Oesophageal cancer

Patients diagnosed 1993-2019
(ICD10: C15)

Further information

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

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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 154 male and 63 female cases of oesophageal cancer diagnosed each year.

▪ Oesophageal cancer made up 3.1% of all male, and 1.3% of all female cancers (ex NMSC).

▪ The risk of developing oesophageal cancer before the age of 75 was 1 in 86.1 for men and 1 in 289.9 for women, while before the age of 85 the risk was 1 in 52.4 for men and 1 in 158.1 for women.

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

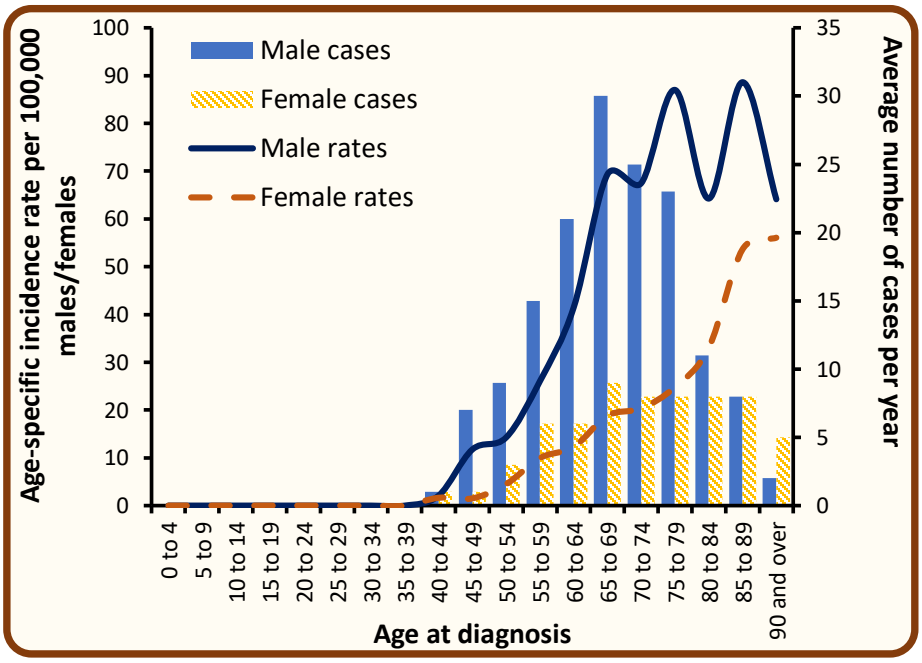
During 2015-2019:

▪ The median age at diagnosis was 68 for men and 73 for women.

▪ Cancer risk increased with age, with 28.6% of men and 46.0% of women aged 75 years or more at diagnosis.

▪ 10.6% of cases were diagnosed among those aged under 55.

Age at diagnosis	Average cases per year		
	Male	Female	Both sexes
0 - 54	17	5	23
54 - 64	36	12	48
65 - 74	55	17	72
75 +	44	29	74
All ages	154	63	217

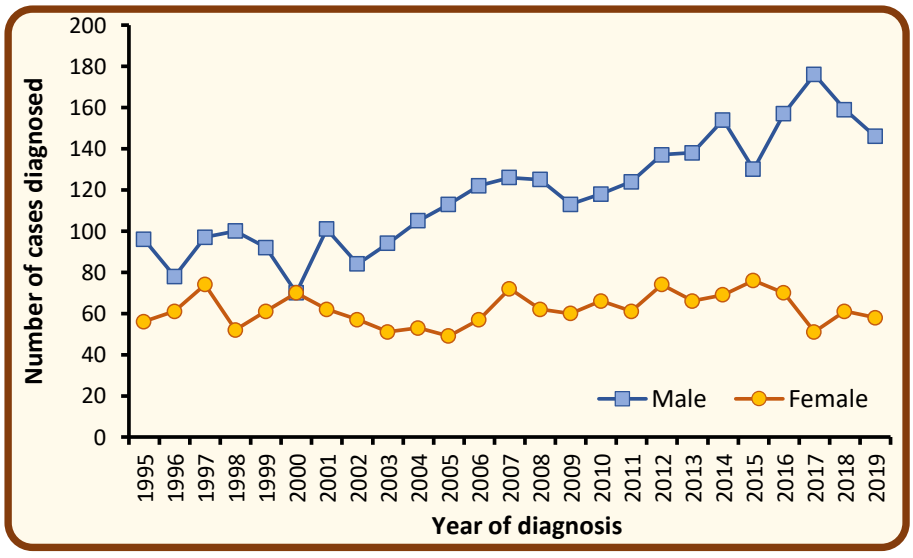


Incidence by year of diagnosis - *Oesophageal cancer, Cases in 1995-2019*

▪ Among males the number of cases of oesophageal cancer increased by 14.9% from an annual average of 134 cases in 2010-2014 to 154 cases in 2015-2019.

▪ Among females the number of cases of oesophageal cancer decreased by 6.0% from an annual average of 67 cases in 2010-2014 to 63 cases in 2015-2019.

Year of diagnosis	Male	Female	Both sexes
2010	118	66	184
2011	124	61	185
2012	137	74	211
2013	138	66	204
2014	154	69	223
2015	130	76	206
2016	157	70	227
2017	176	51	227
2018	159	61	220
2019	146	58	204

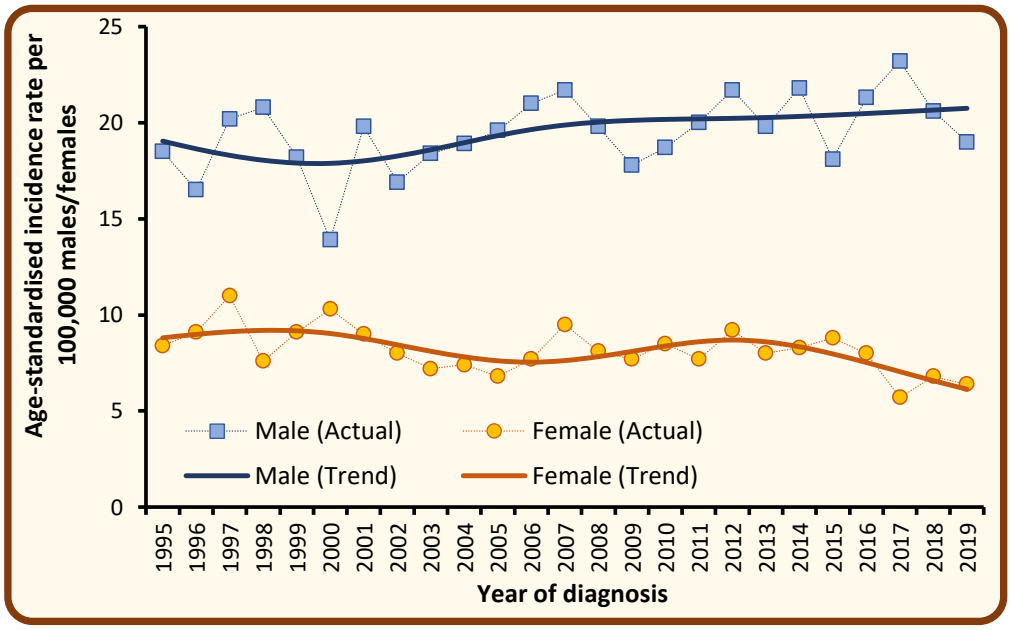


Note: Annual averages have been rounded to the nearest integer. Sums of numbers in table rows or columns may thus differ slightly from the given total.
NMSC: Non-melanoma skin cancer

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

▪ Among males age-standardised incidence rates of oesophageal cancer increased by 0.5% from 20.4 per 100,000 person years in 2010-2014 to 20.5 cases per 100,000 persons years in 2015-2019. This difference was not statistically significant.

▪ Among females age-standardised incidence rates of oesophageal cancer decreased by 14.3% from 8.4 per 100,000 person years in 2010-2014 to 7.2 cases per 100,000 persons years in 2015-2019. 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 - *Oesophageal 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 18.9% higher than the NI average.

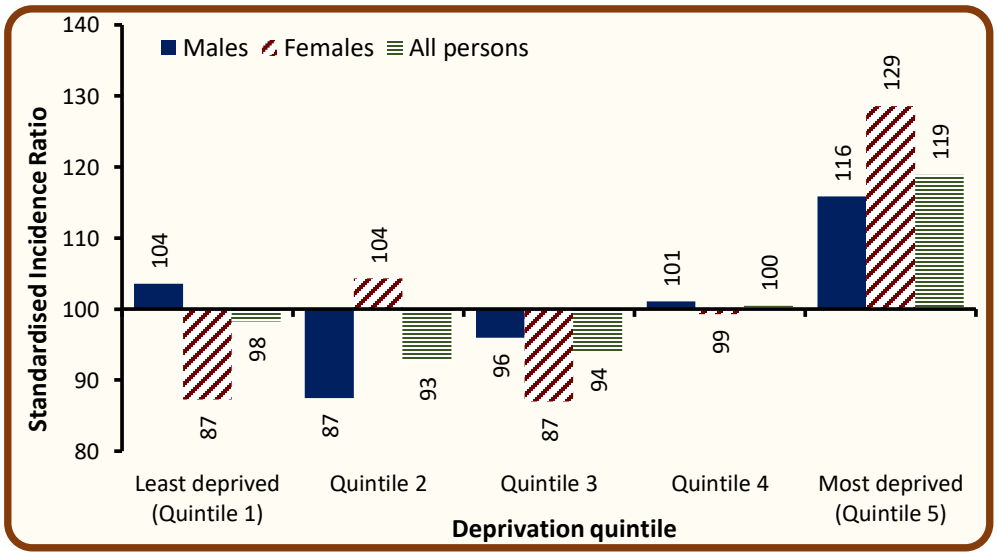
▪ in the least socio-economically deprived areas did not vary significantly from the NI average.

Deprivation quintile	Average cases per year		
	Male	Female	Both sexes
Least deprived (Quintile 1)	33	12	45
Quintile 2	29	14	43
Quintile 3	31	11	43
Quintile 4	31	13	44
Most deprived (Quintile 5)	29	13	42
Northern Ireland	154	63	217

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.



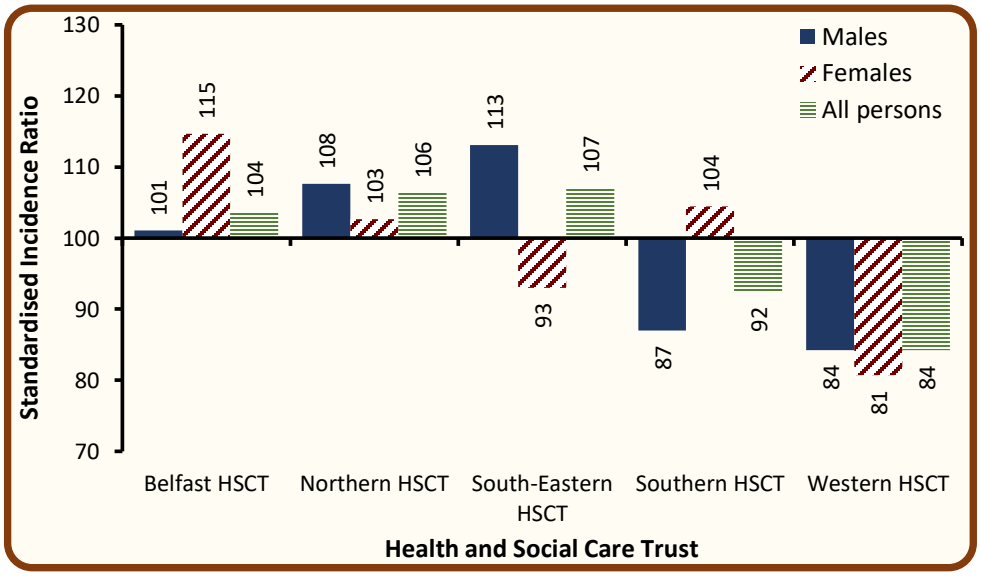
Incidence by Health and Social Care Trust (HSCT) - *Oesophageal cancer, Cases in 2015-2019*

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 were significantly lower than the NI average.

Health and Social Care Trust	Average cases per year		
	Male	Female	Both sexes
Belfast HSCT	27	14	41
Northern HSCT	44	17	61
South-Eastern HSCT	37	12	49
Southern HSCT	25	12	37
Western HSCT	21	8	28
Northern Ireland	154	63	217



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.

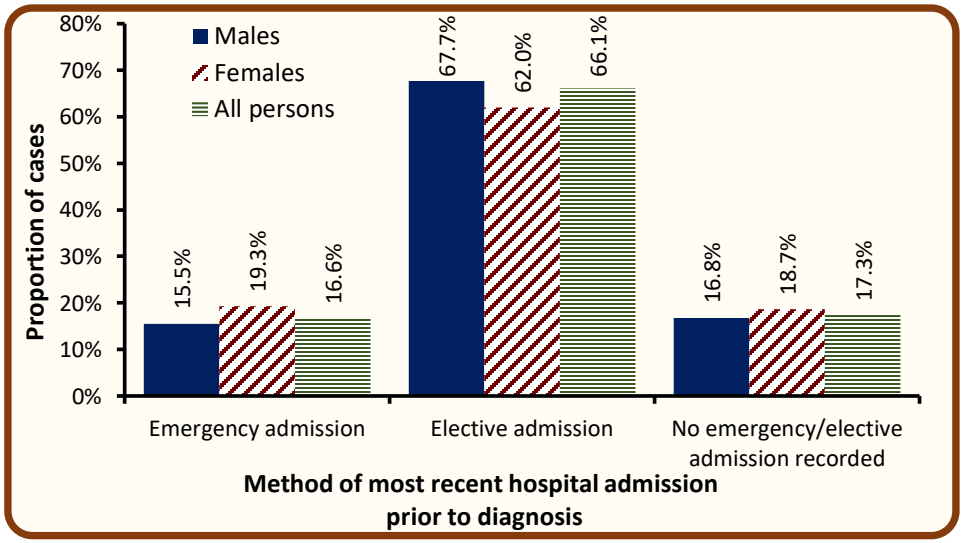
Data for Local Government Districts and Parliamentary Constituencies are available at www.qub.ac.uk/research-centres/nicr

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

During 2015-2019:

- 16.6% of cases had an emergency admission to hospital recorded up to 30 days prior to their cancer diagnosis.
- 15.5% of male cases had an emergency admission up to 30 days prior to diagnosis, compared to 19.3% of female cases.
- In 17.3% 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	24	12	36
Elective admission	104	39	143
No emergency/elective admission recorded	26	12	38
Total	154	63	217



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.

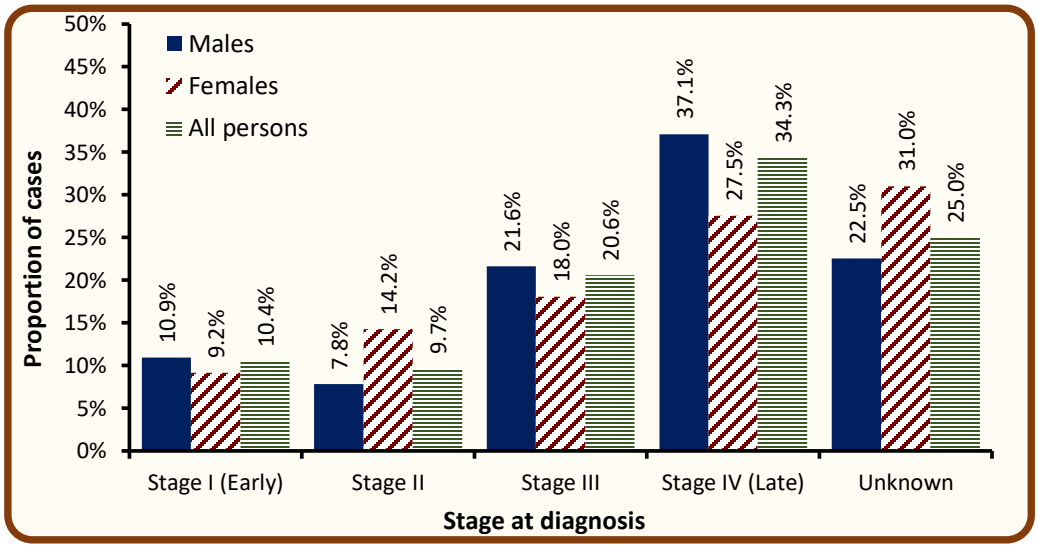
The majority of patients with no inpatient admission recorded prior to diagnosis are likely to have been diagnosed via an outpatient route.

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

During 2015-2019:

- 75.0% of cases diagnosed had a stage assigned.
- 10.4% of cases were diagnosed at stage I. (13.9% of staged cases)
- 34.3% of cases were diagnosed at stage IV. (45.8% of staged cases)
- Among cases which were staged, 47.9% of male cases were diagnosed at stage IV, compared to 39.9% of female cases.

Stage at diagnosis	Average cases per year		
	Male	Female	Both sexes
Stage I (Early)	17	6	23
Stage II	12	9	21
Stage III	33	11	45
Stage IV (Late)	57	17	74
Unknown	35	20	54
All stages	154	63	217



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).

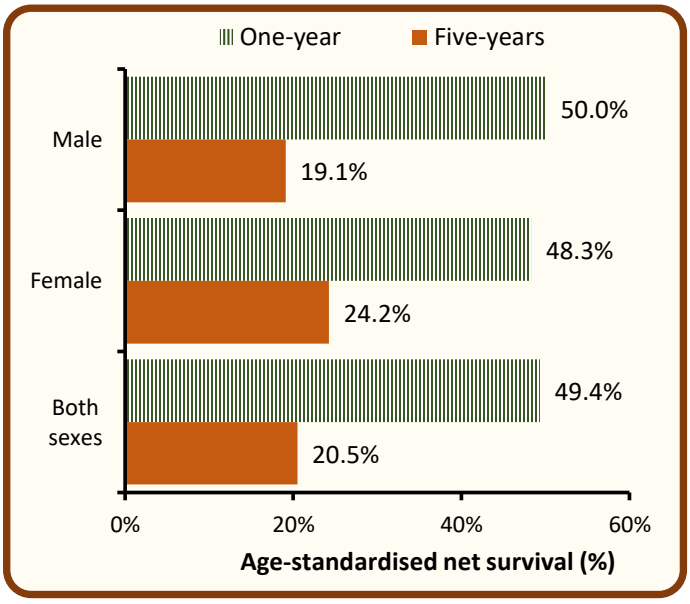
Survival

- 46.4% of patients were alive one year and 17.3% were alive five years from an oesophageal cancer diagnosis in 2010-2014. (observed survival)
- Age-standardised net survival (ASNS), which removes the effect of deaths from causes unrelated to cancer, was 49.4% one year and 20.5% five years from an oesophageal cancer diagnosis in 2010-2014.
- Five-year survival (ASNS) for oesophageal cancer patients diagnosed in 2010-2014 was 19.1% among men and 24.2% among women.

Gender	Observed survival		Age-standardised net survival	
	One-year	Five-years	One-year	Five-years
Male	48.6%	17.1%	50.0%	19.1%
Female	42.0%	17.7%	48.3%	24.2%
Both sexes	46.4%	17.3%	49.4%	20.5%

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.

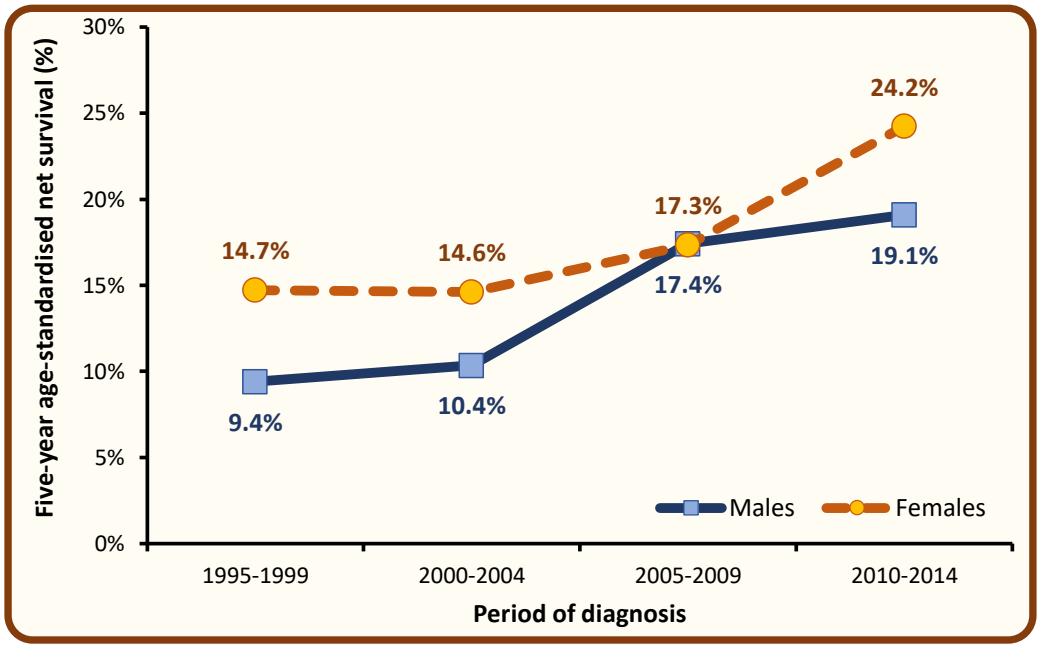
Age-standardised net survival is the proportion of patients who would survive if the patient could not die from causes unrelated to their cancer. This measure is more typically used in studies of cancer survival.



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

▪ Among men five-year survival (ASNS) from oesophageal cancer increased from 17.4% in 2005-2009 to 19.1% in 2010-2014. This difference was not statistically significant.

▪ Among women five-year survival (ASNS) from oesophageal cancer increased from 17.3% in 2005-2009 to 24.2% in 2010-2014. This difference was not statistically significant.

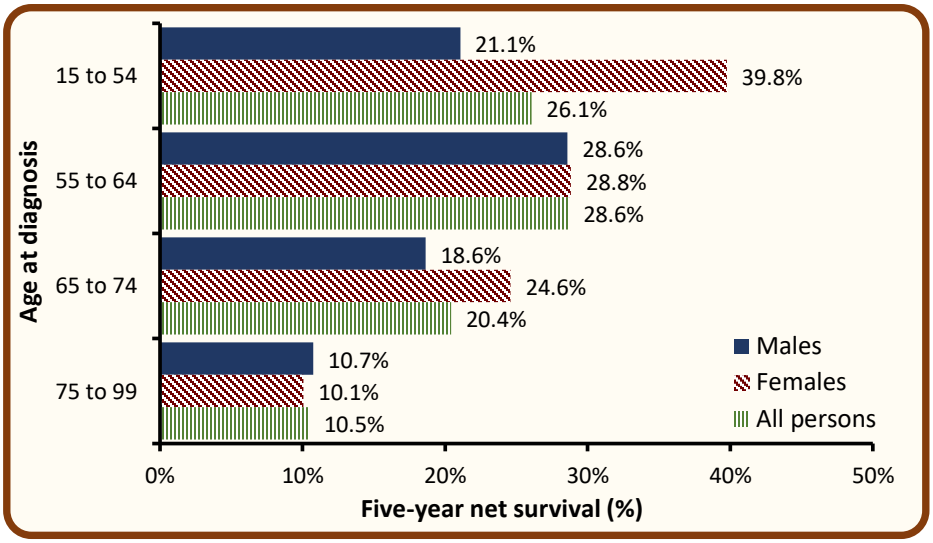


Survival by age at diagnosis - *Oesophageal cancer, Patients diagnosed in 2010-2014*

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

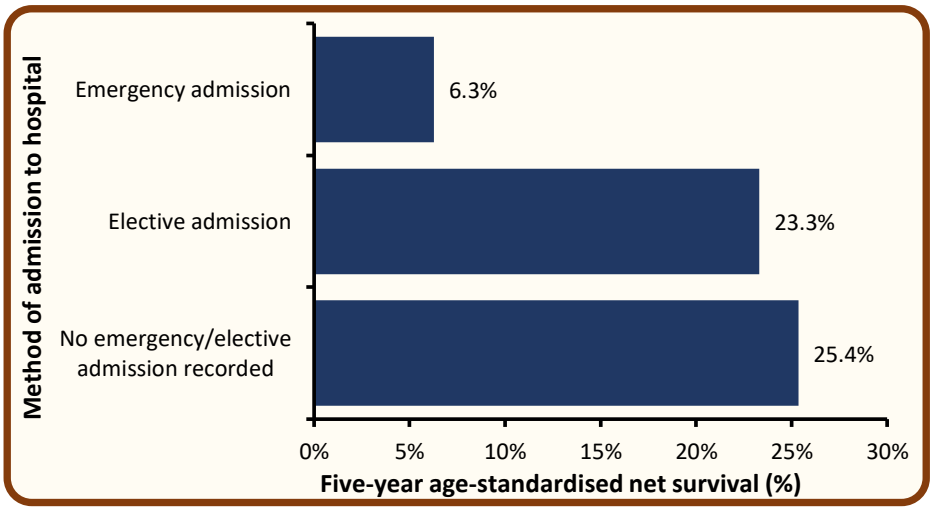
▪ Five-year net survival ranged from 28.6% among patients aged 55 to 64 at diagnosis to 10.5% among those aged 75 and over.

▪ Five-year net survival among patients aged 75 and over was 10.7% for men and 10.1% for women.



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

▪ Five-year survival (ASNS) among oesophageal cancer patients who had an emergency admission to hospital up to 30 days prior to their cancer diagnosis was 6.3% compared to 23.3% among those with elective admissions and 25.4% among those who had no hospital admissions recorded up to 30 days prior to diagnosis.

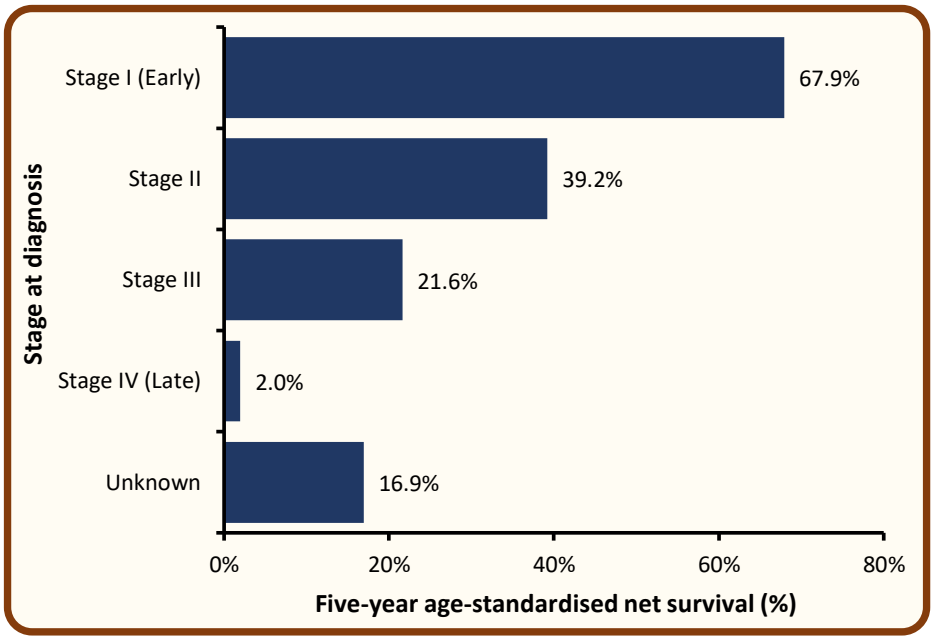


Survival by stage at diagnosis - *Oesophageal cancer, Patients diagnosed in 2010-2014*

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

▪ Five-year survival (ASNS) ranged from 67.9% for early stage (stage I) disease to 2.0% for late stage (stage IV) disease.

▪ Five-year survival (ASNS) for unstaged cancer was 16.9%.



Prevalence

▪ At the end of 2019, there were 688 people (Males: 469; Females: 219) living with oesophageal cancer who had been diagnosed with the disease during 1995-2019.

▪ Of these, 68.2% were male, 40.4% were aged 75 and over, and 22.4% 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	72	24	96	36	22	58	108	46	154
1-5 years	112	49	161	62	21	83	174	70	244
5-10 years	65	30	95	29	21	50	94	51	145
10-25 years	42	16	58	51	36	87	93	52	145
0-25 years	291	119	410	178	100	278	469	219	688

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

▪ Among males the number of survivors from oesophageal cancer who had been diagnosed within the previous ten years increased by 20.5% from 312 survivors in 2014 to 376 survivors in 2019.

▪ Among females the number of survivors from oesophageal cancer who had been diagnosed within the previous ten years increased by 16.8% from 143 survivors in 2014 to 167 survivors in 2019.

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Male	242	265	281	304	312	308	320	366	381	376
Female	105	117	129	139	143	153	157	145	160	167
Both sexes	347	382	410	443	455	461	477	511	541	543

Mortality

- During 2015-2019 there were 137 male and 52 female deaths from oesophageal cancer each year.
- Oesophageal cancer made up 5.9% of all male, and 2.5% of all female cancer deaths (ex NMSC).

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

- The median age at death during 2015-2019 was 69 for men and 76 for women.
- Risk of death from oesophageal cancer was strongly related to age, with 33.6% of men and 53.8% of women aged 75 years or more at time of death.
- 10.1% of oesophageal cancer deaths occurred among those aged under 55.

Age at death	Average deaths per year		
	Male	Female	Both sexes
0 - 54	16	2	19
55 - 64	27	8	35
65 - 74	48	12	60
75 +	46	28	75
All ages	137	52	189

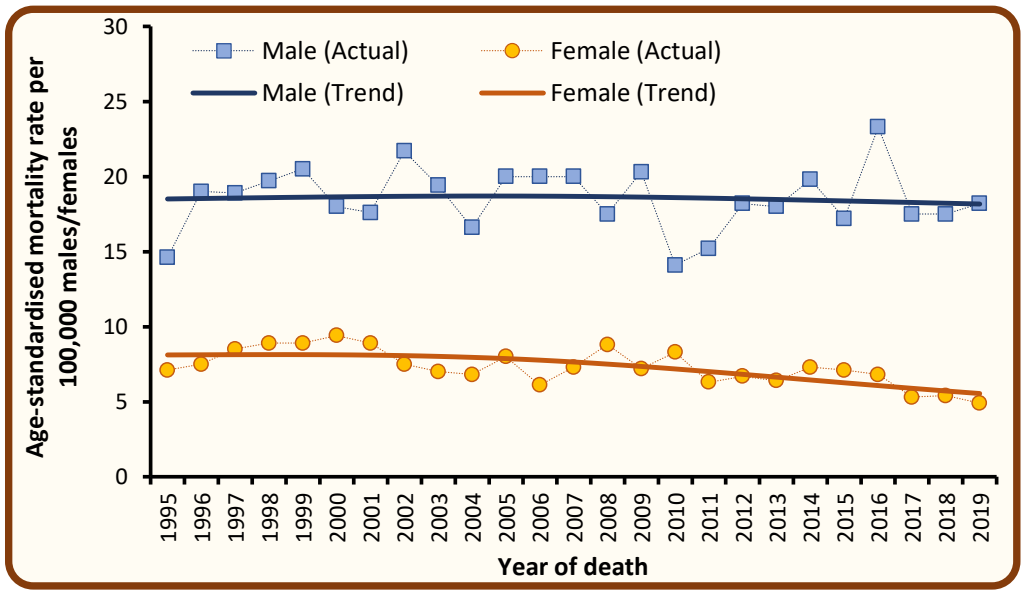
Deaths by year of death - *Oesophageal cancer, Deaths in 2010-2019*

- Among males the number of deaths from oesophageal cancer increased by 24.5% from an annual average of 110 deaths in 2010-2014 to 137 deaths in 2015-2019.
- Among females the number of deaths from oesophageal cancer decreased by 8.8% from an annual average of 57 deaths in 2010-2014 to 52 deaths in 2015-2019.

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Male	93	99	108	119	132	121	165	129	133	137
Female	66	50	54	53	61	61	58	47	49	45
Both sexes	159	149	162	172	193	182	223	176	182	182

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

- Among males age-standardised mortality rates from oesophageal cancer increased by 8.7% between 2010-2014 and 2015-2019 from 17.2 to 18.7 deaths per 100,000 persons years. This difference was not statistically significant.
- Among females age-standardised mortality rates from oesophageal cancer decreased by 15.7% between 2010-2014 and 2015-2019 from 7.0 to 5.9 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.