were divided into three groups - Current Smoker, Ex-Smoker and Non-Smoker. Data was obtained for spirometry results, number of hospital admissions with asthma in the preceding year, Asthma Quality of Life Questionnaire (AQLQ), Asthma Control Test (ACT) and British Thoracic Society (BTS) Step in Asthma Management.

Results See Table 1. The majority of the patients attending the asthma clinic were non-smokers 62/92 (72%), and only 9/92 (10%) were current smokers. Baseline characteristics were similar in all three groups. There were significant differences in FEV_1% ($p < 0.05$) and FEV1/FVC ratio ($p < 0.01$) among the groups, despite no statistical difference in the absolute FEV_1, absolute FVC and FVC%. Interestingly, the groups were similar in terms of number of hospital admissions with asthma in the preceding year, AQLQ score, ACT score and BTS step in Asthma Management.

Conclusions The proportion of smokers attending our asthma clinic is half that in the wider asthma population[1]. Smokers with asthma have lower FEV_1 as a% of predicted and FEV_1/FVC ratio than non-smokers. There were, however, no differences in other spirometric parameters, the number of hospital admissions with asthma in the preceding year, AQLQ score, ACT score and BTS step in asthma management. Smoking cessation may result in subsequent improvements in asthma control and quality of life without the need for escalating treatment.

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Respiratory interventional procedures

M10 21G VS 22G EBUS-TBNA NEEDLE SAMPLING AND CELL MORPHOLOGY OF THE CORE BIOPSIES AND NEEDLE WASHINGS: IS BIGGER BETTER?

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Introduction EBUS-TBNA has avoided the need for patients to undergo mediastinoscopy and can be done under conscious sedation with minimal complications for mediastinal lymph node sampling for lung cancer. The sample analysis varies depending on local expertice.

Objective

1. To compare histology (core biopsy) vs. needle washing cytology in achieving a diagnosis of malignancy.
2. Comparing biopsy results using 21G and 22G EBUS-TBNA needles.

Methods We reviewed all EBUS procedures performed at Glenfield Hospital, UK from 11 June 2008 till 24 April 2013. The results were then filtered to exclude the 1st 10 procedures in view of the learning curve in performing the procedure and EBUS from 1 January 2010–31 December 2010 (period when the EBUS-TBNA needles were changed from 22G to 21G). Only confirmed diagnosis of malignancy from the remainder were analysed for the study.

Results 543 EBUS procedures were done in the 2 periods of which 234 yielded a diagnosis of malignancy (69 and 165 respectively). 68% of 22G needle core samples provided cell type morphology vs. 87% using the 21G needle. Needle washing only provided cell typing in 30% and 28%.

The main cell types for the core biopsies were squamous cell carcinoma (19), adenocarcinoma (14) and small cell carcinoma (10) and in the 21G study adenocarcinoma (47), small cell carcinoma (34) and squamous cell carcinoma (28).

Summary The results show that switching from 22G to 21G EBUS-TBNA needles yielded a better diagnostic result in this study. Diagnosis based on cell types were also better using the 21G needles. Core biopsies gave better results compared to cytology from needle washings.

Potentially depending on local practices we could consider performing diagnostic sampling analysis on needle core biopsies only and 21G EBUS-TBNA needles gave a better diagnostic yield.

M11 ADEQUACY OF 22 AND 21 GAUGE EBUS-TBNA HISTOLOGY SAMPLES FOR GENOTYPING OF PRIMARY LUNG ADENOCARCINOMA

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Introduction Epidermal growth factor receptor (EGFR) gene mutations in non-small cell lung cancer have been shown to confer improved responsiveness to tyrosine kinase inhibitors. NICE recommends tyrosine kinase inhibitors as first line therapy in patients with locally advanced or metastatic tumours with EGFR gene mutations. Evidence from a multicentre retrospective study of 119 patients undergoing EBUS-TBNA to obtain cell block samples showed that EGFR mutation analysis was possible in 89.9% (107/119)[1]. Similar results 32/36 (88.8%) have been observed in a smaller more recent study[2]. The aim of this single centre prospective study was to evaluate the adequacy of EBUS-

Abstract M10 Table 1.

	1st Period (17.9.2008–31.12.2009)–22G Needle	2nd Period (2.1.2011–23.4.2013)–21G Needle
Total EBUS Procedures	122	413
Diagnosis of malignancy	69	165
Both histo/cyto same cell types(include NSCC)	29(42%)	39(24%)
Needle core histology confirm cell type (excl NSCC)	47(68%)	144(87%)
Needle core histology with cell type morphology (incl NSCC)	63(91%)	154(93%)
Needle washing cytology with cell type morphology (excl NSCC)	20(30%)	46(28%)
Needle washing cytology with cell type morphology (incl NSCC)	52(80%)	121(73%)