Incidence (age-standardised rate) of lung cancer among males under 75 years - 2002-04 to 2011-13 (3-year pooled data)

England, South East Region, Oxfordshire and districts within Oxfordshire

Definition
Directly age-standardised registration rates for lung cancer per 100,000 male population aged under 75 years

Source
Health & Social Care Indicator Portal

Numerator
Cancer registrations for lung cancer (ICD10: C33) in the respective calendar years (pooled for 3 years) for males aged under 75 years.

Denominator
Office for National Statistics (ONS) latest revision of mid-year population estimates for males aged under 75 years in the respective calendar years.

Strengths and limitations
1. The European Standard Population (ESP) is an artificial population structure which is used in the weighting of mortality or incidence data to produce Directly Standardised Rates (DSRs), also known as age-standardised rates (ASRs). The ESP is divided into quinary age bands, which correspond to the age bands used by the observations and population figures. Each age band is assigned a value which is used to standardise the rate obtained from the observations and population.
2. Eurostat, the statistical institute of the European Union, decided at the end of 2012 to bring this population structure up to date. Up to 2014, indicators were directly standardised against ESP released in 1976. From 2014 onwards, they are directly standardised against ESP released in 2013.
3. There is a significant increase in many age-standardised cancer incidence rates using 2013 ESP. The incidence rate in England in 2010 for all cancer sites combined was 422.4 per 100,000 males using the 1976 ESP, but rose to 455.2 per 100,000 using the 2013 ESP. The impact is smaller for females. The percentage increase varies by cancer site, with a small decrease for leukaemia, a cancer more common in younger men. The highest increases are found in bladder, stomach, colorectal and lung cancer for both men and women (increases between 58% and 79%). The main female cancers (uterus, ovary and breast) show increases of 38%, 38% and 36% respectively.
4. A year rolling data are used to create a smoother line which is easier to interpret and less susceptible to annual fluctuation.
5. Current results may differ from those previously issued because of changes in methodology to extract data by area, and also because of data enhancements by ONS. Cancer registrations are also continuously being updated retrospectively and ONS records may have been updated since previous analyses.
6. Skin cancers other than malignant melanomas (ICD-10 C44, C47-973) are believed to be greatly under reported. The registration of such cancers varies widely between the regional registers and depends on their ability to access outpatient records and general practitioners. Following ONS practice, the figures presented for ‘incidence of all cancers’ exclude skin cancers other than malignant melanoma.

Latest available data
2011-13

Next available data
2013-15

Time trend
1. The national and regional trends show a general decrease in incidence of lung cancer in males under 75 years of age which showed signs of levelling off. The changes to European Standard Population makes it difficult to say if this trend is continuing. More data points will help us to see this.
2. Oxfordshire was showing an upward trend but the actual number of cases are small and the latest data point (2011-13) indicates a downward turn.

Benchmarking outside Oxfordshire
1. Oxfordshire has a significantly lower incidence of lung cancer in males than England.
2. Vale of White Horse and West Oxfordshire have consistently had significantly lower incidence rates than England. South Oxfordshire had significantly lower incidence rates but in recent years this is no longer the case.
3. In general the incidence in Cherwell has not been significantly different from the national rate.
4. Oxford City had a significantly higher rate than England in 2007-09 but in more recent years there is no significant difference to the national rate.

Benchmarking within Oxfordshire
1. There is some fluctuation in the incidence rate within local districts which will be due, in part, to the small numbers involved.
2. There was a sharp increase in Oxford City between 2005-07 and 2007-09 which levelled off in 2008-10. It is worth noting that the difference in numbers of actual cases is small and more recent data shows the number of new cases is even lower.

Expert interpretation and conclusions with additional information
1. In the UK lung cancer is the second most common cancer, after breast cancer.
2. Many cases of lung cancer in the UK are linked to major lifestyle and other risk factors - 89% (81% in males and 87% in females) each year in the UK. Smoking is the main avoidable risk factor for lung cancer. Linked to an estimated 86% of lung cancer cases in the UK. A diet high in fruit and vegetables may protect against lung cancer – insufficient fruit and vegetables intake is linked to an estimated 9% of lung cancer cases in the UK.
3. Almost 9 in 10 lung cancer cases occur in people aged 60 and over.
4. In Oxfordshire each year approximately 110 men and 80 women under 75 years are diagnosed with lung cancer.
5. There is evidence for a strong association between lung cancer incidence and deprivation for both males and females in England. Whilst the higher rates in Cherwell and Oxford City could be explained by this, the numbers are too low to come to any firm conclusions.
6. The Public Health department commissions Stop Smoking and Tobacco Control Services in Oxfordshire and these support people to quit smoking. It is important that the service continues to target lower socioeconomic groups and others with higher smoking rates.
7. We are concerned that data indicated an increasing rate in the county it is difficult to tell if this has levelled off now. Therefore this should be monitored closely to see if the decrease is sustained.
8. The RAG rating for this indicator is therefore AMBER.

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