

Publication Report



Cancer Mortality in Scotland (2011)

Publication date – 30 October 2012



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Introduction

Cancer deaths in Scotland are updated in this report, covering the years 1986-2011 for each main type of cancer. Information presented here replaces information previously available on the ISD website. The data are drawn from the National Records of Scotland (formerly General Register Office for Scotland) deaths tables.

This publication also includes an update of cancer incidence and mortality rates by the 2009 Scottish Index of Multiple Deprivation (SIMD) quintiles for 28 major types of cancer for which detailed information is provided on the [ISD Cancer Information website](#).

Throughout this publication we refer to all malignant neoplasms (cancers) EXCLUDING non-melanoma skin cancers (NMSC). We use this classification to be in keeping with our publication of [cancer incidence](#), which also excludes NMSC from the category 'all malignant neoplasms' because their recording is less likely to be complete than for other cancers. NMSC are very common, but do not usually result in death - more information can be found on our [FAQ](#) sheet. Exclusion of NMSC from the mortality statistics for 'all malignant neoplasms' has very limited impact because case-fatality is so low. Statistics on deaths from 'all malignant neoplasms' INCLUDING NMSC can be found on [this page](#) or on the website of the [National Records of Scotland](#).

Key points

- Over the last ten years, the overall age-standardised cancer (excluding non-melanoma skin cancers) mortality rates have fallen for both males and females.
- There is considerable variation in trends for different types of cancer. For example, the rate of female deaths due to breast cancer has decreased by over 19% over the last 10 years, while female death rates due to lung cancer have increased by 11% over the same time period.
- Although the age-standardised *rate* of death due to cancer has decreased, the actual *number* of deaths due to cancer has increased: this largely reflects an increase in older age groups within the population, and the fact that cancer is a relatively common disease among the elderly.
- Significant patterns exist when examining incidence and mortality rates by deprivation in Scotland. The most deprived areas have higher incidence and mortality rates for all cancers combined (excluding non-melanoma skin cancers). However, there are variations in this pattern when looking at specific types of cancer, for example malignant melanoma of the skin, which records higher incidence and mortality in the less deprived areas of Scotland.

Results and Commentary

Please note that details of these statistics can be found by cancer site on the [Cancer website](#) and summarised in the [Cancer in Scotland summary report](#).

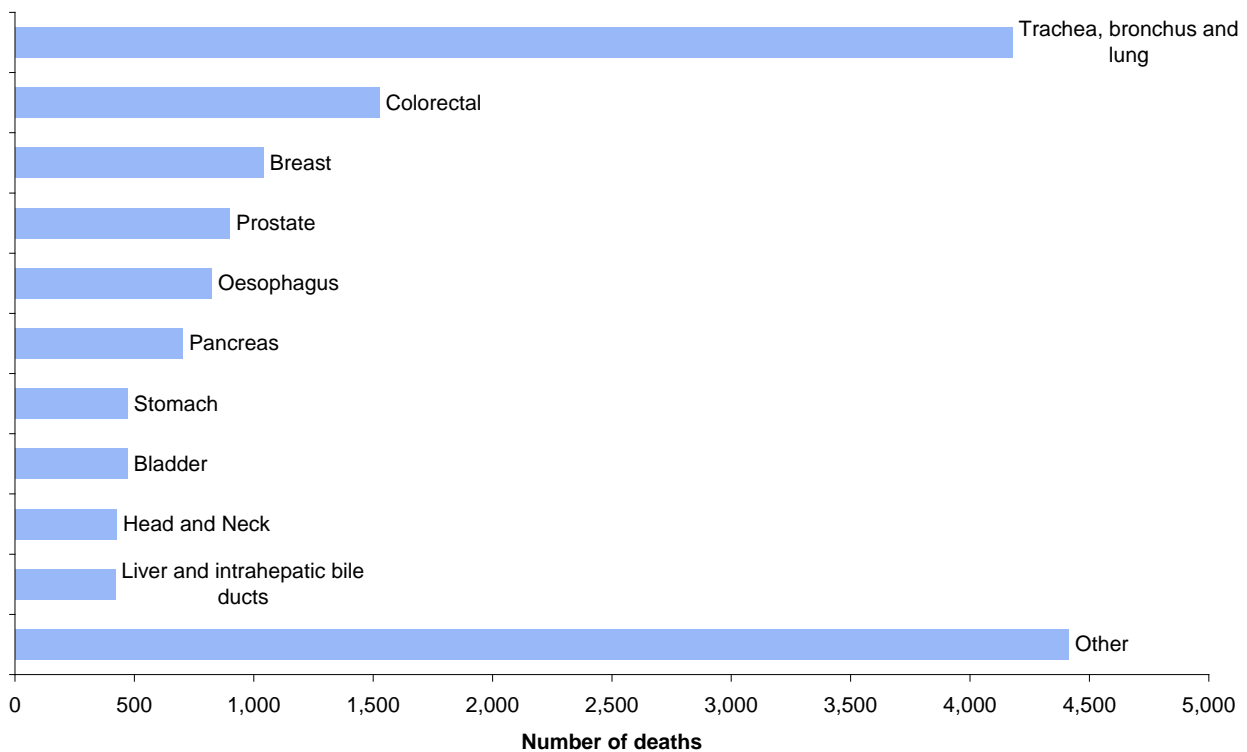
Cancer Mortality

In 2011, 15,375 people died from cancer (excluding non-melanoma skin cancers) in Scotland.

Taking all cancers combined, age-standardised cancer mortality rates have decreased by 12% over the 10 year period of 2001-2011, with a greater decrease in males than in females (15% and 7% decrease, respectively). Trends are estimated using Poisson regression.

The cancers that account for the greatest number of deaths in Scotland are cancers of the lung (4,178), colorectum (1,526), breast (1,041) and prostate (900).

Deaths from cancer* in Scotland, 2011



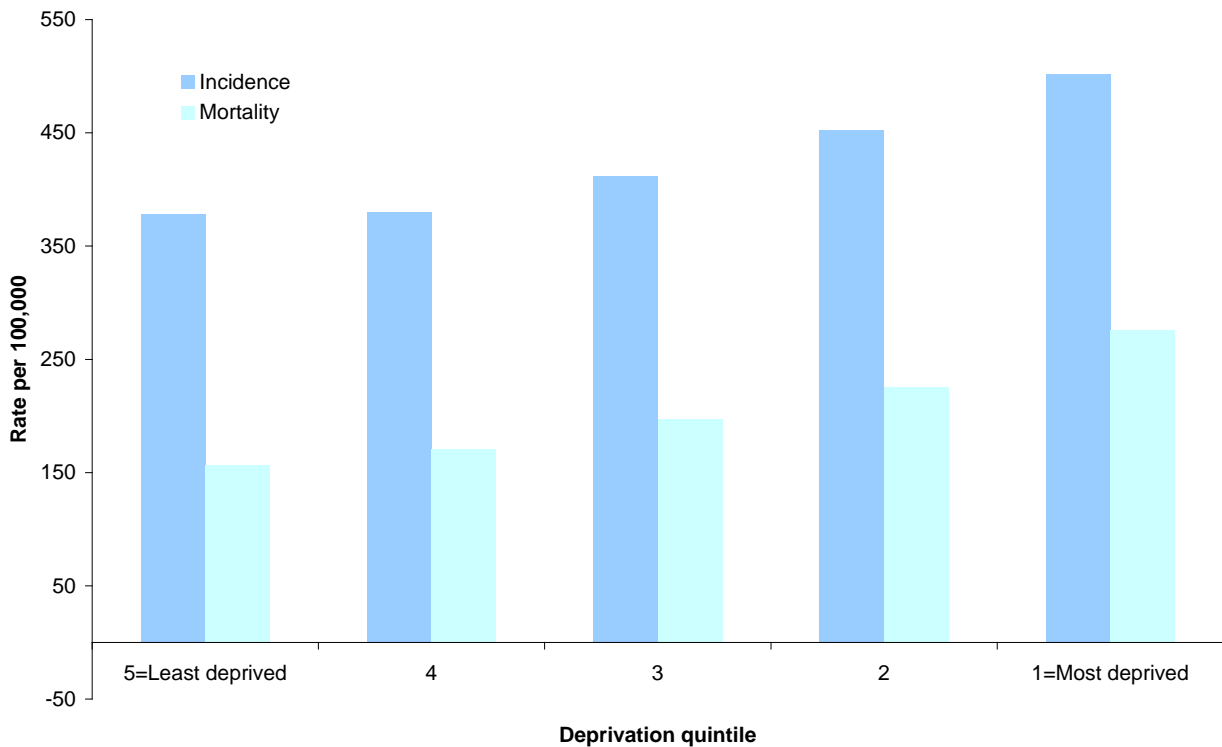
*excluding non-melanoma skin cancers

Source: General Register Office for Scotland (National Records of Scotland);

Cancer Incidence and Mortality by Deprivation Quintile

Significant patterns exist when examining incidence and mortality rates by deprivation in Scotland. Considering all cancers combined, the most deprived areas have incidence rates approximately 33% higher than the least deprived areas; mortality rates for all cancers combined are approximately 76% higher in the most deprived than the least deprived areas.

Cancer* Incidence and Mortality by deprivation quintile in Scotland



*excluding non-melanoma skin cancers

Incidence: 2006-2010; Mortality 2007-2011; deprivation quintile SIMD2009

Source: Scottish Cancer Registry, ISD (registrations); National Records of Scotland (deaths)

However, there are variations in this pattern when looking at specific types of cancer. For example, while lung cancer incidence and mortality rates are higher in the most deprived areas of Scotland, incidence and mortality rates of malignant melanoma of the skin (melanoma skin cancer) are higher in the least deprived areas of Scotland.

Cancers associated with smoking tend to be strongly correlated with deprivation by having the highest incidence and mortality rates in the most deprived areas; these include cancers of the trachea, bronchus and lung, oral cavity and larynx.

The incidence of (and mortality from) cervical cancer tends to be higher in more deprived women, reflecting socio-economic differences in exposure to risk factors, and lower attendance for cervical screening which aims to prevent cervical cancer by diagnosing and treating pre-cancerous changes.

In contrast, the incidence of breast cancer tends to be higher in less deprived areas. Again, this is likely to reflect differences in exposure to risk factors, and higher rates of attendance at breast screening in less deprived areas, since breast screening is not designed to prevent breast cancer, but rather to diagnose the disease as early as possible, when treatment is more likely to be effective. Despite a lower incidence of breast cancer in more deprived areas, the mortality rate in these areas is not correspondingly lower – this is consistent with the observation that survival from breast cancer tends to be lower in patients from deprived areas.

Similarly, incidence of prostate cancer is negatively correlated with deprivation (higher incidence in the less deprived areas) but mortality has no correlation with deprivation quintile. The higher incidence of prostate cancer in less deprived areas may reflect higher rates of prostate specific antigen (PSA) testing of the populations in these areas.

Glossary

Colorectal cancer

Neoplasm

PSA

Bowel cancer

Abnormal growth

Prostate specific antigen – a protein made in the prostate gland

List of Tables

Table No.	Cancer Mortality by year	Time period	File & size
0	Cancer in Scotland Summary	2001-2011	PDF [264 kb]
1	All Cancers	1986-2011	Excel [743 kb]
2	Bladder	1986-2011	Excel [763 kb]
3	Bone and Connective Tissues	1986-2011	Excel [1548 kb]
4	Brain and CNS	1986-2011	Excel [1136 kb]
5	Breast	1986-2011	Excel [761 kb]
6	Colorectal	1986-2011	Excel [1463 kb]
7	Female Genital Organs	1986-2011	Excel [1146 kb]
8	Head and Neck	1986-2011	Excel [3428 kb]
9	Hodgkins Disease	1986-2011	Excel [786 kb]
10	Kidney	1986-2011	Excel [768 kb]
11	Leukaemias	1986-2011	Excel [2701 kb]
12	Liver	1986-2011	Excel [772 kb]
13	Lung and Mesothelioma	1986-2011	Excel [1109 kb]
14	Male Genital Organs	1986-2011	Excel [776 kb]
15	Multiple Myeloma	1986-2011	Excel [774 kb]
16	Non-Hodgkins Lymphoma	1986-2011	Excel [766 kb]
17	Oesophagus	1986-2011	Excel [757 kb]
18	Pancreas	1986-2011	Excel [759 kb]
19	Skin	1986-2011	Excel [1161 kb]
20	Stomach	1986-2011	Excel [758 kb]

Table No.	Summarised Cancer Mortality	Time period	File & size
21	All Cancers	2007-2011	Excel [174 kb]
22	Bladder	2007-2011	Excel [175 kb]
23	Bone and Connective Tissues	2007-2011	Excel [251 kb]
24	Brain and CNS	2007-2011	Excel [212 kb]
25	Breast	2007-2011	Excel [175 kb]
26	Colorectal	2007-2011	Excel [248 kb]
27	Female Genital Organs	2007-2011	Excel [213 kb]
28	Head and Neck	2007-2011	Excel [439 kb]
29	Hodgkins Disease	2007-2011	Excel [176 kb]
30	Kidney	2007-2011	Excel [175 kb]
31	Leukaemias	2007-2011	Excel [326 kb]
32	Liver	2007-2011	Excel [175 kb]
33	Lung and Mesothelioma	2007-2011	Excel [212 kb]
34	Male Genital Organs	2007-2011	Excel [175 kb]
35	Multiple Myeloma	2007-2011	Excel [175 kb]
36	Non-Hodgkins Lymphoma	2007-2011	Excel [175 kb]
37	Oesophagus	2007-2011	Excel [174 kb]
38	Pancreas	2007-2011	Excel [175 kb]
39	Skin	2007-2011	Excel [213 kb]
40	Stomach	2007-2011	Excel [175 kb]

Table No.	Cancer Incidence and Mortality by deprivation quintile	Time period	File & size
41	All Cancers	2006-2011	Excel [36 kb]

42	Bladder	2006-2011	Excel [35 kb]
43	Bone and Connective Tissues	2006-2011	Excel [35 kb]
44	Brain and CNS	2006-2011	Excel [36 kb]
45	Breast	2006-2011	Excel [31 kb]
46	Cervix	2006-2011	Excel [31 kb]
47	Colon	2006-2011	Excel [35 kb]
48	Colorectal	2006-2011	Excel [35 kb]
49	Corpus Uteri	2006-2011	Excel [31 kb]
50	Head and Neck	2006-2011	Excel [35 kb]
51	Hodgkins Disease	2006-2011	Excel [35 kb]
52	Kidney	2006-2011	Excel [35 kb]
53	Larynx	2006-2011	Excel [35 kb]
54	Leukaemias	2006-2011	Excel [35 kb]
55	Liver	2006-2011	Excel [35 kb]
56	Lung and Mesothelioma	2006-2011	Excel [35 kb]
57	Multiple Myeloma	2006-2011	Excel [35 kb]
58	Non-Hodgkins Lymphoma	2006-2011	Excel [35 kb]
59	Oesophagus	2006-2011	Excel [35 kb]
60	Oral	2006-2011	Excel [35 kb]
61	Ovary	2006-2011	Excel [31 kb]
62	Pancreas	2006-2011	Excel [35 kb]
63	Prostate	2006-2011	Excel [31 kb]
64	Rectum & Rectosigmoid junction	2006-2011	Excel [35 kb]
65	Skin	2006-2011	Excel [35 kb]
66	Stomach	2006-2011	Excel [35 kb]
67	Testis	2006-2011	Excel [32 kb]
68	Thyroid	2006-2011	Excel [35 kb]

Table No.	Other updated files	Time period	File & size
69	All Cancers in under 75s	1995-2011	Excel [198 kb]
70	Breast cancer screening	1979-2011	Excel [31 kb]

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Further Information

Further information on cancer statistics can be found on the [ISD Cancer Information website](#).

Further information can be found on the [ISD website](#)

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Appendix

A1 – Background Information

- The cancer mortality rates for the less common cancers may be highly variable from year to year; this is due in part to random fluctuation due to small numbers. As such, cancer mortality trends are more stable when assessed over longer time periods, such as decades.
- All time trends were estimated using Poisson regression in SPSS (IBM®, Inc)
- Cancer mortality data are sourced from the General Register Office for Scotland (GROS) of the National Records of Scotland, as released on [their website](#) in August 2012.

A2 – Publication Metadata (including revisions details)

Metadata Indicator	Description
Publication title	Cancer Mortality
Description	Annual and 5 year summaries of deaths from cancer in Scotland, by Cancer Network Region and Health Board. Within Scotland and Network levels of reporting, the mortality figures are broken down by age group and sex. Summary of incidence and mortality by deprivation quintile.
Theme	Health and Social Care
Topic	Conditions and Diseases
Format	Excel workbooks
Data source(s)	General Register Office for Scotland (GROS), National Records of Scotland
Date that data are acquired	September 2012
Release date	30 October 2012
Frequency	Annual
Timeframe of data and timeliness	Data up to 31 December 2011 for mortality data. No delays between receipt and processing of data for publication. Data up to 31 December 2010 for incidence.
Continuity of data	Reports data since 1986. GROS moved from ICD-9 to ICD-10 in 2000. ICD codes have been back-mapped to 1986 as accurately as possible for continuity of reporting.
Revisions statement	No revisions have occurred and there are no revisions planned.
Revisions relevant to this publication	None
Concepts and definitions	Cancer Information FAQs
Relevance and key uses of the statistics	The number and type of cancer deaths, by sex and geography, allow planning for provision of cancer treatment services and palliative care planning. Permits indirect measure of success of public health measures and interventions over the longer term.
Accuracy	For coding of deaths see the website of the National Records of Scotland . Reported data are compared to previous years' figures and to expected trends.
Completeness	At time of extraction, data for the most recent year are considered to be complete. See above note on Revisions.
Comparability	Cancer mortality data are regularly compared with other UK countries and the UK as a whole (eg NCIS) and international reports (eg EUROCIM). In such comparisons, data are provided only at national (Scotland) level.
Accessibility	It is the policy of ISD Scotland to make its web sites and products accessible according to published guidelines .
Coherence and clarity	All Cancer tables are accessible via the Cancer section of the ISD website . Cancer sites are presented within Excel spreadsheets of cancer groupings, where appropriate. This should minimise the number of spreadsheets a user has to go through to find data, as well as ensure that they are selecting the correct data. Geographical hierarchies are

	also presented using drop down menus.
Value type and unit of measurement	Number of deaths from cancer as count; rates of deaths from cancer as crude, European age standardised, World Age standardised, and as Standardised mortality ratios. Number, eg 1.1
Disclosure	The ISD protocol on Statistical Disclosure Protocol is followed.
Official Statistics designation	National Statistics
UK Statistics Authority Assessment	May 2010
Last published	25 October 2011
Next published	29 October 2013
Help email	nss.isdcancerstats@nhs.net
Date form completed	16 October 2012

A3 – Early Access details (including Pre-Release Access)

Pre-Release Access

Under terms of the "Pre-Release Access to Official Statistics (Scotland) Order 2008", ISD are obliged to publish information on those receiving Pre-Release Access ("Pre-Release Access" refers to statistics in their final form prior to publication). The standard maximum Pre-Release Access is five working days. Shown below are details of those receiving standard Pre-Release Access and, separately, those receiving extended Pre-Release Access.

Standard Pre-Release Access:

Scottish Government Health Department
NHS Board Chief Executives
NHS Board Communication leads

Extended Pre-Release Access

Extended Pre-Release Access of 8 working days is given to a small number of named individuals in the Scottish Government Health Department (Analytical Services Division). This Pre-Release Access is for the sole purpose of enabling that department to gain an understanding of the statistics prior to briefing others in Scottish Government (during the period of standard Pre-Release Access).

Scottish Government Health Department (Analytical Services Division)

A4 – ISD and Official Statistics

About ISD

Scotland has some of the best health service data in the world combining high quality, consistency, national coverage and the ability to link data to allow patient based analysis and follow up.

Information Services Division (ISD) is a business operating unit of NHS National Services Scotland and has been in existence for over 40 years. We are an essential support service to NHSScotland and the Scottish Government and others, responsive to the needs of NHSScotland as the delivery of health and social care evolves.

Purpose: To deliver effective national and specialist intelligence services to improve the health and wellbeing of people in Scotland.

Mission: Better Information, Better Decisions, Better Health

Vision: To be a valued partner in improving health and wellbeing in Scotland by providing a world class intelligence service.

Official Statistics

Information Services Division (ISD) is the principal and authoritative source of statistics on health and care services in Scotland. ISD is designated by legislation as a producer of 'Official Statistics'. Our official statistics publications are produced to a high professional standard and comply with the Code of Practice for Official Statistics. The Code of Practice is produced and monitored by the UK Statistics Authority which is independent of Government. Under the Code of Practice, the format, content and timing of statistics publications are the responsibility of professional staff working within ISD.

ISD's statistical publications are currently classified as one of the following:

- National Statistics (ie assessed by the UK Statistics Authority as complying with the Code of Practice)
- National Statistics (ie legacy, still to be assessed by the UK Statistics Authority)
- Official Statistics (ie still to be assessed by the UK Statistics Authority)
- other (not Official Statistics)

Further information on ISD's statistics, including compliance with the Code of Practice for Official Statistics, and on the UK Statistics Authority, is available on the [ISD website](#).

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.