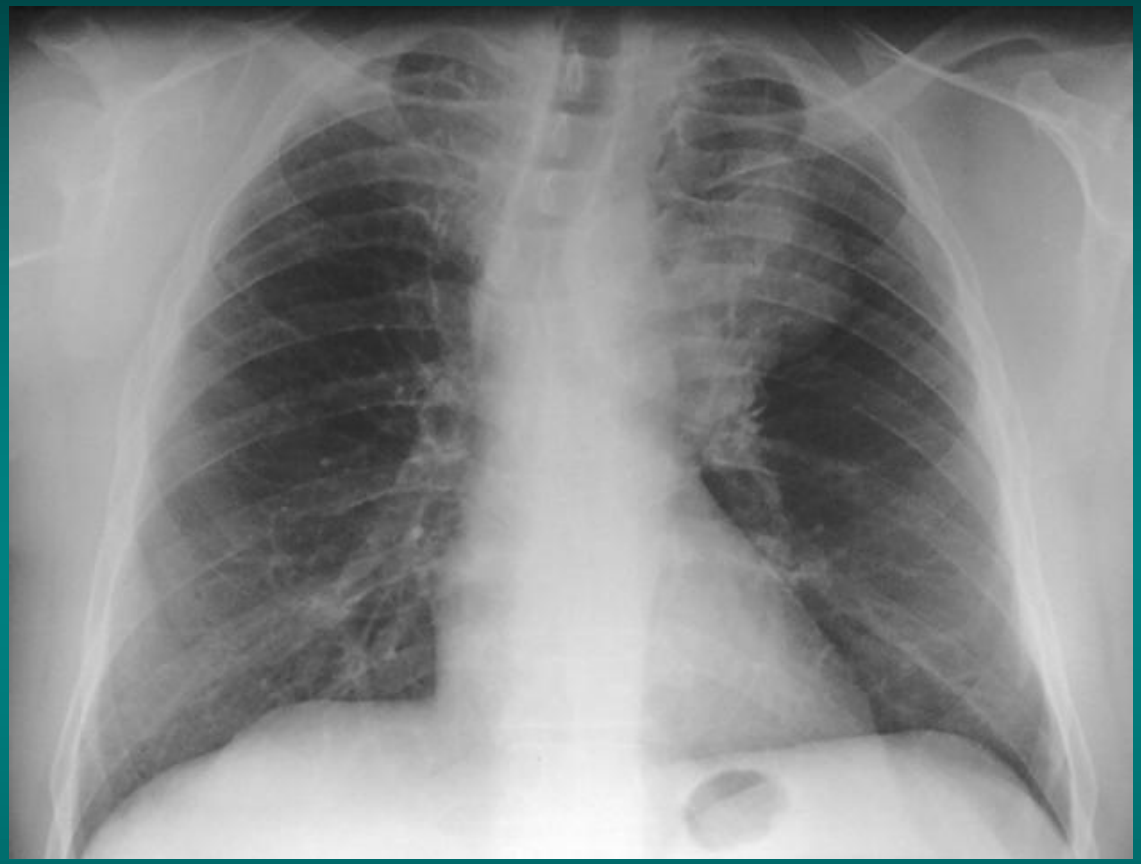
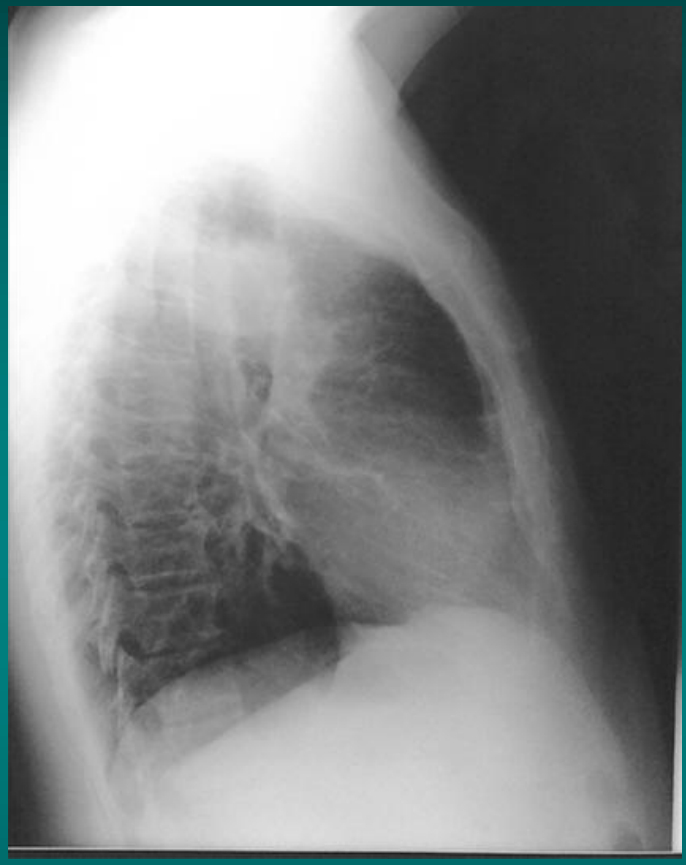
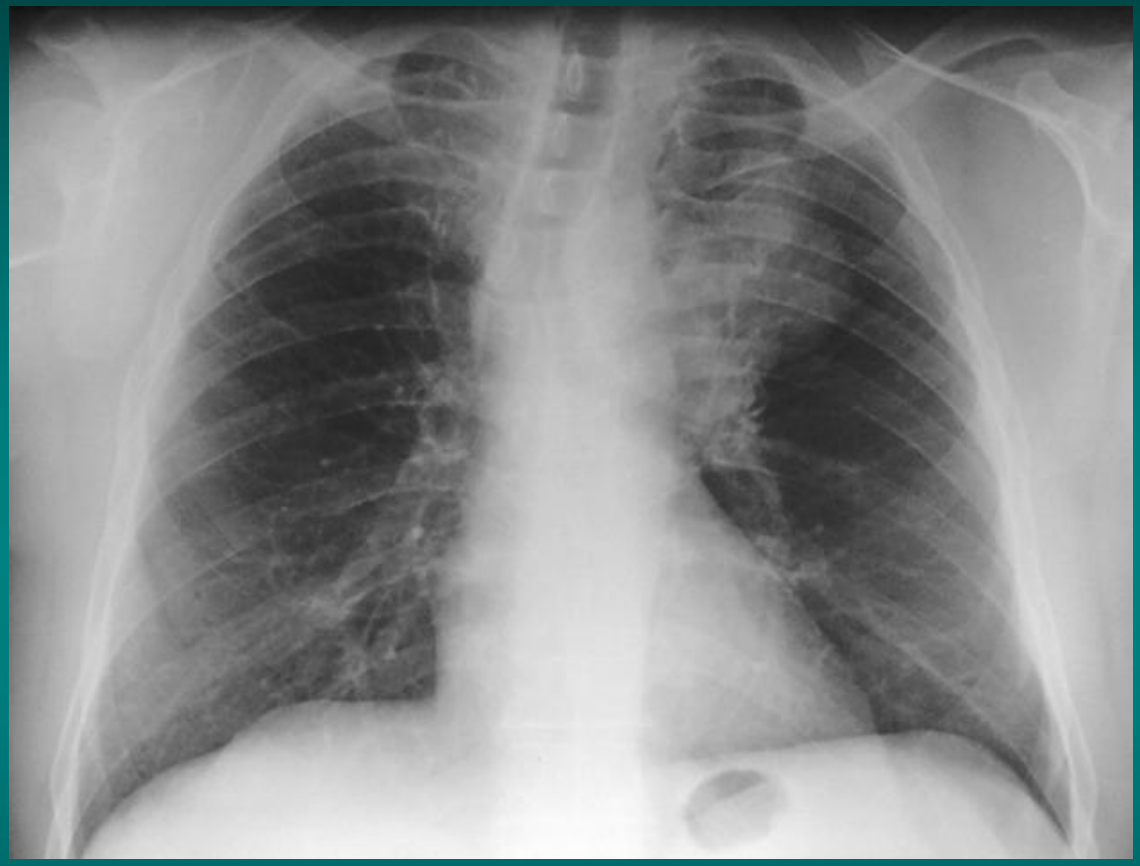
Chapter 10

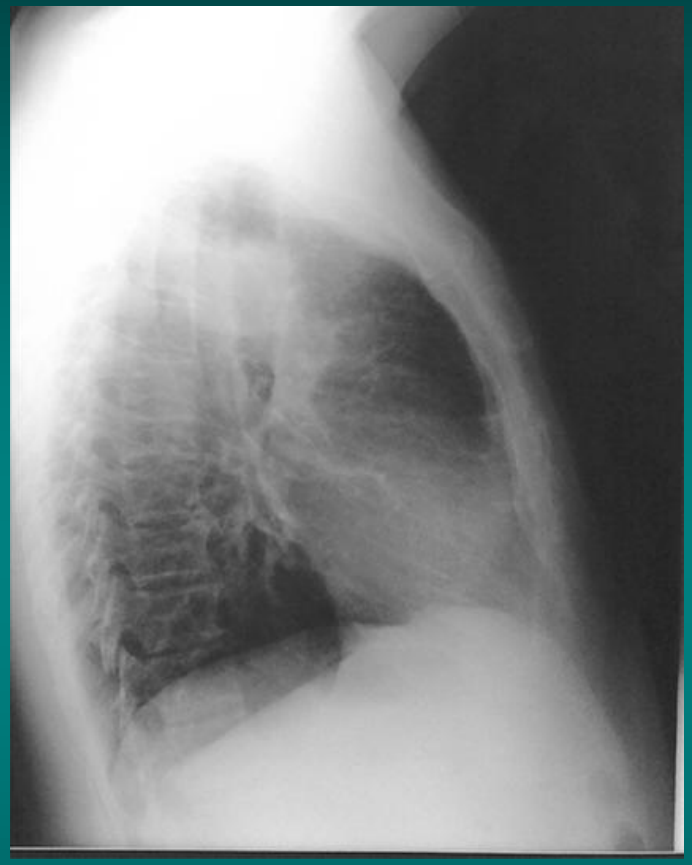
Case 1



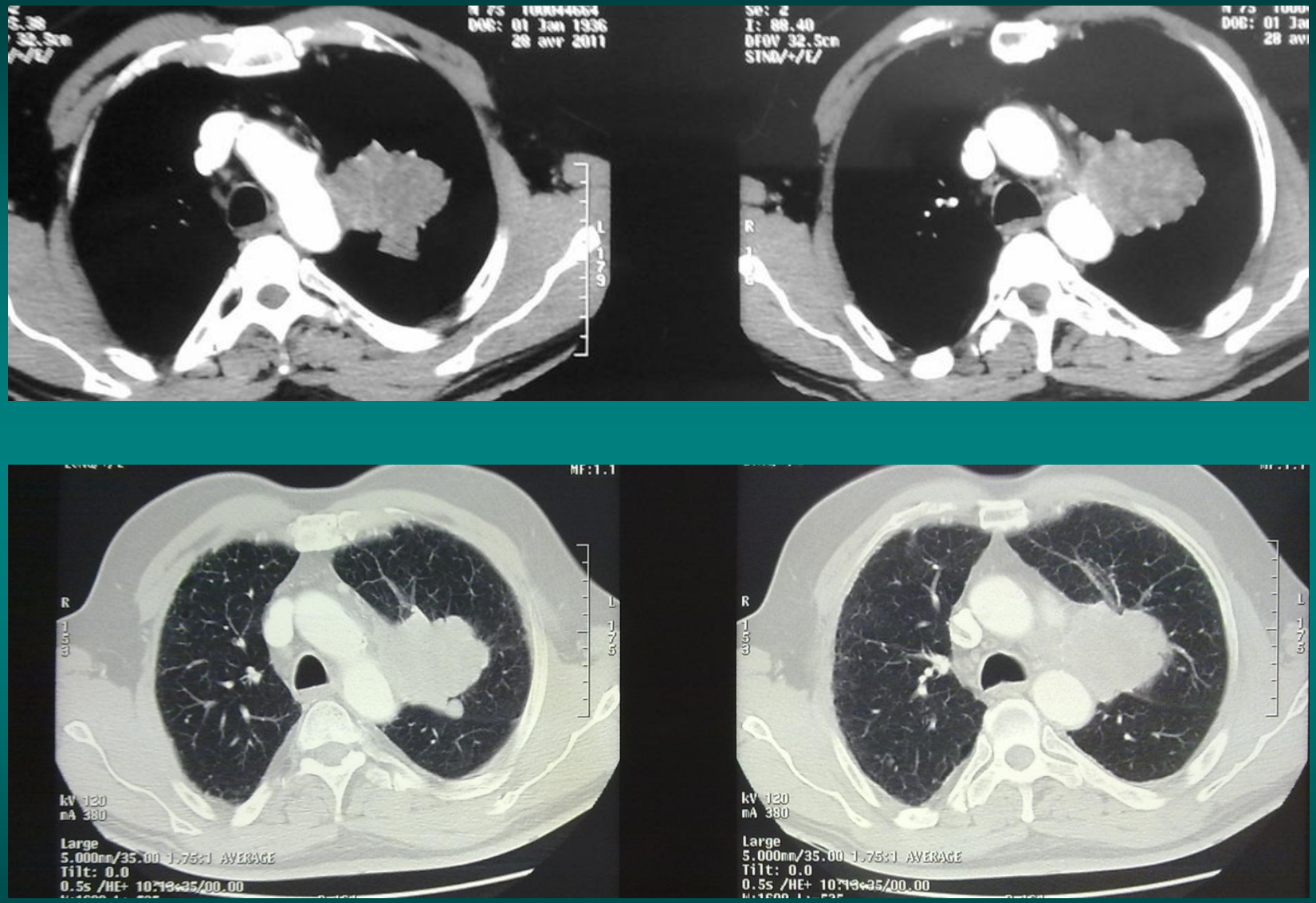


Man, 65 years old, heavy smoker, cough , dyspnea and weight loss.
AFB negative in sputum. Is TB possible?



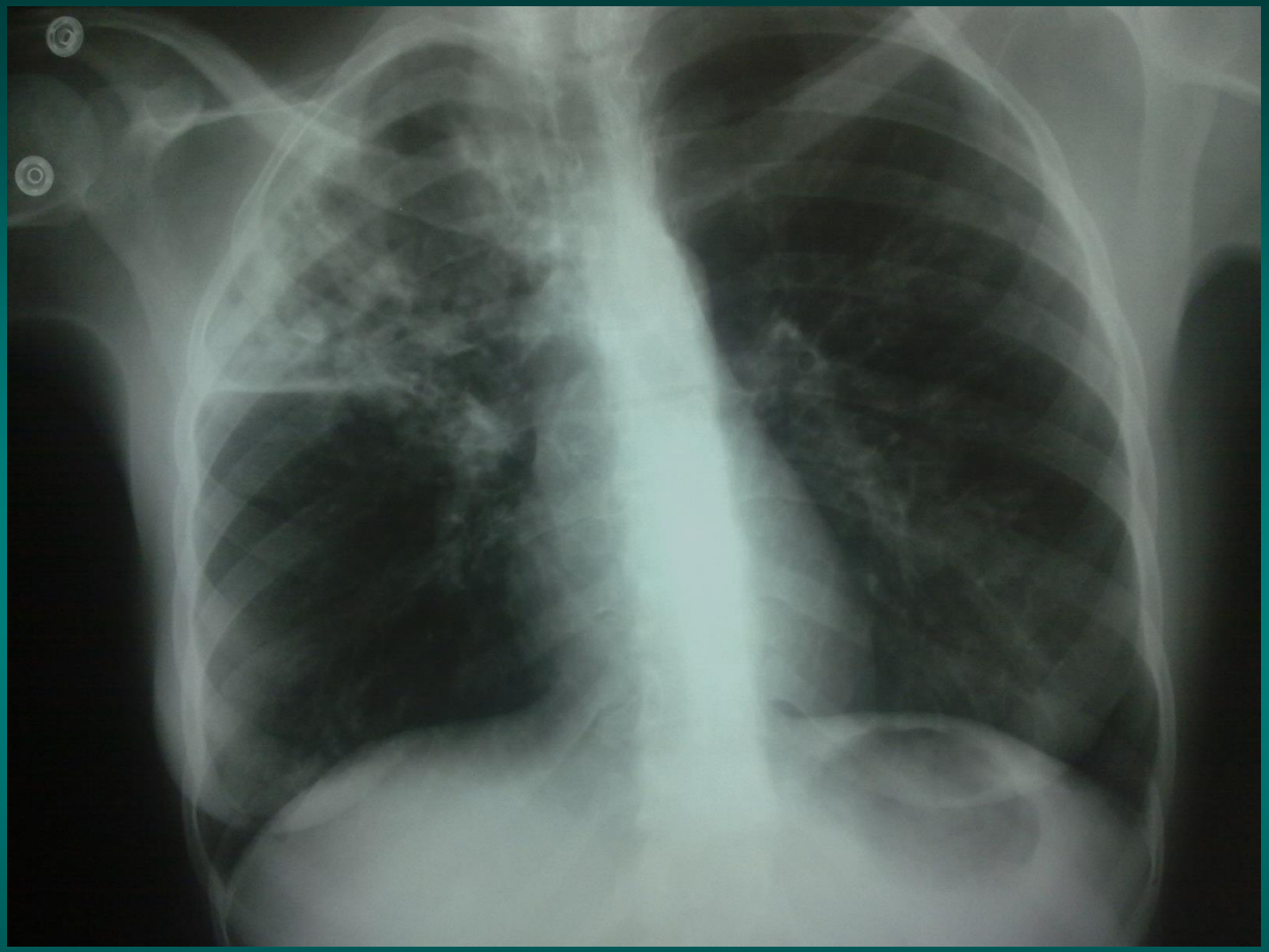


The opacity of the left upper lobe is not cavited and looks like a tissular mass, not alveolar picture, because of sharp limit and dense and homogenous aspect . There is a silhouette sign with aortic arch: mediastinal extension or adenopathies. The diagnosis of TB is improbable because no cavity in the opacity . It is a bronchial cancer with mediastinal adenopathies or mediastinal extension

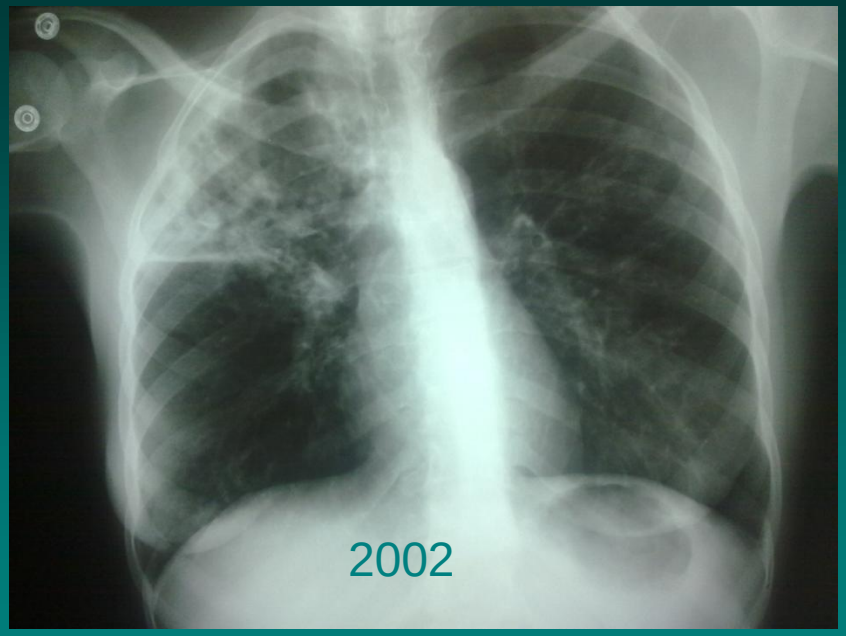


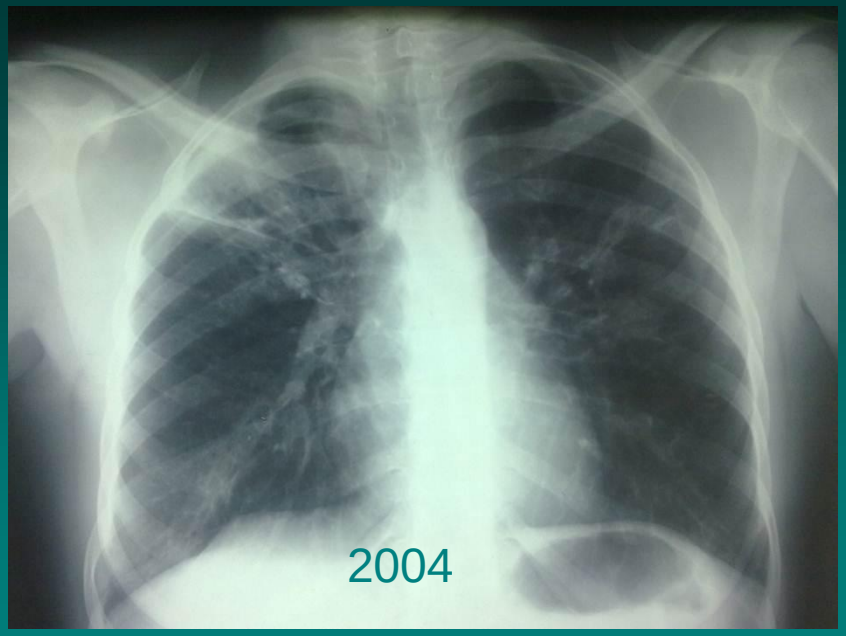
Scan view of the previous case

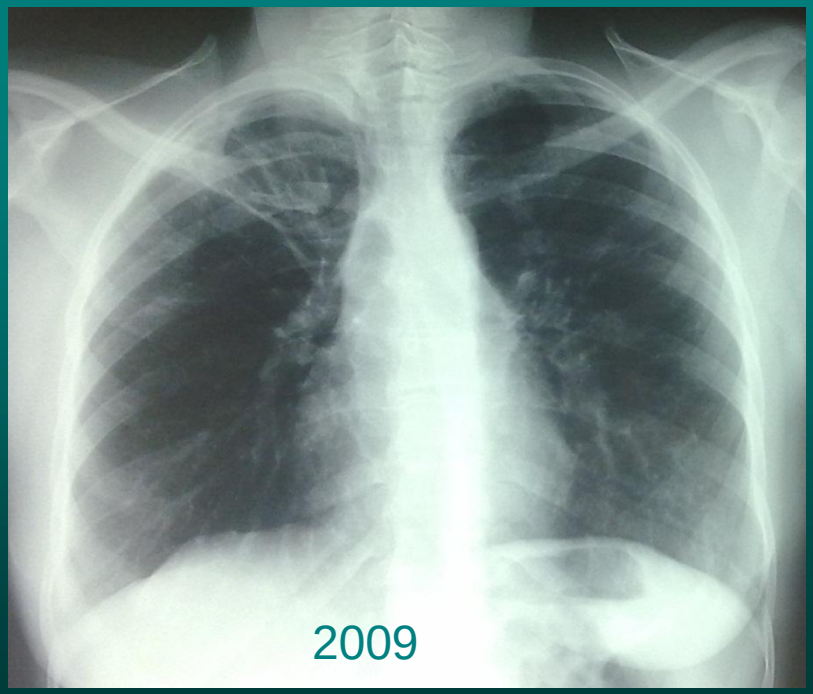
Case 2



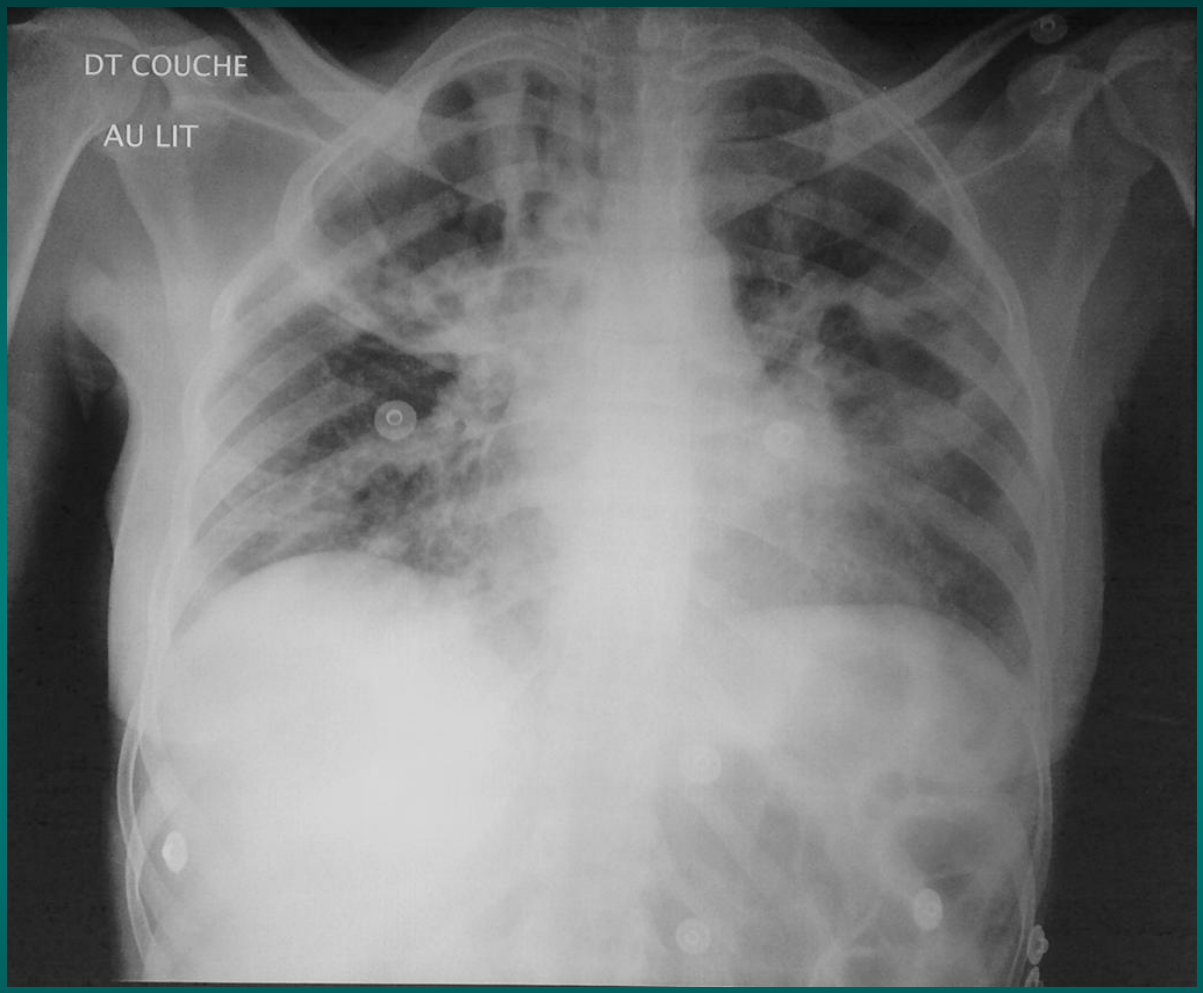
2002: Young woman coming from Guinea, PLHIV (HIV2), cough and worsening condition
AFB positive in sputum: Right superior lobe tuberculous pneumonia. Small left superior lobe infiltrate.



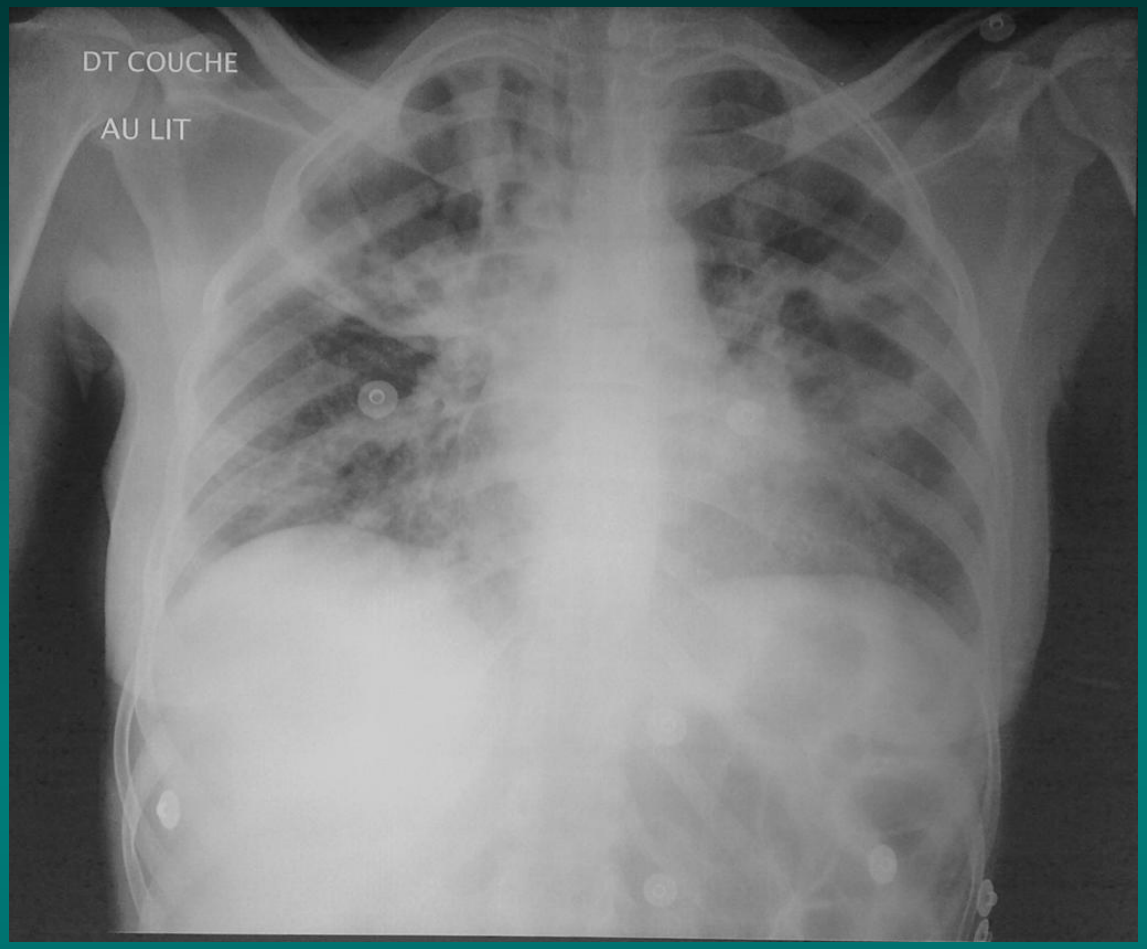




Radiological evolution after TB treatment : retraction and fibrosis



June 2011: worsening condition and severe dyspnea. Producting cough: positive AFB

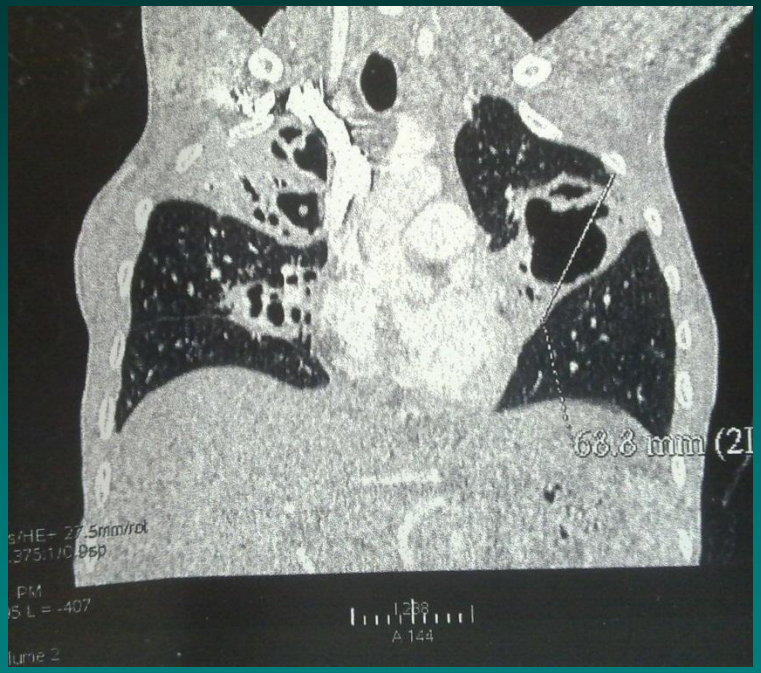


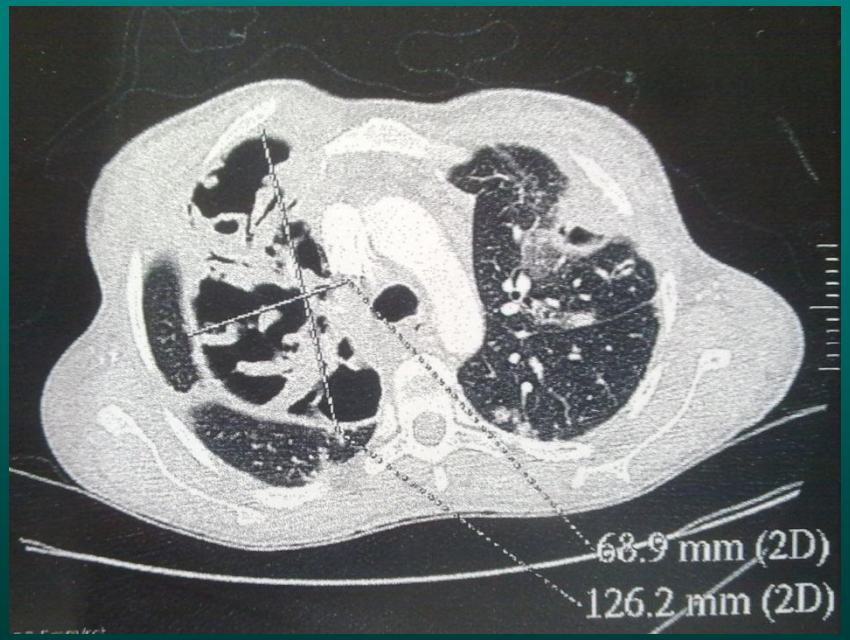
TB Recurence. 2 hypothesis:

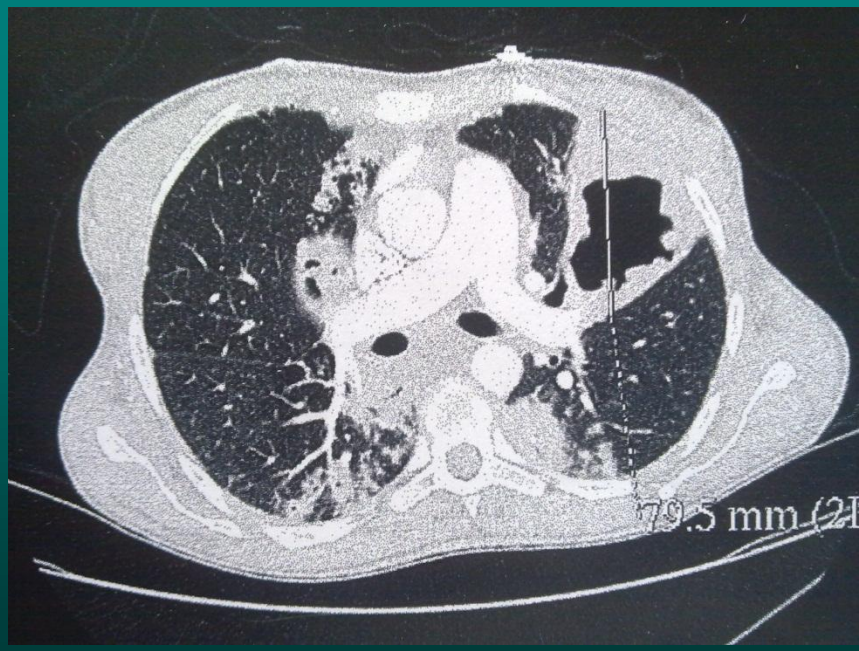
- 1° endogen reinfection in case of incorrect or non complete treatment: in this case MDR TB must be suspected
- 2°Exogen reinfection: in this case probably no resistance to classical treatment.

Specific PCR for research or resistance to anti TB drugs must be performed as soon as possible to decid adequat treatment. (geneXpert)

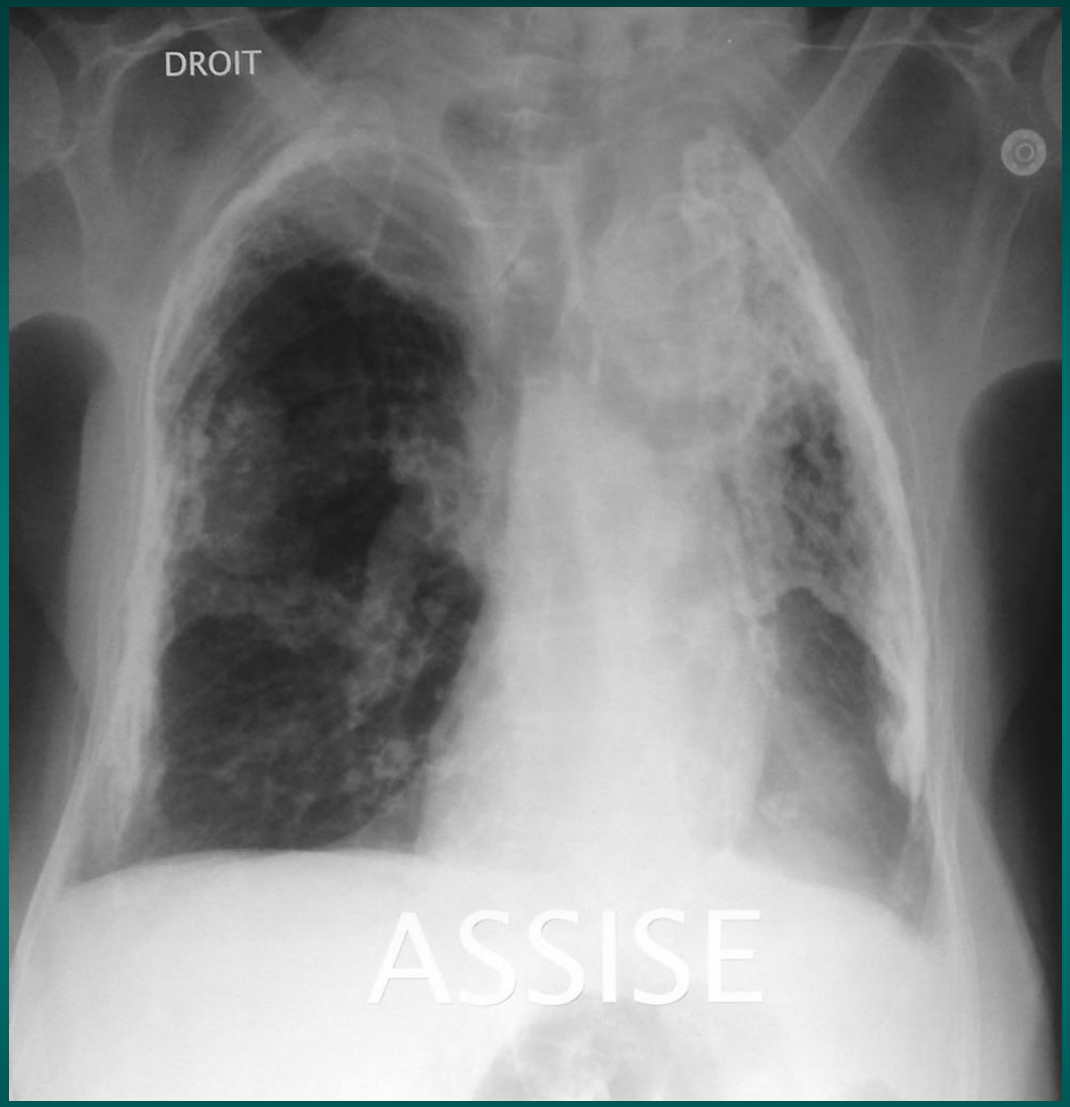
Scan view of the previous case



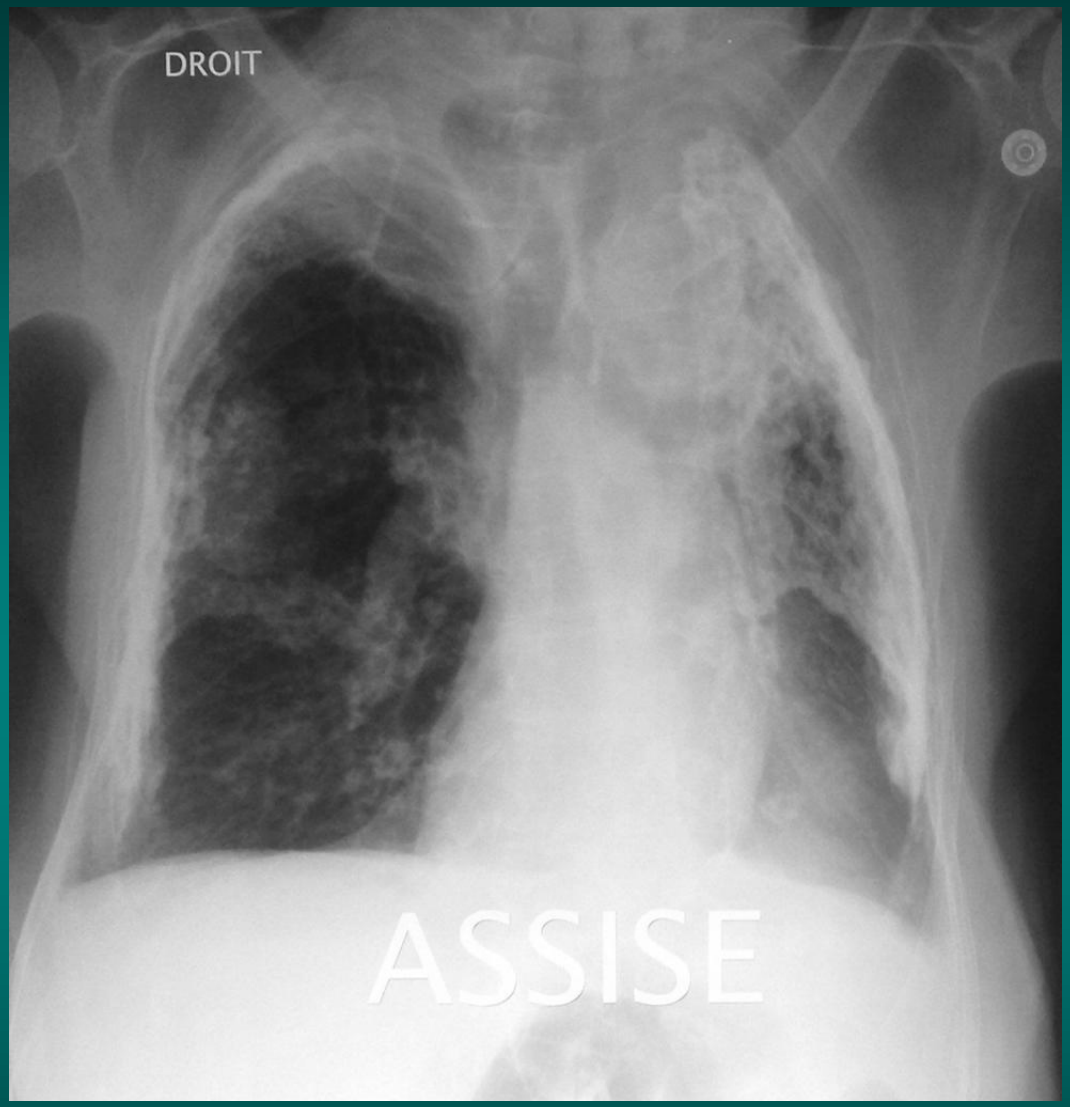




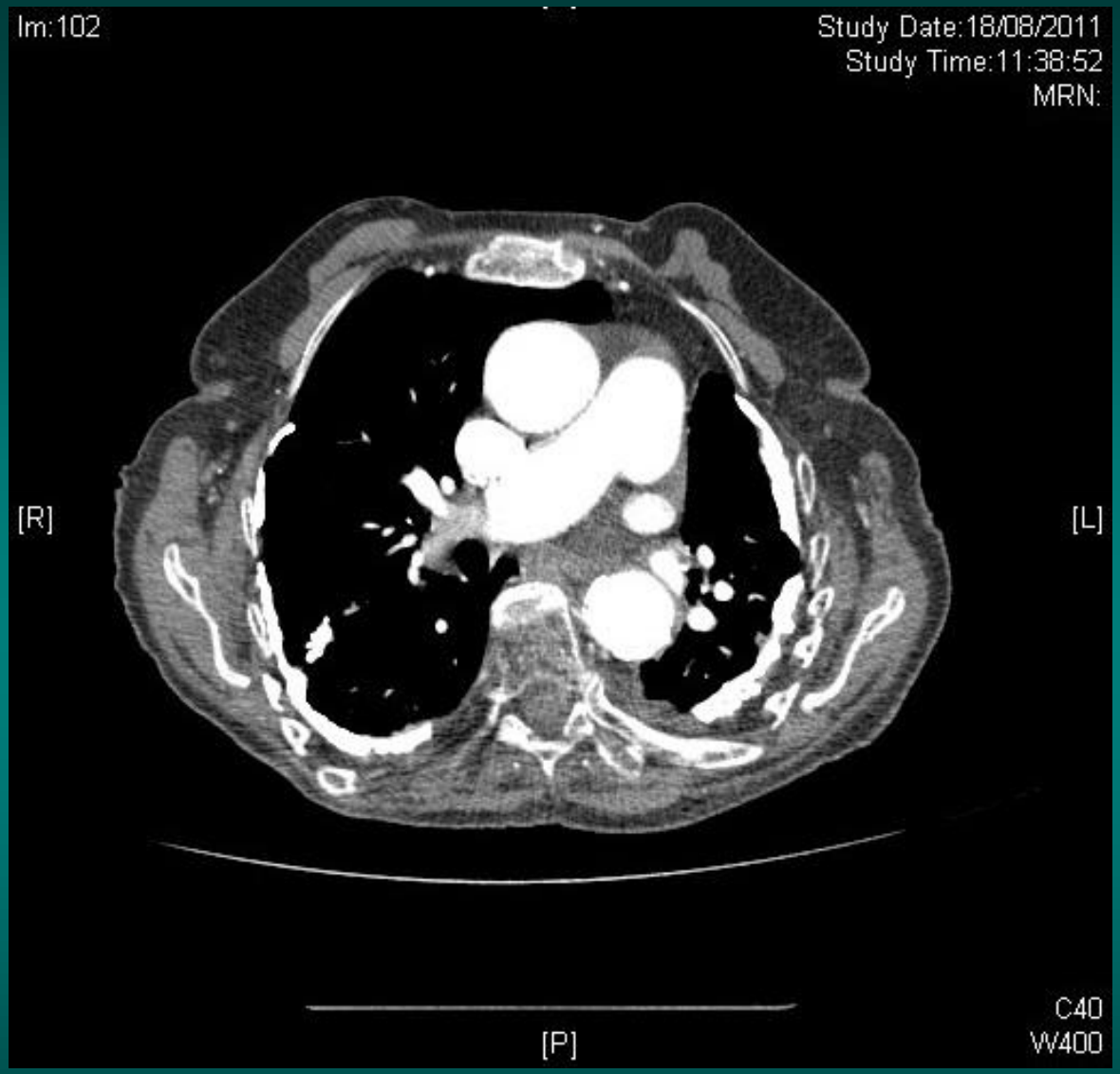
Case 3



Woman, 82 years old, non productive cough and chronic severe dyspnea.Smear negative for AFB. Past history of lung disease but no more information.

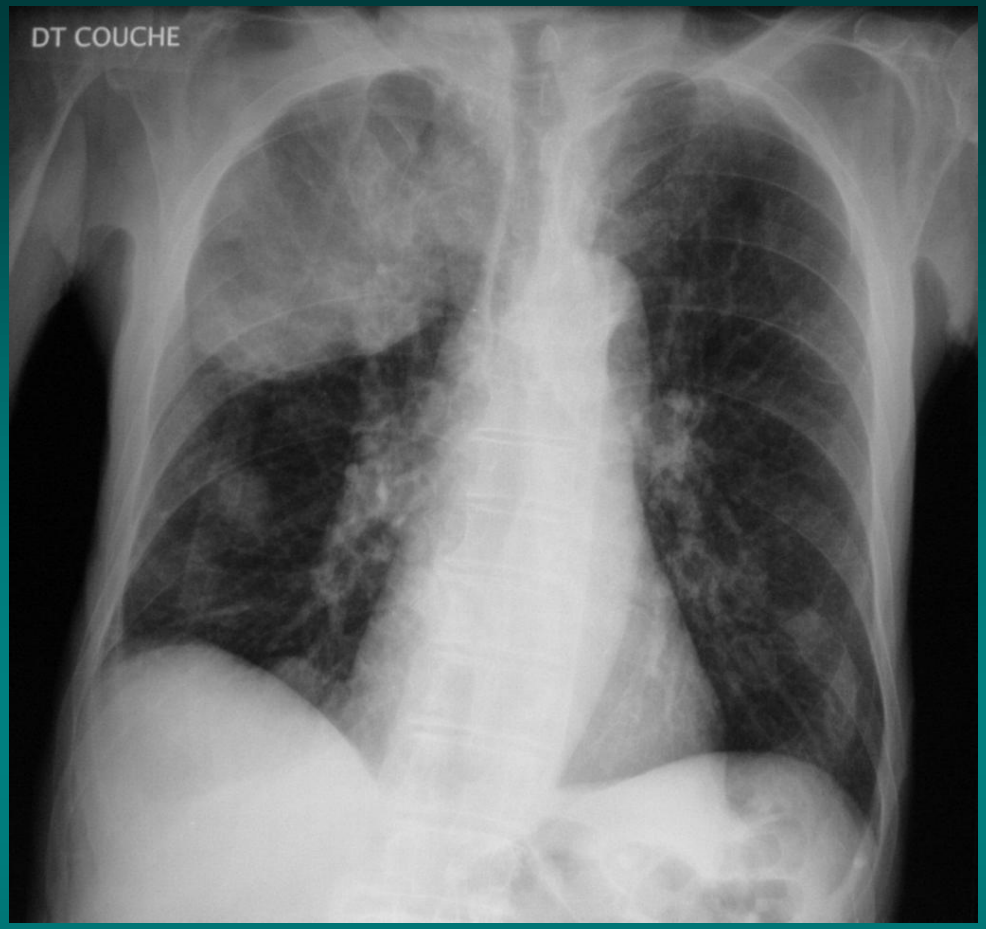


Typical aspect of bilateral calcified pleural sequella, from old TB. Notice the « fishbone » aspect on the left side. No need of retreatment

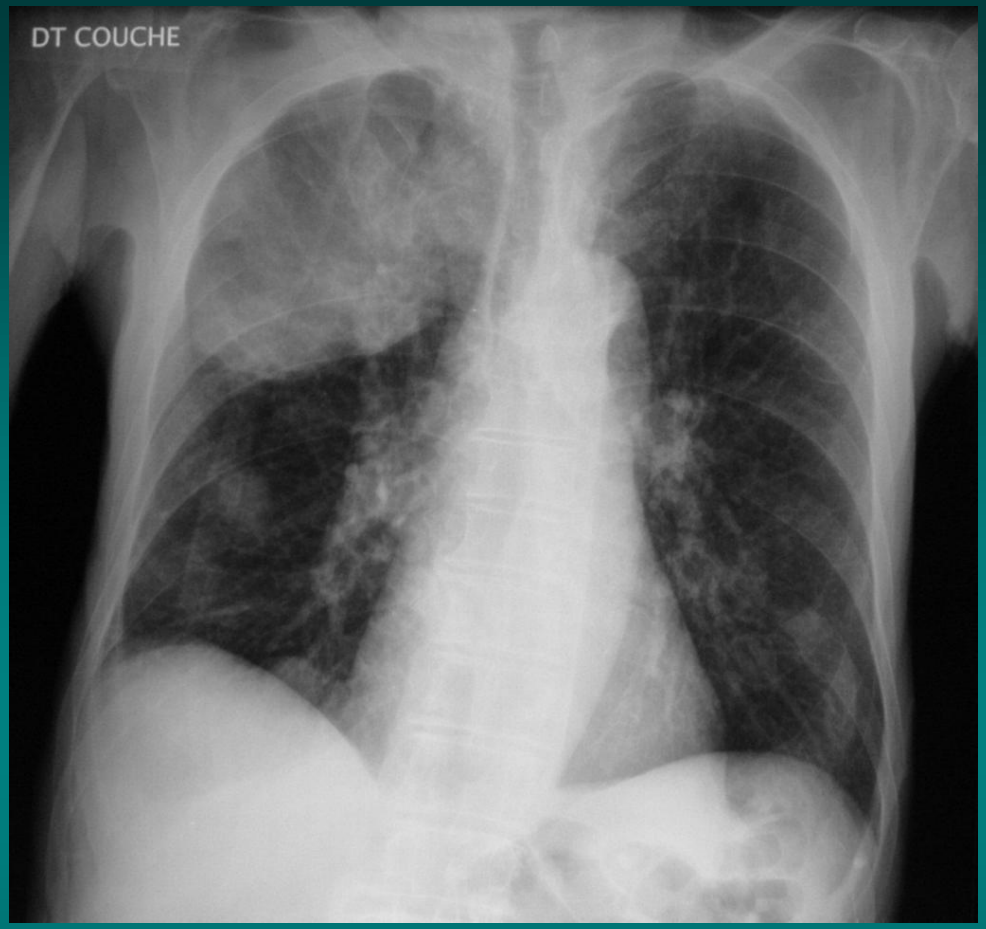


Scan view of the previous case. Calcification of the left pleural wall .

Case 4

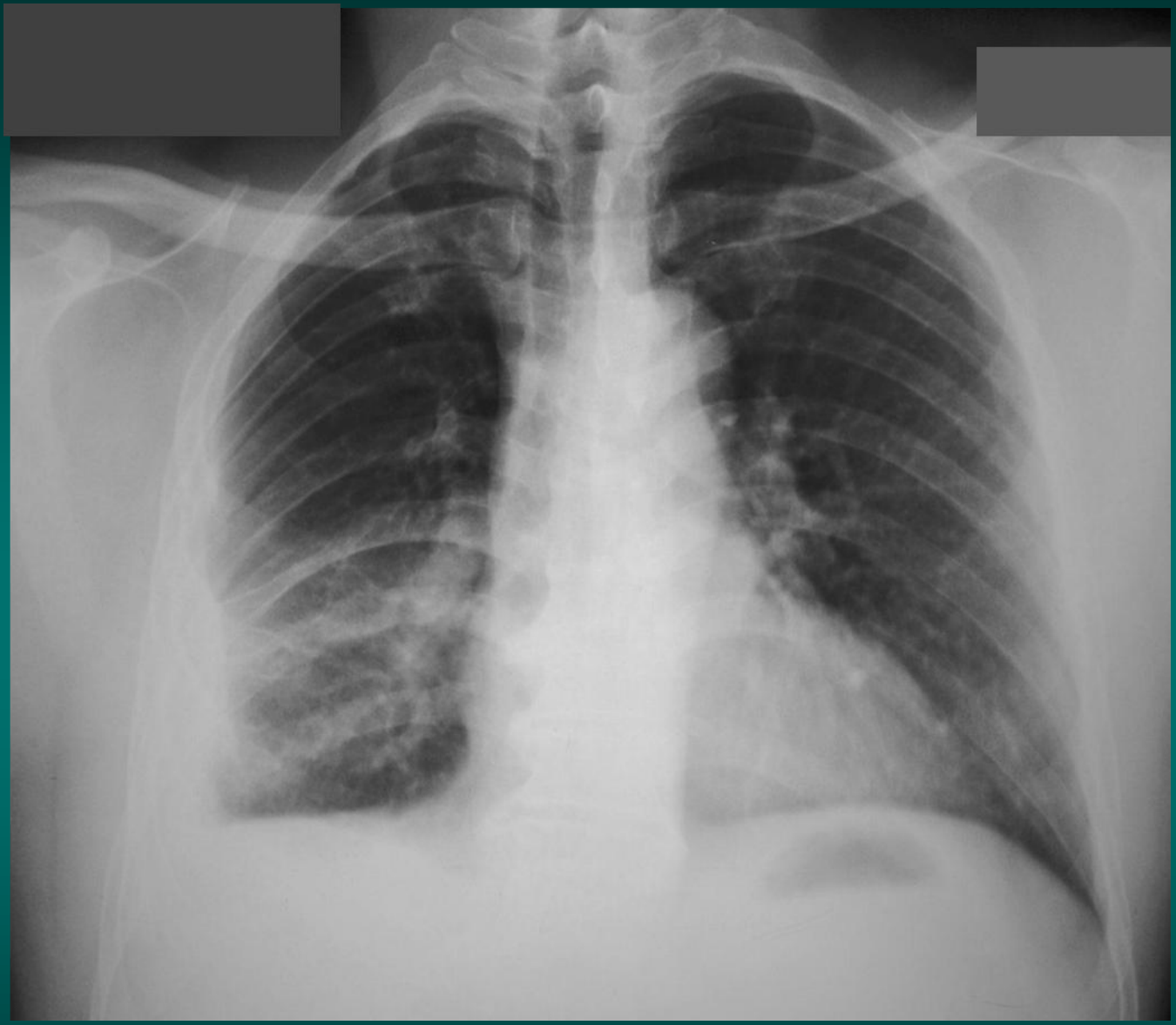


Man, 80 years old, heavy smoker, right scapular pain and worsening condition

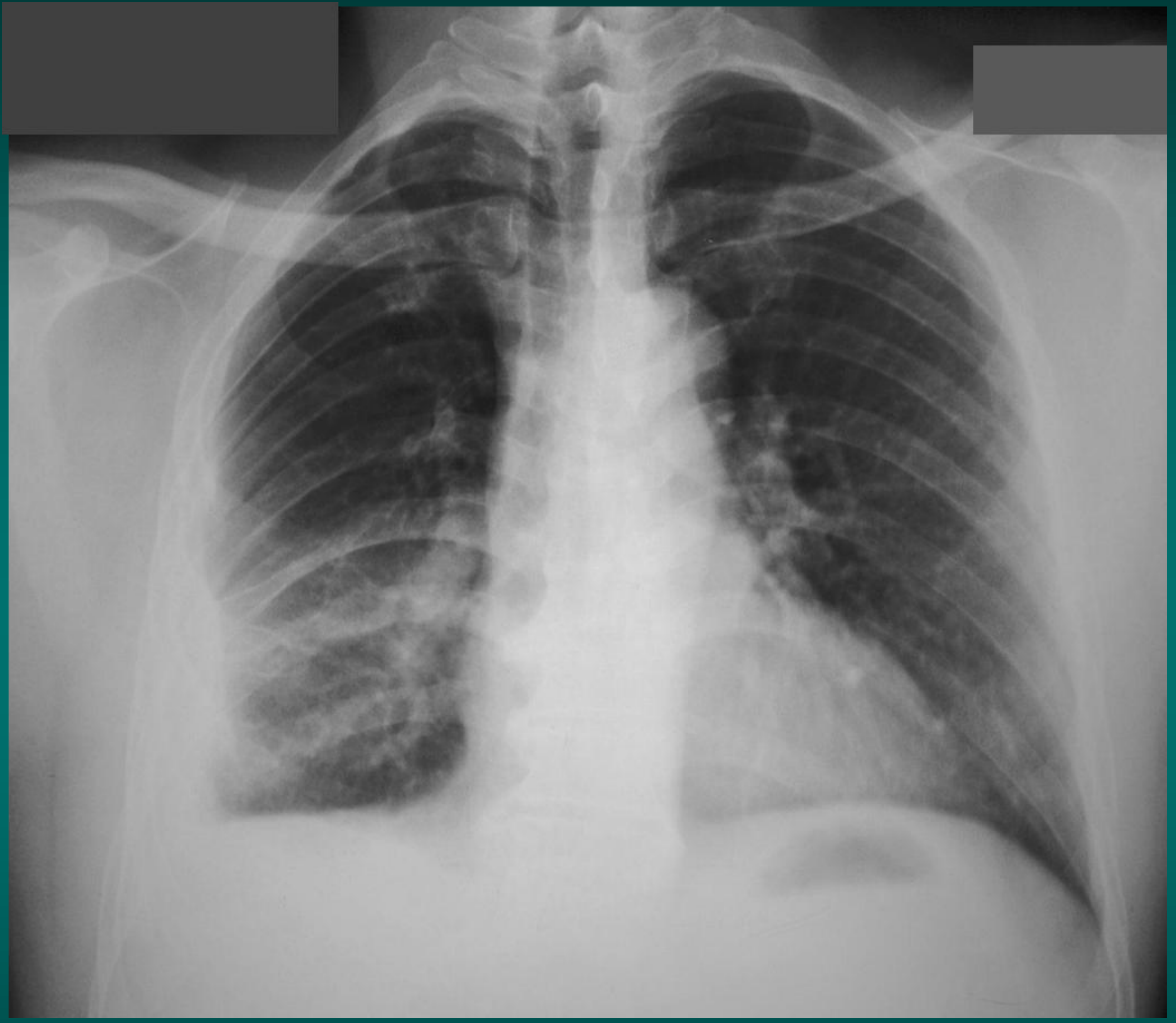


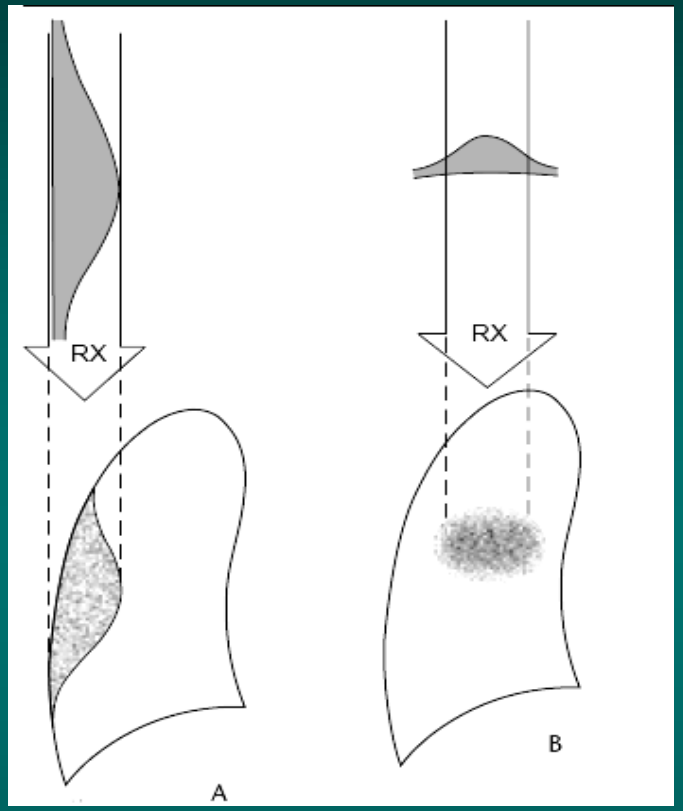
CXR: Right thoracic opacity with destruction of posterior arch of the 3rd 4th and 5th rib. This opacity is not a lung opacity neither pleural one : it is a parietal opacity: probable parietal extension of a bronchial cancer. In this case the diagnostic of TB is highly improbable: no cavity in this bulky opacity , rib destruction.. Notice 2 others round opacities in the inferior lobe suggesting metastasis.

Case 5



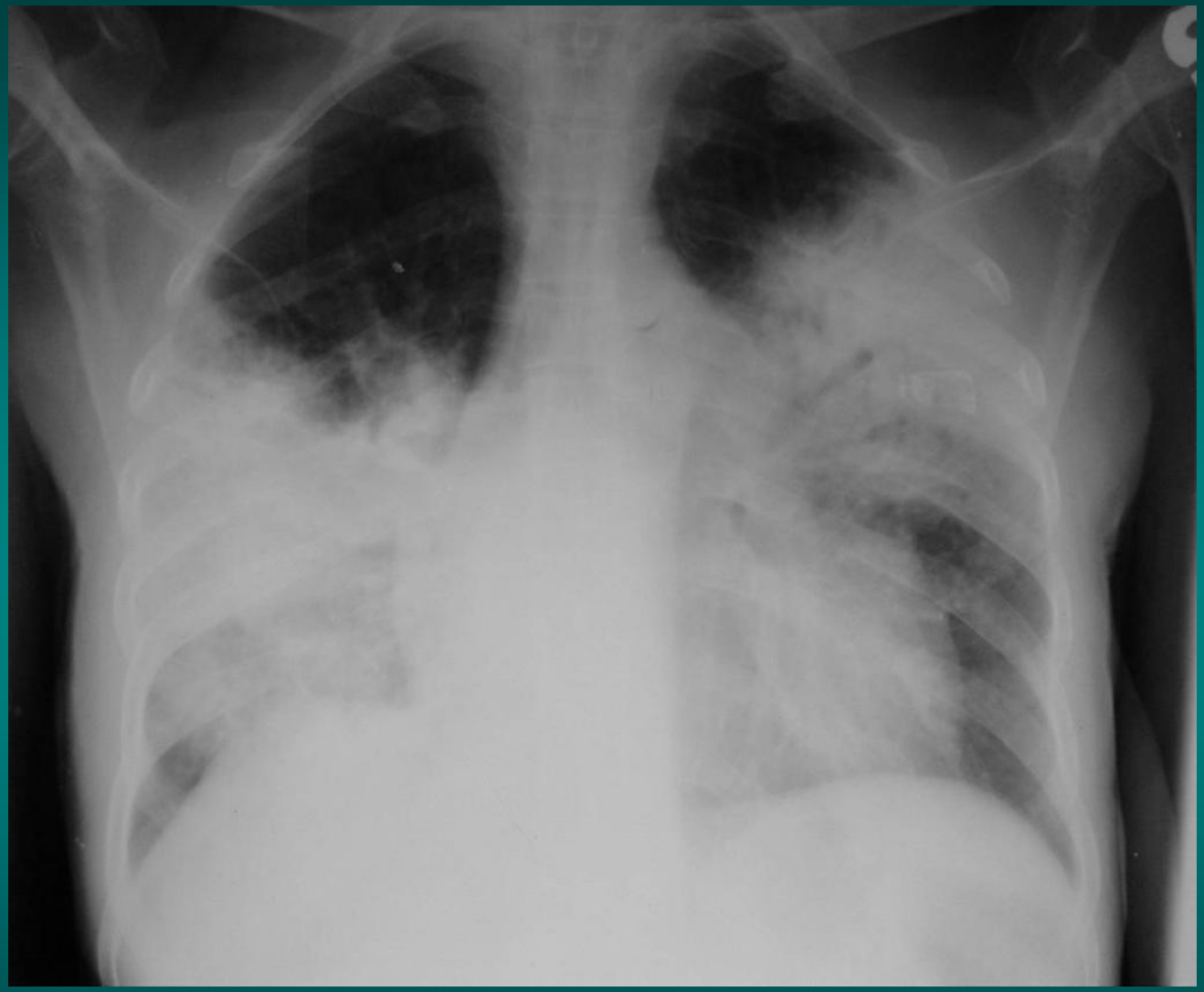
Man, 58 years old non producting cough. Past history of pleural TB with monthes TB treatment. Crepitant rales on the right side at auscutation. No fever, chronic exercice dyspnea.



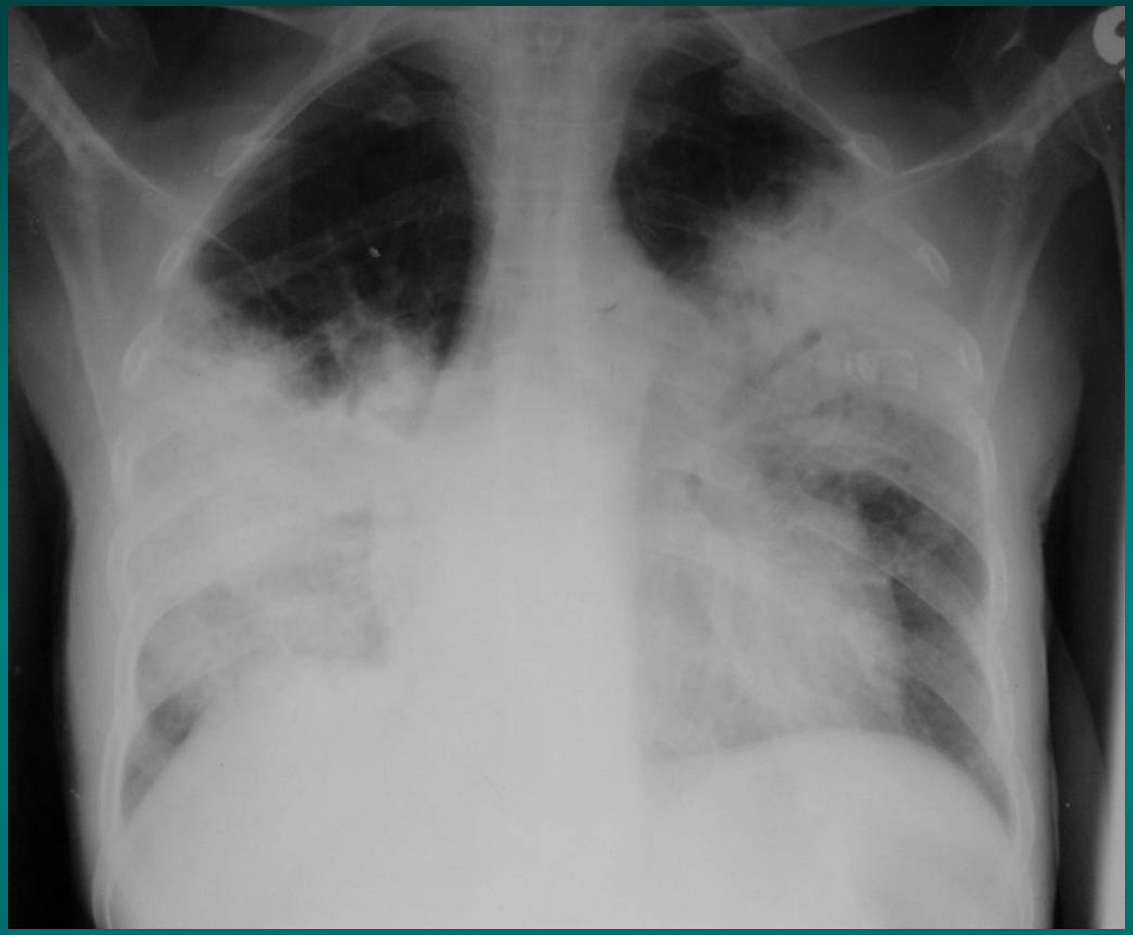


Non systematised opacity of the right inferior field with flatness of the diaphragm. Pleural sequella,, consequence of pleural effusion past history.. This picture is difiicult to distinguish from pneumonia. Lateral view his helpfull

Case 6

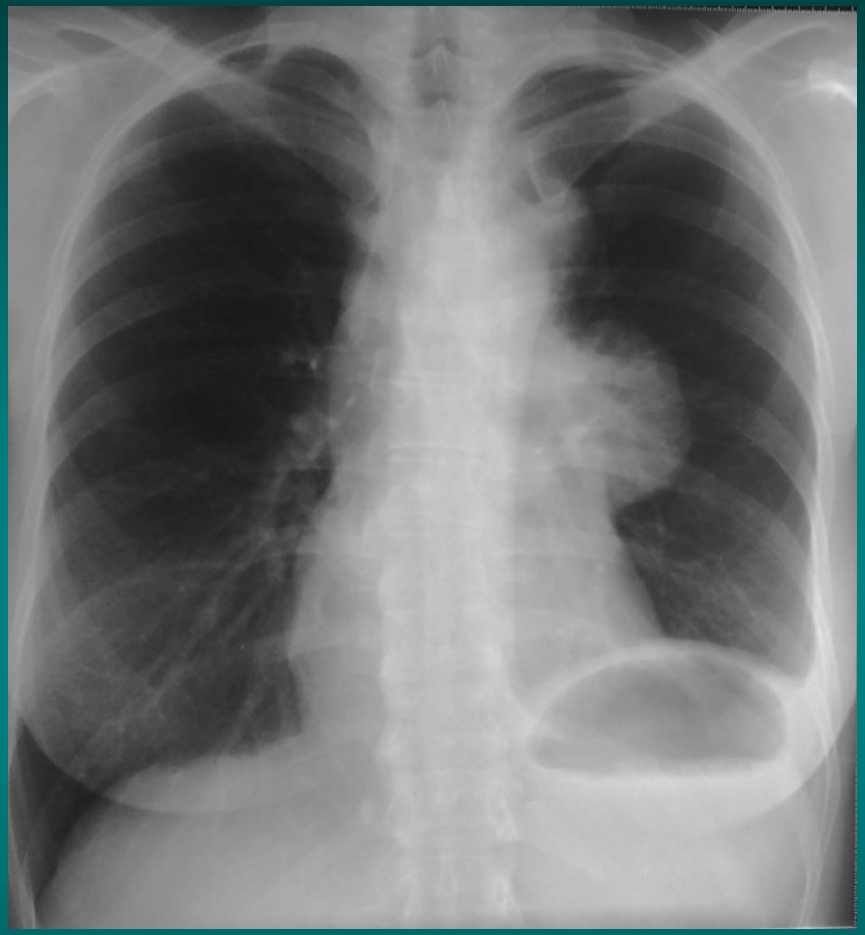


Acute dyspnea non purulent sputum and no fever. Auscultation: bilateral crepitant rales.

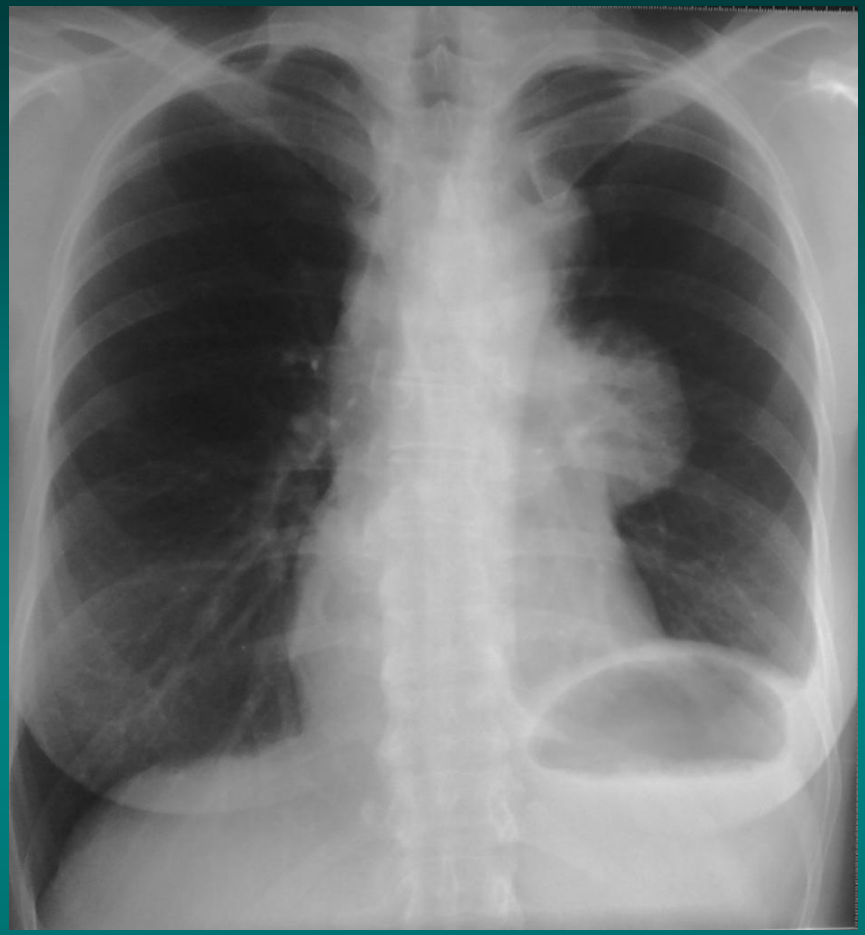


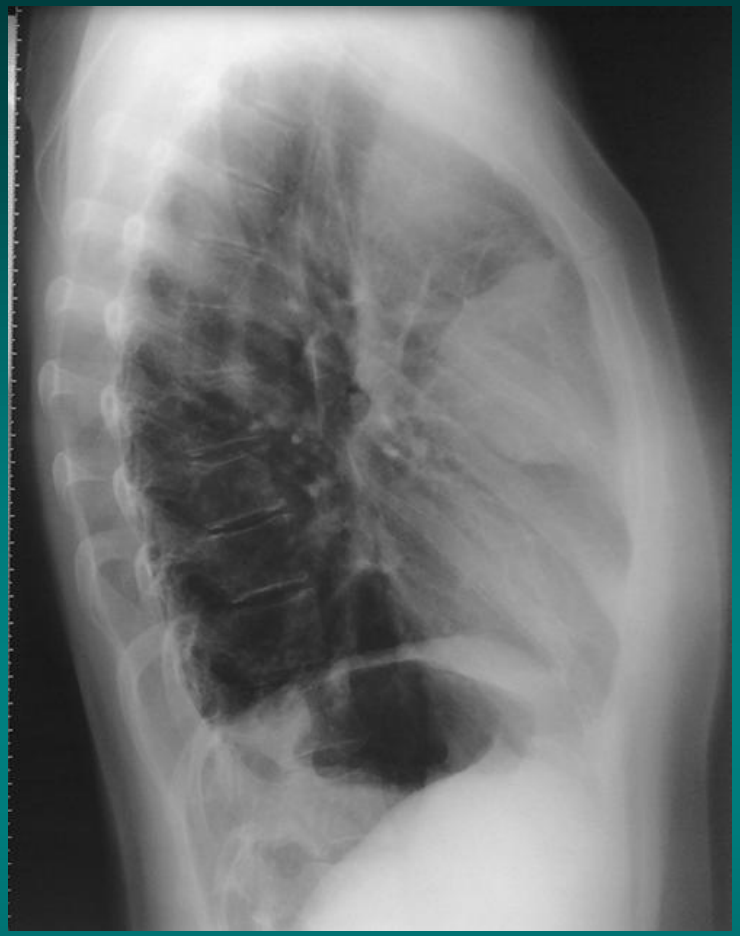
Chest X ray: antero- posterior incidence. Bilateral alveolar pictures (notice he aeric bronchogram onthe left side). Clinical and radiological findings strongly suggest **pulmonary cardiogenic oedema,** even if the alveolar pictures are not symetric.

Case 7



Woman, 54 years old, cough and anterior thoracic paint.



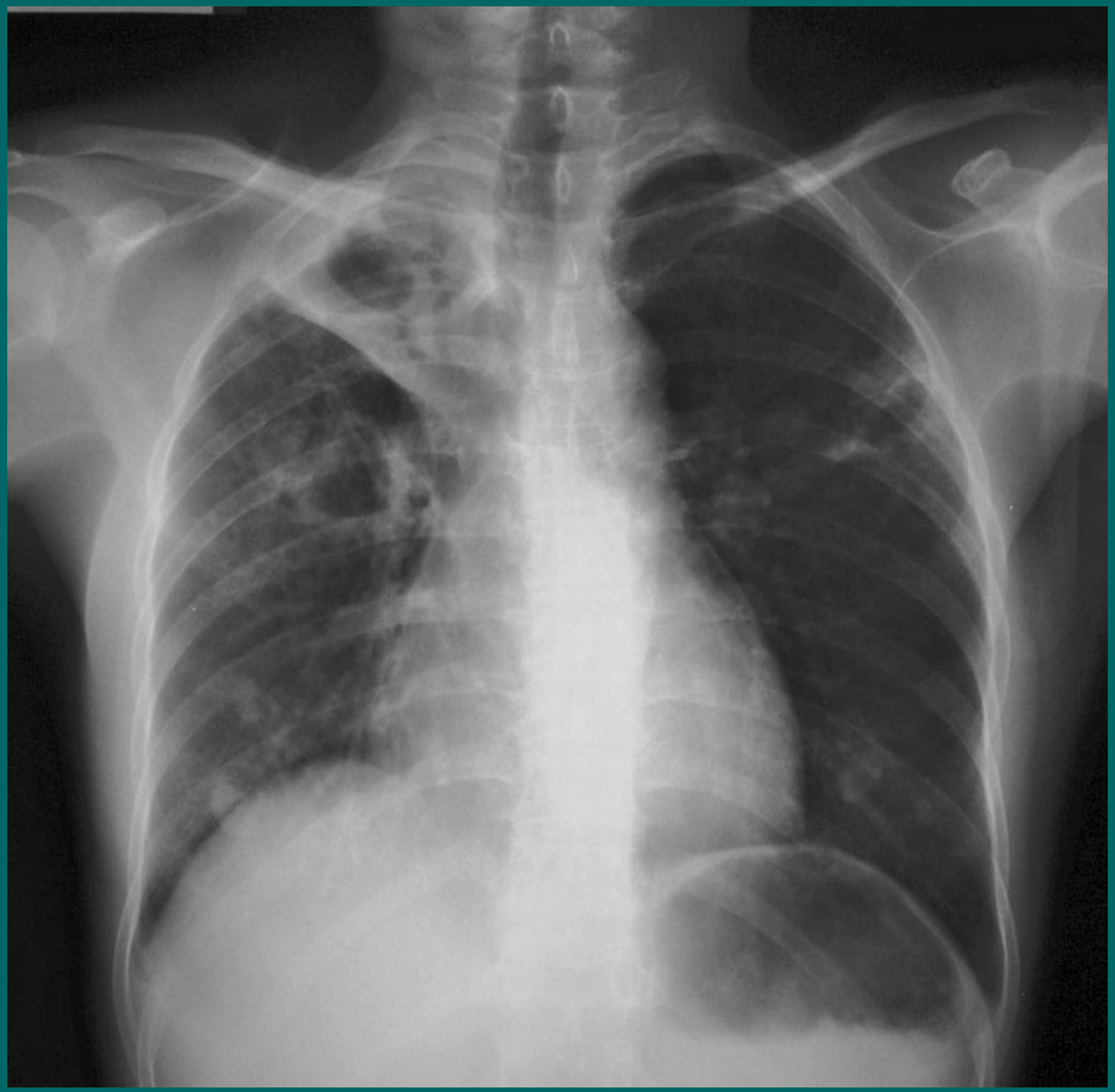


Left hilar opacity, with overlap sign . This opacity is anterior because positive silhouette sign with cardiac edge. On the lateral view the opacity fills the retro sternal clear space.

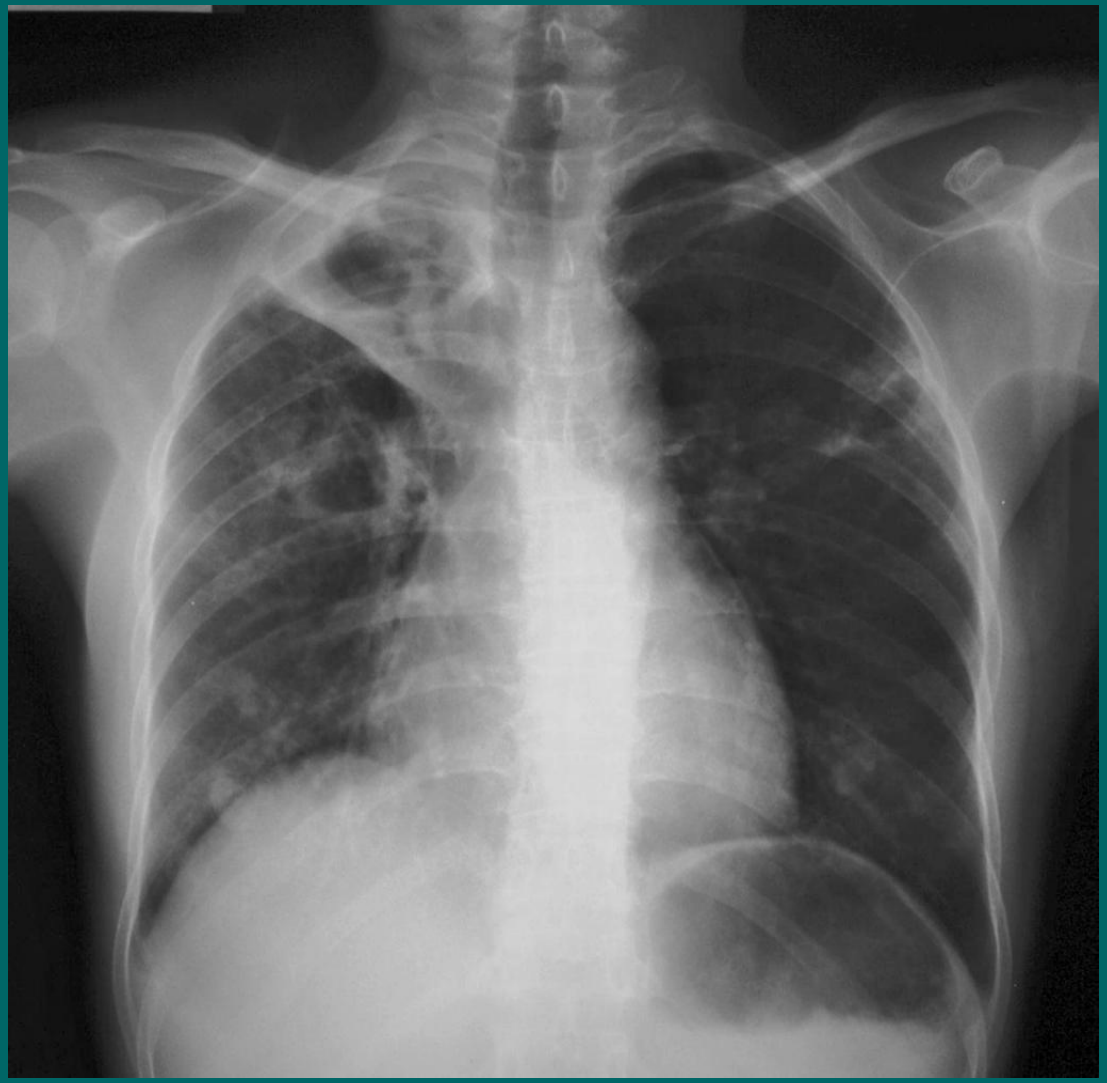
Thymoma

Case 8

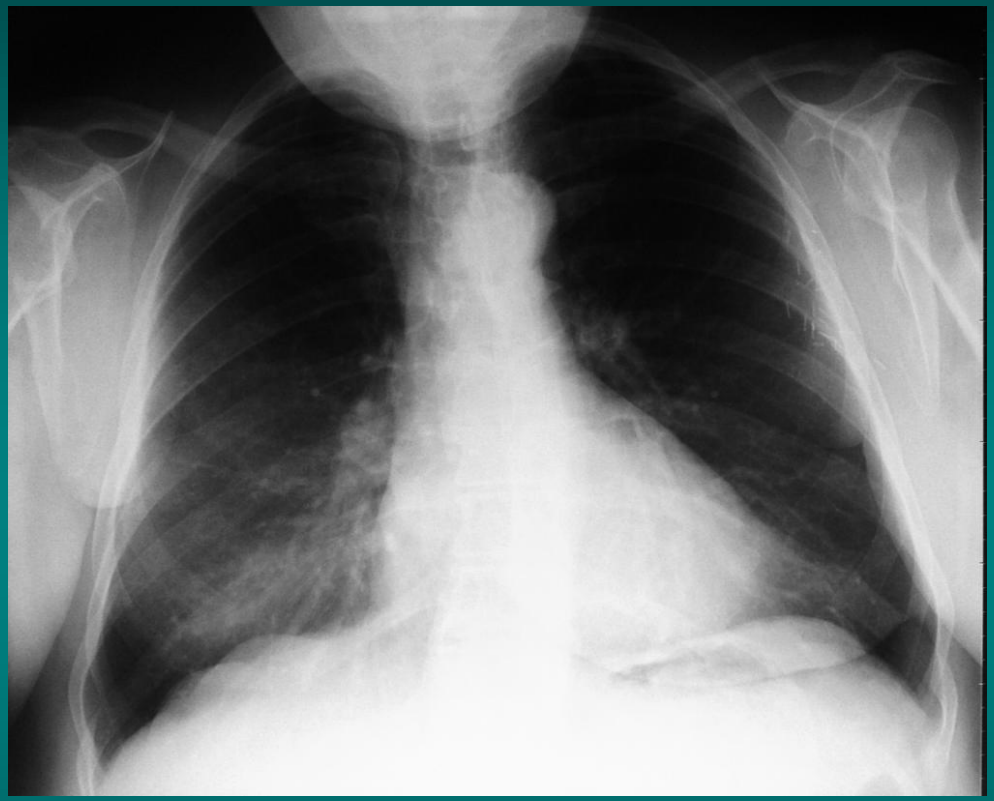
Man, fever and cough for few monthes . Weight loss and recent severe hemoptisy

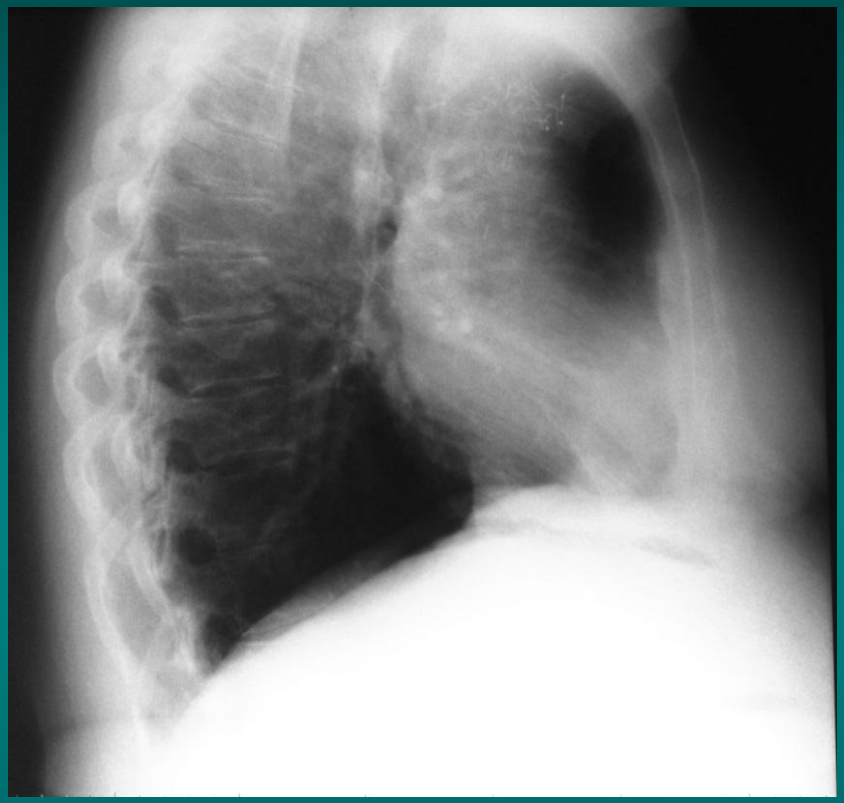


Cavity in right retractile upper lobe, associated with right latero hilar cavity, right inferior lobe infiltrate.
Controlateral cavity in axillar area:
TB cavities, AFB ++ in sputum

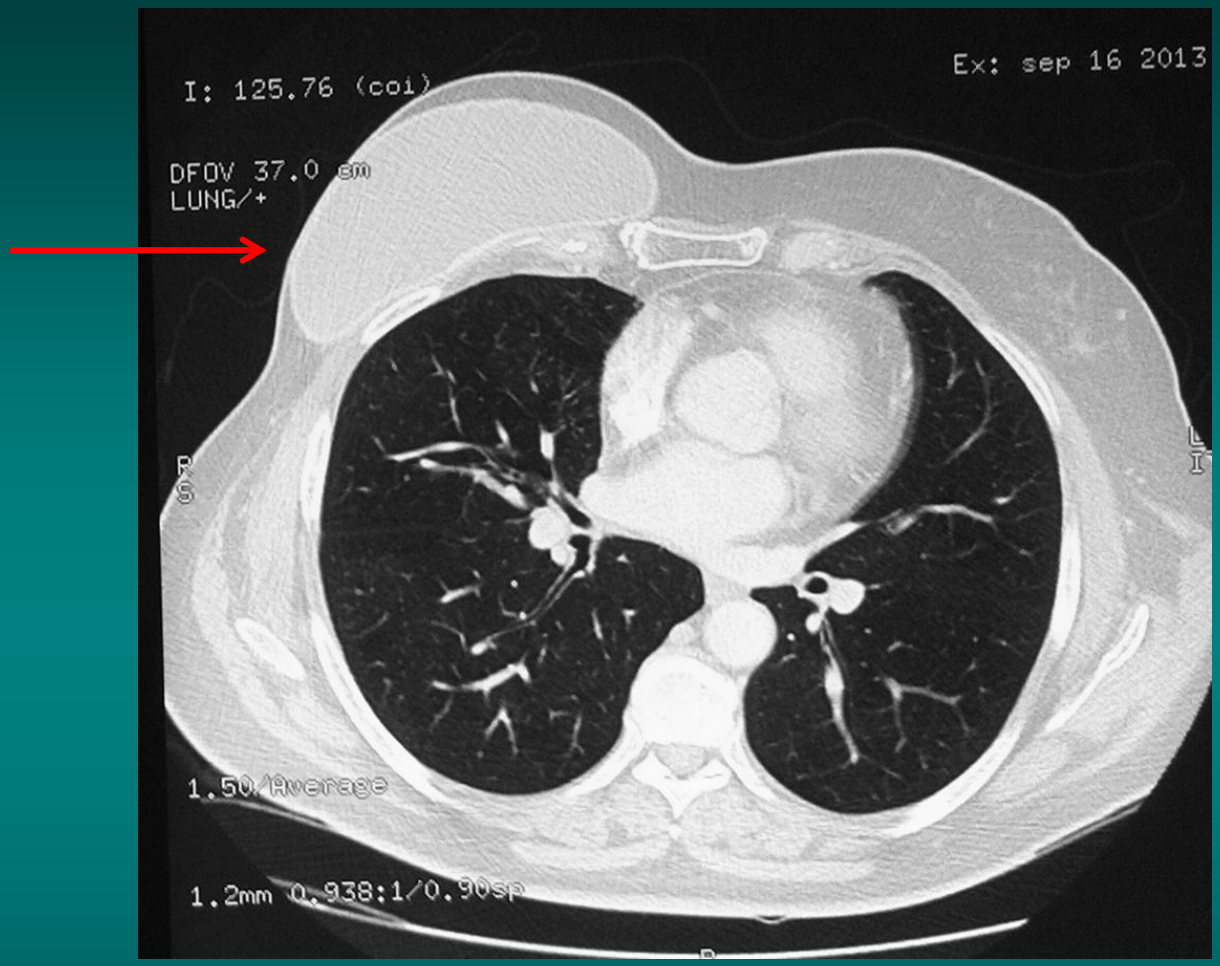


Case 9





Woman, cough but no fever, no worsening condition.
Diagnosis by radiologist and clinician: Right inferior lobe pneumonia… Do you agree?

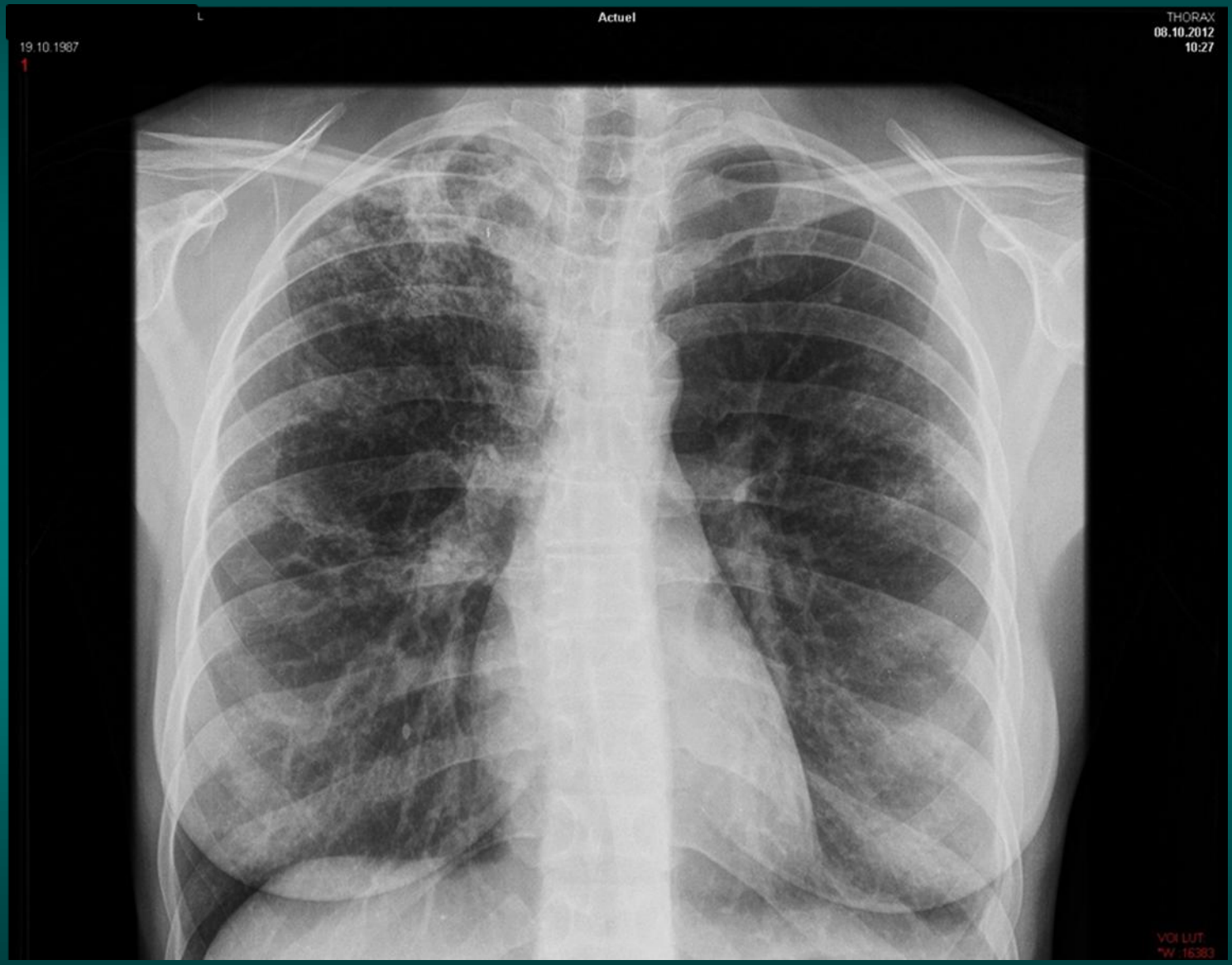


Breast prosthesis superposition!

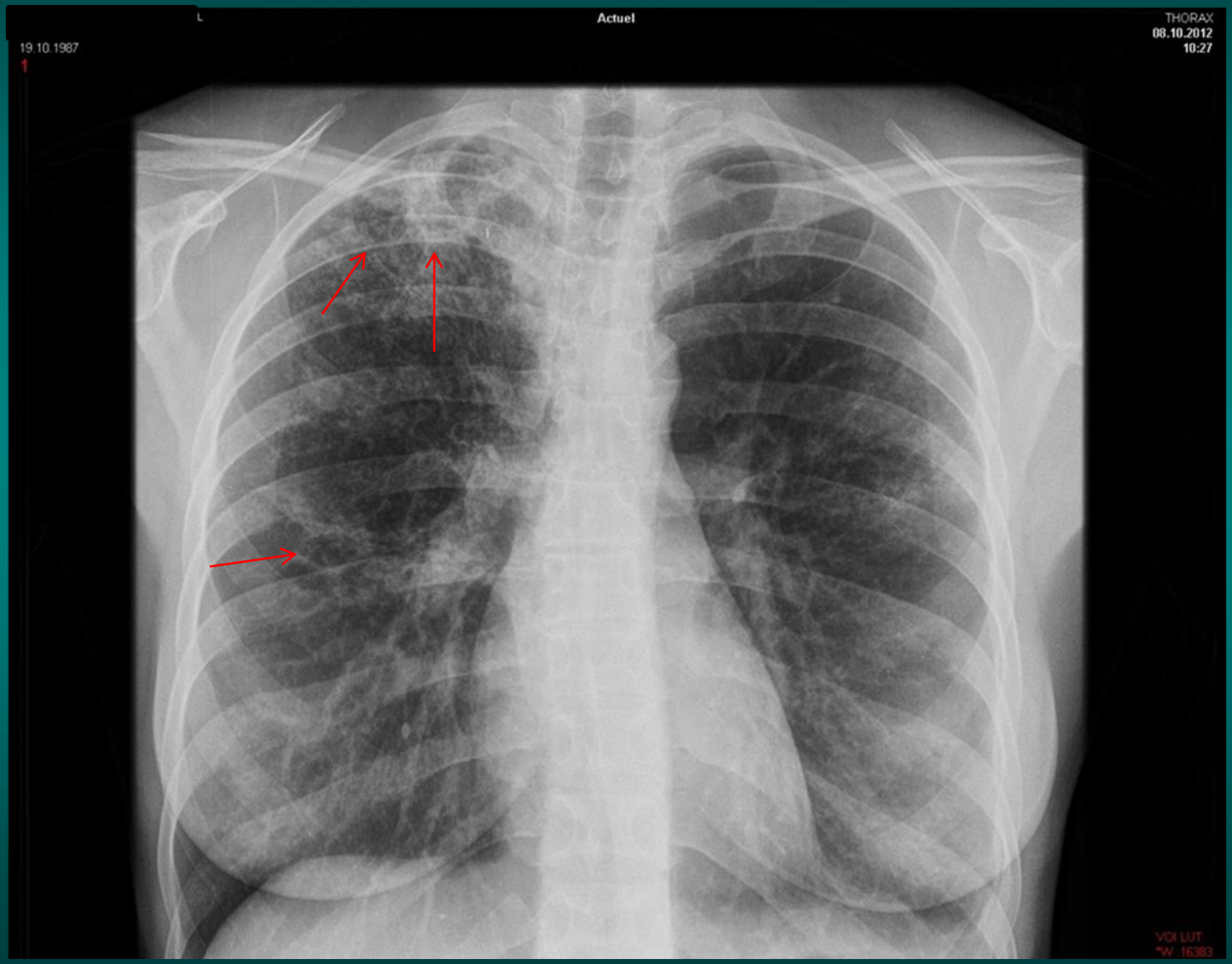
(past history of breast cancer) / Do not make radiological diagnosis without clinical context

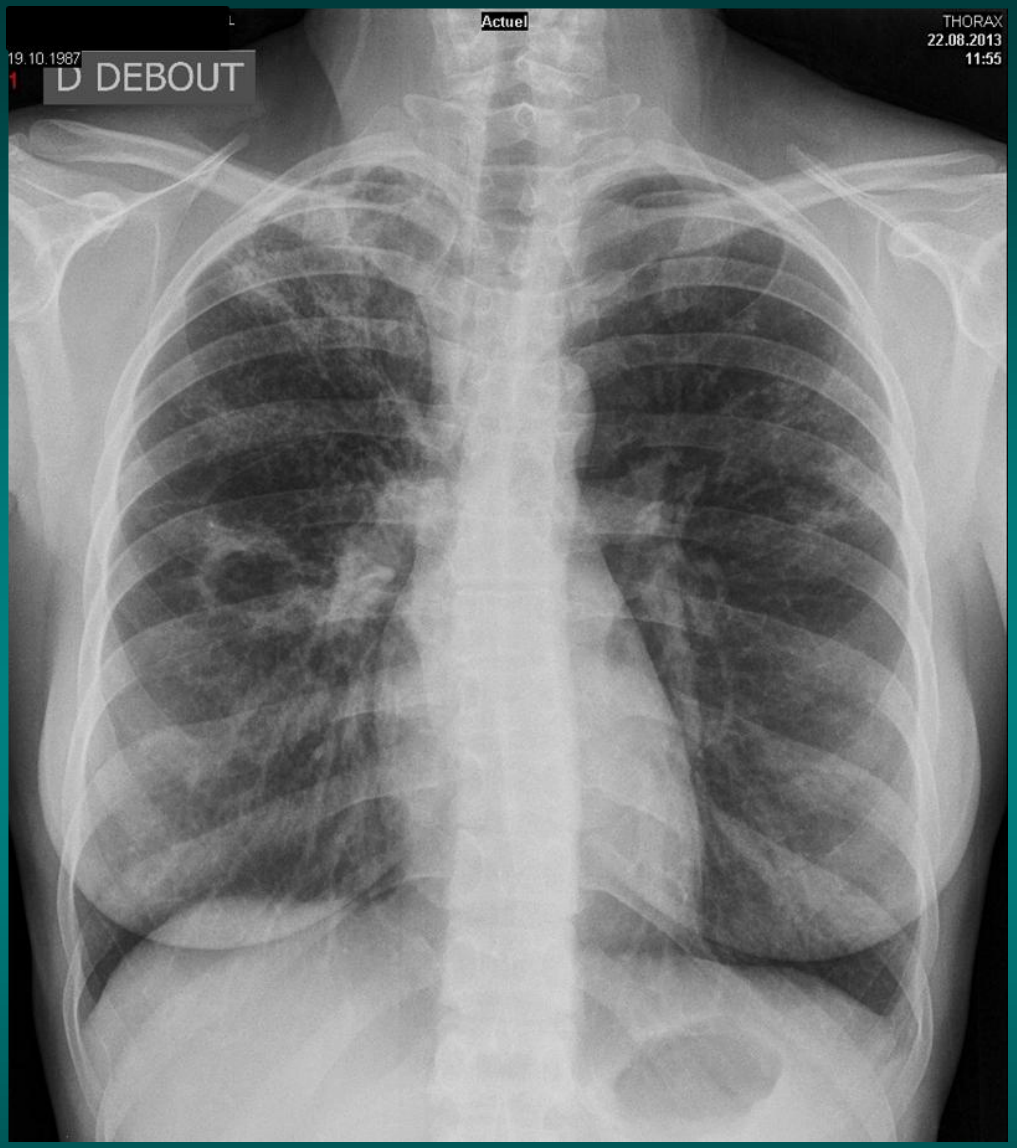
Case 10

Woman, nurse, small cough .
CXR considered as normal by radiologist….
What do you think?



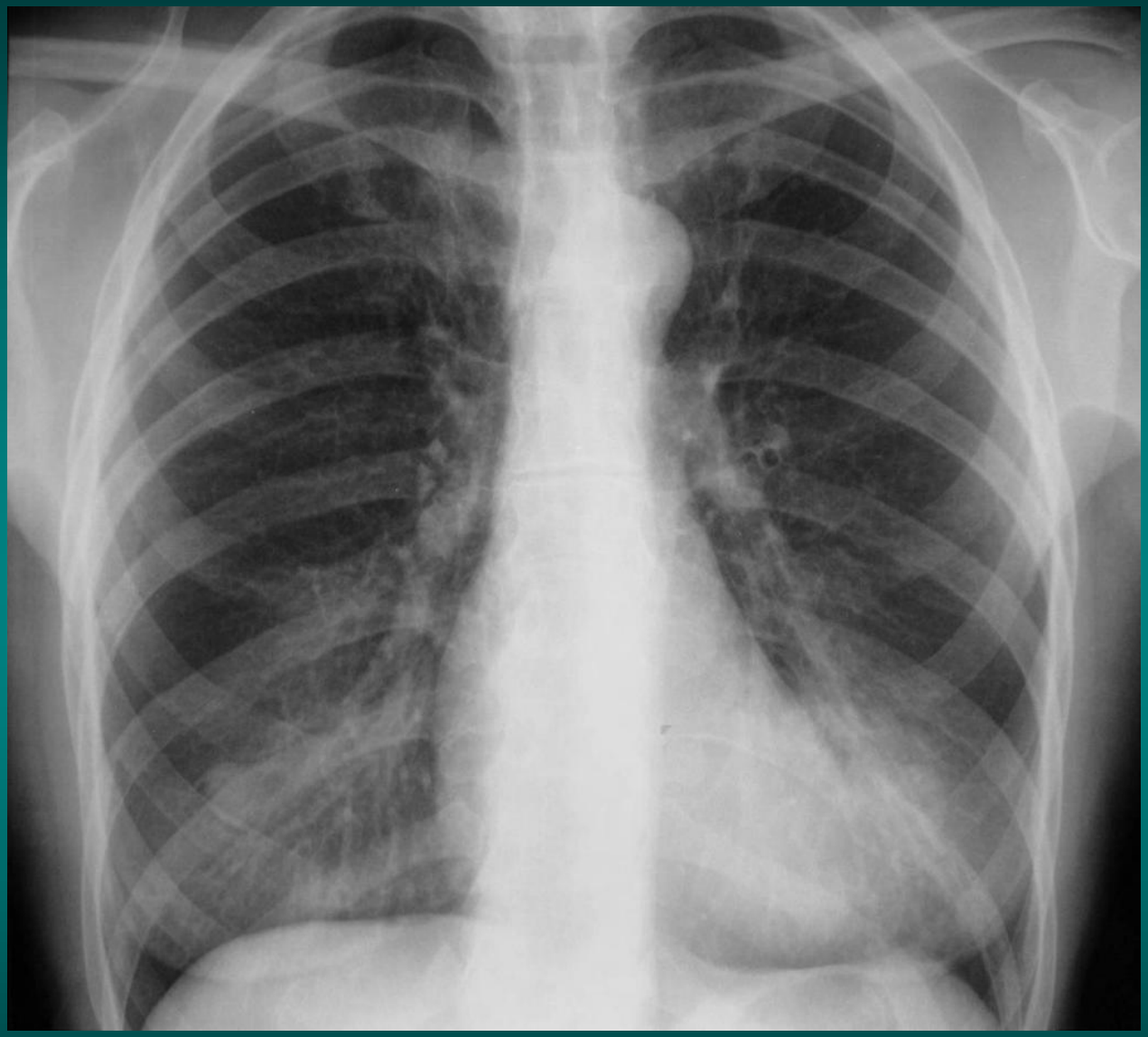
This CXR is not normal: see small infiltrate of the right upper lobe and, may be small cavity in the middle of the right lung



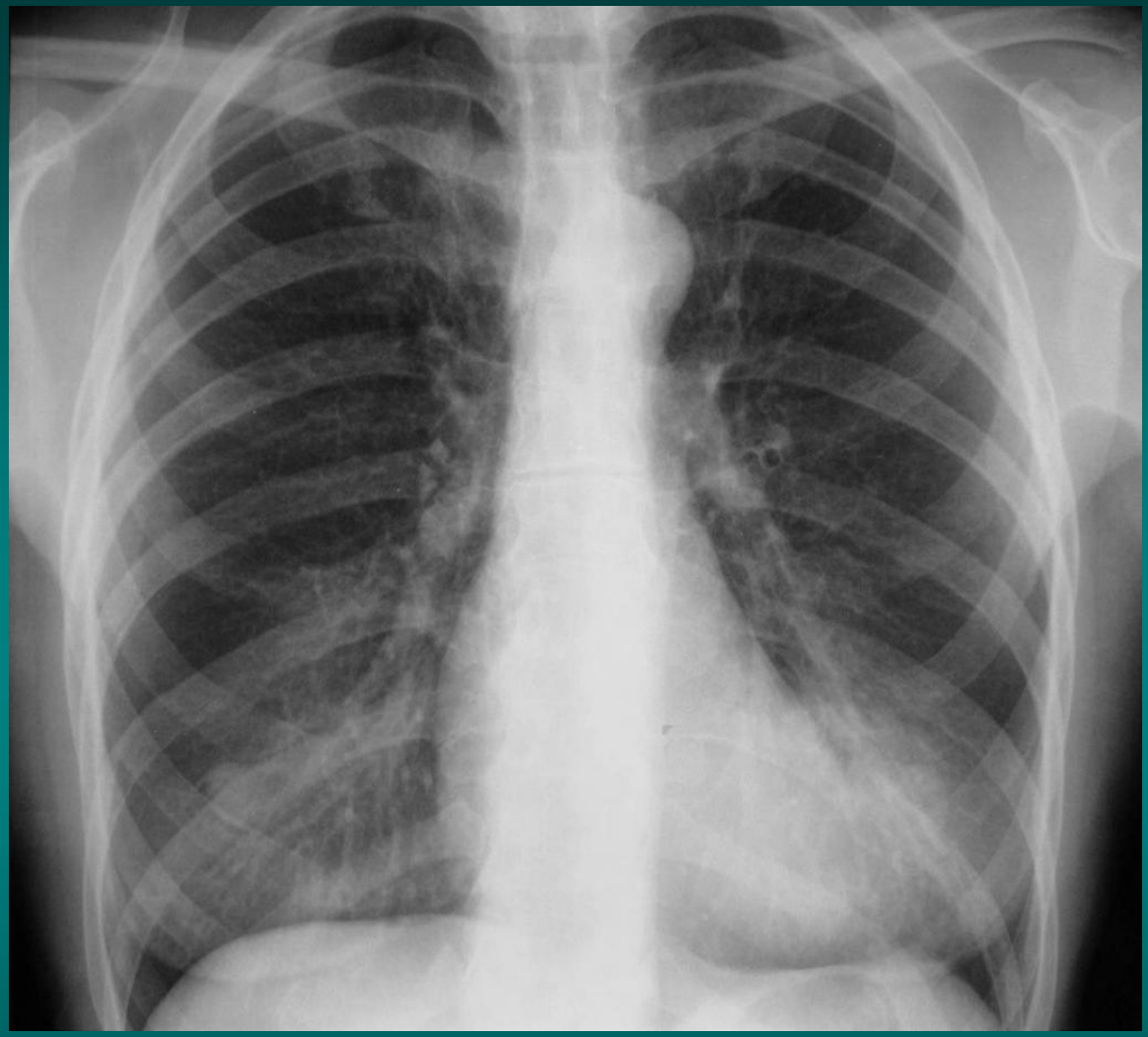


Same patient , 10 monthes after: infiltrate of the upper right lobe with cavern in the middle lobe.AFB +++. This nurse has not been detected in time and had possibly contaminated a lot of patients…

Case N°11

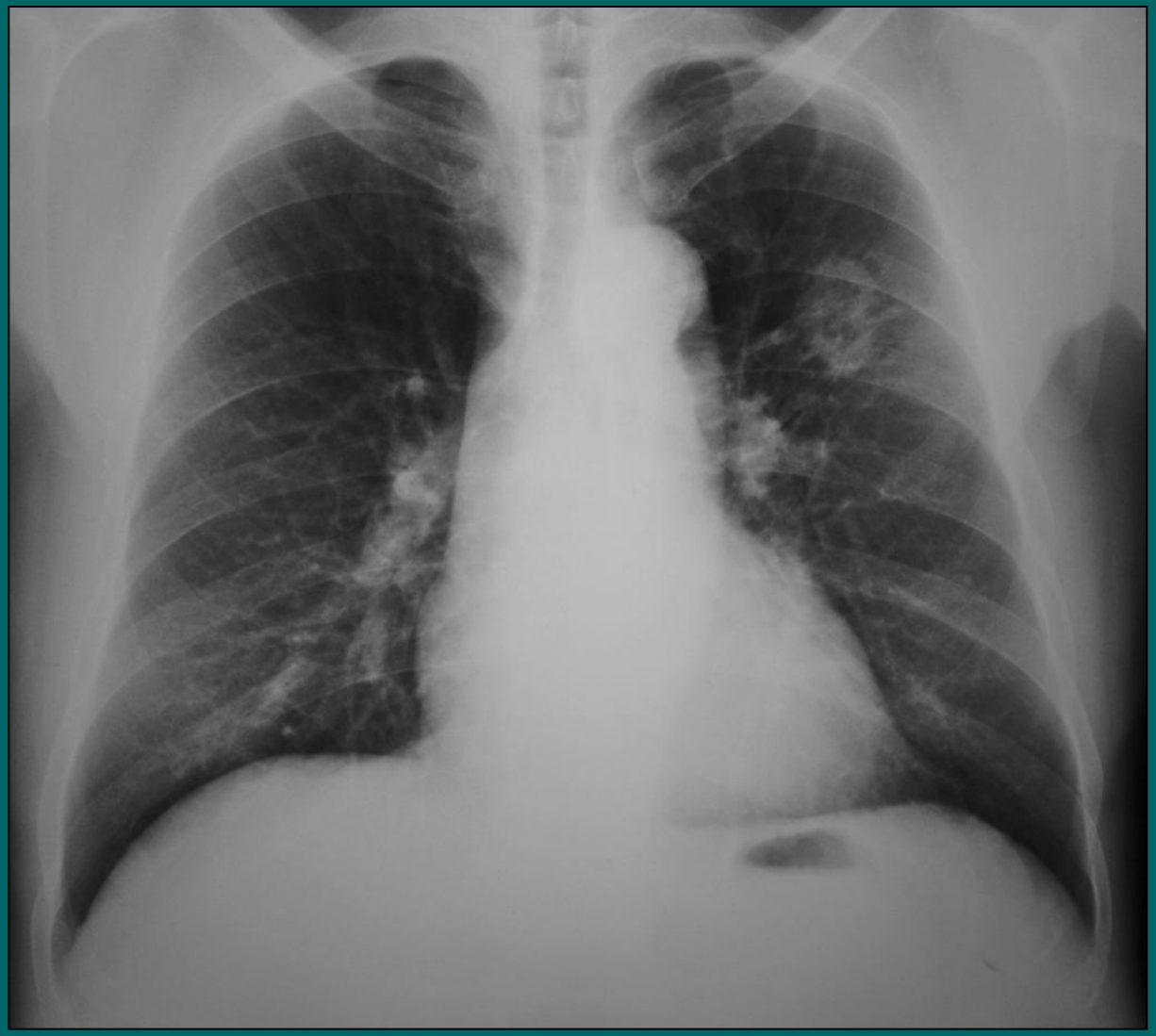


Woman , 26 years old, left thoracic pain with fever and chills.on productive cough. Quick onset of the symptoms. No past history of lung disease.

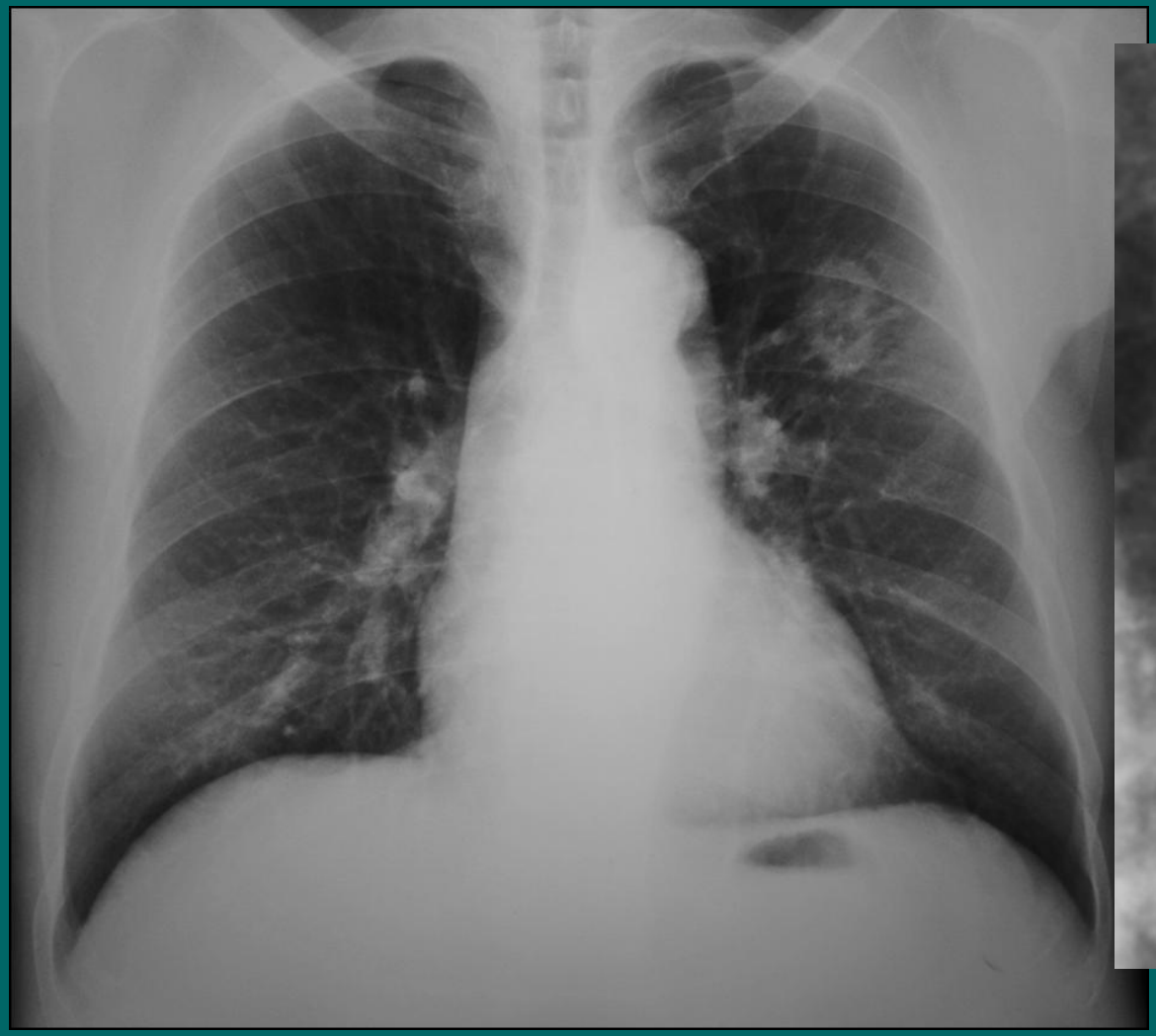


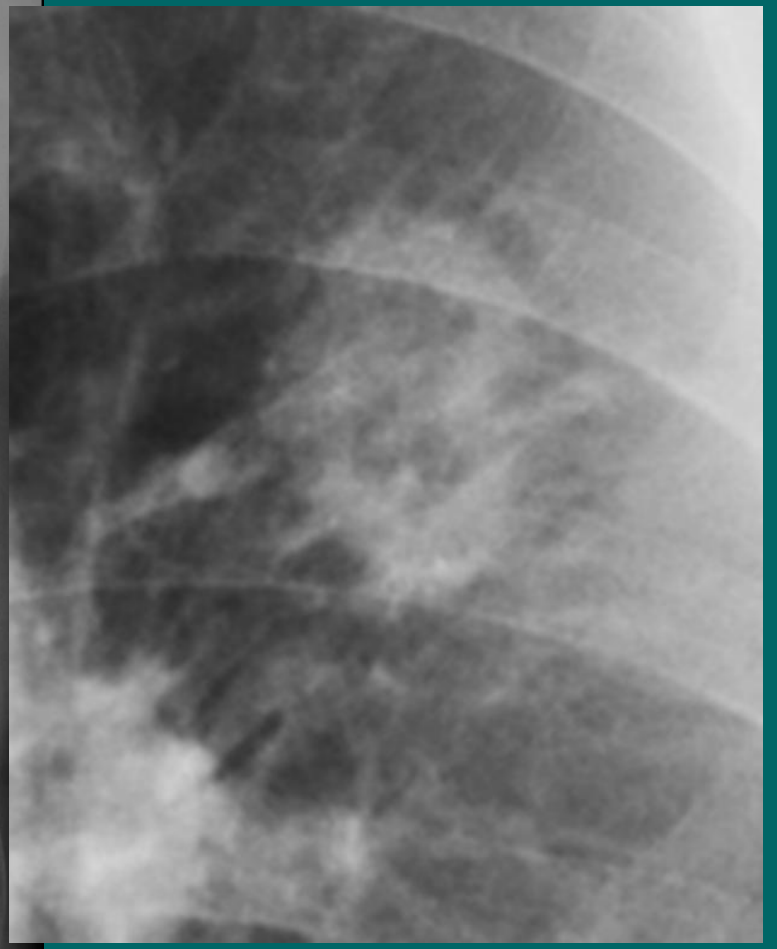
Chest X ray: technically perfect. Left alvolar opacity which erase cardiac silhouette on the left inferior arch, positive silhouette sign: the opacity is anterior ,in the inferior part of the superior lobe (lingula segment). Clinical and radiological signs strongly suggests **acute infectious pneumonia**. Quick improvment with 3 g/ day of amoxicillin…

Case N°12



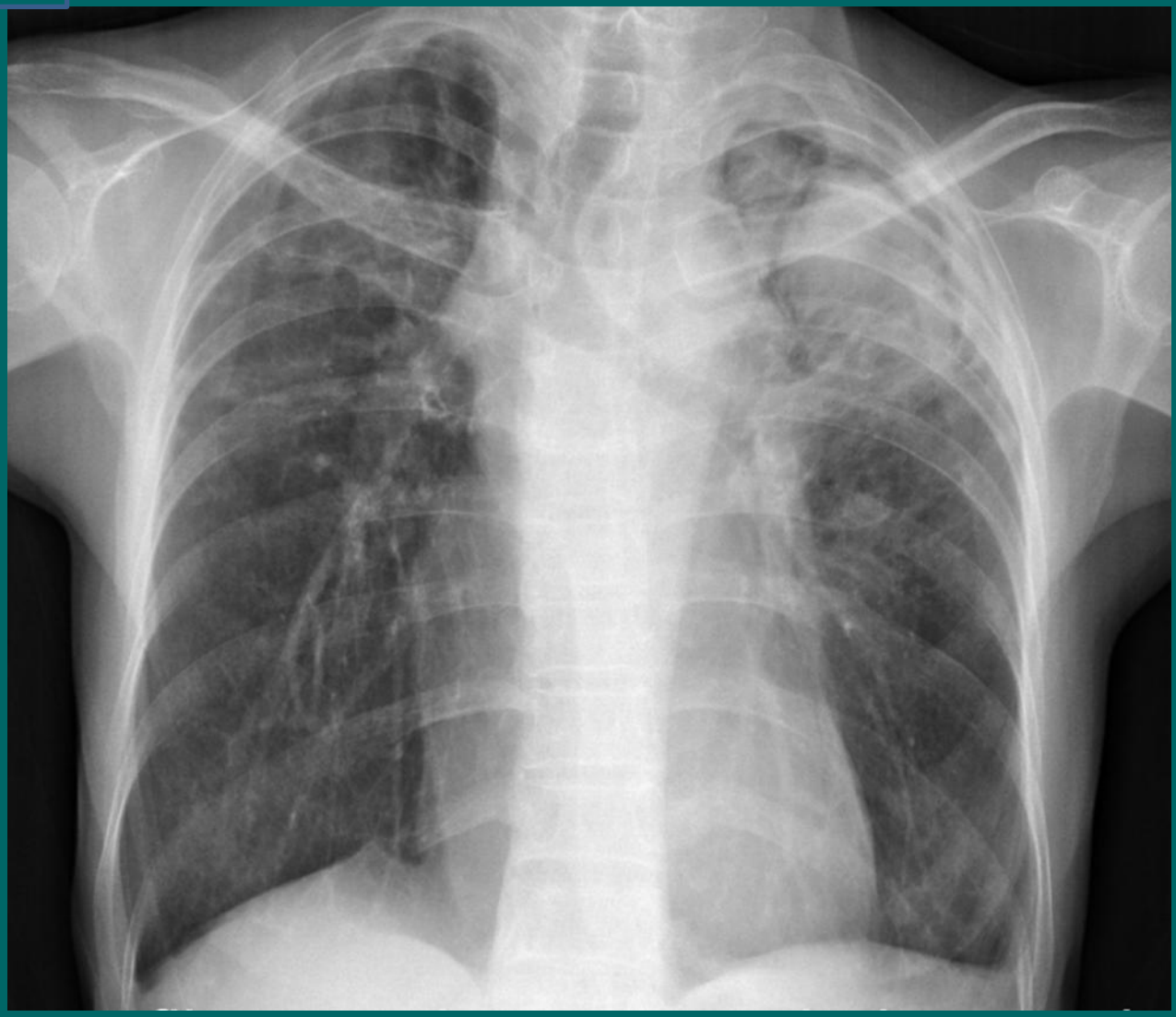
Cough and hemoptisy. AFB neg. Smoking past history





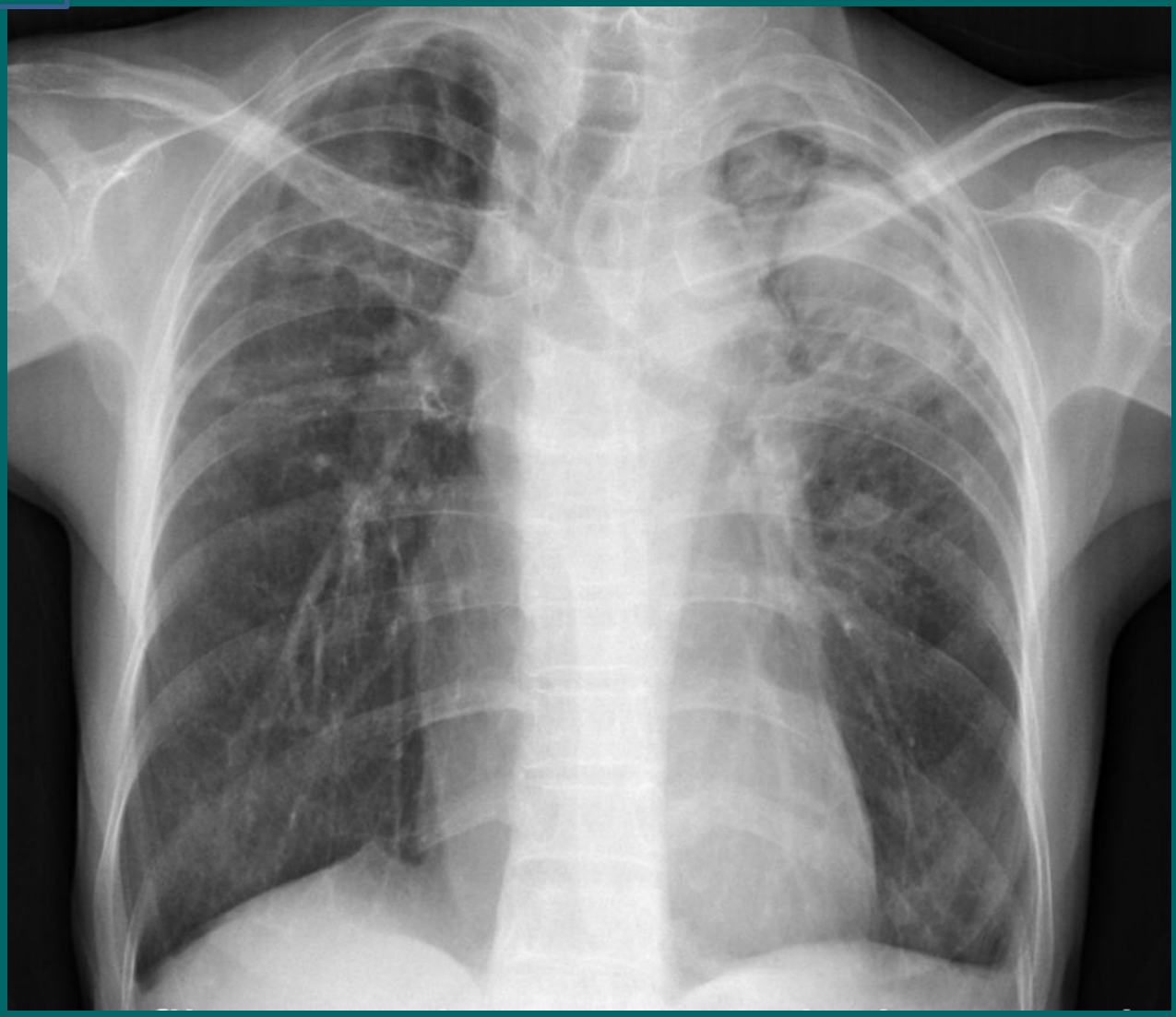
Cavited bronchial cancer.. Thick and irregular wall. TB is possible but improbable because no bacilli in sputum, despite cavity in the opacity , and no associated nodules in the periphery of the mass

Case N°12



Man, 60 y , past history of TB treatment. Severe and repeted hemoptisy for many monthes.

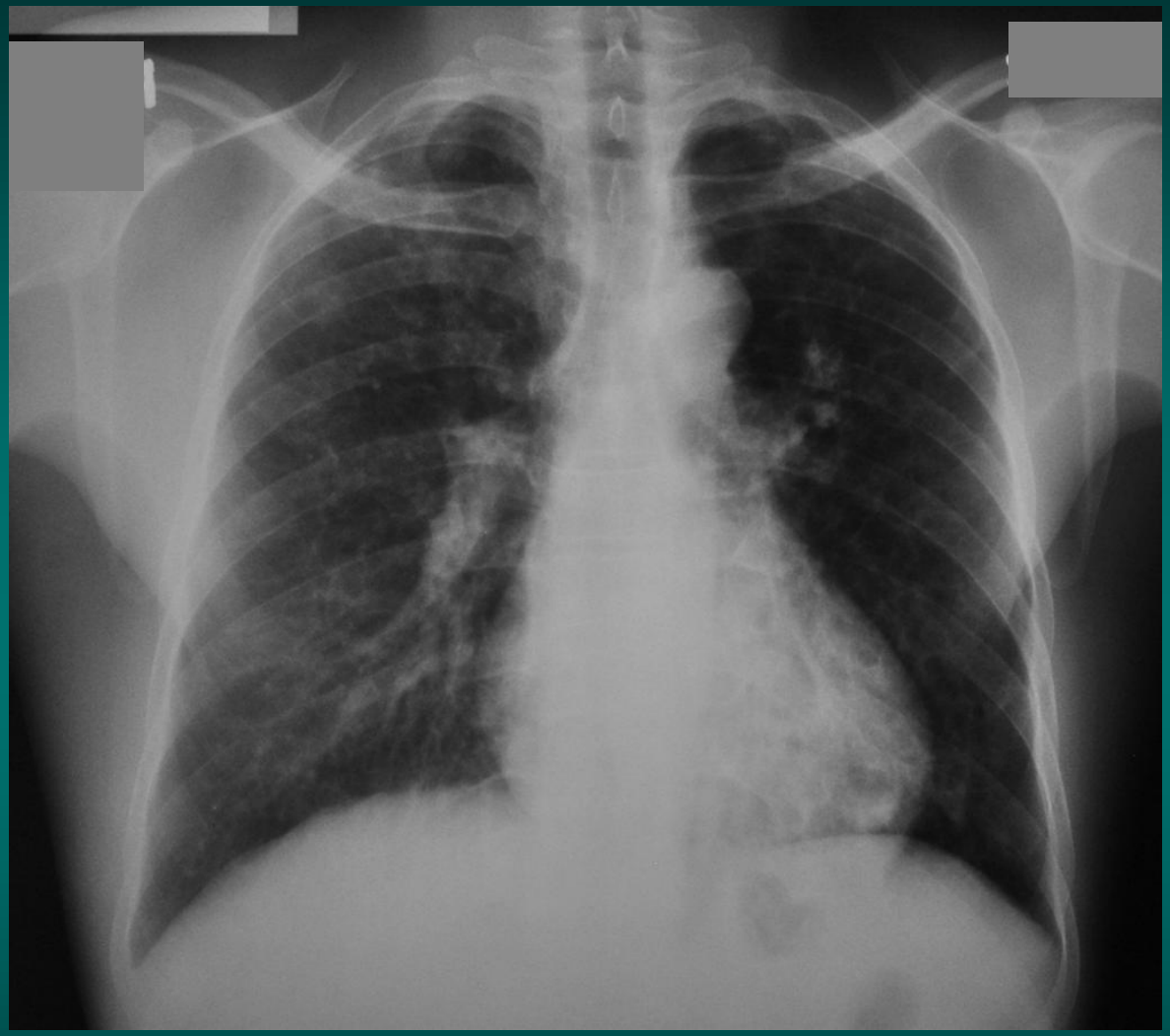
Case N°12



Probable bulky **aspergilloma** in the left upper lobe, developped in tb sequela cavity.

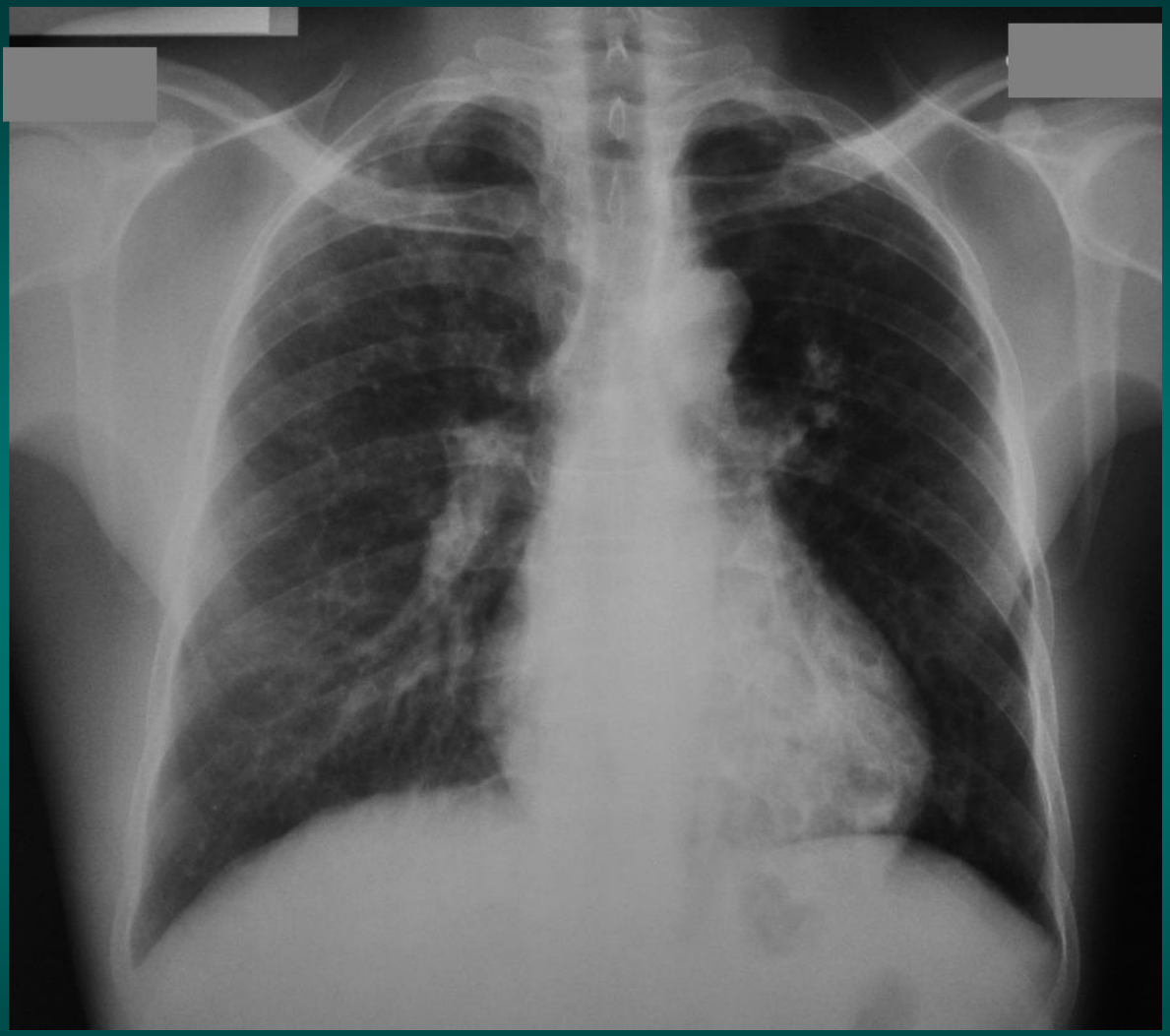
Chapter 11

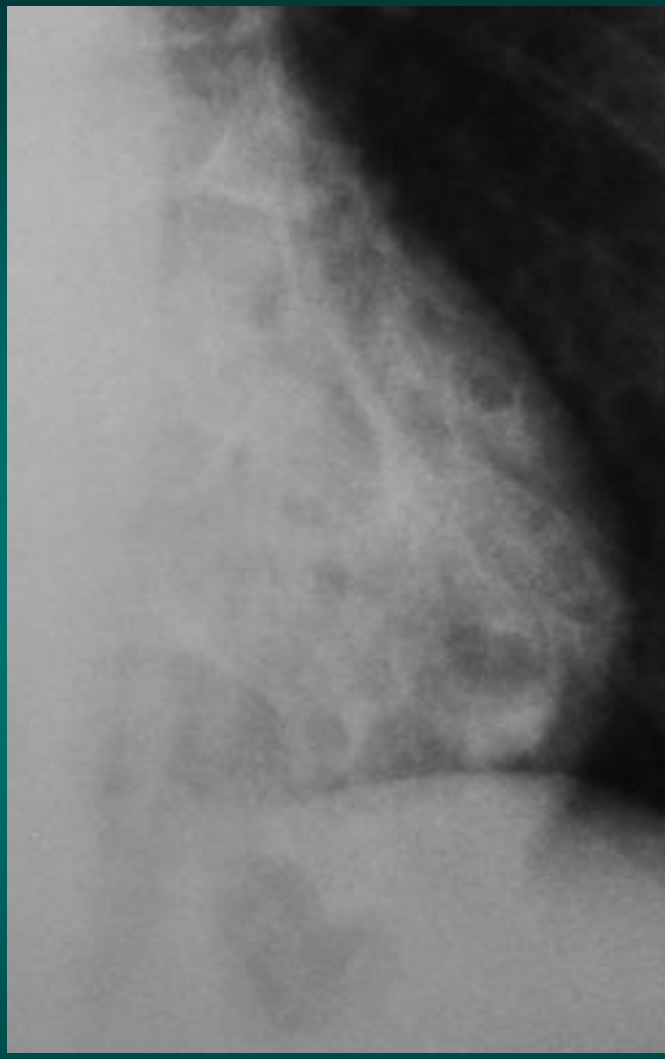
Case 1



Chronic productive cough and repeted infections for years
Repeted smear negative

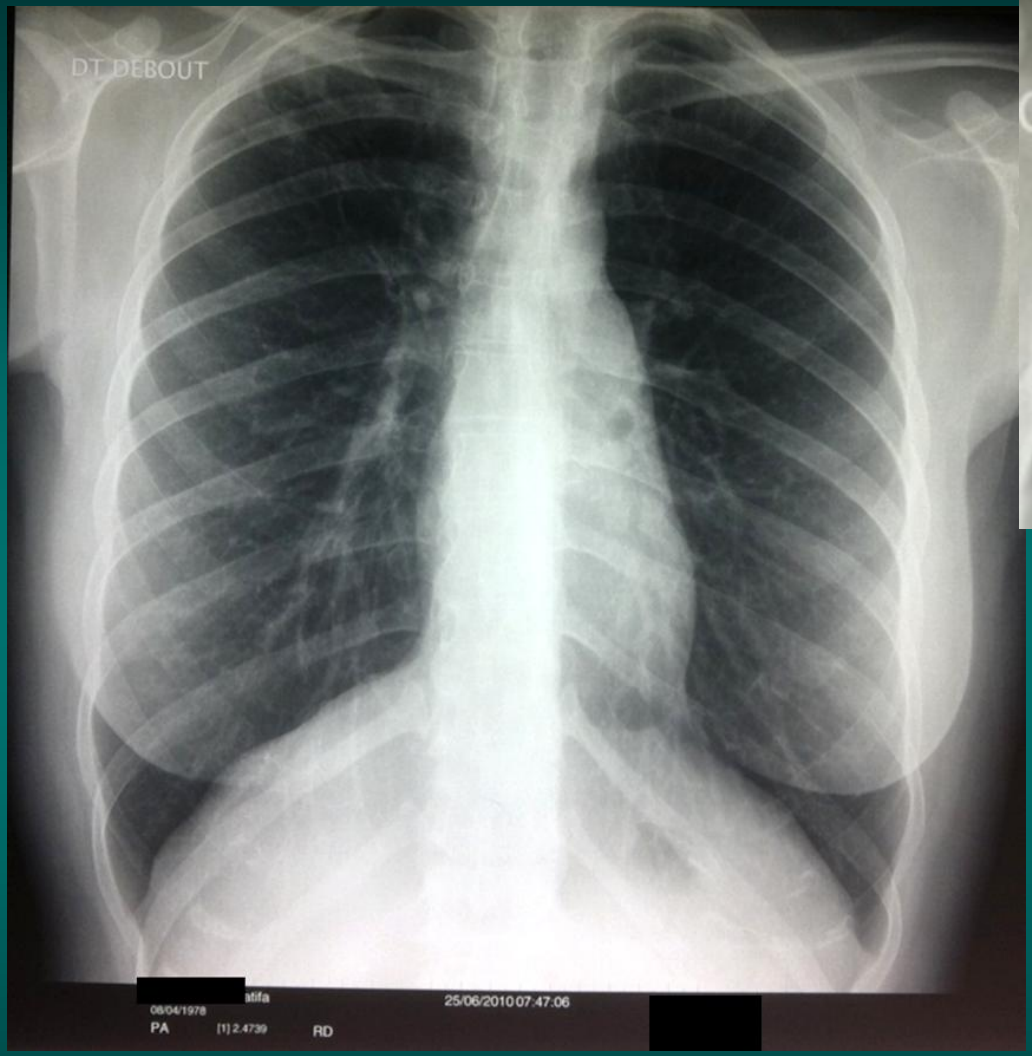
Case 1

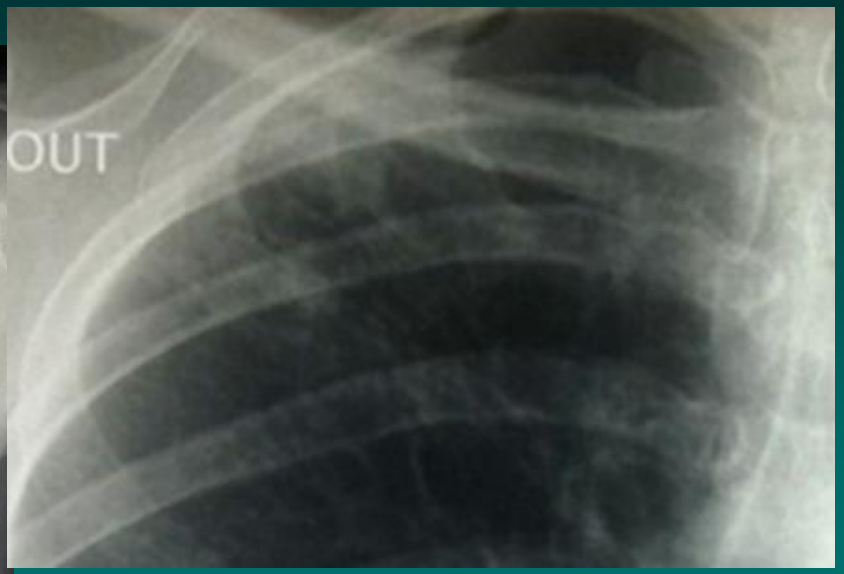




Left inferior lobe bronchectasis

Case 2

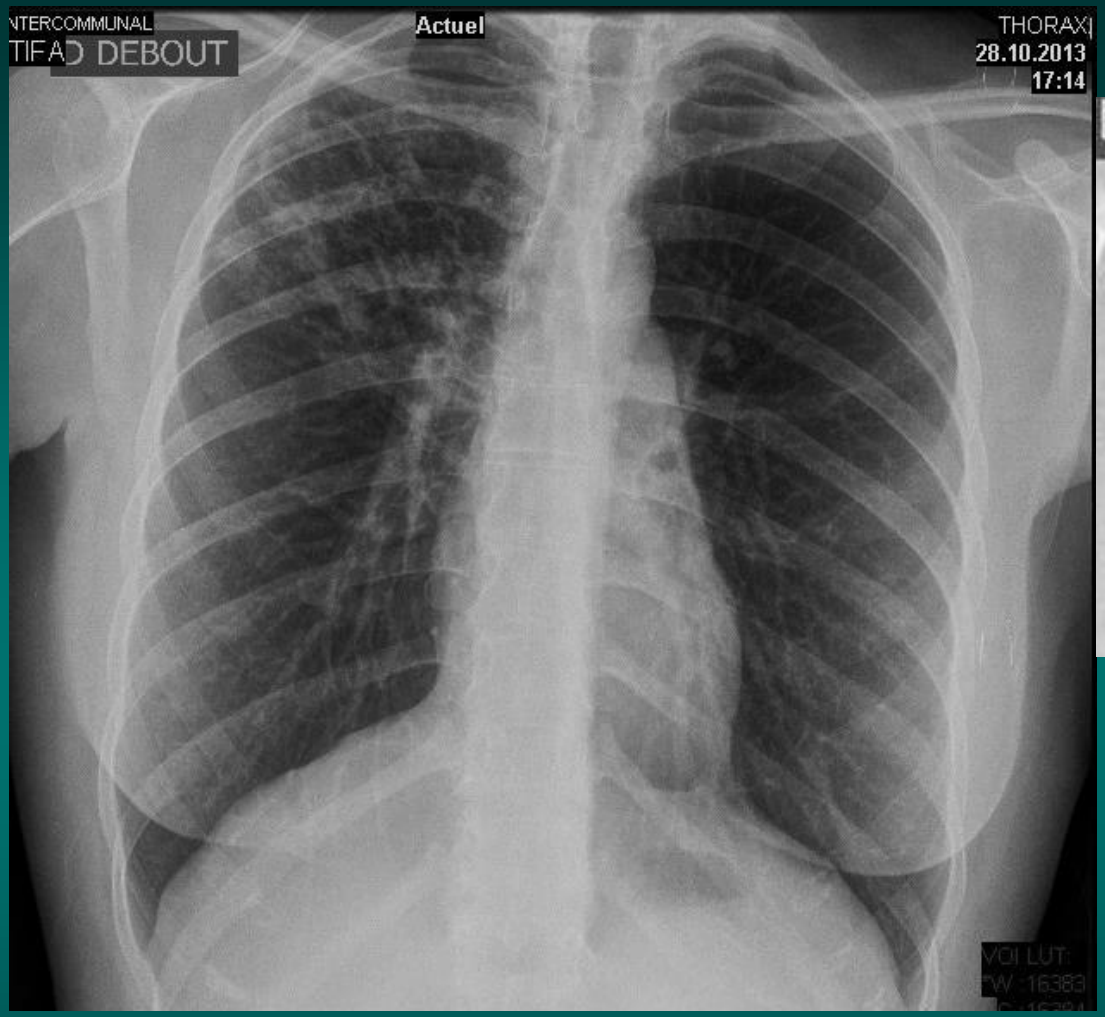


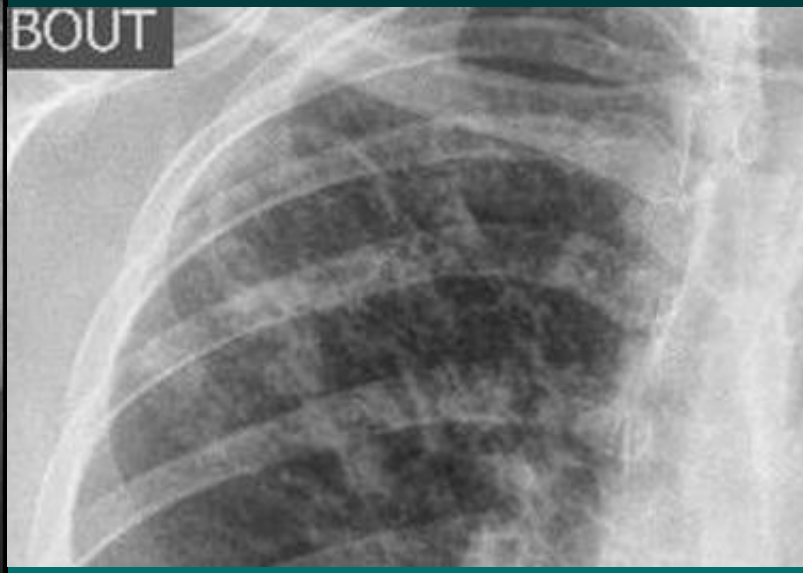


June 2010, 25 years old .Nurse. As part of the recrutment examination: CXR considered as normal…

The radiologist has missed a small tb infiltrate in the right upper lobe…

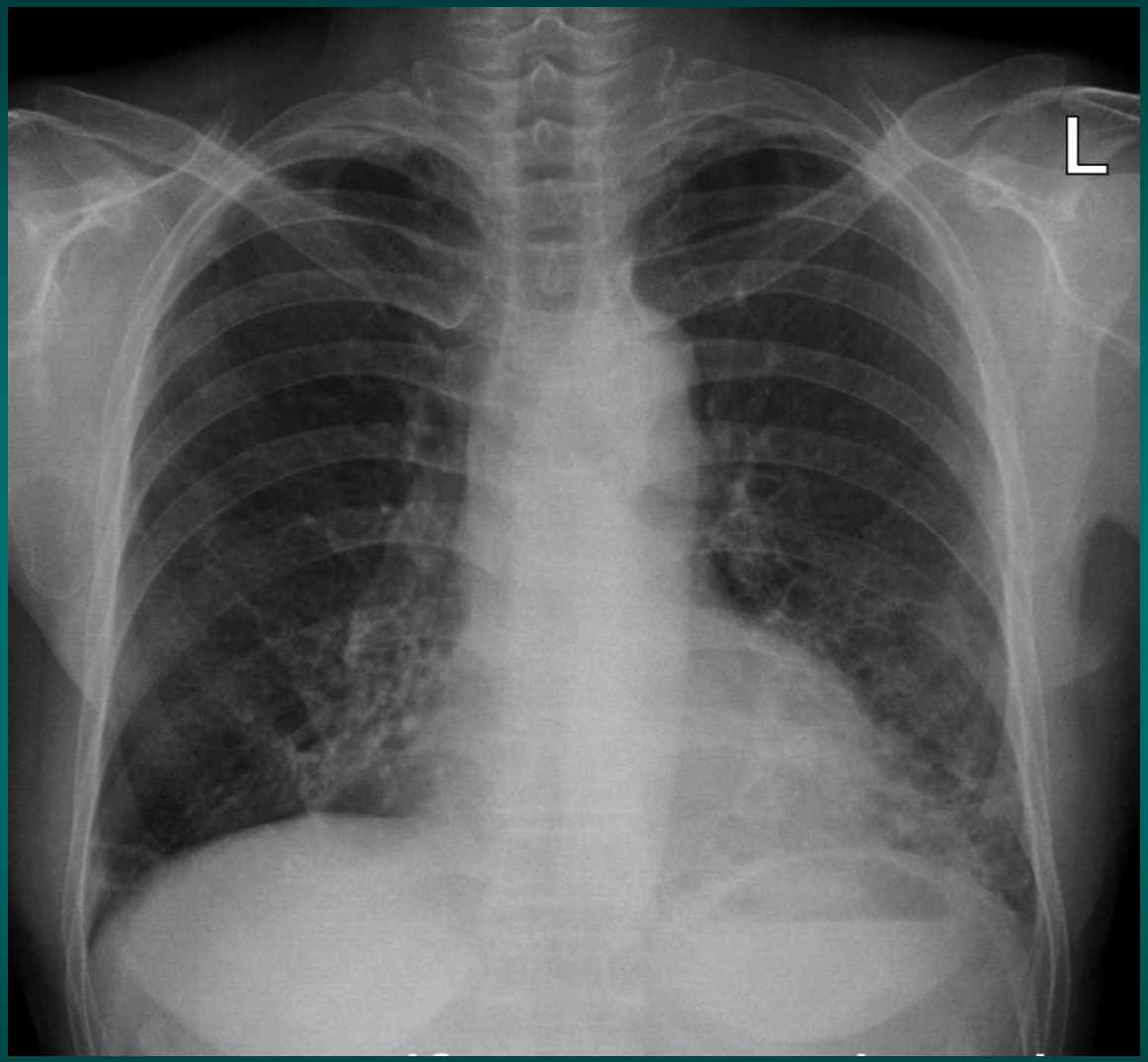
Case 2





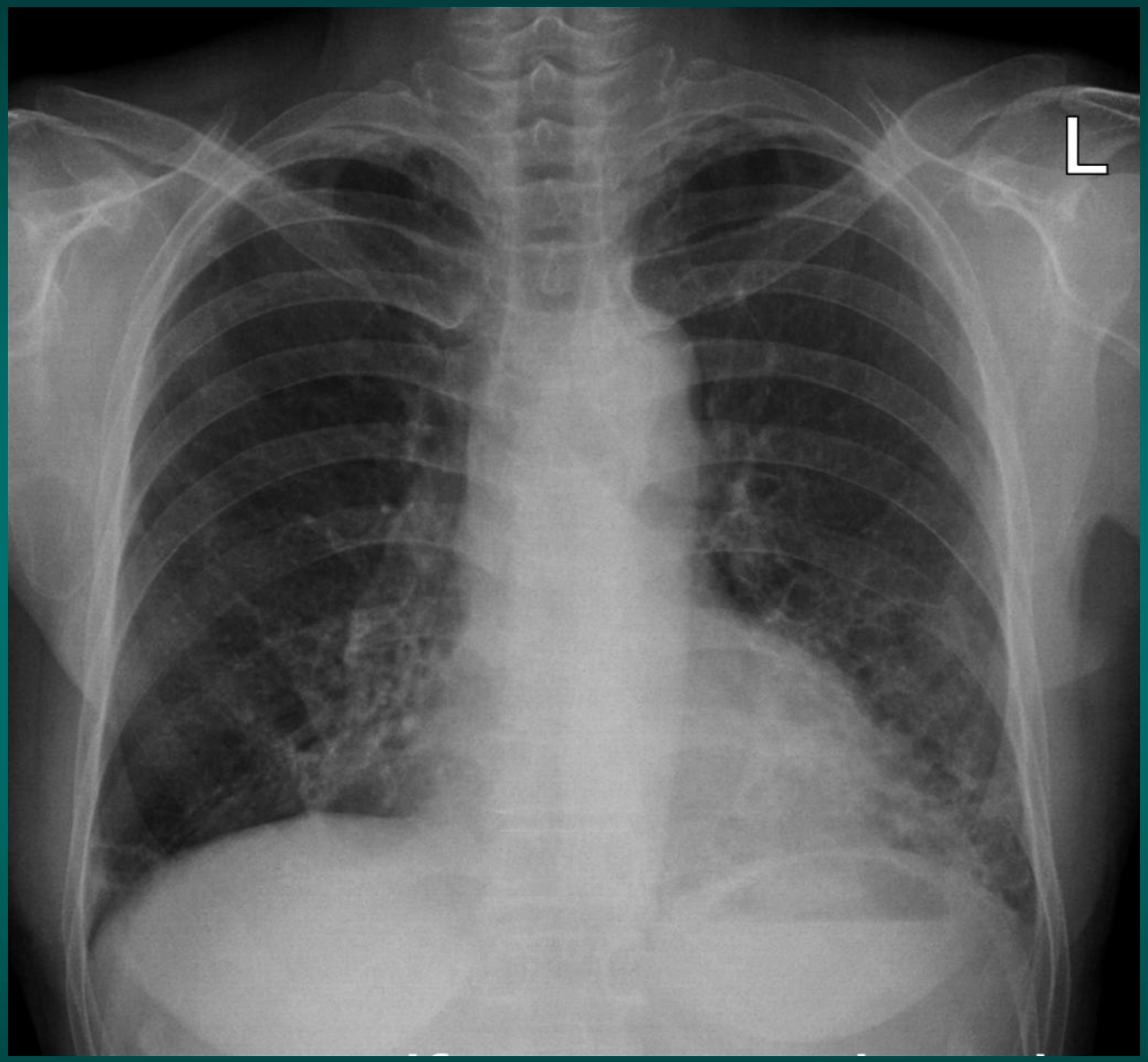
3 years later: Productive cough. Smear ++++ for AFB
TB cavity of the right upper lobe: very high risk of contamination in the houseold and also in the workplace

Case 3



Morning and chronic productive cough . Smear negative

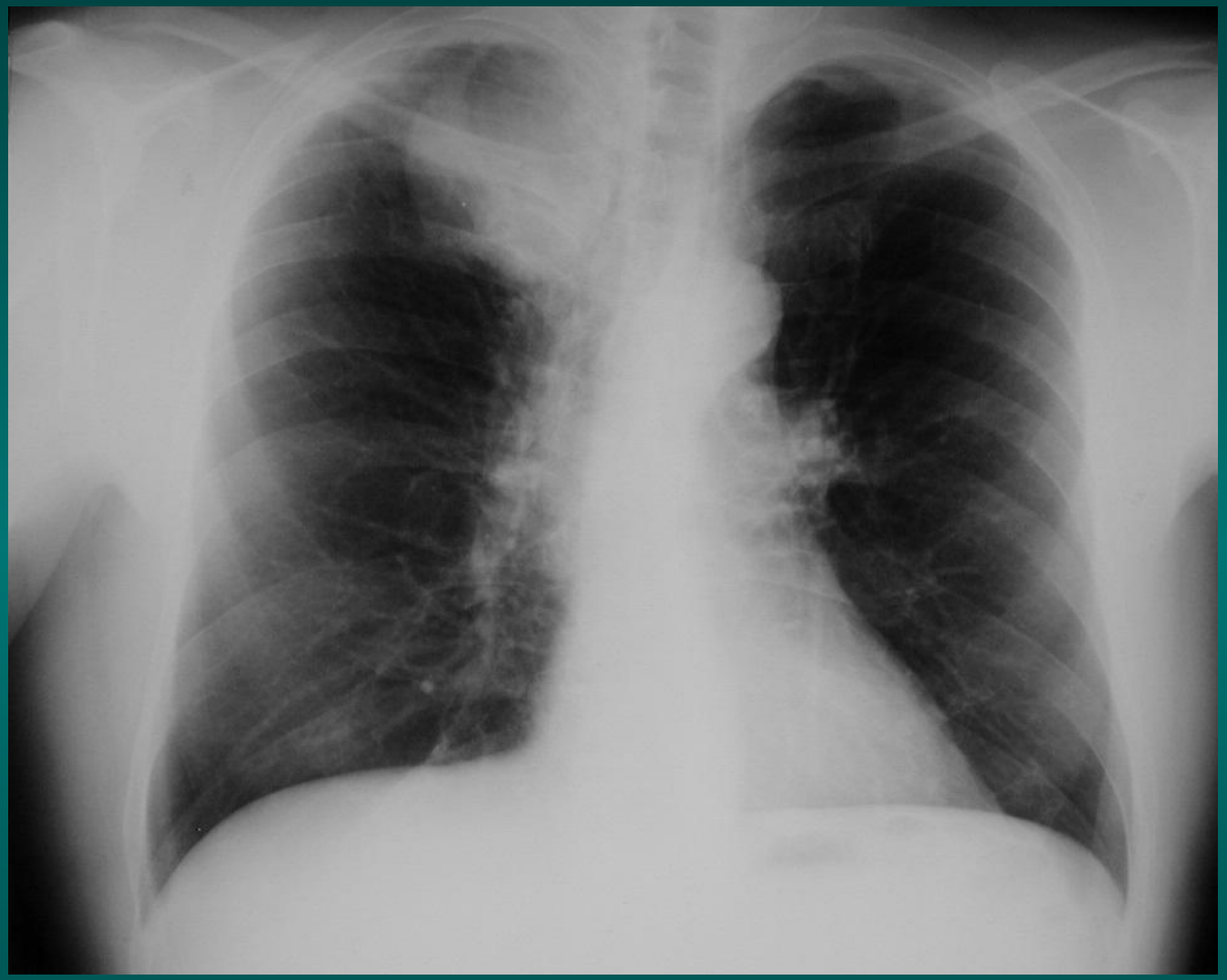
Case 3



Bilateral inferior lobe bronchiectasis

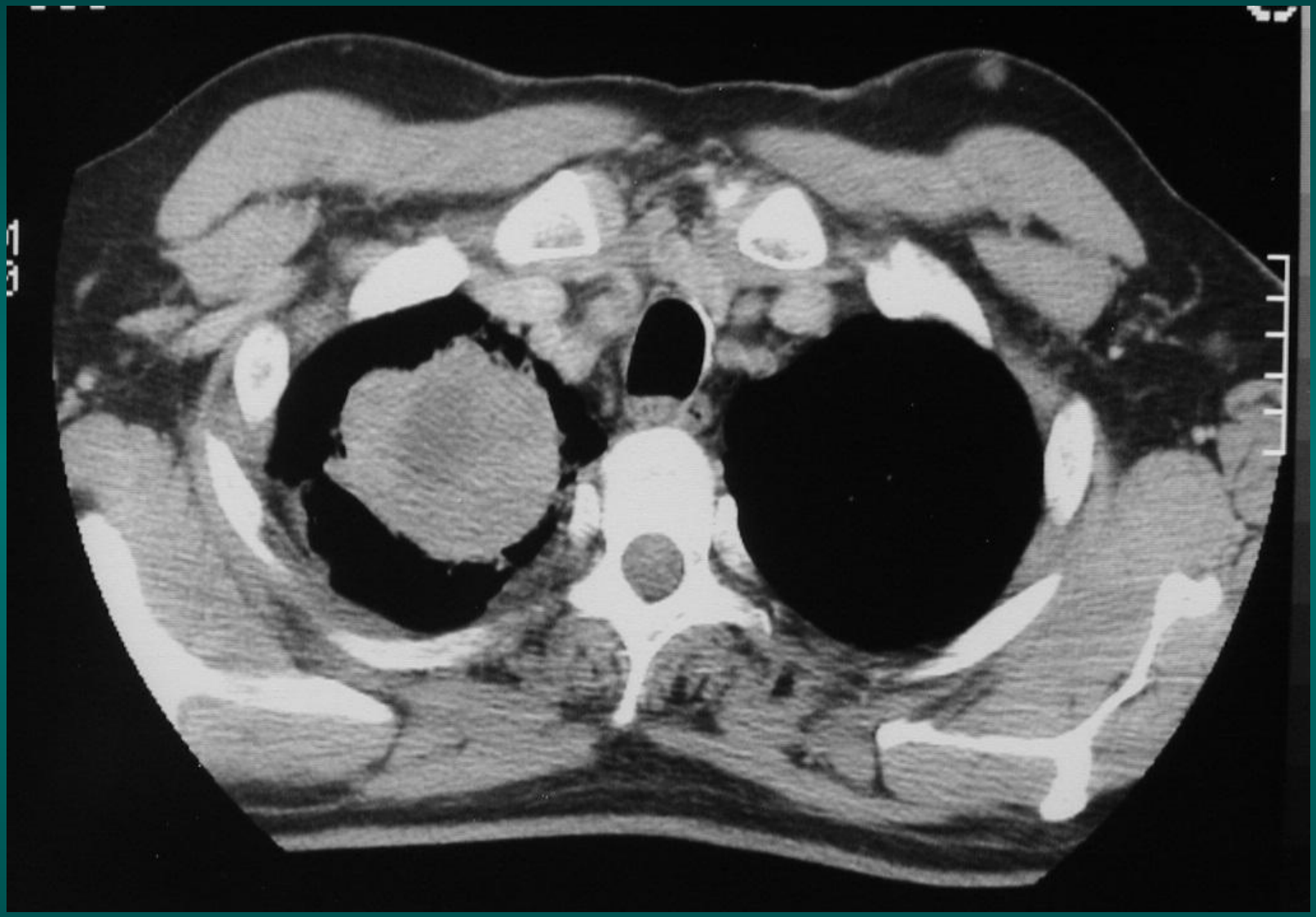
Case 4

Man 56 years old, asthenia cough and weight loss.Smear - . Past history of smoking .



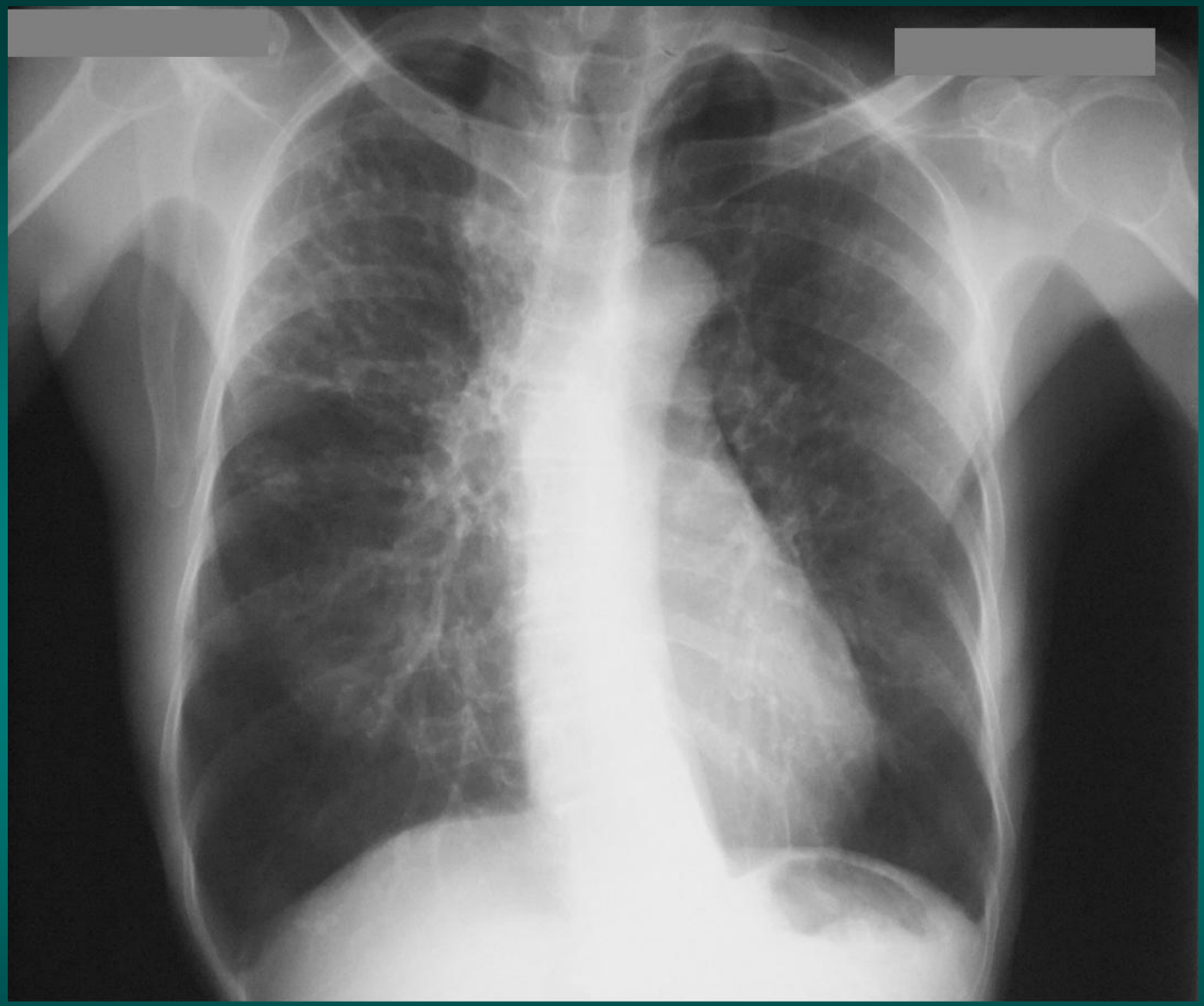
Upper right bulky mass, with no cavitation (false picture of cavity due to rib superposition). TB is very improbable: no cavity and no associated nodules or infiltrate. **Bronchial cancer**.

Case 4



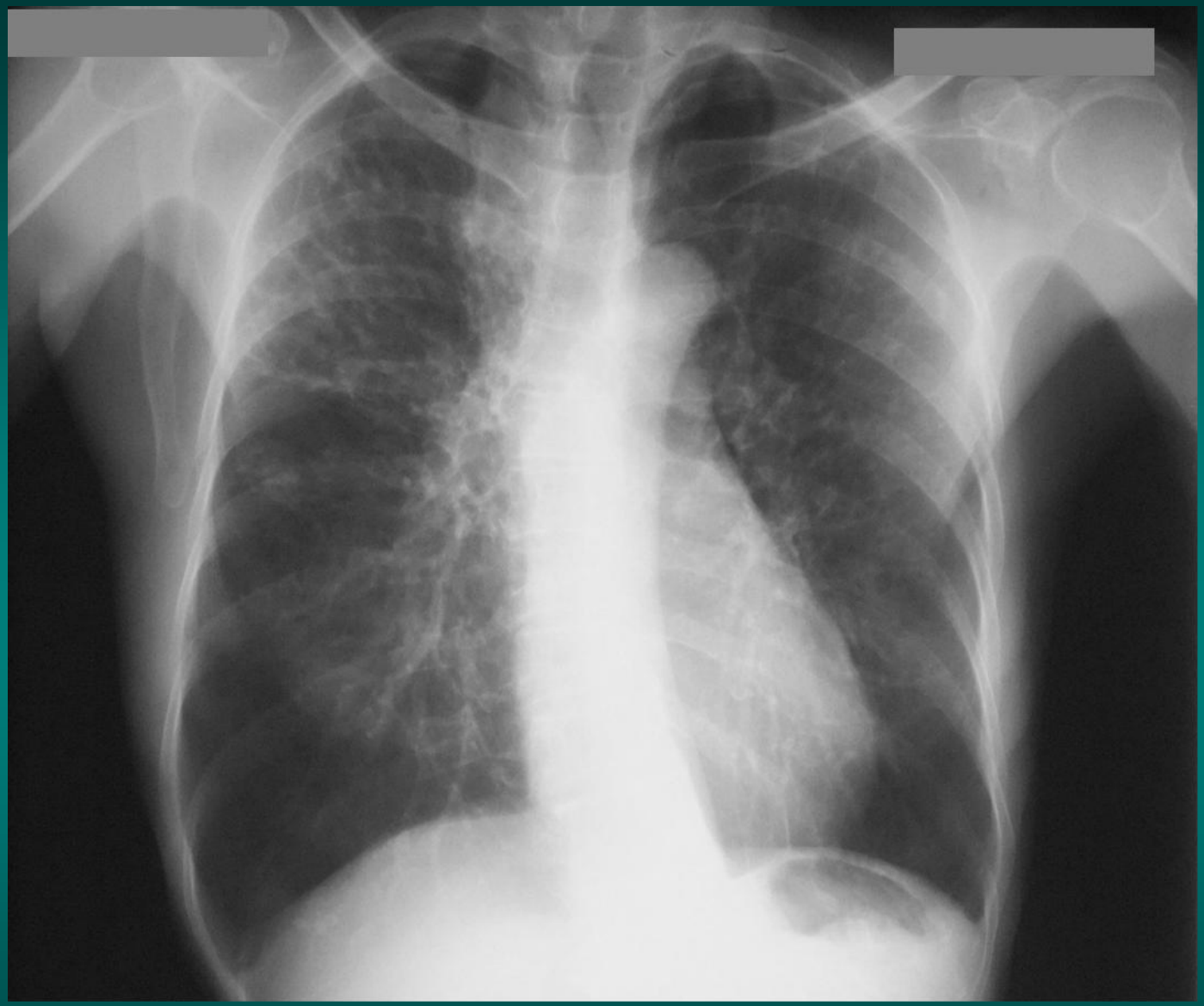
Scan view of the previous case.
Confirmation of no cavity in the upper right lobe mass

Case 5



Fever , weight loss and cough smear (-)

Case 5

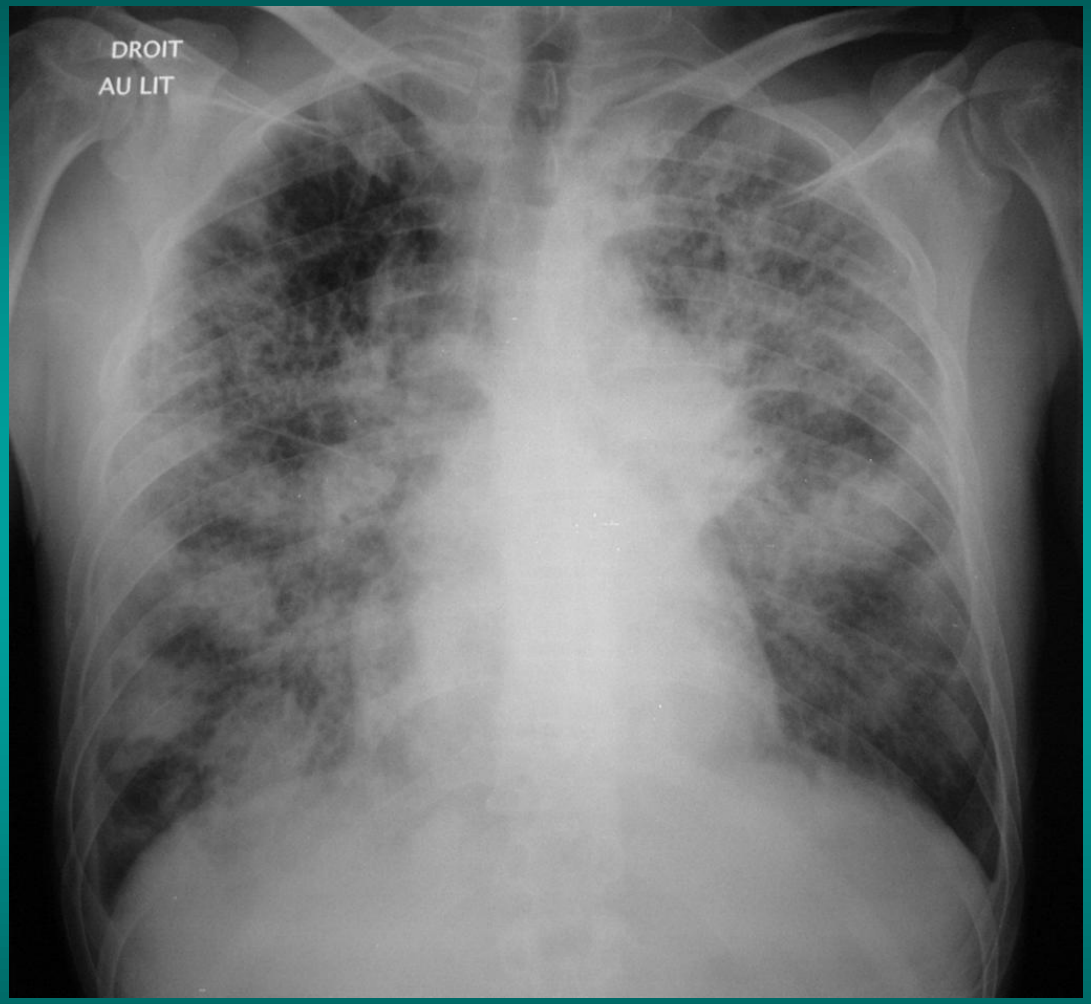


Right superior lobe infiltrate with right latero tracheal adenopathies:
Smear negative Culture Positive: **TB**

Cambodian National TB control program

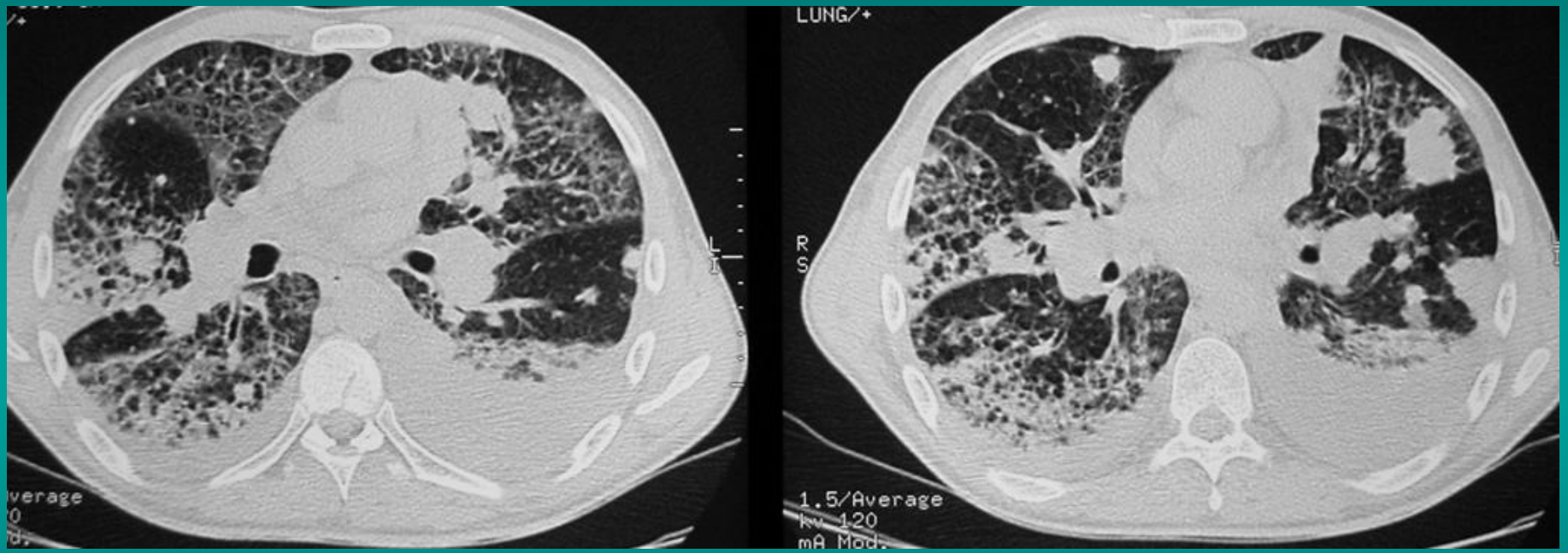
Case 6

Man , 42 years old, severe dyspnea and worsening condition.
Past history of nephrectomy for renal cancer



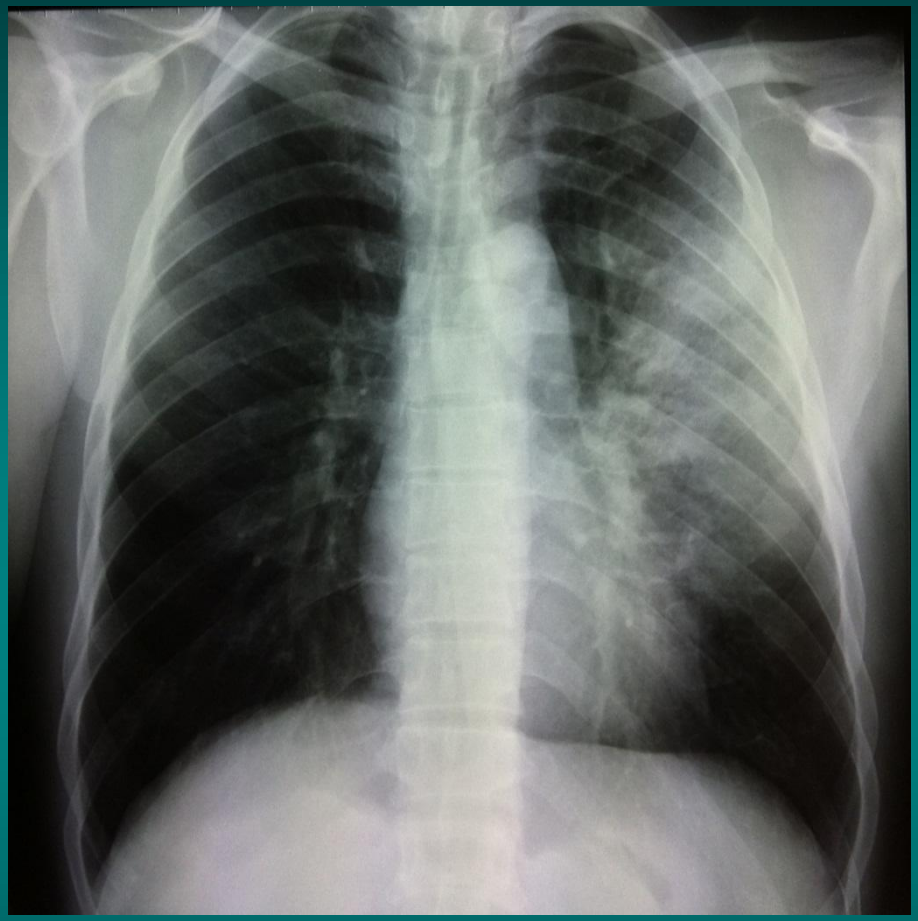
The association of nodular and linear images suggests
in this context a carcinomatous lymphangitis (renal origin)

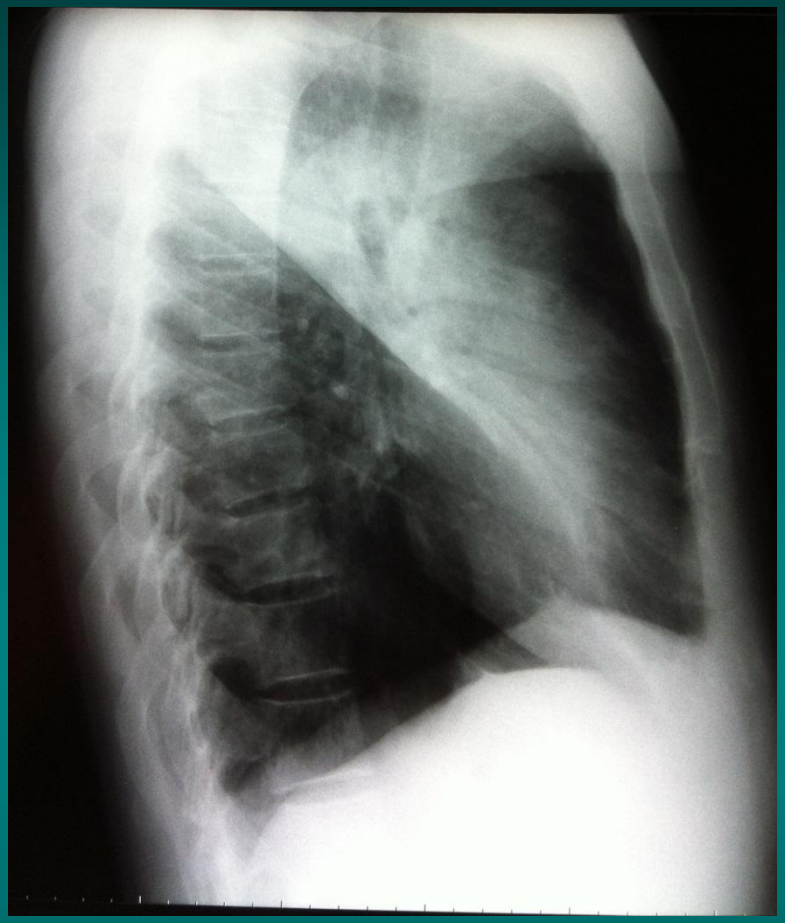
Case 6



The association of nodular and linear and reticular pictures is much more visible on CT scan

Case N°7

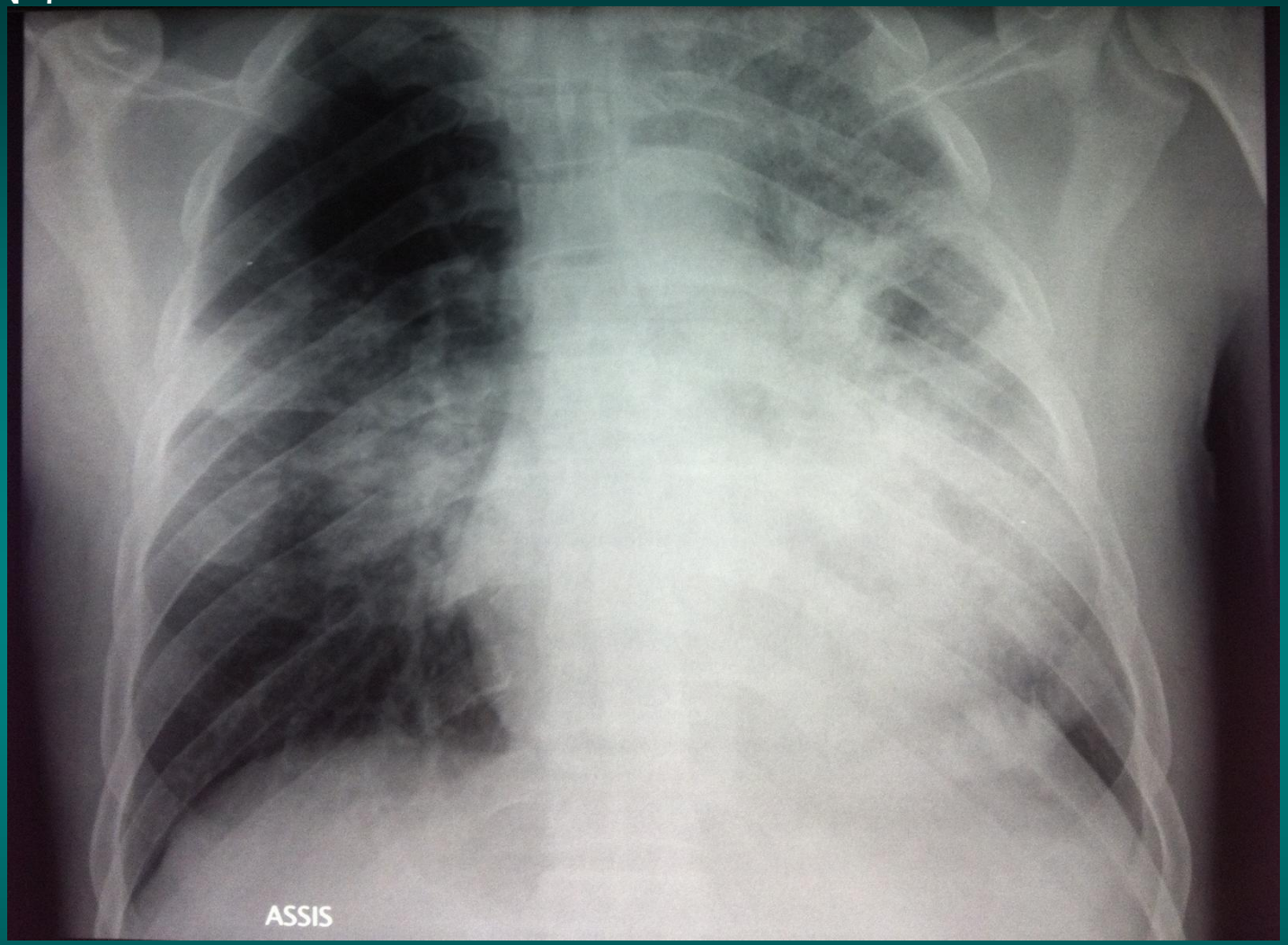




Fever, dyspnea and headaches for 5 days

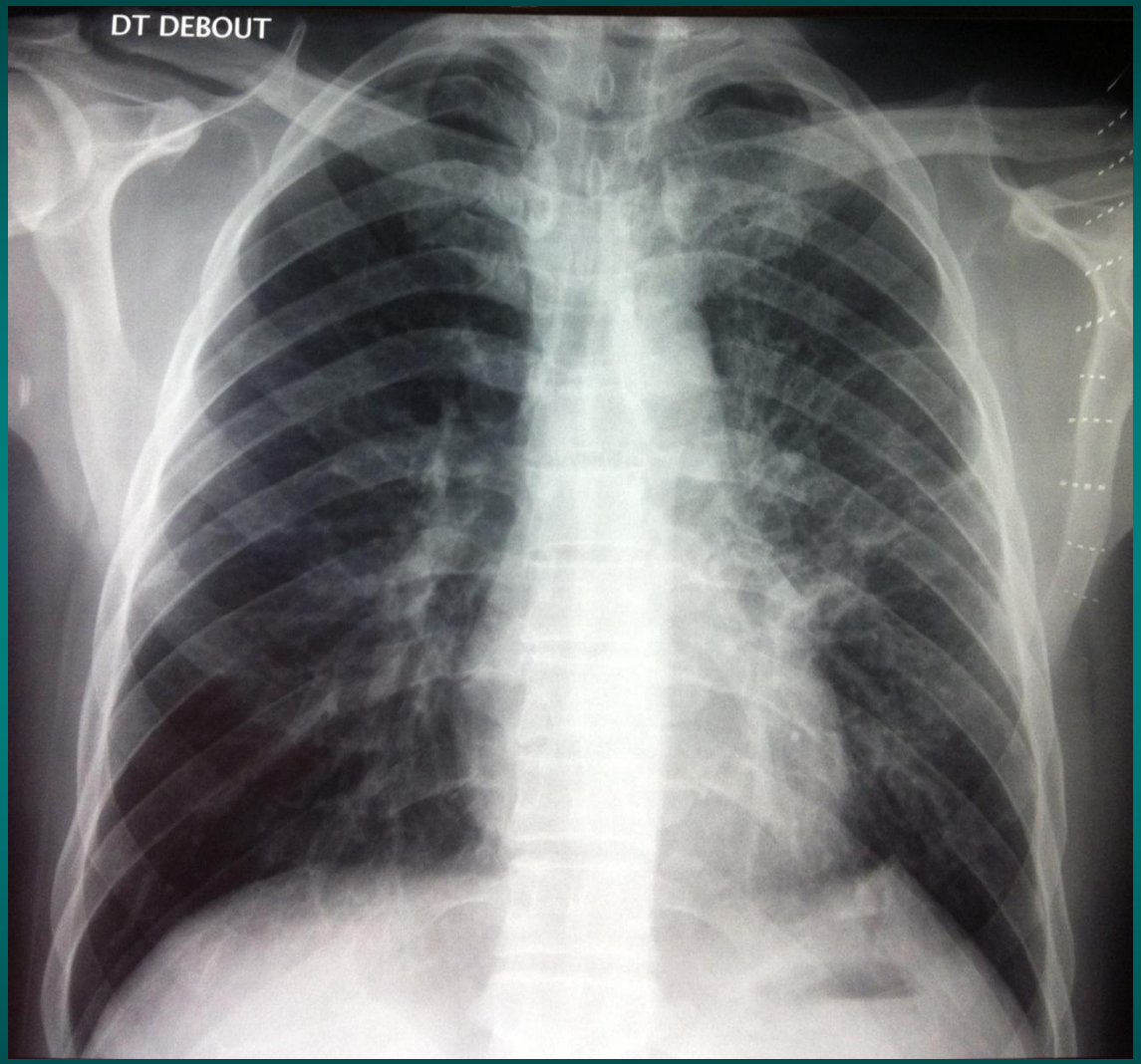
Left superior lobe pneumonia.
J1: beginning of treatment with amoxicillin.

Case N°7



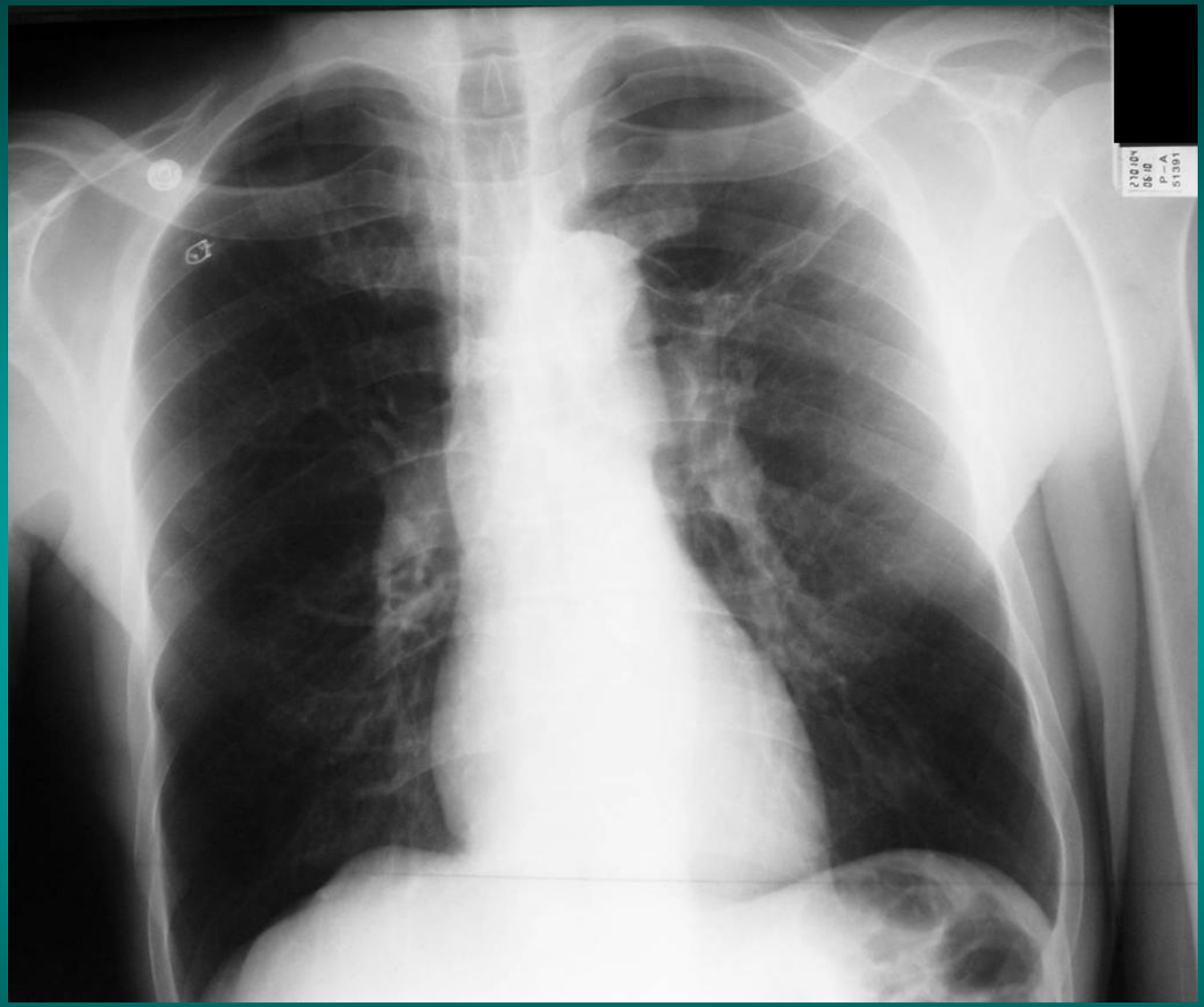
J5: no improvment , Urine analysis positive for legionnella antigen.
Modification of treatment with introduction of iv erythromicin

Case N°7



J12: signifianrt improvment with apyrexy
and no more dyspnea. Residual asthenia

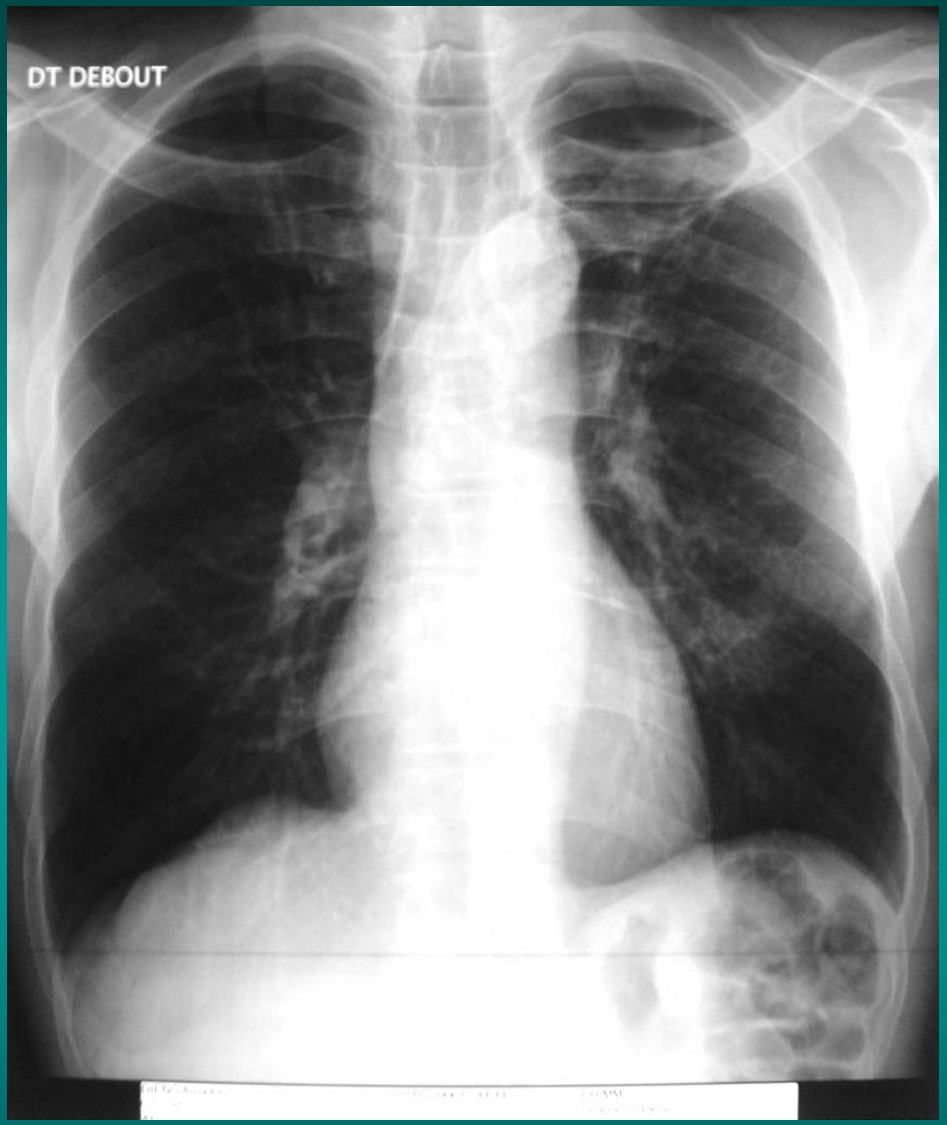
Case N°8



Man, 59 years old, hemoptisy with AFB negative in sputum. Good health condition.

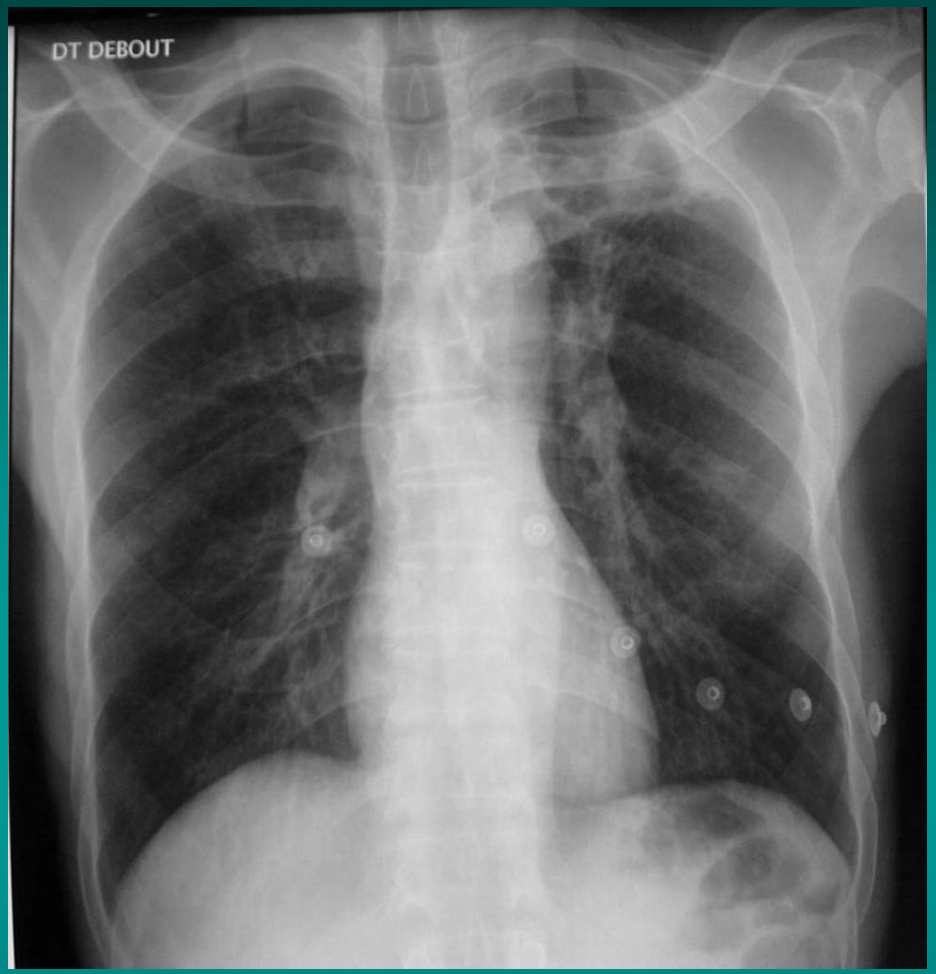
Past history of pulmonary tuberculosis, with a nine monthes treatment 4 years ago..

Case N°8



Same patient 2 years later (2006): possible « nodule » in the late retroclavicular area (always compar right and left for analysis of the retroclavicular area.). New isolated hemoptisy. Smear negative

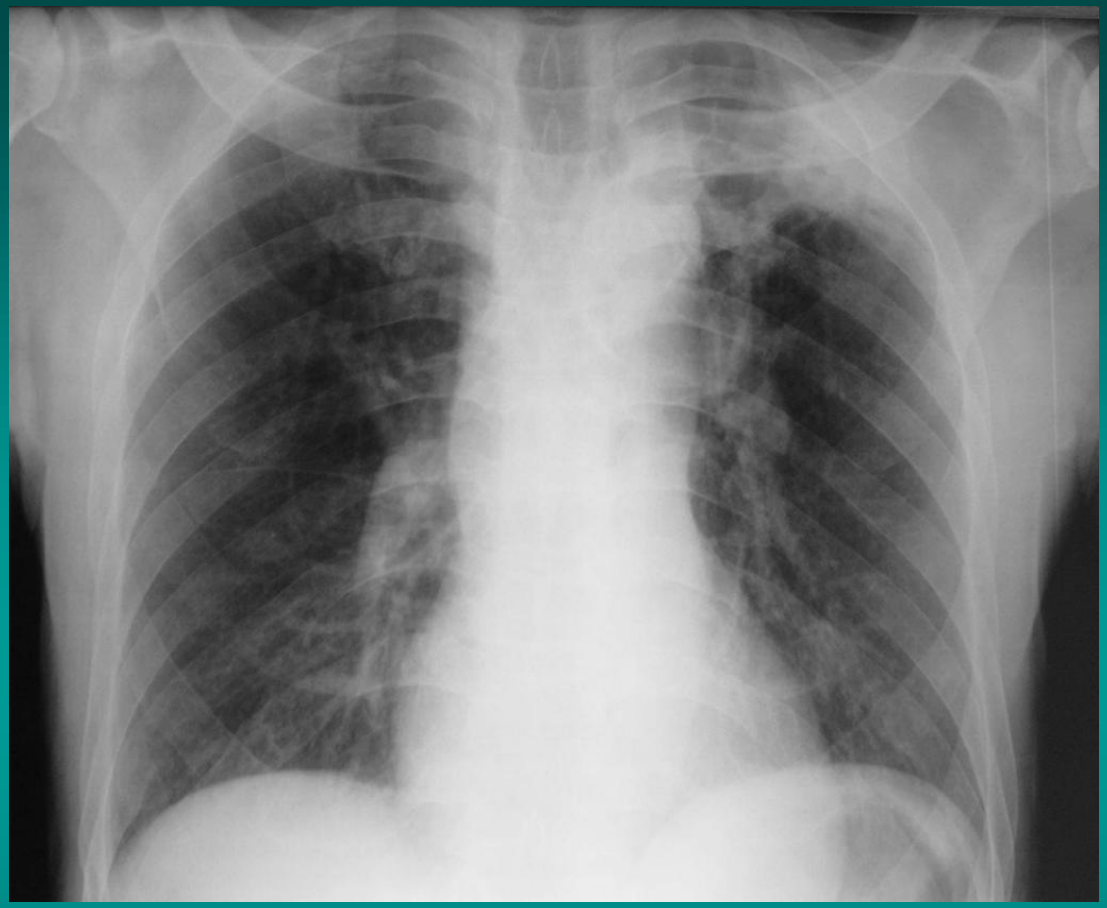
Case N°8



Same patient, November 2007. Hemoptisy with spontaneous improvment. Smear negative. Always good health condition. Notice that the retroclavicular picture seems bigger than 2006

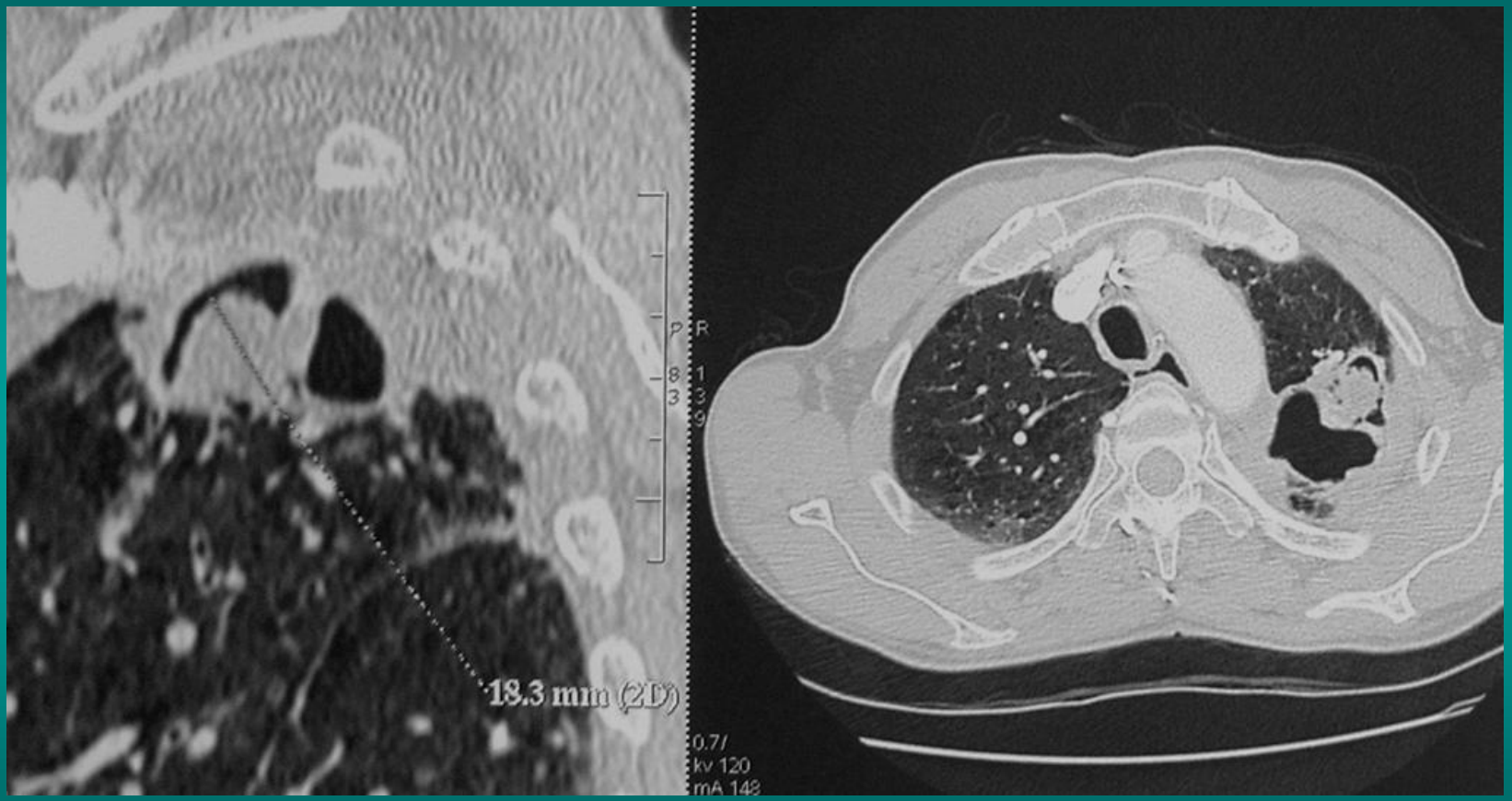
WHAT IS YOUR DIAGNOSIS?

Case N°8



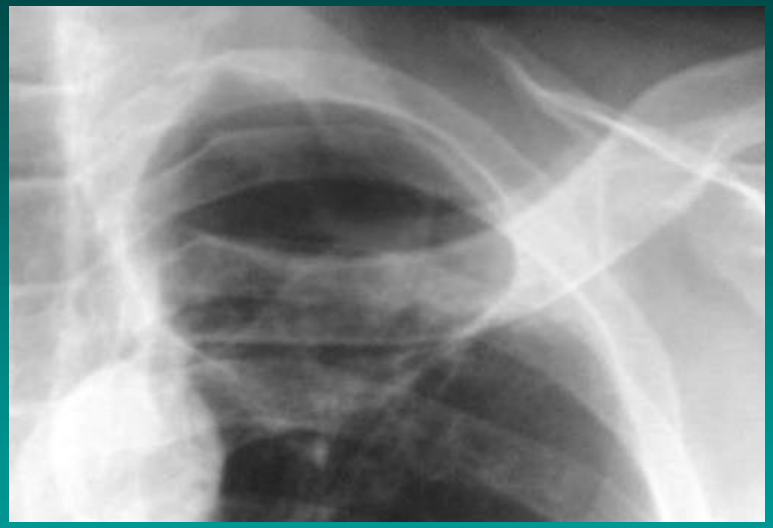
Same patient, june 2009: very severe hemoptisy, life threatening situation. Improvment with IV glypressine treatment before emergency thoracic surgery surgery (left superior lobectomy.)
Notice on the chest X ray before surgery the enlargment of the retroclavicular opacity, inside the TB sequella cavity. Clinical and radiological evolution is highly suggesting of **aspergilloma.**

Case N°8

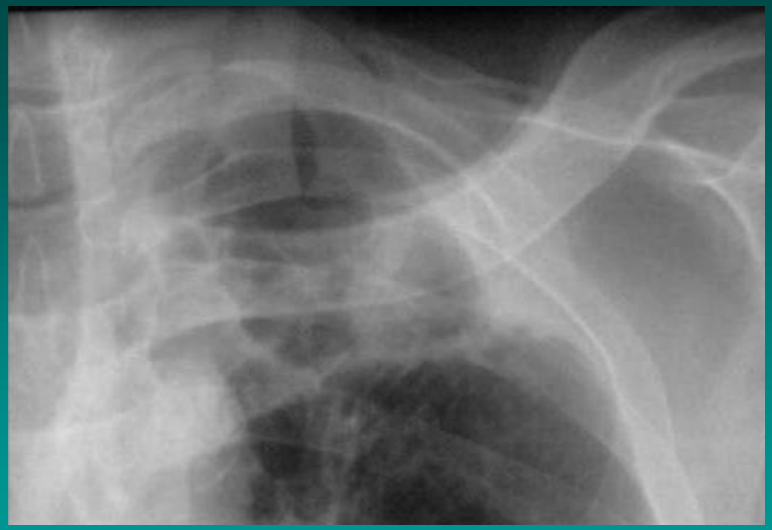


Same patient:Typical aspect of aspergilloma on scannographic view

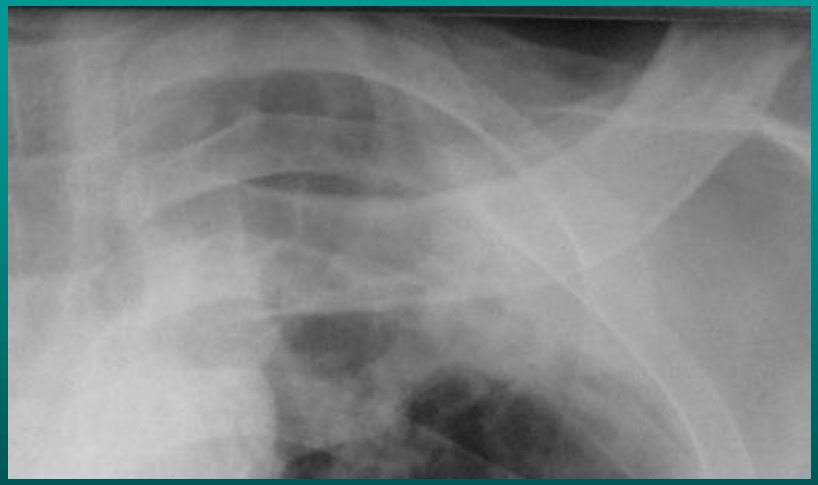
Case N°8



2006

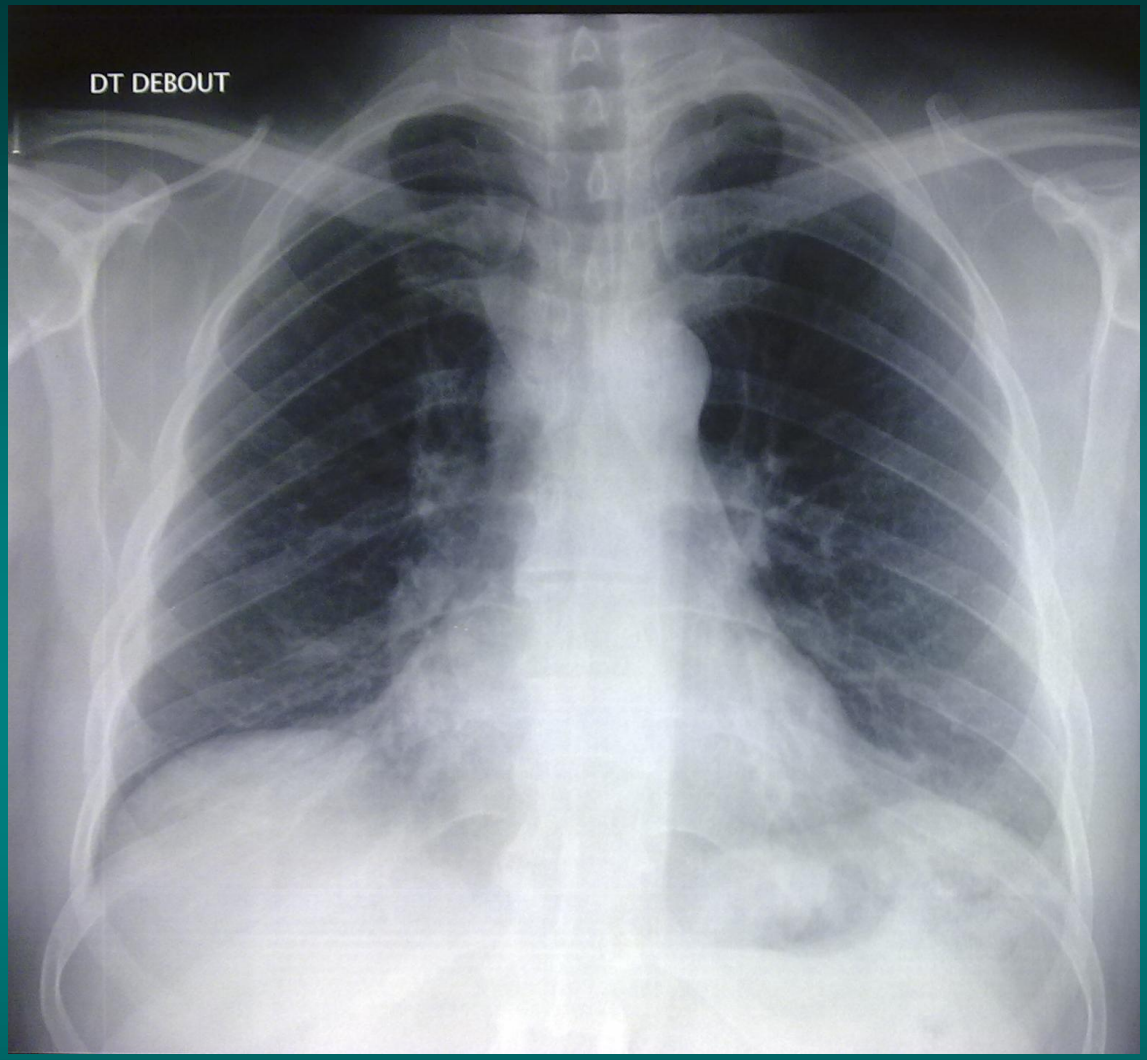


2007



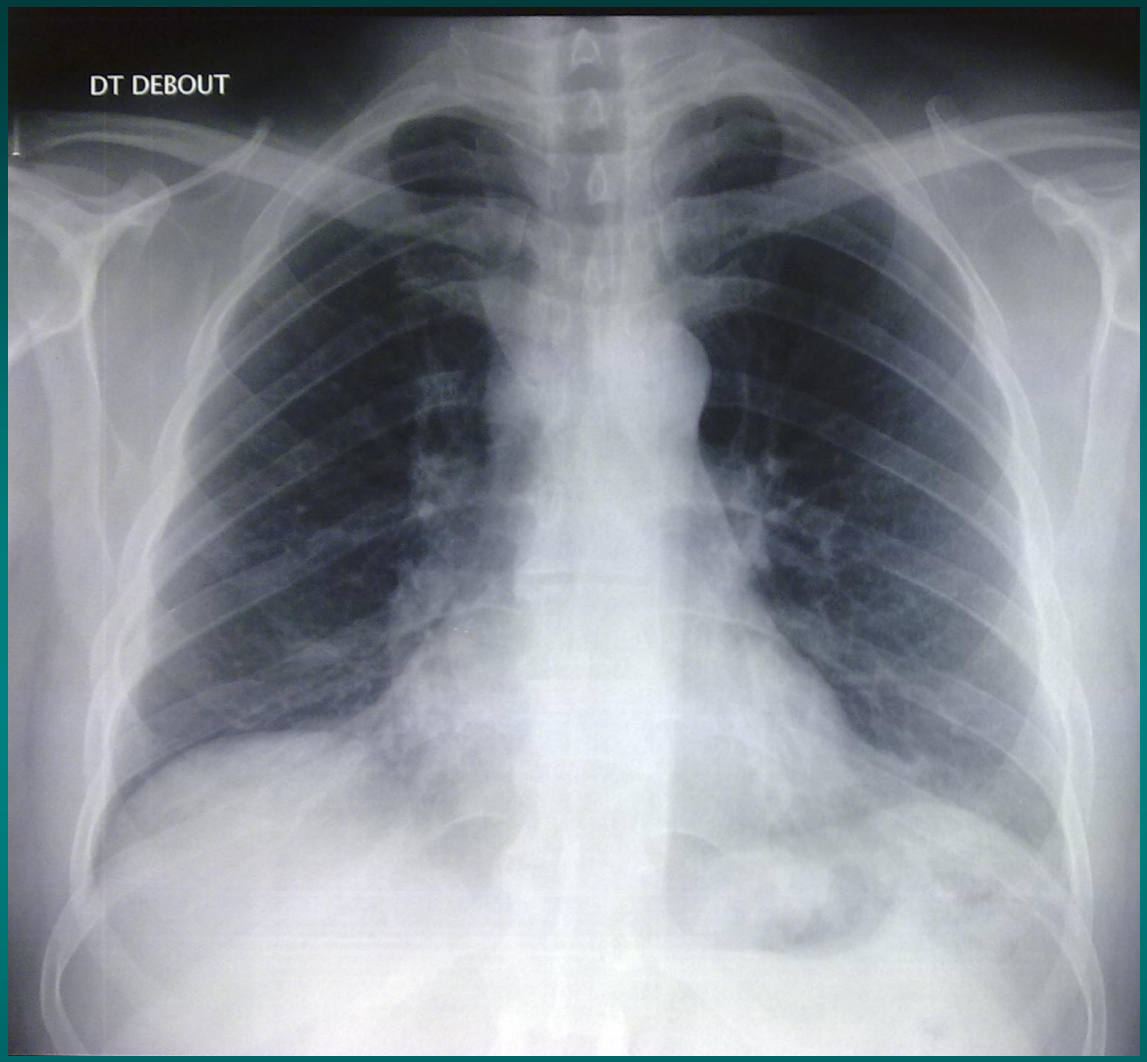
2009

Case N° 9



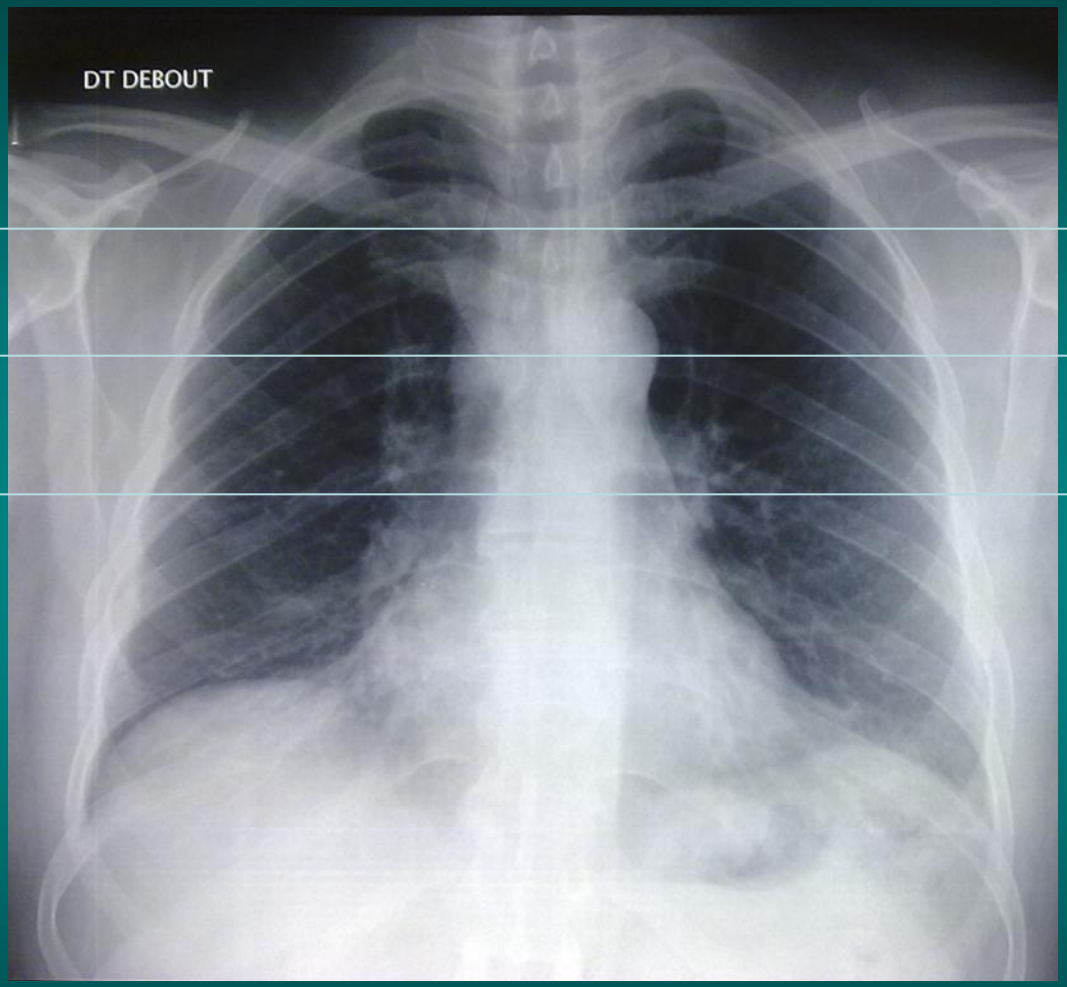
Men , 45 years old. Asthenia et weight loss. Nocturnal sweat and chronic cough. Smear negative

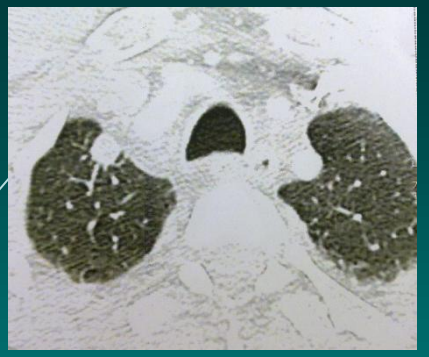
Case N° 9

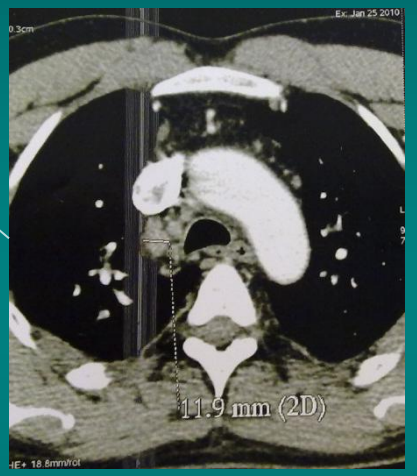


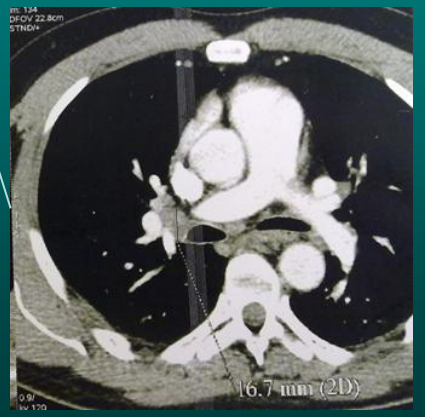
CXR: middle lobe opacity with retraction on the right side and enlargment of the mediastinum and right hilus: probable adenopathies. In this clinical context TB must be suspected.

Case N° 9



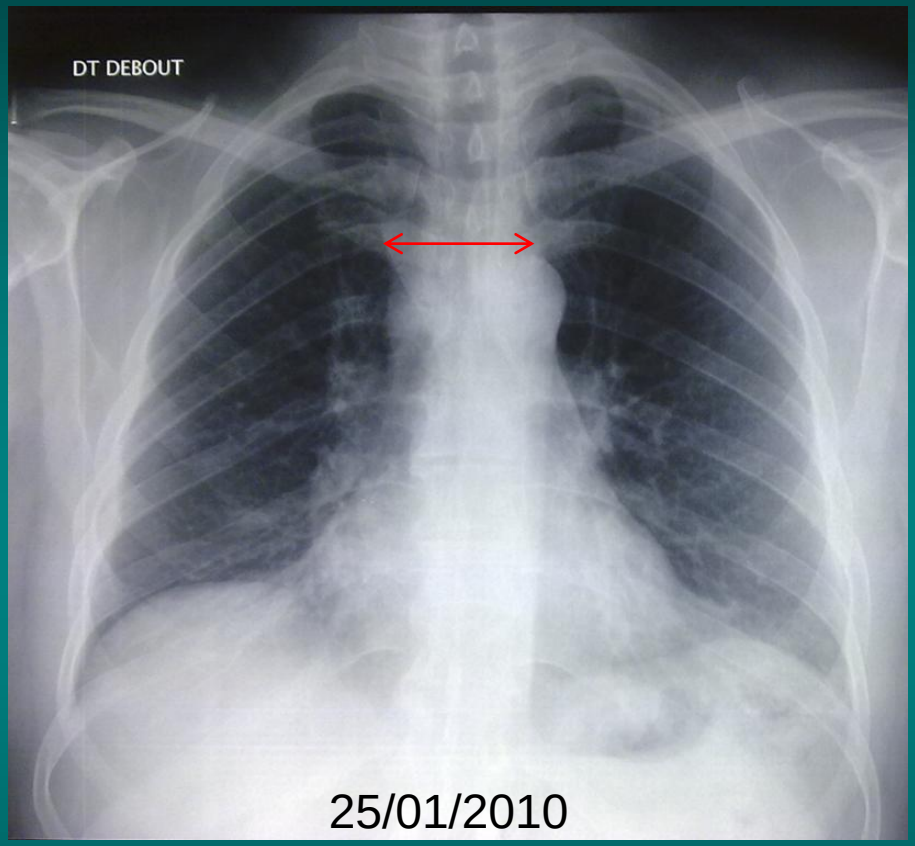




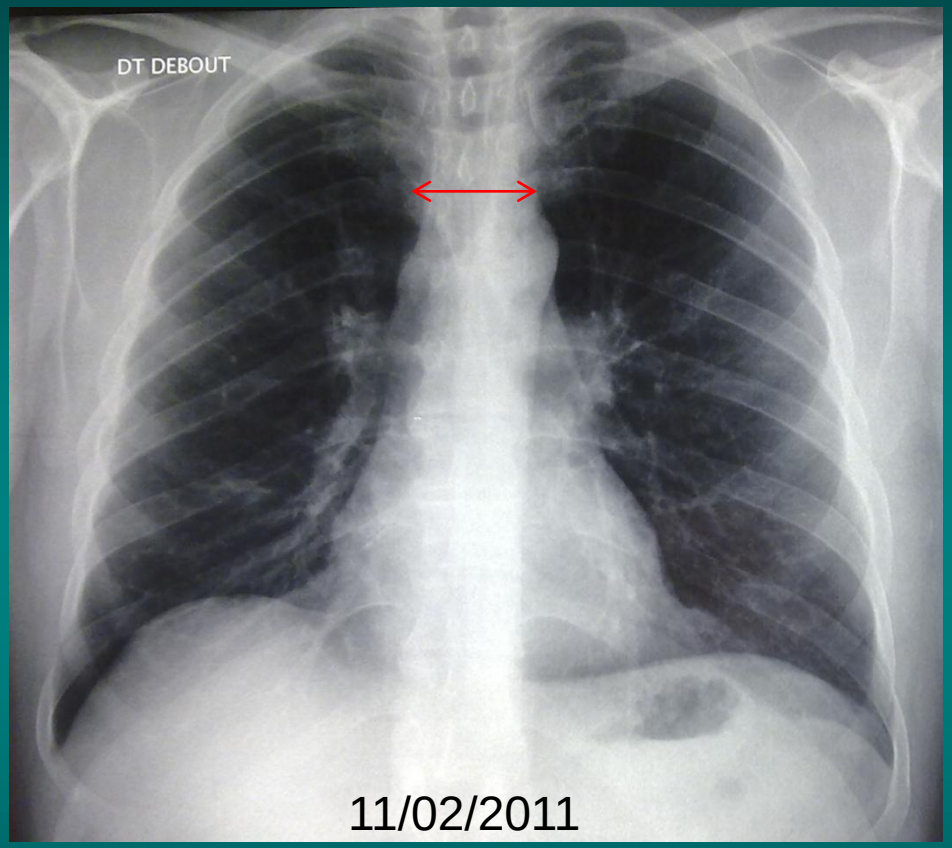


Mediastinoscopy: positive for TB lesion. If no mediastinoscopy possible TB treatment must be nethertheless instaured on clinical and radiological argument

Case N° 9



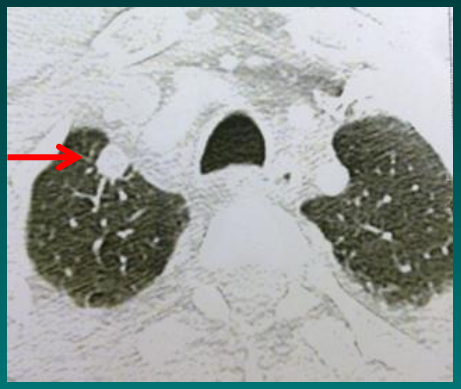
25/01/2010

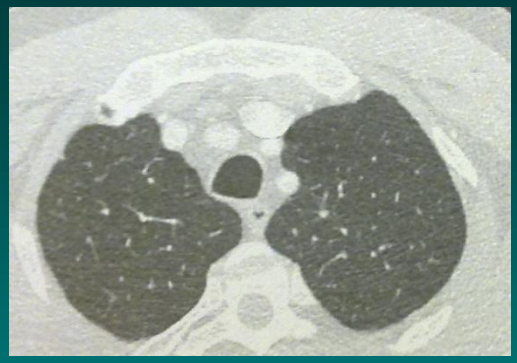


11/02/2011

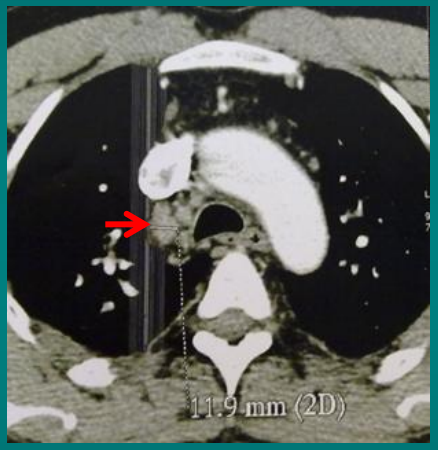
Same patient after Tb treatment (right side): regression of mediastinum enlargment and middle lobe pneumonia

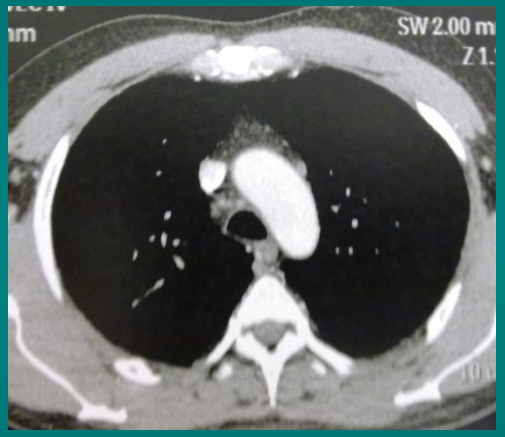
Case N° 9

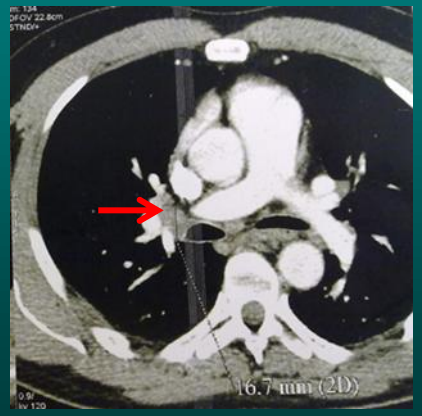


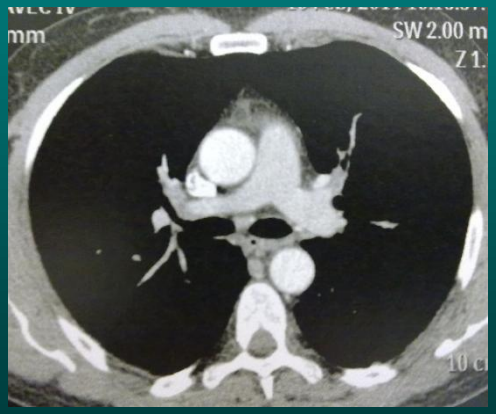


Before and after treatment .
Notice the decrease of volume of the lymphe nodes

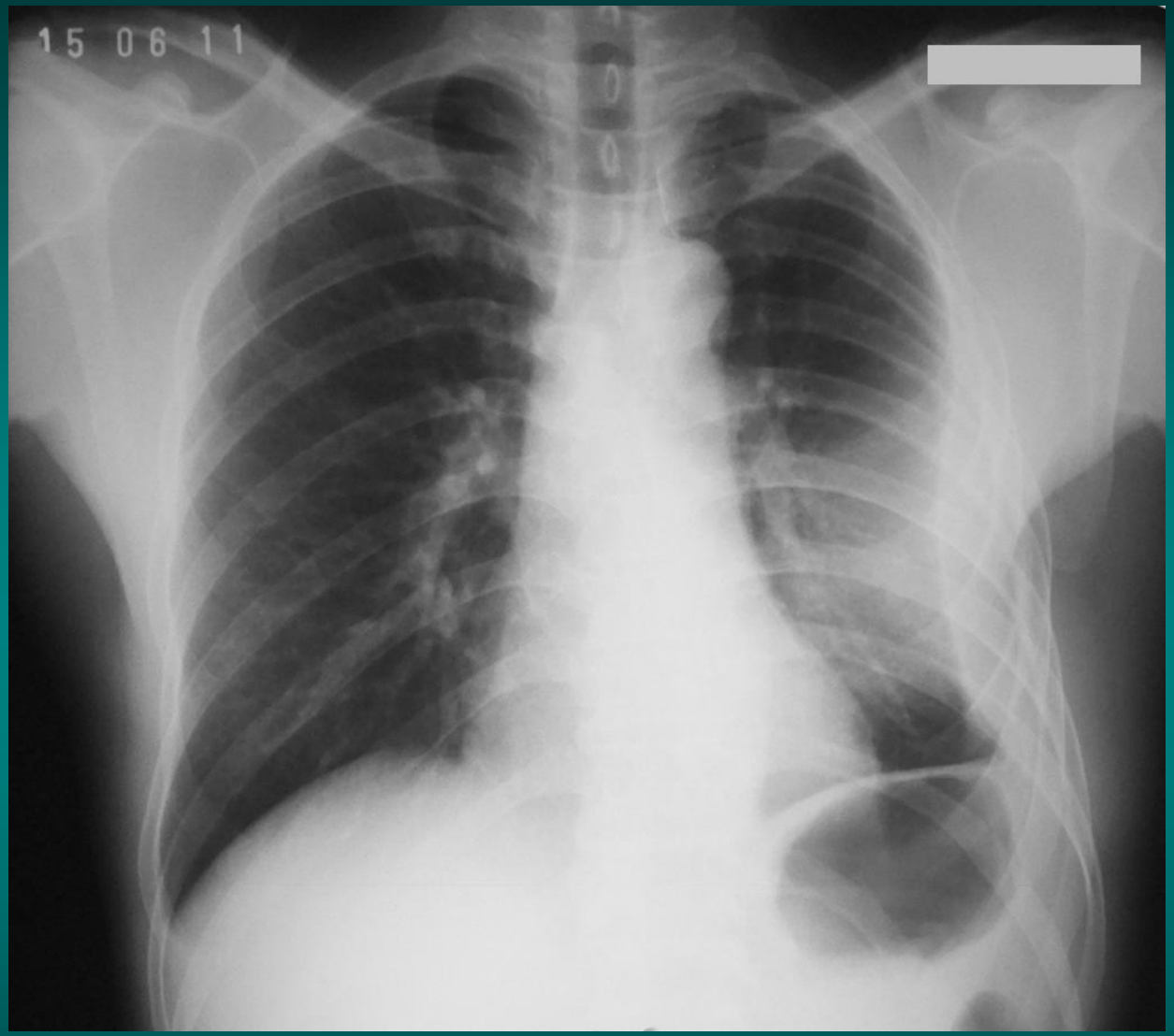






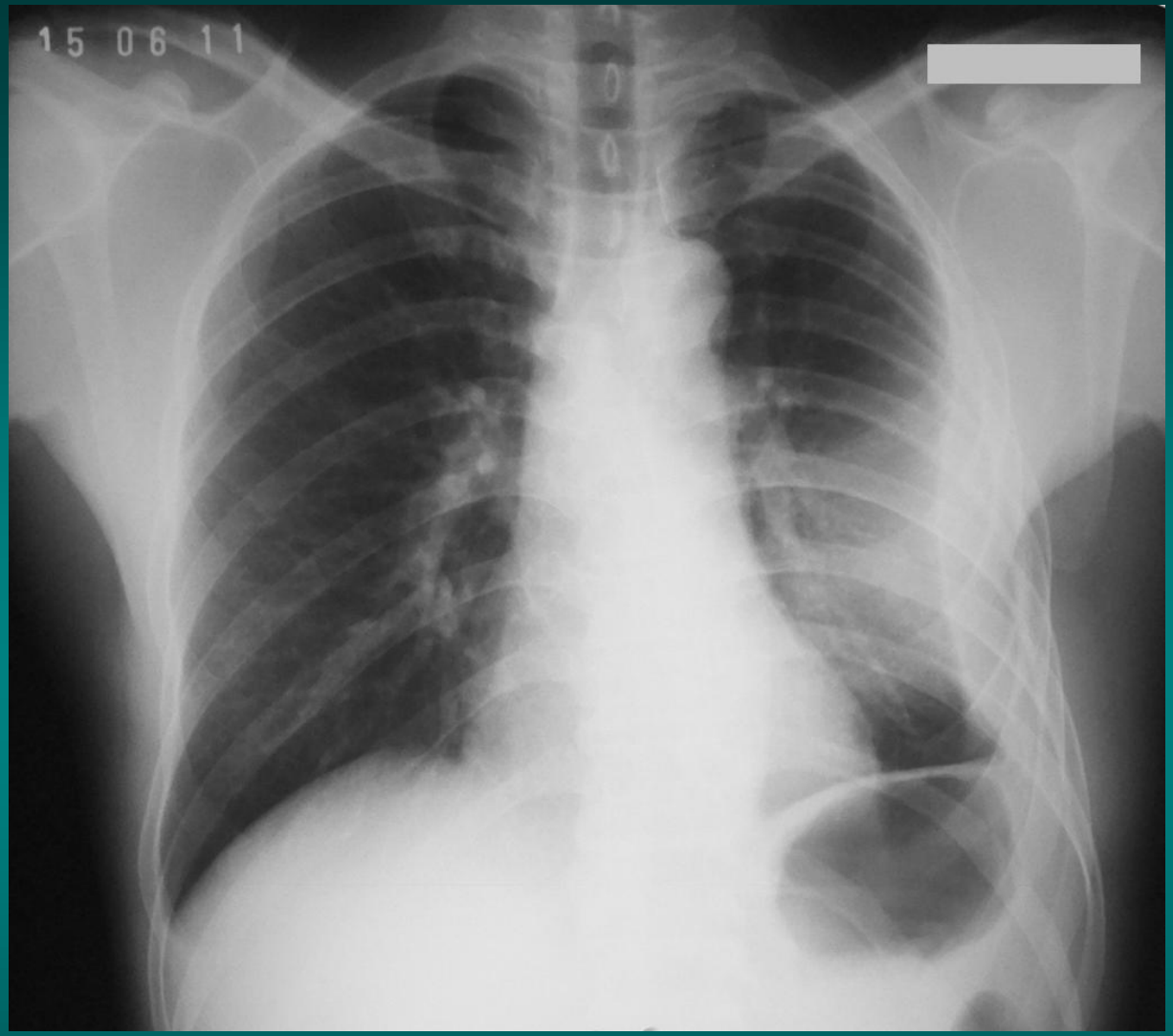


Case N° 10



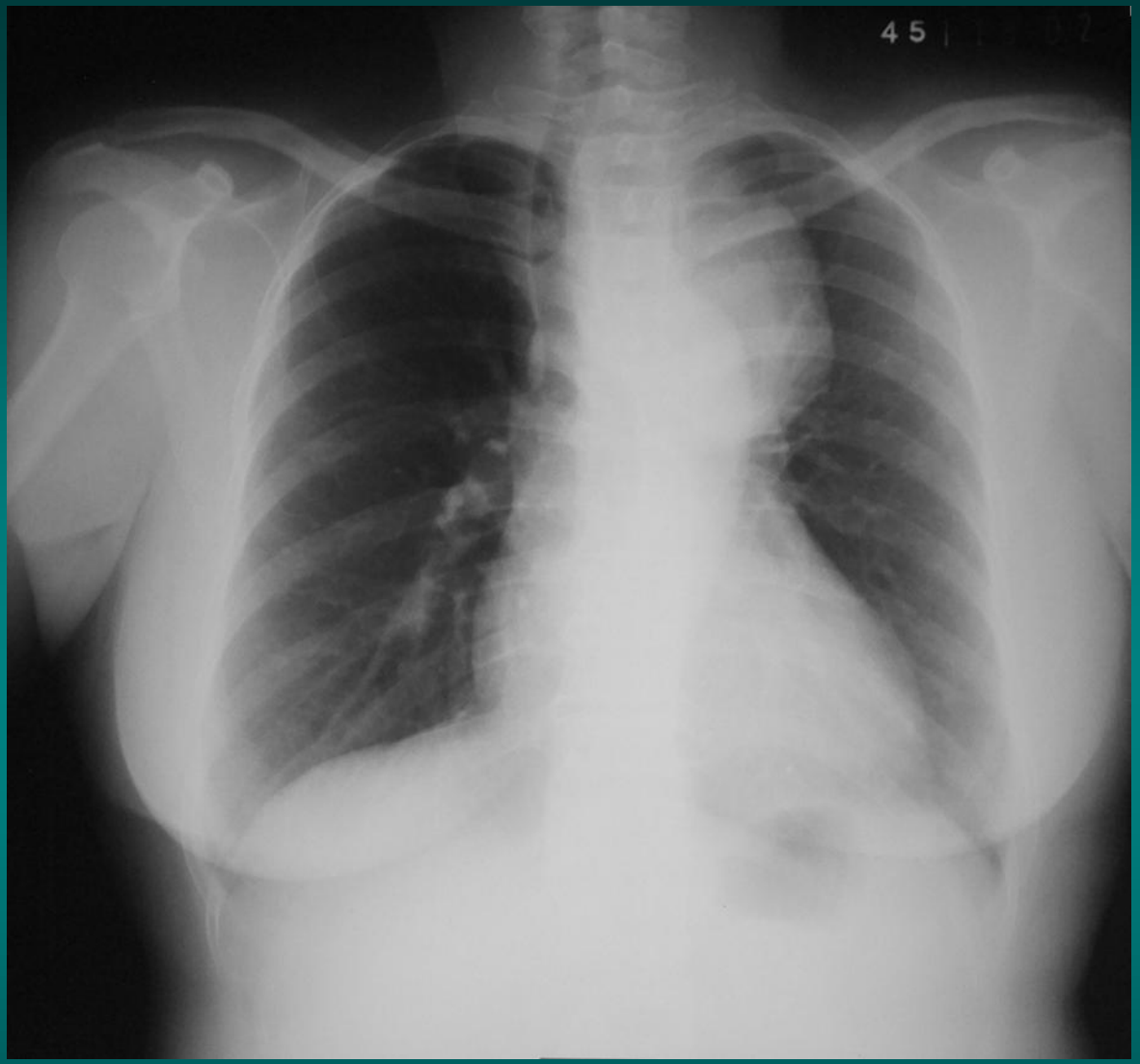
Cough an thoracic paint for few weeks . Smear negative

Case N° 10



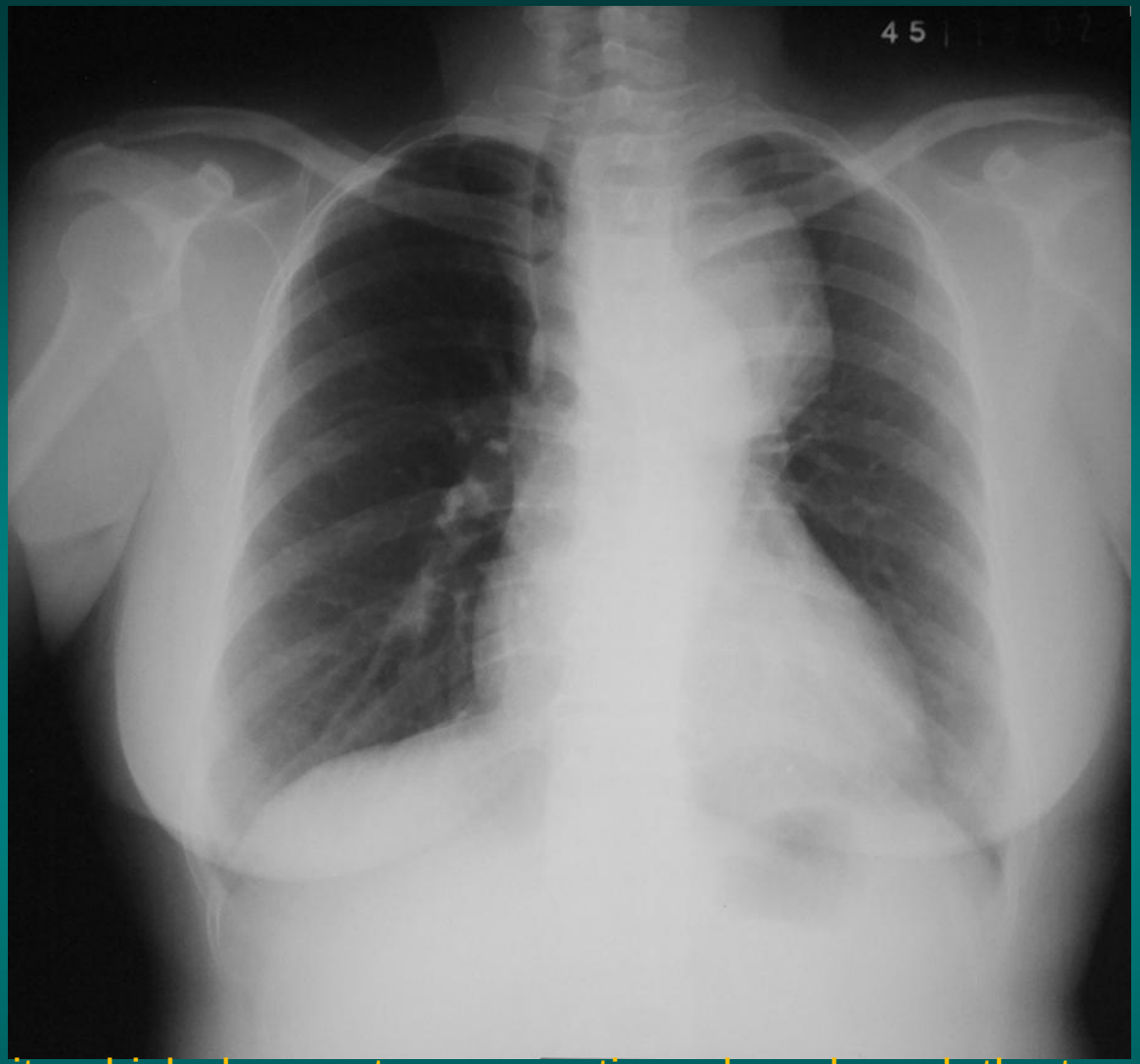
Pleural encysted effusion. Possible pleural TB but others etiologies are possible (non tb infection..) Exploratory thoracentesis is necessary, if possible after ultrasound tracking

Case N° 11



Young women. Fever , weight loss and non productive cough for 2 monthes.

Case N° 11

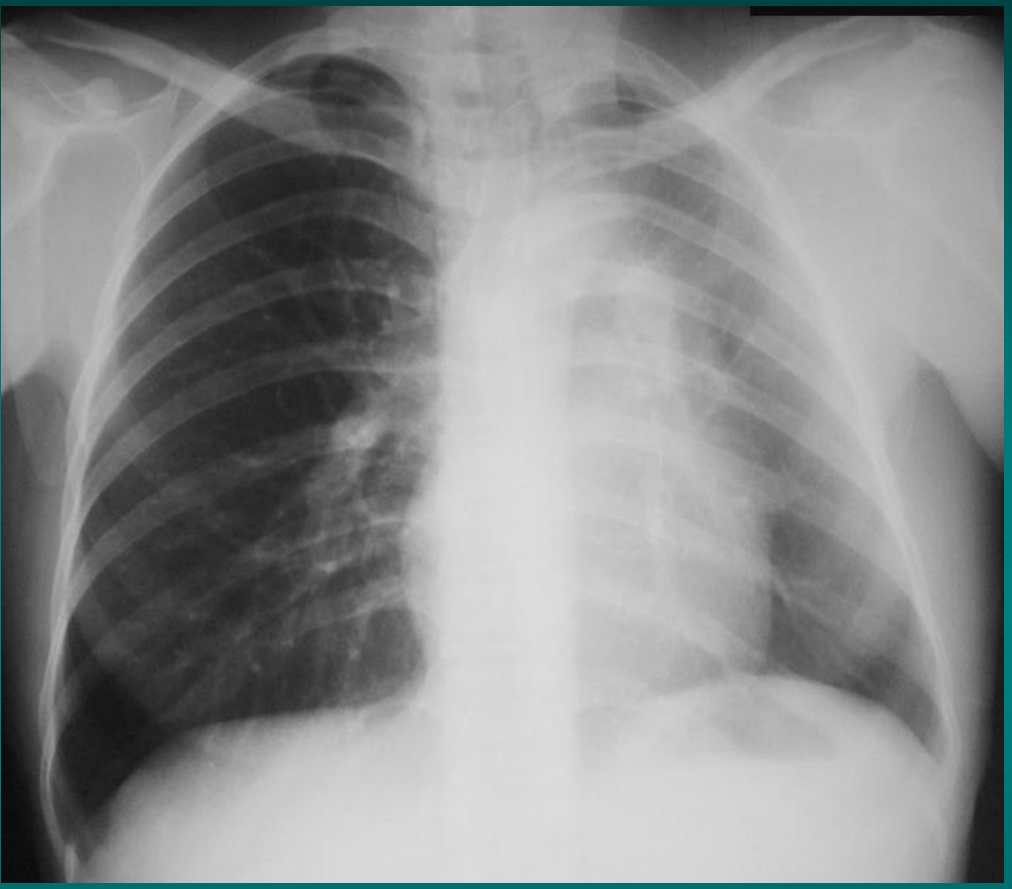


Well limited opacity which does not erase aortic arch,and push the trachea. Notice also that the external limit is sharp under the clavicle and blurred over: So, this opacity is in the anterior mediastinum middle tier. The most probable diagnosis is thymoma or more probably LYMPHOMA.

Tb adenopathies are less probable

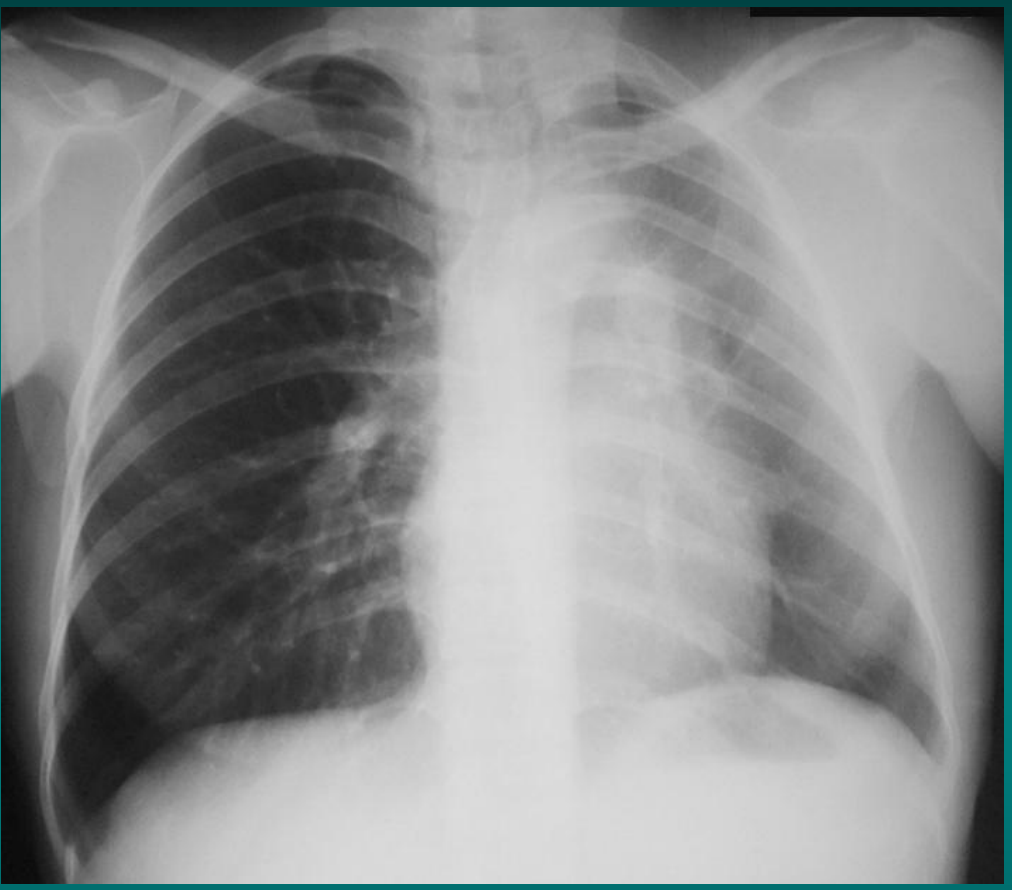
CXR library for TB Diagnosis.- Cambodian National TB control program

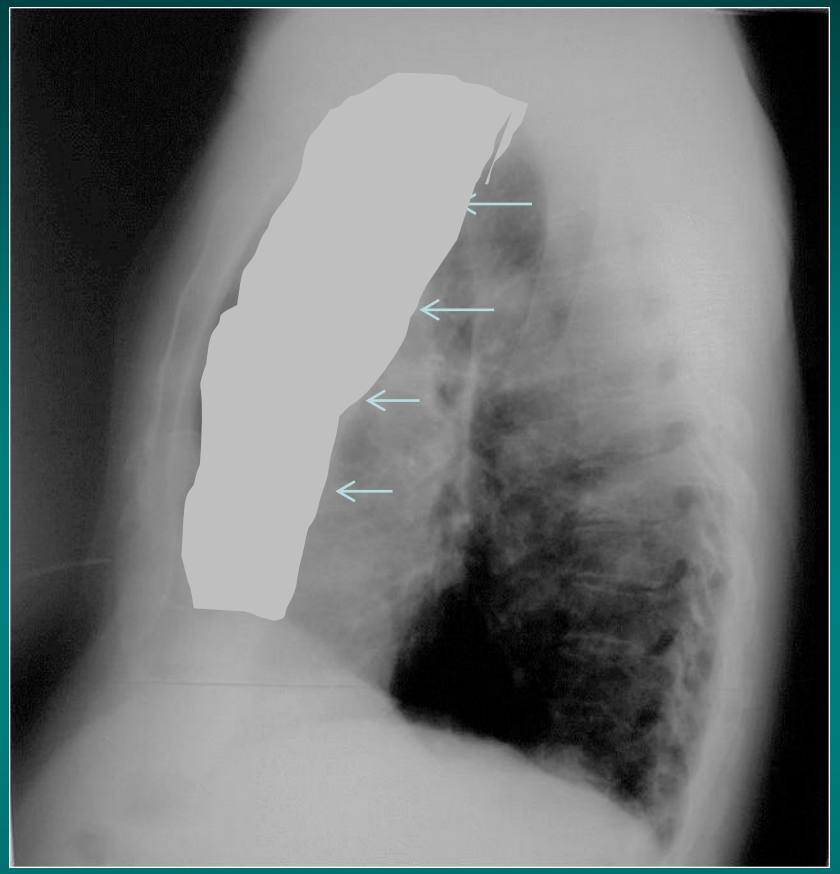
Case N° 12



Man, 6 years old ,heavy smoker. Left thoracic paint , cough, asthenia and weight loss. Smear negative

Case N° 12

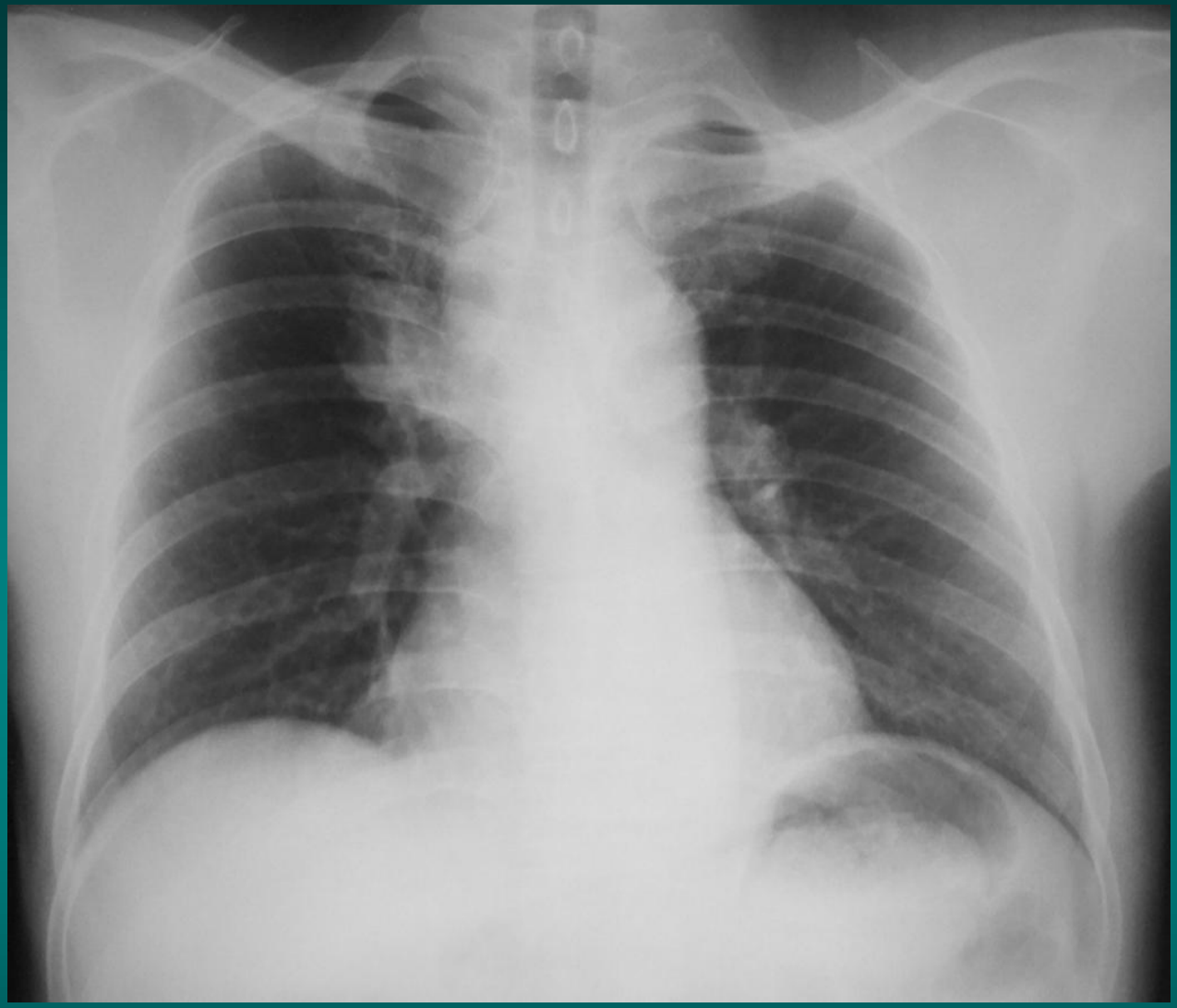




Notice the retraction and blur of the superior part of the left lung. On the profil view you see the retracted systematised opacity: lest superior lung atelectasis.
In this clinical context you must suspect a bronchial cancer and, if possible propose a bronchoscopy for diagnosis confirmation

Chapter 12

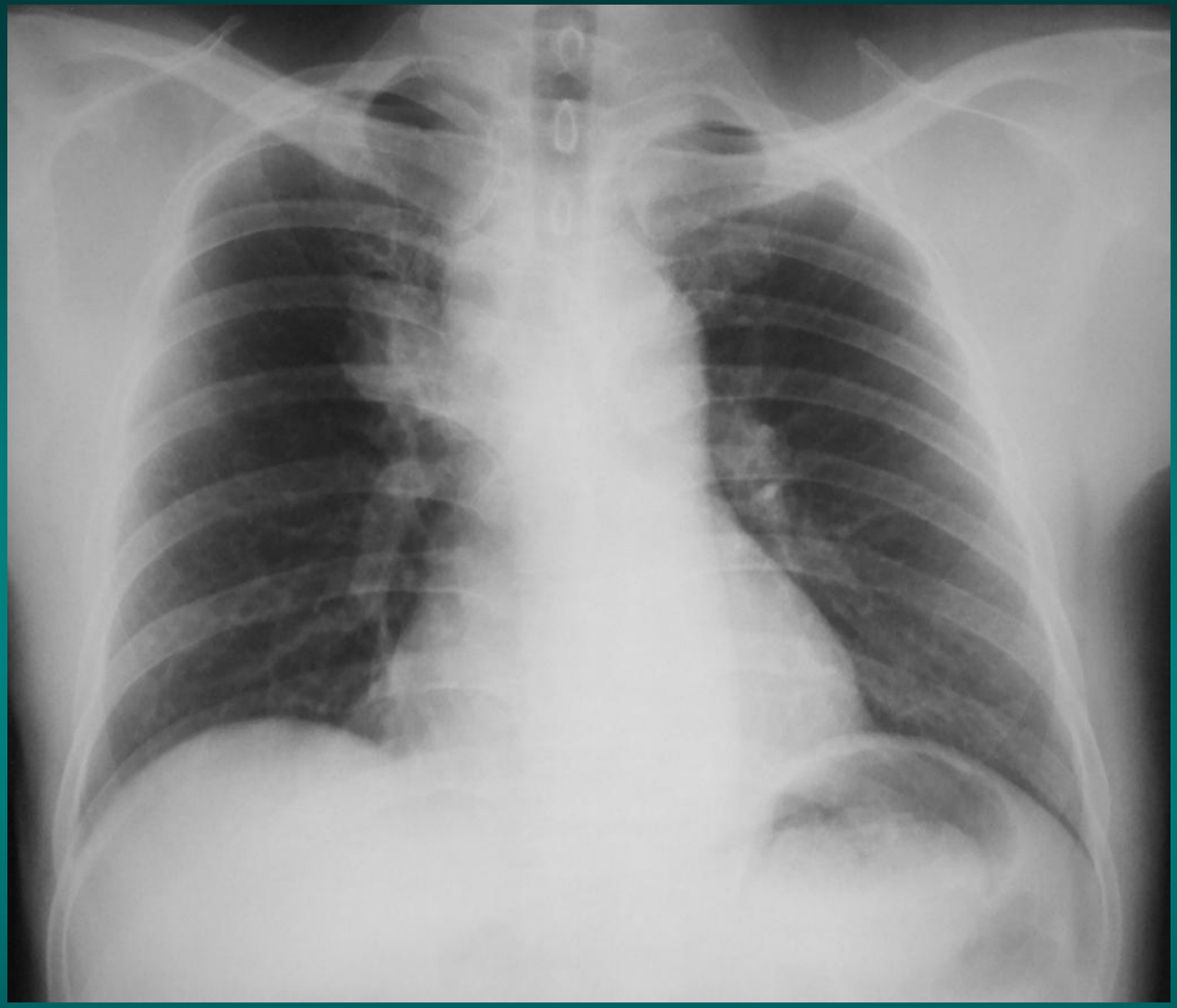
Case N° 1



Man, fever and cough . Mild hemoptisy. Smear negative an culture negative

CXR library for TB Diagnosis.- Cambodian National TB control programMan , f

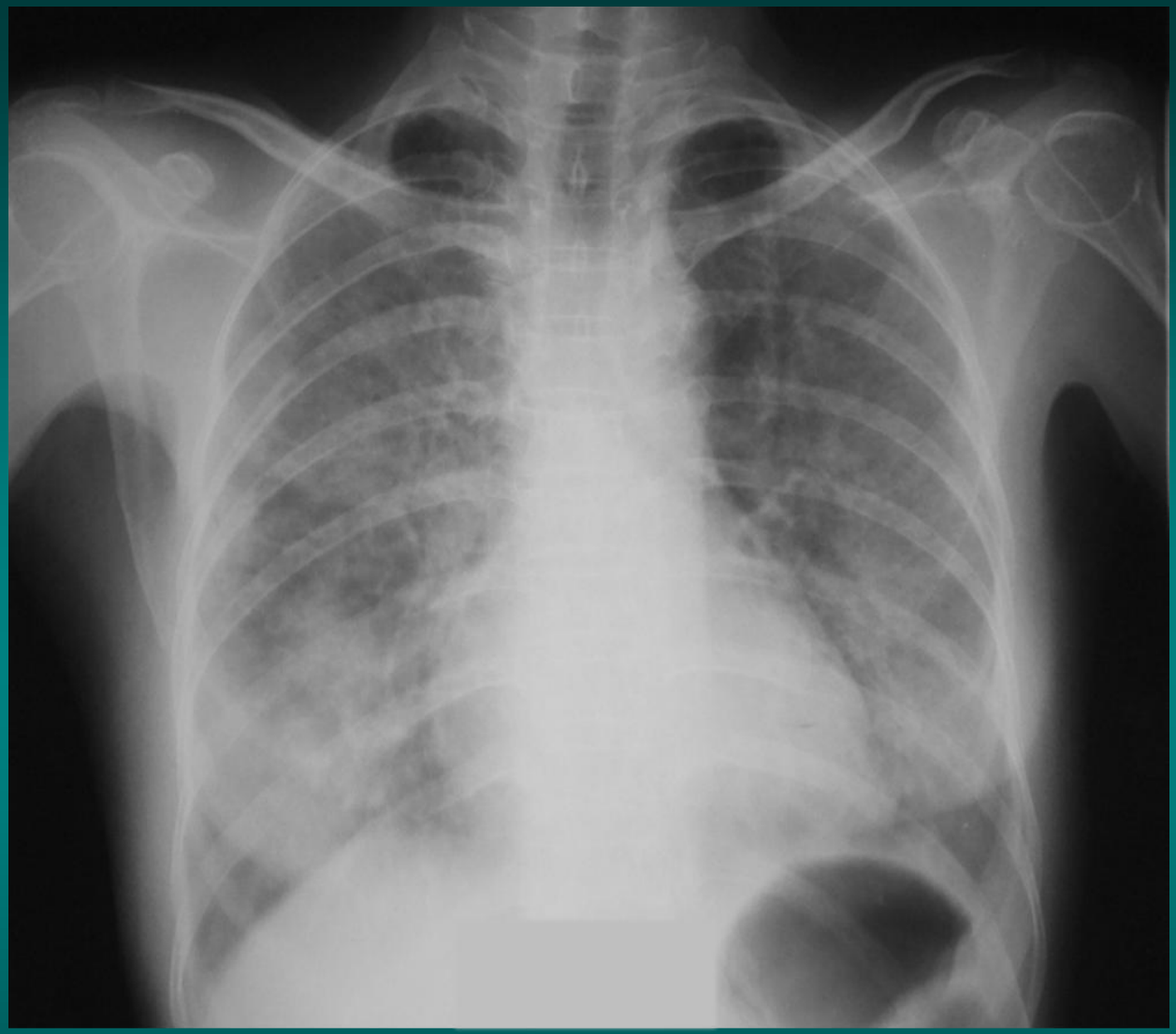
Case N° 1



Right latero tracheal adenopathy with probable hilar mass. TB is possible. But **bronchial cancer** with mediastinum associated adenopathies is more probable. Bronchoscopy and, if possible, TDM is required for diagnosis confirmation.

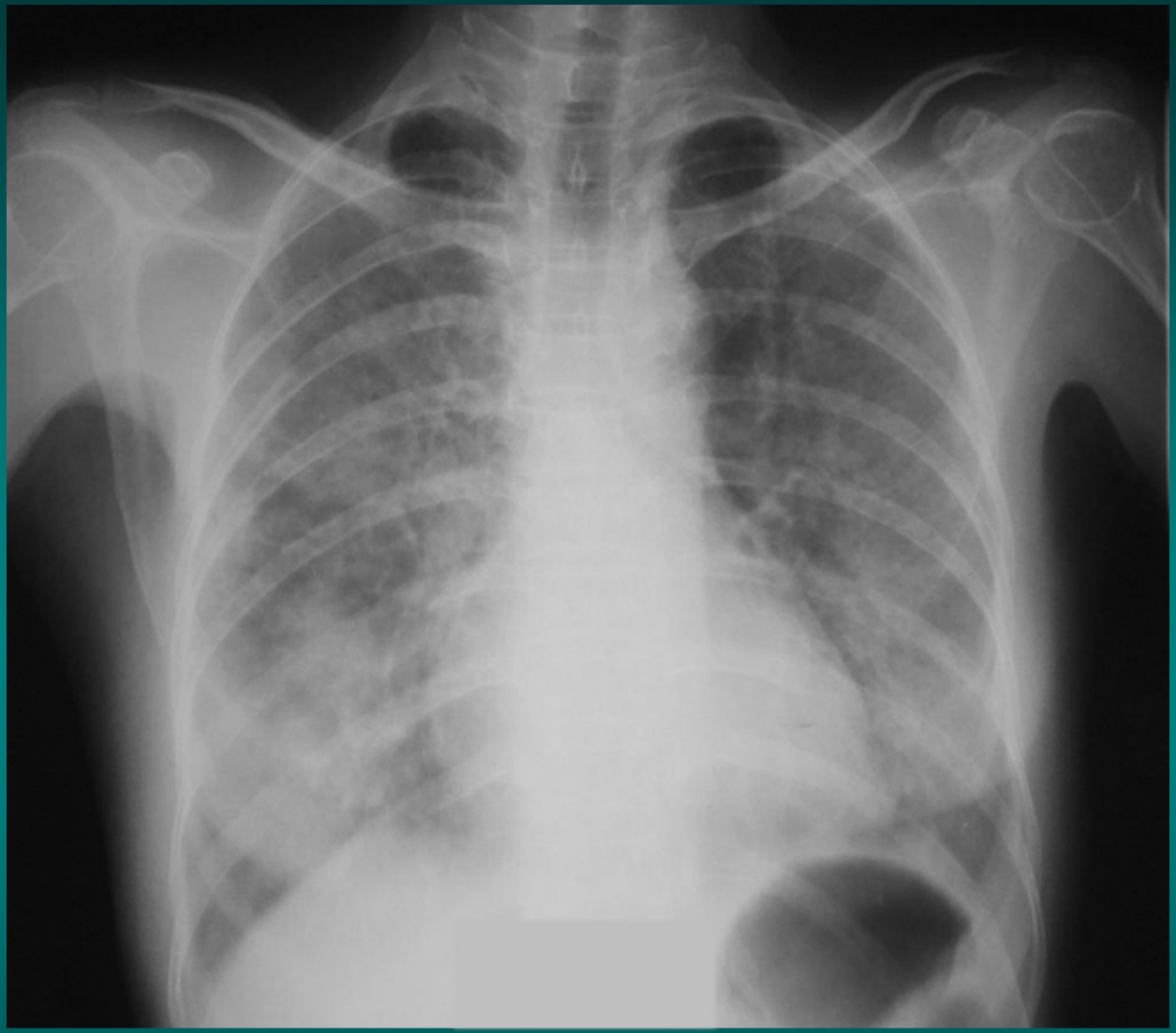
CXR library for TB Diagnosis.- Cambodian National TB control programMan ,

Case N° 2



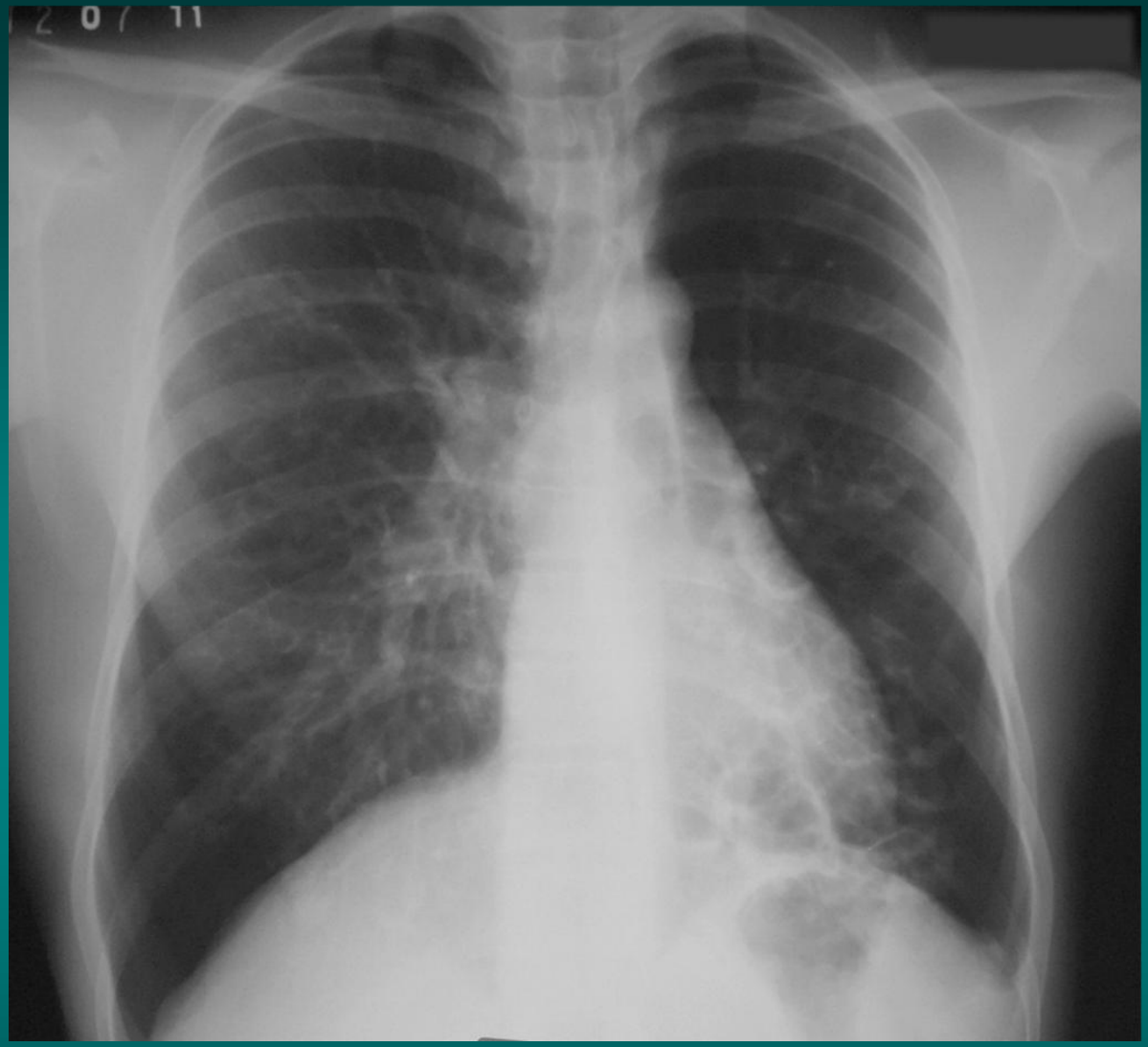
Woman, acute dyspnea and non productive cough, worsening condition

Case N° 2



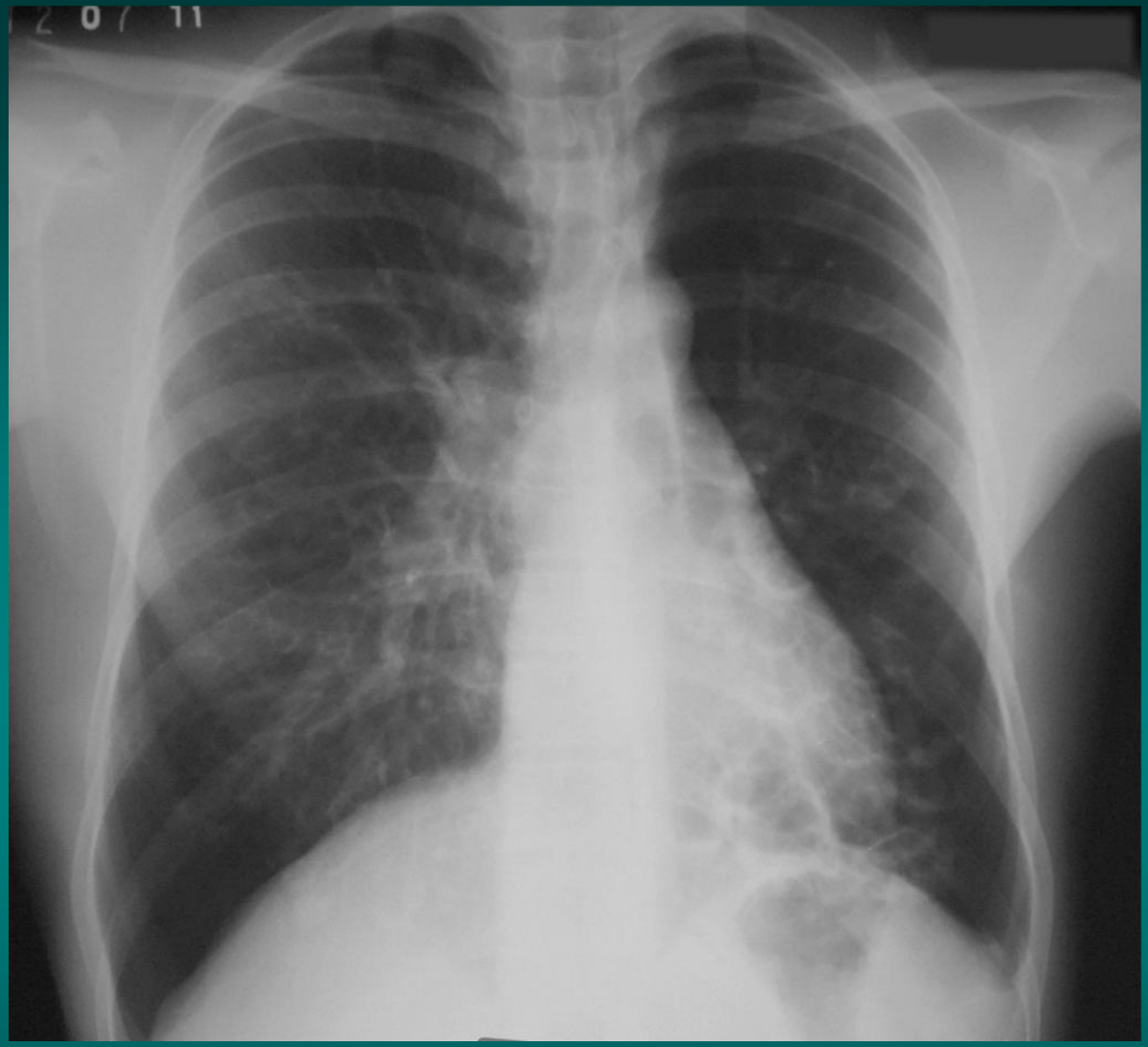
Diffuse , alveolar and interstitial pneumonia. Bacterial or viral pneumonia is possible. In case of HIV context, the most likely diagnosis is pneumocystosis

Case N° 3



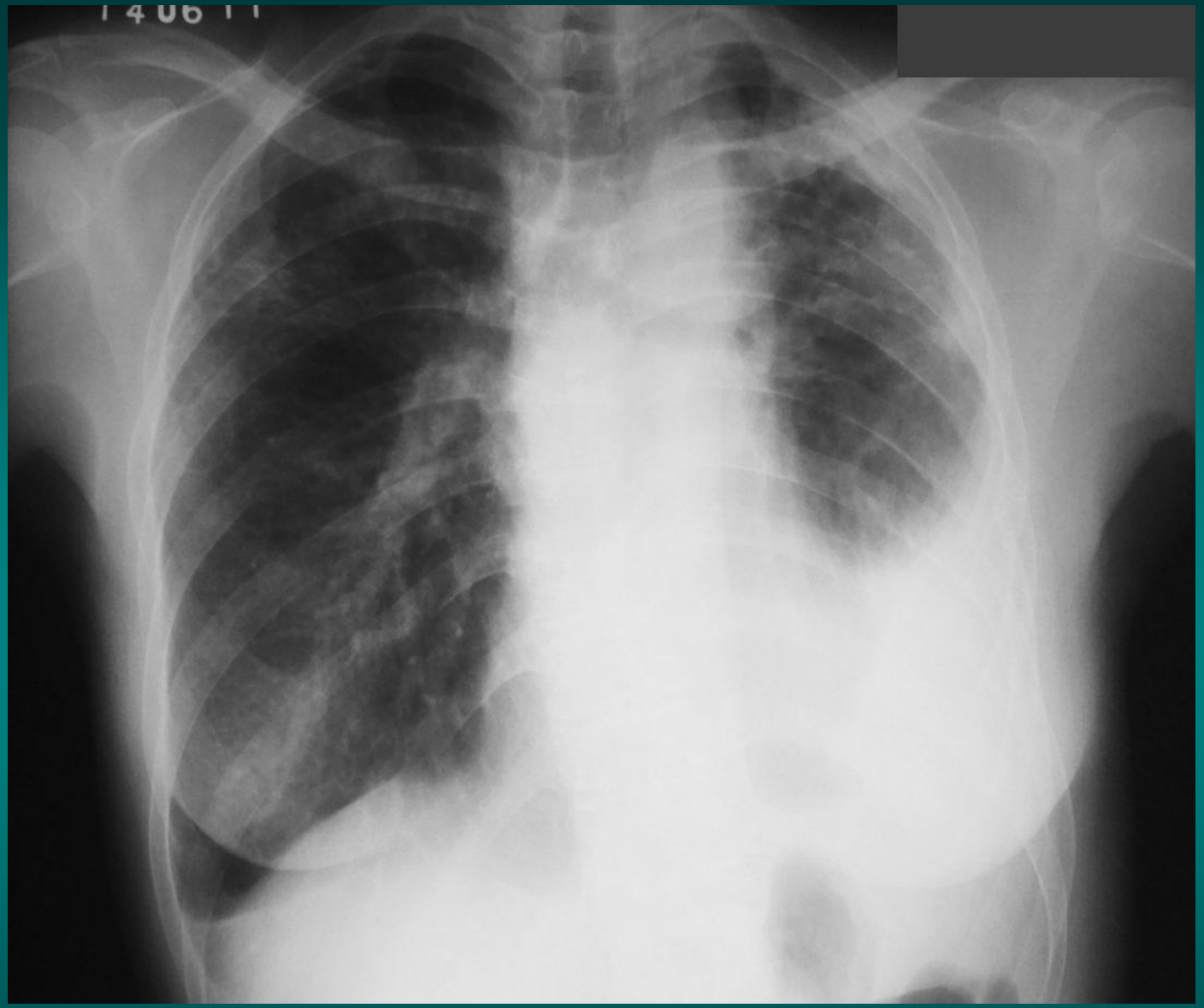
Chronic productive cough with repeted bonchial infections

Case N° 3



Multiple cavities in the retro cardiac area. Probable left inferior lobe bronchiectasis

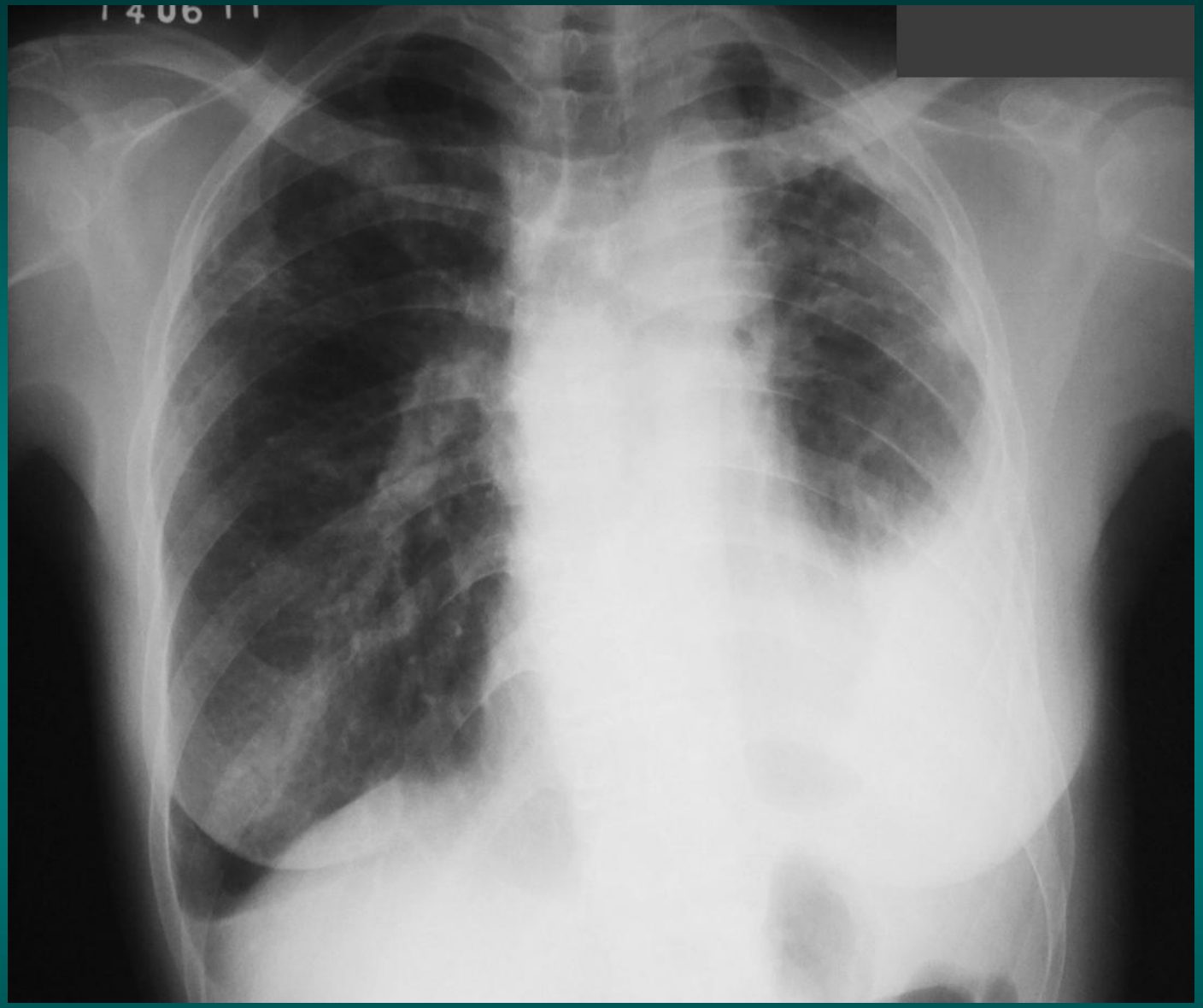
Case N° 4



Cough and left thoracic paint. Smear negative.
TB treatment or not?

.- Cambodian National TB control program

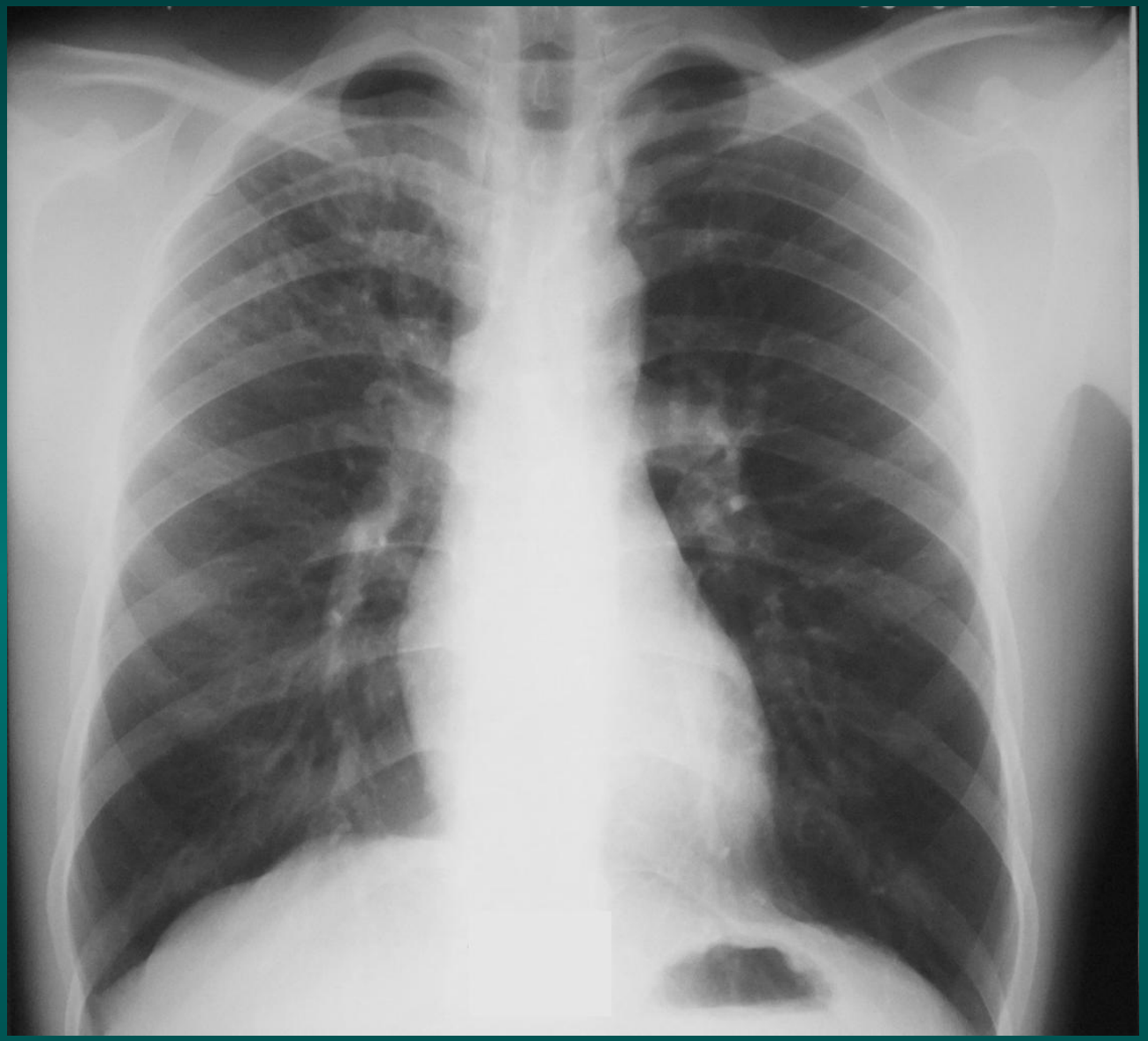
Case N° 4



Left pleural effusion with right axillar and bilateral retro clavicular infiltrates. Mediastinum enlargment (probable adenopathies) Culture positive : Tuberculosis

.- Cambodian National TB control program

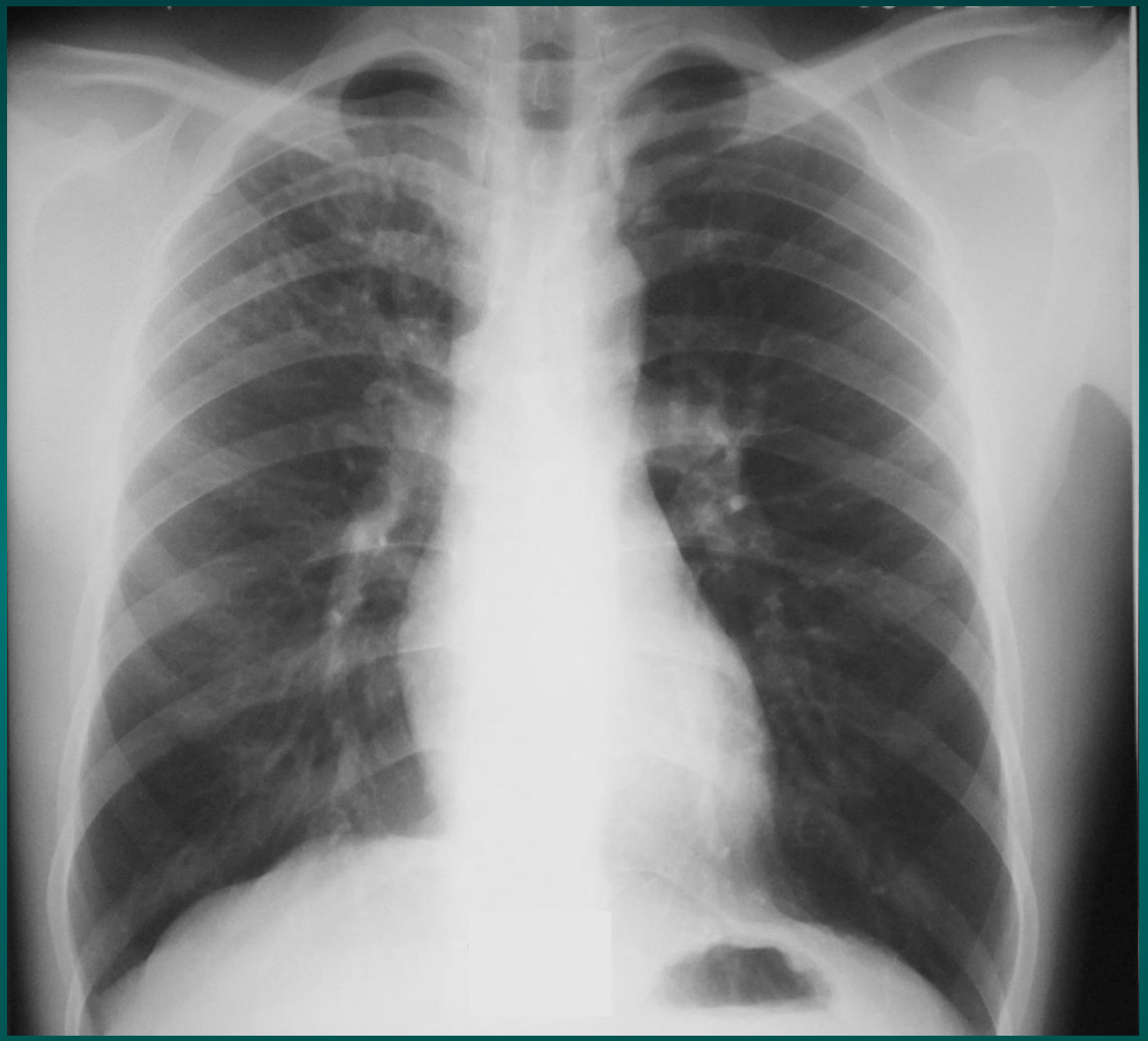
Case N° 5



Slight fever and cough. Smear negative
TB treatment or not?

.- Cambodian National TB control program

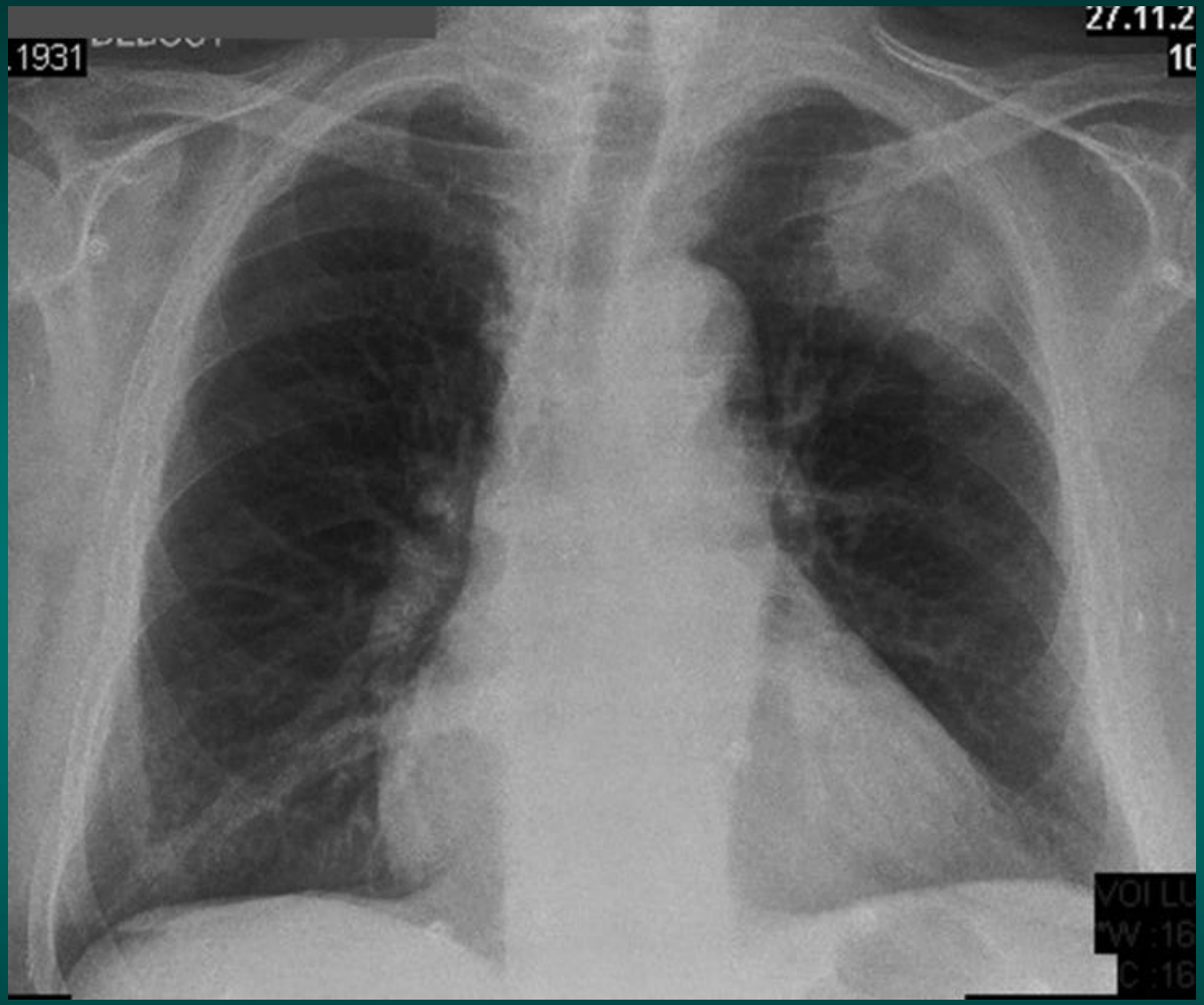
Case N° 5



Right superior lobe infiltrate. Culture positive Tuberculosis

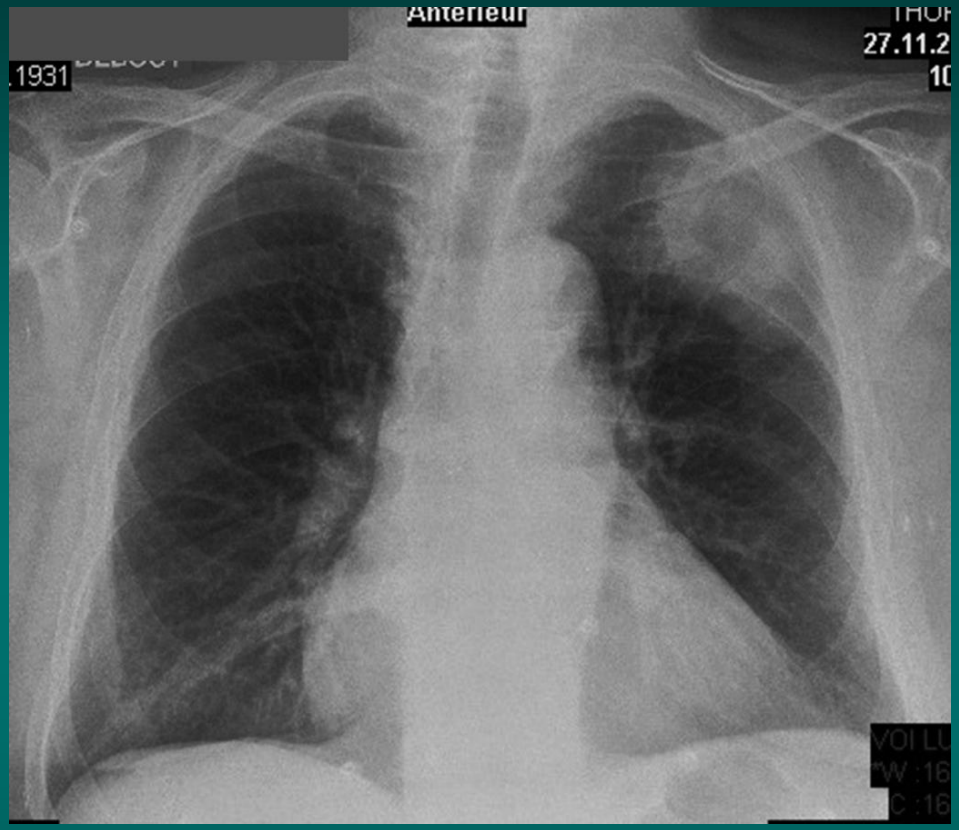
.- Cambodian National TB control program

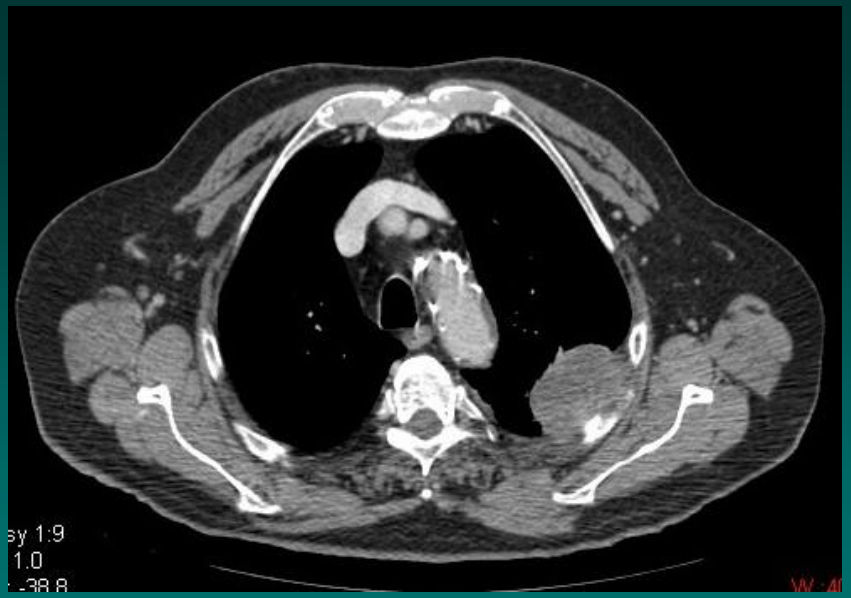
Case N° 6

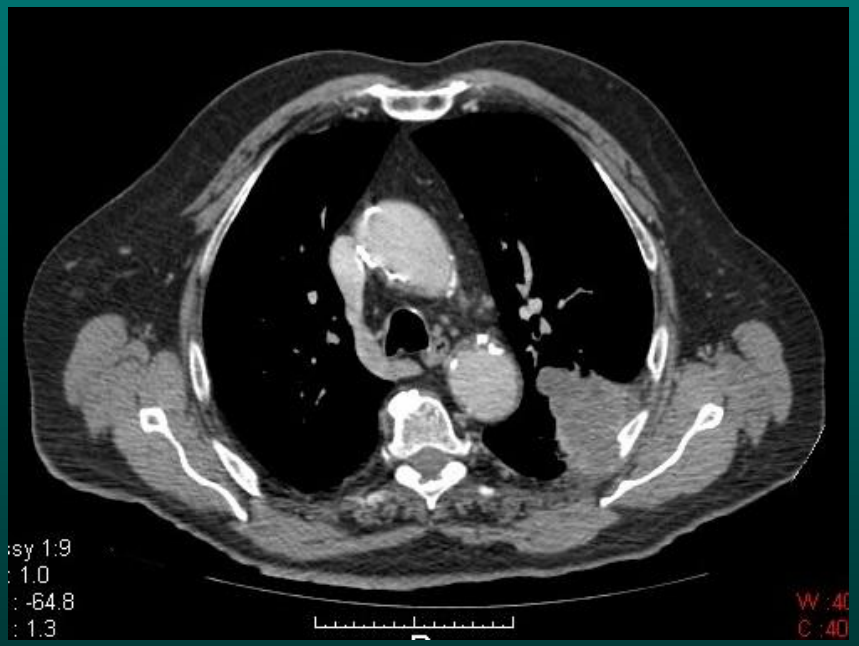


Man, 65 years old . Heavy smoker. Worsening condition and severe left shoulder and dorsal thoracic paint. Smear negative. TB treatment or not?

Case N° 6

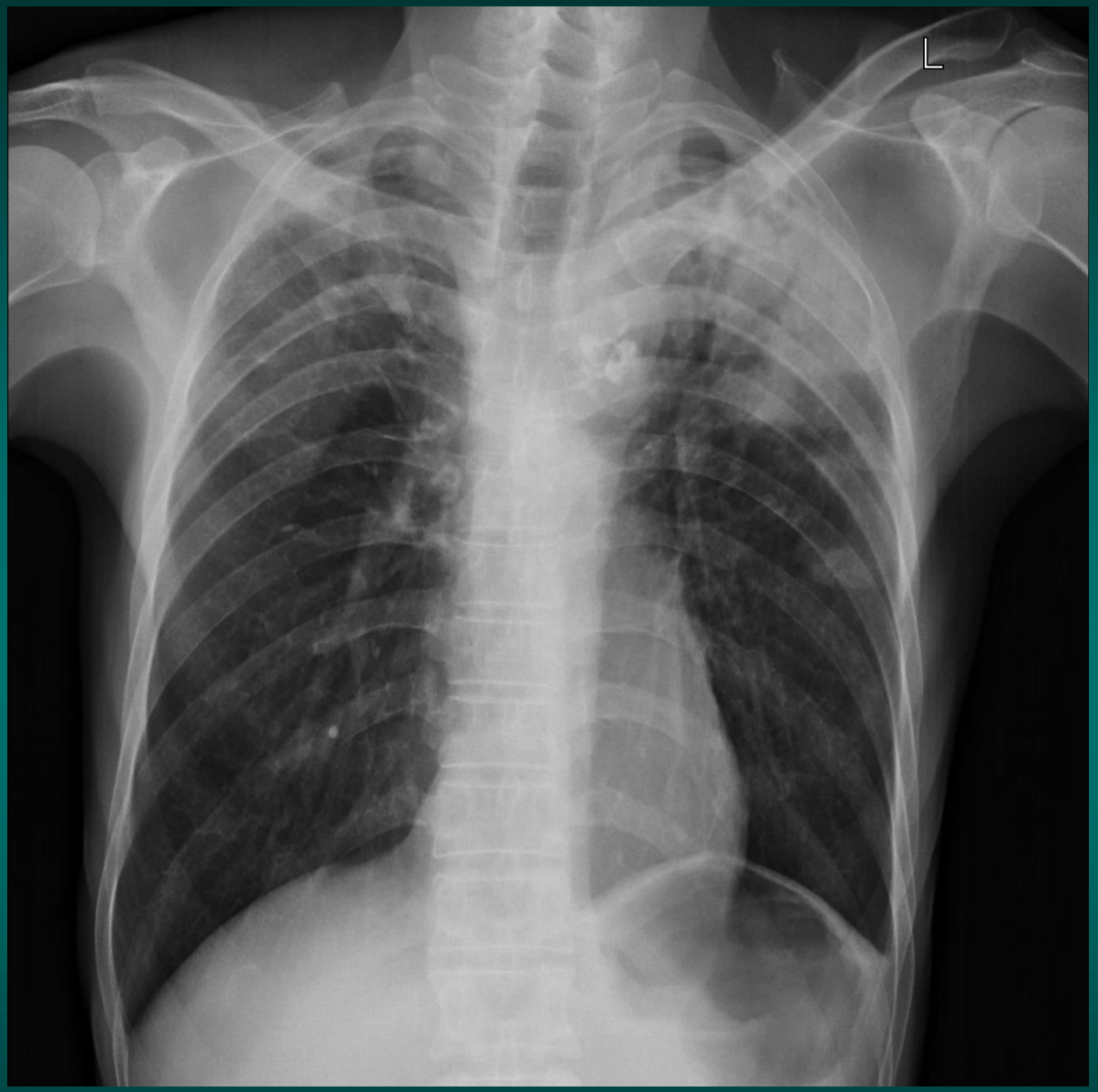






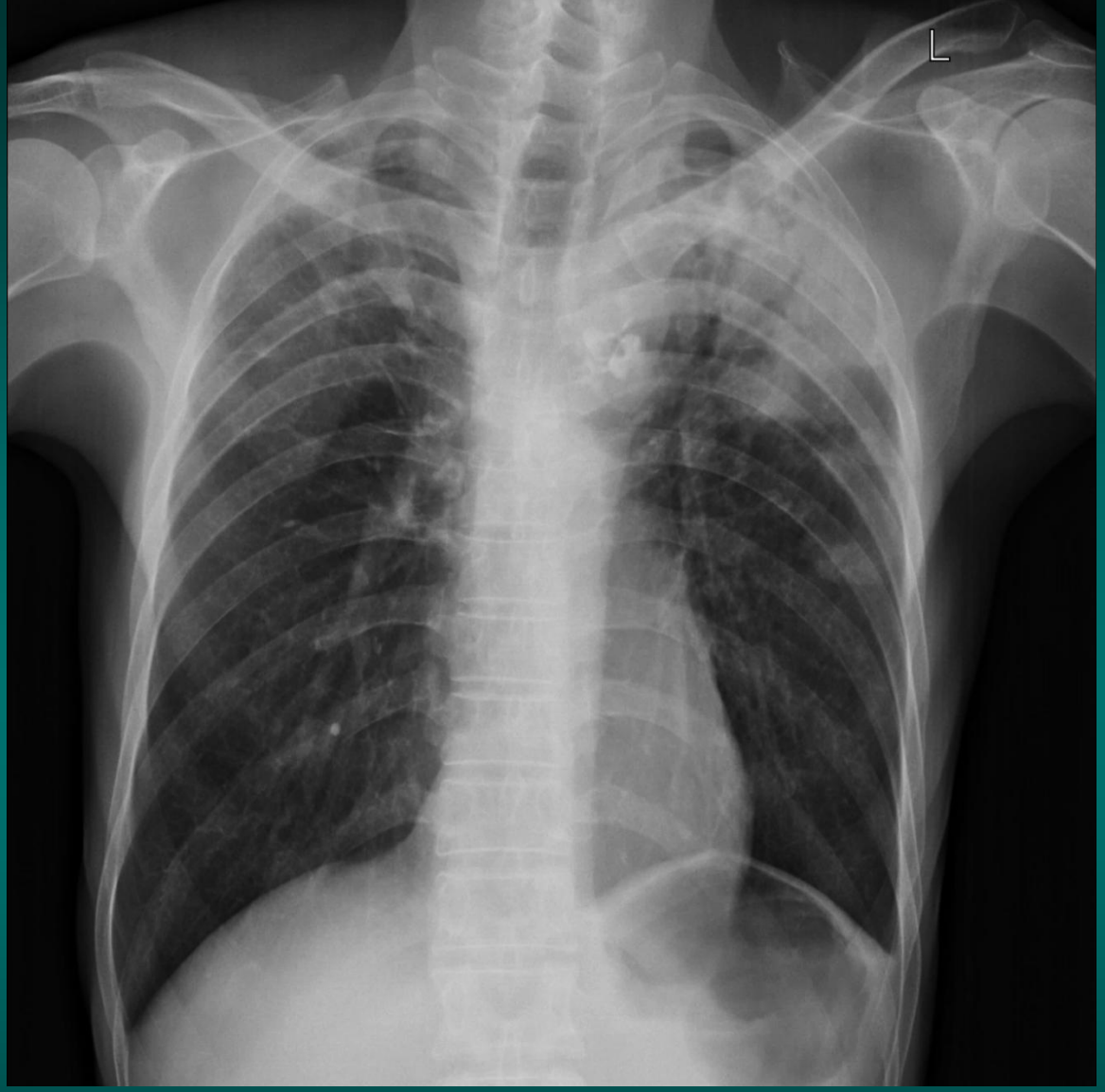
Left superior lobe mass with thoracic wall exrtension.: **Bronchial cancer**. Notice the false picture of cavity which is the consequency of rib superpositions.
No need of tb treatment..

Case N° 7



Cough fever and weight loss for 3 monthes Smear negative Do you initiate tb treatment or not?

Case N° 7

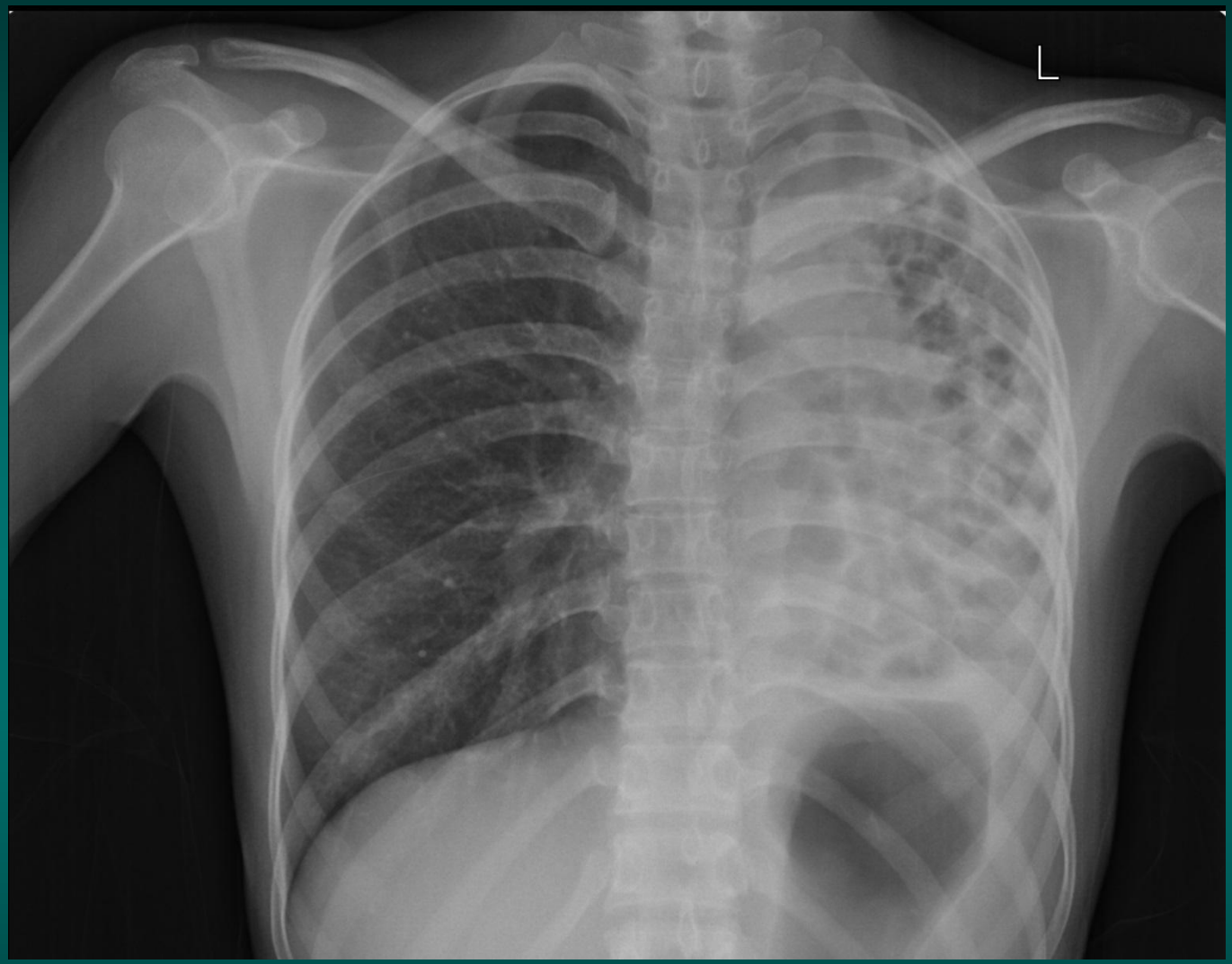


Left superior lobar pneumonia (with aeric bronchogram) and right superior lobe infiltrate. Calcified left hilus adenopathies: The association of these different pictures strongly suggests TB.

gene expert or Culture should be positive if available

In this case TB treatment is mandatory because of clinical and radiological context

Case N° 8



Man, chronic dyspnea and chronic productive cough with frequent bronchial infections. Past history of TB in house hold and TB treatment in childhood.

Do you think tb retreatment is necessary or not?

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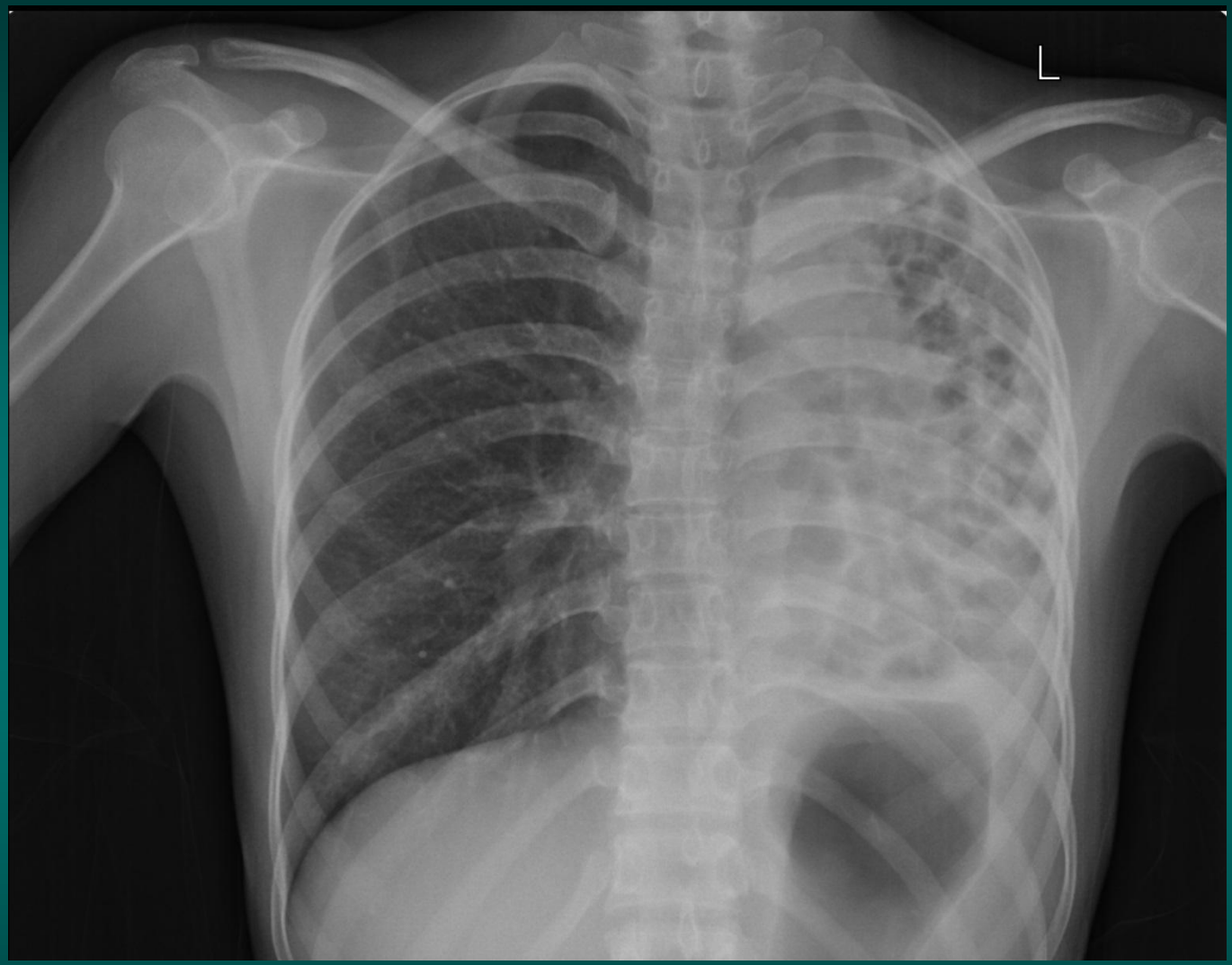
Case N° 8



Diffuse bronchiectasis of the left lung, which is restracted and distroyed. Typical of TB important sequella. No need of retreatment (smear and culture negative)

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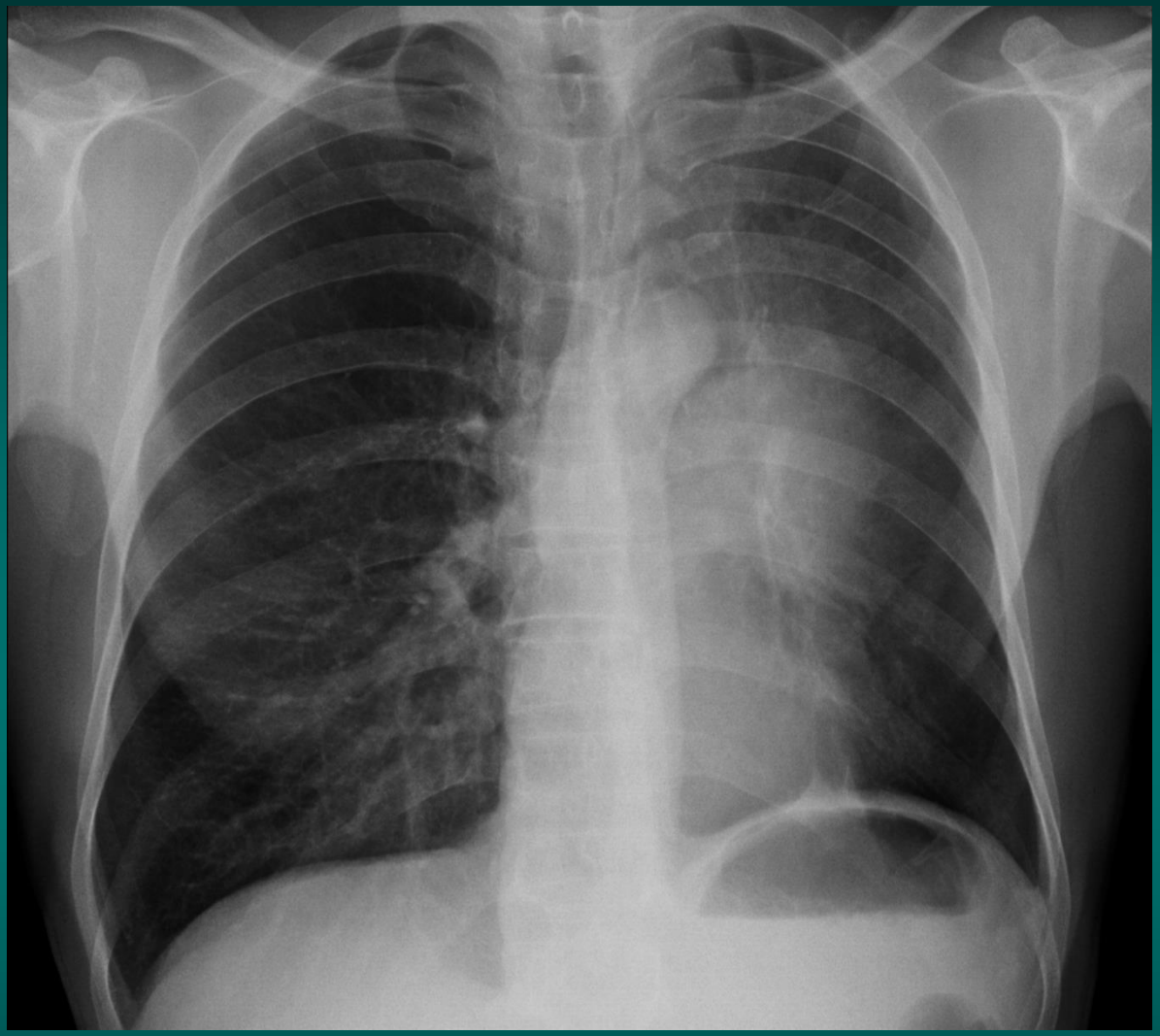
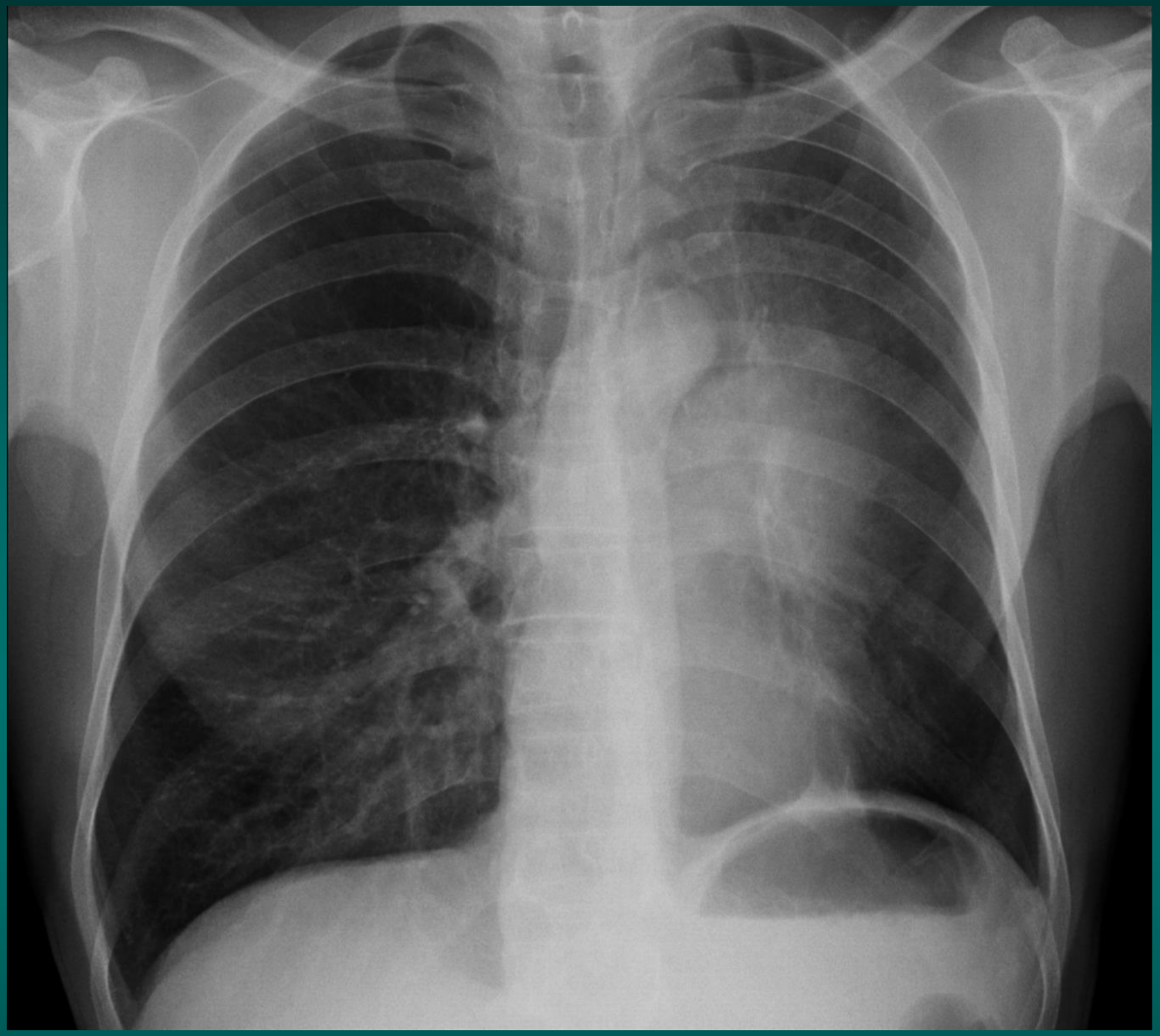
Case N°9



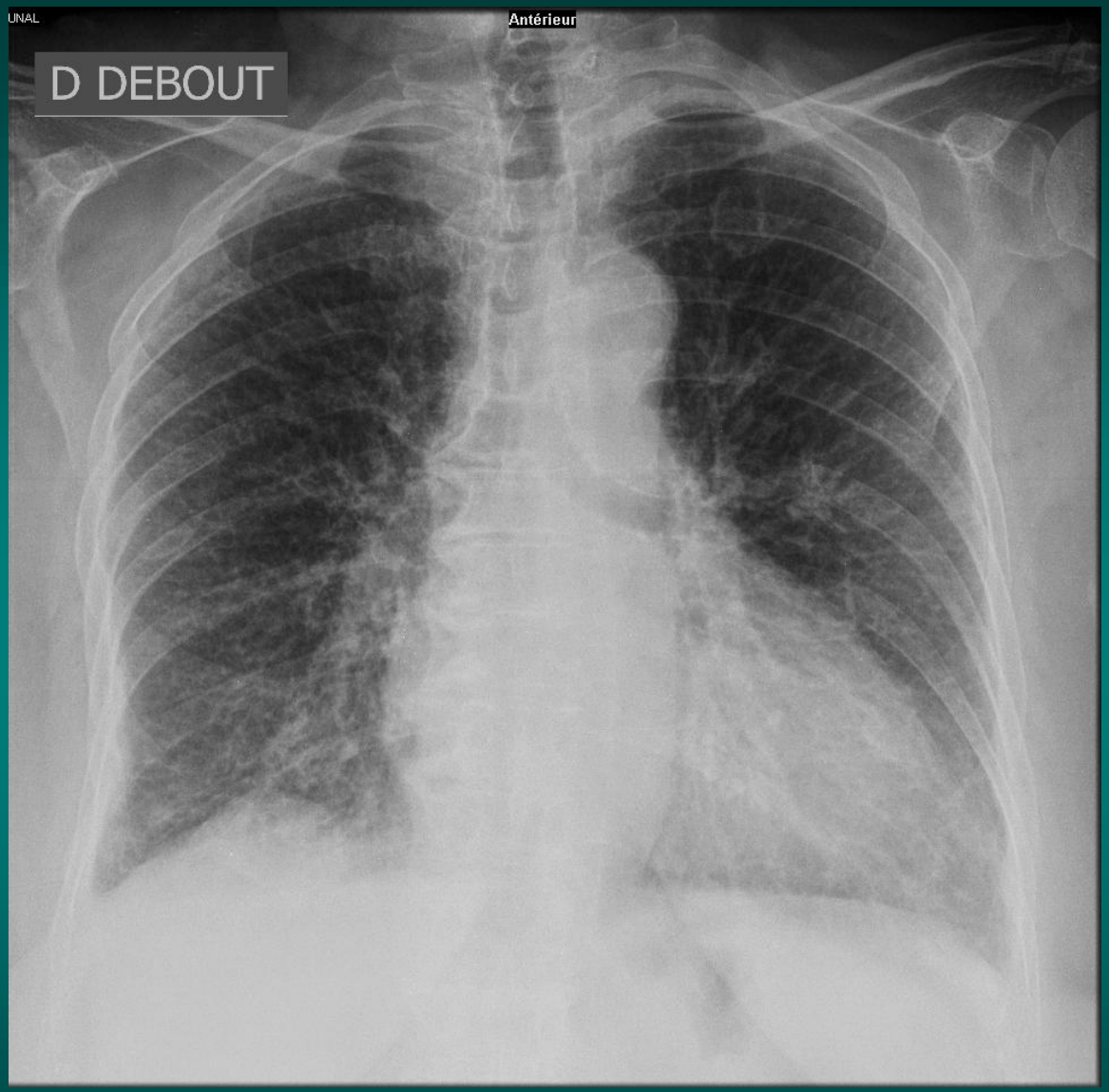
Men ,57 years old, weight loss and hemoptisy. Past history of smoking.
Smear negative

Case N°9



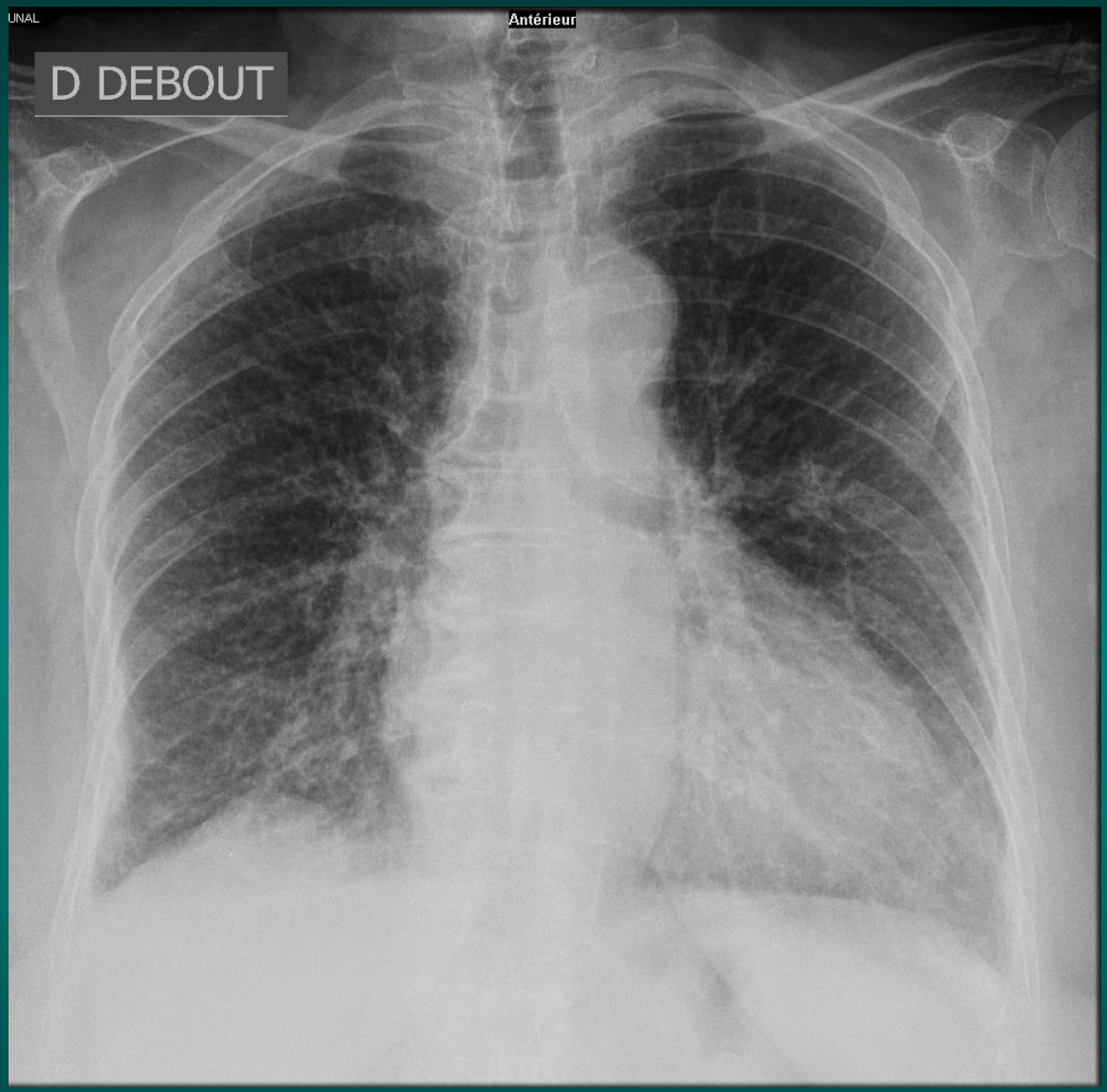
Overlap of the left hilus by a mass . (notice that vessels are visible through the mass. It is an anterior overlap , because the mass is in contact with heart: (positive silhouette sign). Notice that left lung is slightly retracted with attraction of the trachea and ascension of the left diaphragm
Final diagnosis is bronchial cancer with partial left superior lobe atelectasis

Case N°10



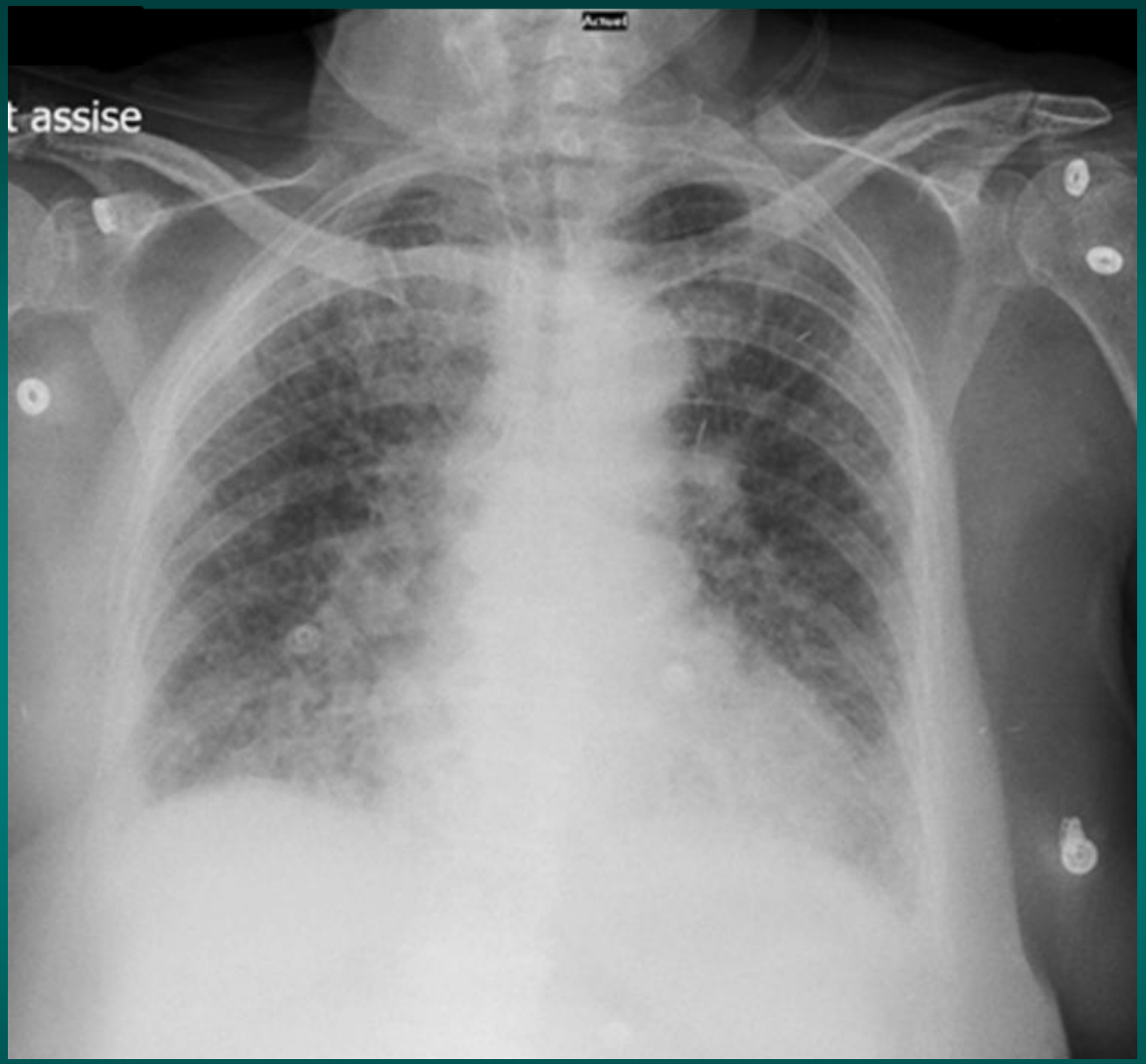
Woman78 years old, past history of hypertension, increasing dyspnea, with cough . Smear negative

Case N°10



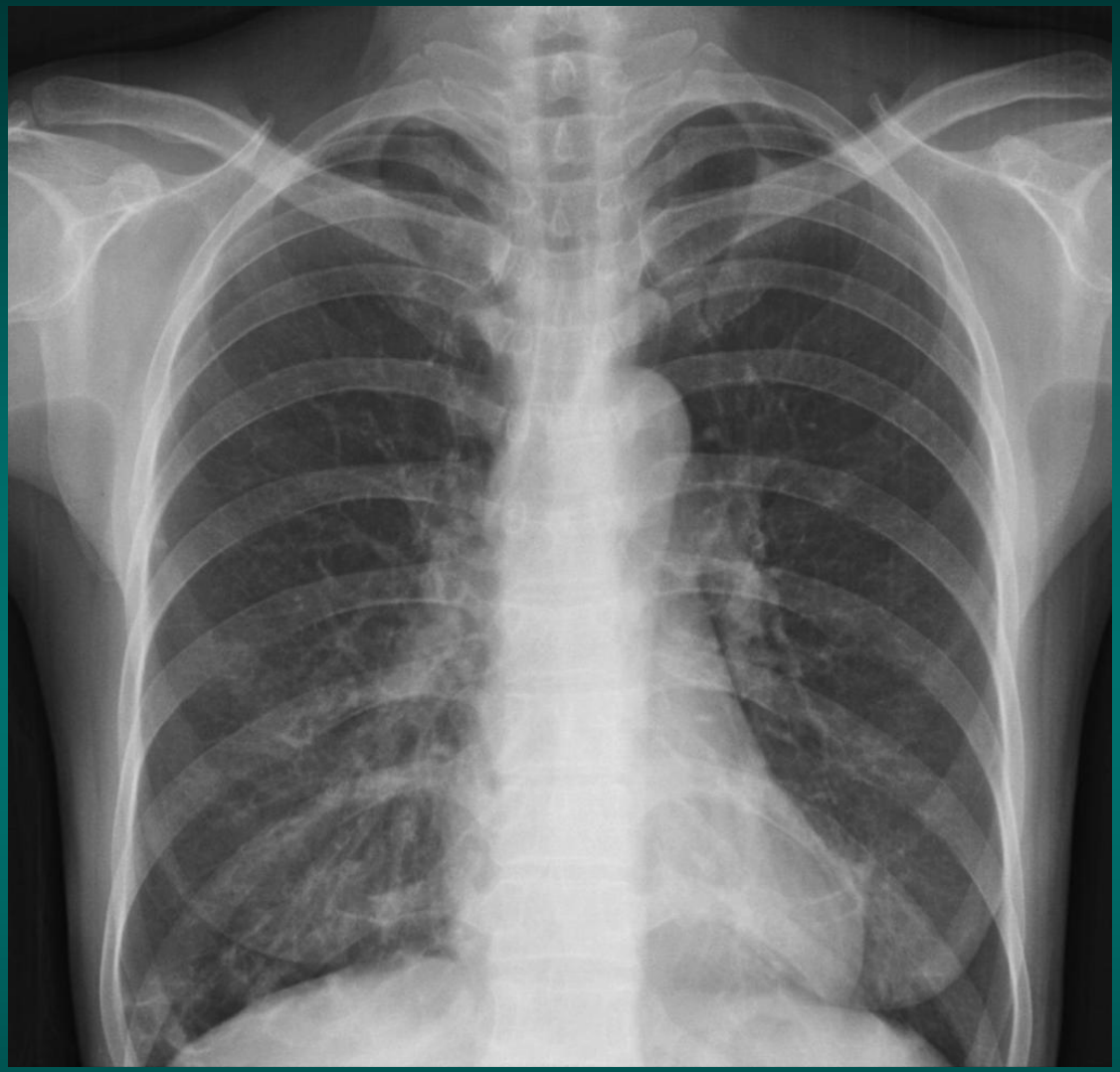
Notice cardiac enlargment, blur and enlargment of the hili with vascular convergence : probable cardiac failure on the begining.

Case N°10



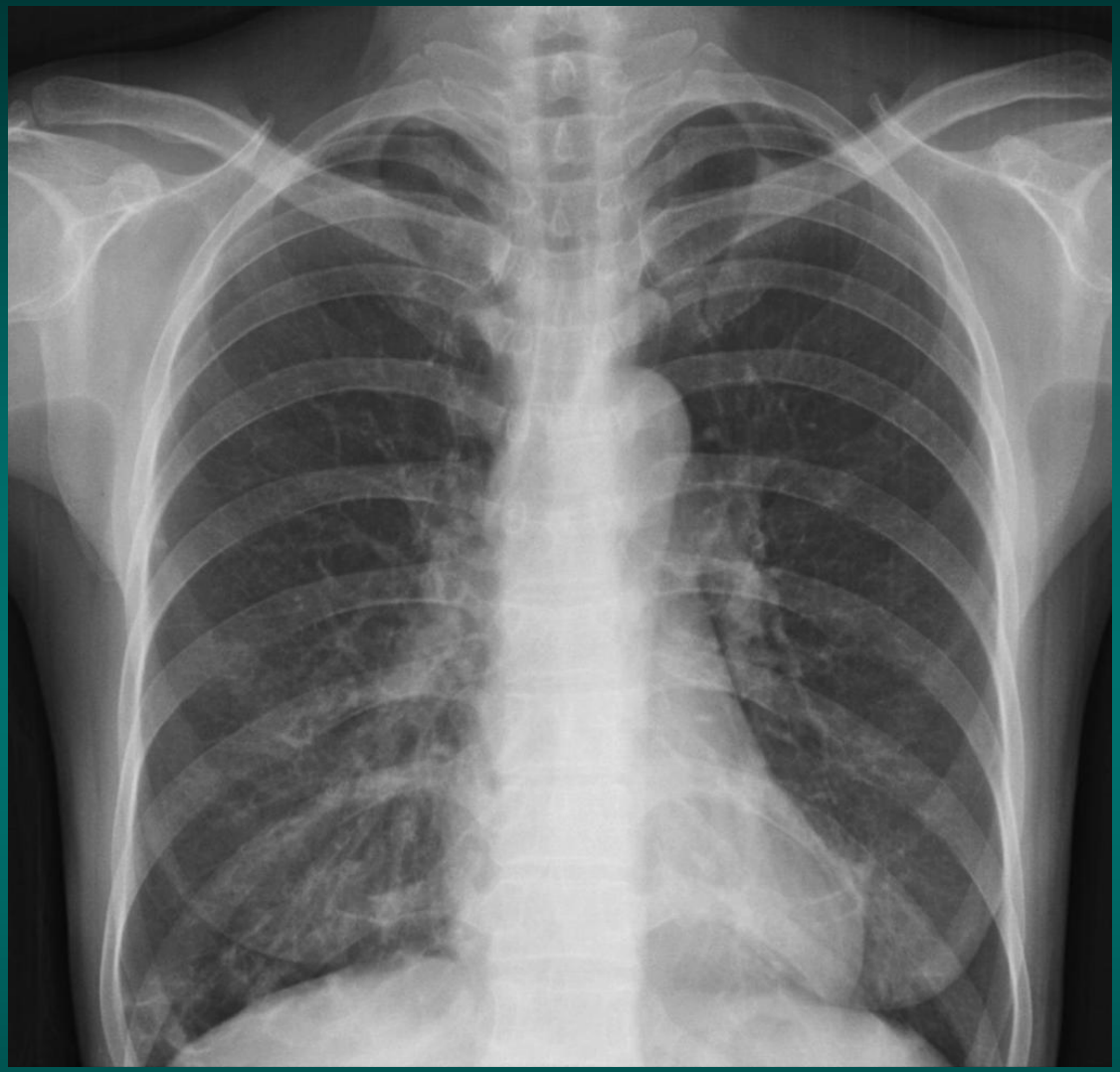
Spontaneous evolution: severe dyspnea with hypoxemia, bilateral crepitant rales: CXR bilateral alveolar patern acute pulmonary oedema

Case N°11



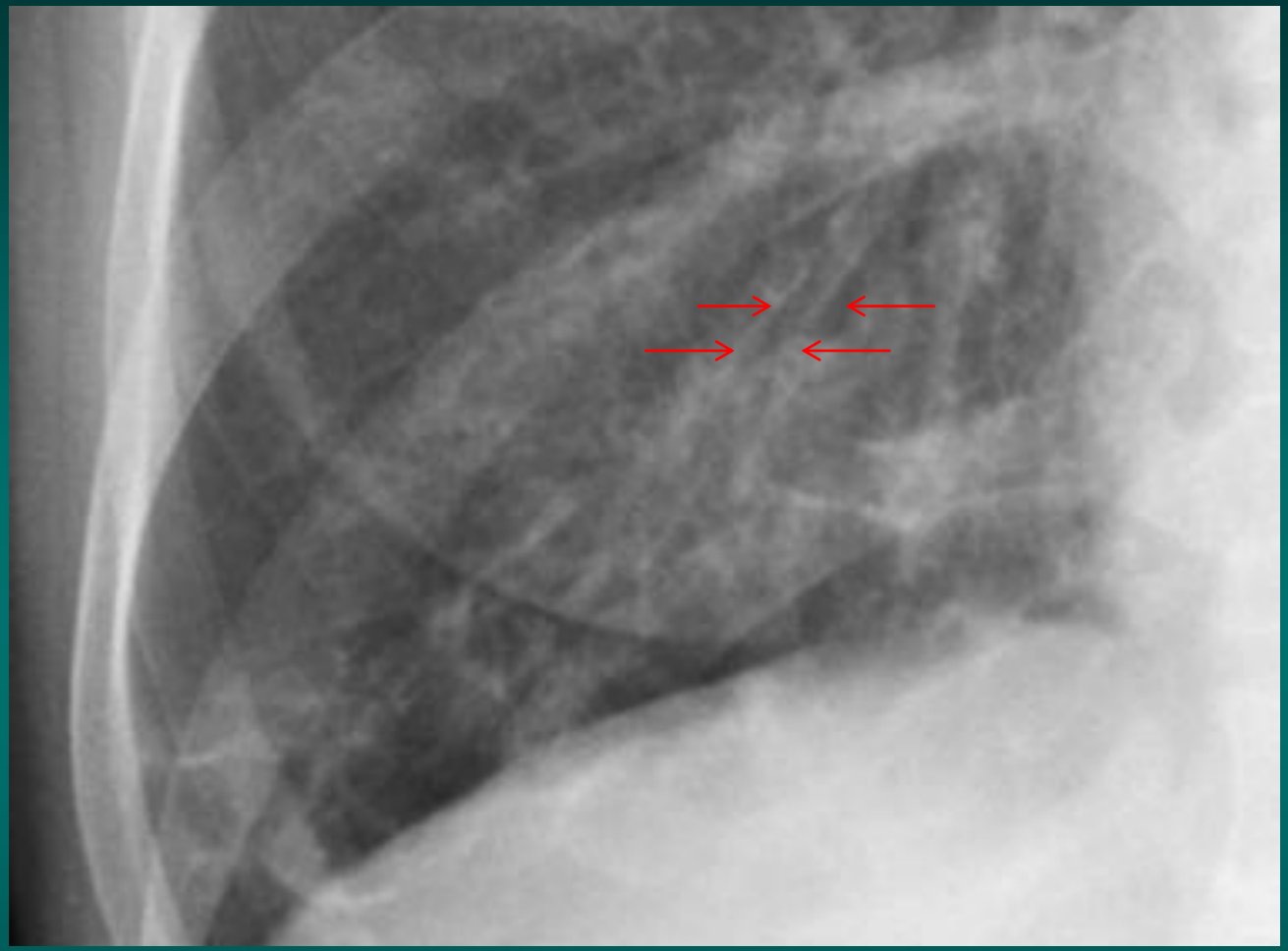
Woman, 37 years old.chronic cough with ,sometimes hemoptoïc sputum.
Repeted bronchial infections . Repeted smear negative for AFB

Case N°11



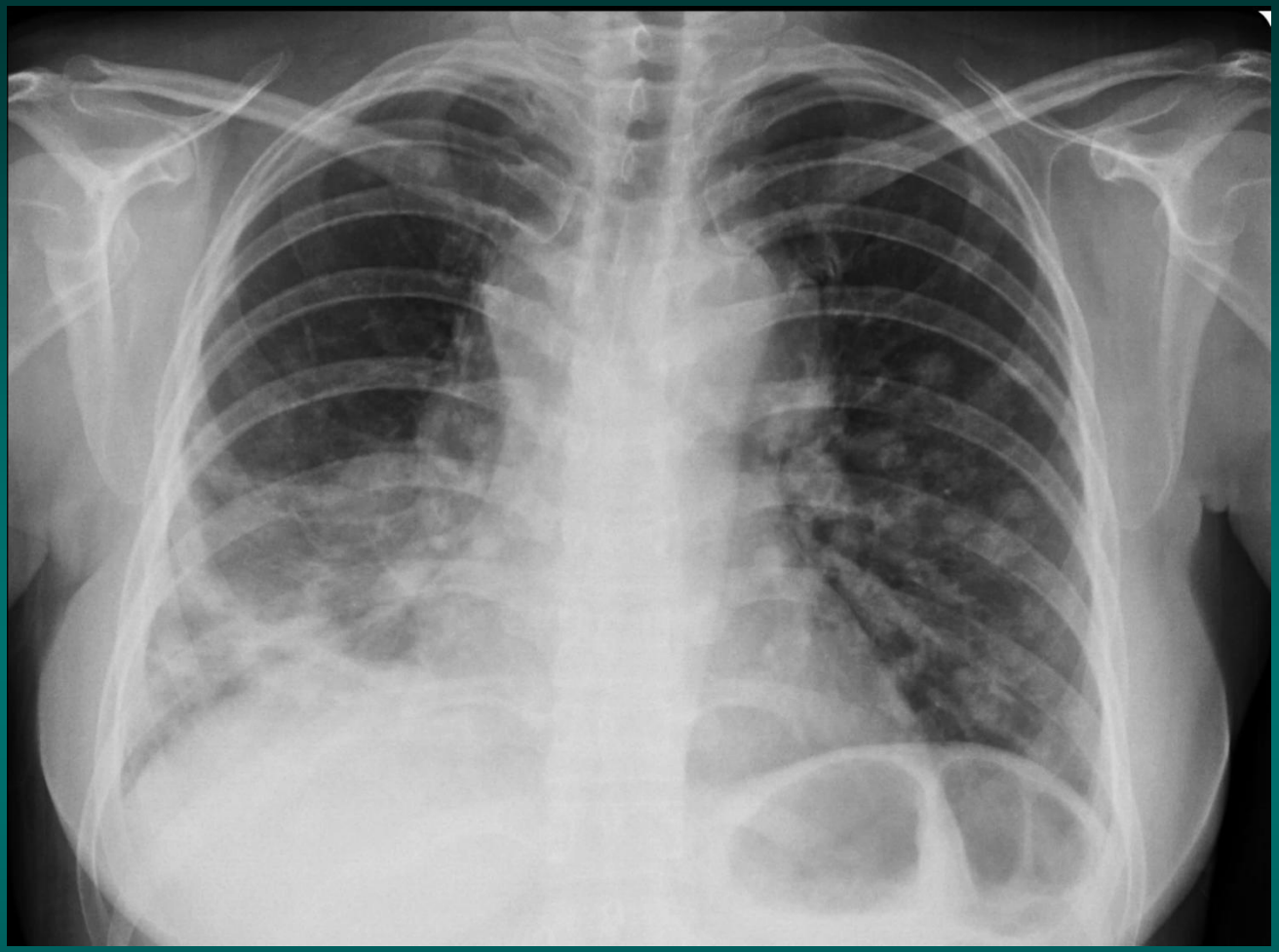
Right inferior lobe bronchiectasis. Look at the magnified view in the following slide

Case N°11



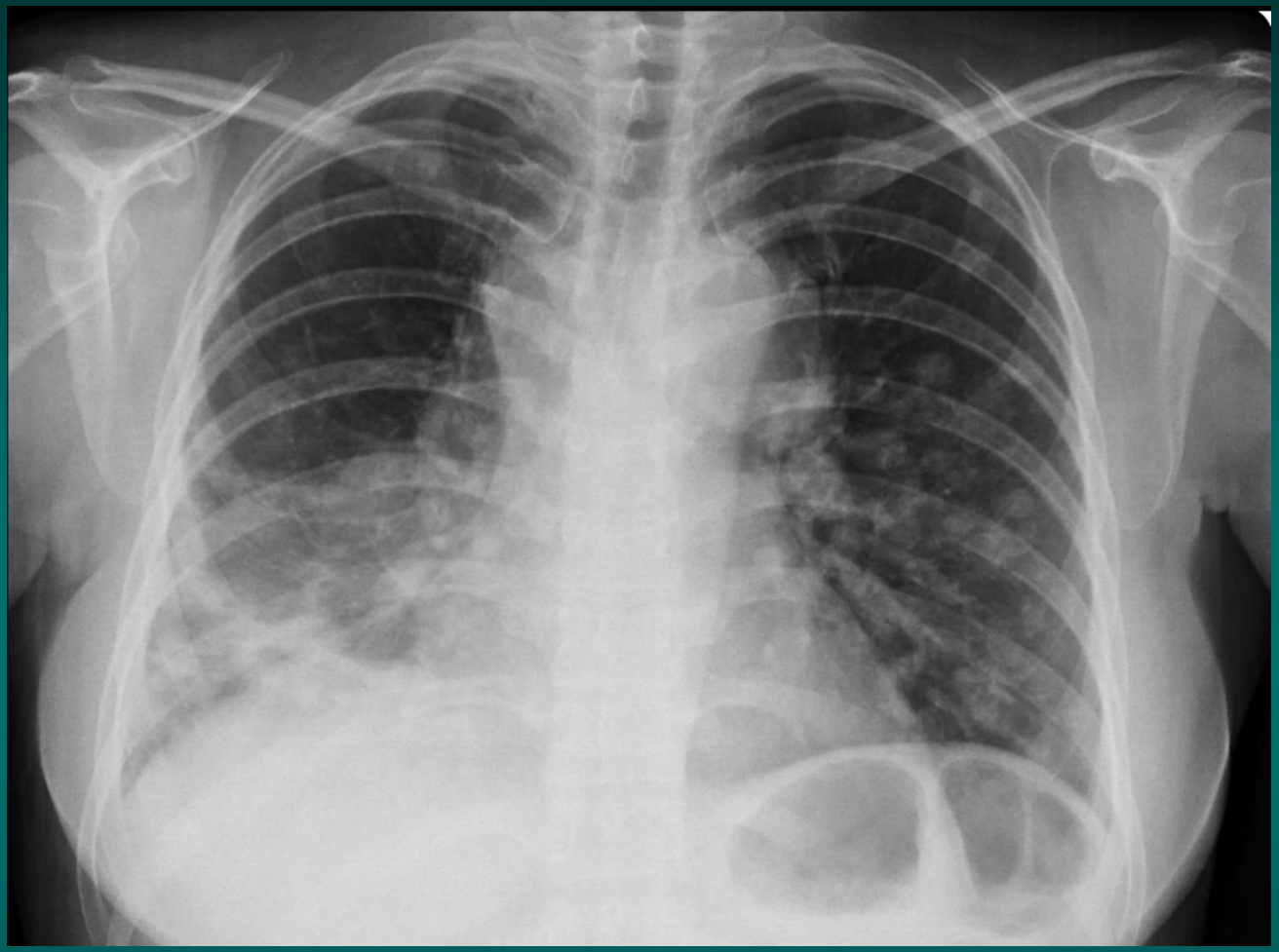
Typical rail pictures highly suggestive of cylindric bronchiectasis

Case N°12



Woman, 54 years old, bad clinical condition , weight loss , cough . Sputum negative for AFB.

Case N°12



Mediastinum elargment highly indicative of adenopathies , with macronodules , left side predominant, and probable partial right inferior lobe atelectasis. This radiological features highly suggest neoplasic process with pulmonary and node dissemination. Primitive tumor could be pulmonary, or extra pulmonary.