Results 1656 subjects were seen (Active TB: 22%, Latent TB: 11%, Other final diagnosis not TB: 67%). 748 (45%) had all three BBV tests performed. This was significantly different between the groups, as subjects with either latent or active TB were more likely to have all three tests (Active: 90%, Latent: 83% vs Other diagnosis: 24%, P<0.001). In those tested, an HIV positive result was more frequently found in active TB (7.5%), whilst the HIV prevalence was similar in the two other groups (Latent 1.3% vs Other 1.4%). HBV was more common in Active & Latent TB populations compared to the Others (3% vs 0.8%, P<0.001). HCV had a similar prevalence pattern to HIV, in that it was more common in those with Active TB (3% vs Latent TB: 0.6%, Other 1%, P= 0.06).

Conclusion We find a high rate of uptake for HIV, HBV & HCV testing in our subjects treated for active and latent TB. HIV & HCV were more common in the former population. Adults with latent TB had a similar prevalence of HIV and HCV to those subjects whose final diagnosis was other than TB. However, the latter had a much lower overall uptake of BBV testing. This is of concern and suggests that we are missing opportunities to diagnose unsuspected BBV infection in a large number of clinic attendees.

P55 IDENTIFYING POTENTIAL PREDICTORS OF MORTALITY AND MORBIDITY IN TUBERCULOUS MENINGITIS (TBM)

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Introduction The early and prompt diagnosis of TBM is essential to improve outcomes. Delayed treatment leads to increased morbidity and mortality. Cerebrospinal fluid (CSF) findings may assist in early diagnosis as well as potentially identifying patients at high-risk of death.

Methods A retrospective analysis of patients treated for TBM from 2000–2010 was undertaken using the London TB Register. Data was collected from medical records and pathology results.

Results Mortality was 20% (8/41) and 12% (5/41) were left with permanent neurological deficits. Mycobacterium tuberculosis (MTB) was cultured from CSF in 37% (14/38). Mortality in patients in whom CSF was culture positive was higher than those whose CSF culture was negative (33% vs 16%). The mean value of CSF protein was higher in patients with poorer outcomes than those who recovered fully (2.72 vs 1.92 g/L).

Corticosteroids were given to 92% of patients (35/38). Of the three patients who did not receive steroids, one was left with a permanent disability.

Conclusions In our population, we observed high mortality and morbidity rates for patients diagnosed with TBM. A large proportion of diagnoses were not confirmed microbiologically. Higher mortality rates were observed in those whose CSF cultured MTB A possible explanation for this finding is that those patients for whom microbiological confirmation was not obtained, the presumptive diagnosis of TBM was not correct. There is a trend towards higher mortality and morbidity in those with higher CSF protein values. This may be an indicator of increased bacterial load with an associated increase in inflammatory cytokines.

P56 USE OF THE TUBERCULIN SKIN TEST AND TSPOT FOR SCREENING PRIOR TO TNF ANTAGONIST THERAPY IDENTIFIES ADDITIONAL PATIENTS ELIGIBLE FOR CHEMOPROPHYLAXIS COMPARED TO USE OF RISK ASSESSMENT STRATEGIES ALONE

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Patients with rheumatological disease who are treated with TNF antagonist therapy are at increased risk of reactivating latent tuberculosis infection (LTBI). It is believed that immunosuppressant therapy in this group may reduce the reliability of the tuberculin skin test (TST) due to a high incidence of anergy. The value of interferon gamma release assays in this setting is also unclear. The aim of this study was to assess the value of a combination of the TST and *Tspot* for screening in patients on immunosuppressants and compare to the BTS-recommended approach, which advocates treatment decisions based on risk stratification.

Methods Adult patients referred for TB screening to a tertiary centre prior to commencement of Anti-TNF therapy were included in the study. All patients received a uniform screening protocol of clinical history, chest radiograph, stratification of TB risk (by ethnicity and age according to BTS guideline risk-tables), TST and *Tspot*.

Results There were 137 patients included with 116 (84.7%) taking immunosuppressant medication at the time of screening. Of the sub-group on immunosuppressants, 17 patients (14.7%) had positive TST results (5 patients with result >15mm in presence of BCG, 12 patients with result >5mm in absence of previous BCG). Of this sub-group with positive TST results, 12 patients (70.6%) would not have been treated according to risk-stratification tables. Of the sub-group on immunosuppressants, 25 patients (21.6%) had positive *Tspot* results and 1 patient had an indeterminate result.

Of this subgroup with positive *Tspot* results, 17 patients (68%) would not have been treated according to risk-stratification tables.

When comparing strategies, use of risk-stratification tables alone would lead to 26 patients being treated with chemoprophylaxis. Addition of either positive TST and/or positive *Tspot* in patients not identified by risk stratification method led to an additional 22 patients eligible for treatment (9 patients *Tspot* positive alone; 7 patients TST positive alone; 6 patients double positive).

Conclusion Performing both a TST and *Tspot* in patients on immunosuppressants prior to commencement of Anti-TNF screening gives an additional yield of potential LTBI when risk assessment strategies alone would not have identified these.

P57 COMPARATIVE COST-EFFECTIVENESS OF IGRA TO DETECT LATENT TB INFECTION IN UK INFLAMMATORY BOWEL DISEASE PATIENTS INITIATING ANTI-TNFα AGENTS

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Introduction Two commercial Interferon Gamma release assays (IGRA) are approved in the UK by NICE to detect M tuberculosis (Mtb) infection. They use different test platforms. Both may provide borderline (neither clear positive or negative) or indeterminate (failure of control samples) results, especially in people taking immunomodulatory therapy. Since 2008, we have applied a standard IGRA-based assessment for latent Mtb infection in inflammatory bowel disease (IBD) patients being considered for anti-TNFα therapy. Initially this involved T-Spot.TB (TSTB) but in December 2010, our service switched to Quantiferon Gold In-tube (QFGIT). Here we review the performance and cost-effectiveness of these assays within our protocol.

Method Adult IBD patients were assessed using symptom review, chest radiograph (CXR) and IGRA Indeterminate/borderline IGRA were repeated and patients with persistently indeterminate/borderline results plus TB risk factors, or a positive result were referred to TB services. Cost per patient assessment used the average of assay costs and repeated assays plus onward referrals for those with indeterminate/borderline tests. Appointment costs were taken from

standard NHS tariffs. Immunomodulators were defined as thiopurines, methotrexate or prednisolone >20mg/day.

Results Between October 2008 and November 2010, 90 patients were tested with TSTB, of which 2 had a positive TSTB result and 5 borderline/indeterminate. From December 2010 until July 2012, 82 patients were tested with QFGIT, of which 3 had a positive result and 12 indeterminate/borderline (Table). 170 (99%) had normal CXR and a negative clinical assessment. 4 of 13 patients had two sequential indeterminate IGRA and also required assessment in TB clinic. The average price per patient was £60.66 for TSTB and £52.41 for QFGIT. 88% (152/172) have subsequently received treatment with either infliximab or adalimumab. No subjects have gone on to develop active tuberculosis.

Conclusion Using either platform, we find a comparable, low rate of LTBI in our IBD population. There appears to be a higher frequency of indeterminate results using QFGIT. This raises the average cost per patient, but overall, QFGIT remains more cost-effective than TSTB. Despite differing length of follow-up, the average time was sufficient in both, otherwise comparable, cohorts to detect likely development of active TB disease.

Abstract P57 Table 1 Characteristics of groups and results of screening assessment

	T Spot	Quantiferon
Number of subjects	90	82
Median Age [years], (range)	35 (17–70)	35 (17–76)
Risk Factors for TB	12%	16%
On immunomodulators	63/90 (70%)	66/82 (80%)
Pos IGRA	0	3
Neg IGRA	61	52
Borderline IGRA	1	2
Indeterminate IGRA	1	9
No immodulators	27/90 (30%)	16/82 (20%)
Pos IGRA	2	0
Neg IGRA	22	15
Borderline IGRA	0	0
Indeterminate IGRA	3	1
Cost/assay	£60.00	£35.00
Cost/patient assessment	£66.13	£52.41
Median follow up	29 months	13 months

P58 AN AUDIT OF TREATMENT OUTCOMES FOR PATIENTS WITH TUBERCULOSIS DIAGNOSED AT AN INNER LONDON TEACHING HOSPITAL BETWEEN 2000 AND 2010

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Background The WHO has the ambition that 85% of patients starting treatment for TB achieve treatment success (cure or treatment complete).[1] There has been considerable anxiety that poor treatment completion rates would lead to increased transmission of tuberculosis and perhaps drive increased drug resistance. We have been monitoring treatment outcomes for patients registering at our hospital since the year 2000. Here we report outcomes and analyse risk factors for treatment interruption for patients with tuberculosis registering up until 2010.

Methods All patients diagnosed with tuberculosis at an inner London teaching hospital between 2000 and 2010 were included in the study. Outcomes were recorded, as defined by the requirements of the London TB Register. Follow-up of patients is predominantly nurse-led with little day-to-day involvement from doctors. Samples are sent to the National Mycobacterial Reference Laboratory – Whitechapel, for culture and sensitivity testing with first line anti-tuberculous drugs. Sex, Age (Decade), HIV status, disease site (pulmonary or extra pulmonary) and resistance to any first line drug were evaluated to see whether they were associated with "ost to follow up", as opposed to all other outcomes, using chi-square test for proportions.

Results One thousand two hundred and forty two patients were identified. Ten patients (1%) had MDRTB, 714 58% were male, 981 (79%) were born abroad, 160 (13%) aged 0–20 years, 679 (55%) 21–40 years, 279 22% (41–60), 124 10% > 60, 164 (13%) were known to be HIV, 596 (48%) had pulmonary disease 147 (18%) of 803 with positive cultures had any drug resistance. None of the variables assessed were significantly associated with being lost to follow up.

Discussion Our nurse led TB programme has resulted in outcomes that meet international standards. Less than 5% of patients interrupt treatment. The results would probably improve if we obtained treatment outcomes for those who transferred out. None of the variables examined should be used as indicators for enhanced supervision.

1. World Health Organization - Stop TB Partnership. The Stop TB Strategy, 2006.

P59 TREATMENT AND DRUG SURVEILLANCE OF LATENT TUBERCULOSIS INFECTIONS (LTBI) BY A TB PHARMACIST: A PILOT STUDY

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Objectives To assess the safety and effectiveness of a pharmacist-led LTBI clinic.

Methods Patients identified by screening as having LTBI were seen by TB pharmacist at the weekly TB clinic. Initial interview included history of symptoms to exclude active TB. Baseline bloods were taken as well as a screen for blood borne viruses. Follow up appointments were scheduled at 2 weeks, one month and at the end of treatment. The TB pharmacist obtains written consent for therapy, dispenses medication and information leaflets regarding potential drug adverse effects. At follow-up appointments the pharmacist evaluates treatment adherence and potential adverse effects.

Results 62 latent TB patients were seen from 01/05/11 to 01/05/12. All patients were discussed at the TB-MDT. 51 (82%) patients were allocated to the pharmacist led clinic. The 11 (18%) patients seen by the Consultant Respiratory Physician had significant co-morbidities at initial interview, but subsequently were followed up by the pharmacist. Of the 51 patients, 50 started therapy and 1 patient did not attend the appointment. 9 (18%) patients reported adverse drug reaction. 46 (92%) patients successfully completed treatment, 3 (6%) patients did not complete therapy due to side effects and 1 (2%) patient was lost to follow up. The patient who did not attend subsequently developed active TB during the study period. Of the 9 adverse drug reactions reported, only 3 required treatment to be discontinued. No adverse drug reaction occurred due to drug interaction.

Conclusion A pharmacy-led clinic for LTBI is feasible and safe. Patients were happy to be seen by the pharmacist. Patients with poly-pharmacy benefited as they had a medication review to maximise therapy and reduce adverse drug reactions.

P60 HOW OFTEN DO PATIENTS WITH TUBERCULOSIS REQUIRE ENHANCED CASE MANAGEMENT?

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