Breast cancer

N. IRELAND Cancer Registry

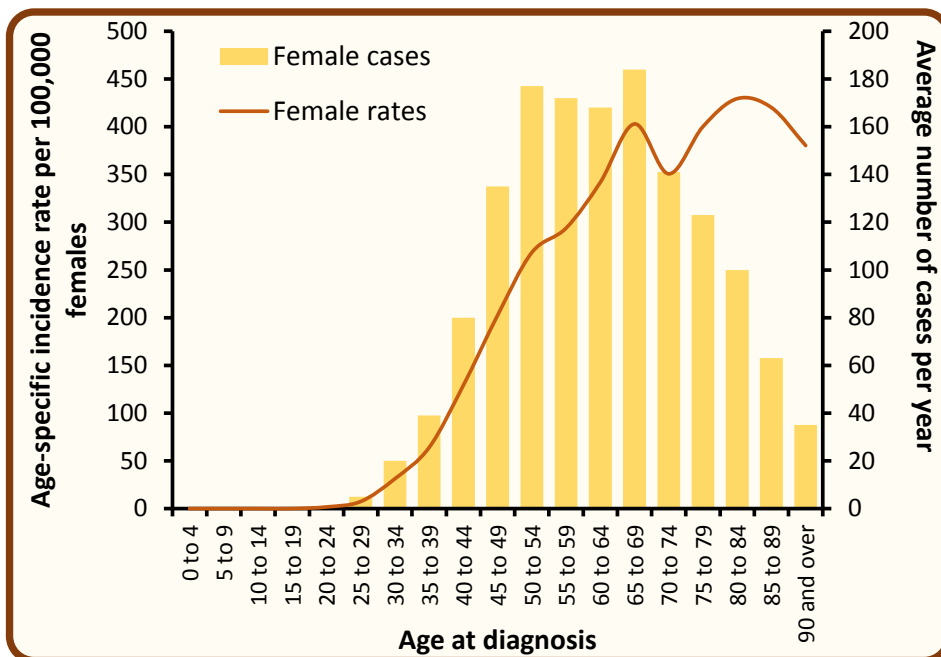| Number of cases per year			Number of deaths per year		
(2014-2018) [1]			(2014-2018) [1]		
Male	Female	Both sexes	Male	Female	Both sexes
12	1,443	1,455	2	314	316
Five-year net survival			25-year prevalence		
(2009-2013)			(2018)		
Female			Female		
83.4%			16,462		

Incidence

During 2014-2018:

▪ There were 12 male and 1,443 female cases of breast cancer diagnosed each year.

▪ There were 152.5 cases of breast cancer per 100,000 females diagnosed each year.

▪ Breast cancer made up 29.9% of all female cancers (ex NMSC).

▪ The risk of developing breast cancer before the age of 75 was 1 in 10 for women.

Incidence by age at diagnosis: Female breast cancer 2014-2018[1]

During 2014-2018:

▪ The median age at diagnosis for female breast cancer was 62.

▪ Breast cancer risk increased with age, with 44.8% of women aged 65 years or more at diagnosis.

▪ 19.4% of cases were diagnosed among those aged under 50.

Age at diagnosis	Average cases per year
	Female
0 - 49	280
50 - 64	517
65 - 74	325
75 +	321
All ages	1,443

Incidence by year of diagnosis: Female breast cancer 2009-2018

▪ Among females the number of cases of breast cancer increased by 13.0% from an annual average of 1,277 cases in 2009-2013 to 1,443 cases in 2014-2018.
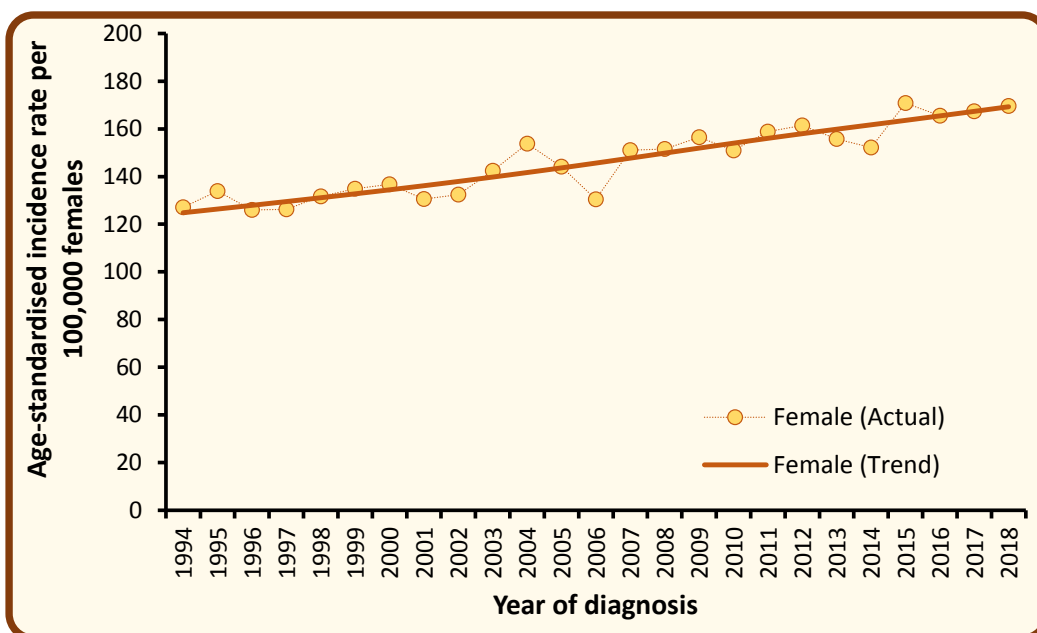
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Female	1,235	1,215	1,298	1,331	1,305	1,299	1,467	1,445	1,483	1,522

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1. 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.
NMSC: Non-melanoma skin cancer

Trends in age-standardised incidence rates: Female breast cancer 1994-2018

▪ Age-standardised incidence rates of female breast cancer increased by 5.4% from 156.7 per 100,000 person years in 2009-2013 to 165.2 cases per 100,000 persons years in 2014-2018. 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).

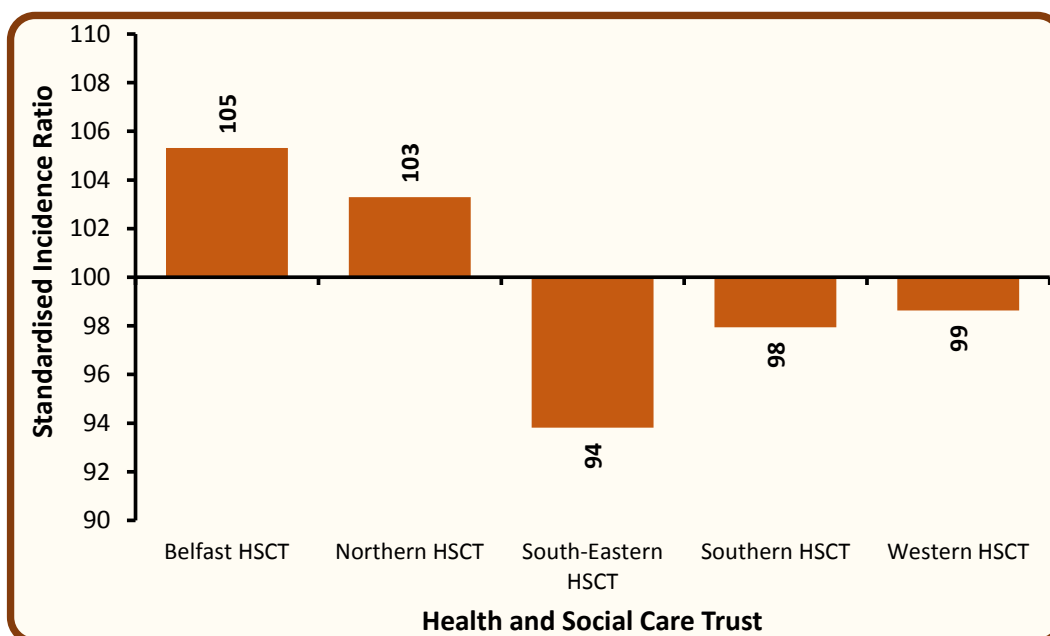They thus represent changes other than those caused by population growth and/or ageing.

Incidence (cases and rates) by Health and Social Care Trust (HSCT): Female breast cancer 2014-2018[1]

The annual number of female breast cancer cases in 2014-2018 varied in each HSCT due to variations in population size and age (see table). After accounting for these factors, incidence rates (see figure):
  ▪ 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 significantly lower than 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.

Health and Social Care Trust	Average cases per year
	Female
Belfast HSCT	286
Northern HSCT	392
South-Eastern HSCT	280
Southern HSCT	265
Western HSCT	221
Northern Ireland	1,443

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 Northern Ireland average.

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

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1. 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.
HSCT: Health and Social Care Trust

The annual number of female breast cancer cases during 2014-2018 varied in each deprivation quintile due to variations in population size and age (see table).

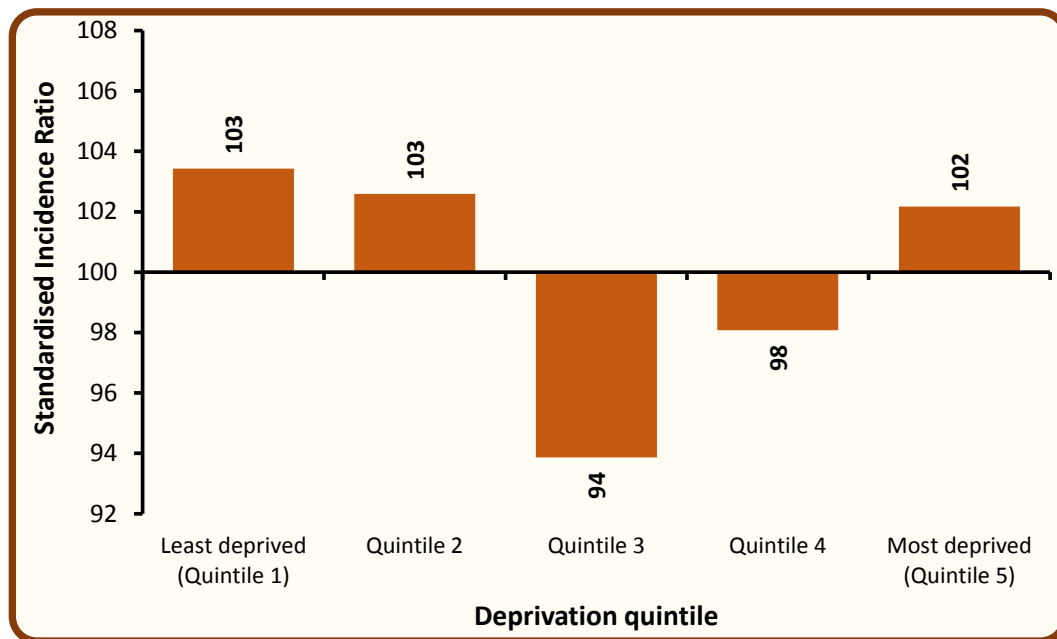After accounting for these factors, incidence rates (see figure):

▪ 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.

Deprivation quintile	Average cases per year
	Female
Least deprived (Quintile 1)	315
Quintile 2	312
Quintile 3	280
Quintile 4	284
Most deprived (Quintile 5)	252
Northern Ireland	1,443

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.

Survival

▪ 94.4% of female breast cancer patients were alive one year and 76.8% were alive five years from a diagnosis in 2009-2013. (observed survival)

▪ Age-standardised net survival (ASNS), which removes the effect of deaths from causes unrelated to cancer, was 95.6% one year and 83.4% five years from a female breast cancer diagnosis in 2009-2013.

▪ Estimates for survival (ASNS) of patients diagnosed during 2012-2016 are 96.0% one year, and 83.5% five years from diagnosis.

Period of diagnosis[2]	Gender	Observed survival		Age-standardised net survival	
		One-year	Five-years	One-year	Five-years
2009-2013	Female	94.4%	76.8%	95.6%	83.4%
2012-2016 estimates	Female	94.7%	77.2%	96.0%	83.5%

Observed survival is the proportion of patients still alive one/five years after diagnosis. However, in this measure patients may have died from causes unrelated to their cancer.

Age-standardised net survival is the proportion of patients who would survive if the patient could not die from causes unrelated to their cancer. This measure is more typically used in studies of cancer survival.
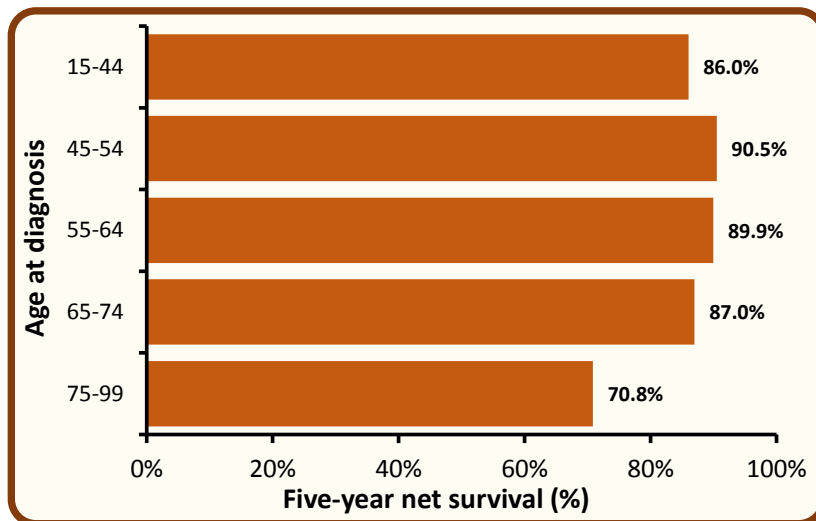
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1. Annual averages based upon several years have been rounded to the nearest integer. Sums of numbers in table rows or columns may thus differ slightly from the given total.

2. Five-year survival for 2012-2016 are estimates as not all patients have five years worth of follow up.
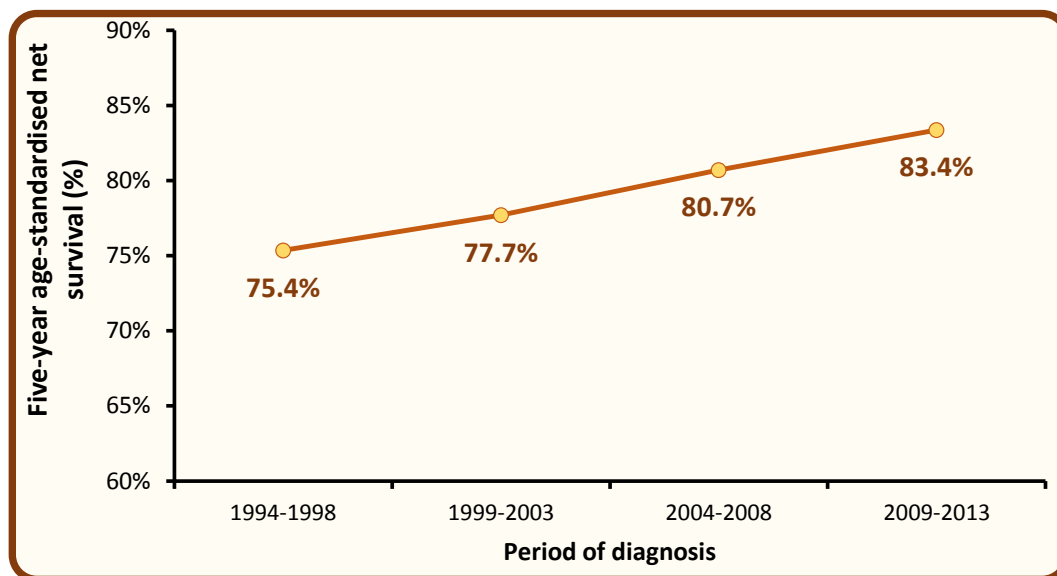
ASNS: Age-standardised net survival

Survival by age at diagnosis: Female breast cancer 2009-2013

▪ Survival from female breast cancer varies by age at diagnosis with poorer five-year survival among the oldest patients.

▪ Five-year net survival ranged from 90.5% among patients aged 45-54 at diagnosis to 70.8% among those aged 75 and over.

Trends in age-standardised net survival: Female breast cancer 1994-2013

▪ Among women five-year survival (ASNS) from breast cancer increased from 75.4% for those diagnosed in 1994-1998 to 83.4% for those diagnosed in 2009-2013. This difference was statistically significant.

Prevalence

▪ At the end of 2018 there were 16,462 females living with breast cancer who had been diagnosed with the disease during 1994-2018.

▪ Of these, 42.9% were aged 70 and over, and 8.7% had been diagnosed in the previous year.

25-year prevalence refers to the number of cancer survivors who were alive at the end of 2018, and had been diagnosed with their cancer in the previous 25 years (i.e. 1994-2018).

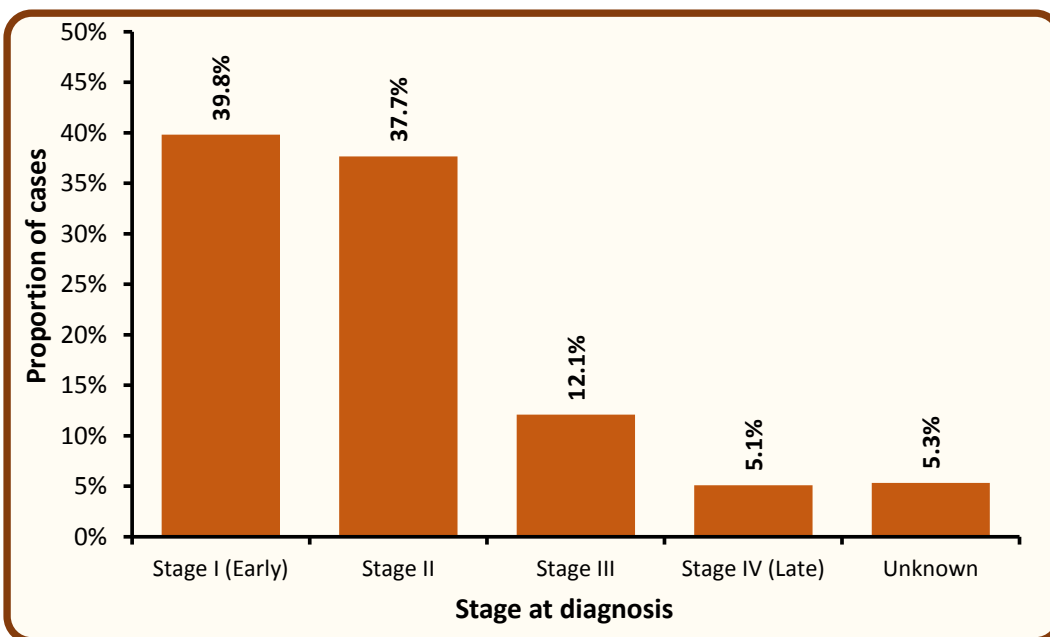| Time since diagnosis	25-year prevalence		
	Aged 0-69	Aged 70+	All ages
	Female	Female	Female
0-1 year	997	429	1,426
1-5 years	3,073	1,602	4,675
5-10 years	2,487	1,740	4,227
10-25 years	2,839	3,295	6,134
0-25 years	9,396	7,066	16,462

ASNS: Age-standardised net survival

Cancer stage

Incidence by stage at diagnosis: Female breast cancer 2013-2017[1]

During 2013-2017:

- 94.7% of female breast cancer cases had a stage assigned at diagnosis.
- 39.8% of cases were diagnosed at stage I. (42.1% of staged cases)
- 5.1% of cases were diagnosed at stage IV. (5.4% of staged cases)

Stage at diagnosis	Average cases per year
	Female
Stage I (Early)	557
Stage II	527
Stage III	169
Stage IV (Late)	71
Unknown	75
All stages	1,400

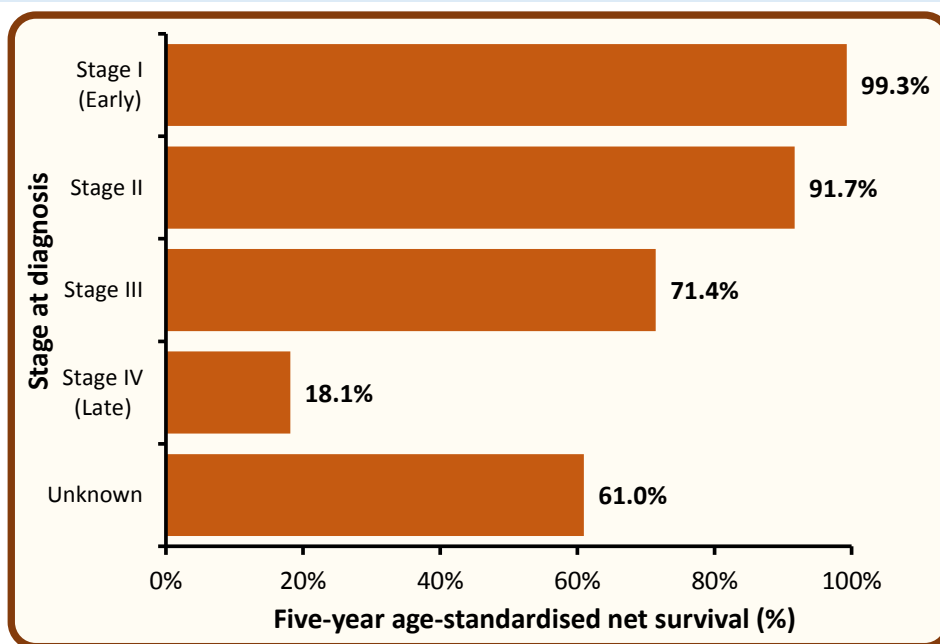Cancer stage describes the size of a cancer and how far it has grown and spread.

This information is used to help decide what treatments are needed.

The classification used here to stage cancer is the TNM (version 7) classification.

Data on cancer stage in 2018, classified using TNM (version 8), is available online at www.qub.ac.uk/nicr

Survival by stage at diagnosis: Female breast cancer 2009-2013

- Stage at diagnosis is one of the most important factors in female breast cancer survival with five-year survival decreasing as stage increases.

- Five-year survival (ASNS) ranged from 99.3% for early stage (stage I) disease to 18.1% for late stage (stage IV) disease.

- Five-year survival (ASNS) for unstaged female breast cancer was 61.0%.

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ASNS: Age-standardised net survival

Mortality

During 2014-2018:

▪ There were 2 male and 314 female deaths from breast cancer each year.

▪ Death from breast cancer made up 15.0% of all female cancer deaths (ex NMSC).

Deaths by age at death: Female breast cancer 2014-2018[1]

During 2014-2018:

▪ The median age at death from breast cancer among women was 72.

▪ Risk of death from breast cancer among women was strongly related to age, with 66.6% of women aged 65 years or more at time of death.

▪ 10.2% of female breast cancer deaths occurred among those aged under 50.

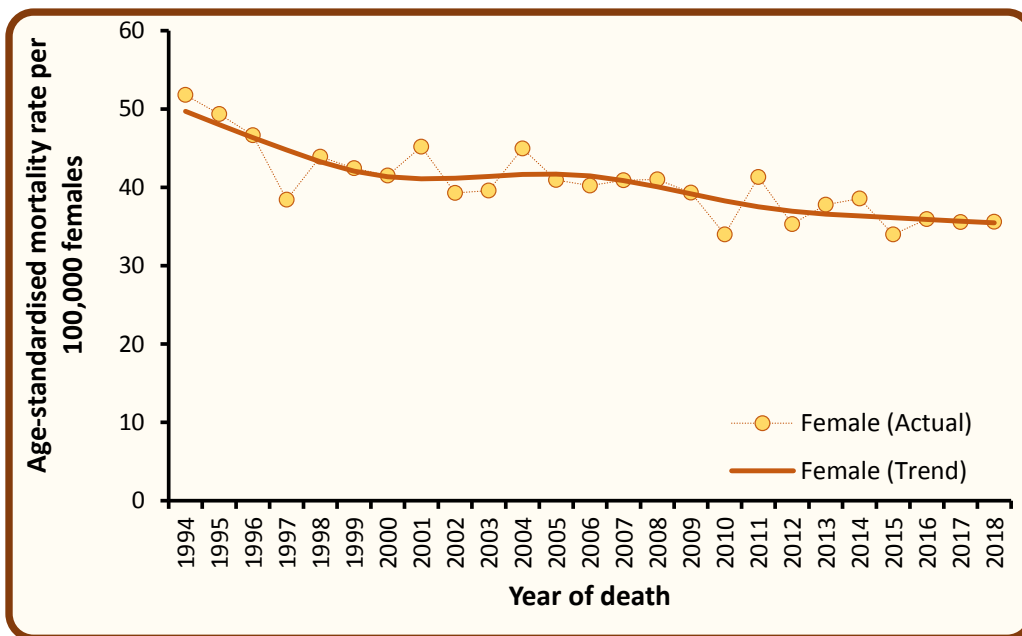| Age at death	Average deaths per year
	Female
0 - 49	32
50 - 64	72
65 - 74	67
75 +	142
All ages	314

Deaths by year of death: Female breast cancer 2009-2018

▪ Among females the number of deaths from breast cancer increased by 4.0% from an annual average of 302 deaths in 2009-2013 to 314 deaths in 2014-2018.

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Female	302	268	336	290	314	326	292	316	317	320

Trends in age-standardised mortality rates: Female breast cancer 1994-2018

▪ Among women age-standardised mortality rates from breast cancer decreased by 4.3% from 37.5 per 100,000 person years in 2009-2013 to 35.9 deaths per 100,000 persons years in 2014-2018. This difference was not statistically significant.

Mortality data are provided by the Northern Ireland General Registrar Office via the Department of Health.

Counts of the number of deaths are based upon the year that death occurred, and upon the primary cause of death only.

Age-standardised mortality rates remove changes over time caused by population growth and/or ageing.

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