Mini OSCE File
2020 Batch

Rheumatology

Autoantibodies

- RF: IgM against IgG (RA, Sjögrens)
- Anti CCP: specific for RA
- ANA (SLE)
- Anti ds DNA (SLE)
- Anti RO (SS-A), LA (SS-B): Sjögrens
- Anti U1-RNP: MCTD
- Anti Scl70 (limited), Anti centromere (diffuse): scleroderma
- Anti histone: drug induced LE
- ANCA (p-, c-): vasculitis
- Celiac: anti endomyseal, TTG antibodies
- DM type 1: Anti GAD

There's a mistake in this slide...anticentromere is specific for limited cutanoues systemic sclerosis +ve in 50%
Ainti-scl-70 for diffuse (30%)

GAD:glutamic acid decarboxylase

Synovial fluid

1. Cell:

- Normal: 0-200
- Non inflammatory: 200-2000
- Inflammatory: 2000-2,000
- Septic: > 50,000

Crystal

Culture

- A patient is awoken from sleep by severe pain in his left knee. He also reports a recent abscess over that knee which required incision and drainage and improved treatment with a cephalosporin. The left knee is erythematous, swollen, warm, and very tender. Synovial fluid analysis reveals a white blood cell (WBC) count of 110,000/µL with 99% neutrophils. Image courtesy of Wikimedia Commons.

- The preferred treatment for acute gout is first-line therapy with NSAIDs or with system steroids such as prednisone to taper over 7-10 days. Traditional dosing of oral colchicine has a high frequency of side effects; low-dose therapy is now recommended. Uric acid-lowering drugs, such as allopurinol, during an acute attack may provoke an arthritis flare. Image courtesy of Wikimedia Commons.
- The opposite knee had a firm raised nodule anteriorly, just below the patella (shown). Aspiration of this lesion revealed thick whitish fluid which most likely contained:
  A. Polymorphonuclear leucocytes
  B. Uric acid crystals
  C. Bacteria
  D. Leucocytes and crystals
  E. Fatty tissue

B

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Rheumatoid Arthritis

Swan neck deformity(DIP flexion,,PIP hyperextension)

In RA you may also see: boutonniere(pip flexion ,,DIP hyperextension)
You also may see ulnar deviation.

Q10 :45 y/o female c/o hand joints pain
- mention 2 abnormalities.
- What is the diagnosis?

RA

If he means abnormalities seen on this Xray: 1)ulnar deviation
2)joint space narrowin
3)subluxation of fingers joints
4)decreased bone density (osteopenia)
5)pannus
In general(not in this picture): Swan neck,,boutonniere

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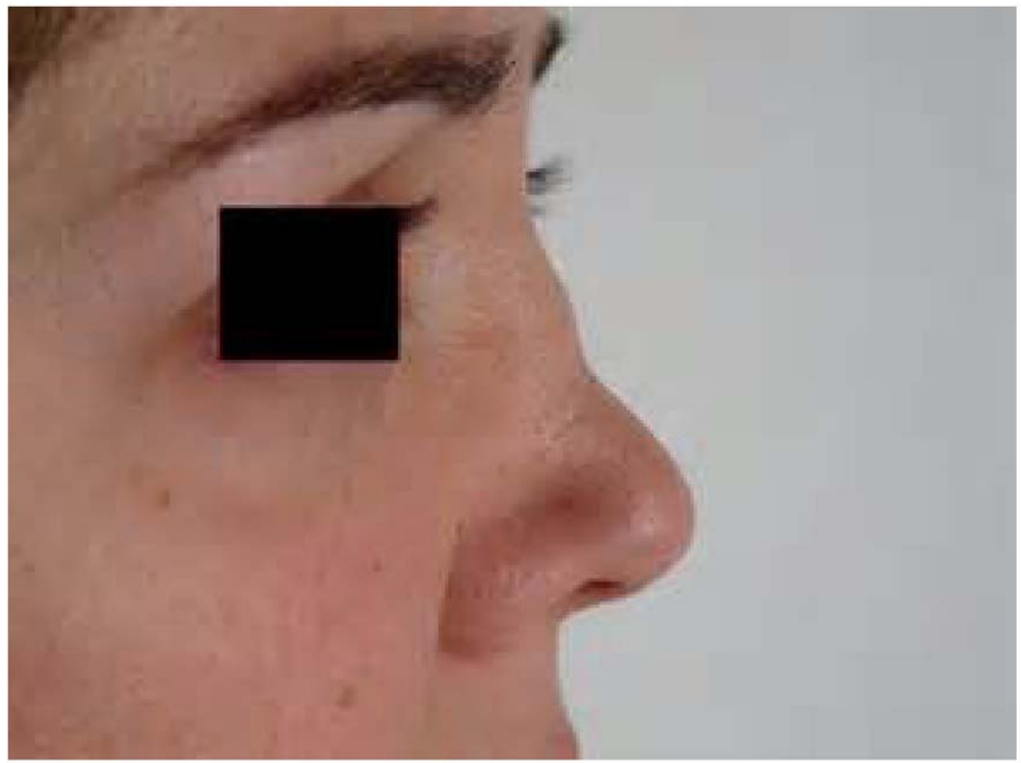
Osteoarthritis

Vasculitis

35 y/o male patient, c/o of cough, hematuria and presented with saddle nose.

- What are the autoantibodies associated with this disease?

Wegner's granulomatosis(granulomatosis with polyangitis)
C-ANCA



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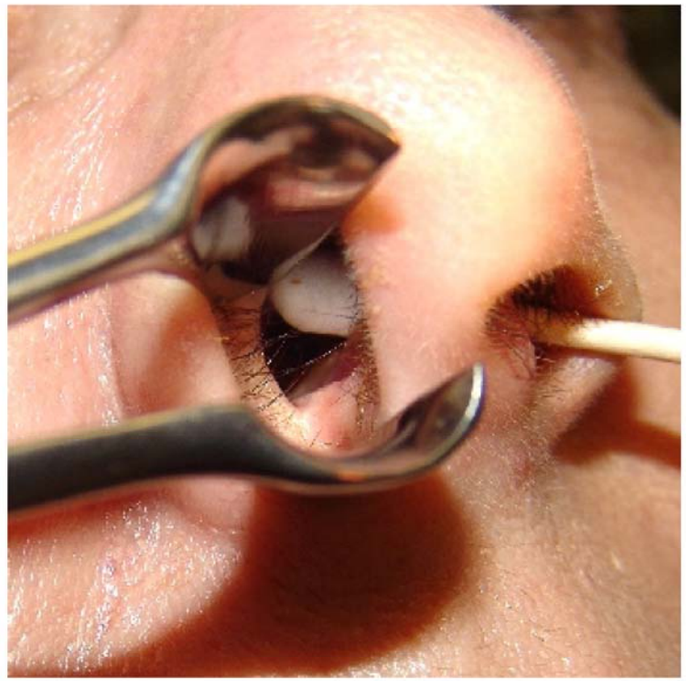
Wegner also



28 years old man presented with haematuria and joint pain
- What is the abnormality?
- What is the likely diagnosis?

Abnormality:Pupura on buttocks and legs most likely due to vasculitis secondary to immune

Patient with painful mouth lesion, and we did this test for him (below), 3months later he developed left leg swelling & calf pain that diagnosed as DVT.

What is the diagnosis ?

Behçet's disease (BD).
Criteria for diagnosis:
Recurrent oral ulcers 3 times within 12 months + 2 of the following:
1)recurrent genital ulcers
2)ocular lesions.(uveitis or retinal vasculitis)
3)skin lesion.(erythema nodosum or acneiform nodules)
4)+ve pathergy test

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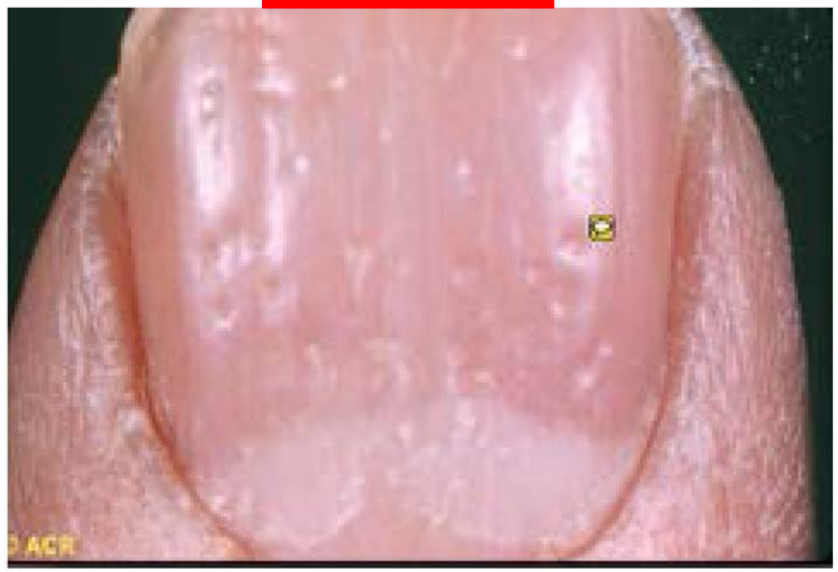
Temporal Arteritis

Psoriatic arthritis

Dactylitis(sausage like digit):inflammation of the entire digit.
Dactyl is the greek of digit.

Brittle nails



Raised red scaly patches on the extensor surface of the knee

Scleroderma

Telengictasia

Dermato-myositis

This patient complained from shoulder & hip muscle weakness. What's your diagnosis?

Dermatomyositis
You may see elevated CK...
Antibodies: ANA ,Anti jo-1 , Anti-SRB, Anti-Mi-2

Shawl sign .

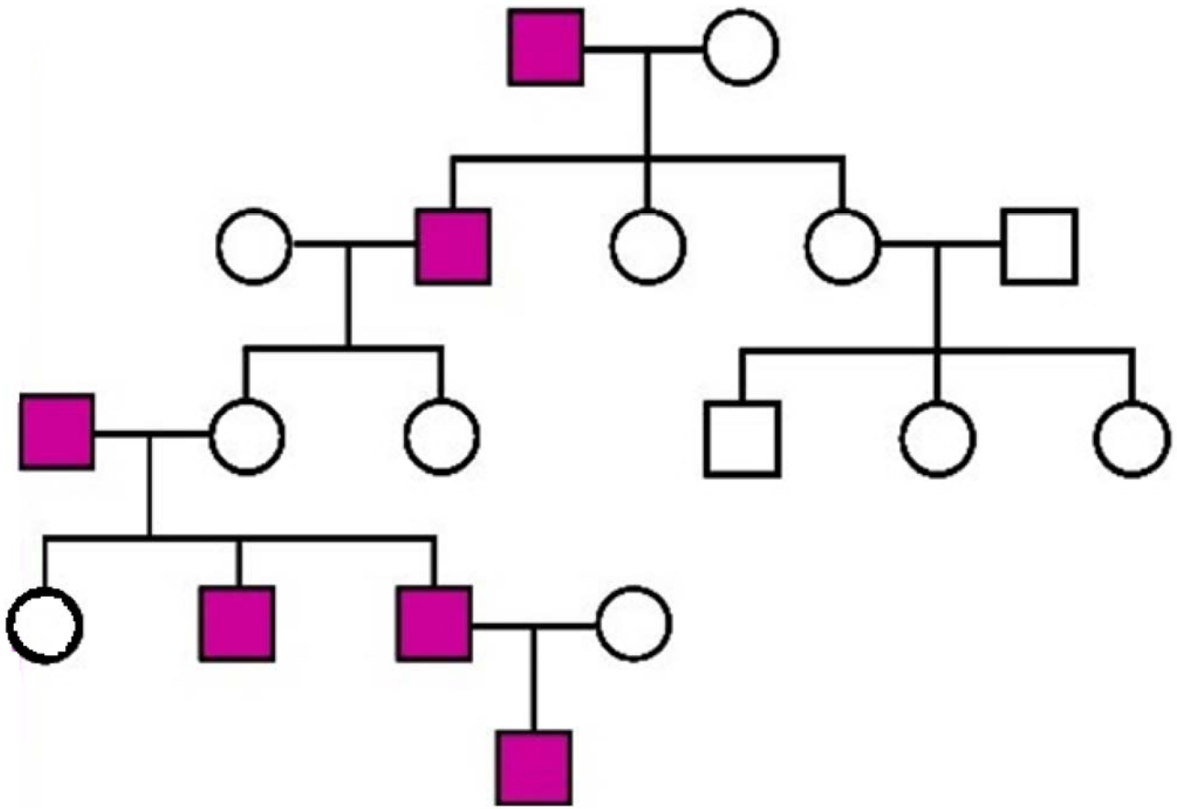
See also a picture of the V sign.

Heliotrope rash:periorbital rash.

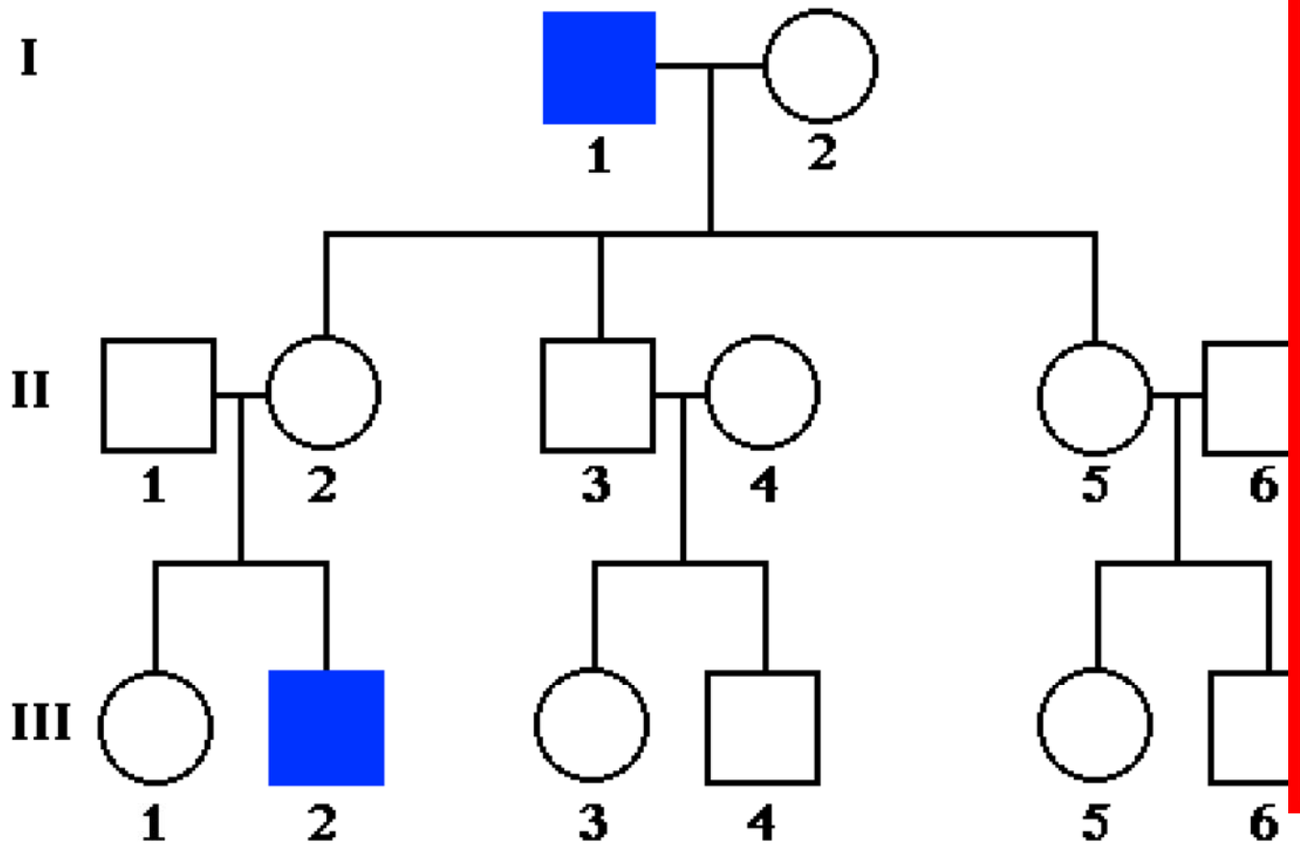
Gottron papule: papules on the knuckles.

Pedigrees

Y- inheritance

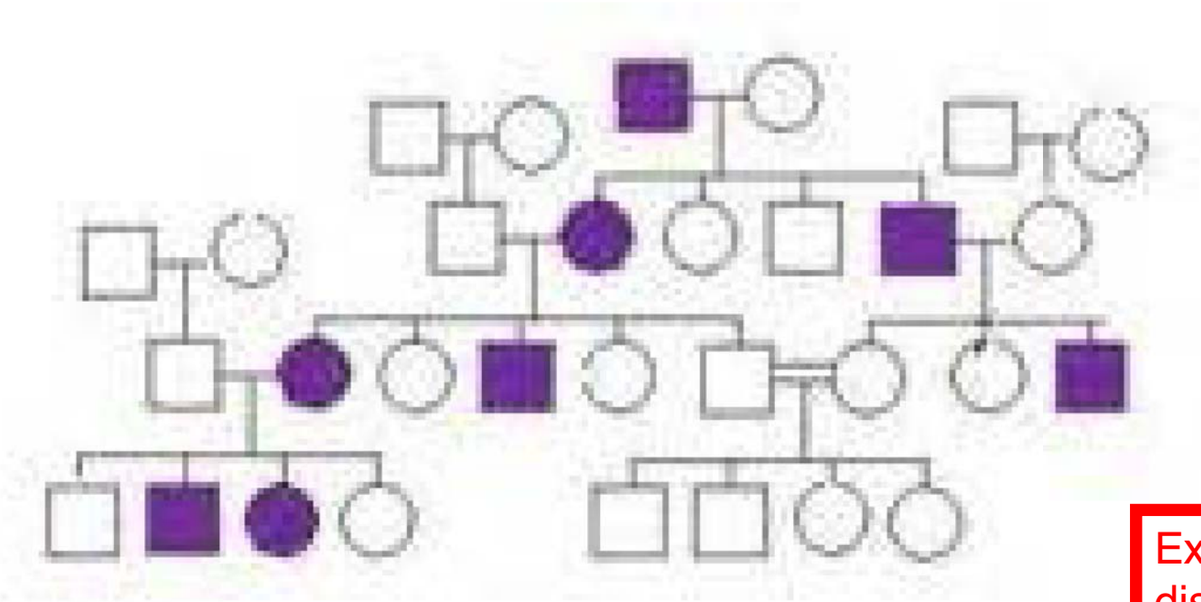


This is the pedigree of a boy presented with bleeding tendency.
What is the mode of inheritance? ***x linked recessive***
What is the diagnosis? ***could be hemophilia A***



Skipped generation:recessive
No male to male inheritance+ more male than female involvement = x-linked.
X-linked recessive disorder.
Hemophilia A(most common) : deficiency of facter VIII.,,,Increased PTT ,normal PT ,normal platelet count and bleeding time.
Ttt: recombinant factor replacement +desmopressin (icreases vWF release from weibel palade bodies.)
Hemophilia B: resembles A except that the deficiency is in factor IX .
hemophilia C:factor XI , common in jews.

What is inheritance pattern in this family pedigree ? ***autosomal dominant***



No skipped generation
=dominant.
male to male=autosomal.

Example for autosomal dominant diseases: Huntington,,,marfans....

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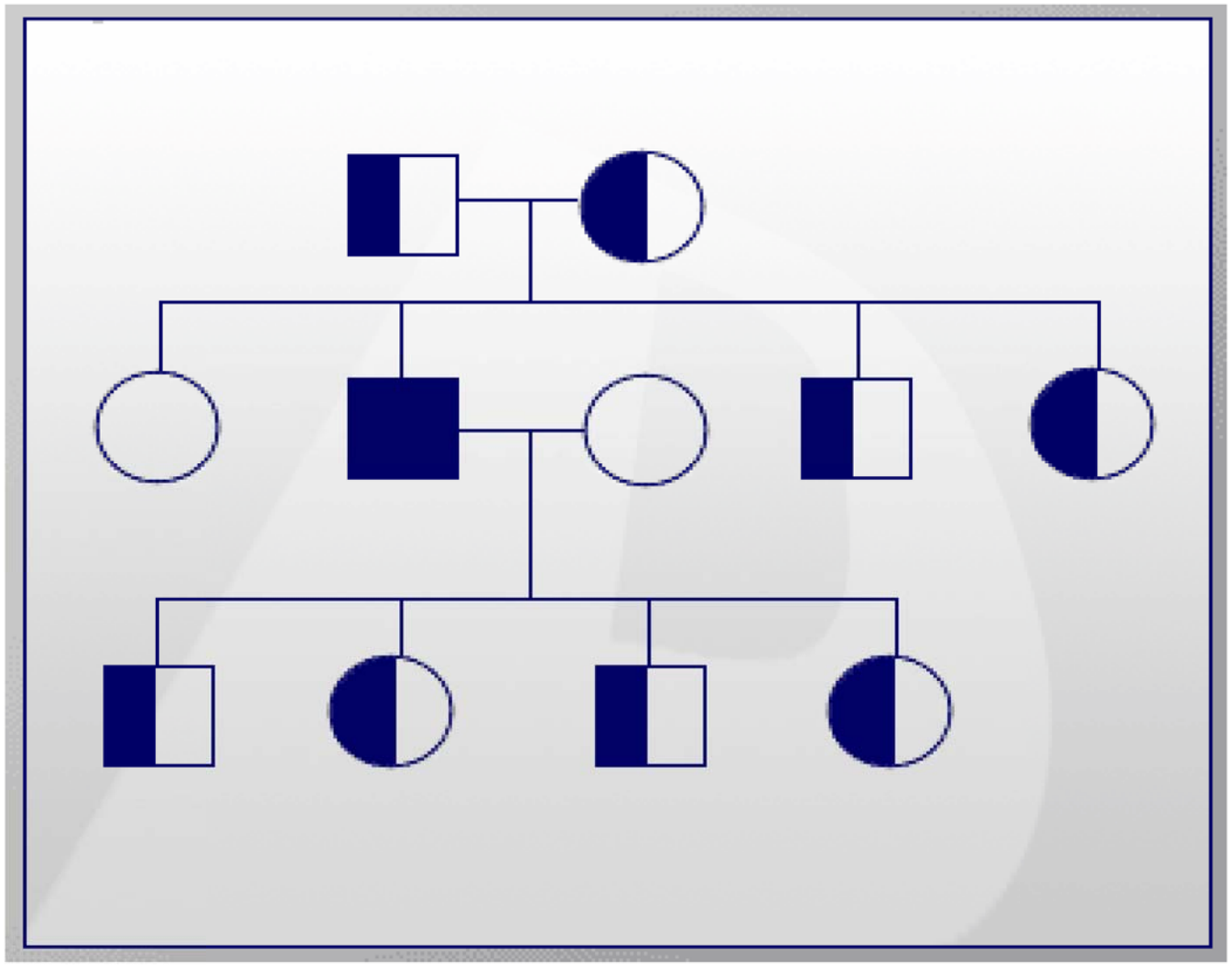
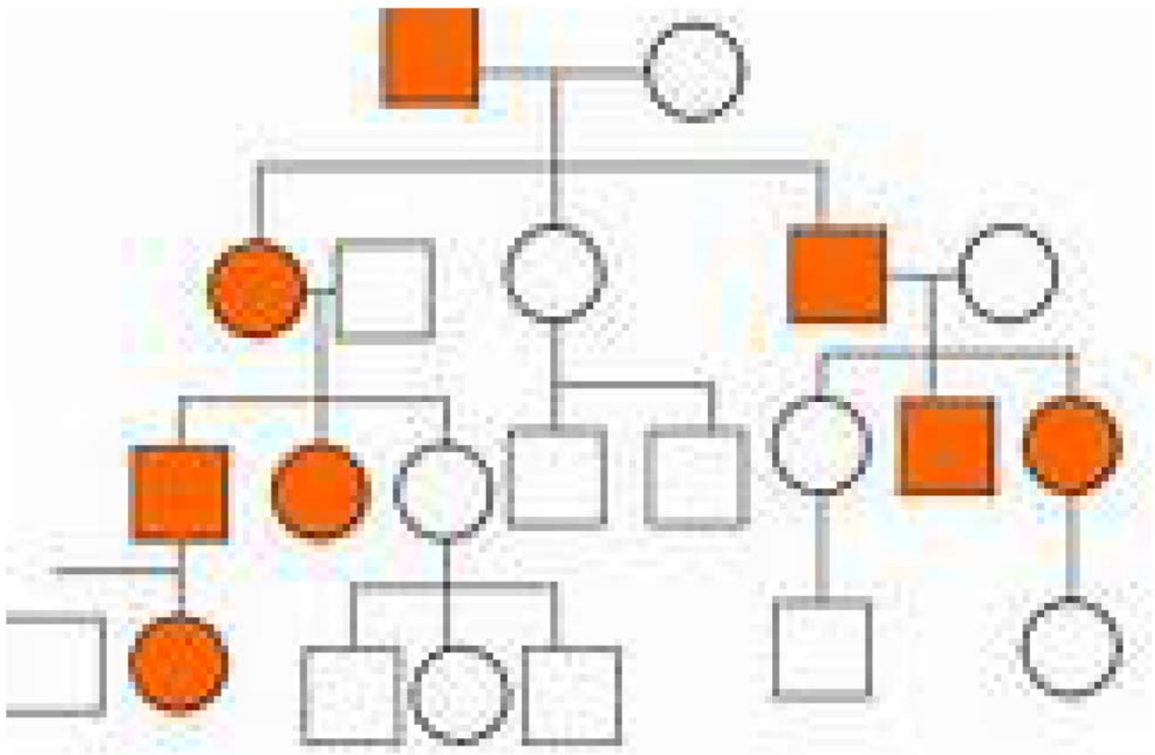
What is the mode of inheritance? ***autosomal recessive***



What is the mode of inheritance in this family pedigree ?
- mention an example of hemolytic anemia has this mode of inheritance.

Also you can also say hereditary spherocytosis ,,,,

autosomal dominant
alpha thalassemia



Pulmonary System

Also Bronchiectasis+empyema.
If he said mention a cardiac disease that causes it you can say: any right to left shunt can cause it ,,e.g. tetralogy of the fallot ,,,,eisenmenger 2ndary to left to right shunt

Mention 2 lung diseases that cause this abnormality in smokers:

-Lung CA

-Lung Fibrosis

-Pulmonary Infections

Drumstick: stage 4 clubbing

DON'T SAY COPD

The doctor in this picture examine the JVP ?

- what is the condition that cause elevated <u>non- pulsatile JVP</u> ? **Superior Vena Cava Obstruction**

- Normally, If the doctor compress on the root of neck , JVP will --------- disappear

- if he gently compress on patient's abdomen, the JVP will ----- increase

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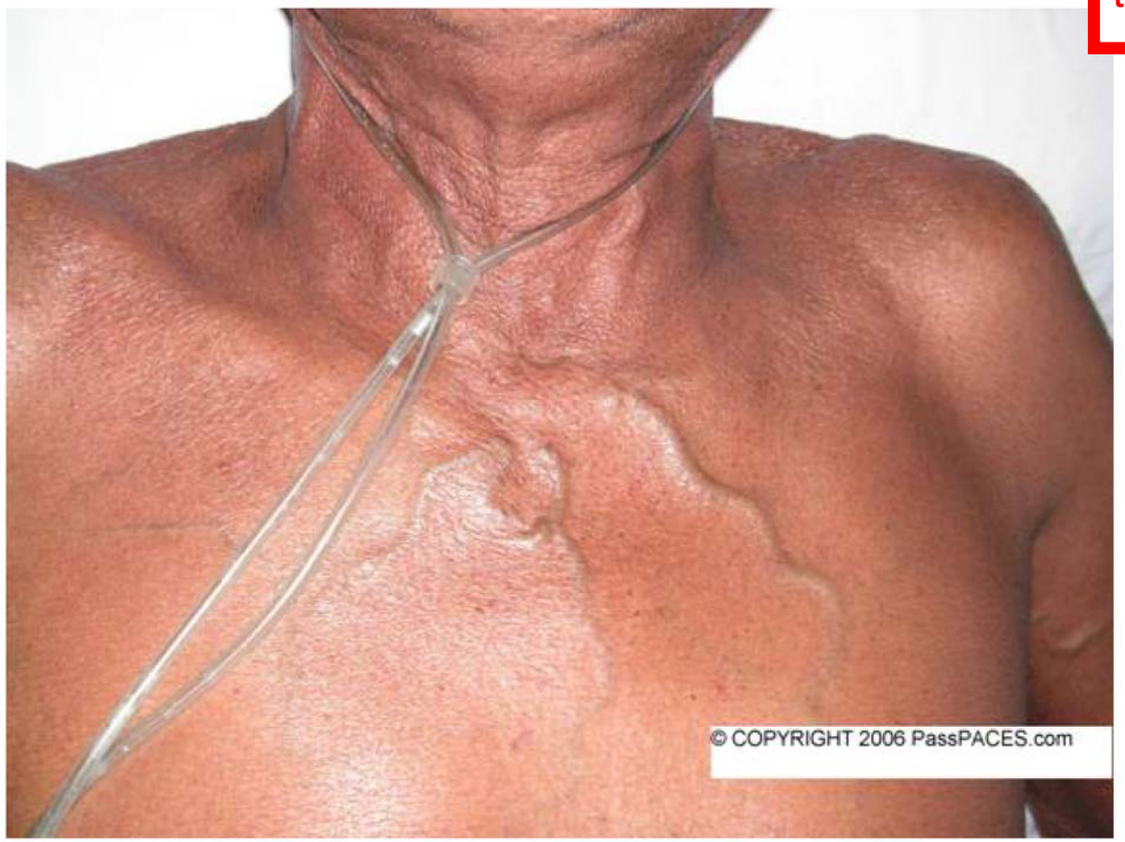
a 60 y/o male has lung Cancer ?
what is the condition in such patient that cause elevated non- pulsatile JVP ? Superior vena cava obstruction

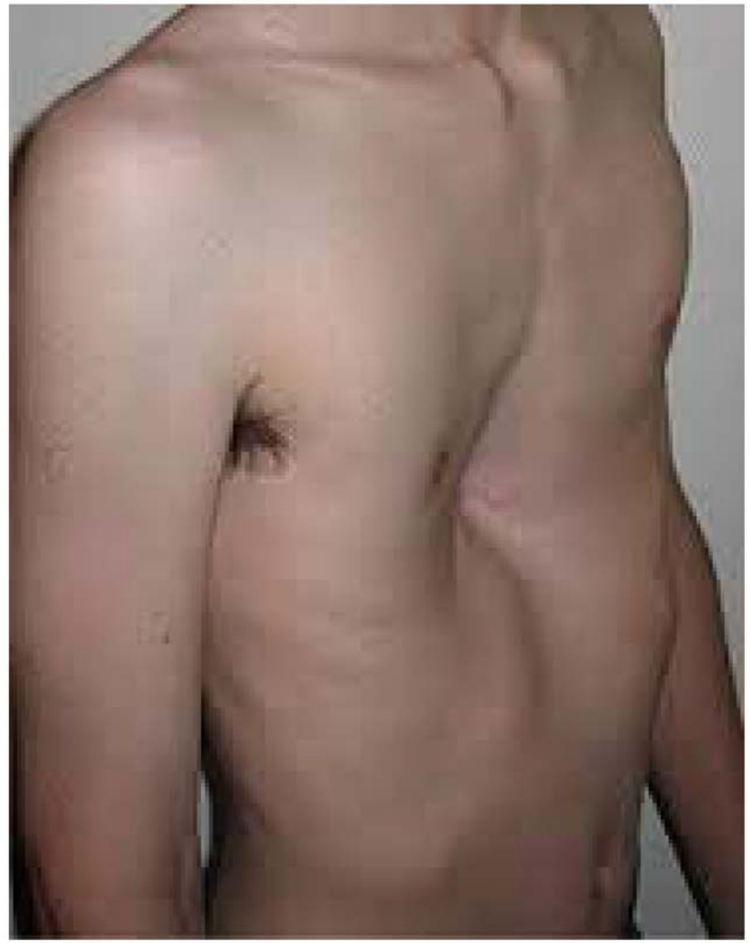
In 90% of cases secondary to lung cancer (most likely broncogenic cancer then pancoast tumor)



Name These Findings

Scoliosis

Pectus Excavatum



- **Match the color sputum with the cell that cause its color .**

- Red cell lysis (rusty red)

- Live neutrophils (yellow)

- Dead neutrophils (green)

Pneumococcal pneumonia

When neutrophils die they release the enzyme verdoperoxidase which is greenish.

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Dont worry about this ,,,we will provide you with a detailed summary for this subject.

ABG

This ABG is from patient presented to ER C/O vomiting & SOB?
What are the metabolic disturbances ?
Mixed alkalosis

PH	**7.62**
PCO2	28.5
HCO3	30
PO2	234 (FIO2 50%)

Patient presented to ER c/o vomiting what is the metabolic disturbance ?
Mixed alkalosis

Anion gap= Na+ -(HCO3- + Cl-)
Normally 8-12

PH	**7.62**
PCO2	28.5
HCO3	30
PO2	234 (FIO2 50%)
HCO2 excess	8.2
Na	132
Cl	90
K	2
Glucose	12.7 (X18)
Lactate	1.1 (<1.3)

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40 y/o RA, complain of epigastric pain & vomiting, she is already on Aspirin?
Mention 2 metabolic disturbance caused by Aspirin ?

aspirin toxicity causes initial respiratory alkalosis then later metabolic acidosis

PH	7.7
PaCO2	25
PaO2	85
HCO3	30
Na+	135
Cl-	88
ALBUMIN	4

This is a case of mixed respiratory alkalosis(acute effect of aspirin i.e.hyperventilation.)+metabolic alkalosis(vomiting)

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- 40 y/o RA, complain of epigastric pain & vomiting, she is already on Aspirin.
- What is the metabolic disturbances in this patient?

PH	**7.7**
PaCO2	**25**
PaO2	**85**
HCO3	**30**
Na+	**135**
Cl-	**88**
ALBUMIN	**4**

18 year-old comatose, quadriplegic patient who has the following ABG done as part of a medical workup:

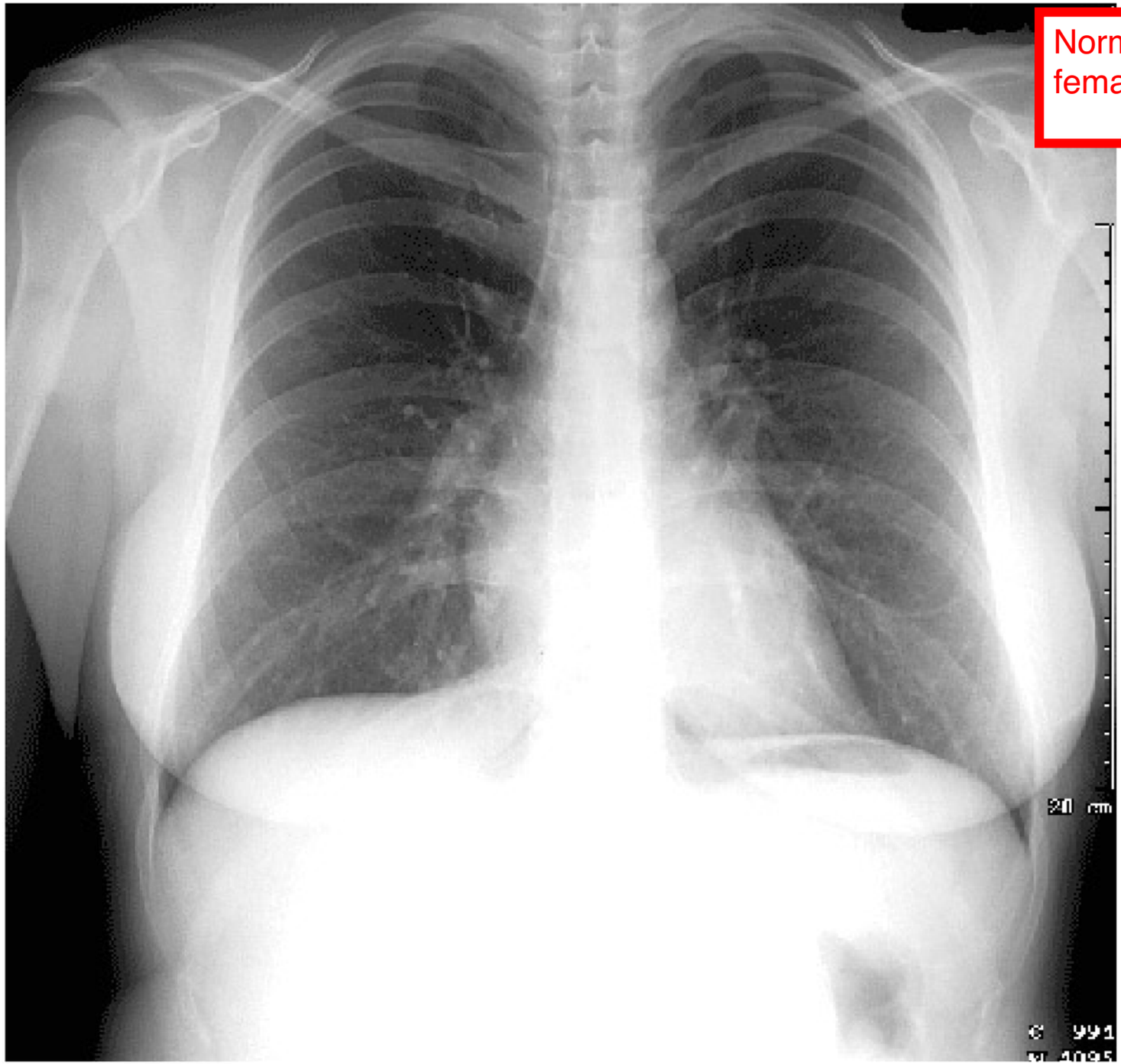
- What is the Acid base disturbance?

Respiratory alkalosis with metabolic compensation

pH	7.48
C02	22
p02	96
HC03	16
Sa02	98%

Chest X-Ray

- Projection (PA, AP)
- Orientation
- Penetration
- Rotation
- Inspiration
- Lung, trachea, Hilum, mediastinum
- Heart, Aorta, pulmonary
- Bone

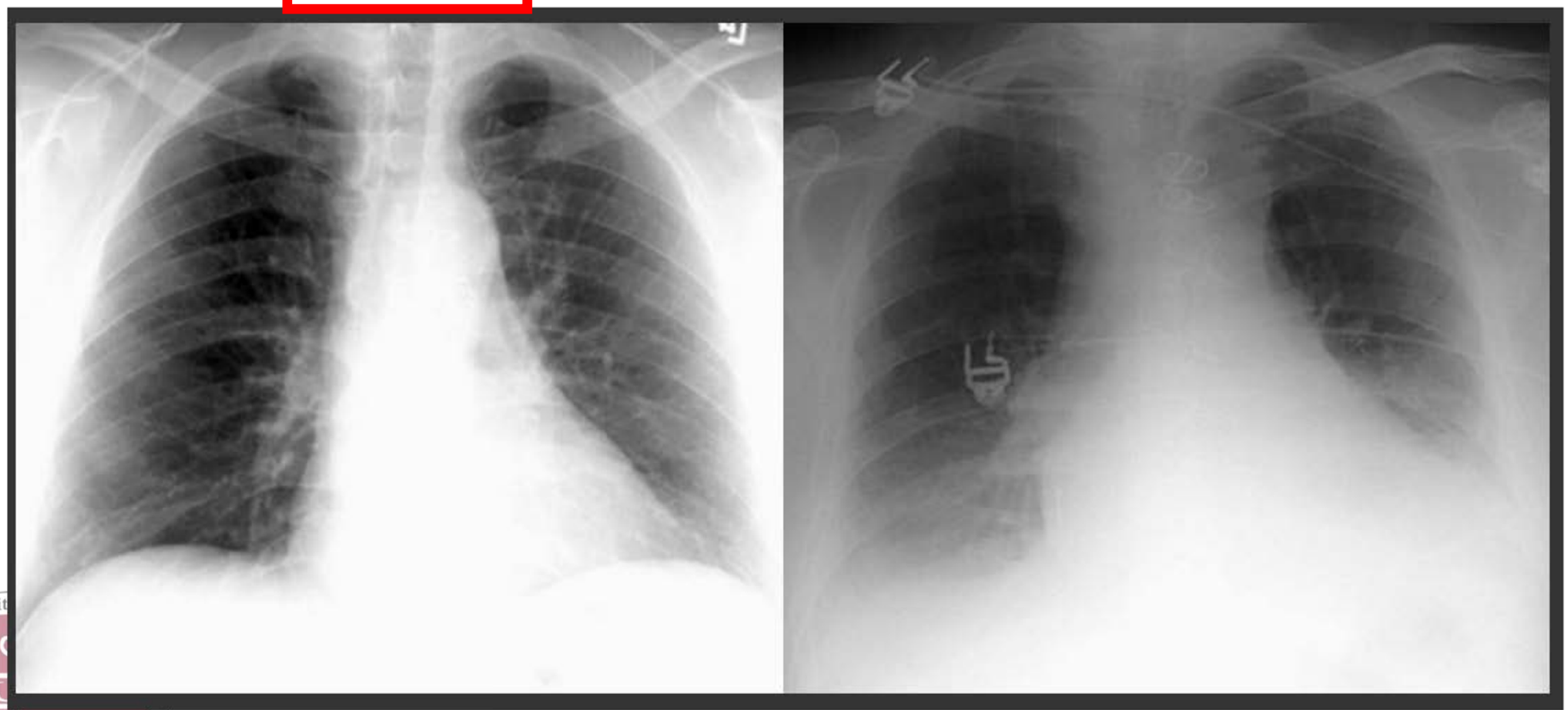


Normal chest x-Ray for a female.

Projection

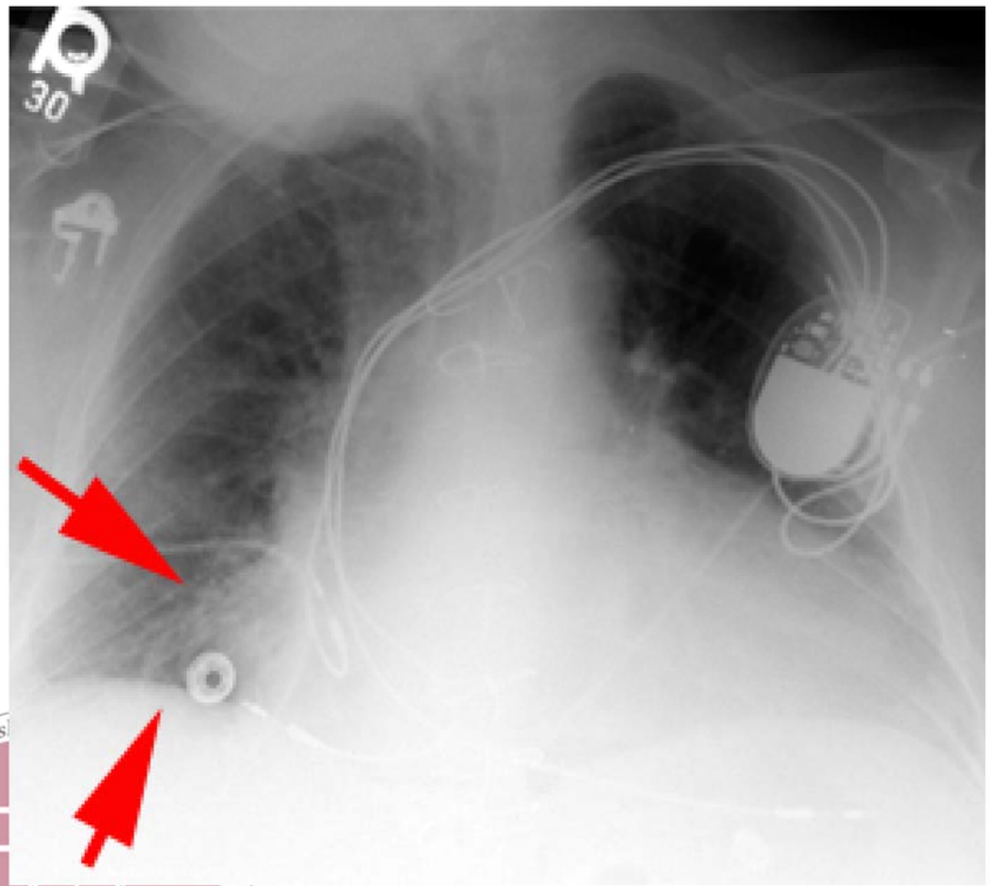
PA

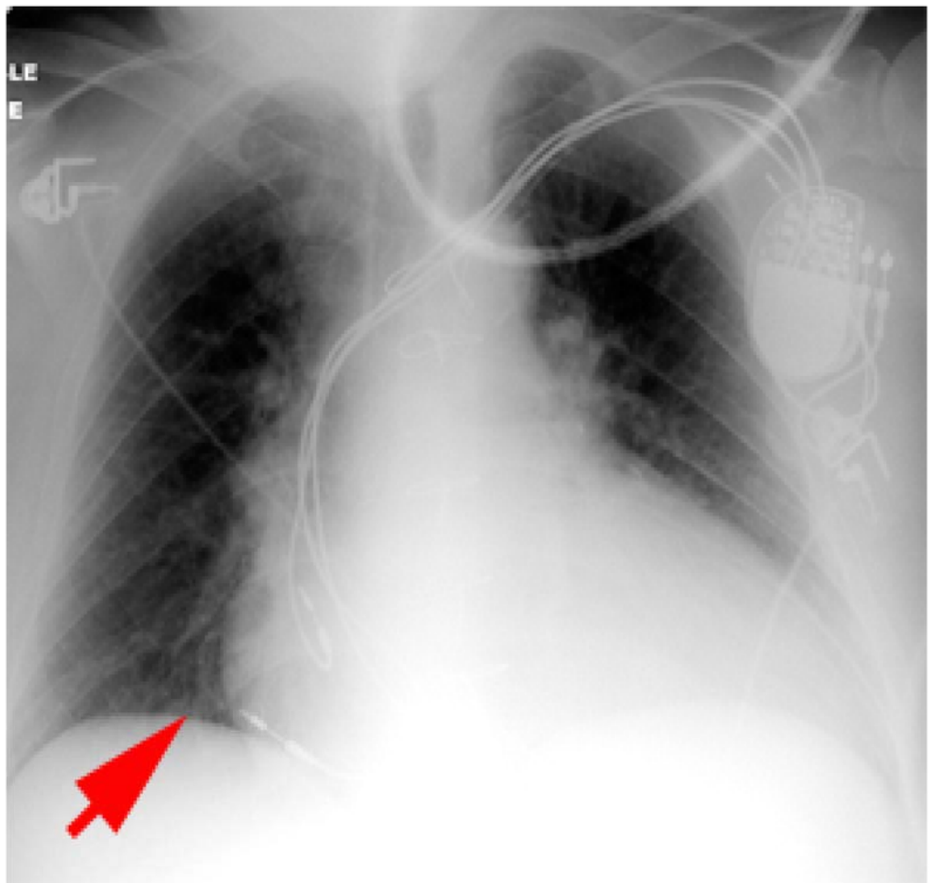
AP: magnification of the heart ya kbeer.



inspiration

Adequate inspiration: 8-10 posterior ribs should be able to count .
Some resources consider 8 posterior ribs as inadequate.





Penetration

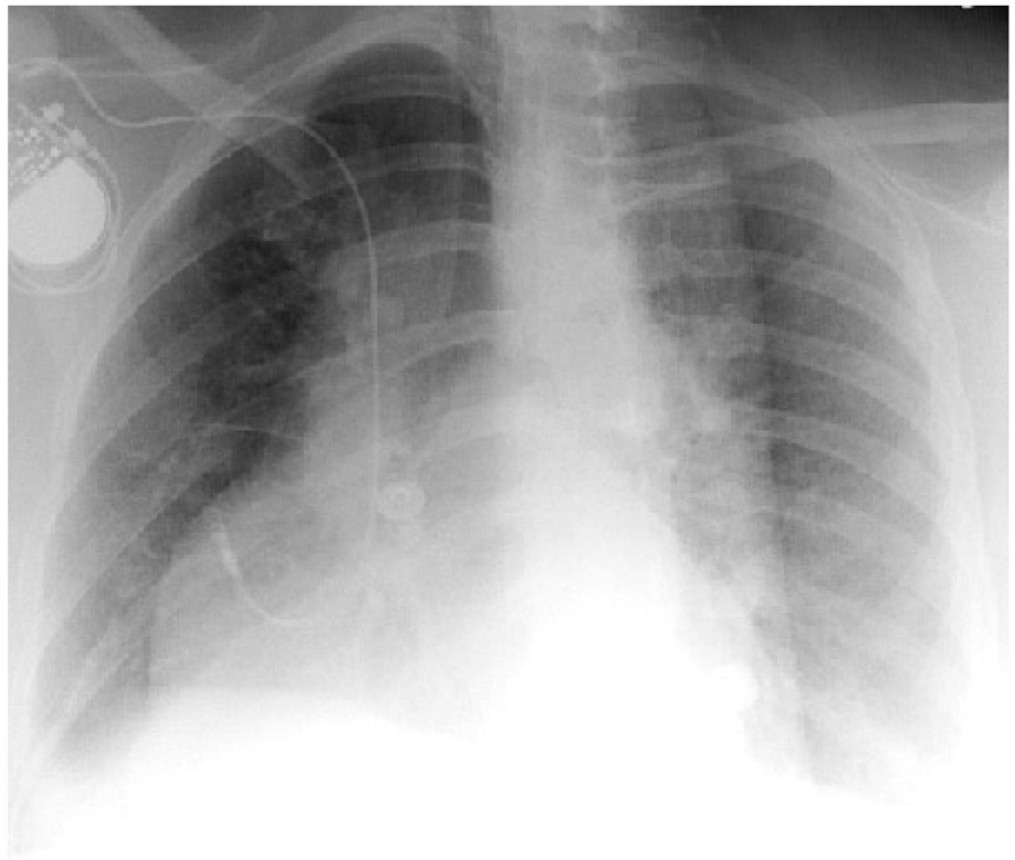
Vertebrae behind the heart are normally (barely) seen.
According to william herring.

Overpenetration

Underexposure

Rotation

Lock at the clavicle,,,,
The patient is rotated to the right.
Rule:If the spinous process appears closer to the medial end of tbe right clavicle, the patient is rotated to his or her own left side ,,,and vice-versa.



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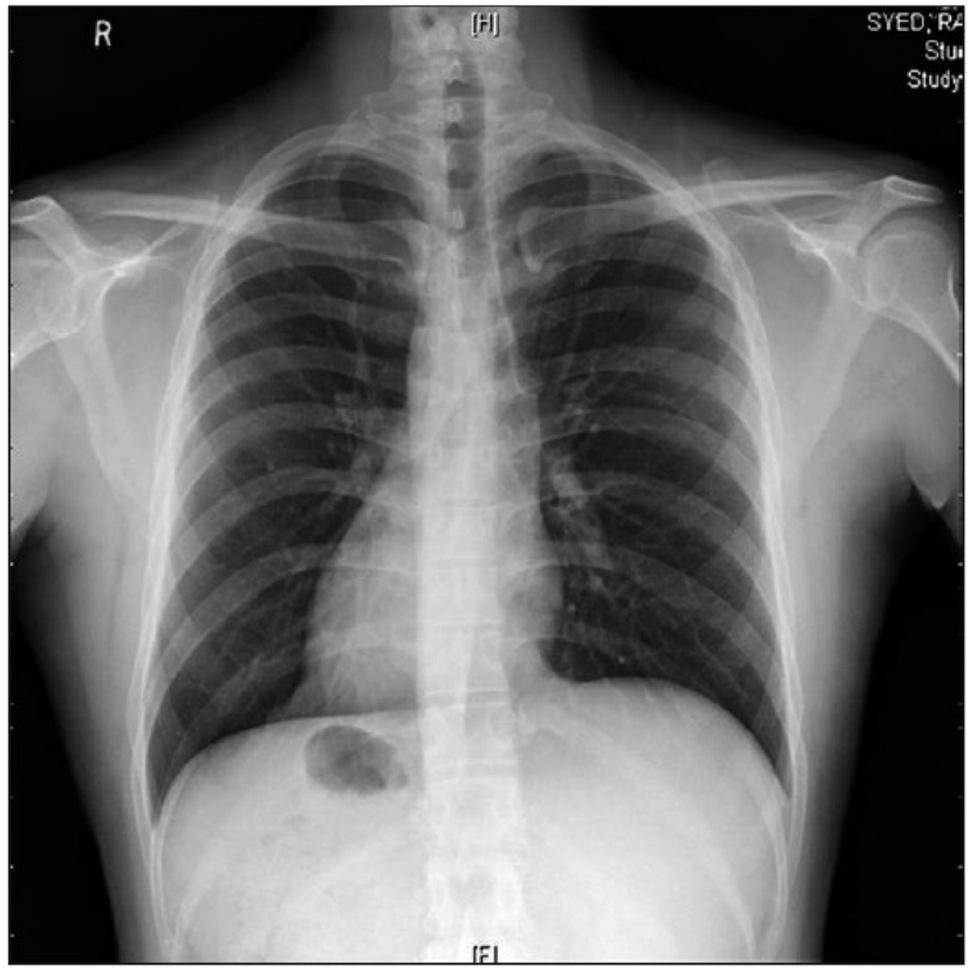
Orientation

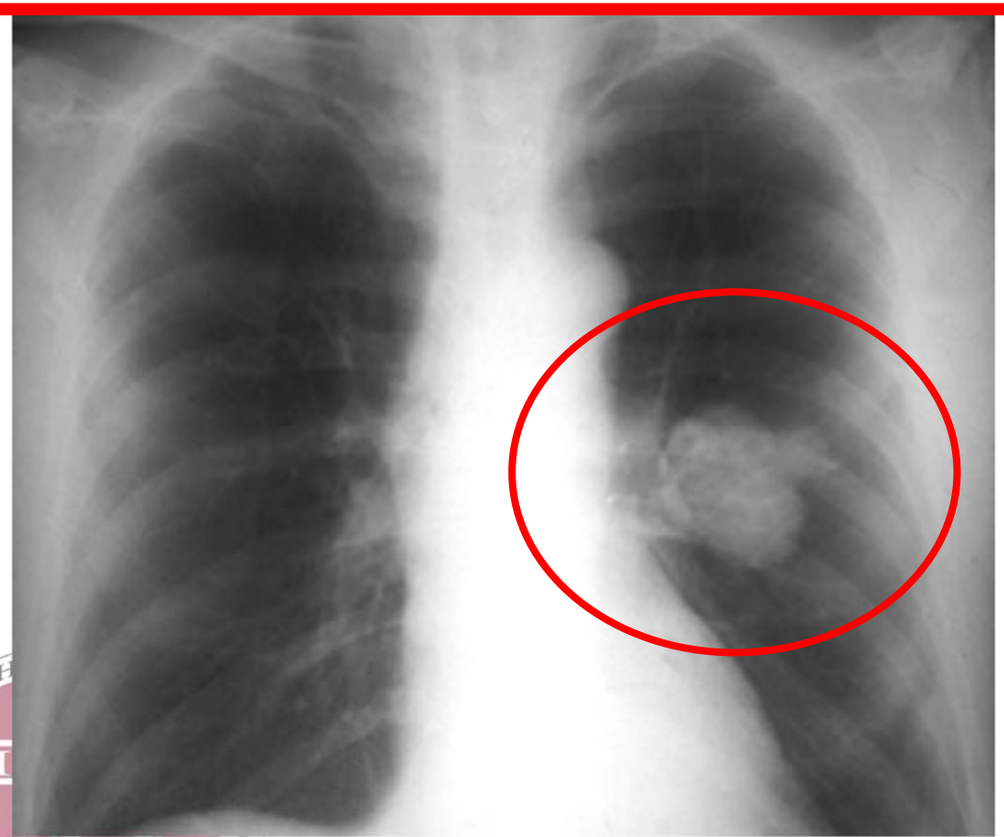
Dextrocardia.

Situs inversus.



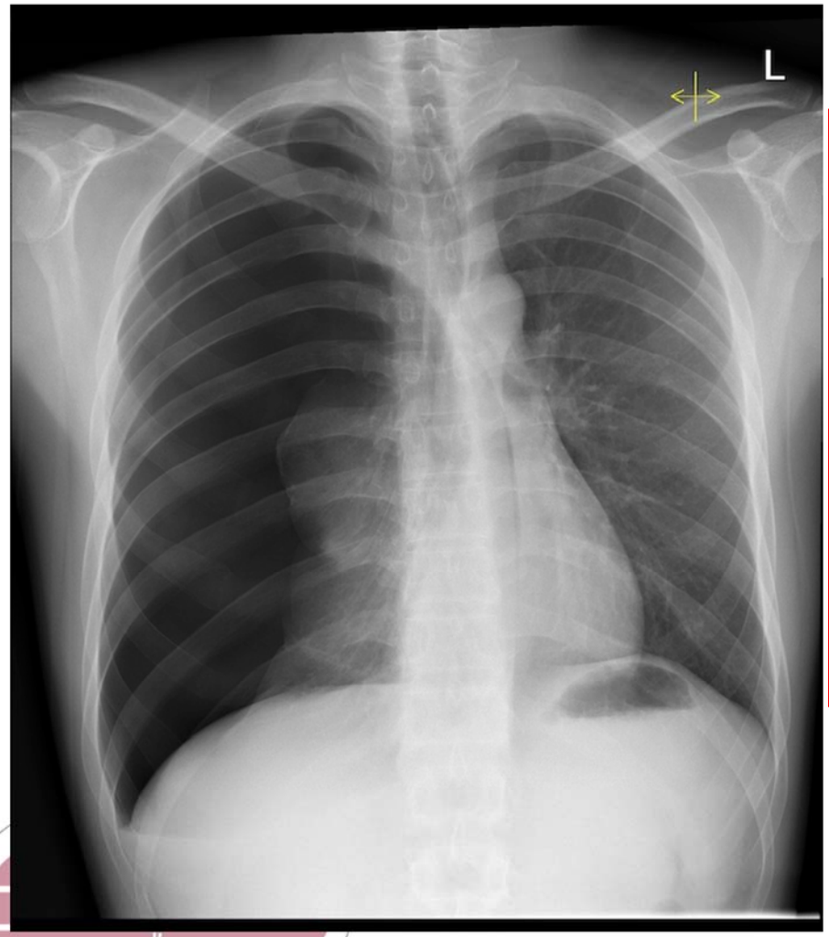
Mass Vs infiltrate

According to william herring if the lung mass is greater than 5cm ,,,it's 95% malignant.

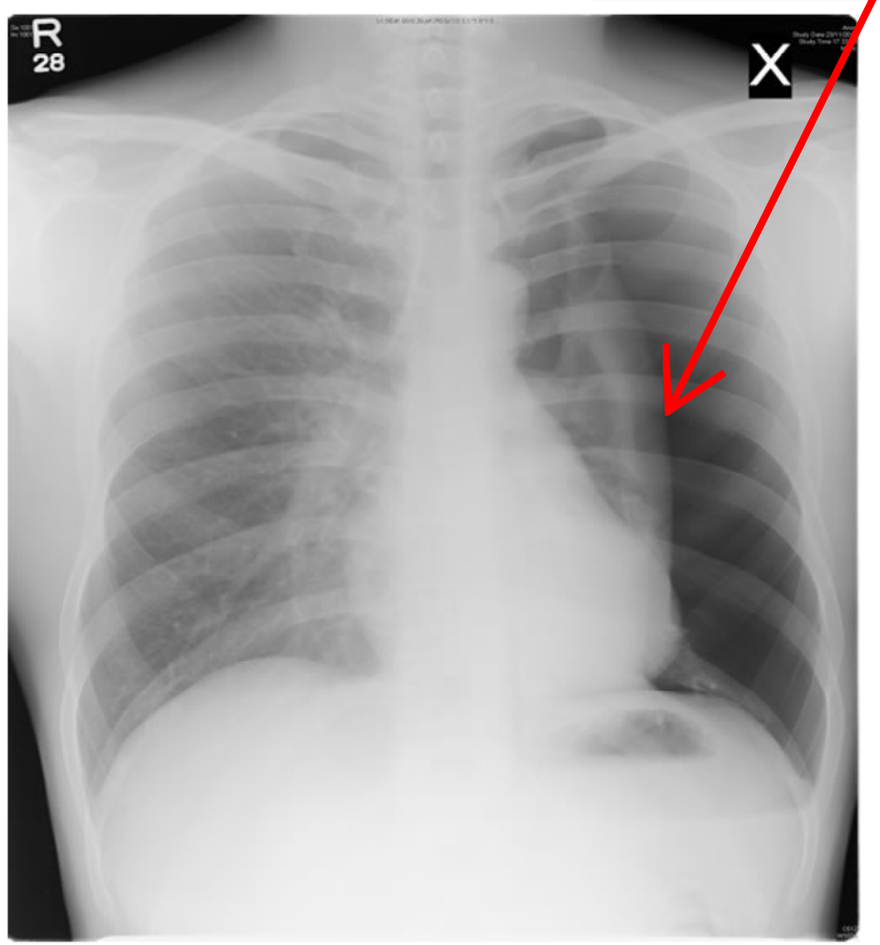


Middle lung zone pneumonia.

Pneumothorax (tension Vs simple)



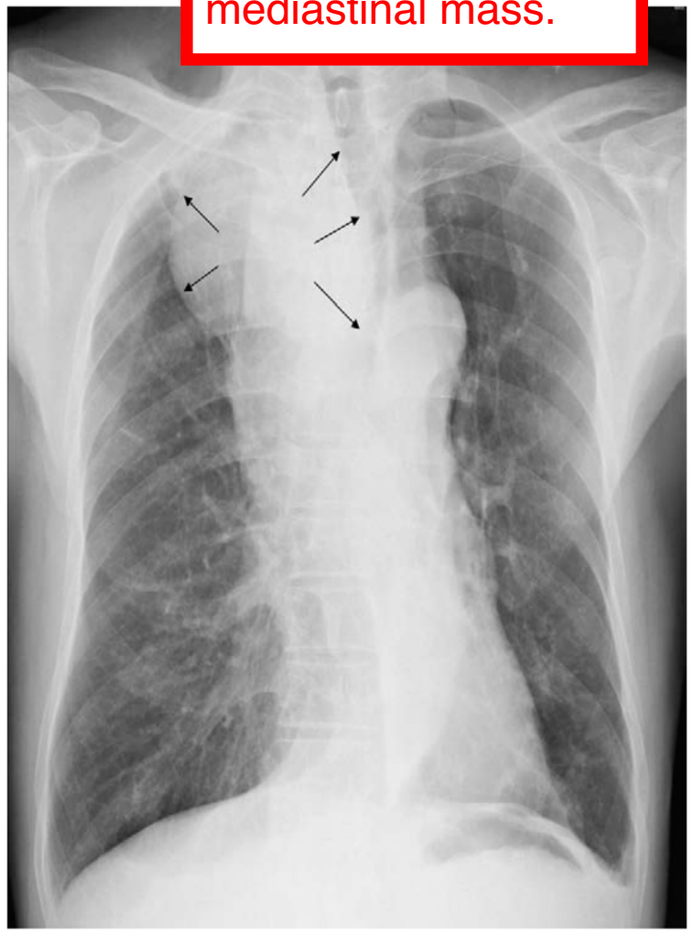
Mediastinal shift to the opposite side,,,tension....
The right border of the heart should be an inch from the spine.
Here it's not seen.
Note the tracheal deviation also.



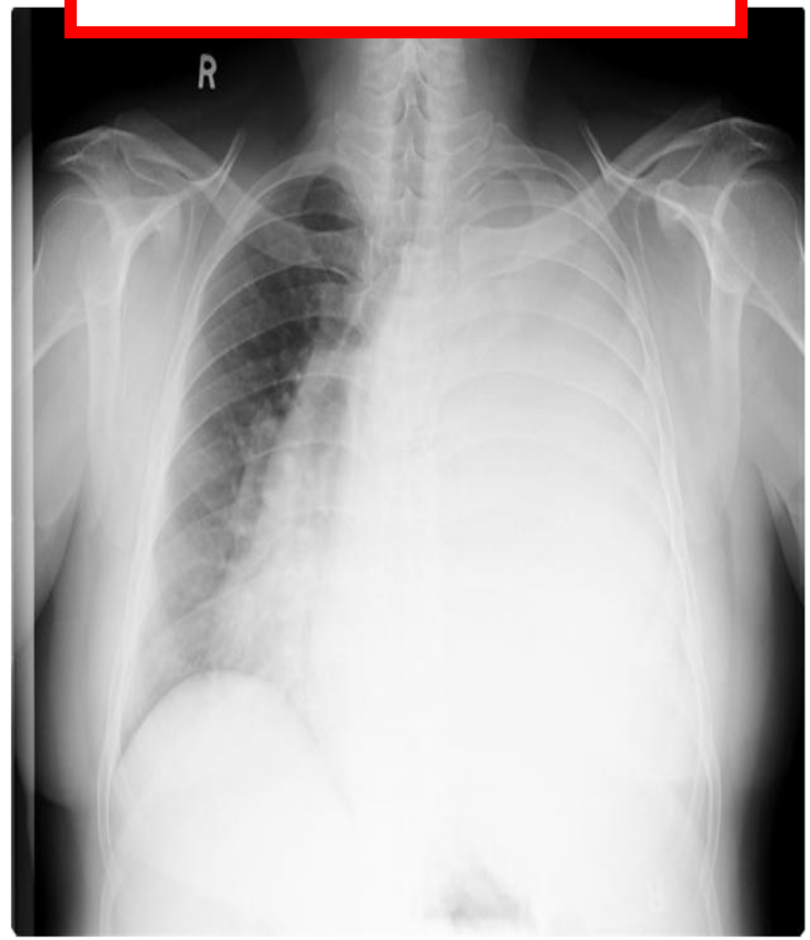
Pleural line....no deviation,, simple pneumothorax.

Tracheal deviation

Opacified hemithorax with ipsilateral mediastinal shift..., Most likely right lung collapse.

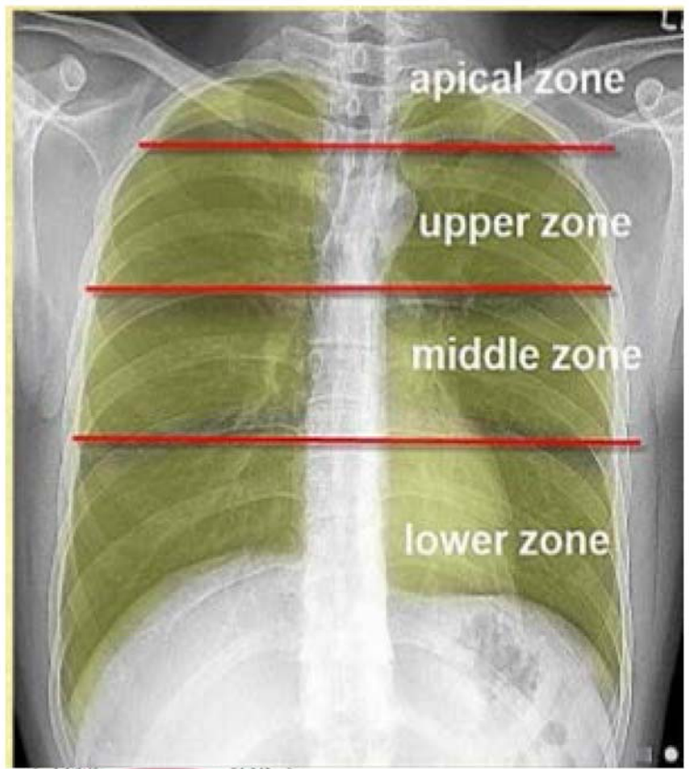


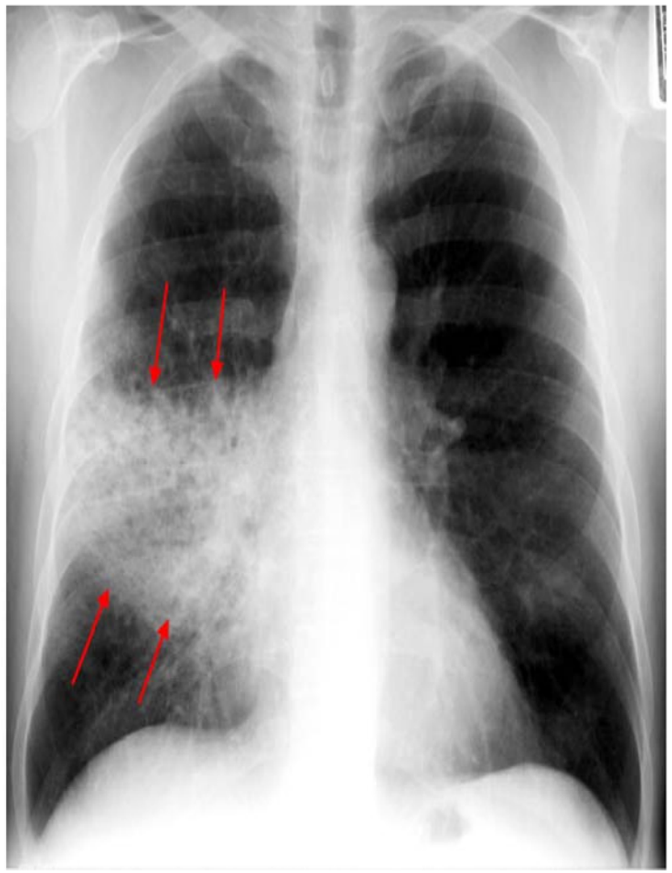
Most likely Pancoast tumor.
Note that goiter can cause tracheal deviation ....but it's an anterior mediastinal mass.

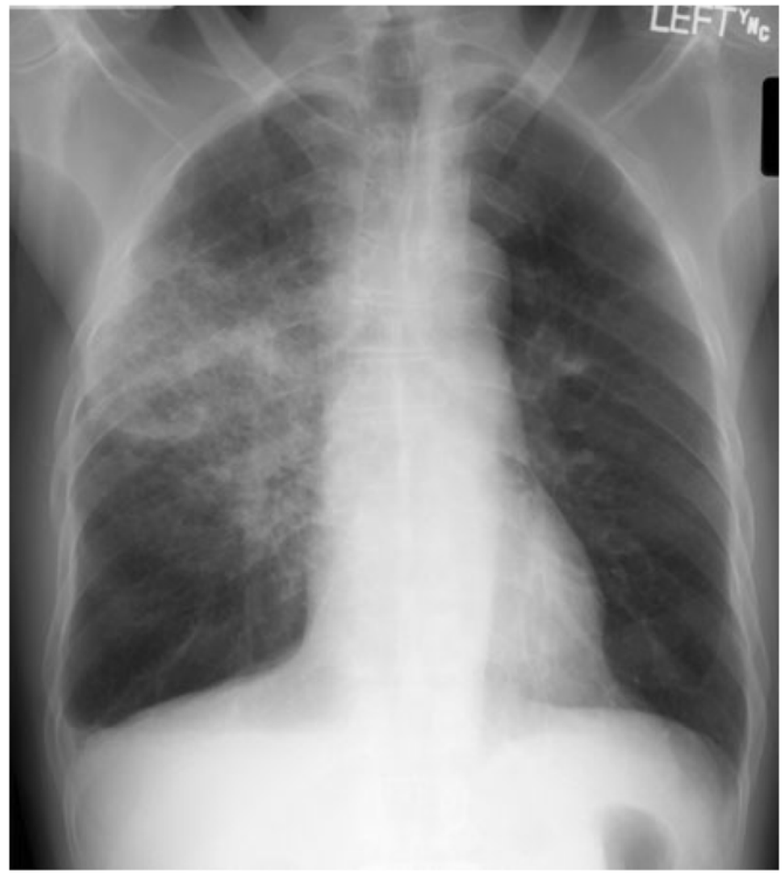


Left Opacified hemithorax with opposite mediatinal shift, most likely left massive pleural effusion.

Which Zone ? Which Lobe ?







Pulmonary Edema

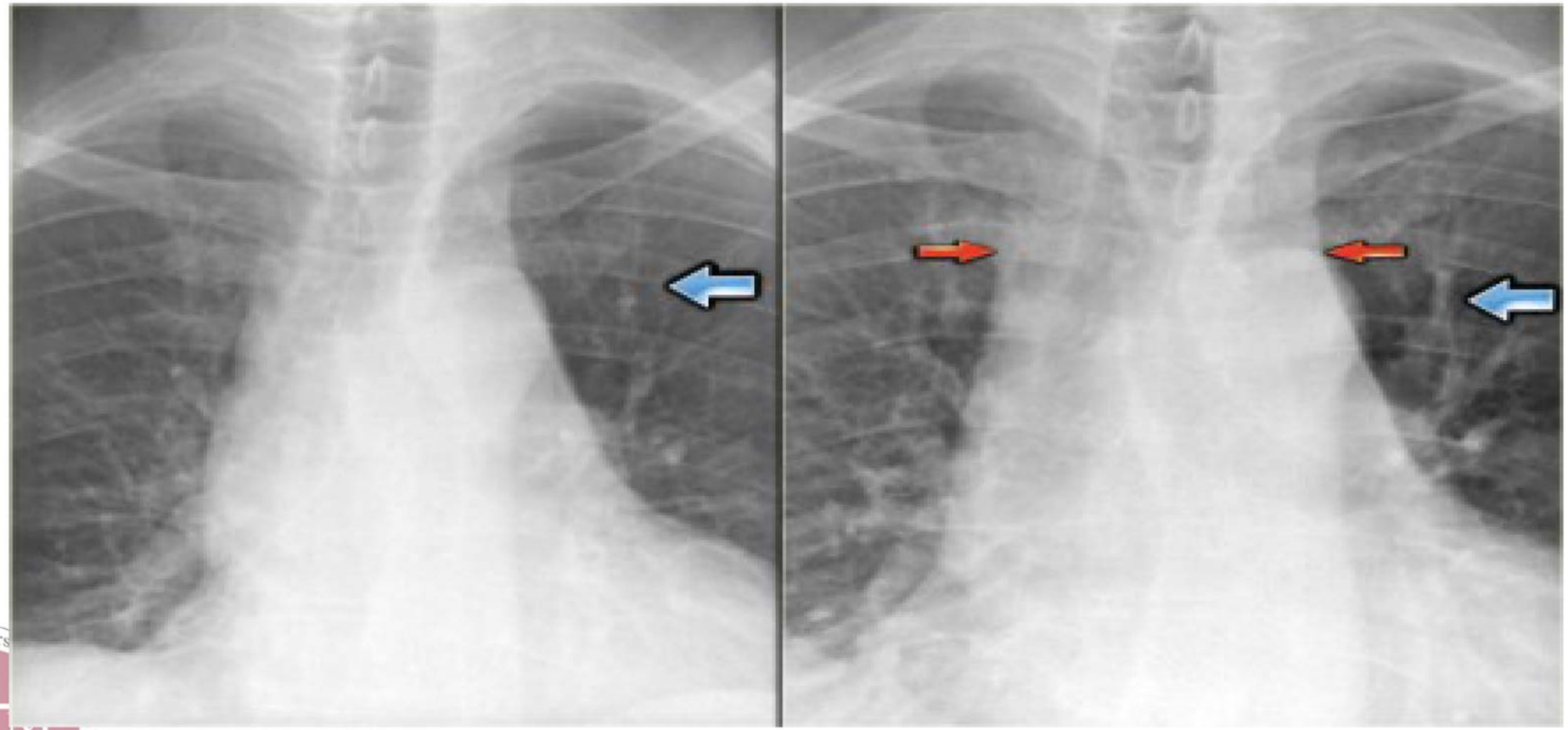
Stage of Congestive Heart Failure		
Stage 1 Redistribution PCWP 13-18 mmHg	→	Redistribution pulmonary vessels Cardiomegaly Broad vascular pedicle (non acute CHF)
Stage 2 Interstitial edema PCWP 18-25 mmHg	→	Kerley lines Peribronchial cuffing Hazy contour of vessels Thickened interlobar fissure
Stage 3 Alveolar edema PCWP > 25 mmHg	→	Consolidation Air bronchogram Cottonwool appearance Pleural effusion

Cardiomegaly

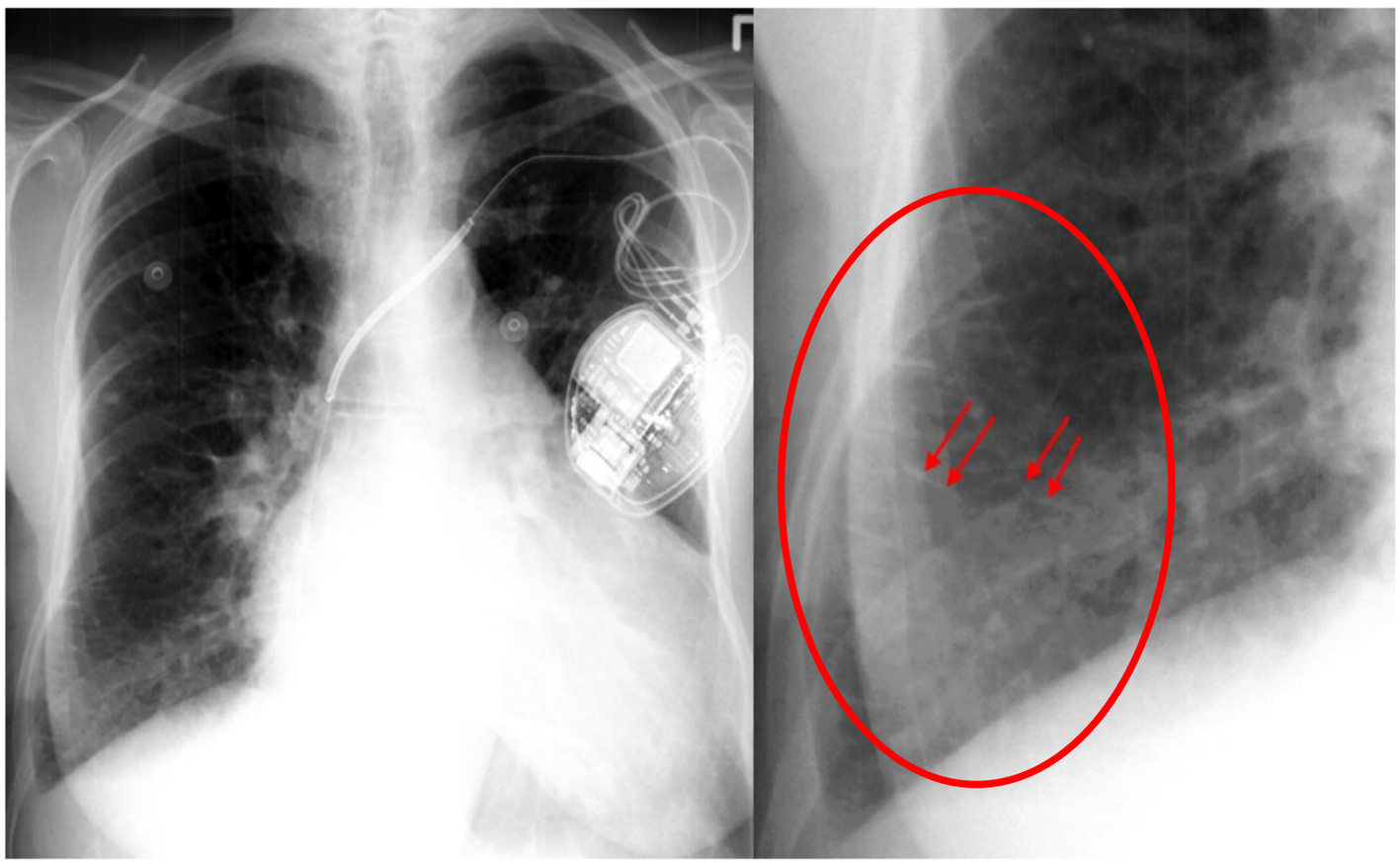
Cardiothoracic ratio more than 50%

Cephalization

Bronchopulmonary markers are directed toward the head,,,,may incdicate CHF.

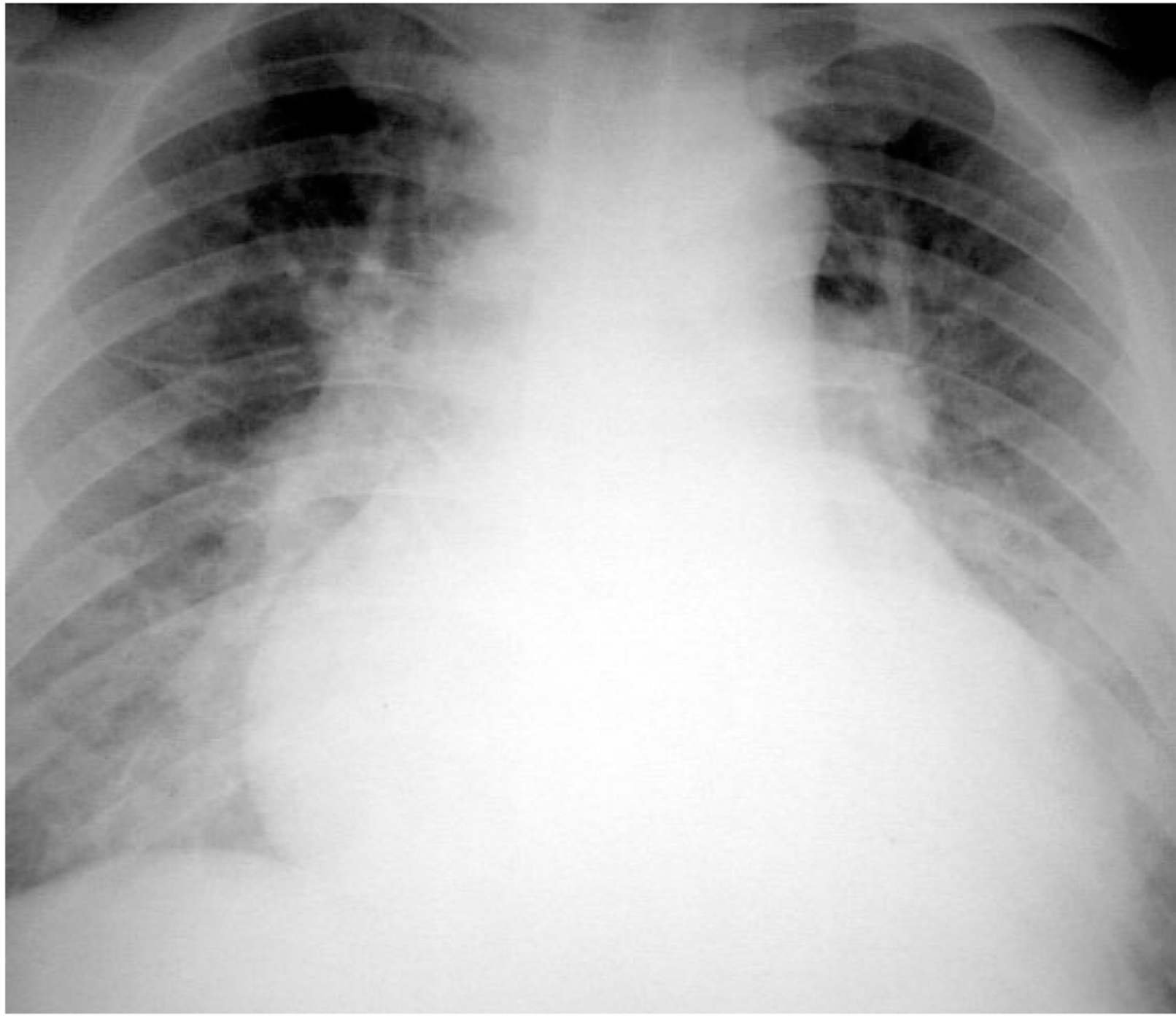


Kerley B lines



Perihilar ...bat wings appearance

Alveolar edema



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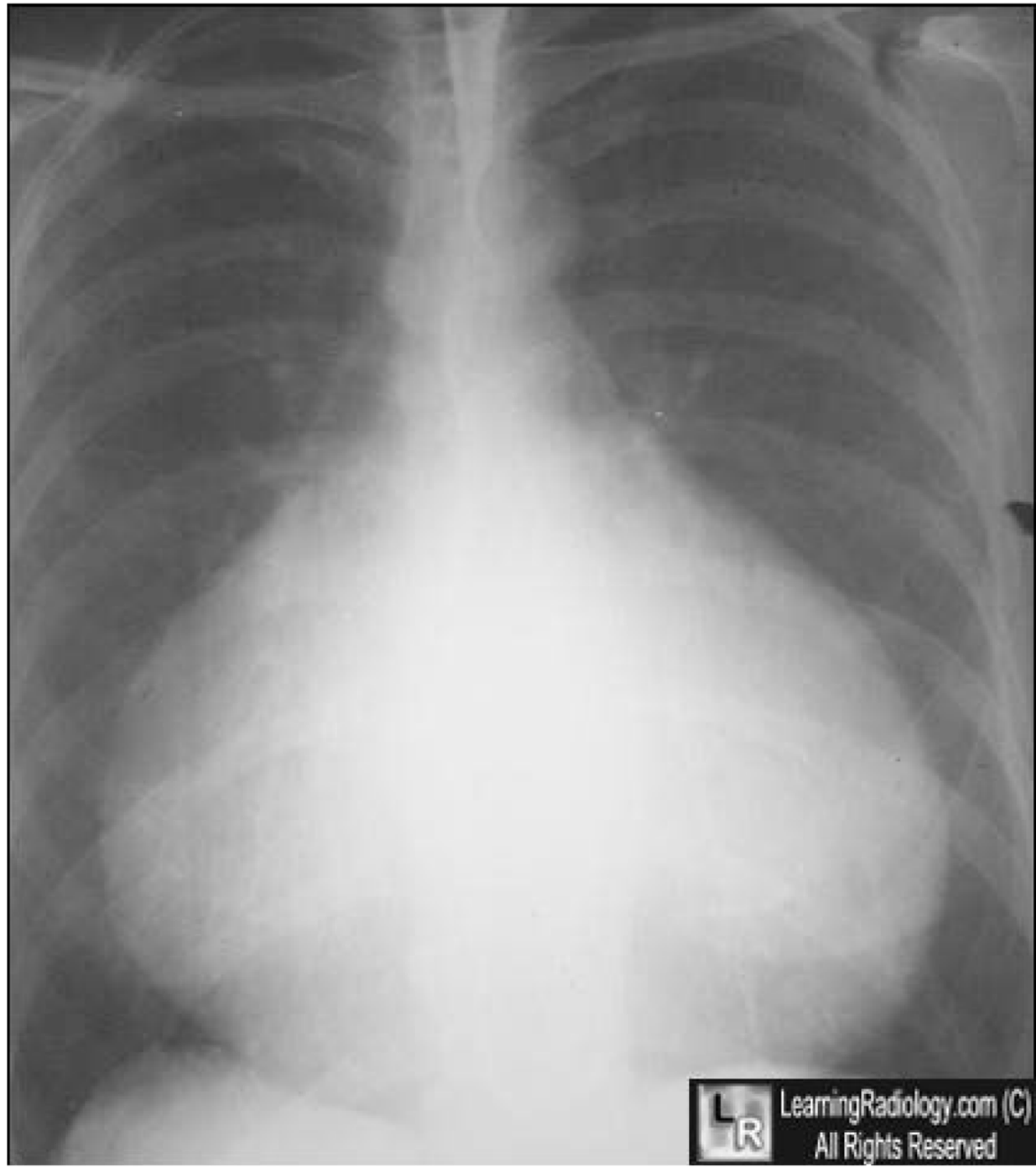
Water bottle appearance,,,

Pericardial Effusion



Boot Shape heart (Tetralogy Of Fallot)

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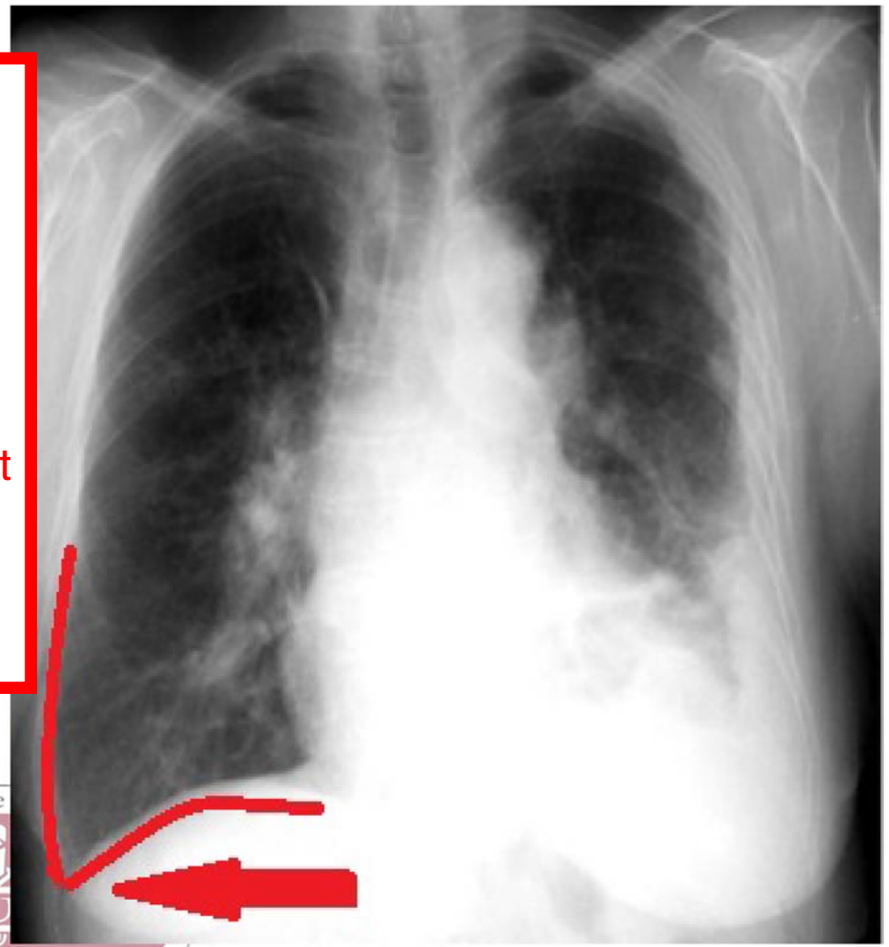
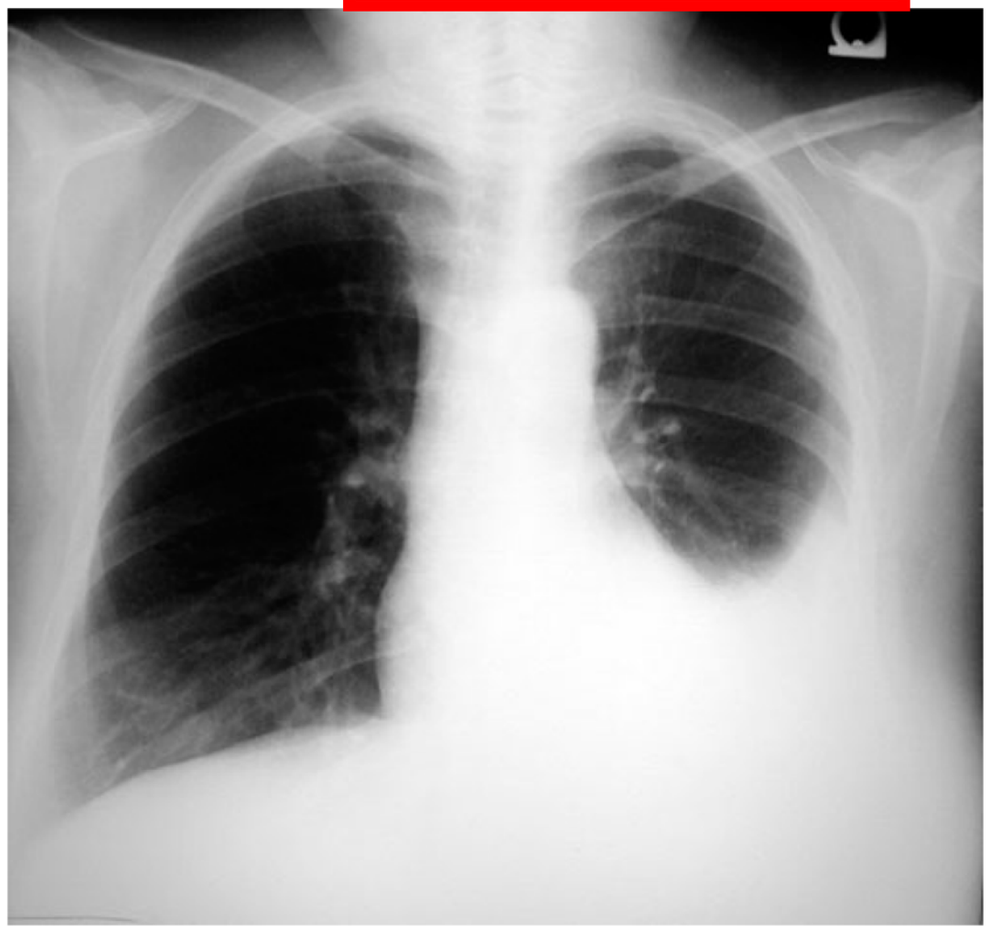
Pleural effusion Vs infiltration

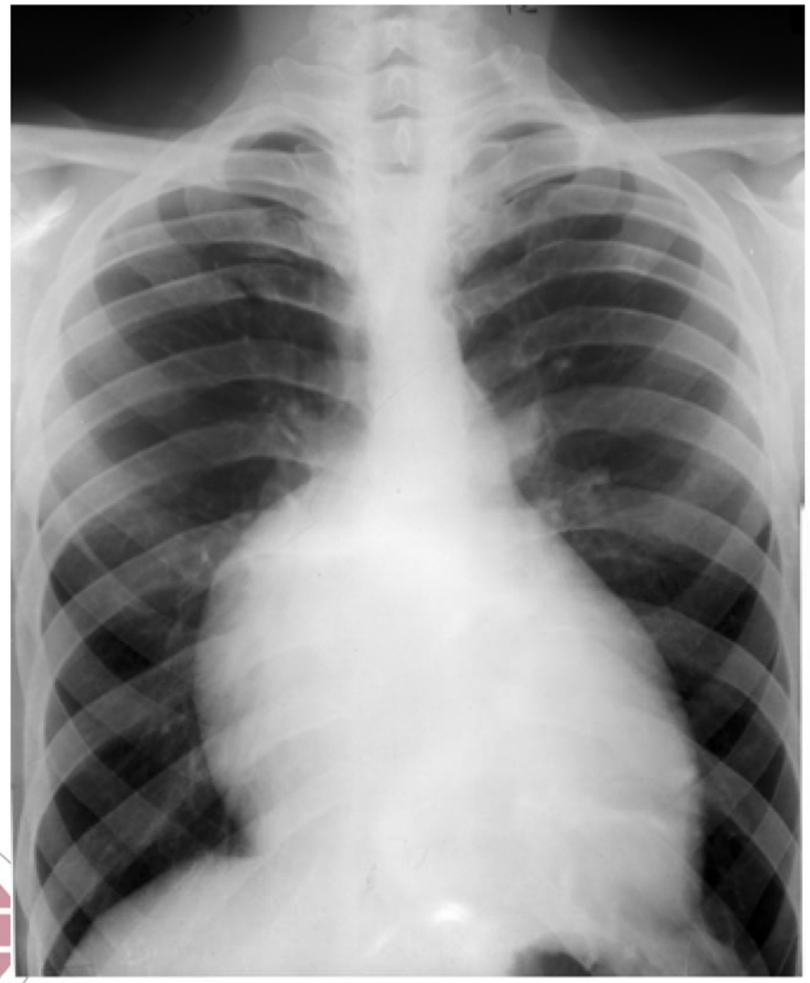
It looks like deep sulcus sign of pneumothorax.... But i don't know what the shit in the left lung is.



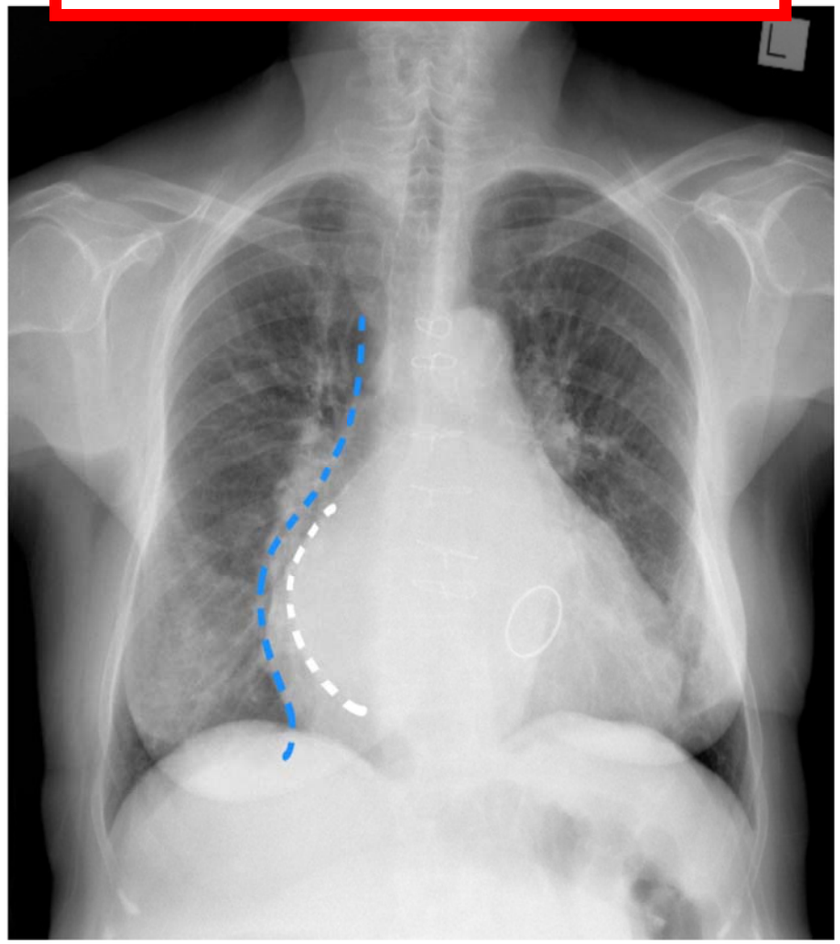
Meniscus sign.
Pleural effusion.



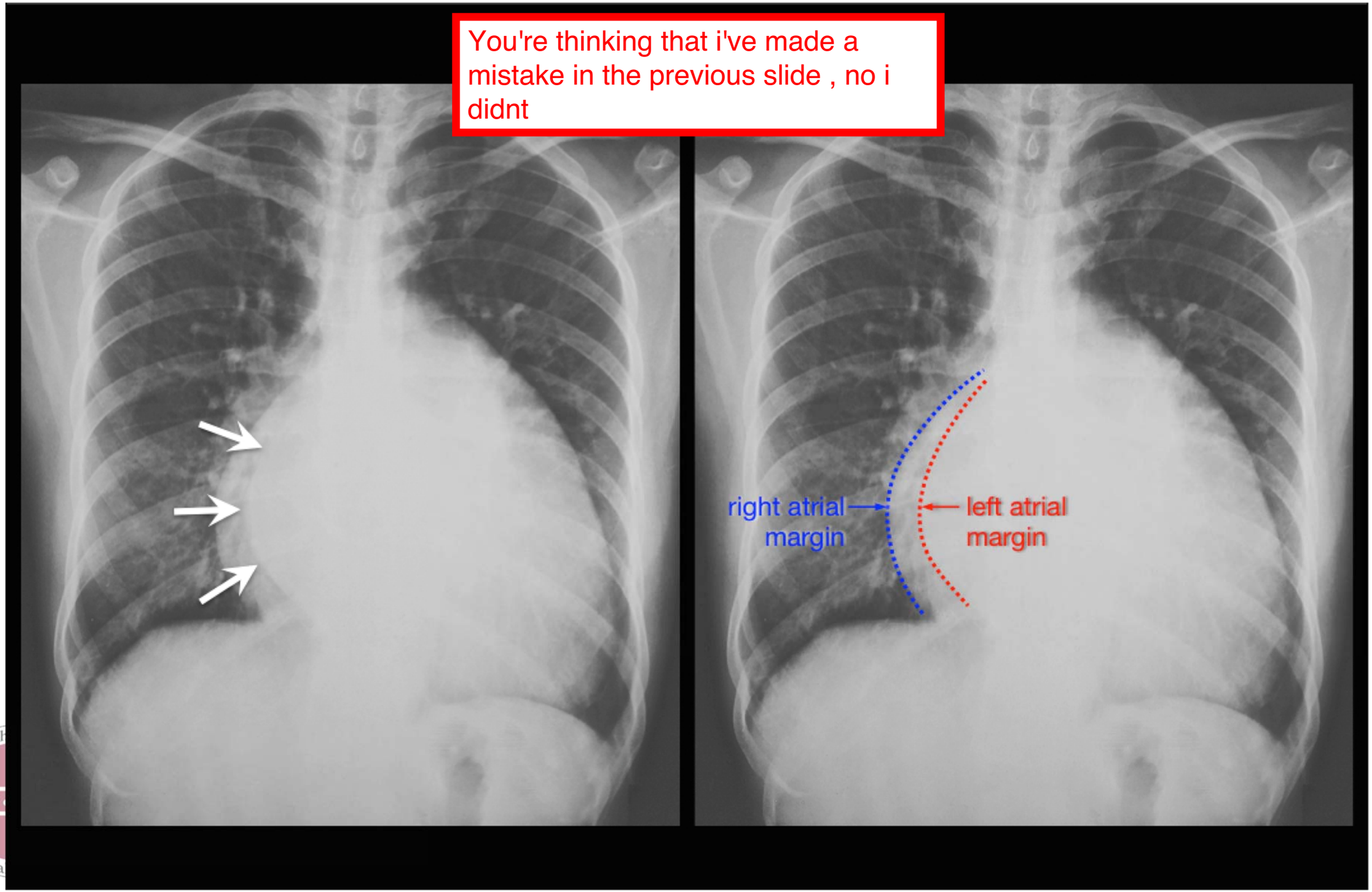
Atrial enlargement



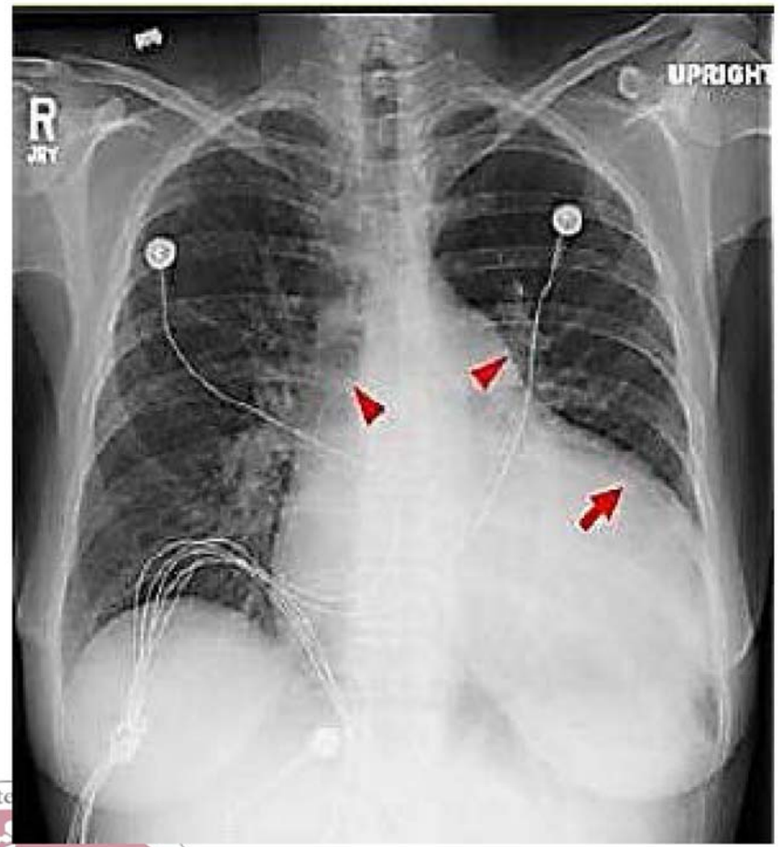
Simply ...the right boder of the heart is formed by the right atrium...so if it enlarges=right atrial enlargement ...
Ddx:ASD.
if you say: atrial hypertrophy ,,,zeeeeroooo

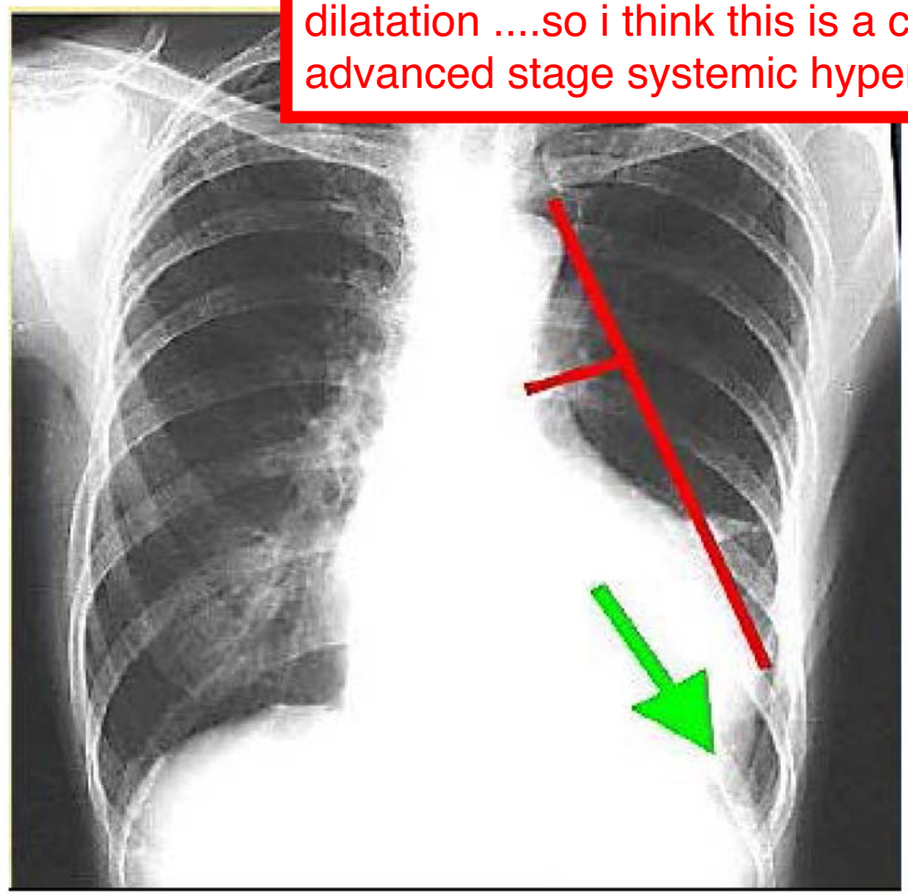


You're thinking that i've made a mistake in the previous slide , no i didnt



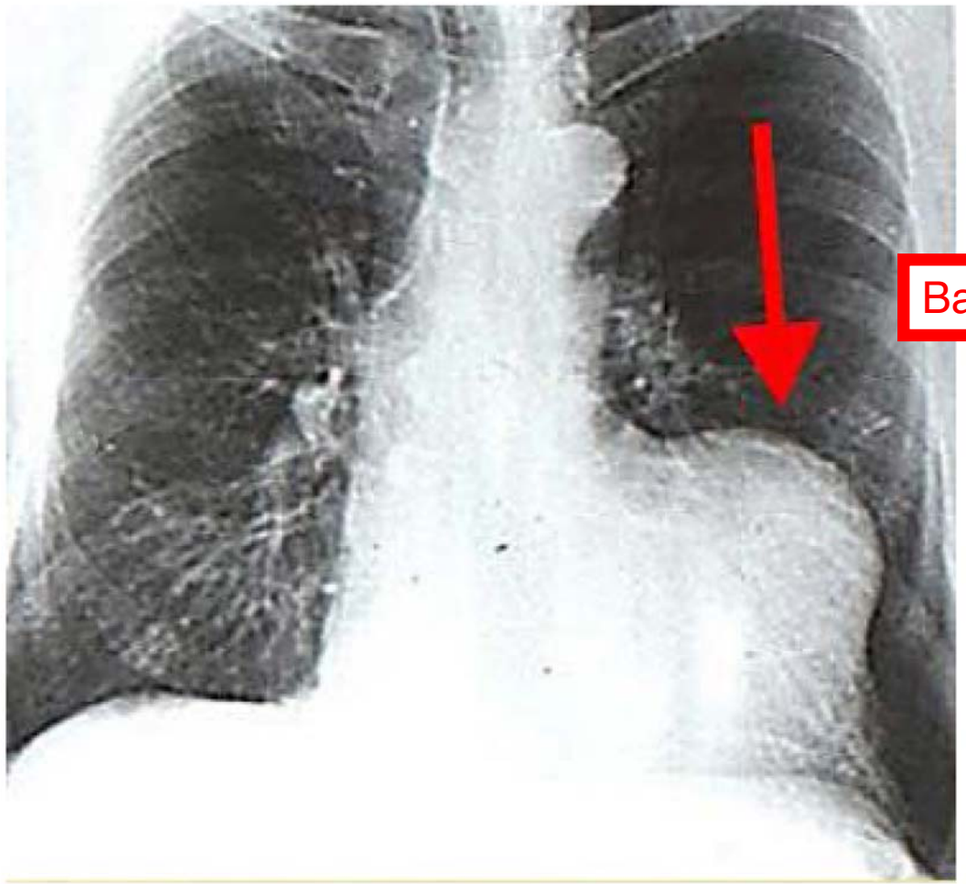
Ventricular enlargement





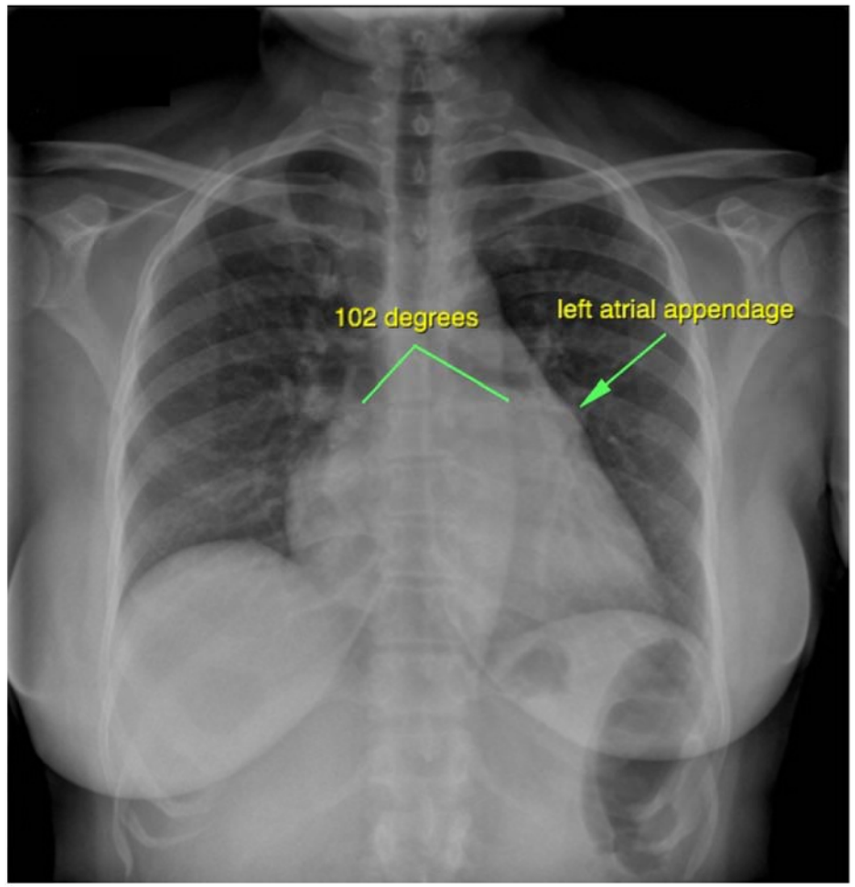
Look how it touches the laterla chest wall here...
LVH....
May be due to systemic hypertension or aortic stenosis...
But if it was aortic stenosis it will be visible on the x-ray as post stenotic aortic dilatation ....so i think this is a case of advanced stage systemic hypertension.

Ventricular Aneurysm



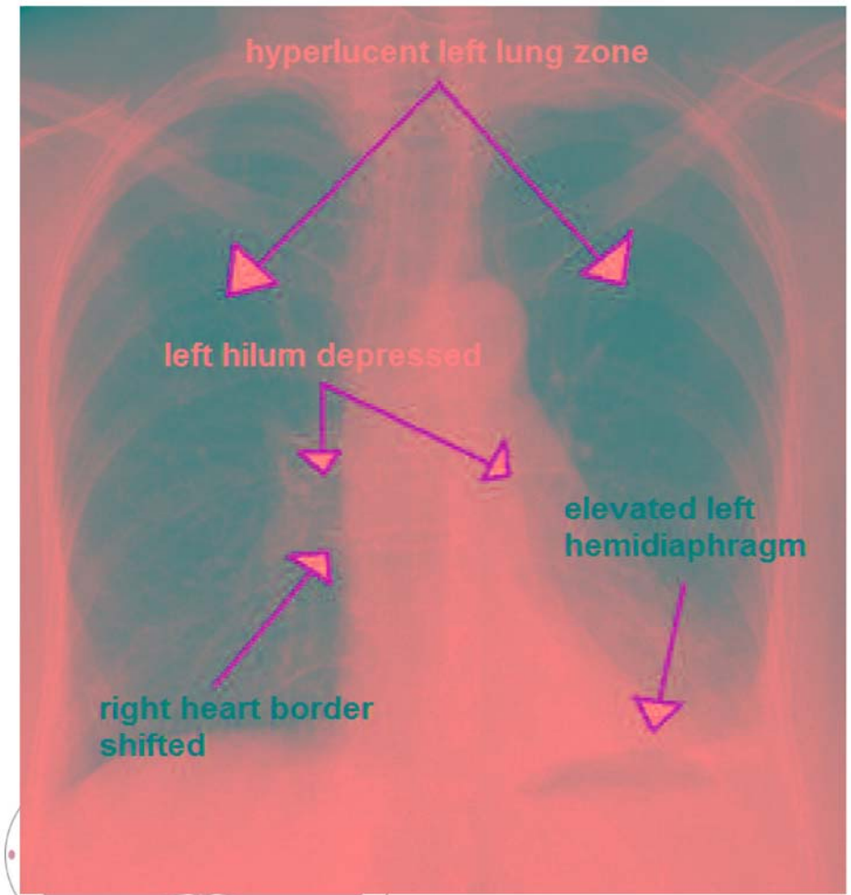
Balloon like dilatation.

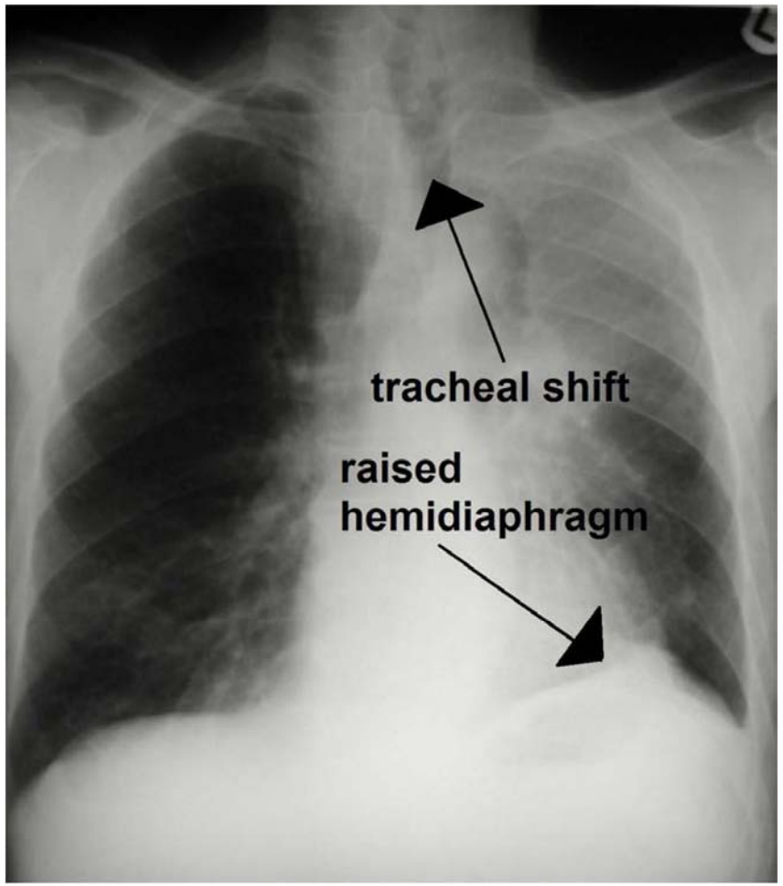
Materialization

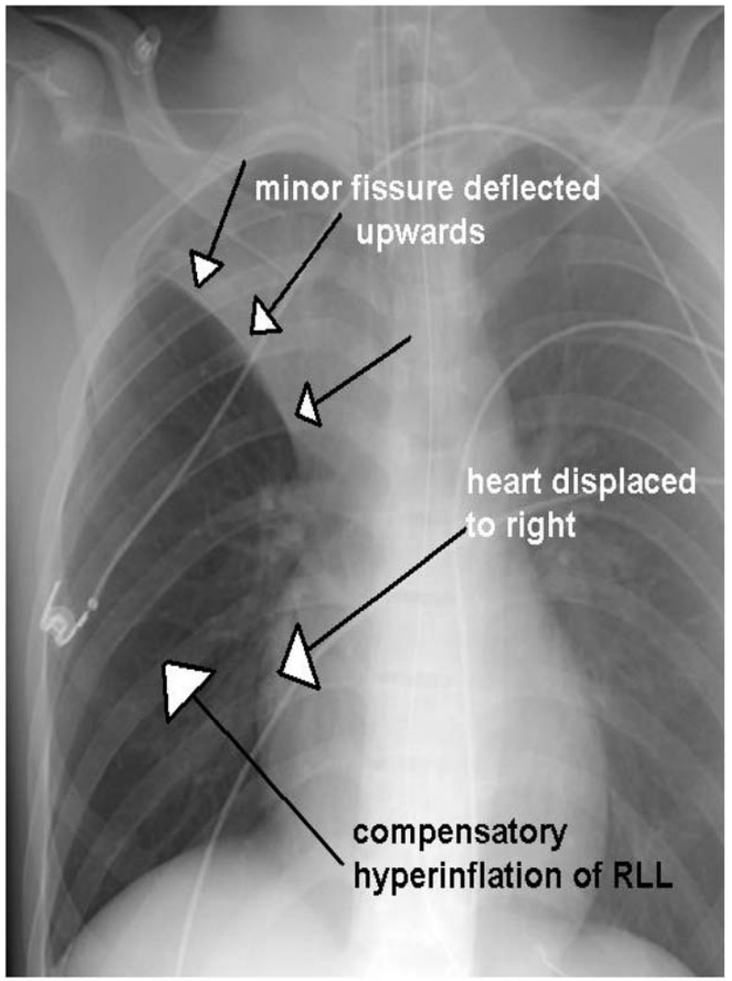


Collapse (volume loss)

Right upper lobe collapse.



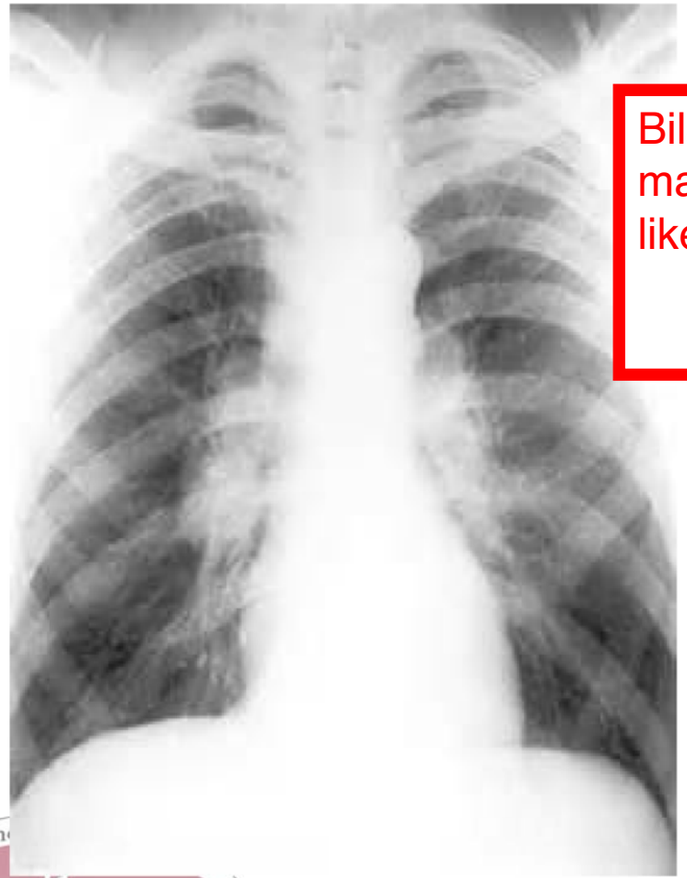




Wide mediastinum

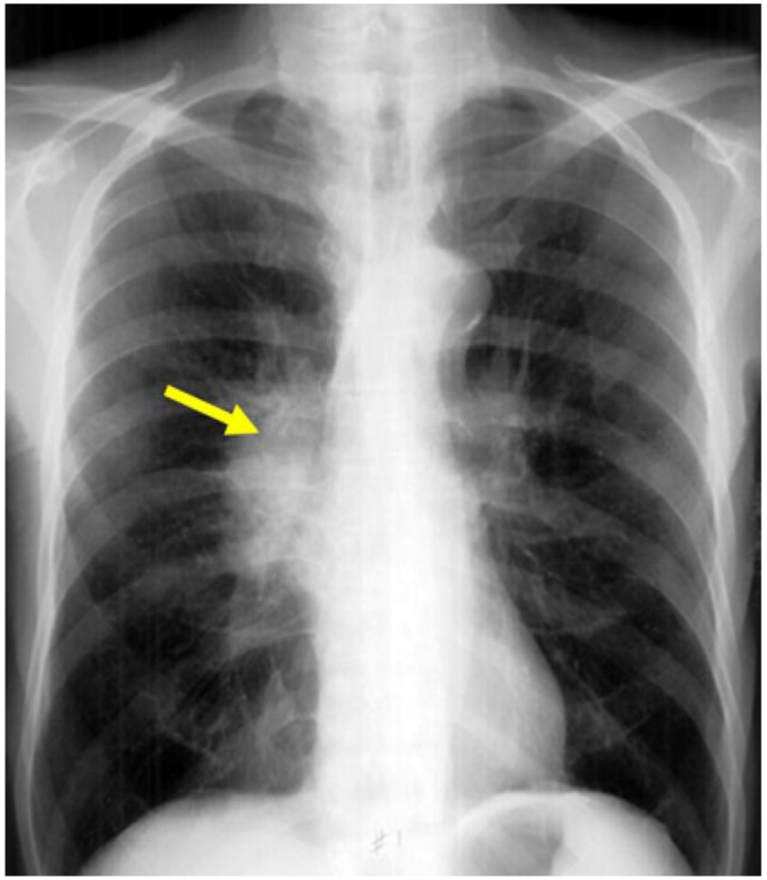
Most likely aortic dissection.

Hilum Lymphadenopathy



Bilateral hilar masses ...most likely sarcoidosis.

Ddx.....small cell lung cancer ,,,sarcoidosis ....etc,,



Multiole Cannonball nodules= Mets....
Primaries are commonly from breast CA and colon CA..

Multiple nodules

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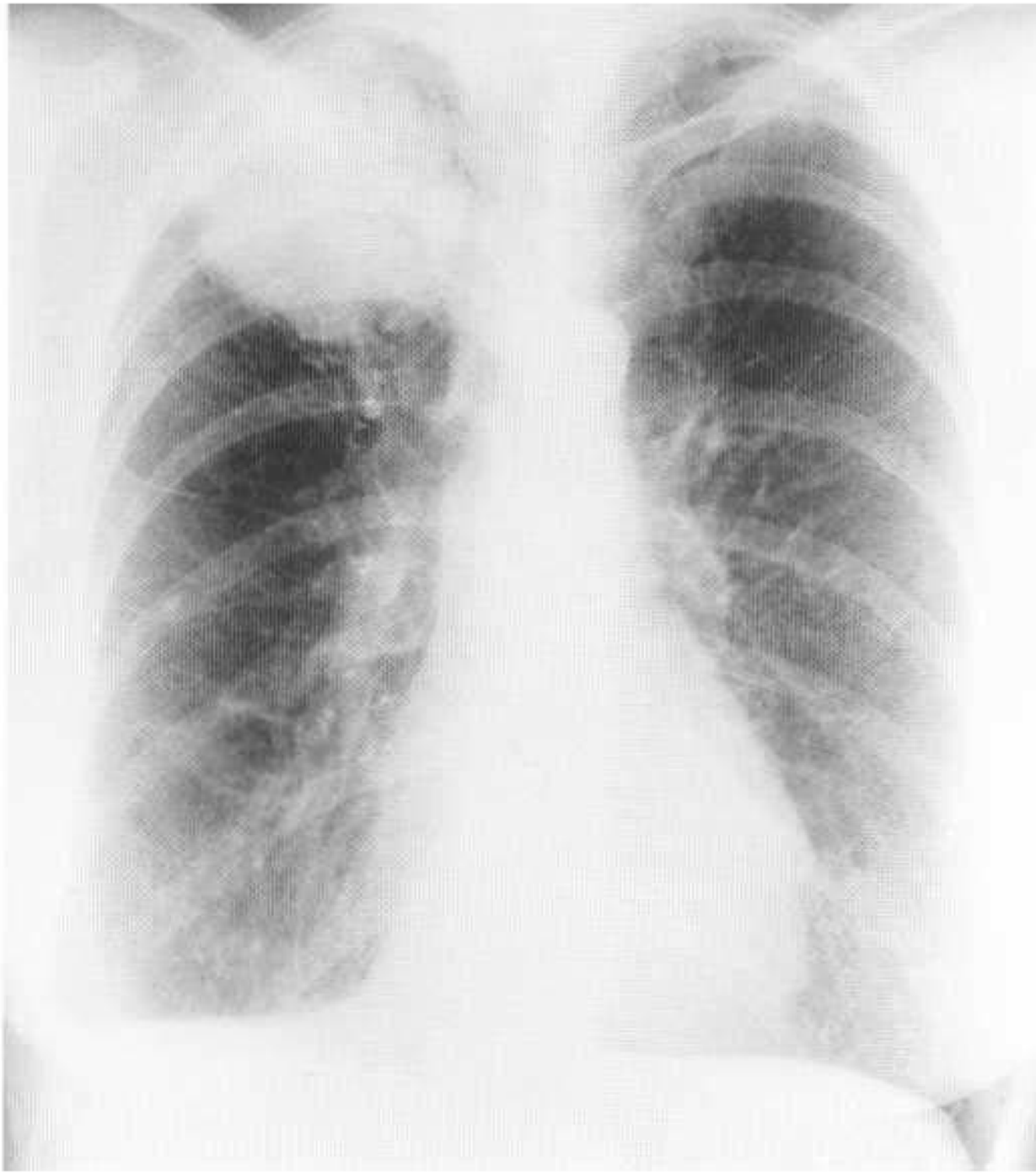
Pancoast again
I can see there's reticular interstitial lung infiltrates.

Lung mass



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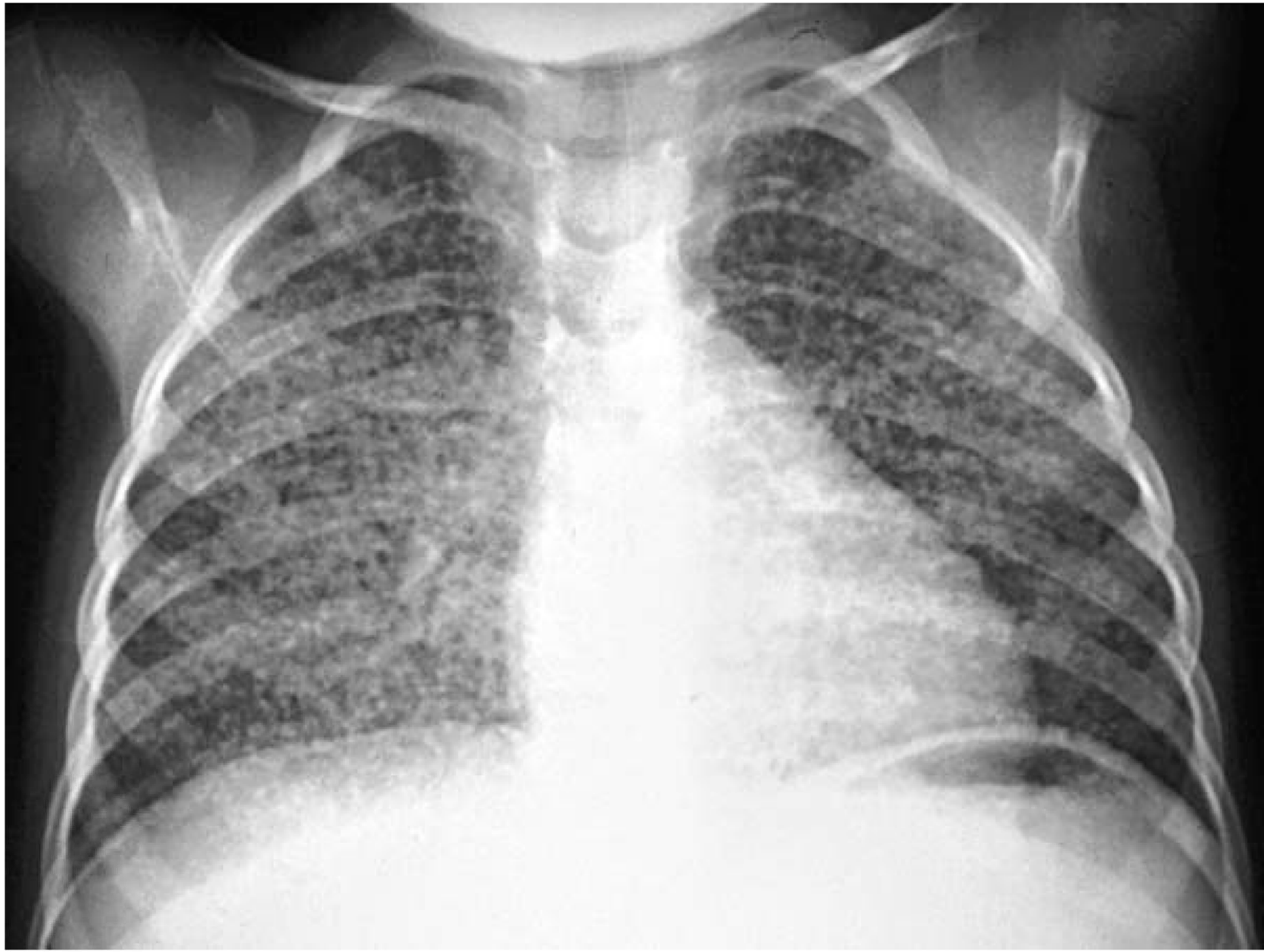
Widespread,,,patchy.

Miliary TB



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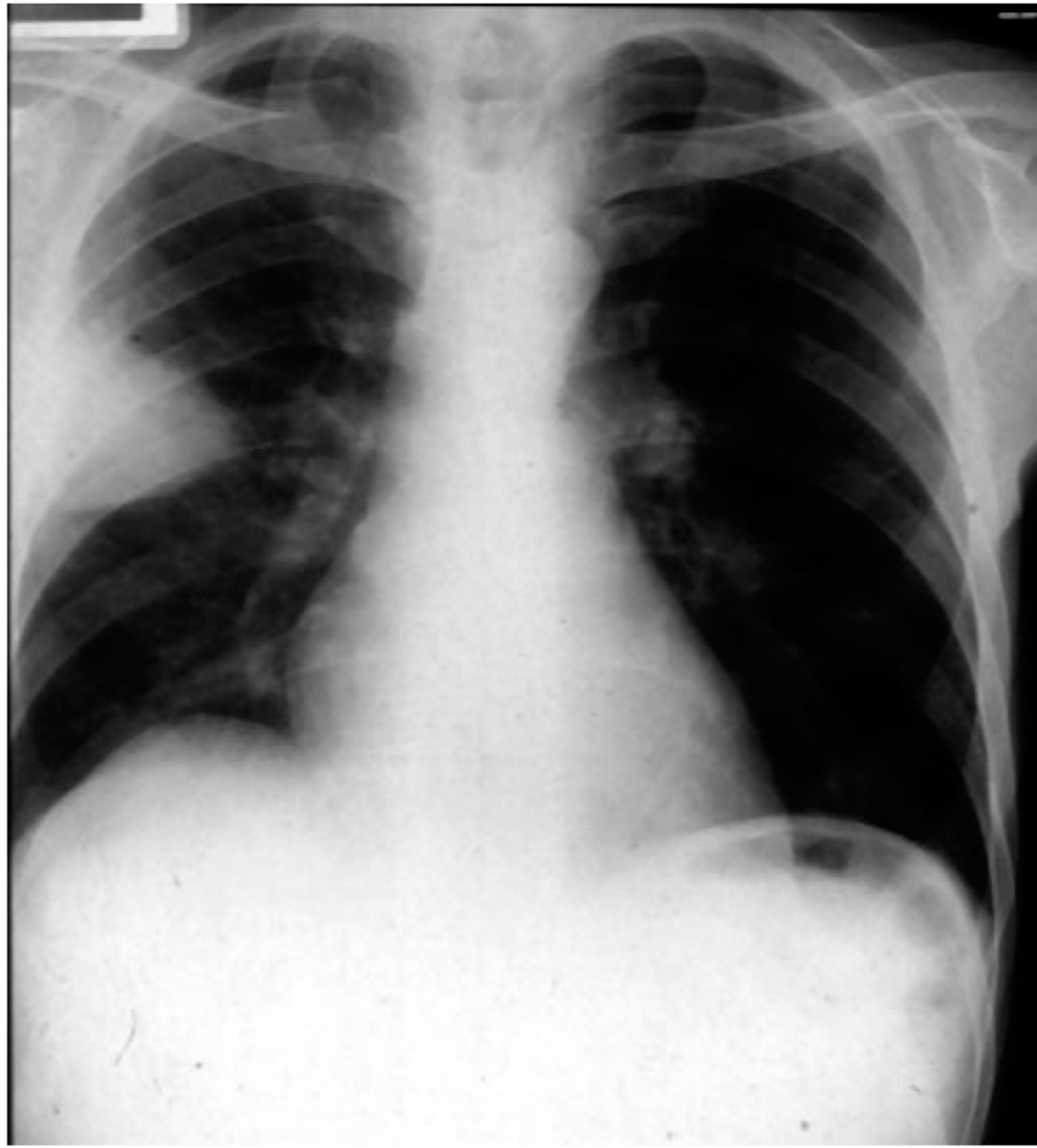
Hampton hump!! ,,pulmonary embolism...
I'm just guessing.

wedge-shaped lesion



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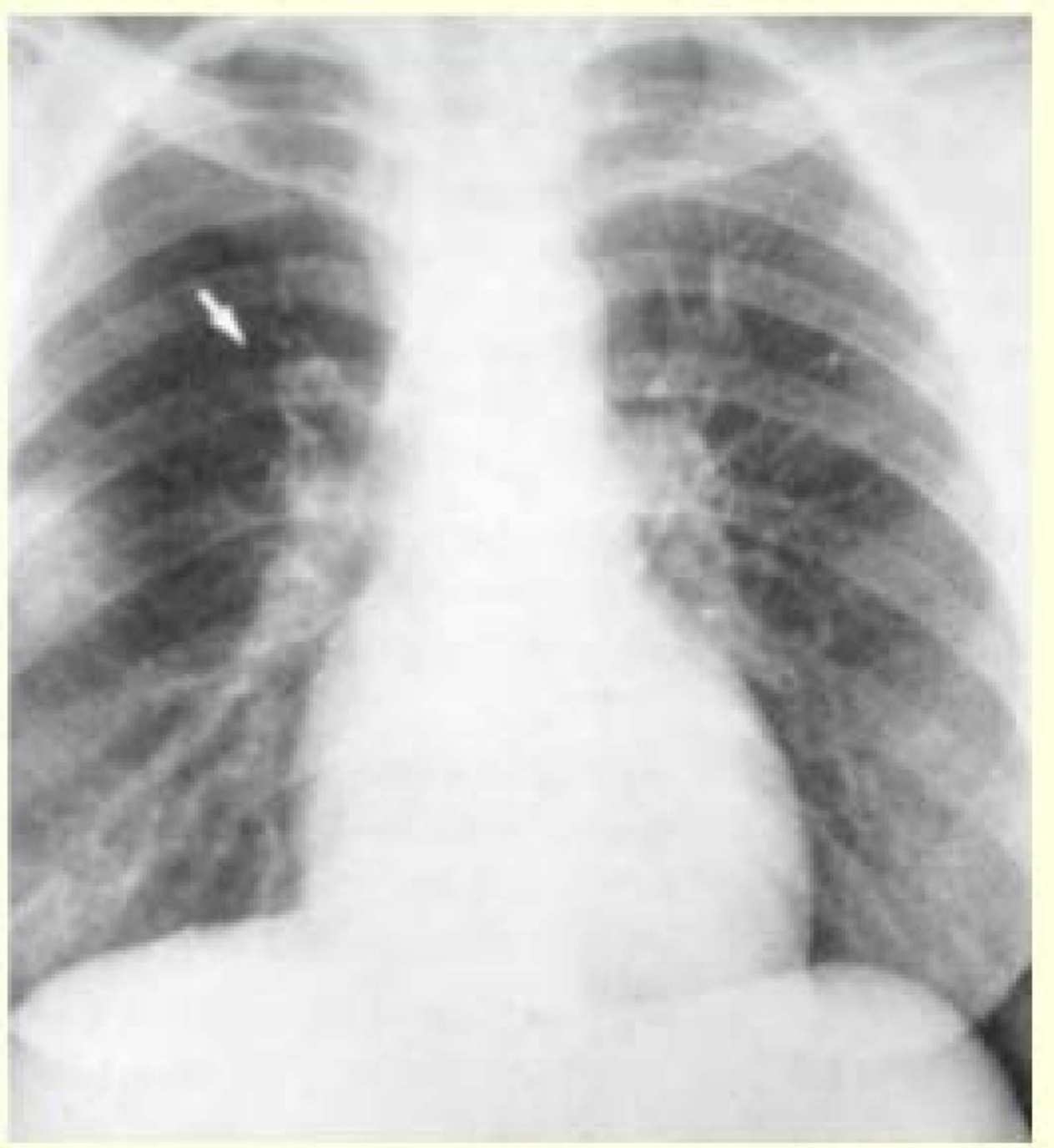
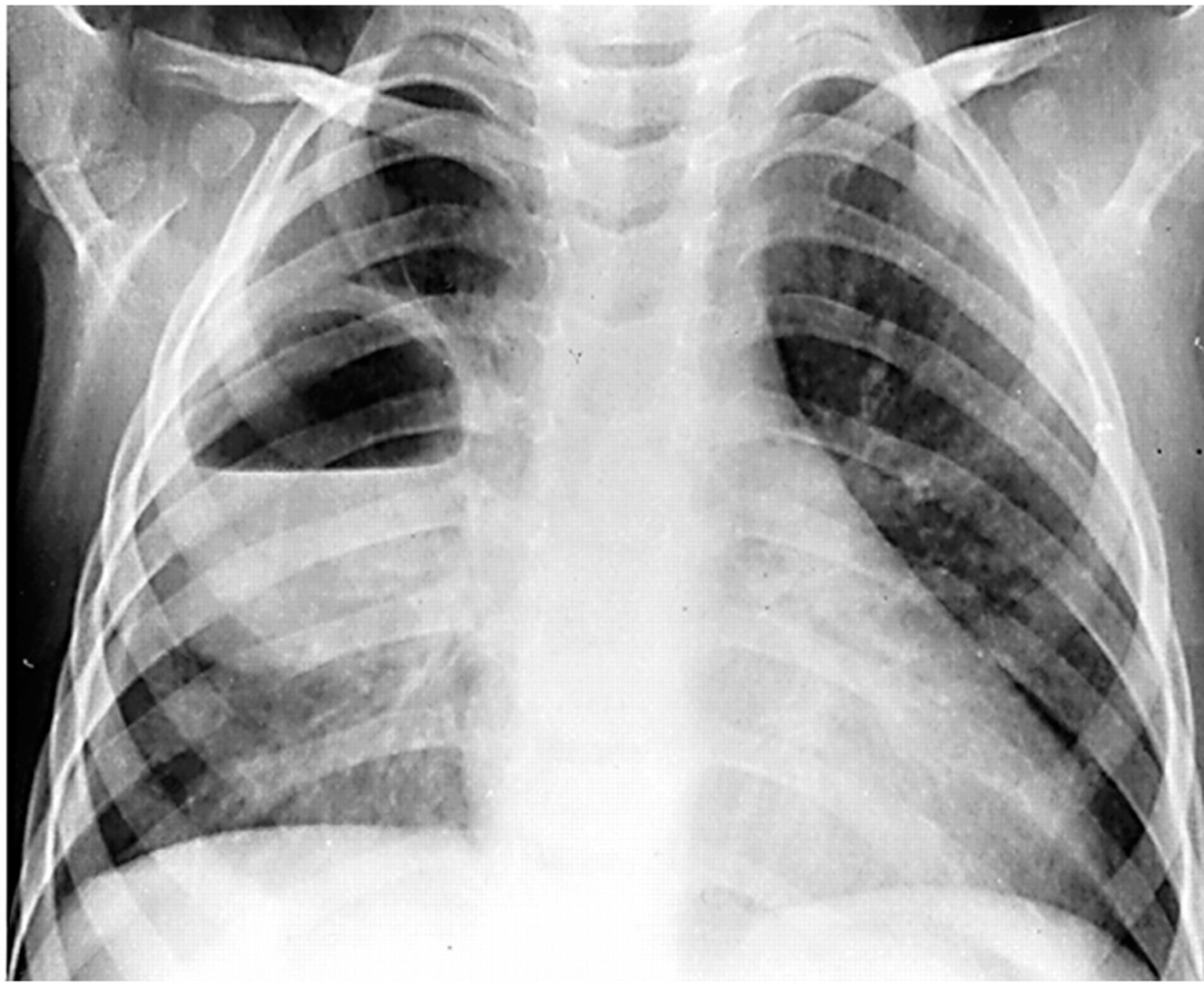
Pulmonary embolism also.

Westermark

Dilatation proximal to the embolus ...with diastal collapse of the vascular markings....(cut off sign.)

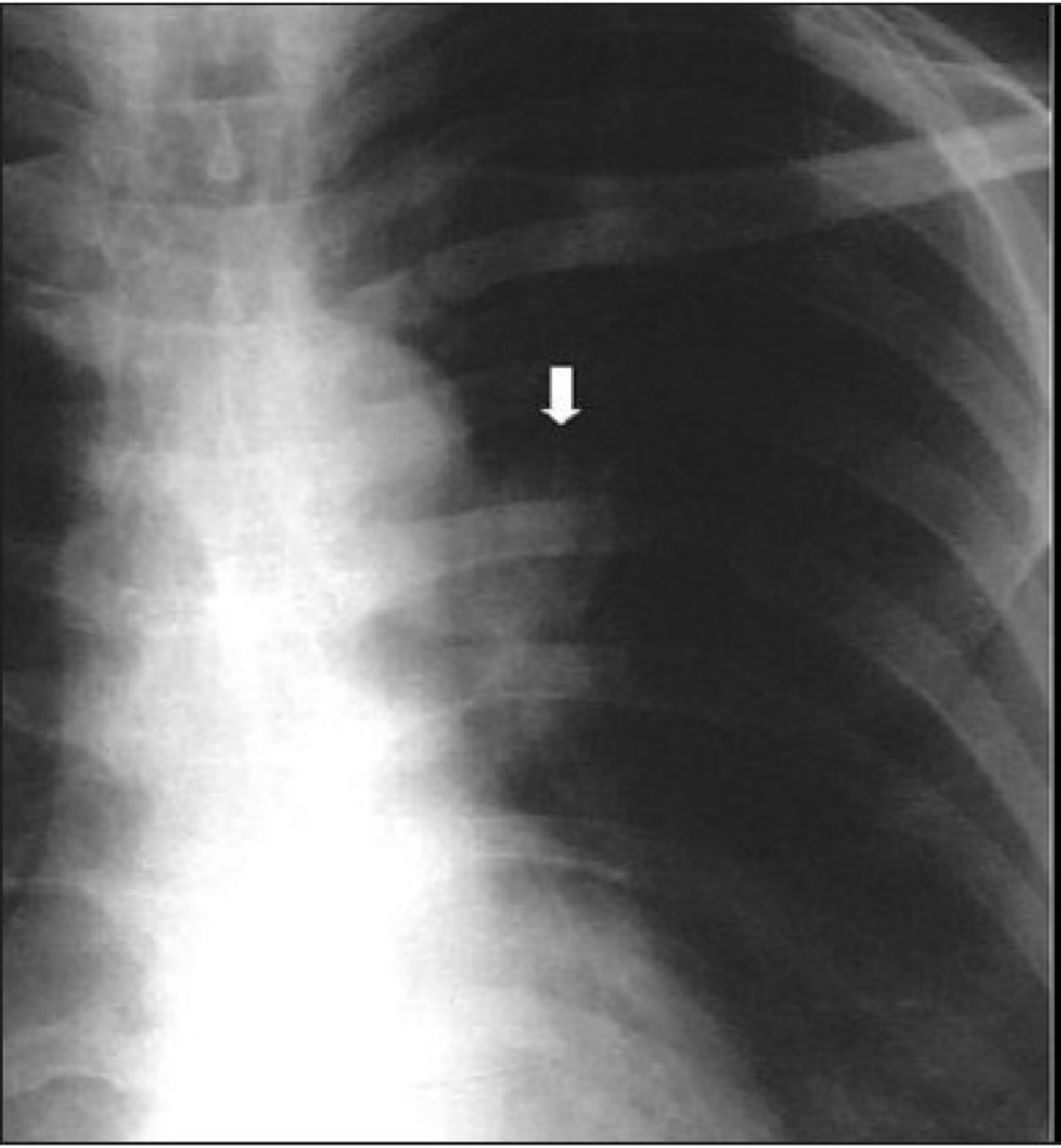


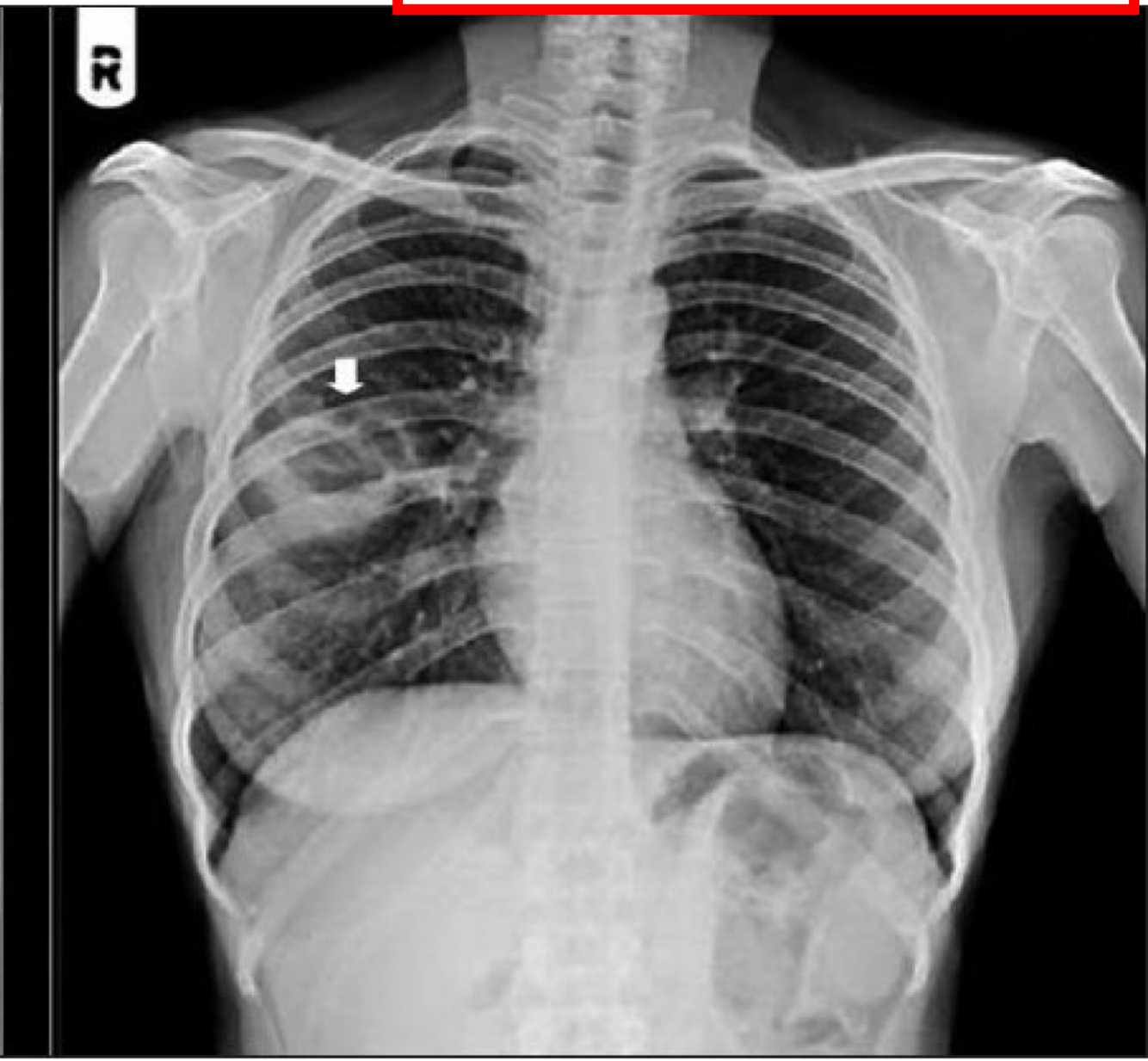
Lung Abscess



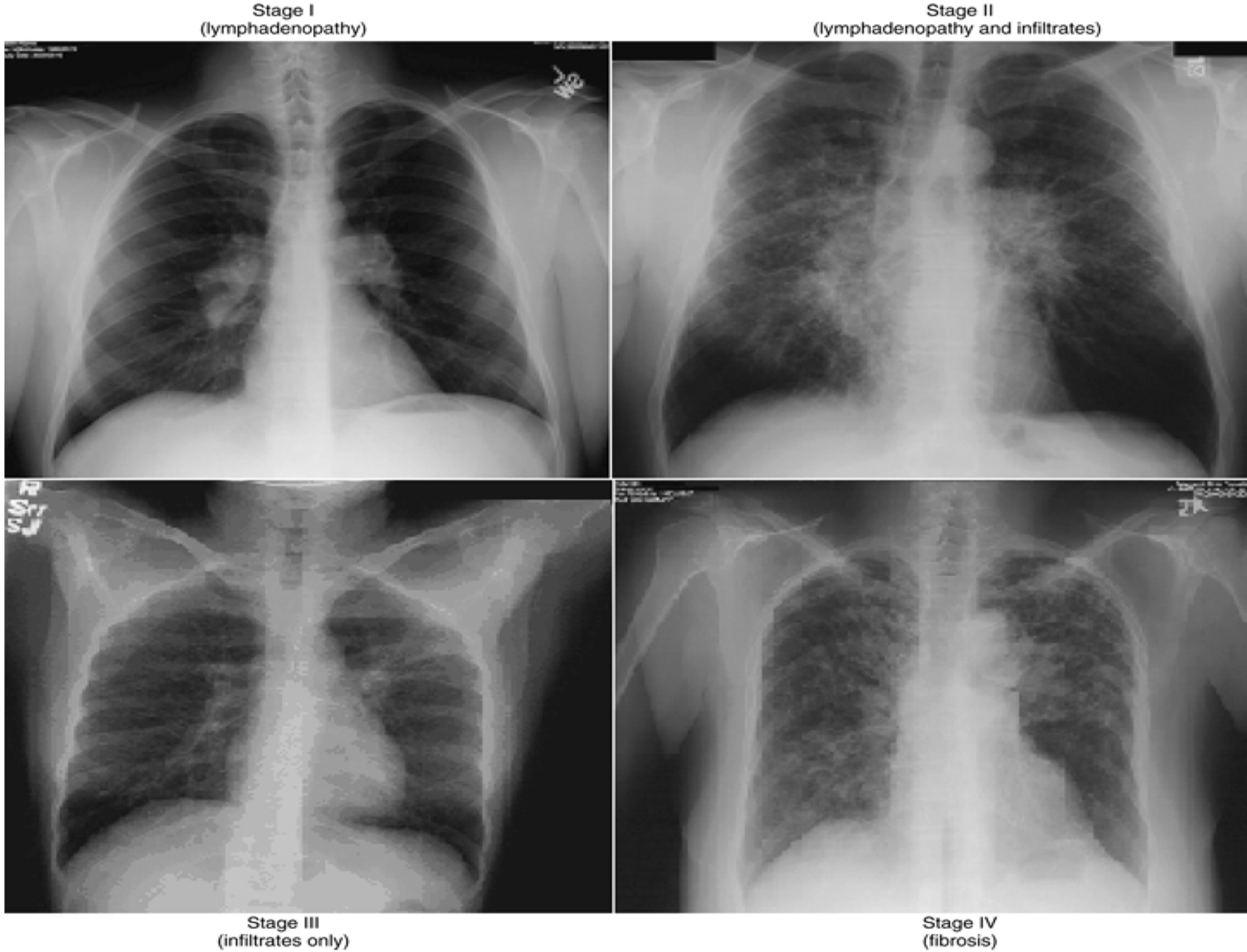
Cavity lesion

Ddx:TB ,squamous cell lung cancer,,cavitary pulmonary mets...
Even wegner can cause this appearance.





Sarcoidosis



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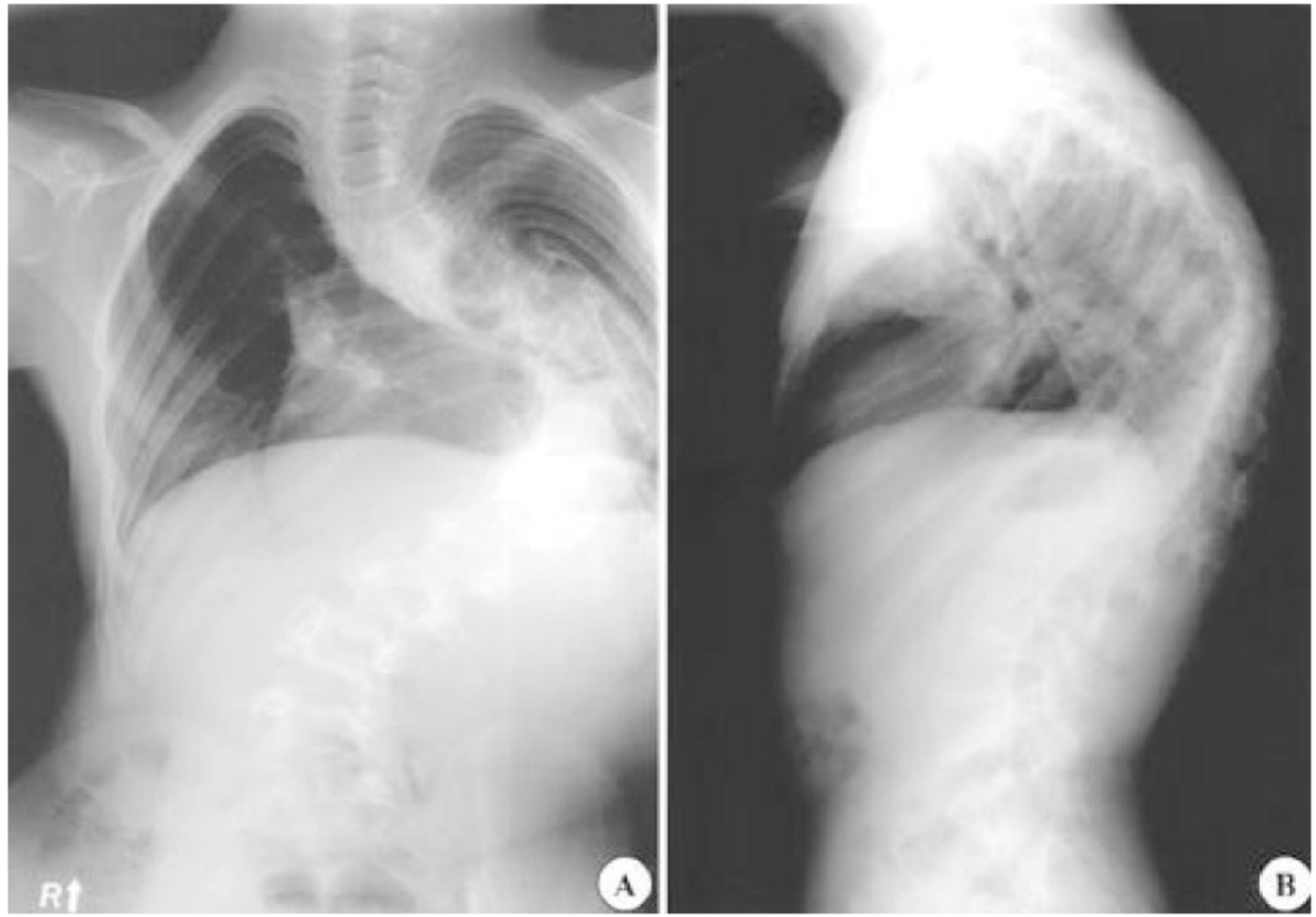
TLC=6L,, VC=4.8L,, RV=1.2L,,FRC =2.2L
DLCO =80-120%.

This patient is SOB ,what is the respiratory defect pattern do you expect him to have in pulmonary Function test?

This patient has scoliosis (a spinal defect) which would restrict the lungs.
TLC --- decreased
FVC --- decreased
FEV1 --- normal
FEV1/FVC --- increased
O2 diffusion --- normal



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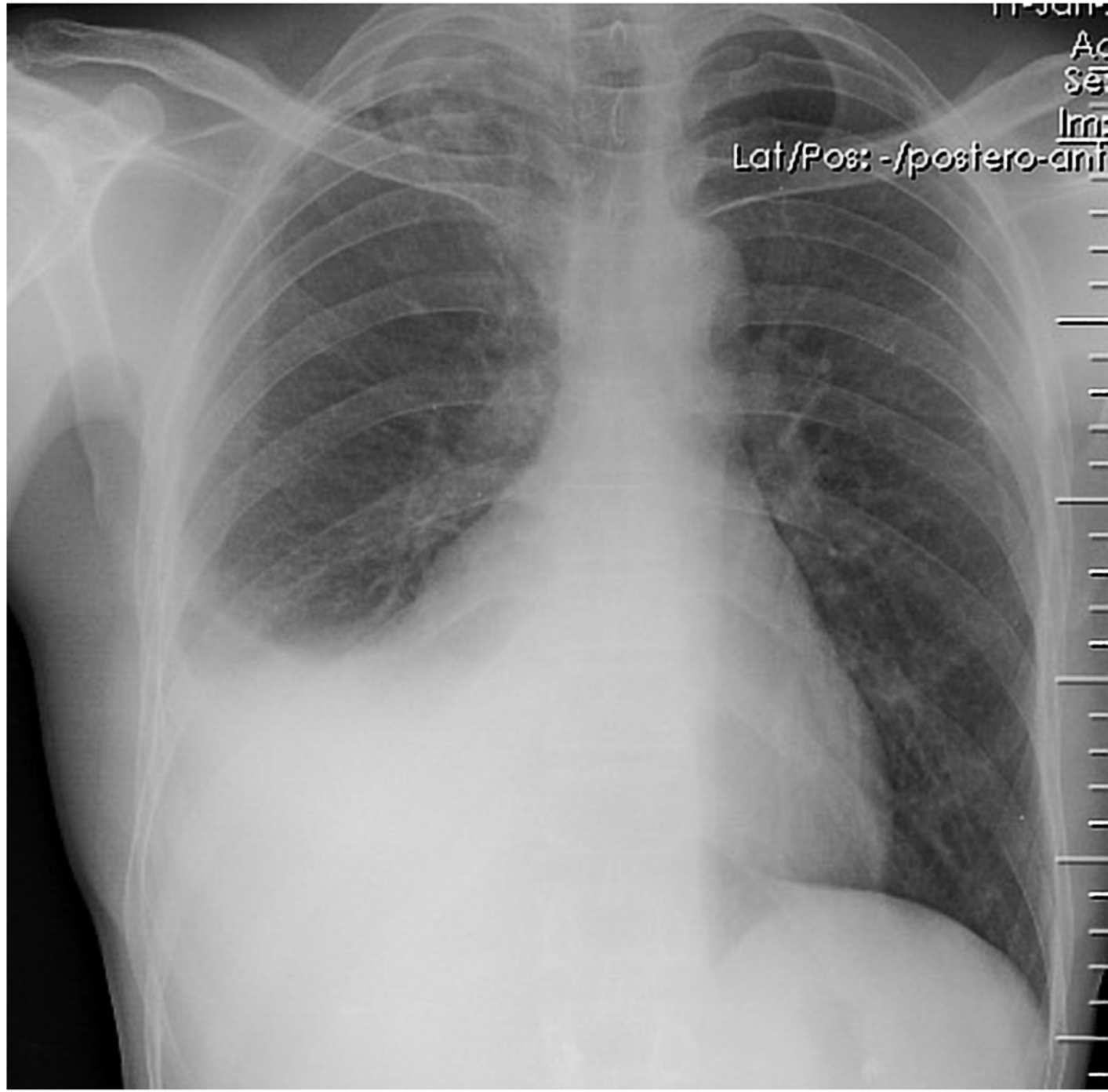
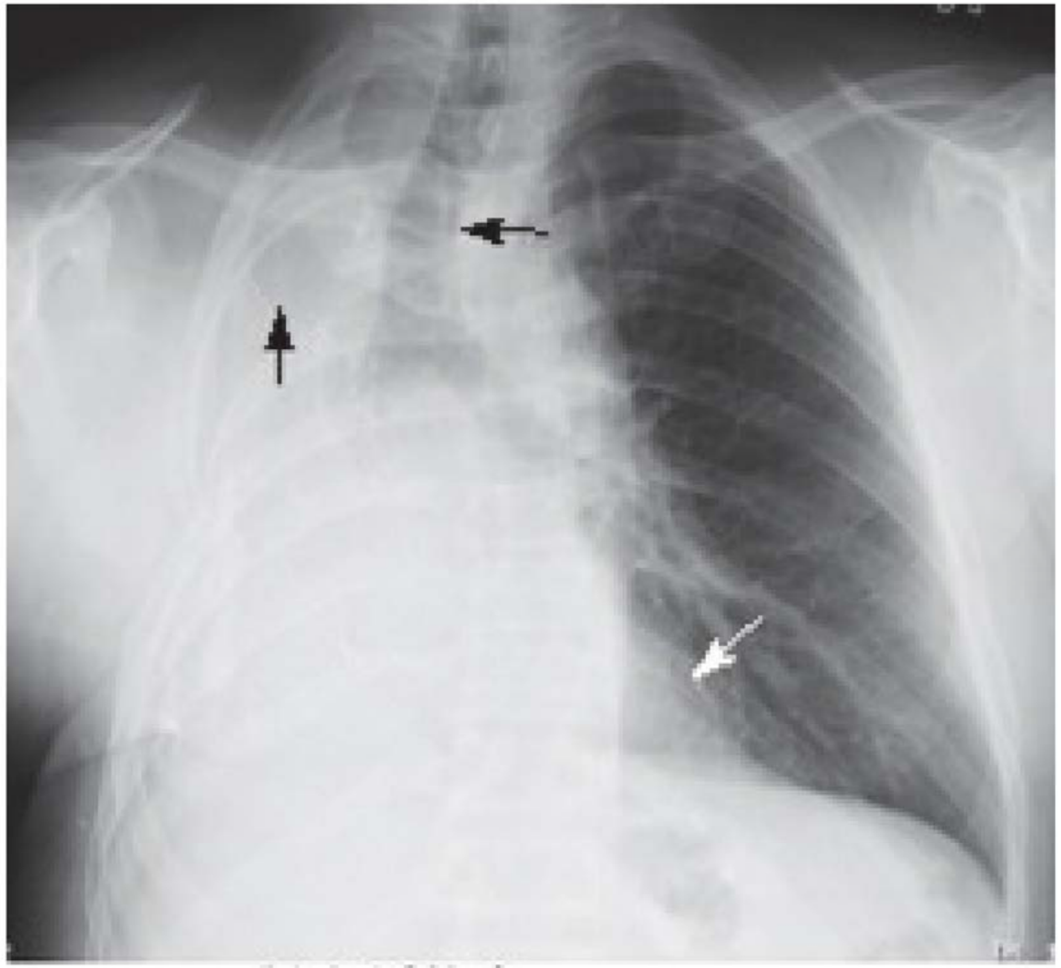
What abnormality do you see ?

Plueral effusion



patient complaining of SOB, what is the cause of right white lung?

 # Notice that the trachea is deviated to the right.



Collapsed lung

67years old patient, Hypertensive & diabetic, presented with shortness of breath and orthopnea.
mention three medications decrease the mortality in such patient?

This patient has CHF, there is an increase in the size of the heart with kerley b lines

Drugs that reduce mortality in CHF are:
-ACE inhibitors / ARBs
-Beta blockers
-Spironolactone

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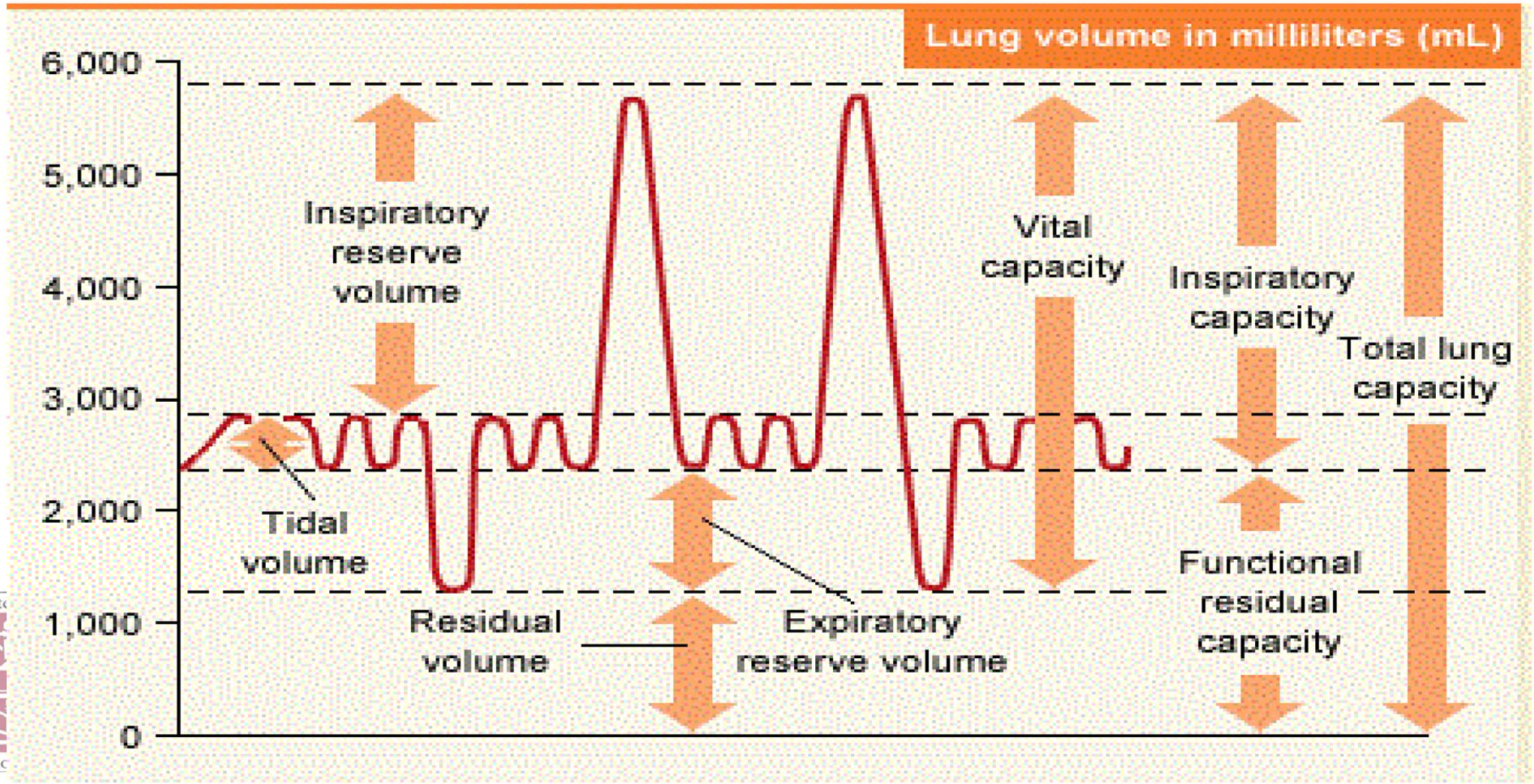
Heart Failure (pulmonary Edema)

- Kerley B line
- Fissure edema
- cephalization,
- Bilateral peripheral consolidation in a 'bat's wing' configuration

PFT

Lung Volumes



Abbreviations

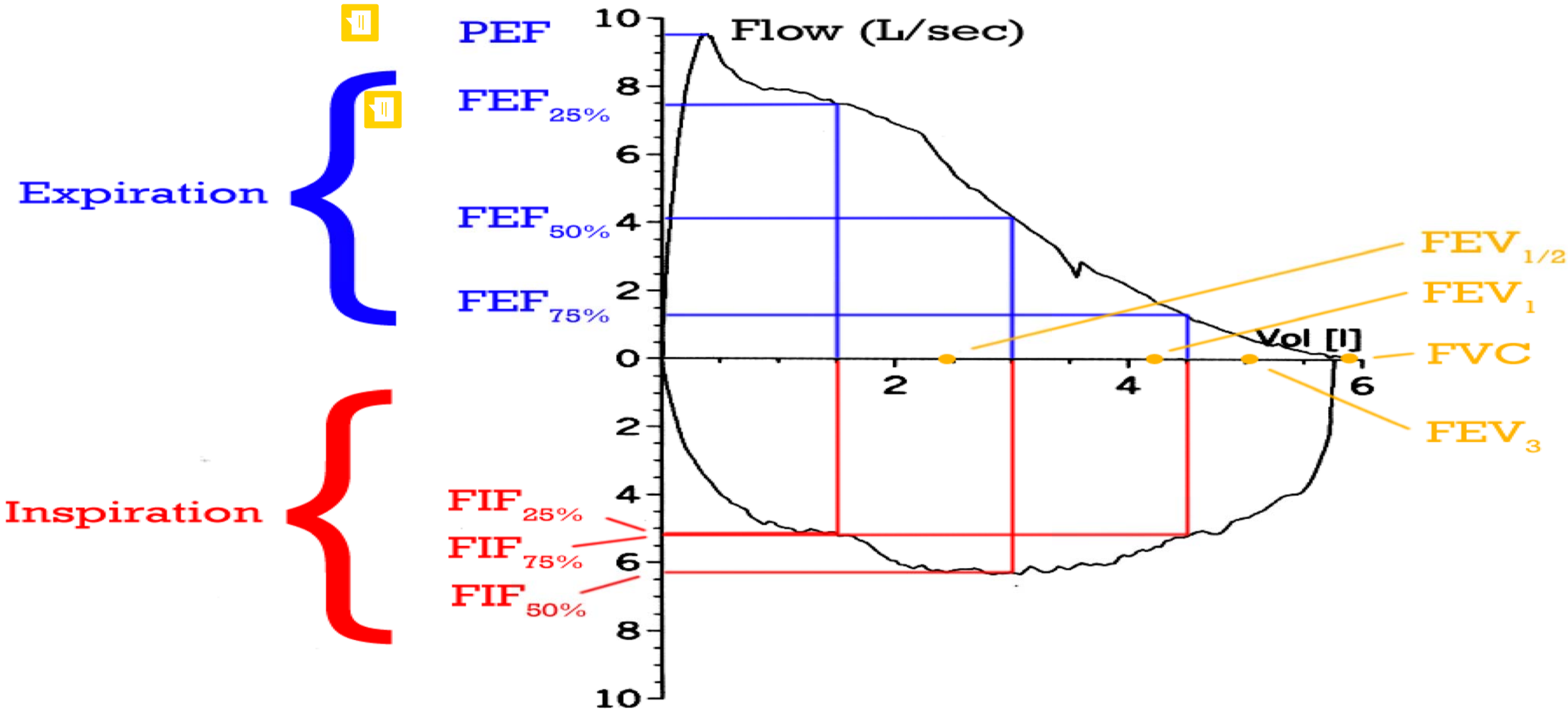
- FVC: Forced Vital Capacity
- FEV1: Forced Expiratory Volume in One Second
- TLC: Total Lung Capacity
- RV: Residual Volume
- DLCO: Diffusion Capacity for Carbon Monoxide
- BD: Bronchodilator

Severity of airflow limitation

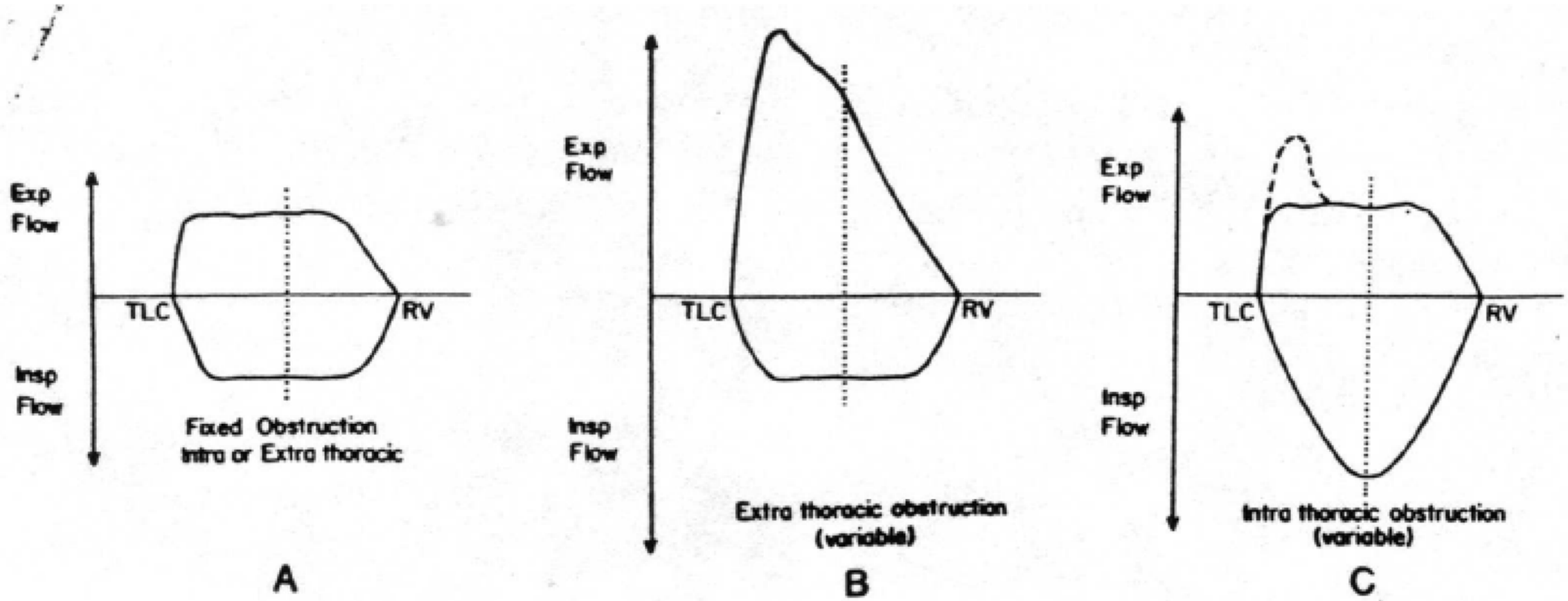
Category/Severity Stage	FEV_1/FEV	FEV_1 (% Predicted)
Normal (healthy patients)	0.80	~100
I: Mild	<0.70	≥80
II: Moderate	<0.70	50 to <80
III: Severe	<0.70	30 to <50
IV: Very Severe	<0.70	<30[a]

- FEV1/FVC ratio
- Reversibility : FEV1 > 200ml, > 12%
- TLC, RV
- FEV1 & FVC > 20% (supine & upright): diaphragmatic weakness
- Air-trapping RV
- Hyper-inflated TLC > 120
- Restrictive TLC < 80%

Flow Volume Loop

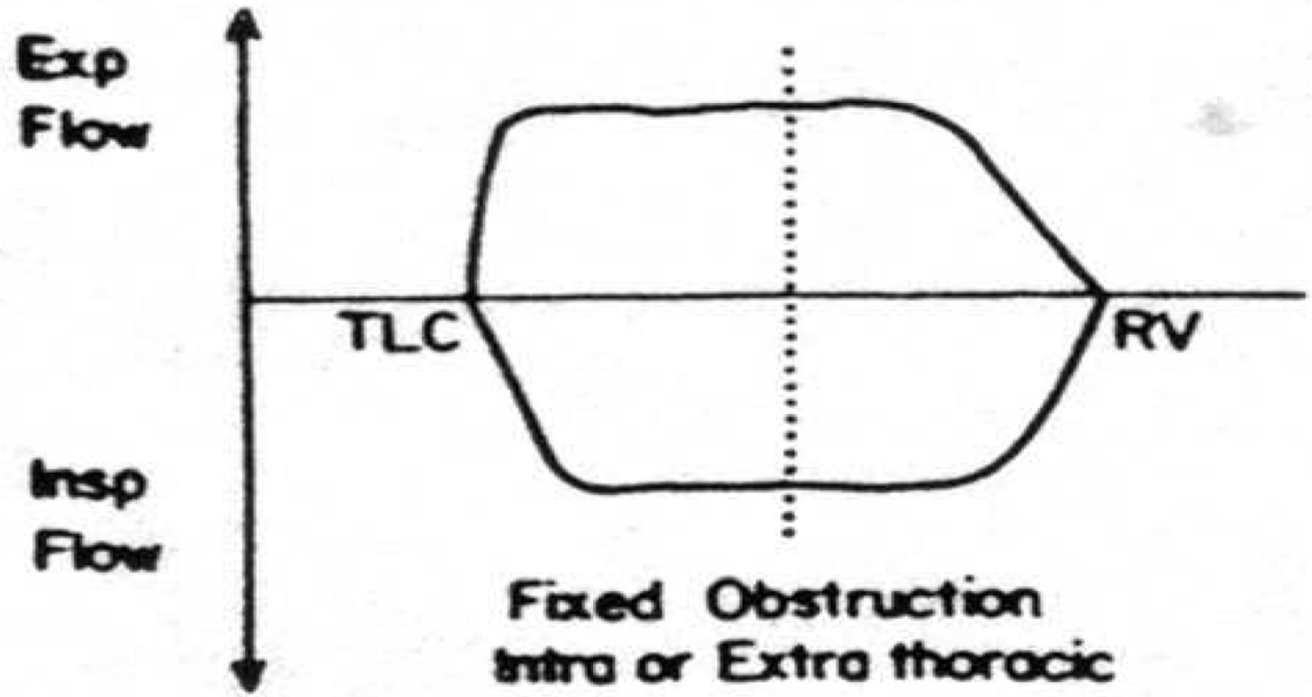


Pattern of airway obstruction



A 25 y/o man presents to his physician with complaints of dyspnea and wheezing.
He had a tracheostomy because he remained on ventilator for a total of 7 weeks after motor vehicle accident, His tracheostomy was removed 2 months after his discharge from the hospital.
flow volume loop was done as shown

- What is the most likely Diagnosis?



if we ask for a pulmonary function test for this patient, what are the changes that you expect to find in the:

1- TLC: decreased

2- FEV1/FVC: increased

3- DLCO: normal

It may also be normal.

A 36 year-old woman presents with a several month history of worsening dyspnea on exertion and exercise limitation, non smoker, no past history of pulmonary disease, Her pulmonary function testing is as follows:

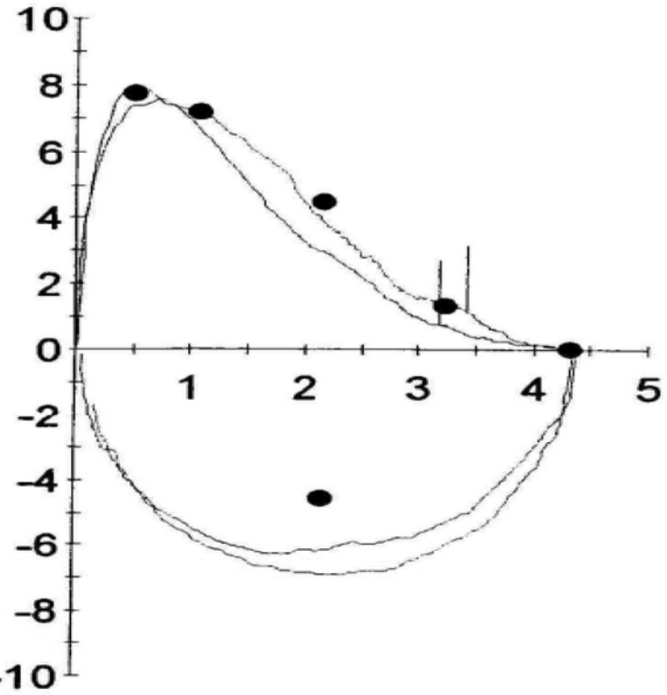
Extra thoracic restrictive disease

- What is the cause of her dyspnea ?

	Pre-Bronchodilator (BD)		
Test	Actual	Predicted	% Predicted
FVC (L)	0.88	3.34	26
FEV_1 (L)	0.87	2.87	30
FEV_1/FVC (%)	99	86	
RV (L)	1.61	1.40	115
TLC (L)	2.49	4.73	53
RV/TLC (%)	65	29	
DLCO corr	26.14	31.28	84

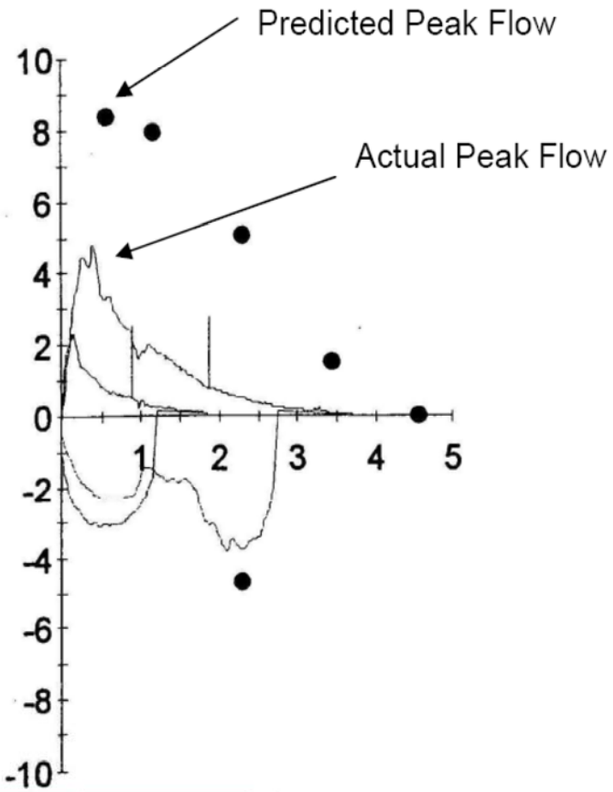
Questions

1. A 65 year-old man undergoes pulmonary function testing as part of a routine health-screening test. He had no pulmonary complaints. He is a lifelong nonsmoker and had a prior history of asbestos exposure while serving in the Navy. His pulmonary function test results are as follows:



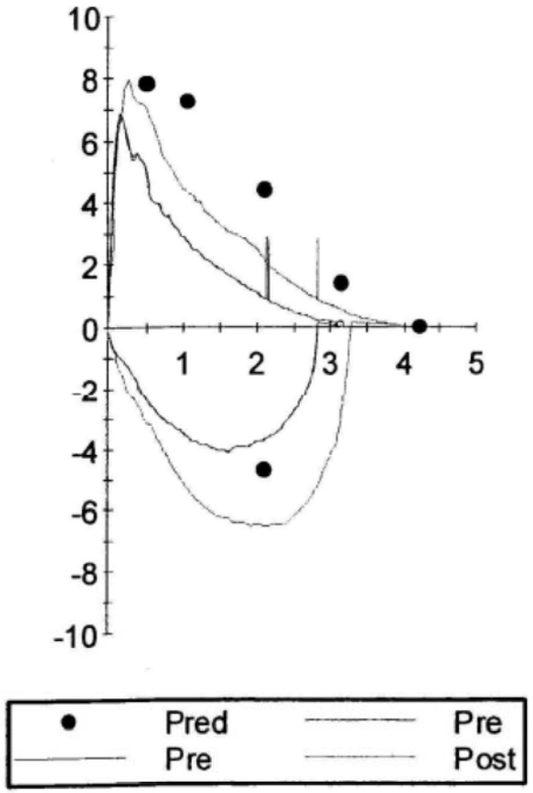
	Pre-Bronchodilator (BD)			Post- BD
Test	Actual	Predicted	% Predicted	% Change
FVC (L)	4.39	4.32	102	-1
FEV_1 (L)	3.20	3.37	95	7
FEV_1/FVC (%)	73	78		8
FRC (L)	3.17	3.25	98	
ERV (L)	0.63	0.93	68	
RV (L)	2.54	2.32	109	
TLC (L)	6.86	6.09	113	
DLCO uncorr	25.69	31.28	82	
DLCO corr	26.14	31.28	84	

2. A 54 year-old man presents to his primary care provider with dyspnea and a cough. He is a non-smoker with no relevant occupational exposures.



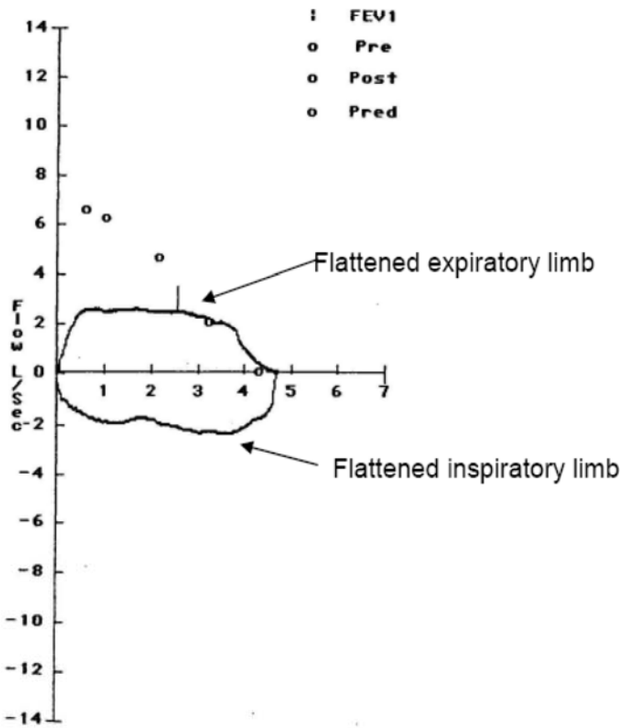
	Pre-Bronchodilator (BD)			Post- BD	
Test	**Actual**	**Predicted**	**% Predicted**	**Actual**	**% Change**
FVC (L)	3.19	4.22	76	4.00	25
FEV_1 (L)	2.18	3.39	64	2.83	30
FEV_1/FVC (%)	68	80		71	4

3. A 60 year-old man presents to his primary care provider with complaints of increasing dyspnea on exertion. He has a 40 pack-year history of smoking and is retired following a career as a building contractor. His pulmonary function testing is as follows:



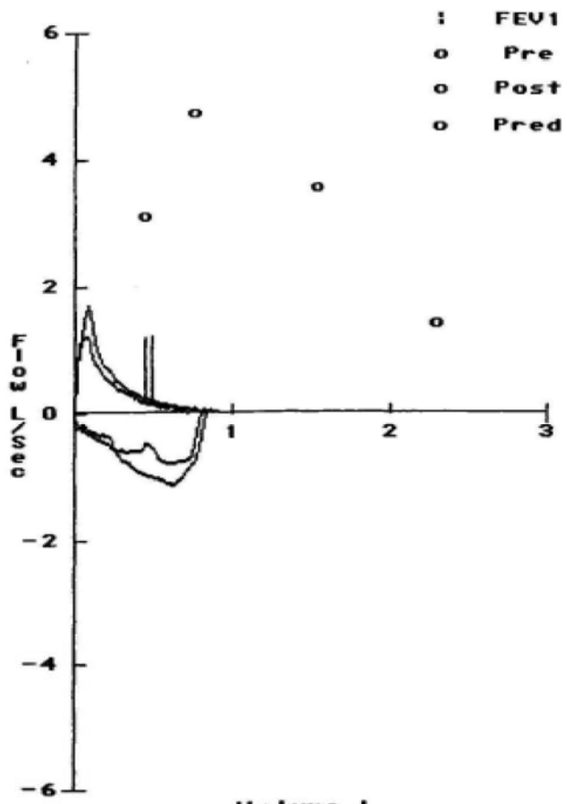
	Pre-Bronchodilator (BD)			Post- BD	
Test	Actual	Predicted	% Predicted	Actual	% Change
FVC (L)	1.89	4.58	41	3.69	96
FEV_1 (L)	0.89	3.60	25	1.89	112
FEV_1/FVC (%)	47	79			
RV (L)	5.72	2.31	248		
TLC (L)	7.51	6.41	117		
RV/TLC (%)	76	37			
DLCO corr	20.73	33.43	62		

4. A 25 year-old man presents to his physician with complaints of dyspnea and wheezing. He is a non-smoker. Two years ago, he was in a major motor vehicle accident and was hospitalized for 3 months. He had a tracheostomy placed because he remained on the ventilator for a total of 7 weeks. His tracheostomy was removed 2 months after his discharge from the hospital. His pulmonary tests are as follows:



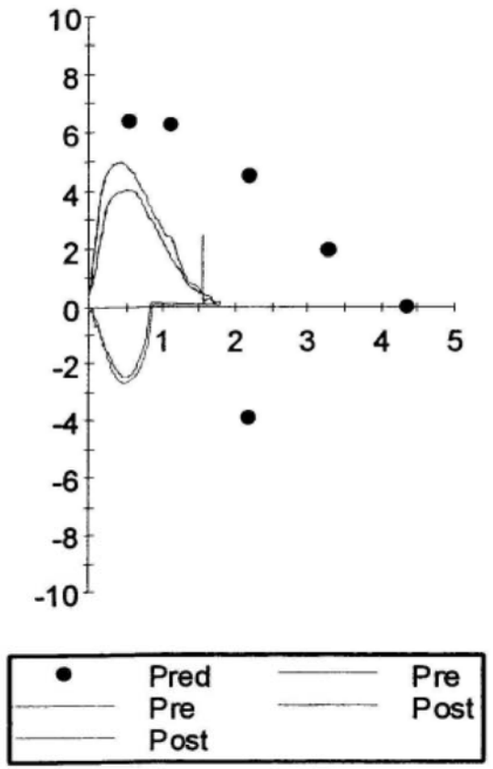
	Pre-Bronchodilator (BD)		
Test	**Actual**	**Predicted**	**% Predicted**
FVC (L)	4.73	4.35	109
FEV_1 (L)	2.56	3.69	69
FEV_1/FVC (%)	54	85	

5. A 41 year-old woman presents to the General Internal Medicine Clinic at Harborview Medical Center complaining of dyspnea with mild exertion. She has a 10 pack-year history of smoking and a history of using intravenous drugs including heroin. Her pulmonary function tests are as follows:



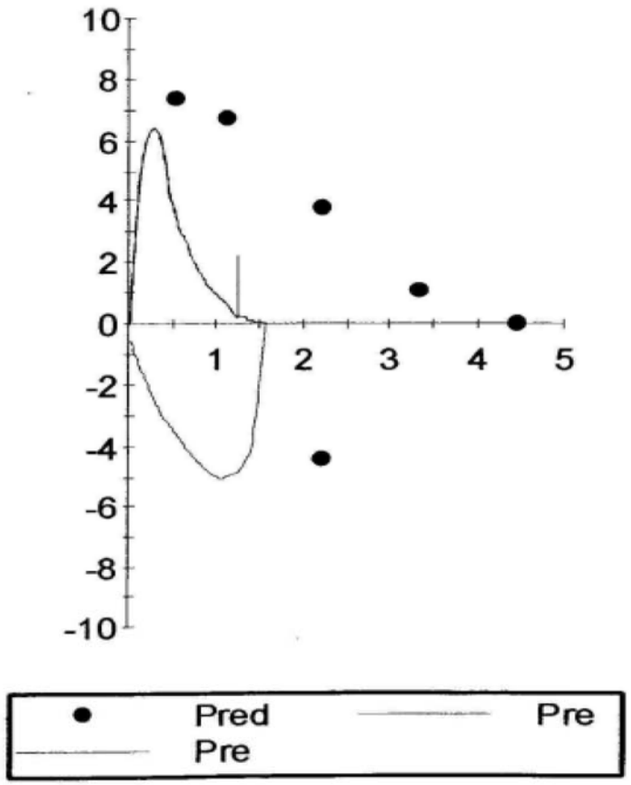
	Pre-Bronchodilator (BD)			Post- BD	
Test	**Actual**	**Predicted**	**% Predicted**	**Actual**	**% Change**
FVC (L)	0.90	3.09	29	0.74	- 17
FEV_1 (L)	0.49	2.57	19	0.44	-10
FEV_1/FVC (%)	54	83		59	8
RV (L)	3.83	1.49	257		
TLC (L)	4.78	4.44	108		
RV/TLC (%)	80	33			
DLCO corr	0.75	24.85	3		

6. A 30 year-old woman presents for evaluation of dyspnea on exertion, which has been present for 2 months. She is a life-long non-smoker with no prior history of asthma or other pulmonary problems. She works as a receptionist at a publishing company. She has two cats and several parakeets at home. Her pulmonary function testing is as follows:



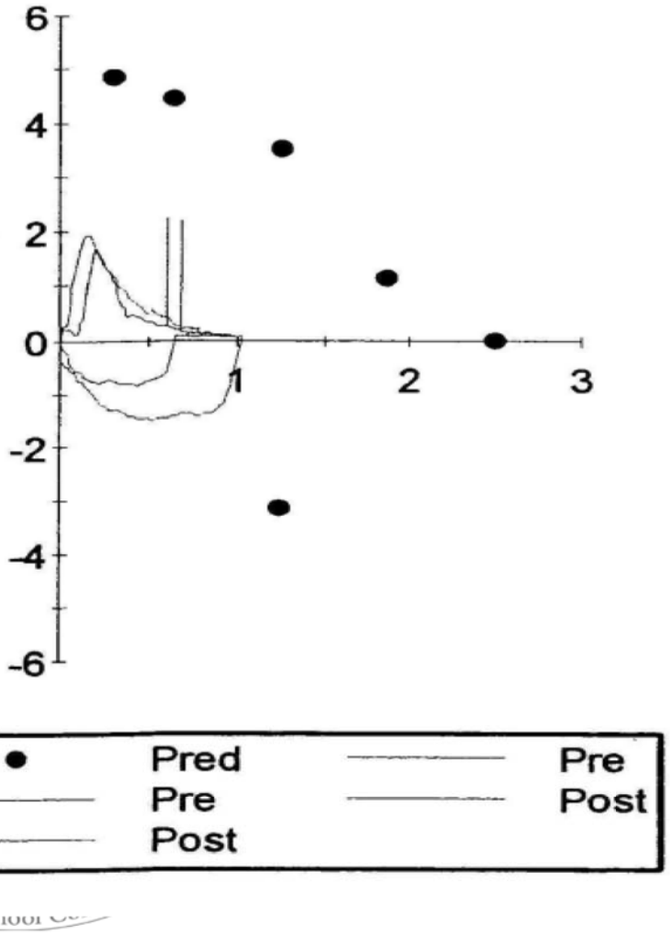
	Pre-Bronchodilator (BD)			Post- BD	
Test	Actual	Predicted	% Predicted	Actual	% Change
FVC (L)	1.73	4.37	40	1.79	4
FEV_1 (L)	1.57	3.65	43	1.58	0
FEV_1/FVC (%)	91	84		88	-3
RV (L)	1.01	1.98	51		
TLC (L)	2.68	6.12	44		
RV/TLC (%)	38	30			
DLCO corr	5.13	32.19	16		

7. A 73 year-old man presents with progressive dyspnea on exertion over the past one year. He reports a dry cough but no wheezes, sputum production, fevers or hemoptysis. He is a life-long non-smoker and worked as a lawyer until retiring 3 years ago. He likes to hunt and fish in his leisure time. His pulmonary function testing is as follows:



	Pre-Bronchodilator (BD)		
Test	**Actual**	**Predicted**	**% Predicted**
FVC (L)	1.57	4.46	35
FEV_1 (L)	1.28	3.39	38
FEV_1/FVC (%)	82	76	
FRC	1.73	3.80	45
RV (L)	1.12	2.59	43
TLC (L)	2.70	6.45	42
RV/TLC (%)	41	42	
DLCO corr	5.06	31.64	16

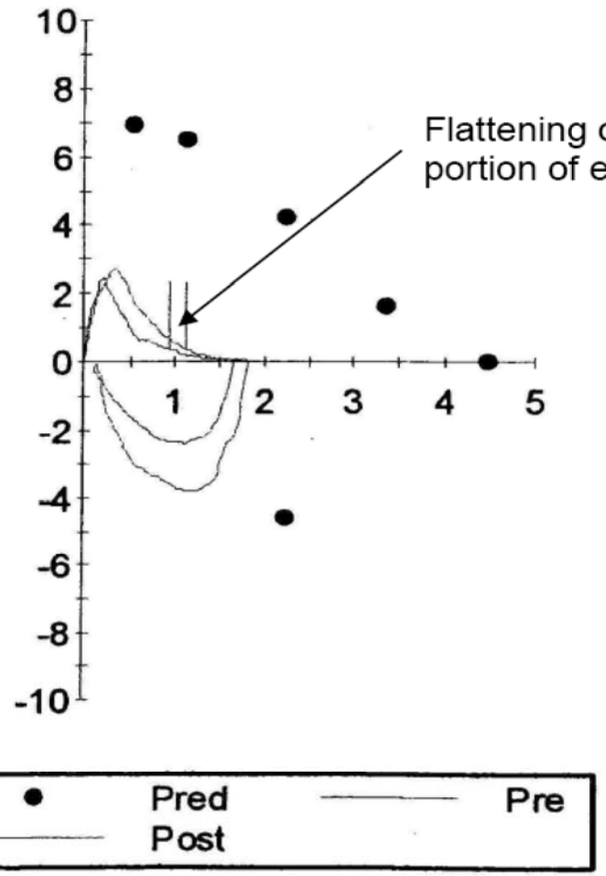
8. A 64 year-old woman presents with complaints of dyspnea and orthopnea. She is a life-long non-smoker. Her pulmonary function testing is as follows:



	Pre-Bronchodilator (BD)			Post- BD	
Test	Actual	Predicted	% Predicted	Actual	% Change
FVC (L)	1.00	2.51	40	1.02	3
FEV_1 (L)	0.61	2.00	30	0.69	13
FEV_1/FVC (%)	61	80		67	10
RV (L)	1.15	1.55	74		
TLC (L)	2.08	4.04	52		
RV/TLC (%)	55	39			

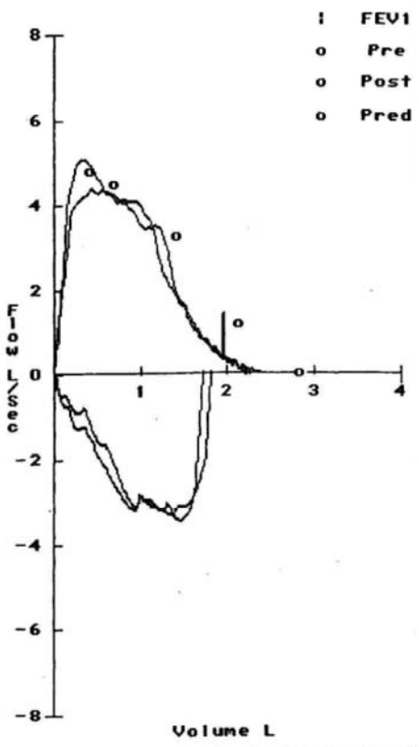
Test	Upright	Supine
FVC (L)	0.49	0.37
FEV_1 (L)	0.82	0.68
FEV_1/FVC (%)	0.60	0.54

9. A 35 year-old previously healthy man presents with dyspnea, fevers, chills and night sweats for the past 2 months. He is a non-smoker with no concerning habits or occupational exposures. His pulmonary function tests are as follows:



	Pre-Bronchodilator (BD)		
Test	**Actual**	**Predicted**	**% Predicted**
FVC (L)	1.66	4.48	37
FEV_1 (L)	0.94	3.67	26
FEV_1/FVC (%)	57	82	
RV (L)	1.39	1.66	84
TLC (L)	3.06	5.96	51
RV/TLC (%)	45	29	

10. A 53 year-old woman presents with increasing dyspnea on exertion. She denies cough, fevers, hemoptysis, weight loss or sweats. She was previously an active runner but has had to cut back significantly because of her symptoms with exercise. She does note occasional chest pain with exercise but has not had any syncope or palpitations. Her pulmonary function tests are as follows:



	Pre-Bronchodilator (BD)			Post- BD	
Test	Actual	Predicted	% Predicted	Actual	% Change
FVC (L)	2.38	2.87	83	2.23	-6
FEV_1 (L)	1.95	2.31	84	1.93	-1
FEV_1/FVC (%)	82	81		87	
RV (L)	1.69	1.58	107		
TLC (L)	4.26	4.36	98		
RV/TLC (%)	40	36			
DLCO corr	9.96	23.25	43		

11. A 36 year-old woman presents with a several month history of worsening dyspnea on exertion and exercise limitation. She is a life-long non-smoker and has no history of asthma or other known pulmonary diseases. She has had to stop going out with her weekly running group because she can no longer keep up with her friends. Her pulmonary function testing is as follows:

	Pre-Bronchodilator (BD)		
Test	**Actual**	**Predicted**	**% Predicted**
FVC (L)	0.88	3.34	26
FEV_1 (L)	0.87	2.87	30
FEV_1/FVC (%)	99	86	
RV (L)	1.61	1.40	115
TLC (L)	2.49	4.73	53
RV/TLC (%)	65	29	
DLCO corr	21	26.6	78

12. A 44 year-old woman with cirrhosis secondary to chronic alcohol abuse and Hepatitis C presents with complaints of increasing dyspnea. She reports that her dyspnea is worse when she is sitting upright or walking but improves when she is lying flat. She is an active cigarette smoker. On exam, she has a room air oxygen saturation of 88% in the sitting position and a room air oxygen saturation of 96% in the supine position. Her pulmonary function testing is as follows.

	Pre-Bronchodilator (BD)			Post- BD	
Test	**Actual**	**Predicted**	**% Predicted**	**Actual**	**% Change**
FVC (L)	3.94	3.69	107%	3.86	-2
FEV_1 (L)	2.76	3.03	91%	2.85	3
FEV_1/FVC (%)	70	82			
RV (L)	1.89	1.86	102		
TLC (L)	5.67	5.40	105		
RV/TLC (%)	33	33			
DLCO corr	10.22	28.22	36		

Answers

1. Normal

2. Moderate airflow limitation with reversibility

3. Severe Airflow limitation with reversibility, with air trapping (RV high)

4. Moderate airflow limitation, flattening of both inspiratory & expiratory arm, fixed upper airway obstruction (tracheal stenosis)

5. Severe airflow limitation, no reversibility, air-trapped, not hyper inflated, decrease diffusion, low PEF (alpha 1 AT deficiency)

6. Severe Restrictive pattern, with decrease diffusion (intrathoracic)

7. Severe Restrictive airway

8. Obstructive & Restrictive , Diaphragmatic weakness.

9. Obstructive (severe) & restrictive (moderate), flat 2nd part of expiratory arm: unequal emptying of both lung (mass cause obstructive & restrictive)

10. No obstructive nor restrictive airway, but isolated decreased diffusion, most likely vascular element (pulmonary hypertension)

11. No obstructive, restrictive, high RV, extra- thoracic restriction (neuromuscular)

12. No obstruction, no restriction, isolated decreased diffusion, with platypnea, orthodeoxia (intrpulmonary shunt), hepato-pulmonary

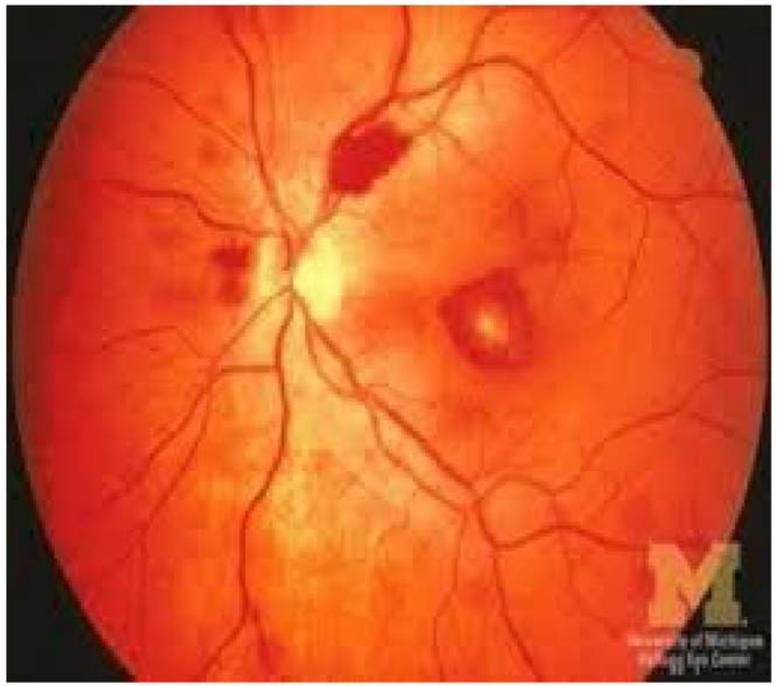
Cardiovascular System

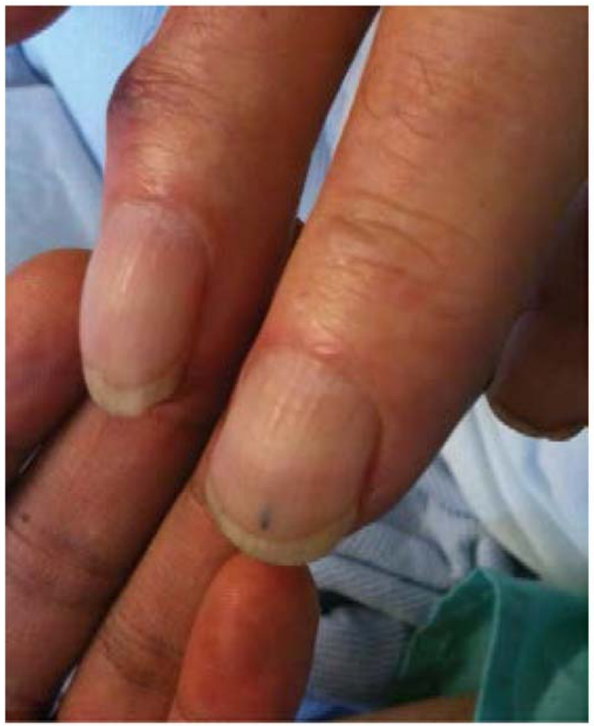
Malar flush = Mitral stenosis

Infective Endocarditis

Splinter hemorrhages.

Roth spots.





Janeway lesion : small ,pailess,erythematous and on palm and sole.
Osler node:painful, tender raised lesion on fingers and toes.

- During examination of peripheral pulses, what artery is being assessed now?
  - Dorsalis Pedis
- regarding the surface marking, it pass lateral which tendon?
  - Extensor Hallucis Longus

56 y/o patient admitted 6 weeks ago with Acute anterior MI, and presented now with chest pain & persistent ST elevation? What is the Diagnosis ?

Left ventricular aneurysm.

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This patient has history of Rheumatic fever.
Mention 3 abnormalities:
What is the likely diagnosis:

1)Incresed cardiothoracic ratio(cardiomegaly)
I can't see other abnormalities on this x-ray ,,
But other abnormalities on this disease...
Mitral regurge....migratory polyarthritis...sydenham chorea...erythema margunatum....

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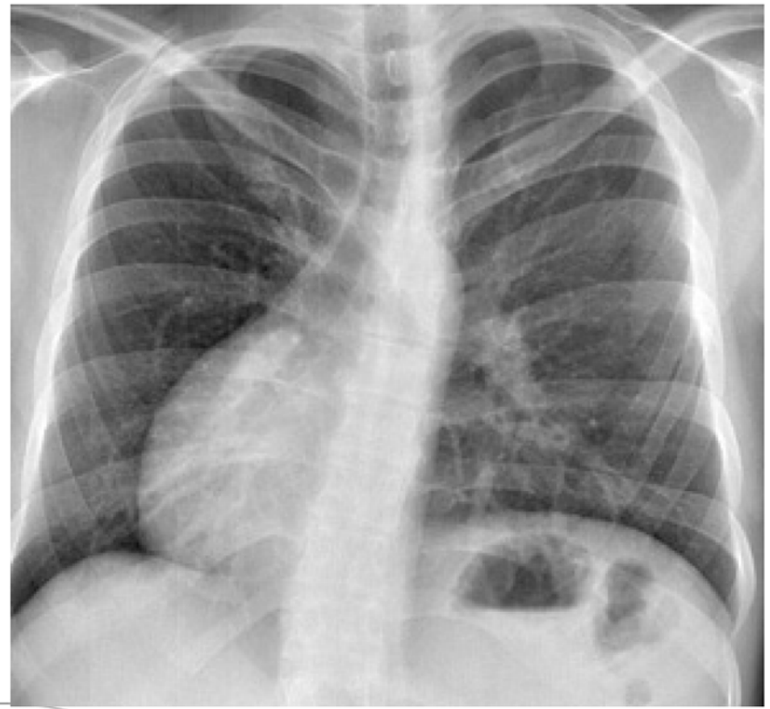
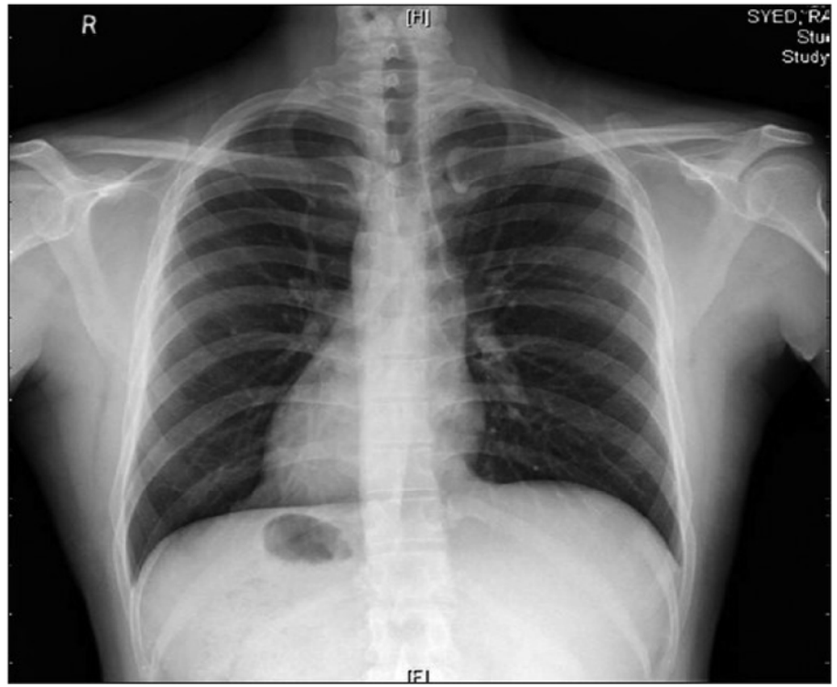
This patient presented with retrosternal pain and shortness of breath
what is the diagnosis?

Diaphragmatic eventration

Q13: what is the diagnosis in patient A, Patient B ?





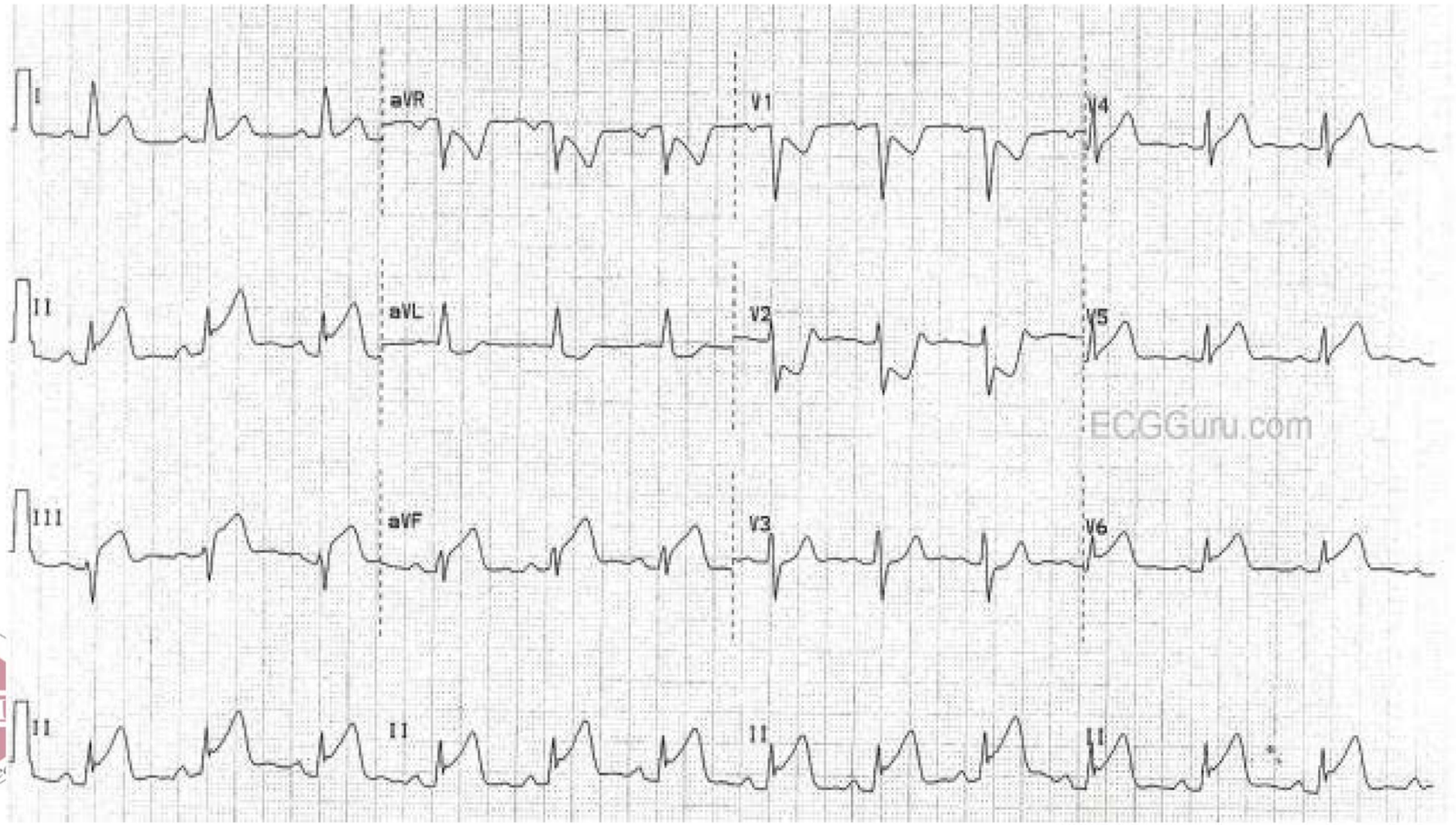
A (Dextrocardia)

B (Situs Inversus)

ECG

This is acute STEMI, presented with shock the first line management is

IV fluids.



Patient has episodes of palpitation, ECG was done.

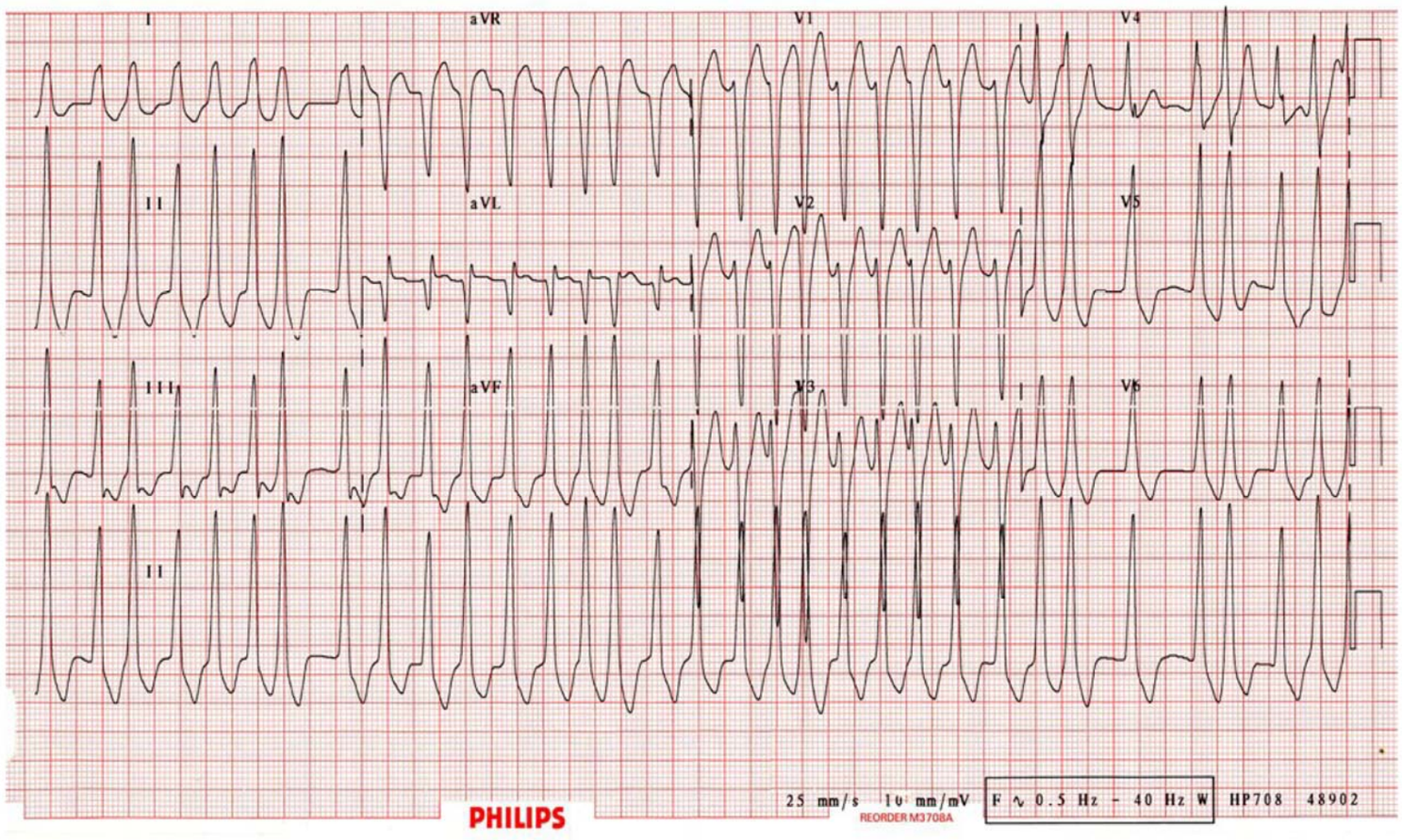
What is the finding in this ECG?

What is the diagnosis?

Finding : delta wave
+narrowed PR interval:less than 3 small squares
Ddx:wolf parkinson white.

WPW (notice the q wave)

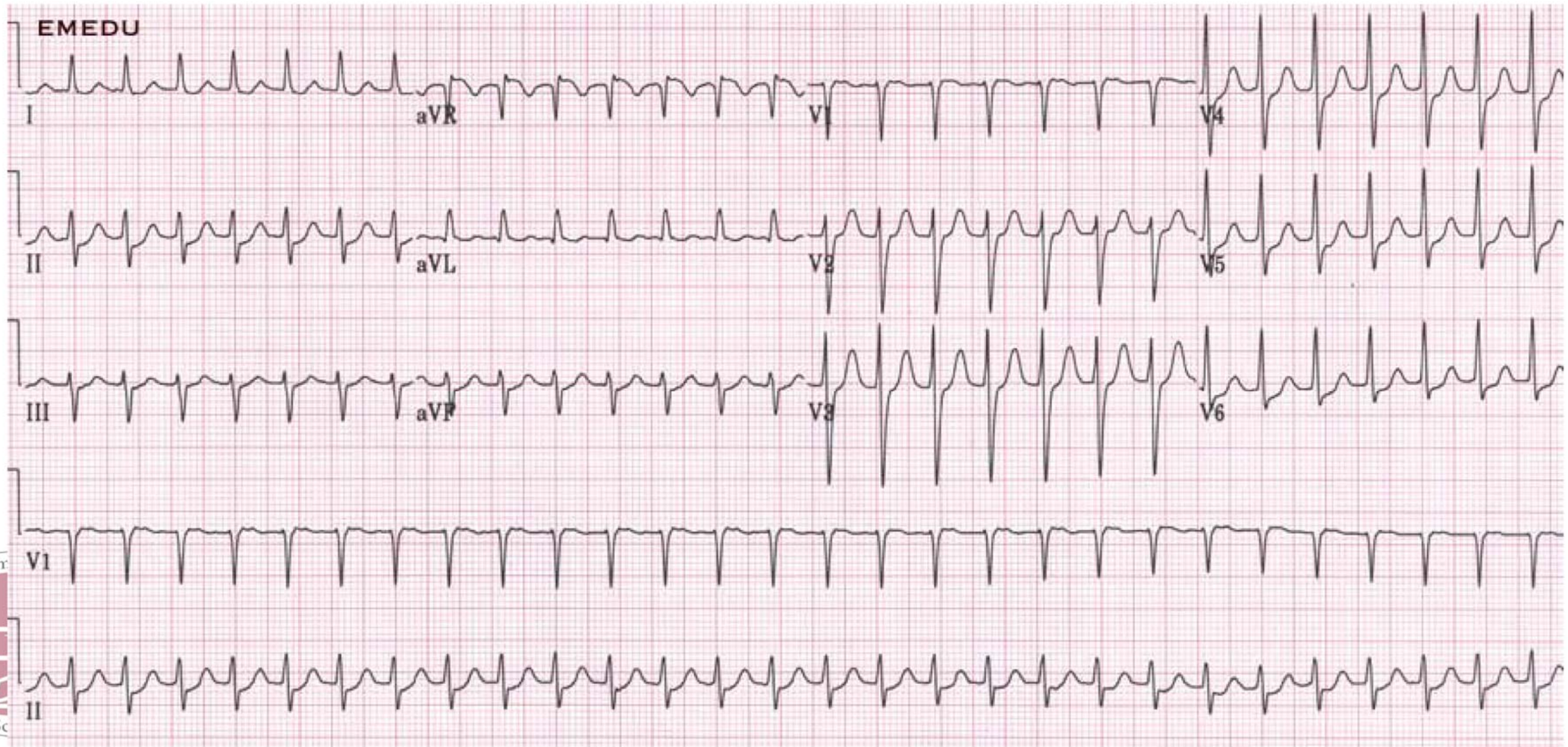
Patient presented to ER c/o palpitation & chest pain with decrease LOC for 1 h PTA, in ER BP **60/35** what is the best immediate management ?



V-tachy(not sure).i can't see if the QRS complex is wide or not(it should be wide) ...also v-tach is only slightly irregular....here it's obviously irregular.
Management...
It's polymorphic and the patient is hemldynamically compromised so you can say:
Electrical Cardioversion (synchronized DC)>>the answer.
....then give IV beta blocker if ischemia can't be excluded .....
Some may give IV amiodarone as long as QT isn't prolonged.
IV lidocaine can be useful.

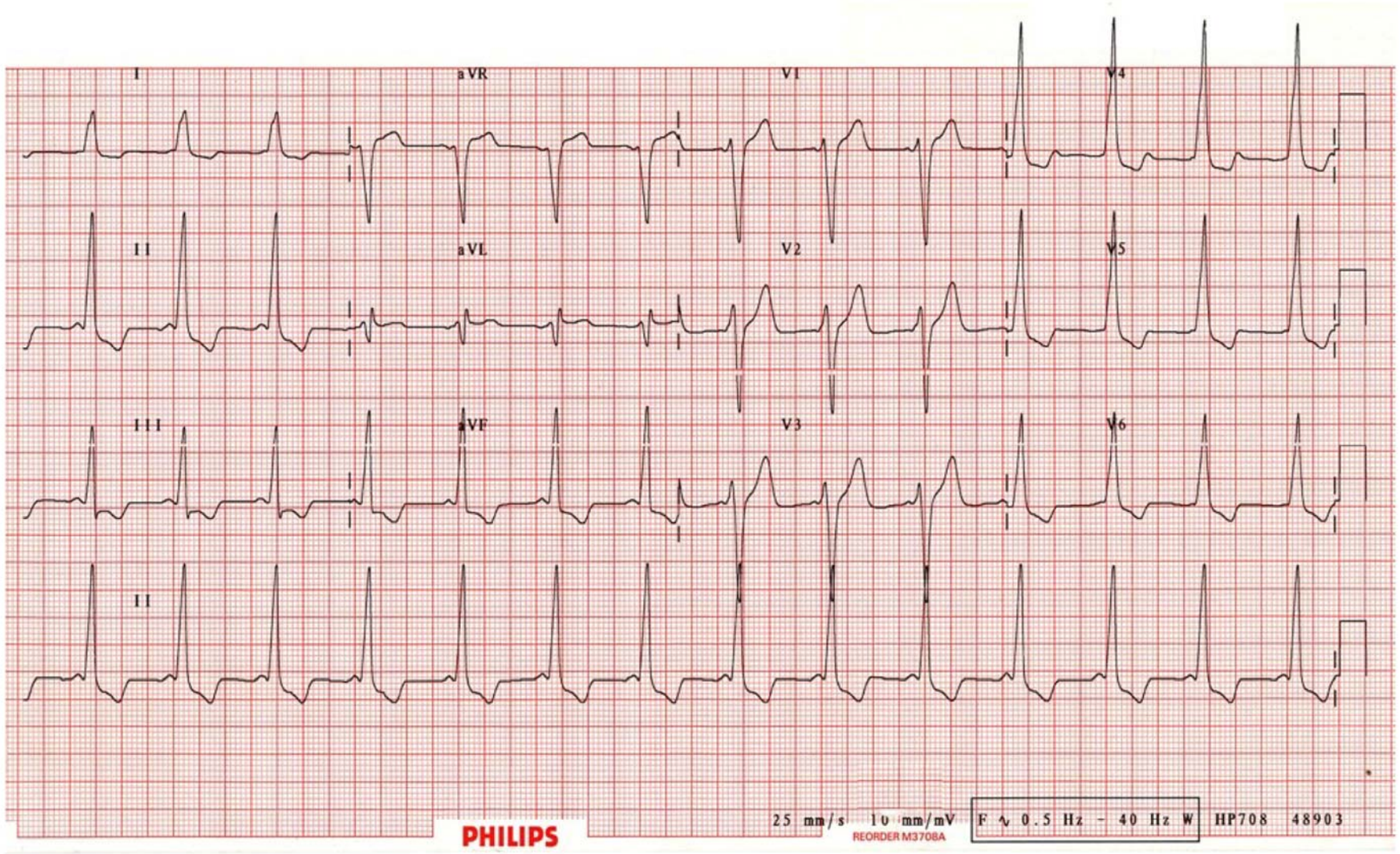
patient presented to ER with palpitation what is your diagnosis?

PSVT



Narrow PR+ delta wave=Wolf parkinson white.
Narrow PR only(without delta waves)= lown-ganong-levine.
This is a case of WPW.

This patient presented with repeated Attacks of SVT, what is the underling cause?



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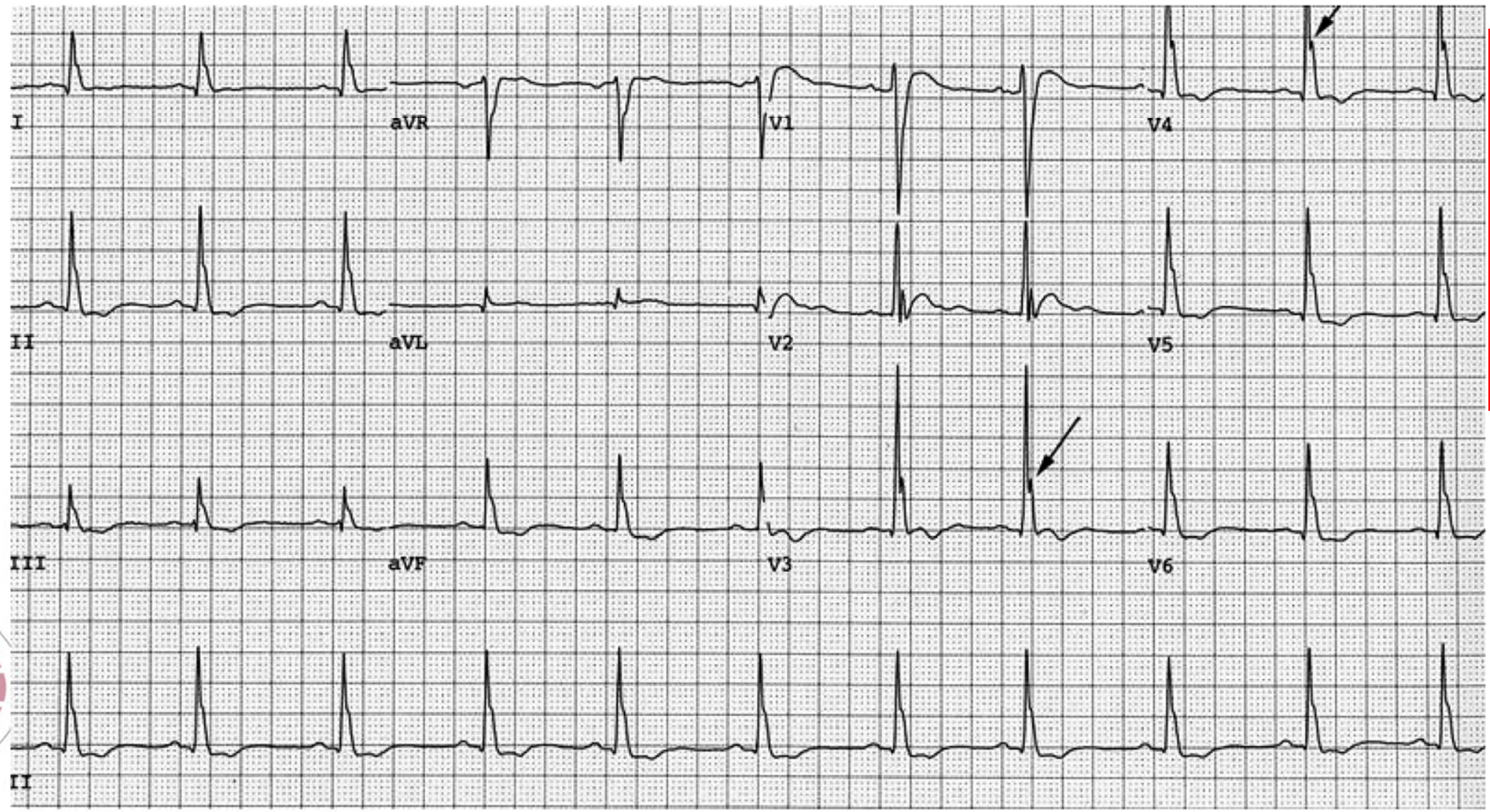
A 54-year-old man with lung CA and bone metastasis, presented with polyuria & polydipsia.

- ECG as shown, What is the most appropriate course of action at this point?



There's shortening of QT interval due to hypercalcemia...

..

Normal saline

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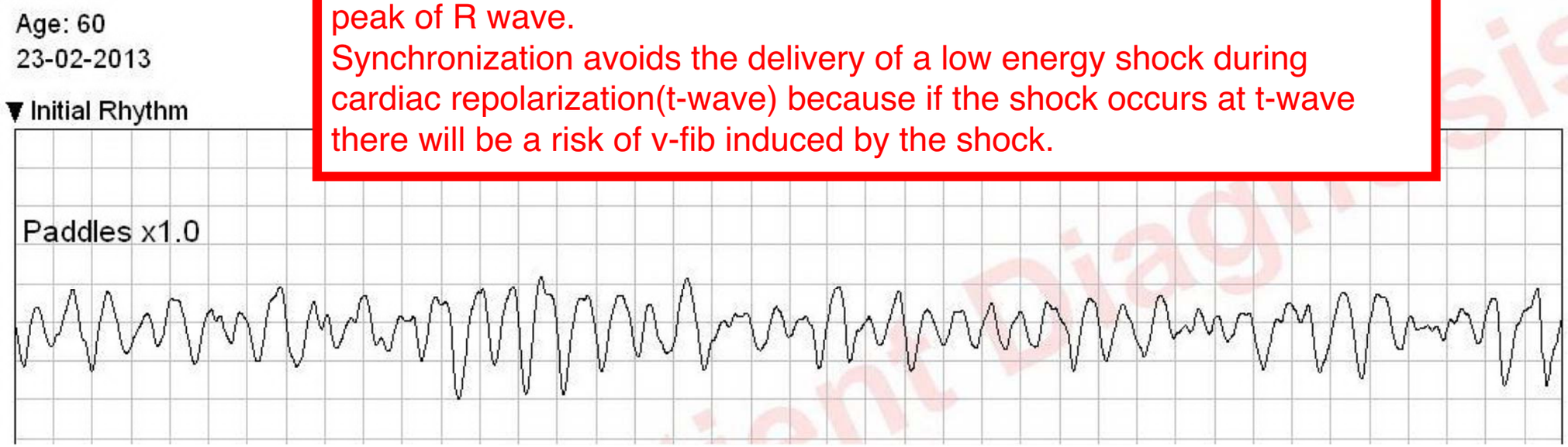
60 years old man, sudden collapse
- what is the diagnosis? ***V Fib***
- what is the immediate (synchronized or unsynchronized DC) ***unsynchronized***

Synchronized dc shock is a DC shock that the defibrillator hits at the peak of R wave.
Synchronization avoids the delivery of a low energy shock during cardiac repolarization(t-wave) because if the shock occurs at t-wave there will be a risk of v-fib induced by the shock.



Unsynchronized is used when there's no coordinated intrinsic electrical activity in the heart (pulseless VT OR VF)
IF THE PATIENT IS STABLE AND YOU CAN SEE QRS-T COMPLEXES USE SYNCH .
OTHERWISE >>UNSYNCH.

Notes to keep in mind

- Most likely we will not get asked about the management, and the doctor didn't mention them he just looked at the pictures and said (this is STEMI, this is v tach, this is WPW…etc). We just added the whole slide for completion sake.
- A point the doctor mentioned is that the only condition in which there is pr depression is pericarditis.
- Always look at the ecg in a systematic way to make sure you don't miss anything.

Gastrointestinal System

- 32 year old male complaining of (crushing) chest pain precipitated by cold drink, no sweating, no vomiting, ECG normal, cardiac enzyme negative, barium swallow was done and show:

- What is the diagnosis ?
- What is the test that confirm Diagnosis ?

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Diffuse Esophageal Spasm

- Esophageal Manometry to confirm Diagnosis
- Corkscrew Appearance of the esophagus

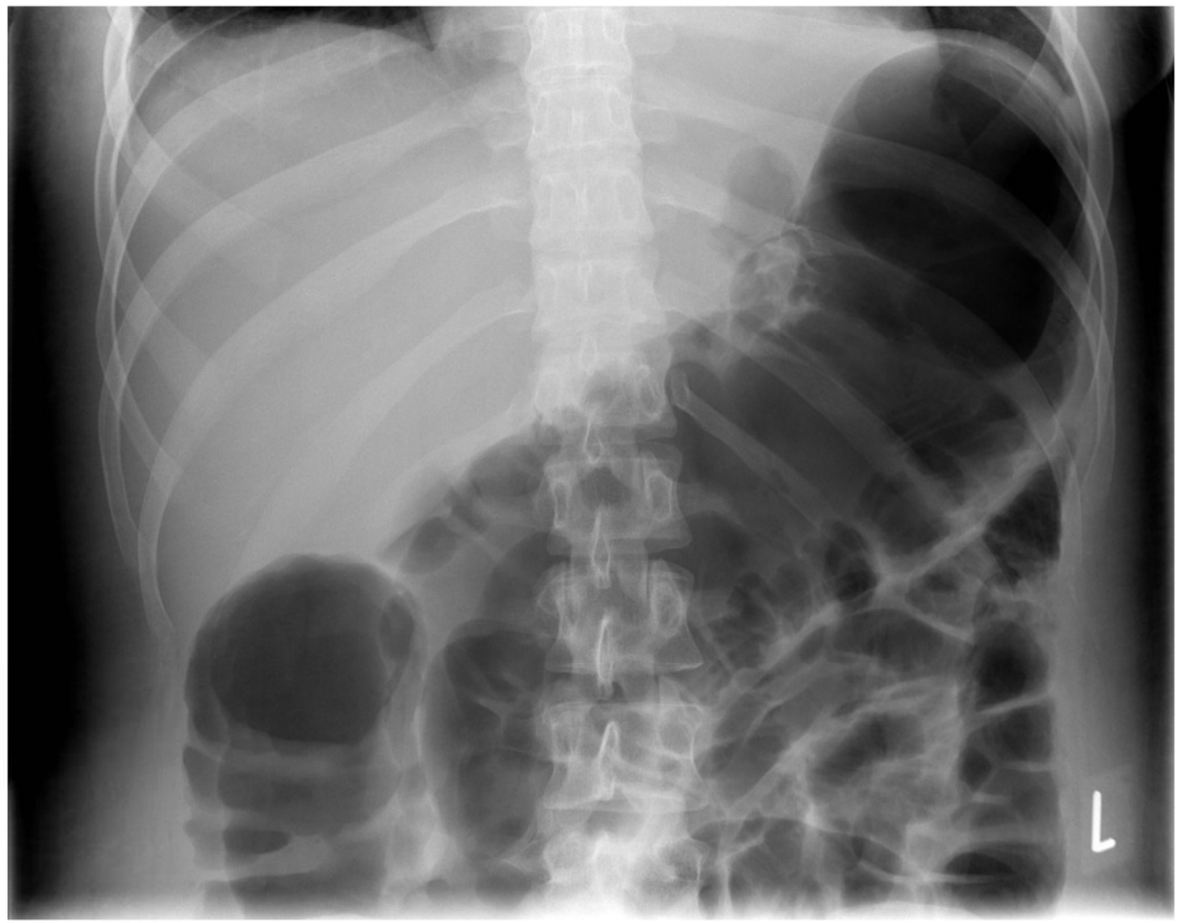
Barium swallow for patient presented with Dysphagia as shown, what is the cause ?

It may also be pseudoachalasia (cancer comressing the LES) But always think benign unless there's something that may alarm you.

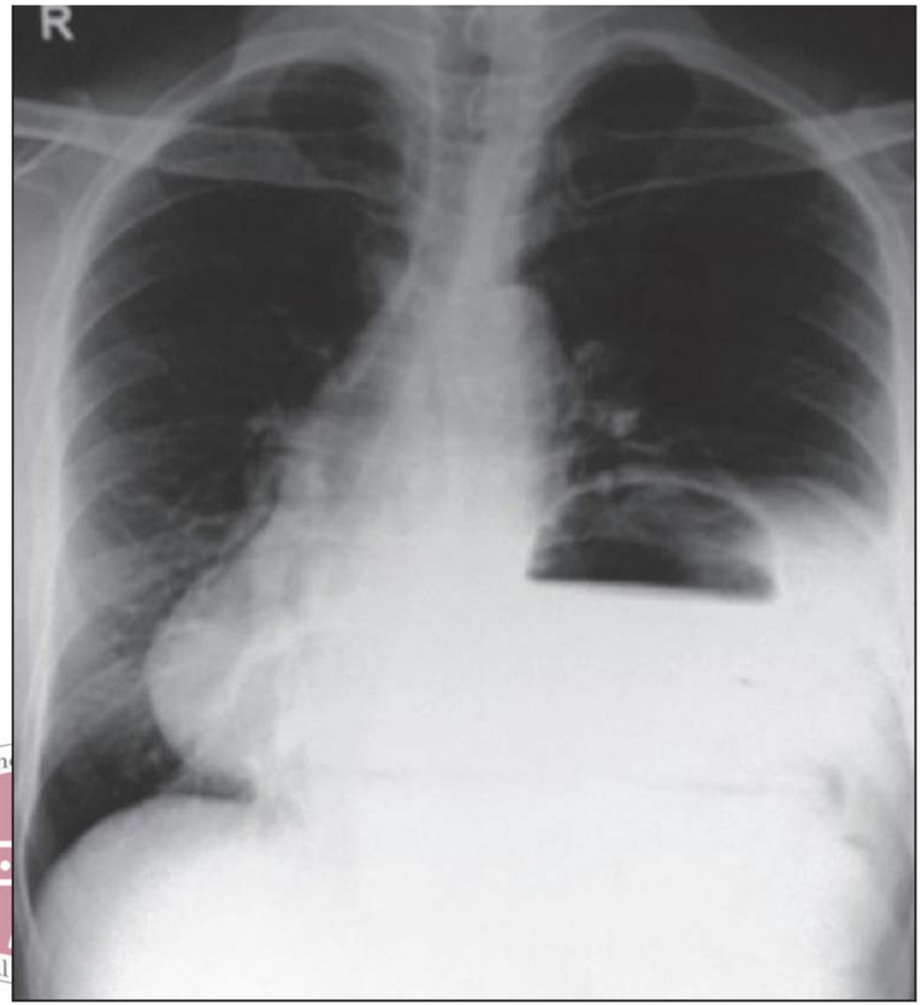
- Achalasia
- Bird Peak Sign
- Due To Failure Of The LES To Relax
- EGD: Biopsy should be done to rule out malignancy.

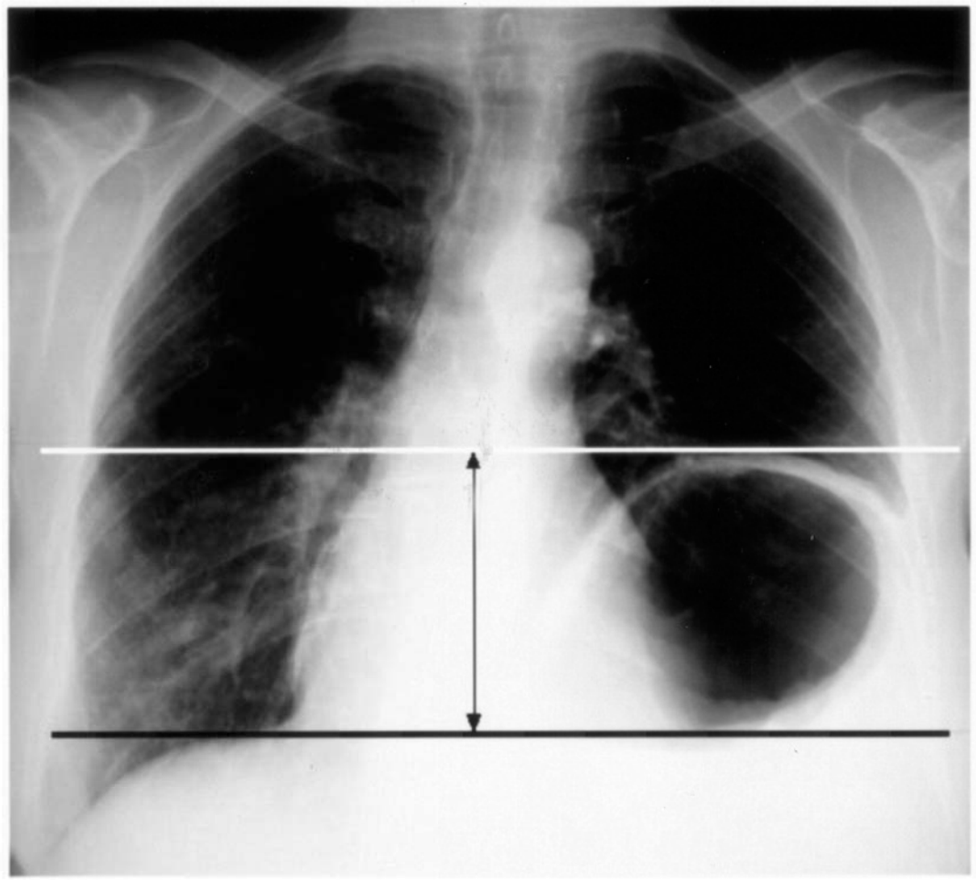
36 years old patient with IBD, present with abdominal pain & distension
- What complication is shown in this Abdomen X ray?

Toxic Megacolon



Diaphragmatic eventeration





Diaphragmatic hernia

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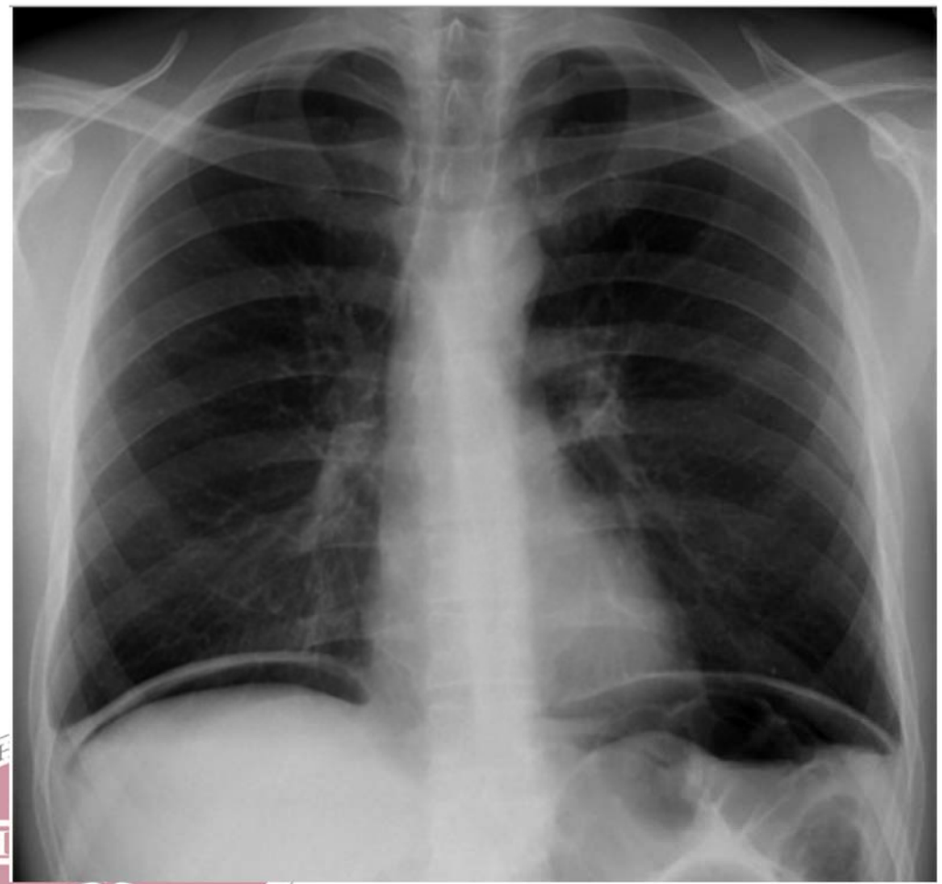
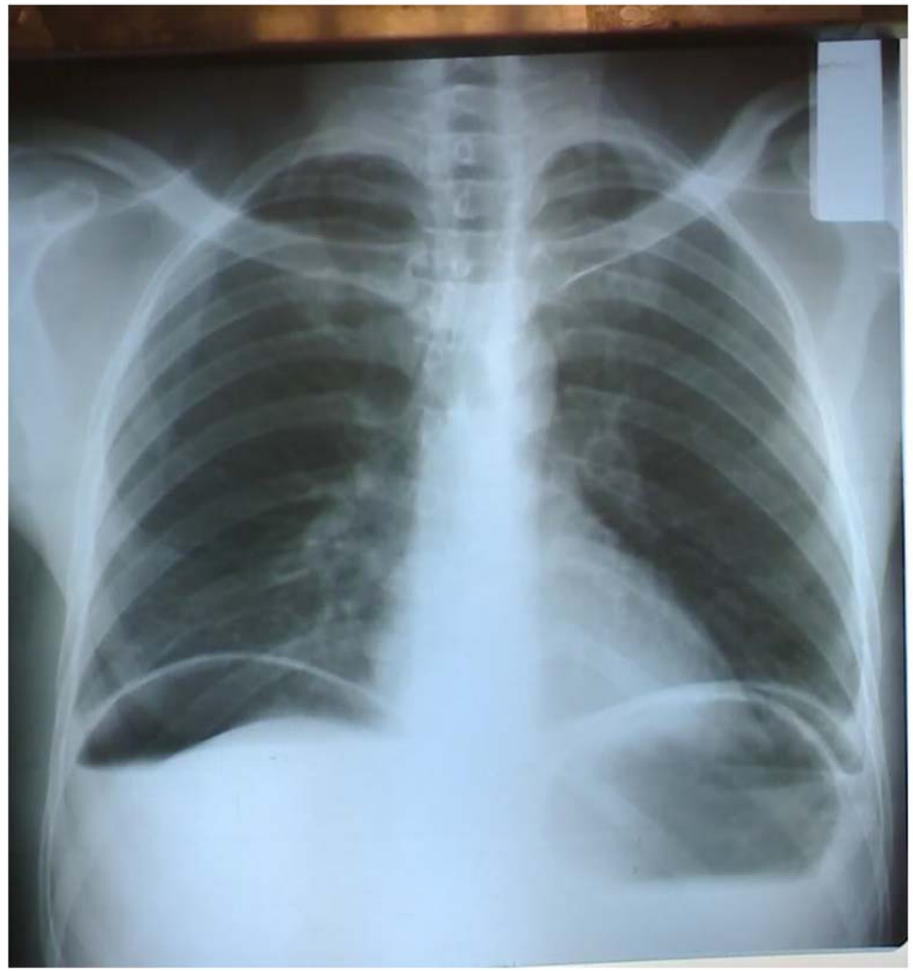
Air under the Diaphragm





- In patient with celiac disease you found this nail change, what is the main cause ?

- **Koilonychia**
- **Most common cause is iron deficiency anaemia**

- In patient with liver cirrhosis you found this nail change, what is the main cause?

- Leukonychia due to hypoalbunemia

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- This patient is case of chronic liver disease.
- What Is the most likely origin of the facial swelling? *parotid gland swelling most likely due to alcohol consumption*
- if you examine the chest, what finding would you search for?

Stigmata of liver cirrhosis ...
Mention 3 of them.

This was found in duodenal aspirate of a patient with diarrhoea and weight loss.
What is it ?
What treatment will you give ?

- Giardia Lamblia
- Metronedizole

A 60 lady has symptoms of intermittent abdominal pain and loose stool which have occurred over 1 year, Iron & folate Deficiency anemia, TTG antibodies positive.

- What is this skin lesion ?

Dermatitis Herpetiformis In Celiac Disease

Ttt for this lesion is dapsone .. I'm just adding some stuff for you to know (not necessary for the exam).

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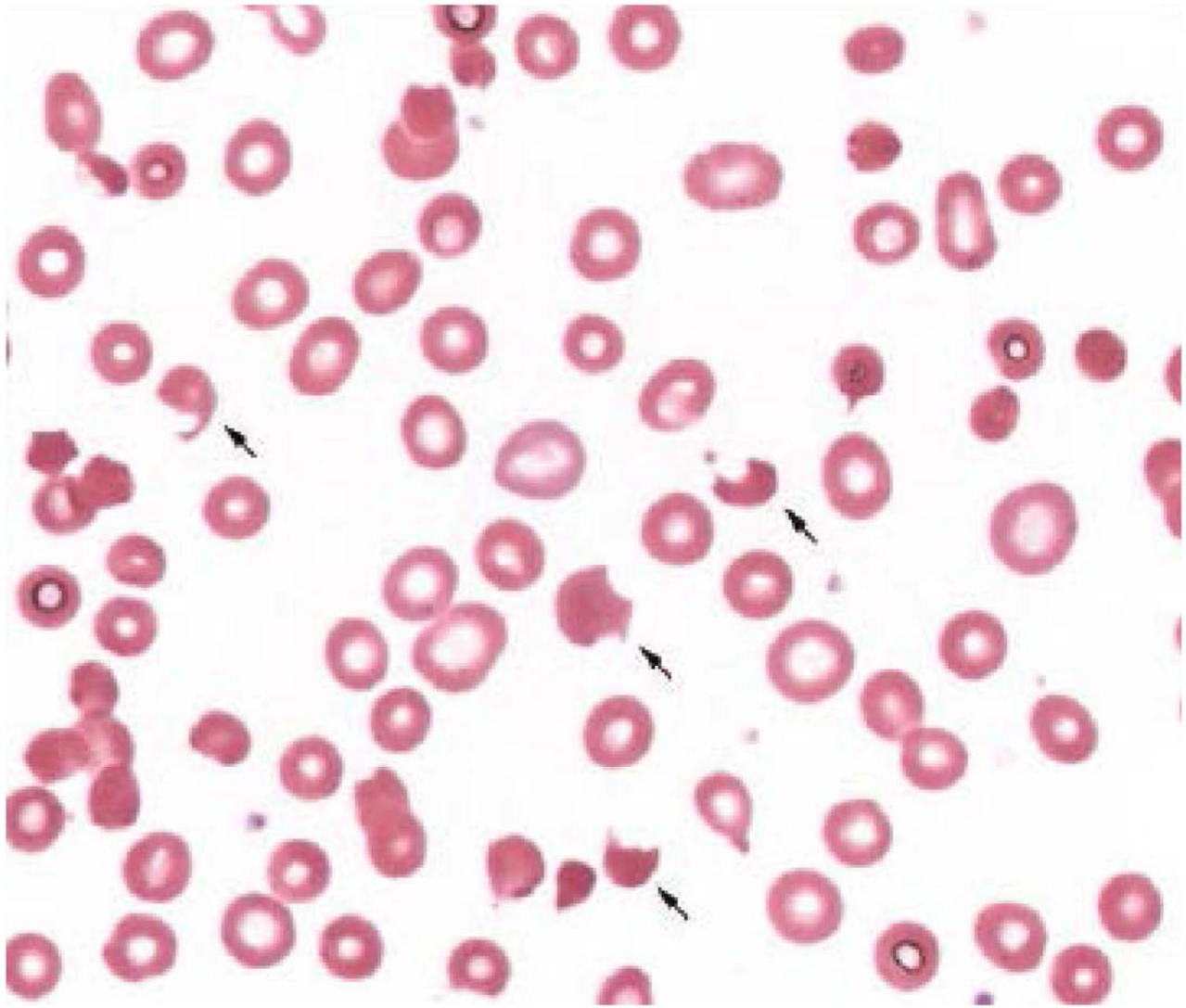
Hematopoietic System

Fragmented cell

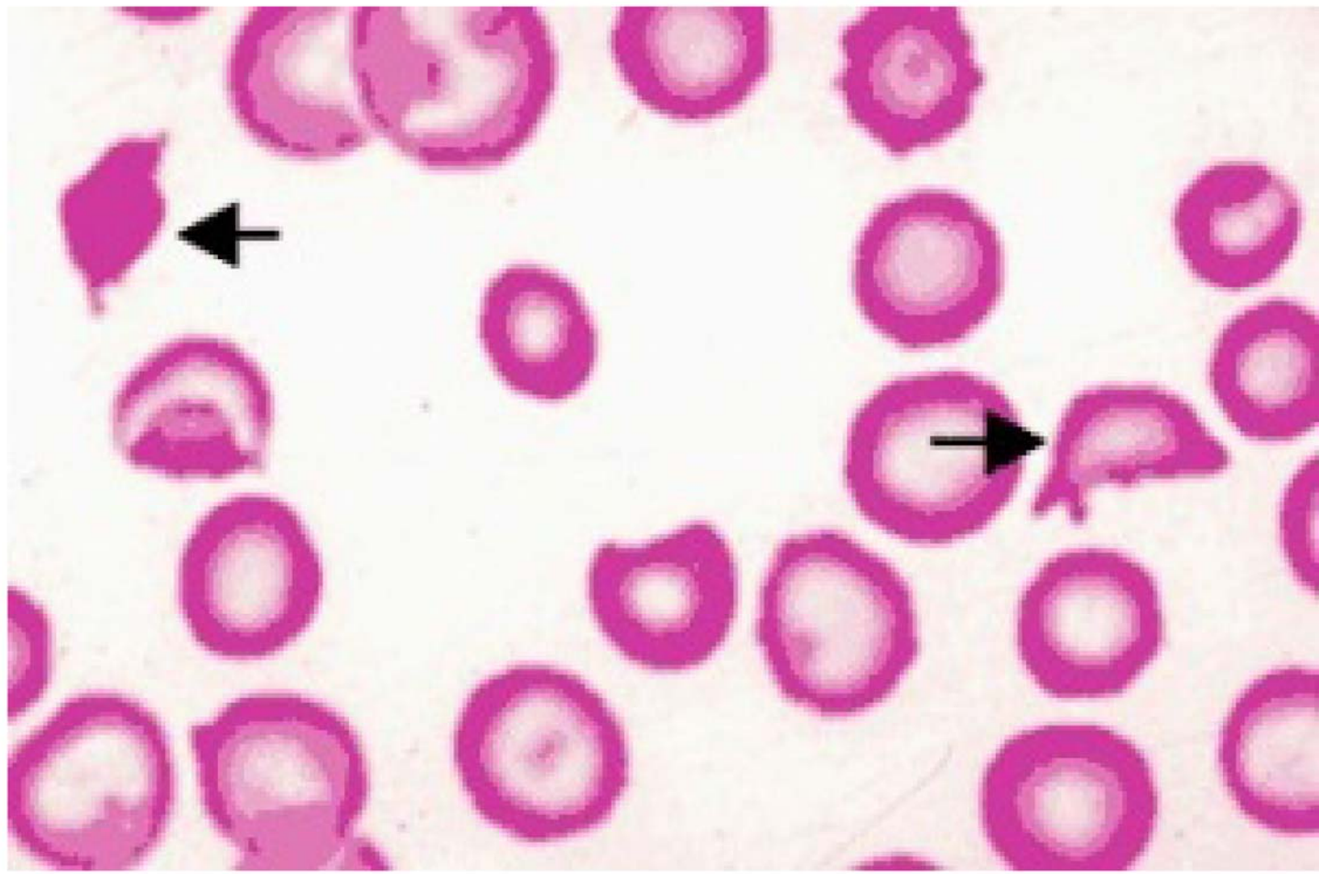


37 Y/O male admitted with high fever and severe dysuria, temp 40C, BP 80/50, presented with bleeding from needle puncture.
Low HB, high PT, PTT, low Platelets

It goes with DIC.

- What is Blood film finding
- What is the diagnosis?

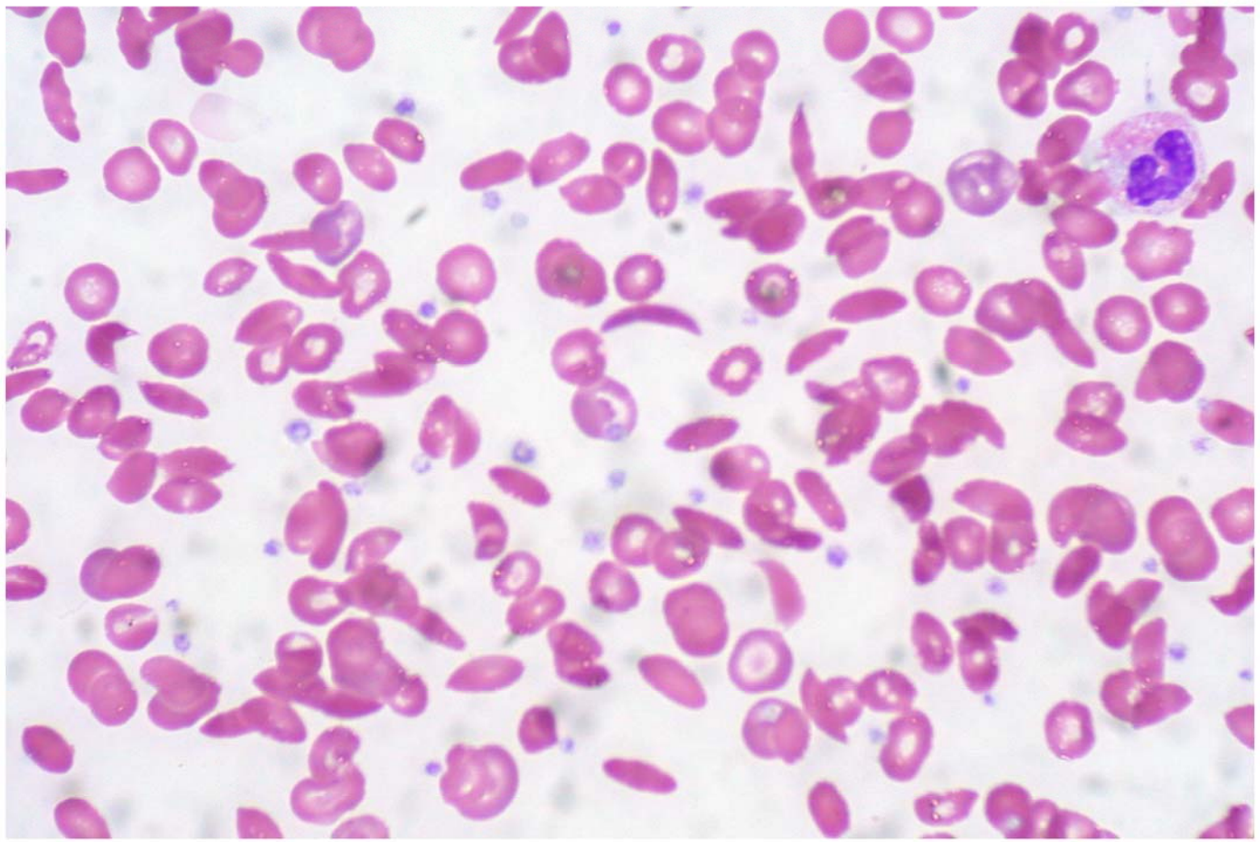
schistocytes
hemolytic anemia



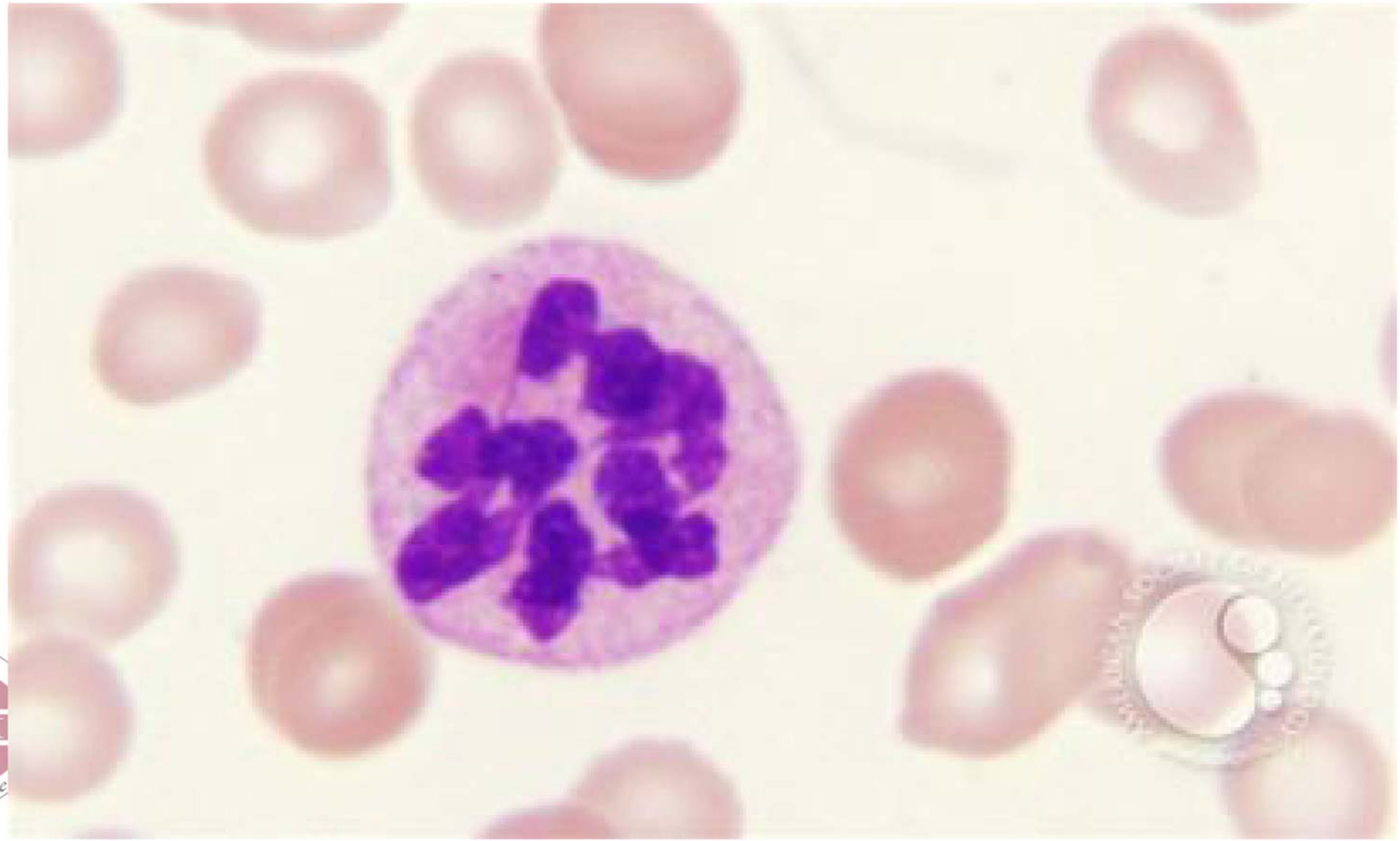
Sickle cell

This patient is anemic, and have abdominal & lower limb pain. What's your diagnosis?

sickle cell anemia

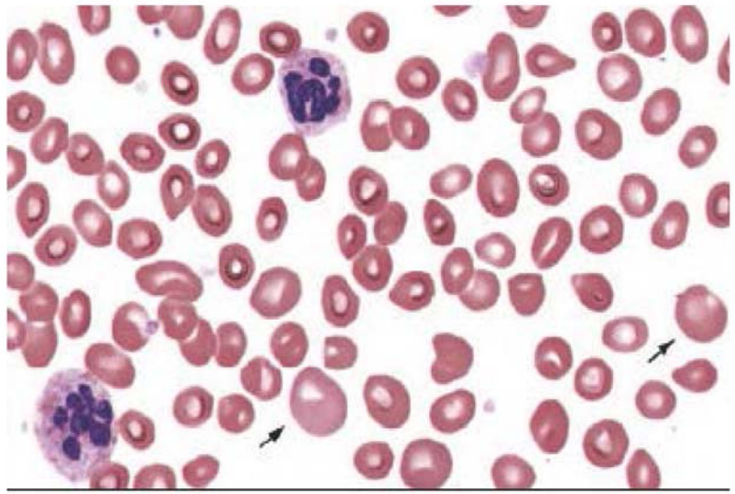


Hyper-segmented neutrophil

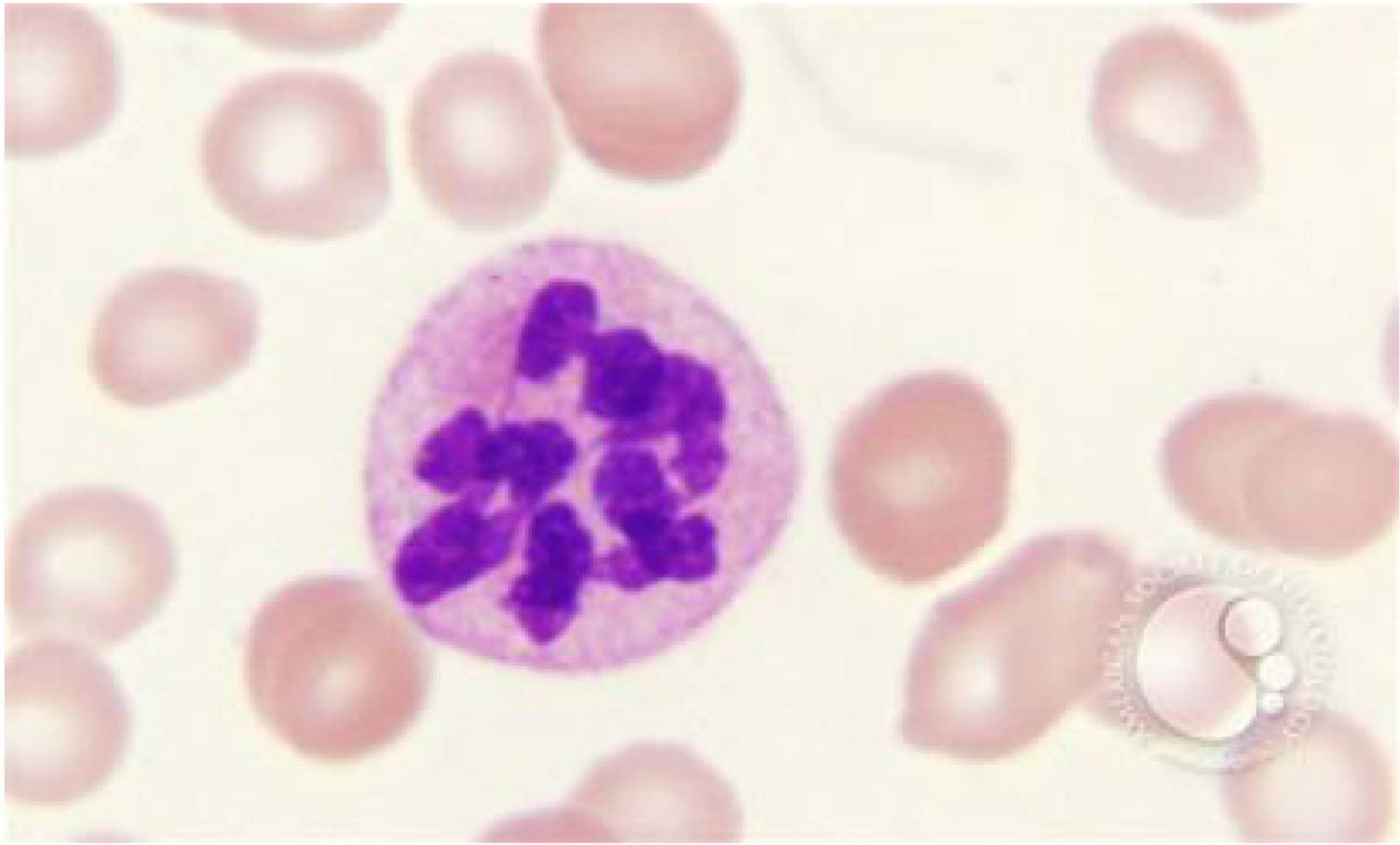


32 y/o c/o SOB and painful tonuge, had a history of vitiligo, found to have anemia?
Blood film as showed, EGD showed this image
what is the diagnosis ?

Pernicious anemia or
Atrophic gastritis.

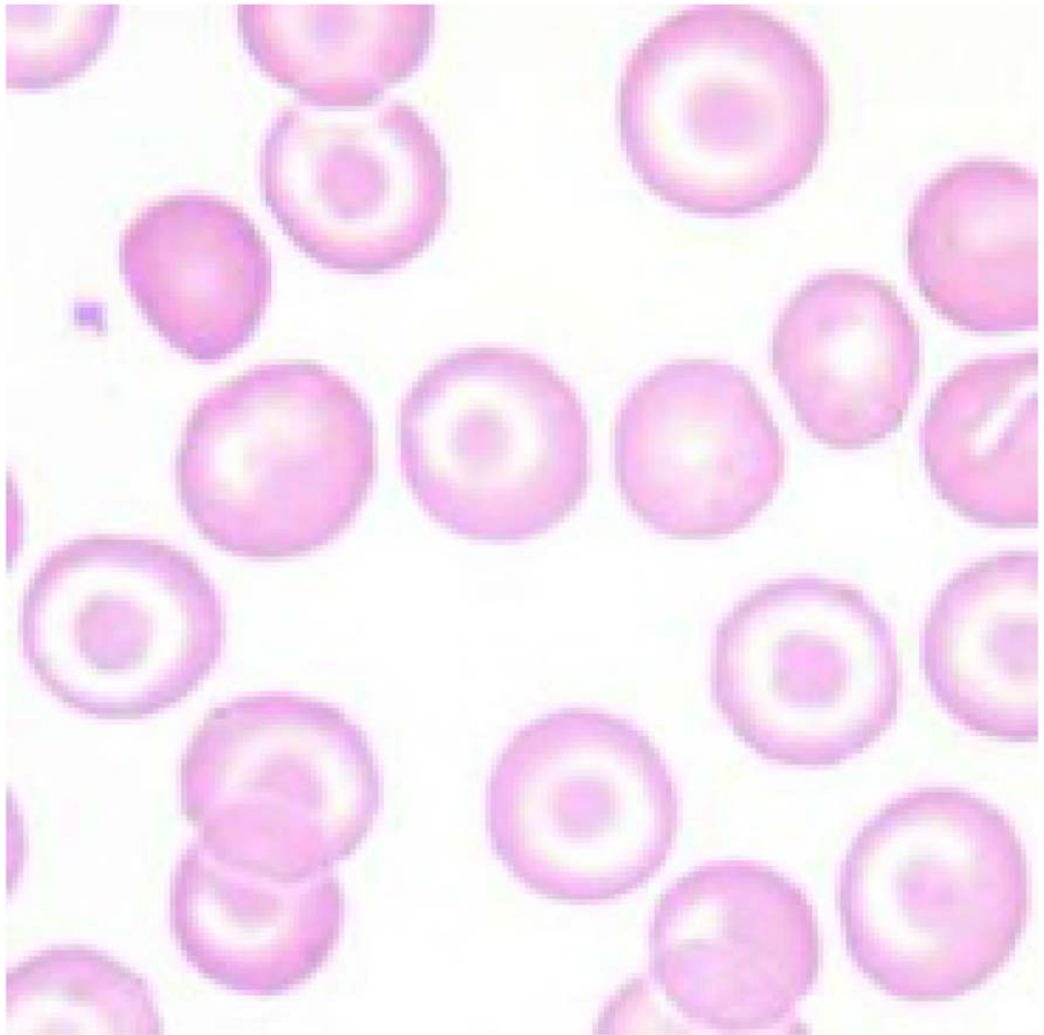


40 y/o with chron's disease, his HB 9.5, MCV 112, blood film is shown below.
what is the cause of anemia?
Hyper segmented neutrophils are seen in patients with macrocytic anemias most likely due to folate or b12 deficiencies.



Target cell

Thalassemia



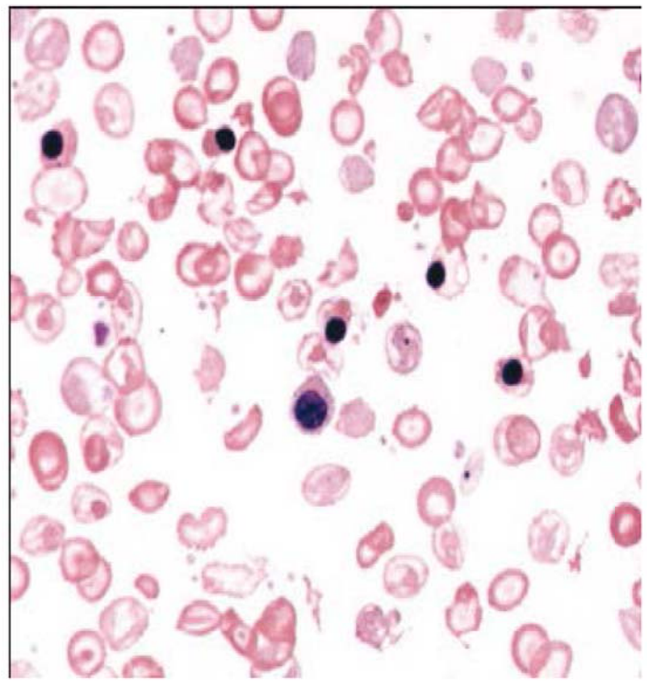
17 y/o with microcytic anemia presented with leg ulcer

what is the diagnosis ?

Thalassemia.

What is the abnormalities in head X-ray ?

Hair on end appearance.



65 y/o male c/o low back pain & hyper-Ca

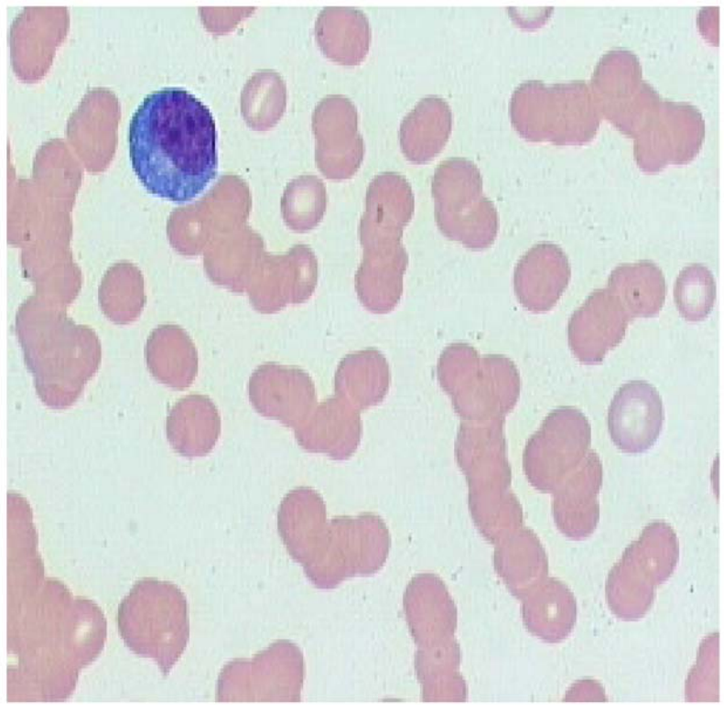
mention:

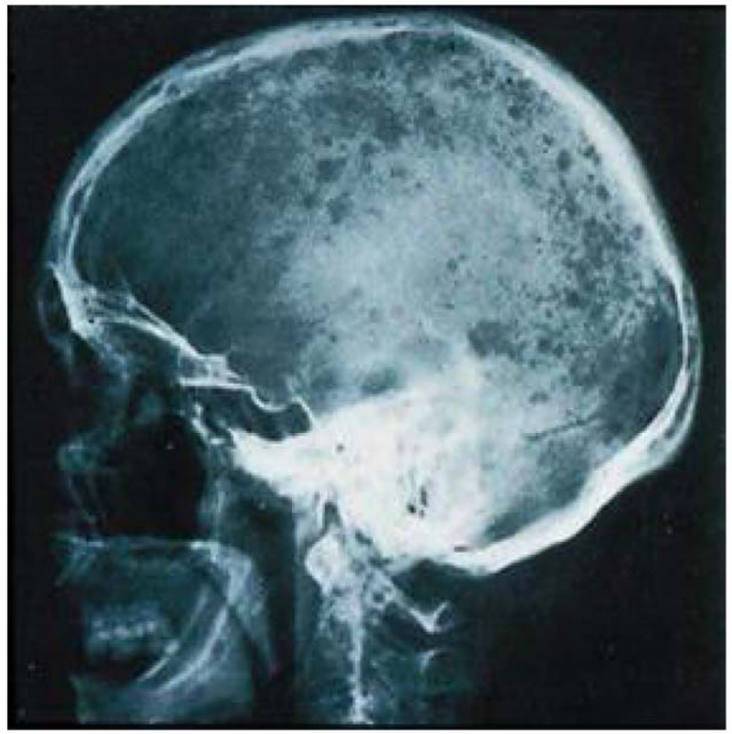
a- abnormality in blood film

b- abnormality in skull X-ray

Rouleaux formation.

Multiple punched out lytic bone lesions.





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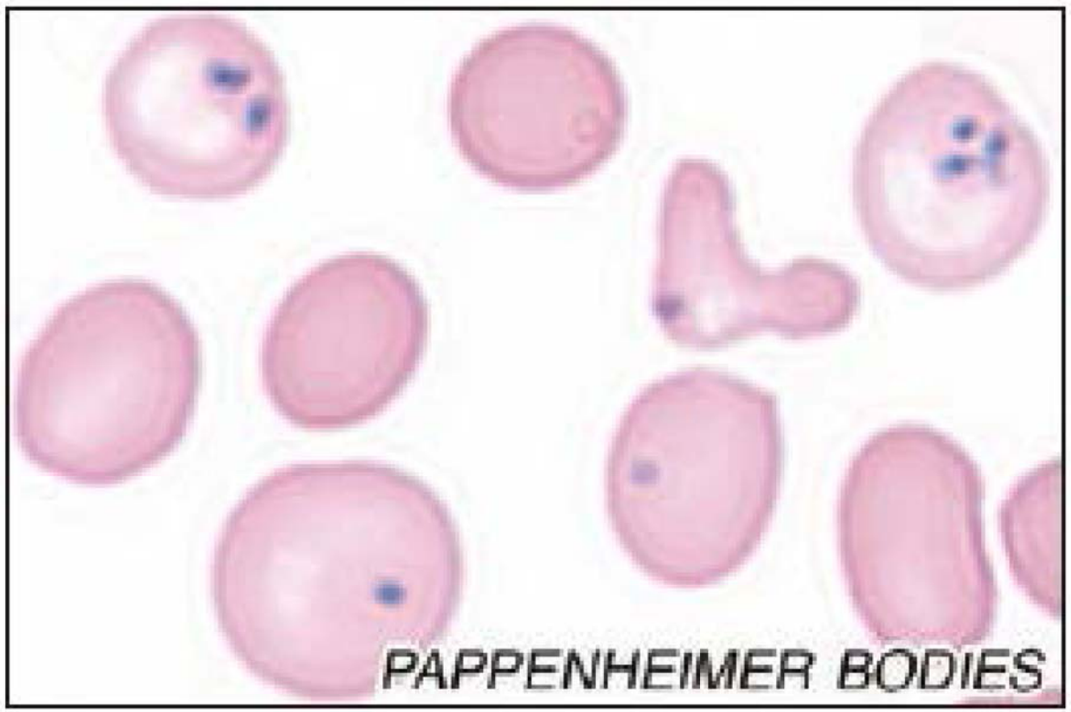
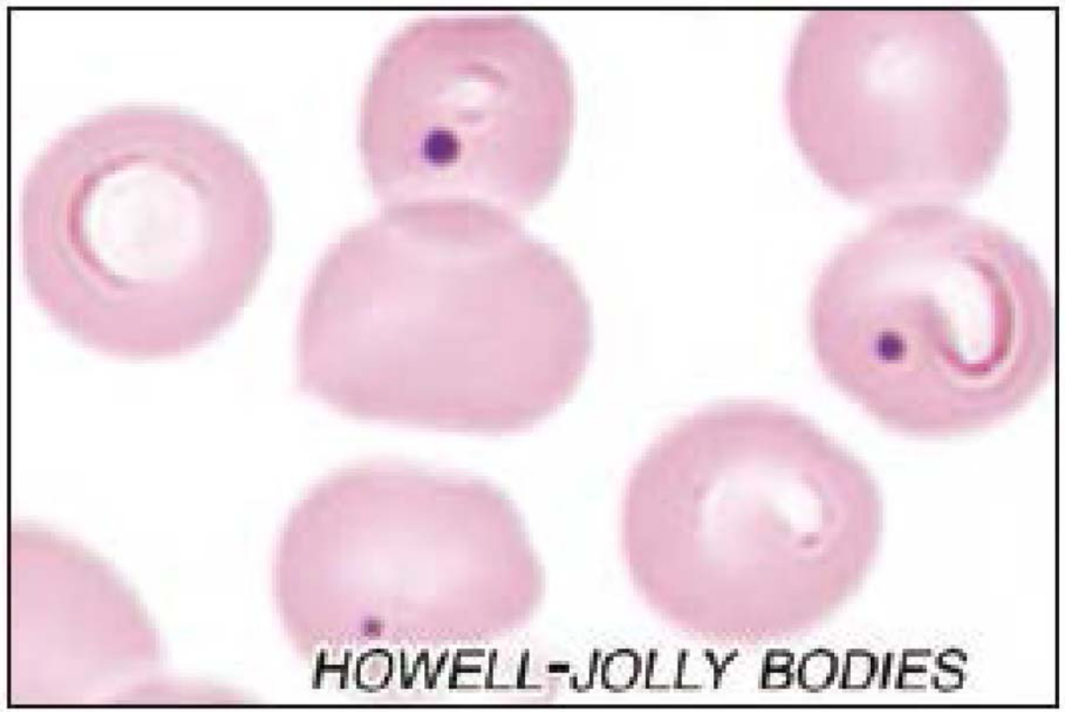
65 y/o female presented with recurrent GI bleeding & iron deficiency anemia what is the diagnosis ?

hereditary hemorrhagic telgiectasia.

Blood film

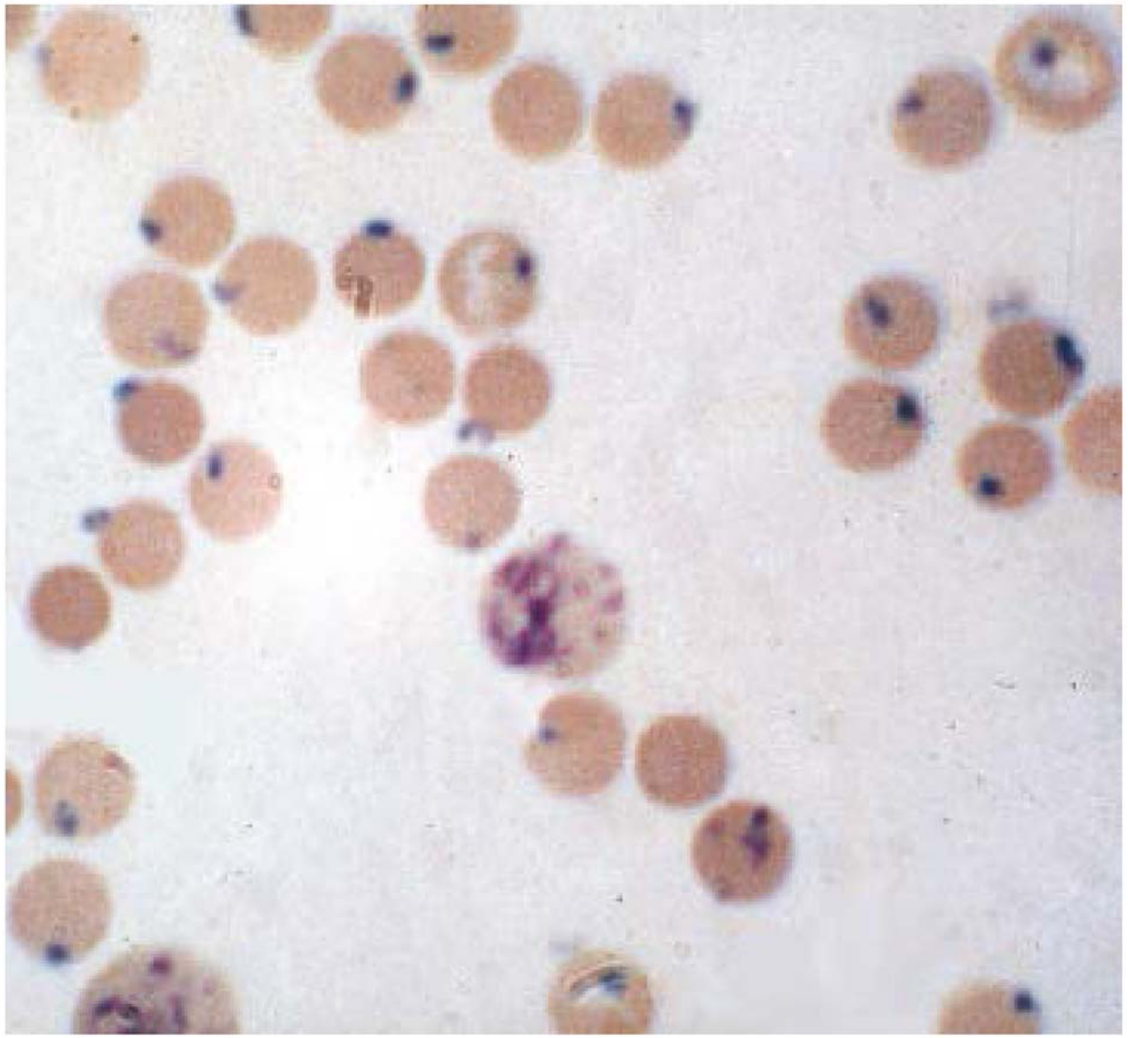
Asplenism.





Heinz body

G6PD Deficiency



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Endocrine System

Diabetic Amytrophy

- **A 56-year-old man with type 2 DM (HbA1c 8.8%) of 24 years' duration presents with burning, lancinating pain in the right buttock, thigh, and legs. He had weight loss, On physical examination, there is wasting of the thigh muscles on the right side, with occasional involuntary twitching.**

- **What is the likely diagnosis?**

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Acanthosis Nigricans

- An obese 24-year-old man presents to the emergency department (ED) with headache and fatigue. He has no previous history of DM. His blood glucose was 450 mg/dL, and his HbA1c is 12.3%. The physical examination is remarkable for this papillomatous, hyperkeratotic and pigmented lesions in both axillae. The patient had known about the lesions for at least 3 years.
- What is this lesion ?

Acanthosis nigricans

- What is the significance of these lesions?

Indicates insulin resistance in this case....
It may also indicate intraabdominal malignancy(gastric or pancreatic)

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Charcot Nueroarthropathy

- A 72-year-old man with long-standing uncontrolled diabetes and autonomic neuropathy presents to you with a painful and warm left foot.
- What is the most likely diagnosis for this patient?

Right 3rd CN palsy

- A 72-year-old man with a history of type 2 DM and hypertension presents with a complaint of having awakened with headache and nausea. His right eye shows clinically remarkable findings (shown).
- What is the likely diagnosis?

Left Bells Palsy

Right not left

- A 24-year-old male with uncontrolled type 1 DM (HbA1c 11%) presents with diabetic ketoacidosis (DKA). He also demonstrates features of cranial nerve neuropathy.
- What is the likely diagnosis, and what is the prognosis?

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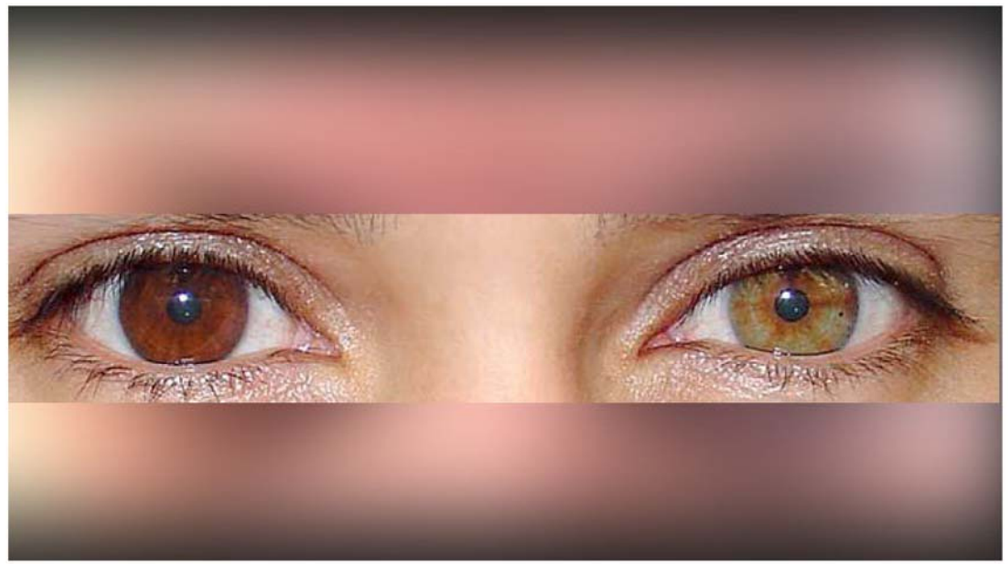
Heterochromia Iridium

- **A young female patient with DM (HbA1c 8.9%) of 8 years' duration undergoes a physical examination, the results of which are completely normal. Her primary care provider asks you take a look at the patient's most recent photograph (shown), which, he thinks, demonstrates an abnormality that was not seen earlier.**
- **What is the diagnosis, and how is it linked to diabetes?**

I don't know.



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Thyroid Gland

Exophthalmos

Graves

- Mention 2 abnormal physical signs
- What is the diagnosis

1- Neck Mass
2- Exophthalmos

Diagnosis: Hyperthyroidism

Lid Lag

- During Examination of the eyes of Thyrotoxicosis patient. What is this sign ?

Lid lag :delayed descent of upper eyelid with downgaze .
Lid retraction: In primary (front) gaze.

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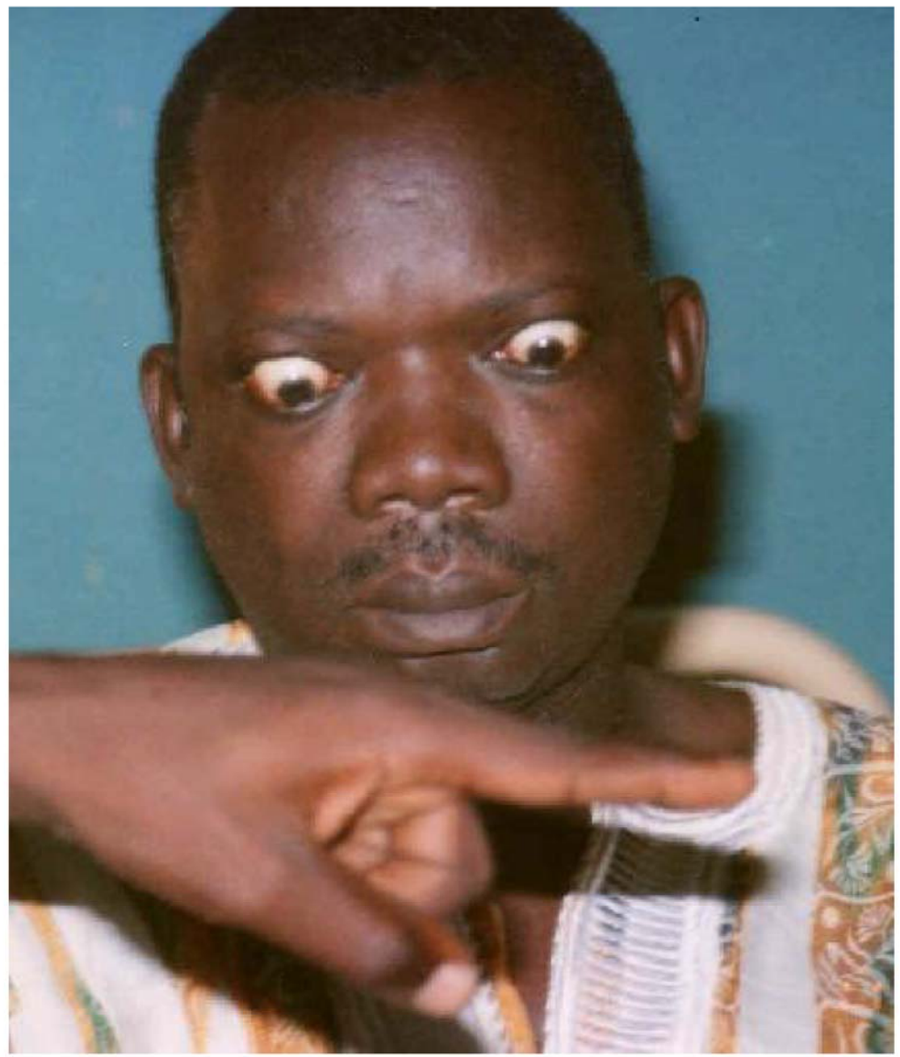
Patient c/o tremor & palpitation is trying to follow the examiner's finger, what is the sign shown in this patient?

Lid Lag



Pretibial Myxedema

Graves

Goiter

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Hypothyroidism

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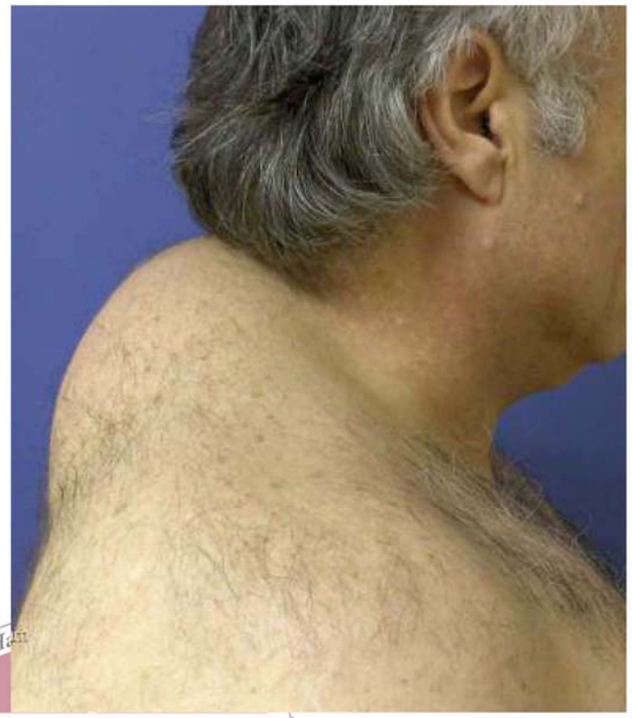
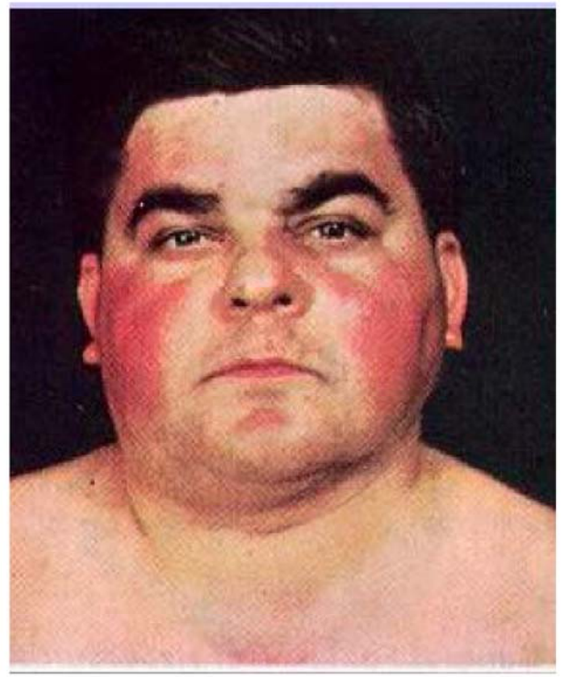
Adrenal Gland

Mucosal pigmentation (Adrenal Insufficiency)

Patient is on chronic steroid, mention 3 signs that you can see:

Cushingoid Features
-Buffalo Hump -Purple Striae -Moon Face





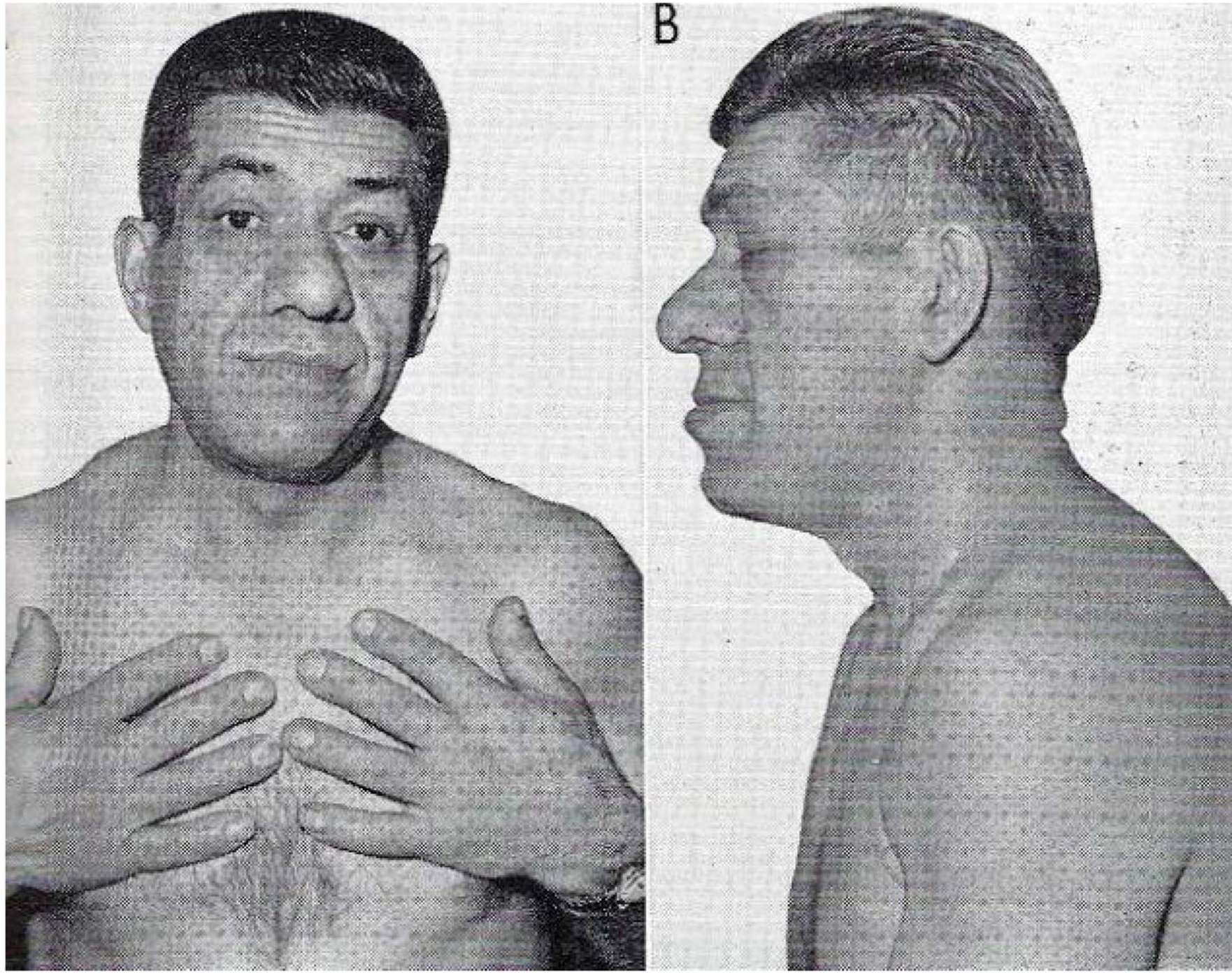
Pituitary Gland

Acromegaly

Other complications in patients with acromegaly is carpal tunnel syndrome

Their pressure is also usually high

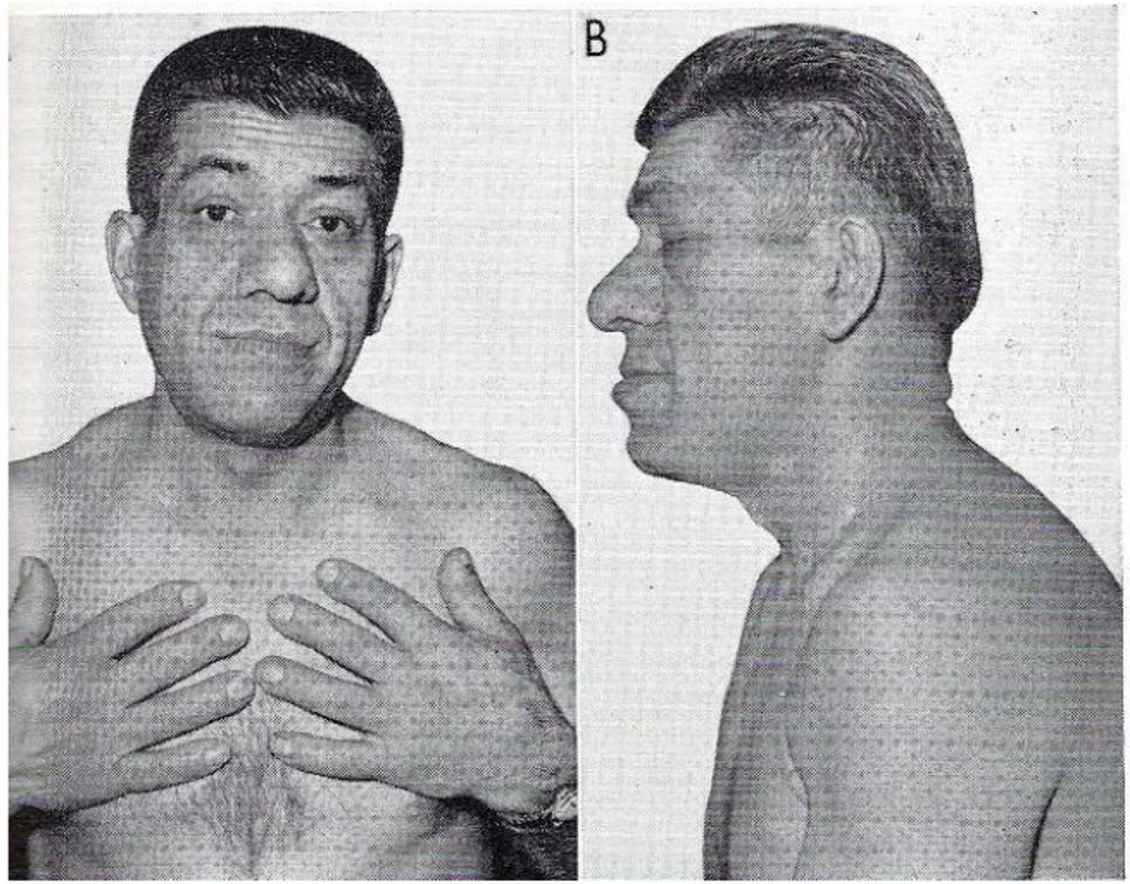
Due to excess growth hormone



This is patient with visual field defect
What is the first line of treatment of such patient presented to Endocrinology clinic ?

1st line treatment is trans sphenoidal surgery, followed by medical therapy for residual disease.
Radiation treatment usually is reserved for recalcitrant cases.

Also somatostatin and dopamine analogues and GH receptor antagonists are the mainstays of medical treatment for GH excess and are generally used when primary surgery fails to induce complete remission.



Cardiology

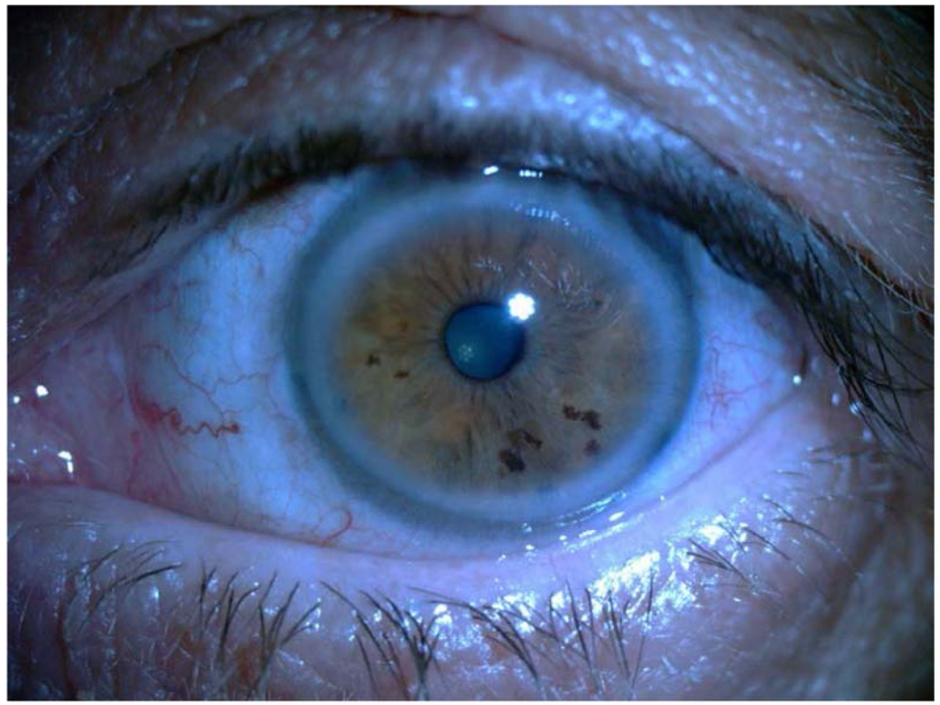
- Hyperlipidemia
- Valvular Heart Disease
- Infective Endocarditis

Hyperlipidemia

See also :
Tendon Xanthoma ,
Eruptive Xanthoma

Xantholasma

Corneal Arcus



نتمنى أن تستفيدوا من هذا الملف ونعتذر عن أي خطأ أو سؤال من غير إجابة

هذا الملف هو مجهود طلابي قاموا بتصوير وتفريغ الصور التي تم عرضها خلال المحاضرات والراوندات وحل ما أمكن منها

Always Remember That Your Job As A Doctor Isn’t Just To Add Years To Life, It’s Also Your Job To Add Life To Years

~فريق إحسان الأكاديمي~

~لجنة الطب البشري~