Man, 58 years old, smoker 1 pqt/day for 40 years, worsening condition, flatness, headaches and repeated hemoptysis.

CXR: mediastinal and left hilar mass: bronchial cancer with hilar and mediastinal extension (notice positive silhouette sign with descending aorta sign, suggesting mediastinal denopathies or mediastinal extension.
Case N° 1

TDM view of the previous case: mediastinal extension and brain metastasis
Man, worsening condition and dyspnea, PLHIV. No sputum available (too weak for producing efficient sputum).
Case N° 2

CXR: Bilateral alveolar opacities: non homogenous, not well limited. Air bronchogram. Notice the enlargement of superior mediastinum (red arrow) which suggests right latero tracheal adenopathies.

The association of bilateral pneumonia with mediastinal adenopathies is indicative of TB in HIV infection context. Probable severe immunosuppression. This case is typical of patients with severe TB who are so tired that they are not able to produce sputum available for AFB research. Always inquire of the clinical context if there is a contradiction between a chest X ray highly suggestive of TB and a negative AFB result in sputum (salivary sputum, or no sputum at all).
Woman, 23 years old, fever and weight loss. No cough, no respiratory symptoms. Her husband has been recently treated for TB.

CXR: Notice the enlargement of mediastinum just in the right latero tracheal area: the chest ray and the clinical context highly suggests TB adenopathies.
Scannographic view of the previous case.
The arrows show the adenopathies.
Man, 46 years old. No respiratory signs but cervical swelling. Punction: purulent content with few AFB bacilli

Bilateral hilar tuberculous adenopathies
Previous patient on the left side. Normal hilus on the right side. Notice the overlap sign of the right hilus because of hilar adenopathies overlapping pulmonary artery.
Case N° 5

Woman, 82 years old. Cough and dyspnea when exercising.

CXR: Opacity of the anterior and superior mediastinum, with cervico thoracic pass sign (the opacity disappears above the clavicles. See the cervico thoracic pass sign in the chapter mediastinum syndrome). Notice that the tracheal shadow is narrow: the most probable diagnosis is antero superior thyroid goiter with tracheal compression.
Scan view of the previous case: tracheal compression by a bulky goiter.
woman, HIV+, dyspnea, non productive cough and severe weight loss.

Chest X ray: miliary, and bulky mediastinal adenopathies. The most probable diagnosis is TB in HIV context.
Man, PLHIV, worsening condition, weight loss, and dyspnea.

No sputum available in this patient too tired to produce efficient cough for sputum production.
Case N° 6

Chest Xray: alveolar pictures in the left upper lobe and in the right perihilar area. Enlargment of the right hilus and of the superior mediastinum, suggesting adenopathies. The association of alveolar pictures with adenopathies in HIV context strongly suggests tuberculosis.
In fact, a lot of AFB will be found in bronchial aspiration by bronchial fibroscopy in this patient. This case is typical of patient with severe TB who are so tired that they are not able to produce sputum available for AFB research. Always inquire of the clinical context if there is a contradiction between a chest X ray highly suggestive of TB and a negative AFB result in sputum (salivary sputum, or no sputum at all)
Man 72 years old. Long past history of non-productive cough, increasing dyspnea and progressive weight loss. AFB negative in sputum. No improvement with several antibiotic treatments.
Case N° 7

Chest X-ray; diffused nodules in the right lung, which is retracted. Notice mediastinum enlargement with probable adenopathies in the hilar and right latero-tracheal area. The clinical context, and the association of diffused nodules, adenopathies and retraction suggests tuberculosis. But one possible differential diagnosis is cancer with carcinomatous lymphangitis. Bronchial aspiration by endoscopy was positive for AFB...
Case N° 7

Scannographic view of the previous case: mediastinum adenopathies (red arrows), and tuberculous lesions (yellow arrows)
Man, thirty years old, HIV positive, cough and fever, worsening condition with dyspnea.
No sputum available. No improvement with amoxicillin.
Chest X ray: alveolar opacity of the left upper lobe, with left hilar enlargement and filling of the aorto pulmonary space = probable adenopathies. 
On the right side, alveolar opacity of the middle lobe and probable adenopathies of the right latero tracheal area.

**HIV context + subacute context + uni or bilateral pneumonia + mediastinum adenopathies and no improvement with antibiotic = probable TB even if AFB is negative.**
Man, 35 years old, PLHIV, cough and dyspnea, worsening condition.
CXR: Typical aspect of TB with VIH +: association of right pneumonia, with enlargement of latero tracheal nodes: the association of pneumonia and mediastinum adenopathies in HIV context is highly indicative of TB. (AFB positive in sputum in this case).
Man HIV positive, worsening condition and non productive cough. AFB negative. No improvement after amoxicillin treatment.
Middle lobe pneumonia (silhouette sign with heart right edge) + probable right hilar adenopathy, + right superior lobe infiltrate + left inferior lobe alveolar process or infiltrate + hiv context = very probable TB
Magnified view of the right hilus: typical hilar adenopathy (overlap sign). Association with pneumonic process in HIV context is highly suggestive of TB.
Asthenia and hemoptysis. Oedema of the face and arms suggesting vena cava compression. Past history of smoking
Chest X ray: bulky adenopathies in the laterotracheal area and hilar mass. AFB negative.
Bonchoscopy: bronchial carcinoma in the main right bronchus.
Scan view of the previous case. Red arrow = lymph node enlargement with metastatic adenopathies. Notice the compression of the vena cava (yellow arrow). No superior vena cava syndrome in case of TB.
Mild dyspnea and cough. AFB negative.
Case N° 12

Chest x ray: bilateral adenopathies, nearly symetric. It could be TB adenopathies. In this case it is sarcoïdosis.
Left side, previous case: hilar adenopathies. On the right side, normal lateral view. Lateral view is useful to confirm hilar and mediastinum adenopathies (red arrow) in the carena area. Notice partial atelectasis of the middle lobe (yellow arrow).
Man, 35 years old, fever and slight weight loss. Nocturnal sweet. AFB negative in sputum. Positive skin test, 20 mmm.
Case N° 13

Fever and weight loss. Repeated AFB negative in sputum.
Chest x ray: Right laterotracheal and hilar adenopathies: Biopsy (mediastinoscopy): bronchial cancer
Case N° 14

Scan view of the previous case
Case N° 15

Man, 40 years old, supra clavicular adenopathies Fever and sweat Weight loss
CXR: Bulky right hilar and mediastinal adenopathies: **Hodgkin disease**
( TB supra clavicular adenopathies are very unfrequent)
Case 12 13 14 15: nearly similar chest X ray aspect with different etiologies. The clinical and bacteriological aspect is very important to make the good diagnosis.
Man, smoker, weight loss and non productive cough.
Chest Xray: round peripheric opacity. No visible excavation. Enlargement of the left hilus with filling of the aorto pulmonary window, suggesting adenopathy. TB is possible but not really probable: alone round non excavaded macronodule (false picture excavation inside the macronodule, due to rib superposition: trap picture). No associated lesions (nodules or infiltrate).

**Bronchial cancer is the most probable diagnosis.** Bronchoscopy is required for confirmation.
CT scan of the previous case. Notice that no excavation is seen in the nodule, which is bigger than 3 cm in this larger diameter: This is a strong argument against TB.
Man, worsening condition and dyspnea. Smoking more than 30 cigarettes /day for 30 years
.AFB negative in sputum.
CXR: non cavited opacity of the left upper lobe and enlargement of the superior mediastinum with filling of the left aorto pulmonary window, suggesting adenopathies. On the lateral view, one can see partial atelectasis of the superior left lobe (culmen segment). TB is not impossible but improbable: no cavity in the upper left lobe opacity, no associated nodules, and AFB negative. The most probable diagnosis is bronchial cancer with mediastinal metastatic nodes. Bronchoscopy is required for confirmation of the diagnosis.
Case N° 17

Previous case. Elargment of mediastinal node and partial atelectasis of upper lobe

Normal lateral view
Scan view of the previous case: bulky neoplastic mass of the left upper lobe with direct extension in the mediastinum, and neoplastic adenopathies.
Case N° 18

Woman, 28 years old. Evening fever and nocturnal sweet. Past history of TB in the family.
Chest X ray: partial filling of the left aorto pulmonary window with enlargement of the left hilus, suggesting adenopathies. In this context, left hilar TB adenopathies must be suspected.
Case N° 18

Previous case before TB treatment (left side) and after TB treatment (right side)
Woman, 22 years old, fever, nocturnal sweet, asthenia and weight loss.
Close contact with TB case index few months ago (her husband)

CXR: enlargement of the mediastinum, in the right latero-tracheal area: suspicion of adenopathies. In this context **TB primary infection** must be suspected. In such situation, AFB are nearly always negative
Ct scanner of the previous case. Red arrows shows TB adenopathies.
Woman, chronic cough. Good health condition.

Chest X-ray: typical aspect of sequella of old Tb Primary infection: calcified nodule and calcified hilar adenopathy (red arrows). If repeated AFB negative in sputum, no need of treatment.
Man, 26 years old, cough and worsening condition.
On the left side CXR 2 years before symptoms
On the right side CXR after the beginning of symptoms
Alveolar picture overlapping the right hilus probably in the mediastinum. Notice the enlargement of the mediastinum, which is evident if we compare the left CXR with the right one. Notice also nodular picture above the alveolar picture. The association of this alveolar picture with mediastinum adenopathy must evoke *Tuberculosis*. AFB positive in sputum
Scan view of the previous case. Notice alveolar picture, nodular pictures and adeopathies
Endoscopic view of the previous case: brochial TB with tuberculous granuloma on the biopsy specimen.
Woman, 54 years old, cough and anterior thoracic pain.

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**
Man 25/1/2010: fever asthenia and cough. AFB negative in sputum. Possible contact with friend AFB+ 2 years ago.
CXR: middle lobe opacity with retraction on the right side and enlargement of the mediastinum and right hilus: probable adenopathies. In this clinical context TB must be suspected.
Mediastinoscopy: positive for TB lesion. If no mediastinoscopy possible TB treatment must be nevertheless instaured on clinical and radiological argument
Same patient after Tb treatment (right side)
Before and after treatment. Notice the decrease of volume of the lymph nodes.