Female breast insitu tumours

1993-2021

(ICD10 codes: D05)

Northern Ireland Cancer Registry, 2023

An official statistics publication

ABOUT THIS REPORT

Contents

This report includes information on incidence of female breast insitu tumours 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 and prevalence 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.

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 2023. Female breast insitu tumours: 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

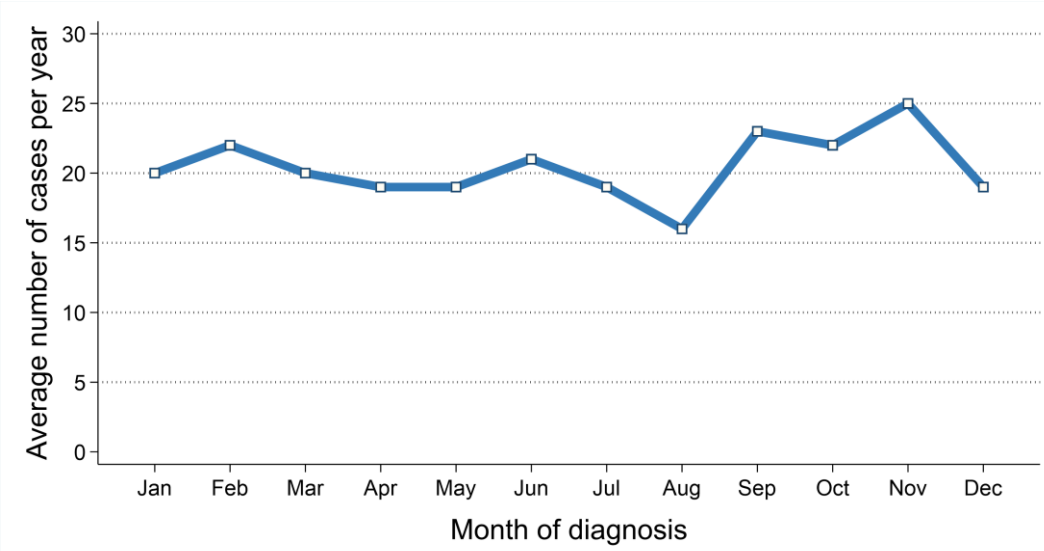
The Northern Ireland Cancer Registry (NICR) uses data provided by patients and collected by the health service as part of their care and support.

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

INCIDENCE

- There were 1,221 cases of female breast insitu tumours diagnosed during 2017-2021 in Northern Ireland. On average this was 244 cases per year.
- The most common diagnosis month during 2017-2021 was November with 25 cases per year.

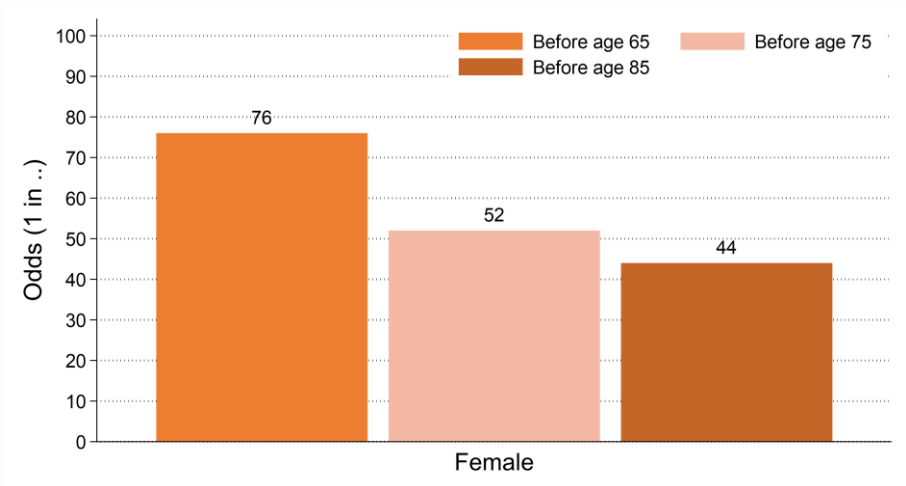
Figure 1: Average number of cases of female breast insitu tumours per year in 2017-2021 by month of diagnosis



Month of diagnosis	Average number of cases per year Females
January	20
February	22
March	20
April	19
May	19
June	21
July	19
August	16
September	23
October	22
November	25
December	19

- The breast insitu tumour incidence rate was 25.5 cases per 100,000 females.
- The odds of developing a female breast insitu tumour before age 85 was 1 in 44.

Figure 2: Odds of developing a female breast insitu tumour in 2017-2021



INCIDENCE BY AGE

- The median age of females diagnosed with a breast insitu tumour during 2017-2021 was 58 years.
- The risk of being diagnosed with a breast insitu tumour varied by age, with 10.2% of women diagnosed with a breast insitu tumour aged 75 and over at diagnosis.
- In contrast, 40.1% of women diagnosed with a breast insitu tumour were aged 0 to 54 at diagnosis.

Figure 3: Average number of cases of female breast insitu tumours diagnosed per year in 2017-2021 by age at diagnosis

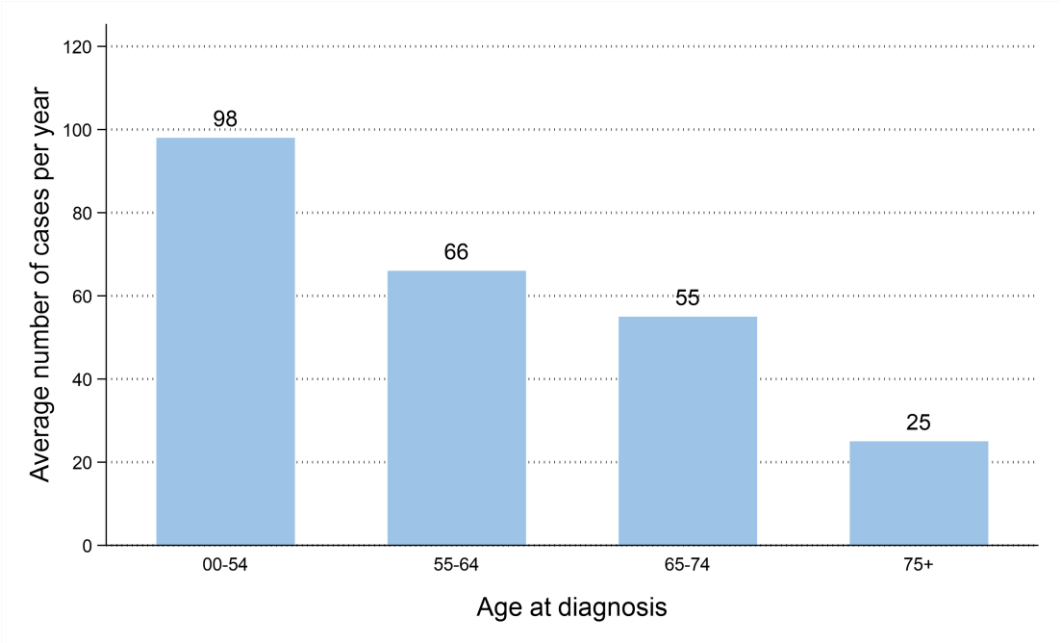
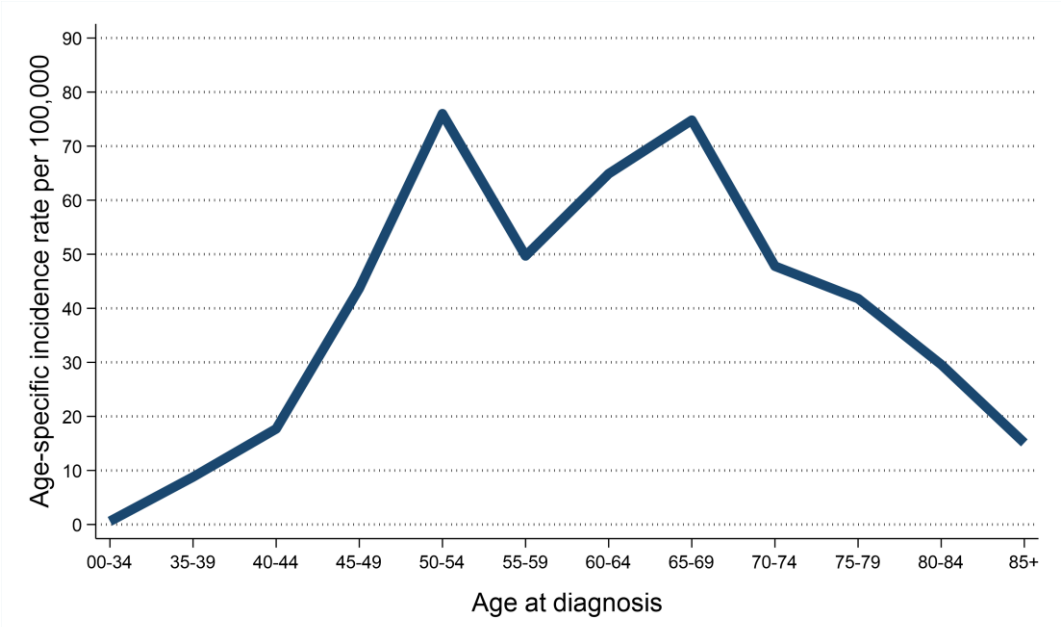


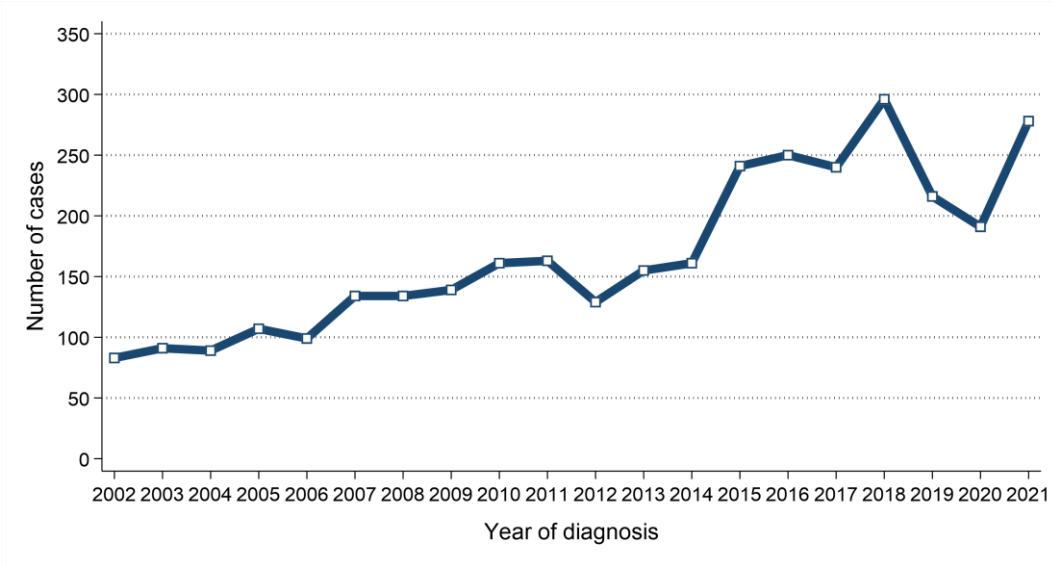
Figure 4: Age-specific incidence rates of female breast insitu tumours in 2017-2021



INCIDENCE TRENDS

- The number of cases of breast insitu tumours among females increased between 2012-2016 and 2017-2021 by 30.4% from 936 cases (187 cases per year) to 1,221 cases (244 cases per year).

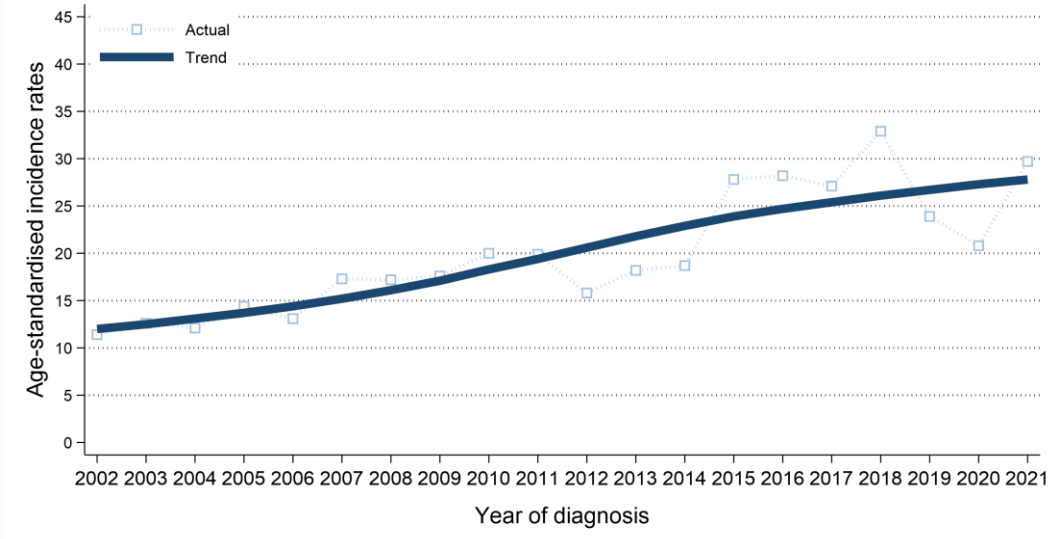
Figure 5: Trends in number of cases of female breast insitu tumours diagnosed from 2002 to 2021



Year of diagnosis	Number of cases Females
2012	129
2013	155
2014	161
2015	241
2016	250
2017	240
2018	296
2019	216
2020	191
2021	278

- Female age-standardised breast insitu tumour incidence rates increased between 2012-2016 and 2017-2021 by 22.8% from 21.9 to 26.9 cases per 100,000 females. This change was statistically significant.

Figure 6: Trends in incidence rates of female breast insitu tumours 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).

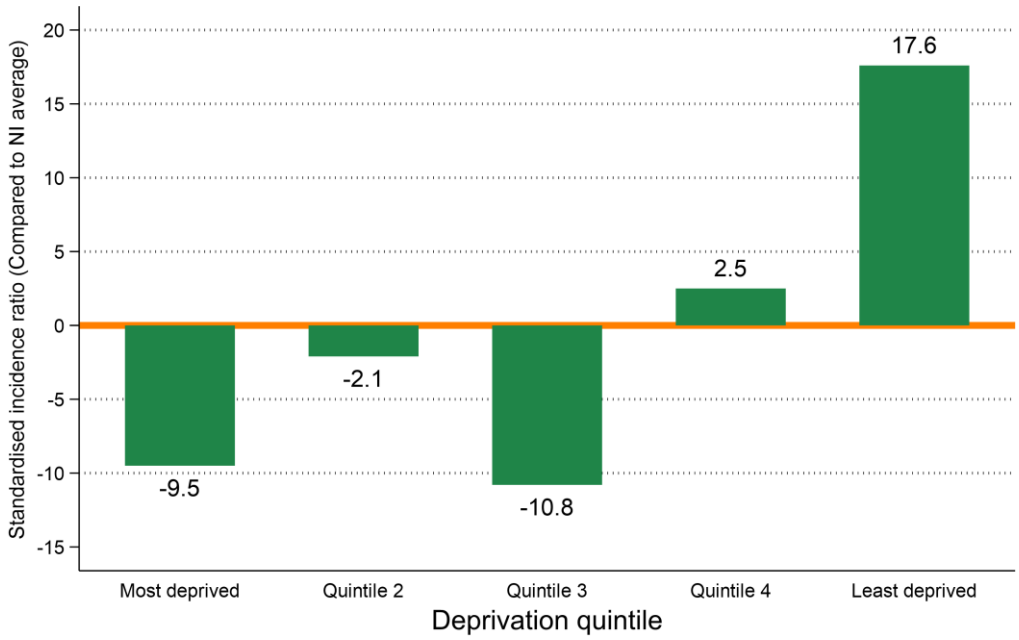
INCIDENCE BY DEPRIVATION

- The number of cases of female breast insitu tumours 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 were 17.6% higher than the NI average.

Table 1: Number of cases of female breast insitu tumours diagnosed in 2017-2021 by deprivation quintile

Deprivation quintile	Female	
	Total cases in period	Average cases per year
Northern Ireland	**1,221**	**244**
	.	.
Most deprived	189	38
Quintile 2	239	48
Quintile 3	226	45
Quintile 4	267	53
Least deprived	299	60
Unknown	1	0

Figure 7: Standardised incidence ratio comparing deprivation quintile to Northern Ireland for female breast insitu tumours 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.

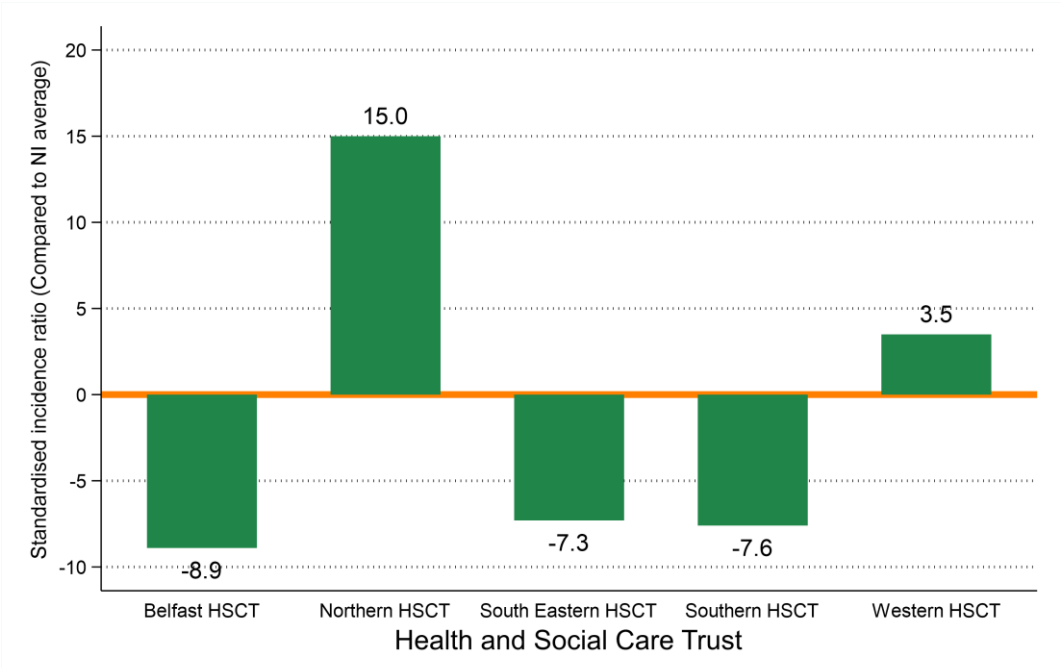
INCIDENCE BY HEALTH AND SOCIAL CARE TRUST

- The number of cases of female breast insitu tumours 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 were 15.0% higher than 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 2: Number of cases of female breast insitu tumours diagnosed in 2017-2021 by Health and Social Care Trust

Health and Social Care Trust	Female	
	Total cases in period	Average cases per year
Northern Ireland	**1,221**	**244**
	.	.
Belfast HSCT	201	40
Northern HSCT	368	74
South Eastern HSCT	234	47
Southern HSCT	216	43
Western HSCT	201	40
Unknown	1	0

Figure 8: Standardised incidence ratio comparing Health and Social Care Trust to Northern Ireland for female breast insitu tumours diagnosed in 2017-2021



PREVALENCE

- At the end of 2021, there were 3,108 females living with a breast insitu tumour who had been diagnosed with the disease during 1997-2021.
- Of these 8.7% had been diagnosed in the previous year (one-year prevalence) and 62.7% in the previous 10 years (ten-year prevalence).
- 22.1% of female breast insitu tumour survivors were aged 75 and over at the end of 2021.

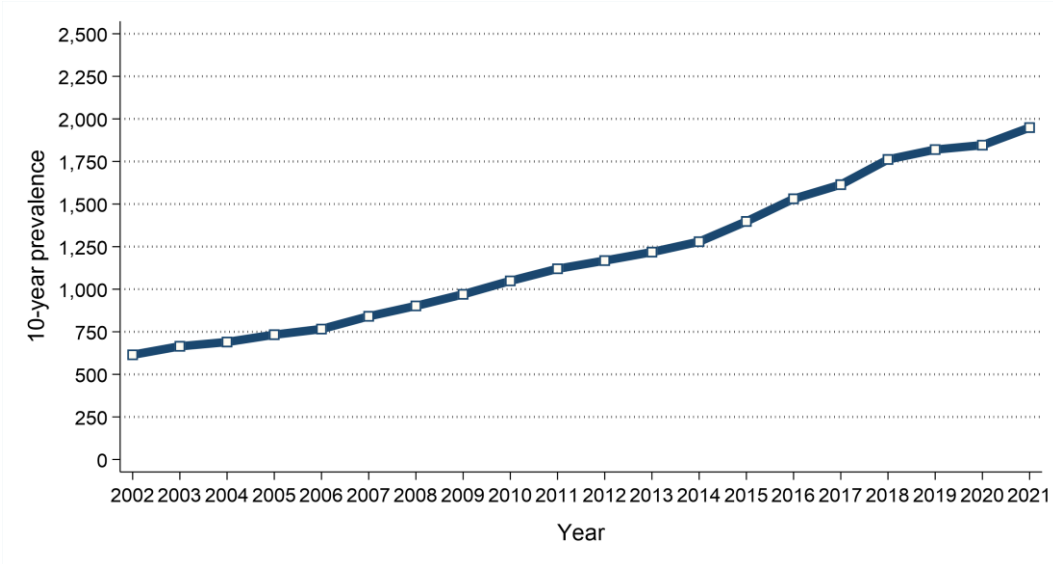
Table 3: 25-year prevalence of female breast insitu tumours by age at end of 2021

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 ages	3,108	271	875	803	1,159
0 to 74	2,422	240	759	649	774
75 and over	686	31	116	154	385

PREVALENCE TRENDS

- 10-year prevalence of breast insitu tumours among females increased between 2016 and 2021 by 27.3% from 1,531 survivors to 1,949 survivors.

Figure 9: Trends in 10-year prevalence of female breast insitu tumours in 2002-2021



Year	10-year prevalence Females
2012	1,168
2013	1,218
2014	1,279
2015	1,398
2016	1,531
2017	1,614
2018	1,762
2019	1,820
2020	1,846
2021	1,949

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. female breast insitu tumour 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. female breast insitu tumour 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.