

Unknown primary cancer



Number of cases per year (2014-2018) ¹			Number of deaths per year (2014-2018) ¹		
Male	Female	Both sexes	Male	Female	Both sexes
95	105	200	124	128	251
Five-year net survival (2009-2013)			25-year prevalence (2018)		
Male	Female	Both sexes	Male	Female	Both sexes
14.0%	14.3%	14.2%	177	172	349

Incidence

During 2014-2018:

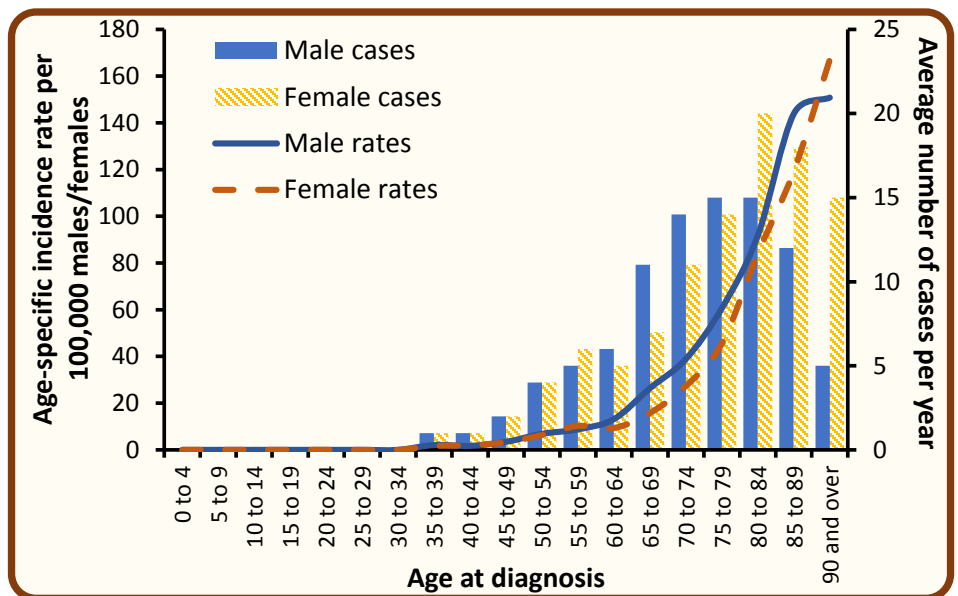
- There were 95 male and 105 female cases of unknown primary cancer diagnosed each year.
- There were 10.4 male and 11.1 female cases of unknown primary cancer per 100,000 males/females diagnosed each year.
- Unknown primary cancer made up 2.0% of all male cancers (ex NMSC), and 2.2% of all female cancers (ex NMSC).
- The risk of developing unknown primary cancer before the age of 75 was 1 in 195 for men and 1 in 260 for women.

Incidence by sex and age at diagnosis: Unknown primary cancer 2014-2018¹

During 2014-2018:

- The median age at diagnosis was 75 for men and 80 for women.
- Unknown primary cancer risk increased with age, with 75.8% of men and 81.0% of women aged 65+ years at diagnosis.
- 4.5% of cases were diagnosed among those aged under 50.

Age at diagnosis	Average cases per year		
	Male	Female	Both sexes
0 - 49	4	4	9
50 - 64	15	15	31
65 - 74	25	18	44
75 +	47	67	115
All ages	95	105	200



Incidence by sex and year of diagnosis: Unknown primary cancer 2009-2018

- Among males the number of cases of unknown primary cancer decreased by 6.9% from an annual average of 102 cases in 2009-2013 to 95 cases in 2014-2018.
- Among females the number of cases of unknown primary cancer decreased by 18.0% from an annual average of 128 cases in 2009-2013 to 105 cases in 2014-2018.

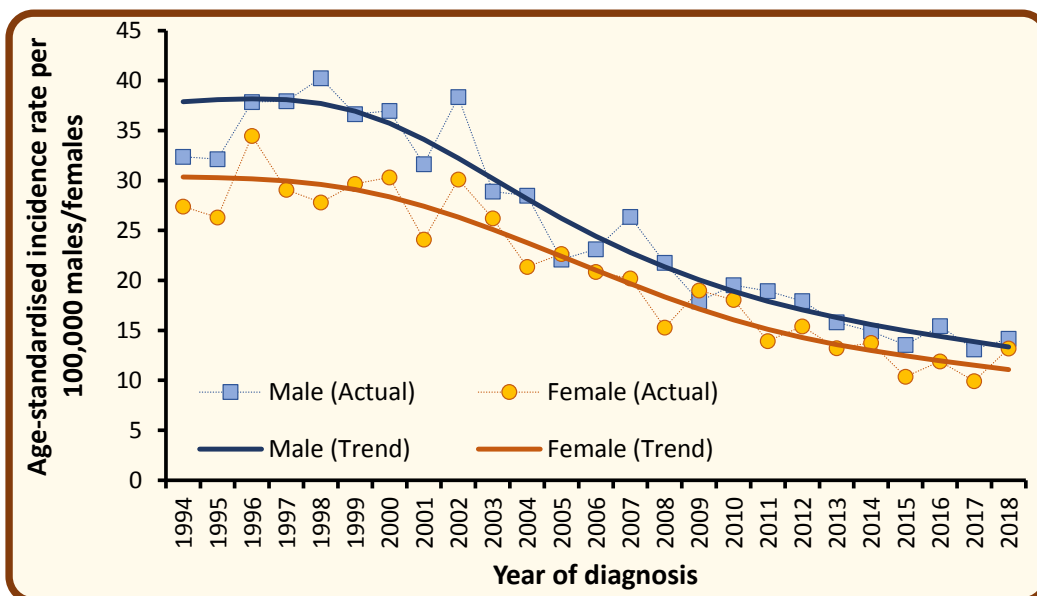
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Male	92	112	113	97	96	96	85	102	88	103
Female	146	144	115	126	110	118	90	107	89	120
Both sexes	238	256	228	223	206	214	175	209	177	223

1. Annual averages based upon several years 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 by sex: Unknown primary cancer 1994-2018

- Among males age-standardised incidence rates of unknown primary cancer decreased by 21.0% from 18.0 per 100,000 person years in 2009-2013 to 14.2 cases per 100,000 persons years in 2014-2018. This difference was statistically significant.
- Among females age-standardised incidence rates of unknown primary cancer decreased by 25.5% from 15.9 per 100,000 person years in 2009-2013 to 11.8 cases per 100,000 persons years in 2014-2018. 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.

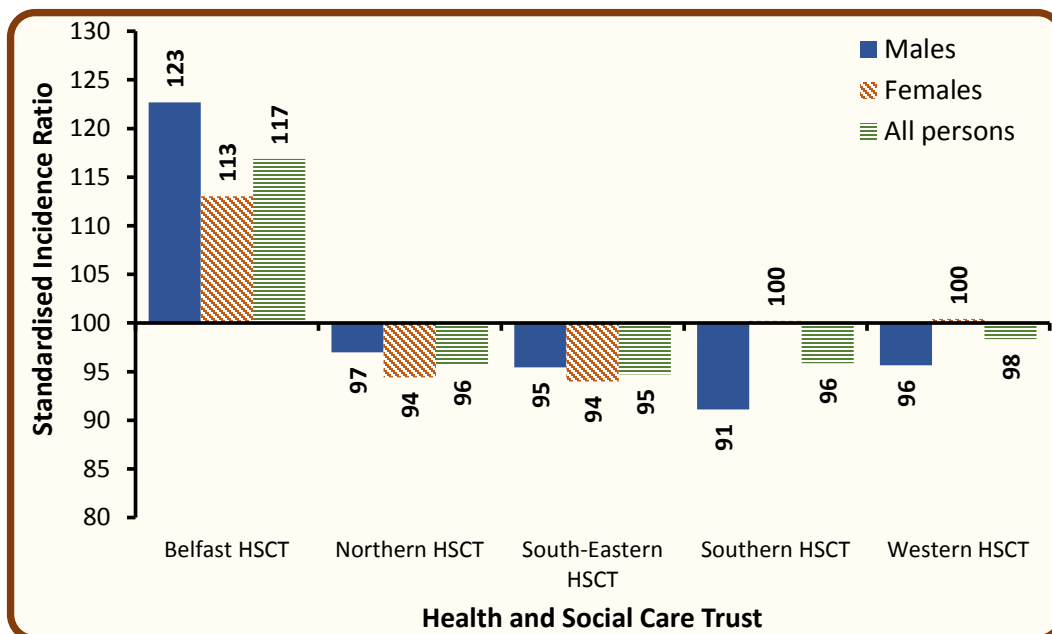
Incidence (cases and rates) by sex and Health and Social Care Trust (HSCT): Unknown primary cancer 2014-2018¹

The annual number of unknown primary cancer cases in 2014-2018 varied in each HSCT due to variations in population size and age (see table).

After accounting for these factors, incidence rates (see figure):

- in Belfast HSCT were significantly higher than 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		
	Male	Female	Both sexes
Belfast HSCT	21	24	45
Northern HSCT	25	26	51
South-Eastern HSCT	19	21	40
Southern HSCT	16	19	35
Western HSCT	14	15	29
Northern Ireland	95	105	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 Northern Ireland average. This measure takes account of population size and age structure. Differences are thus not a result of these factors.

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HSCT: Health and Social Care Trust

Incidence (cases and rates) by sex and deprivation quintile: Unknown primary cancer 2014-2018¹

The annual number of unknown primary cancer cases during 2014-2018 varied in each deprivation quintile due to variations in population size and age (see table).

After accounting for these factors, incidence rates (see figure):

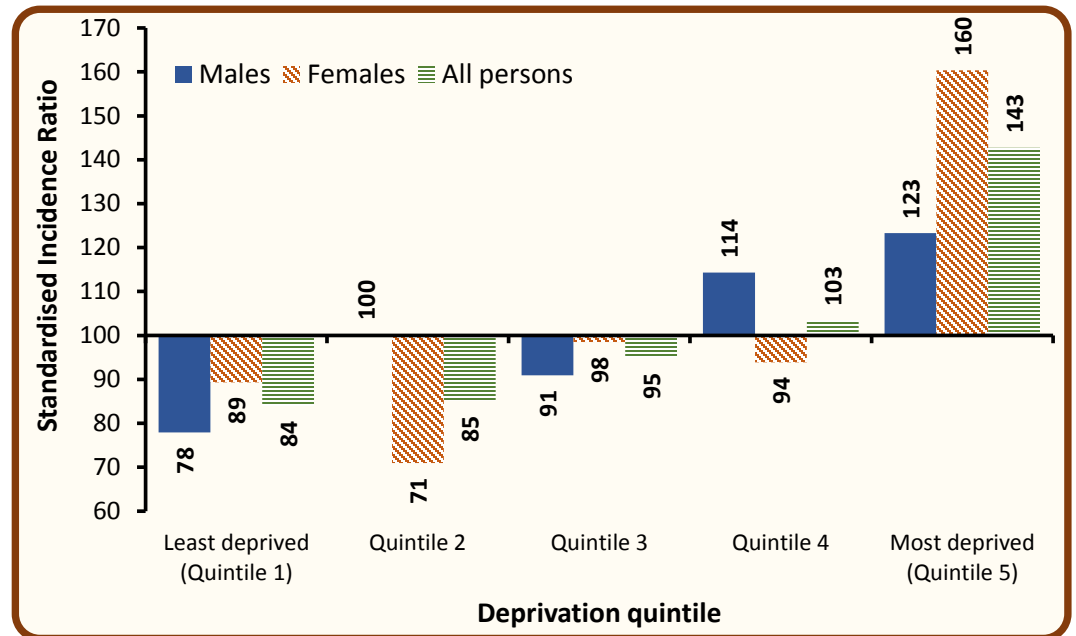
- in the most socio-economically deprived areas were 42.8% higher than the NI average, a result driven by higher than average rates among women.
- in the least socio-economically deprived areas were 16.1% lower than the NI average.

Deprivation quintile	Average cases per year		
	Male	Female	Both sexes
Least deprived (Quintile 1)	16	21	36
Quintile 2	20	15	36
Quintile 3	18	21	40
Quintile 4	22	20	41
Most deprived (Quintile 5)	19	28	46
Northern Ireland	95	105	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.



Survival

- 16.7% of patients were alive one year and 8.3% were alive five years from an unknown primary cancer diagnosis in 2009-2013. (observed survival)
- Age-standardised net survival (ASNS), which removes the effect of deaths from causes unrelated to cancer, was 23.8% one year and 14.2% five years from an unknown primary cancer diagnosis in 2009-2013.
- Five-year survival (ASNS) for patients diagnosed in 2009-2013 was 14.0% among men and 14.3% among women.
- Estimates for survival (ASNS) of patients diagnosed during 2012-2016 are 24.8% one year, and 15.6% five years from diagnosis.

Period of diagnosis ²	Gender	Observed survival		Age-standardised net survival	
		One-year	Five-years	One-year	Five-years
2009-2013	Male	18.7%	9.0%	25.3%	14.0%
	Female	15.2%	7.7%	22.2%	14.3%
	Both sexes	16.7%	8.3%	23.8%	14.2%
2012-2016 estimates	Male	16.7%	10.3%	24.3%	16.5%
	Female	17.7%	8.3%	25.1%	14.3%
	Both sexes	17.2%	9.2%	24.8%	15.6%

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.

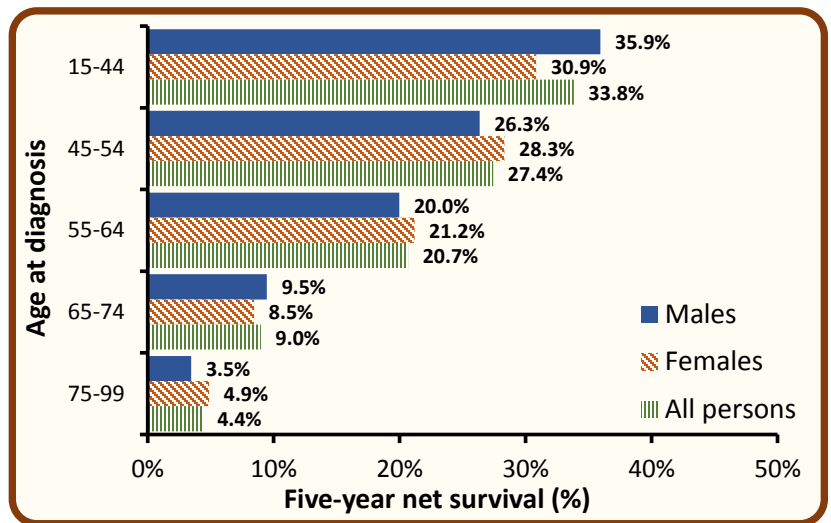
1. Annual averages based upon several years have been rounded to the nearest integer. Sums of numbers in table rows or columns may thus differ slightly from the given total.

2. Five-year survival for 2012-2016 are estimates as not all patients have five years worth of follow up.

ASNS: Age-standardised net survival

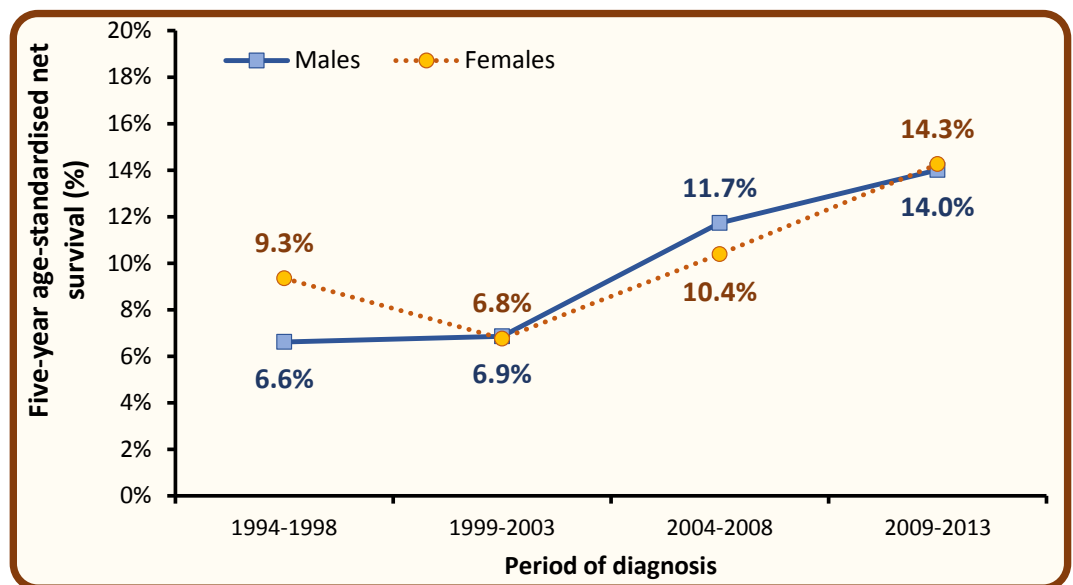
Survival by sex and age at diagnosis: Unknown primary cancer 2009-2013

- Survival from unknown primary cancer is strongly related to age at diagnosis with five-year survival decreasing as age increases.
- Five-year net survival ranged from 33.8% among patients aged 15-44 at diagnosis to 4.4% among those aged 75 and over.
- Five-year net survival among unknown primary cancer patients aged 75 and over was 3.5% for men and 4.9% for women.



Trends in age-standardised net survival by sex: Unknown primary cancer 1994-2013

- Among men five-year survival (ASNS) from unknown primary cancer increased from 6.6% for those diagnosed in 1994-1998 to 14.0% for those diagnosed in 2009-2013. This difference was statistically significant.
- Among women five-year survival (ASNS) from unknown primary cancer increased from 9.3% for those diagnosed in 1994-1998 to 14.3% for those diagnosed in 2009-2013. This difference was not statistically significant.



Prevalence

- At the end of 2018, there were 349 people (Males: 177; Females: 172) living with unknown primary cancer who had been diagnosed with the disease during 1994-2018.
- Of these, 50.7% were male, 51.0% were aged 70 and over, and 16.0% had been diagnosed in the previous year.

25-year prevalence refers to the number of cancer survivors who were alive at the end of 2018, and had been diagnosed with their cancer in the previous 25 years (i.e. 1994-2018).

Time since diagnosis	25-year prevalence								
	Aged 0-69			Aged 70+			All ages		
	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes
0-1 year	17	13	30	14	12	26	31	25	56
1-5 years	24	21	45	17	15	32	41	36	77
5-10 years	23	20	43	15	22	37	38	42	80
10-25 years	25	28	53	42	41	83	67	69	136
0-25 years	89	82	171	88	90	178	177	172	349

ASNS: Age-standardised net survival

Mortality

During 2014-2018:

- There were 124 male and 128 female deaths from unknown primary cancer each year.
- Death from unknown primary cancer made up 5.4% of male, and 6.1% of female cancer deaths (ex NMSC).

Deaths by sex and age at death: Unknown primary cancer 2014-2018¹

During 2014-2018:

- The median age at death was 76 for men and 79 for women.
- Risk of death from unknown primary cancer was strongly related to age, with 79.8% of men and 81.3% of women aged 65 years or more at time of death.
- 4.4% of unknown primary cancer deaths occurred among those aged under 50.

Age at death	Average deaths per year		
	Male	Female	Both sexes
0 - 49	5	5	11
50 - 64	19	17	38
65 - 74	30	26	57
75 +	69	78	146
All ages	124	128	251

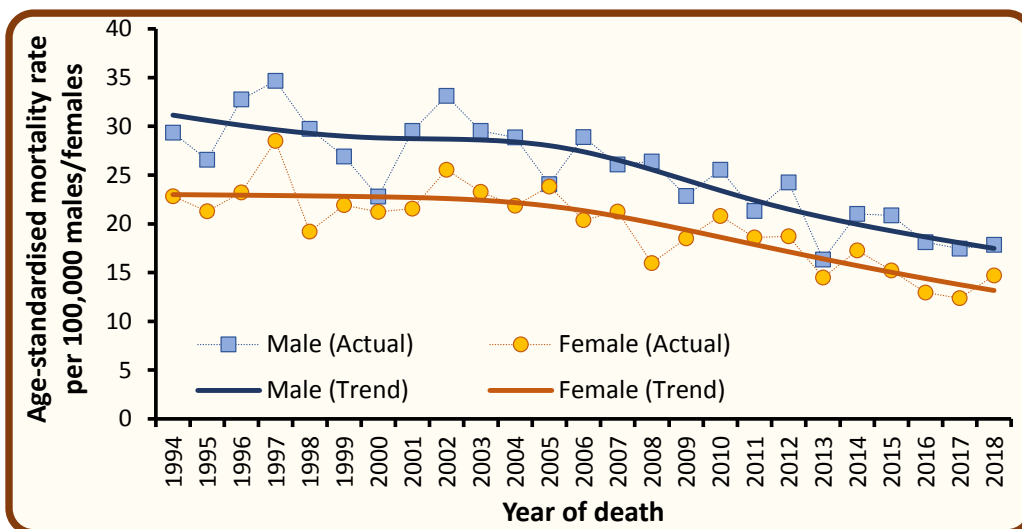
Deaths by sex and year of death: Unknown primary cancer 2009-2018

- Among males the average number of deaths each year from unknown primary cancer did not change between 2009-2013 and 2014-2018 with an average of 124 deaths per year.
- Among females the number of deaths from unknown primary cancer decreased by 12.3% from an annual average of 146 deaths in 2009-2013 to 128 deaths in 2014-2018.

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Male	113	146	120	141	98	128	133	116	117	125
Female	141	164	151	154	120	146	132	116	111	133
Both sexes	254	310	271	295	218	274	265	232	228	258

Trends in age-standardised mortality rates by sex: Unknown primary cancer 1994-2018

- Among males age-standardised mortality rates from unknown primary cancer decreased by 13.5% from 21.9 per 100,000 person years in 2009-2013 to 19.0 deaths per 100,000 persons years in 2014-2018. This difference was not statistically significant.
- Among females age-standardised mortality rates from unknown primary cancer decreased by 20.4% from 18.2 per 100,000 person years in 2009-2013 to 14.5 deaths per 100,000 persons years in 2014-2018. This difference was 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.

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NMSC: Non-melanoma skin cancer

Further Information

Further data is available from the NI Cancer Registry web site: www.qub.ac.uk/nicr
 Phone: +44 (0)28 9097 6028
 e-mail: nicr@qub.ac.uk



Acknowledgements

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