TB OR NOT TB?

Now Available: QuantiFERON® - TB Gold Plus

Latest evolution of QuantiFERON® technology for tuberculosis (TB) infection evaluations

Now the right test — Now the right result
Selecting the Replacement Standard

QuantiFERON®-TB Gold Plus (QFT®-Plus) is the fourth generation in QuantiFERON-TB testing technology. This single blood specimen collection is recommended by the Centers for Disease Control and Prevention (CDC) for use in certain situations in which a tuberculin skin test (TST) is appropriate. Interferon Gamma Release Assays (IGRAs), such as QFT-Plus, are a modern alternative to the more than 100-year-old TST. QFT-Plus offers improved performance and is preferred in individuals who have received Bacille Calmette-Guérin (BCG) vaccination or who may not be in compliance for return visits to have a TST read.

Improving Upon Technology Limitations

QFT-Plus leads the industry with the new innovative CD8 cell technology.

- QFT has been shown to be more accurate than the TST in identifying people who may have latent tuberculosis (TB) infection.
- QFT has been shown to be more reliable than the TST in identifying those who may progress to active TB. QFT-Plus is >97% specific, nearly eliminating false-positive readings; and false positive rates for TST have been published as low as 3% in non–BCG-vaccinated populations and as high as 65% when using a 10-mm induration as the cutoff in BCG-vaccinated populations.
- QFT-Plus offers >94% sensitivity, decreasing false negatives.

- QFT-Plus is the latest IGRA technology for TB infection. This new assay adds an additional antigen that targets CD8+ T cells to provide clear objective results. During *M. tuberculosis* infection, CD4 T cells play a critical role in immunological control through secretions of the cytokine IFN-γ. Evidence now also supports a role for CD8+ T cells in host defense against *M. tuberculosis*. CD8+ T cells produce IFN-γ and other soluble factors.

- Moreover, research indicates that TB-specific CD8+ T cells that produce IFN-γ have been:
  - More frequently detected in those with TB disease (active) vs. TB infection (latent);
  - Associated with recent exposure to TB;
  - Detectable in active TB patients with HIV co-infection and young children who have TB.
### Advantages of QFT®-Plus

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<tr>
<th>TST Challenges</th>
<th>QFT Offers Improvements</th>
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<tbody>
<tr>
<td>Requires multiple office visits to inject and read the TST reaction</td>
<td>One office visit for single blood draw</td>
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<tr>
<td>Higher false-positive rate (than QFT-Plus)</td>
<td>&gt;97% specific, nearly eliminating false positives</td>
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<tr>
<td>Higher false-negative rate (than QFT-Plus)</td>
<td>&gt;94% sensitivity, decreasing false negatives</td>
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<td>Subjective result</td>
<td>Produces an objective result</td>
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<td>May be affected by previous BCG vaccinations</td>
<td>Unaffected by previous BCG vaccinations</td>
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<td>May boost subsequent TST test results</td>
<td>Does not boost subsequent QFT-Plus test results and less affected by prior TST</td>
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<td>TST approved for use to aid in the evaluation of TB</td>
<td>QFT-Plus is an approved alternative for use where TST is appropriate. QFT-Plus is also preferred in individuals who have received BCG vaccination or who may not be in compliance for return visits to have a TST read.</td>
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### AT RISK

The CDC states that individuals at increased risk for *M. tuberculosis* infection include:

- Those with close contact with persons known or suspected to have active tuberculosis
- Foreign-born persons from areas with a high incidence of active tuberculosis
- Visitors to areas with a high prevalence of active tuberculosis
- Residents and employees of congregate settings whose clients are at increased risk for active tuberculosis (correctional facilities, long-term care facilities, and homeless shelters)
- Health care workers who serve clients at increased risk for active tuberculosis
- Populations defined locally with increased risk of *M. tuberculosis* infection
References

For more information, including client-incubated test information, ask your LabCorp representative, or visit www.labcorp.com/testmenu.