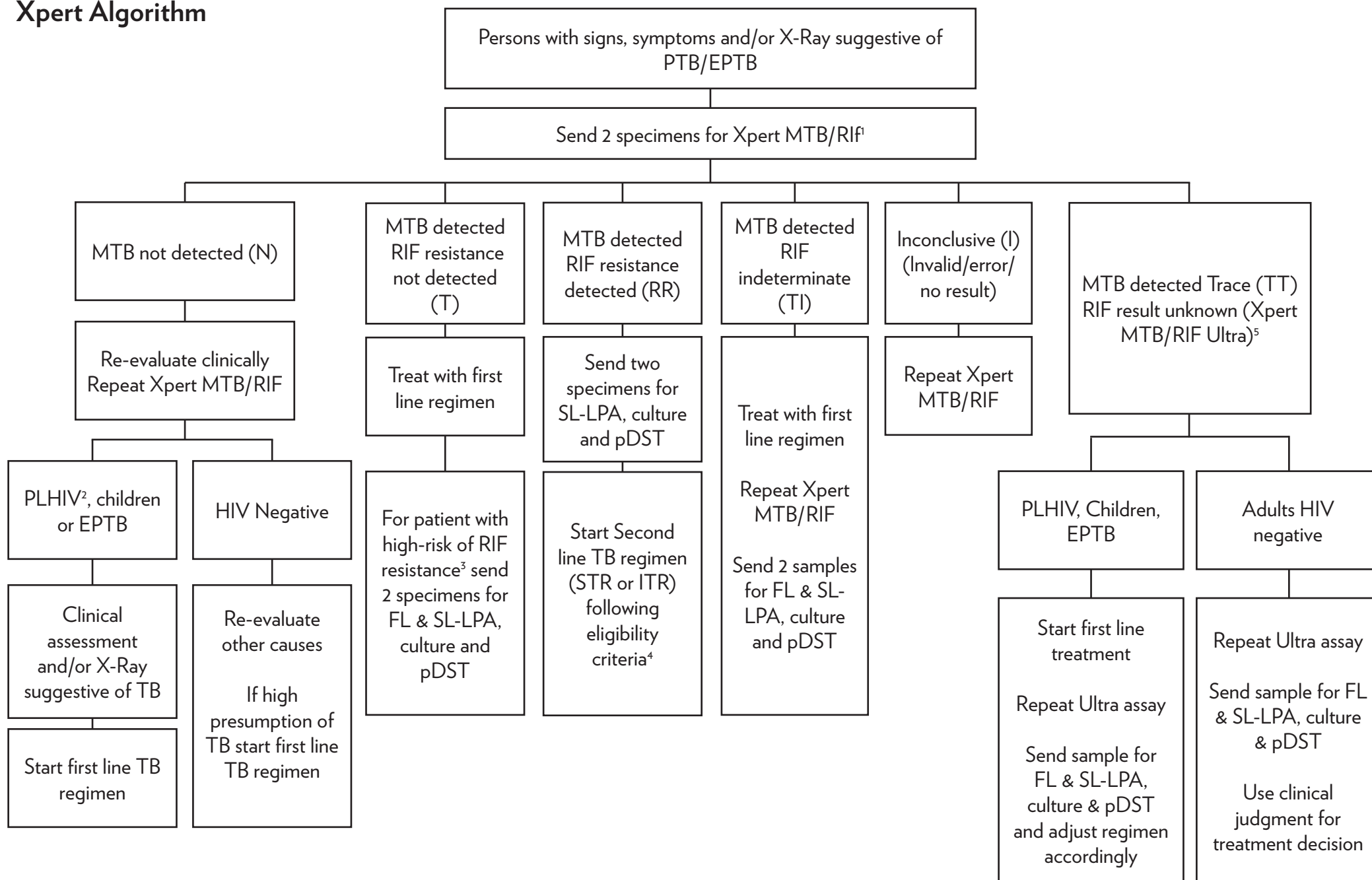


## Xpert Algorithm



<sup>1</sup>It is advisable to collect two specimens up-front. The first specimen is used for Xpert MTB/RIF test, and the second can be used to repeat Xpert MTB/RIF if necessary (First result MTB negative, invalid, or RR indeterminate) or can be referred for additional testing. If not possible to collect two specimens, one specimen should be submitted without delays.

<sup>2</sup>For persons being evaluated for TB who are HIV positive and have CD4 counts  $\leq 100$  cells/ $\mu$ l or are seriously ill, refer samples for LF-LAM Assay (Lateral flow urine lipoarabinomannan).

<sup>3</sup>For patients at high risk of DR-TB, a sample should be sent for LPA and culture/pDST: known DR-TB contacts; previously treated TB patients (including lost to follow-up, relapse, and treatment failure); patients with smear positive at  $\geq 2$  months of first line TB treatment; health care workers; miners; prisoners and HIV co-infected patients, especially those with severe immunosuppression. If patient is failing a first line regimen start empiric MDR Treatment while waiting for LPA and pDST results.

<sup>4</sup>Eligibility criteria for STR: 1) No confirmed/risk of resistance to FQ and/or SLI; 2) No contact with patient that has resistance to FQ/SLI; 3) No exposure to second line drugs for  $\geq 1$  month; 4) No known intolerance to drugs in the shorter regimen; 5) Not pregnant; 6) No Extra-Pulmonary TB (EPTB); 7) No other risk of unfavorable outcome (extensive parenchymal damage, poorly controlled diabetics, HIV co-infected patients with severe immunosuppression).

Note: all patient not eligible for STR are eligible for ITR.

Non-severe forms of EPTB can be eligible for the shorter DR-TB regimen, including TB pleural effusion (adults and children) and TB lymphadenitis (Children).

<sup>5</sup>Xpert MTB/RIF Ultra<sup>®</sup> MTB detected traces/RIF unknown result

In PLHIV, children and EPTB consider as bacteriological confirmation of TB: start TB treatment. Send samples to repeat Xpert MTB/RIF FL/SL-LPA, culture and pDST.

In HIV negative adults repeat the ultra assay and request additional investigations to confirm TB. In persons with recent history of TB treatment (in past 2 years) there is possibility of Ultra false positive because presence of DNA of non-viable bacilli. Clinical decisions must be made on all available information and clinical judgment. Further investigations for TB may include chest X-ray, additional clinical assessments, clinical response following treatment with broad-spectrum antimicrobial agents, FL/SL-LPA, culture and pDST.