

## Lung cancer: audit and outcomes

### P1 AN ANALYSIS OF 8,503 CASES OF MESOTHELIOMA FROM THE NATIONAL LUNG CANCER AUDIT

<sup>1</sup>P Beckett, <sup>1</sup>I Woolhouse, <sup>2</sup>R Stanley, <sup>3</sup>D Fennell, <sup>1</sup>J Edwards, <sup>4</sup>R Hubbard, <sup>1</sup>MD Peake; <sup>1</sup>Royal College of Physicians, London, England; <sup>2</sup>Health and Social Care Information Centre, Leeds, England; <sup>3</sup>University of Leicester, Leicester, England; <sup>4</sup>University of Nottingham, Nottingham, England

10.1136/thoraxjnl-2013-204457.151

**Background** The National Lung Cancer Audit records outcomes in lung cancer and mesothelioma on a population scale, in order to explain the wide variations seen within the UK and between the UK and other countries and ultimately improving outcomes.

**Methods** All cases of mesothelioma submitted to the audit by English Trusts 2006–2011 were analysed. A hierarchy of diagnosis from surgical histology to non-surgical histology to clinical diagnosis was used to exclude patients with potentially conflicting diagnoses. These records were further analysed to extract data on age/sex distribution, referral source, histological subtype, treatment regime and survival rates.

**Results** There were 8,503 patients with mean age 72yrs (83% male), representing around 65% of expected incident cases (a substantial number diagnosed at autopsy and not included in the audit). 45% have right-sided disease, 28% left-sided, and 1% bilateral (data missing in 26%). The majority of patients (47%) were referred by their primary care physician, but at least 20% present to secondary care as emergencies. Overall, 89% were histo-cytologically confirmed with that figure appearing to rise slowly over the audit period from 81% (2006) to 92% (2011). Survival data is shown in the table. 37% of patients received no anti-cancer treatment, but 28%, 26% and 30% of patients received “surgery”, chemotherapy or radiotherapy at any time. Most surgical operations (60%) were pleurodesis. Median survival varied by first treatment modality: surgery 378 days, chemotherapy 399 days, radiotherapy 308 days, no anti-cancer treatment 140 days. Survival was highest in patients having “surgery” and chemotherapy (491 days). Use of chemotherapy varied across cancer networks from 14% to 41% of patients, but overall increased over the audit period from 13% to 34%.

**Conclusion** Mesothelioma is predominantly a cancer of elderly males, with a striking tendency for right-sided disease. Only 11% have no histological confirmation, but where this is obtained, the epithelioid subtype has best prognosis. Low rates of anti-cancer treatment may reflect therapeutic nihilism as well as patient fitness, but there is an encouraging trend towards wider use of chemotherapy which was associated with a greater than doubling in survival compared with no treatment.

Abstract P1 Table 1.

	n (%)	Median survival (days)	1 year survival (%)
All patients	8,503 (100%)	278	41
Survival was slightly better in females (median 304 days vs 274 days HR 0.91, p= 0.002)			
<b>Subtype</b>			
Unspecified	3,798	276	39.5
Epithelioid	2,300	388	53.2
Sarcomatoid	439	123	16.4
Biphasic	268	274	36.0

### P2 TRENDS IN LUNG CANCER DIAGNOSTICS, DOES THE TIMING OF TESTS MATTER? RESULTS FROM THE NATIONAL LUNG CANCER AUDIT 2009–2011

<sup>1</sup>IS Woolhouse, <sup>2</sup>R Stanley, <sup>3</sup>M Slade, <sup>1</sup>P Beckett, <sup>1</sup>MD Peake; <sup>1</sup>Royal College of Physicians, London, UK; <sup>2</sup>The Health and Social Care Information Centre, Leeds, UK; <sup>3</sup>Papworth Hospital, Cambridge, UK

10.1136/thoraxjnl-2013-204457.152

**Background** NICE lung cancer guidelines recommend choosing investigations that give the most information about diagnosis and staging with the least risk to the patient. In particular, performing CT scan before bronchoscopy, PET scan before surgery and avoiding tests that give only diagnosis when information on staging is also needed to guide treatment. We report current UK practice for lung cancer patients diagnosed following a GP referral and assess the impact of the timing of diagnostic and staging tests on the number of tests, diagnostic times and survival.

**Methods** Data submitted to the National Lung Cancer Audit 2006 to 2011 were analysed. Completeness of the “date CT performed” field was used as a marker of diagnostic data quality. The audit periods 2006–8 were excluded due to CT completeness less than 80%. This study focuses on outpatient pathways and includes GP referrals only.

**Results** 43,747 patients were identified. The proportion of patients recorded as having each test is shown in the table. The proportion of patients with two or more tests recorded dropped from 30% in 2009 to 26.5% in 2011 (p < 0.001). Mean diagnostic time was significantly shorter in patients undergoing CT before first appointment (30 days versus 36 days, p < 0.001). The mean number of tests was marginally lower in patients undergoing CT before bronchoscopy (1.5 tests versus 1.6 tests, p < 0.01). This equates to 4375 fewer tests in this study population. Of the 7,340 patients who underwent surgery, mean survival in those with a date of death recorded was higher in those with PET recorded (356 versus 300 days, p < 0.001) but no different in those with pre-operative histology recorded (334 versus 322 days, p = ns).

**Conclusion** The data suggest an improvement in practice consistent with current guidance and that diagnostic pathways with early CT are associated with shorter diagnostic times and fewer diagnostic tests. However, a significant proportion of patients undergoing surgery do not have a PET scan recorded which is associated with worse survival. Further study is required to understand this association but it may relate to unrecognised metastatic disease in patients not undergoing PET before surgery.

Abstract P2 Table 1.

	2009 (n = 14316)	2010 (n = 14652)	2011 (n = 14779)	Chi-square test
Bronchoscopy (%)	51	47	46	p<0.001
CT biopsy (%)	19	21	22	p<0.001
Other biopsy (%)	20	20	18	p<0.001
Staging procedure (%)	23	21	21	p<0.001
CT before first appointment (%)	24	27	28	p<0.001
CT before bronchoscopy (%)	70	75	79	p<0.001
PET before surgery (%)	71	71	73	p<0.001
Surgery without histology (%)	18	16	10	p<0.001