UK lung cancer care outcomes: A comparison with Europe

What is lung cancer?

Lung cancer is one of the most common types of cancer. It is most often diagnosed in those over 70, and it rarely affects people younger than 40. Research shows that eight out of ten cases of lung cancer are caused by smoking.1

About 46,000 people each year are diagnosed with lung cancer in the UK.2 Lung cancer often does not show any symptoms until the tumour has become quite large. As it progresses, symptoms for lung cancer can include: a cough; feeling out of breath; blood in mucus or phlegm; pain; and weight loss.3

Lung cancer treatments differ according to the type of lung cancer and how it spreads, and can include surgery, chemotherapy, radiotherapy or a combination of these. Survival rates can vary widely, depending on how far the cancer has spread at the time of diagnosis.4

This briefing provides an overview of lung cancer outcomes in the UK and Europe informed by the findings from the Institute of Health Economics’ (IHE) Comparator Report on Access to cancer medicines in Europe revisited.5

UK patient outcomes for lung cancer

The UK’s lung cancer outcomes compare poorly in relation to those of its European neighbours. The incidence rates for lung cancer in the UK are higher than in Europe - 45.1 per 100,000 people in the UK compared to a European average of 44.1 per 100,000.5

The chances of survival for UK patients at five years after diagnosis are 4% lower than in Europe and the likelihood of them dying from the disease is also higher, with 38.8 per 100,000 people in the UK dying from lung cancer compared to a European average of 36.5 per 100,000.5

Women with lung cancer in the UK have markedly worse mortality rates than women in Europe on average. 32.5 women out of 100,000 die from lung cancer in the UK compared to 20.6 out of 100,000 in Europe.5

Incidence of cancer is increasing across the whole of Europe. The IHE report notes that demographic factors contribute to this increase.

However, this alone does not explain the higher incidence rate in the UK, where similar demographic changes to Europe are taking place.5
Poor survival rates from lung cancer are a result of a wide variety of factors, including the variation in quality and provision of cancer services across the UK and decades of under-investment in healthcare professionals and equipment.\(^7\)

In England, emergency presentation is the most common route to diagnosing lung cancer, which is concerning given that the chance of survival declines the later the cancer is diagnosed.\(^8,9\)

Timely referral, early diagnosis and rapid patient access to treatment and care may all, therefore, need to be prioritised to improve the UK’s outcomes for lung cancer.

**Cancer spending**

The UK’s spending on healthcare overall, as well as on cancer and lung cancer specifically, fall below the European average. According to the IHE report, the UK spend on healthcare as a percentage of GDP is 1% lower, and per capita spending on cancer in the UK is €41 lower, than the European average.\(^5\)

The UK spends 3% of its cancer budget on lung cancer.\(^8\) This is significantly lower than the highest spending countries in Europe, such as Germany or the Netherlands, which spend 8.1% and 9% of their cancer budget on lung cancer respectively.\(^5\) The higher spend in the Netherlands, can be explained as a result of the higher incidence rate of lung cancer in the Netherlands (53.8 per 100,000) compared to the incidence in the UK (45.1 per 100,000). In Germany, however, lung cancer incidence is lower than it is in the UK and therefore, the higher spend cannot be explained in this way.
There is also evidence that suggests that the UK is not using its resources in the most efficient way.\textsuperscript{5} For example, Spain has a higher five year survival rate than the UK despite spending almost exactly the same amount per capita as the UK on cancer.

The patient journey

\textit{Diagnosis}

Between 2006 and 2013, 37\% of England’s lung cancer patients are identified via emergency presentation.\textsuperscript{9} This is 15\% higher than the average for all cancers. Furthermore, in terms of alternative routes to diagnosis, the percentage of people with lung cancer diagnosed via GP referral is lower than for most other cancers, with 21\% of lung cancer patients being diagnosed through this route compared to 26\% of all cancer patients.

Regardless of the route to diagnosis, lung cancer patients are often diagnosed at stage IV.\textsuperscript{10} About four out of ten people diagnosed via GP referral are at stage IV while only about two out of ten are at stage I. For those diagnosed via emergency presentation, seven out of ten are at stage III or higher. For patients diagnosed at stage III or later, there is a 29\% lower chance of surviving five years or more than those diagnosed at stage I.\textsuperscript{4}

\textit{Access to new treatments}

Traditionally, the UK’s uptake of new medicines has been relatively low compared to other European countries, which has meant that cancer patients in the UK have had fewer treatment options.\textsuperscript{5} This trend is mirrored in the case of lung cancer treatments, where the UK has some of the lowest levels of uptake of new lung cancer medicines out of the five largest EU states. Since 2000 the UK has approved sixteen treatments for different lung cancers through NICE and further treatments have been made available through the Cancer Drugs Fund (CDF).\textsuperscript{11, 12}

The introduction of the CDF in 2011 was designed to improve access for NHS patients to new cancer medicines, which was then significantly below the European average.\textsuperscript{13} Recent reforms introduced to the CDF should be monitored to ensure patients continue to have timely access to new lung cancer treatments.

\textit{Patient experience}

When compared to other cancers, patient experience with lung cancer in England presents a mixed picture.

According to the 2015 National Cancer Patient Experience Survey, which surveys over 100,000 cancer patients in England, lung cancer patients rated their speed of diagnosis and understanding of their condition as better than patients with other types of cancer.\textsuperscript{14}
However, nearly two out of ten people with lung cancer stated that they were not aware of the treatment options available to them, suggesting that further improvements need to be made in increasing patient awareness of the advantages and disadvantages of different treatment options.\(^4\)

**The future of lung cancer care**

In the UK around 130 people are diagnosed with lung cancer every day, making it the third most common cancer in the UK after breast and prostate cancer.\(^5\) It remains the most common cause of death from cancer. Outcomes for people with lung cancer in the UK are worse than the rest of Europe, as is the current uptake of innovative treatments.

In order to ensure the system is ready to tackle the future challenges that the UK faces for lung cancer, it is important that:

- **Focus on early diagnosis** is increased to improve five year survival rates for lung cancer given the higher chance of survival at an earlier stage of the disease
- **Inequalities in lung cancer outcomes** between patients in the UK and the rest of Europe are addressed, especially the relatively low survival rates compared to the rest of Europe
- **Reimbursement, funding and uptake** pathways for innovative treatments are optimised by making sure that the CDF and NICE Health Technology Appraisal processes are fit for purpose for lung cancer treatments

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**About this briefing**

This briefing has been developed following the publication of the *Comparator Report on patient access to cancer medicines in Europe Revisited* by the Swedish Institute for Health Economics. It aims to highlight the key findings of the report in relation to the UK’s lung cancer outcomes in the European context. Whilst the briefing primarily draws on the findings of the report, it also brings together additional relevant data sources.

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**References**