




# Peace of mind for patients living with HIV

Patients living with HIV are at increased risk for TB, and reliable surveillance is critical to protect their health. QuantiFERON-TB Gold Plus provides highly accurate detection of TB infection for immunocompromised patients in a single patient visit.

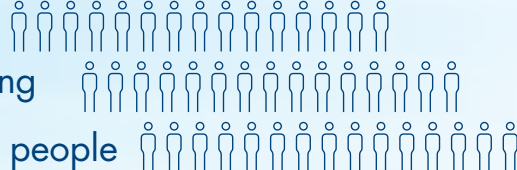


## People living with HIV are at increased risk for TB infection

**1.3 million**  **TB deaths worldwide (1)**

According to the World Health Organization, adults, adolescents, children and infants living with HIV should be prioritized for systematic testing and treatment of latent TB infection

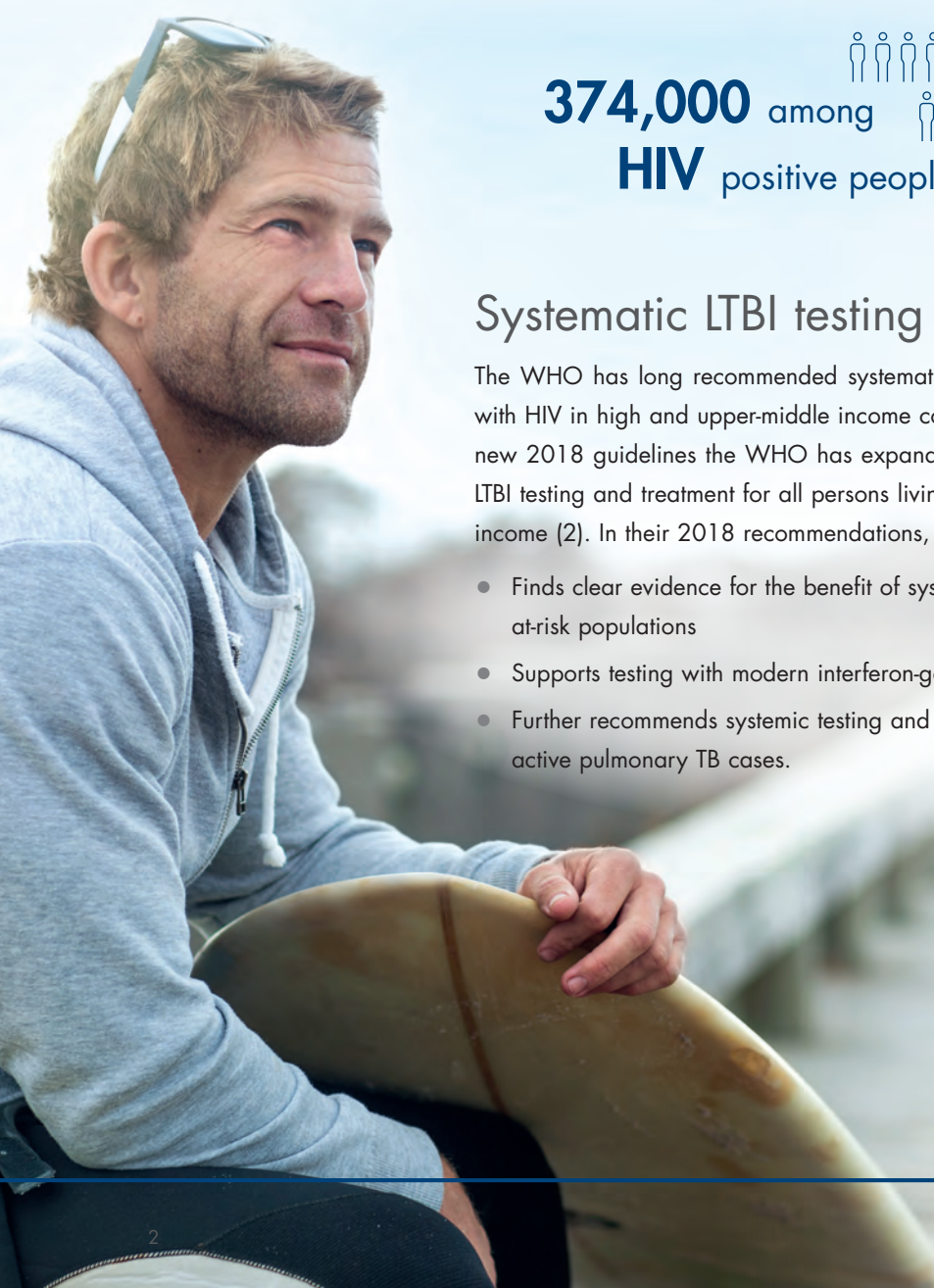
Tuberculosis is the leading cause of death globally among all infectious diseases, ranking above HIV/AIDS. One in 4 people in the world carry latent TB infection (LTBI) and face a ~10% average lifetime risk of developing active TB (2). As a result of immunosuppression, HIV infection is the largest known risk factor for reactivation of latent TB (1).

**374,000** among  **HIV positive people**

### Systematic LTBI testing protects your patients

The WHO has long recommended systematic LTBI testing and treatment for people living with HIV in high and upper-middle income countries with low TB burden. However, in their new 2018 guidelines the WHO has expanded this recommendation to include systematic LTBI testing and treatment for all persons living with HIV regardless of country incidence or income (2). In their 2018 recommendations, the WHO:

- Finds clear evidence for the benefit of systematic testing and treatment of LTBI for at-risk populations
- Supports testing with modern interferon-gamma release assays (IGRAs) globally
- Further recommends systemic testing and treatment for all household contacts of active pulmonary TB cases.



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## The WHO recommends QuantiFERON TB testing

QuantiFERON TB testing employs a simple blood test (IGRA) to aid in the detection of *Mycobacterium tuberculosis* infection. Unlike the TB skin test (TST or PPD), QuantiFERON TB testing requires only a single patient visit and is unaffected by prior BCG-vaccination. QuantiFERON-TB Gold In-Tube is one of only two commercially available IGRAs that were reviewed and recommended by the WHO in its 2018 guidelines on latent TB testing (2).

***The latest WHO guidelines recognize the need for high-burden countries to implement outreach and treatment for the most vulnerable patients with latent TB infection, in addition to treating those with the active disease. –***

Dr. Masae Kawamura, QIAGEN Medical Affairs

## Reliable test results for the immunocompromised

Published studies identify the potential benefits of QuantiFERON technology for patients living with HIV.

- In a study of 830 HIV+ individuals, QFT showed a 99% negative predictive value for disease progression (3):

***“... on the basis of our study results, we now strongly recommend chemoprevention to HIV-1–infected patients with a positive QFT-GIT result.”***

- In a study of 415 HIV+ individuals, IGRA tests demonstrated high positive predictive value, with 14.5% (8/55) of patients with positive IGRA results developing active TB within 120 days of follow-up (4).
- In a study of 256 HIV+ individuals, the TST demonstrated poor return rates among urban HIV-positive patients (5):

***“43% of patients who had a TST failed to return for test reading, and thus had no result available. Interferon gamma release assays require a single visit, and thus offer a clear practical advantage over the TST.”***

## Cutting-edge technology

CD4 T cell responses can be suppressed in HIV-positive patients, impairing detection of TB infection. The fourth generation QuantiFERON-TB Gold Plus test measures both CD4 and CD8 T cell responses, for a more complete picture of the patient's immune response to TB. Research indicates that TB-specific CD8 T cells are more frequently detected in those with active TB disease vs. latent infection are detectable in active TB subjects with HIV co-infection (6–9).

# Peace of mind with QuantiFERON-TB Gold Plus

In a published study of QFT-Plus performance in HIV+ patients, Telisinghe *et al.* found that QFT-Plus had improved overall sensitivity compared to both QFT and TST testing and was less impacted by very low CD4 counts (Figure 1 and Figure 2). The additional detection of CD8 T cell responses in the new QFT-Plus TB2 tube increased positive rates by 29% among people living with HIV (10).

**“Overall QFT-Plus sensitivity and indeterminate rates are not statically impacted by HIV status.”**

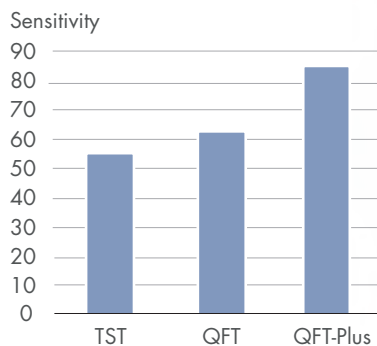


Figure 1. Test sensitivity in people living with HIV.

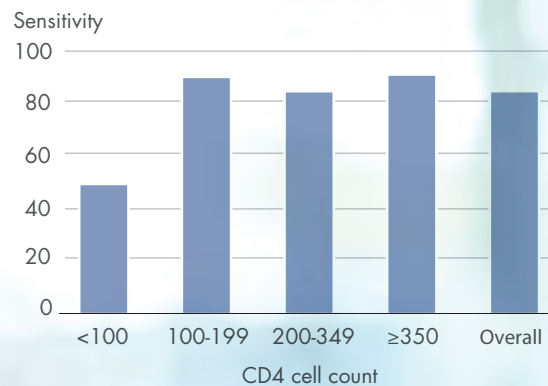


Figure 2. QFT-Plus test sensitivity by CD4 cell count in people living with HIV.

Patients living with HIV are at increased risk for TB infection. Provide the assurance of the most advanced test on the market – QuantiFERON-TB Gold Plus.

To find out more, visit [www.QuantiFERON.com/HIV](http://www.QuantiFERON.com/HIV)

#### References

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QuantiFERON-TB Gold Plus (QFT-Plus) is an in vitro diagnostic aid for detection of *Mycobacterium tuberculosis* infection. QFT-Plus is an indirect test for *M. tuberculosis* infection (including disease) and is intended for use in conjunction with risk assessment, radiography, and other medical and diagnostic evaluations. QFT-Plus package inserts, up-to-date licensing information and product-specific disclaimers can be found at [www.QuantiFERON.com](http://www.QuantiFERON.com) or can be requested from QIAGEN Technical Services or your local distributor.

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