

Number of cases per year (2014-2018) ¹			Number of deaths per year (2014-2018) ¹		
Male	Female	Both sexes	Male	Female	Both sexes
687	626	1,313	554	469	1,023
Five-year net survival (2009-2013)			25-year prevalence (2018)		
Male	Female	Both sexes	Male	Female	Both sexes
11.2%	13.2%	12.1%	1,189	1,244	2,433

Incidence

During 2014-2018:

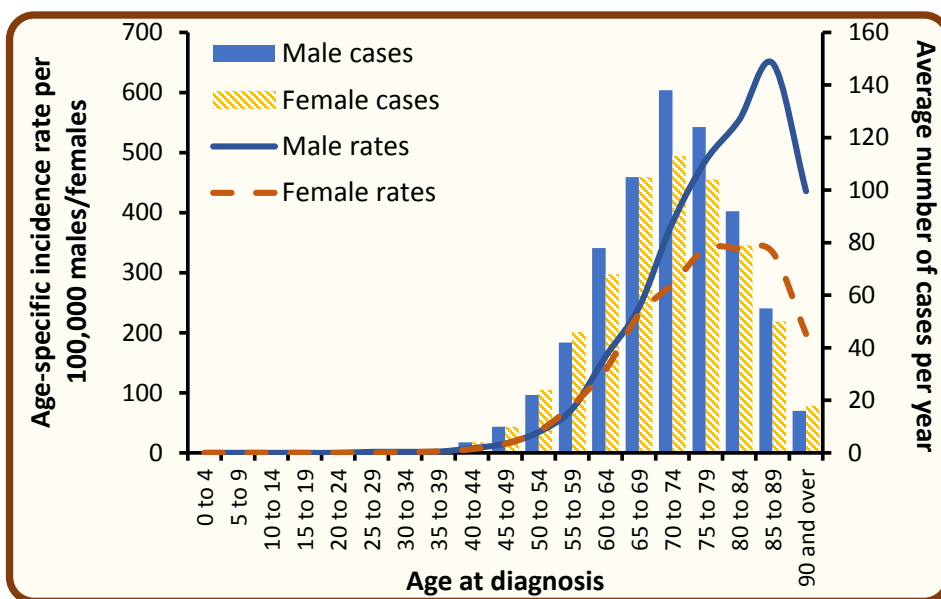
- There were 687 male and 626 female cases of lung cancer diagnosed each year.
- There were 75.1 male and 66.1 female cases of lung cancer per 100,000 males/females diagnosed each year.
- Lung cancer made up 14.3% of all male cancers (ex NMSC), and 13.0% of all female cancers (ex NMSC).
- The risk of developing lung cancer before the age of 75 was 1 in 22 for men and 1 in 26 for women.

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

During 2014-2018:

- The median age at diagnosis was 72 for men and 72 for women.
- Lung cancer risk increased with age, with 77.1% of men and 74.9% of women aged 65 years or more at diagnosis.
- 2.7% of cases were diagnosed among those aged under 50.

Age at diagnosis	Average cases per year		
	Male	Female	Both sexes
0 - 49	17	16	35
50 - 64	142	138	280
65 - 74	243	218	461
75 +	287	251	538
All ages	687	626	1,313



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

- Among males the number of cases of lung cancer increased by 5.2% from an annual average of 653 cases in 2009-2013 to 687 cases in 2014-2018.
- Among females the number of cases of lung cancer increased by 28.3% from an annual average of 488 cases in 2009-2013 to 626 cases in 2014-2018.

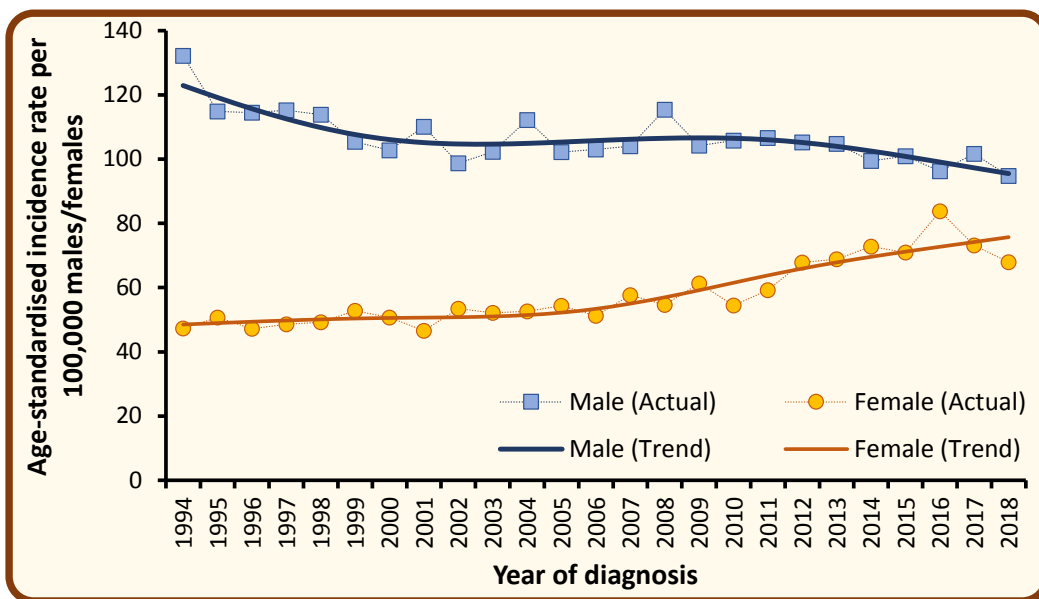
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Male	617	640	664	660	685	667	687	671	719	692
Female	464	420	465	537	555	592	595	716	631	596
Both sexes	1,081	1,060	1,129	1,197	1,240	1,259	1,282	1,387	1,350	1,288

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: Lung cancer 1994-2018

- Among males age-standardised incidence rates of lung cancer decreased by 6.4% from 105.4 per 100,000 person years in 2009-2013 to 98.6 cases per 100,000 persons years in 2014-2018. This difference was not statistically significant.
- Among females age-standardised incidence rates of lung cancer increased by 17.9% from 62.4 per 100,000 person years in 2009-2013 to 73.6 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.

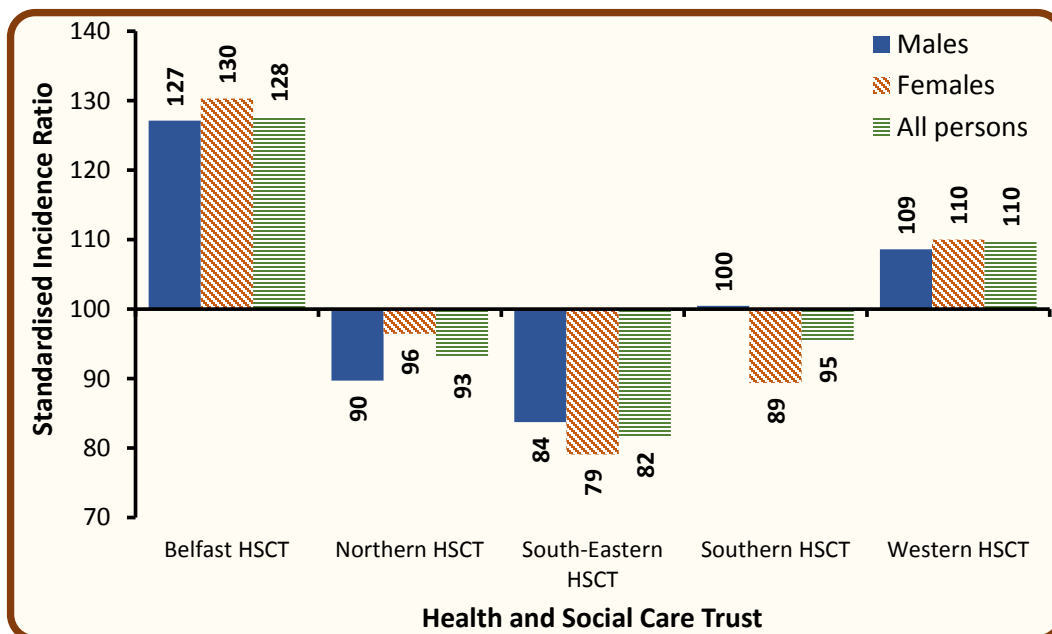
Incidence (cases and rates) by sex and Health and Social Care Trust (HSCT): Lung cancer 2014-2018¹

The annual number of lung cancer cases during 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 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	154	156	309
Northern HSCT	166	161	326
South-Eastern HSCT	122	104	226
Southern HSCT	128	102	230
Western HSCT	118	103	221
Northern Ireland	687	626	1,313



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: Lung cancer 2014-2018¹

The annual number of lung 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):

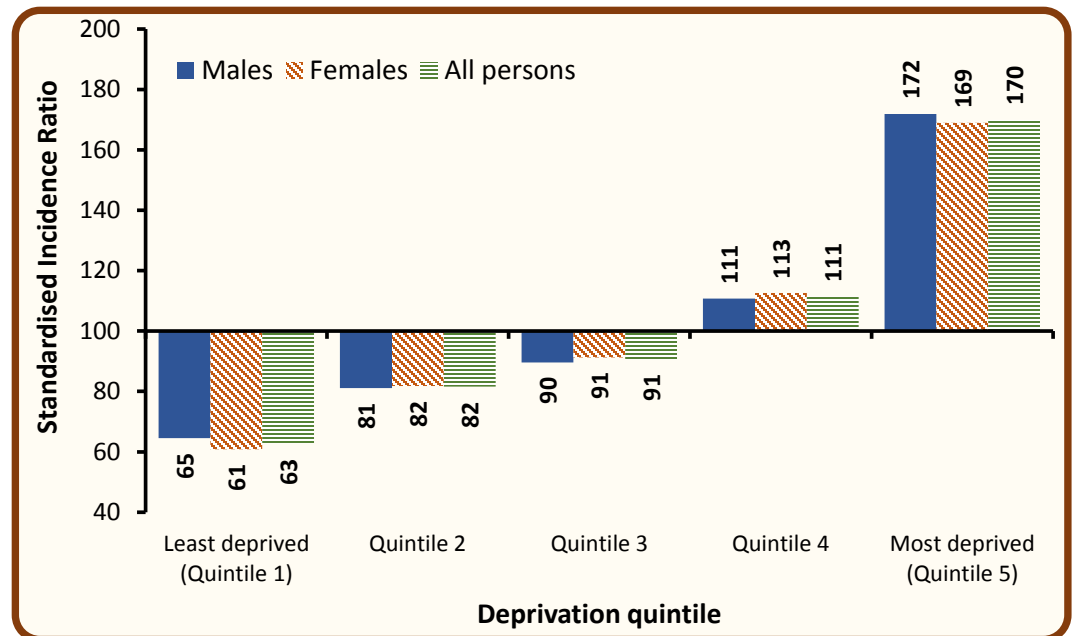
- in the most socio-economically deprived areas were 70.0% higher than the NI average.
- in the least socio-economically deprived areas were 37.2% lower than the NI average.

Deprivation quintile	Average cases per year		
	Male	Female	Both sexes
Least deprived (Quintile 1)	94	82	176
Quintile 2	119	107	225
Quintile 3	131	118	250
Quintile 4	152	142	294
Most deprived (Quintile 5)	191	177	368
Northern Ireland	687	626	1,313

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

- 31.5% of patients were alive one year and 8.9% were alive five years from a lung cancer diagnosis in 2009-2013. (observed survival)
- Age-standardised net survival (ASNS), which removes the effect of deaths from causes unrelated to cancer, was 34.8% one year and 12.1% five years from a lung cancer diagnosis in 2009-2013.
- Five-year survival (ASNS) for patients diagnosed in 2009-2013 was 11.2% among men and 13.2% among women.
- Estimates for survival (ASNS) of patients diagnosed during 2012-2016 are 37.4% one year, and 14.6% 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	30.3%	7.9%	33.9%	11.2%
	Female	33.2%	10.3%	36.2%	13.2%
	Both sexes	31.5%	8.9%	34.8%	12.1%
2012-2016 estimates	Male	32.4%	9.0%	35.4%	12.7%
	Female	36.2%	12.7%	39.7%	16.6%
	Both sexes	34.2%	10.8%	37.4%	14.6%

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.

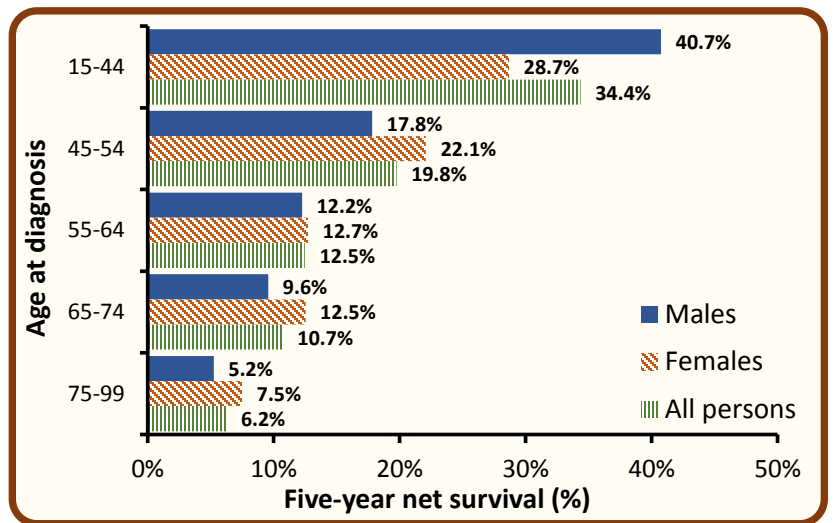
1. Annual averages based upon several years have been rounded to the nearest integer. Sums of numbers in table rows or columns may thus differ slightly from the given total.

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

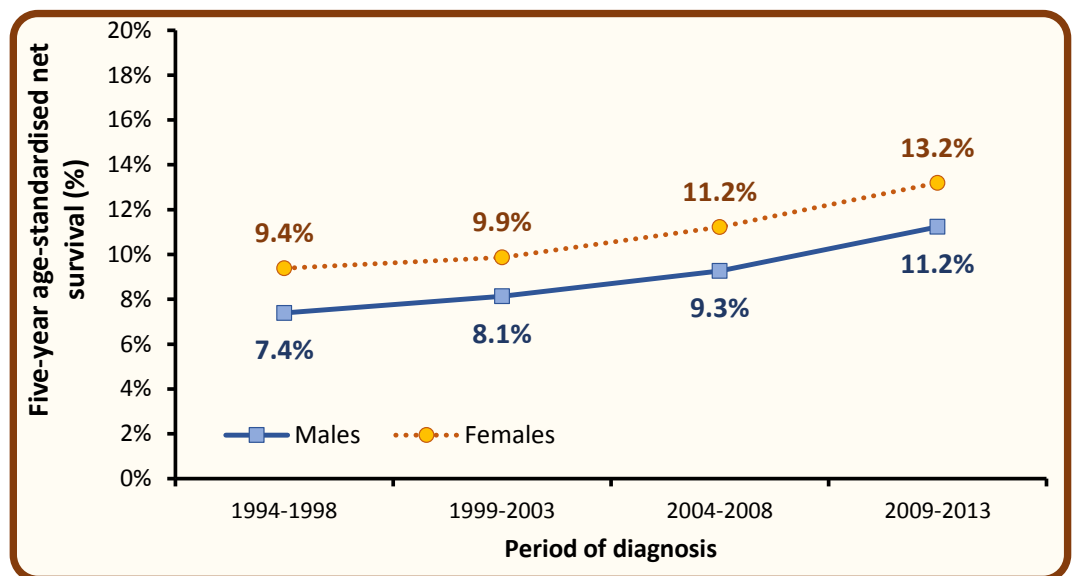
Survival by sex and age at diagnosis: Lung cancer 2009-2013

- Survival from lung cancer is strongly related to age at diagnosis with five-year survival decreasing as age increases.
- Five-year net survival ranged from 34.4% among patients aged 15-44 at diagnosis to 6.2% among those aged 75 and over.
- Five-year net survival among lung cancer patients aged 75 and over was 5.2% for men and 7.5% for women.



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

- Among men five-year survival (ASNS) from lung cancer increased from 7.4% for those diagnosed in 1994-1998 to 11.2% for those diagnosed in 2009-2013. This difference was statistically significant.
- Among women five-year survival (ASNS) from lung cancer increased from 9.4% for those diagnosed in 1994-1998 to 13.2% for those diagnosed in 2009-2013. This difference was statistically significant.



Prevalence

- At the end of 2018, there were 2,433 people (Males: 1,189; Females: 1,244) living with lung cancer who had been diagnosed with the disease during 1994-2018.
- Of these, 48.9% were male, 58.9% were aged 70 and over, and 30.5% 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	148	163	311	231	200	431	379	363	742
1-5 years	199	231	430	262	314	576	461	545	1,006
5-10 years	71	86	157	110	102	212	181	188	369
10-25 years	54	48	102	114	100	214	168	148	316
0-25 years	472	528	1,000	717	716	1,433	1,189	1,244	2,433

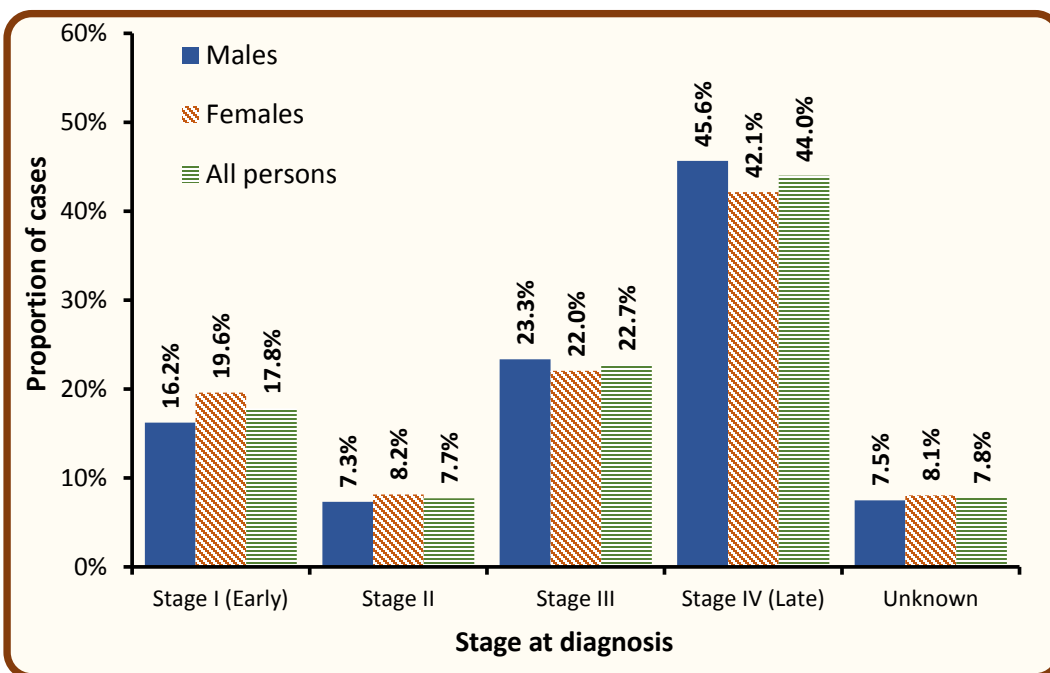
Cancer stage

Incidence by sex and stage at diagnosis: Lung cancer 2013-2017¹

During 2013-2017:

- 92.2% of cases diagnosed had a stage assigned.
- 17.8% of cases were diagnosed at stage I. (19.3% of staged cases)
- 44.0% of cases were diagnosed at stage IV. (47.7% of staged cases)
- Among cases which were staged, 49.3% of male cases were diagnosed at stage IV, compared to 45.8% of female cases.

Stage at diagnosis	Average cases per year		
	Male	Female	Both sexes
Stage I (Early)	111	121	232
Stage II	50	50	101
Stage III	160	136	296
Stage IV (Late)	313	260	573
Unknown	51	50	101
All stages	686	618	1,304



Cancer stage describes the size of a cancer and how far it has grown and spread.

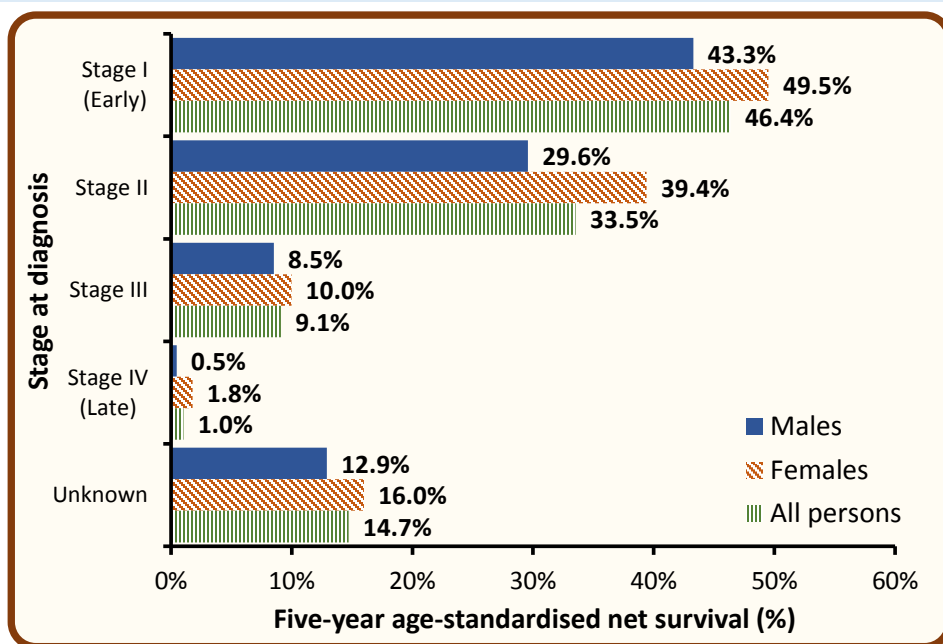
This information is used to help decide what treatments are needed.

The classification used here to stage cancer is the TNM (version 7) classification.

Data on cancer stage in 2018, classified using TNM (version 8), is available online at www.qub.ac.uk/nicr

Survival by sex and stage at diagnosis: Lung cancer 2009-2013

- Stage at diagnosis is one of the most important factors in lung cancer survival with five-year survival decreasing as stage increases.
- Five-year survival (ASNS) ranged from 46.4% for early stage (stage I) disease to 1.0% for late stage (stage IV) disease.
- Five-year survival (ASNS) for unstaged lung cancer was 14.7%.
- Five-year survival (ASNS) for stage IV lung cancer was 0.5% for men, compared to 1.8% for women.



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ASNS: Age-standardised net survival

Mortality

During 2014-2018:

- There were 554 male and 469 female deaths from lung cancer each year.
- Death from lung cancer made up 24.0% of male cancer deaths (ex NMSC), and 22.4% of female cancer deaths (ex NMSC).

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

During 2014-2018:

- The median age at death was 73.0 for men and 73.0 for women.
- Risk of death from lung cancer was strongly related to age, with 78.7% of men and 77.6% of women aged 65 years or more at time of death.
- 2.2% of lung cancer deaths occurred among those aged under 50.

Age at death	Average deaths per year		
	Male	Female	Both sexes
0 - 49	10	12	23
50 - 64	108	92	200
65 - 74	183	156	339
75 +	253	208	460
All ages	554	469	1,023

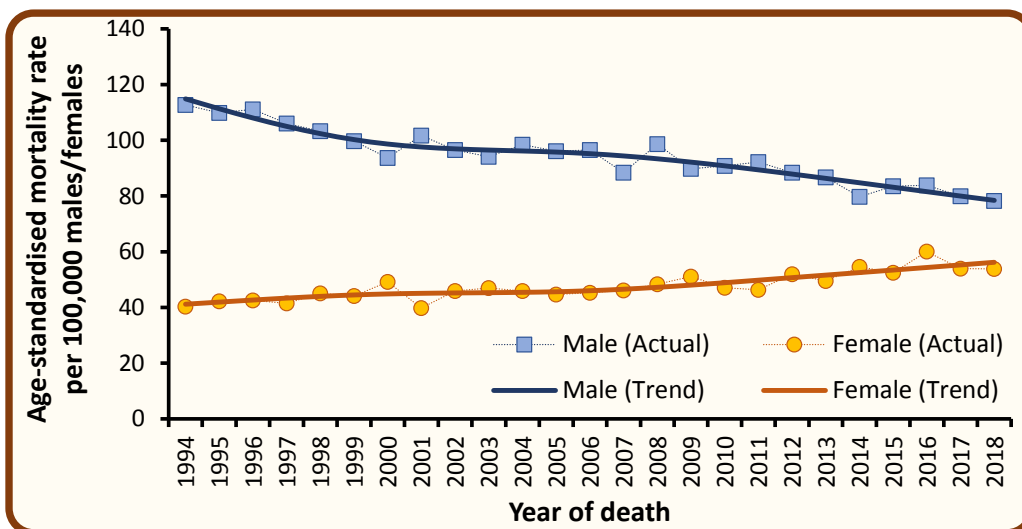
Deaths by sex and year of death: Lung cancer 2009-2018

- Among males the number of deaths from lung cancer increased by 1.8% from an annual average of 544 deaths in 2009-2013 to 554 deaths in 2014-2018.
- Among females the number of deaths from lung cancer increased by 21.5% from an annual average of 386 deaths in 2009-2013 to 469 deaths in 2014-2018.

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Male	518	541	559	543	559	527	556	572	558	557
Female	389	365	363	416	398	449	439	512	469	475
Both sexes	907	906	922	959	957	976	995	1,084	1,027	1,032

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

- Among males age-standardised mortality rates from lung cancer decreased by 9.5% from 89.5 per 100,000 person years in 2009-2013 to 81.0 deaths per 100,000 persons years in 2014-2018. This difference was statistically significant.
- Among females age-standardised mortality rates from lung cancer increased by 11.7% from 49.2 per 100,000 person years in 2009-2013 to 55.0 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.

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

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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