Cancer among older people

1993-2022

(Excluding non-melanoma skin cancer)

(ICD10 codes: C00-C43, C45-C97; Aged 75+)

Northern Ireland Cancer Registry

Northern Ireland Cancer Registry, 2025

An official statistics publication

ABOUT THIS REPORT

Contents

This report includes information on incidence of cancer among older people (excluding non-melanoma skin cancer) as recorded by the Northern Ireland Cancer Registry (NICR). Incidence data is available annually from 1993 to 2022, however in order to provide stable and robust figures the majority of information presented in this report is based upon the average number of cases diagnosed in the last five years.

Methodology

The methodology used in producing the statistics presented in this report, including details of data sources, classifications and coding are available in the accompanying methodology report available at: www.qub.ac.uk/research-centres/nicr/CancerInformation/official-statistics.

Official statistics

The incidence, prevalence and survival statistics in this publication are designated as official statistics signifying that they comply with the Code of Practice for Official Statistics. Further information on this code is available at code.statisticsauthority.gov.uk.

Cancer mortality data

The NI Statistics and Research Agency (NISRA) is the official statistics provider of cancer mortality data in Northern Ireland. However, for completeness, data on cancer mortality is also provided in this report. While analysis is conducted by NICR staff, the original data is provided courtesy of the General Register Office (NI) via the Department of Health.

Reuse of information

The information in this report (and any supplementary material) is available for reuse free of charge and without the need to contact NICR. However, we request that NICR is acknowledged as the source of any reused information. The following reference is recommended:
Northern Ireland Cancer Registry 2025. Cancer among older people: 1993-2022. Available at: www.qub.ac.uk/research-centres/nicr

Further information

Further information is available at: www.qub.ac.uk/research-centres/nicr

Phone: +44 (0)28 9097 6028 **e-mail:** nicr@qub.ac.uk

Acknowledgements

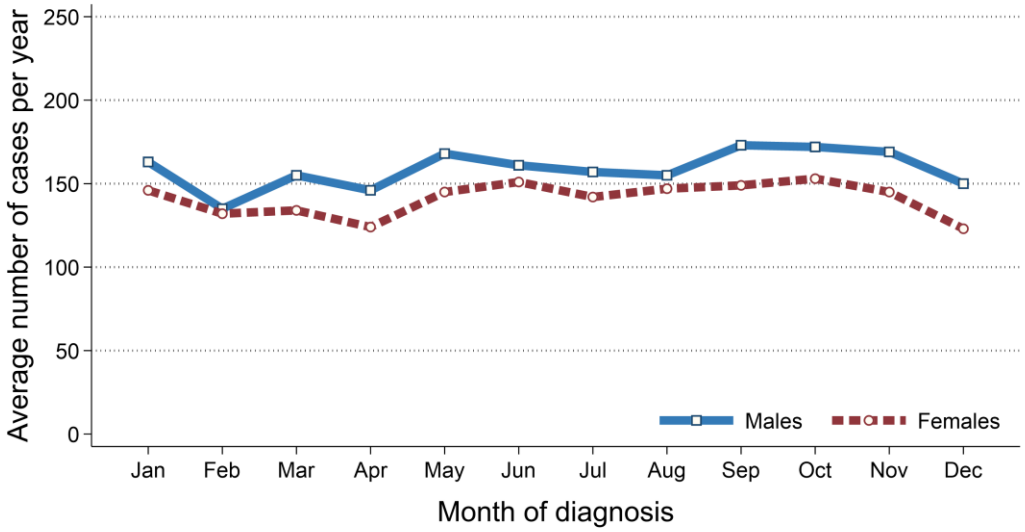
The Northern Ireland Cancer Registry (NICR) uses data provided by patients and collected by the health service as part of their care and support.

NICR is funded by the Public Health Agency and is based in Queen's University, Belfast.

INCIDENCE

- There were 17,980 cases of cancer among older people (excluding non-melanoma skin cancer) diagnosed during 2018-2022 in Northern Ireland. On average this was 3,596 cases per year.
- During this period 47.0% of cancer cases among those aged 75 and over were among women (Male cases: 9,524, Female cases: 8,456). On average there were 1,905 male and 1,691 female cases of cancer among older people per year.
- The most common diagnosis month during 2018-2022 was September among males with 173 cases per year and October among females with 153 cases per year.

Figure 1: Average number of cases of cancer among older people per year in 2018-2022 by month of diagnosis



Month of diagnosis	Average number of cases per year	
	Males	Females
January	163	146
February	135	132
March	155	134
April	146	124
May	168	145
June	161	151
July	157	142
August	155	147
September	173	149
October	172	153
November	169	145
December	150	123

- Among people aged 75 and over the cancer incidence rates for each gender were 3,044.9 cases per 100,000 males aged 75 and over and 1,985.5 cases per 100,000 females aged 75 and over.

INCIDENCE BY CANCER TYPE

- During 2018-2022 the most common cancer types among males aged 75 and over were:
  - Prostate cancer (25.8%),
  - Lung cancer (including trachea) (15.9%) and
  - Colorectal cancer (14.0%).
- Among females aged 75 and over they were:
  - Breast cancer (20.6%),
  - Lung cancer (including trachea) (16.5%) and
  - Colorectal cancer (14.5%).

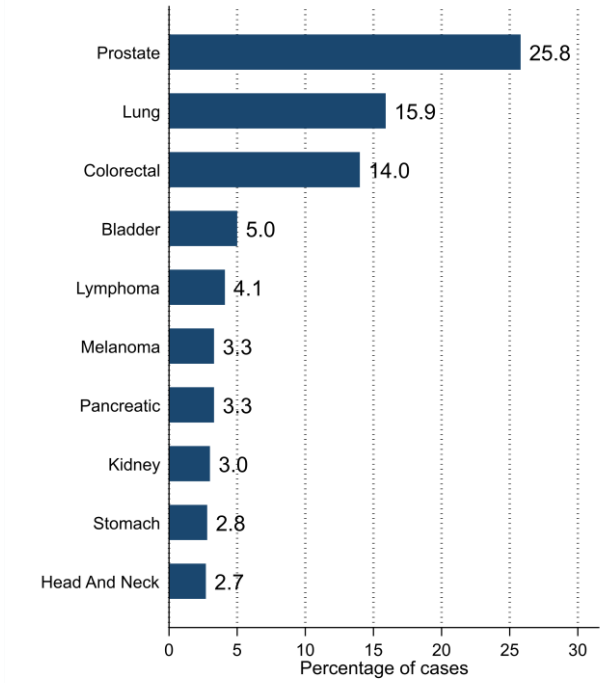
Table 1: Number of cases of cancer among older people diagnosed in 2018-2022 by cancer type

Cancer type	All persons		Male		Female	
	Total cases in period	Average cases per year	Total cases in period	Average cases per year	Total cases in period	Average cases per year
Cancer among older people	**17,980**	**3,596**	**9,524**	**1,905**	**8,456**	**1,691**
	.	.	.	.	.	.
Bladder cancer	689	138	480	96	209	42
Brain cancer (inc. CNS)	227	45	132	26	95	19
Breast cancer	1,757	351	19	4	1,738	348
Cervical cancer	28	6	.	.	28	6
Colorectal cancer	2,560	512	1,335	267	1,225	245
Gallbladder and other biliary cancer	294	59	113	23	181	36
Head and neck cancer	397	79	260	52	137	27
Kidney cancer	466	93	287	57	179	36
Leukaemia	451	90	253	51	198	40
Liver cancer	333	67	216	43	117	23
Lung cancer (inc. trachea)	2,905	581	1,512	302	1,393	279
Lymphoma	736	147	394	79	342	68
Malignant melanoma	577	115	312	62	265	53
Multiple myeloma	377	75	208	42	169	34
Oesophageal cancer	407	81	256	51	151	30
Ovarian cancer (inc. fallopian tube)	311	62	.	.	311	62
Pancreatic cancer	671	134	314	63	357	71
Prostate cancer	2,455	491	2,455	491	.	.
Stomach cancer	456	91	262	52	194	39
Thyroid cancer	70	14	25	5	45	9
Unknown primary cancer	543	109	230	46	313	63
Uterine cancer	364	73	.	.	364	73

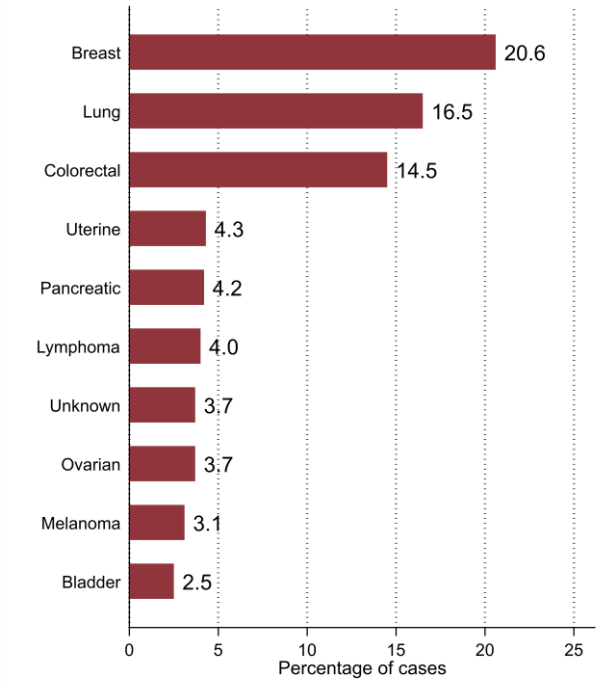
Note: Totals include other less common cancer types not listed in the table. CNS: Central Nervous System

Figure 2: Proportion of cases of cancer among older people in 2018-2022 by cancer type

MALE



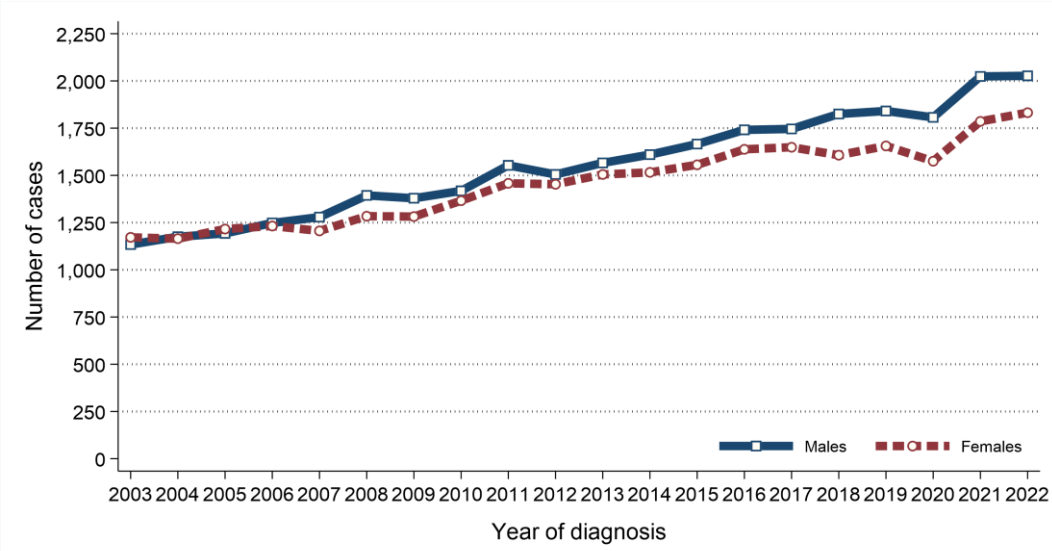
FEMALE



INCIDENCE TRENDS

- The number of cases of cancer among older males increased between 2013-2017 and 2018-2022 by 14.3% from 8,329 cases (1,666 cases per year) to 9,524 cases (1,905 cases per year).
- The number of cases of cancer among older females increased between 2013-2017 and 2018-2022 by 7.5% from 7,864 cases (1,573 cases per year) to 8,456 cases (1,691 cases per year).

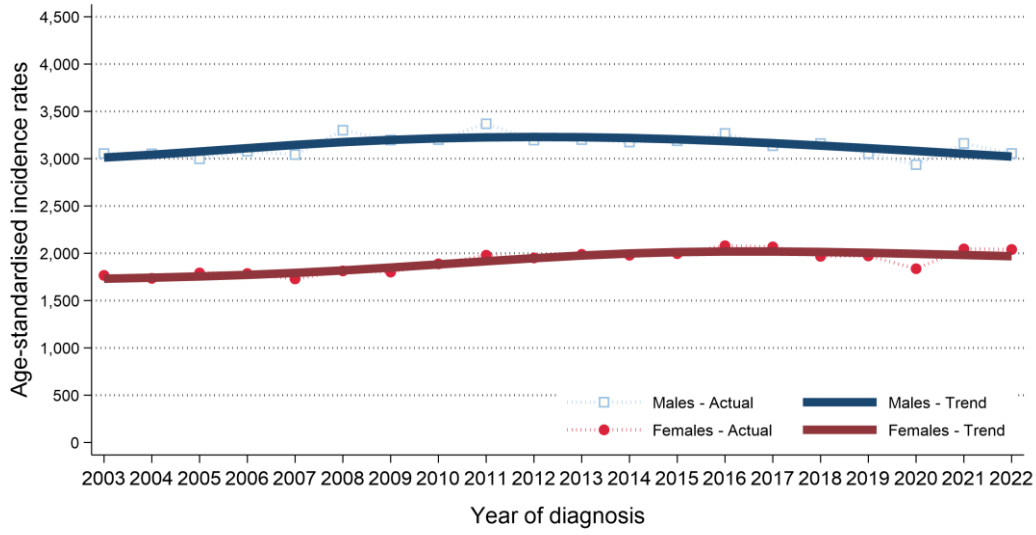
Figure 3: Trends in number of cases of cancer among older people diagnosed from 2003 to 2022



Year of diagnosis	Number of cases	
	Males	Females
2013	1,566	1,505
2014	1,610	1,516
2015	1,666	1,556
2016	1,741	1,638
2017	1,746	1,649
2018	1,825	1,607
2019	1,841	1,656
2020	1,807	1,575
2021	2,024	1,786
2022	2,027	1,832

- Male age-standardised cancer incidence rates decreased between 2013-2017 and 2018-2022 by 3.8% from 3193.6 to 3072.1 cases per 100,000 males aged 75 and over. This change was not statistically significant.
- Female age-standardised cancer incidence rates decreased between 2013-2017 and 2018-2022 by 2.5% from 2023.4 to 1973.4 cases per 100,000 females aged 75 and over. This change was not statistically significant.

Figure 4: Trends in incidence rates of cancer among older people from 2003 to 2022



Age-standardised incidence rates illustrate the change in the number of cases within a population of a fixed size and age structure (2013 European Standard).

They thus represent changes other than those caused by population growth and/or ageing.

Trends can also be influenced by changes in how cancer is classified and coded. (e.g. the move from ICD-0-2 to ICD-0-3 in 2019).

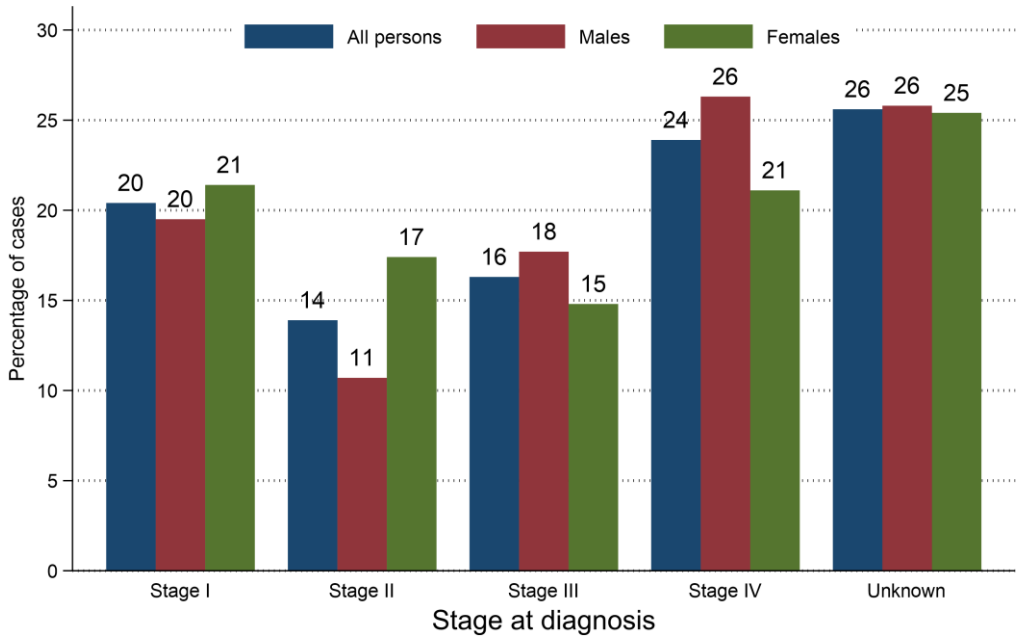
INCIDENCE BY STAGE AT DIAGNOSIS

- During 2018-2022 74.4% of cancer cases among older people had a stage assigned.
- 20.4% of cancer cases among older people were diagnosed at Stage I. (27.4% of staged cases)
- 23.9% of cancer cases among older people were diagnosed at Stage IV. (32.1% of staged cases)

Table 2: Number of cases of cancer among older people diagnosed in 2018-2022 by stage at diagnosis

Stage at diagnosis	All persons		Male		Female	
	Total cases in period	Average cases per year	Total cases in period	Average cases per year	Total cases in period	Average cases per year
All stages	**17,980**	**3,596**	**9,524**	**1,905**	**8,456**	**1,691**
	.	.	.	.	.	.
Stage I	3,665	733	1,857	371	1,808	362
Stage II	2,495	499	1,022	204	1,473	295
Stage III	2,931	586	1,681	336	1,250	250
Stage IV	4,289	858	2,509	502	1,780	356
Unknown	4,600	920	2,455	491	2,145	429

Figure 5: Proportion of cases of cancer among older people diagnosed in 2018-2022 by stage at diagnosis



Cancer stage describes the size of a cancer and how far it has grown and spread.

This information is used to help decide what treatments are needed.

The classification used here to stage cancer is the TNM classification (Version 7 prior to 0, Version 8 from 0 onwards).

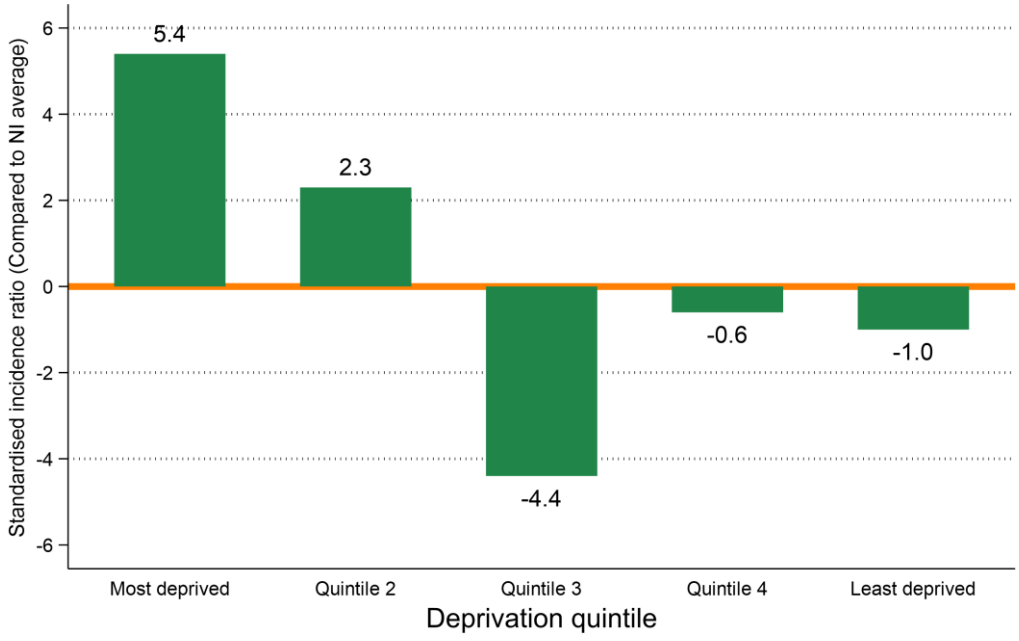
INCIDENCE BY DEPRIVATION

- The number of cases of cancer among older people diagnosed during 2018-2022 varied in each deprivation quintile due to variations in population size and age.
- After accounting for these factors, incidence rates:
  - in the most socio-economically deprived areas were 5.4% higher than the NI average.
  - in the least socio-economically deprived areas did not vary significantly from the NI average.

Table 3: Number of cases of cancer among older people diagnosed in 2018-2022 by deprivation quintile

Deprivation quintile	All persons		Male		Female	
	Total cases in period	Average cases per year	Total cases in period	Average cases per year	Total cases in period	Average cases per year
Northern Ireland	**17,980**	**3,596**	**9,524**	**1,905**	**8,456**	**1,691**
	.	.	.	.	.	.
Most deprived	2,940	588	1,525	305	1,415	283
Quintile 2	3,656	731	1,907	381	1,749	350
Quintile 3	3,637	727	1,952	390	1,685	337
Quintile 4	3,759	752	2,011	402	1,748	350
Least deprived	3,987	797	2,128	426	1,859	372
Unknown	1	0	1	0	0	0

Figure 6: Standardised incidence ratio comparing deprivation quintile to Northern Ireland for cancer among older people diagnosed in 2018-2022



Standardised incidence ratios compare incidence rates in each deprivation quintile with the Northern Ireland incidence rate.

A value above 0 means that incidence rates in that deprivation quintile are greater than the NI average.

This measure takes account of population size and age structure. Differences are thus not a result of these factors.

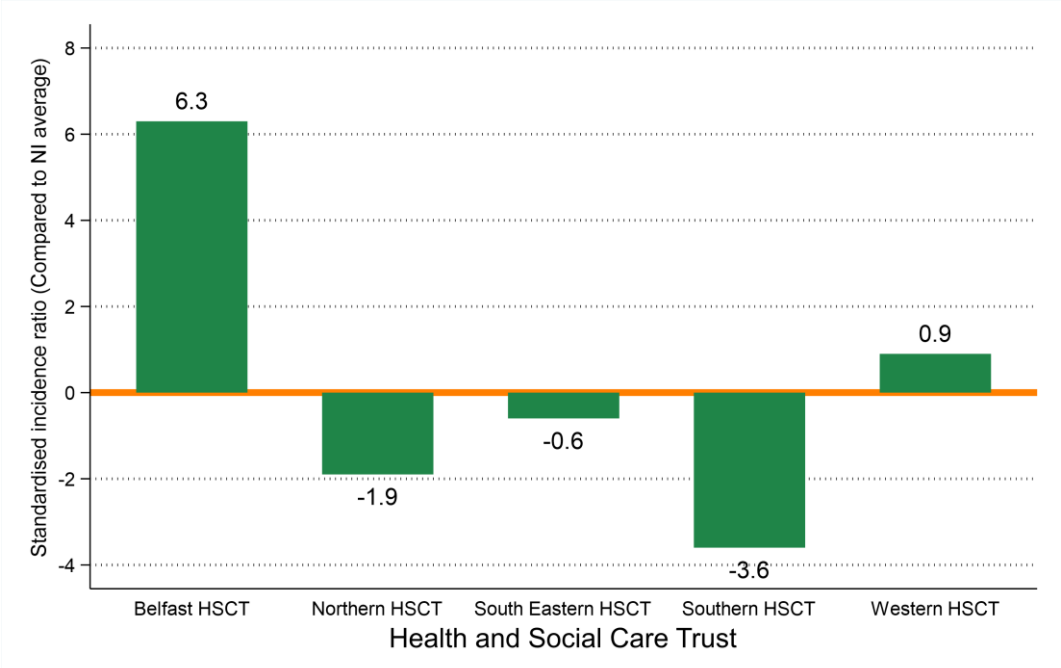
INCIDENCE BY HEALTH AND SOCIAL CARE TRUST

- The number of cases of cancer among older people diagnosed during 2018-2022 varied in each Health and Social Care Trust due to variations in population size and age.
- After accounting for these factors, incidence rates:
  - in Belfast HSCT were 6.3% higher than the NI average.
  - in Northern HSCT did not vary significantly from the NI average.
  - in South Eastern HSCT did not vary significantly from the NI average.
  - in Southern HSCT were 3.6% lower than the NI average.
  - in Western HSCT did not vary significantly from the NI average.

Table 4: Number of cases of cancer among older people diagnosed in 2018-2022 by Health and Social Care Trust

Health and Social Care Trust	All persons		Male		Female	
	Total cases in period	Average cases per year	Total cases in period	Average cases per year	Total cases in period	Average cases per year
Northern Ireland	**17,980**	**3,596**	**9,524**	**1,905**	**8,456**	**1,691**
	.	.	.	.	.	.
Belfast HSCT	3,537	707	1,786	357	1,751	350
Northern HSCT	4,773	955	2,572	514	2,201	440
South Eastern HSCT	3,867	773	2,053	411	1,814	363
Southern HSCT	3,151	630	1,666	333	1,485	297
Western HSCT	2,651	530	1,446	289	1,205	241
Unknown	1	0	1	0	0	0

Figure 7: Standardised incidence ratio comparing Health and Social Care Trust to Northern Ireland for cancer among older people diagnosed in 2018-2022



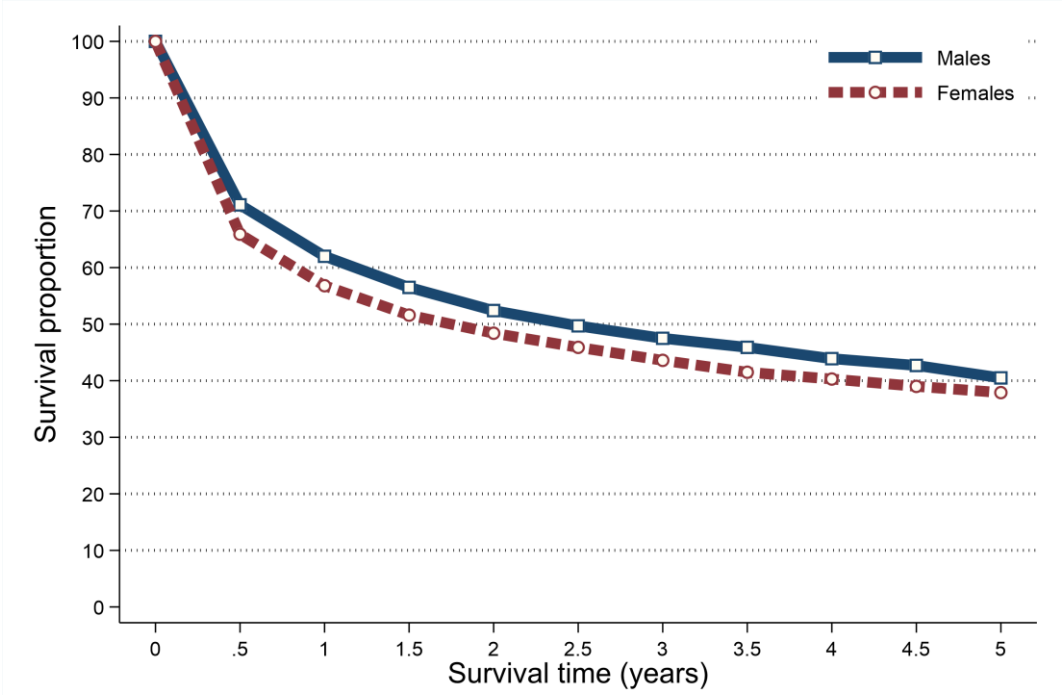
SURVIVAL

- 55.7% of patients aged 75 and over were alive one year and 27.5% were alive five years from a cancer diagnosis in 2013-2017. (observed survival)
- Net survival (NS), which removes the effect of deaths from causes unrelated to cancer, was 59.5% one year and 39.3% five years from a cancer diagnosis among patients aged 75 and over in 2013-2017.
- Five-year survival (NS) for cancer among older patients diagnosed in 2013-2017 was 40.5% among men and 37.9% among women.

Table 5: Survival from cancer among older people for patients diagnosed in 2013-2017

Time since diagnosis	All persons		Male		Female	
	Observed survival	Net survival	Observed survival	Net survival	Observed survival	Net survival
6 months	66.3%	68.6%	68.6%	71.1%	63.9%	65.9%
One year	55.7%	59.5%	57.8%	62.0%	53.5%	56.8%
Two years	44.1%	50.4%	45.4%	52.4%	42.8%	48.4%
Five years	27.5%	39.3%	27.9%	40.5%	27.2%	37.9%

Figure 8: Net survival from cancer among older people for patients diagnosed in 2013-2017



Observed survival examines the time between diagnosis and death from any cause, however, due to the inclusion of non-cancer deaths it may not fully reflect how changes in cancer care impact survival from cancer.

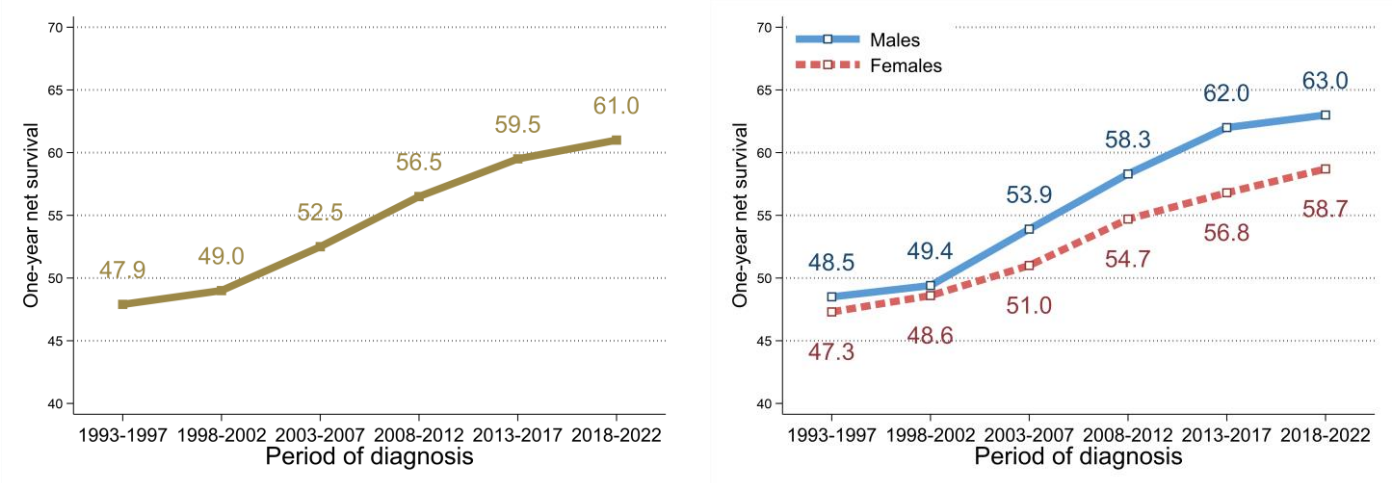
Net survival provides an estimate of patient survival which has been adjusted to take account of deaths unrelated to cancer. It is more widely used to assess the impact of changes in cancer care on patient survival.

SURVIVAL TRENDS

ONE-YEAR NET SURVIVAL

- Between 2013-2017 and 2018-2022 there was no significant change in one-year survival (NS) from cancer among older people.
- Compared to 1993-1997 one-year survival (NS) from cancer among older people in 2018-2022 increased significantly from 47.9% to 61.0%. This increase was significant for males (48.5% to 63.0%) and females (47.3% to 58.7%).

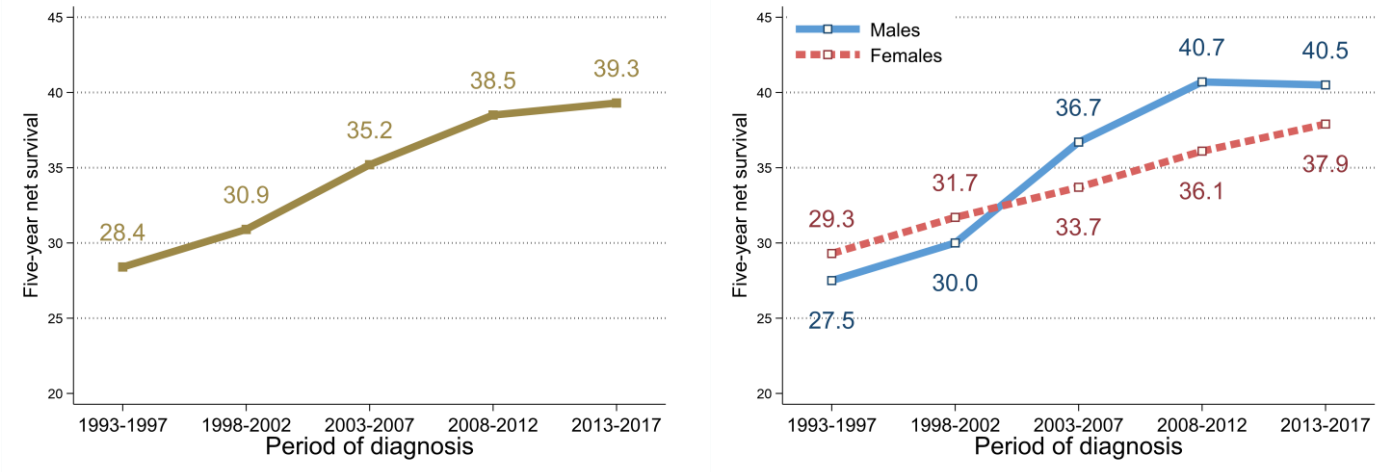
Figure 9: Trends in one-year net survival from cancer among older people in 1993-2022



FIVE-YEAR NET SURVIVAL

- Between 2008-2012 and 2013-2017 there was no significant change in five-year survival (NS) from cancer among older people.
- Compared to 1993-1997 five-year survival (NS) from cancer among older people in 2013-2017 increased significantly from 28.4% to 39.3%. This increase was significant for males (27.5% to 40.5%) and females (29.3% to 37.9%).

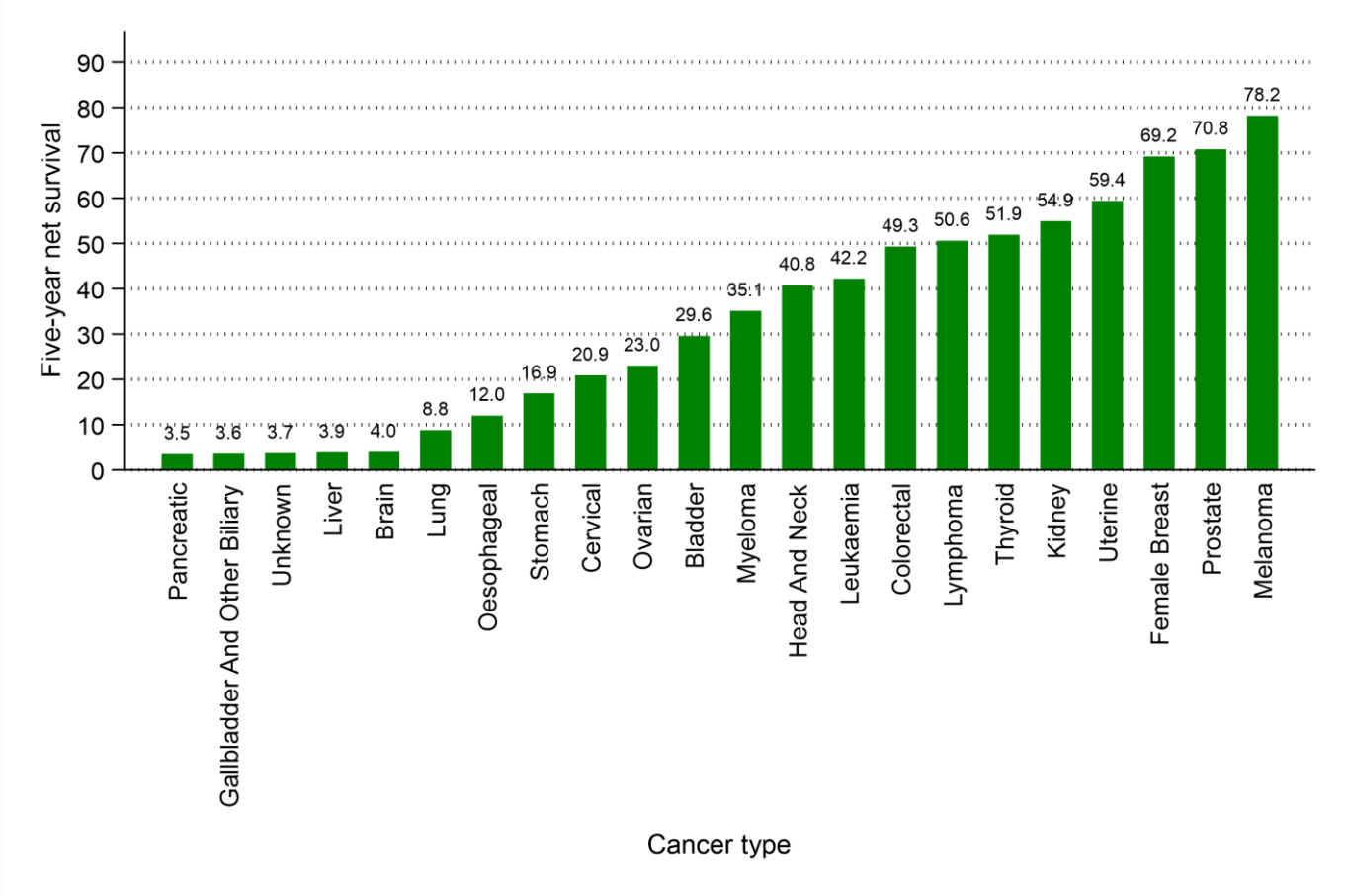
Figure 10: Trends in five-year net survival from cancer among older people in 1993-2017



SURVIVAL BY CANCER TYPE

- Five-year survival (NS) for patients aged 75 and over and diagnosed in 2013-2017 ranged from 78.2% for malignant melanoma to 3.5% for pancreatic cancer.
- In particular five-year survival (NS) for the most common cancer types was 8.8% for lung cancer (including trachea), 49.3% for colorectal cancer, 70.8% for prostate cancer and 69.2% for female breast cancer.

Figure 11: Five-year net survival from cancer among older people for patients diagnosed in 2013-2017 by cancer type



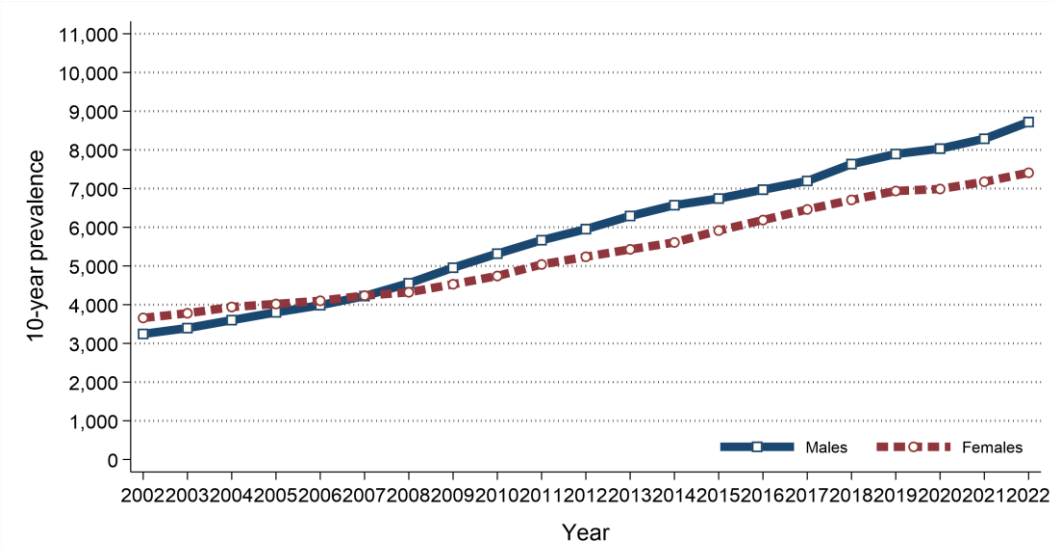
PREVALENCE

- At the end of 2022, there were 26,175 people (Males: 13,342; Females: 12,833) living with cancer who were aged 75 and over and had been diagnosed with the disease during 1998-2022.
- Of these 10.1% had been diagnosed in the previous year (one-year prevalence) and 61.6% in the previous 10 years (ten-year prevalence).

PREVALENCE TRENDS

- 10-year prevalence of cancer among males aged 75 and over increased between 2017 and 2022 by 21.1% from 7,197 survivors to 8,719 survivors.
- 10-year prevalence of cancer among females aged 75 and over increased between 2017 and 2022 by 14.7% from 6,461 survivors to 7,408 survivors.

Figure 12: Trends in 10-year prevalence of cancer among older people in 2002-2022



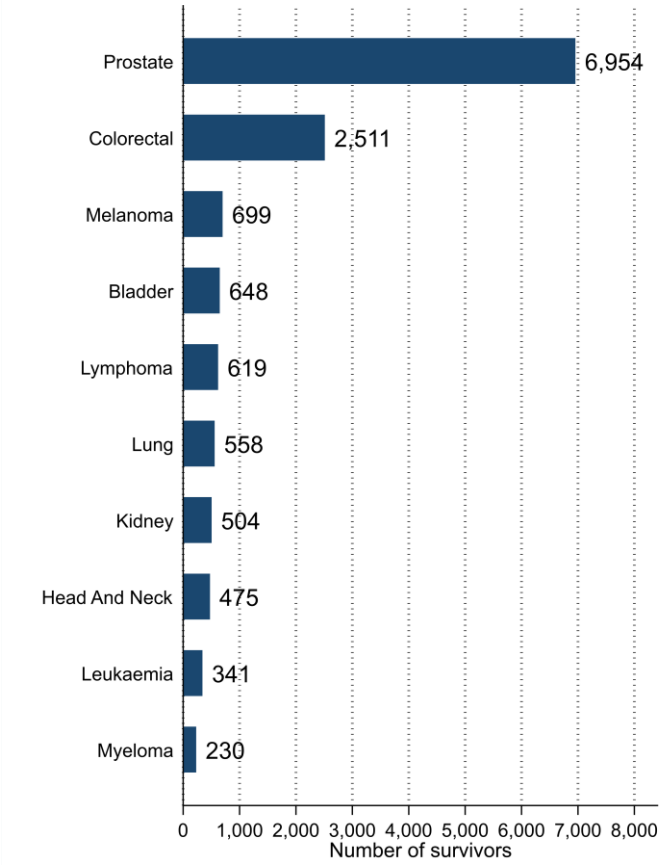
Year	10-year prevalence	
	Males	Females
2013	6,292	5,430
2014	6,571	5,609
2015	6,742	5,915
2016	6,972	6,187
2017	7,197	6,461
2018	7,634	6,707
2019	7,893	6,938
2020	8,032	6,990
2021	8,286	7,176
2022	8,719	7,408

PREVALENCE BY CANCER TYPE

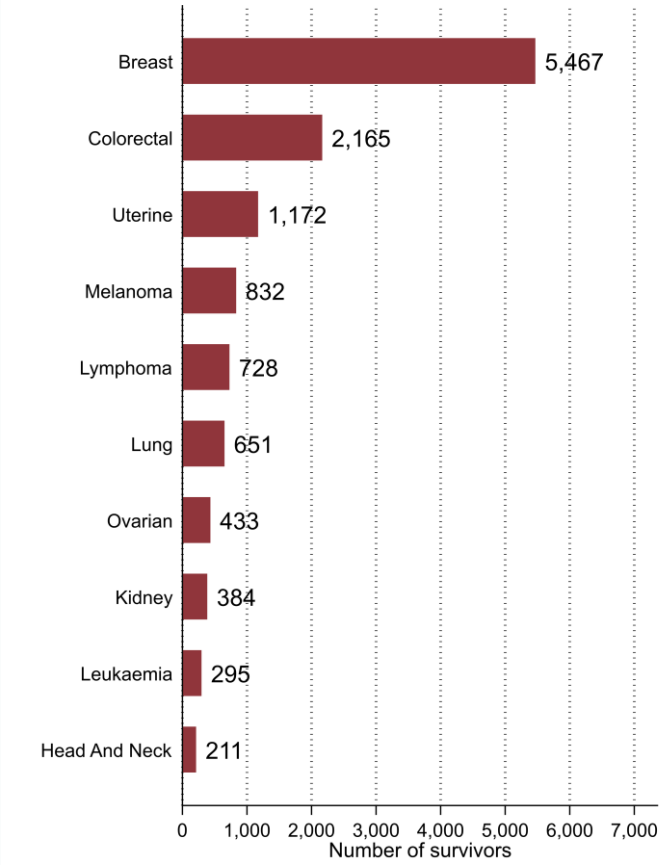
- At the end of 2022 the most prevalent cancer types among males aged 75 and over were prostate cancer (6,954), colorectal cancer (2,511) and malignant melanoma (699). Among females aged 75 and over they were breast cancer (5,467), colorectal cancer (2,165) and uterine cancer (1,172).

Figure 13: 25-year prevalence of cancer among older people at the end of 2022 by cancer type

MALE



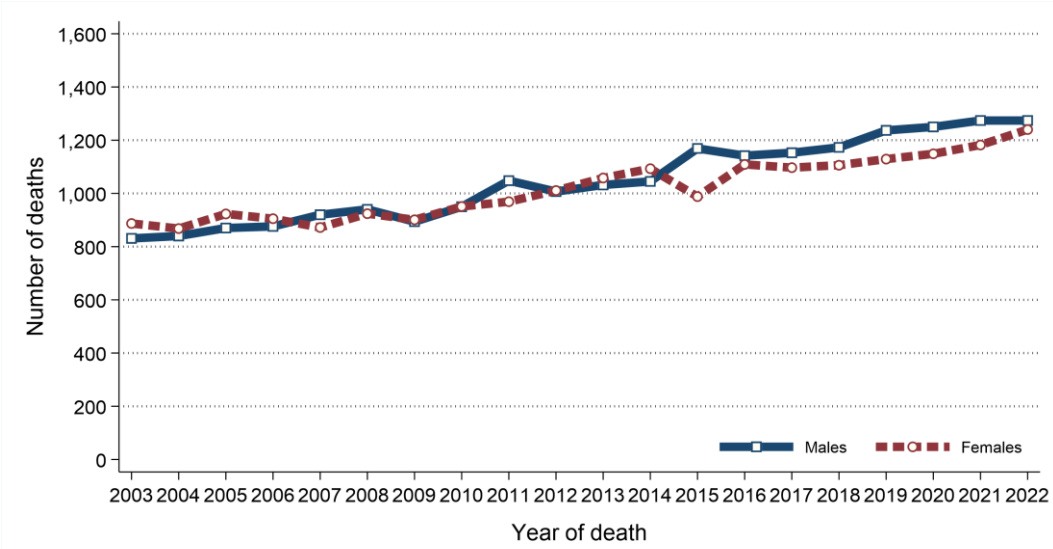
FEMALE



MORTALITY

- There were 12,014 deaths from cancer among older people (excluding non-melanoma skin cancer) during 2018-2022 in Northern Ireland. On average this was 2,403 deaths per year.
- During this period 48.3% of cancer deaths among older people were among women (Male deaths: 6,208, Female deaths: 5,806). On average there were 1,242 male and 1,161 female deaths from cancer among older people per year.
- The number of deaths from cancer among males aged 75 and over increased between 2013-2017 and 2018-2022 by 12.0% from 5,541 deaths (1,108 deaths per year) to 6,208 deaths (1,242 deaths per year).
- The number of deaths from cancer among females aged 75 and over increased between 2013-2017 and 2018-2022 by 8.6% from 5,345 deaths (1,069 deaths per year) to 5,806 deaths (1,161 deaths per year).

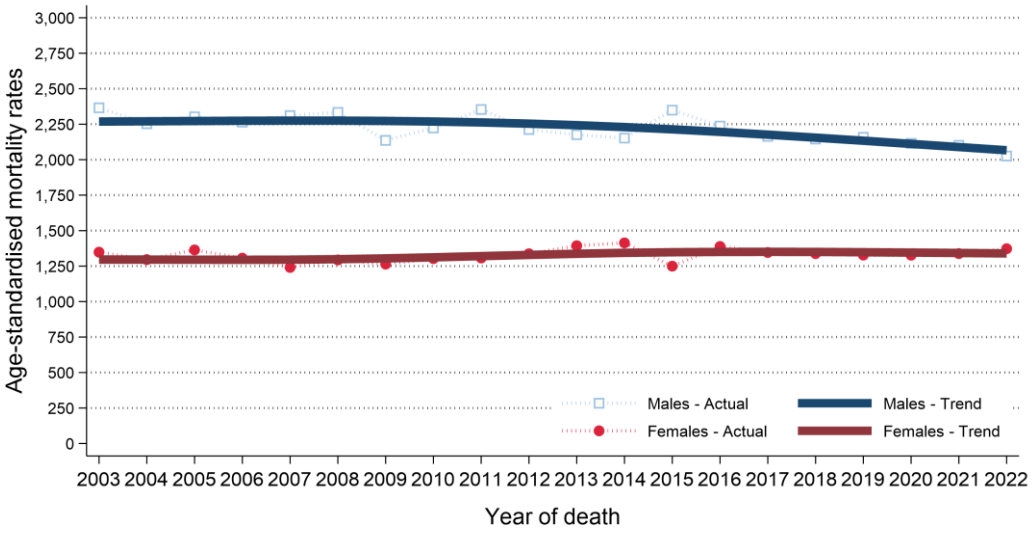
Figure 14: Trends in the number of deaths from cancer among older people from 2003 to 2022



Year of death	Number of deaths	
	Males	Females
2013	1,032	1,058
2014	1,045	1,093
2015	1,169	988
2016	1,142	1,109
2017	1,153	1,097
2018	1,173	1,106
2019	1,237	1,129
2020	1,250	1,149
2021	1,274	1,182
2022	1,274	1,240

- Male age-standardised cancer mortality rates among persons aged 75 and over decreased between 2013-2017 and 2018-2022 by 5.0% from 2,216.9 to 2,107.0 deaths per 100,000 males. This change was not statistically significant.
- Female age-standardised cancer mortality rates among persons aged 75 and over decreased between 2013-2017 and 2018-2022 by 1.3% from 1,358.2 to 1,340.6 deaths per 100,000 females. This change was not statistically significant.

Figure 15: Trends in mortality rates of cancer among older people from 2003 to 2022



Age-standardised mortality rates illustrate the change in the number of deaths within a population of a fixed size and age structure (2013 European Standard).

They thus represent changes other than those caused by population growth and/or ageing.

Trends can also be influenced by changes in how cancer is classified and coded.

MORTALITY BY CANCER TYPE

- During 2018-2022 the most common causes of cancer death among older males were lung cancer (including trachea) (21.0%), prostate cancer (16.8%) and colorectal cancer (10.8%). Among females they were lung cancer (including trachea) (20.0%), breast cancer (13.0%), colorectal cancer (11.2%) and pancreatic cancer (6.6%).

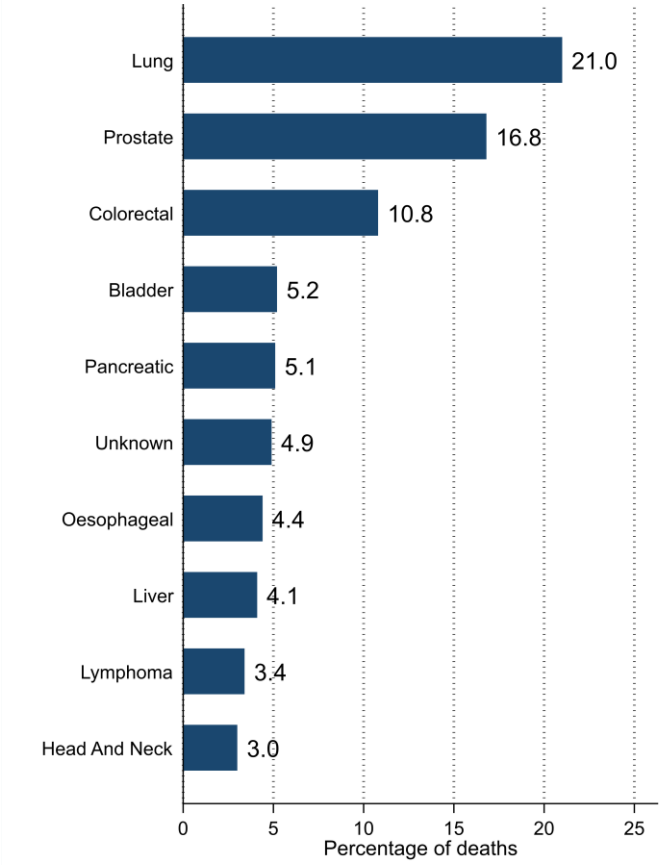
Table 7: Number of deaths from cancer among older people in 2018-2022 by cancer type

Cancer type	All persons		Male		Female	
	Total deaths in period	Average deaths per year	Total deaths in period	Average deaths per year	Total deaths in period	Average deaths per year
Cancer among older people	**12,014**	**2,403**	**6,208**	**1,242**	**5,806**	**1,161**
	.	.	.	.	.	.
Bladder cancer	484	97	324	65	160	32
Brain cancer (inc. CNS)	223	45	126	25	97	19
Breast cancer (Female only)	757	151	.	.	757	151
Cervical cancer	29	6	.	.	29	6
Colorectal cancer	1,325	265	672	134	653	131
Gallbladder and other biliary cancer	120	24	36	7	84	17
Head and neck cancer	259	52	184	37	75	15
Kidney cancer	286	57	176	35	110	22
Leukaemia	316	63	169	34	147	29
Liver cancer	465	93	253	51	212	42
Lung cancer (inc trachea)	2,466	493	1,304	261	1,162	232
Lymphoma	404	81	211	42	193	39
Malignant melanoma	151	30	84	17	67	13
Multiple myeloma	258	52	134	27	124	25
Oesophageal cancer	414	83	272	54	142	28
Ovarian cancer (inc. fallopian tube)	278	56	.	.	278	56
Pancreatic cancer	696	139	315	63	381	76
Prostate cancer	1,043	209	1,043	209	.	.
Stomach cancer	311	62	176	35	135	27
Thyroid cancer	33	7	16	3	17	3
Unknown primary cancer	673	135	303	61	370	74
Uterine cancer	193	39	.	.	193	39

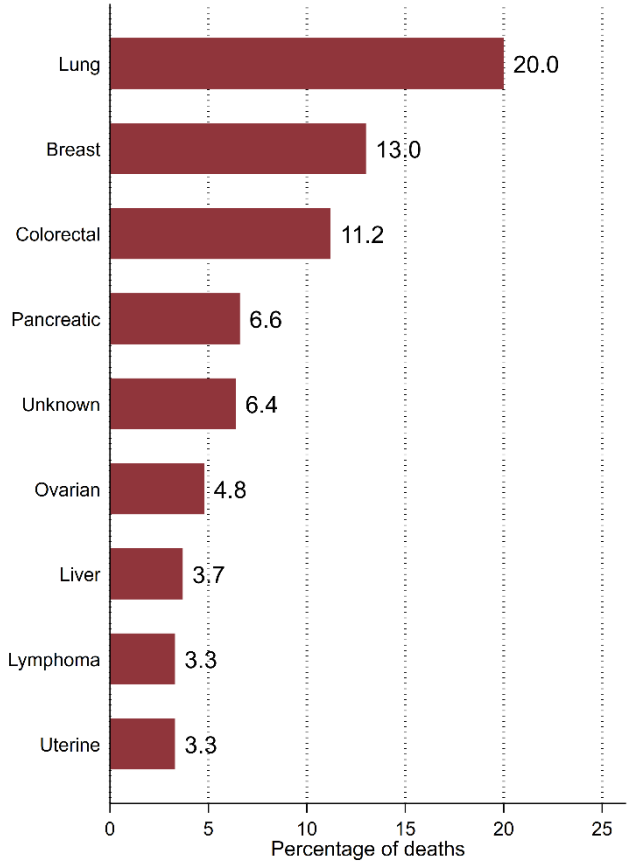
Note: Totals include other less common cancer types not listed in the table. CNS: Central Nervous System

Figure 16: Proportion of deaths from cancer among older people in 2018-2022 by cancer type

MALE



FEMALE



BACKGROUND NOTES

Cancer classification: Classification of tumour sites is carried out using ICD10 codes. For a listing and explanation of ICD10 codes see: World Health Organisation at http://apps.who.int/classifications/icd10/browse/2010/en#/II

Population data: Population data for Northern Ireland, and smaller geographic areas, are extracted from the NI mid-year population estimates available from the NI Statistics and Research Agency (available at www.nisra.gov.uk).

Geographic areas: Geographic areas are assigned based on a patient's postcode of usual residence at diagnosis using the Jul 2024 Central Postcode Directory (CPD) produced by the NI Statistics and Research Agency (available at www.nisra.gov.uk).

Deprivation quintiles: Super output areas (SOA) are assigned to each patient based on their postcode of usual residence at diagnosis. Using the SOA each patient is assigned a socio-economic deprivation quintile based on the 2017 Multiple Deprivation Measure. The 2017 Multiple Deprivation Measure is available from the NI Statistics and Research Agency (available at www.nisra.gov.uk).

Crude incidence/mortality rate: The number of cases/deaths per 100,000 person years in the population. Person years are the sum of the population over the number of years included.

Age-standardised incidence/mortality rates per 100,000 person years are estimates of the incidence/mortality rate if that population had a standard age structure. Throughout this report the 2013 European Standard Population has been used. Standardising to a common Standard Population allows comparisons of incidence/mortality rates to be made between different time periods and geographic areas while removing the effects of population change and ageing.

Standardised Incidence/Mortality Ratio (SIR/SMR) is the ratio of the number of cases/deaths observed in a population to the expected number of cases/deaths, based upon the age-specific rates in a reference population. This statistic is often used to compare incidence/mortality rates for geographic areas (e.g. Trusts) to the national incidence/mortality rates (i.e. Northern Ireland). An SIR/SMR of 100 indicates there is no difference between the geographic area and the national average.

Confidence intervals measure the precision of a statistic (e.g. cancer among older people incidence rate). Typically, when numbers are low, precision is poorer and confidence intervals will be wider. As a general rule, when comparing statistics (e.g. cancer among older people incidence rate in year 2012 vs year 2013), if the confidence interval around one statistic overlaps with the interval around another, it is unlikely that there is any real difference between the two. If there is no overlap, the difference is considered to be statistically significant.

Lifetime risk is estimated as the cumulative risk of getting cancer up to age 75/85, calculated directly from the age-specific incidence rates. The odds of developing the disease before age 75/85 is the inverse of the cumulative risk.

Prevalence is the number of cancer patients who are alive in the population on a specific date (31st December 2022 in this report). Since data from the NI Cancer Registry are only available since 1993, prevalence only refers to a fixed term (10 and 25 years in this report). There may be members of the population living with a diagnosis of cancer for more than 25 years.

Patient survival is evaluated using two measures. Observed survival examines the time between diagnosis and death from any cause. It thus represents what cancer patients experience, however, due to the inclusion of non-cancer deaths (e.g. heart disease), it may not reflect how changes in cancer care impact survival from cancer. Thus age-standardised net survival is also examined. This measure provides an estimate of patient survival which has been adjusted to take account of deaths unrelated to cancer. It also assumes a standard age distribution thereby removing the impact of changes in the age distribution of cancer patients on changes in survival over time. While this measure is hypothetical, as it assumes patients can only die from cancer related factors, it is a better indicator of the impact of changes in cancer care on patient survival.