



How to approach a CXR

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University of Alabama Birmingham

UAB MEDICINE

Knowledge that will change your world

Objectives

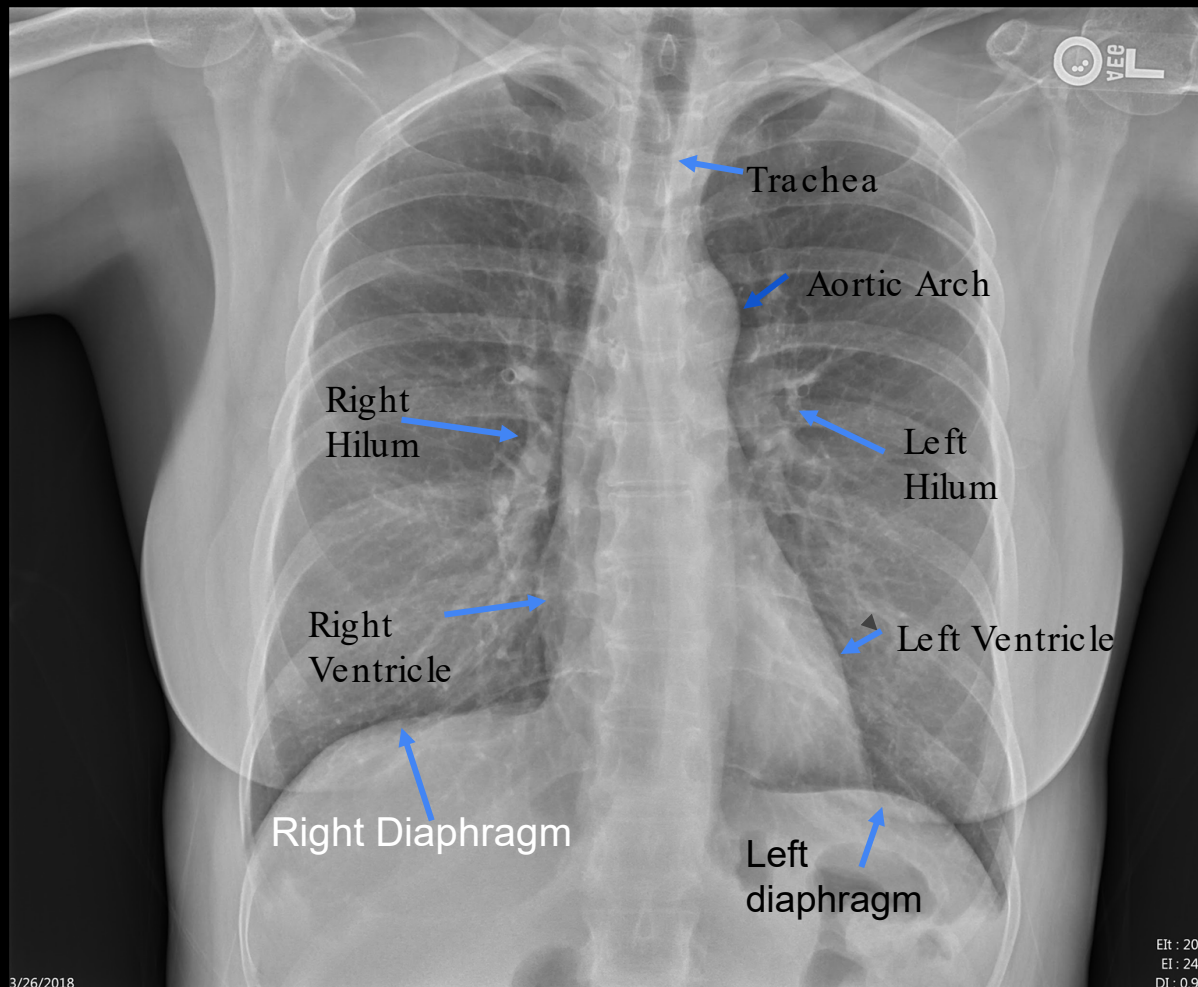
Anatomy

Approach

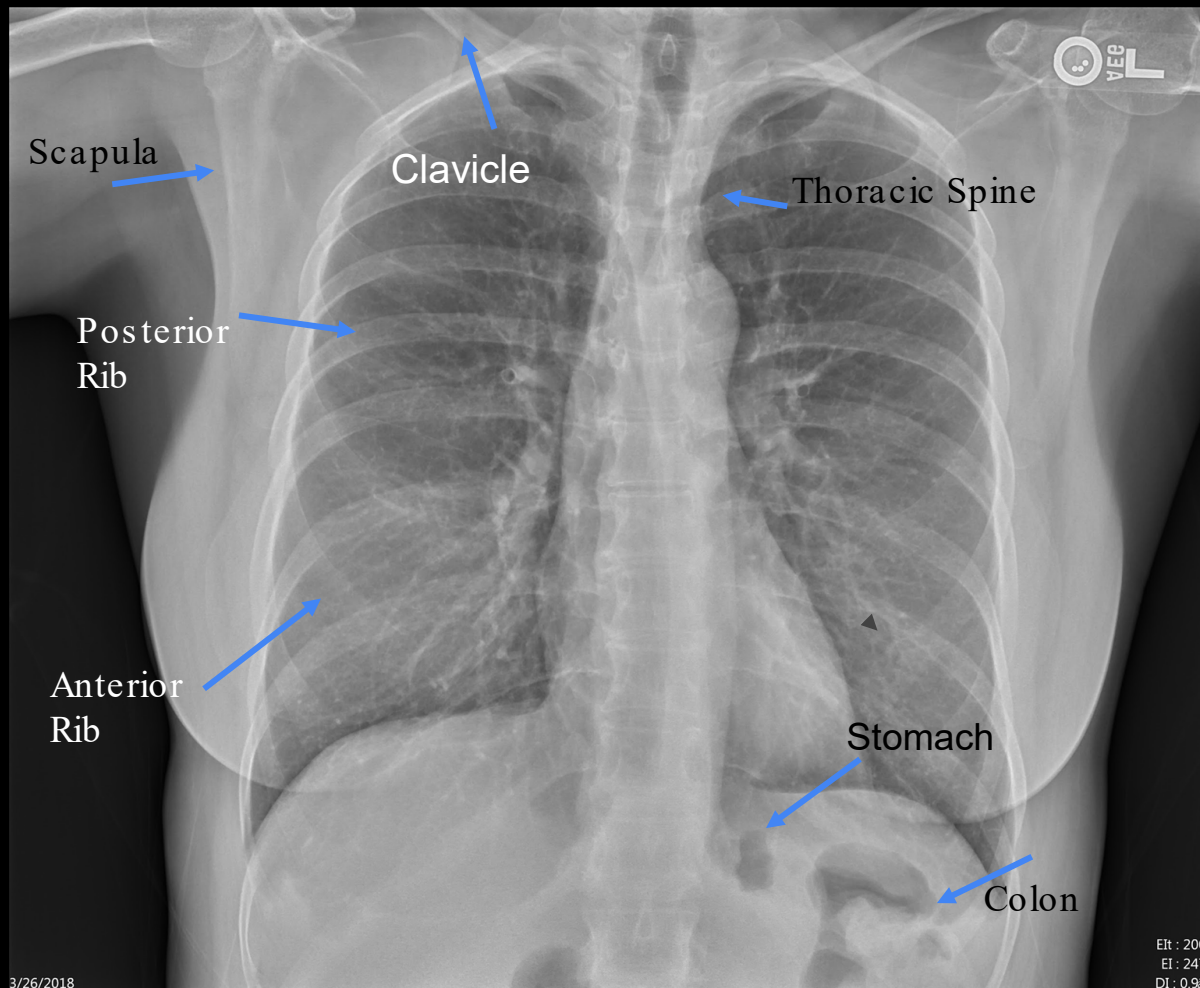
Blind Spots

Common pathology

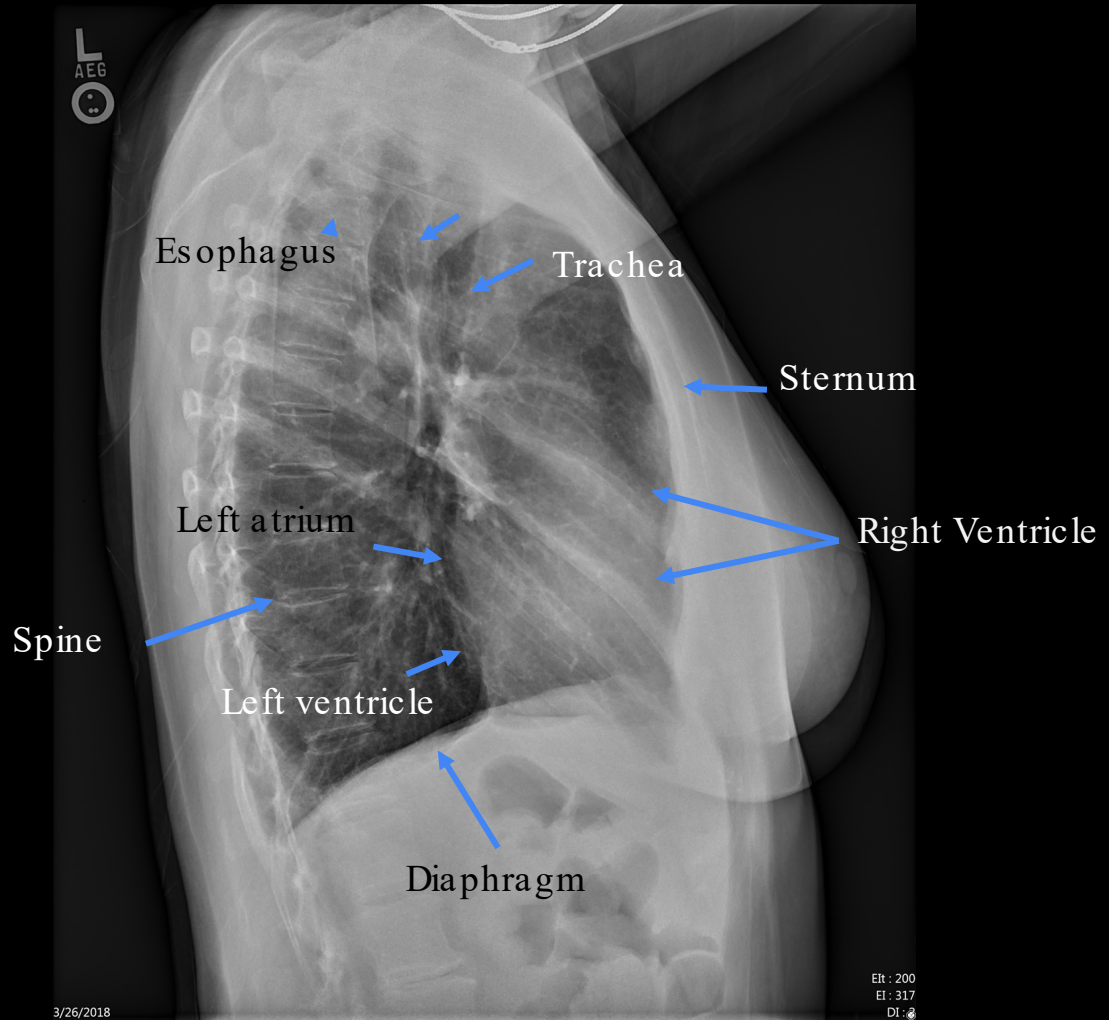
Normal PA



Normal PA



Normal Lateral



Dose

Radiography- Chest

Approximate effective Dose: 0.1 mSv

Comparable to Natural Background Radiation: 10 Days

Estimated Lifetime Risk of Fatal Cancer from Examination: 1 in 1,000,000 to 1 in
100,000

<https://www.radiologyinfo.org/en/info.cfm?pg=safety-xray#safety-effective-dose-adults> Accessed 2.26.2019

Approach to Interpretation

Use a systematic approach

Pay special attention to the blind spots

Approach to Interpretation -PA

Felson's Systemic

approach: **ATMLL**

(click to see)

Abdomen

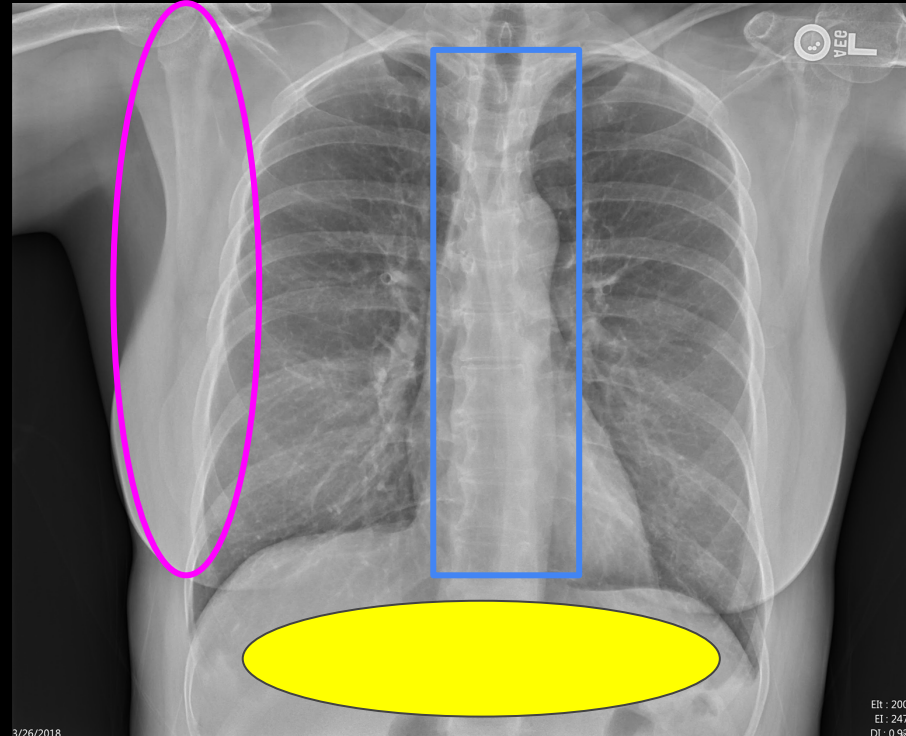


Thorax-soft tissues

and bones



Mediastinum



Approach to Interpretation -Lat

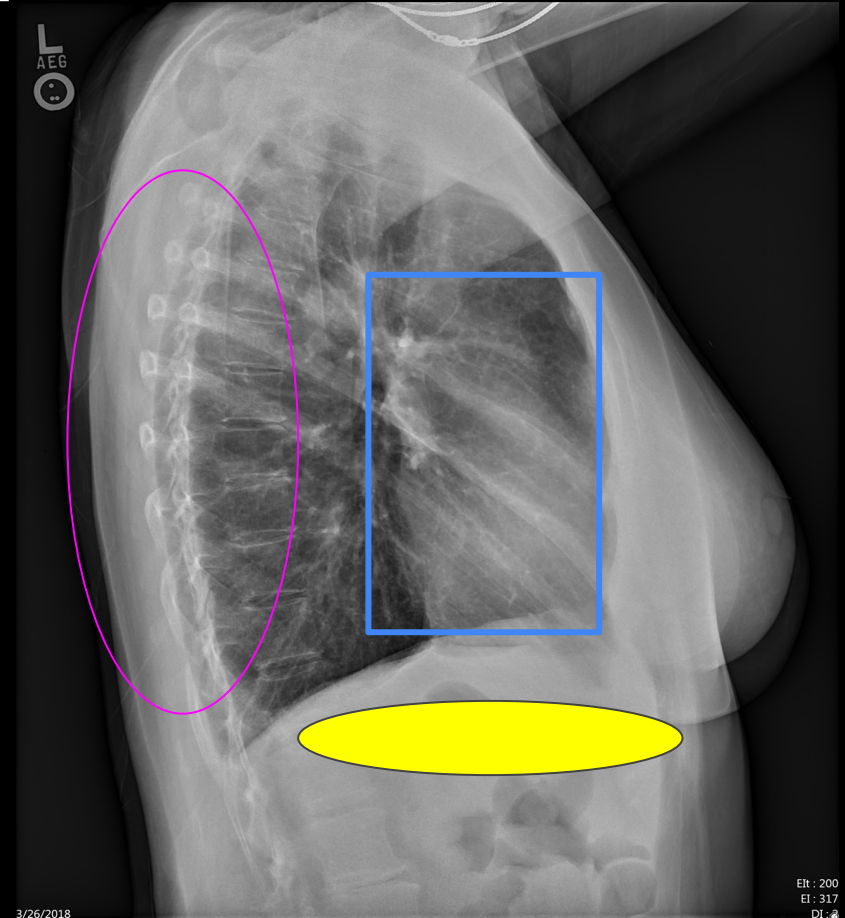
Felson's approach:

ATMLL (Click to see)

Abdomen 

Thorax-soft tissues
and bones 

Mediastinum 



Approach to Interpretation -PA

Felson's approach:

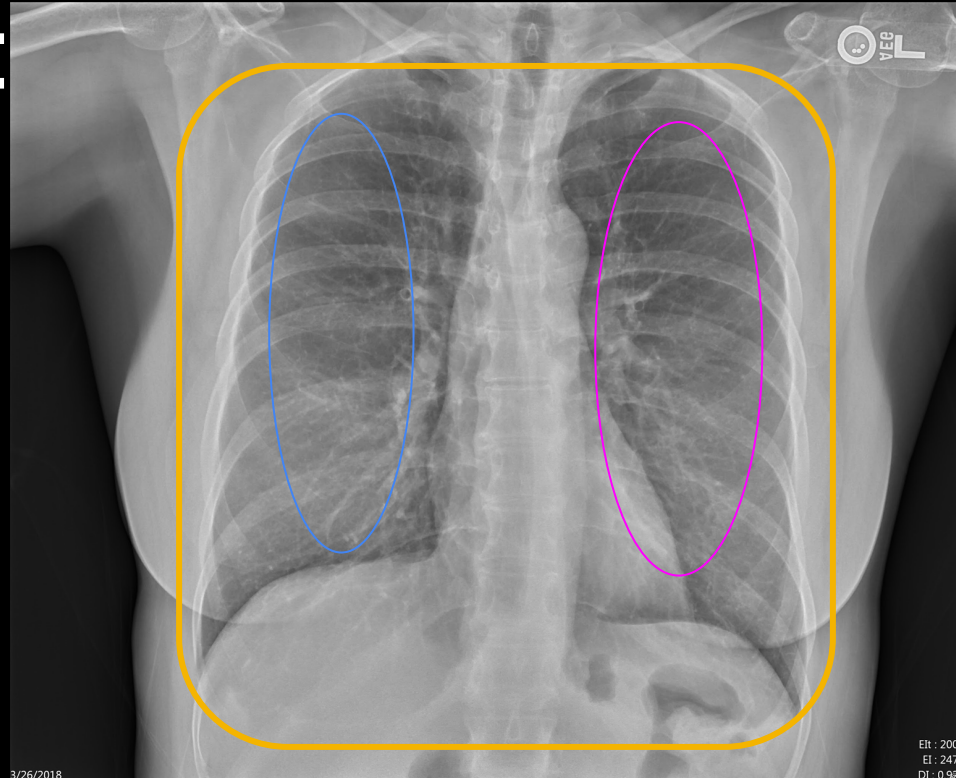
ATM**LL**

Look at each lung individually and then
at both

Lung-unilateral  

Lungs-bilateral 

[Click to show](#)



Approach to Interpretation -Lat

Felson's approach:

ATM**LL**

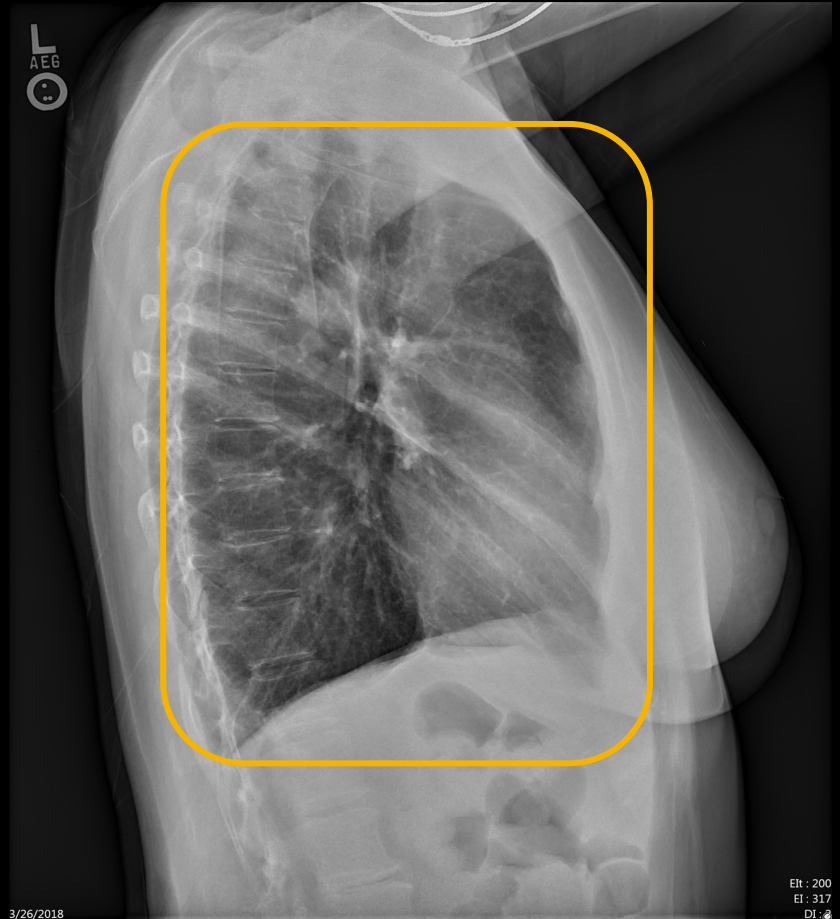
on the lateral the lungs overlap however
can define fissures for each lung

Lung-unilateral

Lungs-bilateral



[Click to show](#)



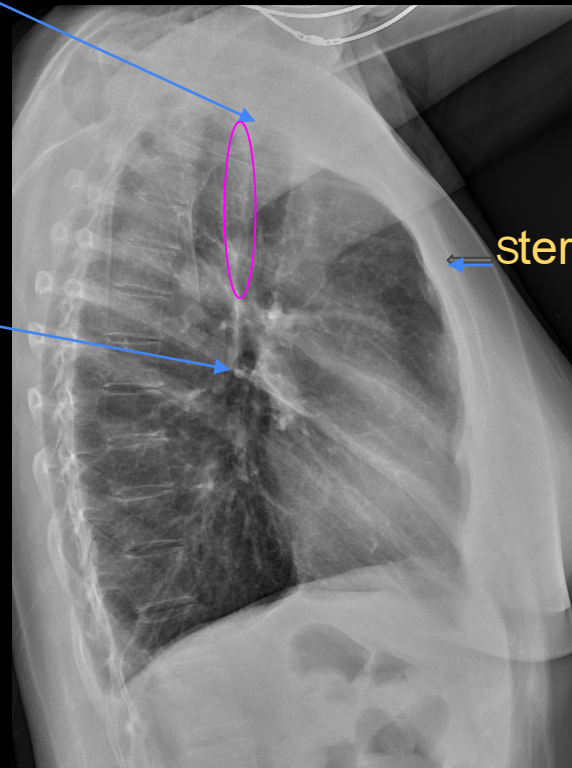
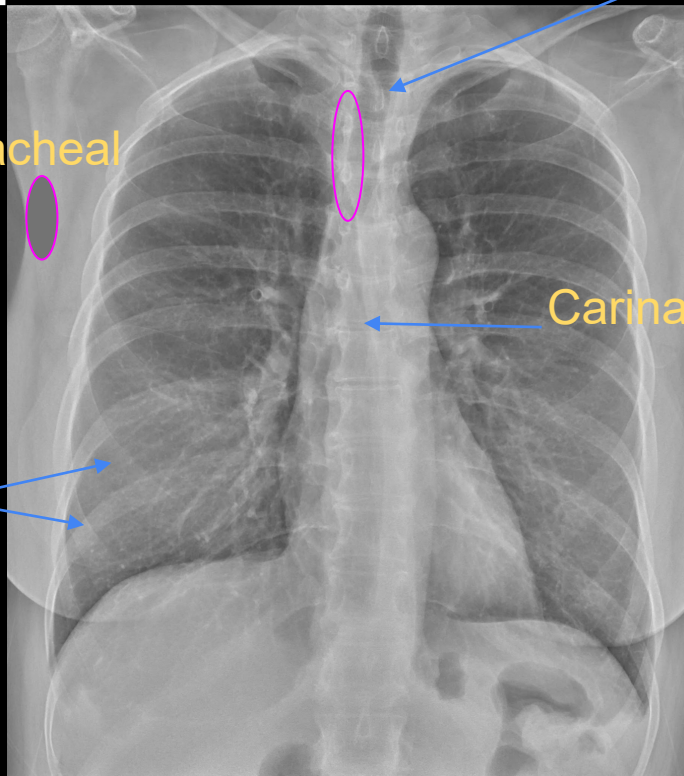
Approach to Interpretation

Use a systematic approach

Pay special attention to the blind spots

Blind Spots

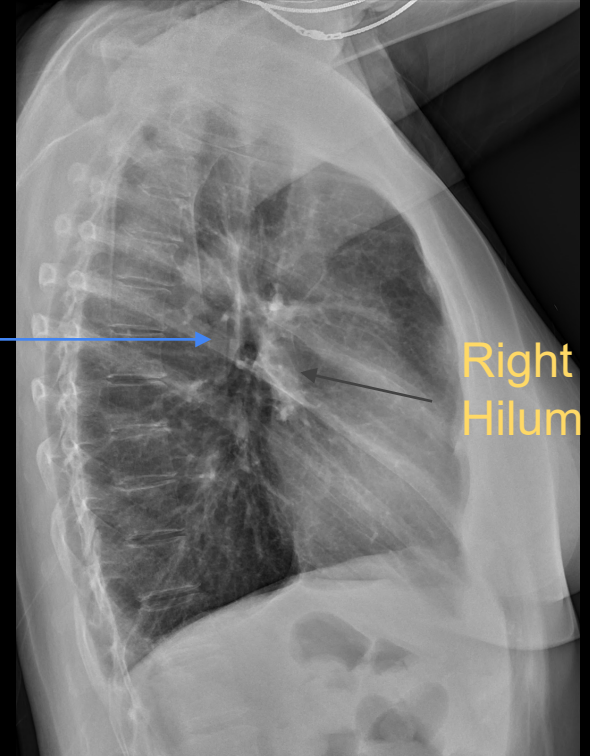
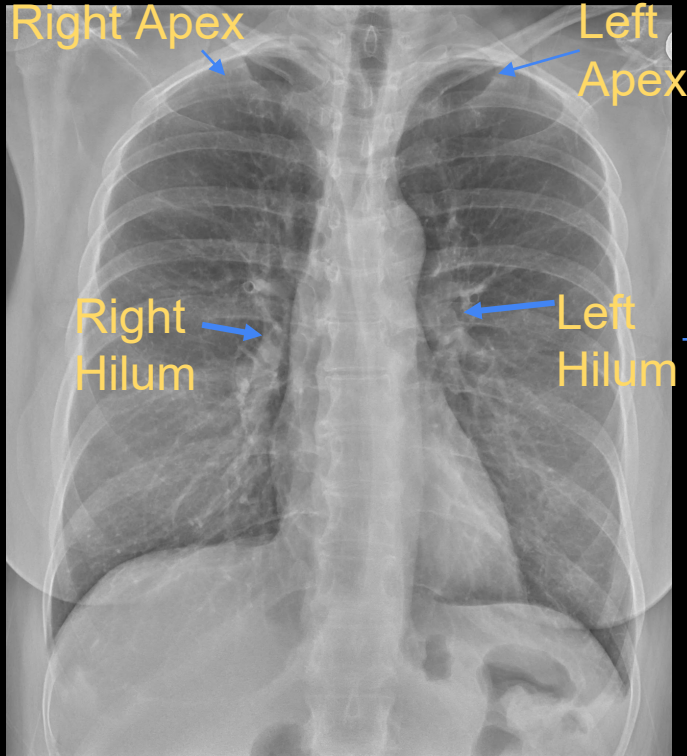
Trachea



- 1.Sternum;
- 2.Rib
- 3.Trachea;
- 4.Paratracheal region
- 5.Carina
- 6.Right lung apex
- 7.Left lung apex
- 8.Right hilum
- 9.Left hilum
- 10, Infrahilar region
- 11.Right Lung base
- 12.Retrocardiac left lower lobe;
13. Vertebral body.

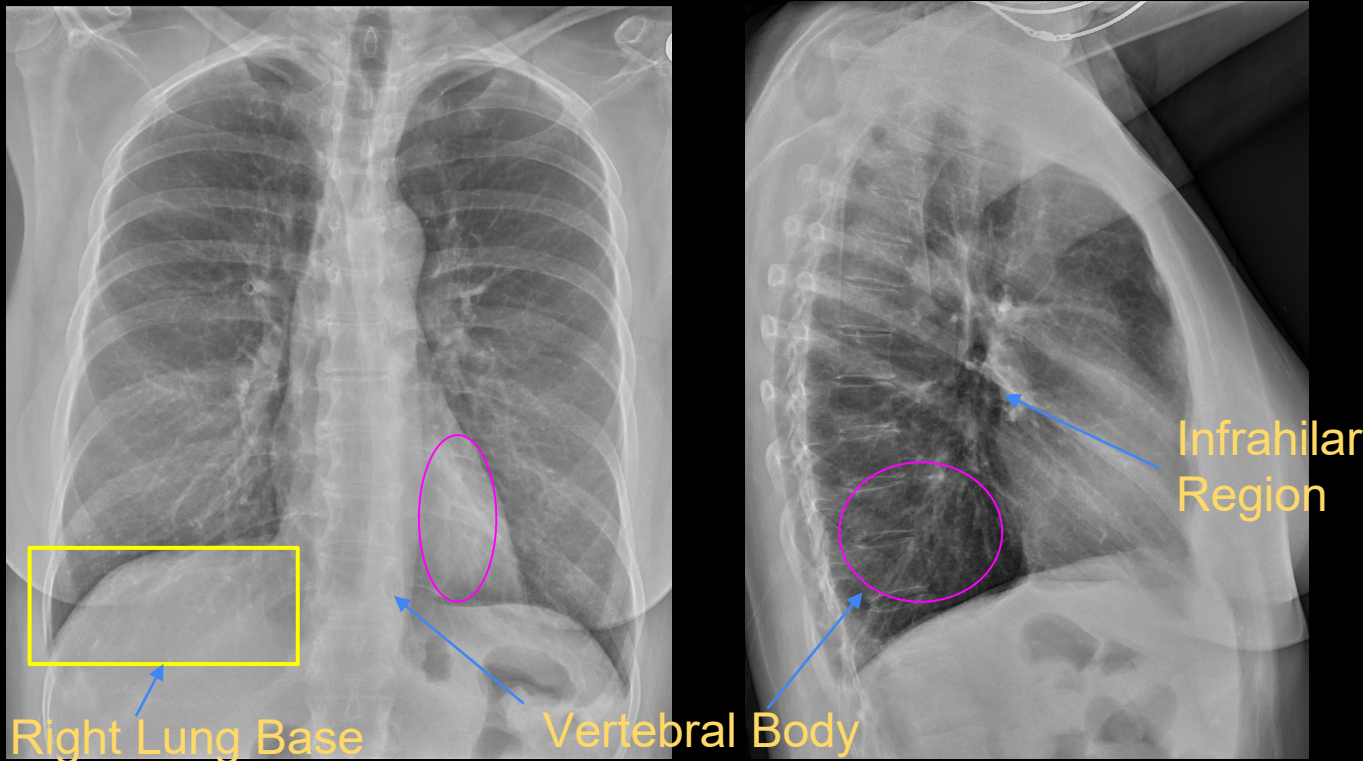
Blind Spots

1. Sternum;
2. Rib
3. Trachea;
4. Paratracheal region
5. Carina
6. Right lung apex
7. Left lung apex
8. Right hilum
9. Left hilum
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Blind Spots

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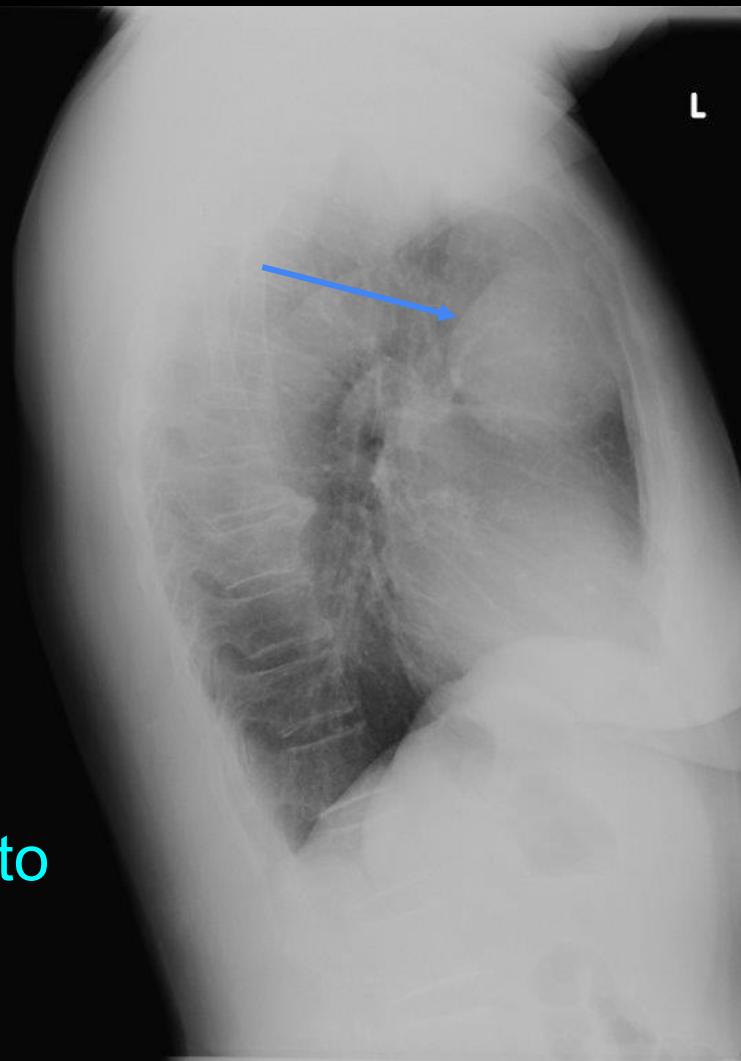
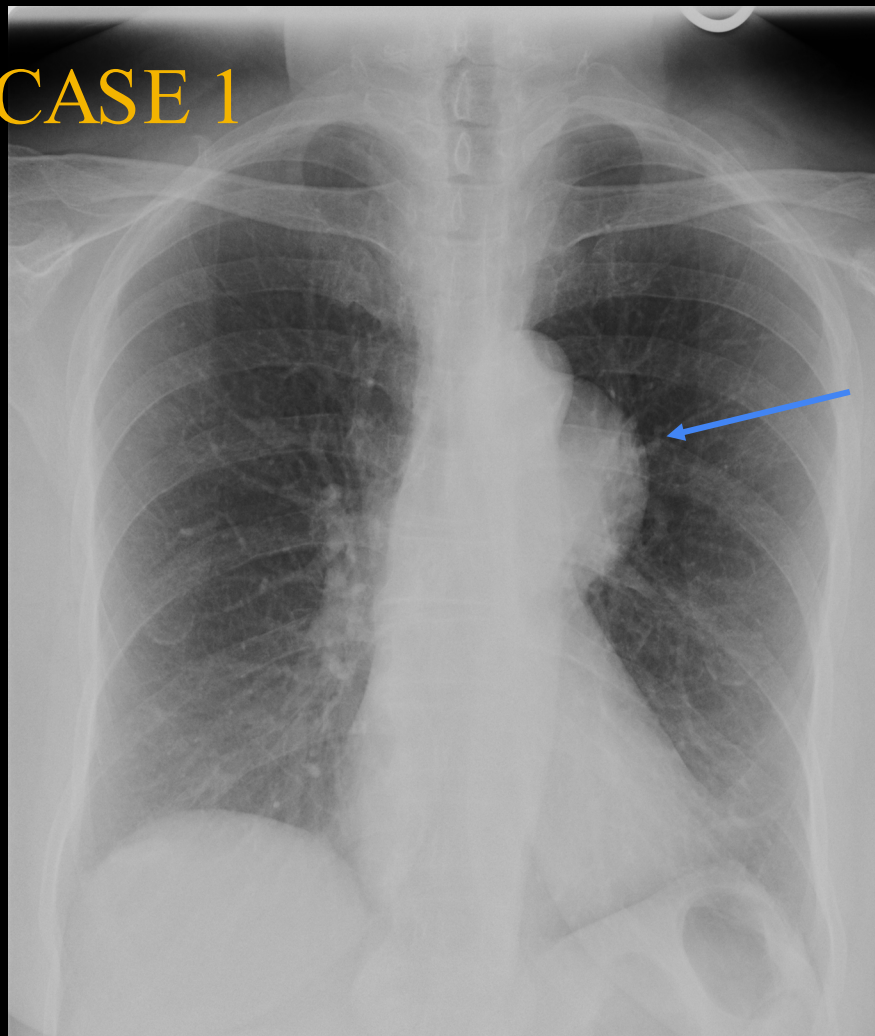


Mediastinum

Can you identify the
abnormality?

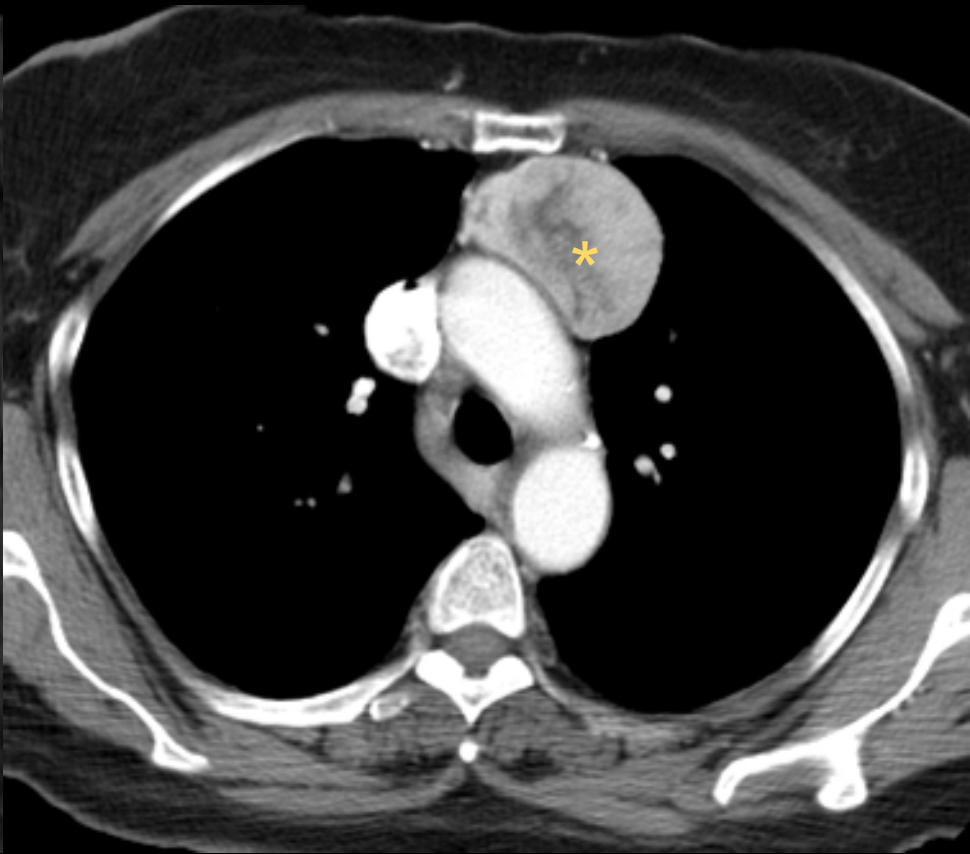
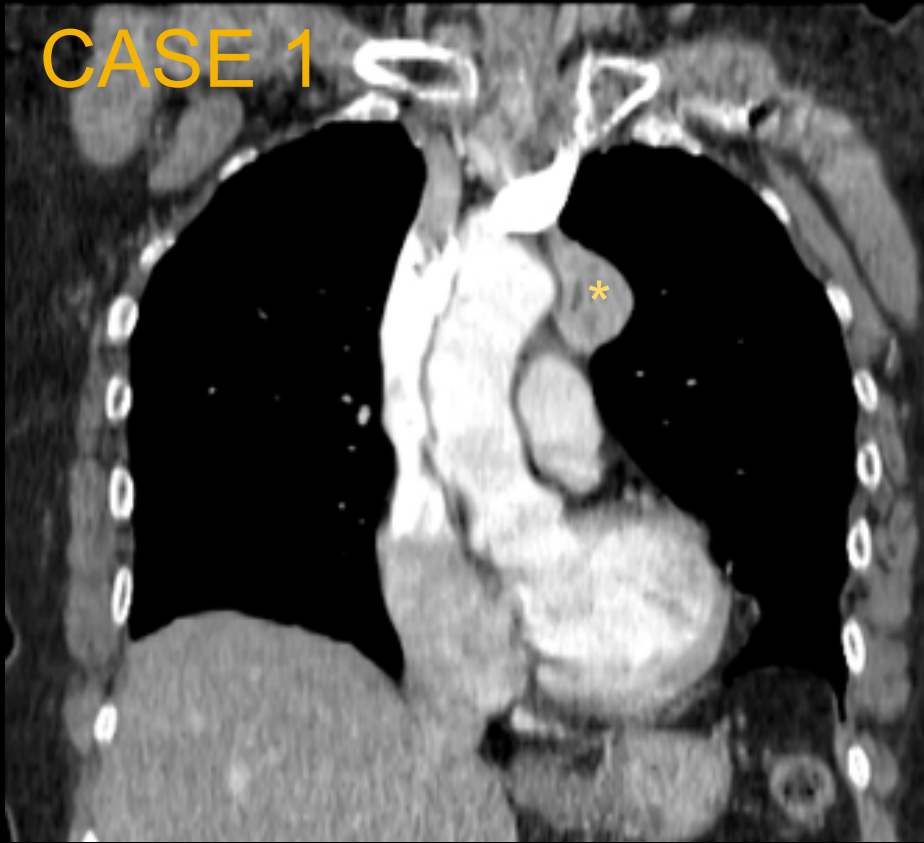
! Remember the Blind Spots !

CASE 1



Click to
see

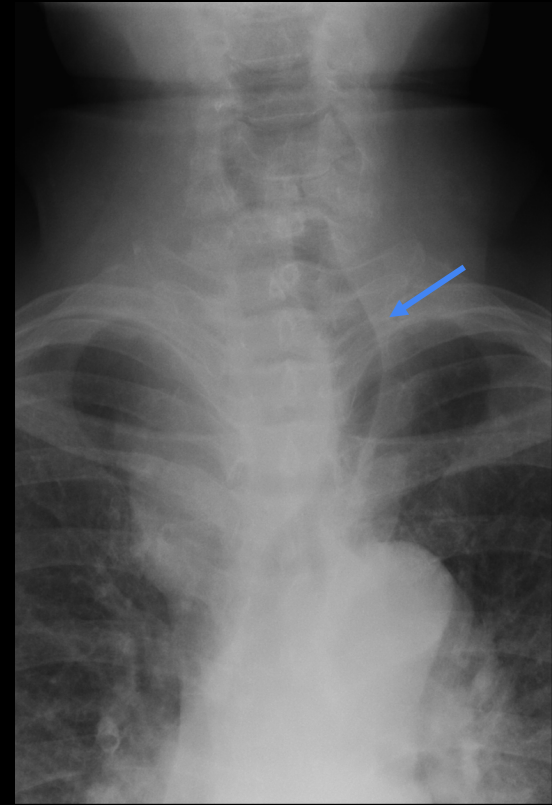
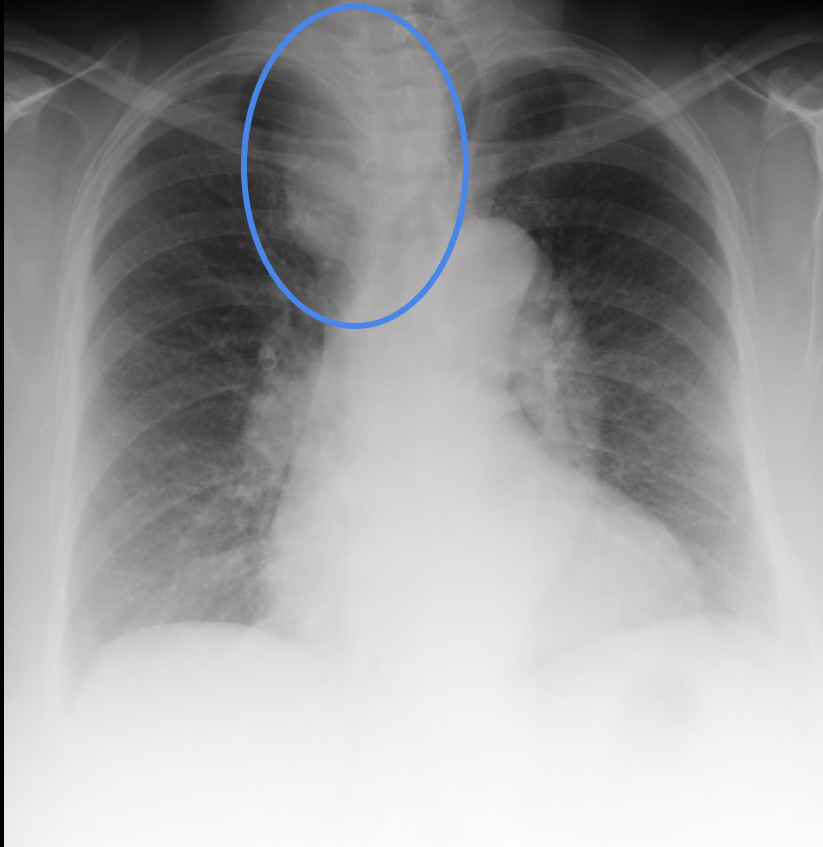
CASE 1



Anterior mediastinal mass retrosternal space [*]

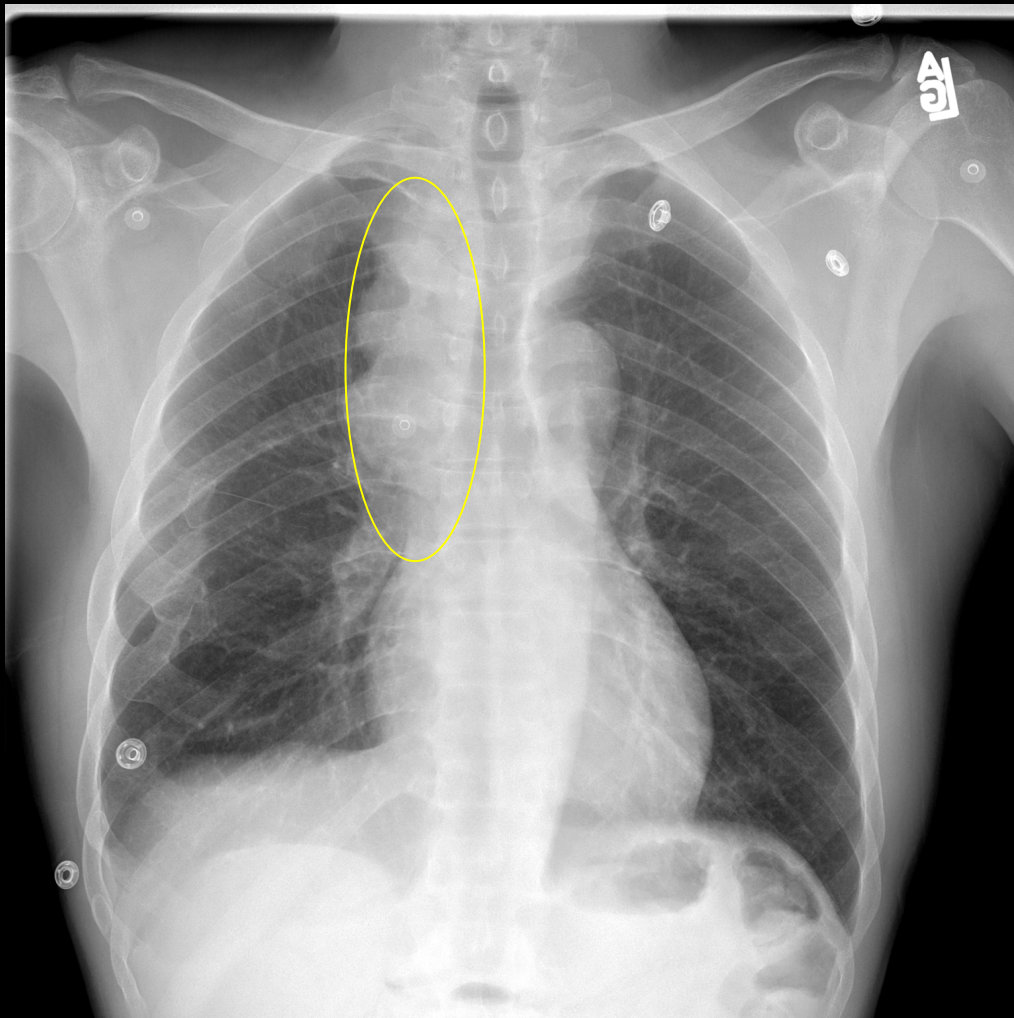
CASE 2

Click twice for answer



Right upper mediastinal mass
with trachea deviated to the left

CASE 3

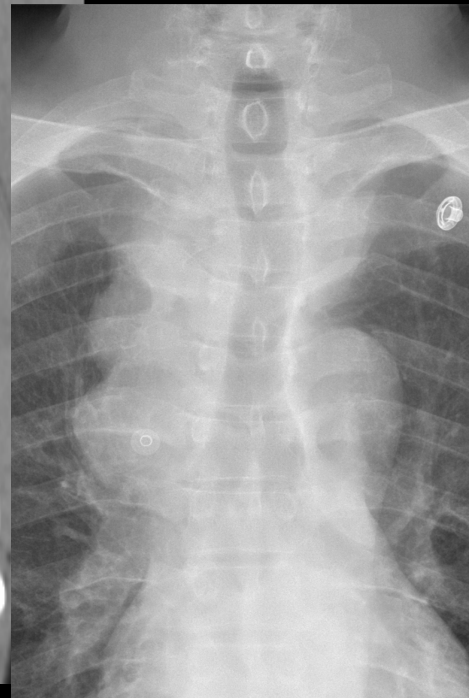


Click twice
for answers

Rt
paratracheal
adenopathy

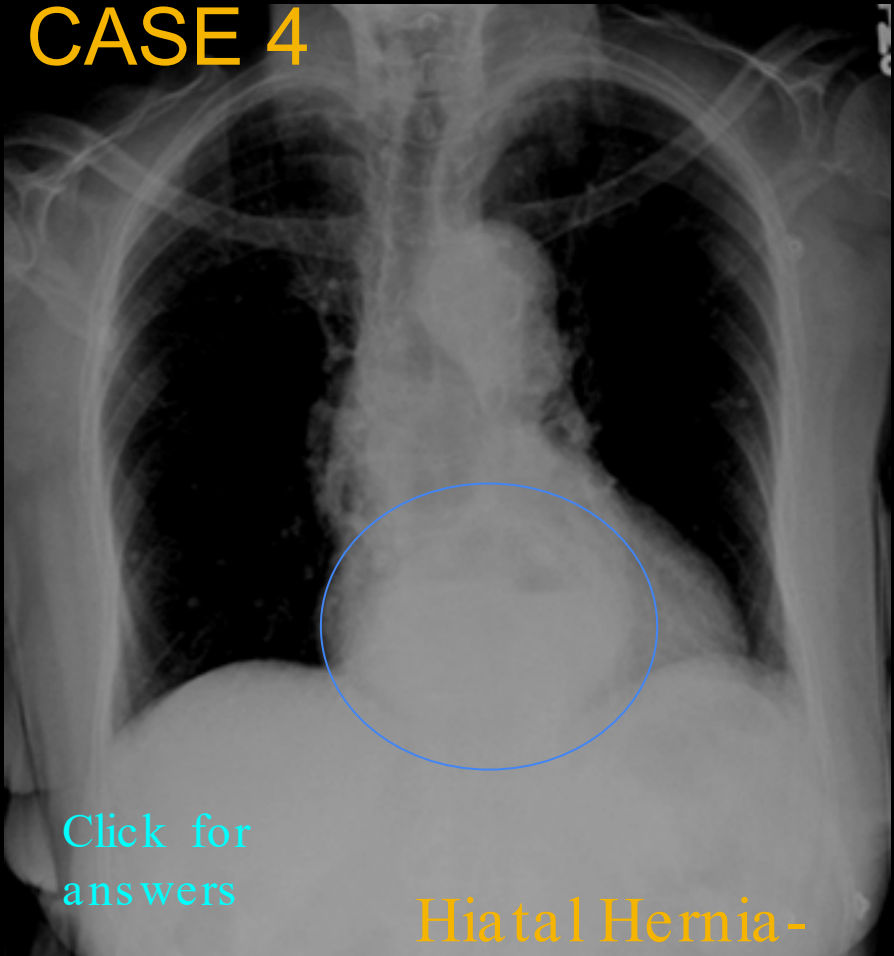
CASE 3

Rt paratracheal
adenopathy





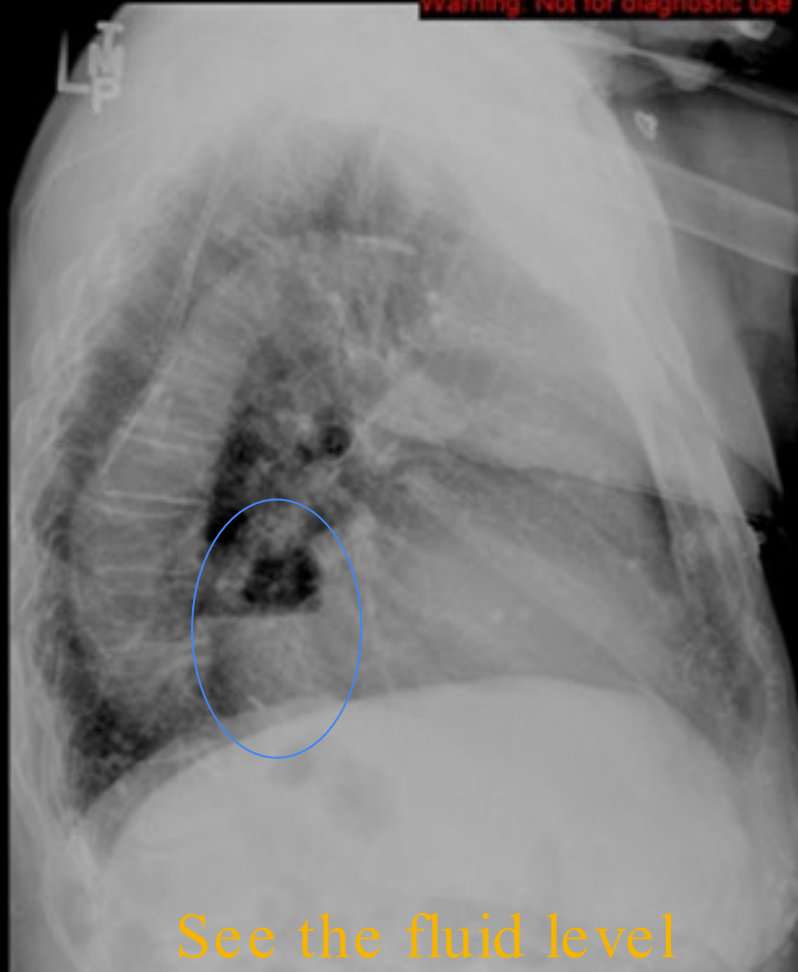
CASE 4



[Click for answers](#)

Hiatal Hernia-

Warning: Not for diagnostic use



See the fluid level

Lungs

Can you identify the
abnormality?

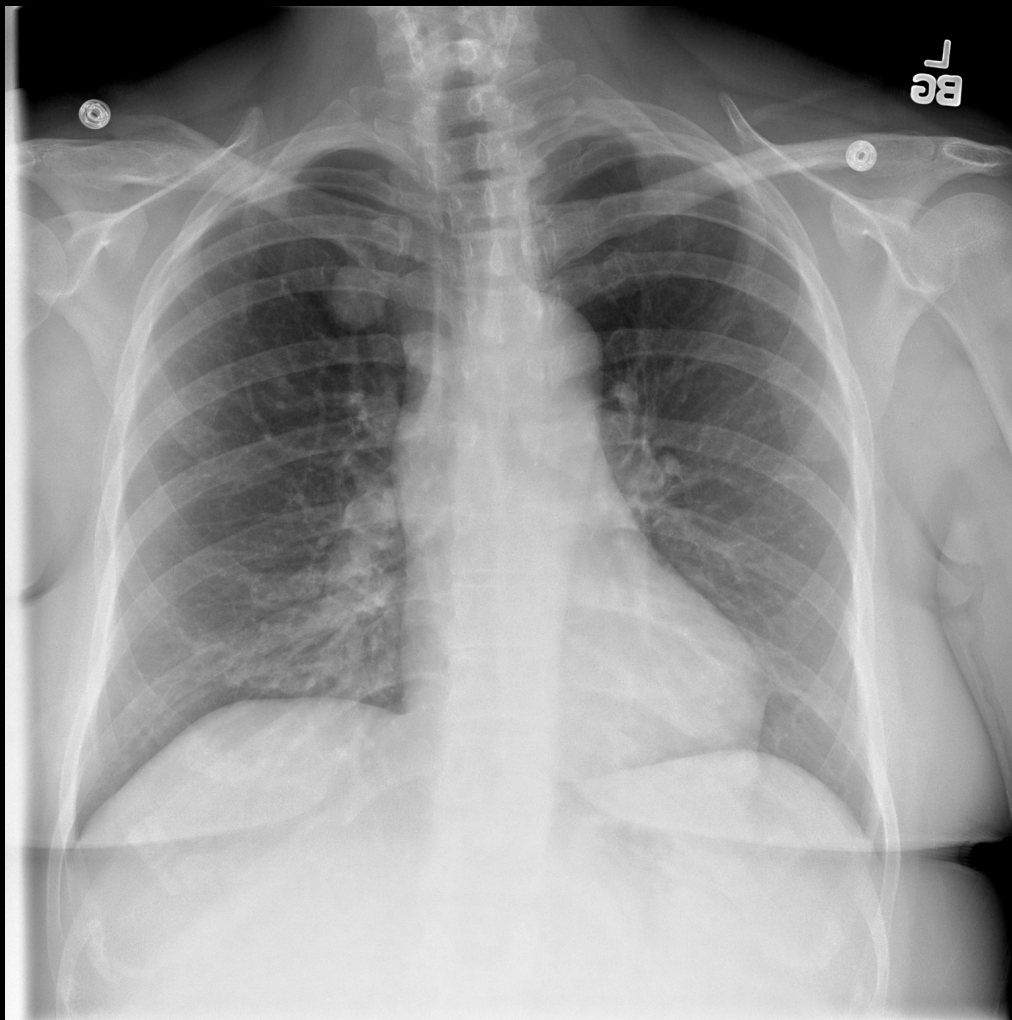
CASE 5

AP View

Is the
abnormality
in the right
lung or the
left lung?

See next
slide





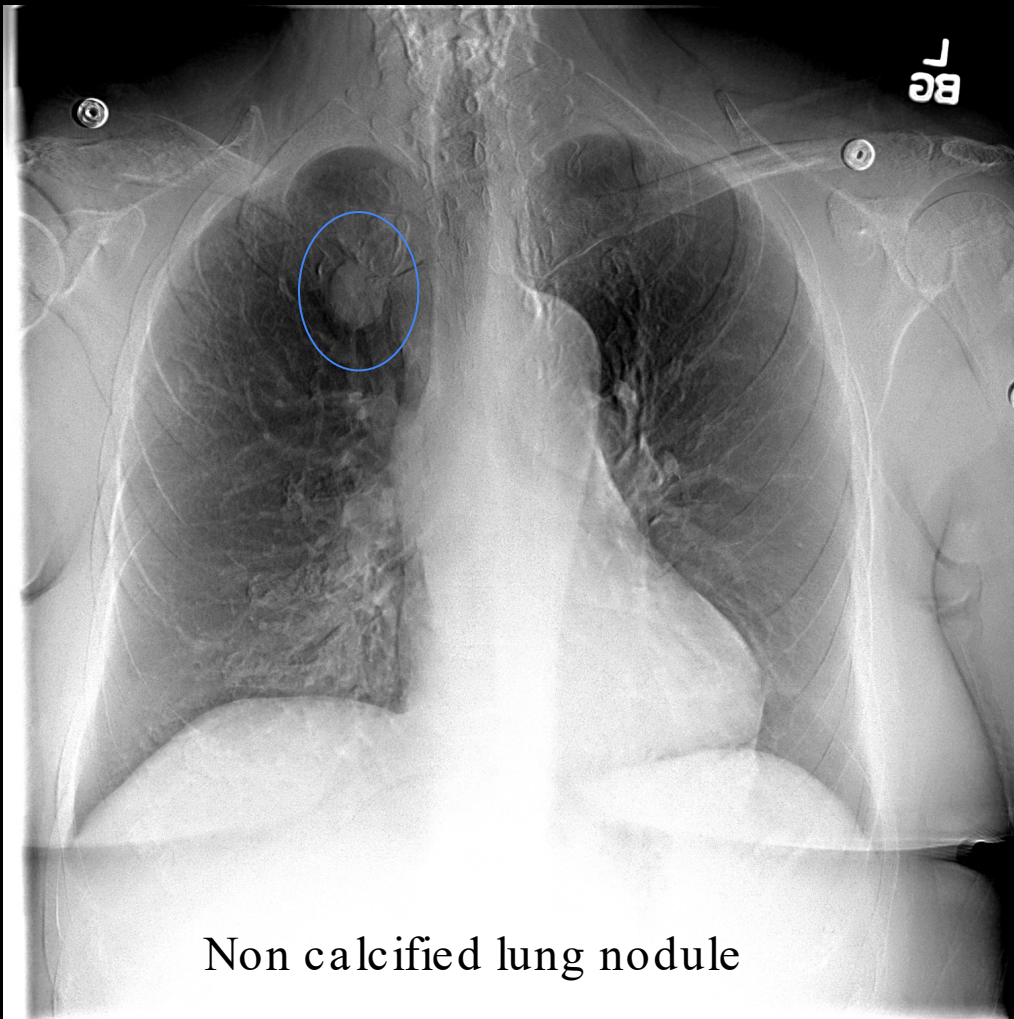
CASE 5

PA view

Is the abnormality in
the right lung or the
left lung?

[Click for answer](#)

Right



CASE 5

PA view with the
bones subtracted

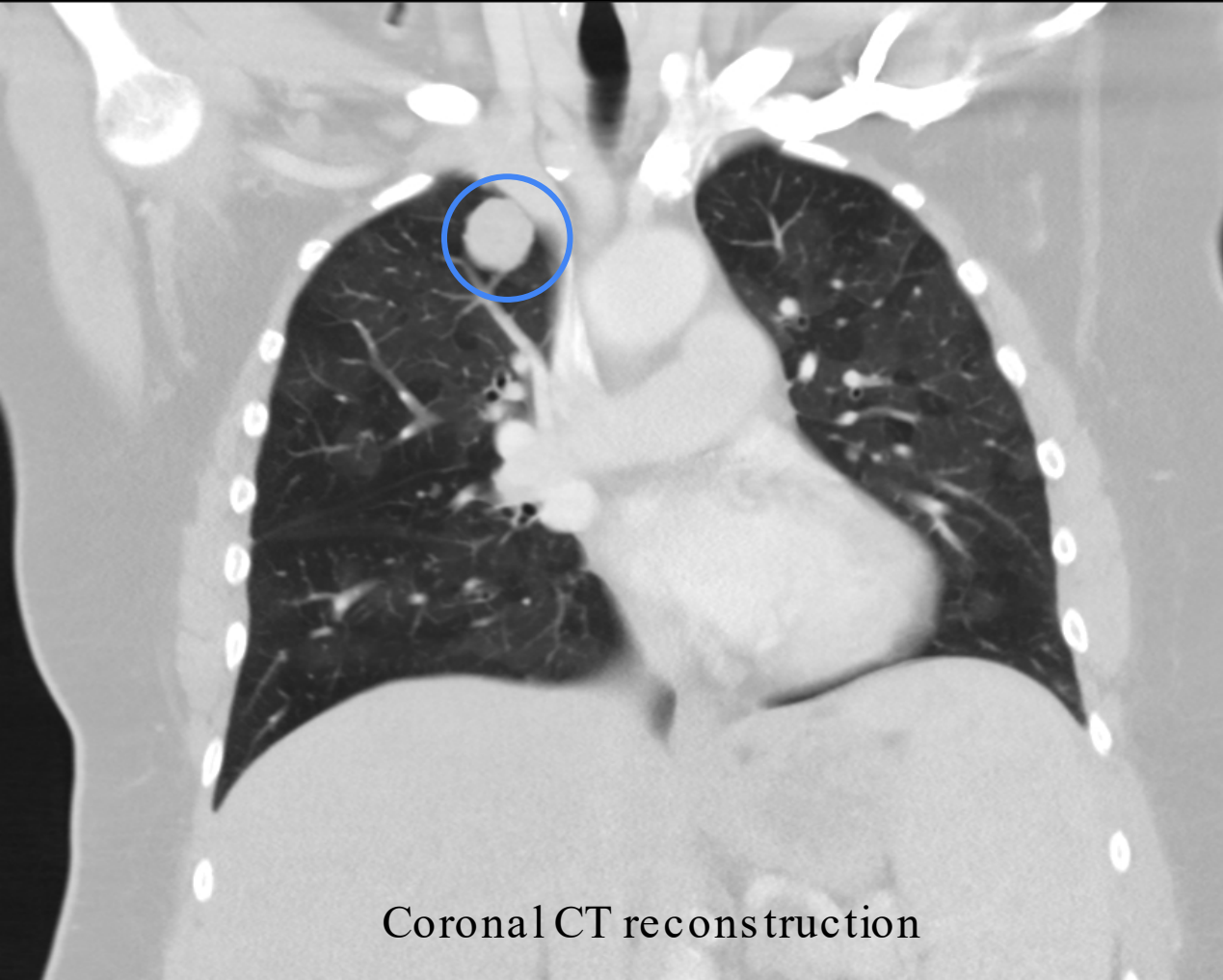
[Click for marker](#)

Non calcified lung nodule

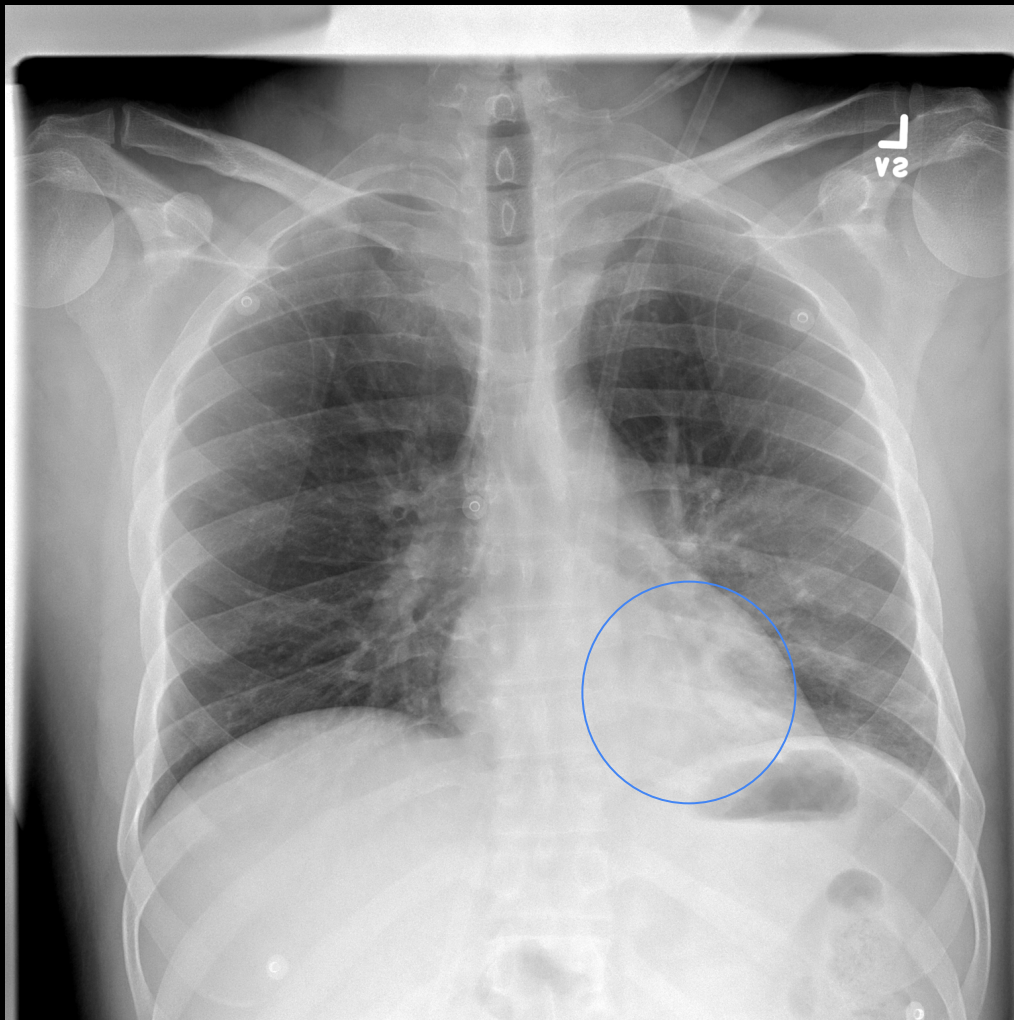
CASE 5

RUL nodule (circle)
obscured by bone on
the CXR.

Always compare the
apices of the lungs,
side to side, for
differences in density



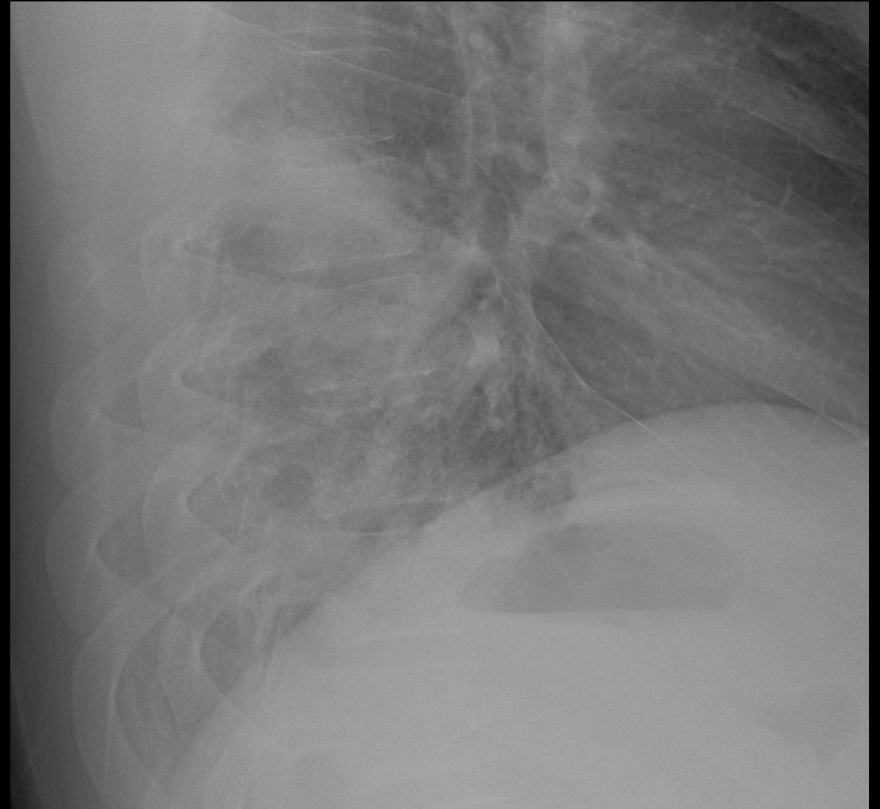
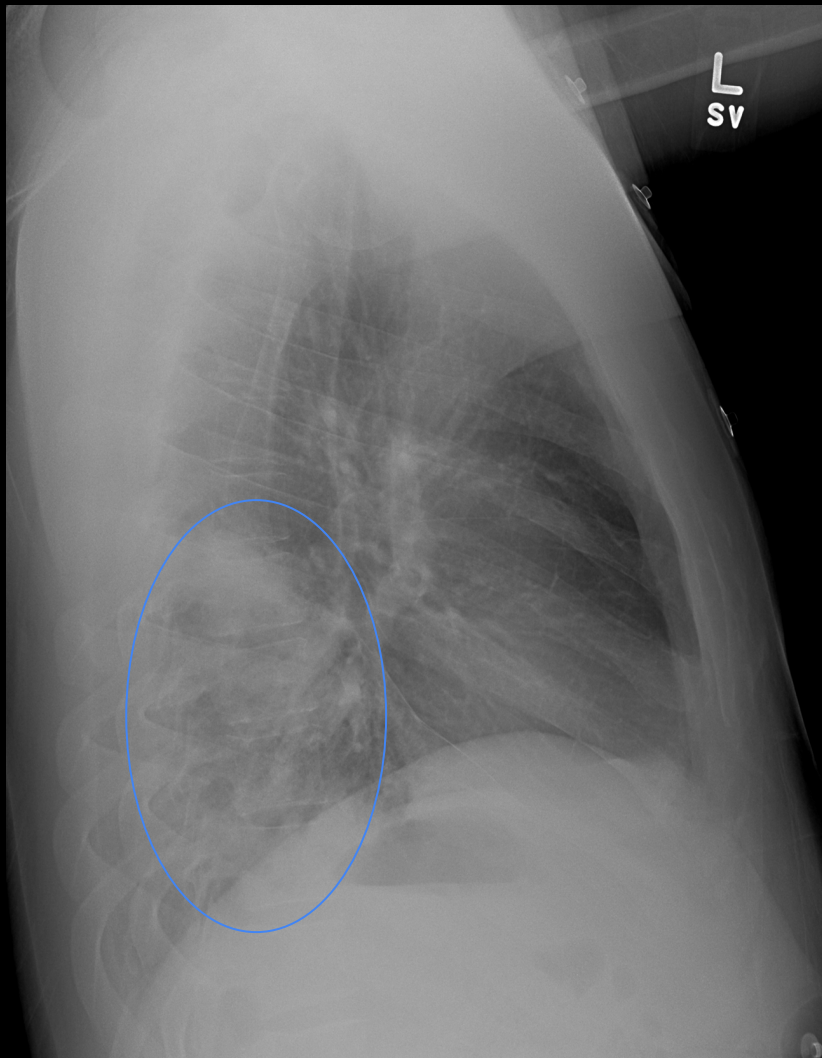
Coronal CT reconstruction



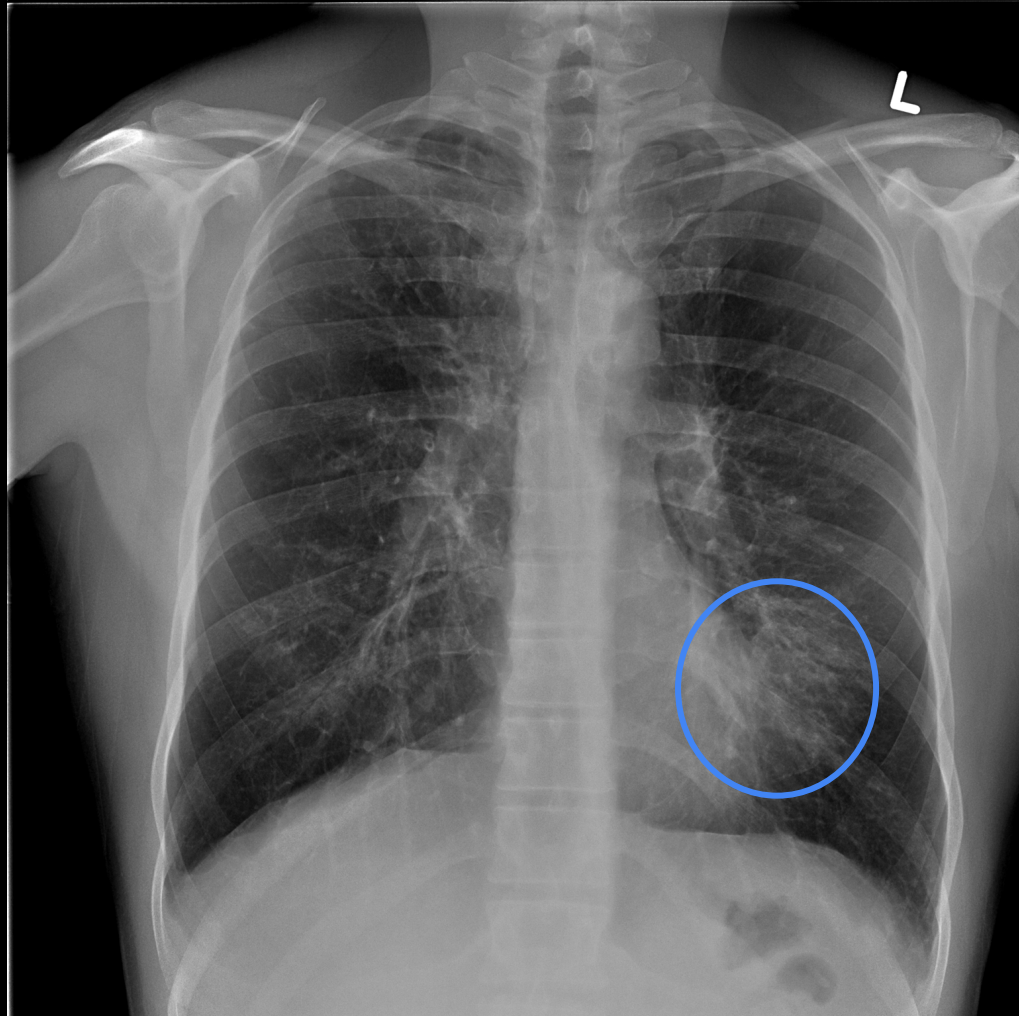
CASE 6

Click for
marker

CASE 6



Retrocardiac Left Lower Lobe Pneumonia



CASE 7

[Click for answer](#)

Lingular
Pneumonia

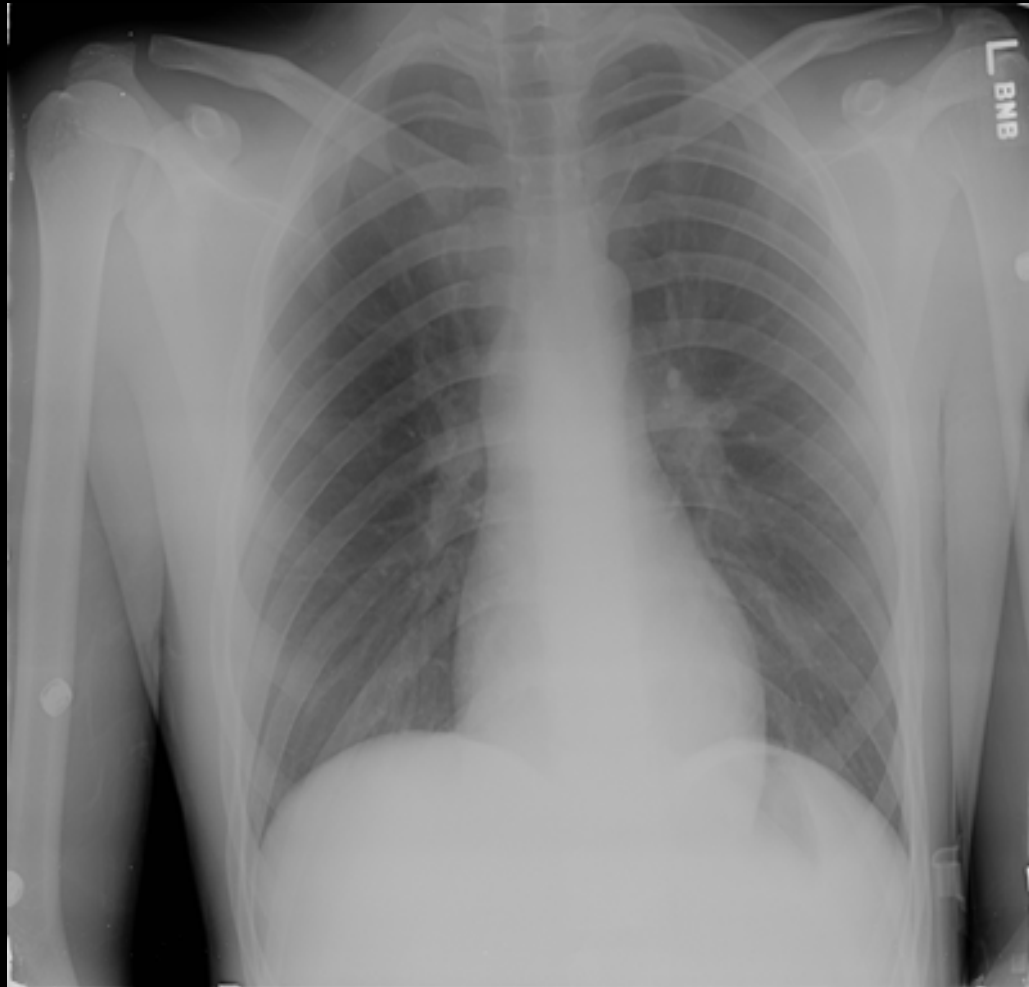
Bone and Soft Tissue

Can you identify the
abnormality?

Case 9

Trauma

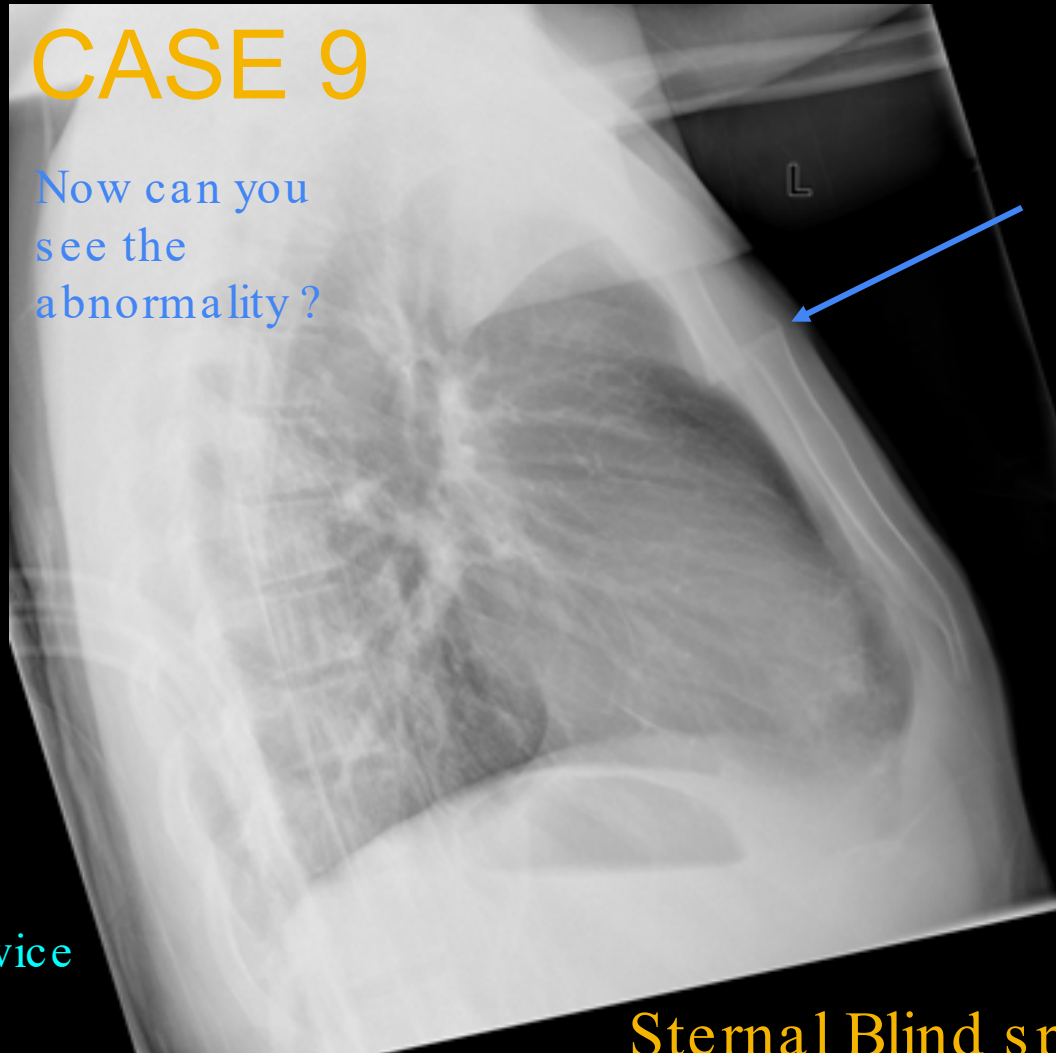
See next
slide





CASE 9

Now can you see the abnormality?

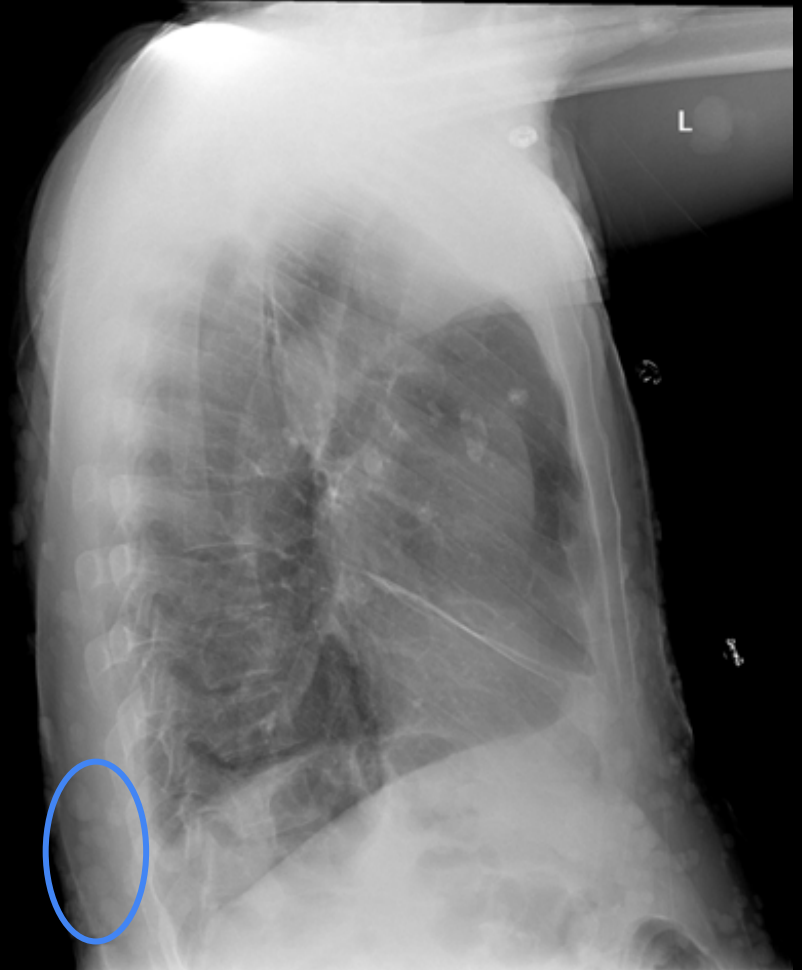
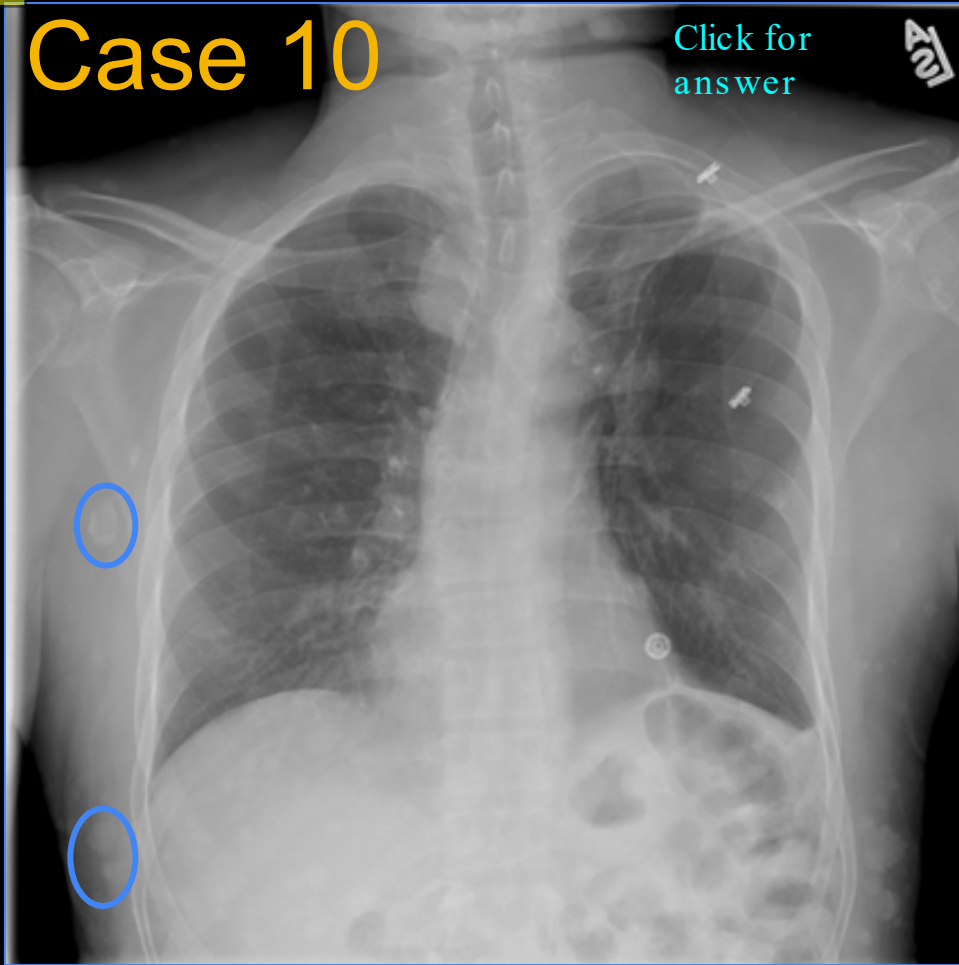


Click twice

Sternal Blind spot

Case 10

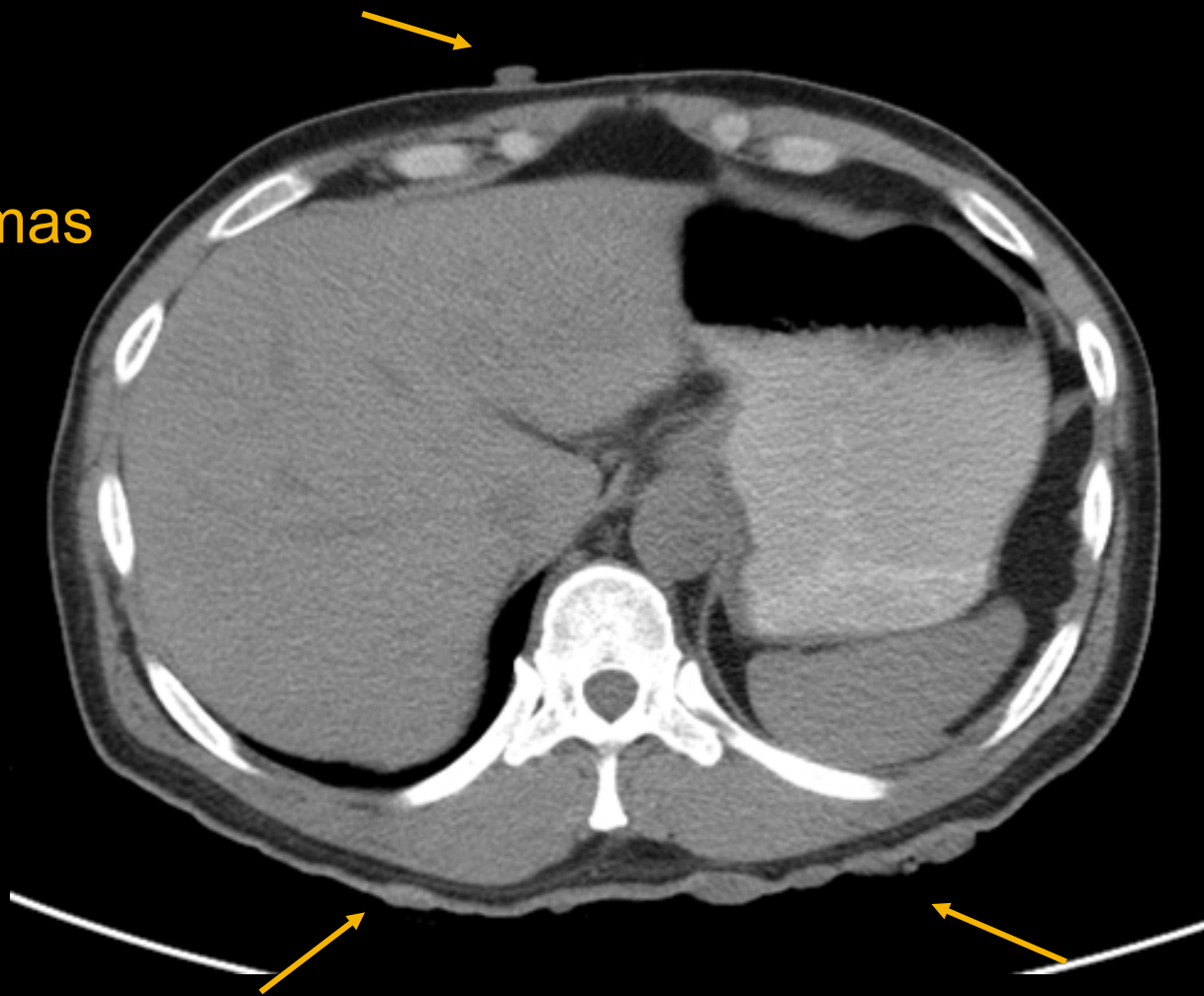
[Click for answer](#)



Neurofibromatosis with visible skin neurofibromas

Case 10

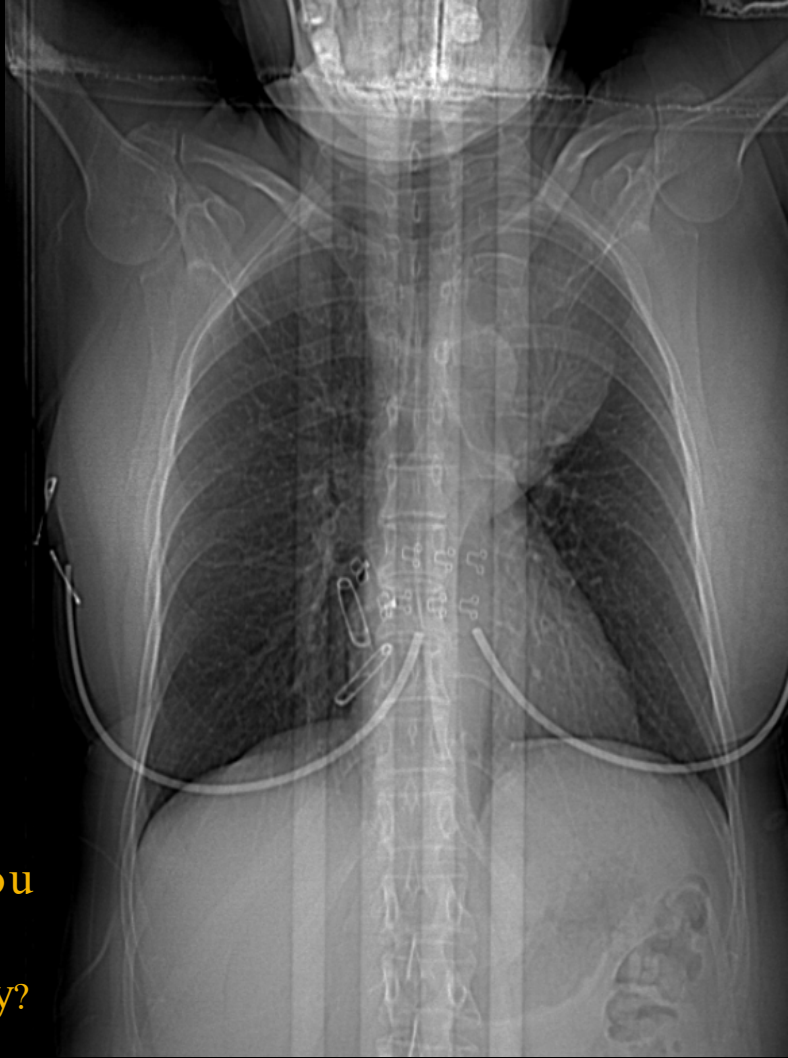
Skin neurofibromas



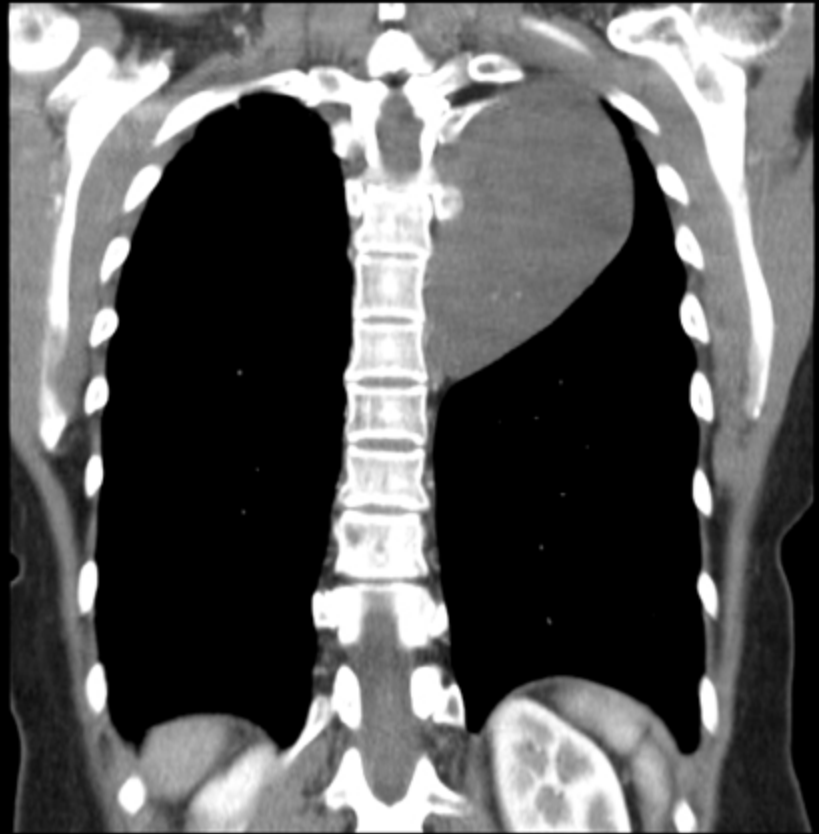
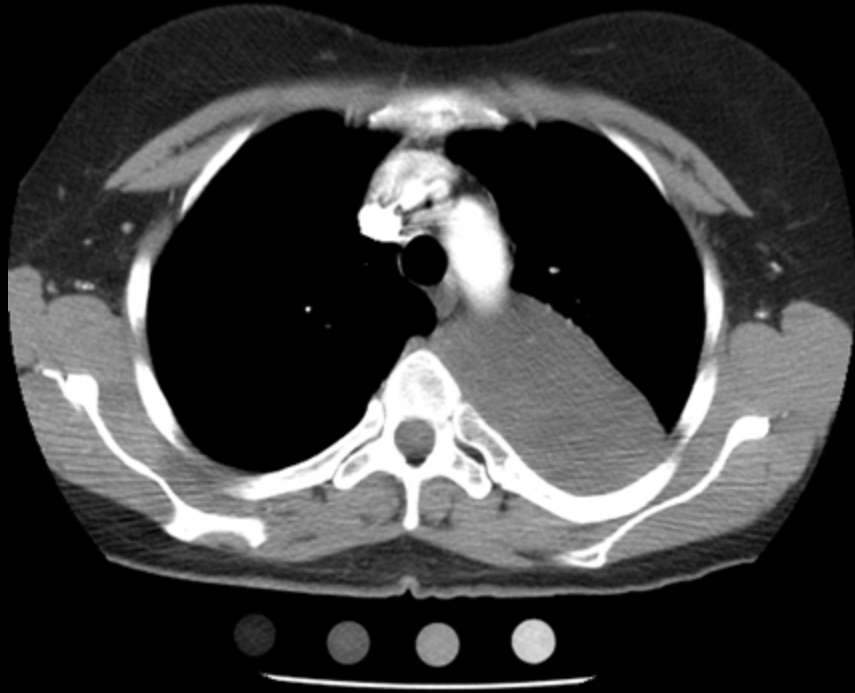
Case 11

[Click for additional image](#)

Now can you see the abnormality?



Case 11

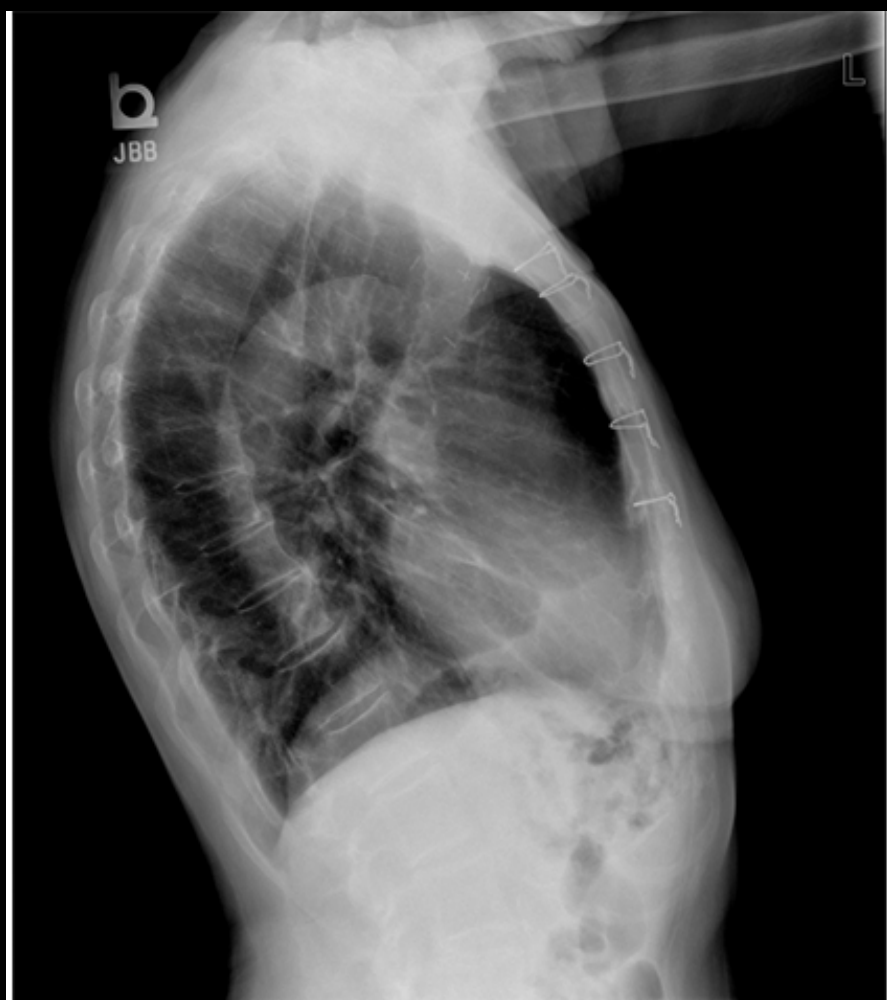
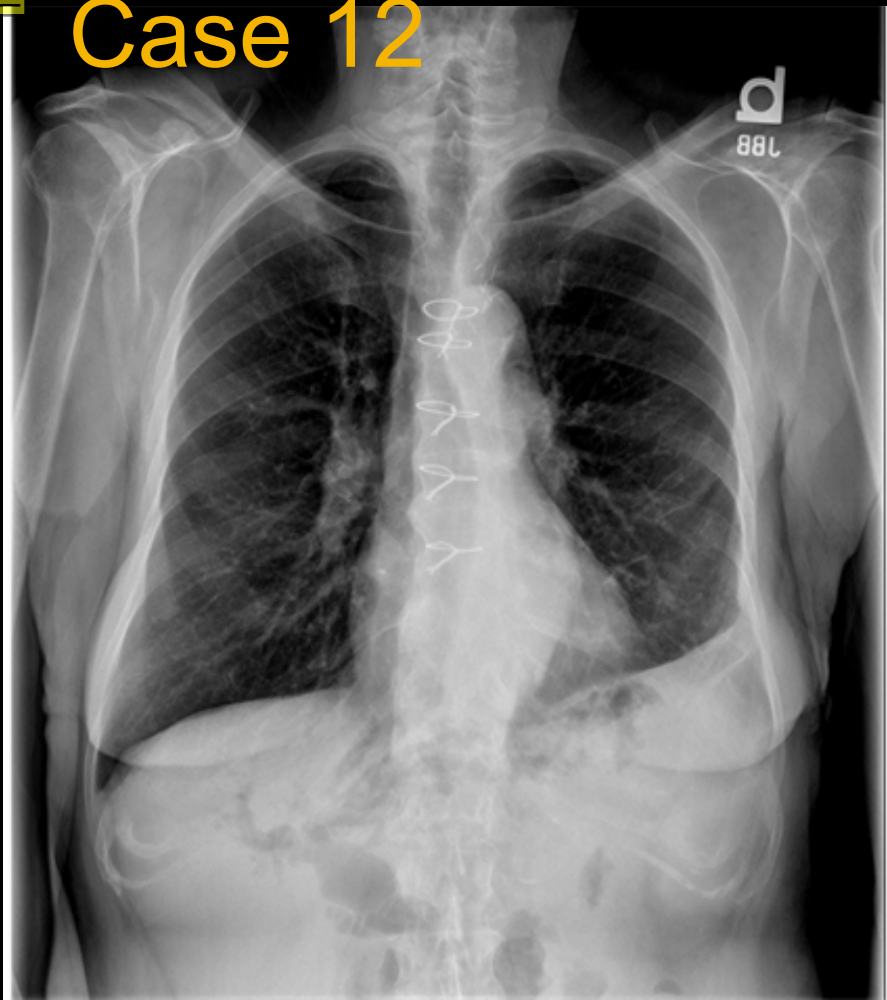


Paraspinal mass adjacent to vertebra- Ganglioneuroma
Blind Spot: over the spine and behind the Trachea

Abdomen

Can you identify the
abnormality?

Case 12





Case 12



Click
for CT

Air in the Biliary tree

Case 13

Click for answer

Free air under both hemidiaphragms

In the Left Upper Abdomen see air on both sides of the colon wall

