

Tuberculosis (TB) Blood Test: Interferon Gamma Release Assay (IGRA)

Provider Information and Guidelines for Interpretation

What is it?

Interferon Gamma Release Assays (IGRAs) are blood tests for detecting *M. tuberculosis* (*M. tb*) infection by measuring a person's immune response. White blood cells that recognize *M. tb*, release interferon-gamma (IFN- γ) when mixed with peptide antigens that stimulate *M. tb* proteins, including ESAT-6 and CFP-10. These proteins are not found in BCG strains and most non-tuberculous mycobacteria (NTM). IGRAs include the QuantiFERON and T-SPOT.TB tests.

A positive test can occur due to active tuberculosis (TB) disease or latent tuberculosis TB infection (LTBI).

What are the advantages of IGRA?

Prior BCG (Bacille Calmette-Guérin) vaccination and most NTM Infections do not cause a false-positive IGRA result.

Requires a single patient visit to conduct the test.
Does not boost responses for subsequent tests.

Less subject to reader bias and error when compared with the TST.

Downsides of IGRA?

Errors in collecting or transporting or in running and interpreting the assay can decrease the accuracy of IGRAs.

May be more expensive than a TST.

When should I use IGRA?

IGRAs are the preferred TB screening test in the following situations:

- Patients who have received a BCG vaccine.
- Patients unlikely to return for the TST reading.

When should I use both a TST and IGRA?

For immunocompromised patients at high risk of TB exposure or concerning symptoms, consider performing both tests and utilizing any positive result as evidence of infection.

Is IGRA covered by Medi-Cal?

YES! As of March 1, 2014, Medi-Cal removed the age restriction on Medi-Cal reimbursement of IGRA tests for children under 5 years old.

How do you interpret IGRA test results?

Negative: A negative TST or IGRA does not rule out active TB disease. A patient with symptoms or signs of TB disease should be evaluated with a CXR and may need sputum AFB smears/cultures/nucleic acid amplification testing based on symptoms and CXR results.

Positive: A positive test suggests TB infection or disease. Medical evaluation, including a chest x-ray, symptom review and exam are needed to evaluate for TB disease. If there are no symptoms or signs of TB disease and the CXR is normal, treatment for latent TB infection should be provided.

Indeterminate: Uninterpretable. Repeat IGRA or place TST per patient and provider preference.

Can IGRAs be done at the same time as receiving vaccinations?

Similar to TST, live virus vaccines (e.g., MMR, varicella) might affect IGRA test results. CDC recommends that both TST and IGRA testing in the context of live vaccine administration be done as follows:

- Either on the same day as vaccination with the live virus vaccine, OR
- At least 4-6 weeks after administration of the live virus vaccine.

Additional Information

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