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# Non-melanoma skin cancer

Patients diagnosed 1993-2020  
(ICD10: C44)

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## Further information

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Further data is available at: [www.qub.ac.uk/research-centres/nicr](http://www.qub.ac.uk/research-centres/nicr)

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## Acknowledgements

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The Northern Ireland Cancer Registry (NICR) is funded by the Public Health Agency and is based in Queen's University, Belfast. NICR uses data provided by patients and collected by the health service as part of their care and support.

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.



# Incidence

During 2016-2020:

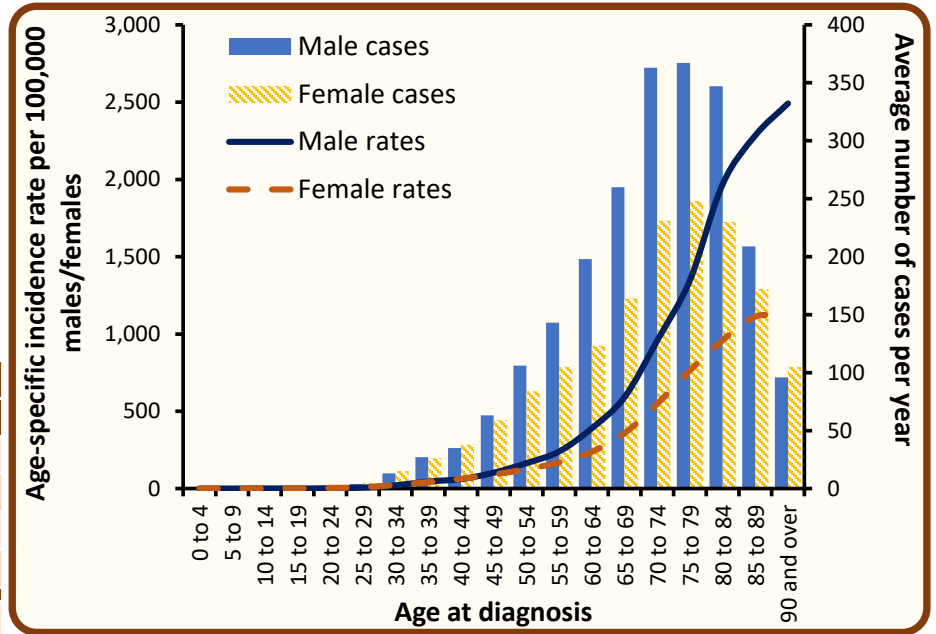
- There were 2,233 male and 1,608 female cases of non-melanoma skin cancer diagnosed each year.
- The risk of non-melanoma skin cancer before the age of 75 was 1 in 8 for men and 1 in 13 for women, while before the age of 85 the risk was 1 in 4 for men and 1 in 6 for women.

## Incidence by age at diagnosis - Non-melanoma skin cancer, Cases in 2016-2020

During 2016-2020:

- 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 55.

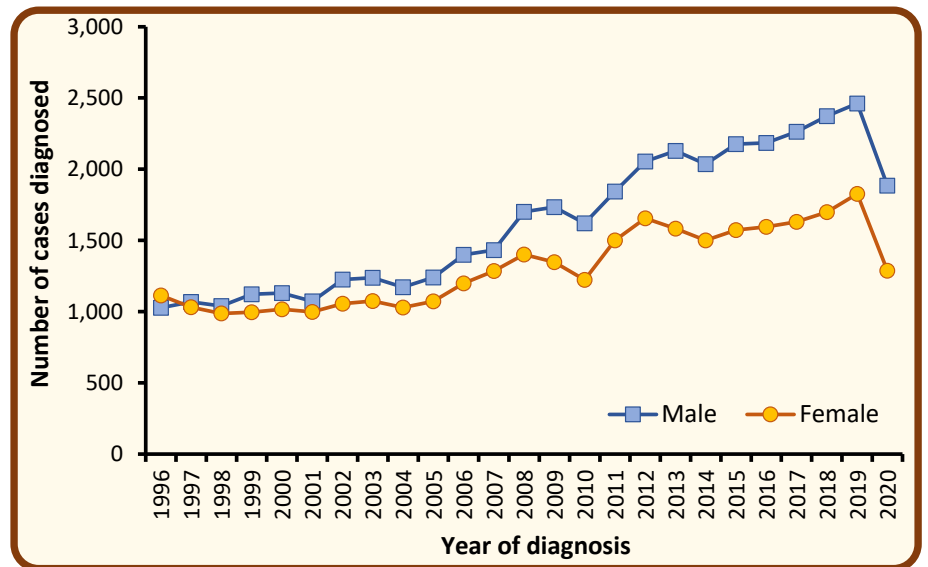
Age at diagnosis	Average cases per year		
	Male	Female	Both sexes
0 - 54	249	229	481
55 - 64	341	228	570
65 - 74	623	395	1,017
75 +	1,019	755	1,774
<b>All ages</b>	<b>2,233</b>	<b>1,608</b>	<b>3,841</b>



## Incidence by year of diagnosis - Non-melanoma skin cancer, Cases in 1996-2020

- Among males the number of non-melanoma skin cancer increased by 9.0% from an annual average of 2,048 cases in 2011-2015 to 2,233 cases in 2016-2020.
- Among females the number of cases of non-melanoma skin cancer increased by 2.9% from an annual average of 1,563 cases in 2011-2015 to 1,608 cases in 2016-2020.

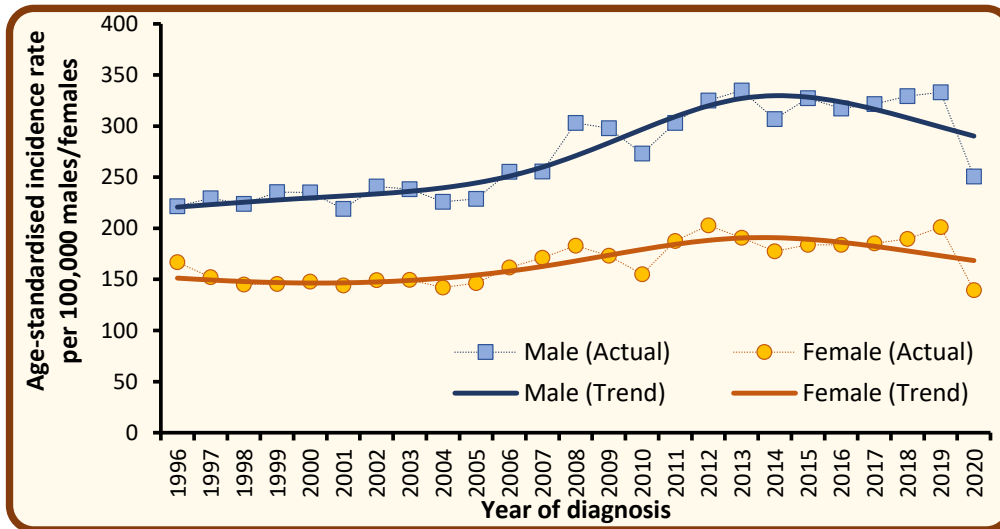
Year of diagnosis	Male	Female	Both sexes
2011	1,844	1,501	3,345
2012	2,055	1,656	3,711
2013	2,128	1,584	3,712
2014	2,036	1,501	3,537
2015	2,176	1,573	3,749
2016	2,184	1,596	3,780
2017	2,263	1,631	3,894
2018	2,372	1,698	4,070
2019	2,462	1,827	4,289
2020	1,885	1,287	3,172



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.

## Trends in age-standardised incidence rates - Non-melanoma skin cancer, Cases in 1996-2020

- Among males age-standardised incidence rates of non-melanoma skin cancer decreased by 3.1% from 319.7 per 100,000 person years in 2011-2015 to 309.7 cases per 100,000 persons years in 2016-2020. This difference was not statistically significant.
- Among females age-standardised incidence rates of non-melanoma skin cancer decreased by 4.6% from 188.3 per 100,000 person years in 2011-2015 to 179.6 cases per 100,000 persons years in 2016-2020. This difference was 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 1996-2020

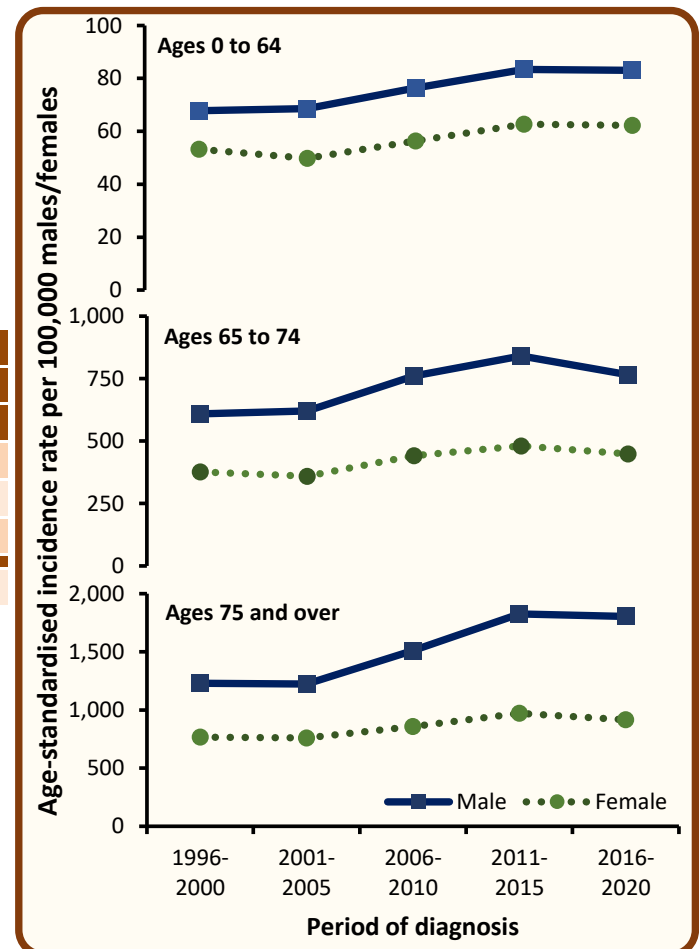
For the total number of cases recorded, between 2011-2015 and 2016-2020 there was:

- an increase of 5.9% among males aged 0 to 64, an increase of 2.3% among males aged 65 to 74 and an increase of 15.7% among males aged 75 and over.
- an increase of 5.0% among females aged 0 to 64, an increase of 2.3% among females aged 65 to 74 and an increase of 1.8% among females aged 75 and over.

Age group	Average cases per year			
	2011-2015		2016-2020	
	Male	Female	Male	Female
0 to 64	558	437	591	459
65 to 74	609	385	623	394
75 and over	881	741	1,019	754
<b>All ages</b>	<b>2,048</b>	<b>1,563</b>	<b>2,233</b>	<b>1,608</b>

For age-standardised incidence rates, between 2011-2015 and 2016-2020 there was:

- no significant change among males aged 0 to 64, a decrease of 8.9% among males aged 65 to 74 and no significant change 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 2016-2020

The annual number of cases during 2016-2020 varied in each deprivation quintile due to variations in population size and age.

After accounting for these factors, incidence rates:

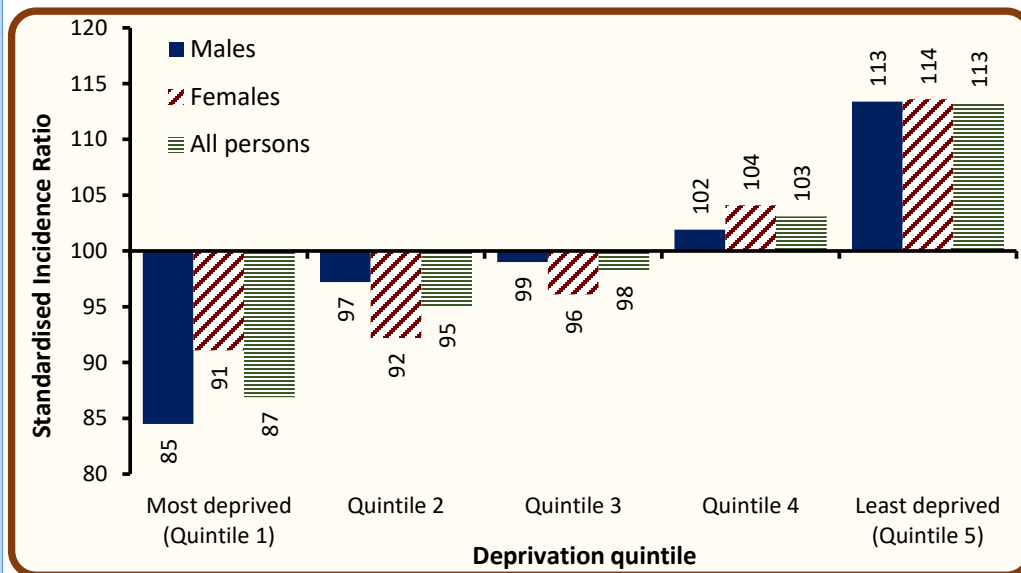
- in the least socio-economically deprived areas were 13.3% higher than the NI average.
- in the most socio-economically deprived areas were 13.1% lower than the NI average.

Deprivation quintile	Average cases per year		
	Male	Female	Both sexes
Most deprived (Quintile 1)	302	243	545
Quintile 2	431	298	730
Quintile 3	473	321	794
Quintile 4	487	351	838
Least deprived (Quintile 5)	540	394	934
<b>Northern Ireland</b>	<b>2,233</b>	<b>1,608</b>	<b>3,841</b>

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.



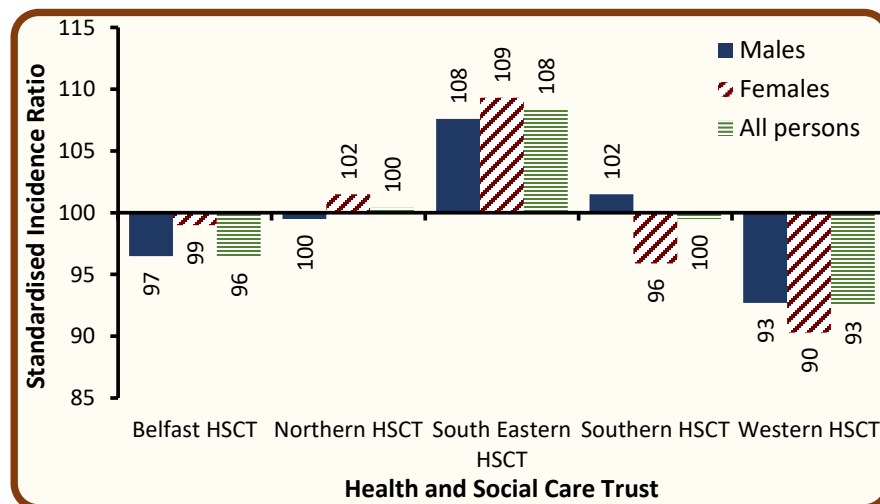
## Incidence by Health and Social Care Trust (HSCT) - Non-melanoma skin cancer, Cases in 2016-2020

The annual number of cases during 2016-2020 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	378	304	682
Northern HSCT	595	433	1,027
South Eastern HSCT	507	369	877
Southern HSCT	425	284	709
Western HSCT	328	217	545
<b>Northern Ireland</b>	<b>2,233</b>	<b>1,608</b>	<b>3,841</b>



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](http://www.qub.ac.uk/research-centres/nicr)

## Prevalence

- At the end of 2020, there were 39,049 people (Males: 21,182; Females: 17,867) living with non-melanoma skin cancer who had been diagnosed with the disease during 1996-2020.
- Of these, 54.2% were male, 51.9% were aged 75 and over (in 2020), and 7.8% had been diagnosed in the previous year.

25-year prevalence refers to the number of cancer survivors who were alive at the end of 2020, and had been diagnosed with their cancer in the previous 25 years (i.e. 1996-2020).

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	940	652	1,592	853	592	1,445	1,793	1,244	3,037
1-5 years	3,813	2,858	6,671	3,576	2,850	6,426	7,389	5,708	13,097
5-10 years	2,914	2,318	5,232	3,117	2,642	5,759	6,031	4,960	10,991
10-25 years	2,737	2,553	5,290	3,232	3,402	6,634	5,969	5,955	11,924
0-25 years	10,404	8,381	18,785	10,778	9,486	20,264	21,182	17,867	39,049

### Trends in 10-year prevalence - Non-melanoma skin cancer, Patients alive at end of each year from 2011-2020

- Among males the number of survivors from non-melanoma skin cancer who had been diagnosed within the previous ten years increased by 14.3% from 13,306 survivors in 2015 to 15,213 survivors in 2020.
- Among females the number of survivors from non-melanoma skin cancer who had been diagnosed within the previous ten years increased by 8.9% from 10,938 survivors in 2015 to 11,912 survivors in 2020.

Year	10-year prevalence		
	Male	Female	Both sexes
2011	10,783	9,311	20,094
2012	11,434	9,847	21,281
2013	12,090	10,264	22,354
2014	12,716	10,645	23,361
2015	13,306	10,938	24,244
2016	13,893	11,247	25,140
2017	14,458	11,493	25,951
2018	14,904	11,740	26,644
2019	15,251	12,079	27,330
2020	15,213	11,912	27,125

## Mortality

- During 2016-2020 there were 23 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 84 for men and 86 for women.

### Deaths by year of death - Non-melanoma skin cancer, Deaths in 2011-2020

- The number of deaths from non-melanoma skin cancer increased by 52.2% from an annual average of 23 deaths in 2011-2015 to 35 deaths in 2016-2020.

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
All persons	18	22	19	24	34	26	34	40	36	41

## 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** 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](http://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](http://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](http://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 2020 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 EURO CARE, 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.