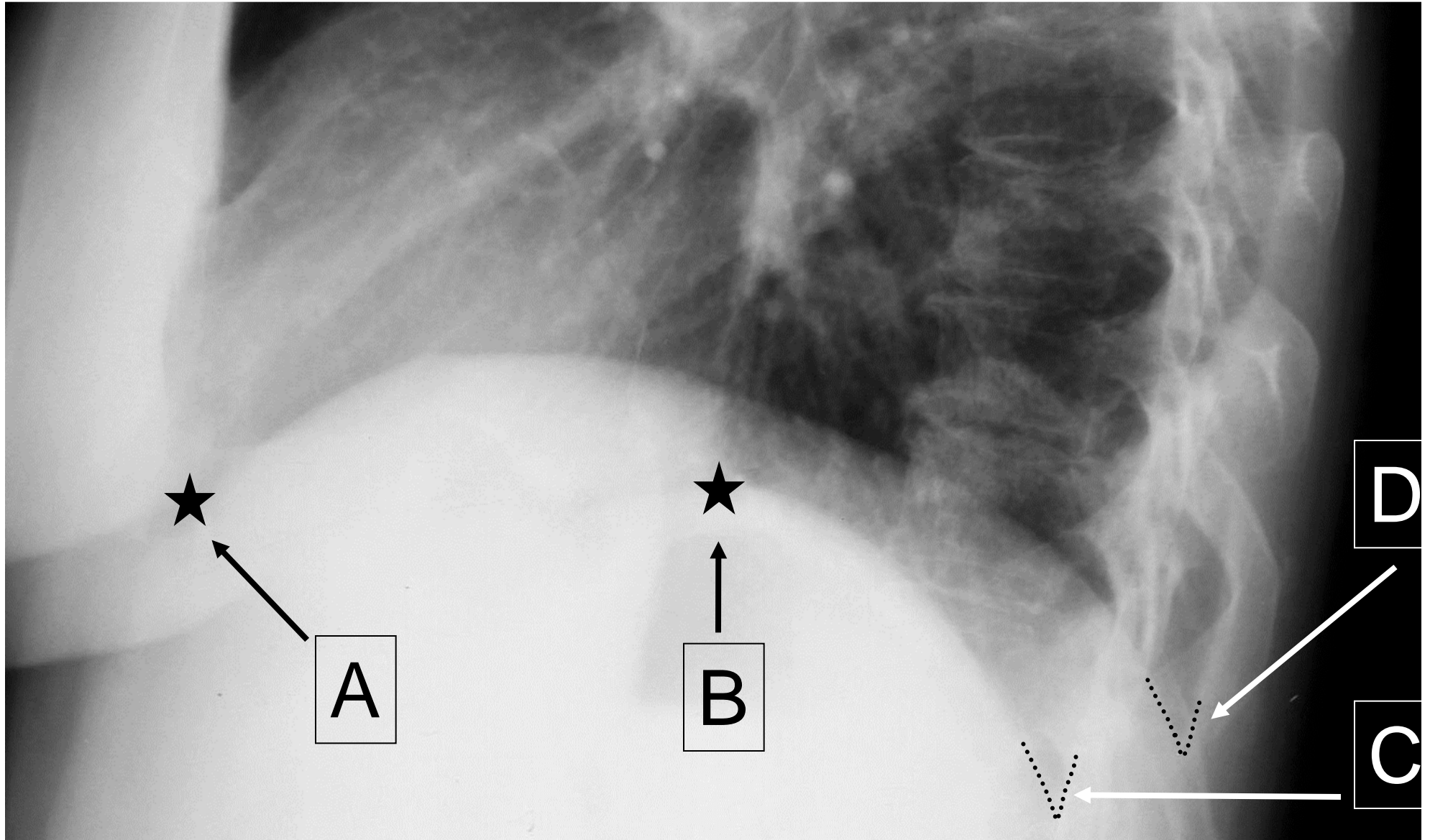
Thorax
Profil gauche

Fenêtre aorto
pulmonaire
projetée en

?



thorax : profil gauche
sinus costo-diaphragmatique postérieur gauche =



Exemple de cliché mal effectué

- Pourquoi?
- Comment y remédier?





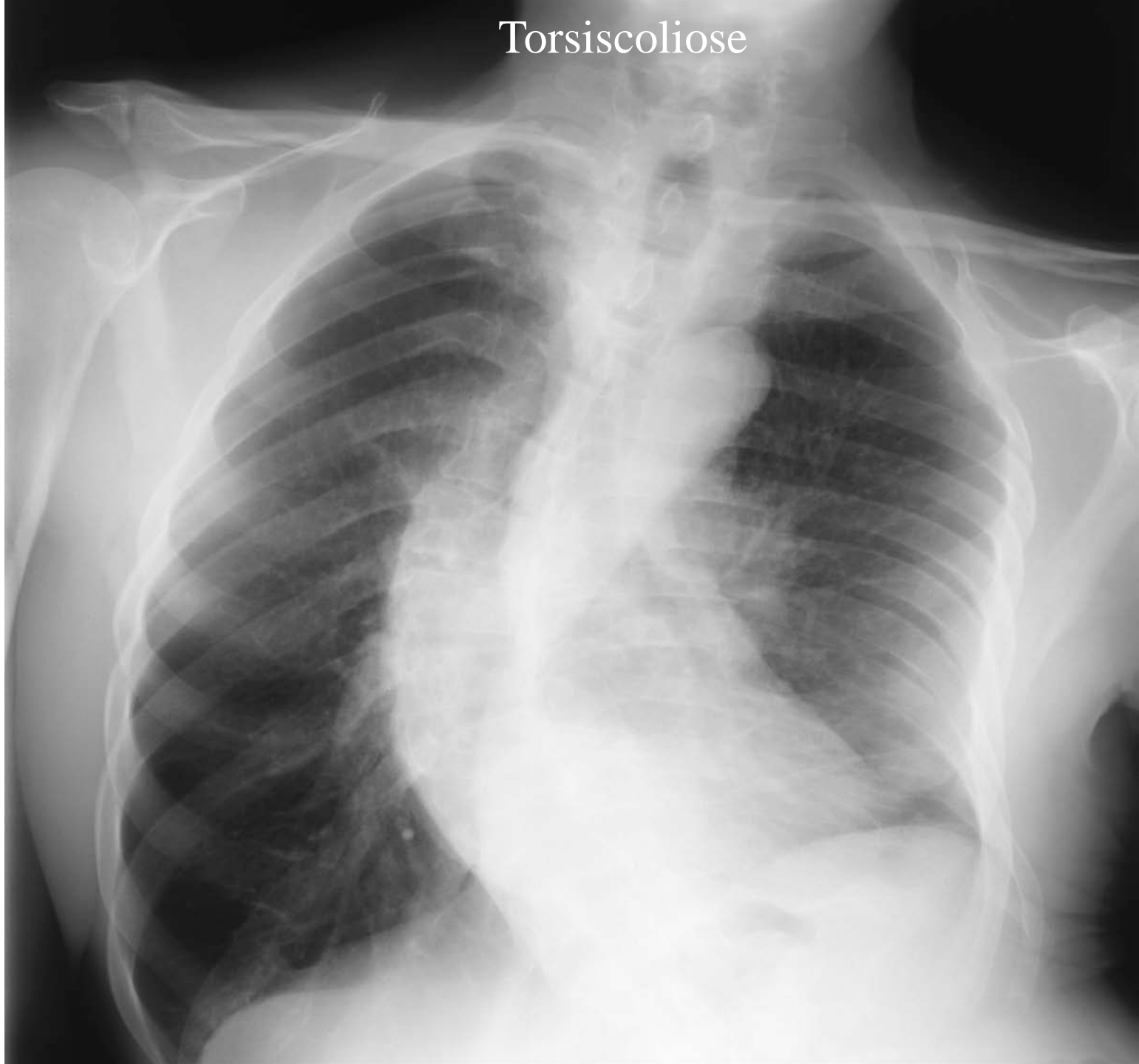


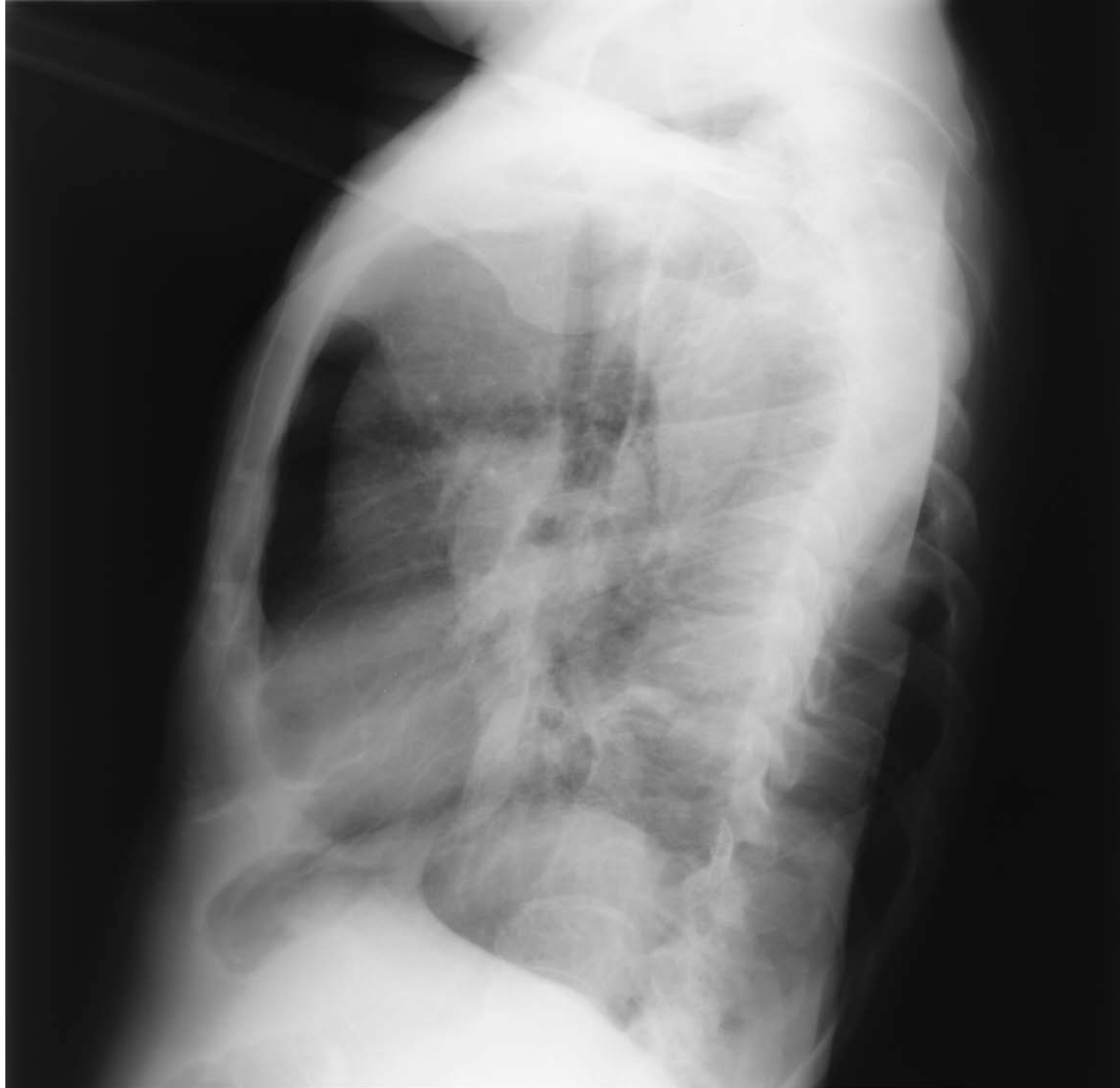


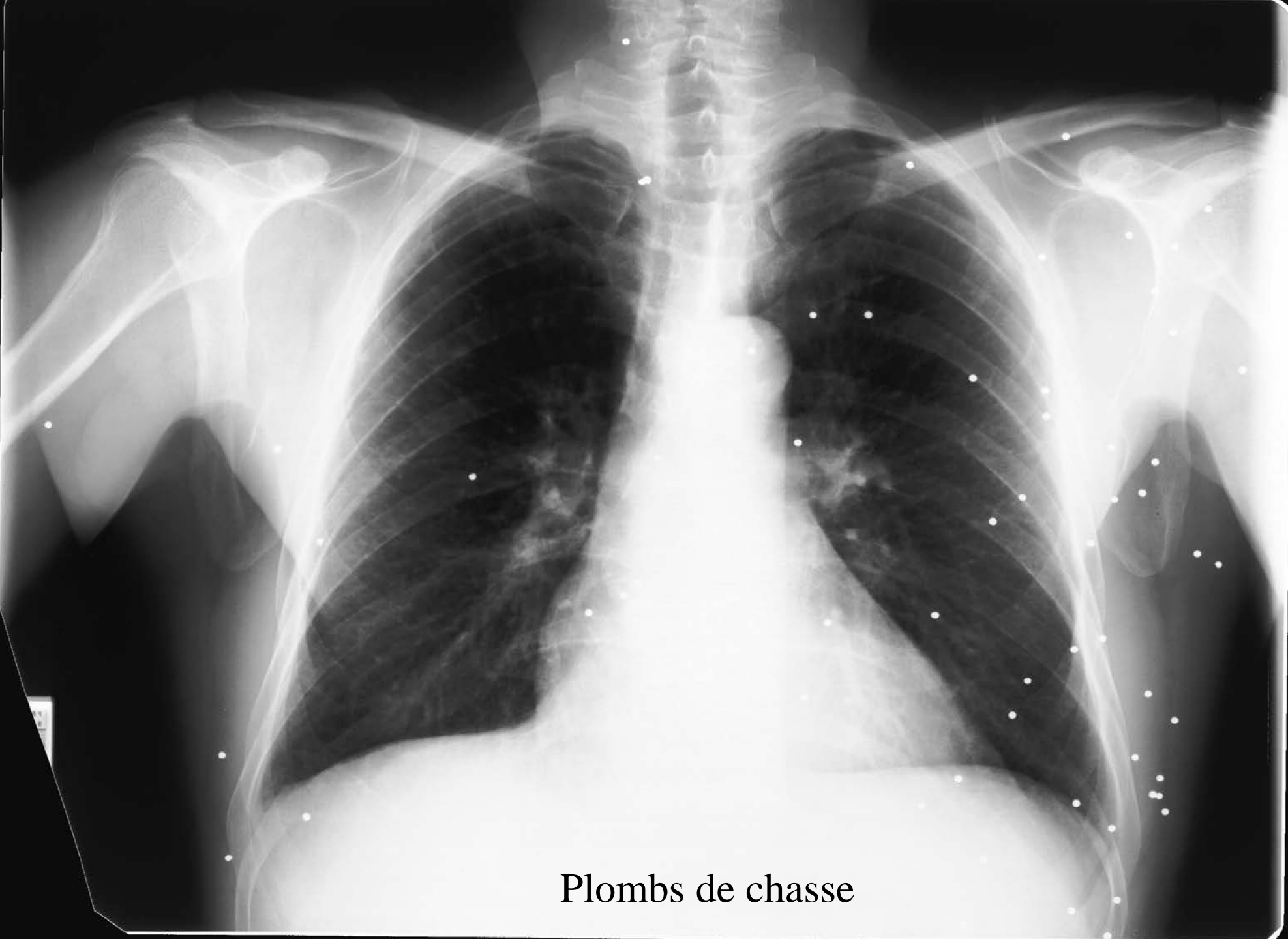
Pièges!!!

- Scoliose
- Déformations post chirurgicales
- Corps étrangers intrinsèques
- Artéfacts liés au matériel

Torsicoliose







Plombs de chasse

