Cancer registrations in England, 2010

Coverage: England  
Date: 24 April 2012  
Geographical Area: Country  
Theme: Health and Social Care

Cancer registrations in England, 2010

- There were 136,372 new cases of cancer registered for males and 132,386 for females in England in 2010. Compared with 2009 the number of cancer registrations have increased by 1,736 for males (1.3 per cent) and 2,343 for females (1.8 per cent).

- For all malignancies the age-standardised incidence rates for males have decreased slightly from 424.3 males per 100,000 population in 2009 to 422.6 males per 100,000 population in 2010. The age-standardised incidence rates for females increased from 366.9 to 369.6 per 100,000 population in 2010.

- For males, the three most common cancers were prostate, lung and colorectal.

- For females, the three most common cancers were breast, lung and colorectal.

Summary

This annual bulletin presents the number of newly diagnosed cases of cancer (incidence) and the age-standardised incidence rates for the three most common cancers for males and females in England, in 2010.

This is the first time that the Office for National Statistics (ONS) has published 2010 statistics on cancer incidence in England.
Table 1: Number of newly diagnosed cancers and age-standardised rates; by sex, 2010, England

<table>
<thead>
<tr>
<th>Site</th>
<th>Number</th>
<th>Percentage</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prostate</td>
<td>34,892</td>
<td>25.6</td>
<td>106.4</td>
</tr>
<tr>
<td>Lung</td>
<td>18,738</td>
<td>13.7</td>
<td>55.9</td>
</tr>
<tr>
<td>Colorectal</td>
<td>18,590</td>
<td>13.6</td>
<td>56.5</td>
</tr>
<tr>
<td>Sub-total</td>
<td>72,220</td>
<td>53.0(^4)</td>
<td>.(^5)</td>
</tr>
<tr>
<td>All cancers(^3)</td>
<td>136,372</td>
<td>100</td>
<td>422.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Site</th>
<th>Number</th>
<th>Percentage</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast</td>
<td>41,259</td>
<td>31.2</td>
<td>125.7</td>
</tr>
<tr>
<td>Lung</td>
<td>15,041</td>
<td>11.4</td>
<td>37.9</td>
</tr>
<tr>
<td>Colorectal</td>
<td>14,628</td>
<td>11</td>
<td>36.1</td>
</tr>
<tr>
<td>Sub-total</td>
<td>70,928</td>
<td>53.6(^4)</td>
<td>.(^5)</td>
</tr>
<tr>
<td>All cancers(^2)</td>
<td>132,386</td>
<td>100</td>
<td>369.6</td>
</tr>
</tbody>
</table>

Table notes:
1. Prostate cancer is defined by the International Classification of Diseases, Tenth revision (ICD-10) code C61, lung cancer is defined as ICD-10 code C34, colorectal cancer is defined as ICD-10 codes C18-20 and breast cancer is defined as ICD-10 code C50.
2. Directly age-standardised rate per 100,000 using the European Standard Population, see background note 1.
3. Cancer incidence is defined using International Classification of Diseases, Tenth Revision (ICD-10) codes C00-C97 excluding code C44, non-melanoma skin cancer.
4. Percentages may not sum to sub-total or total due to rounding.
5. Denotes not applicable – rates are not calculated on this subtotal.
6. Source: Office for National Statistics on behalf of the Cancer Registries

Download table
[XLS](XLS format) (30 Kb)

Incidence rates

The accompanying tables give detailed figures for the numbers of cases and rates by sex and age group.

There has been little change in the age-standardised incidence rate of cancer registrations (see background notes 1 and 2) in England in the last three years. Between 2009 and 2010, the age-standardised incidence rate for males decreased by 1.7 to 422.6 per 100,000 population while the female age-standardised rate increased by 2.7 to 369.6 females per 100,000 population.
Most common cancers among males and females

Table 1 summarises figures for the three most common cancers in males and females, together they account for 53 per cent of all new cancer registrations. The three most common sites for new cancer registrations for men in 2010 are prostate, lung and colorectal. For females, the three most common sites are breast, lung and colorectal.

Number of new cases diagnosed by site

There were 136,372 new cases of cancer registered for males and 132,386 for females in England in 2010 (see background note 2).
For males, the overall number of registrations increased by 1,736 in 2010 compared with 2009. There were 299 more cases of prostate cancer in 2010 compared with 2009, while there were 363 more cases of colorectal cancer, and 246 more cases of lung cancer.

For females, the overall number of registrations increased by 2,343 cases in 2010 compared with 2009. There were 999 more cases of breast cancer, 419 more cases of lung cancer and 104 more cases of colorectal cancer in 2010, compared with 2009.

Breast cancer continued to account for around one-in-three newly diagnosed cases of cancer in females. Between 2001 and 2010, the age-standardised incidence rate for breast cancer increased by 6.3 per cent (Cancer statistics - registrations, England). The primary risk factors for breast cancer are considered to be age, late childbearing, lack of breastfeeding, higher hormone levels and family history (Cancer Research UK).

**Figure 2: Directly age-standardised rates for the three most common sites: by sex, 2001-2010 England**

Females:
Prostate cancer accounts for just over one-in-four newly diagnosed cases of cancer in males. A sharp rise in the incidence of prostate cancer was observed in the early part of the 1990s after increased use of prostate-specific antigen (PSA) testing resulted in more cases being diagnosed (Quinn et al, 2001). Between 2001 and 2010 the age-standardised rate increased by around 10 per cent. The established risk factors of prostate cancer are age, family history and ethnicity: although many other factors including alcohol, smoking, diet, physical activity and medications have also been implicated in its development (Cancer Research UK). Prostate cancer is relatively uncommon in men under 45 but becomes more common with advancing age.
The age-standardised incidence rate of lung cancer in males was 55.9 per 100,000 population in 2010. Since 2001 the age-standardised incidence rate has decreased by 15 per cent (from 66.1 males per 100,000 population). In contrast, the lung cancer incidence rate for females increased by 1.1 per cent to 37.9 per 100,000 population between 2009 and 2010, and by 10.8 per cent since 2001 (from 34.2 per females 100,000 population). The majority of lung cancer cases occur as a result of tobacco smoking. Historically, males started smoking earlier than females and it wasn’t until after the Second World War that females started to smoke in greater numbers. Smoking cessation has helped reduce the number of lung cancer cases in males but for females the lung cancer rate is still increasing (Cancer Research UK). This increase is in part due to females being more susceptible than males to developing lung cancer and could also be due to other non-smoking factors like genetics and the female hormone oestrogen (NHS Choices).
Colorectal cancer was the third most common cancer in both males and females. The age-standardised incidence rate for colorectal cancer has remained fairly constant for both sexes over the past ten years.

Between 2009 and 2010 there was a 19.3 per cent decrease of carcinoma in situ of cervix uteri (see background note 4). Carcinoma in situ is not a malignant cancer but in some women it will develop into a malignant cancer if left untreated. In 2010 there were 22,132 newly diagnosed cases of carcinoma in situ of cervix uteri. The age-standardised incidence rate was 88 females per 100,000 population, compared with 27,438 cases and an incidence rate of 110.3 females per 100,000 population in 2009. This is likely to be due to the larger than usual increase in the 2009 cancer registrations of carcinoma in situ of cervix uteri. The death of a young celebrity from cervical cancer in 2009 led to a sudden increase in the awareness of the condition and improved levels of screening among young females, resulting in more cases being diagnosed during this period. The 2010 cancer registrations for carcinoma in situ of cervix uteri illustrate that registrations of this non-malignant cancer have now returned to levels comparable with previous years.

Policy context

In Improving Outcomes: A Strategy for Cancer (January 2011), the Department of Health states that although improvements have been made in the quality of cancer services in England, a significant gap remains in survival compared with the European average (see background note 5). Survival rates for cervical, colorectal and breast cancer are some of the lowest among member states of the Organisation for Economic Co-operation and Development (OECD). The Outcomes Strategy sets out how the Department of Health aims to improve outcomes for all cancer patients and improve cancer survival rates, with the aim of saving an additional 5,000 lives every year by 2014/15.

Outcomes strategies set out how the NHS, public health and social care services will contribute to the ambitions for progress agreed with the Secretary of State in each of the high-level outcomes frameworks. The indicator set for the National Health Service (NHS) Outcomes Framework includes one- and five-year relative survival from colorectal, breast and lung cancers.

Acknowledgements

The National Cancer Registry at the Office for National Statistics wish to acknowledge the work of the regional cancer registrries in England, which provide the raw data for these analyses.

Further information

Further cancer statistics are available on the ONS website:

- Cancer statistics registrations (series MB1) will provide more detailed tables on cancer registrations including regional information. This will be published in June/July 2012
- Cancer survival by cancer network in England
- Cancer incidence and mortality in the United Kingdom
- Cancer survival in England
- Geographic patterns of cancer survival in England
• **Cancer survival in the 'Spearhead' Primary Care Trusts of England**
• **Combined cancer survival by Primary Care Trusts**

Further cancer statistics for the United Kingdom:

Statistics on cancer in Scotland are available from the [Information Services Division (ISD)](http://www.isd.scotland.on), Scotland.

Statistics on cancer in Wales are available from the [Welsh Cancer Intelligence Surveillance Unit](http://www.heciswales.co.uk).

Statistics on cancer in Northern Ireland are available from the [Northern Ireland Cancer Registry](http://www.belfast.gov.uk/health/nicr).

Further information about statistics on cancer registrations published by the Office for National Statistics (ONS) can be found in the [Summary Quality Report for cancer registrations (189.7 Kb Pdf)](http://www.ons.gov.uk/ons/publications/cancerregistrations/summaryqualityreportcancerregistrations.html).

Summary quality reports are overview notes which pull together key qualitative information on the various dimensions of the quality of statistics as well as providing a summary of the methods used to compile the output. Information about key users of these statistics are also provided.

**References**


2. Cancer Research UK. Breast cancer - risk factors
   [info.cancerresearchuk.org/cancerstats/types/breast/riskfactors/](http://info.cancerresearchuk.org/cancerstats/types/breast/riskfactors/)


   [info.cancerresearchuk.org/cancerstats/types/prostate/riskfactors/](http://info.cancerresearchuk.org/cancerstats/types/prostate/riskfactors/)

   [info.cancerresearchuk.org/cancerstats/types/lung/smoking/](http://info.cancerresearchuk.org/cancerstats/types/lung/smoking/)

6. NHS Choices, Lung cancer in women
   [www.nhs.uk/Livewell/Lungcancer/Pages/Womenandlungcancer.aspx](http://www.nhs.uk/Livewell/Lungcancer/Pages/Womenandlungcancer.aspx)

Background notes

1. The age-standardised rates in this release are expressed per 100,000 population and are standardised to the European Standard Population. They are standardised to allow for more robust comparisons between males and females, years and geographical areas.

2. The figures for numbers and rates of 'all cancers' in this release refer to all malignant neoplasms (ICD-10 C00-C97), excluding non-melanoma skin cancer (ICD-10 C44). Non-melanoma skin cancer (nmsc) is very common, but the policies and practices for the recording of nmsc have varied among the cancer registries, and over time. As the available figures are known to be under-estimates and unreliable for comparison purposes, they have been excluded from the figures for 'all cancers'.

3. The PSA test enables invasive prostate cancer to be identified earlier than it might otherwise have been, but it also identifies latent tumours that may never have caused symptoms and were therefore never diagnosed during the man's lifetime.

4. In situ means that the cancer is in its earliest stages (not yet spread from the surface layer of cells in an organ or other tissue) and is usually curable. ICD-10 groups in situ neoplasms in D00-D09.

5. Cancer incidence data from this report and tables and from the MB1 series are used to calculate National Statistics on cancer survival.

6. The cancer registrations data reported are believed to be essentially complete for the year 2010 (97 per cent at the time of extraction), but it is important to note that the cancer registration database is dynamic. In common with cancer registries in other countries, cancer incidence rates in England can take up to five years after the end of a given calendar year to reach 100 per cent completeness and stability, due to the continuing accrual of late registrations. The figure of 97 per cent is an estimate of completeness based on the figures published for three previous years data (2007-2009), compared with the number of late registrations subsequently received for these years. It is therefore the difference between what figures have been published in the First Release publication (and all subsequent ONS cancer incidence publications within that reporting year), versus late registrations received after the publication date cut-off. It is not an estimate of how many cancers never get recorded.

7. Figures presented for years prior to 2010 are based on rates reported in the most recent Annual Reference Volume (Cancer statistics - registrations, England, 2009, Series MB1 no.40) and represent registrations received at ONS by September 2010.

9. Within the Office for National Statistics (ONS), cancer registration data are used to produce National Statistics on cancer incidence and survival. These data are also used to answer parliamentary questions and provide bespoke tables for customers, for a charge (subject to legal frameworks, disclosure control, resources and agreement of costs, where appropriate). Such enquiries should be made to:

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Cardiff Road
Newport NP10 8XG

Tel: +44 (0)1633 456801
Email: cancer.newport@ons.gsi.gov.uk

10. We welcome feedback from users on the content, format and relevance of this release. The Health and Life Events user engagement strategy is available to download from the ONS website. Please send feedback to the postal or email address above.

11. A list of the names of those given pre-publication access to the statistics and written commentary is available in pre-release access - cancer registrations in England 2010 (54.6 Kb Pdf). The rules and principles which govern pre-release access are featured within the Pre-release Access to Official Statistics Order 2008.

12. Follow ONS on Twitter and Facebook.

13. Details of the policy governing the release of new data are available by visiting www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html or from the Media Relations Office email: media.relations@ons.gsi.gov.uk

The United Kingdom Statistics Authority has designated these statistics as National Statistics, in accordance with the Statistics and Registration Service Act 2007 and signifying compliance with the Code of Practice for Official Statistics.

Designation can be broadly interpreted to mean that the statistics:

- meet identified user needs;
- are well explained and readily accessible;
- are produced according to sound methods; and
- are managed impartially and objectively in the public interest.
Once statistics have been designated as National Statistics it is a statutory requirement that the Code of Practice shall continue to be observed.

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This document is also available on our website at www.ons.gov.uk.

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