**Medical Evaluation for Persons with Positive Test Results**

**Indicating TB Infection**

Massachusetts Department of Public Health

Division of Global Populations and Infectious Disease Prevention



**INTRODUCTION**

All persons with a positive interferon-gamma release assay (IGRA) or tuberculin skin test (TST) result for TB infection should be evaluated for active tuberculosis (TB) disease. This can be done in primary care or other clinical settings. The Massachusetts Department of Public Health supports a network of TB clinics in hospital facilities; referral to a TB clinic for this evaluation may be an option for primary care patients.

Prioritization for medical evaluation should be given to those patients at higher risk for progression to TB disease if infected, including:

* Patients with suspected or known immunosuppression
* Young children (under five years of age)
* Persons with recent close contact to persons known to have TB disease.

**MEDICAL HISTORY**

Relevant medical history includes information about:

* TB risk factors (should be done prior to testing for infection)
* Previous negative or positive tests for TB infection
* Previous prescribed treatment for latent TB infection or TB disease, including length of treatment, problems if any with treatment, and adherence
* Risk assessment for liver disease
* Risk factors or co-morbidities that would make the individual at higher risk for active disease

Written documentation of a previously positive TST or IGRA result is required; a patient’s verbal history is not sufficient.

Providers should consider travel and work history, psycho-social and/or behavioral risk factors in obtaining a medical history.

**DIAGNOSTIC CONSIDERATIONS**

A physical examination should be performed with special attention to findings that would be consistent with active tuberculosis (*e.g.,* weight loss, fever, lymphadenopathy, chest examination findings).

Chest radiographs help differentiate latent TB infection and pulmonary TB disease in individuals with a positive test for TB infection. The following guidelines are recommended:

* A chest radiograph should be ordered as part of a medical evaluation for a person who has a positive TST or IGRA result.
  + A chest radiograph is also indicated in the absence of a positive test result for TB infection when a person is a close contact of an infectious TB patient and treatment for latent TB infection will be started regardless of test result (*e.g.,* “window prophylaxis” in a young child or immunocompromised person).
  + Children less than 11 years of age should have both posterior-anterior and lateral views; all others should have at least posterior-anterior views.
  + Other views or additional studies should be done based on the health care provider’s judgment.
* Persons with nodular or fibrotic lesions consistent with old TB are high-priority candidates for treatment of latent TB infection after active TB disease is excluded.
* Persons with isolated calcified, discrete granulomas do not have an increased risk for progression to active TB disease.
* Once evaluated and determined to have latent TB infection, “routine” periodic radiographs are not required. However, a chest radiograph, and history and physical examination should be done if symptoms consistent with TB are identified.

**Sputum Examination with AFB Smear, Nucleic Acid Amplification, and Culture**

Sputum examination is indicated for persons with positive test results for TB infection and either an abnormal chest radiograph or the presence of respiratory symptoms (even when the chest radiograph is normal).

**INITIATION OF TREATMENT FOR LATENT TB INFECTION**

Treatment for latent TB infection may be recommended once active TB disease is excluded. In some cases, this may require waiting for culture results (up to 8 weeks). If active TB has not been ruled out and active TB still is possible, initiation of treatment for suspected TB with a standard 4-drug regimen may be reasonable, pending follow-up evaluation (including final culture results). A person in whom active TB is suspected should *not* be treated with a latent TB infection regimen to minimize the risk of inducing secondary drug resistance to first line drugs.

**RESOURCE INFORMATION**

World Health Organization. Chest Radiography in Tuberculosis Detection. 2016. <http://www.who.int/tb/publications/Radiography_TB_factsheet.pdf>

American Thoracic Society / Infectious Disease Society of America / Centers for Disease Control and Prevention Clinical Practice Guidelines: Diagnosis of tuberculosis in adults and children. *CID* 2017;64(2):e1–e33. <https://www.thoracic.org/statements/resources/tb-opi/diagnosis-of-tuberculosis-in-adults-and-children.PDF>

Centers for Disease Control and Prevention, Division of Tuberculosis Elimination

# Latent Tuberculosis Infection: A Guide for Primary Health Care Providers; Diagnosis of Latent TB Infection. <https://www.cdc.gov/tb/publications/ltbi/diagnosis.htm>

Core Curriculum on Tuberculosis: What the Clinician Should Know. Chapter 4 Diagnosis of Tuberculosis Disease. <https://www.cdc.gov/tb/education/corecurr/pdf/chapter4.pdf>

Massachusetts Department of Public Health[**TB Information for Your Patients**](https://www.mass.gov/lists/tb-information-for-your-patients-in-english-and-other-languages)<https://www.mass.gov/lists/tb-information-for-your-patients-in-english-and-other-languages>

For further information, contact the MDPH Tuberculosis Program at 617-983-6970.

**REGULATIONS**

**105 CMR 300**

Reportable diseases, surveillance, and isolation and quarantine requirements

<https://www.mass.gov/regulations/105-CMR-30000-reportable-diseases-surveillance-and-isolation-and-quarantine>