treatment rates has not previously been reported. Therefore we evaluated the impact on lung cancer diagnoses at our institution following a similar media based campaign piloted in the Midlands, with particular reference to lung cancer stage, patient fitness and treatment.

Method We conducted a case control cohort study comparing patients diagnosed at our institution in the 3 months following the campaign in 2011 to the same time period in 2010. Data on chest X-ray referrals were obtained from local imaging systems. Patient and lung cancer information were obtained from data submitted to the National Lung Cancer Audit. Statistical analyses were performed using SPSS.

Result are shown in Table 1. Following the campaign, GP chest X-ray referrals increased by 27%, whereas outpatient chest X-ray referrals remained unchanged. The number of lung cancers diagnosed increased by 24%. The proportion of patients with good performance status significantly improved, as did measured lung function. There was a 9% increase in early stage cancer although this did not reach statistical significance. However, the proportion of patients undergoing surgical resection significantly increased from 14% to 31%, $p<0.05$.

Conclusions The results suggest that the regional lung cancer public awareness campaign was successful in increasing GP and public awareness with a consequent increase in lung cancer diagnoses at our institution. Furthermore, patients appeared to present with better performance status and preserved lung function which may, together with the trend to earlier stage at diagnosis, explain the significant improvement in surgical resection rates. These results are very promising and wider evaluation of the regional campaign is awaited with interest.

References

Athey V, Suckling RJ, Tod AM, Walters J & Rogers TK. Early diagnosis of lung cancer: evaluation of a community-based social marketing intervention. Thorax May 2012; 67(5): 412–417.

Abstract P65 Table 1 Results before and after public awareness campaign

	2010		2011		p value
GP Chest x-ray	2458		3126		
Lung cancers diagnosed	49		61		
Good performance status (0–1)	19	39%	35	57%	**0.05**
Stage I-II	14	29%	23	38%	**0.31**
FEV1 (L)	1.46		1.89		**0.03**
FEV1%	65		80		**0.02**
Surgical resection	7	14%	19	31%	**0.04**

P66 IS EARLIER CT SCANNING FOR LUNG CANCER EXPOSING PATIENTS TO AN INCREASED RISK OF HARM FROM CONTRAST NEPHROPATHY?

doi:10.1136/thoraxjnl-2012-202678.207

B O'Leary, E Ghorani, AK Reinhardt. *Whipps Cross University Hospital, London, UK*

Introduction Contrast induced nephropathy (CIN) is the third most common cause of hospital-acquired acute kidney injury [1] and is associated with increased incidence of requiring dialysis, and with increased mortality. This is particularly the case in those with pre-existing renal impairment or other co-morbidities, such as diabetes or heart failure. Computed tomography of the chest with IV contrast is now an integral part in the diagnosis and staging of patients with lung cancer. In an effort to reduce time to diagnosis, contrast studies are routinely performed early, often prior to first review in secondary care. As a result, this population may have inadequate assessment of CIN risk. To investigate this further we carried out a retrospective analysis of the monitoring of the renal function of patients with lung cancer who underwent a CT chest with contrast at a London teaching hospital.

Methods A consecutive series of 100 patients diagnosed between November 2011 and January 2012 was identified using the local lung cancer registry. We examined how frequently renal function was monitored in relation to the patients' CT chest scans. Whether this was clinically adequate was decided with reference to recommendations from the Royal College of Radiologists.

Results Of 30 CKD patients, 14 (47%) had appropriate pre-contrast bloods. Of patients identified as having diabetes (n=10), 50% had appropriate pre-contrast bloods.

Of 29 patients admitted acutely, 28 (97%) had appropriate pre-contrast bloods.

Of the 37 remaining patients, outpatients with normal renal function, 26 (70%) had appropriate pre-contrast bloods.

Conclusions This study demonstrated that almost all inpatients undergoing CT chest with IV contrast had appropriate monitoring of their renal function. However, this was true of a significantly lower proportion of outpatients. Perhaps of most concern was that approximately half of those patients at the highest risk of developing contrast-induced nephropathy were monitored appropriately. We suggest that earlier CT scanning, in the interests of expediting diagnosis and treatment, could be exposing more patients to increased risk of harm associated with administration of IV contrast.

References

1. Hou SH et al. Hospital-acquired renal insufficiency: a prospective study. Am J Med. 1983; 74243–8.

P67 LUNG NODULE FOLLOW-UP SURVEY OF LONDON AND EAST OF ENGLAND HOSPITALS: WHAT ARE WE ACTUALLY DOING?

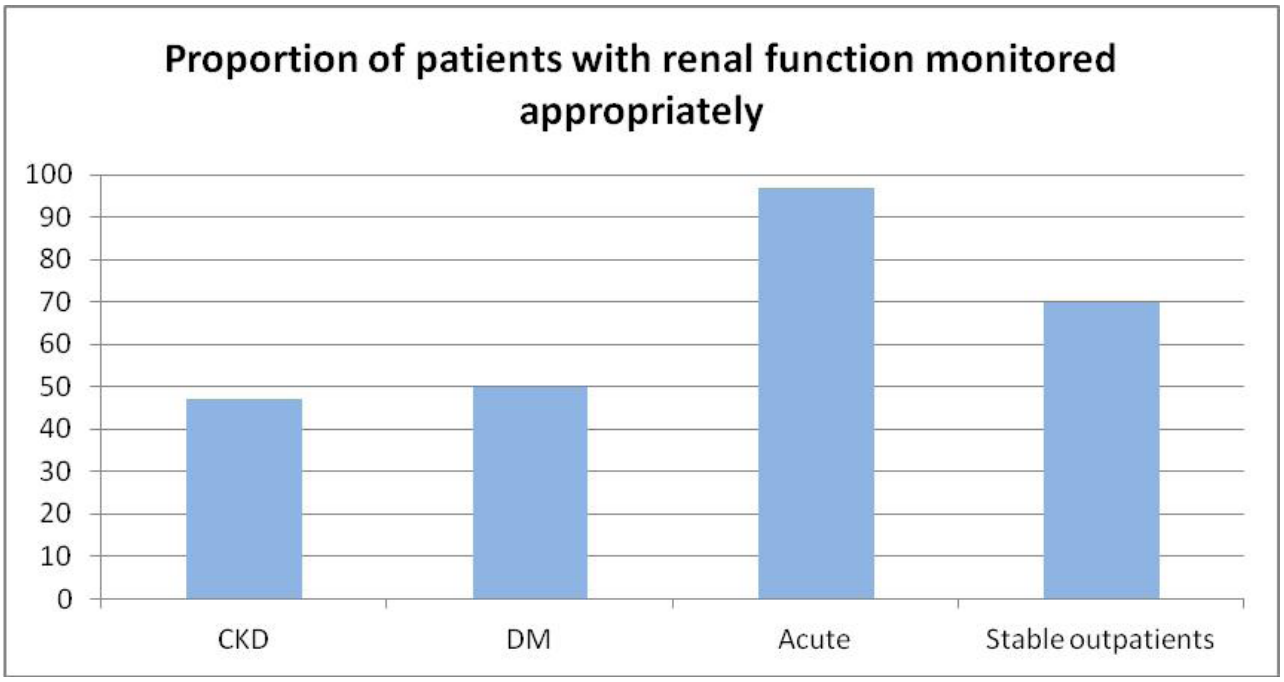
doi:10.1136/thoraxjnl-2012-202678.208

Z Mangera, S Isse, DYL Tang, R Gupta, P James, DK Mukherjee, JT Samuel, KV Wadsworth, B Yung. *BasildonThurrock University Hospital, Basildon, Essex*

Background The widespread use of computed tomography (CT), to investigate both lung and non-lung pathology has led to the finding of increasing numbers of incidental pulmonary nodules. The BTS is currently in the process of developing guidelines on the investigation and management of pulmonary nodules, due 2013. We aim to establish current practise with pulmonary nodule follow up, including the use of low dose thin-section techniques and lung nodule volumes, both of which have been recommended to enhance patient safety and diagnostic accuracy respectively.

Methods We developed a structured questionnaire in order to survey 60 hospital trusts in the London and East of England region between May-July 2012. The named lung cancer lead was emailed/faxed with a 40% response rate.

Results All hospitals followed a local trust guideline, based partly on Fleischner Society recommendations. On discovery of an incidental lung nodule 80% of radiology departments alerted a respiratory physician and 20% the referring doctor only. 67% of hospitals reviewed patients in specialist lung cancer clinic initially, the remainder being seen in general respiratory. Follow up methods varied between hospitals, with 29% being followed up in clinic, 29% by telephone and 42% by letter. For follow up scans 52% of departments used conventional "staging" CT chest, 29% used dedicated low dose CT protocols and 19% used unehanced



Abstract P66 Figure 1

CT scans. The majority of departments scanned the entire lung (62%), 20% used limited slices and 20% used a combination as part of follow up. Only 15% of departments used lung nodule volume measurements routinely, with a further 20% having access on request.

Conclusions There is significant variation both in the way patient's are followed-up as well as the methods of scanning deployed. Some trusts have developed streamlined pathways to monitor patients, without using valuable clinic slots. The chest physician is very much reliant on the organisation and expertise of their radiology department, with a significant majority not having access to low dose CT or lung nodule volumes. It is a crucially important area that requires continued improvement, both in achieving earlier cancer detection, balanced against the need for limiting the radiation dose.

P68 OUTCOME OF A PRAGMATIC PROTOCOL FOR CT LUNG NODULE SURVEILLANCE IN A UK DISTRICT GENERAL HOSPITAL

doi:10.1136/thoraxjnl-2012-202678.209

MT Reichmann, D Edwards, A Sivaloganathan, A Drury, D Laws. *Royal Bournemouth Hospital, Bournemouth, United Kingdom*

Introduction and objectives The appropriate way to follow-up indeterminate pulmonary nodules found incidentally on CT scanning has caused clinicians and radiologists in the UK some concern. Guidelines developed by the Fleischner Society in 2005 were based on studies outside of the UK. Our hospital developed local guidance for lung nodule surveillance prior to the publication of Fleischner guidelines which were designed to be pragmatic and easy to follow. We present the results of our experience.

Methods Outcomes of patients undergoing the local lung nodule surveillance programme in our hospital from 2004 to 2011 were analysed. Eligibility criteria included initial lung nodules 5–10mm diameter; previous or current smokers; aged 45–75 years old with good performance status. Those with 5 or more nodules more than 5mm diameter, benign calcification, or patients already under follow up, e.g. oncology patients, were excluded. A stamp was placed in the notes and on CT request forms to record and remind clinicians of the criteria. In accordance to our protocol CT scans were performed at 6, 18 and 30 months from the index scan.

Results 107 patients were followed up but only 63 patients fulfilled the initial inclusion criteria. This shows that despite a pragmatic protocol, clinicians will often interpret it differently when faced with an individual. The commonest reason was nodule size over 10mm. Of those eligible, the outcomes were recorded as to whether nodule confirmed as cancer (positive), nodule size reduced or unchanged over 30 months (negative), surveillance cut short as a clinical decision and those still under surveillance.

Of the 63 patients, 2 were found to have lung cancer (see Figure 1). Of those patients who were not eligible, but still underwent the surveillance programme, 6 were found to have cancer. These were not eligible because nodule size was over 10mm.

Conclusions Our study shows that a simple protocol is helpful to clinicians, but will be adapted according to the clinicians' belief. In our study 3% of nodules 5–10mm were early cancers. Nodules over 10mm, which were bigger than our criteria but followed up within this protocol, were more likely to be cancerous (14%).

P69 DO PATIENTS PROGRESS WHILST UNDERGOING DIAGNOSIS AND STAGING FOR LUNG CANCER: A RETROSPECTIVE AUDIT?

doi:10.1136/thoraxjnl-2012-202678.210

[1]R Kwong, [1]C Bradshaw, [2]L Finney, [3]GJ Burkill, [2]SR Doffman. [1]*Brighton Sussex Medical School, Brighton, East Sussex;* [2]*Department of Respiratory Medicine, Brighton and Sussex University Hospitals NHS Trust, Brighton, East Sussex;* [3]*Department of Radiology, Brighton and Sussex University Hospitals NHS Trust, Brighton, East Sussex*

Background In the last 10 years, the survival rate in lung cancer in the UK has improved, but remains lower than some counterpart