

**Background** The purpose of this study was to identify trends in survival and chemotherapy use, during the duration of the National Lung Cancer Audit (NLCA), for individuals with small-cell lung cancer (SCLC) in England.

**Methods** We used data from the NLCA database to identify people with histologically proven SCLC from 2004 to 2009. We used Hospital Episode Statistics (HES) database and NLCA to identify patients with codes of receiving chemotherapy, while NLCA was used to identify radiotherapy. We calculated the median survival by stage and observed the changing patient features of the cohort. We also looked at the proportions of patients with records of chemotherapy and/or radiotherapy over the years.

**Results** 11,603 patients were diagnosed with SCLC in our cohort. The median survival was 6 months; 1 year for limited stage and 4 months for extensive stage. 70% received chemotherapy and this proportion did not change overtime. Patient features including sex, age and performance status remained stable throughout the years ( $\chi^2$  p-value 0.25, 0.93 & 0.08 respectively). There has been an increase in the proportion of patients that had a record of receiving chemotherapy and radiotherapy each year in both limited and extensive stage disease (from 19% to 36% in limited & from 10% to 17% in extensive stage from 2004 to 2009) (table 1). Patients who had a record for chemotherapy and radiotherapy had better survival in days compared with those who received only chemotherapy or no treatment independent of stage (334 days for chemotherapy & radiotherapy vs. 240 days for chemotherapy alone, 82 days for radiotherapy alone & 25 days for no treatment).

**Conclusion** Since 2004, when the NLCA was established, the recorded use of chemotherapy and survival in days has remained static. We have found an increasing trend in patients receiving chemotherapy & radiotherapy which corresponds to better survival compared with other treatments. We were unable to see if these patients received these therapies for palliative or curative purpose; however the new chemotherapy and radiotherapy database soon to be linked with the NLCA would be better suitable to answer these questions.

#### P15 IDENTIFYING PATIENTS WHO RECEIVE CHEMOTHERAPY FOR SMALL-CELL LUNG CANCER USING LARGE DATASETS

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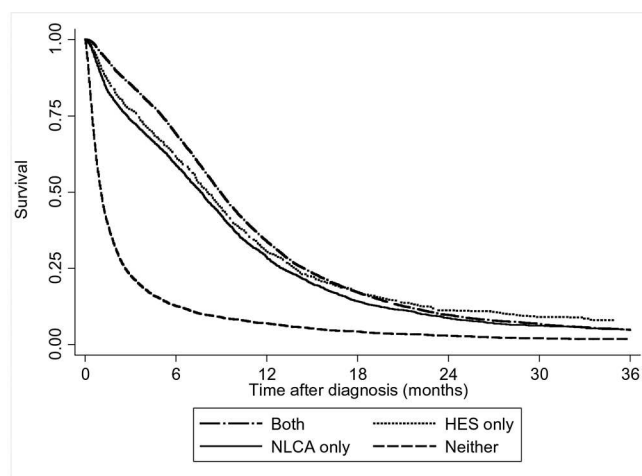
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**Introduction** The National Lung Cancer Audit (NLCA) has collected data on primary lung cancer in England since 2004, and has now been linked with Hospital Episodes Statistics (HES) for research into inequalities in access to treatment. How well these two large datasets capture chemotherapy for small cell lung cancer (SCLC) is not known.

**Methods** We identified all cases of SCLC in the NLCA diagnosed between January 2004 and March 2012. We calculated the proportion of patients with a HES code for chemotherapy, and the proportion with a start date for chemotherapy in the NLCA, within 6 months of diagnosis. We inspected survival curves for people with a chemotherapy record in HES only or the NLCA only, people who had records of chemotherapy in both databases (who we could be reasonably sure had chemotherapy), and those with no record of chemotherapy. We assessed whether the results

changed over time as case ascertainment in the NLCA increased from 19% to 98% between 2004 and 2009.

**Results** We identified 18,398 cases of histologically confirmed SCLC; 9,484 (52%) had chemotherapy records in both databases and 5,100 (28%) had no record of chemotherapy in either. 737 patients (4%) had chemotherapy recorded only in HES and 2,539 (14%) only in the NLCA. For people with a record of chemotherapy in a single database (NLCA only or HES only) survival was similar to that of people with records of chemotherapy in both datasets (figure 1); the average age, stage and performance status was also very similar for people in these three groups. Survival patterns were the same when we analysed the data by year of diagnosis however the proportions with chemotherapy records in HES only or the NLCA only decreased to 3% and 12% respectively in 2011.



**Abstract P15 Figure 1. Survival after diagnosis for people with SCLC according to records of chemotherapy**

**Conclusion** Our results suggest that it is best to identify people who received chemotherapy using data in the NLCA and HES combined. A record of chemotherapy in either database appears to be a valid means of determining who received chemotherapy but if a single database is used the proportion treated is likely to be an under-estimate.

#### P16 SEVERITY AND BURDEN OF ASTHMA IN SCOTLAND—A FULL POPULATION STUDY USING THE PRESCRIBING INFORMATION SYSTEM

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In contrast to many epidemiological studies of asthma that have been limited to samples assumed to be representative of the national population from which they are drawn we have used routinely collected drug dispensing data for the whole Scottish population. Our aim was to use NHS Scotland's Prescribing Information System (PIS) to describe asthma prevalence, asthma severity (BTS treatment steps) and asthma control (exacerbations, hospital / A&E episodes) in children and young adults. Methods For >95% of dispensed prescriptions in primary care between December 2009 and December 2012 a valid patient identifier is available including some socio-demographical characteristics (age-group, sex, socioeconomic status). Data were also linked to hospital admission and A&E event data to identify