

increasing incidence between 1994 and 2011, likely due to advances in antenatal diagnosis. The retrospective nature of this study means that patients with CTM who were not followed up postnatally and not imaged postnatally would not be included. The incidence provided therefore represents the minimum incidence. The increasing incidence of CTMs has therapeutic implications as the complication rates may be lower than previously reported.

## TB: Diagnosis and Management

### P24 DIAGNOSING TUBERCULOSIS USING EBUS-CYTOLOGY IS NOT ENOUGH

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**Introduction** Endobronchial ultrasound with transbronchial needle aspiration (EBUS-TBNA) provides a technique for safely sampling mediastinal and hilar lymph nodes. In the diagnosis of tuberculosis (TB) published data has shown excellent performance in identifying suggestive cytology but with disappointing culture-confirmation rates of <50%. We sought to investigate the proportion of TB cases referred to our tertiary referral service in whom culture and sensitivities were obtained.

**Methods** EBUS-TBNA was performed by 2 experienced consultants with on-site cytology review. Data was abstracted from our prospective database of all EBUS-TBNA cases between 01/2008 and 01/2013, our hospital electronic record and by contacting referring clinicians. A final diagnosis of active TB was made if treatment for active TB was commenced subsequent to EBUS-TBNA. Treated TB was defined as anyone who had received at least 2 months of anti-TB treatment prior to EBUS-TBNA.

**Results** A final diagnosis of active or treated TB was made in 142 of 2121 EBUS-TBNA cases (6.7%). Sampled nodes were: right para-tracheal 32%, left para-tracheal 9%, right hilar 16%, left hilar 8%, sub-carinal 35%. A median of 7 passes (range: 4–14) were performed per case. Granulomas with and without necrosis were identified in 91.5%, necrosis alone in 4.9% and lymphocytes alone in 3.5%. Of 118 (73%) diagnosed with active TB, culture-confirmation was obtained in 89 (75%) with a median time to positive liquid culture of 27 days (range: 4–42). Cytology from cases of treated TB and active TB with and without culture-confirmation are compared in the Table.

**Discussion** These data suggest that EBUS-TBNA can obtain higher proportions of culture-confirmed TB than has been previously reported. The similar cytology profile seen in active TB cases regardless of smear status, culture result or treatment history highlights the need for both adequate samples to be sent for culture and for improved TB diagnostics.

**Abstract P24 Table 1. Comparison of AFB smear and cytology results in cases with treated TB and untreated active TB.**

	AFB smear Ziehl-Neelsen	AFB smear auramine	Granulomas present	Necrosis present
Treated TB n = 24	19%	0%	92%	50%
Active TB (total) n = 118	37%	6%	92%	54%
Active TB (culture +ve) n = 89	43%	8%	90%	58%
Active TB (culture -ve) n = 29	19%	0%	97%	41%

### P25 SENSITIVITY OF THE XPert® MTB/RIF ASSAY IN BRONCHOALVEOLAR LAVAGE SAMPLES IN A NORTH WEST LONDON HOSPITAL: A USEFUL ADJUNCT TO CURRENT DIAGNOSTIC MODALITIES

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**Introduction and Objectives** The Gene Xpert® MTB/RIF test has been validated in sputum samples, facilitating rapid mycobacterium tuberculosis (MTB) diagnosis with improved sensitivity compared to smear alone. Its utility in bronchoalveolar lavage (BAL) samples, in a low prevalence setting, is unclear. Our objective was to examine the sensitivity of the Xpert® test in BAL samples and evaluate its use as a rapid diagnostic test in non-productive or smear negative patients undergoing bronchoscopy.

**Methods** We conducted a retrospective analysis of all culture-proven MTB samples acquired by BAL between 01.08.2009 and 01.06.2013, which were also sent for the Xpert® test, n = 38. We assessed the proportion of Xpert® MTB positive samples and compared these results with smear status and time to culture positivity.

**Results** 26/38 of the culture-proven cases sent for analysis were MTB Xpert® positive, giving a sensitivity (if culture is taken as the 'gold standard') of 68%. 17/38 samples were smear positive. Of the 21 smear negative/culture positive samples, 43% were MTB Xpert® positive. All smear positive cases were Xpert® positive. The Xpert® positive samples had a lower mean time to positivity: 11.2 days vs. 17.2 days for Xpert® negative samples. There was one case of rifampicin resistance correctly identified by Gene Xpert®, giving a lead time of 28 days vs. culture sensitivity. Incidentally 4 additional Xpert® positive samples were identified which were BAL culture negative, all in patients with clinically likely MTB, one of whom went on to culture MTB from sputum, and one of whom had necrotising granulomas on subsequent endobronchial ultrasound-guided transbronchial needle aspiration.

**Conclusions** To our knowledge this is the largest series reported of MTB culture positive BAL samples analysed using the Xpert® MTB/RIF assay. This data supports the use of Xpert® in the diagnosis of pulmonary MTB in BAL fluid, with a sensitivity of 68% when compared to MTB culture, adding additional value to simple smear and early detection of rifampicin resistance. In fact, the true sensitivity may well be higher given the cases detected exclusively by Xpert®.

### P26 UTILITY OF THE CHEST X-RAY IN THE ERA OF IGRA TESTING FOR LATENT TB PRIOR TO ANTI-TNF THERAPY

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**Introduction** Anti-TNF therapies are associated with increased risk of reactivation of latent *Mycobacterium tuberculosis* infection (LTBI). Screening for LTBI is recommended prior to commencing anti-TNF therapy. BTS guidelines for screening incorporate epidemiologic risk, clinical examination, Mantoux testing and chest radiography (CXR). Other guidelines recommend use of interferon gamma release assays (IGRAs). We audited the use of IGRA and CXR as part of screening for LTBI in