
Non-Hodgkin's lymphoma

1993-2021

(ICD10 codes: C82-C86)



Northern Ireland Cancer Registry, 2024

An official statistics publication

ABOUT THIS REPORT

Contents

This report includes information on incidence of non-Hodgkin's 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. Non-Hodgkin's 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.

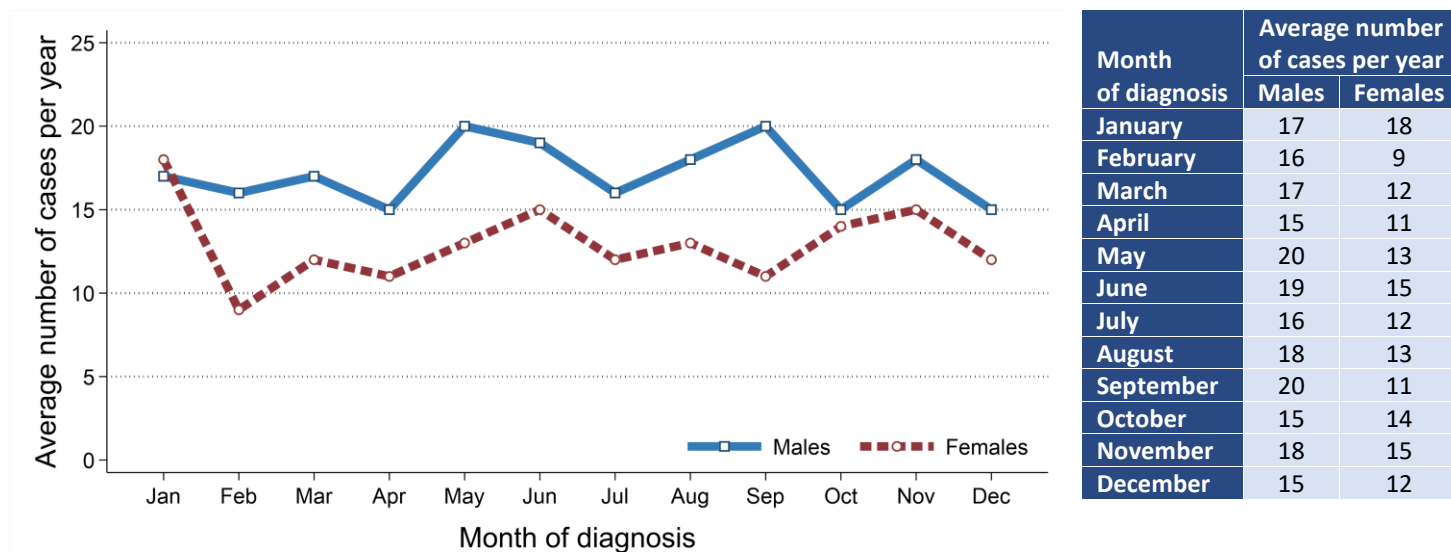
NICR is funded by the Public Health Agency and is based in Queen's University, Belfast.



INCIDENCE

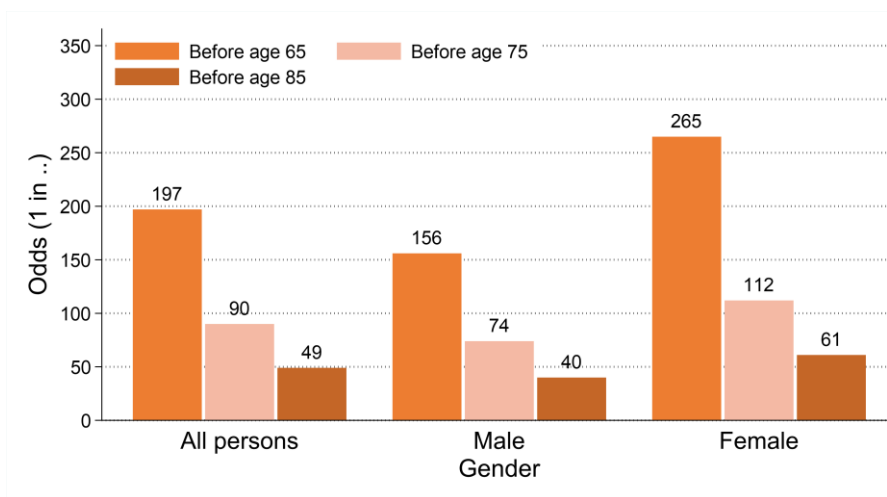
- There were 1,800 cases of non-Hodgkin's lymphoma diagnosed during 2017-2021 in Northern Ireland. On average this was 360 cases per year.
- During this period 43.1% of non-Hodgkin's lymphoma cases were among women (Male cases: 1,025, Female cases: 775). On average there were 205 male and 155 female cases of non-Hodgkin's lymphoma per year.
- The most common diagnosis month during 2017-2021 was May and September among males with 20 cases per year and January among females with 18 cases per year.

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



- Non-Hodgkin's lymphoma made up 4.0% of all male and 3.1% of all female cancer cases (excluding non-melanoma skin cancer).
- The non-Hodgkin's lymphoma incidence rates for each gender were 22.0 cases per 100,000 males and 16.2 cases per 100,000 females.
- The odds of developing non-Hodgkin's lymphoma before age 85 was 1 in 40 for men and 1 in 61 for women.

Figure 2: Odds of developing non-Hodgkin's lymphoma in 2017-2021



INCIDENCE BY AGE

- The median age of patients diagnosed with non-Hodgkin's lymphoma during 2017-2021 was 71 years (Males: 70, Females: 72).
- The risk of developing non-Hodgkin's lymphoma varied by age, with 34.4% of men and 40.8% of women diagnosed with non-Hodgkin's lymphoma aged 75 and over at diagnosis.
- In contrast, 16.2% of patients diagnosed with non-Hodgkin's lymphoma were aged 0 to 54 at diagnosis.

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

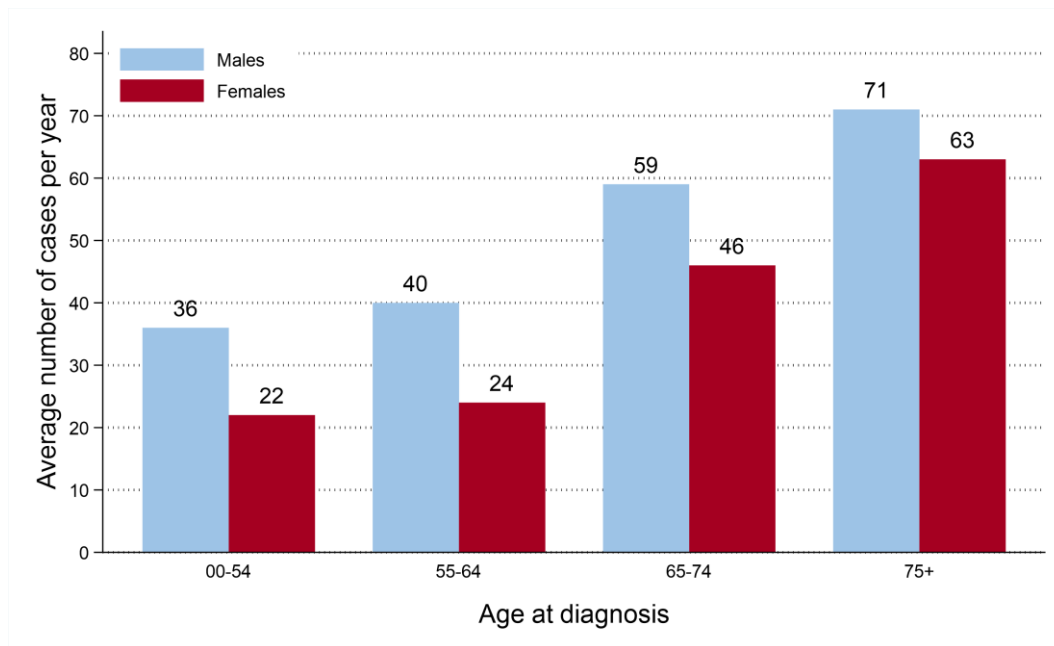
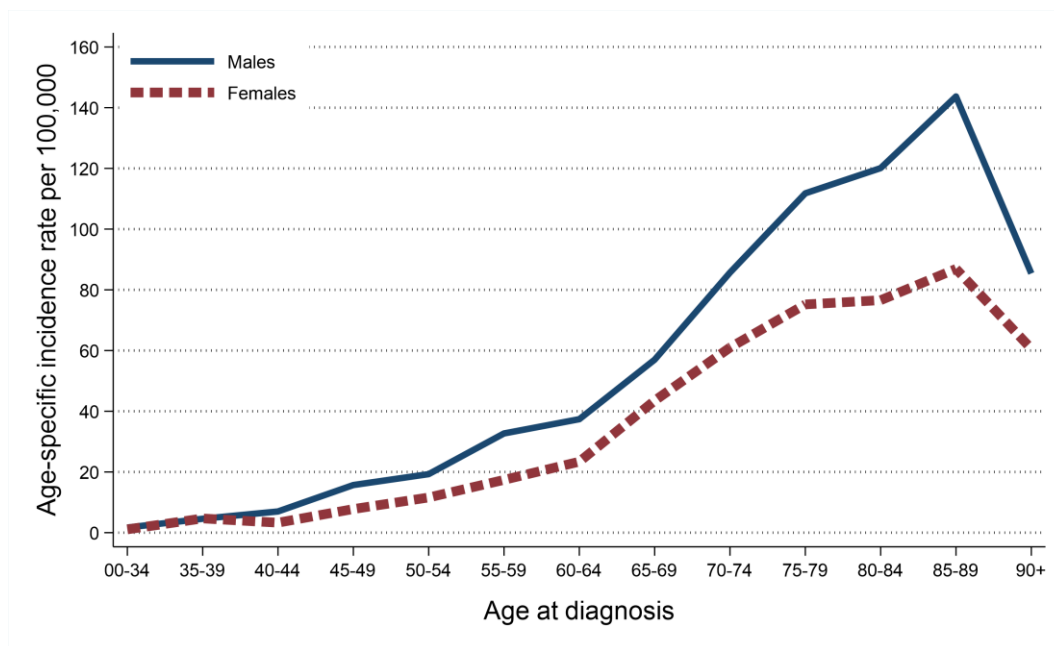


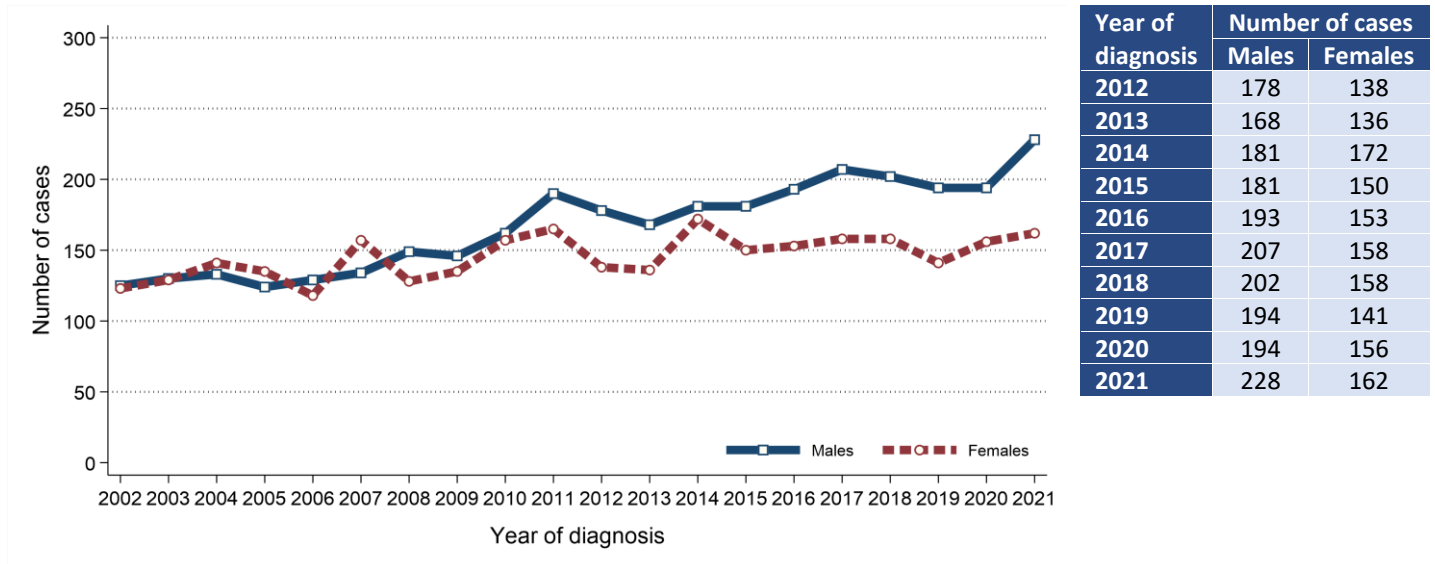
Figure 4: Age-specific incidence rates of non-Hodgkin's lymphoma in 2017-2021



INCIDENCE TRENDS

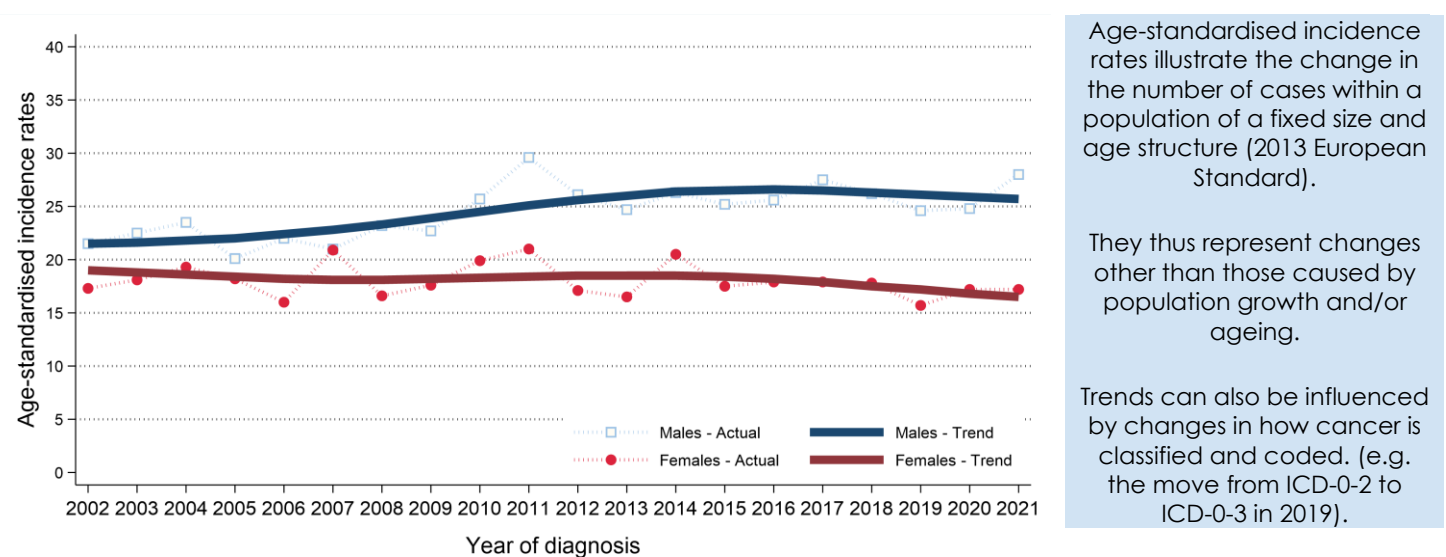
- The number of cases of non-Hodgkin's lymphoma among males increased between 2012-2016 and 2017-2021 by 13.8% from 901 cases (180 cases per year) to 1,025 cases (205 cases per year).
- The number of cases of non-Hodgkin's lymphoma among females increased between 2012-2016 and 2017-2021 by 3.5% from 749 cases (150 cases per year) to 775 cases (155 cases per year).

Figure 5: Trends in number of cases of non-Hodgkin's lymphoma diagnosed from 2002 to 2021



- Male age-standardised non-Hodgkin's lymphoma incidence rates increased between 2012-2016 and 2017-2021 by 2.3% from 25.6 to 26.2 cases per 100,000 males. This change was not statistically significant.
- Female age-standardised non-Hodgkin's lymphoma incidence rates decreased between 2012-2016 and 2017-2021 by 3.9% from 17.9 to 17.2 cases per 100,000 females. This change was not statistically significant.

Figure 6: Trends in incidence rates of non-Hodgkin's lymphoma from 2002 to 2021



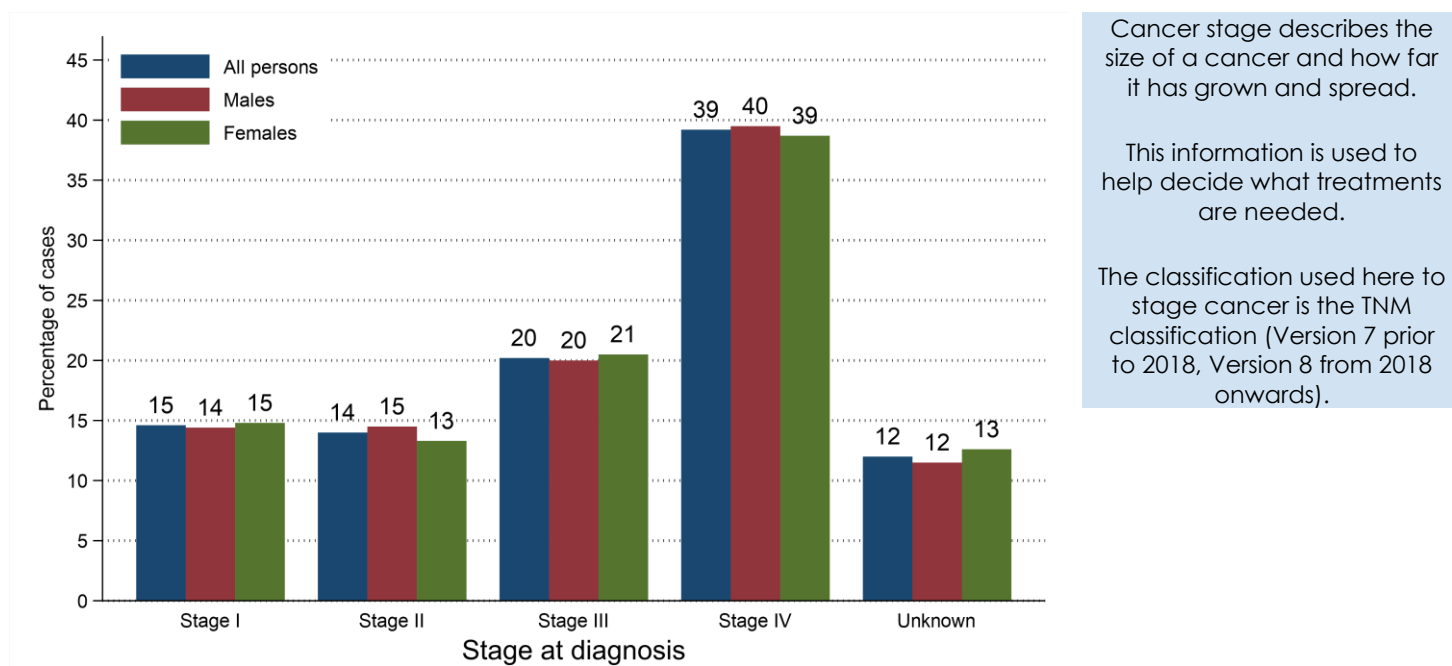
INCIDENCE BY STAGE AT DIAGNOSIS

- During 2017-2021 88.0% of non-Hodgkin's lymphoma cases had a stage assigned.
- 14.6% of non-Hodgkin's lymphoma cases were diagnosed at Stage I. (16.6% of staged cases)
- 39.2% of non-Hodgkin's lymphoma cases were diagnosed at Stage IV. (44.5% of staged cases)

Table 1: Number of cases of non-Hodgkin's 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	1,800	360	1,025	205	775	155
Stage I	263	53	148	30	115	23
Stage II	252	50	149	30	103	21
Stage III	364	73	205	41	159	32
Stage IV	705	141	405	81	300	60
Unknown	216	43	118	24	98	20

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



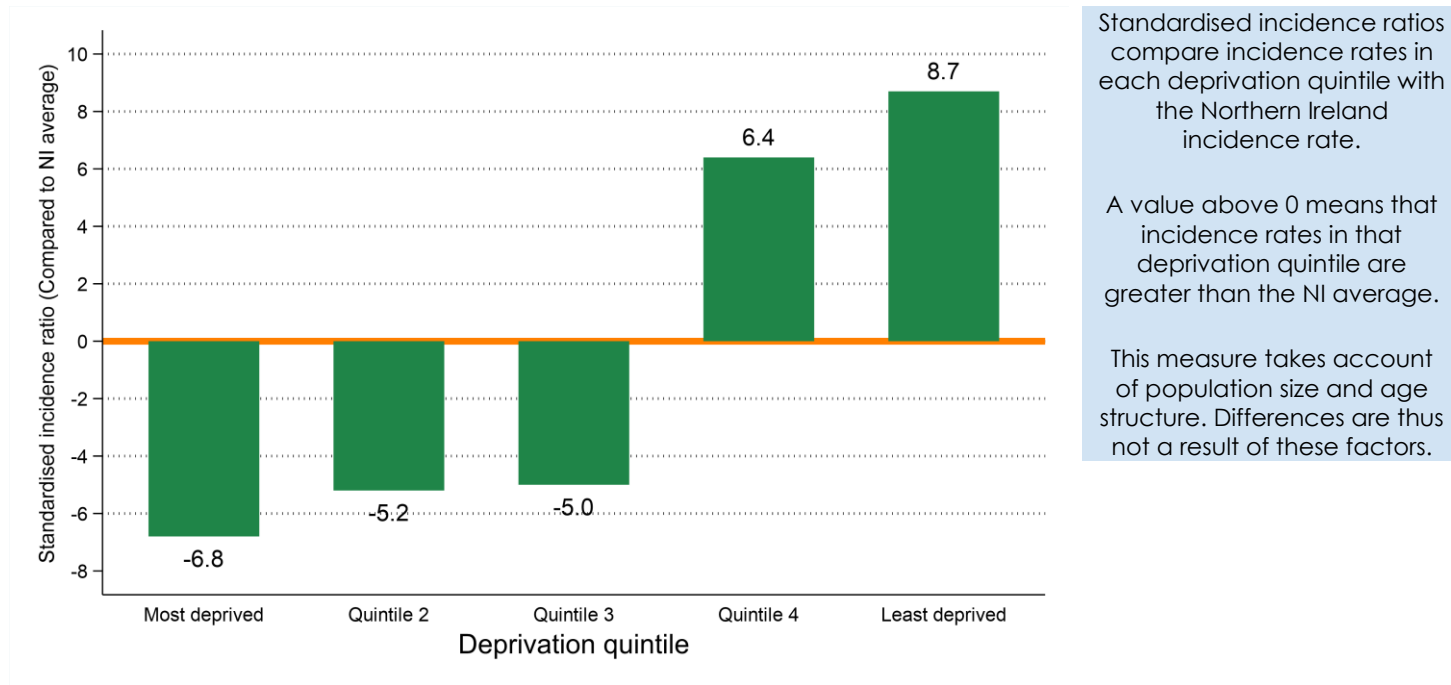
INCIDENCE BY DEPRIVATION

- The number of cases of non-Hodgkin's 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 non-Hodgkin's 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	1,800	360	1,025	205	775	155
Most deprived	276	55	163	33	113	23
Quintile 2	342	68	195	39	147	29
Quintile 3	360	72	201	40	159	32
Quintile 4	407	81	225	45	182	36
Least deprived	415	83	241	48	174	35
Unknown	0	0	0	0	0	0

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



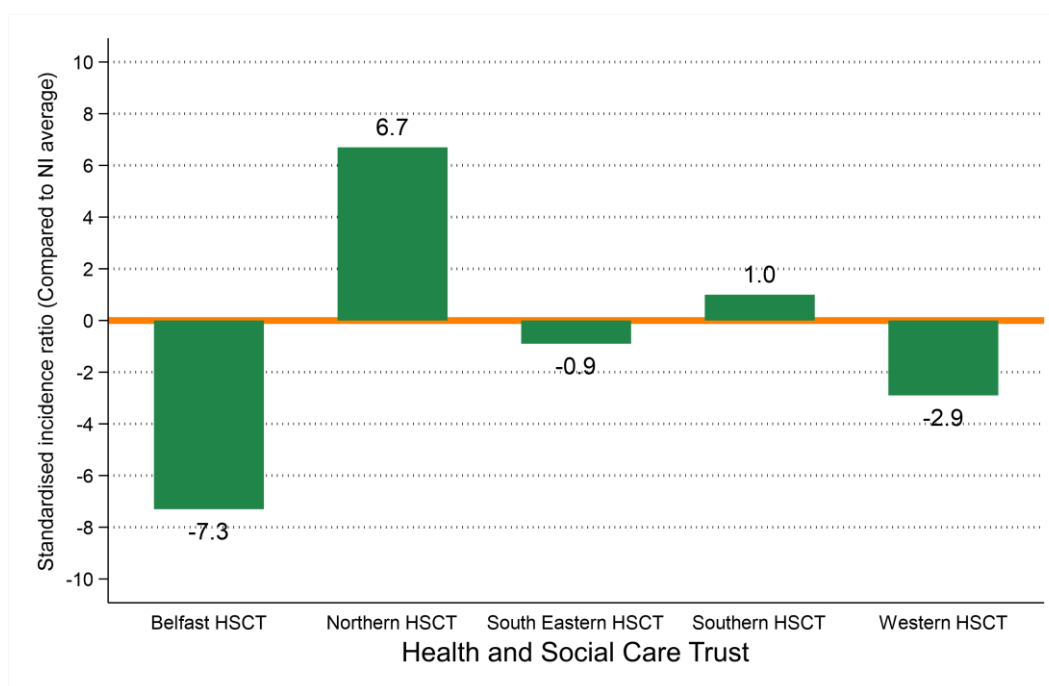
INCIDENCE BY HEALTH AND SOCIAL CARE TRUST

- The number of cases of non-Hodgkin's 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 non-Hodgkin's 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	1,800	360	1,025	205	775	155
Belfast HSCT	301	60	167	33	134	27
Northern HSCT	510	102	300	60	210	42
South Eastern HSCT	375	75	214	43	161	32
Southern HSCT	342	68	181	36	161	32
Western HSCT	272	54	163	33	109	22
Unknown	0	0	0	0	0	0

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



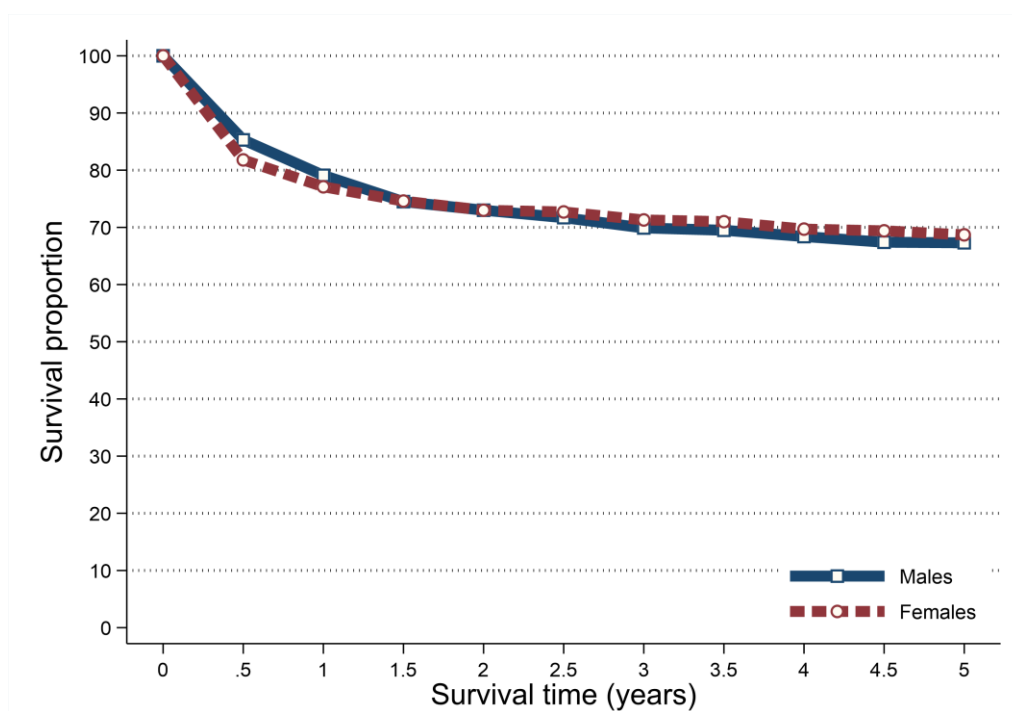
SURVIVAL

- 74.6% of patients were alive one year and 58.0% were alive five years from a non-Hodgkin's lymphoma diagnosis in 2012-2016. (observed survival)
- Age-standardised net survival (ASNS), which removes the effect of deaths from causes unrelated to cancer, was 78.0% one year and 67.8% five years from a non-Hodgkin's lymphoma diagnosis in 2012-2016.
- Five-year survival (ASNS) for non-Hodgkin's lymphoma patients diagnosed in 2012-2016 was 67.3% among men and 68.7% among women.

Table 4: Survival from non-Hodgkin's 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	81.3%	83.7%	83.8%	85.3%	78.3%	81.8%
One year	74.6%	78.0%	76.6%	79.1%	72.1%	77.1%
Two years	68.0%	72.8%	68.9%	73.0%	66.8%	73.0%
Five years	58.0%	67.8%	58.1%	67.3%	57.8%	68.7%

Figure 10: Age-standardised net survival from non-Hodgkin's 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.

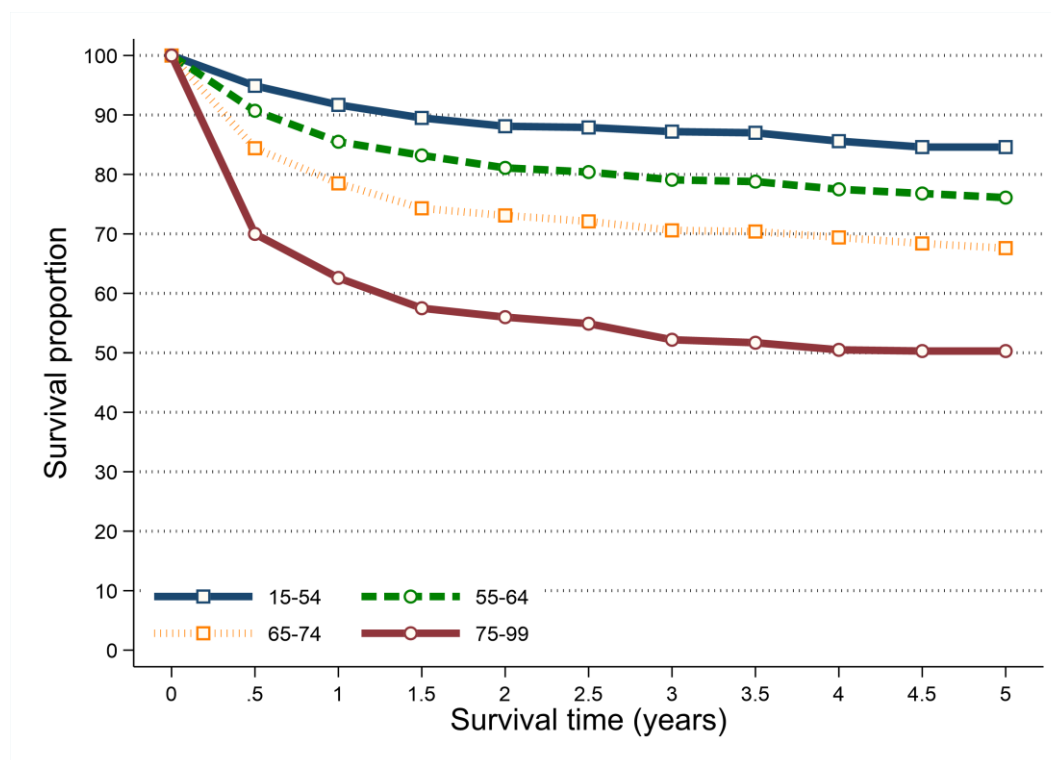
SURVIVAL BY AGE

- Survival from non-Hodgkin's 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 84.6% among patients aged 15 to 54 at diagnosis to 50.3% among those aged 75 to 99.

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

Age group	All persons	
	One-year	Five-years
15 to 54	91.7%	84.6%
55 to 64	85.5%	76.1%
65 to 74	78.5%	67.6%
75 to 99	62.6%	50.3%

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

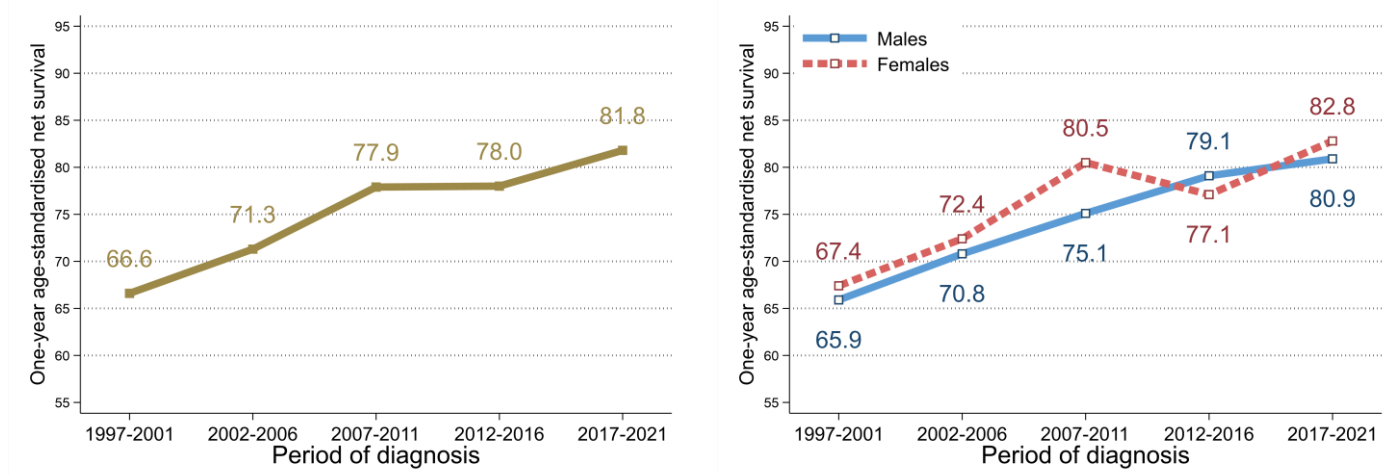


SURVIVAL TRENDS

ONE-YEAR NET SURVIVAL

- Between 2012-2016 and 2017-2021 there was no significant change in one-year survival (ASNS) from non-Hodgkin's lymphoma.
- Compared to 1997-2001 one-year survival (ASNS) from non-Hodgkin's lymphoma in 2017-2021 increased significantly from 66.6% to 81.8%. This increase was significant for males (65.9% to 80.9%) and females (67.4% to 82.8%).

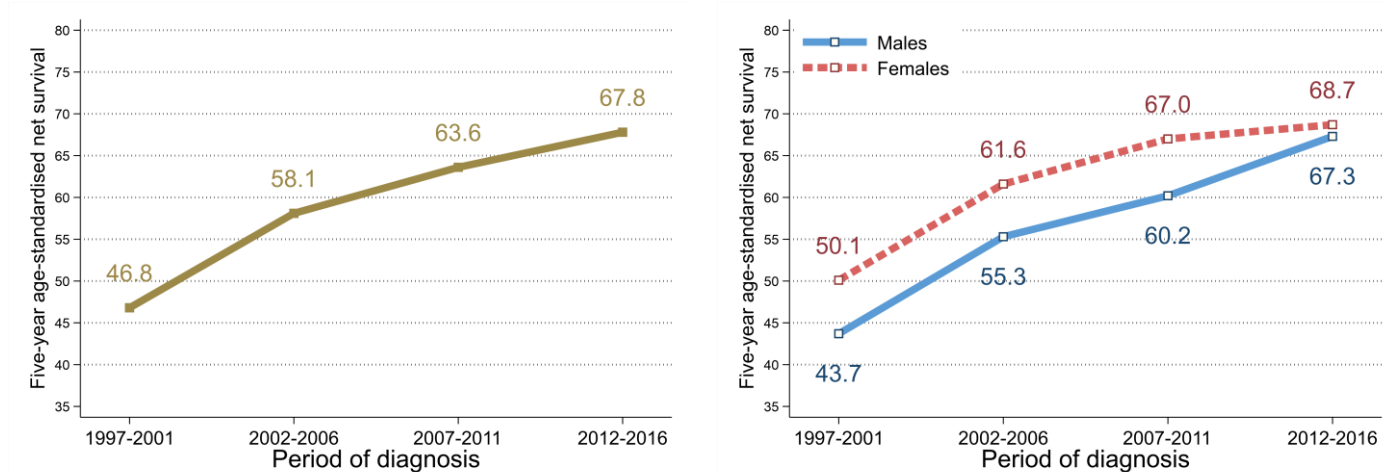
Figure 12: Trends in one-year age-standardised net survival from non-Hodgkin's lymphoma in 1997-2021



FIVE-YEAR NET SURVIVAL

- Between 2007-2011 and 2012-2016 there was no significant change in five-year survival (ASNS) from non-Hodgkin's lymphoma.
- Compared to 1997-2001 five-year survival (ASNS) from non-Hodgkin's lymphoma in 2012-2016 increased significantly from 46.8% to 67.8%. This increase was significant for males (43.7% to 67.3%) and females (50.1% to 68.7%).

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



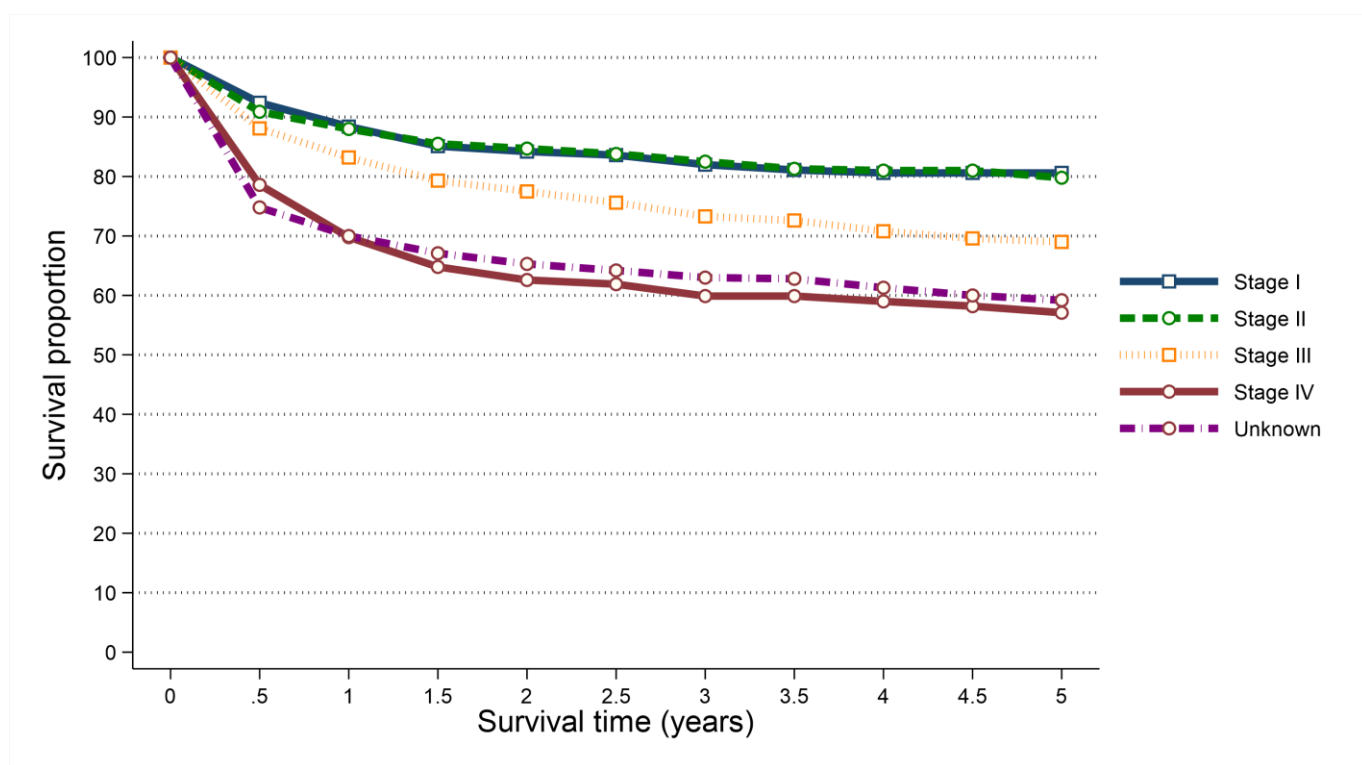
SURVIVAL BY STAGE

- Survival from non-Hodgkin's 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 80.6% among patients diagnosed at Stage I to 57.1% among those diagnosed at Stage IV.

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

Stage at diagnosis	All persons	
	One-year	Five-years
Stage I	88.4%	80.6%
Stage II	88.0%	79.8%
Stage III	83.2%	69.0%
Stage IV	69.8%	57.1%
Unknown	70.0%	59.2%

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



PREVALENCE

- At the end of 2021, there were 3,156 people (Males: 1,671; Females: 1,485) living with non-Hodgkin's lymphoma who had been diagnosed with the disease during 1997-2021.
- Of these 10.1% had been diagnosed in the previous year (one-year prevalence) and 65.0% in the previous 10 years (ten-year prevalence).
- 38.4% of non-Hodgkin's lymphoma survivors were aged 75 and over at the end of 2021.

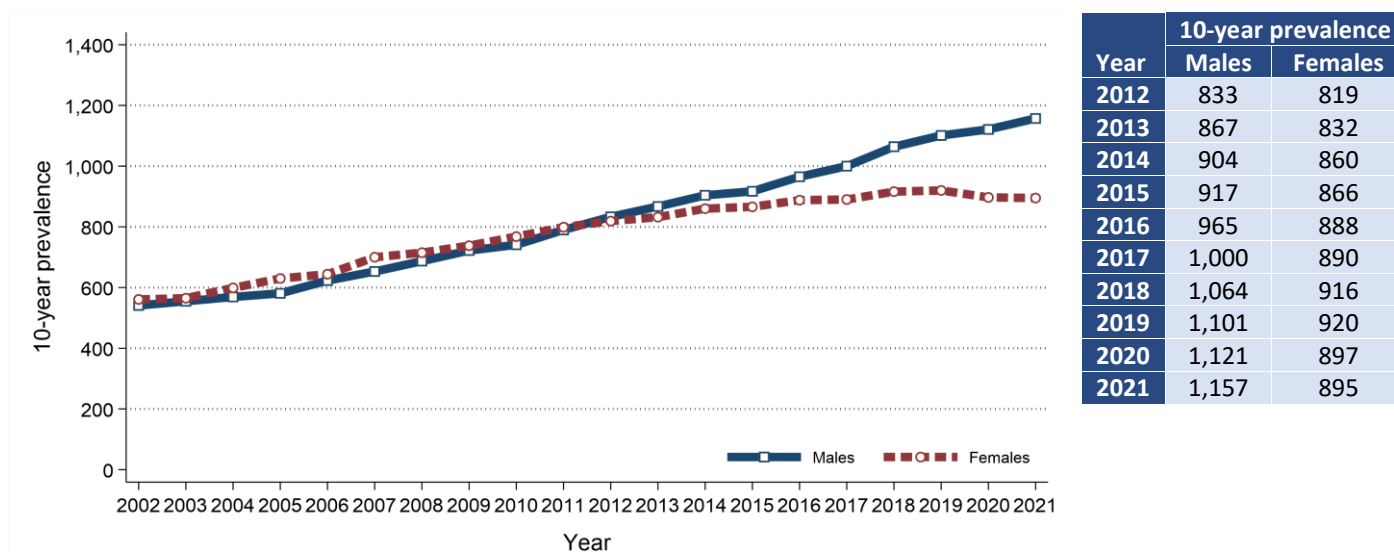
Table 7: 25-year prevalence of non-Hodgkin's lymphoma by age at end of 2021

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	3,156	318	913	821	1,104
	0 to 74	1,944	201	586	496	661
	75 and over	1,212	117	327	325	443
Male	All ages	1,671	189	522	446	514
	0 to 74	1,112	126	354	282	350
	75 and over	559	63	168	164	164
Female	All ages	1,485	129	391	375	590
	0 to 74	832	75	232	214	311
	75 and over	653	54	159	161	279

PREVALENCE TRENDS

- 10-year prevalence of non-Hodgkin's lymphoma among males increased between 2016 and 2021 by 19.9% from 965 survivors to 1,157 survivors.
- 10-year prevalence of non-Hodgkin's lymphoma among females increased between 2016 and 2021 by 0.8% from 888 survivors to 895 survivors.

Figure 15: Trends in 10-year prevalence of non-Hodgkin's lymphoma in 2002-2021



MORTALITY

- There were 628 deaths from non-Hodgkin's lymphoma during 2017-2021 in Northern Ireland. On average this was 126 deaths per year.
- During this period 47.1% of non-Hodgkin's lymphoma deaths were among women (Male deaths: 332, Female deaths: 296). On average there were 66 male and 59 female deaths from non-Hodgkin's lymphoma per year.
- Non-Hodgkin's lymphoma deaths made up 2.8% of all male cancer deaths and 2.8% of all female cancer deaths.
- The median age of patients who died from non-Hodgkin's lymphoma during 2017-2021 was 78 years (Males: 77, Females: 79).
- The risk of dying from non-Hodgkin's lymphoma varied by age, with 56.9% of men and 65.2% of women who died from non-Hodgkin's lymphoma aged 75 and over at death.
- In contrast, 5.7% of patients who died from non-Hodgkin's lymphoma were aged 0 to 54 at death.

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

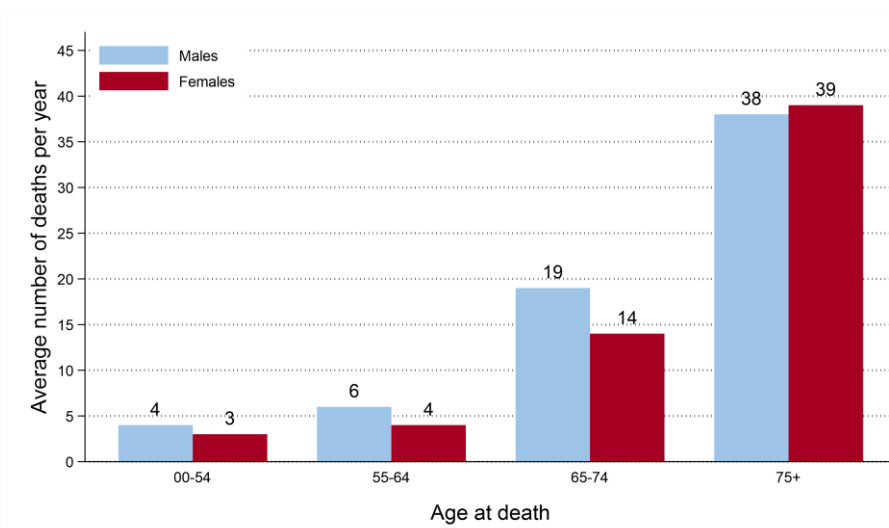
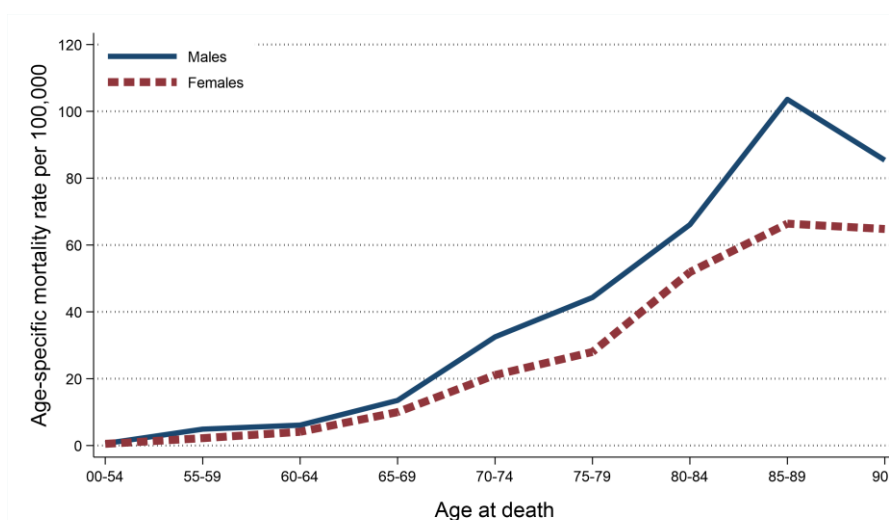


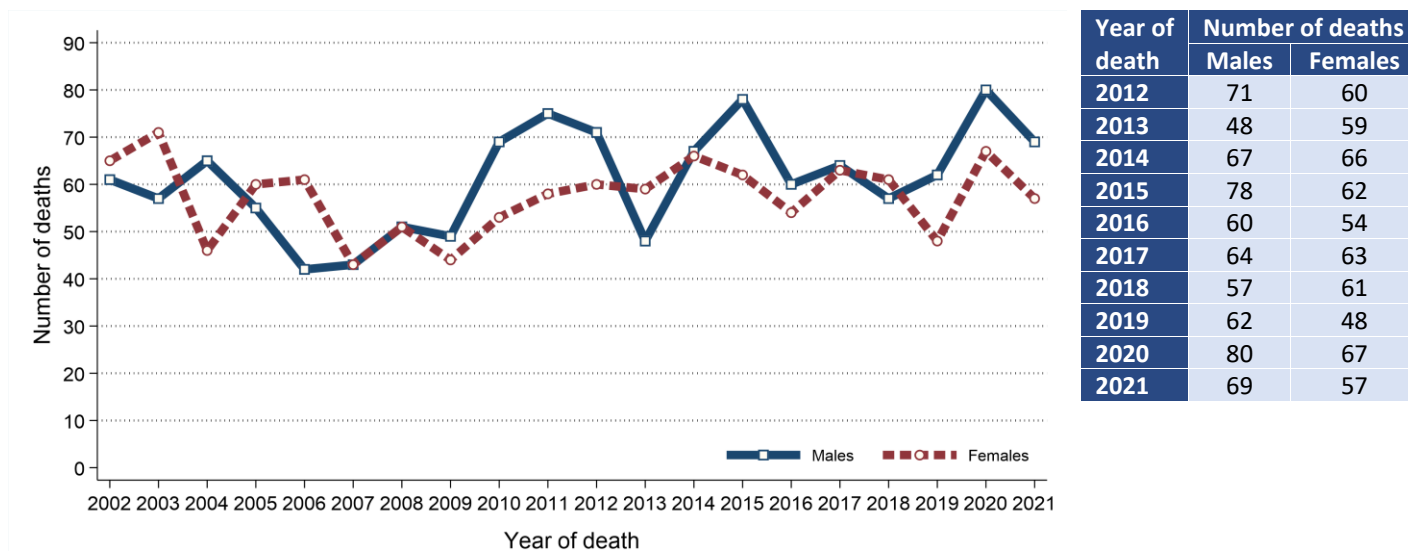
Figure 17: Age-specific mortality rates of non-Hodgkin's lymphoma in 2017-2021



MORTALITY TRENDS

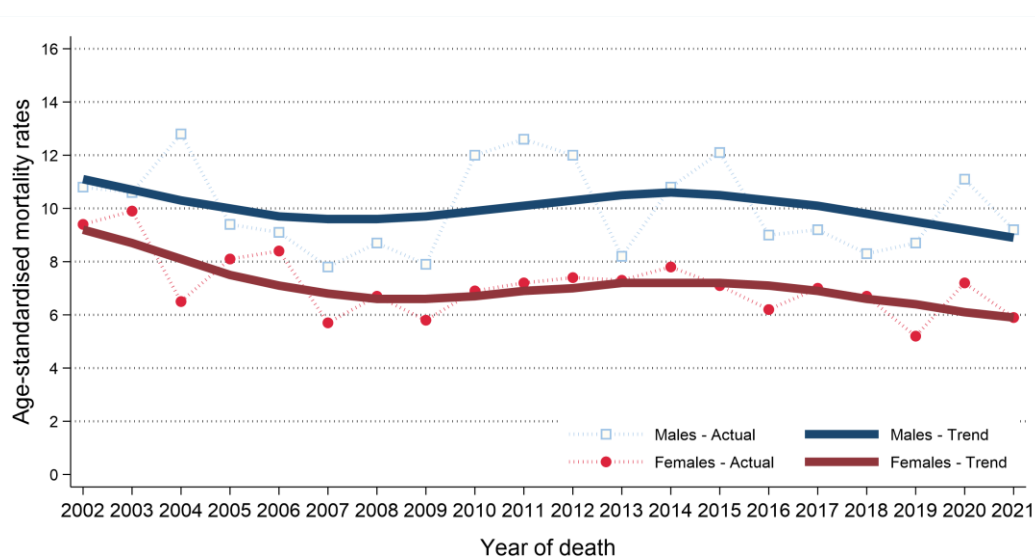
- The number of deaths from non-Hodgkin's lymphoma among males increased between 2012-2016 and 2017-2021 by 2.5% from 324 deaths (65 deaths per year) to 332 deaths (66 deaths per year).
- The number of deaths from non-Hodgkin's lymphoma among females decreased between 2012-2016 and 2017-2021 by 1.7% from 301 deaths (60 deaths per year) to 296 deaths (59 deaths per year).

Figure 18: Trends in the number of deaths from non-Hodgkin's lymphoma from 2002 to 2021



- Male age-standardised non-Hodgkin's lymphoma mortality rates decreased between 2012-2016 and 2017-2021 by 10.6% from 10.4 to 9.3 deaths per 100,000 males. This change was not statistically significant.
- Female age-standardised non-Hodgkin's lymphoma mortality rates decreased between 2012-2016 and 2017-2021 by 9.9% from 7.1 to 6.4 deaths per 100,000 females. This change was not statistically significant.

Figure 19: Trends in mortality rates of non-Hodgkin's 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. non-Hodgkin's 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. non-Hodgkin's 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.