Bladder cancer

1993-2022

(ICD10 codes: C67)

Northern Ireland Cancer Registry

Northern Ireland Cancer Registry, 2025

An official statistics publication

ABOUT THIS REPORT

Contents

This report includes information on incidence of bladder 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. Bladder cancer: 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

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Acknowledgements

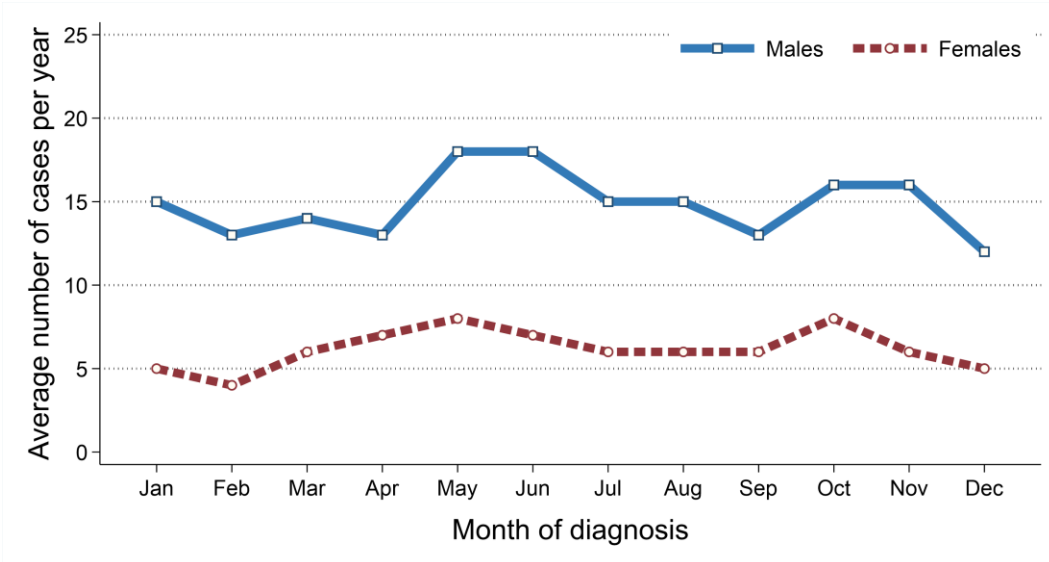
The Northern Ireland Cancer Registry (NICR) uses data provided by patients and collected by the health service as part of their care and support.

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

INCIDENCE

- There were 1,262 cases of bladder cancer diagnosed during 2018-2022 in Northern Ireland. On average this was 252 cases per year.
- During this period 29.9% of bladder cancer cases were among women (Male cases: 885, Female cases: 377). On average there were 177 male and 75 female cases of bladder cancer per year.
- The most common diagnosis month during 2018-2022 was May and June among males with 18 cases per year and May and October among females with 8 cases per year.

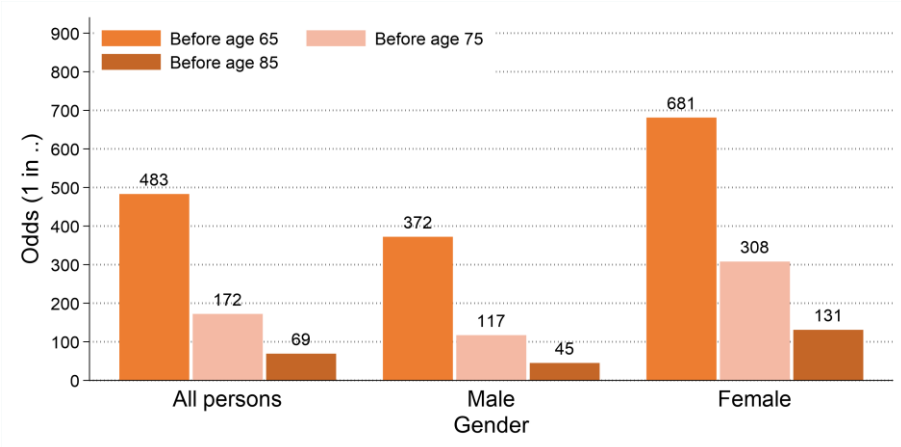
Figure 1: Average number of cases of bladder cancer per year in 2018-2022 by month of diagnosis



Month of diagnosis	Average number of cases per year	
	Males	Females
January	15	5
February	13	4
March	14	6
April	13	7
May	18	8
June	18	7
July	15	6
August	15	6
September	13	6
October	16	8
November	16	6
December	12	5

- Bladder cancer made up 3.4% of all male and 1.5% of all female cancer cases (excluding non-melanoma skin cancer).
- The bladder cancer incidence rates for each gender were 18.9 cases per 100,000 males and 7.8 cases per 100,000 females.
- The odds of developing bladder cancer before age 85 was 1 in 45 for men and 1 in 131 for women.

Figure 2: Odds of developing bladder cancer in 2018-2022



INCIDENCE BY AGE

- The median age of patients diagnosed with bladder cancer during 2018-2022 was 76 years (Males: 76, Females: 76).
- The risk of developing bladder cancer varied by age, with 54.2% of men and 55.4% of women diagnosed with bladder cancer aged 75 and over at diagnosis.
- In contrast, 4.8% of patients diagnosed with bladder cancer were aged 0 to 54 at diagnosis.

Figure 3: Average number of cases of bladder cancer diagnosed per year in 2018-2022 by age at diagnosis

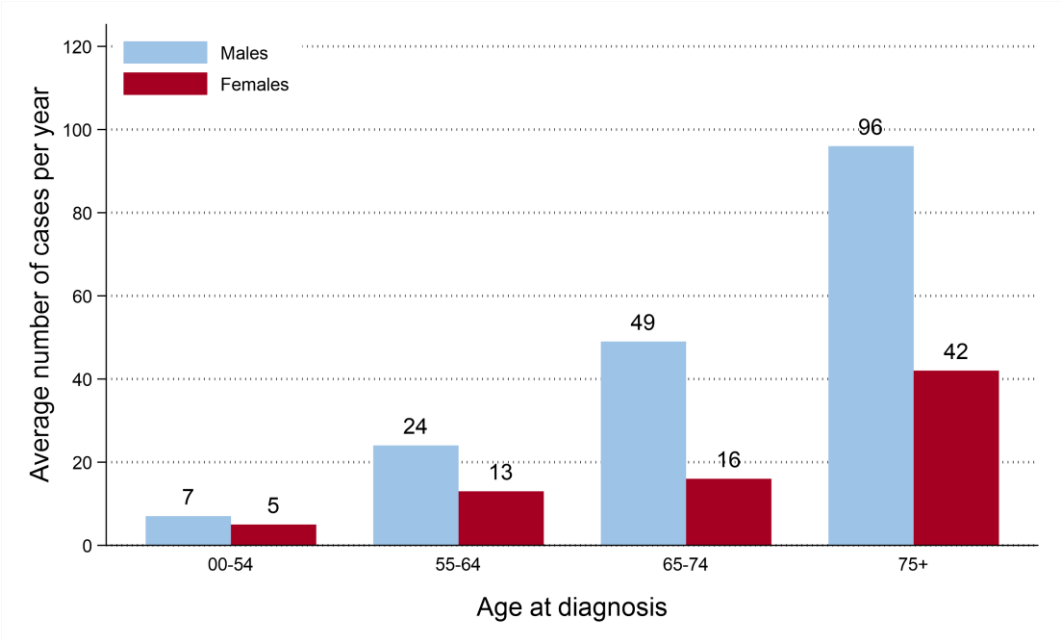
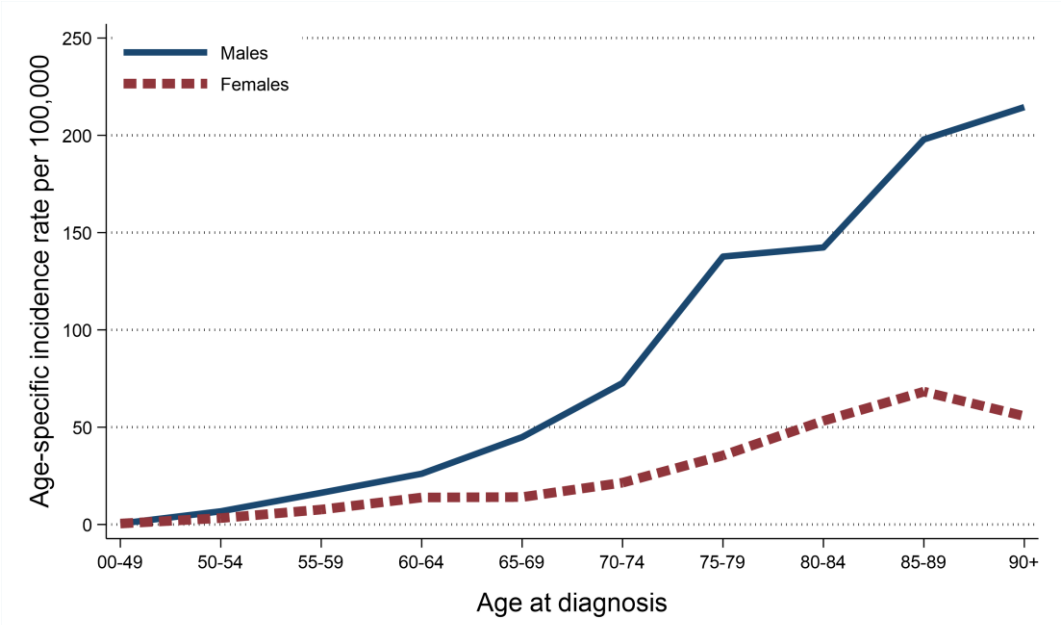


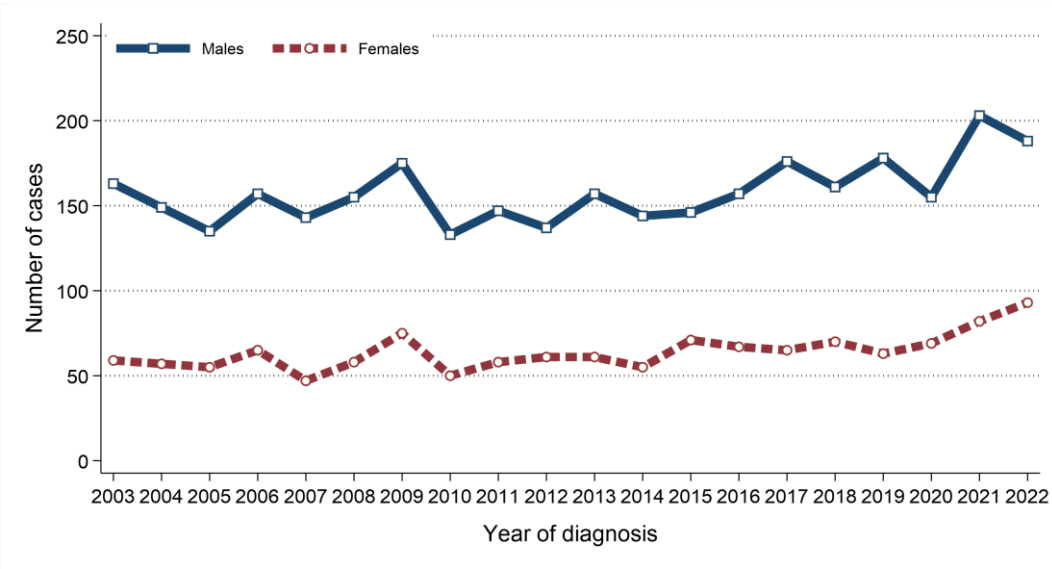
Figure 4: Age-specific incidence rates of bladder cancer in 2018-2022



INCIDENCE TRENDS

- The number of cases of bladder cancer among males increased between 2013-2017 and 2018-2022 by 13.5% from 780 cases (156 cases per year) to 885 cases (177 cases per year).
- The number of cases of bladder cancer among females increased between 2013-2017 and 2018-2022 by 18.2% from 319 cases (64 cases per year) to 377 cases (75 cases per year).

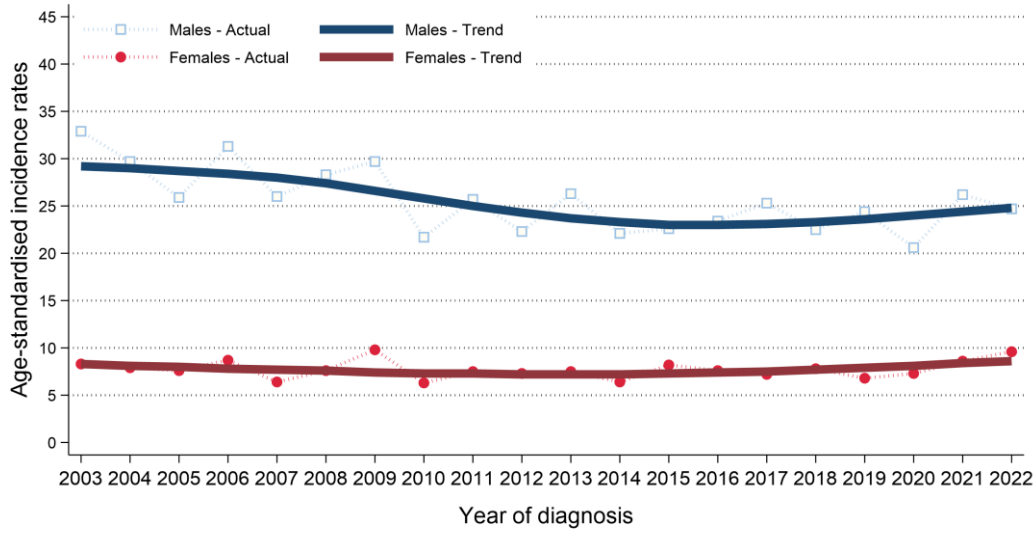
Figure 5: Trends in number of cases of bladder cancer diagnosed from 2003 to 2022



Year of diagnosis	Number of cases	
	Males	Females
2013	157	61
2014	144	55
2015	146	71
2016	157	67
2017	176	65
2018	161	70
2019	178	63
2020	155	69
2021	203	82
2022	188	93

- Male age-standardised bladder cancer incidence rates decreased between 2013-2017 and 2018-2022 by 1.3% from 24.0 to 23.7 cases per 100,000 males. This change was not statistically significant.
- Female age-standardised bladder cancer incidence rates increased between 2013-2017 and 2018-2022 by 9.5% from 7.4 to 8.1 cases per 100,000 females. This change was not statistically significant.

Figure 6: Trends in incidence rates of bladder cancer 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).

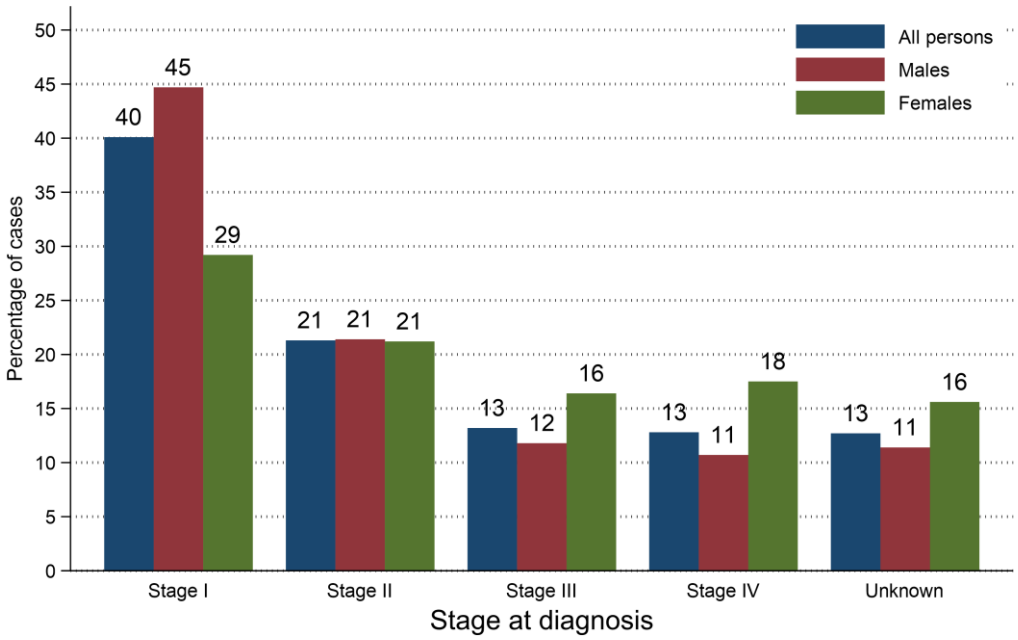
INCIDENCE BY STAGE AT DIAGNOSIS

- During 2018-2022 87.3% of bladder cancer cases had a stage assigned.
- 40.1% of bladder cancer cases were diagnosed at Stage I. (45.9% of staged cases)
- 12.8% of bladder cancer cases were diagnosed at Stage IV. (14.6% of staged cases)

Table 1: Number of cases of bladder cancer 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	**1,262**	**252**	**885**	**177**	**377**	**75**
	.	.	.	.	.	.
Stage I	506	101	396	79	110	22
Stage II	269	54	189	38	80	16
Stage III	166	33	104	21	62	12
Stage IV	161	32	95	19	66	13
Unknown	160	32	101	20	59	12

Figure 7: Proportion of cases of bladder cancer 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 2018, Version 8 from 2018 onwards).

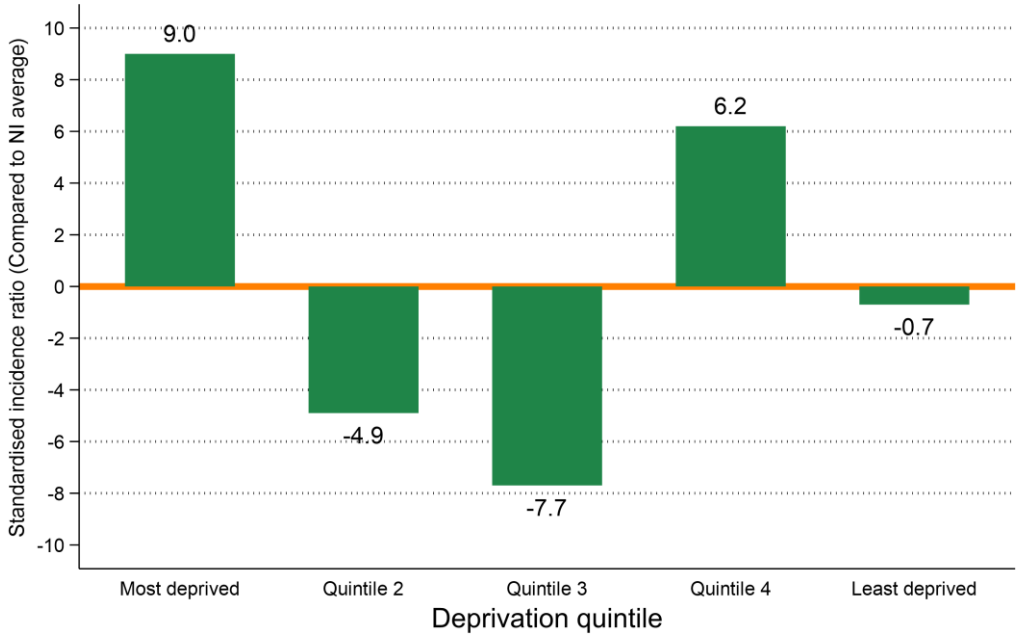
INCIDENCE BY DEPRIVATION

- The number of cases of bladder cancer 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 did not vary significantly from the NI average.
  - in the least socio-economically deprived areas did not vary significantly from the NI average.

Table 2: Number of cases of bladder cancer 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	**1,262**	**252**	**885**	**177**	**377**	**75**
	.	.	.	.	.	.
Most deprived	219	44	149	30	70	14
Quintile 2	239	48	172	34	67	13
Quintile 3	246	49	171	34	75	15
Quintile 4	285	57	202	40	83	17
Least deprived	273	55	191	38	82	16
Unknown	0	0	0	0	0	0

Figure 8: Standardised incidence ratio comparing deprivation quintile to Northern Ireland for bladder cancer 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.

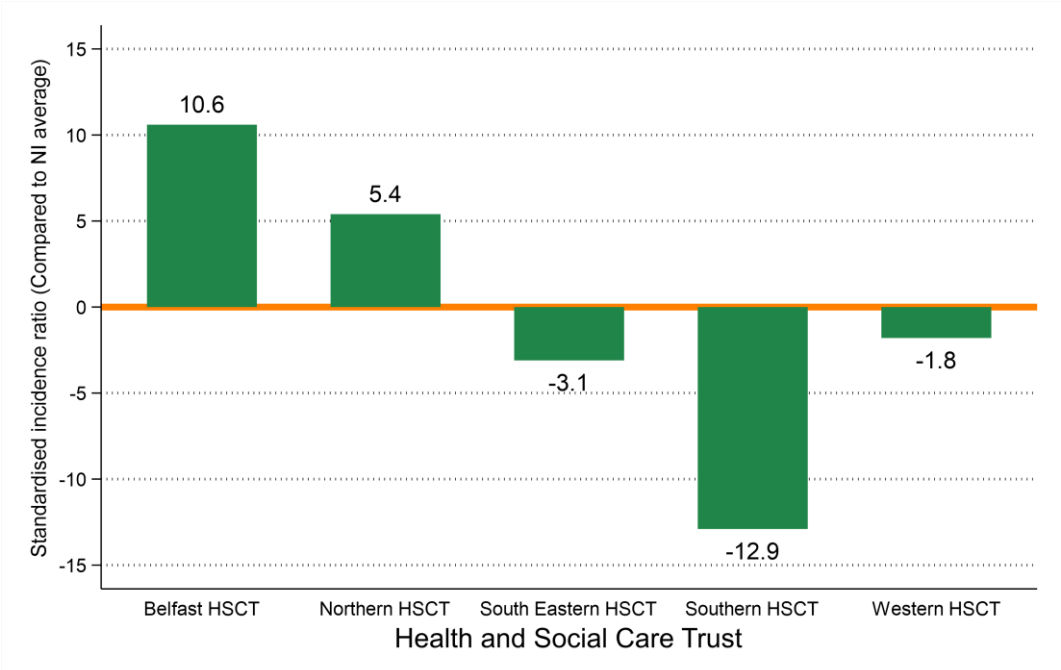
INCIDENCE BY HEALTH AND SOCIAL CARE TRUST

- The number of cases of bladder cancer 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 did not vary significantly from 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 12.9% lower than the NI average.
  - in Western HSCT did not vary significantly from the NI average.

Table 3: Number of cases of bladder cancer 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	**1,262**	**252**	**885**	**177**	**377**	**75**
	.	.	.	.	.	.
Belfast HSCT	250	50	176	35	74	15
Northern HSCT	356	71	252	50	104	21
South Eastern HSCT	262	52	184	37	78	16
Southern HSCT	204	41	134	27	70	14
Western HSCT	190	38	139	28	51	10
Unknown	0	0	0	0	0	0

Figure 9: Standardised incidence ratio comparing Health and Social Care Trust to Northern Ireland for bladder cancer diagnosed in 2018-2022



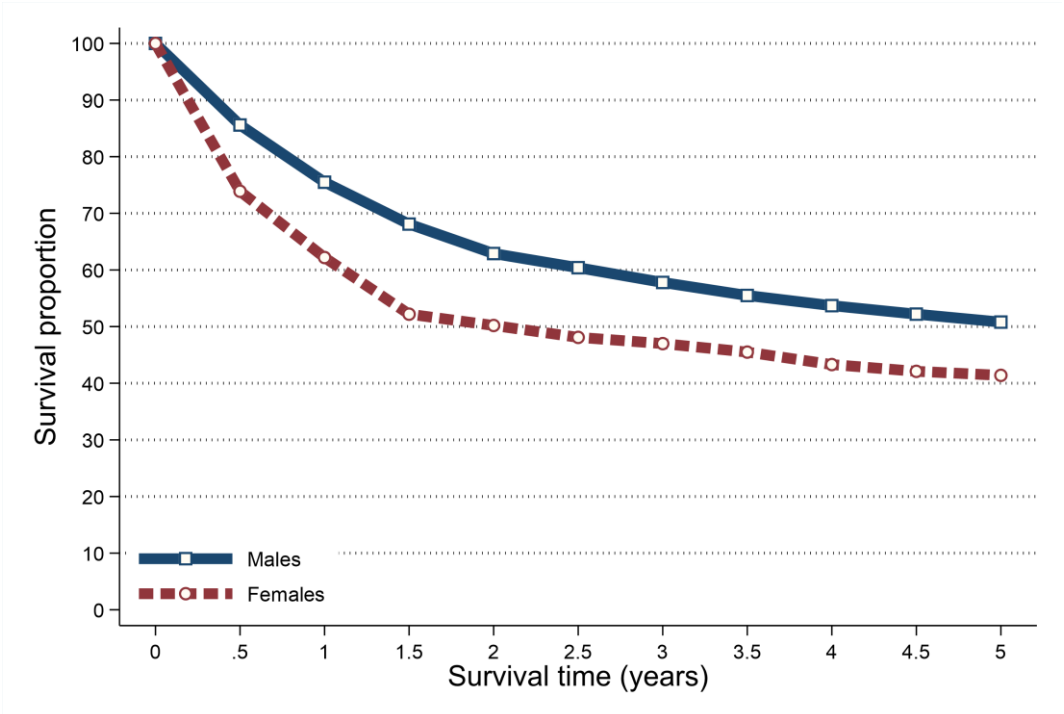
SURVIVAL

- 64.7% of patients were alive one year and 34.4% were alive five years from a bladder cancer diagnosis in 2013-2017. (observed survival)
- Age-standardised net survival (ASNS), which removes the effect of deaths from causes unrelated to cancer, was 71.6% one year and 48.1% five years from a bladder cancer diagnosis in 2013-2017.
- Five-year survival (ASNS) for bladder cancer patients diagnosed in 2013-2017 was 50.8% among men and 41.4% among women.

Table 4: Survival from bladder cancer for patients diagnosed in 2013-2017

Time since diagnosis	All persons		Male		Female	
	Observed survival	Age-standardised net survival	Observed survival	Age-standardised net survival	Observed survival	Age-standardised net survival
6 months	76.6%	82.2%	79.2%	85.6%	70.2%	73.9%
One year	64.7%	71.6%	67.9%	75.5%	56.8%	62.2%
Two years	50.8%	59.2%	53.6%	62.9%	44.1%	50.2%
Five years	34.4%	48.1%	36.2%	50.8%	29.8%	41.4%

Figure 10: Age-standardised net survival from bladder cancer 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.

Age-standardised 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.

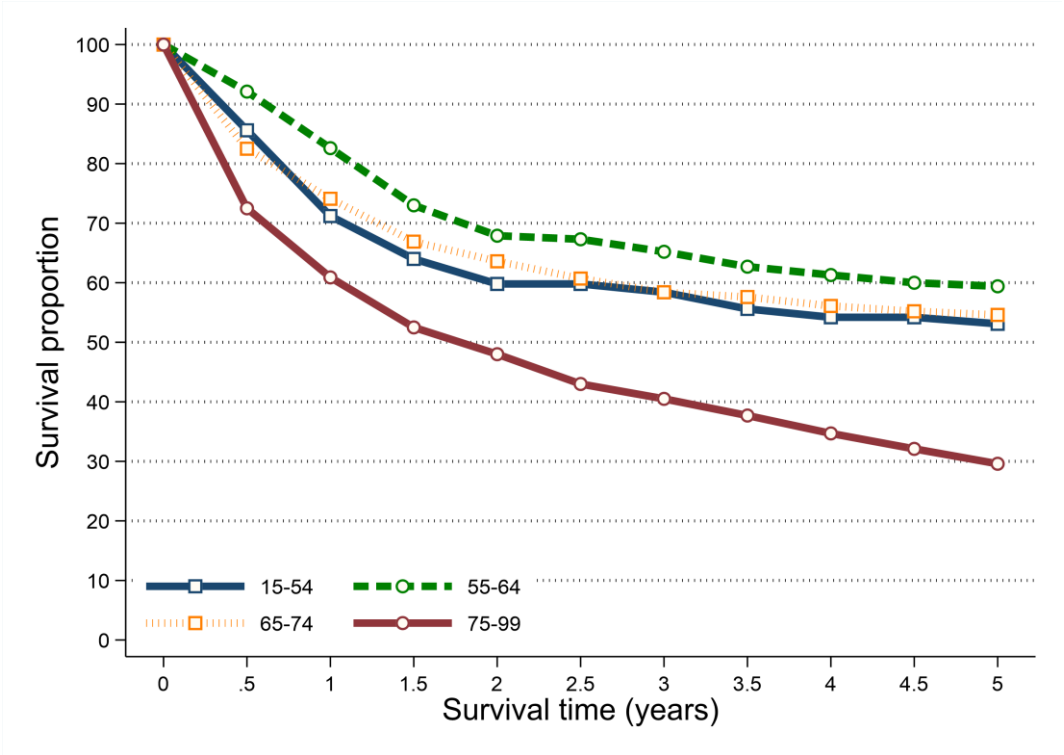
SURVIVAL BY AGE

- Survival from bladder cancer among patients diagnosed during 2013-2017 was related to age with better five-year survival among younger age groups.
- Five-year net survival ranged from 59.4% among patients aged 55 to 64 at diagnosis to 29.6% among those aged 75 to 99.

Table 5: Net survival from bladder cancer for patients diagnosed in 2013-2017 by age at diagnosis

Age group	All persons	
	One-year	Five-years
15 to 54	71.2%	53.1%
55 to 64	82.6%	59.4%
65 to 74	74.1%	54.6%
75 to 99	60.9%	29.6%

Figure 11: Net survival from bladder cancer for patients diagnosed in 2013-2017 by age at diagnosis

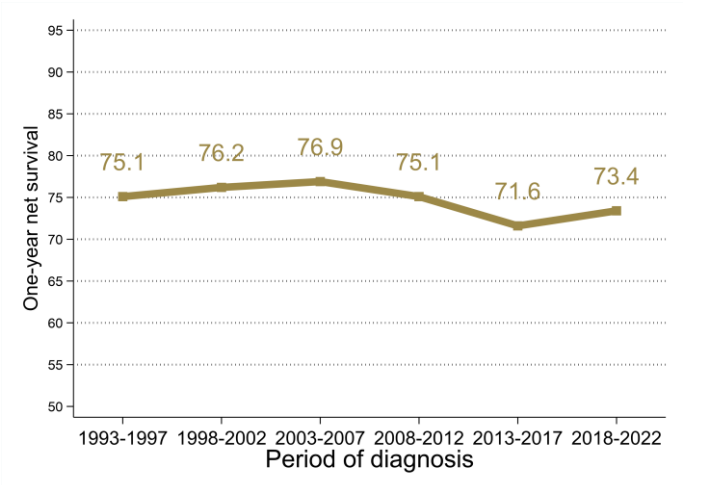


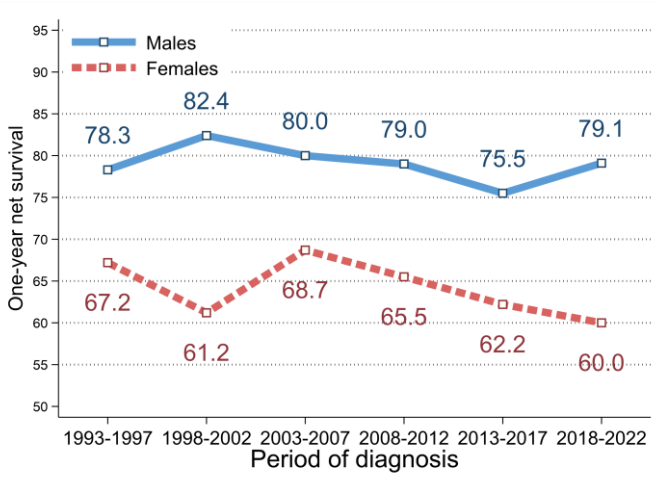
SURVIVAL TRENDS

ONE-YEAR NET SURVIVAL

- Between 2013-2017 and 2018-2022 there was no significant change in one-year survival (ASNS) from bladder cancer.
- Compared to 1993-1997 one-year survival (ASNS) from bladder cancer in 2018-2022 did not change significantly.

Figure 12: Trends in one-year age-standardised net survival from bladder cancer in 1993-2022

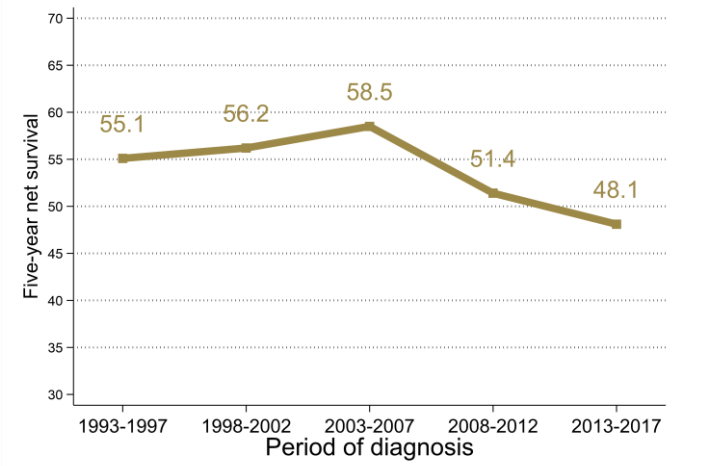


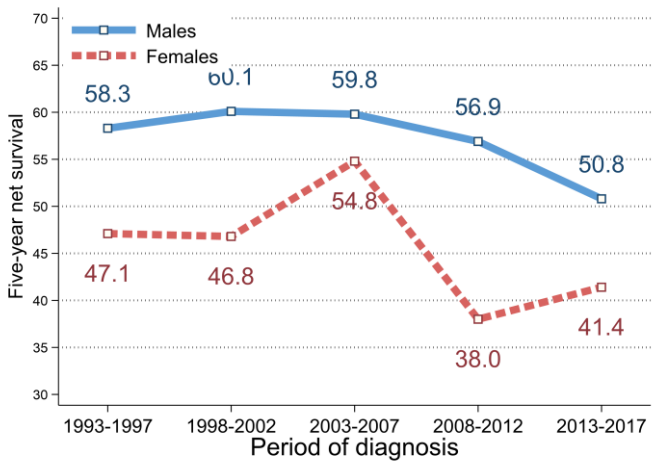


FIVE-YEAR NET SURVIVAL

- Between 2008-2012 and 2013-2017 there was no significant change in five-year survival (ASNS) from bladder cancer.
- Compared to 1993-1997 five-year survival (ASNS) from bladder cancer in 2013-2017 did not change significantly.

Figure 13: Trends in five-year age-standardised net survival from bladder cancer in 1993-2017





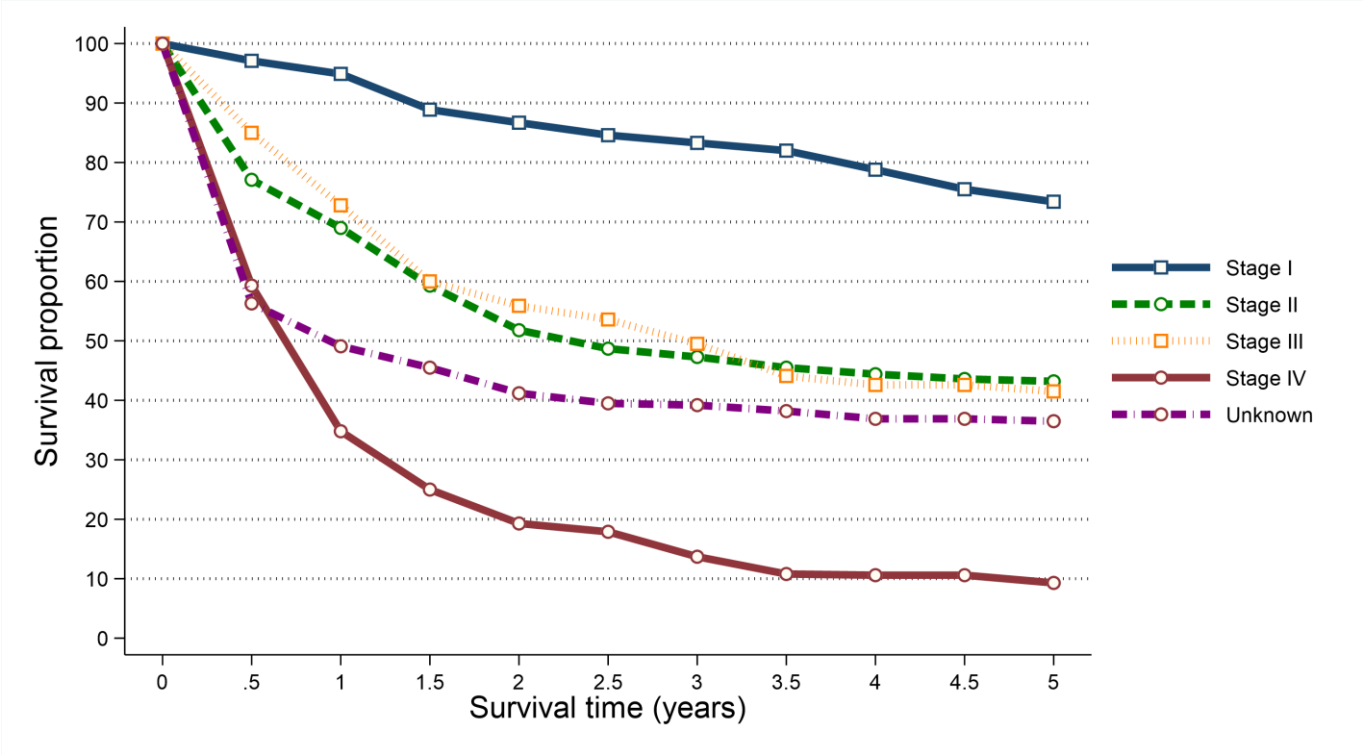
SURVIVAL BY STAGE

- Survival from bladder cancer among patients diagnosed during 2013-2017 was strongly related to stage with better five-year survival among those diagnosed at earlier stages.
- Five-year survival (ASNS) ranged from 73.4% among patients diagnosed at Stage I to 9.3% among those diagnosed at Stage IV.

Table 6: Age-standardised net survival from bladder cancer for patients diagnosed in 2013-2017 by stage at diagnosis

Stage at diagnosis	All persons	
	One-year	Five-years
Stage I	94.9%	73.4%
Stage II	69.0%	43.2%
Stage III	72.8%	41.5%
Stage IV	34.8%	9.3%
Unknown	49.1%	36.5%

Figure 14: Age-standardised net survival from bladder cancer for patients diagnosed in 2013-2017 by stage at diagnosis



PREVALENCE

- At the end of 2022, there were 1,506 people (Males: 1,129; Females: 377) living with bladder cancer who had been diagnosed with the disease during 1998-2022.
- Of these 14.5% had been diagnosed in the previous year (one-year prevalence) and 68.3% in the previous 10 years (ten-year prevalence).
- 56.7% of bladder cancer survivors were aged 75 and over at the end of 2022.

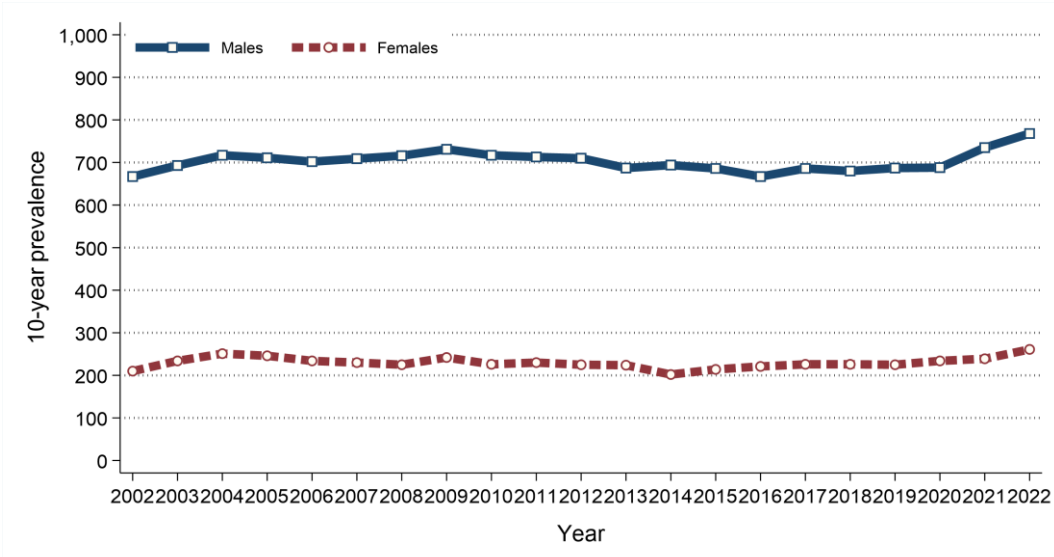
Table 7: 25-year prevalence of bladder cancer by age at end of 2022

Gender	Age at end of 2022	25-year prevalence	Time since diagnosis			
			0 to 1 year	1 to 5 years	5 to 10 years	10 to 25 years
All persons	All ages	1,506	219	489	321	477
	0 to 74	652	96	243	141	172
	75 and over	854	123	246	180	305
Male	All ages	1,129	155	371	242	361
	0 to 74	481	70	177	102	132
	75 and over	648	85	194	140	229
Female	All ages	377	64	118	79	116
	0 to 74	171	26	66	39	40
	75 and over	206	38	52	40	76

PREVALENCE TRENDS

- 10-year prevalence of bladder cancer among males increased between 2017 and 2022 by 12.0% from 686 survivors to 768 survivors.
- 10-year prevalence of bladder cancer among females increased between 2017 and 2022 by 15.5% from 226 survivors to 261 survivors.

Figure 15: Trends in 10-year prevalence of bladder cancer in 2002-2022



Year	10-year prevalence	
	Males	Females
2013	687	224
2014	694	202
2015	686	214
2016	667	221
2017	686	226
2018	680	226
2019	687	225
2020	688	234
2021	735	239
2022	768	261

MORTALITY

- There were 687 deaths from bladder cancer during 2018-2022 in Northern Ireland. On average this was 137 deaths per year.
- During this period 33.8% of bladder cancer deaths were among women (Male deaths: 455, Female deaths: 232). On average there were 91 male and 46 female deaths from bladder cancer per year.
- Bladder cancer deaths made up 3.8% of all male and 2.1% of all female cancer deaths.
- The median age of patients who died from bladder cancer during 2018-2022 was 80 years (Males: 80, Females: 81).
- The risk of dying from bladder cancer varied by age, with 71.2% of men and 69.0% of women who died from bladder cancer aged 75 and over at death.
- In contrast, 2.9% of patients who died from bladder cancer were aged 0 to 54 at death.

Figure 16: Average number of deaths from bladder cancer per year in 2018-2022 by age at death

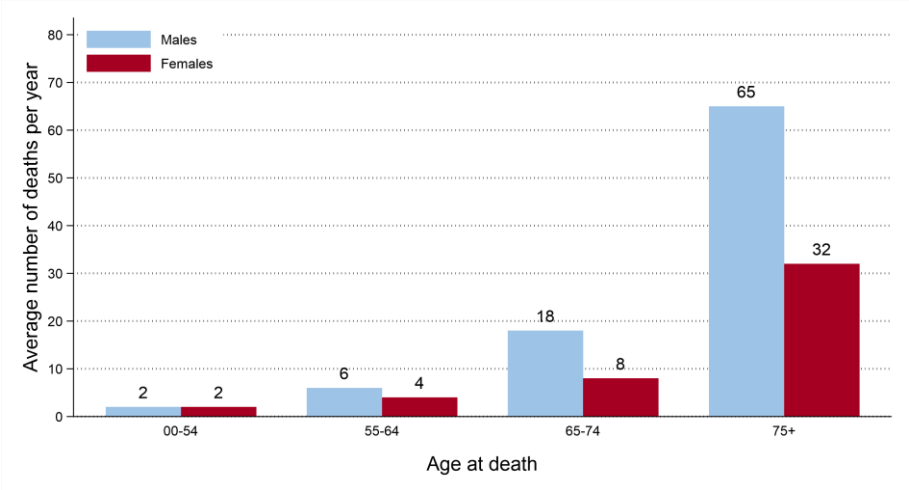
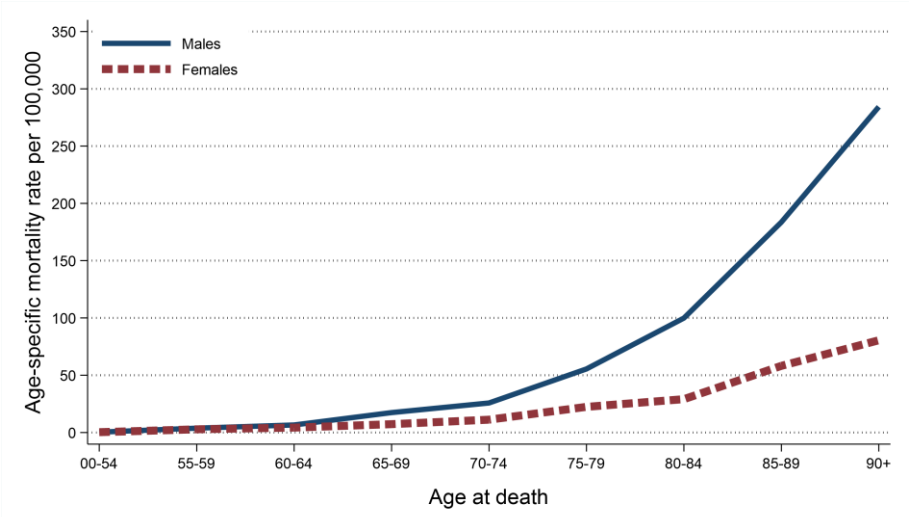


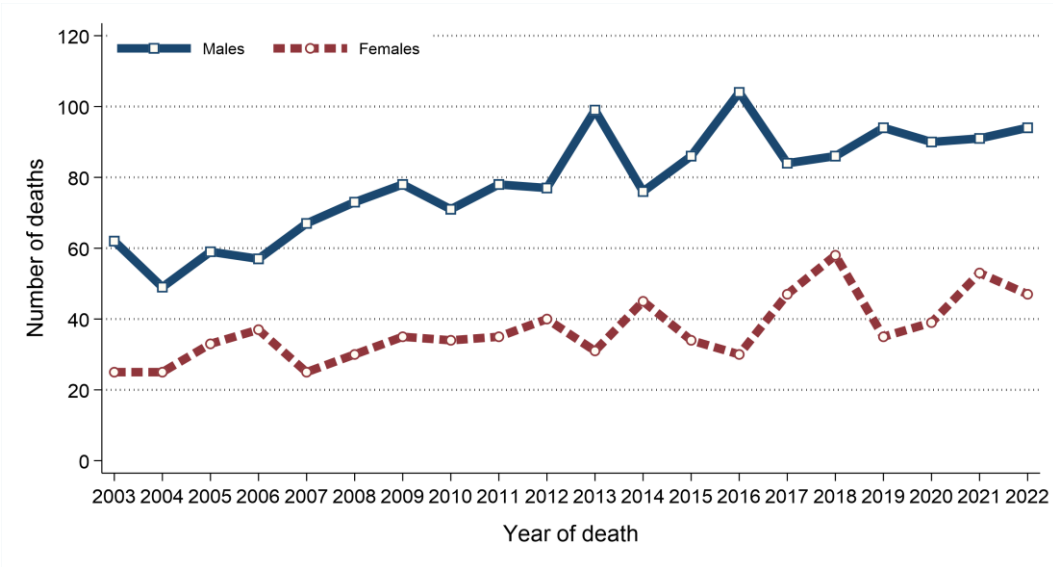
Figure 17: Age-specific mortality rates of bladder cancer in 2018-2022



MORTALITY TRENDS

- The number of deaths from bladder cancer among males increased between 2013-2017 and 2018-2022 by 1.3% from 449 deaths (90 deaths per year) to 455 deaths (91 deaths per year).
- The number of deaths from bladder cancer among females increased between 2013-2017 and 2018-2022 by 24.1% from 187 deaths (37 deaths per year) to 232 deaths (46 deaths per year).

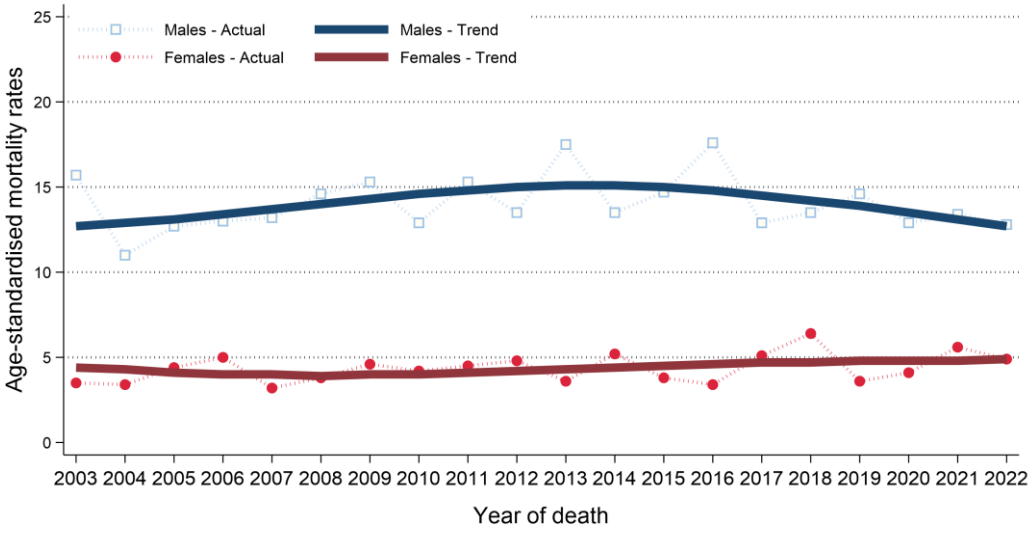
Figure 18: Trends in the number of deaths from bladder cancer from 2003 to 2022



Year of death	Number of deaths	
	Males	Females
2013	99	31
2014	76	45
2015	86	34
2016	104	30
2017	84	47
2018	86	58
2019	94	35
2020	90	39
2021	91	53
2022	94	47

- Male age-standardised bladder cancer mortality rates decreased between 2013-2017 and 2018-2022 by 11.8% from 15.2 to 13.4 deaths per 100,000 males. This change was not statistically significant.
- Female age-standardised bladder cancer mortality rates increased between 2013-2017 and 2018-2022 by 16.7% from 4.2 to 4.9 deaths per 100,000 females. This change was not statistically significant.

Figure 19: Trends in mortality rates of bladder cancer 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.

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. bladder cancer 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. bladder cancer 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.