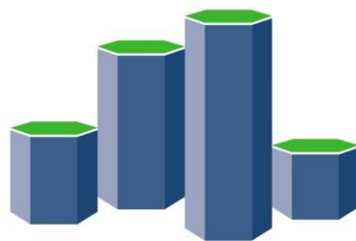

Malignant melanoma

1993-2022

(ICD10 codes: C43)



Northern Ireland
Cancer Registry

Northern Ireland Cancer Registry, 2024

An official statistics publication

ABOUT THIS REPORT

Contents

This report includes information on incidence of malignant melanoma as recorded by the Northern Ireland Cancer Registry (NICR). Incidence data is available annually from 1993 to 2022, 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. Malignant melanoma: 1993-2022. 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.

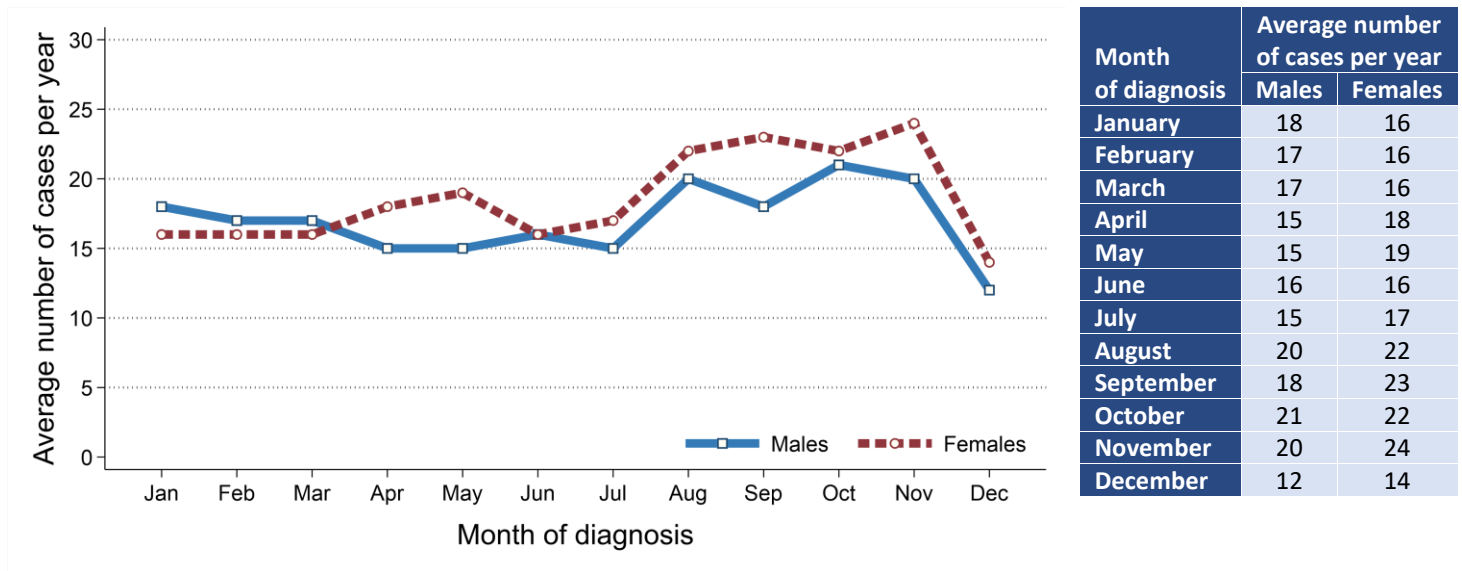
NICR is funded by the Public Health Agency and is based in Queen's University, Belfast.



INCIDENCE

- There were 2,120 cases of malignant melanoma diagnosed during 2018-2022 in Northern Ireland. On average this was 424 cases per year.
- During this period 52.1% of malignant melanoma cases were among women (Male cases: 1,015, Female cases: 1,105). On average there were 203 male and 221 female cases of malignant melanoma per year.
- The most common diagnosis month during 2018-2022 was October among males with 21 cases per year and November among females with 24 cases per year.

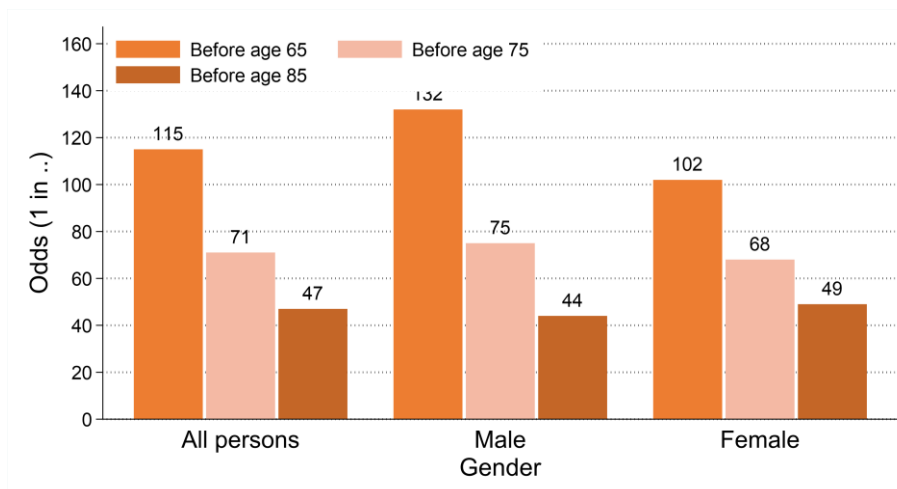
Figure 1: Average number of cases of malignant melanoma per year in 2018-2022 by month of diagnosis



- The malignant melanoma incidence rates for each gender were 21.7 cases per 100,000 males and 22.9 cases per 100,000 females.

- The odds of developing malignant melanoma before age 85 was 1 in 44 for men and 1 in 49 for women.

Figure 2: Odds of developing malignant melanoma in 2018-2022



INCIDENCE BY AGE

- The median age of patients diagnosed with malignant melanoma during 2018-2022 was 64 years (Males: 67, Females: 61).
- The risk of developing malignant melanoma varied by age, with 30.7% of men and 24.0% of women diagnosed with malignant melanoma aged 75 and over at diagnosis.
- In contrast, 33.5% of patients diagnosed with malignant melanoma were aged 0 to 54 at diagnosis.

Figure 3: Average number of cases of malignant melanoma diagnosed per year in 2018-2022 by age at diagnosis

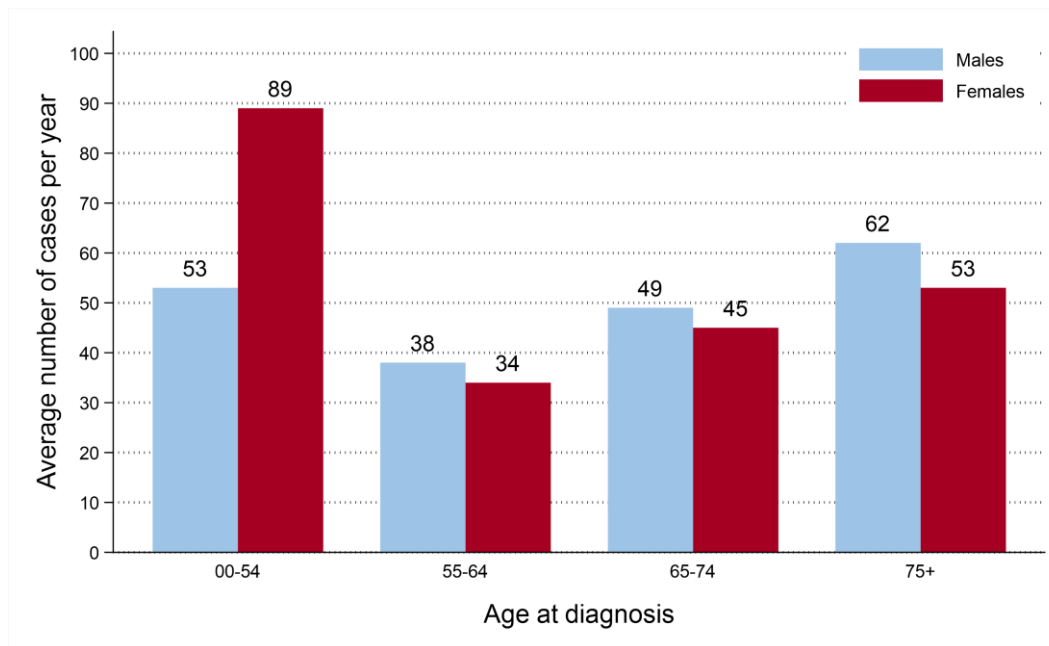
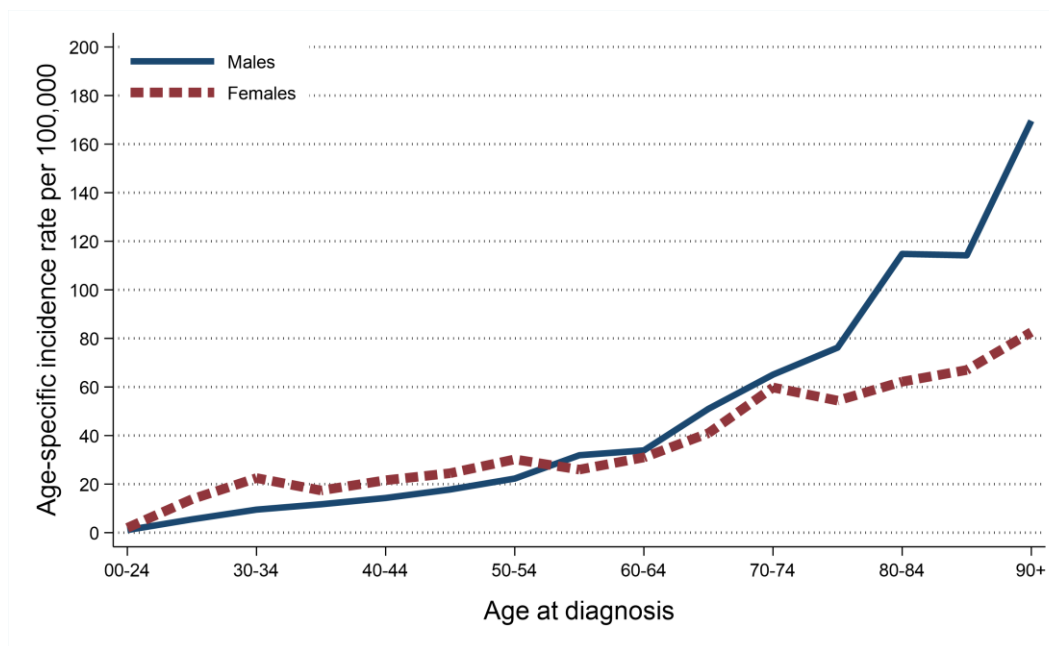


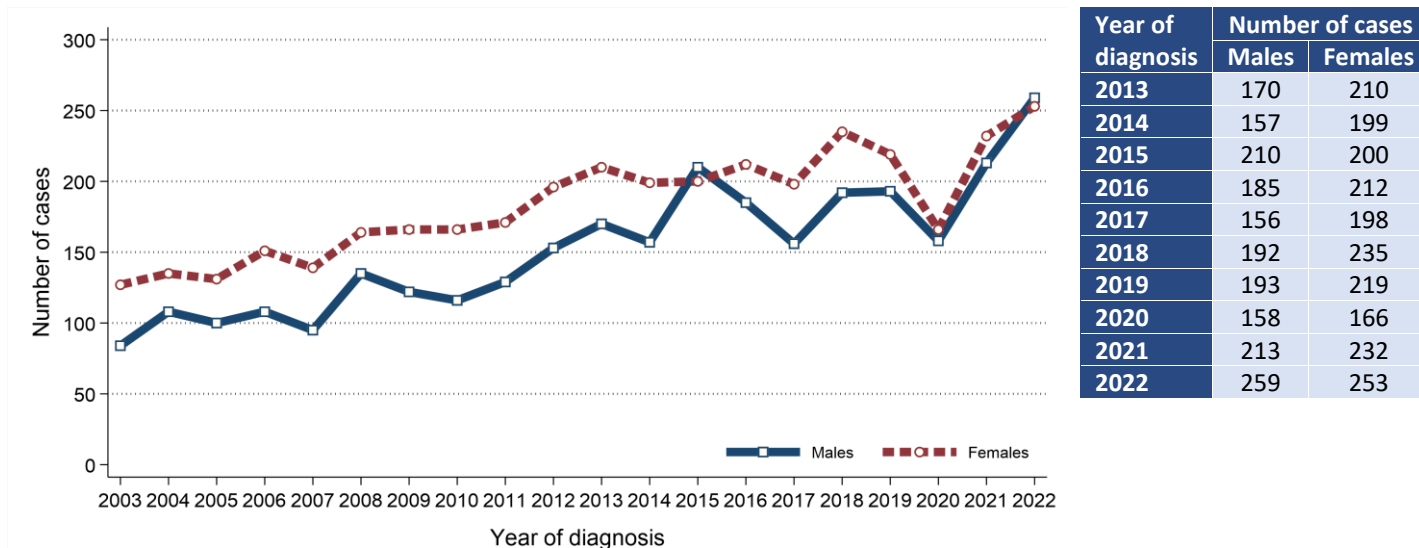
Figure 4: Age-specific incidence rates of malignant melanoma in 2018-2022



INCIDENCE TRENDS

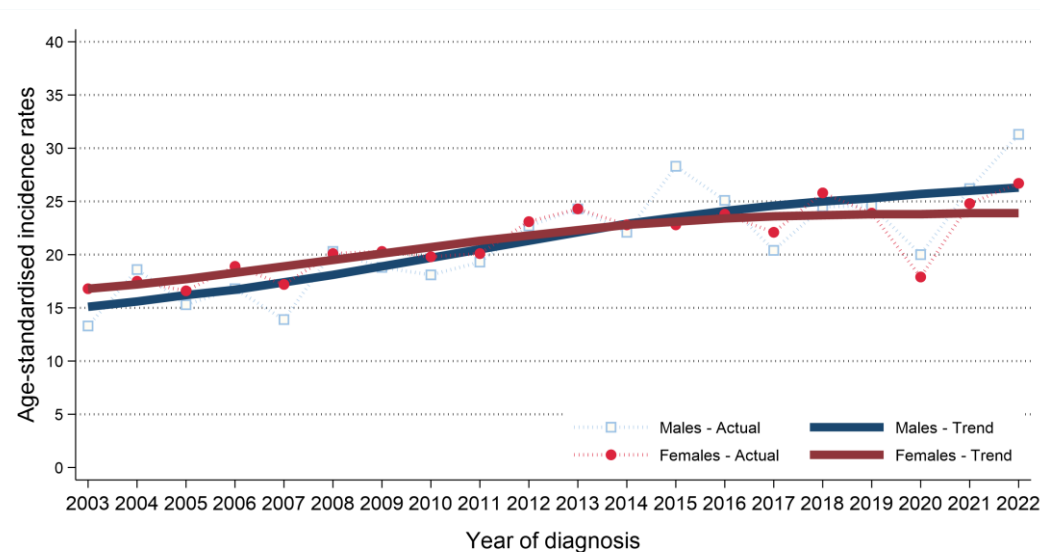
- The number of cases of malignant melanoma among males increased between 2013-2017 and 2018-2022 by 15.6% from 878 cases (176 cases per year) to 1,015 cases (203 cases per year).
- The number of cases of malignant melanoma among females increased between 2013-2017 and 2018-2022 by 8.4% from 1,019 cases (204 cases per year) to 1,105 cases (221 cases per year).

Figure 5: Trends in number of cases of malignant melanoma diagnosed from 2003 to 2022



- Male age-standardised malignant melanoma incidence rates increased between 2013-2017 and 2018-2022 by 5.8% from 24.0 to 25.4 cases per 100,000 males. This change was not statistically significant.
- Female age-standardised malignant melanoma incidence rates increased between 2013-2017 and 2018-2022 by 2.6% from 23.2 to 23.8 cases per 100,000 females. This change was not statistically significant.

Figure 6: Trends in incidence rates of malignant melanoma from 2003 to 2022



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 HISTOLOGICAL TYPE

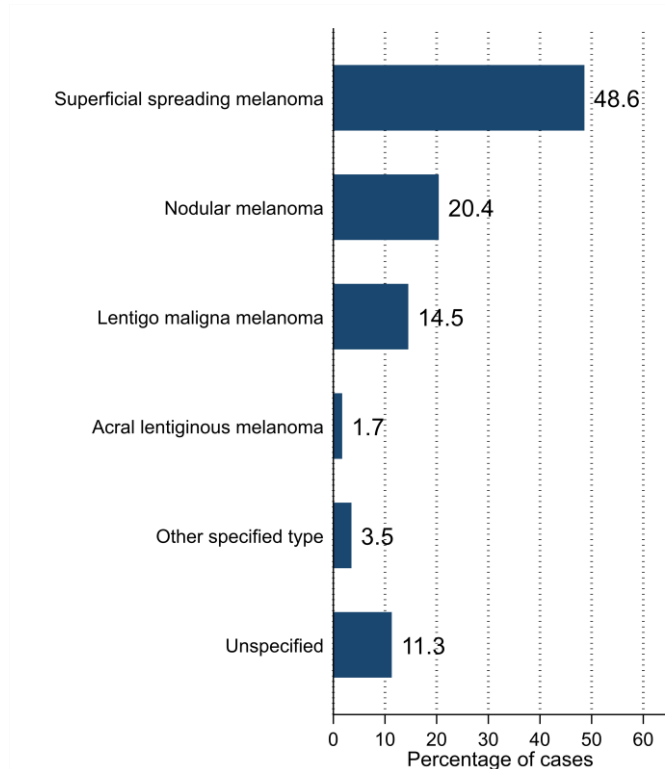
- During 2018-2022 88.6% of malignant melanoma cases had a histological type specified.
- Of the 241 cases with an unspecified type 2.9% were not microscopically verified.
- The most common malignant melanoma types among males were superficial spreading melanoma (48.6%) and nodular melanoma (20.4%). Among females they were superficial spreading melanoma (59.3%) and nodular melanoma (15.0%).

Table 1: Number of cases of malignant melanoma diagnosed in 2018-2022 by histological type

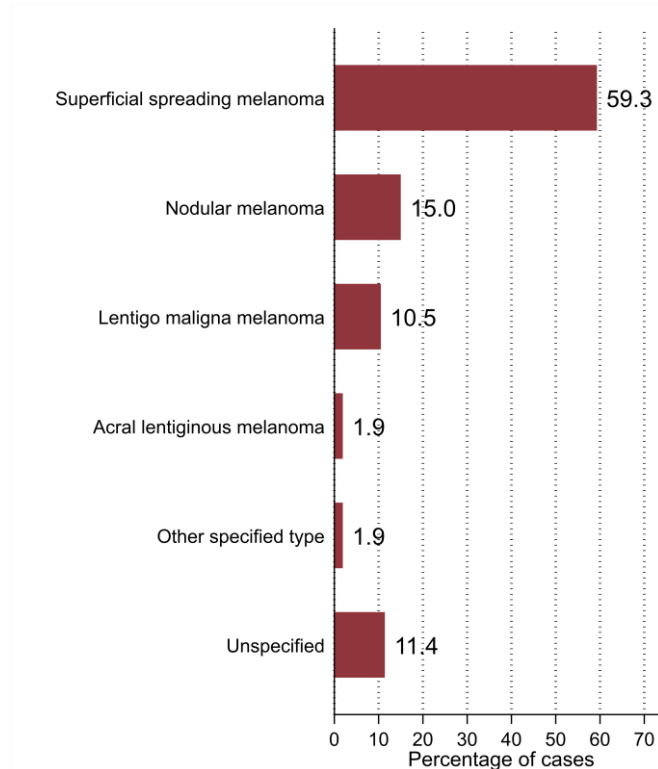
Histological type	All persons		Male		Female	
	Total cases in period	Average cases per year	Total cases in period	Average cases per year	Total cases in period	Average cases per year
All types	2,120	424	1,015	203	1,105	221
Acral lentiginous melanoma	38	8	17	3	21	4
Lentigo maligna melanoma	263	53	147	29	116	23
Nodular melanoma	373	75	207	41	166	33
Superficial spreading melanoma	1,148	230	493	99	655	131
Other specified type	57	11	36	7	21	4
Unspecified	241	48	115	23	126	25

Figure 7: Proportion of cases of malignant melanoma in 2018-2022 by histological type

MALE



FEMALE



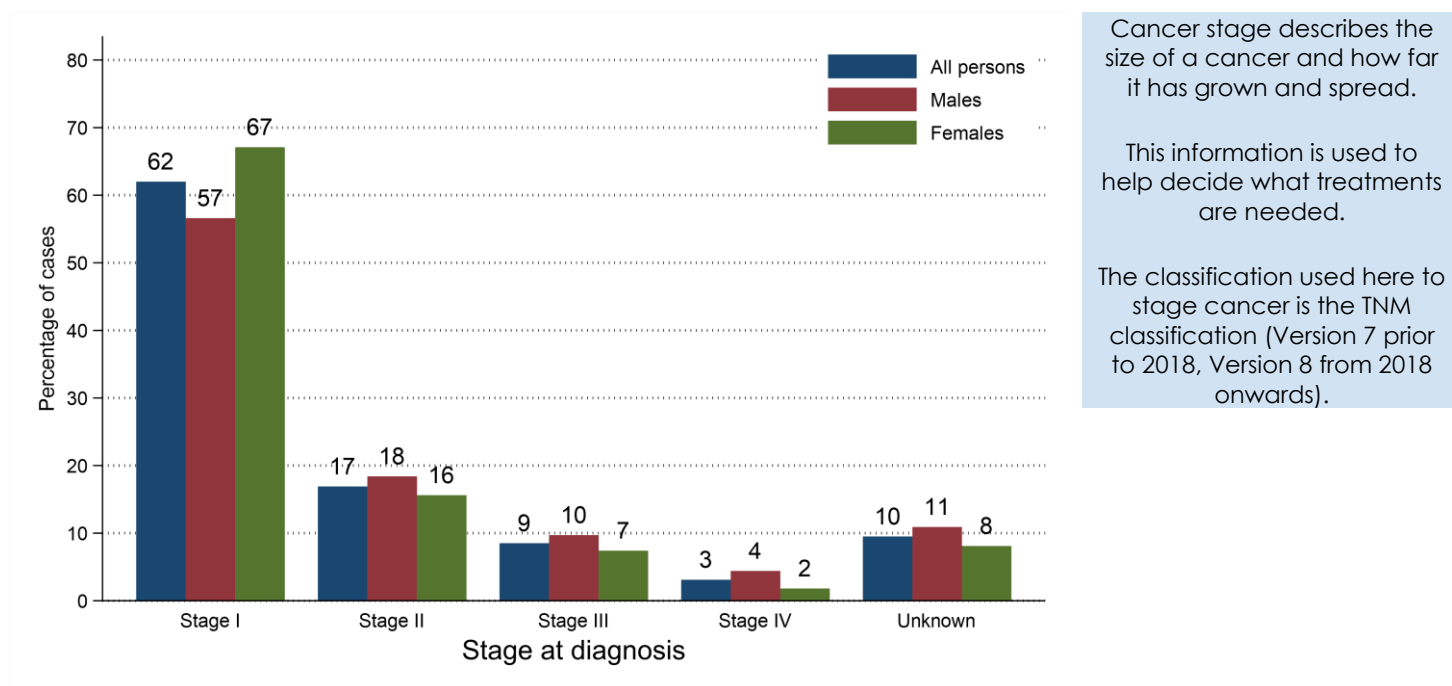
INCIDENCE BY STAGE AT DIAGNOSIS

- During 2018-2022 90.5% of malignant melanoma cases had a stage assigned.
- 62.0% of malignant melanoma cases were diagnosed at Stage I. (68.5% of staged cases)
- 3.1% of malignant melanoma cases were diagnosed at Stage IV. (3.4% of staged cases)

Table 2: Number of cases of malignant melanoma diagnosed in 2018-2022 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	2,120	424	1,015	203	1,105	221
Stage I	1,315	263	574	115	741	148
Stage II	359	72	187	37	172	34
Stage III	180	36	98	20	82	16
Stage IV	65	13	45	9	20	4
Unknown	201	40	111	22	90	18

Figure 8: Proportion of cases of malignant melanoma diagnosed in 2018-2022 by stage at diagnosis



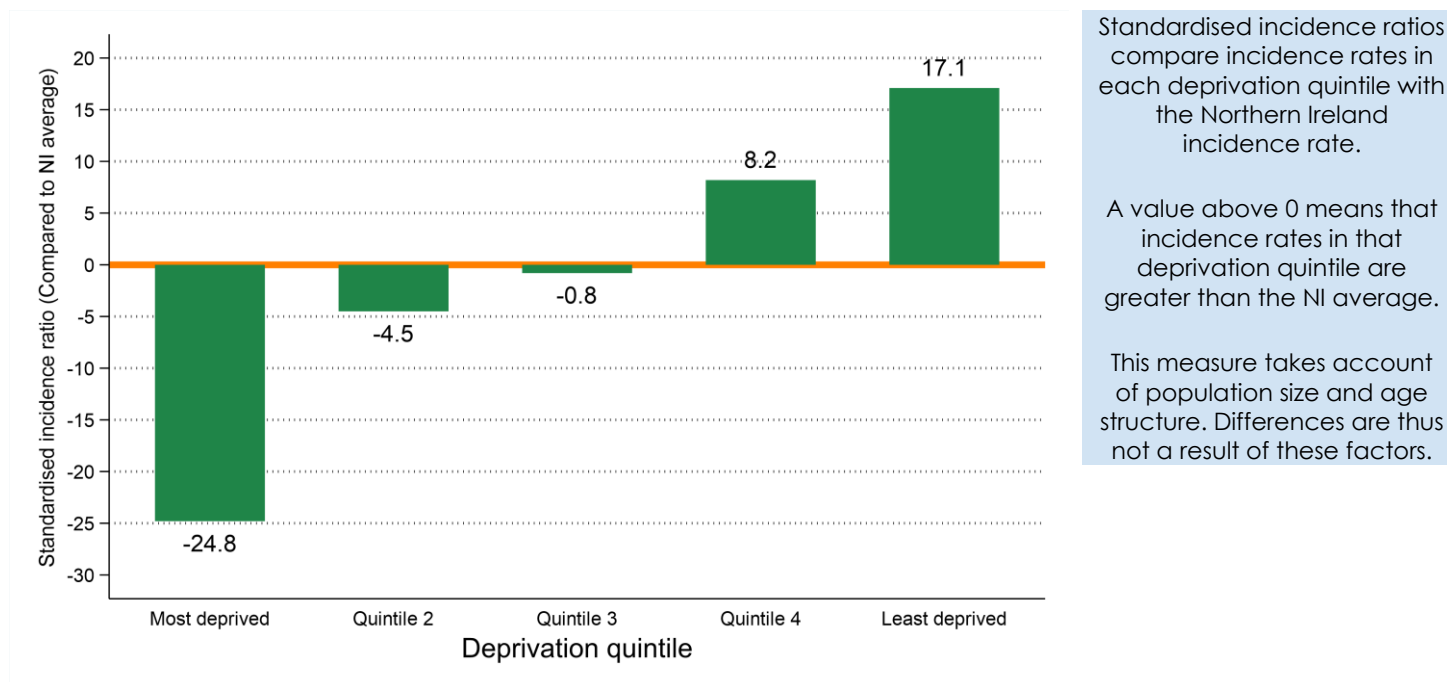
INCIDENCE BY DEPRIVATION

- The number of cases of malignant melanoma diagnosed during 2018-2022 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 were 24.8% lower than the NI average.
 - in the least socio-economically deprived areas were 17.1% higher than the NI average.

Table 3: Number of cases of malignant melanoma diagnosed in 2018-2022 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	2,120	424	1,015	203	1,105	221
Most deprived	270	54	116	23	154	31
Quintile 2	406	81	199	40	207	41
Quintile 3	443	89	221	44	222	44
Quintile 4	487	97	238	48	249	50
Least deprived	514	103	241	48	273	55
Unknown	0	0	0	0	0	0

Figure 9: Standardised incidence ratio comparing deprivation quintile to Northern Ireland for malignant melanoma diagnosed in 2018-2022



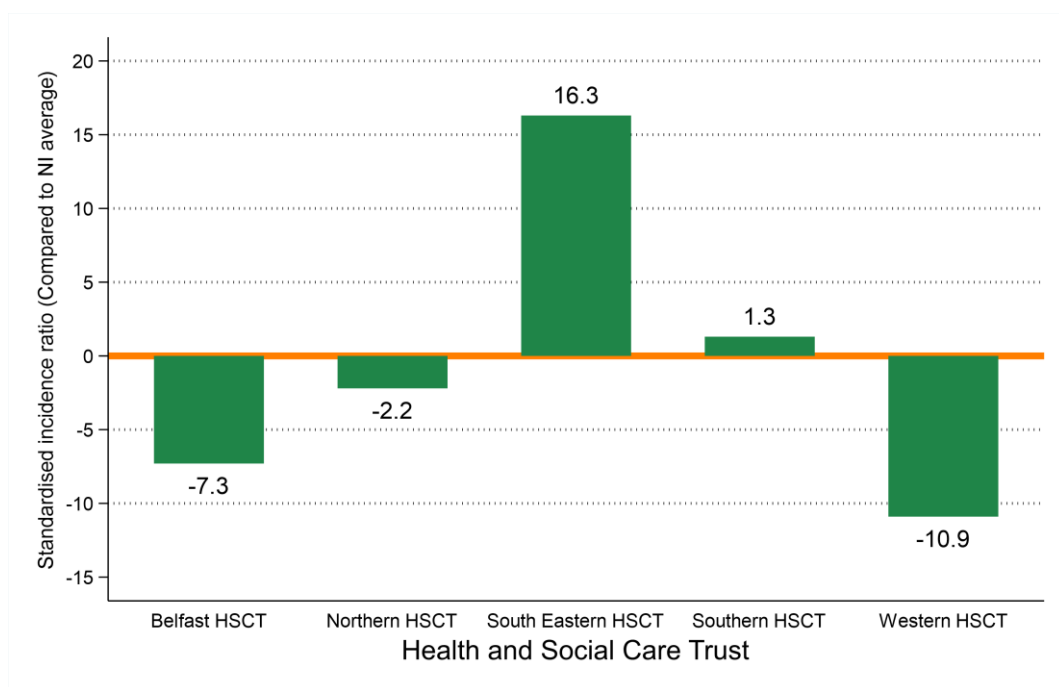
INCIDENCE BY HEALTH AND SOCIAL CARE TRUST

- The number of cases of malignant melanoma diagnosed during 2018-2022 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 were 16.3% higher than the NI average.
 - in Southern HSCT did not vary significantly from the NI average.
 - in Western HSCT were 10.9% lower than the NI average.

Table 4: Number of cases of malignant melanoma diagnosed in 2018-2022 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	2,120	424	1,015	203	1,105	221
Belfast HSCT	361	72	164	33	197	39
Northern HSCT	542	108	247	49	295	59
South Eastern HSCT	506	101	245	49	261	52
Southern HSCT	415	83	211	42	204	41
Western HSCT	296	59	148	30	148	30
Unknown	0	0	0	0	0	0

Figure 10: Standardised incidence ratio comparing Health and Social Care Trust to Northern Ireland for malignant melanoma diagnosed in 2018-2022



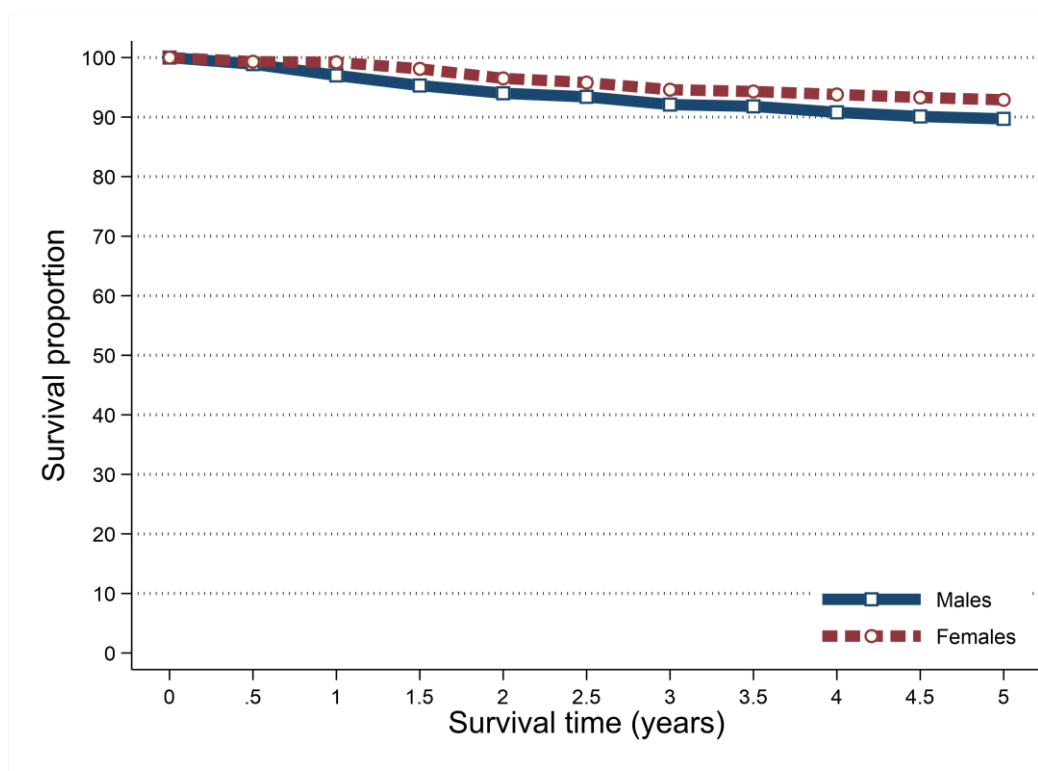
SURVIVAL

- 95.9% of patients were alive one year and 80.8% were alive five years from a malignant melanoma diagnosis in 2013-2017. (observed survival)
- Age-standardised net survival (ASNS), which removes the effect of deaths from causes unrelated to cancer, was 98.2% one year and 91.4% five years from a malignant melanoma diagnosis in 2013-2017.
- Five-year survival (ASNS) for malignant melanoma patients diagnosed in 2013-2017 was 89.7% among men and 92.9% among women.

Table 5: Survival from malignant melanoma for patients diagnosed in 2013-2017

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	98.0%	99.2%	97.6%	98.9%	98.4%	99.3%
One year	95.9%	98.2%	93.9%	97.0%	97.5%	99.2%
Two years	90.9%	95.3%	88.3%	94.0%	93.0%	96.5%
Five years	80.8%	91.4%	76.2%	89.7%	84.7%	92.9%

Figure 11: Age-standardised net survival from malignant melanoma for patients diagnosed in 2013-2017



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.

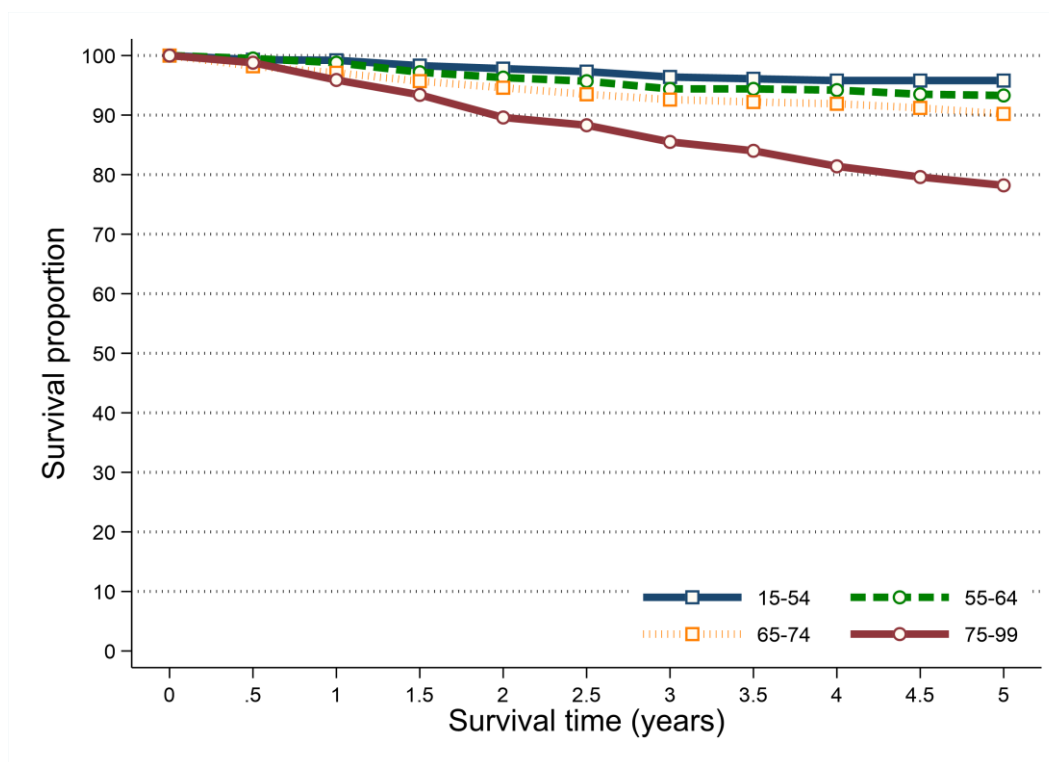
SURVIVAL BY AGE

- Survival from malignant melanoma among patients diagnosed during 2013-2017 was related to age with better five-year survival among younger age groups.
- Five-year net survival ranged from 95.8% among patients aged 15 to 54 at diagnosis to 78.2% among those aged 75 to 99.

Table 6: Net survival from malignant melanoma for patients diagnosed in 2013-2017 by age at diagnosis

Age group	All persons	
	One-year	Five-years
15 to 54	99.2%	95.8%
55 to 64	98.8%	93.3%
65 to 74	97.1%	90.2%
75 to 99	95.9%	78.2%

Figure 12: Net survival from malignant melanoma for patients diagnosed in 2013-2017 by age at diagnosis

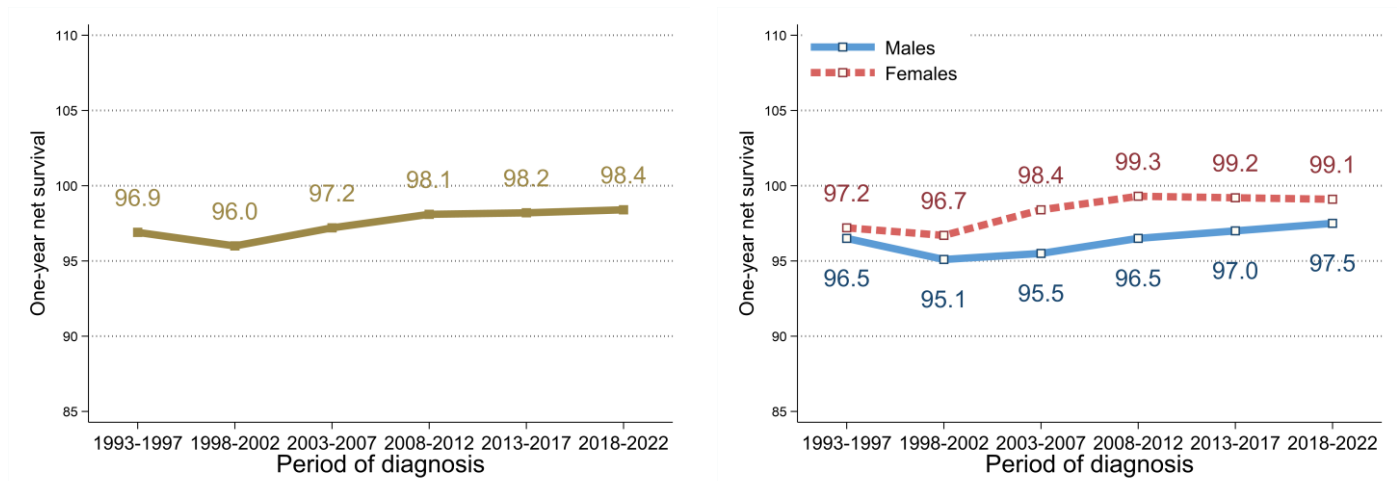


SURVIVAL TRENDS

ONE-YEAR NET SURVIVAL

- Between 2013-2017 and 2018-2022 there was no significant change in one-year survival (ASNS) from malignant melanoma.
- Compared to 1993-1997 one-year survival (ASNS) from malignant melanoma in 2018-2022 did not change significantly.

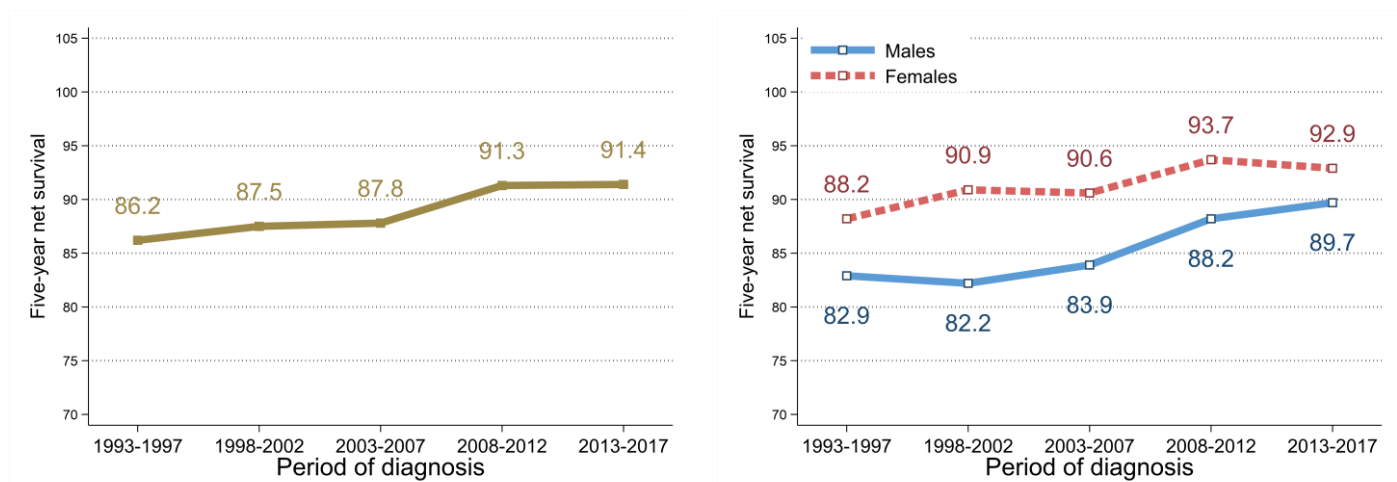
Figure 13: Trends in one-year age-standardised net survival from malignant melanoma in 1993-2022



FIVE-YEAR NET SURVIVAL

- Between 2008-2012 and 2013-2017 there was no significant change in five-year survival (ASNS) from malignant melanoma.
- Compared to 1993-1997 five-year survival (ASNS) from malignant melanoma in 2013-2017 did not change significantly.

Figure 14: Trends in five-year age-standardised net survival from malignant melanoma in 1993-2017



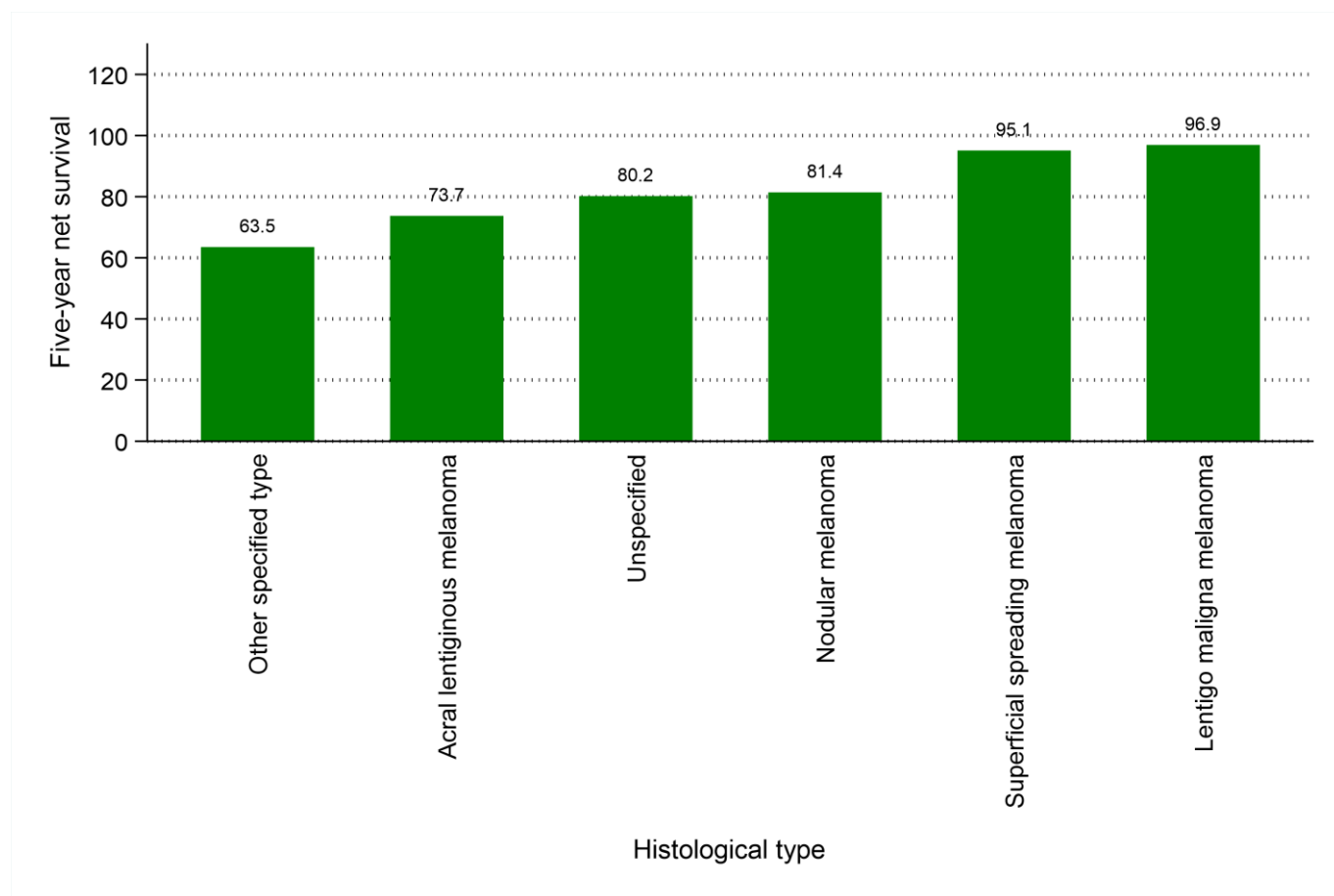
SURVIVAL BY HISTOLOGICAL TYPE

- Five-year survival (ASNS) for patients diagnosed in 2013-2017 ranged from 96.9% for lentigo maligna melanoma to 63.5% for those with another specified type.

Table 7: Age-standardised net survival from malignant melanoma for patients diagnosed in 2013-2017 by histological type

Histological type	All persons	
	One-year	Five-years
Acral lentiginous melanoma	84.6%	73.7%
Lentigo maligna melanoma	99.3%	96.9%
Nodular melanoma	95.5%	81.4%
Superficial spreading melanoma	99.6%	95.1%
Other specified type	86.8%	63.5%
Unspecified	91.3%	80.2%

Figure 15: Five-year age-standardised net survival from malignant melanoma for patients diagnosed in 2013-2017 by histological type



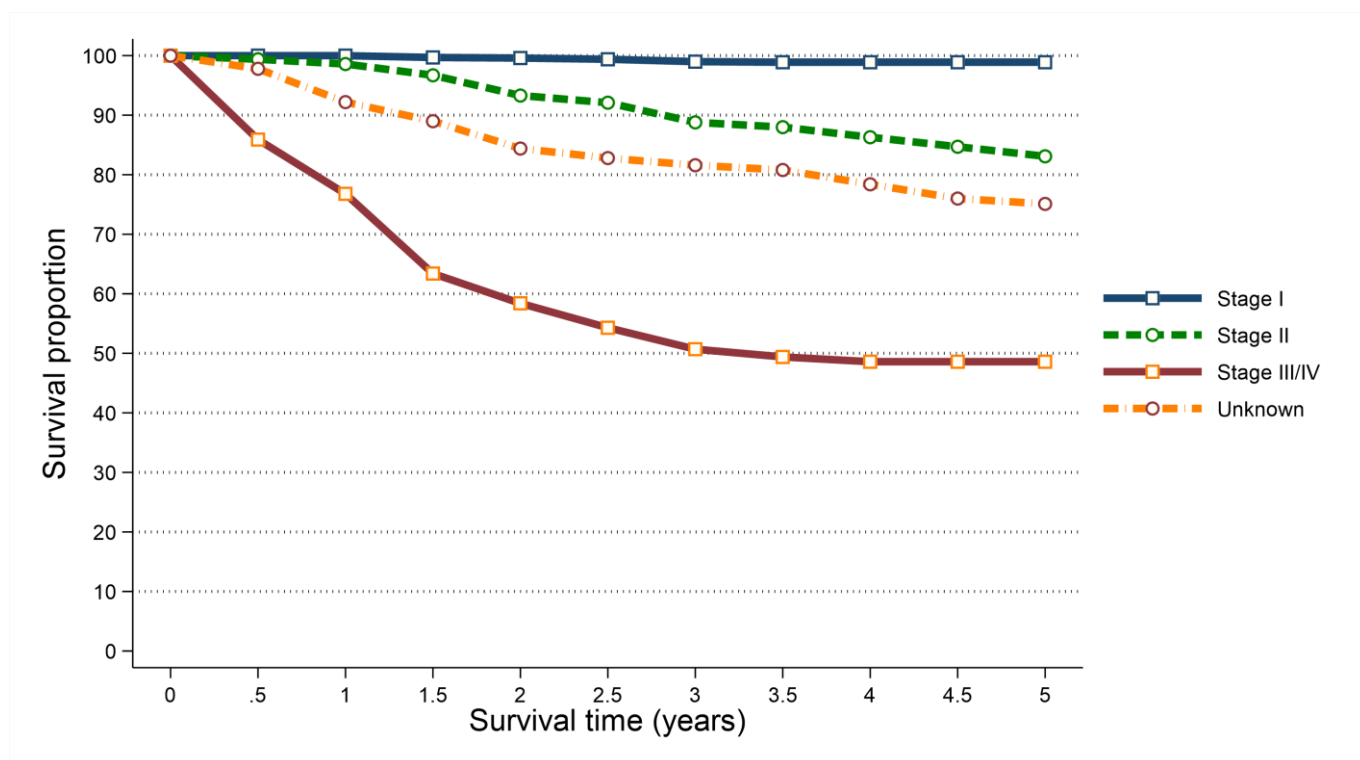
SURVIVAL BY STAGE

- Survival from malignant melanoma among patients diagnosed during 2013-2017 was strongly related to stage with better five-year survival among those diagnosed at earlier stages.
- Five-year survival (ASNS) ranged from 98.9% among patients diagnosed at Stage I to 48.6% among those diagnosed at Stage III/IV.

Table 8: Age-standardised net survival from malignant melanoma for patients diagnosed in 2013-2017 by stage at diagnosis

Stage at diagnosis	All persons	
	One-year	Five-years
Stage I	100.0%	98.9%
Stage II	98.6%	83.1%
Stage III/IV	76.8%	48.6%
Unknown	92.2%	75.1%

Figure 16: Age-standardised net survival from malignant melanoma for patients diagnosed in 2013-2017 by stage at diagnosis



PREVALENCE

- At the end of 2022, there were 5,245 people (Males: 2,158; Females: 3,087) living with malignant melanoma who had been diagnosed with the disease during 1998-2022.
- Of these 9.4% had been diagnosed in the previous year (one-year prevalence) and 62.0% in the previous 10 years (ten-year prevalence).
- 29.2% of malignant melanoma survivors were aged 75 and over at the end of 2022.

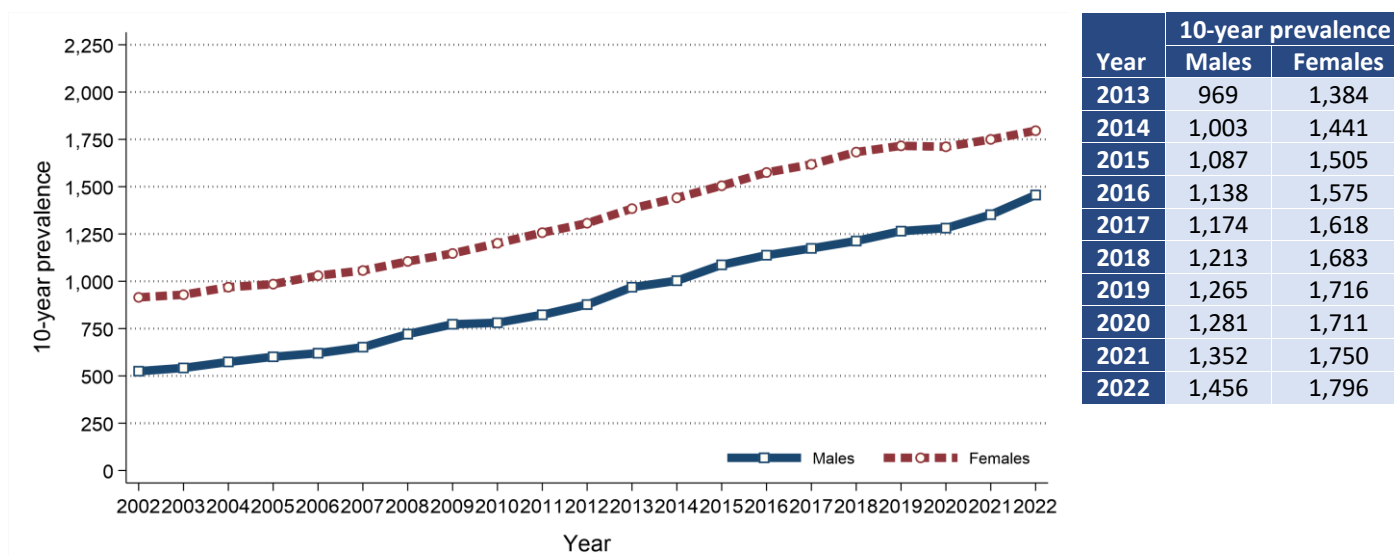
Table 9: 25-year prevalence of malignant melanoma by age at end of 2022

Gender	Age at end of 2022	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	5,245	492	1,386	1,374	1,993
	0 to 74	3,714	356	989	966	1,403
	75 and over	1,531	136	397	408	590
Male	All ages	2,158	245	624	587	702
	0 to 74	1,459	164	433	380	482
	75 and over	699	81	191	207	220
Female	All ages	3,087	247	762	787	1,291
	0 to 74	2,255	192	556	586	921
	75 and over	832	55	206	201	370

PREVALENCE TRENDS

- 10-year prevalence of malignant melanoma among males increased between 2017 and 2022 by 24.0% from 1,174 survivors to 1,456 survivors.
- 10-year prevalence of malignant melanoma among females increased between 2017 and 2022 by 11.0% from 1,618 survivors to 1,796 survivors.

Figure 17: Trends in 10-year prevalence of malignant melanoma in 2002-2022



MORTALITY

- There were 294 deaths from malignant melanoma during 2018-2022 in Northern Ireland. On average this was 59 deaths per year.
- During this period 42.5% of malignant melanoma deaths were among women (Male deaths: 169, Female deaths: 125). On average there were 34 male and 25 female deaths from malignant melanoma per year.
- Malignant melanoma deaths made up 1.4% of all male cancer deaths and 1.2% of all female cancer deaths.
- The median age of patients who died from malignant melanoma during 2018-2022 was 75 years (Males: 74, Females: 76).
- The risk of dying from malignant melanoma varied by age, with 49.7% of men and 53.6% of women who died from malignant melanoma aged 75 and over at death.
- In contrast, 13.9% of patients who died from malignant melanoma were aged 0 to 54 at death.

Figure 18: Average number of deaths from malignant melanoma per year in 2018-2022 by age at death

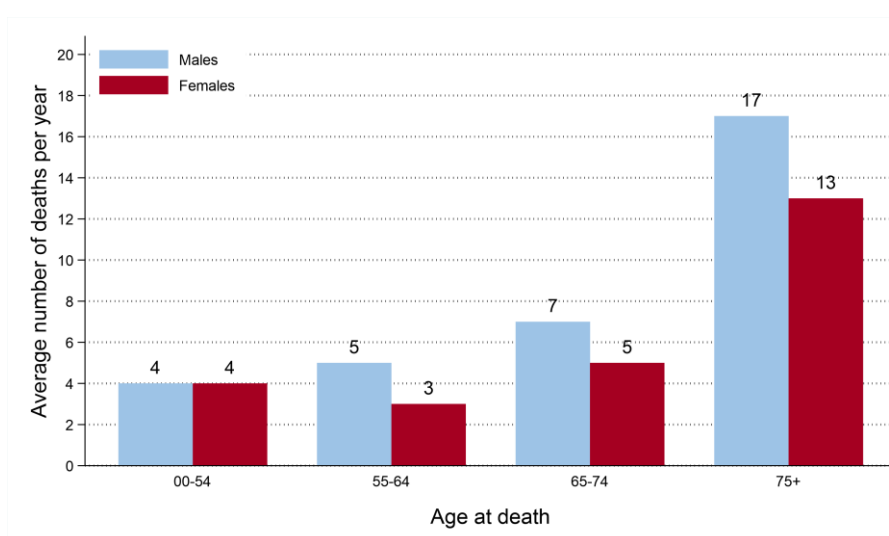
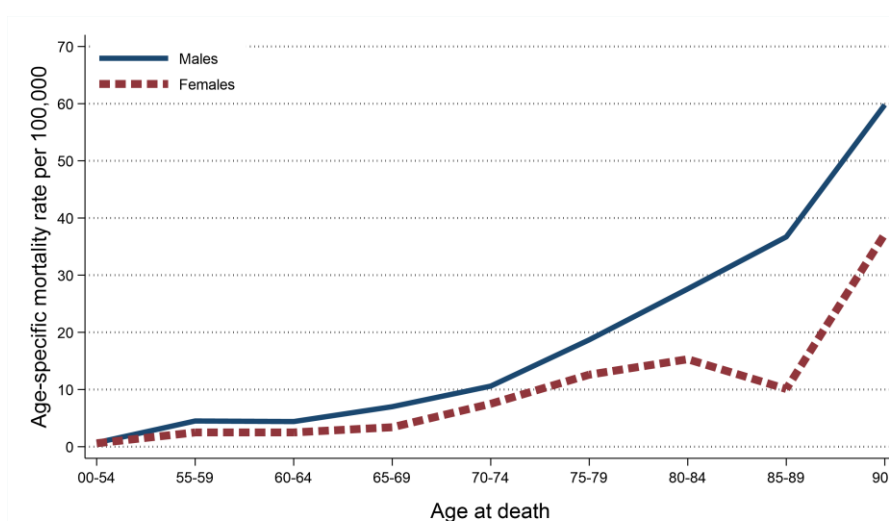


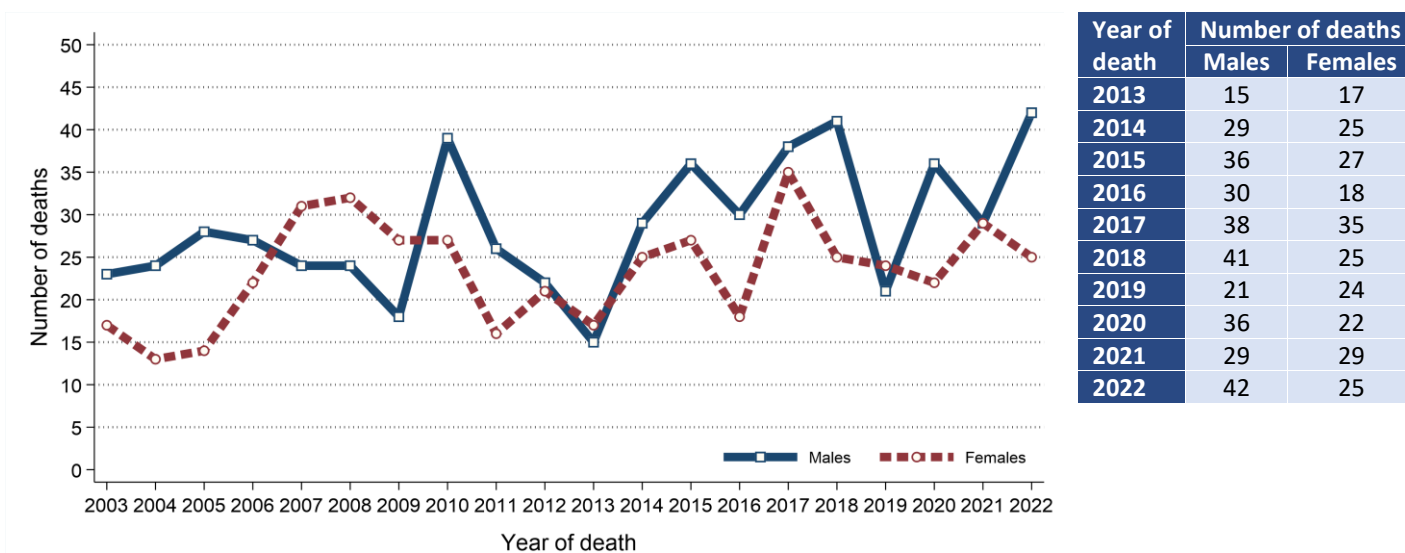
Figure 19: Age-specific mortality rates of malignant melanoma in 2018-2022



MORTALITY TRENDS

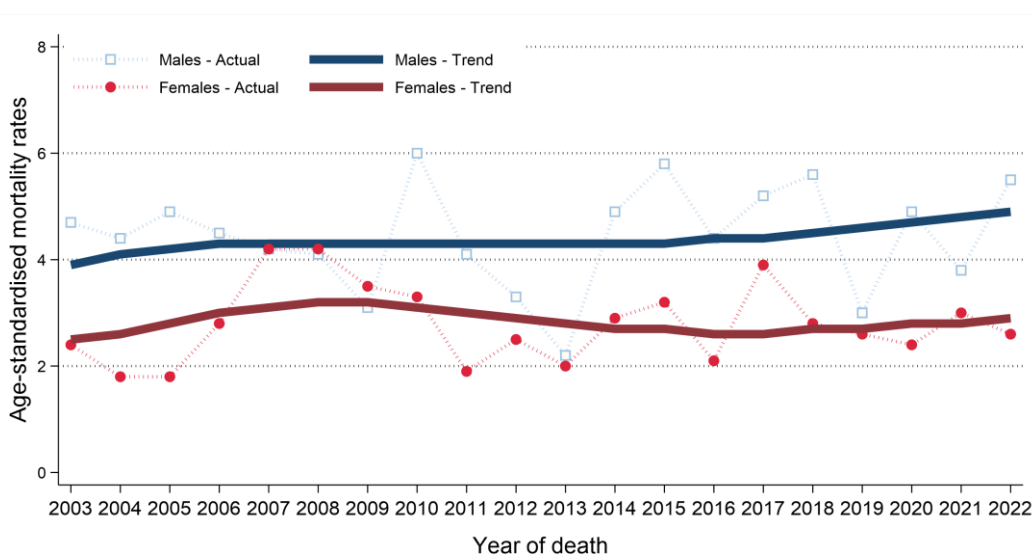
- The number of deaths from malignant melanoma among males increased between 2013-2017 and 2018-2022 by 14.2% from 148 deaths (30 deaths per year) to 169 deaths (34 deaths per year).
- The number of deaths from malignant melanoma among females increased between 2013-2017 and 2018-2022 by 2.5% from 122 deaths (24 deaths per year) to 125 deaths (25 deaths per year).

Figure 20: Trends in the number of deaths from malignant melanoma from 2003 to 2022



- Male age-standardised malignant melanoma mortality rates increased between 2013-2017 and 2018-2022 by 2.2% from 4.5 to 4.6 deaths per 100,000 males. This change was not statistically significant.
- Female age-standardised malignant melanoma mortality rates decreased between 2013-2017 and 2018-2022 by 3.6% from 2.8 to 2.7 deaths per 100,000 females. This change was not statistically significant.

Figure 21: Trends in mortality rates of malignant melanoma from 2003 to 2022



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#/I>

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 Jul 2024 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. malignant melanoma 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. malignant melanoma 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 2022 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.