

adjustment, start to explain the wide variations noted. Although Wales and Scotland also submit data to the audit, this abstract presents results for England only.

**Results** In Year 5, participation has again increased and the number of cases submitted has risen from 10 920 cases in 2005, to 16 922 in 2006, to 20 639 in 2007 to 25 757 in 2008, and to 30 155 in 2009. Completeness of data on individual cases has also improved—recording of PS has risen to 88%, stage to 80% and treatment to 89% of cases. Results suggest that the quality of care is improving, with annual increases in the proportion of patients being discussed in an MDT, proportion of patients receiving anti-cancer treatment, and in the surgical resection rate (see Abstract P210 Table 1). Data also show that the degree of variation across organisation is reducing year-on-year.

Abstract P210 Table 1 Process and outcomes

	2005	2006	2007	2008	2009
Confirmed histological diagnosis	68%	66%	65%	67%	70%
Discussed at MDT?	79%	84%	87%	89%	93%
Any anti-cancer treatment?	45%	50%	52%	54%	59%
Overall surgical resection rate	9%	9%	10%	11%	14%
NSCLC resection rate	14%	14%	15%	16%	19%
SCLC chemotherapy rate	58%	62%	65%	63%	66%

**Conclusions** These results once again highlight the considerable achievement of the National Lung Cancer Audit in collecting data and are a testament to the hard work of lung cancer teams across the country in achieving such high quality data on such a large scale. The results suggest that care for lung cancer patients is slowly improving, although some of the apparent improvement is likely to reflect the rise in data quality. However, wide variations in outcomes still persist between organisations, which need to be the focus of ongoing service improvement work.

**P211 ASSESSMENT OF OPERABILITY IN EARLY STAGE LUNG CANCER: RESULTS FROM THE NATIONAL LUNG CANCER AUDIT**

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**Background** NICE guidelines recommend that patients who are staged as candidates for curative treatment on CT should undergo further evaluation with PET scan, mediastinal sampling (where appropriate) and lung function tests to confirm stage and to assess fitness for surgery. Under-use and/or variability in the interpretation of these investigations as well as the frequency of comorbidities may contribute to the relatively low surgical resection rates seen within England. These data are collected by the national lung cancer audit but have not previously been reported at a national level.

**Methods** Data are presented for patients submitted to the national lung cancer audit with histologically confirmed non-small lung cancer (NSCLC) first seen in England in 2008. It is anticipated that data for 2009 will be available for presentation at the meeting.

**Results** 13 488 patients (53%) had histologically confirmed NSCLC of which staging data were available for 11 661 patients. 2071 (18%) had stage I or II disease. Investigations and treatment for these patients are shown in the Abstract P211 Table 1 42% of patients with stage I disease who did not undergo surgery had good performance status (WHO 0-1) and adequate FEV1 for lobectomy (>1.5L). 23% of patients with stage II disease who did not undergo

surgery had good performance status and adequate FEV1 for pneumonectomy (>2.0L).

Abstract P211 Table 1

PET scan field completed	1711 (83%)
PET scan performed	1228 (72%)
Staging procedure performed	509 (26%)
Lung function recorded	1184 (57%)
FEV <sub>1</sub> (L)	1.7 (1.30–2.23)*
FEV <sub>1</sub> (% predicted)	74 (58–90)*
Surgery performed	1140 (55%)
Radiotherapy given	340 (16%)

\*Median (IQR).

**Conclusion** PET scanning is generally being performed as recommended in national guidelines. The low level of recording of lung function may represent poor data completeness for this field or, more worryingly, under use of this test. The available spirometric data suggest that lung function is relatively well preserved in this group of patients. In particular, approximately one third of those patients who did not undergo surgery appeared to have adequate respiratory reserve and performance status to tolerate resection. The reasons why these patients did not undergo surgery require further evaluation at a local level.

**P212 SCREENING FOR LUNG CANCER: A QUALITATIVE STUDY OF THE ACCEPTABILITY OF SCREENING AND PARTICIPATION IN THE LUNG-SEARCH TRIAL**

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**Introduction** Lung cancer has the highest mortality of all cancers in the UK and, as such, constitutes a major public health problem. Lung-SEARCH is a UK multi-centre randomised control trial to determine whether screening (annual sputum cytology and if positive, followed by annual CT scanning and bronchoscopy) of smokers with mild COPD improves the detection of lung cancer at early stages when curative treatment is feasible. Acceptability is an ethical requirement of any screening programme. In addition, maximising participation of at-risk groups is key to any successful screening programme. We conducted a qualitative study to answer two questions:

1. Are the screening methods of the Lung Search trial acceptable to patients
2. Why do some people take part and others decline?

**Methodology** A qualitative study using semi-structured face-to-face and telephone interviews involving three groups of respondents a) those giving an annual sputum sample; b) those undergoing annual bronchoscopy and CT scanning, and c) those who declined participation in the trial. We used the Framework technique to carry out a thematic analysis. Respondent validation was used to strengthen the research findings.

**Results** 50 interviews were completed (group a: 16, group b: 11; group c: 23). Respondents felt sputum analysis and CT scanning was acceptable. Some recalled a negative experience of bronchoscopy but would not object to future bronchoscopies. The main reasons for declining the trial include travelling for CT scanning and bronchoscopy, negative experiences/perceptions of screening tests, and low perceived susceptibility of lung cancer. There were four main typological behaviours recognised within the declining group: ‘too

old to be bothered', 'worriers', 'fatalists' and 'avoiders'. Declining patients perceived they were at low risk compared to those taking part. Risk was believed to be related to family history and current health rather than smoking.

**Conclusion** Whilst screening methods in the Lung-SEARCH trial are largely acceptable to trial participants, strategies to increase acceptability and participation of this at-risk group should include providing tests locally, resolving anxieties concerning screening tests and addressing beliefs of those who underestimate or deny their risk of lung cancer.

**P213** **LONG TERM RESULTS OF CONCURRENT CHEMOTHERAPY AND HYPOFRACTIONATED RADIOTHERAPY FOR INOPERABLE NSCLC**

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Concurrent chemoradiation is an effective form of treatment for inoperable stage 3 NSCLC, with a survival advantage in meta-analyses compared to standard chemotherapy and radiotherapy. However, reported local tumour control (LTC) rates are less than 40%. US studies aim to improve LTC by radiotherapy dose escalation and the addition of cetuximab. An alternative approach is to deliver radical radiotherapy concurrent with chemotherapy within a 4-week period, aiming to minimise the effects of accelerated repopulation and thus enhance LTC and survival.

We have treated 104 NSCLC patients with cisplatin (30 patients) or cisplatin and vinorelbine (74 patients) concurrently with 50–55Gy in 20 fractions over 26 days. Two-thirds of the patients were male, one third female; median age was 64. 90 patients had stage 3 NSCLC, 12 patients had inoperable stage 2 disease, and 2 had stage 4 disease. 84 patients were PS 0-1, 18 PS 2 and 2 PS 3. 64 patients received between two and four cycles of chemotherapy after completion of concurrent treatment.

Median survival for the whole group was 23 months. Survival rates at 3, 5 and 10 years (all causes mortality) were 41.7%, 30.1% and 16.2%. Chemotherapy after concurrent treatment increased median survival (26.6 vs 14.6 months) and survival at 2 years (53.1% vs 40%) but made no difference to survival at three and 5 years. There was an advantage for patients who received 55Gy compared to those who received 50–52.5Gy, with median survival of 37.9 months versus 20.6 months, 2-year survival 64.2% versus 40%, 3-year survival 56.2% versus 34.2% and 5-year survival 36% versus 28.5%. The local tumour control rate was 76% for patients receiving 55Gy and 68.6% for patients receiving 50–52.5 Gy.

There were no treatment related deaths. 86 patients developed grade 2 oesophagitis, nine patients suffered grade 3 oesophagitis and eight patients required dilation of oesophageal stricture between 8 weeks and 3 years after treatment.

Chemoradiation using accelerated hypofractionated radiotherapy concurrent with cisplatin and vinorelbine enhances local control and survival for patients with locally advanced NSCLC and good performance status.

**P214** **PATHOLOGICAL STAGING OF MALIGNANT PLEURAL MESOTHELIOMA. HOW IMPORTANT IS NODAL DISEASE IN SELECTION FOR RADICAL SURGERY?**

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**Purpose** Selection criteria for radical surgery in malignant pleural Mesothelioma (MPM) and related clinical trials remain contro-

versial. The relative importance of nodal metastases and the need for preoperative nodal staging are undetermined.

**Methods** From a prospective database, we identified 203 patients (175 male and 28 female) with non-sarcomatoid MPM (Epithelioid 154 patients; Biphasic 49 patients). Preoperative staging included CT and mediastinoscopy. We investigated the effect of nodal burden and distribution on overall survival.

**Results** 125 patients underwent extrapleural pneumonectomy (EPP) and 78 radical pleurectomy/decortication (RPD) all with systematic nodal dissection. There was no difference in survival between EPP or RPD: 1 year 63% vs 56%; 3 year 17% vs 15% and 5 year 8% vs 5%  $p=0.55$ . The median number of lymph nodes resected was 10 (1–58); 88 (43%) patients were N0, 18 (9%) N1 and 97 (48%) N2. Patients with N0 disease had the best prognosis: median survival 22 months (SE 3, 95% CI 16 to 28) versus 11 months (SE 3, 95% CI 4 to 18) for N1 and 14 months (SE 1, 95% CI 11 to 17) for N2,  $p=0.005$ . There was no significant survival difference between N1 and N2,  $p=0.85$ . Overall survival was associated with the absolute number of positive extrapleural lymph nodes ( $p=0.05$ ) and the number of extrapleural nodal stations involved ( $p=0.01$ ) but not, the total (intra and extra pleural) number of involved nodes or stations ( $p=0.13$  and  $0.23$ ).

**Conclusions** Extrapleural nodal status remains one of the most important prognostic factors following radical surgery for malignant pleural Mesothelioma. These data have important implications for preoperative staging and revision to the current IMIG staging system.

**Abstract P214 Table 1 Actuarial survival following radical surgery**

EPP + RPD n = 203	1 year survival	2 years survival	3 years survival	4 years survival	5 years survival
pN0 n=88	70%	46%	23%	17%	15%
pN1 n=18	44%	22%	7%	–	–
pN2 n=97	55%	22%	10%	7%	–

**P215** **THE INFLUENCE OF AGE ON MANAGEMENT OF LUNG CANCER PATIENTS IN ENGLAND**

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**Introduction** The evidence on which to base treatment decisions in the elderly patient with lung cancer is generally considered to be inadequate, with significant under-representation of older patients in key clinical trials. Although European recommendations have recently been published confirming the benefits of active treatment (EORTC Elderly Task Force), there are no UK guidelines and anecdotal evidence suggests that in the UK elderly patients have much lower rates of active treatment for lung cancer.

**Methods** Using the National Lung Cancer Audit dataset of 27 815 patients first seen in 2008, we have analysed a variety of measures according to patient age at the time of diagnosis. Patients outside the range 38–96 were excluded due to low numbers.

**Results** Comparison with Cancer Research-UK data shows that the elderly are not under-represented in the dataset; neither is there any evidence of under-reporting of key case-mix variables such as PS and Stage. Older patients tend to have lower stage at diagnosis, but this may be due to a reduced intensity of investigations. Not unexpectedly, there is a rapid decline in the proportion with good PS after age 70. Whilst FEV<sub>1</sub> (absolute) declines with age, the average FEV<sub>1</sub>%