



# TEST INFORMATION UPDATE

## Quantiferon Gold (QFT-Plus)

January 3, 2023

### QFT- Plus is the Interferon Gamma Release Assay of Choice at VUMC to Aid in diagnosing *M. tuberculosis* Infection

Individuals infected with *Mycobacterium tuberculosis* complex (Mtb) may develop symptoms and signs of disease (T.B. disease) or may have no clinical evidence of disease (latent tuberculosis infection, LTBI). Tuberculin skin test (TST) and interferon-gamma release assay (IGRA, also known as T.B. blood tests) are indirect tests to aid with the diagnosis of Mtb infection (1). IGRAs measure the cell-mediated immune response to Mtb antigens in whole blood. The QuantiFERON-TB Gold Plus (QFT-Plus) and T-Spot T.B. test (T-Spot) are the two commercially available IGRAs in the U.S.

QFT-Plus is the IGRA of choice at VUMC to aid with the diagnosis of *M. tuberculosis* infection.

The rationale for the recommendation:

1. QFT-Plus is performed in-house at VUMC, daily. Time to results is <48 hours
2. QFT-Plus test provides an objective interpretation of test results, allowing better reproducibility.
3. Meta-analyses demonstrate no differences in the rate of indeterminate results between QFT-Plus and T.Spot, in both adults (4) and children living with HIV (5).
4. The QFT Plus provides increased sensitivity over past iterations of the assay by detecting interferon-gamma released from both CD4+ and CD8+ T cells.

A secondary T-Spot test can be considered to

1. Resolve an indeterminate or borderline QFT-Plus test.
2. Confirm a negative QFT-plus test for patients with high clinical suspicion of T.B. disease, particularly those with cell-mediated immunity deficiency.

IGRAs should not be used to diagnose active T.B. infection, as the sensitivity and specificity are poor, particularly in acute illness (2-3). Instead, performing a culture with a well-collected specimen is recommended.

IGRAs should not be used for children <2 years of age – TST should be performed (6).

References:

1. Lewinsohn D.M., et al. Clin Infect Dis. 2017;64:111.
2. Metclafe J et al. J Infect Dis. 2011;204:S1120
3. Sotgiu et al. J Infect. 2019;79:444
4. Huo et al. BMC Infect Dis. 2016;16:350.
5. Meier et al. Front Pediatr. 2019;7:208.
6. RedBook: 2021-2024. Report of the Committee on Infectious Diseases, 32nd Ed