Diagnostic Test Cases

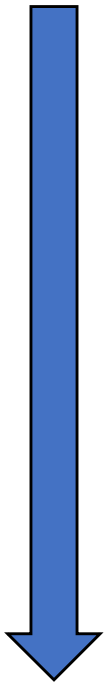
- Initial evaluation process
- Decision on TB treatment initiation

Diagnostic process
The first step: Risk Assessment

- Exposure risk:
  - Those from high TB incidence countries
  - Homelessness, correctional facilities, institutional residence, substance abuse
- Progression risk:
  - HIV and other immunosuppression (e.g., TNF-alpha inhibitors)

Diagnostic process

- Epidemiologic or medical risk factors
- Clinical presentation
  - symptoms suggestive of TB?
- Imaging
- Obtain appropriate specimens for AFB smear, culture, and NAAT/PCR (Lab confirmation)



Laboratory Diagnosis for Pulmonary TB

	Sensitivity
AFB smear	50-70%
AFB culture	90-95%
PCR / NAAT	Smear positive 95%
	Smear negative 65%

Initial evaluation process

- Goals:

1. Prompt diagnosis and treatment initiation
2. Interrupt TB transmission in the community

- Actions:

1. Further diagnostic specimens and/or procedures
2. Empiric TB treatment
3. Isolation

Diagnostic process: consideration and urgency

- Epidemiologic info
- Clinical presentation
- Pulmonary vs. Extrapulmonary
- Community risk (environment where the patient spends their time)

Isolation

- Home isolation
- “TB motel”
- Isolation at a hospital

Approach to a smear-negative patient when the lab reports AFB growth

- Review TB risk factors (epi risk and medical risk for progression) and imaging → Level of clinical suspicion

High	Uncertain/Unclear	Low
Initiate Rx Isolation	**Consider Rx if benefits>risks** 1. Risk of progression 2. Risk of transmission 3. Risk of adverse effects	**No treatment** Wait for final ID ?isolation

Re-evaluate for other diagnoses while ID is pending

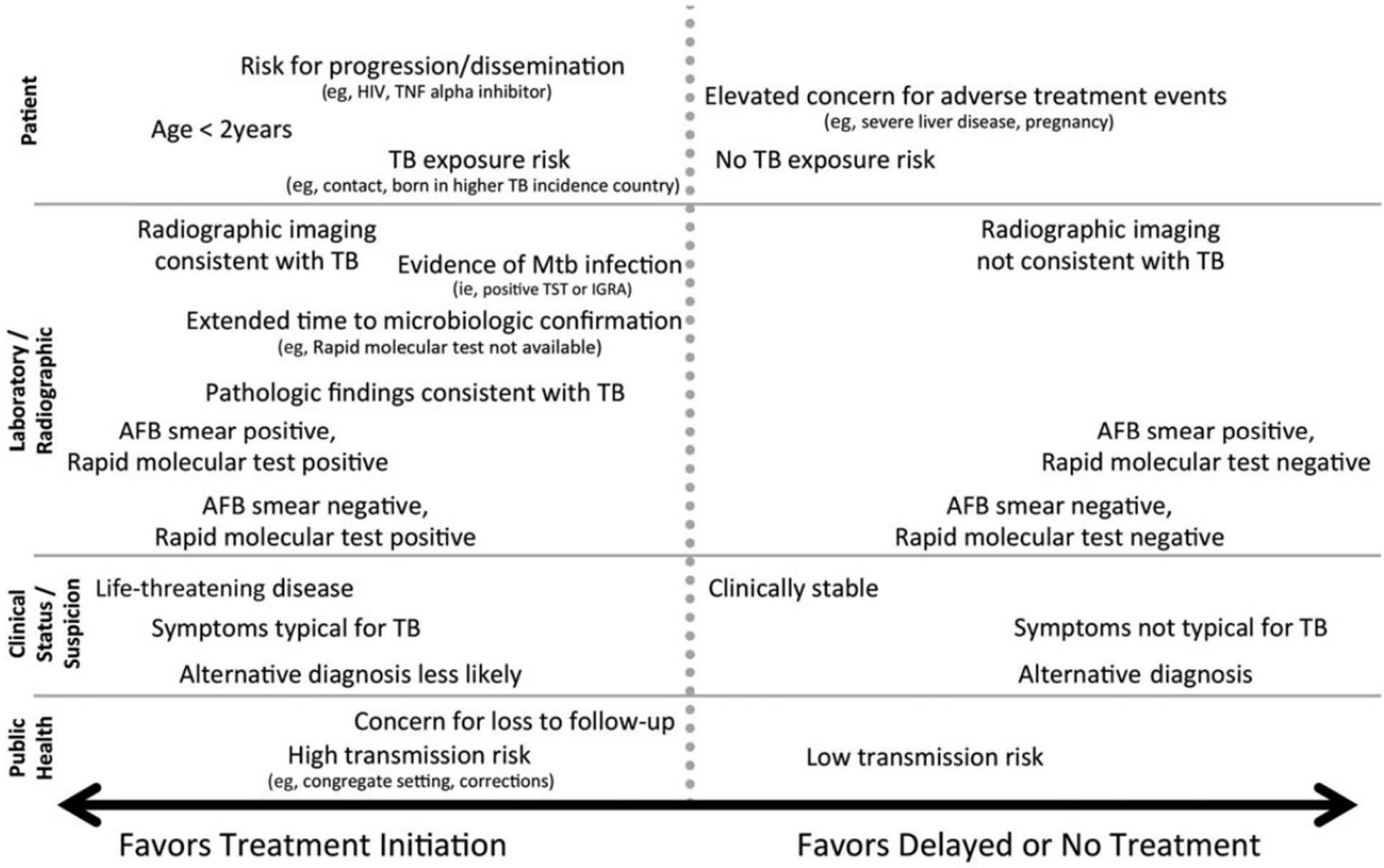
e.g., Repeat a CXR

Additional sputum for AFB smear/culture and NAAT

Clinical Infectious Diseases
IDSA GUIDELINE

Official American Thoracic Society/Centers for Disease Control and Prevention/Infectious Diseases Society of America Clinical Practice Guidelines: Treatment of Drug-Susceptible Tuberculosis

2016



CDC definition: "Confirmed TB Case"

- **Laboratory case definition**
  - *M. tuberculosis* by culture or NAAT, or
  - AFB smear + (if culture not obtained)

OR

- **Clinical case definition**
  1. Positive TST or IGRA, AND
  2. Compatible signs/symptoms/imaging findings, AND
  3. Response to treatment with 2 or more TB meds, AND
  4. Completed diagnostic evaluation

Miliary TB

- TB spreads via a hematogenous or lymphatic route.
- Mortality: 20-30 %
- Specimens:
  - Blood culture
  - Lymph node biopsy (if present, high yield)
  - Transbronchial lung biopsy
  - Bone marrow
  - Liver