

**Quantitative Analysis of the Antigen-Specific T-Cell Interferon-gamma Response Measured Using QuantiFERON-TB Gold and T-SPOT.TB Assays, [Publication Page: A573]**

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**Introduction:** QuantiFERON-TB Gold (QFT-G) and T-SPOT.TB (TS.TB), two commercial interferon-gamma (IFN- $\gamma$ ) release tests for tuberculosis (TB) infection may produce discordant results in clinical practice. Their positive cut-off values have been identified based on surrogate diagnostic gold standard. We hypothesized that part of these discrepancies are due to borderline results.

**Methods:** consecutive subjects simultaneously tested with both QFT-G and TS.TB from October 2004 to August 2005 were enrolled. The antigen-specific IFN- $\gamma$  responses measured for ESAT-6 and CFP10 antigens were plotted using the recommended cut-off values and analyzed by linear regression.

**Results:** 330 pairs of tests have been analyzed. The correlation between the values measured with QFT-G and TS.TB was good ( $r=0.584$  for ESAT-6 and  $r=0.631$  for CFP10). Among QFT-G-negative/TS.TB-positive individuals for single antigens (47 for ESAT-6 and 52 for CFP10), most were TS.TB-positive at high levels ( $n=28$  [59.6%],  $29.3 \pm 22.1$  SFC, range 10-85 for ESAT-6;  $n=37$  [71.2%],  $21.3 \pm 13.6$  SFC, range 10-68 for CFP10); others responded to antigens at lower levels ( $n=19$  [40.4%],  $7.6 \pm 1.1$  SFC for ESAT-6;  $n=15$  [28.8%],  $7.7 \pm 1.0$  SFC for CFP10). QFT-G-negative/TS.TB-positive results were not over-represented among immunosuppressed patients.

**Conclusions:** the analysis of IFN- $\gamma$  levels produced after *M. tuberculosis*-specific stimulation identified QFT-G-negative individuals with a strong TS.TB response; these results were not associated with individual immunosuppression. Although it seems unlikely that such individuals have false positive TS.TB results, the analysis of risk and patients features need to be performed for a better understanding of their clinical value.

**Session Info:** [\*\*] Poster Discussion Session, [C23] CHALLENGES IN THE IDENTIFICATION OF THOSE WITH LATENT AND ACTIVE INFECTION WITH MTB

**Session Time:** 8:15 AM - 11:00 AM

**Presentation Time:** 8:15 AM

**Poster Viewing:** 8:15 AM - 9:15 AM

**Poster Discussion:** 9:15 AM - 11:00 AM

**Room:** Room 303 (Esplanade Level), Moscone Center

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