

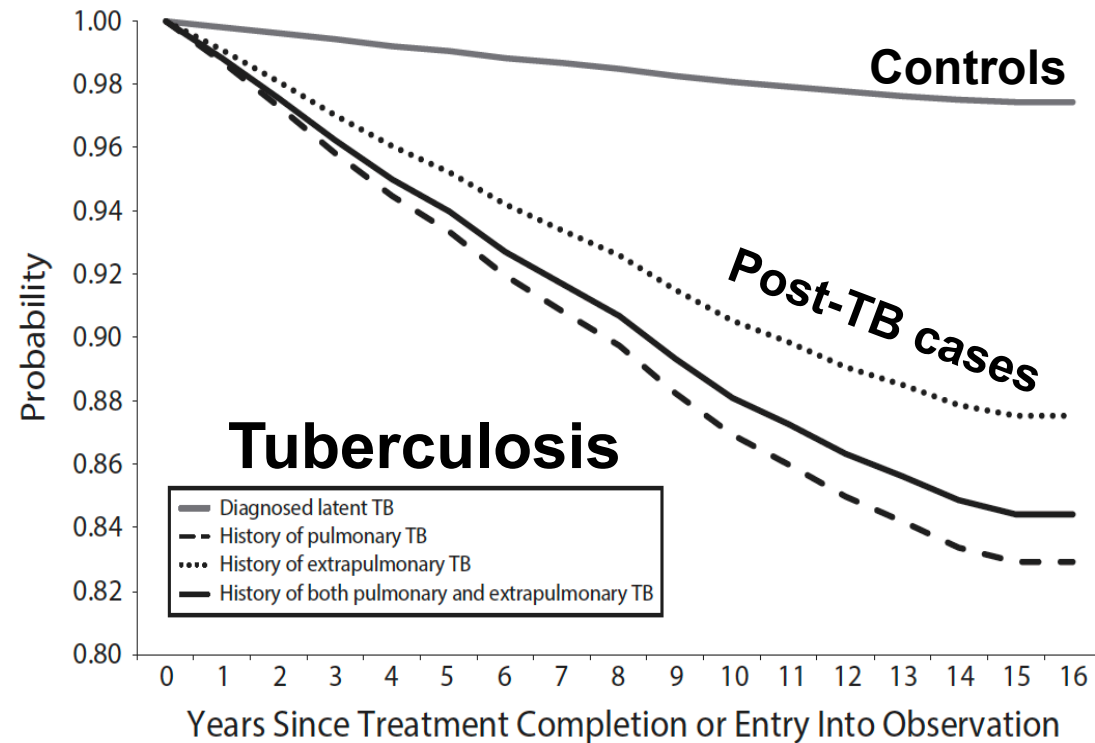
World TB Day Updates: Post-TB M&M

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How should we define treatment success?



2019 Meta-analysis:
TB patients die 3.7-
fold increased risk
compared to
propensity matched
controls

Note. TB = tuberculosis. Treatment completion indicates a history of active TB; entry into observation indicates no history of active TB.

FIGURE 1—Age, gender, race/ethnicity, HIV status, and nativity-adjusted Cox regression survival probability by tuberculosis history: Centers for Disease Control and Prevention's National Death Index; Texas, Massachusetts, and Seattle and King County, WA; 2008.

Estimated long-term outcomes for 10^7 TB patients

~10,000,000

TB Cases a year



5-year outcomes

In-Rx death	10-15% CFR	1,500,000 deaths/ yr
Relapse	2% ² ;	200,000 relapses/ yr
Post-Rx death	2-6/ 100 PYs; ³	105-300,000 deaths
Post-Rx CVD	1.7 CVD/ 100 PYs ³	88,000 CVD deaths
Post-Rx Cancer	1.2 Cancer/ 100 PYs	60,000 Cancer deaths
Lung DysFxn	15% severe	7,500,000 severe PTLD

References & Notes

1: 2021 WHO Report; * TB mortality dramatically reduces once antimicrobial therapy is started.

2: Vega et al 2021, BMJ Thorax, PMID: 33547088; alternative reference PMID: 20074418

3: Romanowski & Lee-Rodriguez;

4: Blondal: 81 post-TB CVD deaths; * only represents CVD deaths, not all CVD.

5: Christensen; 22% Post-TB mortality due to Cancer; only represents Cancer deaths, not all cancers

6: Ravimohan 2018; 2020; Pasipanodya 2007

How can we decrease post-TB Morbidity and Mortality?

Adjunctive host-directed therapies for pulmonary tuberculosis: a prospective, open-label, phase 2, randomised controlled trial

Robert S Wallis, Sibuse Ginindza, Trevor Beattie, Nishanee Arjun, Morongwe Likoti, Vinodh A Edward, Mohammed Rassool, Khatija Ahmed, Katherine Fielding, Bintou A A hidjo, Mboyo DT Vangu, Gavin Churchyard

Clinical Infectious Diseases

MAJOR ARTICLE

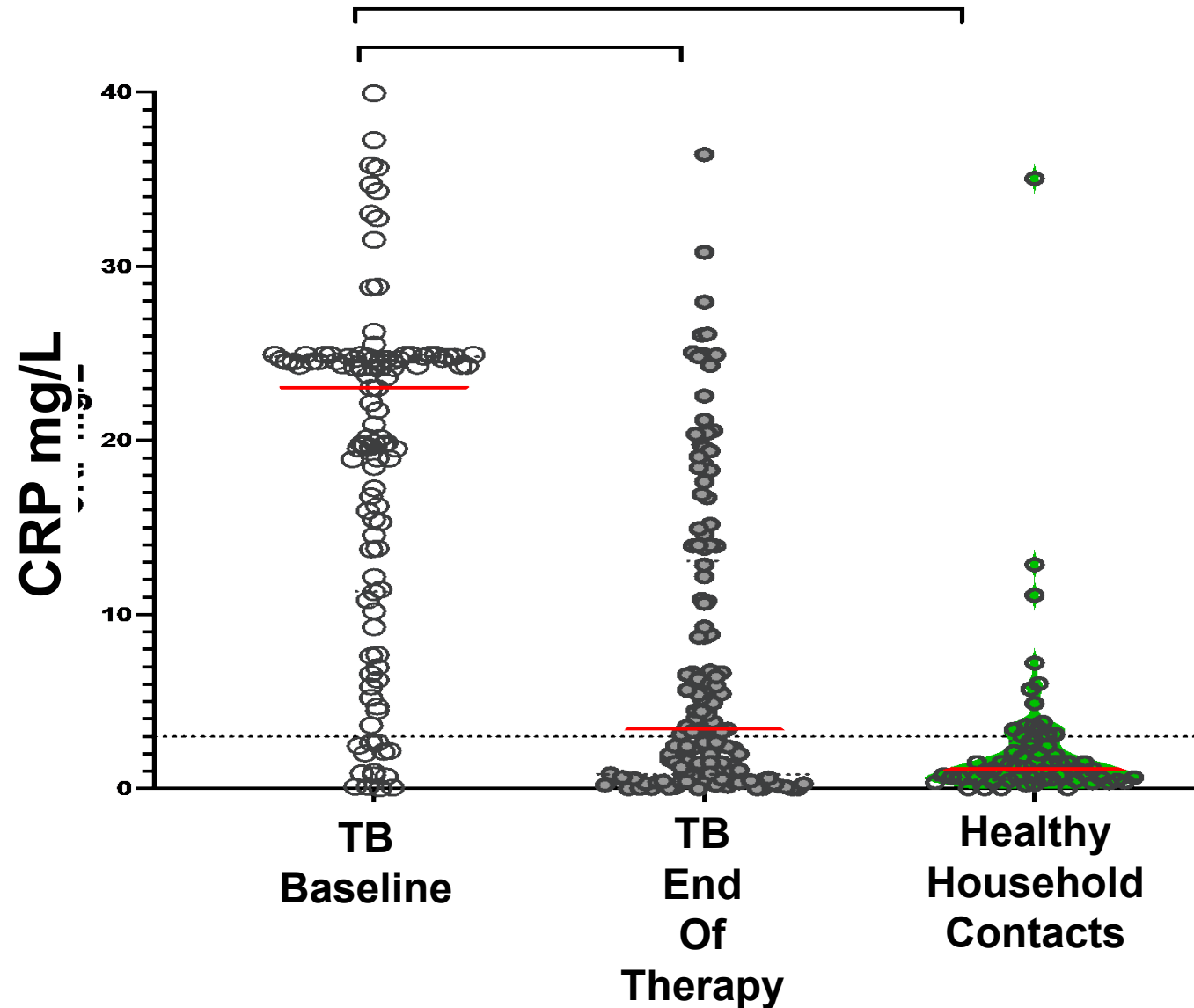


OXFORD

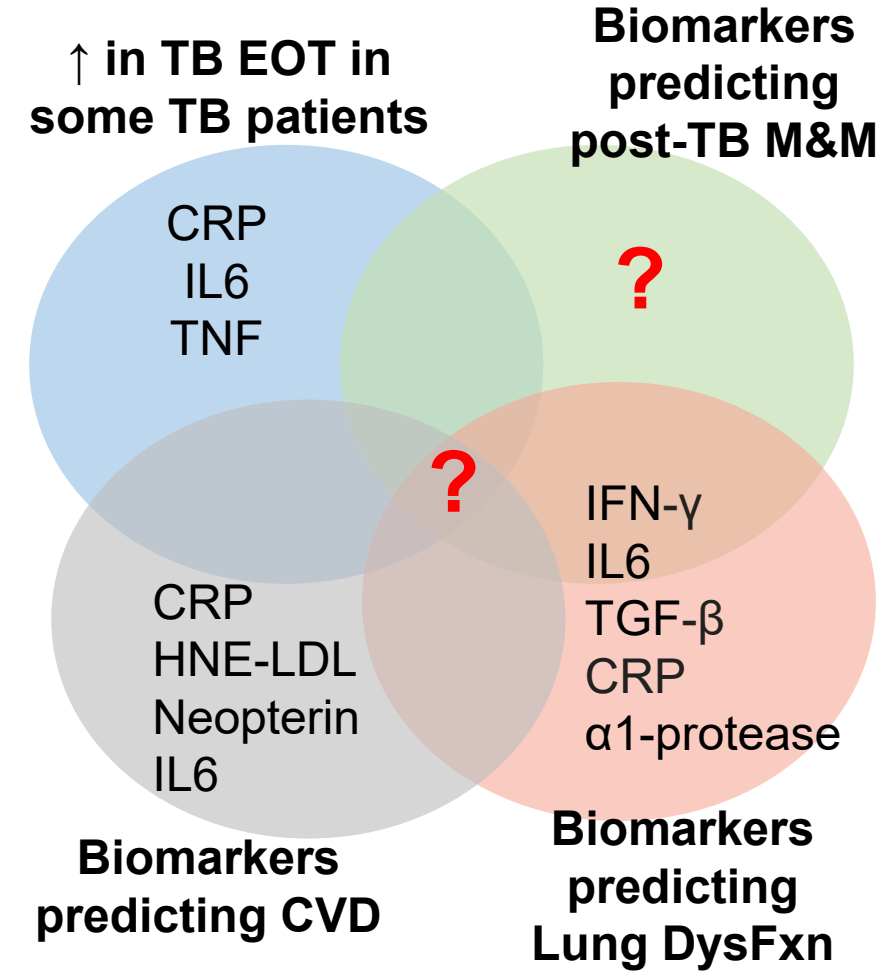
Randomized Trial of Metformin With Anti-Tuberculosis Drugs for Early Sputum Conversion in Adults With Pulmonary Tuberculosis

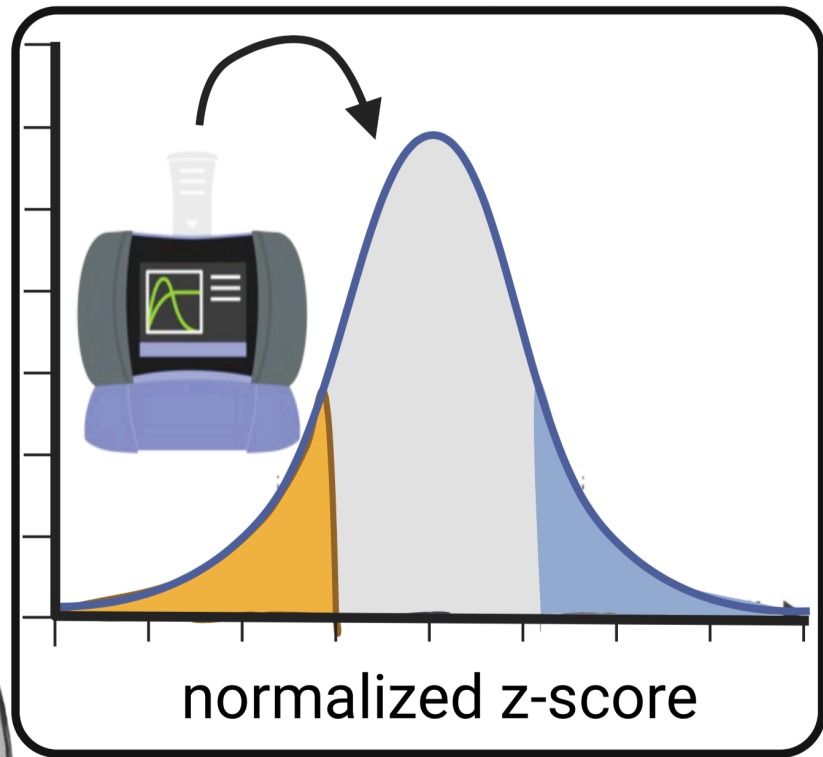
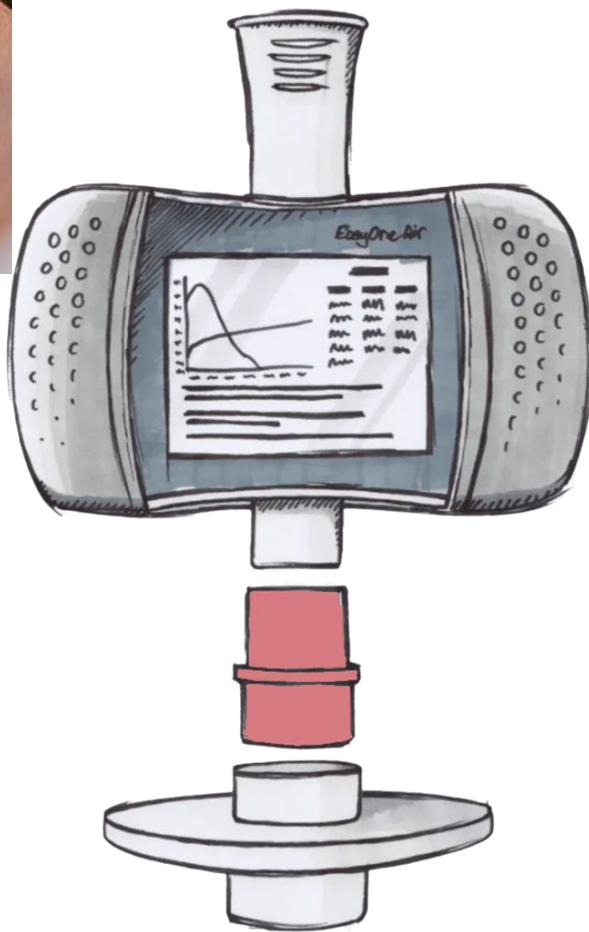
Chandrasekaran Padmapriyadarsini,¹ Megha Mamulwar,^{2,a} Anant Mohan,^{3,a} Prema Shanmugam,¹ N. S. Gomathy,¹ Aarti Mane,² Urvashi B. Singh,³ Nathella Pavankumar,¹ Abhijeet Kadam,² Hemanth Kumar,¹ Chandra Suresh,¹ Devaraju Reddy,¹ Poornaganga Devi,¹ P. M. Ramesh,⁴ Lakshmanan Sekar,¹ Shaheed Jawahar,⁵ R. K. Shandil,⁵ Manjula Singh,⁶ Jaykumar Menon,⁵ Randeep Guleria³, and the METRIF Team

Eswatini Post-TB inflammation



Approach to identifying *mechanisms* and biomarkers of post-TB morbidity and mortality





Houston Ben Taub TB clinic

- Pulmonologist (Dr. Beth Guy)
- Infectious Diseases (Dr. Andrew DiNardo)
- PFTs and spirometry to assess for morbidity and debilitation
- Immune deficiency evaluations
- Therapeutic drug monitoring

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