Lung cancer

This section will focus on the main type of lung cancer, lung carcinoma which accounts for the majority of all lung cancers including trachea (or windpipe; C33*) and lung and bronchus (C34*). We recognise that a smaller number of lung cancers are a result of asbestos exposure and these have a different aetiology (causal pathways). These are out of the scope of this chapter.

Key messages

- Lung cancer is the cause of 12% of new cancer cases in Cheshire East and 20% of all cancer deaths reflecting the poor survival associated with this type of cancer at both one year and at five years.
- A continued whole system approach to tobacco control should have a significant impact on lung cancer long-term as 86% of lung cancers are due to smoking.
- The number of new cases of lung cancer in Cheshire East has increased by 54.4% since 2001-2003.
- Incidence and 1 year survival rates for Cheshire East are similar to the rates for England and mortality rates are significantly lower than the rates for England.
- Incidence and mortality rates of lung cancer in Cheshire East are significantly higher in males than females.
- Data suggests Crewe is a priority area as incidence rates and male mortality rates are significantly higher in this area compared to the average for Cheshire East.
- Early diagnosis is critical to improving survival and mortality rates, currently 56% of lung cancers are diagnosed at a late stage in Cheshire East so more needs to be done to identify cases earlier within primary care.

*Codes from ICD-10 (International Classification of Diseases version 10)
Summary of burden of lung cancer in Cheshire East

Lung cancer is the fourth most common cancer in Cheshire East after breast, male genital organ (mainly prostate) and colorectal (bowel). There were 854 new lung cancers diagnosed in Cheshire East in 2012-2014. Amongst men, 482 lung cancers were diagnosed and among women 372 lung cancers were diagnosed. These were 12% of all new cancer diagnoses in Cheshire East.

Although lung cancer is the fourth most common cancer diagnosed it is the most common cause of cancer deaths in Cheshire East. There were 606 lung cancer deaths in Cheshire East in 2012-2014. Lung cancer deaths accounted for 20% of all cancer deaths in Cheshire East in 2012-2014. Consequently, lung cancer is a significant driver of mortality and premature mortality in Cheshire East.

One-year lung cancer survival rates in Cheshire East remain poor compared to other cancers but they are improving. These improvements may be the result of earlier diagnosis due to the increased awareness of lung cancer among both patients and GPs. There have also been significant improvements made to the diagnostic pathway for lung cancer within secondary care.

Needs analysis

The majority of lung cancer cases in Cheshire East are preventable and are associated with a low survival and high mortality.

- The ongoing promotion of smoking cessation through ‘Making Every Contact Count’ brief interventions provided by all health professionals will ensure that the prevalence of smoking continues to decline. This in turn will have a significant impact on lung cancer rates in the long-term.
- Areas with higher levels of deprivation such as Crewe continue to see high levels of smoking prevalence. Steps should be taken to reduce smoking levels in these areas, otherwise the significantly higher lung cancer rates will continue for decades to come.
- Efforts are being made through the Action on Cancer programme of work to inform people about early signs and symptoms of lung cancers to improve early presentation of patients with lung cancer symptoms.
- Patients presenting with the symptoms associated with lung cancer should be referred efficiently for prompt investigation, diagnosis and treatment. Those who are 50+, have had a cough for 3 weeks or more and who haven’t had a chest x-ray in the last 3 months can attend Leighton Hospital or Victoria Infirmary in Northwich for a chest x-ray to consider a possible lung cancer.
89% of lung cancers are preventable

- **Being smokefree** could prevent 86% of lung cancers
- **Preventing occupational exposure to materials such as asbestos** could also prevent some lung cancers
- **Eating more fruit and veg** could also prevent some lung cancers

*Source: Cancer Research UK, 2016*

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Prevalence of risk factors for lung cancer in Cheshire East

- **Adult smoking prevalence** for Cheshire East in 2016 estimated between 10.6% and 15.9% (similar to the England average: 15.5%)*

- **55.2% of adults** in Cheshire East eat ‘5 a-day’ on a usual day (similar to England average of 52.3%)

*Data source: Annual Population Survey*
Symptoms and signs of lung cancer

The majority of people with lung cancer will initially present at their GP surgery with symptoms such as:

- A persistent cough (3 weeks or longer)
- Weight loss
- Coughing up blood (haemoptysis)
- Pain
- Difficulty breathing

Their GP will then refer them for a chest x-ray and if the result is suspicious of lung cancer they will make an urgent suspected cancer referral.

**NICE guidelines on referral for suspected lung cancer**

*Source: NICE (2015) Suspected cancer: recognition and referral*

- Two-week wait referrals should be made for suspected lung cancer in people who have chest X-ray findings that suggest lung cancer or are aged 40 and over with unexplained haemoptysis.

- Offer an urgent chest X-ray (to be performed within 2 weeks) to assess for lung cancer in people aged 40 and over if they have 2 or more of the following unexplained symptoms, or if they have ever smoked and have 1 or more of the following unexplained symptoms: cough, fatigue, shortness of breath, chest pain, weight loss or appetite loss.

- Consider an urgent chest X-ray (to be performed within 2 weeks) to assess for lung cancer in people aged 40 and over with any of the following: persistent or recurrent chest infection, finger clubbing, supraclavicular lymphadenopathy or persistent cervical lymphadenopathy, chest signs consistent with lung cancer or thrombocytosis.
Route to diagnosis

Patients with lung cancer are also diagnosed through a variety of referral routes listed to the left. As can be seen below the highest proportion of stage 4 cancers are discovered via an emergency presentation.

Route of lung cancer diagnosis by stage of lung cancer in Cheshire East 2013

<table>
<thead>
<tr>
<th>Referral route</th>
<th>Stage 1</th>
<th>Stage 2</th>
<th>Stage 3</th>
<th>Stage 4</th>
<th>Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency presentation</td>
<td>27.70%</td>
<td>15.00%</td>
<td>28.10%</td>
<td>39.50%</td>
<td>48.40%</td>
</tr>
<tr>
<td>Urgent referral for suspected cancer (Two week wait)</td>
<td>27.70%</td>
<td>45.00%</td>
<td>35.10%</td>
<td>32.60%</td>
<td>6.50%</td>
</tr>
<tr>
<td>GP Referral</td>
<td>36.20%</td>
<td>25.00%</td>
<td>31.60%</td>
<td>18.60%</td>
<td>25.80%</td>
</tr>
<tr>
<td>Inpatient Elective</td>
<td>0.00%</td>
<td>10.00%</td>
<td>0.00%</td>
<td>2.30%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Other outpatient</td>
<td>8.50%</td>
<td>0.00%</td>
<td>3.50%</td>
<td>2.30%</td>
<td>3.20%</td>
</tr>
<tr>
<td>Unknown</td>
<td>0.00%</td>
<td>5.00%</td>
<td>1.80%</td>
<td>3.50%</td>
<td>9.70%</td>
</tr>
<tr>
<td>Death Certificate only</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>1.2%</td>
<td>6.5%</td>
</tr>
<tr>
<td>Total</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

Source: Cheshire East Public Health Intelligence Team; Data for this study is based on information collected and quality assured by the PHE National Cancer Registration and Analysis Service. Access to the data was facilitated by the PHE Office for Data Release.

Delays in the diagnosis of lung cancer are one of the main reasons for high mortality and low survival rates. Delayed diagnosis is often due to patients not presenting to their GP, as well delays in the diagnostic pathways including some cases where the GP fails to recognise a patients symptoms or potential risk factors at first presentation. Increasing early diagnosis is possible by increasing awareness of the risk factors and symptoms associated with lung cancer among both the general population and primary care staff including GPs and practice nurses.
Emergency presentations

In Cheshire East emergency presentation is the most common route to receiving a lung cancer diagnosis. In Eastern Cheshire CCG the most common route to a lung cancer diagnosis is an urgent suspected cancer referral but this is closely followed by emergency presentation. In contrast in South Cheshire CCG, emergency presentation is the most common route to a lung cancer diagnosis followed by an urgent suspected cancer referral. Work has been undertaken by Mid-Cheshire Hospitals NHS Foundation Trust and East Cheshire NHS Trust to improve the route to diagnosis as detailed on page 7. Local data that has not yet been validated suggests that emergency presentations as a route to diagnosis have reduced significantly in 2015.

<table>
<thead>
<tr>
<th>Locality</th>
<th>Percentage of Emergency Presentations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alderley Edge, Chelford, Handforth, Wilmslow</td>
<td>26.1%</td>
</tr>
<tr>
<td>Macclesfield</td>
<td>34.1%</td>
</tr>
<tr>
<td>Bollington, Disley, Poynton</td>
<td>33.3%</td>
</tr>
<tr>
<td>Knutsford</td>
<td>16.7%</td>
</tr>
<tr>
<td>Congleton, Holmes Chapel</td>
<td>34.4%</td>
</tr>
<tr>
<td>Nantwich and Rural</td>
<td>53.8%</td>
</tr>
<tr>
<td>Crewe</td>
<td>34.5%</td>
</tr>
<tr>
<td>SMASH</td>
<td>34.0%</td>
</tr>
</tbody>
</table>

Route to lung cancer diagnosis 2013

Overall in 2013, 81 lung cancers were diagnosed by emergency presentation in Cheshire East. Across locality areas Nantwich has the highest proportion of lung cancers diagnosed through the emergency presentation route followed by Crewe (34.5%).
Early diagnosis of lung cancer

Be Clear on Cancer Campaign
Increasing awareness of the symptoms of lung cancer is one way to improve early diagnosis. Once individuals begin to experience symptoms, recognising them as signs of cancer can encourage them to follow the symptoms up with their GP. Public Health England launched a national campaign to promote awareness and early diagnosis of lung cancer which was launched nationally in May 2012. Since then there have been a number of ‘reminder’ campaigns to keep the key messages front of mind.

Every Breath You Take
Alongside the national campaign a local awareness raising campaign was developed in 2015 for the residents of Crewe, due to the high incidence of lung cancer in the area. The campaign involved a range of materials to promote awareness of the symptoms of lung cancer including posters, a home leaflet drop and the training of local lung cancer champions. During the campaign period the proportion of lung cancers diagnosed through the emergency presentation diagnosis route for Mid-Cheshire Hospitals NHS Foundation Trust declined from 20.7% in 2013 to 6.4% in 2015.

Self referral chest x-ray service
Access to primary care services is often cited as a reason why patients with lung cancer present late after the initial onset of symptoms. Recognising this as a barrier Mid-Cheshire Hospitals NHS Trust have developed a self-referral chest x-ray service. This service is accessible to individuals over the age of 50 who are experiencing one or more lung cancer related symptoms. East Cheshire NHS Trust have enabled a pathway where pharmacies can refer their customers for a chest x-ray to individuals over the age of 50, had a cough for 3 weeks or more and not had a recent chest x-ray.

Improvements to the diagnostic pathway
Mid-Cheshire Hospitals NHS Foundation Trust introduced a series of improvements to their lung cancer diagnostic pathway during 2015. The purpose of the improvements is to streamline the referral pathway from chest x-ray to first outpatients appointment for all lung cancer patients. As a result waiting times have reduced from 32.6 days to 11 days between chest x-ray and first outpatient appointment for patients referred via the urgent suspected cancer pathway that ultimately received a lung cancer diagnosis.

East Cheshire NHS Trust have also been working with the Cancer Alliance to improve the pathway to diagnose a lung cancer.
Incidence of lung cancer  
There were 111,907 new lung cancer cases diagnosed across England in the three year period 2012 – 2014. Of these, 854 occurred in people in Cheshire East. 440 cases occurred in people in NHS Eastern Cheshire CCG and 414 occurred in people in NHS South Cheshire CCG.

New lung cancer cases occurred at a directly standardised rate of 79.7 per 100,000 per year in England in 2012-2014. Cheshire East as a whole has an incidence rate that is consistent with England average (74.4 per 100,000; 95% CI: 69.2-79.6). In NHS Eastern Cheshire CCG, this rate was 68.7 per 100,000 (95% CI: 62.0-75.44) indicating a rate significantly lower than the rate for England. However, the incidence rate was 81.08 per 100,000 (95% CI: 72.9-89.3) in NHS South Cheshire CCG, indicating that the rate of new lung cancers was not significantly different from the rate for England.

Impact of gender
In England in 2012-2014, there were 60,507 new cases of lung cancer amongst males and 51,400 new cases of lung cancer amongst females. Overall, new lung cancer rates amongst males (94 per 100,000; 95% CI: 93.3–94.8) were 43.5% higher than those amongst females (65.5 per 100,000; 95% CI: 64.9 – 66.1).

In Cheshire East, there were 482 new cancer cases amongst males in 2012-2014 and 372 amongst females. The rate of new cancer cases in males in Cheshire East is very similar to England average (90.8 per 100,000; 95% CI: 82.7 – 99.5 per 100,000). For females in Cheshire East, the rate is 58.1 per 100,000 (95% CI: 52.3 – 64.4) which is significantly lower than the rate for England. Overall in Cheshire East rates of new lung cancer cases are 56.3% higher in males than females.

In NHS Eastern Cheshire CCG, there were 234 new lung cancer cases amongst males in 2012-2014 and 206 amongst females. The rate of new cancer cases in males in NHS Eastern Cheshire CCG are 80.2 per 100,000 (95% CI: 70.2-91.5) which is significantly lower than the rate for men in England. For females the incidence rate is 57.2 per 100,000 (95% CI: 49.6 – 65.9). Overall, in NHS Eastern Cheshire CCG rates of new cancer cases are 40% higher in males than females.

In NHS South Cheshire CCG, there were 248 new lung cancer cases amongst males in 2012-2014 and 166 in females. The rate of new lung cancer cases in males in NHS South Cheshire CCG are 103.4 per 100,000 (95% CI: 90.8 – 117.7). For females the rate is 58.7 per 100,000 (95% CI: 50.1 – 68.6). Overall, the rate of new lung cancer cases are 76% higher in males than females.
There was some variation between localities with respect to lung cancer incidence in 2009-2014. For males, rates of new cancer cases were highest in Crewe. Here, incidence rates were nearly 59% higher than Nantwich and Rural where the lowest rates of cancer lung incidence amongst Cheshire East males was experienced. Rates of lung cancer in men in Crewe were significantly higher than for rates in men for Cheshire East as a whole.

For females, there was similar variation between localities. The highest incidence rates amongst females were once again observed in Crewe. Here, rates were nearly 58.6% higher than in Nantwich and Rural (where the lowest rates are observed). These rates of lung cancer in women in Crewe were significantly higher than the rates in women for Cheshire East as a whole.
The number of new cases of lung cancer increased by 54.4% between 2001-2003 and 2012-2014. South Cheshire CCG saw the largest percentage increase of 67.6% compared to Eastern Cheshire CCG where cases increased by 43.8%.

Whilst these increases have affected both men and women, much larger increases have been observed amongst men.

Whilst the incidence rate for lung cancer in England has remained relatively stable between 2001 and 2014, only increasing by 2%. The incidence rate for lung cancer in Cheshire East has increased by 20.6%. Since the 1990s lung cancer incidence rates in England have been declining in line with declining smoking prevalence. There is a delay experienced in the benefits associated with reducing prevalence of smoking and its impact on lung cancer rates. This is due to the time it takes for a lung cancer to develop in individuals who have been exposed to a risk factor such as smoking or asbestos.
Mortality
There were 85,705 deaths due to lung cancer across England in the three year period 2012-2014. Of these 606 lung cancer deaths occurred in Cheshire East. Across the CCG areas there were 322 deaths in NHS Eastern Cheshire CCG and 284 NHS South Cheshire CCG.

Lung cancer deaths occurred at a rate of 64 per 100,000 per year in England in 2012-2014 (95% CI: 60.9-61.8). **Cheshire East as a whole has a lung cancer mortality rate of 53 per 100,000 (95% CI: 48.6-57.3) which is significantly lower than the rate for England.** In NHS Eastern Cheshire CCG, the lung cancer mortality rate was 50.4 per 100,000 (95% CI: 44.6-56.2) which is also significantly lower than the rate for England. However, in NHS South Cheshire CCG the mortality rate is 55.8 per 100,000 (95% CI: 48.9-62.6) which is a similar rate to England.

Lung cancer is the top cause of premature cancer mortality in Cheshire East causing 51 premature deaths per 100,000 between 2013 and 2015. Compared to other areas of England Cheshire East has a better than average level of premature mortality caused by lung cancer ranking 46th out of 150 areas with 150 being the worst area.

Impact of gender
In England in 2012-2014, there were 47,251 deaths due to lung cancer amongst males and 38,454 deaths due to cancer amongst females. Overall, cancer death rates amongst males (74.2 per 100,000 95% CI: 73.5-74.9) are 53% higher than those amongst females (48.5 per 100,000 95% CI: 48.0-49.0).

In Cheshire East, there were 346 lung cancer deaths amongst males in 2012-2014 and 260 amongst females. **The rate of lung cancer deaths in males in Cheshire East is 66.1 per 100,000 (95% CI: 59.3-73.7) which is similar to the rate for England.** For females, the rate is 39.8 per 100,000 (95% CI: 35.0-45.0) which is significantly lower than the rate for England. Overall, rates of lung cancer deaths are 33% higher in males than females.

In NHS Eastern Cheshire CCG, there were 175 cancer deaths amongst males in 2012-2014 and 147 amongst females. The rate of lung cancer deaths in males in NHS Eastern Cheshire CCG are 61 per 100,000 (95% CI: 52.2-71.1). The rate of lung cancer deaths amongst females is 147 per 100,000 (95% CI: 33.5-47.1). The mortality rates for both males and females are significantly lower than the rates for England. Overall, rates of cancer deaths are 53.3% higher in males than females.

In NHS South Cheshire CCG, there were 171 cancer deaths amongst males in 2012-2014 and 113 in females. The rate of lung cancer deaths in males in NHS South Cheshire CCG are 72.1 per 100,000 (95% CI: 61.5-84.3). This is similar to the rate for England. For females the rate is 39.5 per 100,000 (95% CI: 32.5-47.6), which is significantly lower than the rate for England. Overall, the rate of cancer deaths are 82.5% higher in males than females.

**Key messages**

Overall, lung cancer death rates in Cheshire East are significantly lower than England average. Eastern Cheshire CCG has a significantly lower rate of lung cancer mortality compared to England.

Males in Cheshire East experience a similar mortality rate to England. Whereas women experience a mortality rate 17.9% lower than the rate for England.

Cheshire East has a better than average premature mortality caused by lung cancer.
Mortality rates from lung cancer among men in Cheshire East are highest in the Crewe area where they are significantly higher than Cheshire East average. The mortality rates in men in Crewe are 80.9% higher than male mortality rates from lung cancer observed in the Bollington, Disley, Poynton area where mortality rates are the lowest for men with lung cancer in Cheshire East.

For females, the highest mortality rates from lung cancer are in the Alderley Edge, Chelford, Handforth, Wilmslow area these rates are not significantly different from the Cheshire East average though. Here, female mortality rates are 48.8% higher than female mortality rates from lung cancer observed in the Bollington, Disley, Poynton area where rates are the lowest in Cheshire East.
Lung Cancer Survival

Lung cancer survival is influenced by a number of factors including age, sex, socio-economic status, location of cancer in the lung, treatment, histology and ethnicity. Lung cancer survival in England has been found to be lower than survival in other European countries with similar health systems. Improvements in lung cancer treatment and early diagnosis are thought to be key to improving survival. How lung cancer patients are diagnosed with lung cancer can impact on how long they live for after diagnosis. As discussed earlier, a significant number of lung cancers are diagnosed through the emergency diagnosis route therefore reducing how long patients are likely to survive.

Survival in Cheshire East

One-year lung cancer survival has been increasing in Eastern Cheshire CCG since 1999, in comparison, South Cheshire CCG experienced a decline in one-year survival until 2007 onwards when survival began to increase. The one-year survival rate for South Cheshire CCG in patients diagnosed during 2014 was 40.3%. This is a 51.5% increase in one-year survival compared to 1999. In comparison Eastern Cheshire CCG has a one-year survival rate for patients diagnosed in 2014 of 38.6% which is a 34.5% increase since 1999.

Rightcare

NHS Rightcare is a programme committed to improving people’s health and outcomes. It makes sure that the right person has the right care, in the right place, at the right time, making the best use of available resources. This is achieved through the use of intelligence and innovation to enable the implementation of sustainable change. The Rightcare programme provides CCGs with focus packs which identify areas that they should be focusing on to improve variation.

Cancer Focus Packs

Focus packs compare the performance of a CCG to the 10 most demographically similar CCGs. This is used to identify realistic opportunities to improve health and healthcare for the population.

Emergency presentations for lung cancer

Eastern Cheshire CCG had 21.4 per 100,000 emergency presentations for lung cancer. This makes them the 5th worst performing CCG in their comparator group with South Warwickshire being the best performing CCG. South Cheshire CCG had 26.9 per 100,000 emergency presentations for lung cancer. This makes them the 5th worst performing CCG in their comparator group with South Worcestershire being the best performing CCG. It should be noted that this emergency presentation data period is 2006-2013. Local data for South Cheshire CCG that has not yet been validated suggests that there have been significant reductions in the number of emergency presentations for 2015.

Lung cancers detected at an early stage

Eastern Cheshire CCG detected 26.3% of lung cancers at stage 1 or 2, they are the best performing CCG in their comparator group for this indicator. South Cheshire CCG detected 24.1% of lung cancers at stage 1 or 2, they are the second best performing CCG in their comparator group for this indicator.

Smoking quit rates (16+)

Eastern Cheshire CCG has the worst levels of successful quitters in their comparator group with 2402.6 per 100,000. South Cheshire CCG is the second worst performing CCG in their comparator group with 2406.1 per 100,000. The best performing comparator CCGs have quit rates that are double those in Eastern and South Cheshire CCG, work needs to be undertaken to identify how these rates are being achieved and adopt any best practice.
Management of lung cancer

Lung Cancer Treatment

Treatment plans for lung cancer patients are based on four key factors.

1) The type of lung cancer found on biopsy. Surgery is generally recommended for patients with a type of lung cancer called non-small-cell lung cancer.

2) The extent of disease (stage) at presentation. Approximately two-thirds of lung cancer patients present with lung cancer that has already spread outside the lung, which means that it is not possible to remove all of the cancer by an operation. Surgery is the first choice of treatment for patients who present with early-stage lung cancer, as it offers the best chance of a cure.

3) The presence of other serious diseases, in addition to lung cancer. Lung cancer patients often have diseases such as emphysema and heart disease, which means that they may not be fit enough to cope with major lung surgery.

4) Patient preference. Some patients decide that they do not wish to have a certain form of lung cancer treatment, including surgery. Lung cancer Multi-Disciplinary Teams (MDTs) will always support patients in the decision-making process and respect the final decision that a patient makes regarding their treatment.

Source: Lung cancer clinical outcomes publication (2016)

Curative Surgery

In Cheshire East the two main NHS Trusts are Mid-Cheshire Hospitals NHS Foundation Trust (MCHFT) and Eastern Cheshire NHS Foundation Trust (ECFT). In 2015 17.1% of lung cancer patients in MCHFT received lung cancer surgery which is similar to the national average. In ECFT 19.4% of lung cancer patients received lung cancer surgery which is higher than the national average.

The majority of patients from the Cheshire East area will receive their lung cancer surgery in Wythenshawe hospital. This hospital performed 467 lung cancer surgeries in 2014 with a adjusted 30 and 90 day survival rates of 98.4% and 96.5% respectively.


Palliative treatment

Those patients who are not suitable for curative treatment can be offered palliative treatment. This is provided in the form of radiotherapy and should be planned by the MDT with early direct involvement of the palliative care team and the clinical nurse specialist (CNS).
Assets:

- **National Cancer Strategy:** In July 2015, the National Cancer Strategy ‘Achieving World Class Cancer Outcomes’ was published. This set out a number of ambitions for outcomes which matter most to patients and society by 2020 e.g. a reduction in cancer incidence and number of cases linked to deprivation; 62% of cancers to be diagnosed at an early stage (stage 1 or 2); 75% of people with cancer should survive to at least 1 year following diagnosis; 57% of people with cancer should survive to at least 10 years following diagnosis; and continuous improvement in patient experience and improved quality of life following diagnosis. More recently, a Cancer Alliance for Cheshire and Merseyside has been established which aims to be the local delivery vehicle for national Cancer Strategy.

- **Be Clear on Cancer Campaigns:** These campaigns are led by Public Health England in partnership with NHS England, the Department of Health and Cancer Research UK. They aim to improve early diagnosis of cancer by raising public awareness of signs and/or symptoms of cancer, and thus promote presentation to GPs as soon as possible. [http://www.cancerresearchuk.org/health-professional/early-diagnosis-activities/be-clear-on-cancer](http://www.cancerresearchuk.org/health-professional/early-diagnosis-activities/be-clear-on-cancer)

- **Action on Cancer in Central Cheshire:** Through the Cancer Commissioning Board for South Cheshire and Vale Royal which has representation from several local partners including CCGs, Mid-Cheshire NHS Foundation Trust, Public Health, Cancer Research UK and Healthwatch, there is an Action on Cancer initiative. Partners aim to inform, educate and empower our local population, communities (e.g. through targeted social marketing and recruitment of community cancer champions) and a range of professionals to be more aware of signs and symptoms, to present earlier to their GP and to participate in the cancer screening programmes where appropriate.

- **Access to chest x-ray** for patients aged over 50 with symptoms and who have not had a chest x-ray in the last 3 months. This is via self-referral in South Cheshire clinical commissioning group area or via referral from a pharmacist in Eastern Cheshire clinical commissioning group area.

**Lung Cancer Improvement Projects:**

- **National Lung Cancer Audit:** Commissioned by the Healthcare Quality Improvement Partnership (HQIP) as part of the National Clinical Audit Programme (NCA). Its aim is to promote quality improvement, and in particular to increase the impact that clinical audit has on healthcare quality in England and Wales. The lung cancer audit looks at the care delivered during referral, diagnosis, treatment and outcomes for people diagnosed with lung cancer and mesothelioma.

- **Accelerate, Coordinate, Evaluate (ACE) Programme:** The ACE Programme is an early diagnosis programme that supports the NHS outcome of ‘preventing people from dying prematurely’. The programme is supported by Cancer Research UK and Macmillan Cancer Support and will run across England for 3 years. Wave 1 projects completed in 2017 and there were two main programmes specific to lung cancer; Lung Cancer Pathways and Proactive Approaches to People at High Risk of Lung Cancer.
Opportunities for improvement / future developments

- Undertaking a whole system approach to reducing the prevalence of smoking, a significant lung cancer risk factor amongst Cheshire East residents would result in a reduction in lung cancer incidence in the long-term.
- Further work needs to be undertaken within primary care to ensure that GPs are aware of the risk factors associated with lung cancer and make appropriate referrals for access to investigation and treatment.
- Additional work needs to be undertaken to identify the at-risk population within deprived communities and encourage them to present in primary care if they become symptomatic.
- More understanding is needed of emergency presentations, the linking of primary care and secondary care data may enable a clearer understanding of the patient’s journey and any potential missed opportunities.

Further information:

- PHE’s National Cancer Intelligence Network and Macmillan Cancer Support (2016). Routes to diagnosis [http://lci.cancertoolkit.co.uk/](http://lci.cancertoolkit.co.uk/)
- The ACE programme [http://www.cancerresearchuk.org/health-professional/early-diagnosis-activities/ace-programme/about-ace](http://www.cancerresearchuk.org/health-professional/early-diagnosis-activities/ace-programme/about-ace)
- Tobacco JSNA: [www.cheshireeast.gov.uk/jsna](http://www.cheshireeast.gov.uk/jsna)
Appendix: NHS Eastern Cheshire Clinical Commissioning Group

**Emergency Admission**

- 21.4 in 100,000 people received emergency diagnoses (2006-2013).
- England average is 28.1 in 100,000.

**Stage at Diagnosis**

- 26.3% of lung cancers are diagnosed early (2013).

**Diagnosis**

- 129 people diagnosed (2014).
- 58 new cases per 100,000 people.
- England average is 78 per 100,000.

**Survival**

- 1-year survival: 37.8% (2014).
- Consistent with England average (35.4%).
- England 5-year survival: 9.5% (2009).

**Deaths**

- 49 in 100,000 died of lung cancer in 2014.
- England average is 61 per 100,000.

GP Referral

- 77.5 in 100,000 people were referred to hospital by their GP for cancer investigations (Two week wait) (2014/2015).
- This is lower than England average.

Lung Cancer JSNA (page 18 of 19)
Appendix: NHS South Cheshire Clinical Commissioning Group

LUNG CANCER

Emergency Admission

27 in 100,000 people received emergency diagnoses (2006-2013).
England average is 28 in 100,000

Diagnosis

153 people diagnosed (2014)
87 new cases per 100,000 people
England average is 78 per 100,000.

Stage at Diagnosis

24.1% of lung cancers are diagnosed early (2013)
England average is 20.3%

GP Referral

116 in 100,000 people were referred to hospital by their GP for cancer investigations (Two week wait) (2014/2015)
This is consistent with England average

Survival

1-year survival: 30.5% (2014)
Worse than England average (35.4%)
England 5-year survival: 9.8% (2009)

Deaths

60 in 100,000 died of lung cancer in 2014
England average is 61 per 100,000

104 people died from lung cancer in 2014.