Cervical cancer

1993-2022

(ICD10 codes: C53)

Northern Ireland Cancer Registry

Northern Ireland Cancer Registry, 2025

An official statistics publication

ABOUT THIS REPORT

Contents

This report includes information on incidence of cervical 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. Cervical 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

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

Acknowledgements

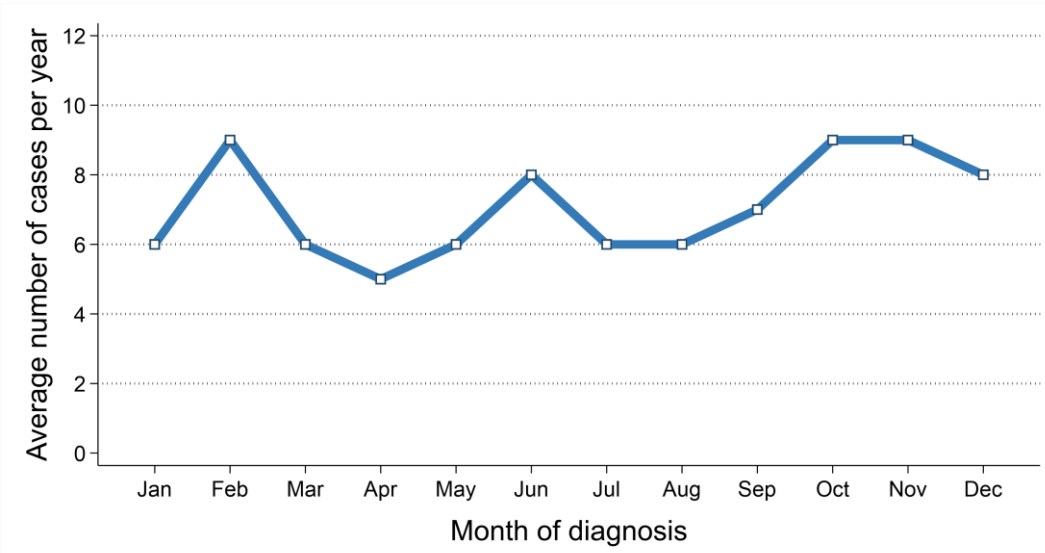
The Northern Ireland Cancer Registry (NICR) uses data provided by patients and collected by the health service as part of their care and support.

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

INCIDENCE

- There were 422 cases of cervical cancer diagnosed during 2018-2022 in Northern Ireland. On average this was 84 cases per year.
- The most common diagnosis month during 2018-2022 was November, February and October with 9 cases per year.

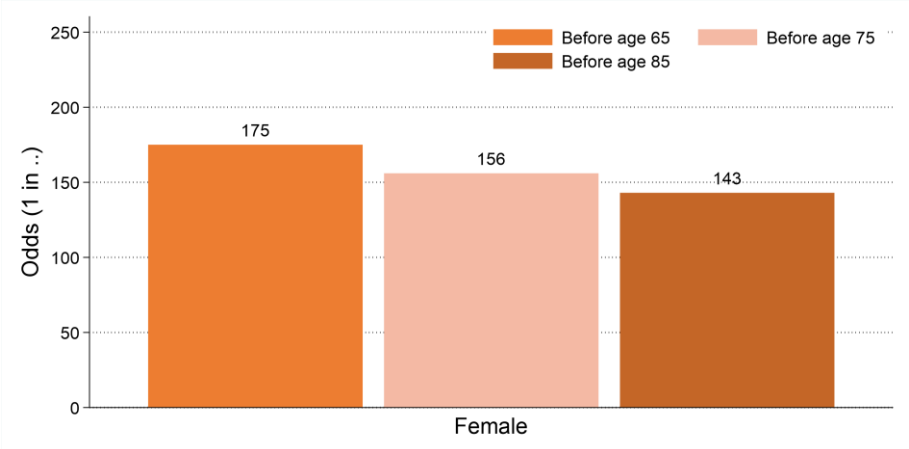
Figure 1: Average number of cases of cervical cancer per year in 2018-2022 by month of diagnosis



Month of diagnosis	Average number of cases per year Females
January	6
February	9
March	6
April	5
May	6
June	8
July	6
August	6
September	7
October	9
November	9
December	8

- Cervical cancer made up 1.7% of all female cancer cases (excluding non-melanoma skin cancer).
- The cervical cancer incidence rate was 8.7 cases per 100,000 females.
- The odds of developing cervical cancer before age 85 was 1 in 143.

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



INCIDENCE BY AGE

- The median age of females diagnosed with cervical cancer during 2018-2022 was 45 years.
- The risk of being diagnosed with cervical cancer varied by age, with 31.0% of women diagnosed with cervical cancer aged 55 and over at diagnosis.
- In contrast, 21.1% of women diagnosed with cervical cancer were aged 0 to 34 at diagnosis.

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

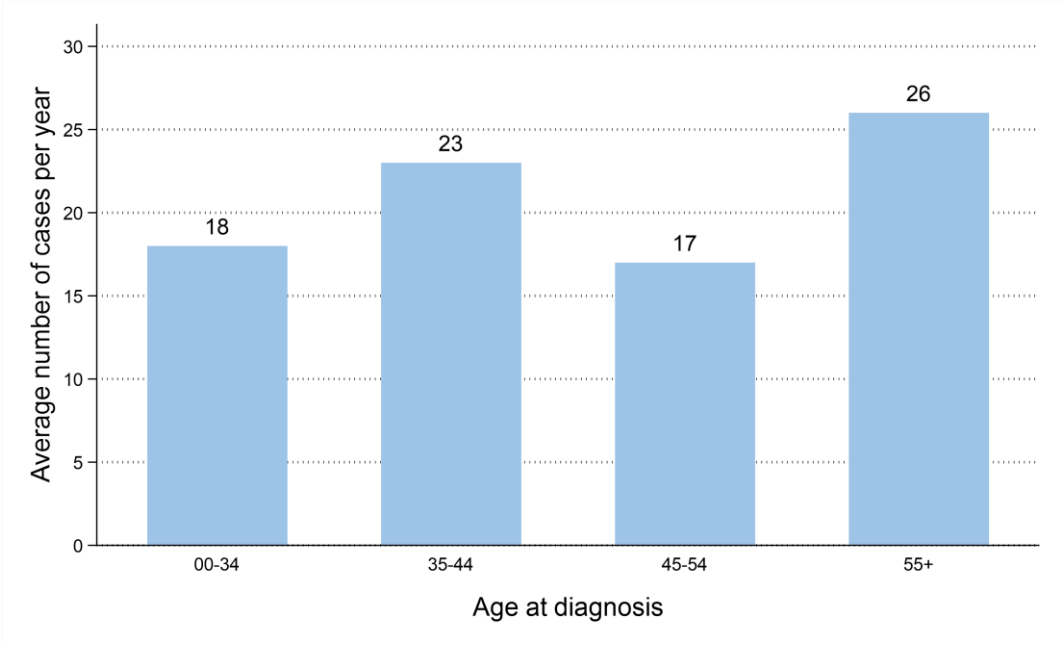
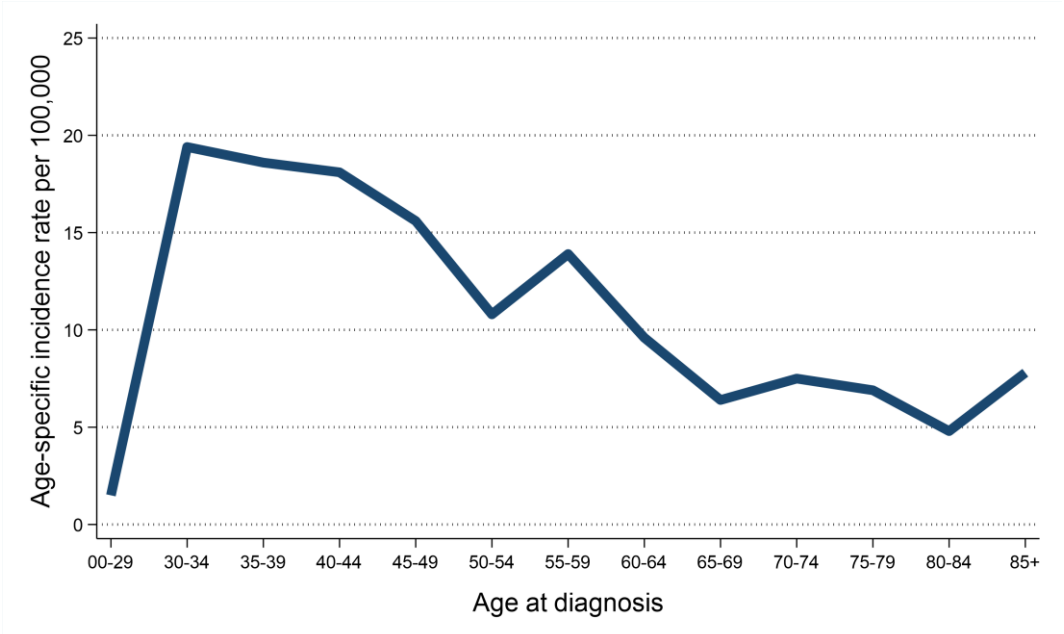


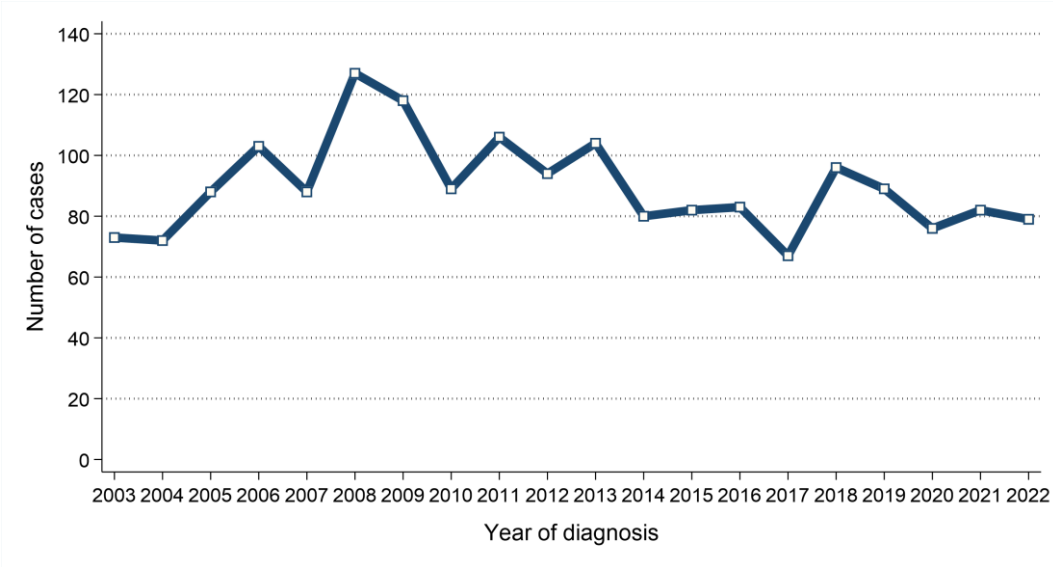
Figure 4: Age-specific incidence rates of cervical cancer in 2018-2022



INCIDENCE TRENDS

- The number of cases of cervical cancer among females increased between 2013-2017 and 2018-2022 by 1.4% from 416 cases (83 cases per year) to 422 cases (84 cases per year).

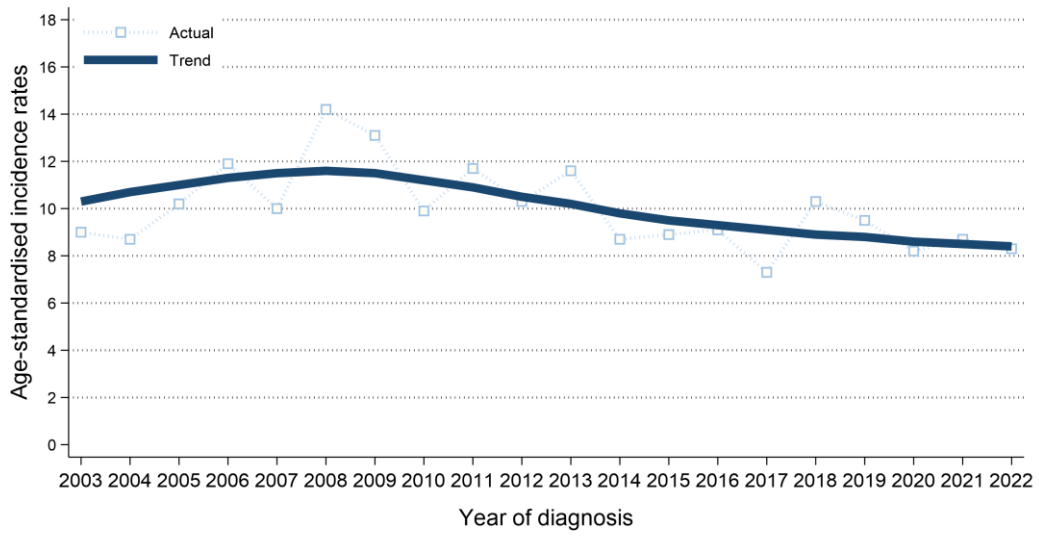
Figure 5: Trends in number of cases of cervical cancer diagnosed from 2003 to 2022



Year of diagnosis	Number of cases Females
2013	104
2014	80
2015	82
2016	83
2017	67
2018	96
2019	89
2020	76
2021	82
2022	79

- Female age-standardised cervical cancer incidence rates decreased between 2013-2017 and 2018-2022 by 1.1% from 9.1 to 9.0 cases per 100,000 females. This change was not statistically significant.

Figure 6: Trends in incidence rates of cervical 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).

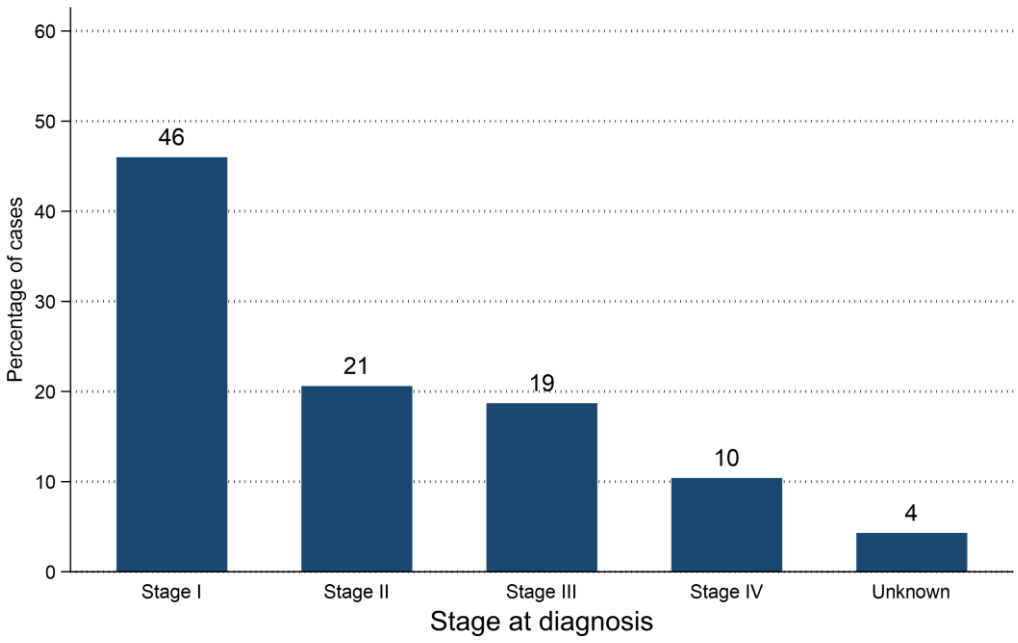
INCIDENCE BY STAGE AT DIAGNOSIS

- During 2018-2022 95.7% of cervical cancer cases had a stage assigned.
- 46.0% of cervical cancer cases were diagnosed at Stage I. (48.0% of staged cases)
- 10.4% of cervical cancer cases were diagnosed at Stage IV. (10.9% of staged cases)

Table 1: Number of cases of cervical cancer diagnosed in 2018-2022 by stage at diagnosis

Stage at diagnosis	Female	
	Total cases in period	Average cases per year
All stages	**422**	**84**
	.	.
Stage I	194	39
Stage II	87	17
Stage III	79	16
Stage IV	44	9
Unknown	18	4

Figure 7: Proportion of cases of cervical 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).

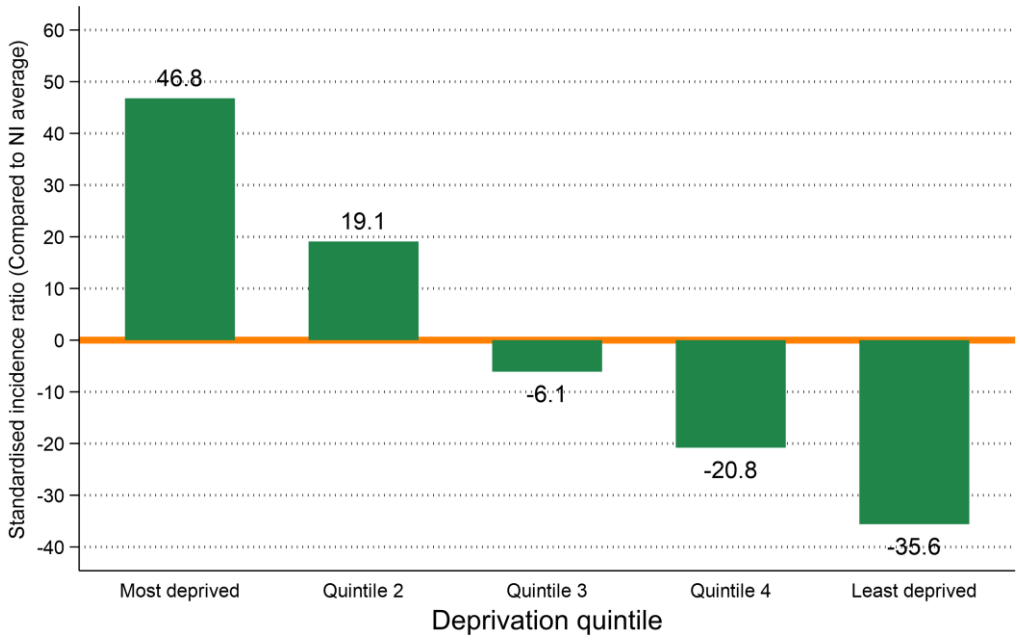
INCIDENCE BY DEPRIVATION

- The number of cases of cervical 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 were 46.8% higher than the NI average.
  - in the least socio-economically deprived areas were 35.6% lower than the NI average.

Table 2: Number of cases of cervical cancer diagnosed in 2018-2022 by deprivation quintile

Deprivation quintile	Female	
	Total cases in period	Average cases per year
Northern Ireland	**422**	**84**
	.	.
Most deprived	115	23
Quintile 2	102	20
Quintile 3	82	16
Quintile 4	70	14
Least deprived	53	11
Unknown	0	0

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

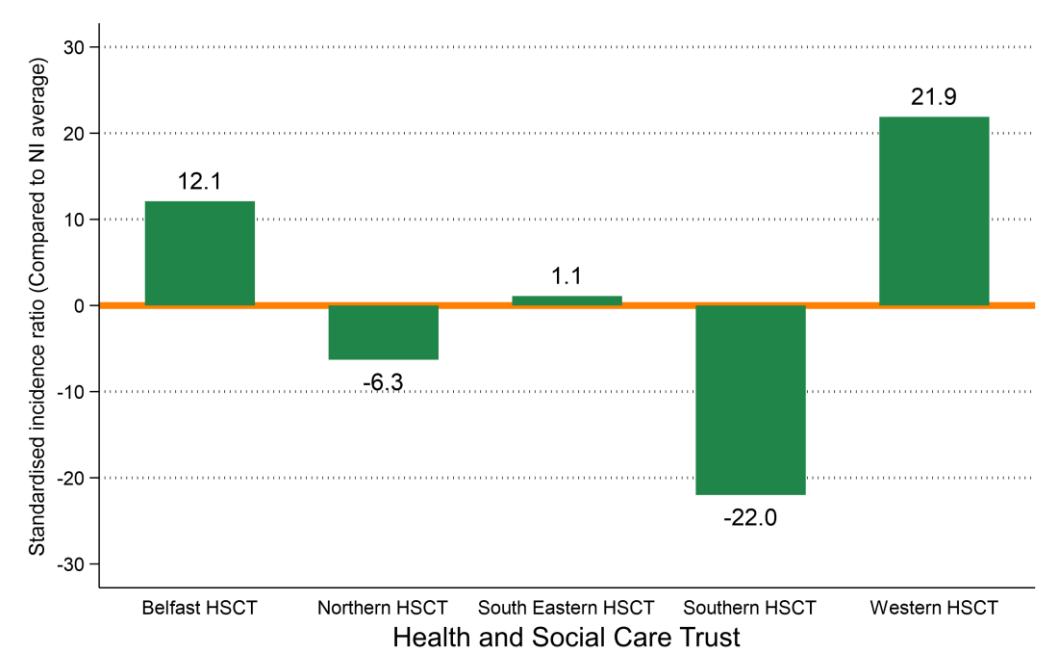
INCIDENCE BY HEALTH AND SOCIAL CARE TRUST

- The number of cases of cervical 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 22.0% lower than the NI average.
  - in Western HSCT did not vary significantly from the NI average.

Table 3: Number of cases of cervical cancer diagnosed in 2018-2022 by Health and Social Care Trust

Health and Social Care Trust	Female	
	Total cases in period	Average cases per year
Northern Ireland	**422**	**84**
	.	.
Belfast HSCT	91	18
Northern HSCT	100	20
South Eastern HSCT	84	17
Southern HSCT	66	13
Western HSCT	81	16
Unknown	0	0

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



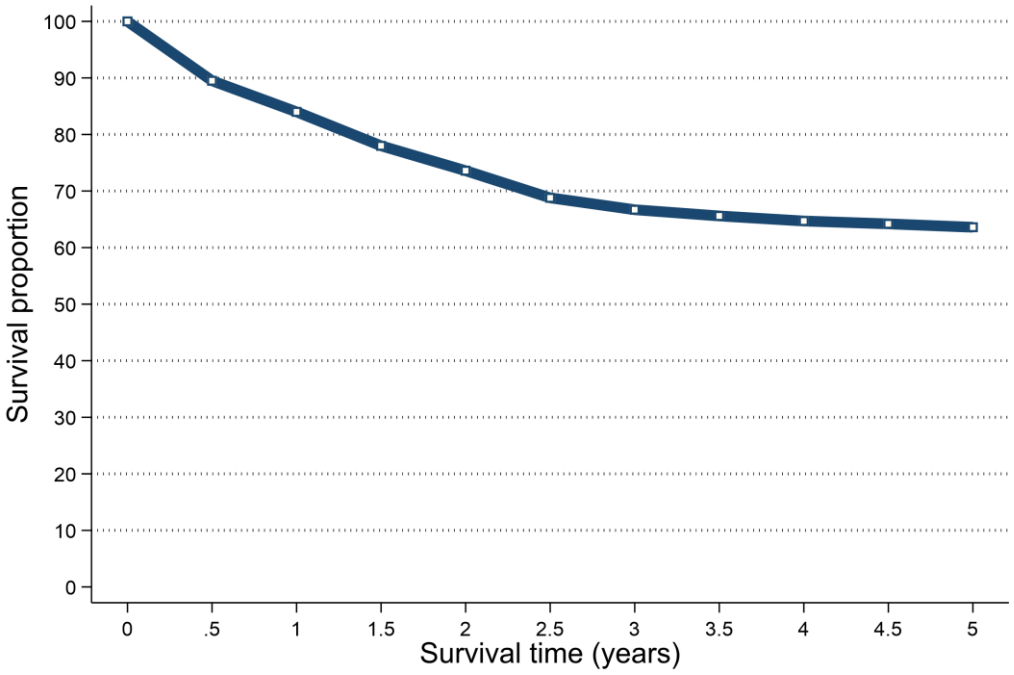
SURVIVAL

- 90.8% of patients were alive one year and 75.2% were alive five years from a cervical cancer diagnosis in 2013-2017. (observed survival)
- Age-standardised net survival (ASNS), which removes the effect of deaths from causes unrelated to cancer, was 84.0% one year and 63.6% five years from a cervical cancer diagnosis in 2013-2017.

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

Time since diagnosis	Female	
	Observed survival	Age-standardised net survival
6 months	93.9%	89.5%
One year	90.8%	84.0%
Two years	83.3%	73.6%
Five years	75.2%	63.6%

Figure 10: Age-standardised net survival from cervical 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.

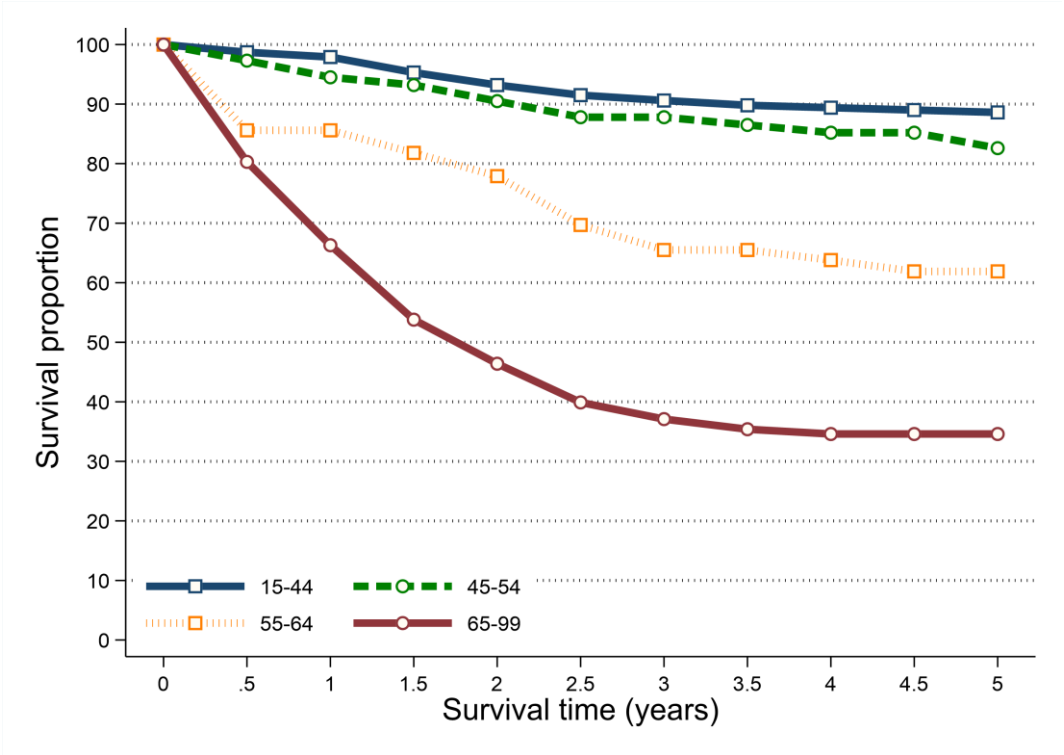
SURVIVAL BY AGE

- Survival from cervical 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 88.6% among patients aged 15 to 44 at diagnosis to 34.6% among those aged 65 to 99.

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

Age group	Female	
	One-year	Five-years
15 to 44	97.9%	88.6%
45 to 54	94.5%	82.6%
55 to 64	85.6%	61.9%
65 to 99	66.3%	34.6%

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

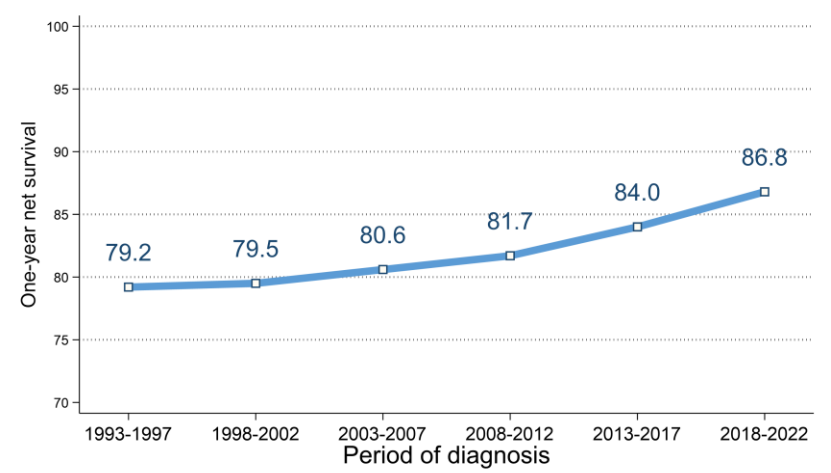


SURVIVAL TRENDS

ONE-YEAR NET SURVIVAL

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

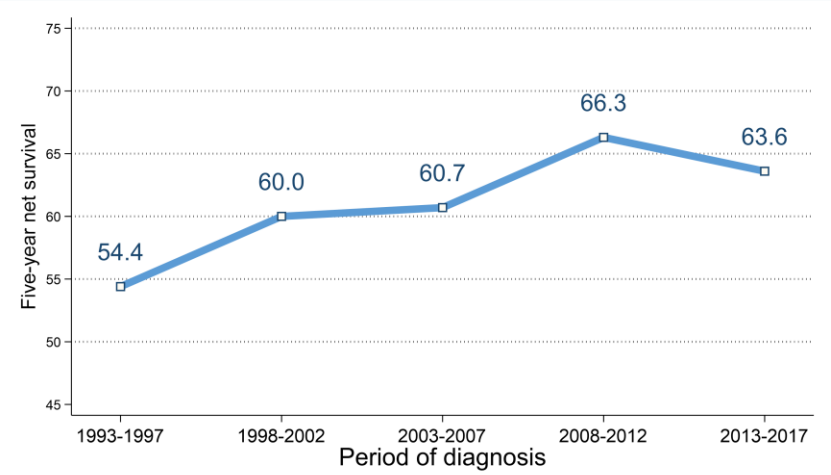
Figure 12: Trends in one-year age-standardised net survival from cervical cancer in 1993-2022



FIVE-YEAR NET SURVIVAL

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

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



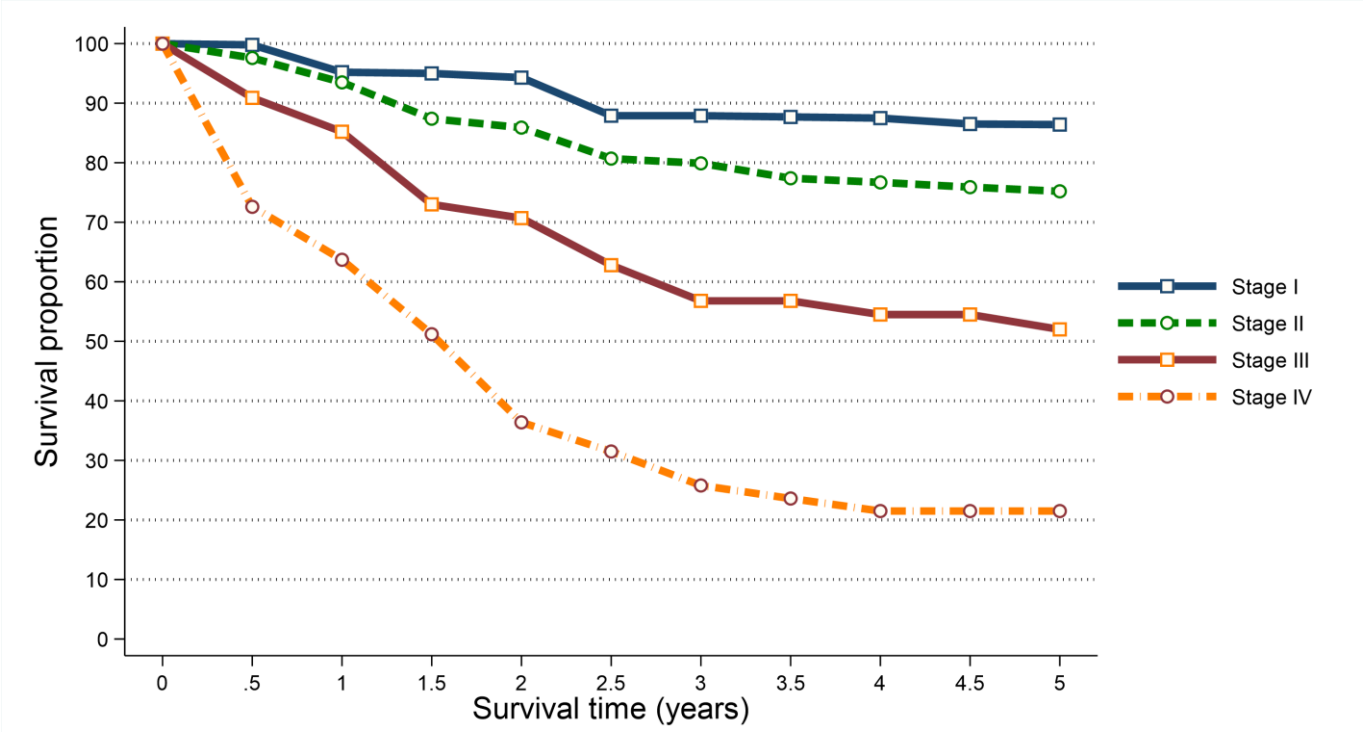
SURVIVAL BY STAGE

- Survival from cervical 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 86.4% among patients diagnosed at Stage I to 21.5% among those diagnosed at Stage IV.

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

Stage at diagnosis	Female	
	One-year	Five-years
Stage I	95.2%	86.4%
Stage II	93.5%	75.2%
Stage III	85.2%	52.0%
Stage IV	63.7%	21.5%

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



PREVALENCE

- At the end of 2022, there were 1,449 females living with cervical cancer who had been diagnosed with the disease during 1998-2022.
- Of these 5.1% had been diagnosed in the previous year (one-year prevalence) and 43.8% in the previous 10 years (ten-year prevalence).
- 37.7% of cervical cancer survivors were aged 55 and over at the end of 2022.

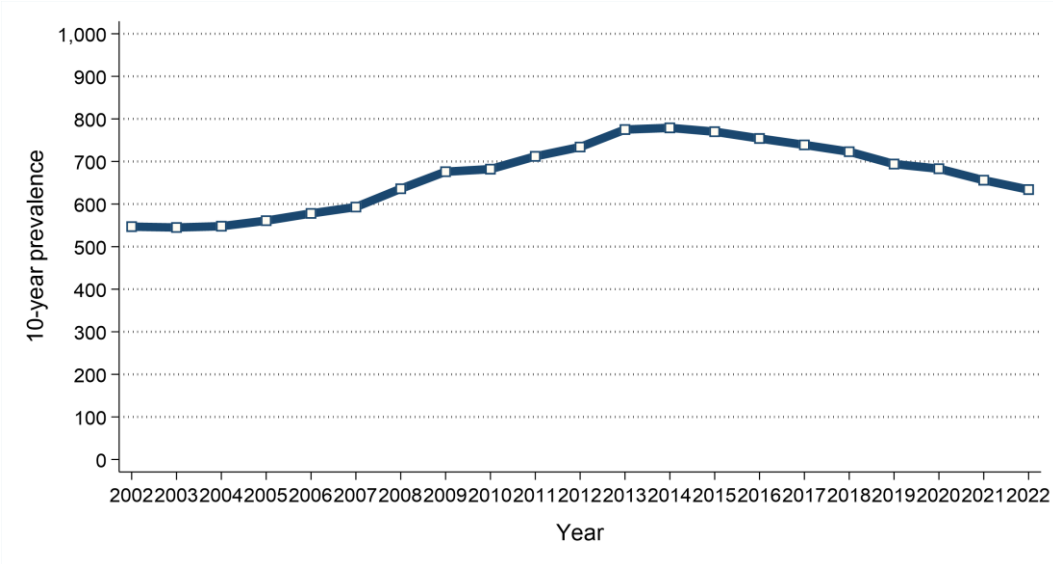
Table 7: 25-year prevalence of cervical cancer by age at end of 2022

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 ages	1,449	74	271	289	815
0 to 54	903	51	189	211	452
55 and over	546	23	82	78	363

PREVALENCE TRENDS

- 10-year prevalence of cervical cancer among females decreased between 2017 and 2022 by 14.2% from 739 survivors to 634 survivors.

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



Year	10-year prevalence Females
2013	775
2014	779
2015	770
2016	754
2017	739
2018	723
2019	694
2020	683
2021	656
2022	634

MORTALITY

- There were 103 deaths from cervical cancer during 2018-2022 in Northern Ireland. On average this was 21 deaths per year.
- Cervical cancer deaths made up 1.0% of all female cancer deaths.
- The median age of females who died from cervical cancer during 2018-2022 was 57 years.
- The risk of dying from cervical cancer varied by age, with 28.2% of women who died from cervical cancer aged 75 and over at death.
- In contrast, 43.7% of women who died from cervical cancer were aged 0 to 54 at death.

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

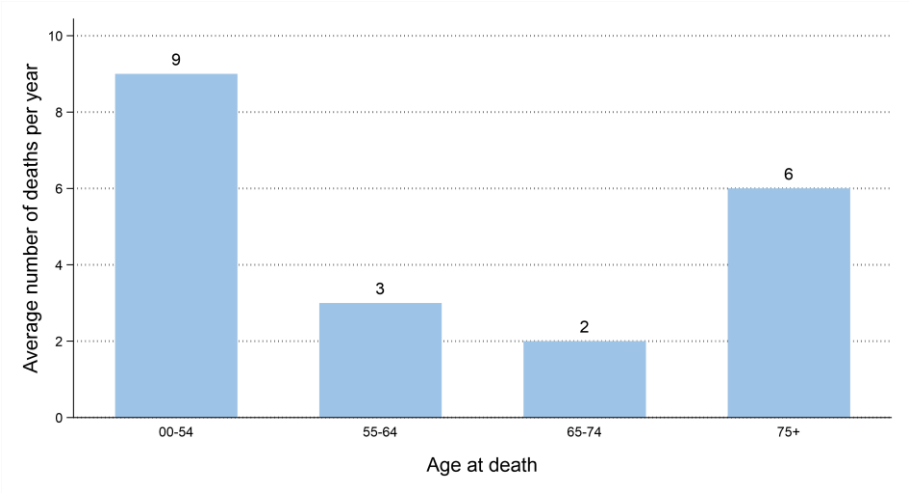
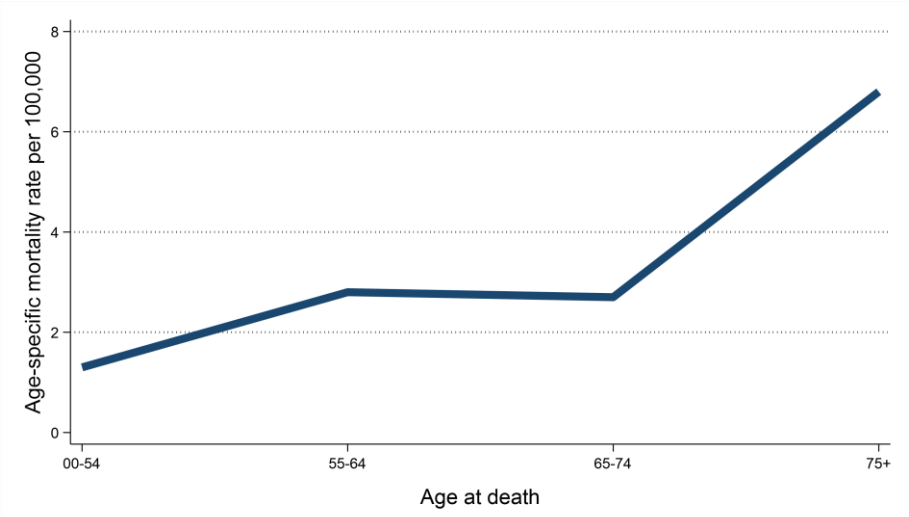


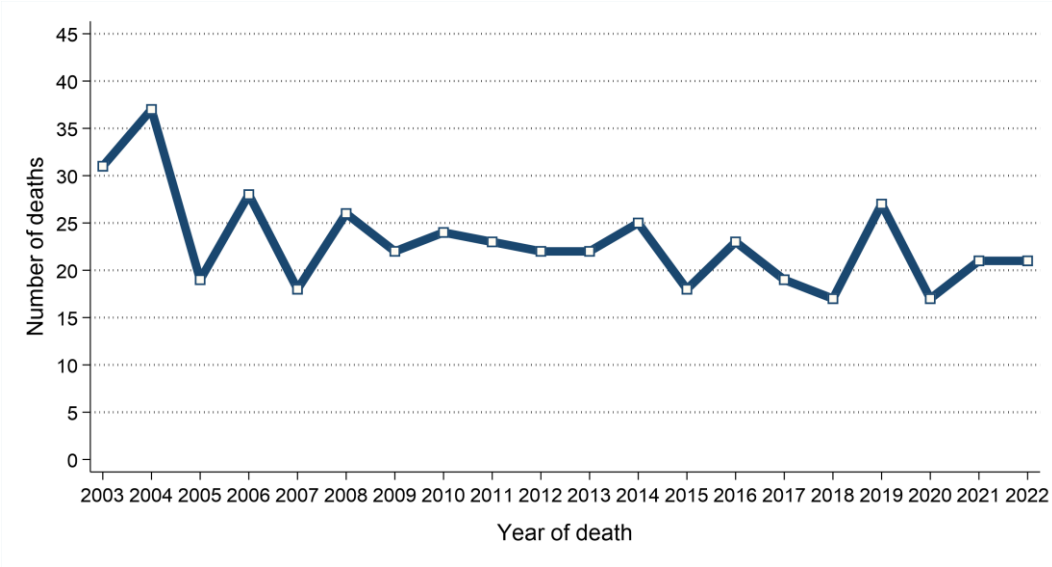
Figure 17: Age-specific mortality rates of cervical cancer in 2018-2022



MORTALITY TRENDS

- The number of deaths from cervical cancer among females decreased between 2013-2017 and 2018-2022 by 3.7% from 107 deaths (21 deaths per year) to 103 deaths (21 deaths per year).

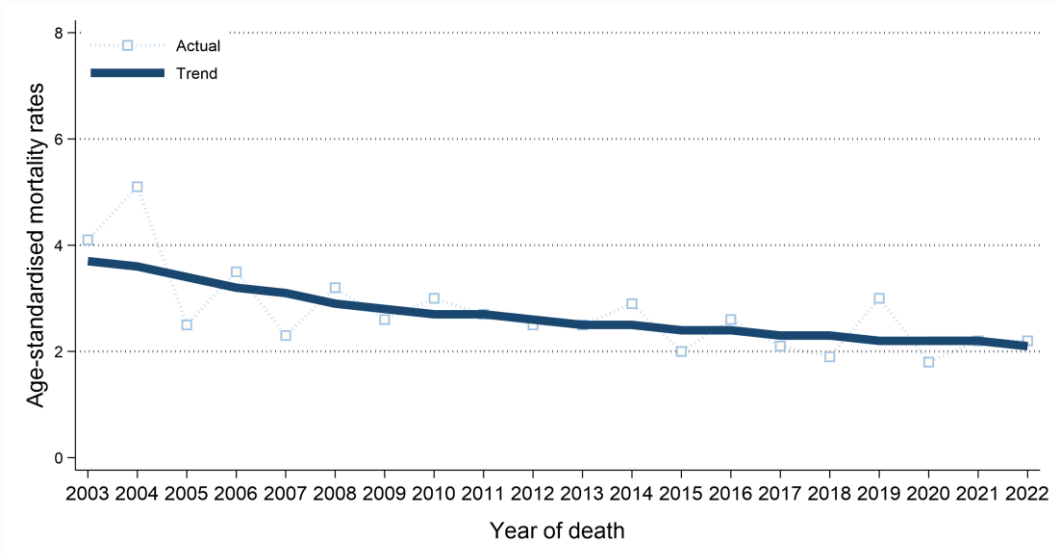
Figure 18: Trends in the number of deaths from cervical cancer from 2003 to 2022



Year of death	Number of deaths Females
2013	22
2014	25
2015	18
2016	23
2017	19
2018	17
2019	27
2020	17
2021	21
2022	21

- Female age-standardised cervical cancer mortality rates decreased between 2013-2017 and 2018-2022 by 8.3% from 2.4 to 2.2 deaths per 100,000 females. This change was not statistically significant.

Figure 19: Trends in mortality rates of cervical 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. cervical 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. cervical 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.