Cervical cancer

Patients diagnosed 1993-2019
(ICD10: C53)

Further information

Further data is available at: **www.qub.ac.uk/research-centres/nicr**
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Acknowledgements

The Northern Ireland Cancer Registry (NICR) is funded by the Public Health Agency and is based in Queen's University, Belfast. NICR uses data provided by patients and collected by the health service as part of their care and support.

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.

Incidence

During 2015-2019:

▪ There were 83 cases of cervical cancer diagnosed each year.

▪ Cervical cancer made up 1.7% of all female cancers (ex NMSC).

▪ Among women the risk of developing cervical cancer before the age of 75 was 1 in 154.5, while before the age of 85 the risk was 1 in 140.0.

Incidence by age at diagnosis - *Cervical cancer, Cases in 2015-2019*

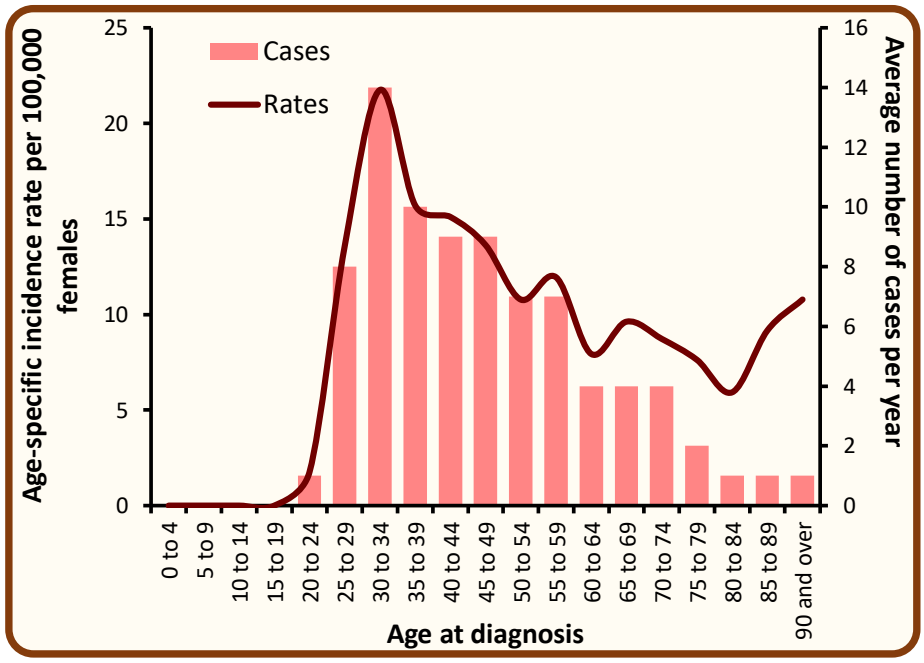
During 2015-2019:

▪ The median age at diagnosis among women was 44.

▪ Cancer risk increased with age, with 28.9% of women aged 55 years or more at diagnosis.

▪ 27.7% of cases were diagnosed among those aged under 35.

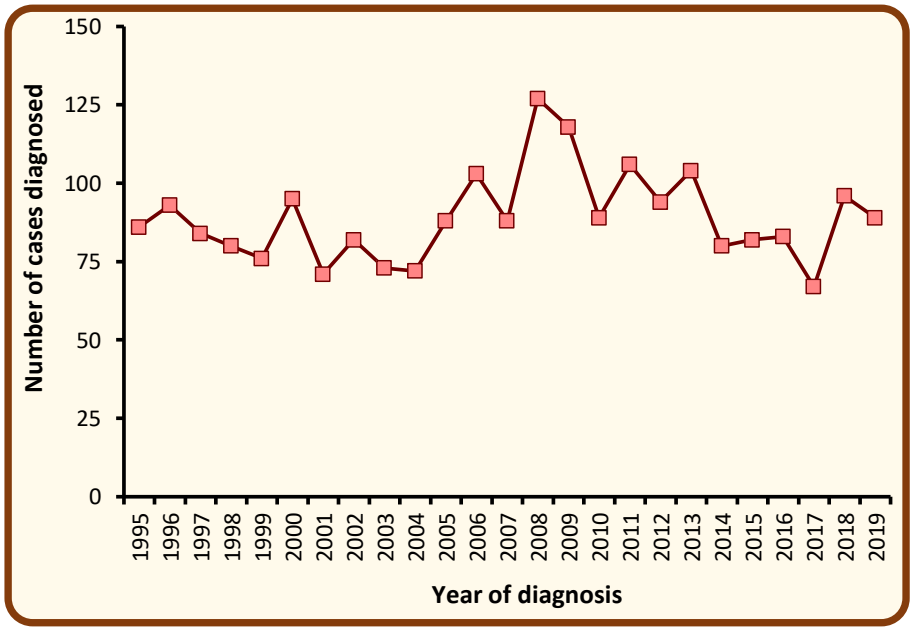
Age at diagnosis	Average cases per year
	Female
0 - 34	23
35 - 44	19
45 - 54	16
55 and over	24
All ages	83



Incidence by year of diagnosis - *Cervical cancer, Cases in 1995-2019*

▪ Among females the number of cases of cervical cancer decreased by 12.6% from an annual average of 95 cases in 2010-2014 to 83 cases in 2015-2019.

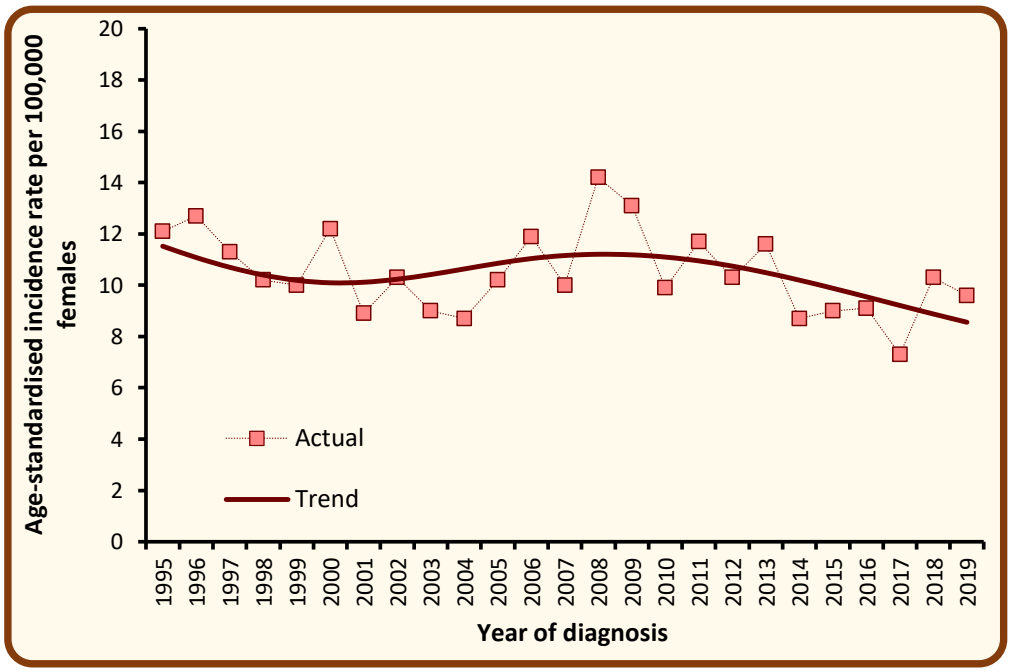
Year of diagnosis	Female cases
2010	89
2011	106
2012	94
2013	104
2014	80
2015	82
2016	83
2017	67
2018	96
2019	89



Note: Annual averages have been rounded to the nearest integer. Sums of numbers in table rows or columns may thus differ slightly from the given total.
NMSC: Non-melanoma skin cancer

Trends in age-standardised incidence rates - *Cervical cancer, Cases in 1995-2019*

▪ Age-standardised incidence rates of cervical cancer decreased by 12.5% between 2010-2014 and 2015-2019 from 10.4 to 9.1 cases per 100,000 persons years. This difference was not statistically significant.



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 deprivation quintile - *Cervical cancer, Cases in 2015-2019*

The annual number of cases during 2015-2019 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 63.4% higher than the NI average.

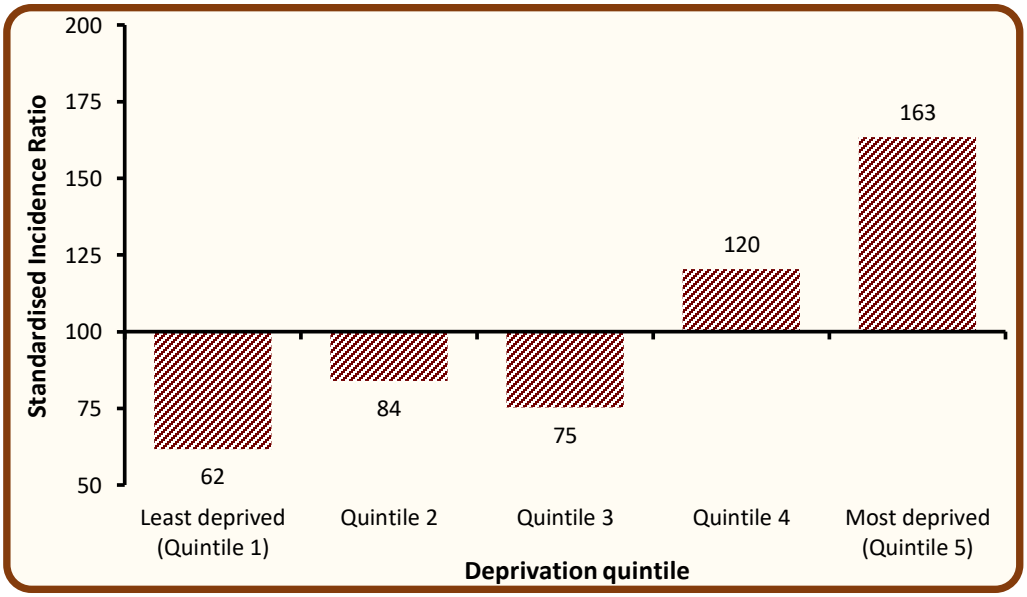
▪ in the least socio-economically deprived areas were 38.4% lower than the NI average.

Deprivation quintile	Average cases per year
	Female
Least deprived (Quintile 1)	10
Quintile 2	15
Quintile 3	13
Quintile 4	20
Most deprived (Quintile 5)	25
Northern Ireland	83

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

A value above 100 means that incidence rates in that deprivation quintile are greater than the Northern Ireland average.

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



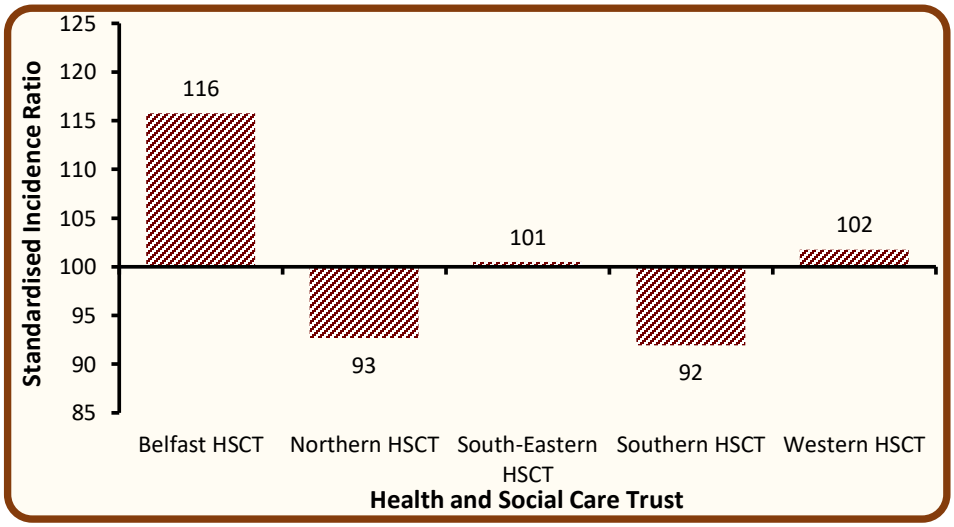
Incidence by Health and Social Care Trust (HSCT) - *Cervical cancer, Cases in 2015-2019*

The annual number of cases during 2015-2019 varied in each HSCT 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 did not vary significantly from the NI average.
- in Western HSCT did not vary significantly from the NI average.

Health and Social Care Trust	Average cases per year
	Female
Belfast HSCT	19
Northern HSCT	20
South-Eastern HSCT	16
Southern HSCT	15
Western HSCT	13
Northern Ireland	83



Standardised incidence ratios compare incidence rates in each HSC Trust with the Northern Ireland incidence rate. A value above 100 means that incidence rates in that HSC Trust 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.

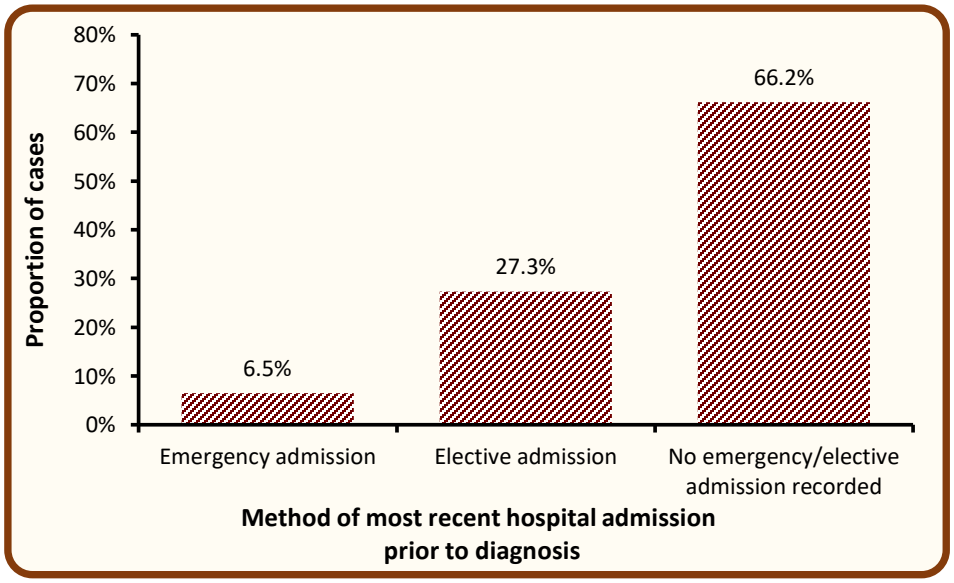
Data for Local Government Districts and Parliamentary Constituencies are available at www.qub.ac.uk/research-centres/nicr

Incidence by method of most recent admission to hospital - *Cervical cancer, Cases in 2015-2019*

During 2015-2019:

- 6.5% of cases had an emergency admission to hospital recorded up to 30 days prior to diagnosis.
- In 66.2% of diagnosed cases there was no record of a hospital inpatient admission up to 30 days prior to diagnosis.

Method of admission	Average cases per year
	Female
Emergency admission	5
Elective admission	23
No emergency/elective admission recorded	55
Total	83



Admission method refers to the most recent hospital inpatient admission that a patient had prior to cancer diagnosis, regardless of reason for the admission.

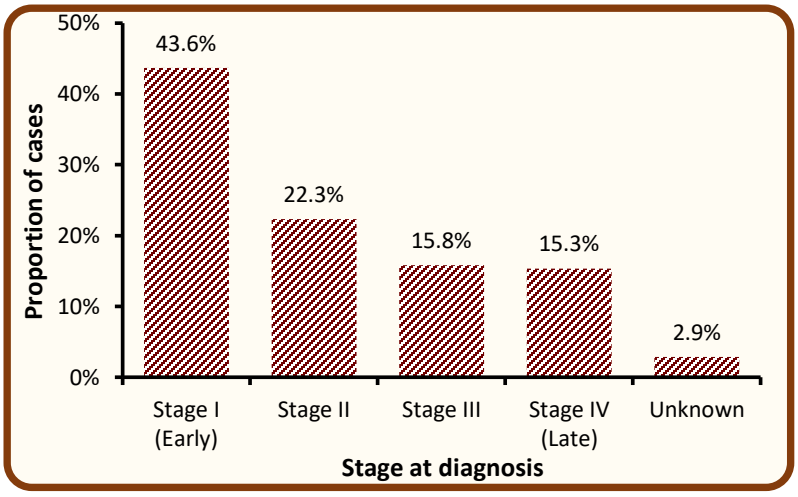
Admissions are considered up to a maximum of 30 days prior to diagnosis. Admissions up to two days post diagnosis are also considered to allow for a reasonable margin or error in data recording.

The majority of patients with no inpatient admission recorded prior to diagnosis are likely to have been diagnosed via an outpatient route.

Incidence by stage at diagnosis - *Cervical cancer, Cases in 2015-2019*

During 2015-2019:

- 97.1% of cases diagnosed had a stage assigned.
- 43.6% of cases were diagnosed at stage I. (44.9% of staged cases)
- 15.3% of cases were diagnosed at stage IV. (15.8% of staged cases)



Stage at diagnosis	Average cases per year
Stage I (Early)	36
Stage II	19
Stage III	13
Stage IV (Late)	13
Unknown	2
All stages	83

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).

Survival

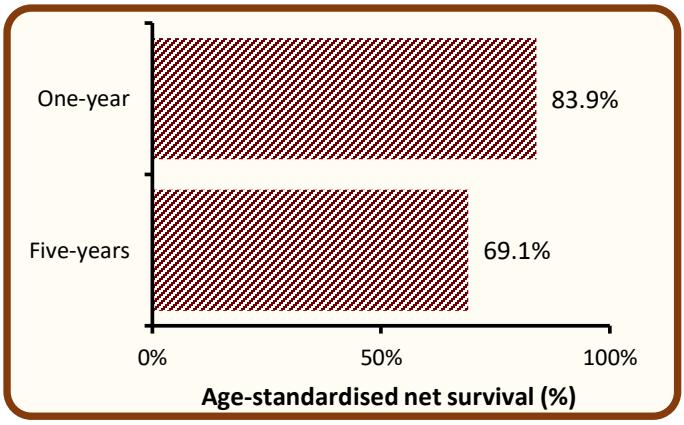
- 92.5% of cervical cancer patients were alive one year and 81.2% were alive five years after a diagnosis in 2010-2014. (observed survival)

- Age-standardised net survival (ASNS), which removes the effect of deaths from causes unrelated to cancer, was 83.9% one year and 69.1% five years from a cervical cancer diagnosis in 2010-2014.

Survival time	Observed survival	Age-standardised net survival
One-year	92.5%	83.9%
Five-years	81.2%	69.1%

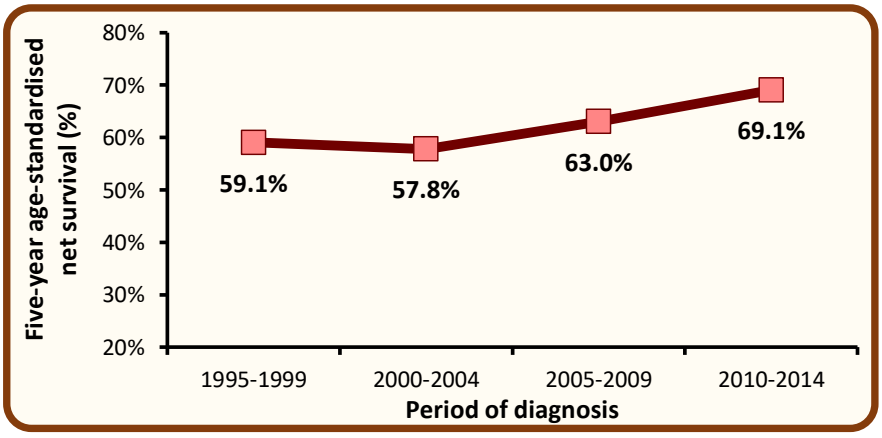
Observed survival is the proportion of patients still alive one/five years after diagnosis. However, in this measure patients may have died from causes unrelated to their cancer.

Age-standardised net survival is the proportion of patients who would survive if the patient could not die from causes unrelated to their cancer. This measure is more typically used in studies of cancer survival.



Trends in survival - *Cervical cancer, Patients diagnosed in 1995-2014*

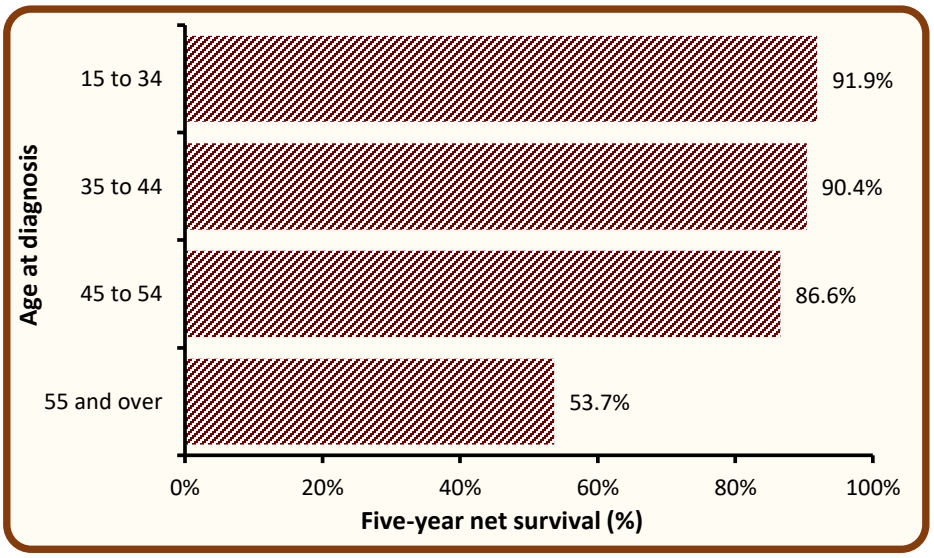
- Five-year survival (ASNS) from cervical cancer increased from 63.0% in 2005-2009 to 69.1% in 2010-2014. This difference was not statistically significant.



Survival by age at diagnosis - *Cervical cancer, Patients diagnosed in 2010-2014*

▪ Survival from cervical cancer among patients diagnosed in 2010-2014 was related to age with better five-year survival among younger age groups.

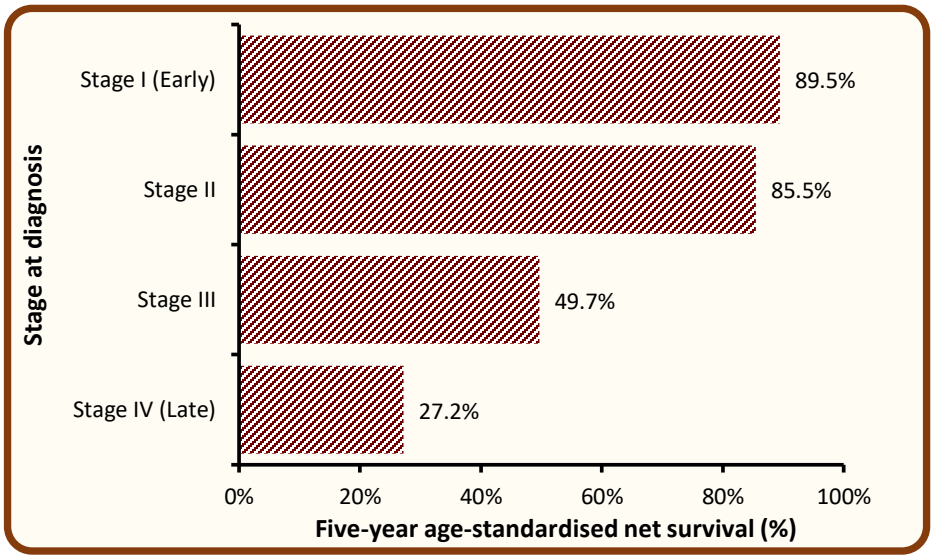
▪ Five-year net survival ranged from 91.9% among patients aged under 55 at diagnosis to 53.7% among those aged 75 and over.



Survival by stage at diagnosis - *Cervical cancer, Patients diagnosed in 2010-2014*

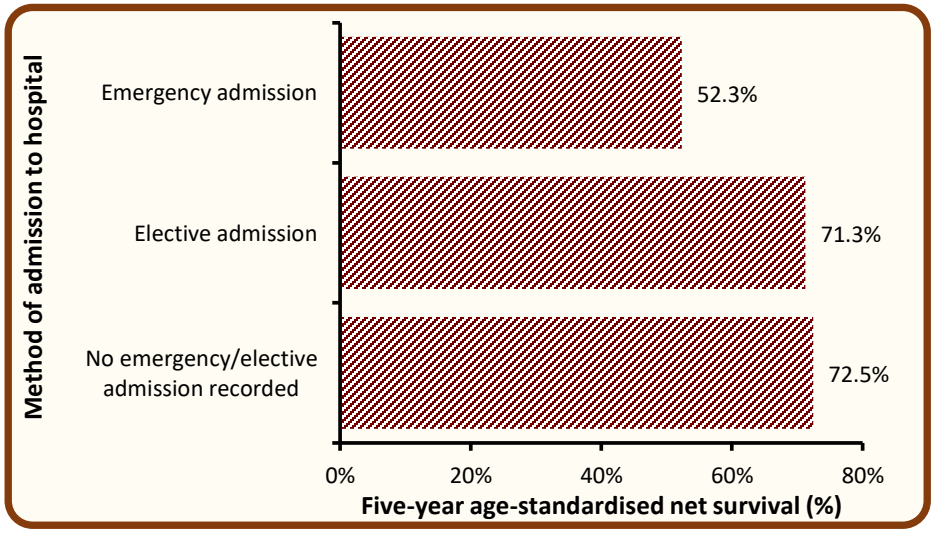
▪ Stage at diagnosis is one of the most important factors in cervical cancer survival with five-year survival decreasing as stage increases.

▪ Five-year survival (ASNS) ranged from 89.5% for early stage (stage I) disease to 27.2% for late stage (stage IV) disease.



Survival by method of most recent admission to hospital - *Cervical cancer, Patients diagnosed in 2010-2014*

▪ Five-year survival (ASNS) among patients who had an emergency admission to hospital up to 30 days prior to their cancer diagnosis was 52.3% compared to 71.3% among those with elective admissions and 72.5% among those who had no hospital admissions recorded up to 30 days prior to diagnosis.



Prevalence

▪ At the end of 2019, there were 1,464 women living with cervical cancer who had been diagnosed in the previous 25 years.

▪ Of these, 37.4% were aged 55 and over, and 5.7% had been diagnosed in the previous year.

25-year prevalence refers to the number of cancer survivors who were alive at the end of 2019, and had been diagnosed with their cancer in the previous 25 years (i.e. 1995-2019).

Time since diagnosis	25-year prevalence		
	Aged 0-54	Aged 55+	All ages
0-1 year	50	34	84
1-5 years	190	61	251
5-10 years	274	85	359
10-25 years	403	367	770
0-25 years	917	547	1,464

Trends in 10-year prevalence - *Cervical cancer, Patients alive at end of each year from 2010-2019*

▪ Among women the number of survivors from cervical cancer who had been diagnosed within the previous ten years decreased by 11.4% from 783 survivors in 2014 to 694 survivors in 2019.

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Female	689	718	740	782	783	772	755	739	723	694

Mortality

▪ During 2015-2019 there were 21 deaths from cervical cancer each year. Cervical cancer made up 1.0% of all female cancer deaths (ex NMSC).

▪ Risk of death from cervical cancer was strongly related to age, with 52.4% of women aged 55 years or more at time of death, while 9.5% of cervical cancer deaths occurred among those aged under 35. The median age at death was 58.

Age at death	Average deaths per year
0 - 34	2
35 - 44	3
45 - 54	4
55 +	11

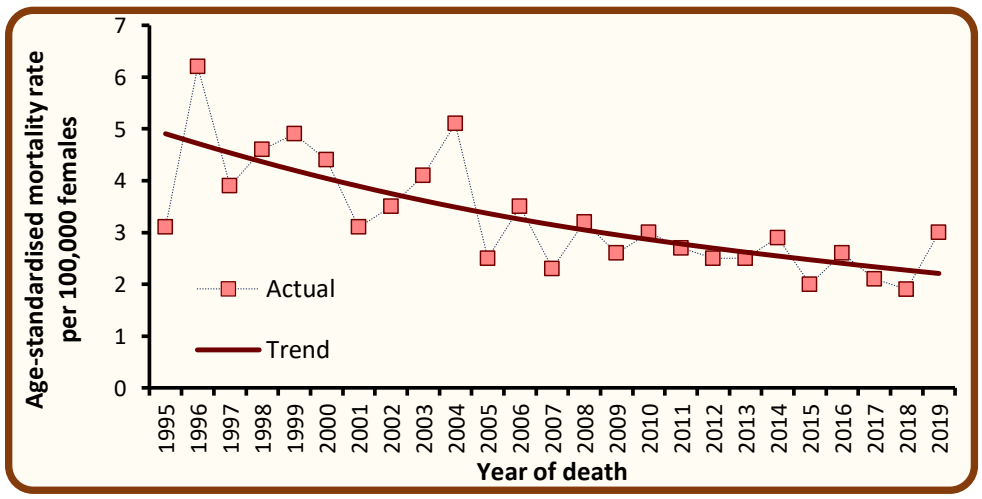
Deaths by year of death - *Cervical cancer, Deaths in 2010-2019*

▪ Among women the number of deaths from cervical cancer decreased by 8.7% from an annual average of 23 deaths in 2010-2014 to 21 deaths in 2015-2019.

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Female	24	23	22	22	25	18	23	19	17	27

Trends in age-standardised mortality rates - *Cervical cancer, Deaths in 1995-2019*

▪ Among females age-standardised mortality rates from cervical cancer decreased by 14.8% between 2010-2014 and 2015-2019 from 2.7 to 2.3 deaths per 100,000 persons years. This difference was not statistically significant.



Mortality data are provided by the Northern Ireland General Registrar Office via the Department of Health.

Counts of the number of deaths are based upon the year that death occurred, and upon the primary cause of death only.

Age-standardised mortality rates remove changes over time caused by population growth and/or ageing.

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 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 are assigned based on a patient's postcode of usual residence at diagnosis using the Jan 2021 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).

A **crude incidence/mortality rate** is 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.

An **age-standardised incidence/mortality rate** per 100,000 person years is an estimate 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.

A **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 are a measure of 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 2019 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.

Observed survival refers to the proportion of patients who survive a specified amount of time from their date of diagnosis. Observed survival considers death from any cause and is not adjusted for the age of the patient. Cause of death may be unrelated to the cancer the patient has been diagnosed with.

Net Survival is an estimate of survival where the effect on survival of background population mortality rates has been removed. It represents the [theoretical] survival of cancer patients if they could only die from cancer-related causes. Age-standardised net survival estimates are the estimates that would occur if that population of cancer patients had a standard population age structure. The age groups and weights used here are those used by international studies such as EUROCARE, an international study group that compares cancer survival among European countries. However, due to the small number of patients in NI, the last two age categories in the standard population are combined.

Mortality: Information relating to cancer mortality is sourced from the General Registrar Office (GRONI) via the Department of Health (NI). Results are based upon the date on which death occurs, and may thus differ slightly than those produced by the Northern Ireland Statistics and Research Agency (NISRA), which produces deaths data based upon the date on which the death is registered with GRONI.