Non-melanoma skin cancer

Patients diagnosed 1993-2019

(ICD10: C44)

Incidence

During 2015-2019:

▪ There were 2,295 male and 1,667 female cases of non-melanoma skin cancer diagnosed each year.

▪ Non-melanoma skin cancer made up 31.7% of all male cancers, and 25.3% of all female cancers.

▪ The risk of non-melanoma skin cancer before the age of 75 was 1 in 7.9 for men and 1 in 11.9 for women, while before the age of 85 the risk was 1 in 3.7 for men and 1 in 6.1 for women.

Incidence by age at diagnosis - *Non-melanoma skin cancer, Cases in 2015-2019*

During 2015-2019:

▪ The median age at diagnosis was 73 for men and 73 for women.

▪ Cancer risk increased with age, with 45.6% of men and 47.0% of women aged 75 years or more at diagnosis.

▪ 12.5% of cases were diagnosed among those aged under 50.

Age at diagnosis	Average cases per year		
	Male	Female	Both sexes
0 - 54	253	240	494
55 - 64	344	231	575
65 - 74	650	411	1,062
75 +	1,047	784	1,832
All ages	2,295	1,667	3,962
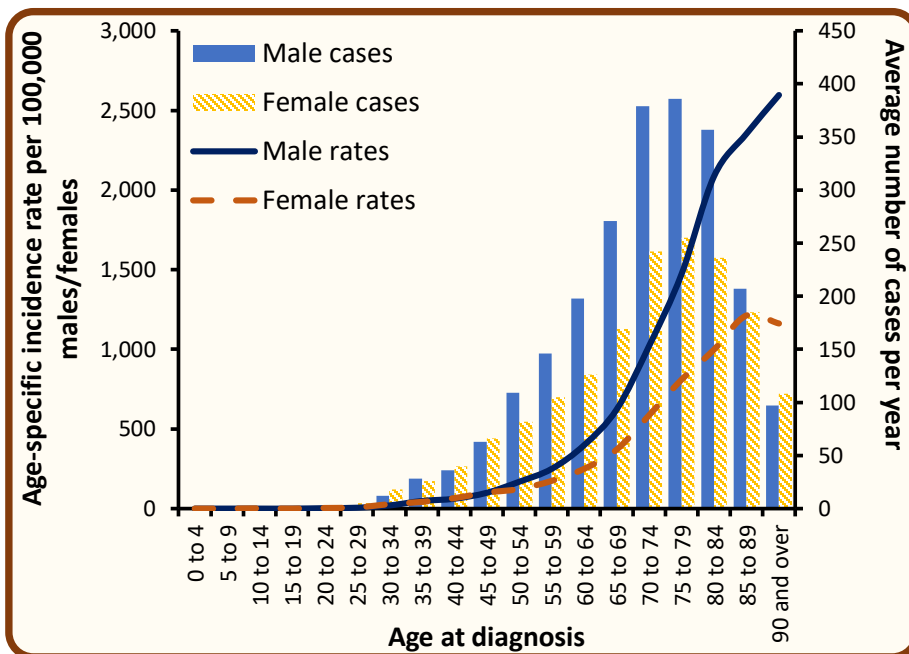
Incidence by year of diagnosis - *Non-melanoma skin cancer, Cases in 1995-2019*

▪ Among males the number of non-melanoma skin cancer increased by 18.5% from an annual average of 1,937 cases in 2010-2014 to 2,295 cases in 2015-2019.

▪ Among females the number of cases of non-melanoma skin cancer increased by 11.7% from an annual average of 1,493 cases in 2010-2014 to 1,667 cases in 2015-2019.

Year of diagnosis	Male	Female	Both sexes
2010	1,620	1,225	2,845
2011	1,846	1,499	3,345
2012	2,056	1,656	3,712
2013	2,128	1,584	3,712
2014	2,036	1,501	3,537
2015	2,176	1,574	3,750
2016	2,184	1,598	3,782
2017	2,264	1,630	3,894
2018	2,373	1,698	4,071
2019	2,477	1,834	4,311
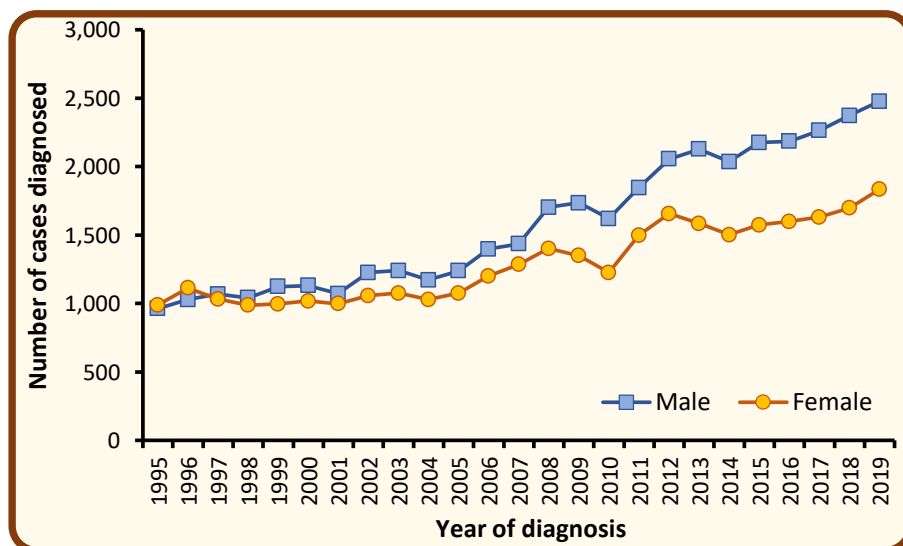
Note: Annual averages based upon several years have been rounded to the nearest integer. Sums of numbers in table rows or columns may thus differ slightly from the given total.

▪ Among males age-standardised incidence rates of non-melanoma skin cancer increased by 5.5% from 309.1 per 100,000 person years in 2010-2014 to 326.2 cases per 100,000 persons years in 2015-2019. This difference was statistically significant.

▪ Among females age-standardised incidence rates of non-melanoma skin cancer increased by 3.4% from 182.8 per 100,000 person years in 2010-2014 to 189.0 cases per 100,000 persons years in 2015-2019. This difference was not statistically significant.
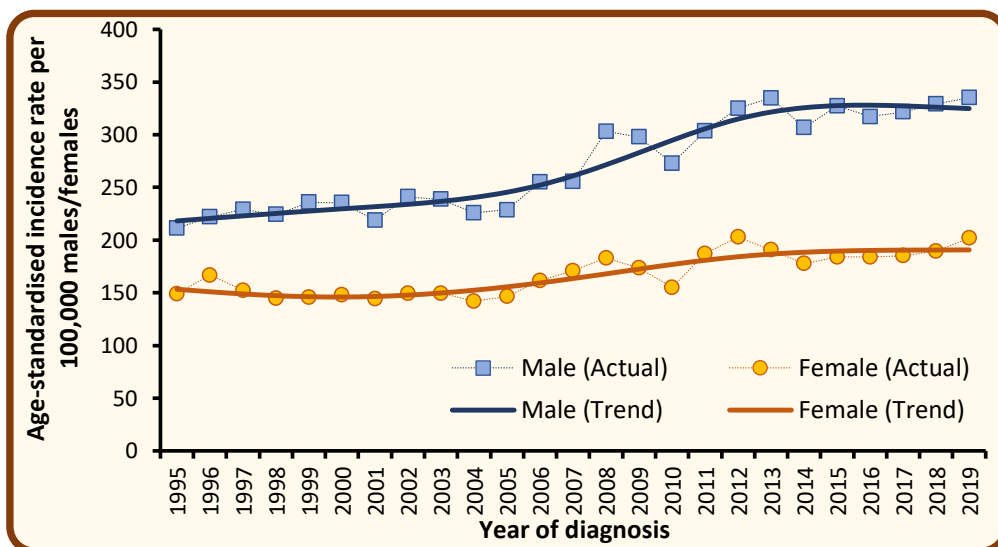
Age-standardised incidence rates illustrate the change in the number of cases within a population of a fixed size and age structure (2013 European Standard).

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

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).

**Trends in age-standardised incidence rates by age** *- Non-melanoma skin cancer, Cases in 1995-2019*

For the total number of cases recorded, between 2010-2014 and 2015-2019 there was:
▪ an increase of 8.7% among males aged 0 to 64, an increase of 12.7% among males aged 65 to 74 and an increase of 29.2% among males aged 75 and over.
▪ an increase of 12.9% among females aged 0 to 64, an increase of 11.1% among females aged 65 to 74 and an increase of 11.2% among females aged 75 and over.

Age group	Average cases per year			
	2010-2014		2015-2019	
	Male	Female	Male	Female
0 to 64	549	418	597	472
65 to 74	577	370	650	411
75 and over	811	705	1,048	784
All ages	1,937	1,493	2,295	1,667

For age-standardised incidence rates, between 2010-2014 and 2015-2019 there was:
▪ no significant change among males aged 0 to 64, no significant change among males aged 65 to 74 and an increase of 10.3% among males aged 75 and over.
▪ no significant change among females aged 0 to 64, no significant change among females aged 65 to 74 and no significant change among females aged 75 and over.
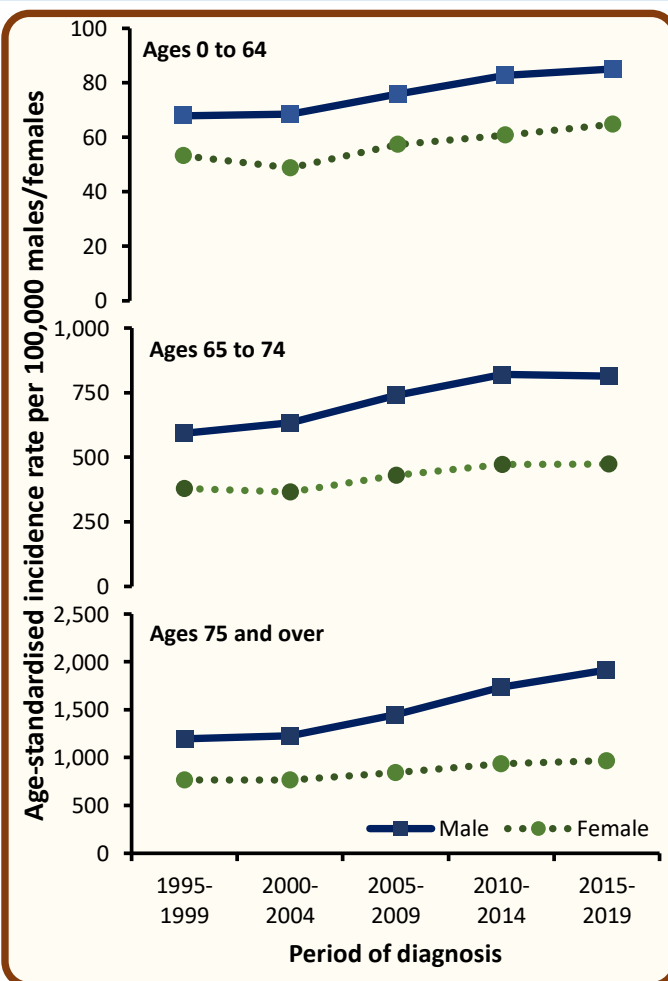
Incidence by deprivation quintile - *Non-melanoma skin cancer, Cases in 2015-2019*

The annual number of cases during 2015-2019 varied in each deprivation quintile due to variations in population size and age.

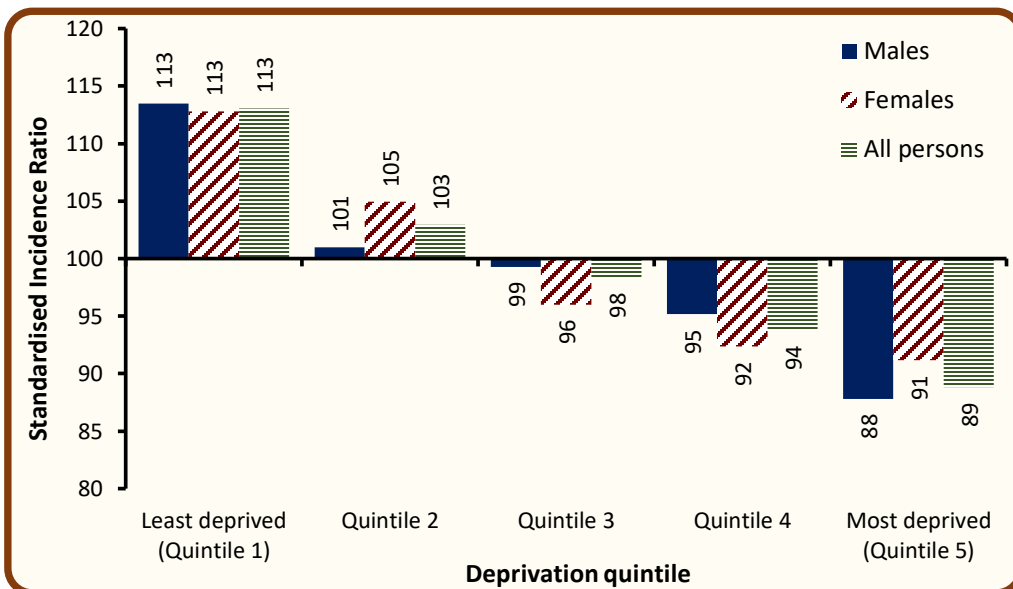After accounting for these factors, incidence rates:

▪ in the most socio-economically deprived areas were 11.2% lower than the NI average.

▪ in the least socio-economically deprived areas were 13.1% higher than the NI average.

Deprivation quintile	Average cases per year		
	Male	Female	Both sexes
Least deprived (Quintile 1)	555	405	960
Quintile 2	494	366	860
Quintile 3	486	332	818
Quintile 4	435	310	745
Most deprived (Quintile 5)	324	253	577
Northern Ireland	2,295	1,667	3,962

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.


Incidence by Health and Social Care Trust (HSCT) - *Non-melanoma skin cancer, Cases in 2015-2019*

The annual number of cases during 2015-2019 varied in each HSCT due to variations in population size and age.

After accounting for these factors, incidence rates:

▪ in Belfast HSCT were significantly lower than the NI average.

▪ in Northern HSCT did not vary significantly from the NI average.

▪ in South-Eastern HSCT were significantly higher than the NI average.

▪ in Southern HSCT did not vary significantly from the NI average.

▪ in Western HSCT were significantly lower than the NI average.

Health and Social Care Trust	Average cases per year		
	Male	Female	Both sexes
Belfast HSCT	398	314	712
Northern HSCT	614	452	1,066
South-Eastern HSCT	504	377	881
Southern HSCT	438	294	732
Western HSCT	340	230	570
Northern Ireland	2,295	1,667	3,962
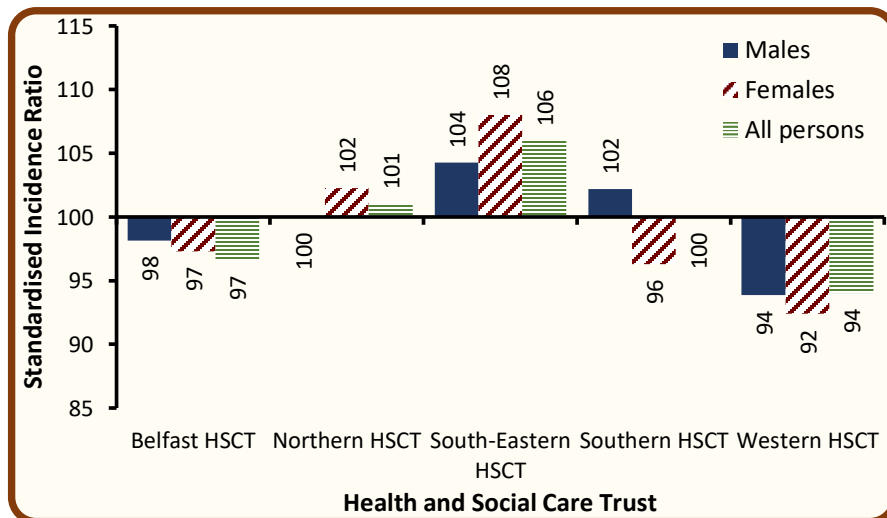
Standardised incidence ratios compare incidence rates in each HSC Trust with the Northern Ireland incidence rate. A value above 100 means that incidence rates in that HSC Trust are greater than the NI average.

This measure takes account of population size and age structure. Differences are thus not a result of these factors.

Data for Local Government Districts and Parliamentary Constituencies are available at www.qub.ac.uk/research-centres/nicr

Prevalence

▪ At the end of 2019, there were 39,203 people (Males: 21,167; Females: 18,036) living with non-melanoma skin cancer who had been diagnosed with the disease during 1995-2019.

▪ Of these, 54.0% were male, 51.6% were aged 75 and over (in 2019), and 10.5% had been diagnosed in the previous year.

25-year prevalence refers to the number of cancer survivors who were alive at the end of 2019, and had been diagnosed with their cancer in the previous 25 years (i.e. 1995-2019).

Time since diagnosis	25-year prevalence								
	Aged 0-74			Aged 75+			All ages		
	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes
0-1 year	1,268	959	2,227	1,081	820	1,901	2,349	1,779	4,128
1-5 years	3,654	2,736	6,390	3,506	2,753	6,259	7,160	5,489	12,649
5-10 years	2,888	2,256	5,144	2,895	2,578	5,473	5,783	4,834	10,617
10-25 years	2,672	2,525	5,197	3,203	3,409	6,612	5,875	5,934	11,809
0-25 years	10,482	8,476	18,958	10,685	9,560	20,245	21,167	18,036	39,203

Trends in 10-year prevalence *- Non-melanoma skin cancer, Patients alive at end of each year from 2010-2019*

▪ Among males the number of survivors from non-melanoma skin cancer who had been diagnosed within the previous ten years increased by 19.8% from 12,763 survivors in 2014 to 15,292 survivors in 2019.

▪ Among females the number of survivors from non-melanoma skin cancer who had been diagnosed within the previous ten years increased by 13.4% from 10,674 survivors in 2014 to 12,102 survivors in 2019.

Year	10-year prevalence		
	Male	Female	Both sexes
2010	10,232	8,924	19,156
2011	10,837	9,345	20,182
2012	11,484	9,876	21,360
2013	12,136	10,293	22,429
2014	12,763	10,674	23,437
2015	13,352	10,965	24,317
2016	13,936	11,273	25,209
2017	14,497	11,516	26,013
2018	14,941	11,760	26,701
2019	15,292	12,102	27,394

Mortality

▪ During 2015-2019 there were 22 male and 12 female deaths from non-melanoma skin cancer each year.

▪ Non-melanoma skin cancer made up 1.0% of all male, and 0.6% of all female cancer deaths.

▪ The median age at death during 2015-2019 was 83 for men and 86 for women.

Deaths by year of death *- Non-melanoma skin cancer, Deaths in 2010-2019*

▪ The number of deaths from non-melanoma skin cancer increased by 78.9% from an annual average of 19 deaths in 2010-2014 to 34 deaths in 2015-2019.

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
All persons	13	18	22	19	24	34	26	34	40	36

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 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 are assigned based on a patient's postcode of usual residence at diagnosis using the Jan 2021 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).

A **crude incidence/mortality rate** is 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.

An **age-standardised incidence/mortality rate** per 100,000 person years is an estimate 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.

A **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 are a measure of the precision of a statistic (e.g. non-melanoma skin cancer 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. cervical cancer 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 2019 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.

Observed survival refers to the proportion of patients who survive a specified amount of time from their date of diagnosis. Observed survival considers death from any cause and is not adjusted for the age of the patient. Cause of death may be unrelated to the cancer the patient has been diagnosed with.

Net Survival is an estimate of survival where the effect on survival of background population mortality rates has been removed. It represents the [theoretical] survival of cancer patients if they could only die from cancer-related causes. Age-standardised net survival estimates are the estimates that would occur if that population of cancer patients had a standard population age structure. The age groups and weights used here are those used by international studies such as EUROCARE, an international study group that compares cancer survival among European countries. However, due to the small number of patients in NI, the first two age categories in the standard population are combined.

Mortality: Information relating to cancer mortality is sourced from the General Registrar Office (GRONI) via the Department of Health (NI). Results are based upon the date on which death occurs, and may thus differ slightly than those produced by the Northern Ireland Statistics and Research Agency (NISRA), which produces deaths data based upon the date on which the death is registered with GRONI.