

Cancer incidence and mortality in the UK, 2007-2009



Coverage: **UK**

Date: **14 March 2012**

Geographical Area: **UK**

Theme: **Health and Social Care**

Key points

- Around 158,900 males and 156,300 females were newly diagnosed with cancer each year in the UK during 2007–09, corresponding to incidence rates of 427 per 100,000 males and 371 per 100,000 females
- Around 81,600 males and 74,600 females died from cancer in each of those years in the UK, corresponding to mortality rates of 209 per 100,000 males and 151 per 100,000 females
- Breast cancer had the highest incidence rate in females (124 cases per 100,000 females) and prostate cancer had the highest incidence rate for males (103 cases per 100,000 males)
- In Wales the incidence rate of all cancers for males was around 8 per cent higher than in the UK as a whole. Scotland had the highest cancer incidence rate for females at 407 cases per 100,000 females. Scotland also had the highest cancer mortality rates for both sexes – 13 per cent higher than the UK average for both males and females

Summary

This report presents the number of newly-diagnosed cases of cancer (incidence) and deaths from cancer (mortality), in the UK during 2007–09, together with the age-standardised incidence and mortality rates (see background notes 1 and 2).

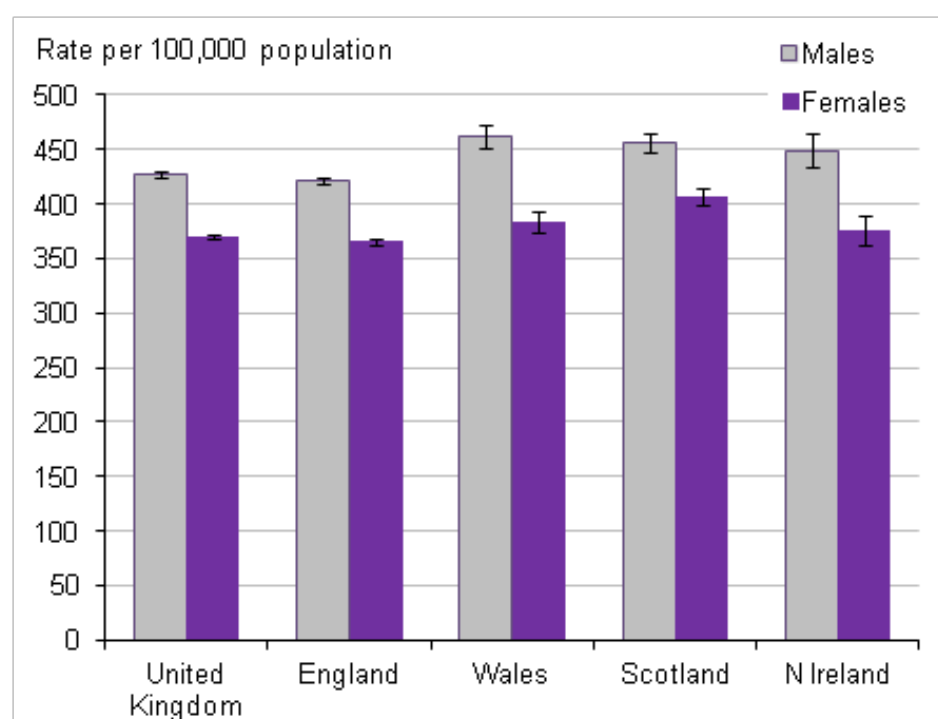
This report covers all cancers combined (excluding the incidence of non-melanoma skin cancer; see background note 3) and 21 common cancers. Results are given for the UK as a whole and for its four constituent countries. Numbers and age-standardised rates have been calculated as averages over the three-year period 2007–09 (see background note 4). Where it is stated that the incidence or mortality rate for a condition or country is higher or lower than another, this is where the rate is higher or lower, and the confidence intervals around the rate do not overlap with those of the figure

being compared. Where it is stated that one rate is comparable with another, this is because the confidence intervals around the two estimates overlap.

The major cancers included in the tables and figures accounted for nearly 90 per cent of all cases of cancer and over 82 per cent of all deaths from cancer in the UK in 2007–2009. The three most common cancers: breast, lung and colorectal accounted for around 41 per cent of cases and 40 per cent of deaths from cancer.

Summary chart. Age-standardised incidence with 95 per cent confidence intervals for newly diagnosed cases of cancer, by sex, 2007-2009

United Kingdom



Source: Office for National Statistics

Notes:

1. Age-standardised incidence rates per 100,000 population, standardised to the European Standard Population. Age-standardised rates are used to allow comparisons between populations which may contain different proportions of people of different ages.
2. Confidence intervals are a measure of the statistical precision of an estimate and show the range of uncertainty around the estimated figure. Calculations based on small numbers of events are often subject to random fluctuations. As a general rule, if the confidence interval around one figure overlaps with the interval around another, we cannot say with certainty that there is more than a chance difference between the two figures.
3. Excludes NMSC: non-melanoma skin cancer (C44).
4. Three-year averages.
5. For underlying figures, see table 2.

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Results

The detailed results are displayed in [tables and charts \(349 Kb Excel sheet\)](#) and can be downloaded as an Excel file from the Office for National Statistics website.

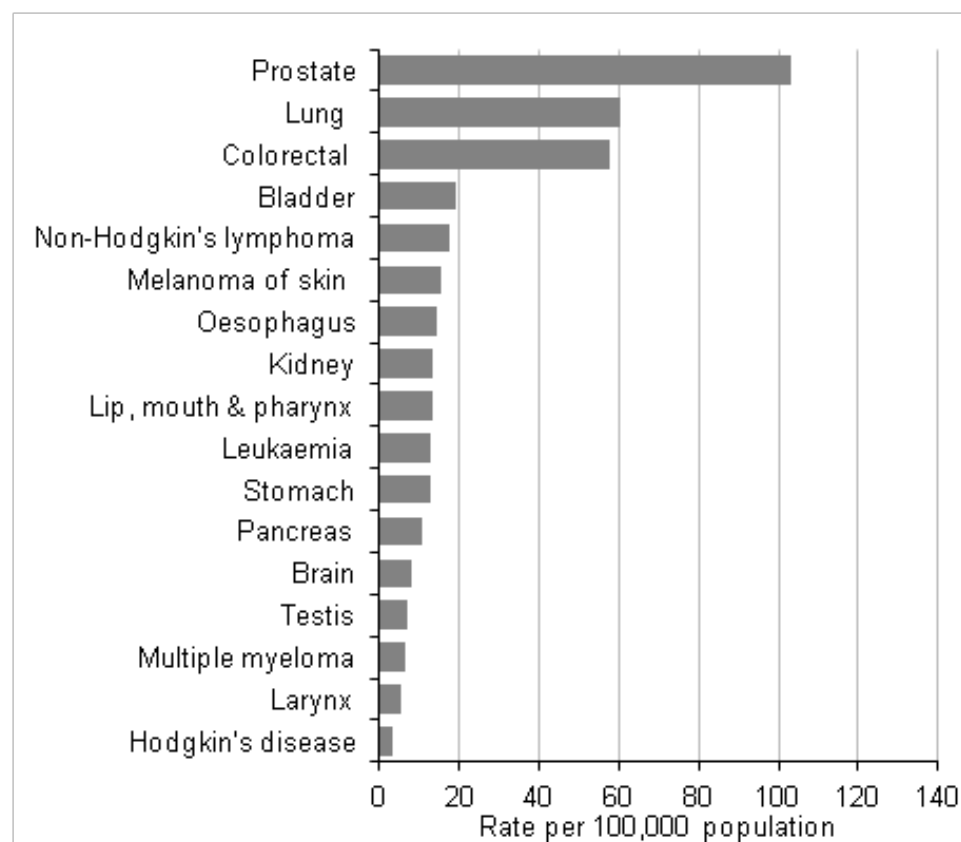
Incidence

In the UK there were on average 315,100 newly-diagnosed cases of cancer each year during the period 2007–2009, with around 158,900 cases among males and 156,300 cases among females ([Table 1 \(349 Kb Excel sheet\)](#)). The overall age-standardised incidence rate was higher among males, at 427 cases per 100,000 compared with 371 per 100,000 for females ([Table 2 \(349 Kb Excel sheet\)](#)).

The three most common cancers for males were prostate, lung and colorectal and for females were breast, lung and colorectal ([Figure 1a and 1b \(49 Kb Excel sheet\)](#)). The incidence rate for lung cancer was 35 per cent higher in males than in females (60 and 39 cases per 100,000 respectively), and the incidence rate of colorectal cancer was 36 per cent higher in males than females (58 and 37 per 100,000 for males and females respectively). Breast cancer in females had the highest overall incidence rate (124 cases per 100,000). This was 17 per cent higher than the cancer with the highest incidence in males – prostate cancer (103 cases per 100,000).

Figure 1a. Age-standardised incidence for the major cancers, males, 2007-2009

United Kingdom



Source: Office for National Statistics

Notes:

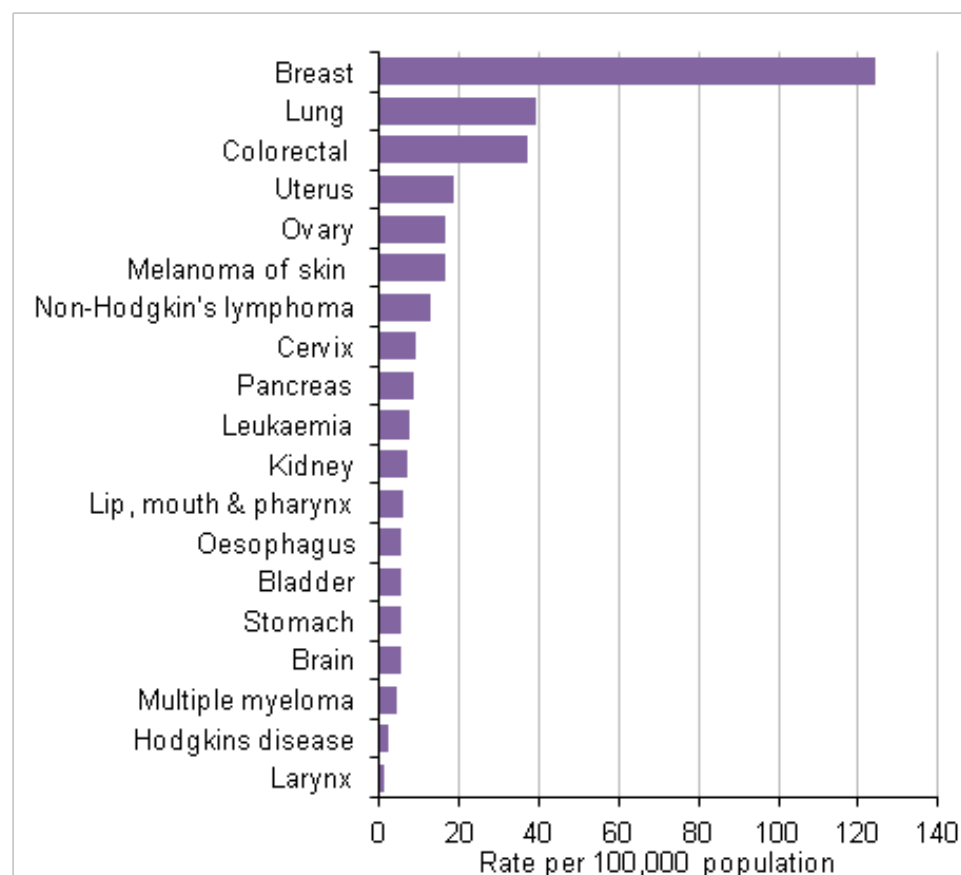
1. See tables 1-4 for the ICD-10 codes used to define these conditions
2. Directly age-standardised using the European Standard Population
3. Rates are calculated as three-year averages

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Figure 1b. Age-standardised incidence for the major cancers, females, 2007-2009

United Kingdom



Source: Office for National Statistics

Notes:

1. See tables 1-4 for the ICD-10 codes used to define these conditions
2. Directly age-standardised using the European Standard Population
3. Rates are calculated as three-year averages

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Mortality

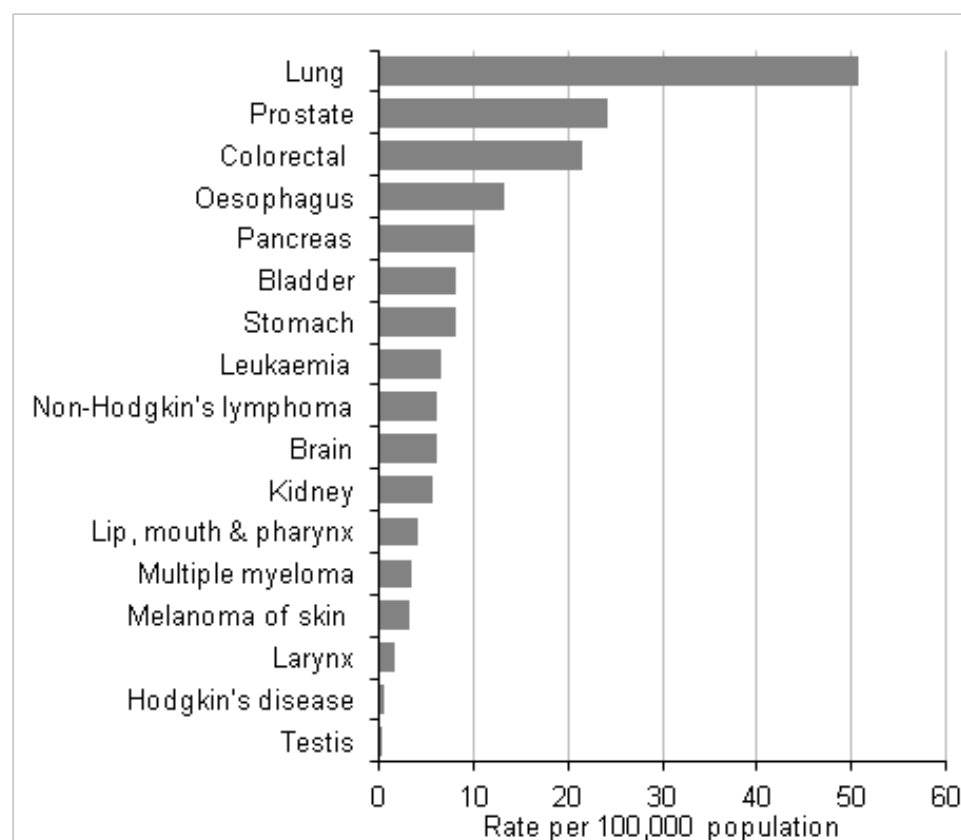
There were on average 156,200 deaths from cancer each year in the UK during 2007–09, with around 81,600 deaths among males and 74,600 among females ([Table 3 \(349 Kb Excel sheet\)](#)). The equivalent age-standardised mortality rates were 209 per 100,000 deaths for males and 151 per 100,000 deaths for females ([Table 4 \(349 Kb Excel sheet\)](#)).

The three most common cancers for both sexes were also the most common causes of death from cancer ([Figure 2a and 2b \(50 Kb Excel sheet\)](#)). Lung cancer had the highest mortality rate for

both males and females and the mortality rate for males was 38 per cent higher than in females. For males the mortality rate for lung cancer (51 deaths per 100,000) was twice as high as that for prostate cancer (24 deaths per 100,000), and for females lung cancer had a higher mortality rate than breast cancer. The mortality rate for colorectal cancer was 38 per cent higher in males than females (22 and 14 deaths per 100,000 for males and females respectively).

Figure 2a. Age-standardised mortality for the major cancers, males, 2007-2009

United Kingdom



Source: Office for National Statistics

Notes:

1. See tables 1-4 for the ICD-10 codes used to define these conditions
2. Directly age-standardised using the European Standard Population
3. Rates are calculated as three-year averages

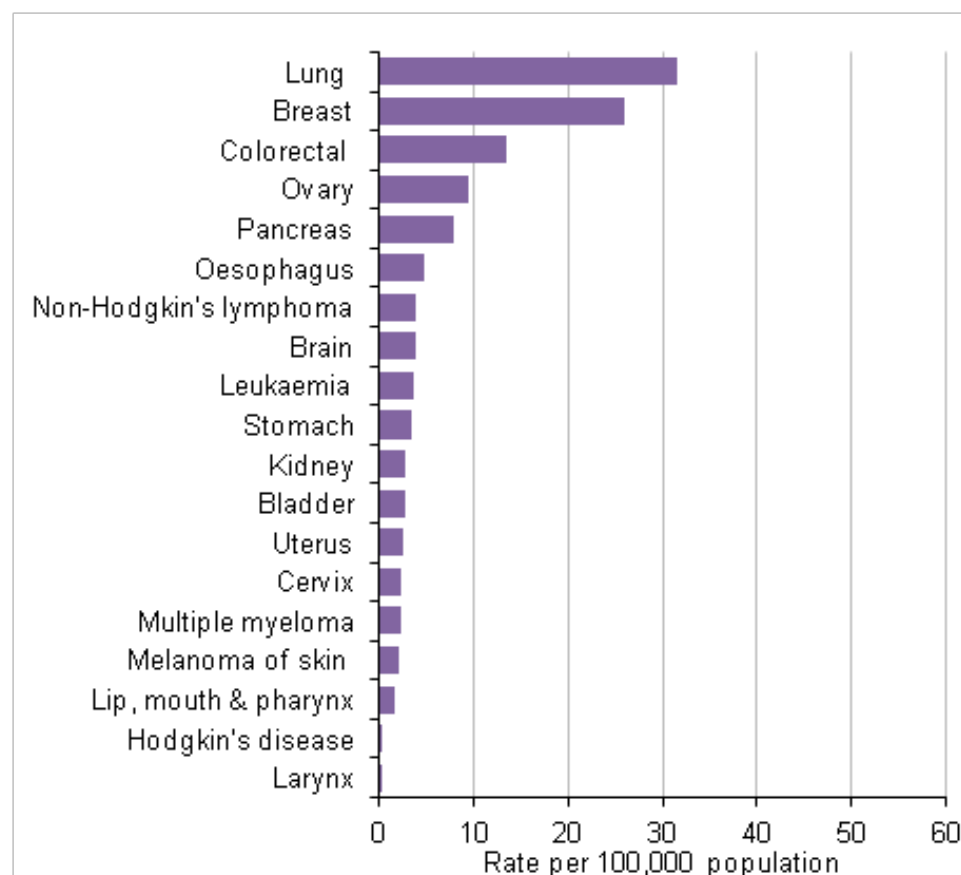
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(50 Kb)

Figure 2b. Age-standardised mortality for the major cancers, females, 2007-2009

United Kingdom



Source: Office for National Statistics

Notes:

1. See tables 1-4 for the ICD-10 codes used to define these conditions
2. Directly age-standardised using the European Standard Population
3. Rates are calculated as three-year averages

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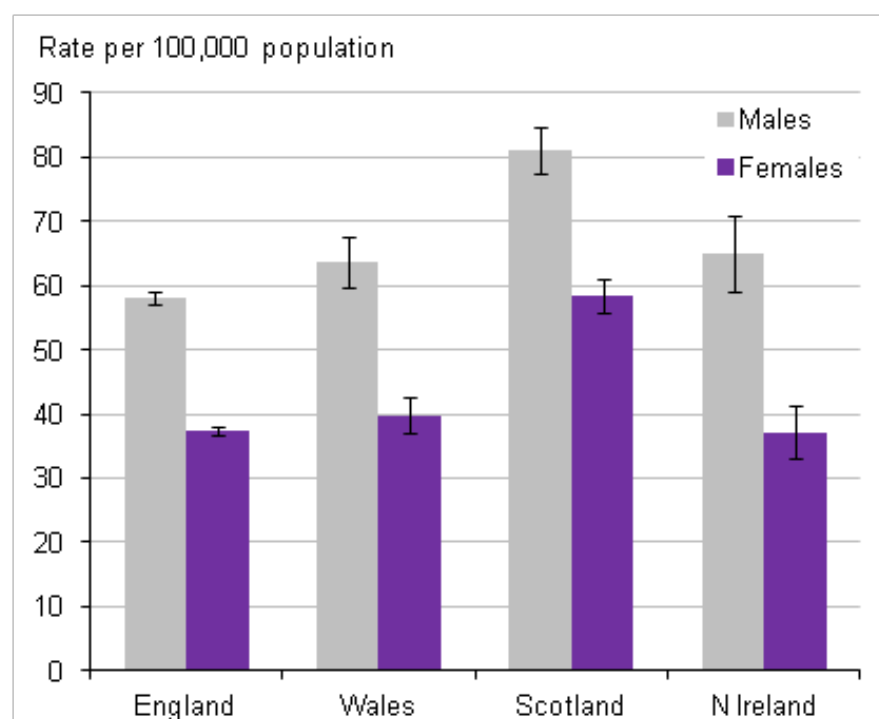
(50 Kb)

Differences between countries

Lung cancer incidence and mortality rates for both sexes were higher in Scotland and lower in England for males than the other constituent countries of the UK ([Figure 3a and 3b \(54.5 Kb Excel sheet\)](#)). Rates in Wales and Northern Ireland were comparable with each other.

Figure 3a. Lung cancer: Age-standardised incidence with 95 per cent confidence intervals by sex and country, 2007-2009

United Kingdom



Source: Office for National Statistics

Notes:

1. Lung cancer is coded as C34 in the International Classification of Diseases, Tenth Revision (ICD-10).
2. Directly age-standardised using the European Standard Population.
3. Rates are calculated as three-year averages.

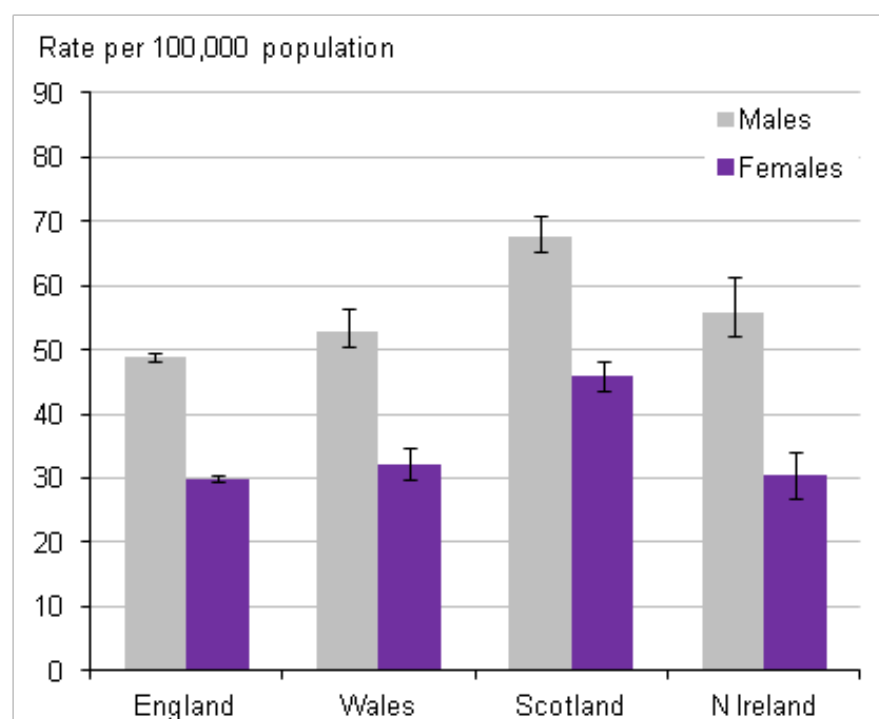
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Figure 3b. Lung cancer: Age-standardised mortality with 95 per cent confidence intervals by sex and country, 2007-2009

United Kingdom



Source: Office for National Statistics

Notes:

1. Lung cancer is coded as C34 in the International Classification of Diseases, Tenth Revision (ICD-10).
2. Directly age-standardised using the European Standard Population.
3. Rates are calculated as three-year averages.

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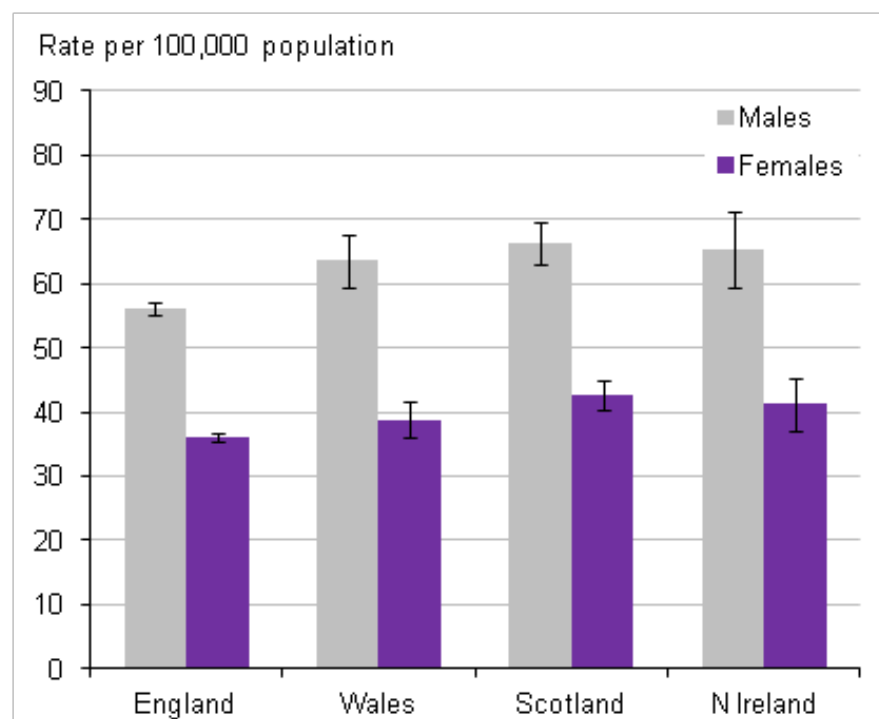
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(54.5 Kb)

For colorectal cancer, the incidence rates were lower in England compared with the rates for the other constituent countries of the UK. This result was also reflected in the mortality rates for colorectal cancer. ([Figure 4a and 4b \(54 Kb Excel sheet\)](#))

Figure 4a. Colorectal cancer: Age-standardised incidence with 95 per cent confidence intervals by sex and country, 2007-2009

United Kingdom



Source: Office for National Statistics

Notes:

1. Colorectal cancer is coded as C18-C20 in the International Classification of Diseases, Tenth Revision (ICD-10).
2. Directly age-standardised using the European Standard Population.
3. Rates are calculated as three-year averages.

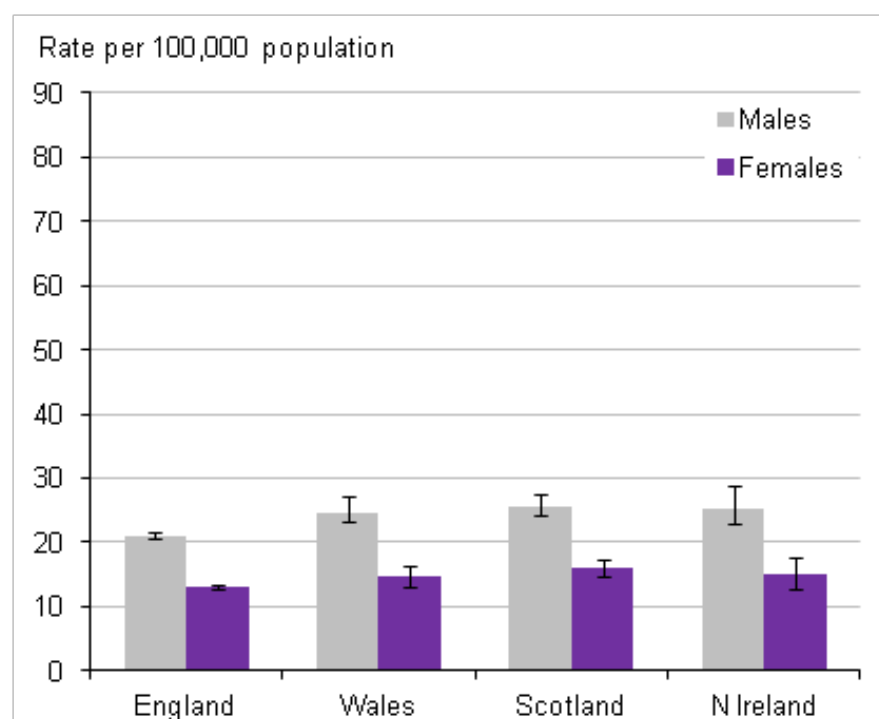
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Figure 4b. Colorectal cancer: Age-standardised mortality with 95 per cent confidence intervals by sex and country, 2007-2009

United Kingdom



Source: Office for National Statistics

Notes:

1. Colorectal cancer is coded as C18-C20 in the International Classification of Diseases, Tenth Revision (ICD-10).
2. Directly age-standardised using the European Standard Population.
3. Rates are calculated as three-year averages.

Download chart

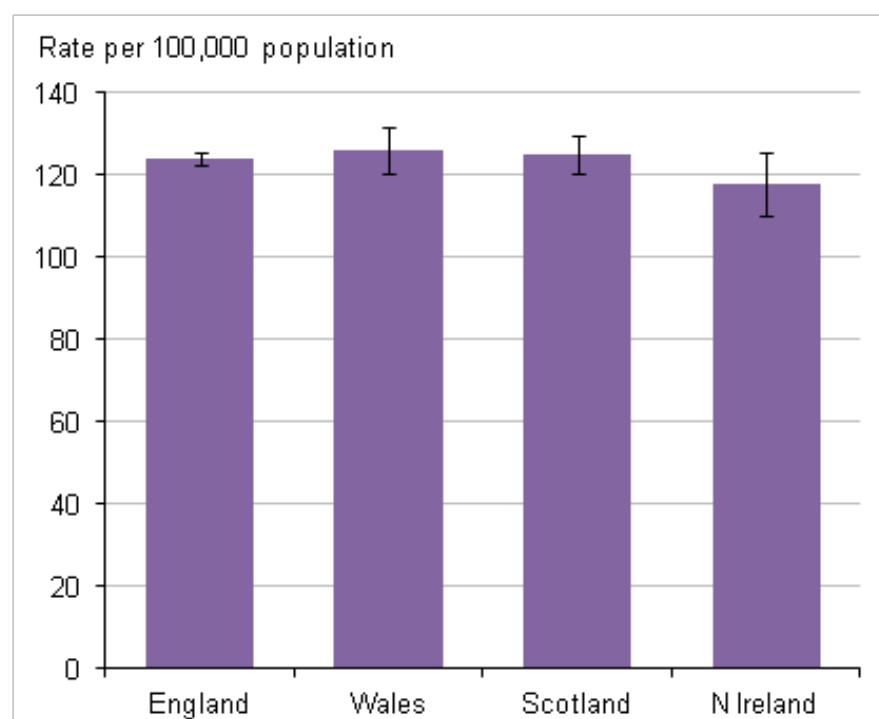
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(54 Kb)

Breast cancer incidence rates were similar in England, Wales and Scotland, but lower in Northern Ireland. Mortality rates were comparable across all constituent countries ([Figure 5a and 5b \(42.5 Kb Excel sheet\)](#)).

Figure 5a. Breast cancer: Age-standardised incidence with 95 per cent confidence intervals by country, females, 2007-2009

United Kingdom



Source: Office for National Statistics

Notes:

1. Breast cancer is coded as C50 in the International Classification of Disease, Tenth Revision (ICD-10).
2. Directly age-standardised using the European Standard Population.
3. Rates are calculated as three-year averages.

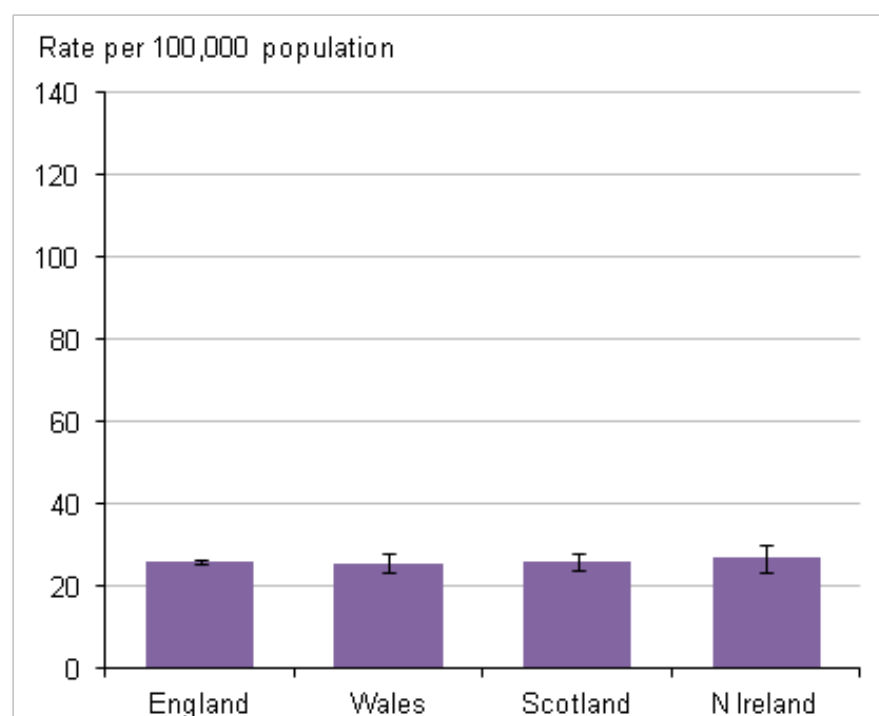
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Figure 5b. Breast cancer: Age-standardised mortality with 95 per cent confidence intervals by country, females, 2007-2009

United Kingdom



Source: Office for National Statistics

Notes:

1. Breast cancer is coded as C50 in the International Classification of Disease, Tenth Revision (ICD-10).
2. Directly age-standardised using the European Standard Population.
3. Rates are calculated as three-year averages.

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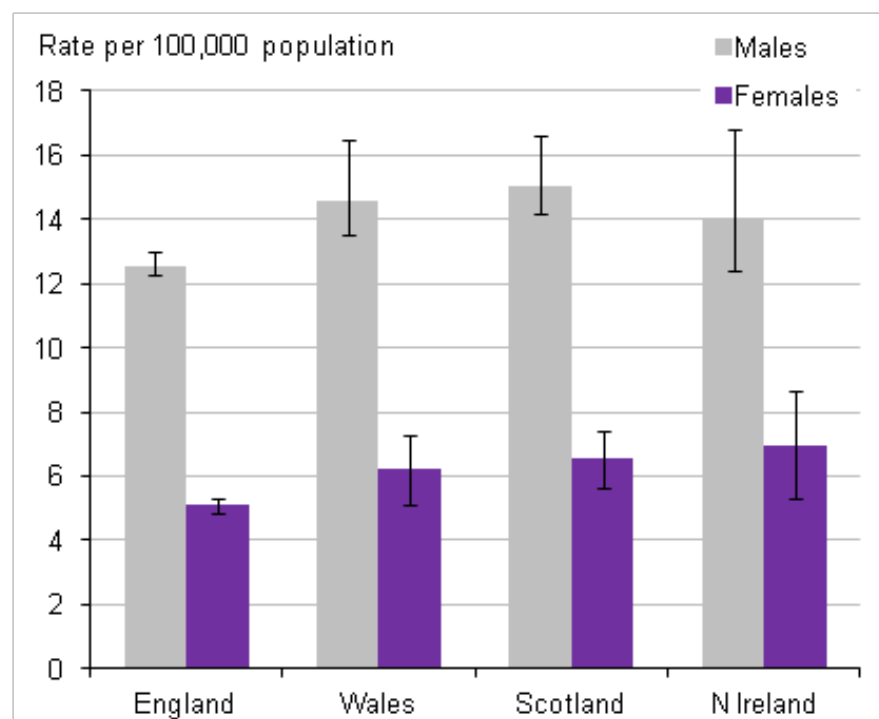
(42.5 Kb)

Incidence rates for prostate cancer varied, with Wales having the highest and Scotland the lowest, while mortality rates were very similar across all countries ([Tables 2 and 4 respectively \(349 Kb Excel sheet\)](#)).

Incidence rates for stomach cancer for both males and females were similar in Scotland, Wales and Northern Ireland and lower in England. Stomach cancer mortality rates for females were comparable in Scotland, Wales and Northern Ireland, but lower in England ([Figure 6a and 6b \(54 Kb Excel sheet\)](#)).

Figure 6a. Stomach cancer: Age-standardised incidence with 95 per cent confidence intervals by sex and country, 2007-2009

United Kingdom



Source: Office for National Statistics

Notes:

1. Stomach cancer is coded as C16 in the International Classification of Diseases (ICD-10).
2. Directly age-standardised using the European Standard Population.
3. Rates are calculated as three-year averages.

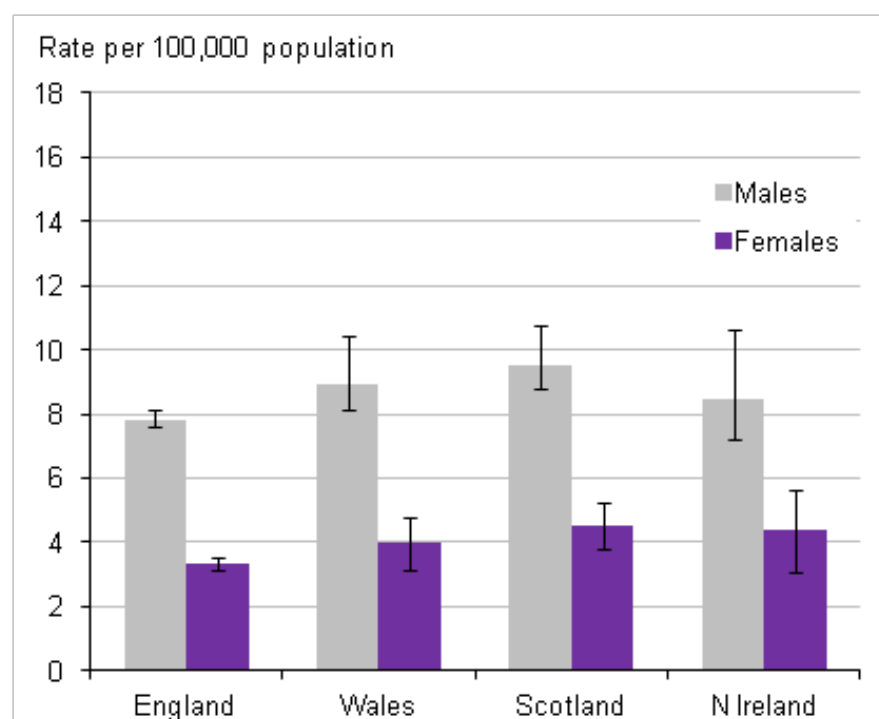
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(54 Kb)

Figure 6b. Stomach cancer: Age-standardised mortality with 95 per cent confidence intervals by sex and country, 2007-2009

United Kingdom



Source: Office for National Statistics

Notes:

1. Stomach cancer is coded as C16 in the International Classification of Diseases (ICD-10).
2. Directly age-standardised using the European Standard Population.
3. Rates are calculated as three-year averages.

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(54 Kb)

For England, cancer incidence rates for all malignancies excluding non-melanoma skin cancer and mortality rates for all malignancies were similar to those for the UK, since the cancer diagnoses and deaths for England accounted for more than 80 per cent of the UK total.

Wales

Wales had a higher overall cancer incidence rate for males than the UK as a whole:

- The incidence rate of prostate cancer was 14 per cent higher for Wales than for the UK as a whole, though the mortality rate from prostate cancer for Wales was comparable with that for the UK

- For females, the incidence of bladder cancer in Wales was 10 per cent higher than the rate for the UK. Mortality rates for bladder cancer in Wales for both sexes were comparable with those for the UK

Scotland

Scotland had the highest cancer incidence rates for females in the UK and Scotland had the highest overall cancer mortality rates for both sexes, which were around 13 per cent higher for both males and females than those for the UK as a whole. The overall cancer incidence rates were 6 per cent higher for males and for females 9 per cent higher than for the UK.

- The incidence of lung cancer was 26 per cent higher for males and 33 per cent higher for females than in the UK as a whole. The incidence of, and mortality from, other smoking-related cancers – oesophagus, lip, mouth, pharynx and larynx – were also high in Scotland in comparison with the figure for the UK. The incidence of prostate cancer was 13 per cent lower in Scotland than in the UK as a whole, although the mortality rate from prostate cancer was comparable with the figure for the UK
- The mortality rate for lung cancer in Scotland was 25 per cent higher for males and 31 per cent higher for females than in the UK as a whole. In males this was nearly three times the mortality rate for prostate cancer and in females it was 43 per cent higher than the mortality rate for breast cancer

Northern Ireland

Northern Ireland had overall incidence and mortality rates similar to those for the UK as a whole. The exceptions to this were:

- Rates for colorectal cancer were higher than those for the UK: incidence was 12 per cent higher in males and 10 per cent higher in females, while mortality was 14 per cent higher in males. Rates were also high for Wales and Scotland for colorectal cancer
- The incidence rate for bladder cancer was 12 per cent lower for males and 14 per cent lower for females compared with the UK as a whole
- The mortality rates for bladder cancer in males was 7 per cent lower than the UK as a whole and for females was 24 per cent lower than the UK as whole
- The incidence rate for breast cancer was the lowest in the UK and mortality rates for uterus cancer were the lowest in the UK, 35 per cent below the UK average

Policy context

England

The Department of Health, in the [‘Improving Outcomes: A Strategy for Cancer’](#) publication states that although improvements have been made in the quality of cancer services in England, a significant gap remains in mortality rates compared with the European average.

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:

- where only the NHS needs to be involved in improving outcomes in a particular area, the relevant outcomes strategy will be initiated and its development led by the new NHS Commissioning Board; and
- where integrated action is required across any combination of the NHS, public health and social care services to improve outcomes in a particular area, the relevant outcomes strategy will be initiated and its development led by the Department of Health, in conjunction with the new Public Health England organisation and the new NHS Commissioning Board as appropriate

Wales

The Welsh Government sees tackling cancer as one of the top priorities for Wales. Its policy *Designed to Tackle Cancer in Wales* (2006) aims to achieve cancer incidence and survival rates comparable with the best in Europe. A Delivery Plan for the NHS for the period up to 2016 is being finalised following consultation. It sets out the Welsh Government's expectations of the NHS in terms of planning and delivering fast, effective and person centred care for people at risk of or with cancer.

Scotland

For many years, cancer has been a national clinical priority for the Scottish Government and NHS Scotland. The policy document, [Better Cancer Care, An Action Plan](#), was launched in October 2008, and set out a series of actions and key priorities intended to make a real difference to cancer services and support provided in Scotland. [The Scottish Cancer Taskforce](#) and its Sub Groups oversee the actions outlined within *Better Cancer Care, An Action Plan*.

A [report of progress](#) made in delivering the commitments set out in *Better Cancer Care, An Action Plan* has been produced and is available to view online. This report highlights achievements made in improving cancer services, and identifies a number of areas where more work is needed. These areas will be prioritised as part of the Scottish Cancer Taskforce's ongoing work plan.

Northern Ireland

After a major review in 1996, cancer services were centralised to one cancer unit and four cancer centres. In 2007, enclosed public places were designated smoke-free by legislation. Screening for breast and cervical cancer has been underway since the early 1990s, offering mammography for women aged 50 to 70, and smear tests for women aged 25 to 64 (20-64 years until 2011). Around three-quarters of eligible women take up the offer of these screening programmes. The Bowel Cancer Screening Programme for men and women aged between 60 and 69 commenced roll-out across Northern Ireland in April 2010, with extensions to all areas by 2012.

In February 2011, the Services Framework for Cancer Prevention Treatment and Care was launched. This sets out standards for cancer services in relation to prevention; diagnosis; treatment and on-going care; rehabilitation; and palliative end-of-life care. There are targets to ensure that treatment commences within 62 days of referral and 31 days after diagnosis.

Additional information

Further information about Cancer Incidence and Mortality in the UK published by the Office for National Statistics (ONS) can be found in the [Summary Quality Report \(135.4 Kb Pdf\)](#).

Summary Quality Reports are overview notes which pull together key qualitative information on the various dimensions of quality as well as providing a summary of methods used to compile the output.

National Statistics

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.

Related publications

1. Office for National Statistics (2010) 'Cancer incidence and mortality 2006-08', Statistical Bulletin. Available [here](#).
2. Office for National Statistics (2008) 'Cancer incidence and mortality: trends in UK and constituent countries, 1993 to 2004', Health Statistics Quarterly 38, 33–43. Available [here \(646.3 Kb Pdf\)](#).

Background notes

1. Incidence and mortality rates have been directly age-standardised, using the European standard population, to control for differences in the age structure of the population between countries, and over time, to allow unbiased comparisons between rates.

2. The incidence figures in this report are those published at the time of the annual statistical releases for the four constituent countries of the UK. The cancer registration systems are live databases. Therefore, the figures presented here will not reflect those held on the live databases.
3. The Office for National Statistics has been advised, both by expert epidemiologists and by members of the Advisory Committee on Cancer Registration, that non-melanoma skin cancer (ICD-10 C44) is greatly under-registered. Registration varies widely depending on a registry's degree of access to out-patient records and general practitioners. Incidence figures given in this report for 'all cancers' therefore exclude non-melanoma skin cancer.
4. All numbers and rates presented in this report have been calculated as three-year averages to reduce the effects of random variation in small numbers over time.
5. Details of the policy governing the release of new data are available from the Media Relations Office.
6. National Statistics are produced to high professional standards set out in the Code of Practice for Official Statistics. They undergo regular quality assurance reviews to ensure that they meet customer needs. They are produced free from any political interference.
7. Current contact details for the cancer registries in Wales, Scotland and Northern Ireland can be found in the [Cancer Statistics Registrations, MB1 Series, No. 40](#) under maps and contact addresses.
8. 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:

Cancer Analysis Team, Health and Life Events Division

Office for National Statistics

Government Buildings

Cardiff Road

Newport

Gwent NP10 8XG

Tel: 01633 456801

E-mail: cancer.newport@ons.gsi.gov.uk

Similarly special extracts and tabulations of cancer mortality data for England and Wales are also available to order for a charge (subject to legal frameworks, disclosure control, resources and agreement of costs, where appropriate). Such requests or enquiries should be made to:

Mortality Analysis Team, Health and Life Events Division
Office for National Statistics
Government Buildings
Cardiff Road
Newport
Gwent NP10 8XG
Tel: 01633 456736
E-mail: mortality@ons.gsi.gov.uk

9. As a valued user of our statistics, we would welcome feedback on this release, in particular, on the content, format and structure. This is in line with the Health and Life Events user engagement strategy, available to download from the ONS website at: [User Engagement in the Health and Life Events Division](#)

Please send feedback to the cancer analysis team postal or e-mail address above.

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12. This publication was produced in partnership with the Welsh Cancer Intelligence and Surveillance Unit (WCISU); the Scottish Cancer Registry (SCR); the National Records of

Scotland (NRS); the Northern Ireland Cancer Registry (NICR); and the Northern Ireland Statistics and Research Agency (NISRA). The Cancer Analysis Team at the Office for National Statistics gratefully acknowledges their assistance. The Cancer Analysis Team also acknowledges the work of the regional cancer registries in England, and their close co-operation with the national registry.

Cancer Registries in the United Kingdom

Welsh Cancer Intelligence and Surveillance Unit

Scottish Cancer Registry

Northern Ireland Cancer Registry

Regional Registries in England

Northern and Yorkshire Cancer Registry

Trent Cancer Registry

Eastern Cancer Registration and Information Centre

Thames Cancer Registry

Oxford Cancer Intelligence Unit

South West Cancer Intelligence Service

West Midlands Cancer Intelligence Unit

North West Cancer Intelligence Service

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

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