



AB021. Comparing the performance of two interferon-gamma release assays in autoimmune skin disease patients: a prospective study

Rebecca L. Krain^{1,2}, Rebecca G. Gaffney^{1,2}, Emily R. Keyes^{1,2}, Rui Feng³, Victoria P. Werth^{1,2}

¹Corporal Michael J. Crescenz VAMC, Philadelphia, PA, USA;

²Department of Dermatology, University of Pennsylvania, Philadelphia, PA, USA; ³Department of Biostatistics and Epidemiology, University of Pennsylvania, Philadelphia, PA, USA

Correspondence to: Victoria P. Werth, Department of Dermatology, Perelman Center for Advanced Medicine, Suite 1-330A, 3400 Civic Center Boulevard, Philadelphia, PA 19104, USA.

Email: werth@penmedicine.upenn.edu.

Abstract: Autoimmune skin disease patients are standardly screened for tuberculosis (TB) via interferon-gamma release assays (IGRAs) prior to starting immunosuppressive drugs or enrolling in clinical trials. Two commercial IGRAs, T-SPOT.TB (T-SPOT) and QuantiFERON-Tb Gold (QFT-G), are reported as either determinate (positive or negative) or indeterminate. Both tests utilize similar immunoenzymatic reactions for interferon-gamma detection, but differ in quantification. Though QFT-G is more widely used, studies have demonstrated that T-SPOT has lower rates of indeterminate results in immunosuppressed patients. The newest generation of QFT-G, QuantiFERON-TB Gold Plus (QFT-Plus), has not been compared to T-SPOT in this patient population. We aim to investigate the performance of T-SPOT and QFT-Plus in autoimmune skin disease patients. This

prospective study included 48 patients. Venous blood samples were collected and underwent TB screening with QFT-Plus and T-SPOT IGRAs. The proportions of indeterminate and determinate results among the two tests were compared. There were 2 indeterminate results with QFT-Plus and no indeterminate results with T-SPOT. There was one positive result for QFT-Plus and T-SPOT. Using a one-tailed Fischer test, there was no statistical significance when comparing QFT-Plus and T-SPOT in autoimmune skin disease patients ($P=0.25$). Although not statistically significant, it is clinically important as indeterminate results preclude these patients from receiving necessary treatment. Compared to previous studies on QFT-G, QFT-Plus showed improvement in reducing the amount of indeterminate results. We suggest using T-SPOT in TB screening for autoimmune skin disease patients who have an indeterminate QFT-G or QFT-Plus, as this test did not display any indeterminate results.

Keywords: Autoimmune skin disease; interferon-gamma release assay; T-SPOT.TB (T-SPOT); QuantiFERON-Tb Gold (QFT-G)

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