

Tuberculosis (TB): diagnosis

❶ Check for TB in the patient with any of the following: cough \geq 2 weeks, weight loss, drenching night sweats, fever \geq 2 weeks, chest pain on breathing, blood-stained sputum.

❷ Give urgent attention to the TB suspect with one or more of:

- Respiratory rate of > 30
- Breathless at rest or while talking
- Confusion or agitation
- Coughing up ≥ 1 tablespoon of fresh blood

Management

- ❸ Give single dose of **ceftriaxone**¹ 1g IV/IM. If unavailable, discuss with doctor.
- ❹ Give oxygen (40% face-mask oxygen or at 4L /min via nasal prongs).
- ❺ Take 1 spot sputum specimen for Xpert MTB/RIF and arrange follow-up.
- Refer same day to hospital.

1st
VISIT

Start the workup to diagnose TB

- ❻ If status unknown, test for HIV \rightarrow 60.
- ❼ Send 1 spot sputum specimen for Xpert MTB/RIF, and ask patient to return for result within 2 days.
- ❽ If patient has chest pain on breathing or coughs blood without sputum, also arrange chest x-ray and doctor visit (see below).

2nd
VISIT

Xpert negative (MTB not detected)

- ❾ If fever or coughing sputum, give **amoxicillin**³ 1g 8 hourly for 5 days and
- Manage further according to HIV status. If status unknown, test for HIV \rightarrow 60.

HIV positive

HIV negative
• TB is unlikely

❿ Advise patient to return if no better or symptoms worsen.

⓫ Send 2nd (ideally early morning) sputum specimen for Xpert MTB/RIF.

Xpert positive (MTB detected)

Rifampicin resistant

⓬ Send a 2nd sputum specimen for smear, culture and DST².

Diagnose Drug-Resistant TB
Refer for DR-TB treatment.

Rifampicin sensitive

⓭ Diagnose Drug-Sensitive TB

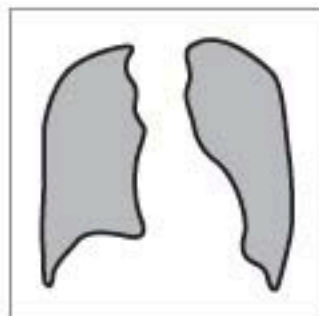
- Give routine DS-TB care and start DS-TB treatment same day \rightarrow 57.
- Register as a bacteriologically confirmed TB case.

Xpert negative (MTB not detected)

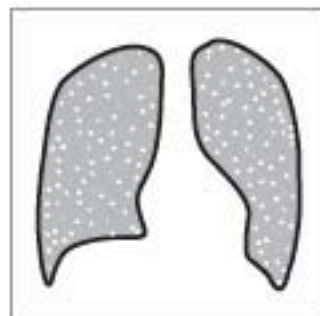
- ⓮ Send for chest-x-ray and doctor visit.
- ⓯ If HIV positive, also send sputum specimen for culture and DST².

¹If severe penicillin allergy (angio-oedema, anaphylactic shock or bronchospasm), discuss with doctor. ²Drug susceptibility testing. ³If penicillin allergic give **erythromycin** 500mg 6 hourly for 5 days instead.

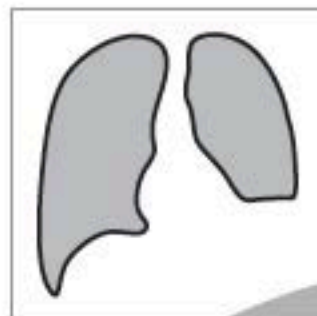
1 Doctor to review chest x-ray.



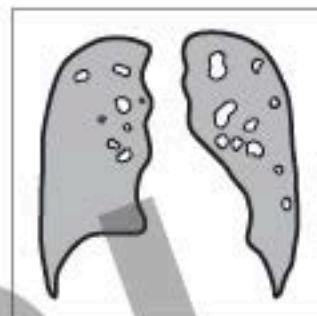
Intrathoracic lymphadenopathy



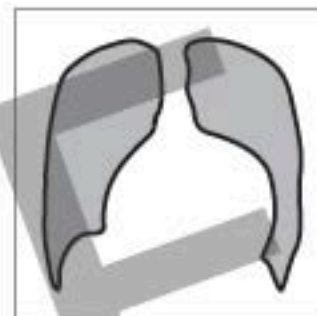
Miliary TB



Pleural effusion
Confirm with tap.



Any lung opacification/s
in HIV patient



Pericardial effusion
Confirm on ultrasound.

Doctor decision about chest x-ray

Chest x-ray similar to x-ray above

2 Diagnose TB on chest x-ray.

Give routine TB care and start TB treatment same day → 57.

Chest x-ray normal or different to above or unsure

- 1 Look for extra-pulmonary TB. If diagnosed, give routine TB care → 57:
- 1 If patient has abdominal pain, swelling or diarrhoea refer for further investigation.
- 1 If patient has headache, refer for lumbar puncture.
- 1 If patient has lymphnode ≥ 2 cm, aspirate for TB and cytology → 7.
- Look for other cause of cough, especially for PCP in the HIV patient → 18.

Review culture result if sent.

Culture positive (MTB confirmed)

Drug sensitive

Diagnose DS-TB

- Doctor to review patient if chest x-ray normal.
- Give routine DS-TB care and start DS-TB treatment same day → 57.

Drug resistant

Diagnose DR-TB

Refer for DR-TB treatment.

Culture negative or pending

- If symptoms persist, refer for specialist review.
- If culture negative and symptoms resolve, advise to return if symptoms recur.