been developed with a bespoke section providing near real time analysis of unprocessed COSD data for the NLCA. This portal currently focusses on data completeness, with plans to add process and treatment data in the near future. We report the results of the first 12 months of data collection using the new system (2015), and have compared this to the last year of LUCADA submissions (2014).

Methods The COSD was submitted monthly by English trusts on patients diagnosed with invasive lung cancer throughout 2015. This raw data was used to populate the data completeness tables on the CancerStats portal. An algorithm was developed to allocate a "trust first seen" to each patient record. Our presentation will include data from the final processed cancer registration records that have been validated using all available data sources within the National Cancer Registration Service (NCRAS). Welsh data submitted via their CANISC system will be available for our presentation.

Results 35,000 individual cases of invasive lung cancer were submitted by English Trusts. Data completeness results are shown in Table 1. Our final presentation will be updated with data from the processed cancer registration records that have been validated using all available data sources within the National Cancer Registration Service (NCRAS), as well as results from Welsh trusts.

Conclusion COSD submissions appear to capture more cases of lung cancer than LUCADA. During this transition period, the quality of the data was less good than previous years with significant variation across organisations. However, data completeness for stage and treatment is expected to be better than indicated since final registered cases use data from a variety of other sources. CancerStats offers the opportunity for teams to monitor their data quality and to iteratively improve their internal processes to deliver robust data for future years, in particular patient factors such as performance status which is not available elsewhere.

Abstract P104 Table 1 Comparison of LUCADA (2014) and cancer registration data (2015)

Measure	National average (Range by Strategic Clinical Network)	LUCADA 2014
Number of diagnoses	33,465	27,995
Gender	100%	96%
Ethnicity	86% (70–96)	N/A
Performance Status	69% (59–76)	89%
FEV1%	24% (9–35)	20%
Smoking status	43% (27–57)	N/A
Basis of Diagnosis	95% (87–100)	99%
Pre-treatment stage	72% (54–77)	92%
Treatment modality	83% (66–93)	57%

P105 LUNG CANCER STAGING – ARE WE GETTING IT RIGHT?

J Ibrahim, A Mukhopadhyay, V Lostarakos, A Mahmood, S Khan, N Maddekar, S Bikmalla, A Lea, C Satur, Q Abid, S Ghosh, M Haris. *Royal Stoke University Hospital, Stoke-on-trent, UK*

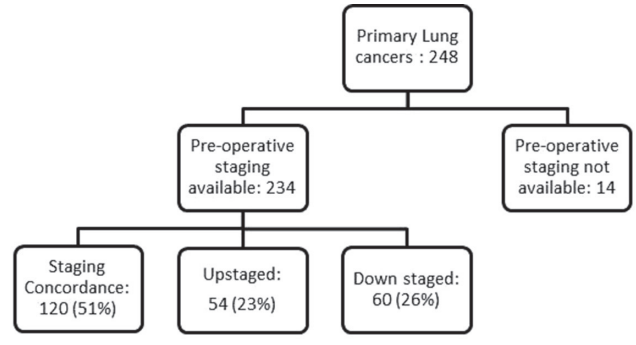
10.1136/thoraxjnl-2016-209333.248

Introduction Despite significant advances in the diagnostic and staging modalities, lung cancer survival remains poor. Accurate staging and stratification of lung cancer is imperative to appropriate management. We reviewed the accuracy of staging in all patients who underwent surgical resection for confirmed or suspected lung cancer.

Methods Retrospective study of consecutive surgical resections over 5 year period between January 2010 and December 2014; patients referred from other hospitals were excluded due to lack of pre-operative staging information. Surgical database and pre-operative diagnostic information was reviewed.

Results 298 patients underwent surgical resection, mean age 68 years (range 26–91), male 150 (50%). All patients had staging CT. 108 (36%) had EBUS/Bronchoscopy, 9 (3%) had pleural aspiration, 39 (13%) had CT guided lung biopsy, 8 (3%) other tissue sampling* (pelvic lesion, subcutaneous lymph node, previous wedge biopsy & exploratory thoracotomy). Mean time from staging CT to resection was 47 days. 48 (16%) had histo-cytological confirmation of lung cancer prior to resection. 248 (83%) were primary lung, 17 (6%) metastatic lung tumours from other primaries (breast, colorectal, bladder and renal), 2 (1%) lymphoma and 31 (10%) benign. Of the 248 patients with lung primary (see Figure 1), pre-operative staging was available in 234; 60/234 (26%) were down staged on post-operative staging, 54 (23%)) upstaged and 120 (51%) showed concordance.

Conclusion Despite the use of combined pre-operative assessment, staging accuracy was only 51% and histo-cytological confirmation of lung cancer was only available in a small number of patients. Every effort should be made by the multidisciplinary team to accurately stage lung cancer to guide appropriate therapeutic intervention.



Abstract P105 Figure 1

P106 IMPROVING FIVE YEAR SURVIVAL IN LUNG CANCER: SURVEYING PATIENTS AND CARERS, HCPS AND GPS

R Steyn, MD Peake. *UK Lung Cancer Coalition, London, UK*

10.1136/thoraxjnl-2016-209333.249

Introduction The United Kingdom Lung Cancer Coalition (UKLCC) was established in 2005 with the primary goal of doubling five-year survival rates in lung cancer by 2015. Estimates suggest that the UKLCC has met this goal in England, with improvements also seen in Scotland, Wales and Northern Ireland. The UKLCC is now looking to set a new ambition to substantially raise five-year survival rates by 2025.

Method The UKLCC surveyed 102 patients and carers, 148 healthcare professionals, and 1,003 general practitioners (GPs) asking questions related to improvement of five-year survival rates for lung cancer.

Results Awareness: Over 40% of patients and carers stated they did not know that weight loss, tiredness and chest pain are possible symptoms of lung cancer.

Screening: 52% of HCPs believe their Government should introduce a national screening programme for lung cancer.

Early diagnosis: 68% of HCPs believe that prompt access to investigative testing including blood tests, chest x-rays and CT scans are the greatest challenge to rapid diagnosis.

Waiting times: 36% of patients were waiting over one month for confirmation of a suspected lung cancer diagnosis and 17% waited over two months.

Achievability of survival: 49% of patients and carers believe surviving lung cancer for more than five years to be achievable. However, 65% of HCPs consider it difficult to achieve and 15% "completely unachievable".

Local variation: 84% of the HCPs believe regional inequalities in health and care services have a moderate or major impact on lung cancer survival rates.

Conclusion Analysis of the results shows that improvement in prevention, early-stage diagnosis and awareness of signs and symptoms among the public, could play a significant part in improving five-year survival. The results also show that patients and carers are more optimistic about the achievability of surviving lung cancer for more than five years (though this discounts patients who were not well enough to complete the survey) than HCPs.

P107 PREDICTORS OF MORTALITY IN PATIENTS UNDERGOING LUNG CANCER SURGERY

[1]H Law, [1]P Foden, [1]M Evison, [2]F Wallace, [2]A Ashworth, [3]R Shah, [1]P Crosbie, [1]R Booton. [1]*North West Lung Centre, UHSM, Manchester, UK*; [2]*Cardiothoracic ICU, UHSM, Manchester, UK*; [3]*Department of Cardiothoracic Surgery, UHSM, Manchester, UK*

10.1136/thoraxjnl-2016-209333.250

Introduction Surgical resection is a treatment of choice for patients with early stage lung cancer and physiological measurements are routinely used to help predict post-operative risk, particularly in the 'high-risk' patient group.

At present, there is a lack of concordance between current available guidelines incorporating the use of such parameters aimed to guide decisions on surgery for high-risk patients with lung cancer. As a result, the decision to operate will differ for a particular patient depending on which guidelines are consulted.

We aim to identify which parameters best predicts post-operative mortality and whether this information can be used to construct a more encompassing pre-operative risk prediction model to help guide these difficult decision processes.

Methods Retrospective analysis of all patients undergoing CPET (cardio-pulmonary exercise testing) prior to lung cancer surgery between 01/01/2012 and 31/12/2015 was carried out. Age, BMI along with pre-operative and post-operative predicted physiological parameters were reviewed and statistical analysis performed. We also looked at survival based on type of surgery (sub-lobar, lobar, pneumonectomy), histology and cancer staging.

Results Single variable analysis of the 178 patients identified that low BMI ($p = 0.005$) and PPO DLCO% ($p = 0.004$) were associated with greater post-operative mortality risk.

There was a statistically significant difference between different cancer stage and type of surgery as expected.

Using the probabilities from the logistical regression model to predict one-year mortality gives an AUC of 0.764. A probability cut-off of 0.167 used to predict whether a patient will die within one year of surgery provides a sensitivity of 76.5%, specificity 66.4%, PPV 35.1% and NPV 92.2%.

Conclusions Contrary to current guidelines, CPET data did not seem to carry statistically significant weighting in determining post-operative mortality outcomes in our patient group with BMI and PPO DLCO% showing a stronger, statistically significant association.

Absolute% change between pre and PPO FEV1 values appears to be a good predictor of one-year mortality following surgery.

Further work is required but early analysis suggested that parameters such as BMI, PPO DLCO% and absolute post-operative change in FEV1% can be used to construct a pre-surgical prediction model for 'high-risk' patients undergoing surgery for lung cancer.

Abstract P107 Table 1

Variable	n	Hazard ratio (95% CI)	Cox regression p-value
Age	178	0.988 (0.957, 1.020)	0.47
BMI	**178**	**0.932 (0.887, 0.979)**	**0.005**
FEV1% predicted (pre)	178	1.008 (0.999, 1.018)	0.088
FEV1% predicted (post)	177	0.998 (0.987, 1.010)	0.73
DLCO% predicted (pre)*	137	0.994 (0.976, 1.013)	0.54
DLCO% predicted (post)	**136**	**0.963 (0.939, 0.988)**	**0.004**
VO2 max	178	1.035 (0.975, 1.098)	0.26
VO2 max% predicted (pre)	178	1.003 (0.991, 1.015)	0.66
VO2 max% predicted (post)	177	0.990 (0.977, 1.003)	0.14
VECO2	176	1.024 (0.996, 1.053)	0.091

P108 LUNG CANCER RESECTION OUTCOMES IN THE FIRST YEAR: A 5 YEAR REVIEW

J Ibrahim, A Mukhopadhyay, V Lostarakos, A Mahmood, S Khan, N Maddekar, I Hussain, A Lea, C Satur, Q Abid, S Ghosh, M Haris. *Royal Stoke University Hospital, Stoke-on-trent, UK*

10.1136/thoraxjnl-2016-209333.251

Introduction Lung cancer survival remains poor despite the use of advanced diagnostic and therapeutic interventions. Surgical resection offers the best chance of cure for those with early stage lung cancer. Those who undergo curative resection for non-small cell lung cancer remain at risk of recurrence. We wished to evaluate thoracotomy outcomes in patients undergoing resection with curative intent.

Methods Retrospective review of consecutive surgical resections for suspected or confirmed lung cancer over 5-year period between January 2010 and December 2014 in a tertiary thoracic unit. Patients referred from other centres were excluded. Surgical database and post-operative follow up information was reviewed. Futile thoracotomies were defined as inoperable lung cancer at the time of surgery, benign lung lesion, incomplete tumour resection margins and recurrence or death in the first year.[1]

Results 298 patients underwent surgical resection; mean age 68 years (range 26–91); male 150 (50%). 48 (16%) had histo-cytological confirmation of lung cancer prior to resection. Post-operative histology revealed 248 (83%) primary lung cancer; 31 (10%) benign pathology; 17 (6%) metastatic tumour from other