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ABSTRACT BOOK

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PS-94968-05 Early treatment response predicts MDR-TB, treatment failure and mortality

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Aim: Worldwide, patients are usually only tested for MDR-TB if they survive failing to respond to 4–8 months of empiric first-line therapy. The resultant delay in MDR-TB diagnosis risks transmission, drug-resistance amplification, morbidity and mortality. We therefore assessed early predictors of treatment failure and MDR-TB to identify a high-risk group for early focused MDR-TB testing.

Methods: Unselected patients who adhered to DOTS for pulmonary TB in Peruvian shantytowns were included. Treatment failure was defined as death or lack of cure during 6 months of treatment. In the first community, weight change and sputum microscopy results during early treatment were used to define risk factors for treatment failure. These factors were then evaluated in patients in a nearby shantytown for predicting treatment failure, 5-year outcome (failure, death or recurrence) and MDR-TB.

Results: Treatment failed to cure 9.1% of 460 patients. The best predictors of failure were weight loss or positive sputum microscopy. After 1-month of therapy, 23% of patients had these risk factors, which included 65% of patients whose treatment later failed. By 2-months therapy, 30% of patients had these risk factors, including 74% of treatment failures. When these risk factors were evaluated in a sec-

ond population, after 1-month they were positive for 26% of 411 patients, including most patients with MDR-TB or poor outcome. By 2-months of therapy, these risk factors defined the third of patients who had 3-times the hazard of poor 5-year outcome (graph, $P = 0.0003$) and who included 74% of treatment failures and 80% of MDR-TB.

Conclusion: Weight loss or positive sputum microscopy during the first 2-months of TB therapy are risk factors that identify approximately a quarter of patients, including three-quarters of those whose treatment will fail and 80% of MDR-TB. Thus, patients with these risk factors during early TB treatment should receive enhanced care including early and rapid MDR-TB testing.

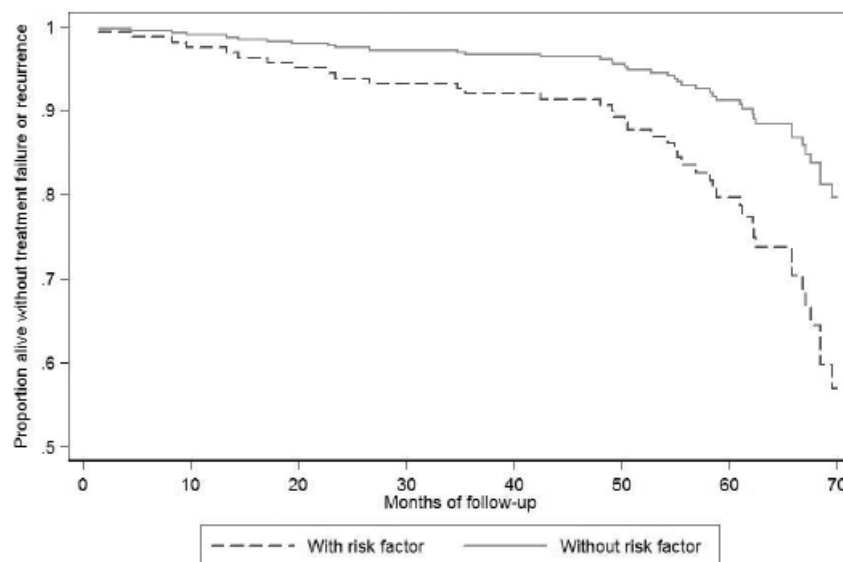


Figure Weight loss and sputum microscopy predict TB outcome.