Introduction Lung nodules are a common incidental finding on chest imaging. Their identification on CXR or CT thorax is a common trigger for referral to the lung cancer MDT. Low risk nodules (<8 mm diameter, <300 mm³ volume, or <10% risk of malignancy on Brock Model) do not require urgent intervention, but may require CT surveillance. These patients, however, are usually aware that they have been referred as “suspected cancer” and require prompt reassurance. In Leeds Teaching Hospitals, patients with low risk nodules were previously brought to lung cancer fast-track clinics for initial consultation. In 2016, we introduced 10 min telephone appointments for patients with new lung nodules, followed by a letter and an information leaflet to the patient. The aim is to improve access to fast-track appointments for patients with a CT scan showing suspected cancer, while allowing patients with low risk lung nodules to receive reassurance sooner and with less inconvenience. We aim to assess the impact of this service on access to fast-track clinics and patient experience.

Methods Patients with new low risk pulmonary nodules were identified from MDT records. We sent surveys to the most recent 24 patients that attended fast-track clinics and 24 patients that had received telephone appointments.

Results During the first three months of the Leeds Pulmonary Nodule Service, a mean of 6 patients per week received telephone consultations, projecting to 325 patients per year. This improved capacity in the fast-track clinic by 4 new patient appointments per week, equivalent to 200 per year. The survey response rate was 13 (54.1%) from fast-track patients and 14 (58.3%) from telephone patients; Table 1.

Discussion The Leeds Pulmonary Nodule Service has led to increased availability of fast-track appointments for patients with suspected lung cancer and improved patient satisfaction and patient-rated quality of care for patients with low risk lung nodules. The new service is currently delivered solely by consultants and this may have impacted on the survey results.

Abstract P264 Table 1

	Type of clinic appointment	
	Face-to-face	Telephone
Travel time	Mean 60 min each way Two patients>2 hours each way	N/A
Appointment on time	46.2%	85.7%
Rating of explanation	Mean 4.1/5 69.2% score 4–5/5	Mean 4.6/5 85.7% score 4–5/5
Opportunity for questions	84.6%	85.7%
Provided written information	61.5%	92.9%
Overall rating of care	Mean 4.1/5 72.8% score 4–5/5	Mean 4.6/5 92.8% score 4–5/5
How would patients prefer to have had their appointment?		
Face-to-face clinic	66.7%	14.3%
No preference	8.3%	28.6%
Telephone clinic	25.0%	57.1%

P265 SURVEY OF NORTH WEST ENGLAND CT FOLLOW-UP OF PATIENTS POST RADICAL TREATMENT FOR LUNG CANCER

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Introduction There is not currently consensus in the UK regarding optimal follow up of patients with non-small cell lung cancer (NSCLC) after radical treatment. Survivorship clinics aim to detect treatment related complications, assess for disease recurrence, support patients (and families) as well as detect new primaries. Computed tomography (CT) is superior to chest x-ray (CXR) for NSCLC follow-up and although several professional bodies have issued guidance on CT follow-up after treatment, real-world practice on when to perform CT follow-up varies according to local protocols, resources as well as patient-related variables.

Aim To determine local patterns of CT surveillance in patients treated radically for NSCLC.

Methods An online questionnaire was sent to 40 different specialists involved in lung cancer treatment in the North West of England. They included respiratory physicians, thoracic surgeons, and clinical and medical oncologists.

Results 21 questionnaires were completed. Surveillance patterns varied between the treatment modality delivered and specialty. Following curative surgery (n=19 respondents): Short-term CT surveillance intervals varied between no routine CT (n=5), 3–6 monthly (n=4), 1–2 yearly (n=10). Following radical radiotherapy (n=16): Frequency of CT varied between no routine CT (n=4), 3–6 monthly (n=5) and 1–2 yearly (n=7). Following Stereotactic Ablative Radiotherapy (SABR) (n=7): Frequency of CT surveillance varied from 3–6 monthly (n=5) to 1–2 yearly (n=2). The total duration of routine follow-up also varied from ‘Indefinitely’ (n=2) to 5 years (n=16), and 10 years (n=3).

Conclusion This survey has demonstrated that wide variation exists in the NW England in relation to when to perform CT scans in patients who have had a radical treatment for NSCLC. There is no standardised follow up protocol for this patient group in NW England. An agreed protocol for follow up of patients after radical treatment for NSCLC based on variables that predict recurrence is needed. It is hoped that data from on-going research should help to inform follow up protocols in the future. We have demonstrated that there is a need for a more uniform and evidence based strategy for CT scan follow up of patients with NSCLC.

P266 EARLY LUNG CANCER TEAM INTERVENTION IN EMERGENCY ADMISSIONS

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Introduction Although the majority of cases of suspected lung cancer can be managed as outpatients where the diagnostic pathway is well developed, a proportion still present unwell via the emergency department where their subsequent journey is less certain. Along with same-day reporting for emergency scans, we have developed a rapid review service for such individuals and were interested in assessing its performance.

Methods We looked at all patients with suspected lung cancer who presented through our emergency department for the first 6 months of 2017, focussing on outcome, time to be seen following admission, and the histological diagnosis rate.

Results Of the 285 referrals to our lung cancer unit, 85 (32%) presented through the emergency department: 21 (25%) of these were discharged to outpatient cancer

investigation. The remaining 64 (75%) were subsequently admitted to 29 different locations (8 medical specialities, surgical, vascular and orthopaedic wards). Of these, 55 (86%) were seen by the lung CNS within one working day and an appropriate management plan initiated. This was aided by our live CT database, where 50 suspicious scans were coded the same day enabling early review by the lung clinician and CNS, often before formal referral from the responsible clinical team was made.

Overall 70 patients (82%) who presented as emergencies subsequently were diagnosed with a malignancy, and of these 34 (49%) had histological confirmation.

Conclusions Our Results show that, by coordinating care between the emergency and radiology departments and the lung cancer team, patients presenting unwell can be managed rapidly even if they remain in hospital. In addition, by actively seeking them out we can not only provide them with timely and appropriate investigations but also early CNS intervention, facilitating symptom management and psychological support.

P267

OPTIMISING TISSUE SAMPLING FOR THE MOLECULAR DIAGNOSIS OF LUNG ADENOCARCINOMA

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Background The development of drugs that target lung adenocarcinoma caused by epidermal growth factor tyrosine kinase (EGFR-TK) and anaplastic lymphoma kinase (ALK) mutations has focused the need to obtain sufficient tissue at biopsy to allow the detection of such molecular markers and so improve treatment options for selected patients. To investigate this further, we looked at the diagnostic yield from various biopsy techniques in our large lung cancer unit (400 cases per year, overall histological yield 77.5%).

Methods We collected data from all patients with an ultimate histological diagnosis of adenocarcinoma for the years 2014 to 2016, looking at the diagnostic method, whether tissue was analysed for molecular mutations, and whether repeat procedures were necessary for EGFR-TK and ALK testing.

Results 224 patients were identified: 42 by EBUS-TBNA, 66 by CT-guided biopsy, 44 at bronchoscopy, 66 at surgical resection, 6 from pleural fluid, and 1 by lymph node FNA. For molecular testing see Table. In addition to those patients where sampling was insufficient to make the diagnosis, a further 30 had inadequate cell numbers for mutation analysis and the reporting pathologist recommended repeat procedures. Of the 10 patients who underwent this, only 2 were retested for molecular markers, and the Results were unchanged.

Conclusion This study shows that all our pre-resection positive diagnostic samples for lung cancer do not always provide sufficient tissue for molecular analysis. Although insufficiency rates were similar between CT, EBUS and bronchoscopy, one third of CT-guided specimens had few cells for the definite exclusion of mutations. With the advent of new therapies for lung cancer, we need to optimise our diagnostic sampling techniques when testing for molecular mutations.

Abstract P267 Table 1 Rate of insufficient tissue or inadequate cell number for molecular mutation detection per sampling technique

Biopsy Technique	Insufficient tissue for EGFR testing (% of biopsy samples per sampling technique)	Insufficient tissue for ALK testing (% of biopsy samples per sampling technique)	Inadequate cell number for definitive molecular mutation detection (% of samples per sampling technique)
EBUS-TBNA	7.70%	12.80%	20%
CT-Guided Biopsy	9.50%	20%	35%
Bronchoscopy and biopsy	11%	11%	6.25%
Surgical resection	0%	0%	0%
Pleural fluid analysis	20%	20%	20%
Lymph node FNA	0%	0%	0%

Pharmacotherapies for COPD

P268

RELATIONSHIP OF INHALER ADHERENCE BEHAVIOUR TO CLINICAL OUTCOMES IN COPD: AN OBSERVATIONAL STUDY

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COPD remains a leading cause of healthcare use despite the availability of effective inhaled therapies. We examined adherence to maintenance therapy by assessing the key components of good inhaler use: habit of use and inhaler technique. The relationship between adherence patterns, specific patient characteristics and clinical outcomes at one year was examined.

We recruited 226 hospitalised patients with a diagnosis of COPD to this prospective observational study. Inhaler adherence was remotely monitored for 90 days after hospital discharge using an INCATM audio recording device. Cluster analysis grouped patients by their adherence behaviour based on the mean rate of attempted use and critical technique errors. The clinical and psychosocial characteristics of each cluster were examined. The rate of all-cause mortality and healthcare use at 12 months was recorded. Survival analysis was used to evaluate the time to first event across adherence groups. Adherence data was available for 195 patients. We identified four patterns of Adherence behaviour: (1) Regular habit of use and good technique (28%); (2) Regular habit of use and poor technique (21%); (3) Poor habit of use and good technique (33%); (4) Poor habit of use and poor technique (19%). The overall event rate was lowest in Cluster 1, 5.46/person/year. Cluster 2 had the lowest annual rate of hospital presentation, but accounted for the majority of community prescriptions for antibiotics and steroids, mean 4.6/person/