Stomach cancer

Patients diagnosed 1993-2019

(ICD10: C15)

Incidence

During 2015-2019:

▪ There were 127 male and 73 female cases of stomach cancer diagnosed each year.

▪ Stomach cancer made up 2.6% of all male, and 1.5% of all female cancers (ex NMSC).

▪ The risk of developing stomach cancer before the age of 75 was 1 in 125.8 for men and 1 in 271.5 for women, while before the age of 85 the risk was 1 in 57.7 for men and 1 in 116.0 for women.

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

During 2015-2019:

▪ The median age at diagnosis was 72 for men and 74 for women.

▪ Cancer risk increased with age, with 41.7% of men and 49.3% of women aged 75 years or more at diagnosis.

▪ 11.5% of cases were diagnosed among those aged under 55.

Age at diagnosis	Average cases per year		
	Male	Female	Both sexes
0 - 54	15	7	23
54 - 64	23	11	33
65 - 74	36	18	55
75 +	53	36	89
All ages	127	73	200
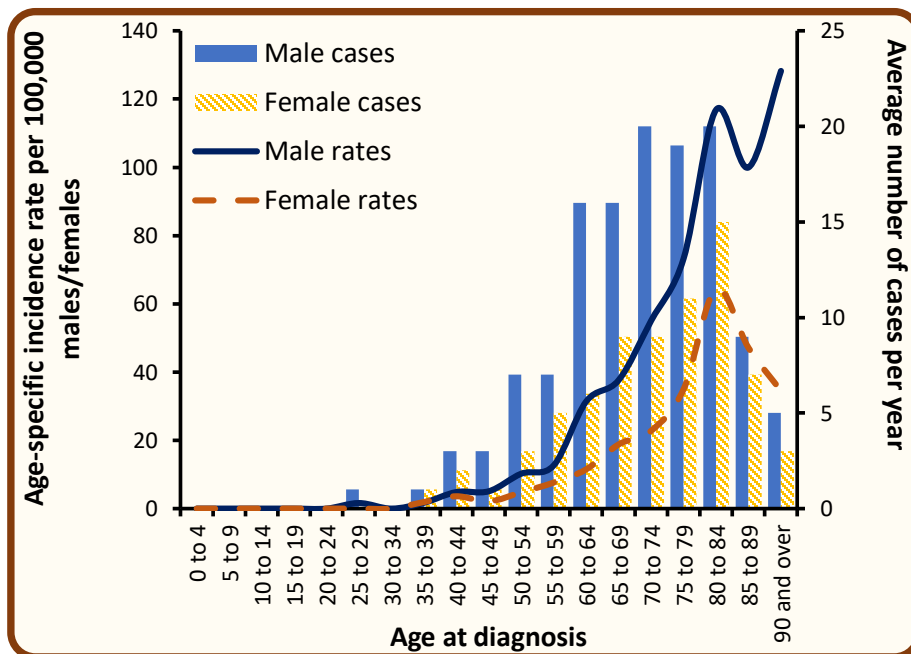
Incidence by year of diagnosis - *Stomach cancer, Cases in 1995-2019*

▪ Among males the number of cases of stomach cancer decreased by 10.6% from an annual average of 142 cases in 2010-2014 to 127 cases in 2015-2019.

▪ Among females the number of cases of stomach cancer decreased by 15.1% from an annual average of 86 cases in 2010-2014 to 73 cases in 2015-2019.

| Year of diagnosis	Male	Female	Both sexes
2010	155	91	246
2011	146	91	237
2012	117	74	191
2013	160	78	238
2014	133	97	230
2015	139	65	204
2016	139	83	222
2017	114	78	192
2018	110	75	185
2019	132	66	198
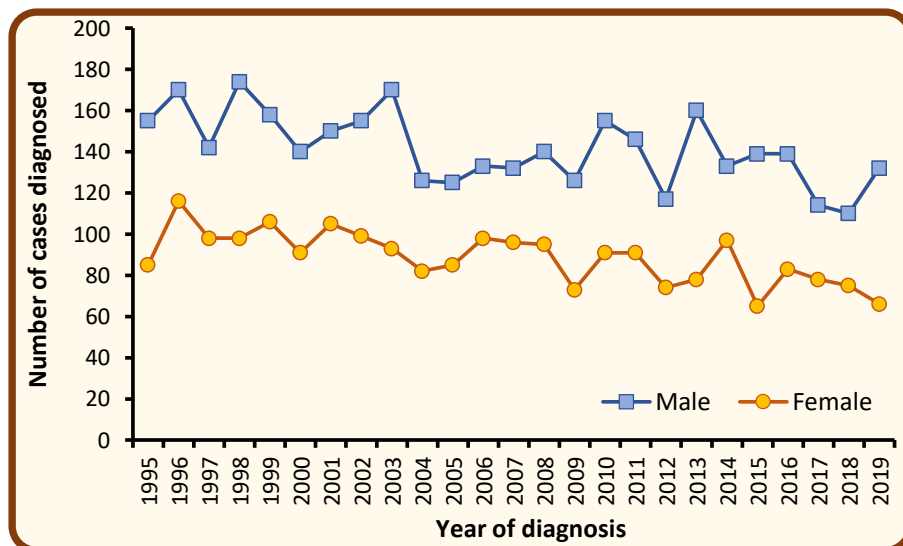
Note: Annual averages have been rounded to the nearest integer. Sums of numbers in table rows or columns may thus differ slightly from the given total.

NMSC: Non-melanoma skin cancer

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

▪ Among males age-standardised incidence rates of stomach cancer decreased by 21.7% from 22.6 per 100,000 person years in 2010-2014 to 17.7 cases per 100,000 persons years in 2015-2019. This difference was statistically significant.

▪ Among females age-standardised incidence rates of stomach cancer decreased by 21.0% from 10.5 per 100,000 person years in 2010-2014 to 8.3 cases per 100,000 persons years in 2015-2019. This difference was statistically significant.
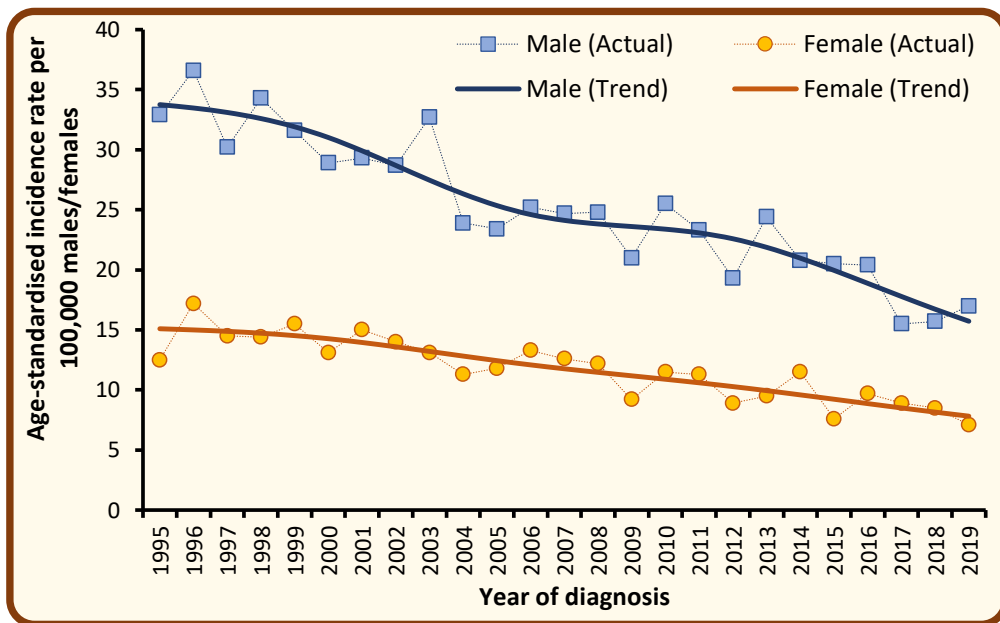
Age-standardised incidence rates illustrate the change in the number of cases within a population of a fixed size and age structure (2013 European Standard).

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 - *Stomach 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.

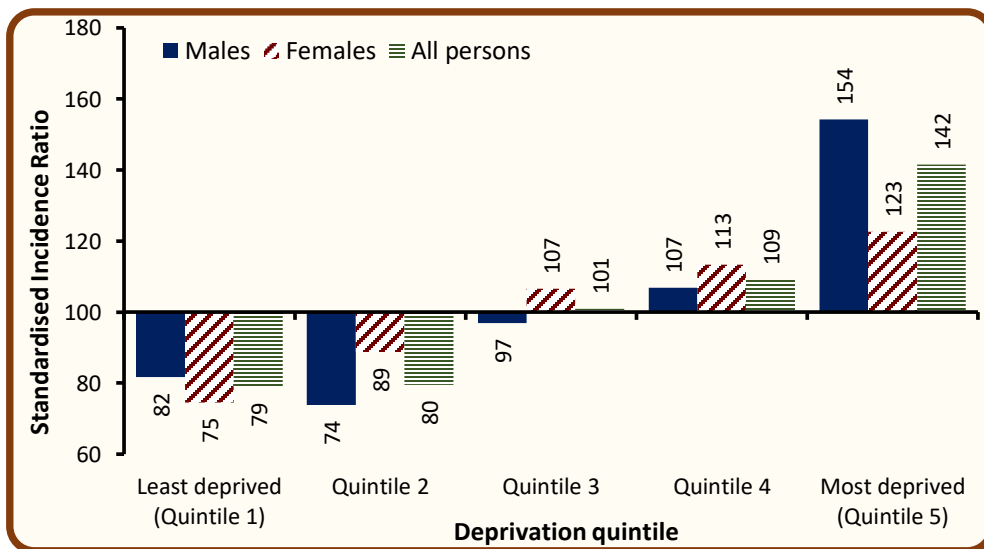After accounting for these factors, incidence rates:

▪ in the most socio-economically deprived areas were 41.6% higher than the NI average.

▪ in the least socio-economically deprived areas were 21.1% lower than the NI average.

Deprivation quintile	Average cases per year		
	Male	Female	Both sexes
Least deprived (Quintile 1)	22	12	34
Quintile 2	20	14	34
Quintile 3	26	16	42
Quintile 4	27	17	44
Most deprived (Quintile 5)	32	15	47
Northern Ireland	127	73	200

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) - *Stomach 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 were significantly higher than the NI average.
- in Northern HSCT were significantly lower than the NI average.
- in South-Eastern HSCT were significantly lower than the NI average.
- in Southern HSCT did not vary significantly from the NI average.
- in Western HSCT were significantly higher than the NI average.

Health and Social Care Trust	Average cases per year		
	Male	Female	Both sexes
Belfast HSCT	30	16	46
Northern HSCT	29	15	44
South-Eastern HSCT	23	11	34
Southern HSCT	22	18	40
Western HSCT	23	13	36
Northern Ireland	127	73	200
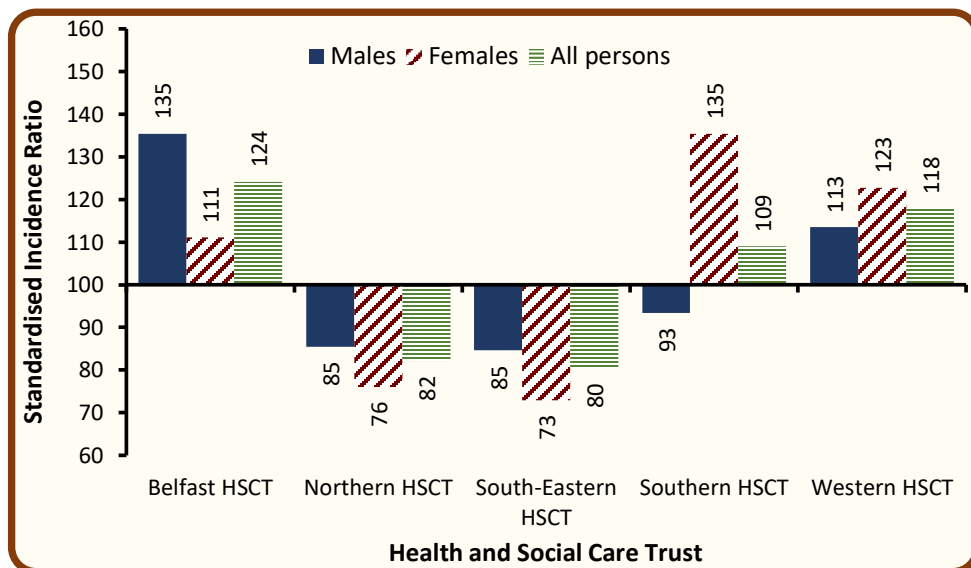
Standardised incidence ratios compare incidence rates in each HSC Trust with the Northern Ireland incidence rate. A value above 100 means that incidence rates in that HSC Trust are greater than the NI average.

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 - *Stomach cancer, Cases in 2015-2019*

During 2015-2019:

- 26.6% of cases had an emergency admission to hospital recorded up to 30 days prior to their cancer diagnosis.
- 24.9% of male cases had an emergency admission up to 30 days prior to diagnosis, compared to 29.4% of female cases.
- In 20.0% 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		
	Male	Female	Both sexes
Emergency admission	32	22	53
Elective admission	71	36	107
No emergency/elective admission recorded	24	16	40
Total	127	73	200
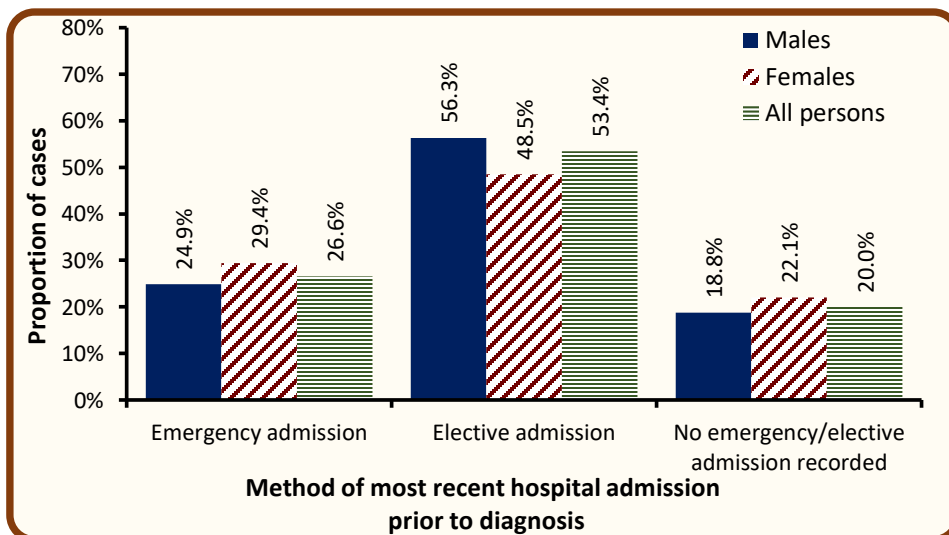
Admission method refers to the most recent hospital inpatient admission that a patient had prior to cancer diagnosis, regardless of reason for the admission.

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 - *Stomach cancer, Cases in 2015-2019*

During 2015-2019:

▪ 72.9% of cases diagnosed had a stage assigned.

▪ 10.5% of cases were diagnosed at stage I. (14.4% of staged cases)

▪ 43.6% of cases were diagnosed at stage IV. (59.7% of staged cases)

▪ Among cases which were staged, 61.5% of male cases were diagnosed at stage IV, compared to 56.4% of female cases.

Stage at diagnosis	Average cases per year		
	Male	Female	Both sexes
Stage I (Early)	11	10	21
Stage II	9	5	14
Stage III	17	7	24
Stage IV (Late)	58	29	87
Unknown	32	22	54
All stages	127	73	200
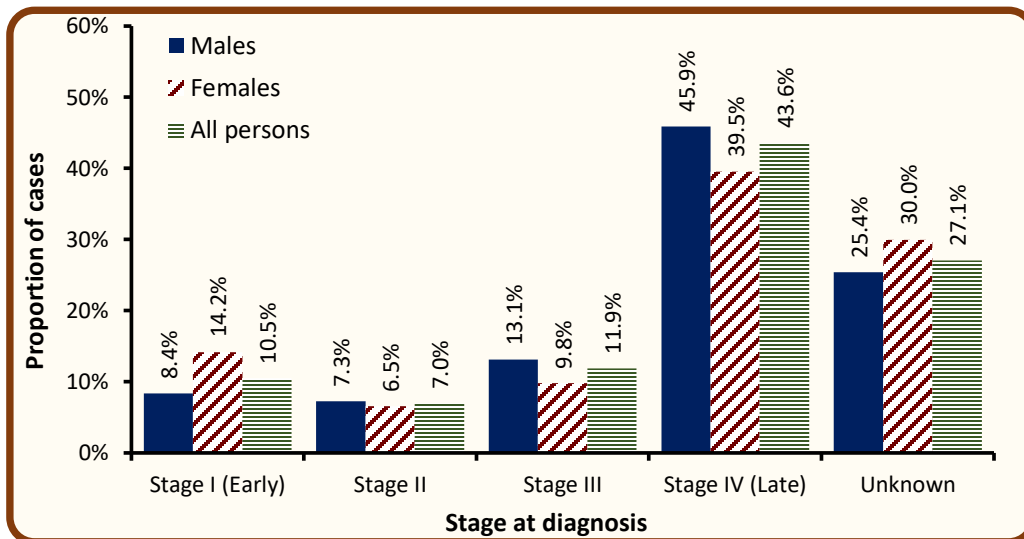
Cancer stage describes the size of a cancer and how far it has grown and spread.

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).
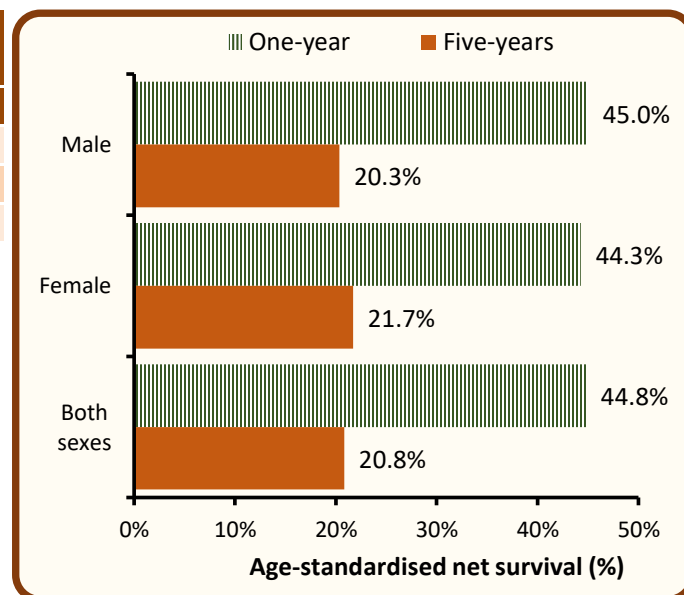
Survival

▪ 40.6% of patients were alive one year and 16.2% were alive five years from a stomach cancer diagnosis in 2010-2014. (observed survival)

▪ Age-standardised net survival (ASNS), which removes the effect of deaths from causes unrelated to cancer, was 44.8% one year and 20.8% five years from a stomach cancer diagnosis in 2010-2014.

▪ Five-year survival (ASNS) for stomach cancer patients diagnosed in 2010-2014 was 20.3% among men and 21.7% among women.

| Gender	Observed survival		Age-standardised net survival	
	One-year	Five-years	One-year	Five-years
Male	41.5%	16.1%	45.0%	20.3%
Female	39.0%	16.3%	44.3%	21.7%
Both sexes	40.6%	16.2%	44.8%	20.8%

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.
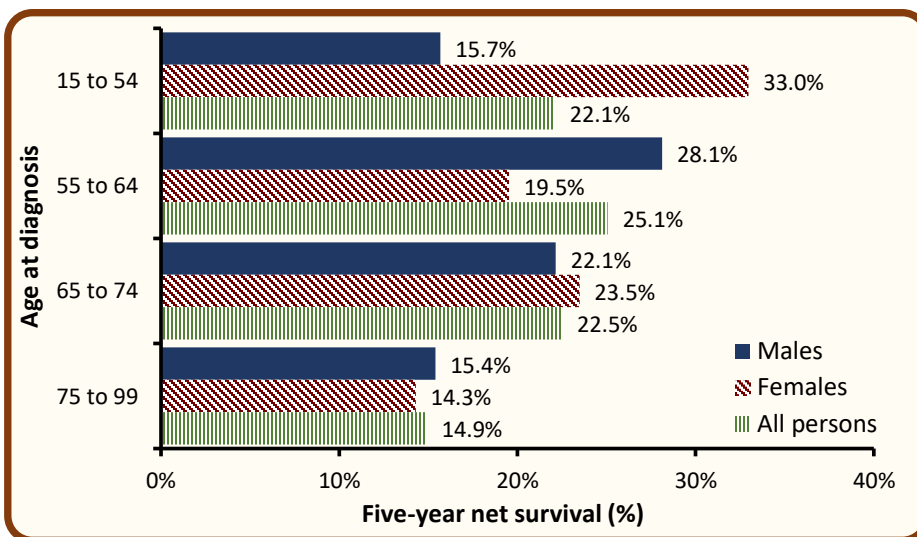
Trends in survival - *Stomach cancer, Patients diagnosed in 1995-2014*

▪ Among men five-year survival (ASNS) from stomach cancer increased from 17.3% in 2005-2009 to 20.3% in 2010-2014. This difference was not statistically significant.

▪ Among women five-year survival (ASNS) from stomach cancer decreased from 22.2% in 2005-2009 to 21.7% in 2010-2014. This difference was not statistically significant.
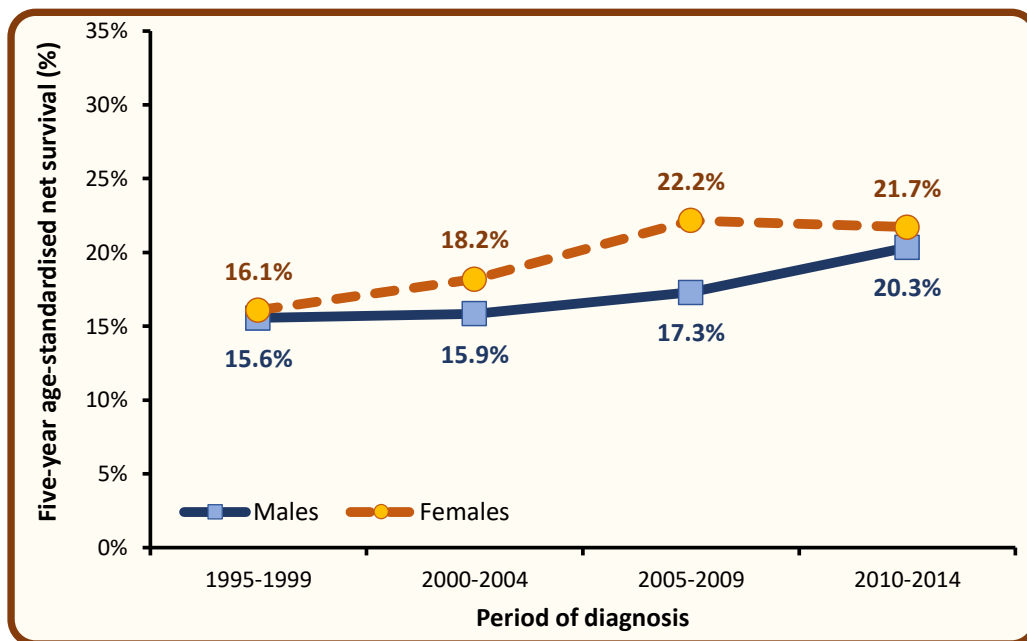
Survival by age at diagnosis - *Stomach cancer, Patients diagnosed in 2010-2014*

▪ Survival from stomach cancer among patients diagnosed in 2010-2014 was strongly related to patient age with five-year survival decreasing as age increases.

▪ Five-year net survival ranged from 25.1% among patients aged 55 to 64 at diagnosis to 14.9% among those aged 75 and over.

▪ Five-year net survival among patients aged 75 and over was 15.4% for men and 14.3% for women.

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

▪ Five-year survival (ASNS) among stomach cancer patients who had an emergency admission to hospital up to 30 days prior to their cancer diagnosis was 6.9% compared to 26.6% among those with elective admissions and 24.5% among those who had no hospital admissions recorded up to 30 days prior to diagnosis.
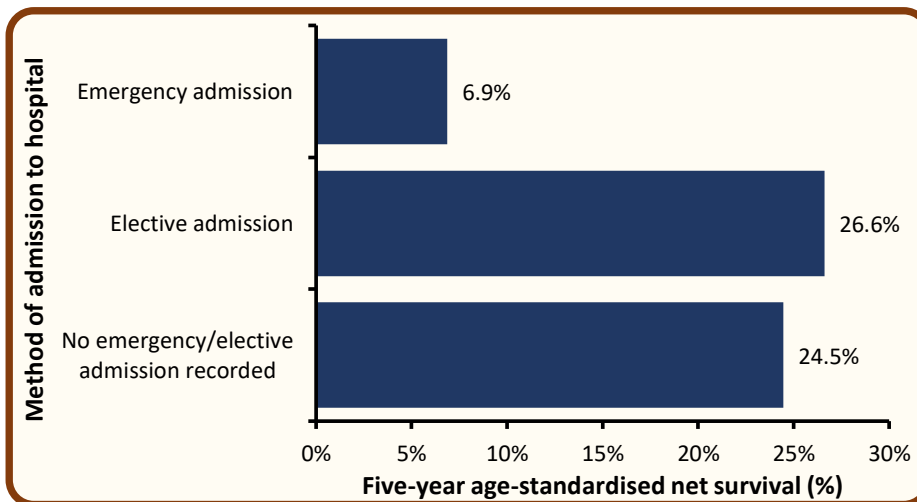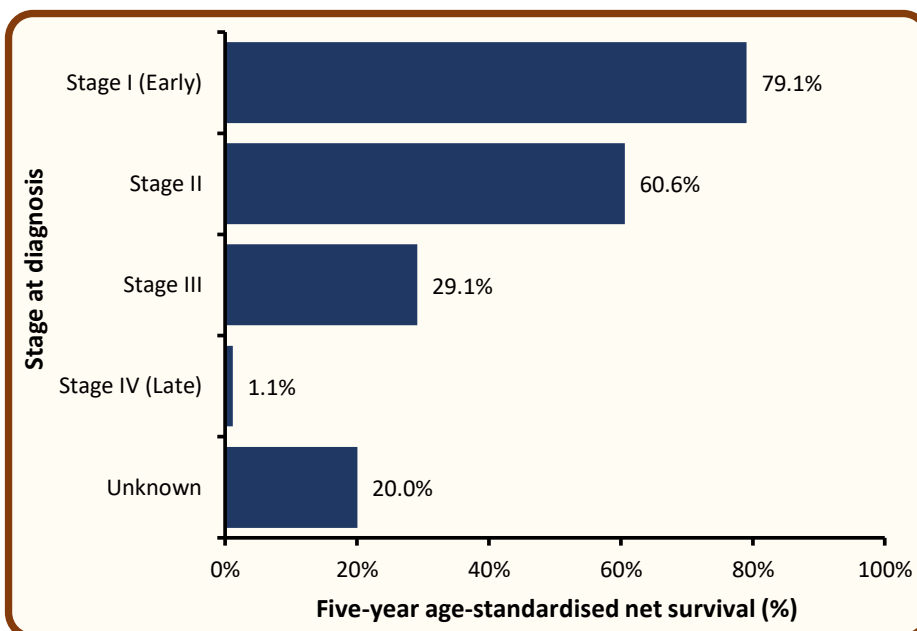
Survival by stage at diagnosis *- Stomach cancer, Patients diagnosed in 2010-2014*

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

▪ Five-year survival (ASNS) ranged from 79.1% for early stage (stage I) disease to 1.1% for late stage (stage IV) disease.

▪ Five-year survival (ASNS) for unstaged cancer was 20.0%.

Stage at diagnosis

Stage	Five-year age-standardised net survival (%)
Stage I (Early)	79.1%
Stage II	60.6%
Stage III	29.1%
Stage IV (Late)	1.1%
Unknown	20.0%

Five-year age-standardised net survival (%)

Prevalence

▪ At the end of 2019, there were 663 people (Males: 410; Females: 253) living with stomach cancer who had been diagnosed with the disease during 1995-2019.

▪ Of these, 61.8% were male, 50.1% were aged 75 and over, and 19.9% 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 0-74			Aged 75+			All ages		
	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes
0-1 year	65	21	86	26	20	46	91	41	132
1-5 years	58	45	103	58	32	90	116	77	193
5-10 years	40	28	68	49	31	80	89	59	148
10-25 years	43	31	74	71	45	116	114	76	190
0-25 years	206	125	331	204	128	332	410	253	663

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

▪ Among males the number of survivors from stomach cancer who had been diagnosed within the previous ten years increased by 1.4% from 292 survivors in 2014 to 296 survivors in 2019.

▪ Among females the number of survivors from stomach cancer who had been diagnosed within the previous ten years decreased by 1.1% from 179 survivors in 2014 to 177 survivors in 2019.

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Male	284	274	277	297	292	306	299	291	298	296
Female	182	173	174	162	179	161	181	181	187	177
Both sexes	466	447	451	459	471	467	480	472	485	473

Mortality

- During 2015-2019 there were 74 male and 53 female deaths from stomach cancer each year.

- Stomach cancer made up 3.2% of all male, and 2.5% of all female cancer deaths (ex NMSC).

Deaths by age at death *- Stomach cancer, Deaths in 2015-2019*

- The median age at death during 2015-2019 was 73 for men and 77 for women.

- Risk of death from stomach cancer was strongly related to age, with 47.3% of men and 56.6% of women aged 75 years or more at time of death.

- 10.2% of stomach cancer deaths occurred among those aged under 55.

| Age at death	Average deaths per year		
	Male	**Female**	**Both sexes**
0 - 54	8	5	13
55 - 64	11	7	17
65 - 74	21	11	32
75 +	35	30	65
All ages	74	53	128

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

- Among males the number of deaths from stomach cancer decreased by 14.0% from an annual average of 86 deaths in 2010-2014 to 74 deaths in 2015-2019.

- Among females the number of deaths from stomach cancer decreased by 11.7% from an annual average of 60 deaths in 2010-2014 to 53 deaths in 2015-2019.

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Male	77	101	72	84	97	73	86	70	70	73
Female	54	72	47	65	63	62	51	57	45	52
Both sexes	131	173	119	149	160	135	137	127	115	125

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

- Among males age-standardised mortality rates from stomach cancer decreased by 23.9% between 2010-2014 and 2015-2019 from 14.2 to 10.8 deaths per 100,000 persons years. This difference was statistically significant.

- Among females age-standardised mortality rates from stomach cancer decreased by 17.8% between 2010-2014 and 2015-2019 from 7.3 to 6.0 deaths per 100,000 persons years. This difference was not statistically significant.
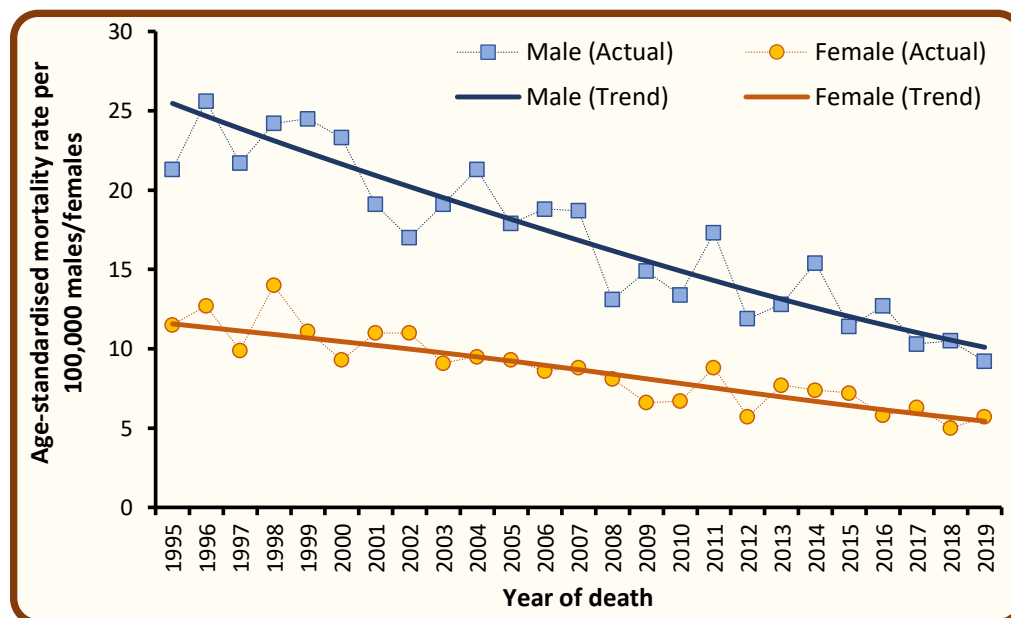
Mortality data are provided by the Northern Ireland General Registrar Office via the Department of Health.

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. colorectal 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 first 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.