

Low concordance between QIAreach QuantiFERON-TB, a novel interferon-gamma release assay, and QuantiFERON-TB Gold Plus, in a population-based survey in Blantyre, Malawi



WHY THE STUDY?

- Detecting infection with *Mycobacterium tuberculosis* (Mtb), the pathogen which causes TB, can be helpful for both individual risk stratification and monitoring population epidemiology.
- Current interferon gamma release assays for Mtb infection require multiple blood tubes and extensive laboratory processing, which are barriers to use in high-burden settings.
- A new test, QIAreach QFT, was designed to overcome some of these barriers, but has not previously been evaluated in a population-based cohort, or in young children.

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WHAT WE DID

We compared the performance of QIAreach QFT with conventional QFT-Plus IGRA, in a community-based survey in Blantyre, Malawi. Informed consent was obtained from participants aged 1-4 and 10-40 (or their guardians), a questionnaire was completed, and blood samples were taken for both assays.

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HOW WE ANALYSED

We processed both blood tests according to the manufacturer's guidelines, and compared the QIAreach QFT against the QFT-Plus reference standard to calculate sensitivity, specificity, and Cohen's kappa. We also constructed Bayesian hurdle-ordered categorical models to compare the quantitative values of the two tests.

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WHAT WE FOUND

- In contrast to previous studies in other settings we observed poor performance of QIAreach QFT, particularly in young children where there was little correlation between the novel test and the reference standard.
- Overall sensitivity and specificity were 62% and 74% respectively.
- There were a high number of results which were positive right at the assay cut-off of 20 minutes.

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WHAT THIS MEANS

This suggests the assay cannot currently be recommended for wider use, particularly in children, and further research is needed to identify an accessible test of Mtb infection.

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CONTACTS

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SCAN TO VIEW

