Breast cancer

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

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 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.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>1,235</td>
<td>1,215</td>
<td>1,298</td>
<td>1,331</td>
<td>1,305</td>
<td>1,299</td>
<td>1,467</td>
<td>1,445</td>
<td>1,483</td>
<td>1,522</td>
</tr>
</tbody>
</table>

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

Breast cancer in Northern Ireland: 2018
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.

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

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.

<table>
<thead>
<tr>
<th>Health and Social Care Trust</th>
<th>Average cases per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belfast HSCT</td>
<td>286</td>
</tr>
<tr>
<td>Northern HSCT</td>
<td>392</td>
</tr>
<tr>
<td>South-Eastern HSCT</td>
<td>280</td>
</tr>
<tr>
<td>Southern HSCT</td>
<td>265</td>
</tr>
<tr>
<td>Western HSCT</td>
<td>221</td>
</tr>
<tr>
<td>Northern Ireland</td>
<td>1,443</td>
</tr>
</tbody>
</table>

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.

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.

### Incidence (cases and rates) by deprivation quintile: Female breast cancer 2014-2018

<table>
<thead>
<tr>
<th>Deprivation quintile</th>
<th>Average cases per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Least deprived (Quintile 1)</td>
<td>315</td>
</tr>
<tr>
<td>Quintile 2</td>
<td>312</td>
</tr>
<tr>
<td>Quintile 3</td>
<td>280</td>
</tr>
<tr>
<td>Quintile 4</td>
<td>284</td>
</tr>
<tr>
<td>Most deprived (Quintile 5)</td>
<td>252</td>
</tr>
<tr>
<td>Northern Ireland</td>
<td>1,443</td>
</tr>
</tbody>
</table>

| 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. |

<table>
<thead>
<tr>
<th>Survival</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 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)</td>
</tr>
<tr>
<td>• 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.</td>
</tr>
<tr>
<td>• Estimates for survival (ASNS) of patients diagnosed during 2012-2016 are 96.0% one year, and 83.5% five years from diagnosis.</td>
</tr>
</tbody>
</table>

*Period of diagnosis*:
- 2009-2013
- 2012-2016 estimates

<table>
<thead>
<tr>
<th>Period of diagnosis</th>
<th>Gender</th>
<th>Observed survival</th>
<th>Age-standardised net survival</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>One-year</td>
<td>Five-years</td>
</tr>
<tr>
<td>2009-2013</td>
<td>Female</td>
<td>94.4%</td>
<td>76.8%</td>
</tr>
<tr>
<td>2012-2016 estimates</td>
<td>Female</td>
<td>94.7%</td>
<td>77.2%</td>
</tr>
</tbody>
</table>

---

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.

![Graph showing survival by age at diagnosis]

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.

![Graph showing trends in ASNS]

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.

![Table showing prevalence]

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).
Incidence by stage at diagnosis: Female breast cancer 2013-2017

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

<table>
<thead>
<tr>
<th>Stage at diagnosis</th>
<th>Average cases per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage I (Early)</td>
<td>557</td>
</tr>
<tr>
<td>Stage II</td>
<td>527</td>
</tr>
<tr>
<td>Stage III</td>
<td>169</td>
</tr>
<tr>
<td>Stage IV (Late)</td>
<td>71</td>
</tr>
<tr>
<td>Unknown</td>
<td>75</td>
</tr>
<tr>
<td>All stages</td>
<td>1,400</td>
</tr>
</tbody>
</table>

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](http://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%.

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. 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

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.

<table>
<thead>
<tr>
<th>Age at death</th>
<th>Average deaths per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td></td>
</tr>
<tr>
<td>0 - 49</td>
<td>32</td>
</tr>
<tr>
<td>50 - 64</td>
<td>72</td>
</tr>
<tr>
<td>65 - 74</td>
<td>67</td>
</tr>
<tr>
<td>75 +</td>
<td>142</td>
</tr>
<tr>
<td>All ages</td>
<td>314</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>302</td>
<td>268</td>
<td>336</td>
<td>290</td>
<td>314</td>
<td>326</td>
<td>292</td>
<td>316</td>
<td>317</td>
<td>320</td>
</tr>
</tbody>
</table>

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.

Further Information

Further data is available from the NI Cancer Registry web site: [www.qub.ac.uk/nicr](http://www.qub.ac.uk/nicr)

Phone: +44 (0)28 9097 6028

e-mail: nicr@qub.ac.uk

Acknowledgements

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