

Publication Report



Cancer Survival in Scotland 1987-2011

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Introduction

This publication provides information on cancer survival in Scotland for people who were diagnosed with cancer between 1987 and 2011. Cancer survival information is presented for 25 types of cancer in the accompanying tables. The information replaces statistics that were previously available on the ISD website.

The discussion within this report concentrates on relative survival, but both observed and relative survival information can be found in the accompanying [data tables](#) for each type of cancer. Observed and relative survival are explained in more detail in [Appendix A1](#).

Survival statistics are typically expressed as a proportion of people alive at a specified time following diagnosis with cancer. In this publication, estimates are presented for the proportion of people who survived for one, three, five and ten years following diagnosis.

Although cancer survival statistics can give an indication of the likelihood of surviving a given length of time after diagnosis, it should be noted that the survival prospects of an individual may vary considerably from the 'average' survival. For example, a person who is diagnosed at an early stage is likely to survive longer than average, whereas someone diagnosed at an advanced stage is likely to have a shorter survival than average.

Trends in cancer survival reflect a complex mixture of changes in cancer diagnosis and treatment as well as changes in the lifestyle and behaviour of the population over time.

Key points

- Survival from cancer generally increased between the periods of diagnosis 1987-1991 and 2007-2011.
- For all cancers combined (excluding non-melanoma skin cancer), five-year age-standardised relative survival in the period of diagnosis 2007-2011 was estimated as 48% for males and 54% for females.
- Five-year age-standardised relative survival for males diagnosed in 2007-2011 varied from 3.6% for cancer of the pancreas to 93.4% for testicular cancer. For females, survival varied from 5.5% for cancer of the pancreas to 95.1% for malignant melanoma of the skin.
- Five-year age-standardised relative survival increased by approximately 19 percentage points in males and by approximately 14 percentage points in females over the period covered by this publication.
- Large absolute increases in five-year age-standardised relative survival were found in multiple myeloma, colorectal cancer, Non-Hodgkin's lymphoma, kidney cancer, leukaemias and female breast cancer.
- The differences between males and females in five-year relative survival were comparatively high for some cancers. For females, survival was higher in malignant melanoma of the skin and cancers of the stomach, oral cavity and thyroid. For males, survival was higher in cancer of the bladder and multiple myeloma.

Results and Commentary

Further details of these statistics, by individual cancer site, can be found on the cancer topic area of the ISD [website](#). More information on the numbers of cases included in the analysis and the methods used can be found in [Appendix A1](#).

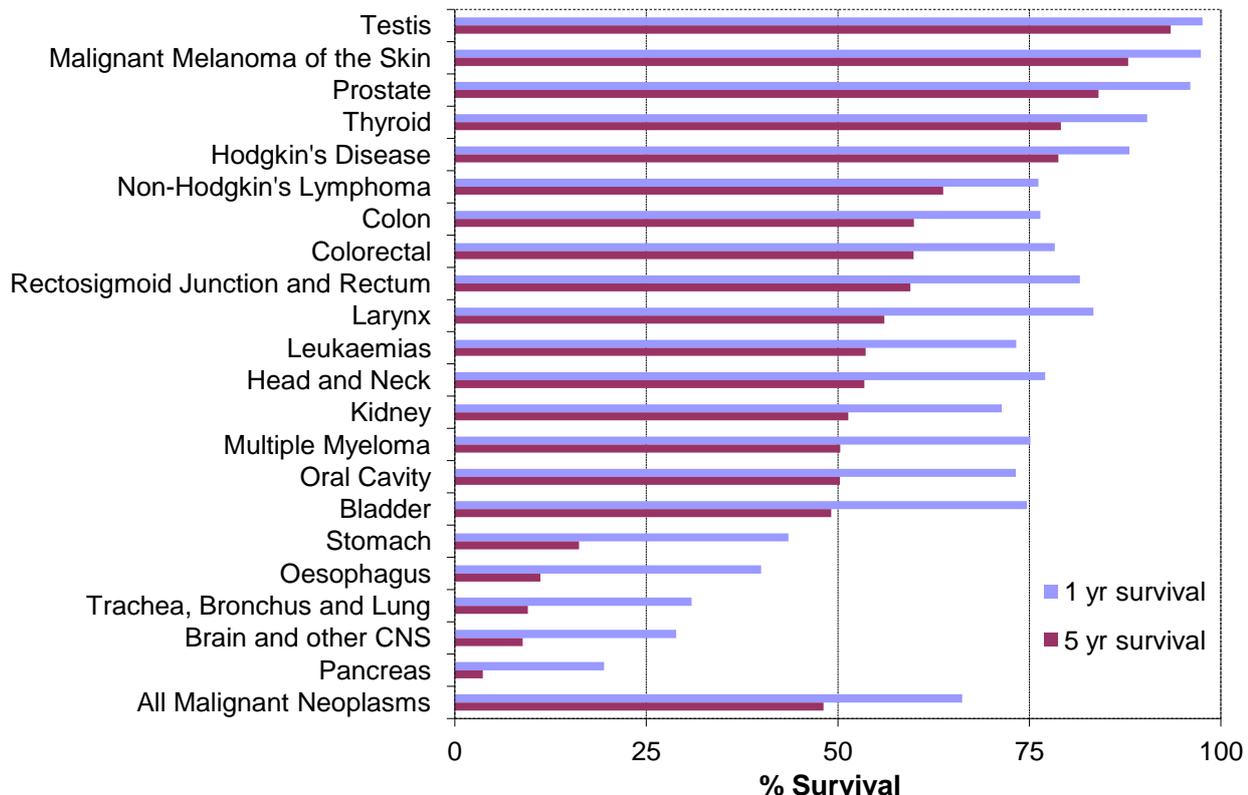
Cancer survival 2007-2011

One- and five-year cancer survival

Age-standardised one- and five-year relative survival estimates are shown in Figure 1a for males and Figure 1b for females. Survival estimates are shown for 25 types of cancer, plus all cancers combined (excluding non-melanoma skin cancer) for patients aged 15-99 who were diagnosed with cancer in the period 2007-2011.

Survival for males at five years after diagnosis varied from 3.6% for cancer of the pancreas to 93.4% for testicular cancer (Figure 1a; [Table 2](#)). For females, survival at five years varied from 5.5% for cancer of the pancreas to 95.1% for malignant melanoma of the skin (Figure 1b; [Table 2](#)). For all cancers combined, survival at five years is higher for women (53.9% compared to 48.1% for men).

Figure 1a. Age-standardised¹ relative survival at 1 and 5 years after diagnosis by cancer (males); Patients aged 15-99, diagnosed 2007-2011²⁻³



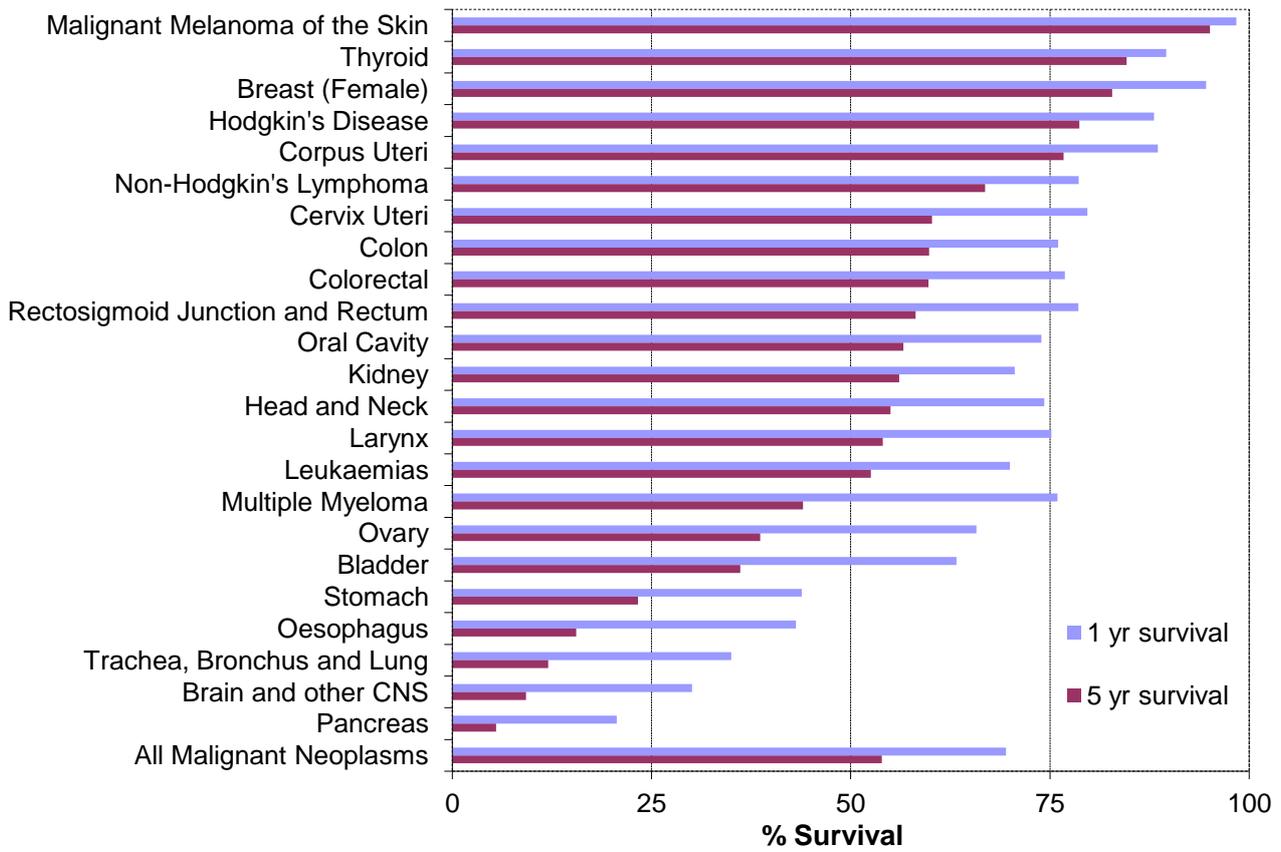
Source: Scottish Cancer Registry

1. These rates are age-standardised to the International Cancer Survival Standard (ICSS).

2. Cases diagnosed in 2009-2011 do not have 5 years' follow-up. Patients have been followed up to 31st December 2013.

3. Cancer registration is a dynamic process: the data presented here may differ from other published data relating to the same time period.

Figure 1b. Age-standardised¹ relative survival at 1 and 5 years after diagnosis by cancer (females); Patients aged 15-99, diagnosed 2007-2011²⁻³



Source: Scottish Cancer Registry

1. These rates are age-standardised to the International Cancer Survival Standard (ICSS).
2. Cases diagnosed in 2009-2011 do not have 5 years' follow-up. Patients have been followed up to 31st December 2013.
3. Cancer registration is a dynamic process: the data presented here may differ from other published data relating to the same time period.

For the five most common cancers (see Cancer Incidence [publication](#)), the estimated five-year age-standardised relative survival for people diagnosed in the period 2007-2011 was:

- lung cancer: 9.5% for males, 12.0% for females;
- female breast cancer: 82.8%;
- colorectal cancer: 59.9% for males, 59.8% for females;
- prostate cancer: 84.0%;
- head and neck cancer: 53.5% for males, 55.0% for females.

Survival was lowest in patients with cancers which often present at an advanced stage and are less amenable to treatment (e.g. cancers of the pancreas, lung and stomach). Survival tended to be better for three groups of cancer:

- cancers which present at an early stage (e.g. cancers of the corpus uteri, thyroid and malignant melanoma of the skin);
- cancers which can be detected early by screening programmes (e.g. cervix uteri, breast and colorectal);
- cancers for which there have been substantial advances in treatment over time (e.g. Hodgkin's disease and cancer of the testis).

Cancer survival by age at diagnosis

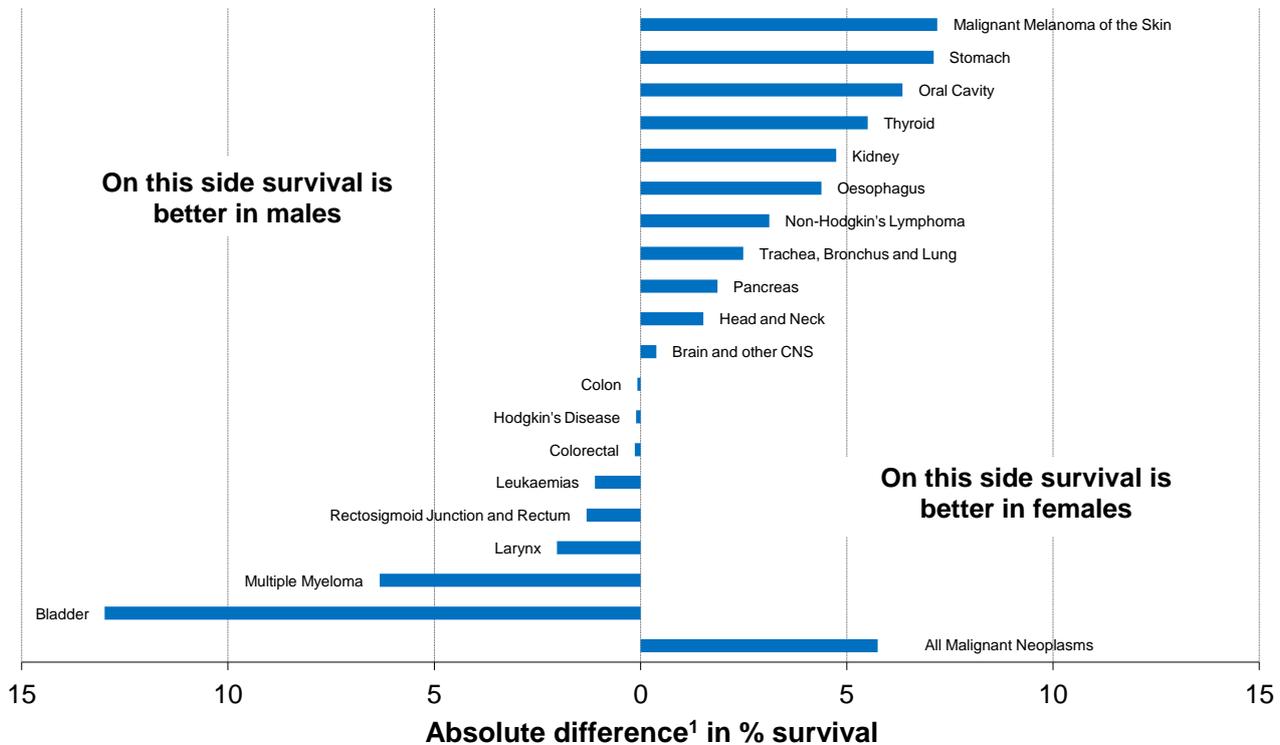
Survival was generally better in younger patients for most cancers ([Table 4](#)), even though adjustment was made for the higher general mortality in older age groups. This could be due to differences in tumour biology, better general health, earlier diagnosis or greater suitability for (and effectiveness of) treatment. Large variations between age groups were seen for many cancers, but it should be noted that the survival estimates are based on quite small numbers of cases in some of the younger age groups (see the accompanying [data tables](#) for individual cancers).

Differences in survival by sex

For many cancers, survival prospects differed between males and females (Figure 2). Cancers where the difference in five-year relative survival was comparatively large included malignant melanoma of the skin and cancers of the stomach, oral cavity and thyroid, all of which had a higher survival in females. Males had a higher five-year relative survival than females for cancer of the bladder and multiple myeloma.

Survival for all cancers combined was higher in females than in males. The main reason for this is that lung cancer, which has low survival, is more common in men than women at present. This will change over time as the number of females diagnosed with lung cancer is approaching that of males (see Cancer Incidence [publication](#)). On the other hand, breast cancer, the most common cancer in females, has a relatively good prognosis.

Figure 2. Absolute difference¹ in age-standardised² relative survival at 5 years after diagnosis between males and females, by cancer; Patients aged 15-99, diagnosed 2007-2011³⁻⁴



Source: Scottish Cancer Registry

1. Absolute difference in % survival is the difference in % between males and females. For example, the % survival for kidney cancer was 56.1% in females and 51.4% in males. Subtraction gives a difference of 4.7 percentage points.

2. These rates are age-standardised to the International Cancer Survival Standard (ICSS).

3. Cases diagnosed in 2009-2011 do not have 5 years' follow-up. Patients have been followed up to 31st December 2013.

4. Cancer registration is a dynamic process: the data presented here may differ from other published data relating to the same time period.

Trends in cancer survival 1987-2011

One-year survival

With the exception of cancer of the bladder (discussed further in the next section), survival at one year after cancer diagnosis improved over the period included in this publication. For all cancers combined, the age-standardised one-year relative survival for males increased from 48.1% for people diagnosed in 1987-1991 to 66.2% for people diagnosed in 2007-2011. This was an absolute increase of 18.1 percentage points. For females, the figure increased from 57.8% to 69.5% over the same period. This was an absolute increase of 11.7 percentage points ([Table 2](#)).

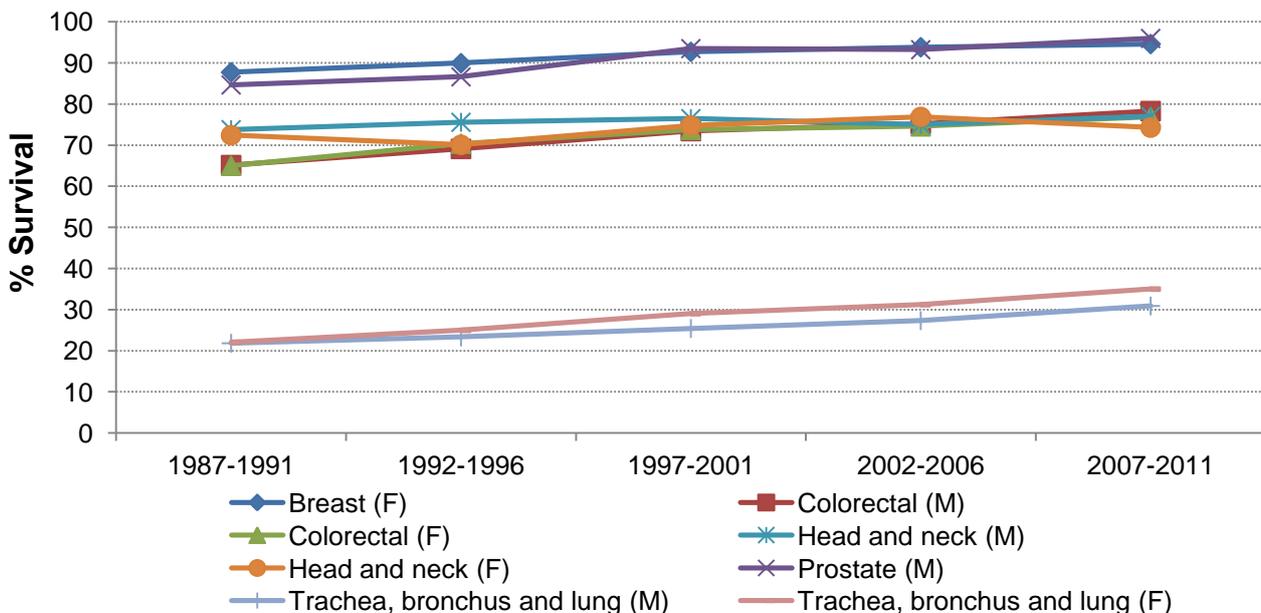
It should be noted that the figures for all cancers combined includes a wide mix of cancers with different survival patterns and the improvement may mask a change in the proportions of different types of cancer as well as representing a genuine improvement in survival over time.

The absolute increase in one-year survival was smaller for females than for males. This was likely to be because there was a comparatively small improvement in survival over the period for breast and gynaecological cancers, which contribute a large proportion of the cancers in females. One-year survival was already relatively high for these types of cancer ([Table 2](#)).

The largest absolute increase in one-year survival was in Non-Hodgkin’s lymphoma for males. Survival increased from 55.9% for males diagnosed in 1987-1991 to 76.2% in 2007-2011, an absolute increase of 20.3 percentage points. Over the same period, the absolute increase for females was 16.5 percentage points from 62.1% to 78.6%.

Figure 3 shows the trends in survival at one year after diagnosis for the five most common cancers (see Cancer Incidence [publication](#)).

Figure 3. Age-standardised¹ relative survival at 1 year after diagnosis from the five most common cancers in Scotland; Patients aged 15-99, diagnosed 1987-2011²⁻³



Source: Scottish Cancer Registry

1. These rates are age-standardised to the International Cancer Survival Standard (ICSS).

2. Patients have been followed up to 31st December 2013.

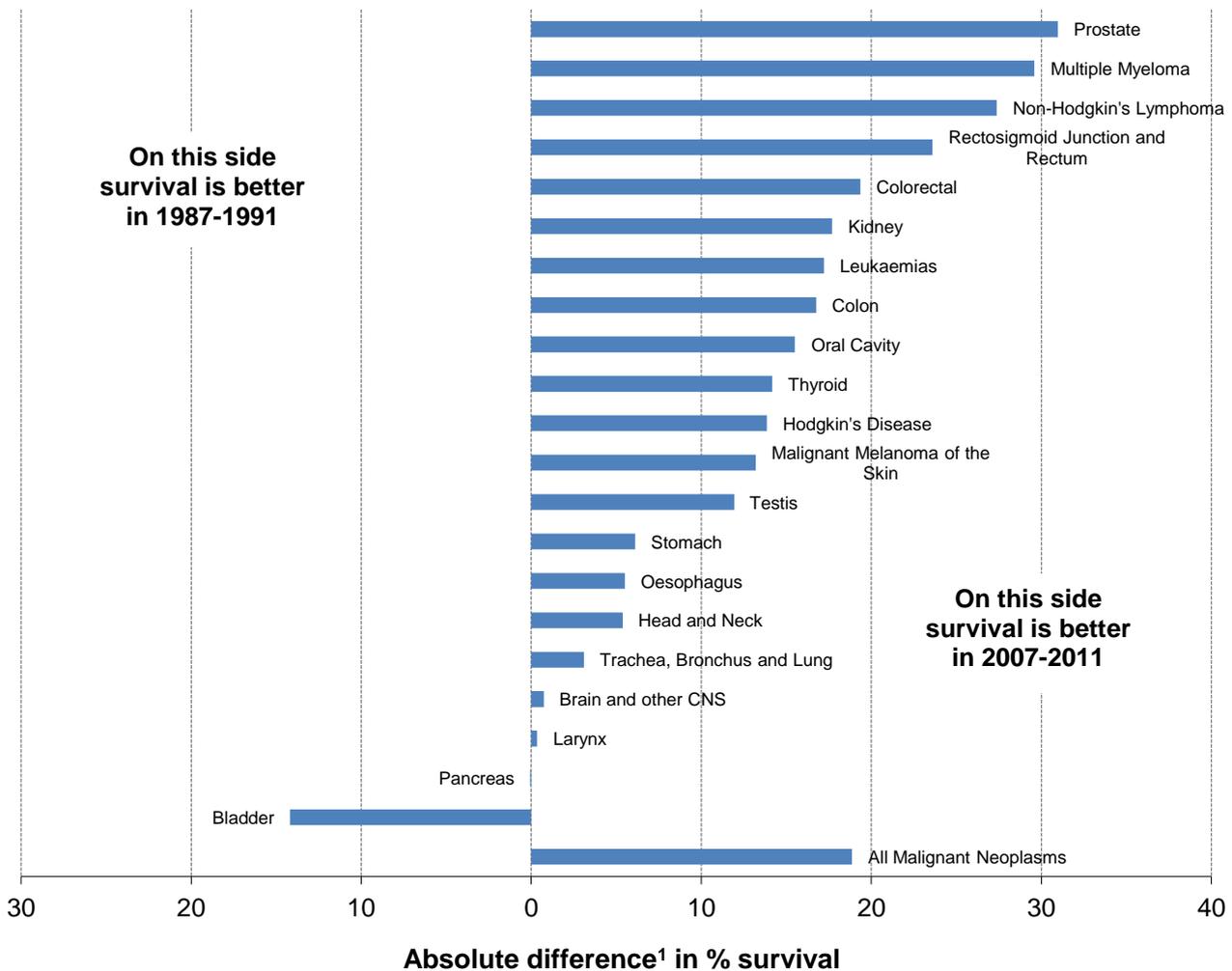
3. Cancer registration is a dynamic process: the data presented here may differ from other published data relating to the same time period.

Five-year survival

Most cancers showed some improvement in survival at five years after diagnosis. For all cancers combined, age-standardised five-year relative survival for males increased from 29.3% for people diagnosed in 1987-1991 to 48.1% for people diagnosed in 2007-2011. This was an absolute increase of 18.9 percentage points. For females, the figure increased from 40.2% to 53.9% over the same period. This was an absolute increase of 13.7 percentage points ([Table 2](#)).

Figure 4a shows the absolute difference in survival at five years between the periods of diagnosis 1987-1991 and 2007-2011 by type of cancer for males. Figure 4b shows the same information for females.

Figure 4a. Absolute difference¹ in age-standardised² relative survival at 5 years after diagnosis by cancer, patients diagnosed in 1987-1991 compared to those diagnosed in 2007-2011 (males); Patients aged 15-99³⁻⁴



Source: Scottish Cancer Registry

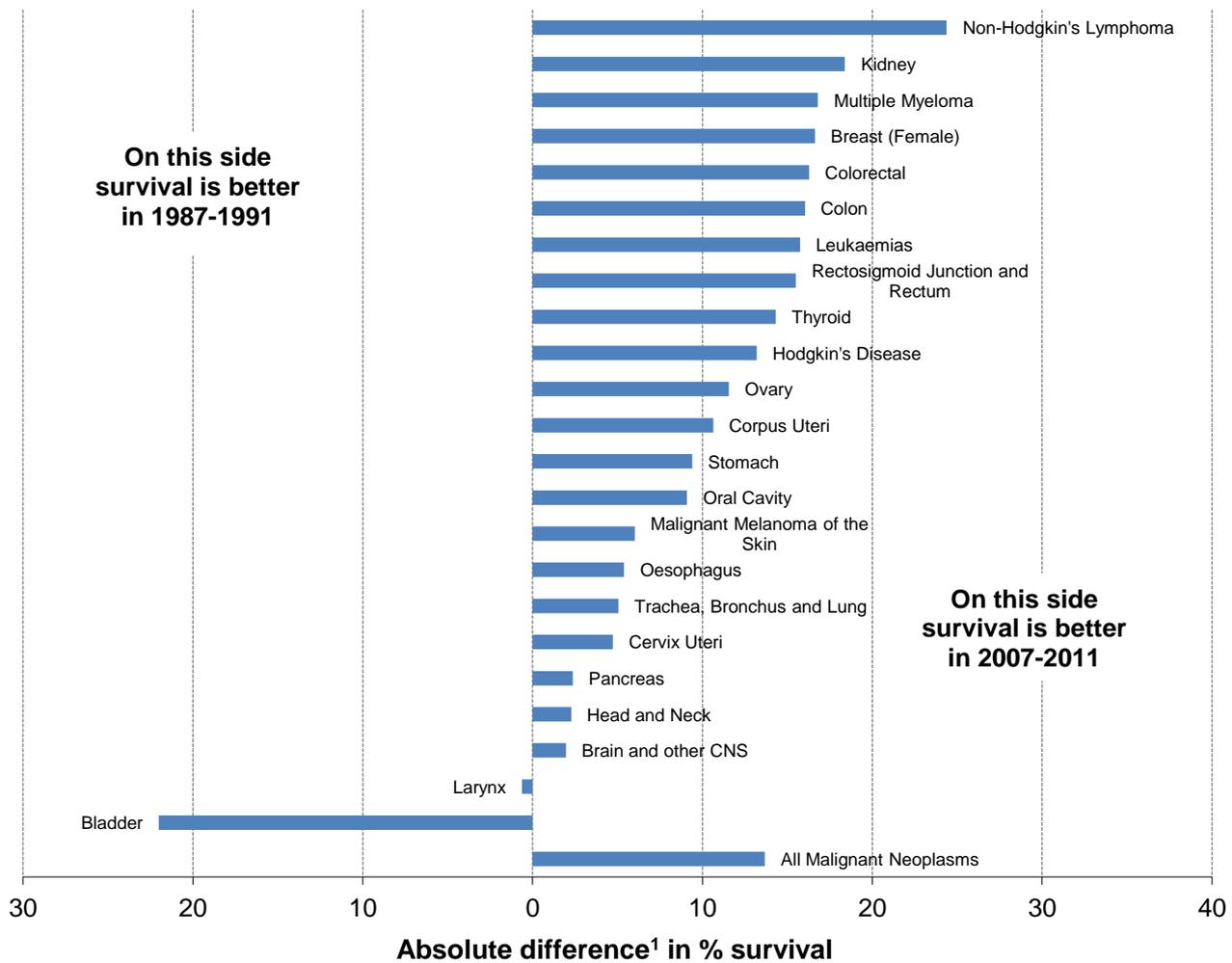
1. Absolute difference in % survival is a difference of % survival between the periods of diagnosis 1987-1991 and 2007-2011. For example, the % survival for Kidney cancer in males in 1987-1991 was 33.7. In 2007-2011, it was 51.4. Subtraction gives a difference of 17.7.

2. These rates are age-standardised to the International Cancer Survival Standard (ICSS).

3. Cases diagnosed in 2009-2011 do not have 5 years' follow-up. Patients have been followed up to 31st December 2013.

4. Cancer registration is a dynamic process: the data presented here may differ from other published data relating to the same time period.

Figure 4b. Absolute difference¹ in age-standardised² relative survival at 5 years by cancer (females), patients diagnosed in 1987-1991 compared to those diagnosed in 2007-2011; Patients aged 15-99³⁻⁴



Source: Scottish Cancer Registry

1. Absolute difference in % survival is a difference of % survival between the periods of diagnosis 1987-1991 and 2007-2011. For example, the % survival for Kidney cancer in females in 1987-1991 was 37.7. In 2007-2011, it was 56.1. Subtraction gives a difference of 18.4.
2. These rates are age-standardised to the International Cancer Survival Standard (ICSS).
3. Cases diagnosed in 2009-2011 do not have 5 years' follow-up. Patients have been followed up to 31st December 2013.
4. Cancer registration is a dynamic process: the data presented here may differ from other published data relating to the same time period.

For some cancers, the improvement was large. For multiple myeloma, the age-standardised relative survival at five years after diagnosis in males increased from 20.7% in the period 1987-1991 to 50.3% in the period 2007-2011, an absolute increase of 29.6 percentage points (Table 2). Over the same period, the increase for females was 16.8 percentage points from 27.2% to 44.0%. These improvements may have resulted from wider use of stem cell transplantation in the 1990s, followed by the introduction of novel anti-myeloma agents over the last decade or so.

Large absolute increases in percentage survival at five years after diagnosis were also seen for colorectal cancer (19.4 and 16.3 percentage points for males and females respectively), Non-Hodgkin's Lymphoma (27.4 percentage points for males and 24.4 for females), kidney cancer (17.7 percentage points for males and 18.4 for females), leukaemia (17.2 percentage points for males and 15.7 for females) and female breast cancer (16.6 percentage points).

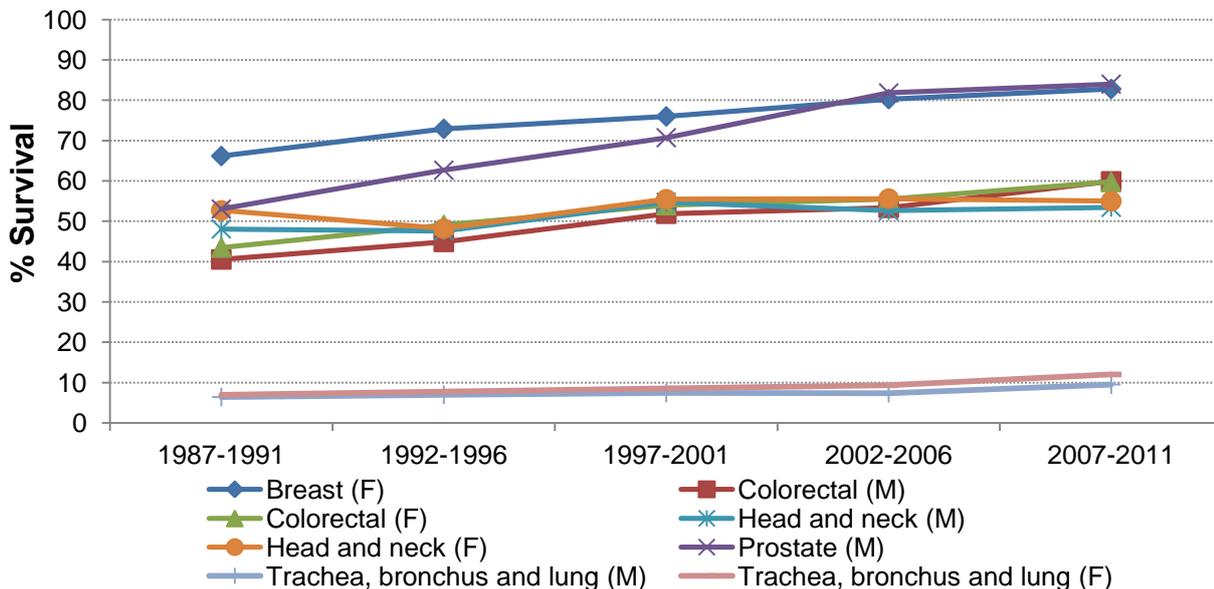
Some of the improvement observed for prostate cancer (31 percentage points from 53.0% in 1987-1997 to 84.0% in 2007-2011) is likely to reflect the introduction of prostate-specific antigen (PSA) testing around 1990, resulting in the diagnosis of some less 'aggressive' tumours.¹

There were small decreases in survival at 5 years for cancer of the larynx in females (-0.6 percentage points) and cancer of the pancreas in males (-0.1 percentage points). The decrease in cancer of the larynx is possibly due to the increased proportion of supraglottic tumours over recent years. These tumours usually take longer to cause symptoms and so tend to present at a later stage, with decreased survival after diagnosis.² Survival from cancer of the pancreas has remained poor across the whole period of observation.

The decrease in survival from bladder cancer is an artefact of a change in classification. Over the period 1996 to 1999, there was a marked reduction in the numbers of registrations of invasive bladder carcinoma. This reflected a change in coding practice recommended by the European Network of Cancer Registries (ENCR) and subsequently by the United Kingdom Association of Cancer Registries (UKACR). Some cases classified and coded previously as invasive bladder cancer (ICD-10 C67) are now coded as carcinoma *in situ* of the bladder (ICD-10 D09.0) or neoplasms of uncertain or unknown behaviour of the bladder (ICD-10 D41.4). Survival from non-invasive bladder tumours is usually very high, so the reclassification of such tumours has led to an apparent decrease in survival from invasive bladder cancer.

Figure 3 shows the trends in survival at five years after diagnosis for the five most common cancers (see Cancer Incidence [publication](#)).

Figure 5. Age-standardised¹ relative survival at 5 years after diagnosis from the five most common cancers in Scotland; Patients aged 15-99, diagnosed 1987-2011²⁻³



Source: Scottish Cancer Registry

1. These rates are age-standardised to the International Cancer Survival Standard (ICSS).
2. Cases diagnosed in 2009-2011 do not have 5 years' follow-up. Patients have been followed up to 31st December 2013.
3. Cancer registration is a dynamic process: the data presented here may differ from other published data relating to the same time period.

¹ Brewster DH, Fraser LA, Harris V and Black RJ (2000). Rising incidence of prostate cancer in Scotland: increased risk or increased detection? *BJU Int*; 85: 463-472.

² Scott N, Gould A, Brewster D. Laryngeal cancer in Scotland, 1960-1994: trends in incidence, geographical distribution and survival. *Health Bulletin* (Edinburgh) 1998; 56:749-756.

Median survival

Median survival time is the length of time from diagnosis to the point at which half the people in the group are still alive. Median survival time varies between types of cancer and by period of diagnosis. Median survival is highest in those cancers that have a good prognosis and/or those that are often diagnosed in younger people (for example, cancers of the testis, thyroid, corpus uteri and Hodgkin's disease ([Table 3](#))).

Over the period included in this publication, median survival more than doubled for colorectal cancer, cancer of the kidney, leukaemias, multiple myeloma, Non-Hodgkin's lymphoma and cancers of the oral cavity, ovary and prostate. It also more than doubled for stomach cancer, but the median survival time was less than one year. For many cancers, median survival increased by more than two years.

For cancers with a favourable prognosis, more than half of the patients were still alive at the end of the follow-up period for this analysis, meaning that median survival could not be calculated. For all cancers combined, median survival increased from 1.7 years for patients diagnosed in 1987-1991 to 5 years for patients diagnosed in 2002-2006. Median survival could not be calculated for the most recent period (2007-2011) as more than half of the patients were still alive at the end of the follow-up period.

Glossary

Cancer registry	The Scottish Cancer Registry is responsible for the collection of information on all new cases of cancer arising in residents of Scotland. More detailed information is available on the ISD website here .
Carcinoma	A cancer of the epithelial tissue that covers all the body's organs. Most cancers are carcinomas.
Epithelial tissue	Tissue that covers the body's organs and other internal surfaces.
ICD-10	The 10 th revision of the International Classification of Diseases produced by the World Health Organisation (WHO). It assigns codes to particular diseases and conditions.
Life table	Life tables provide statistics on life expectancy of a population by age and sex.
Malignant tumour	Cancerous growth.
Neoplasm	Abnormal growth.
Observed survival	An estimate of the probability that a group of patients with a given disease will be alive at a specified time after diagnosis, irrespective of cause of death (see Appendix A1).
Percentage	A rate, number or amount in each hundred.
Relative survival	An estimate of the probability that a group of patients with a given disease will be alive at a specified time after diagnosis, in the absence of other causes of death (see Appendix A1).

List of Tables

Table No.	Summary survival figures	Time period	File & size
1	Table 1. Number of patients in survival analysis	1987-2011	Excel [13kb]
2	Table 2. Relative survival at 1 and 5 years after diagnosis	2007-2011	Excel [20kb]
3	Table 3. Median observed survival in years	1987-2011	Excel [14kb]
4	Table 4. Relative survival at 5 years by sex and age	2007-2011	Excel [15kb]
Table No.	Detailed survival figures	Time period	File & size
5	Rates of survival from all cancers combined	1987-2011	Excel [32kb]
6	Rates of survival from cancer of the bladder	1987-2011	Excel [32kb]
7	Rates of survival from cancers of the brain and central nervous system	1987-2011	Excel [31kb]
8	Rates of survival from cancer of the cervix	1987-2011	Excel [17kb]
9	Rates of survival from cancer of the colon	1987-2011	Excel [32kb]
10	Rates of survival from colorectal cancer	1987-2011	Excel [32kb]
11	Rates of survival from cancer of the uterus	1987-2011	Excel [16kb]
12	Rates of survival from cancer of the female breast	1987-2011	Excel [17kb]
13	Rates of survival from cancers of the head and neck	1987-2011	Excel [32kb]
14	Rates of survival from Hodgkin's disease	1987-2011	Excel [31kb]
15	Rates of survival from cancer of the kidney	1987-2011	Excel [32kb]
16	Rates of survival from cancer of the larynx	1987-2011	Excel [32kb]
17	Rates of survival from leukaemias	1987-2011	Excel [32kb]
18	Rates of survival from cancer of the lung	1987-2011	Excel [32kb]
19	Rates of survival from myeloma	1987-2011	Excel [32kb]
20	Rates of survival from Non-Hodgkin's lymphoma	1987-2011	Excel [32kb]
21	Rates of survival from cancer of the oesophagus	1987-2011	Excel [31kb]
22	Rates of survival from cancers of the oral cavity	1987-2011	Excel [32kb]
23	Rates of survival from cancer of the ovary	1987-2011	Excel [16kb]
24	Rates of survival from cancer of the pancreas	1987-2011	Excel [31kb]
25	Rates of survival from cancer of the prostate	1987-2011	Excel [17kb]

26	Rates of survival from cancer of the rectosigmoid junction and rectum	1987-2011	Excel [32kb]
27	Rates of survival from cancer of the skin	1987-2011	Excel [31kb]
28	Rates of survival from cancer of the stomach	1987-2011	Excel [32kb]
29	Rates of survival from cancer of the testis	1987-2011	Excel [16kb]
30	Rates of survival from cancer of the thyroid	1987-2011	Excel [31kb]

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Further Information

Further information on cancer can be found on [cancer area](#) of the ISD website.

Further information on other ISD publications and datasets can be found on the [ISD website](#).

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Appendix

A1 – Background Information

Data sources

The Scottish Cancer Registry is the source of data for cancer diagnoses in Scotland and has been collecting information on cancer since 1958. The Scottish Cancer Registry contains information on all new cases of cancer including primary malignant neoplasms, carcinoma in situ, neoplasms of uncertain behaviour and benign brain and spinal cord tumours.

The Scottish Cancer Registration team use an electronic registration system to bring together information from several sources of [data](#). Over 500 validity and feasibility checks are carried out against each record before it is validated and made available for analysis. More details on the Scottish Cancer Registry are available on the ISD [website](#). Cancer registry data is linked to the death registrations data provided by [National Records of Scotland](#).

Methods

Observed survival is an estimate of the probability that a group of people with a given disease will be alive at a specified time after diagnosis, irrespective of the cause of death. Observed survival is likely to be lower in older patients because they are at a greater risk of dying from other causes. This makes it difficult to compare survival between age groups or between populations with different rates of competing causes of death.

Relative survival is an estimate of the observed survival divided by the expected probability of survival in the general population. This can be thought of as the probability of survival from cancer in the absence of other causes of death. Background mortality rates for this analysis were calculated by the Cancer Research UK Cancer Survival Group at the London School of Hygiene and Tropical Medicine.

The STATA algorithm *strel* was used to estimate observed and relative survival.³

Median survival was estimated using SPSS.

Direct age-standardisation of survival figures, using the International Cancer Survival Standard (ICSS)⁴, was carried out in this analysis. This allows comparison with other similarly standardised populations such as other European countries and also allows comparison over time as the population age structures change.

³ Cancer Research UK Cancer Survival Group (2006). *Strel* computer program, version 1.2 and lifetables for cancer survival analysis. Downloaded from www.lshtm.ac.uk/ncde/cancersurvival/tools.htm. Department of Non-Communicable Disease Epidemiology, London School of Hygiene & Tropical Medicine, UK.

⁴ Corazziari I, Quinn MJ, Capocaccia R. Standard cancer patient population for age standardising survival ratios. *Eur J Cancer* 2004; 40: 2307–16.

Data available for analysis

The numbers of cases included in the analysis, by cancer and period of diagnosis, are shown in [Table A1](#). The highest numbers were seen for lung, breast, colorectal, prostate and bladder cancers, accounting for 57% of all malignancies in the period 1987-2011. Even with this large dataset covering the whole of Scotland, the number of cases available for analysis was small for some cancers, such as cancer of the thyroid and Hodgkin's disease, particularly when broken down by age and sex.

Table A1. Number of patients entered into survival analysis, by cancer and period of diagnosis. Patients aged 15-99, diagnosed 1987-2011^{1,2}

Cancer	Period of diagnosis					Total
	1987-1991	1992-1996	1997-2001	2002-2006	2007-2011	
Bladder ³ (ICD-9 188; ICD-10 C67)	5,632	6,074	3,942	3,351	3,253	22,252
Brain and other CNS (ICD-9 191-192; ICD-10 C70-C72, C75.1-C75.3)	1,345	1,564	1,707	1,681	1,790	8,087
Breast (Female) (ICD-9 174; ICD-10 C50)	13,096	14,845	16,269	17,511	19,155	80,876
Cervix Uteri (ICD-9 180; ICD-10 C53)	2,127	1,780	1,572	1,382	1,514	8,375
Colon (ICD-9 153; ICD-10 C18)	8,904	9,739	9,899	9,886	11,429	49,857
Colorectal ⁴ (ICD-9 153-154; ICD-10 C18-C20)	13,347	14,688	15,199	15,101	17,036	75,371
Corpus Uteri (ICD-9 182; ICD-10 C54)	1,480	1,663	1,974	2,165	2,736	10,018
Head and Neck (ICD-9 140-149, 160-161; ICD-10 C00-C14, C30-C32)	3,593	4,078	4,401	4,553	4,912	21,537
Hodgkin's Disease (ICD-9 201; ICD-10 C81)	577	642	569	634	750	3,172
Kidney (ICD-9 189; ICD-10 C64-C65)	2,013	2,311	2,497	2,786	3,560	13,167
Larynx (ICD-9 161; ICD-10 C32)	1,179	1,389	1,387	1,342	1,303	6,600
Leukaemias (ICD-9 204-208; ICD-10 C91-C95)	2,210	2,521	2,889	3,059	2,803	13,482
Malignant Melanoma of the Skin (ICD-9 172; ICD-10 C43)	2,231	2,733	3,048	3,920	5,003	16,935
Multiple Myeloma (ICD-9 203; ICD-10 C90)	1,269	1,368	1,414	1,605	1,796	7,452
Non-Hodgkin's Lymphoma (ICD-9 200, 202; ICD-10 C82-C85)	2,971	3,509	3,743	3,998	4,352	18,573
Oesophagus (ICD-9 150; ICD-10 C15)	2,792	3,433	3,430	3,688	3,689	17,032
Oral Cavity (ICD-9 141, 143-145; ICD-10 C01-C06)	1,141	1,311	1,468	1,678	1,858	7,456
Ovary (ICD-9 183; ICD-10 C56)	2,540	2,688	2,785	2,704	2,721	13,438
Pancreas (ICD-9 157; ICD-10 C25)	2,544	2,504	2,711	2,710	3,125	13,594
Prostate (ICD-9 185; ICD-10 C61)	5,773	8,308	9,537	12,154	13,618	49,390
Rectosigmoid Junction and Rectum ⁴ (ICD-9 154; ICD-10 C19-C20)	4,443	4,949	5,300	5,215	5,607	25,514
Stomach (ICD-9 151; ICD-10 C16)	5,086	4,532	4,241	3,649	3,226	20,734
Testis (ICD-9 186; ICD-10 C62)	744	842	975	1,002	972	4,535
Thyroid (ICD-9 193; ICD-10 C73)	441	539	610	644	921	3,155
Trachea, Bronchus and Lung (ICD-9 162; ICD-10 C33-C34)	19,990	20,445	20,050	20,234	21,217	101,936
All Malignant Neoplasms ⁵	101,809	111,596	115,380	120,149	130,052	578,986

Source: Scottish Cancer Registry

1. Cases diagnosed in 2011 do not have 3 years' follow-up, those diagnosed in 2009-2011 do not have 5 years' follow-up and those diagnosed in 2004-2011 do not have 10 years' follow-up. Patients have been followed up to 31st December 2013.

2. Cases diagnosed in 1987-1996 are coded to ICD-9 scheme and cases diagnosed in 1997-2011 are coded to ICD-10 scheme.

3. The decrease in incidence of bladder cancer over time is an artefact of a change in classification.

4. Includes Anus and Anal Canal (ICD-9 154.2-154.8) for cases pre-1997; it is now coded to ICD-10 C21.

5. Defined as ICD-9 140-208; ICD-10 C00-C96 excluding non-melanoma skin cancer (ICD-9 173; ICD-10 C44).

6. Cancer registration is a dynamic process: the data presented here may differ from other published data relating to the same time period.

UK Comparisons

Cancer survival data relating to England, Wales and Northern Ireland are available separately. Please note that these figures may not be directly comparable with published data from Scotland due to differences in methodology.

England: [Office for National Statistics](#)

Wales: [Welsh Cancer Intelligence and Surveillance Unit](#)

Northern Ireland: [Northern Ireland Cancer Registry](#)

International Comparisons

Comparisons of cancer survival across Europe are available on the [EUROCARE](#) website.

The [CONCORD programme](#) also provides estimates of cancer survival across the world.

A2 – Publication Metadata (including revisions details)

Metadata Indicator	Description
Publication title	Cancer Survival in Scotland 1987-2011
Description	Estimates of 1, 3, 5 and 10 year survival for patients diagnosed with cancer in Scotland, for 25 cancer types, plus all cancers combined (excluding non-melanoma skin cancer). The estimates are broken down by age group, sex and period of diagnosis.
Theme	Health and social care
Topic	Conditions and diseases
Format	Excel workbooks
Data source(s)	Scottish Cancer Registry, with deaths linked from National Records of Scotland
Date that data are acquired	January 2015
Release date	03 March 2015
Frequency	Biennial
Timeframe of data and timeliness	Cancer registrations are up to 31 December 2011 with follow-up (deaths) to 31 December 2013.
Continuity of data	Report includes data from 1987-2011. Coding of cancer registrations moved from ICD-9 to ICD-10 and from ICD-0 to ICD-02 in incidence year 1997, then to ICD-03 in incidence year 2006. ICD codes have been back-mapped for continuity of reporting. The range of statistics provided does mean that the continuity will vary, and while considered to be very high, any notable discontinuities (e.g. for specific conditions) will be highlighted within the published data.
Revisions statement	As with other population-based cancer registries, the Scottish Cancer Registry is dynamic, with ongoing updating of records. Each year's release included a refresh of the previous years, and as new registrations from previous years come to light, or changes in the coding are taken into account, the numbers may change. Deaths data tend to be static over time.
Revisions relevant to this publication	As above
Concepts and definitions	See Glossary , Appendix A1 and Cancer Information FAQs .
Relevance and key uses of the statistics	Cancer survival estimates allow service providers to evaluate and monitor changes in cancer diagnoses and treatments over time. Permits indirect measure of success of public health measures and interventions over the longer term.

Accuracy	Registry data are subject to validation at data entry and quality assurance procedures. See the Cancer Information FAQs . Data are compared to previous publications on Scotland's cancer survival estimates.
Completeness	At time of extraction, data for the most recent year are estimated to be complete. See above note on revisions. Routine indicators of data quality are compared to the rest of the UK and to other countries and are available at www.ukacr.org . There have been adhoc studies of data completeness in the past. See the Cancer Information FAQs .
Comparability	<p>Observed survival may be compared with the analogous statistics provided for other UK and international countries. Relative survival is difficult to compare reasonably with relative survival statistics produced by other organisations due to the variety of ways that the underlying life tables can be produced and the permutations possible in the modelling process. The best use of these estimates is for comparison of cancer sites and time periods within this analysis.</p> <p>EUROCARE is an international organisation that provides comparable survival estimates by country, by standardising the approach taken. Scotland is available as a separate country for comparison within their online database. Note that the data are reliant on availability from all participating countries. The most recent data online (EUROCARE-5) is for the period of diagnosis 2000-2007.</p>
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 statistics pages of the ISD website.
Value type and unit of measurement	Number of cases included in the analysis as a count; survival expressed as percentages (both observed and relative survival).
Disclosure	The ISD protocol on Statistical Disclosure Protocol is followed.
Official Statistics designation	National Statistics
UK Statistics Authority Assessment	May 2010
Last published	31 August 2010
Next published	March 2017
Date of first publication	31 August 2010 (in current format)
Help email	nss.isdCANCERSTATS@nhs.net
Date form completed	09 February 2015

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.

Standard Pre-Release Access:

Scottish Government Health Department

NHS Board Chief Executives

NHS Board Communication leads

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.