Conclusions Presence of cavitation on CT at diagnosis was strongly associated with use of anti-NTM antimicrobials, confirming findings of a previous South Korean study.¹ The proportion of patients receiving NTM treatment was no different between our two time periods. Interestingly, systemic immunosuppression (pathological or iatrogenic) was not associated with either need to commence treatment or negative outcomes, but treatment was less likely to improve symptoms in those ≥ 80 . A better understanding of who benefits from antimicrobial treatment for NTM-PD would aid patients and clinicians in making decisions about when to initiate therapy.

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P32

CUTANEOUS ADVERSE DRUG REACTIONS TO ANTI-TUBERCULOSIS THERAPY – AN ISSUE FOR FIXED-DOSE COMBINATION TREATMENTS?

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10.1136/thorax-2021-BTSAbstracts.142

Introduction Fixed dose combination (FDC) tablets for first-line anti-TB treatment (ATT) enable simple prescribing of multiple drugs with reduced pill burden. Cutaneous adverse drug reactions (CADR), can occur to both the individual components and the excipient ingredients. We noted rapid-onset severe rash appearing with Voractiv (Rifampicin, Isoniazid, Pyrazinamide, Ethambutol FDC) in some patients - prompting an assessment of CADR with different ATT drug combinations.

Methods We conducted a retrospective review of TB disease cases commencing standard 4-drug therapy January 2016 to February 2021. Patients were categorised by regimen: Voractiv only; Rifater (Rifampicin, Isoniazid, Pyrazinamide FDC) plus Ethambutol (E); and Rifinah (Rifampicin, Isoniazid FDC) plus Pyrazinamide (Z) and Ethambutol. Records were examined for history of clinically-significant rash in the first month of treatment (that prompted either treatment interruption or use of adjunct medications). Data were analysed with Chi-square & Fisher's exact tests.

Results 378 patients were assessed. Median age was 39 years, 44.2% were female. Main ethnic groups were Black-African (24.6%), White (20.1%), and Indian (18.5%). Moderate or severe rash within 1 month occurred in 5.3% (table 1). There was no clear relationship between this and age, sex, ethnicity, past medical history, or HIV/TB coinfection. Although frequency of rash requiring intervention was similar across the three cohorts, more rapid-onset rashes (less than an hour after first dose) were seen with Voractiv ($p = 0.03$).

There was no standard approach to investigation of rash including eosinophil counts and liver function testing, impairing our ability to detect systemic events. 5 of 6 Voractiv, 6/8 Rifater+E, and 4/6 Rifinah+Z+E cases had treatment reintroduction, though in only 2 was this with the original FDC. In 11 of 15, a culprit drug was omitted: Pyrazinamide (in 5), Isoniazid (3), Rifampicin (2), Ethambutol (1). Four continued without interruption receiving oral antihistamines and occasionally topical steroids; one had no intervention documented. **Conclusion** Despite convenience, our review suggests some FDCs may be associated with rapid-onset rash. Investigation

Abstract P32 Table 1 Frequency of clinically significant rash within first month of treatment by ATT regimen, January 2016 to February 2021

ATT regimen	Patients n	Rash requiring intervention n (%)	Rapid onset (≤ 1 hour) n (% of rash)
Voractiv	110	6 (5.5)	4 (67)
Rifater+E	143	8 (5.6)	1 (12.5)
Rifinah+Z+E	125	6 (4.8)	0
Total	378	20 (5.3)	5 (25)

of CADR was hampered by a lack of standardised management. If implemented, this would ensure consistency, plus early detection of systemic reactions and issues with specific drug batches.

P33

A RETROSPECTIVE REVIEW OF THE INVESTIGATION INTO PATIENTS WITH POSITIVE CULTURES FOR NON-TUBERCULOUS MYCOBACTERIA (NTM). JUST HOW MUCH WORK IS IT?

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10.1136/thorax-2021-BTSAbstracts.143

Introduction NTM patients are an increasing part of the workload of the mycobacterium service. Diagnosis can be challenging and often requires repeated samples, radiology and clinic attendances, all of which produces a significant workload on the multi-disciplinary team. In our hospital serving a population of ~270,000, this is done by the mycobacterium service, primarily set up to manage mycobacterium tuberculosis (MTB). We conducted a workload analysis for NTM in our service, with a view to assess and improve our performance.

Methods Data were collected retrospectively for all patients with a positive culture result for NTM between Nov 2017 and Dec 2020. For each patient, total number of samples sent, number of positive samples, radiology results, presence of symptoms, and whether they were assessed by the mycobacterium service were collected. Patients were then assessed against the British Thoracic Society (BTS) criteria for NTM disease.

Results Our centre received 358 positive cultures for NTM from 154 patients (81 (53%) male, 73 female; ages 3months to 91years with 3 under 18, median 55years). There were 1–14 positive cultures/patient (median 1) and 89 (58%) patients had only one positive culture. 15 different NTM were identified. 11 patients had 2 or more different NTM. 6 patients had NTM/MTB coinfectd. M.avium complex accounted for 63 (38%) of the 168 patient unique isolates (M.avium 45, M. chimera 16, M.intracellulare 2), followed by M.abcessus/M. chelonae 24 (14%), M.fortuitum 19 (11%), M.kansasii 15 (8.9%), M.gordonae 10 (6%), 10 were not identified by whole genome sequencing. Almost all positive cultures were sputum, 7 bronchoalveolar lavage, 3 pus, 3 early morning urine, 1 blood culture. Patients with more than one culture had CT imaging. Most patients had comorbidities: 8 cystic fibrosis, 10 HIV. 31 patients were treated for NTM disease.

Conclusions Despite only a small number of patients meeting the criteria for NTM disease, each single positive NTM culture generates a cascade of further investigations and work for the mycobacterium service. As a minimum, multiple samples, radiology and symptom assessment are needed. For those NTM associated with more complex comorbid disease, this often needs to be repeated over many months.

P34 5-YEAR EXPERIENCE OF LATENT TUBERCULOSIS INFECTION (LTBI) MANAGEMENT PRE-IMMUNOMODULATORY THERAPY AT A TERTIARY HOSPITAL INFECTIOUS DISEASES UNIT IN THE UK

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10.1136/thorax-2021-BTSabstracts.144

A growing number of immunomodulatory therapies that can increase the risk of reactivating latent TB infection (LTBI) are being used. Accordingly a broader range of patients screened for LTBI and referred to TB clinics bring new challenges to chemoprophylaxis risk benefit assessment. We describe 5 years' experience of LTBI management in our infectious diseases TB clinic.

We collected retrospective case note data for all LTBI patients who were assessed for chemoprophylaxis in the clinic between 1/9/2015–30/9/2020. We recorded interferon gamma release assay (IGRA) and tuberculin skin test (TST) results, choice of LTBI chemoprophylaxis and completion rates, and alanine aminotransferase (ALT) levels during treatment. We compared these outcomes according to patient age and gender, referring specialty, current and planned immunomodulatory therapy.

367 patients (48% female) were diagnosed with LTBI, 188 (51%, 47% female) of whom were pre-immunomodulatory therapy and significantly older (median age 56.2 vs 32.6 p<0.0001). This group were also more likely to have had a negative/indeterminate QuantiFERON-TB Gold (QFT) (25.5% vs 4.1%, p<0.0001), as were the 95/188 of these on immunosuppressive therapy when QFT tested (41% vs 9%, p<0.0001). In total, 25 different immunomodulatory treatments were planned by 7 referring specialties for >20 different conditions; anti-TNF (87 patients, 46.3%), other biologic/small molecule inhibitors (SMI) (38, 20.2%), checkpoint inhibitors (21, 11.2%) and DMARDs (14, 7.4%). Oncology referrals and the range of different agents both increased over the period, while overall numbers were stable.

90/188 (48%) patients initiated chemoprophylaxis, 50 with isoniazid (H), 40 with rifampicin/isoniazid (RH). Those initiating chemoprophylaxis were significantly younger (median 48.7 vs 63.5 years old, p<0.0001). Patients with planned anti-TNF (49, 56%) were more likely to initiate chemoprophylaxis than for other biologic/SMI (15, 39%) or immune checkpoint inhibitor therapy (19, 6%). 16 (18%) patients had any rise in ALT, 5 (6%) >5 times the upper limit of normal. 67 (74%) completed chemoprophylaxis, 6 stopped early due to ALT rises. No differences in these outcomes were seen according to chemoprophylaxis agent, gender or age.

Fewer than half pre-immunotherapy LTBI patients commenced chemoprophylaxis, reflecting older age, QFT uncertainty and an increasing variety of biologics/SMIs.

P35 NECK NODE TB: PERSPECTIVE FROM THE RAPID ACCESS HEAD AND NECK CLINIC

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10.1136/thorax-2021-BTSabstracts.145

Background Lymph node TB is the commonest form of extra pulmonary TB and in particular, neck node TB (approximately 20% local data). The 'neck lump pathway' was interrogated to understand differential diagnosis with regards TB and other pathologies.

Aim To assess fine needle aspiration cytology (FNAC) in the Rapid Access Head and Neck Clinic (RAHNC) to facilitate patient assessment, next investigation and appropriate timely out-patient review.

Method A retrospective review of all referrals during the period 01/01/2019–01/12/2019 was undertaken to assess whether initial assessment with FNAC was sufficient to plan on-going management of active TB.

Results 203 neck lump referrals were reviewed in RAHNC (median time from referral 9 days, IQR 4–35) as their first 2 week wait appointment; median age 53 (IQR 35–65); male gender 111 (55%); non-Caucasian ethnicity 83 (41%).

All referrals had initial FNAC and 18 (9%) underwent a second (table 1). First FNAC was diagnostic in 76% of malignant neck lumps. Further histology for diagnosis of cancer and/or staging required in 28 (44%) and in all lymphoma patients. A significant number of benign conditions (27%) required surgical biopsy to exclude malignancy.

TB suspected in 17 (8%); median age 42 (IQR 31–51); non-Caucasian ethnicity 13 (76%); initial FNA consistent with TB cytology (7 granulomatous; 8 necrotising; 1 caseating inflammation; 1 pus). A single patient underwent a second FNA for TB culture. 5 (29%) required excision biopsy (3 confirmed TB; 2 lymphoma).

TB diagnosed in 14 (7%) with 64% culture positivity: 7 fully sensitive; 1 Isoniazid resistance; 1 Rifampicin mono-resistance; 3 culture negative; 2 culture not performed).

Median time from first attendance to TB treatment start 47 days (IQR 27–76). All persons started on TB therapy completed their intended regimen duration.

Conclusion The RAHNC effectively investigates neck lumps of varied pathologies. A single FNA may be sufficient to

Abstract P35 Table 1 Fine needle aspiration cytology (FNAC) result by diagnosis and requirement for further histological clarification

	Final diagnosis frequency (%)	1st FNAC diagnostic (%)		Further histological diagnosis required	Histology required for IHC/staging
Head and neck cancer	45 (22)	61 (76)	37 (82)	8	20
Metastatic cancer	16 (8)		12 (75)	4	2
Lymphoma	19 (9)		12 (63)	7	19 (100%)
TB	14 (7)	11(79)		3	NA
Benign other	109 (53)	73 (67)		29 (27%)	NA

Abbreviations used: FNAC fine needle aspiration cytology; TB tuberculosis; IHC immunohistochemistry