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

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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

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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

primaries (breast, colorectal, bladder and renal) and 2 lymphomas. Of the 248 primary lung cancers, 88 (35%) had adjuvant chemotherapy and 27 (11%) had adjuvant radiotherapy including cranial irradiation. A total of 40/298 (13%) patients had recurrence in first year of which 20 died within 1 year.

Based on previously used definition,¹ the futile thoracotomy rate was 33% (99/298) – see Table 1. If surgical resection of benign lesions is considered diagnostic, the futile thoracotomy rate would be 23% (68/298).

Abstract P108 Table 1 Distribution of futile thoracotomy, n(%)

Benign lung lesion	31 (31)
R2 Resection	3 (3)
Stage IIIA-IV	17 (17)
Recurrence within 1 year	20 (20)
Deaths within 1 year	28 (28)

Conclusion The definition of futile thoracotomy is debatable, but the risk remains high. Prior to surgery every effort should be made to minimise the risk by using combined staging modalities including minimally invasive diagnostic tools and appropriate patient selection.

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Tuberculosis: Clinical Aspects

P109

THE IMPACT OF TB NICE GUIDANCE ON RESOURCE CAPACITY AND CONTACT SCREENING OUTCOMES: A RETROSPECTIVE, OBSERVATIONAL STUDY WITHIN A CENTRAL LONDON TB CENTRE

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Introduction and objectives Recently published NICE guidance has significantly expanded the approach to adult tuberculosis (TB) contact screening by recommending tuberculin skin testing (TST) for pulmonary and laryngeal contacts only, increasing the age threshold for screening and treatment to 65 years and defining a positive TST as induration ≥ 5 mm, regardless of BCG vaccination status. Interferon Gamma Release Assay (IGRA) is recommended only in situations where more evidence of infection is needed.

Our institution has previously adopted an approach comprising a chest radiograph, TST and IGRA.

The aim of our study was to evaluate the impact of NICE guidance on screening outcomes and resource capacity by applying the criteria to a well-defined historic cohort of TB contacts.

Methods This was a retrospective, observational study carried out at a central London teaching hospital. The study population comprised 593 consecutive, adult TB contacts screened between 1/1/2008 and 31/12/2010. Data was collected through a retrospective review of TST and IGRA tests.

Results Of the 593 contacts screened, 358 pulmonary contacts had TST and IGRA results. 56% had a TST ≥ 5 mm, regardless of

BCG status, qualifying them for treatment as per the new NICE guidance. Of these, 61% were IGRA negative (discordant) and may therefore include false positive diagnoses, resulting in the potential for over treatment. In those with TST 5–14 mm, discordance rises to 84%. Conversely, 6% of those with TST < 5 mm are IGRA positive representing potentially missed cases.

16% of screened individuals were contacts of extra pulmonary TB. Not screening this group would reduce the demand for outpatient appointments by 151* in our cohort. In contrast, testing contacts > 35 years would require capacity for an additional 165* appointments. Furthermore, there were 162 additional LTBI cases in comparison to previous guidance requiring an additional 648* appointments. 72% of this group were IGRA negative.

(*Approximate)

Conclusions Our results show the revised guidance will require increased resource capacity largely due to more patients being classified as having latent TB. In addition to workforce planning to meet these demands, further debate is needed to decide if this new approach truly reduces the incidence of active TB or results in unnecessary treatment.

P110

THE ROLE OF TB CHEMOPROPHYLAXIS IN RENAL TRANSPLANT RECIPIENTS

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Background Rates of tuberculosis infection are increased after solid organ transplant. This is associated with increased mortality and allograft loss in one third of cases. The WHO recommend testing for latent tuberculosis (LTBI) in patients receiving dialysis or preparing for solid organ transplant. BTS and ERS guidelines suggest screening for LTBI where tuberculosis incidence rates are high or in patients with risk factors for developing tuberculosis in low incidence areas. They go on to propose chemoprophylaxis with isoniazid or three months of rifampicin and isoniazid, with above 60% effectiveness at preventing subsequent tuberculosis. Guidelines at a large renal transplant centre advocate isoniazid prophylaxis for 6 months post transplant in all patients of Indo-Asian or African heritage as well as anyone who is from a country with TB incidence rates above 40/100,000 who have been in the UK for less than 5 years.

Methods All patients who underwent renal transplantation between January 2011 and December 2014 were assessed to see if tuberculosis prophylaxis was prescribed as per guidelines. Cases of subsequent TB were then identified.

Results 912 patients underwent renal transplant during this time. 243 (26.6%) received isoniazid prophylaxis, with 88% adherence to trust guidelines. 42 (4.6%) patients who should have received prophylaxis did not. During this time one patient developed tuberculosis post transplant. This individual should have received isoniazid according to guidelines, but did not. Another patient from sub-Saharan Africa was discovered to have abdominal tuberculosis when on the operating table prior to transplant.

Discussion We are not aware of any LTBI screening programme amongst renal transplant units in the UK currently. Many use prophylactic isoniazid in a similar manner to our trust. Pre-emptive screening with interferon gamma release assays costs approximately £60 per test, 6 months of isoniazid £560 and 3 months of rifampicin and isoniazid costs £185. Whilst screening may