

Cancer Incidence in Scotland (2015)



Publication date – 25 April 2017

Contents

Introduction	2
Main points.....	3
Results and Commentary.....	4
Cancer incidence in Scotland	4
Cancer incidence by site.....	7
Cancer incidence by age	9
Lifetime risk of developing cancer	10
Prevalence of cancer.....	10
Glossary.....	11
List of Tables.....	12
Contact.....	15
Further Information.....	15
Rate this publication.....	15
Appendices	16
A1 – Background Information	16
A2 – Publication Metadata (including revisions details).....	18
A3 – Early Access details (including Pre-Release Access)	21
A4 – ISD and Official Statistics	22

Introduction

This publication provides information on cancer incidence in Scotland, covering the years 1991-2015 for each main type of cancer. The information presented here updates information previously available on the Information Services Division (ISD) website.

Cancer registration in Scotland

The [Scottish Cancer Registry](#) has been collecting information on cancer since 1958. Data collected by the Registry are published by ISD. This information is used for a wide variety of purposes including: public health surveillance; health needs assessment, planning and commissioning of cancer services; evaluation of the impact of interventions on incidence and survival; clinical audit and health services research; epidemiological studies; and providing information to support genetic counselling and health promotion.

Using this publication

It may be misleading to focus too much attention on any apparent changes in incidence between 2014 and 2015; it is more informative to examine trends in incidence observed over a number of years. Striking changes from one year to the next may occur in the case of rare cancers, but these are likely to reflect random fluctuation caused by small numbers of cases. In such cases it is even more important to examine incidence rates for a number of years aggregated together, rather than focussing on a single year of incidence.

Cancer registrations are believed to be essentially complete for the year 2015, 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 Scotland can take up to five years after the end of a given calendar year to reach 100% completeness and stability, due to the continuing accrual of late registrations coming to light through death certification, for example.

Data Visualisation

Data visualisation is included as part of this publication for the first time. This can be found on our [website](#). If you have any comments or suggestions about this visualisation, please contact us by [email](#).

Acknowledgement

This publication uses data shared by patients and collected by the NHS as part of their care and support.

Main points

- In 2015, excluding non-melanoma skin cancer, there were 31,467 people diagnosed with cancer in Scotland (16,266 women and 15,201 men). Lung cancer remains the most common cancer in Scotland with 4,997 cases diagnosed in 2015.
- Over the last ten years, age-adjusted incidence rates of cancer in Scotland have decreased by 4% for men but increased by 5% for women. Across both sexes, there was a decrease of 0.1% over the last ten years.
- There is considerable variation in incidence trends between different types of cancer. For instance, the incidence rate of head and neck cancer in women has increased by almost 24% over the last ten years. In contrast, the rate for lung cancer in men has decreased by just over 15% during the same period.
- Currently, it is estimated that two in five people in Scotland will be diagnosed with some form of cancer during their lifetime, which is the same as the previous estimate. This includes some cancers that may have no detrimental impact on life expectancy, such as slow-growing prostate tumours.
- There are approximately 186,500 people in Scotland who have been diagnosed with cancer over the last 20 years and who are still alive.

Results and Commentary

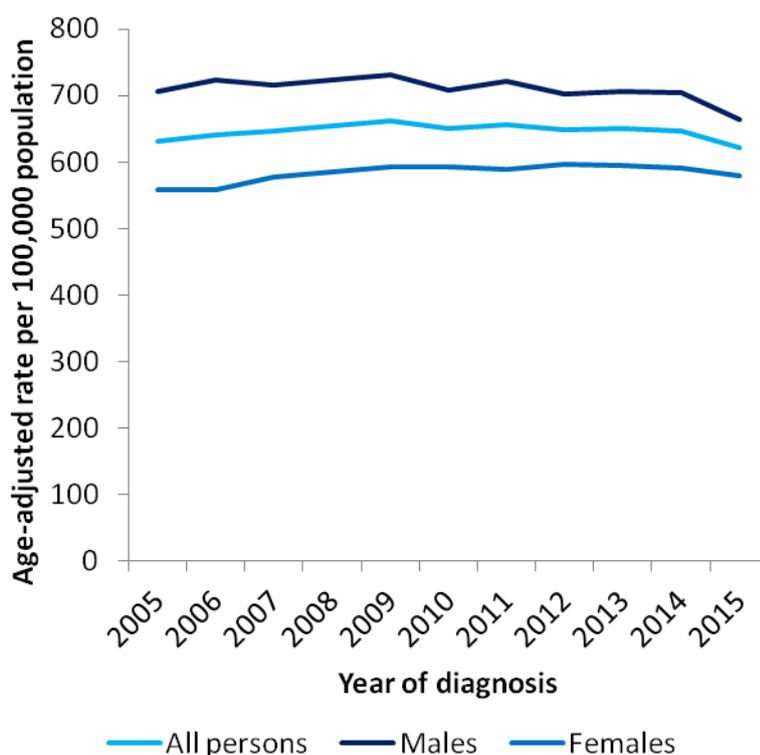
These statistics can be found by cancer site on the Information Services Division website [cancer topic area](#) and in the [Cancer in Scotland summary report](#). Other statistics available there include cancer mortality, lifetime risk, prevalence and survival.

Cancer incidence in Scotland

In 2015, 31,467 people were diagnosed with cancer in Scotland (16,266 females and 15,201 males). The number of people diagnosed has increased over the last ten years from 27,494. These figures do not include non-melanoma skin cancers, of which nearly 12,000 were diagnosed in 2015. An explanation of why non-melanoma skin cancers are not included can be found in [Appendix 1](#).

Over the ten years to 2015, the age-adjusted incidence rate of cancer has increased by 5% for females and decreased by 4% for males. For both sexes combined, the age-adjusted incidence rate has decreased by 0.1% (Figure 1).

Figure 1. Trends (2005-2015) in age-adjusted¹ incidence rates for cancer² in Scotland.



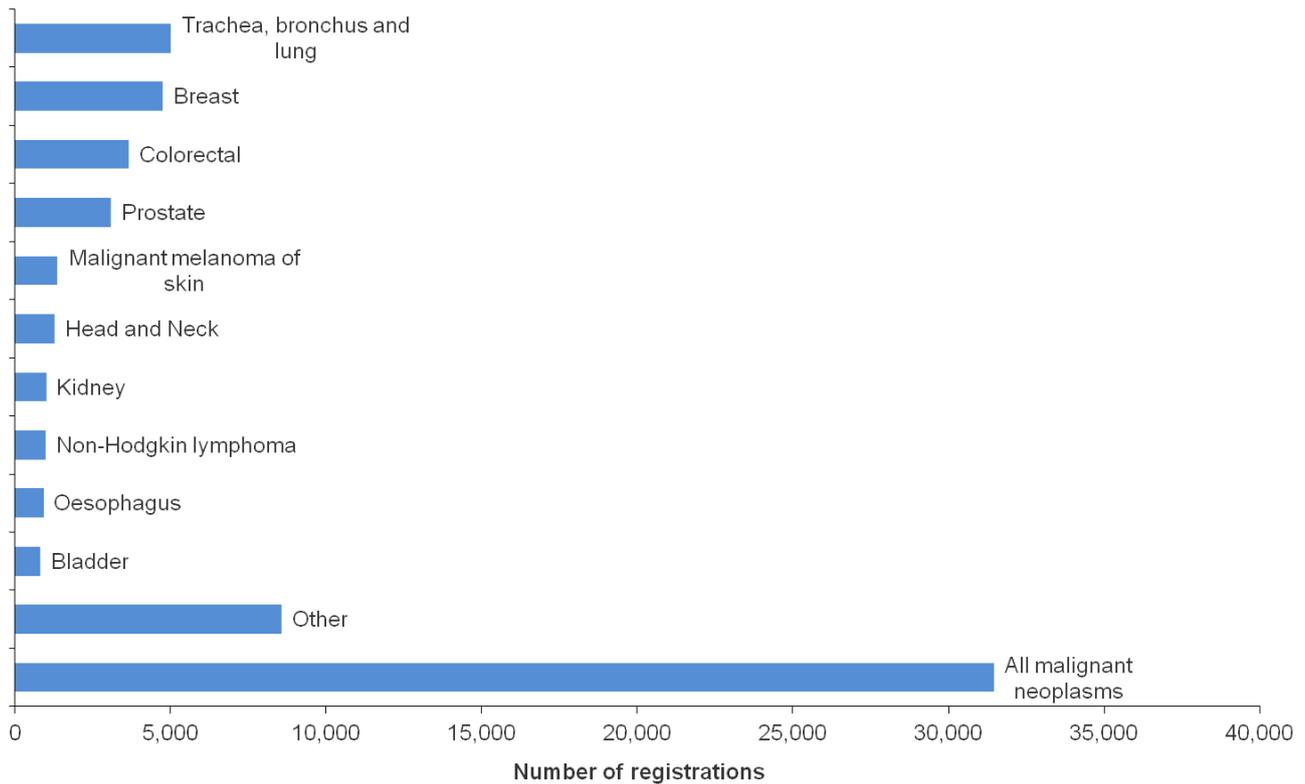
Source: Scottish Cancer Registry

1 European Age Standardised Rates (EASR). The EASR is calculated using ESP2013 and 5 year age groups 0-4, 5-9 up to an upper age group of 90+. The European Standard Population (ESP), which was first used in 1976, was revised in 2013. Figures using ESP1976 and ESP2013 are not comparable.

2 All cancers excluding non-melanoma skin cancers (ICD-10 C00-C97 excl C44)

Lung cancer remains the most common cancer overall in Scotland for both sexes combined, with 4,997 cases diagnosed in 2015. This accounted for 16% of all cancers in Scotland. There were 4,762 cases of breast cancer (15%) and 3,671 cases of colorectal cancer (12%) (Figure 2 and Table 1).

Figure 2. Most common cancers¹ in Scotland, 2015; all persons



Source: Scottish Cancer Registry

1 All cancers excluding non-melanoma skin cancers (ICD-10 C00-C97 excl C44)

For females, the most common cancers are breast, lung and colorectal cancers, accounting for 55% of cancer in women. Prostate, lung and colorectal cancers are the most common for males, accounting for 50% of cancer in men (Table 1).

Table 1 shows the numbers of cases for the most common cancers in 2015 for males, females and both sexes. The table also shows the estimated change in the age-adjusted incidence rates over the last ten years.

Table 1: Most common cancers in Scotland in 2015: Rank, number, frequency and change in incidence rate since 2005

Rank	Type of cancer (with ICD10 code)	Number	Frequency	10 year % change ¹	p - value ³
All Persons					
1	Trachea, bronchus and lung (C33-C34)	4,997	15.9%	-6.8	0.0347
2	Breast (C50) ²	4,762	15.1%	x	x
3	Colorectal (C18-C20)	3,671	11.7%	-10.2	0.0004
4	Prostate (C61) ²	3,091	9.8%	x	x
5	Malignant melanoma of skin (C43)	1,363	4.3%	+21.5	<0.0001
6	Head and Neck (C00-C14, C30-C32)	1,283	4.1%	+10.7	<0.0001
7	Kidney (C64-C65)	1,013	3.2%	+25.0	<0.0001
8	Non-Hodgkin lymphoma (C82-C85)	981	3.1%	-2.9	0.4133
9	Oesophagus (C15)	920	2.9%	-3.4	0.5136
10	Bladder (C67)	828	2.6%	-4.1	0.9093
	Other malignant neoplasms	8,558	27.2%	x	x
	All malignant neoplasms excluding non-melanoma skin cancer	31,467	100.0%	-0.1	0.1748
Males					
1	Prostate (C61)	3,091	20.3%	-0.5	0.8818
2	Trachea, bronchus and lung (C33-C34)	2,531	16.7%	-15.5	<0.0001
3	Colorectal (C18-C20)	1,975	13.0%	-12.5	<0.0001
4	Head and Neck (C00-C14, C30-C32)	902	5.9%	+6.1	0.0618
5	Malignant melanoma of skin (C43)	676	4.4%	+33.1	<0.0001
6	Kidney (C64-C65)	634	4.2%	+27.6	<0.0001
7	Oesophagus (C15)	595	3.9%	-3.8	0.3095
8	Bladder (C67)	551	3.6%	-6.0	0.1401
9	Non-Hodgkin lymphoma (C82-C85)	505	3.3%	-1.7	0.6862
10	Pancreas (C25)	399	2.6%	+10.1	0.0497
	Other malignant neoplasms	3,342	22.0%	x	x
	All malignant neoplasms excluding non-melanoma skin cancer	15,201	100.0%	-3.9	0.0014
Females					
1	Breast (C50)	4,738	29.1%	+5.7	0.0027
2	Trachea, bronchus and lung (C33-C34)	2,466	15.2%	+6.8	0.0125
3	Colorectal (C18-C20)	1,696	10.4%	-6.5	0.0119
4	Corpus uteri (C54)	755	4.6%	+32.1	<0.0001
5	Malignant melanoma of skin (C43)	687	4.2%	+9.9	0.0358
6	Ovary (C56)	570	3.5%	-13.1	0.0001
7	Non-Hodgkin lymphoma (C82-C85)	476	2.9%	-4.4	0.2878
8	Pancreas (C25)	413	2.5%	+14.2	0.0069
9	Head and Neck (C00-C14, C30-C32)	381	2.3%	+23.8	<0.0001
10	Cervix uteri (C53)	379	2.3%	+22.1	<0.0001
	Other malignant neoplasms	3,705	22.8%	x	x
	All malignant neoplasms excluding non-melanoma skin cancer	16,266	100.0%	+4.8	<0.0001

Source: Scottish Cancer Registry

'x' = not applicable.

- 1 Estimated 10-year change in age-adjusted incidence rates, calculated using Poisson regression analyses.
- 2 Percentage change in incidence is not shown in the 'All Persons' table for cancers occurring mainly or only in one sex.
- 3 p-value is the probability that the 10 year percentage change occurred by chance. A p-value of less than 0.05 indicates that the change is statistically significant.

Cancer incidence by site

When attempting to interpret trends in cancer incidence, it is important to remember that recent patterns of cancer are, for the most part, likely to reflect trends in the prevalence of risk and protective factors going back several decades. The commentary below relates to changes in the incidence rates of different types of cancer over the last ten years.

Breast cancer

Breast cancer is the most common cancer in women. Over the last decade the incidence rate has increased by 6%; this may be partly due to increased detection by the Scottish Breast Screening Programme. However, increases in the incidence of breast cancer might also be anticipated with higher prevalence of known risk factors among the female population, such as increases in the mother's age at the birth of her first child, decreases in family size, increases in post-menopausal obesity, and increases in alcohol consumption.

Prostate cancer

Prostate cancer is the most common cancer in men, accounting for slightly more than one in five cancers in men. The incidence rate of prostate cancer has decreased very slightly by 0.5% over the last decade, though this change is not statistically significant. Prostate cancer incidence is likely to be influenced by the extent of prostate-specific antigen testing among men.

Lung cancer

The long-term decline seen in the incidence rate of lung cancer in males, the second most common cancer in men, has continued with a significant fall in the incidence rate of just over 15% during the last ten years. Lung cancer is also the second most common cancer in women. Incidence rates in women increased by almost 7% over the last ten years. To a large extent, this trend reflects historic trends in the prevalence of smoking, which have differed between men and women.

Colorectal cancer

Colorectal cancer has decreased in both women (6%) and men (12%). This recent decrease in incidence might reflect the removal of pre-malignant polyps at colonoscopies resulting from the Scottish Bowel Screening Programme, but that remains to be proven. Modifiable risk factors for colorectal cancer are thought to include diet, lack of physical activity and long-term smoking.

Cancer of the body of the uterus (corpus uteri)

The incidence of cancer of the body of the uterus has increased by 32% over the ten-year period 2005-2015. The majority of cancers at this anatomical site affect the endometrium or lining of the womb. The increase in incidence may be due, at least in part, to longstanding changes in fertility (since childbearing appears to protect against endometrial cancer) and increases in levels of obesity (which increase risk). A further contributing factor may be a decrease in rates of hysterectomy, which leaves a larger population at risk of developing uterine cancer.

Malignant melanoma of the skin

Malignant melanoma of the skin is the fifth most common cancer in both women and men. Incidence rates increased over the last decade by 33% in males and 10% in females. The primary recognised risk factor for melanoma of the skin is exposure to natural and artificial sunlight, especially but not exclusively at a young age.

Ovarian cancer

The 13% decrease observed in ovarian cancer incidence may be partly due to increased use of the oral contraceptive pill from the 1960s onwards, since this appears to protect against the development of ovarian cancer.

Oesophageal cancer

There was a decrease of 4% in males and 3% in females over the last ten years, however neither of these changes are statistically significant. Established risk factors for oesophageal cancer include smoking, alcohol misuse, obesity, and chronic gastro-oesophageal reflux disease. Oesophageal cancer does not appear in table 1 for females as it is not one of the ten most common cancers for women.

Bladder cancer

There was a decrease of 6% in males and an increase of almost 2% in females during the last ten years, however neither of these changes are statistically significant. One of the main risk factors for bladder cancer is smoking.

Non-Hodgkin's lymphoma

Non-Hodgkin's lymphoma (NHL) has decreased in females by 4%, with a smaller decrease in males of 2%, however neither of these changes are statistically significant. Although immunosuppression has been associated with the development of NHL, much has still to be understood about the causes of NHL.

Pancreatic cancer

There have been increases in incidence of pancreatic cancer in both females (14%) and males (10%). Again, the causes of pancreatic cancer are poorly understood, although smoking is one reasonably well-established risk factor.

Kidney cancer

Cancers of the kidney continue to show significant increases in incidence rates over the last ten years of 28% and 20% for males and females, respectively. The increase has occurred primarily in cancers of the renal parenchyma rather than of the renal pelvis. The reason for this increase is not clear. Established risk factors include obesity and smoking, but advances in medical imaging may also have led to an increase in incidental diagnosis of some tumours.

Cervical cancer (cervix uteri)

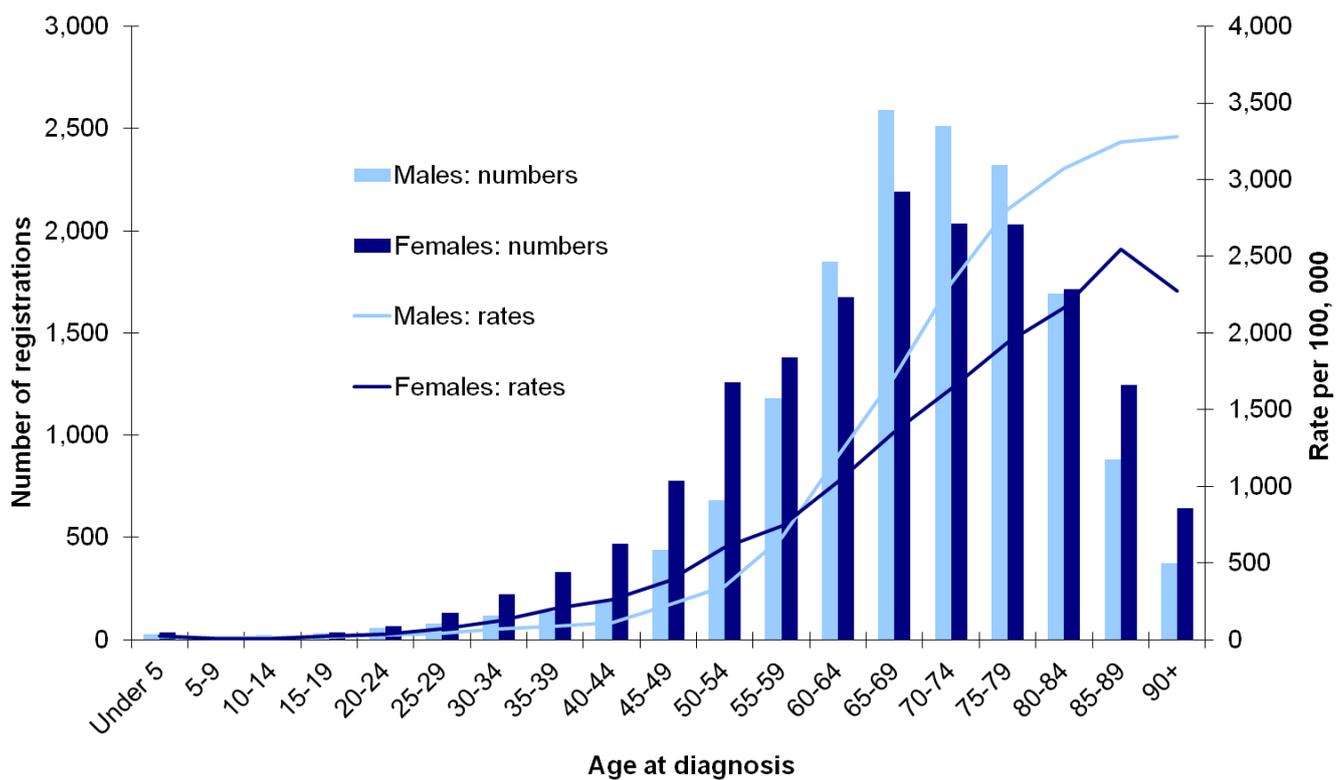
The incidence of cervical cancer has increased by 22% over the last ten years. It was the tenth most common cancer in females in Scotland in 2015 but it is the most common cancer in women under the age of 35 (as it is in the rest of the UK). The main risk factor for cervical

cancer is infection with the human papilloma virus (HPV), which can cause the most common forms of cervical cancer.

Cancer incidence by age

The number of cancer diagnoses increases with age in both sexes (Figure 3), to age 65-69, and then declines thereafter as the population diminishes at older ages. In 2015, just over 75% of cancer diagnoses were in people aged 60 and over. The greater increase in the rate of cancer diagnoses in males relative to females in older age groups is partly reflective of the greater number of females in the population at those age groups.

Figure 3: Number of registrations and age-specific rates per 100,000 population, all malignant neoplasms¹ diagnosed in 2015, by sex



Source: Scottish Cancer Registry

¹ All cancers excluding non-melanoma skin cancers (ICD-10 C00-C97 excl C44)

Lifetime risk of developing cancer

Currently, it is estimated that two in five people in Scotland will be diagnosed with some form of cancer, including some cancers that may have no detrimental impact on life expectancy, such as slow-growing prostate tumours. Risk estimates are based on existing trends and are group statistics, meaning that individual variation in lifestyle, environmental influences and genetics will have an impact on an individual's likelihood of developing cancer.

Details on the risk estimates for individual types of cancer, broken down by sex and by age bands are available on [Cancer Statistics](#) webpages.

Information on how lifetime risk is calculated can be found on our [FAQs](#) webpage.

Prevalence of cancer

The number of people in Scotland diagnosed with some form of cancer in the last 20 years who are still alive is estimated to be approximately 186,500 individuals, or approximately 3% of the population. This number is broken down by sex within each of the cancer types on the [Cancer Statistics](#) webpages.

Information on how prevalence is calculated can be found on our [FAQs](#) webpage.

Glossary

Age-adjusted rate	See European Age Standardised Rate (EASR) below.
Benign tumour	A tumour that does not invade and destroy local tissue or spread to other sites in the body.
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.
Confidence interval	The interval or range of values that is likely to contain the true value of a parameter.
Crude rate	The number of cases divided by the population. The crude rate does not attempt to adjust for differences in age and sex structures between different populations (see European age-standardised rate below). Typically expressed as the number of cases per 100,000 population.
Epithelial tissue	Tissue that covers the body's organs and other internal surfaces.
European Age Standardised Rate (EASR)	The rate that would have been found if the population in Scotland had the same age-composition as the hypothetical standard European population. The 2013 European Standard Population (ESP2013) has been used to calculate EASRs within this publication.
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.
Incidence	Incidence refers to the number of new cases of a condition in a defined population during a defined period and is typically expressed as the number of new cases per 100,000 population per year (or other suitable units).
Indolent tumour	One that grows slowly or is considered to be low risk.
Lifetime risk	A person's chance of developing cancer during their life.
Malignant tumour	Cancerous growth.
Mortality rate	The number of deaths as a rate per 100,000 population.
Neoplasm	Abnormal growth
Non-melanoma skin cancer (NMSC)	A type of cancer that usually develops slowly in the upper layers of the skin.
Percentage	A rate, number or amount in each hundred.
Prevalence	The number of people with a diagnosis of a particular condition who are alive at a given point in time.

List of Tables

Table No.	Cancer Incidence by year	Time period	File & size
0	Cancer in Scotland Summary	1991-2015	PDF [495 kb]
1	All Cancers	1991-2015	Excel [1013 kb]
2	Bladder	1991-2015	Excel [985 kb]
3	Bone and Connective Tissues	1991-2015	Excel [2065 kb]
4	Brain and CNS	1991-2015	Excel [2714 kb]
5	Breast	1991-2015	Excel [1493 kb]
6	Colorectal	1991-2015	Excel [2134 kb]
7	Female Genital Organs	1991-2015	Excel [1725 kb]
8	Head and Neck	1991-2015	Excel [5359 kb]
9	Hodgkin Lymphoma	1991-2015	Excel [979 kb]
10	Kidney	1991-2015	Excel [992 kb]
11	Leukaemias	1991-2015	Excel [3164 kb]
12	Liver	1991-2015	Excel [975 kb]
13	Lung and Mesothelioma	1991-2015	Excel [1518 kb]
14	Male Genital Organs	1991-2015	Excel [973 kb]
15	Multiple Myeloma	1991-2015	Excel [973 kb]
16	Non-Hodgkin Lymphoma	1991-2015	Excel [1001 kb]
17	Oesophagus	1991-2015	Excel [982 kb]
18	Pancreas	1991-2015	Excel [982 kb]
19	Skin	1991-2015	Excel [2717 kb]
20	Stomach	1991-2015	Excel [985 kb]

Table No.	Summarised Cancer Incidence	Time period	File & size
21	All Cancers	2011-2015	Excel [208 kb]
22	Bladder	2011-2015	Excel [204 kb]
23	Bone and Connective Tissues	2011-2015	Excel [308 kb]
24	Brain and CNS	2011-2015	Excel [371 kb]
25	Breast	2011-2015	Excel [249 kb]
26	Colorectal	2011-2015	Excel [313 kb]
27	Female Genital Organs	2011-2015	Excel [272 kb]
28	Head and Neck	2011-2015	Excel [622 kb]
29	Hodgkin Lymphoma	2011-2015	Excel [205 kb]

30	Kidney	2011-2015	Excel [201 kb]
31	Leukaemias	2011-2015	Excel [413 kb]
32	Liver	2011-2015	Excel [200 kb]
33	Lung and Mesothelioma	2011-2015	Excel [254 kb]
34	Male Genital Organs	2011-2015	Excel [203 kb]
35	Multiple Myeloma	2011-2015	Excel [199 kb]
36	Non-Hodgkin Lymphoma	2011-2015	Excel [202 kb]
37	Oesophagus	2011-2015	Excel [203 kb]
38	Pancreas	2011-2015	Excel [200 kb]
39	Skin	2011-2015	Excel [364 kb]
40	Stomach	2011-2015	Excel [204 kb]

Table No.	Lifetime risk of cancer	Time period	File & size
41	All Cancers	2011-2015	Excel [48 kb]
42	Bladder	2011-2015	Excel [49 kb]
43	Bone and Connective Tissues	2011-2015	Excel [51 kb]
44	Brain and CNS	2011-2015	Excel [48 kb]
45	Breast	2011-2015	Excel [46 kb]
46	Colorectal	2011-2015	Excel [59 kb]
47	Female Genital Organs	2011-2015	Excel [46 kb]
48	Head and Neck	2011-2015	Excel [59 kb]
49	Hodgkin Lymphoma	2011-2015	Excel [51 kb]
50	Kidney	2011-2015	Excel [48 kb]
51	Leukaemias	2011-2015	Excel [48 kb]
52	Liver	2011-2015	Excel [52 kb]
53	Lung and Mesothelioma	2011-2015	Excel [48 kb]
54	Male Genital Organs	2011-2015	Excel [47 kb]
55	Multiple Myeloma	2011-2015	Excel [48 kb]
56	Non-Hodgkin Lymphoma	2011-2015	Excel [48 kb]
57	Oesophagus	2011-2015	Excel [48 kb]
58	Pancreas	2011-2015	Excel [51 kb]
59	Skin	2011-2015	Excel [52 kb]
60	Stomach	2011-2015	Excel [51 kb]

Table No.	Cancer prevalence	Time period	File & size
61	All Cancers	Up to 31 Dec 2015	Excel [54 kb]
62	Bladder	Up to 31 Dec 2015	Excel [55 kb]
63	Bone and Connective Tissues	Up to 31 Dec 2015	Excel [64 kb]
64	Brain and CNS	Up to 31 Dec 2015	Excel [60 kb]
65	Breast	Up to 31 Dec 2015	Excel [59 kb]
66	Colorectal	Up to 31 Dec 2015	Excel [64 kb]
67	Female Genital Organs	Up to 31 Dec 2015	Excel [59 kb]
68	Head and Neck	Up to 31 Dec 2015	Excel [94 kb]
69	Hodgkin Lymphoma	Up to 31 Dec 2015	Excel [54 kb]
70	Kidney	Up to 31 Dec 2015	Excel [54 kb]
71	Leukaemias	Up to 31 Dec 2015	Excel [75 kb]
72	Liver	Up to 31 Dec 2015	Excel [55 kb]
73	Lung and Mesothelioma	Up to 31 Dec 2015	Excel [59 kb]
74	Male Genital Organs	Up to 31 Dec 2015	Excel [51 kb]
75	Multiple Myeloma	Up to 31 Dec 2015	Excel [55 kb]
76	Non-Hodgkin Lymphoma	Up to 31 Dec 2015	Excel [54 kb]
77	Oesophagus	Up to 31 Dec 2015	Excel [54 kb]
78	Pancreas	Up to 31 Dec 2015	Excel [54 kb]
79	Skin	Up to 31 Dec 2015	Excel [70 kb]
80	Stomach	Up to 31 Dec 2015	Excel [75 kb]

Table No.	Other updated tables	Time period	File & size
81	Incidence and Mortality by ICD-10 code	2006-2015	Excel [273 kb]
82	Cervical cancer incidence timeline	1981-2015	Excel [115 kb]
83	Cancer Treatment summary	2011-2015	Excel [45 kb]

Contact

Andrew Deas

Principal Information Analyst

andrew.deas@nhs.net

0131 275 7030

Doug Clark

Information Analyst

douglasclark@nhs.net

0131 275 7182

Cancer statistics mailbox

nss.isdcancerstats@nhs.net

Further Information

ISD publish a wide range of cancer statistics. [You can find all our cancer information on our website](#) including [data visualisation](#).

Rate this publication

Please [provide feedback](#) on this publication to help us improve our services.

Appendices

A1 – Background Information

Source of data

The Scottish Cancer Registry is the source of the cancer incidence data provided in this publication. More information on the registry can be found on the Information Services Division [website](#).

Note that cancer registrations differ from recorded hospital admissions for cancer, the statistics for which can be found on the [Hospital Care](#) pages on the [ISD Website](#). An individual diagnosed with a new primary cancer would have a single registration for that cancer, whereas he/she might have multiple admissions to hospital for the cancer. Moreover, the diagnosis and treatment of cancer does not inevitably lead to hospital admission in every case.

Non-melanoma skin cancer

As noted within the main body of the publication, non-melanoma skin cancer is excluded from analyses of all cancers combined for the following reasons:

- In the interests of comparison with other countries, because not all cancer registries collect data on non-melanoma skin cancers.
- Only the first occurrence of a basal cell carcinoma (the most common type of non-melanoma skin cancer) is collected in Scotland because they are so common.

The ISD data on non-melanoma skin cancer is available on our [website](#).

Data completeness

Cancer registrations are believed to be essentially complete for the year 2015, but it is important to note that the cancer registration database is dynamic. In common with other cancer registries, cancer incidence rates in Scotland can take up to five years after the end of a given calendar year to stabilise due to the continuing accrual of late registrations coming to light, for example through death certification.

This seems to be a particular issue for chronic lymphocytic leukaemia (CLL) – if the disease is progressing slowly and diagnosed incidentally on the basis of a blood test, hospital contact (and therefore opportunities for ascertainment) may be limited for some months or even years after diagnosis.

Note on trends

It may be misleading to focus too much attention on any apparent changes in incidence between 2014 and 2015; it is more informative to examine trends in incidence observed over a number of years. Striking changes from one year to the next may occur in the case of rare cancers, but these are likely to reflect random fluctuation caused by small numbers of cases - in such cases, it is even more important to examine incidence rates for a number of years aggregated together, rather than focusing on a single year of incidence.

Comparisons – UK and international

Cancer incidence publications for the rest of the UK can be found at the links below:

[England](#)

[Wales](#)

[Northern Ireland](#)

Comparisons are also produced by Cancer Research UK, and the most recent [incidence report](#) can be found on their [CancerStats page](#).

Comparison of Scottish and UK cancer data to that of other countries is a complex process because of the wide variation amongst data collection and coding practices, as well as variation in the quality and completeness of data. The International Agency for Research on Cancer maintain an online database, [Global Cancer Observatory](#), that is searchable for comparative data.

Age-adjusted incidence rates

Based on the number of cancer registrations in each of the calendar years, the following rates were calculated for this publication:

Crude Rate

The crude rate is the total number of people with an illness (or who die) in a country or region, divided by the total population of that country or region, and is normally expressed 'per 1,000', 'per 10,000' or 'per 100,000'.

Making comparisons on the crude rate can be misleading if the age structures of the populations of the countries or regions are quite different. Areas with larger percentages of younger people are unlikely to have as high levels of death as areas with larger percentages of older people – and therefore if we don't adjust for these differences we may draw the wrong conclusion about the health of an area simply because of the age-structure of the population. European Age-Sex Standardised Rates (EASRs) allow us to make comparisons between different geographical areas as they allow the effects of having different age structures in either the same population over time or different geographies to be removed.

European Age-Sex Standardised Rate (EASR) using ESP2013

For each 5 year age group, the crude rate is calculated and then the weighted average of all age groups is taken based on the weightings of the 2013 European Standard Population, to give the overall EASR.

A2 – Publication Metadata (including revisions details)

Metadata Indicator	Description
Publication title	Cancer Incidence in Scotland (2015)
Description	Annual and 5 year summaries of new incidence cases of cancer in Scotland, by Cancer Network Region and Health Board. Within Scotland and Network levels of reporting, the incidence figures are broken down by age group and sex.
Theme	Health and Social Care
Topic	Conditions and Diseases
Format	Excel workbooks
Data source(s)	Scottish Cancer Registry (SMR06)
Date that data are acquired	02 March 2017
Release date	25 April 2017
Frequency	Annual
Timeframe of data and timeliness	Data up to 31 December 2015. No delays between data availability and processing of data for publication.
Continuity of data	Reports include data from 1991 to 2015. Coding of cancer registrations moved from ICD-9 to ICD-10 and from ICD-O to ICD-O2 in incidence year 1997, then to ICD-O3 in incidence year 2006. ICD codes have been back-mapped to 1989 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 (eg 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 includes 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. The timing of the release is intended to balance the likelihood of significant revision with timeliness of data.
Revisions relevant to this publication	None
Concepts and definitions	See the Cancer Information FAQs
Relevance and key uses of the statistics	The number and type of cancer registrations, 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. Key uses include: public health surveillance; health needs assessment, planning and

	commissioning of cancer services; evaluation of the impact of interventions on incidence and survival; clinical audit and health services research; epidemiological studies; and providing information to support genetic counselling and health promotion.
Accuracy	Registry data are subject to validation at data entry and quality assurance procedures. See the Cancer Information FAQs . Reported data are compared to previous years' figures and to expected trends.
Completeness	At time of extraction, data for the most recent year are estimated to be at least 98% 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 on the UKIACR website . There have been adhoc studies of data completeness in the past. See the Cancer Information FAQs .
Comparability	Cancer incidence data are regularly compared with the UK and other countries, for example in the publication Cancer Incidence in Five Continents . Cancer incidence data is also published separately for England , Wales and Northern Ireland .
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 pages on 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. Spreadsheets may require the user to manipulate drop-down menus, to avoid a frequent problem of confounding data on males and females, and geographical designations.
Value type and unit of measurement	Number of new cases of cancer as count; rates of cancer as crude, European age standardised, World Age standardised, and as Standardised incidence 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	17 May 2016
Next published	24 April 2018
Date of first publication	

Help email	nss.isdcancerstats@nhs.net
Date form completed	30 March 2017

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.