Leukaemia

Number of cases per year (2014-2018) [1]			Number of deaths per year (2014-2018) [1]		
Male	Female	Both sexes	Male	Female	Both sexes
142	102	244	65	49	114
Five-year net survival (2009-2013)			**25-year prevalence (2018)**		
Male	Female	Both sexes	Male	Female	Both sexes
55.0%	59.0%	56.6%	1,050	784	1,834

Incidence

During 2014-2018:

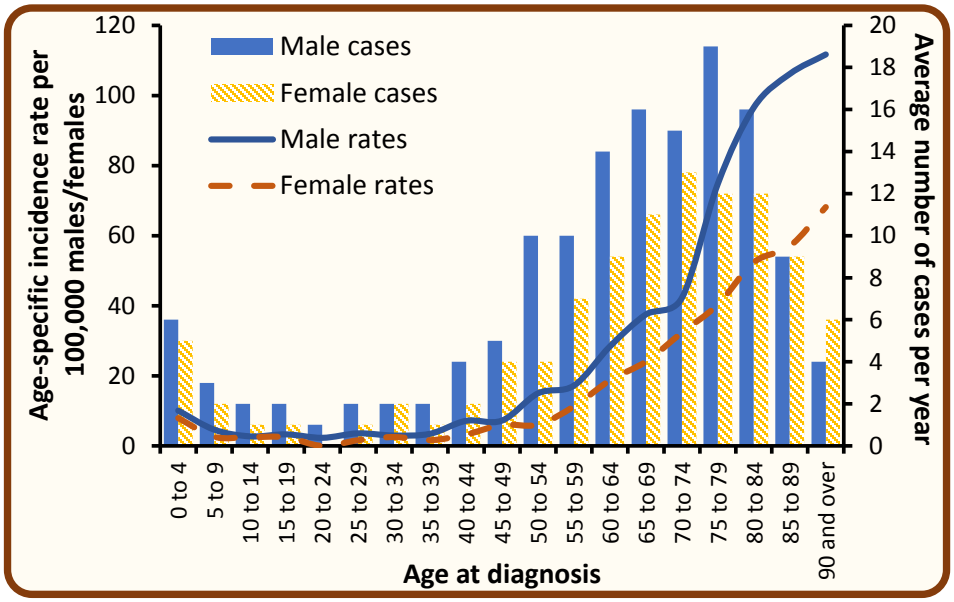
- There were 142 male and 102 female cases of leukaemia diagnosed each year.
- There were 15.5 male and 10.8 female cases of leukaemia per 100,000 males/females diagnosed each year.
- Leukaemia made up 2.9% of all male cancers (ex NMSC), and 2.1% of all female cancers (ex NMSC).
- The risk of developing leukaemia before the age of 75 was 1 in 107 for men and 1 in 162 for women.

Incidence by sex and age at diagnosis: Leukaemia 2014-2018[1]

During 2014-2018:

- The median age at diagnosis was 67 for men and 70 for women.
- Leukaemia risk varies with age, with 55.6% of men and 61.8% of women aged 65 years or more at diagnosis.
- 19.7% of cases were diagnosed among those aged under 50.

Age at diagnosis	Average cases per year		
	Male	Female	Both sexes
0 - 49	29	19	48
50 - 64	34	20	53
65 - 74	31	24	55
75 +	48	39	87
All ages	142	102	244



Incidence by sex and year of diagnosis: Leukaemia 2009-2018

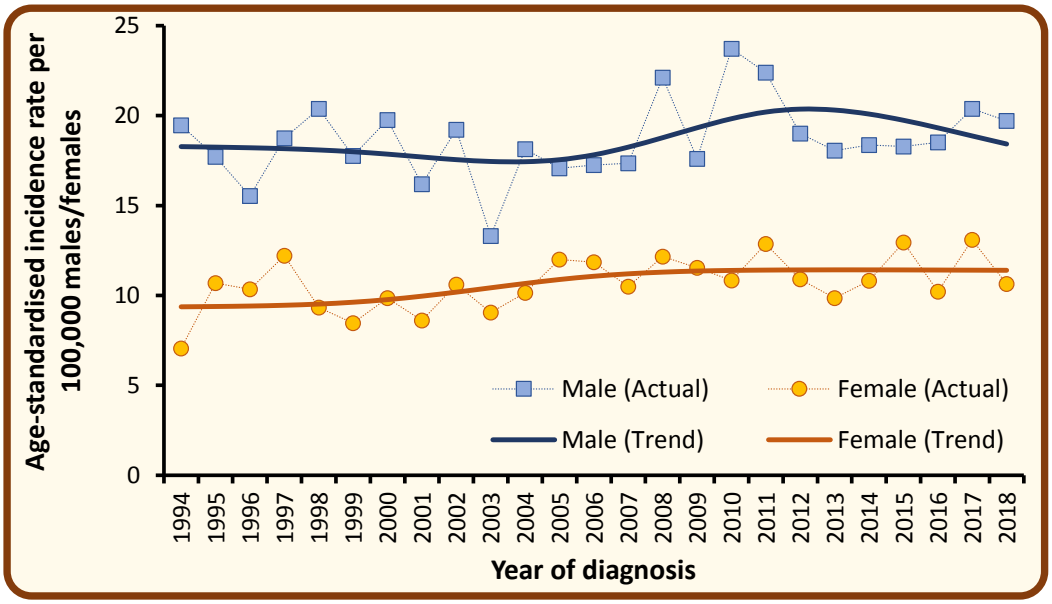
- Among males the number of cases of leukaemia increased by 7.6% from an annual average of 132 cases in 2009-2013 to 142 cases in 2014-2018.
- Among females the number of cases of leukaemia increased by 9.7% from an annual average of 93 cases in 2009-2013 to 102 cases in 2014-2018.

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Male	111	144	144	129	132	128	134	137	154	156
Female	93	89	108	91	85	95	113	91	116	97
Both sexes	204	233	252	220	217	223	247	228	270	253

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: Leukaemia 1994-2018

- Among males age-standardised incidence rates of leukaemia decreased by 5.3% from 20.1 per 100,000 person years in 2009-2013 to 19.0 cases per 100,000 persons years in 2014-2018. This difference was not statistically significant.
- Among females age-standardised incidence rates of leukaemia increased by 3.0% from 11.2 per 100,000 person years in 2009-2013 to 11.6 cases per 100,000 persons years in 2014-2018. 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).

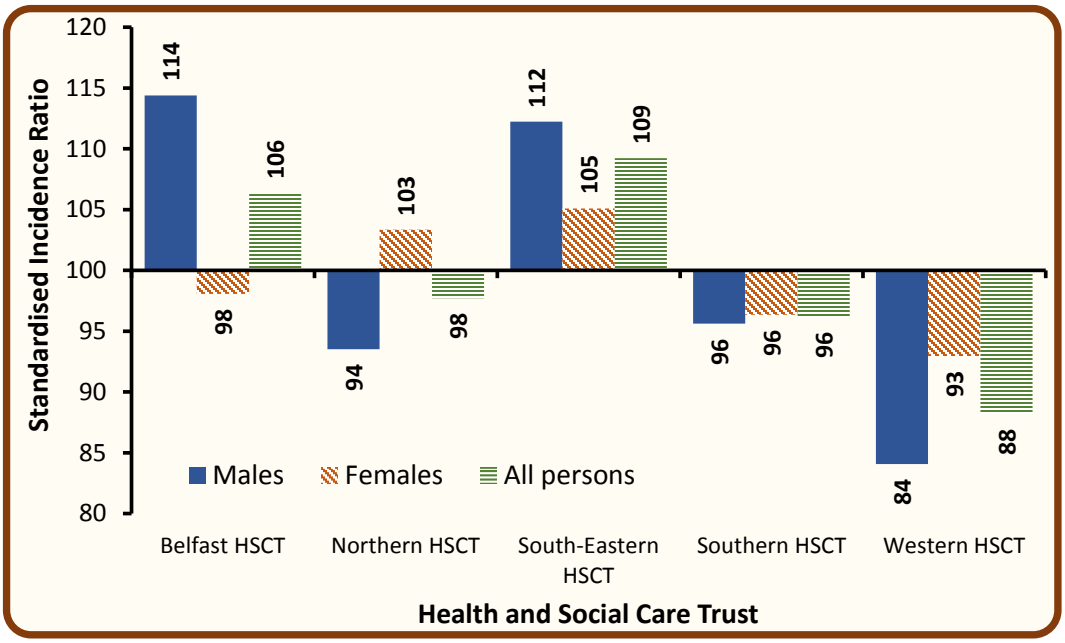
They thus represent changes other than those caused by population growth and/or ageing.

Incidence (cases and rates) by sex and Health and Social Care Trust (HSCT): Leukaemia 2014-2018[1]

The annual number of leukaemia 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 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		
	Male	Female	Both sexes
Belfast HSCT	29	19	49
Northern HSCT	35	28	63
South-Eastern HSCT	33	22	55
Southern HSCT	26	18	44
Western HSCT	19	14	33
Northern Ireland	142	102	244



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.

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.
HSCT: Health and Social Care Trust

Incidence (cases and rates) by sex and deprivation quintile: Leukaemia 2014-2018[1]

The annual number of leukaemia 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):

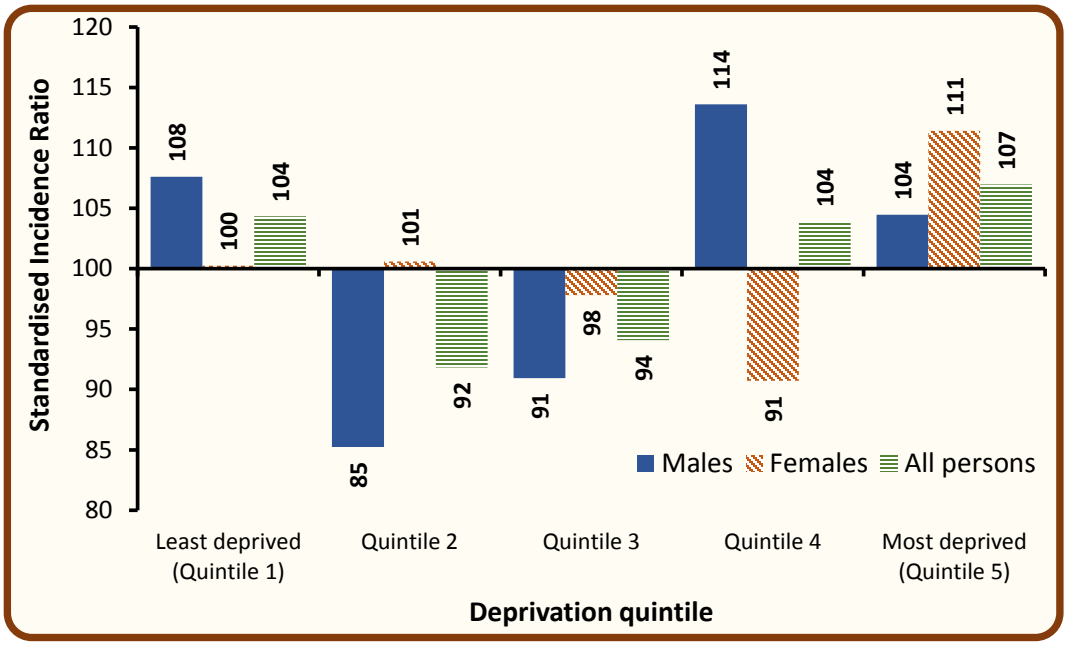
- in the most socio-economically deprived areas did not vary significantly from the NI average.
- in the least socio-economically deprived areas did not vary significantly from the NI average.

Deprivation quintile	Average cases per year		
	Male	Female	Both sexes
Least deprived (Quintile 1)	31	22	53
Quintile 2	26	21	47
Quintile 3	27	21	48
Quintile 4	32	19	51
Most deprived (Quintile 5)	25	20	45
Northern Ireland	142	102	244

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

- 69.6% of patients were alive one year and 46.5% were alive five years from a leukaemia diagnosis in 2009-2013. (observed survival)
- Age-standardised net survival (ASNS), which removes the effect of deaths from causes unrelated to cancer, was 73.8% one year and 56.6% five years from a leukaemia diagnosis in 2009-2013.
- Five-year survival (ASNS) for patients diagnosed in 2009-2013 was 55.0% among men and 59.0% among women.
- Estimates for survival (ASNS) of patients diagnosed during 2012-2016 are 72.9% one year, and 59.0% 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	70.3%	45.7%	73.4%	55.0%
	Female	68.7%	47.6%	74.3%	59.0%
	Both sexes	69.6%	46.5%	73.8%	56.6%
2012-2016 estimates	Male	68.7%	50.1%	71.8%	59.6%
	Female	68.0%	45.7%	74.5%	58.8%
	Both sexes	68.4%	48.3%	72.9%	59.0%

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.

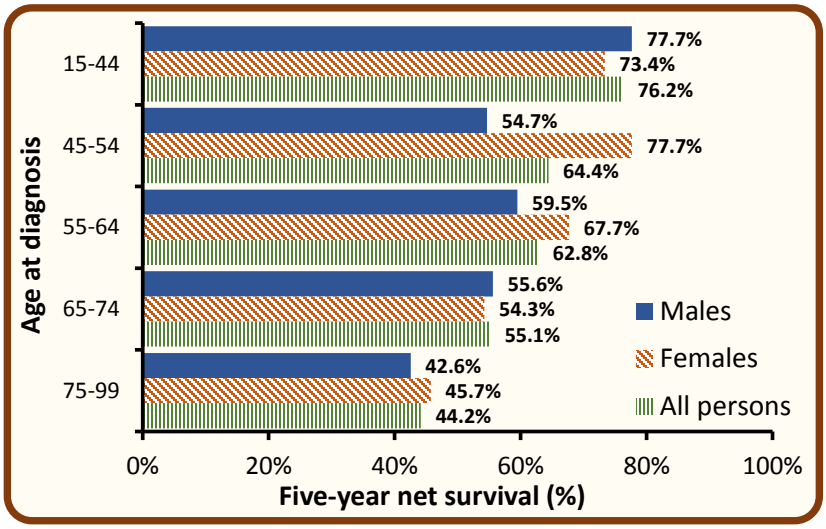
1. Annual averages based upon several years have been rounded to the nearest integer. Sums of numbers in table rows or columns may thus differ slightly from the given total.

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

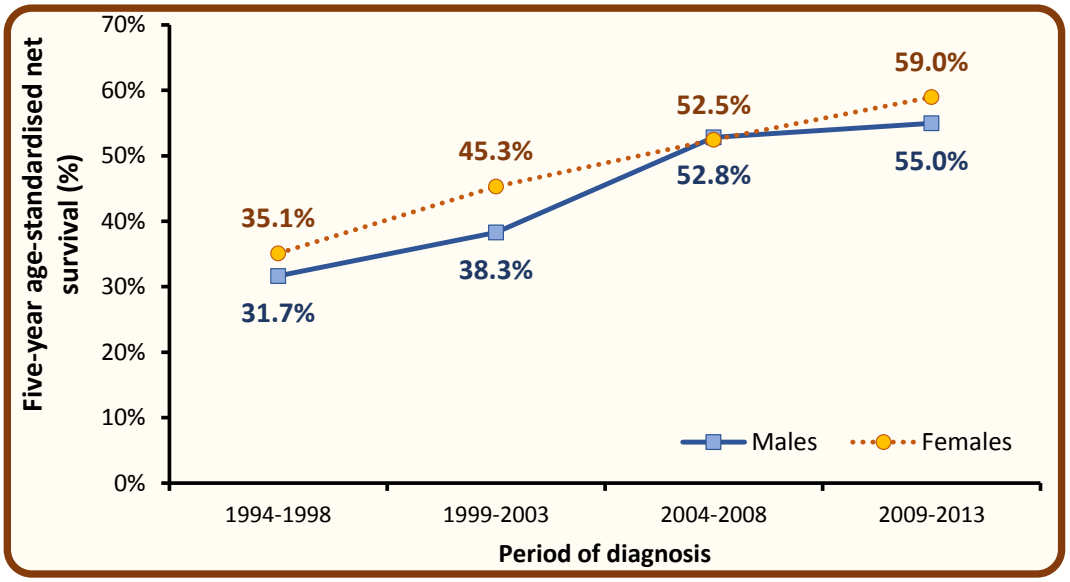
Survival by sex and age at diagnosis: Leukaemia 2009-2013

- Survival from leukaemia is strongly related to age at diagnosis with five-year survival decreasing as age increases.
- Five-year net survival ranged from 76.2% among patients aged 15-44 at diagnosis to 44.2% among those aged 75 and over.
- Five-year net survival among leukaemia patients aged 75 and over was 42.6% for men and 45.7% for women.



Trends in age-standardised net survival by sex: Leukaemia 1994-2013[1]

- Among men five-year survival (ASNS) from leukaemia increased from 31.7% for those diagnosed in 1994-1998 to 55.0% for those diagnosed in 2009-2013. This difference was statistically significant.
- Among women five-year survival (ASNS) from leukaemia increased from 35.1% for those diagnosed in 1994-1998 to 59.0% for those diagnosed in 2009-2013. This difference was statistically significant.



Prevalence

- At the end of 2018, there were 1,834 people (Males: 1,050; Females: 784) living with leukaemia who had been diagnosed with the disease during 1994-2018.
- Of these, 57.3% were male, 38.4% were aged 70 and over, and 11.9% had been diagnosed in the previous year.

25-year prevalence refers to the number of cancer survivors who were alive at the end of 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	82	44	126	52	40	92	134	84	218
1-5 years	226	138	364	107	100	207	333	238	571
5-10 years	148	100	248	118	101	219	266	201	467
10-25 years	218	173	391	99	88	187	317	261	578
0-25 years	674	455	1,129	376	329	705	1,050	784	1,834

ASNS: Age-standardised net survival

Mortality

During 2014-2018:

- There were 65 male and 49 female deaths from leukaemia each year.
- Death from leukaemia made up 2.8% of male cancer deaths (ex NMSC), and 2.3% of female cancer deaths (ex NMSC).

Deaths by sex and age at death: Leukaemia 2014-2018[1]

During 2014-2018:

- The median age at death was 75 for men and 78 for women.
- Risk of death from leukaemia was strongly related to age, with 83.1% of men and 83.7% of women aged 65 years or more at time of death.
- 7.0% of leukaemia deaths occurred among those aged under 50.

Age at death	Average deaths per year		
	Male	Female	Both sexes
0 - 49	4	2	8
50 - 64	8	3	12
65 - 74	19	12	30
75 +	35	29	64
All ages	65	49	114

Deaths by sex and year of death: Leukaemia 2009-2018

- Among males the average number of deaths each year from leukaemia did not change between 2009-2013 and 2014-2018 with an average of 65 deaths per year.

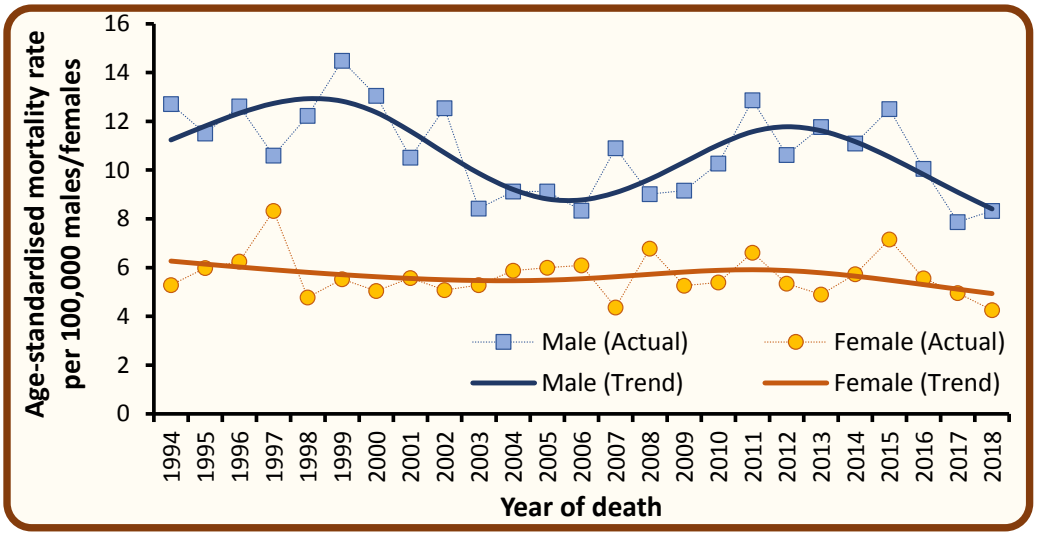
- Among females the number of deaths from leukaemia increased by 8.9% from an annual average of 45 deaths in 2009-2013 to 49 deaths in 2014-2018.

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Male	54	59	76	63	72	70	81	65	52	57
Female	41	43	54	43	42	49	62	49	45	39
Both sexes	95	102	130	106	114	119	143	114	97	96

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

- Among males age-standardised mortality rates from leukaemia decreased by 9.8% from 11.0 per 100,000 person years in 2009-2013 to 9.9 deaths per 100,000 persons years in 2014-2018. This difference was not statistically significant.

- Among females age-standardised mortality rates from leukaemia increased by 0.1% from 5.50 per 100,000 person years in 2009-2013 to 5.51 deaths per 100,000 persons years in 2014-2018. 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.

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
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