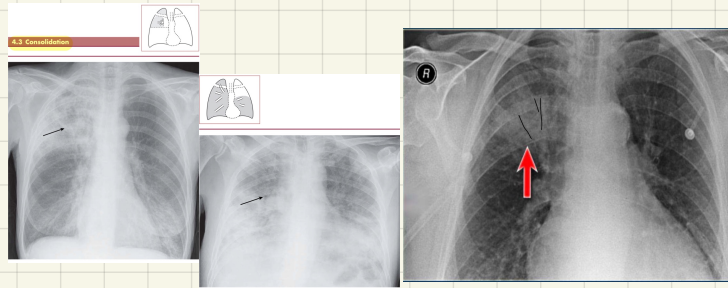


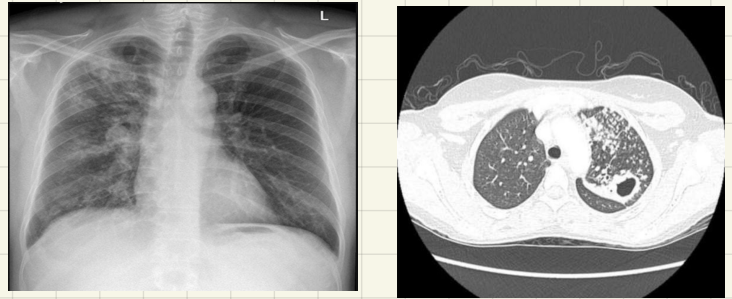
Consolidation , fibrosis , infiltration



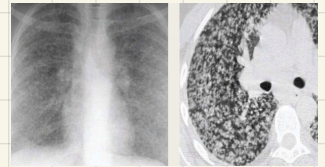
- pneumonia ✳
- shadowing is not uniform
- the border is not so well demarcated (ill-defined)
- **NOT** effusion **OR** collapse
- History of temperature & signs of infection ... dyspnoea associated with cough for 1 week.
- small airways as black against a white background the so called 'air bronchogram'
- replacement of air in the alveoli by pus ...
- Silhouette sign
- Extension to the pleura or fissure, but not crossing it , STOP
- No volume loss , Atelectasis عكس الlobe وين مكانها

و ينسب الي حسب الlobe وين مكانها

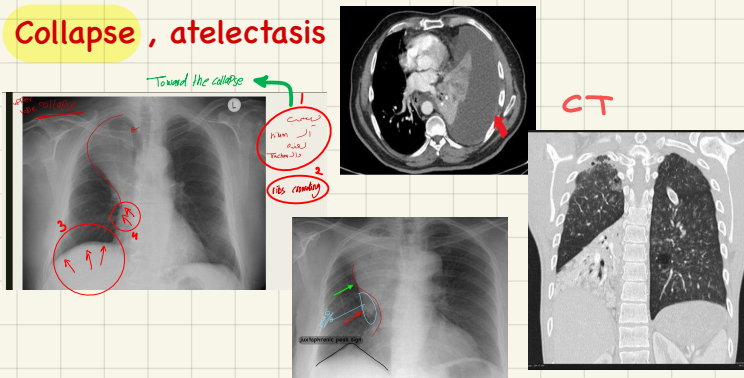
Tuberculosis



- 1° TB**
 - Ghon lesion (tuberculoma) When infection localized and a caseating granuloma
 - lymphadenopathy
 - Ranke complex = lymphadenopathy + Ghon lesion
 - Hilar enlargement
- Post:**
 - post. UP , sup. LOW
 - caseating -> necrosis -> cavitation
 - adenopathy
- Miliary**
 - primary OR post
- healed



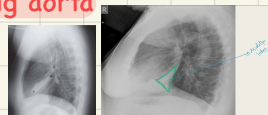
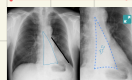
Collapse , atelectasis



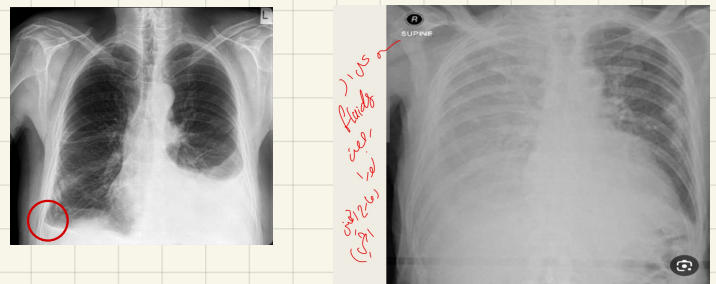
- loss of volume of that part of the lung
- secondary to bronchial obstruction
- SOB despite bronchodilators
- displacement of the fissures
- Rt. Easier than Lt.



- Rt. up**
 - Golden's S sign. ✓ Rt.
 - juxtaphrenic peak sign. ✓
- Lt. up**
 - 'Veil-like' opacification sign in Lt. ✓
 - sickle-shaped lucency medially (luftsischel sign) ✓
- Rt. low**
 - triangular opacity
 - obscured medial heart hemidiaphragm
 - obscured descending interlobar pulmonary artery
- Lt. low**
 - retrocardiac sail sign شراع
 - flat waist sign
 - obscuration of the descending aorta



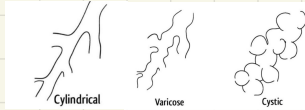
Pleural effusion



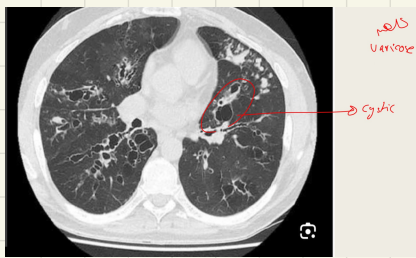
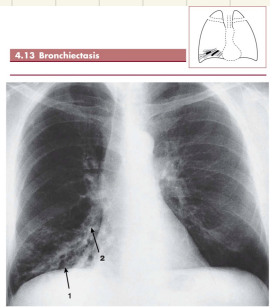
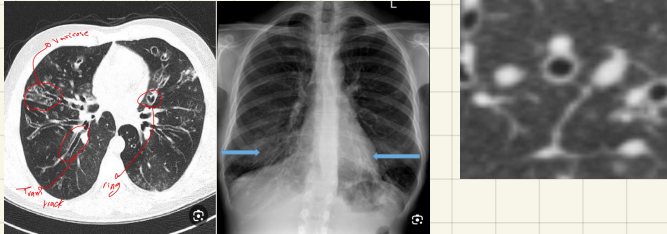
- transudate & exudate
- Loss of the costophrenic angle
- Increased density of the affected hemithorax
- Pseudo-elevation of the diaphragm ↑
- Loss of lower lobe vessels ↓

Bronchiectasis

- pt. Come with common productive cough (sputum)
- irreversible, dilation
 - mucus plugging
 - bacterial colonization
 - inflammatory response

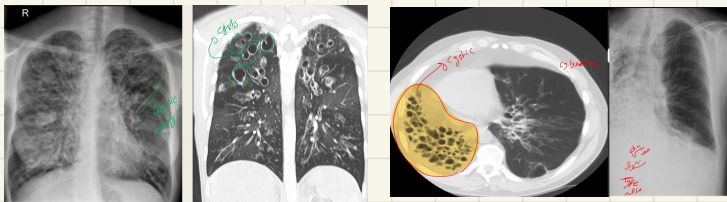


- CT → signet ring sign & tram-track
- CXR → tram-track sign



Cystic fibrosis

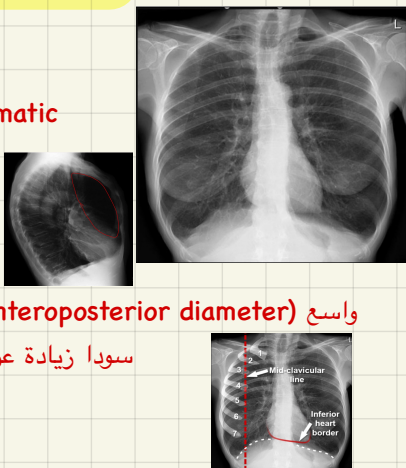
- AR (cryptogenic)
- exocrine function
- In very severely affected areas a denser meshwork produces a 'honeycomb' appearance



- may cause shrinkage of the lungs
- in shape if mediastinum lungs will pull the mediastinum and distort the outline

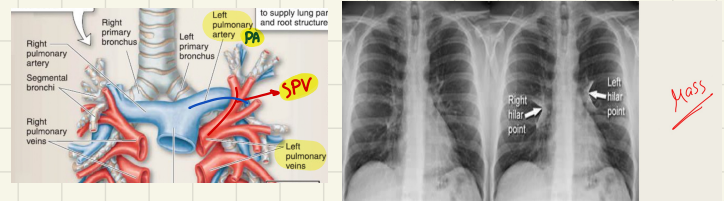
Hyperinflation

- with COPD, aging, airflow obstruction
- flattened hemi-diaphragmatic
- more than 6 anterior or 10 posterior ribs
- horizontalisation of ribs
- air below the heart
- barrel chest (increase anteroposterior diameter) واسع
- hyperlucent lungs سواداً زيادة عن اللزوم



Hilar structures

- normally : left is often slightly higher than the right ,, usually the same size
- LANDMARK** : descending pulmonary artery intersects the superior pulmonary vein.



- Hilar enlargement**
 - bilateral → **sarcoidosis**
 - unilateral / asymmetrical → **malignancy**

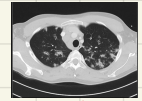


sarcoidosis

- skin rash, erythema nodosum
- pulmonary infiltration
- non-caseating granulomatous
- may progress to pulmonary fibrosis with 'honeycomb'
- lymph node enlargement at both hila.
- symmetric adenopathy
- stippled or eggshell calcification & galaxy sign



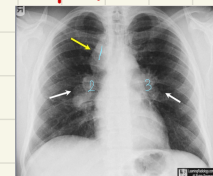
- in CT : perilymphatic nodules of variable sizes, representing sarcoid granulomas.



STAGES ...

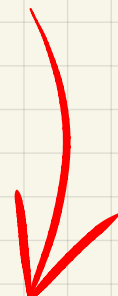
abnormal Hilar position

- pushed (e.g. By an enlarging soft tissue mass)
- pulled (e.g. Lobar collapse)

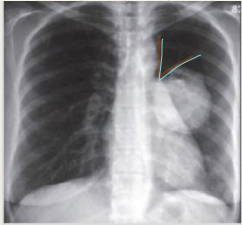


→ **GARLAND TRIADE** :
pawbroker's sign
Potato nodes

Mediastinum

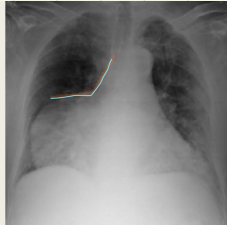


Mediastinal mass (lesion)



Pulmonary mass

- Acute angle with mediastinum
- No silhouetting of mediastinum



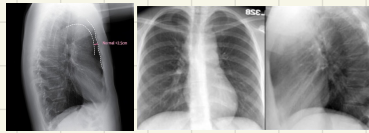
Mediastinal mass

- Obtuse angle with mediastinum
- Silhouetting of mediastinum

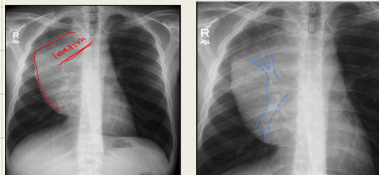
associated spinal, costal or sternal abnormalities.

Anterior

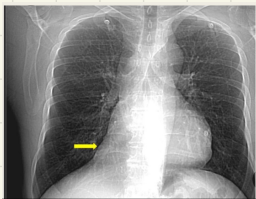
- Obliterated retrosternal clear space



- hilum overlay sign → hilar vessels are visualized through the mass

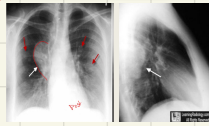


- 3. Obliteration of cardiophrenic angle

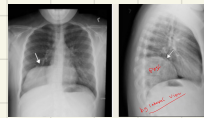


Posterior

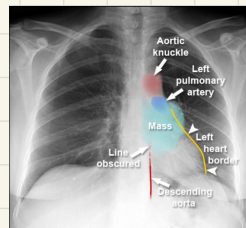
- Hilum overlay sign
- Distinct heart border [not in middle]
- Seen on lateral view posterior to heart



- Adjacent to vertebral body on lateral view

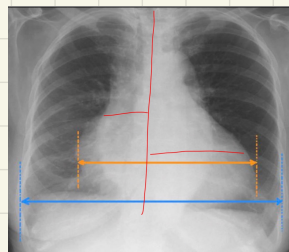


- On left side obscuring the descending aorta



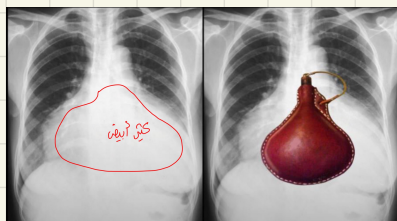
Cardiomegaly

- the transverse diameter of the cardiac silhouette is greater than or equal to 50% of the transverse diameter of the chest (increased cardiothoracic ratio)



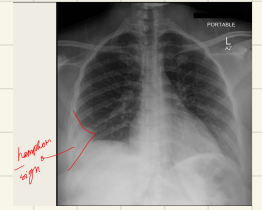
Pericardial effusion

- excess fluid collects in the pericardial space (more than 30-50 mL)
- water bottle configuration
- increased cardiothoracic ratio

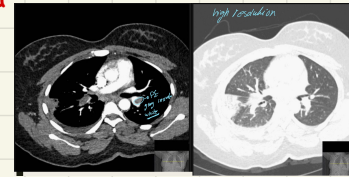
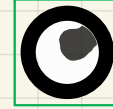
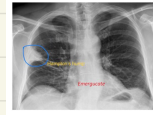


Pulmonary embolism

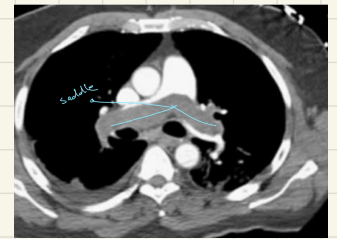
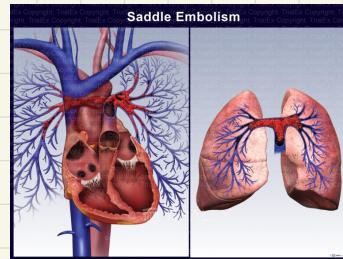
- pulmonary thromboembolism
- Hampton sign
- in CT pulmonary angiography (CTPA) axial plane the central filling defect from the thrombus is surrounded by a thin rim of contrast → Polo



Mint sign



- Saddle pulmonary embolism



Pneumothorax (PTX)

فرشاد

- tension or simple
- lung may completely collapse
- line واضح
- no lung markings are seen peripheral
- mediastinum should not shift away from the pneumothorax unless a tension pneumothorax is present
- deep sulcus sign.

→ if it is not clearly present :

- lateraldecubitusradiograph.
- expiratory chest

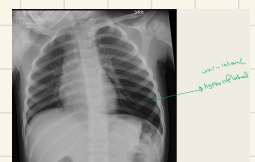
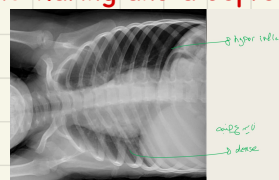


- one complication of its surgery →




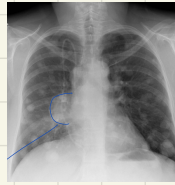
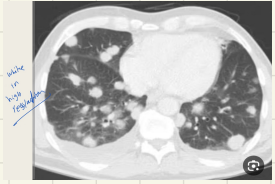
Foreign body

- persistent hyperinflation
- unilateral emphysema or atelectasis are the most common findings
- Should be on expiration to differentiate
- normal lung should appear smaller and denser
- affected lung appear overinflated and hyperlucent
- rib flaring and a depressed ipsilateral hemidiaphragm



Metastases

- distant tumor spread to lung via blood or lymphatic
- Lung cancer (most common primary site) , colorectal renal cell , pancreatic , breast
- cannonballs sign 



Typical report for normal CXR

Name :####

age : 45 years old male

Date of imaging:##

there is no previous x-ray available
for this male

for quality of image

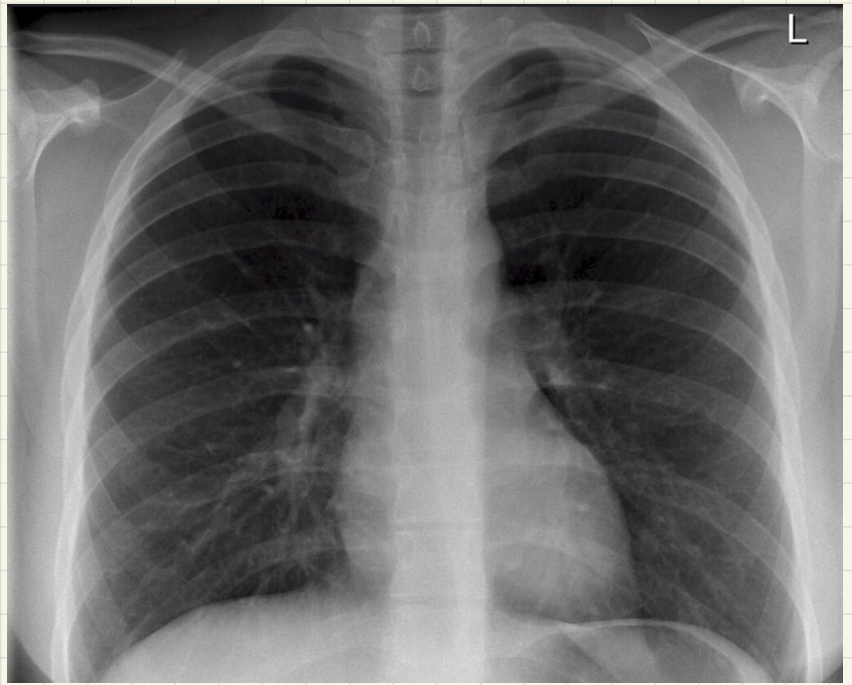
#RIPE

R:rotation

I:inspiratin

P:projection

E:penetration/exposure



there is no rotaion (clavicles is symmetrical) and the distant between its angles is equal .
the inspiratory effort looks good and i can count 6 anterior ribs .
and the costophrenic angle is normal
on both sides .

and it is PA x-ray and the exposure is good cus i can see the vertebral disc and spinal
processes T1-T4.

for clinical assessment

#ABCDE

A: airway

B:breathing

C: cardiac

D:diaphragm

E: everything else

I can see that there is no trachial deviation or any abnormalities

I can't see any opacity or consolidation in both side of the lung .

and pleura is normal , there is no evident of thickening

cardiac shadow is well defined ,

the size of heart is normal (normally its less than 50% of thoracic cage)

the diaphragm contour is normal and there is no abnormal elevation on both sides or any air
under it or any herniation

there is no costphrenic blunt

(blunt:filled by fluid)

E: i cant see and fracture or tube in this image (mention any things that you didn't mention it)