Lymphoma

1993-2021

(ICD10 codes: C81-C86)

Northern Ireland Cancer Registry, 2024

An official statistics publication

ABOUT THIS REPORT

Contents

This report includes information on incidence of lymphoma as recorded by the Northern Ireland Cancer Registry (NICR). Incidence data is available annually from 1993 to 2021, however in order to provide stable and robust figures the majority of information presented in this report is based upon the average number of cases diagnosed in the last five years.

Methodology

The methodology used in producing the statistics presented in this report, including details of data sources, classifications and coding are available in the accompanying methodology report available at: www.qub.ac.uk/research-centres/nicr/CancerInformation/official-statistics.

Official statistics

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. Further information on this code is available at code.statisticsauthority.gov.uk.

Cancer mortality data

The NI Statistics and Research Agency (NISRA) is the official statistics provider of cancer mortality data in Northern Ireland. However, for completeness, data on cancer mortality is also provided in this report. While analysis is conducted by NICR staff, the original data is provided courtesy of the General Register Office (NI) via the Department of Health.

Reuse of information

The information in this report (and any supplementary material) is available for reuse free of charge and without the need to contact NICR. However, we request that NICR is acknowledged as the source of any reused information. The following reference is recommended:
Northern Ireland Cancer Registry 2024. Lymphoma: 1993-2021. Available at: www.qub.ac.uk/research-centres/nicr

Further information

Further information is available at: www.qub.ac.uk/research-centres/nicr

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Acknowledgements

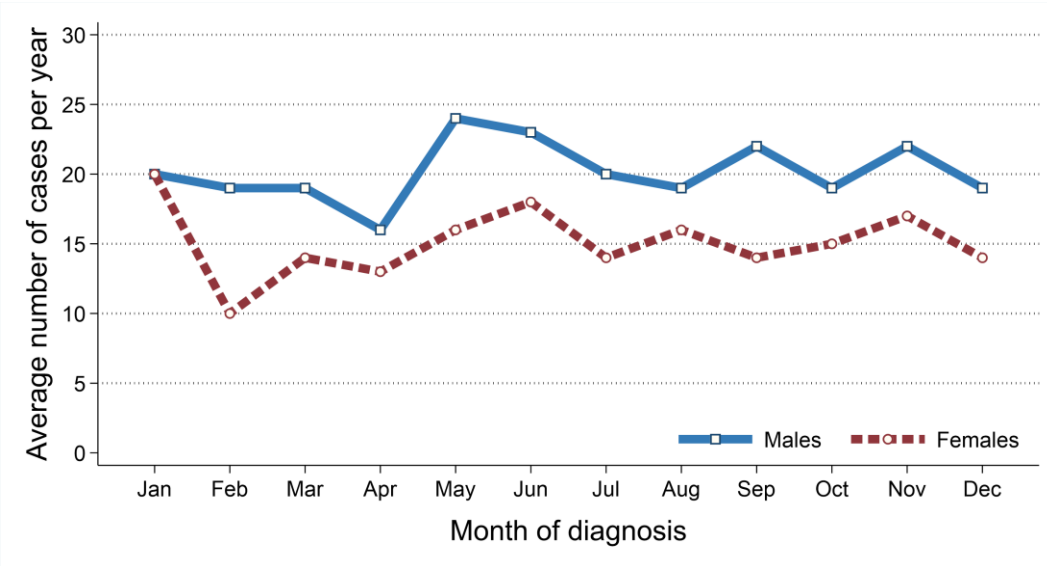
The Northern Ireland Cancer Registry (NICR) uses data provided by patients and collected by the health service as part of their care and support.

NICR is funded by the Public Health Agency and is based in Queen's University, Belfast.

INCIDENCE

- There were 2,123 cases of lymphoma diagnosed during 2017-2021 in Northern Ireland. On average this was 425 cases per year.
- During this period 42.8% of lymphoma cases were among women (Male cases: 1,215, Female cases: 908). On average there were 243 male and 182 female cases of lymphoma per year.
- The most common diagnosis month during 2017-2021 was May among males with 24 cases per year and January among females with 20 cases per year.

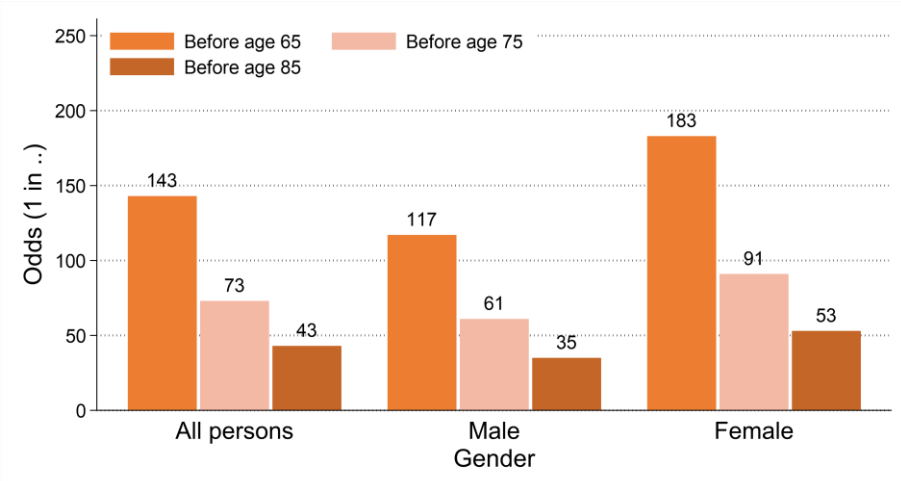
Figure 1: Average number of cases of lymphoma per year in 2017-2021 by month of diagnosis



Month of diagnosis	Average number of cases per year	
	Males	Females
January	20	20
February	19	10
March	19	14
April	16	13
May	24	16
June	23	18
July	20	14
August	19	16
September	22	14
October	19	15
November	22	17
December	19	14

- Lymphoma made up 4.7% of all male and 3.7% of all female cancer cases (excluding non-melanoma skin cancer).
- The lymphoma incidence rates for each gender were 26.1 cases per 100,000 males and 18.9 cases per 100,000 females.
- The odds of developing lymphoma before age 85 was 1 in 35 for men and 1 in 53 for women.

Figure 2: Odds of developing lymphoma in 2017-2021



INCIDENCE BY AGE

- The median age of patients diagnosed with lymphoma during 2017-2021 was 69 years (Males: 68, Females: 70).
- The risk of developing lymphoma varied by age, with 31.2% of men and 36.5% of women diagnosed with lymphoma aged 75 and over at diagnosis.
- In contrast, 22.4% of patients diagnosed with lymphoma were aged 0 to 54 at diagnosis.

Figure 3: Average number of cases of lymphoma diagnosed per year in 2017-2021 by age at diagnosis

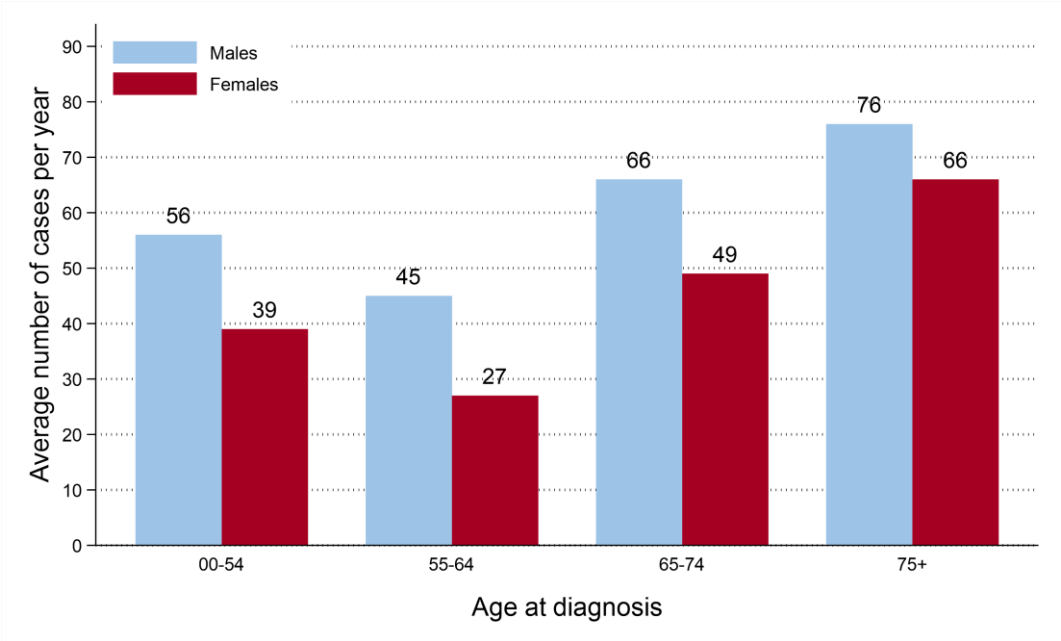
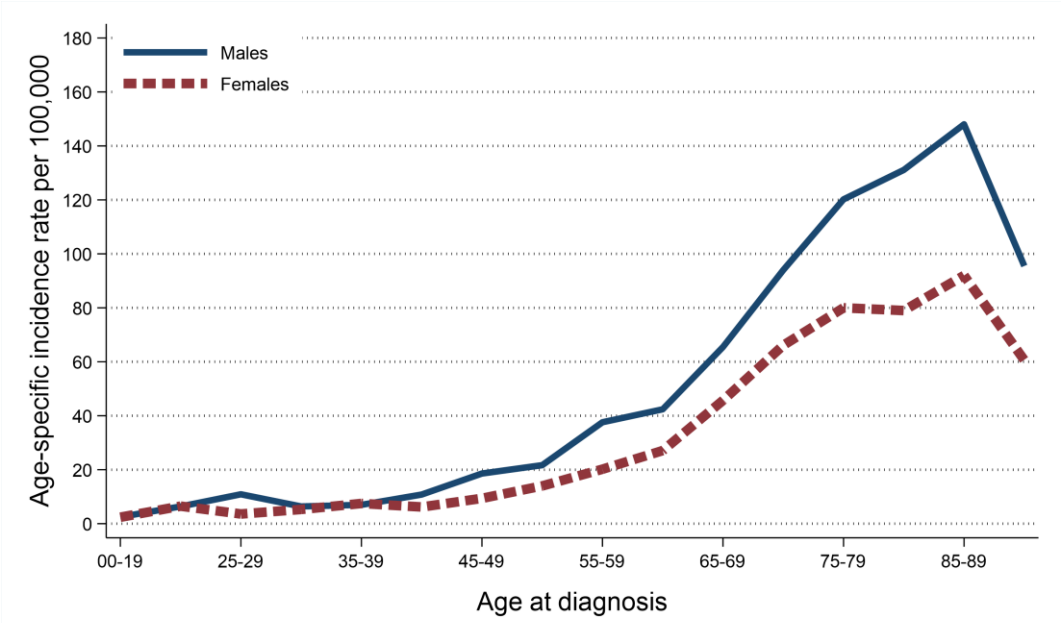


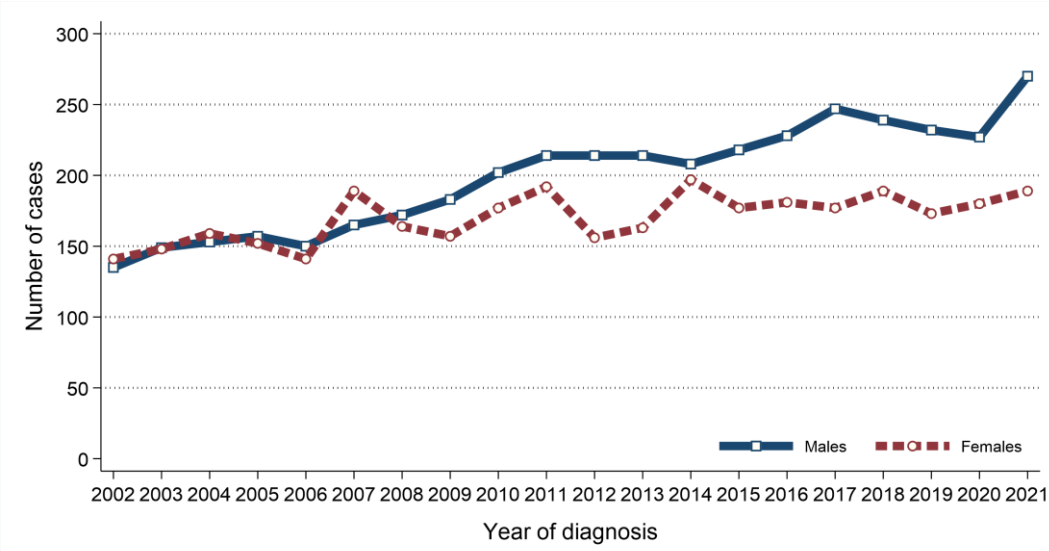
Figure 4: Age-specific incidence rates of lymphoma in 2017-2021



INCIDENCE TRENDS

- The number of cases of lymphoma among males increased between 2012-2016 and 2017-2021 by 12.3% from 1,082 cases (216 cases per year) to 1,215 cases (243 cases per year).
- The number of cases of lymphoma among females increased between 2012-2016 and 2017-2021 by 3.9% from 874 cases (175 cases per year) to 908 cases (182 cases per year).

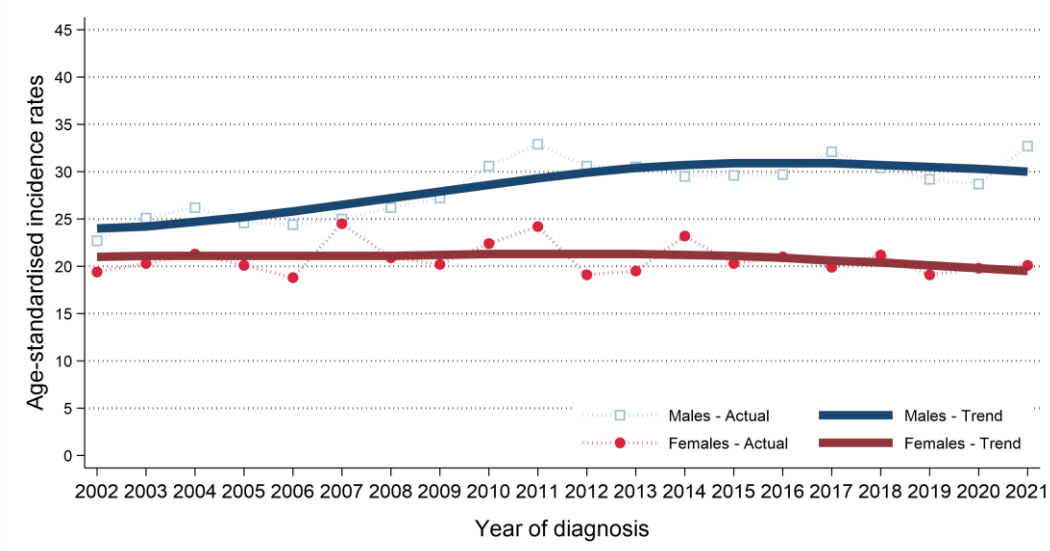
Figure 5: Trends in number of cases of lymphoma diagnosed from 2002 to 2021



Year of diagnosis	Number of cases	
	Males	Females
2012	214	156
2013	214	163
2014	208	197
2015	218	177
2016	228	181
2017	247	177
2018	239	189
2019	232	173
2020	227	180
2021	270	189

- Male age-standardised lymphoma incidence rates increased between 2012-2016 and 2017-2021 by 2.3% from 29.9 to 30.6 cases per 100,000 males. This change was not statistically significant.
- Female age-standardised lymphoma incidence rates decreased between 2012-2016 and 2017-2021 by 2.9% from 20.6 to 20.0 cases per 100,000 females. This change was not statistically significant.

Figure 6: Trends in incidence rates of lymphoma from 2002 to 2021



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).

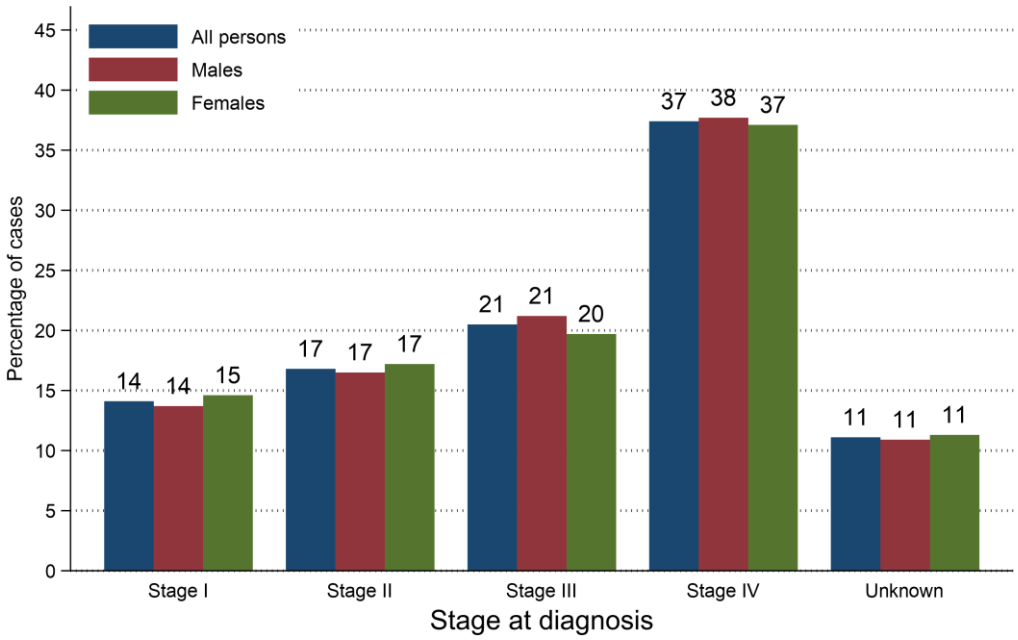
INCIDENCE BY STAGE AT DIAGNOSIS

- During 2017-2021 88.9% of lymphoma cases had a stage assigned.
- 14.1% of lymphoma cases were diagnosed at Stage I. (15.9% of staged cases)
- 37.4% of lymphoma cases were diagnosed at Stage IV. (42.1% of staged cases)

Table 1: Number of cases of lymphoma diagnosed in 2017-2021 by stage at diagnosis

Stage at diagnosis	All persons		Male		Female	
	Total cases in period	Average cases per year	Total cases in period	Average cases per year	Total cases in period	Average cases per year
All stages	**2,123**	**425**	**1,215**	**243**	**908**	**182**
	.	.	.	.	.	.
Stage I	300	60	167	33	133	27
Stage II	356	71	200	40	156	31
Stage III	436	87	257	51	179	36
Stage IV	795	159	458	92	337	67
Unknown	236	47	133	27	103	21

Figure 7: Proportion of cases of lymphoma diagnosed in 2017-2021 by stage at diagnosis



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).

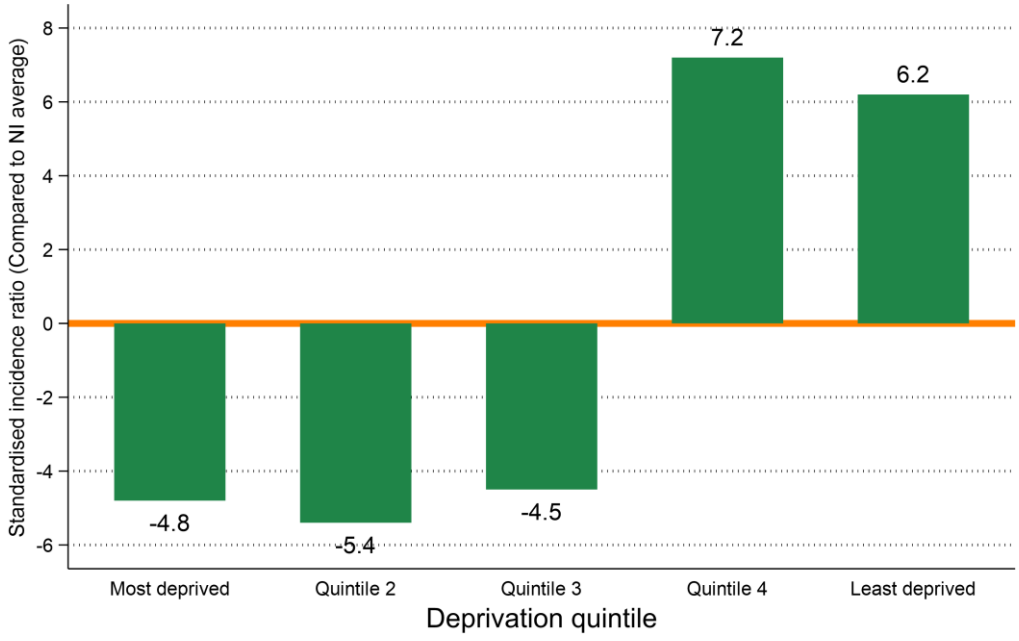
INCIDENCE BY DEPRIVATION

- The number of cases of lymphoma diagnosed during 2017-2021 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 did not vary significantly from the NI average.
  - in the least socio-economically deprived areas did not vary significantly from the NI average.

Table 2: Number of cases of lymphoma diagnosed in 2017-2021 by deprivation quintile

Deprivation quintile	All persons		Male		Female	
	Total cases in period	Average cases per year	Total cases in period	Average cases per year	Total cases in period	Average cases per year
Northern Ireland	**2,123**	**425**	**1,215**	**243**	**908**	**182**
	.	.	.	.	.	.
Most deprived	338	68	200	40	138	28
Quintile 2	403	81	230	46	173	35
Quintile 3	427	85	239	48	188	38
Quintile 4	482	96	265	53	217	43
Least deprived	473	95	281	56	192	38
Unknown	0	0	0	0	0	0

Figure 8: Standardised incidence ratio comparing deprivation quintile to Northern Ireland for lymphoma diagnosed in 2017-2021



Standardised incidence ratios compare incidence rates in each deprivation quintile with the Northern Ireland incidence rate.

A value above 0 means that incidence rates in that deprivation quintile 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.

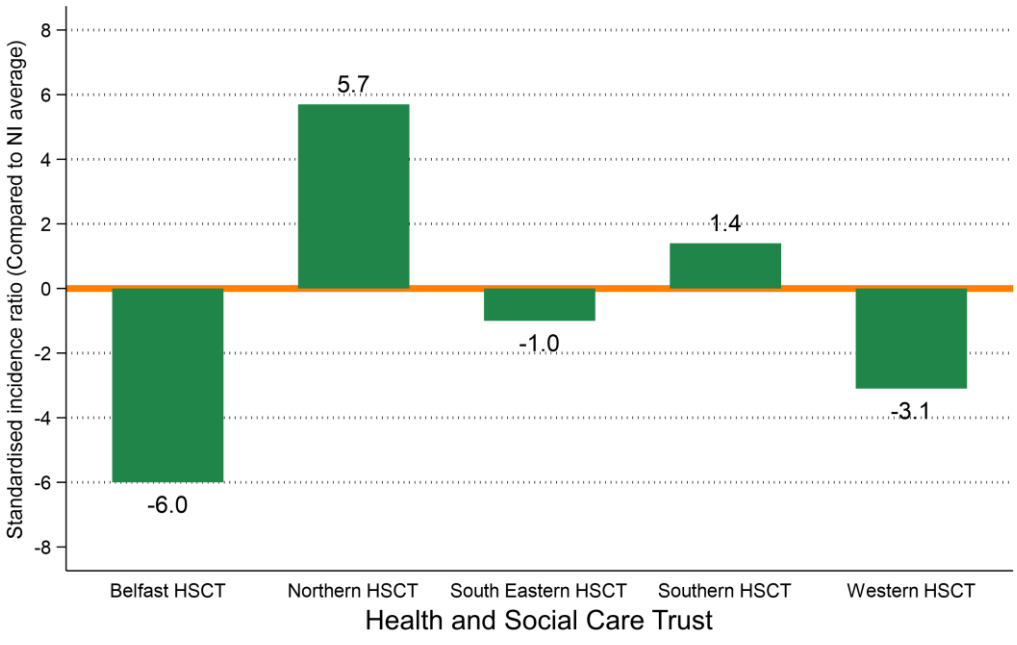
INCIDENCE BY HEALTH AND SOCIAL CARE TRUST

- The number of cases of lymphoma diagnosed during 2017-2021 varied in each Health and Social Care Trust 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 did not vary significantly from the NI average.

Table 3: Number of cases of lymphoma diagnosed in 2017-2021 by Health and Social Care Trust

Health and Social Care Trust	All persons		Male		Female	
	Total cases in period	Average cases per year	Total cases in period	Average cases per year	Total cases in period	Average cases per year
Northern Ireland	**2,123**	**425**	**1,215**	**243**	**908**	**182**
	.	.	.	.	.	.
Belfast HSCT	364	73	207	41	157	31
Northern HSCT	593	119	348	70	245	49
South Eastern HSCT	437	87	252	50	185	37
Southern HSCT	408	82	218	44	190	38
Western HSCT	321	64	190	38	131	26
Unknown	0	0	0	0	0	0

Figure 9: Standardised incidence ratio comparing Health and Social Care Trust to Northern Ireland for lymphoma diagnosed in 2017-2021



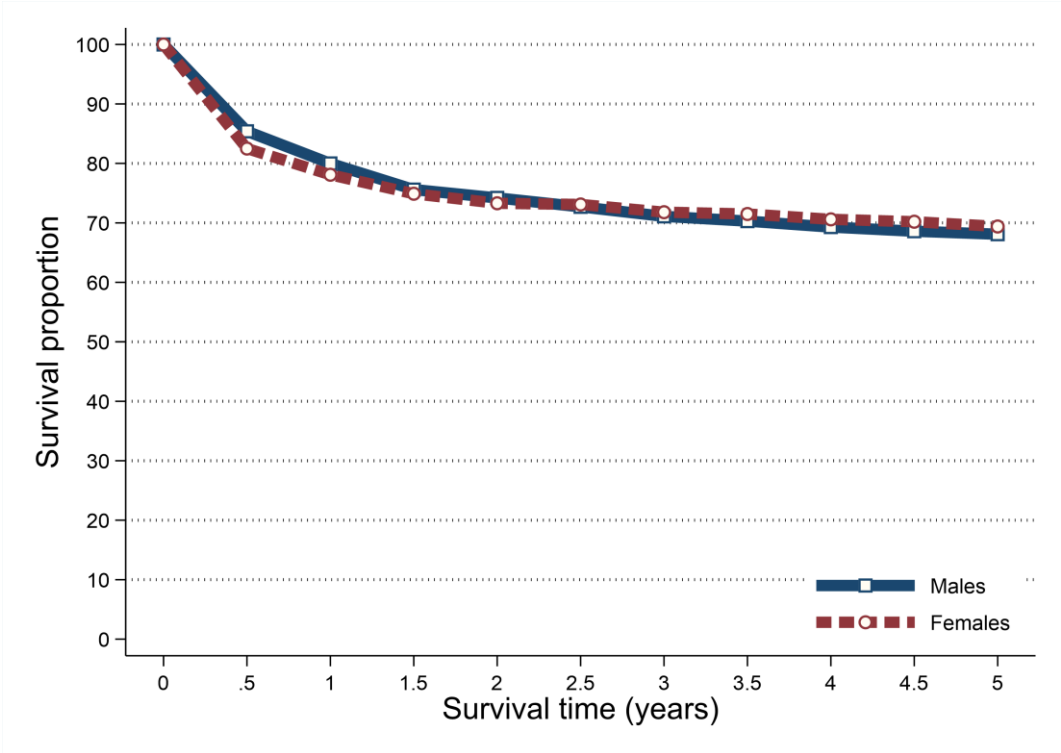
SURVIVAL

- 77.1% of patients were alive one year and 61.1% were alive five years from a lymphoma diagnosis in 2012-2016. (observed survival)
- Age-standardised net survival (ASNS), which removes the effect of deaths from causes unrelated to cancer, was 78.9% one year and 68.5% five years from a lymphoma diagnosis in 2012-2016.
- Five-year survival (ASNS) for lymphoma patients diagnosed in 2012-2016 was 68.1% among men and 69.4% among women.

Table 4: Survival from lymphoma for patients diagnosed in 2012-2016

Time since diagnosis	All persons		Male		Female	
	Observed survival	Age-standardised net survival	Observed survival	Age-standardised net survival	Observed survival	Age-standardised net survival
6 months	82.9%	84.0%	84.9%	85.4%	80.4%	82.5%
One year	77.1%	78.9%	78.8%	80.0%	75.1%	78.1%
Two years	70.6%	73.7%	71.8%	74.2%	69.2%	73.3%
Five years	61.1%	68.5%	61.1%	68.1%	61.1%	69.4%

Figure 10: Age-standardised net survival from lymphoma for patients diagnosed in 2012-2016



Observed survival examines the time between diagnosis and death from any cause, however, due to the inclusion of non-cancer deaths it may not fully reflect how changes in cancer care impact survival from cancer.

Age-standardised net survival provides an estimate of patient survival which has been adjusted to take account of deaths unrelated to cancer. It is more widely used to assess the impact of changes in cancer care on patient survival.

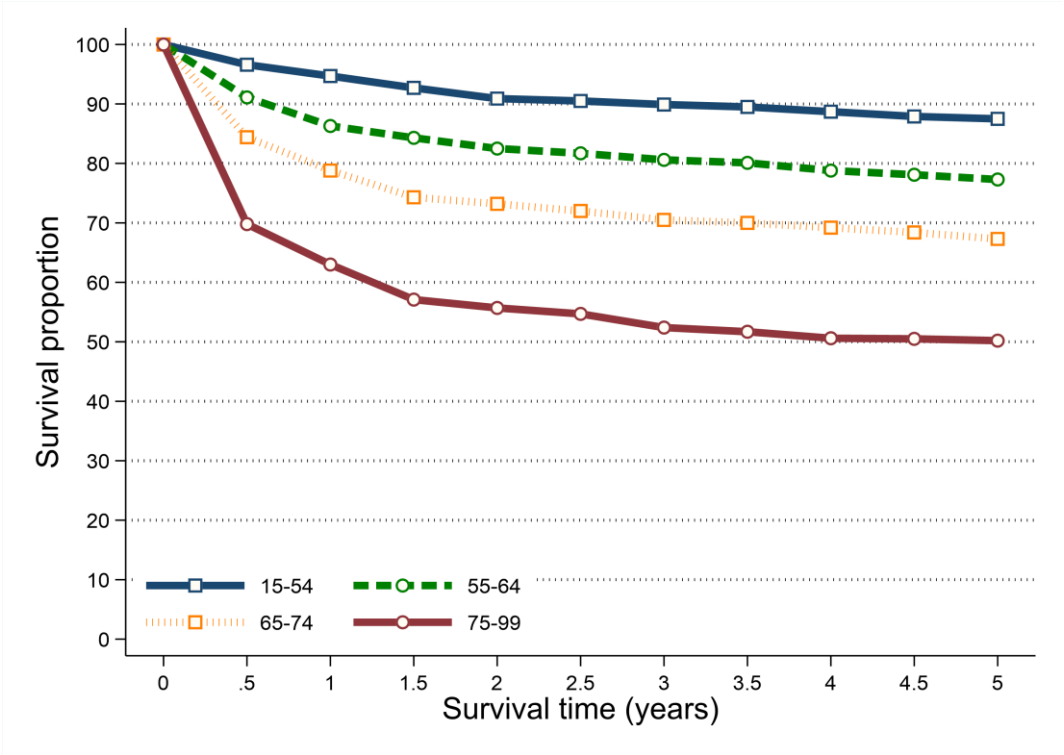
SURVIVAL BY AGE

- Survival from lymphoma among patients diagnosed during 2012-2016 was related to age with better five-year survival among younger age groups.
- Five-year net survival ranged from 87.5% among patients aged 15 to 54 at diagnosis to 50.2% among those aged 75 to 99.

Table 5: Net survival from lymphoma for patients diagnosed in 2012-2016 by age at diagnosis

Age group	All persons	
	One-year	Five-years
15 to 54	94.7%	87.5%
55 to 64	86.3%	77.3%
65 to 74	78.8%	67.3%
75 to 99	63.0%	50.2%

Figure 11: Net survival from lymphoma for patients diagnosed in 2012-2016 by age at diagnosis

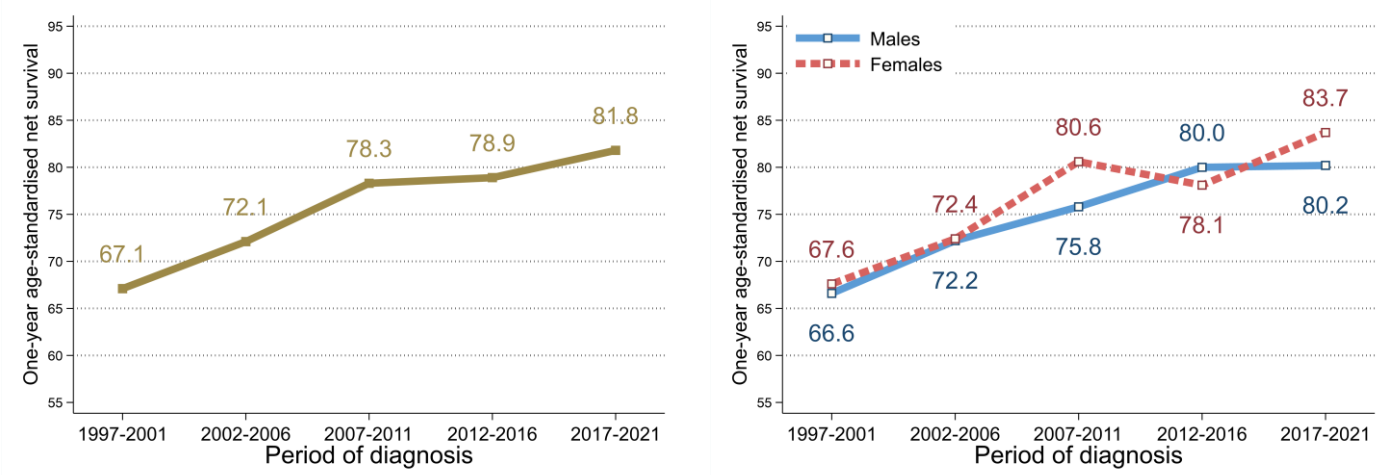


SURVIVAL TRENDS

ONE-YEAR NET SURVIVAL

- Between 2012-2016 and 2017-2021 there was no significant change in one-year survival (ASNS) from lymphoma.
- Compared to 1997-2001 one-year survival (ASNS) from lymphoma in 2017-2021 increased significantly from 67.1% to 81.8%. This increase was significant for males (66.6% to 80.2%) and females (67.6% to 83.7%).

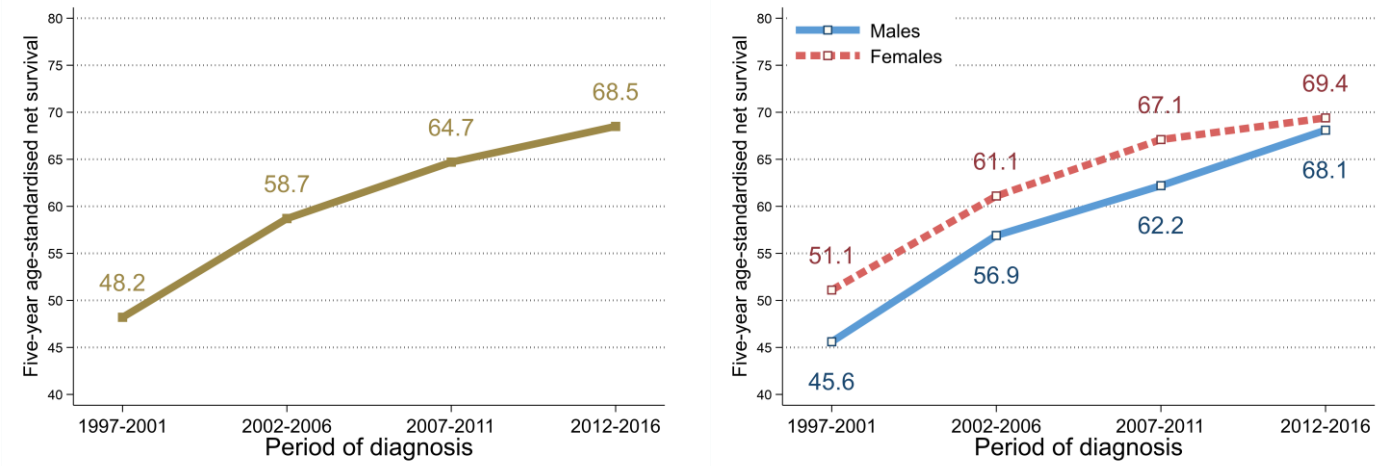
Figure 12: Trends in one-year age-standardised net survival from lymphoma in 1997-2021



FIVE-YEAR NET SURVIVAL

- Between 2007-2011 and 2012-2016 there was no significant change in five-year survival (ASNS) from lymphoma.
- Compared to 1997-2001 five-year survival (ASNS) from lymphoma in 2012-2016 increased significantly from 48.2% to 68.5%. This increase was significant for males (45.6% to 68.1%) and females (51.1% to 69.4%).

Figure 13: Trends in five-year age-standardised net survival from lymphoma in 1997-2016



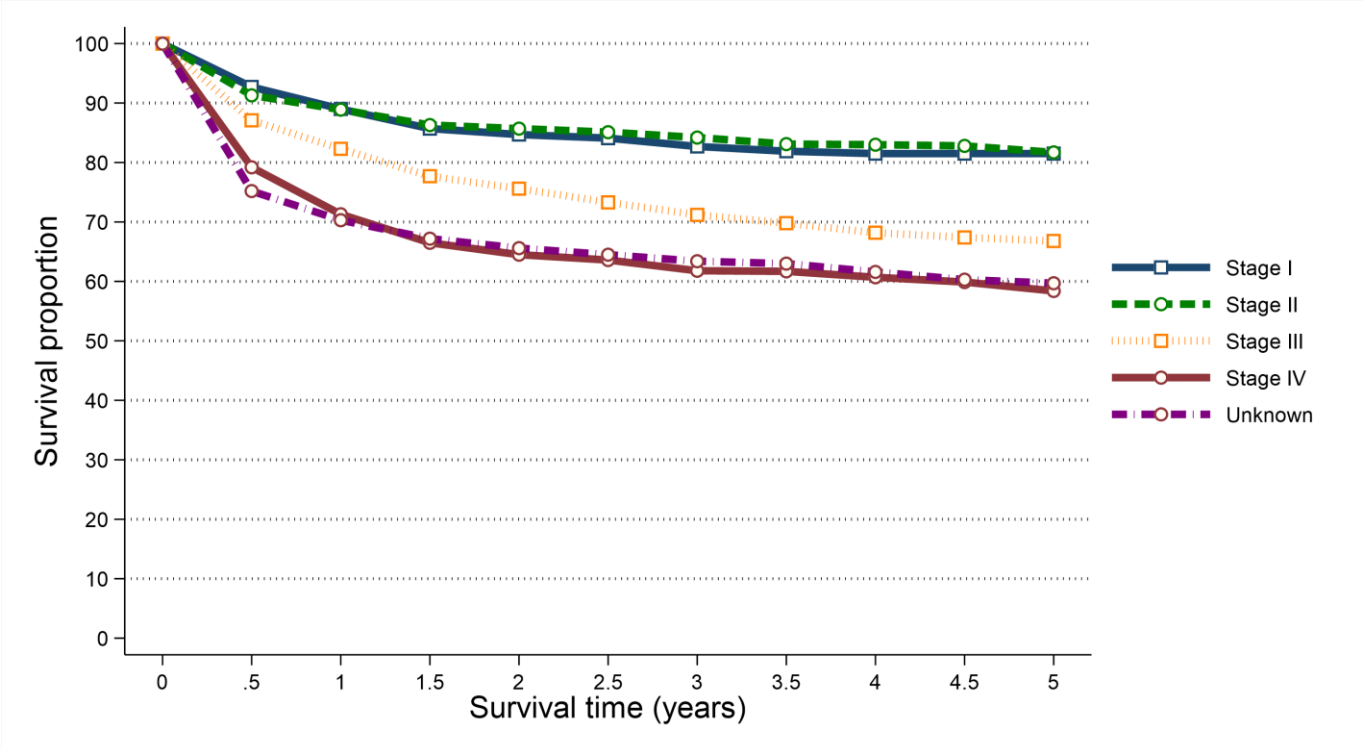
SURVIVAL BY STAGE

- Survival from lymphoma among patients diagnosed during 2012-2016 was strongly related to stage with better five-year survival among those diagnosed at earlier stages.
- Five-year survival (ASNS) ranged from 81.7% among patients diagnosed at Stage II to 58.4% among those diagnosed at Stage IV.

Table 6: Age-standardised net survival from lymphoma for patients diagnosed in 2012-2016 by stage at diagnosis

Stage at diagnosis	All persons	
	One-year	Five-years
Stage I	89.0%	81.5%
Stage II	88.9%	81.7%
Stage III	82.3%	66.8%
Stage IV	71.3%	58.4%
Unknown	70.3%	59.7%

Figure 14: Age-standardised net survival from lymphoma for patients diagnosed in 2012-2016 by stage at diagnosis



PREVALENCE

- At the end of 2021, there were 4,021 people (Males: 2,143; Females: 1,878) living with lymphoma who had been diagnosed with the disease during 1997-2021.
- Of these 9.4% had been diagnosed in the previous year (one-year prevalence) and 63.2% in the previous 10 years (ten-year prevalence).
- 32.0% of lymphoma survivors were aged 75 and over at the end of 2021.

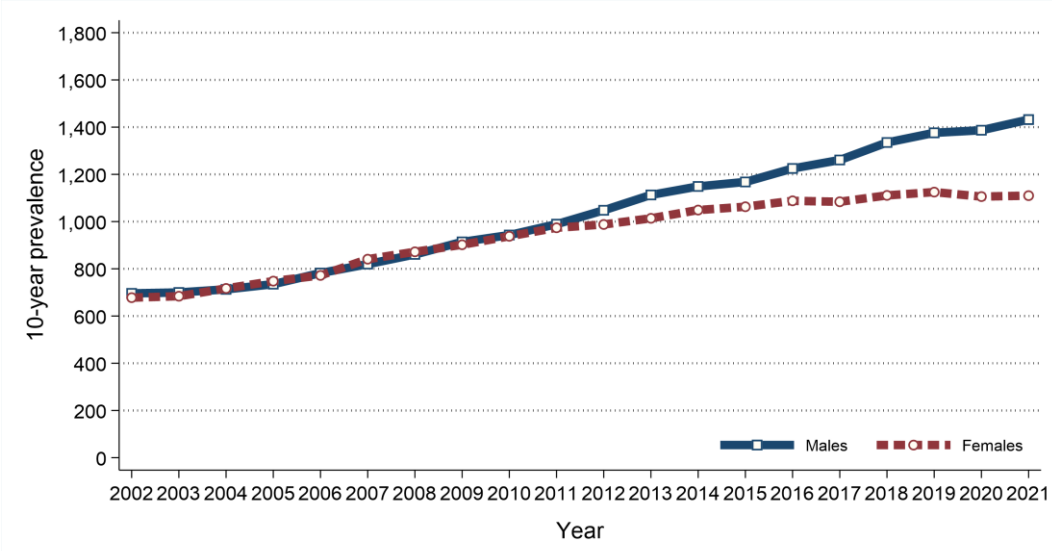
Table 7: 25-year prevalence of lymphoma by age at end of 2021

Gender	Age at end of 2021	25-year prevalence	Time since diagnosis			
			0 to 1 year	1 to 5 years	5 to 10 years	10 to 25 years
All persons	All ages	4,021	379	1,117	1,046	1,479
	0 to 74	2,735	254	772	699	1,010
	75 and over	1,286	125	345	347	469
Male	All ages	2,143	224	633	575	711
	0 to 74	1,545	156	455	398	536
	75 and over	598	68	178	177	175
Female	All ages	1,878	155	484	471	768
	0 to 74	1,190	98	317	301	474
	75 and over	688	57	167	170	294

PREVALENCE TRENDS

- 10-year prevalence of lymphoma among males increased between 2016 and 2021 by 16.9% from 1,225 survivors to 1,432 survivors.
- 10-year prevalence of lymphoma among females increased between 2016 and 2021 by 2.0% from 1,088 survivors to 1,110 survivors.

Figure 15: Trends in 10-year prevalence of lymphoma in 2002-2021



Year	10-year prevalence	
	Males	Females
2012	1,048	988
2013	1,113	1,014
2014	1,149	1,049
2015	1,168	1,063
2016	1,225	1,088
2017	1,261	1,084
2018	1,335	1,111
2019	1,376	1,125
2020	1,387	1,106
2021	1,432	1,110

MORTALITY

- There were 683 deaths from lymphoma during 2017-2021 in Northern Ireland. On average this was 137 deaths per year.
- During this period 45.7% of lymphoma deaths were among women (Male deaths: 371, Female deaths: 312). On average there were 74 male and 62 female deaths from lymphoma per year.
- Lymphoma deaths made up 3.1% of all male cancer deaths and 2.9% of all female cancer deaths.
- The median age of patients who died from lymphoma during 2017-2021 was 78 years (Males: 76, Females: 79).
- The risk of dying from lymphoma varied by age, with 55.0% of men and 65.4% of women who died from lymphoma aged 75 and over at death.
- In contrast, 5.7% of patients who died from lymphoma were aged 0 to 54 at death.

Figure 16: Average number of deaths from lymphoma per year in 2017-2021 by age at death

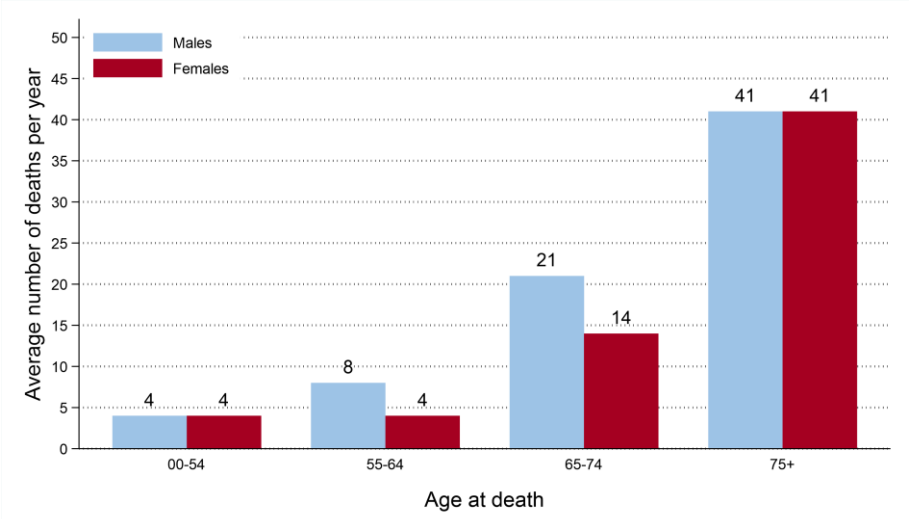
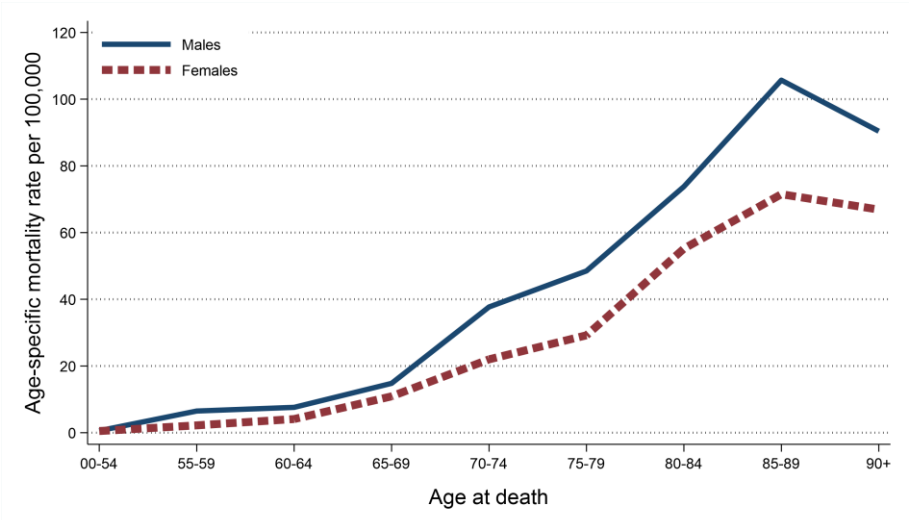


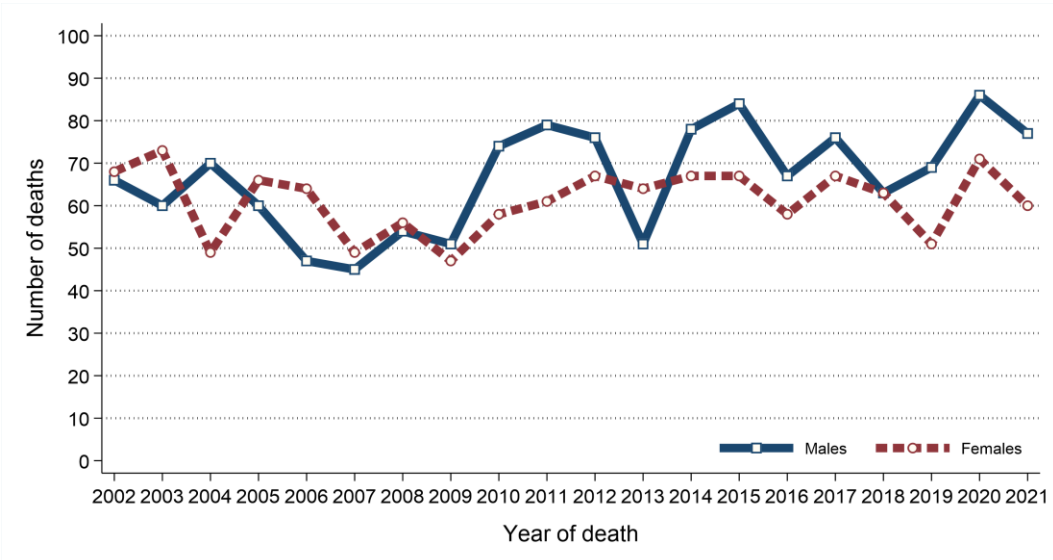
Figure 17: Age-specific mortality rates of lymphoma in 2017-2021



MORTALITY TRENDS

- The number of deaths from lymphoma among males increased between 2012-2016 and 2017-2021 by 4.2% from 356 deaths (71 deaths per year) to 371 deaths (74 deaths per year).
- The number of deaths from lymphoma among females decreased between 2012-2016 and 2017-2021 by 3.4% from 323 deaths (65 deaths per year) to 312 deaths (62 deaths per year).

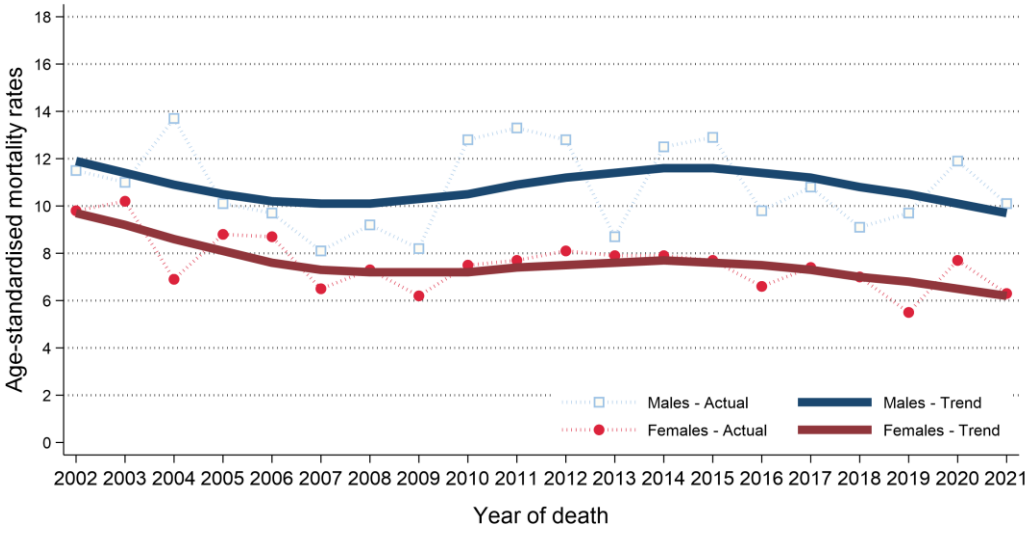
Figure 18: Trends in the number of deaths from lymphoma from 2002 to 2021



Year of death	Number of deaths	
	Males	Females
2012	76	67
2013	51	64
2014	78	67
2015	84	67
2016	67	58
2017	76	67
2018	63	63
2019	69	51
2020	86	71
2021	77	60

- Male age-standardised lymphoma mortality rates decreased between 2012-2016 and 2017-2021 by 8.8% from 11.3 to 10.3 deaths per 100,000 males. This change was not statistically significant.
- Female age-standardised lymphoma mortality rates decreased between 2012-2016 and 2017-2021 by 11.7% from 7.7 to 6.8 deaths per 100,000 females. This change was not statistically significant.

Figure 19: Trends in mortality rates of lymphoma from 2002 to 2021



Age-standardised mortality rates illustrate the change in the number of deaths 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.

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: 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: Geographic areas are assigned based on a patient's postcode of usual residence at diagnosis using the Jan 2023 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).

Crude incidence/mortality rate: 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.

Age-standardised incidence/mortality rates per 100,000 person years are estimates 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.

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 measure the precision of a statistic (e.g. lymphoma 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. lymphoma 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 2021 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.

Patient survival is evaluated using two measures. Observed survival examines the time between diagnosis and death from any cause. It thus represents what cancer patients experience, however, due to the inclusion of non-cancer deaths (e.g. heart disease), it may not reflect how changes in cancer care impact survival from cancer. Thus age-standardised net survival is also examined. This measure provides an estimate of patient survival which has been adjusted to take account of deaths unrelated to cancer. It also assumes a standard age distribution thereby removing the impact of changes in the age distribution of cancer patients on changes in survival over time. While this measure is hypothetical, as it assumes patients can only die from cancer related factors, it is a better indicator of the impact of changes in cancer care on patient survival.