



Mari Rose A. De los Reyes¹, Taane G. Clark², Timothy John R. Dizon¹, Martin L. Hibberd², Julius Clemence Hafalla², Ma. Cecilia G. Ama¹, Dodge R. Lim¹, Lorenzo T. Reyes¹, Virginia M. Aguilas¹, Inez Andrea P. Medado¹, Susana Campino², Anna Marie Celina G. Garfin³

¹ Research Institute for Tropical Medicine, Department of Health, the Philippines

² London School of Hygiene and Tropical Medicine, United Kingdom,

³ National Tuberculosis Control Program, Department of Health, the Philippines



INTRODUCTION

Globally, tuberculosis is the 10th leading cause of death and the leading cause of a single infectious disease (1). The estimated TB prevalence per 100,000 population aged ≥ 15 years in the Philippines was 434 (95% CI: 350–518) for smear-positive TB, and 1,159 (95% CI: 1,016–1,301) for bacteriologically confirmed TB during the 2016 National TB Prevalence Survey (2). The use of Xpert has improved detection, but since it relies on sputum it presents a challenge for use in some populations like children. We are investigating the use of blood sample as an alternative diagnostic tool. Using biomarkers, we may distinguish between active and latent TB or healthy individuals, predict disease progression, treatment efficacies, and clinical outcomes. The overarching aim of this study is to develop a TB human blood transcriptome response assay risk score that could be used to identify active TB and evaluate treatment response in reducing active TB.

METHODOLOGY

A. Preliminary activities



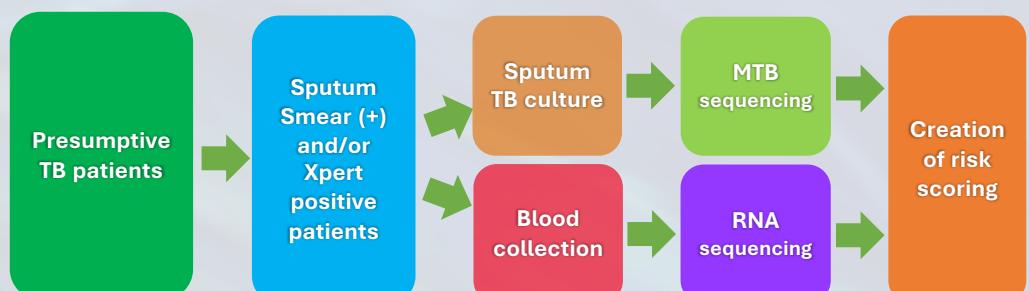
Meeting with LSHTM



Meeting with TB DOTS clinics

B. Study proper

We are following a cohort of patients with newly diagnosed TB (Cat 1), MDR TB and pediatric TB from diagnosis to cure or completion of TB treatment. The patient recruitment process is shown below.



PRELIMINARY RESULTS

A total of 61 TB patients and 51 non-TB patients are currently enrolled into the study (figure 1). Among the culture isolates, 32 have been found to be drug resistant. Drug resistance types of the isolates are shown in figure 2. Data collection and laboratory procedures are still ongoing.

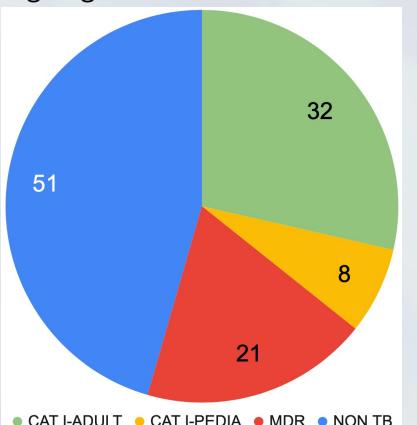


Figure 1. Patients enrolled

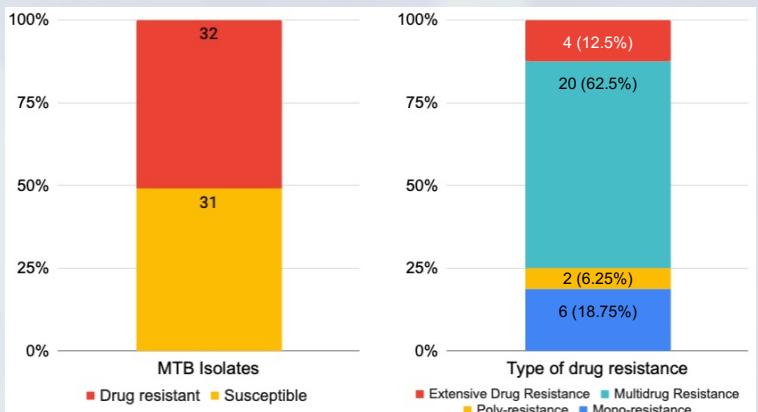


Figure 2. MTB isolate drug resistance

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