

	Total	Solid tumor	Hematologic tumor
Tuberculosis infection (patients, %)			
Lung and pleura	102 (89.5%)	62 (92.5%)	40 (85.1%)
Lymph node	8 (7.0%)	2 (3.9%)	6 (12.8%)
Hemoculture	2 (1.8%)	2 (3.9%)	0 (0%)
CNS	3 (2.6%)	2 (3.9%)	1 (2.1%)
Bone and joint	4 (3.5%)	3 (4.5%)	1 (2.1%)
Peritoneum	2 (1.8%)	2 (3.9%)	0 (0%)
Liver and spleen	3 (2.6%)	0 (0%)	3 (6.4%)
small and large bowel	3 (2.6%)	0 (0%)	3 (6.4%)
Otitis media	1 (0.9%)	1 (1.5%)	0 (0%)
Nasopharynx	1 (0.9%)	1 (1.5%)	0 (0%)
Pericardial	1 (0.9%)	0 (0%)	1 (2.1%)
Disseminated	14 (12.3%)	6 (8.9%)	8 (17.0%)
Treatment tuberculosis infection (patients, %)			
- Complete treatment	40 (35.1%)	23 (34.4%)	17 (36.2%)
- Unknown duration	36 (31.6%)	28 (41.8%)	8 (17.0%)
- Death before complete treatment	27 (23.7%)	8 (11.9%)	19 (40.4%)
- Loss follow up	11 (9.6%)	8 (11.9%)	3 (6.4%)

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1379. Comparison of Inpatient Tuberculosis Screening Methods and Their Effect on Patient Duration in Airborne Isolation

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Background. Tuberculosis (TB) remains a significant public health concern, and exposure in healthcare settings is prevalent. Current guidelines recommend testing for TB by acid-fast bacilli (AFB) smear microscopy with 3 sputum samples and/or using nucleic acid amplification test (NAAT), and mycobacterium culture. The purpose of this project is to compare how different TB diagnostic tests affect the duration of stay in respiratory isolation.

Methods. This study was conducted at the Veteran Affairs South Texas hospital, which includes a total of 437 beds. Data were collected retrospectively from medical records. Eligibility included patients admitted to the hospital and placed in airborne isolation for TB screening and diagnosis, had 3 sputum samples collected 8 hours apart and/or had 2 PCR MTB/RIF. Patients were excluded if they had TB or were not undergoing evaluation for TB. Three time periods analyzed included, 3 AFB sputum samples analyzed in-house from December 2012 to January 2014 (Group A), 3 AFB sputum samples analyzed at outside facility during 2013 to 2014 as well as 2 months in 2012 (Group B), and 2 MTB PCR/RIF in house during 2017 and 2018 (Group C). Duration of isolation was compared between groups using the Kruskal-Wallis test. A total number of 815 patients were screened, leaving 105 patients for analysis after exclusion. There were 49 patients analyzed from Group A, 28 from Group B, and 28 from Group C.

Results. Crude analysis of the data showed numerical differences in the total number of days and hours in isolation between the 3 groups. The average (mean) days in isolation were 4.2 for Group A, 7.4 for Group B, and 5.5 for Group C. There was no statistically significant difference in either days or hours of airborne precautions by "rule out" method. Days of isolation in airborne precautions (median IQR) was 4 for all groups ($P = 0.3313$). Likewise, hours of airborne precautions had a median IQR of 96 for all groups $P = 0.4347$.

Conclusion. Although there was no statistical significance between the groups, crude analysis did show a numerical difference in the mean total airborne days and hours. Lack of statistical difference may be due to low number of patients, timing of order placement for in-house PCR, and longer than expected stay in airborne precautions.

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1380. Safety of Repurposed Drugs for Multidrug-Resistant and Extensively Drug-Resistant Tuberculosis: An Analysis of Adverse Events Reported in the Literature

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Background. Multi and extensively drug-resistant (MDR and XDR) tuberculosis (TB) remains a treatment challenge due to drug adverse events (AEs) and long regimens. Our aim was to identify AEs which resulted from repurposing drugs for MDR and XDR-TB.

Methods. A PubMed search for case reports of repurposed drugs for MDR and XDR-TB from January 1, 2014 to October 23, 2018 identified 130 patients (78 MDR, 52 XDR) in 91 articles. There were 31 extrapulmonary, 81 pulmonary TB cases, and 18 with both. Drugs were regarded as repurposed if they were either not approved for TB by the FDA, or they were approved for TB but were used in novel populations, novel combinations, or nonstandard doses. Drug labels were reviewed for AEs.

Results. Linezolid ($n = 65$) and moxifloxacin ($n = 48$) were the most commonly repurposed drugs. The following were also frequently used: clofazimine ($n = 47$), levofloxacin ($n = 45$), amikacin ($n = 43$), amoxicillin-clavulanate ($n = 40$), kanamycin ($n = 36$), carbapenems ($n = 22$), and clarithromycin ($n = 17$). Of the drugs that are approved for TB, the following were repurposed in a novel population, dose, or combination: cycloserine ($n = 20$), bedaquiline ($n = 13$), capreomycin ($n = 4$), ethambutol ($n = 3$), and isoniazid ($n = 3$). Treatments were discontinued due to AEs in 41 patients. There were no discontinuations for amoxicillin-clavulanate and levofloxacin. Extended drug exposure is a unique treatment feature for MDR and XDR-TB, which often requires ~2 years of treatment. Approximately 87% of treatment discontinuations due to AEs occurred after >1 month of exposure. AEs leading to treatment discontinuation after > 6 months of drug exposure were seen in 15 cases, of which 12 were due to linezolid and cycloserine. Peripheral and optic neuropathy was the most common AE reported (linezolid $n = 12$, cycloserine $n = 1$). Most AEs were labeled events.

Conclusion. Several antimicrobials are being repurposed to treat MDR and XDR-TB. There were no AEs reported after prolonged use that was not described in drug labels. Physicians should review information in labeling if prescribing drugs in this manner. There is a need for comparative safety data for repurposed drugs assessed through clinical trials.

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1381. M. genavense in the ART Era: From Persistent Disseminated Disease to Severe Disease

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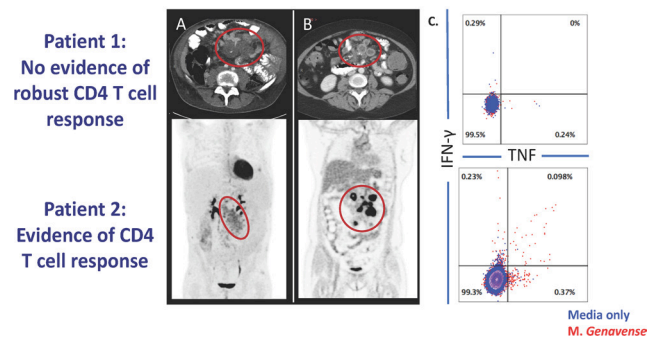
Background. *Mycobacterium genavense* is an opportunistic pathogen in HIV patients that is difficult to culture and difficult to manage clinically. Here we describe three cases of HIV patients with *Mycobacterium genavense* with courses representing the spectrum of *M. genavense* presentations in the current ART era complicated by differing divergent immune responses.

Methods. Two patients were in a longitudinal study at NIAID enrolling patients with HIV and suspected IRIS (PANDORA) (NCT02147405) and one was seen at St. James's hospital in Dublin. Frozen peripheral blood mononuclear cells were collected at the time of presentation and were used for in vitro stimulation with irradiated *M. genavense* in cases 1 and 2 to detect production of cytokines by CD4 T cells.

Results. Pt 1: 27-year old male with *M. genavense* presenting as diarrhea, abdominal pain, skin nodules, hepatosplenomegaly, and lymphadenopathy (LAN) that persisted on one year of anti-mycobacterial therapy and ART. No CD4 T-cell cytokine response to *M. genavense genavense* was detected (Fig 1). He received interferon- γ and optimization of his antimycobacterial regimen with improvement of symptoms and decreased pathogen burden on repeated biopsies. Pt 2: 55-year old female with *M. genavense* IRIS manifesting as fevers and abdominal pain that persisted for 10 months on ART (CD4 109 cells/ μ mL) requiring intermittent corticosteroid use complicated by adrenal insufficiency. She had evidence of CD4 T-cell response to *M. genavense* in vitro and improved with optimization of her anti-mycobacterial and corticosteroid regimen. Pt 3: 39-year-old male with *M. genavense* IRIS presenting as fevers, LAN, pleuritic chest pain, and abdominal pain on ART (CD4 19 c/mL) persisting despite immunologic response to ARV therapy (CD4 recovery to 419 c/mL), appropriate anti-mycobacterial therapy and corticosteroids. He required 4 doses of infliximab (5 mg/kg IV) that facilitated tapering of prednisone.

Conclusion. The clinical presentation of *Mycobacterium genavense* in HIV patients in the ARV era range from disseminated disease with poor immune reconstitution to persistent or severe IRIS requiring immune suppression. Effective clinical outcomes relied on appropriate anti-mycobacterial and either immune-boosting or immune-suppressive therapies.

1 year post *M. Genavense* diagnosis



Disclosures. All authors: No reported disclosures.