Official statistics

Cancer survival in Wales

Latest official statistics of one year and five year cancer survival for diagnosis years 1995-1999 to 2010-2014

Published 28 September 2017

www.wcisu.wales.nhs.uk
www.udgcc.wales.nhs.uk

Overall cancer survival continues to increase in Wales

Overall cancer survival is slightly higher in women than men, but the gap is narrowing

Melanoma and cancers of the prostate and breast have the highest cancer survival rates in Wales

One year survival has improved for most cancer types

There has been a statistically significant improvement in five year survival for melanoma, lung, prostate and bowel cancers

The latest one year cancer survival for men and women is similar in Wales and England for most cancer types

There are no statistically significant differences in five year survival between Wales and England for any of the cancer types

Many factors combine to explain the differences in cancer survival

The key policy on cancer in Wales is set out in the Cancer Delivery Plan 2016-2020
Things you should know:

**All cancers** refers to all cancer types combined excluding non-melanoma skin cancer (ICD10 codes C00-C96 excluding C44)

**Survival** refers to population based age standardised net cancer survival unless otherwise stated

**Breast cancer** refers to female breast cancer only

**Melanoma** refers to melanoma of the skin only (i.e. not retina, for example)

**Statistical significance** If a difference in the survival rates between populations is statistically significant, it means that difference is unlikely to have occurred due to chance alone, and that we can be more confident that we are observing a ‘true’ difference. In this commentary we use the conventional arbitrary cut-off of less than 5% chance to mean statistically significant. Just because a difference is statistically significant doesn’t necessarily mean that it is large or important – that can depend on our judgement and other things. Multiple testing has not been taken into account and so 1 in 20 tests will be statistically significant by chance alone

After collaboration within the UK and Ireland Association of Cancer Registries, this year, for the first time, all UK country routinely published survival statistics can be broadly compared because we are using the same statistical method and diagnosis periods. The new method will allow us to estimate five year survival up to the diagnosis year of 2014, which is much more contemporary than previously possible.

We appreciate that analyses at sub-national level such as health board, local authority and lower are of great value. However, the development of the new statistical method is still ongoing. Which means that for this year only, with regret, our survival analysis will only be possible at the national Wales-only level. We apologise for this, but we are making progress on developing the method for smaller areas by working with Public Health England.

Further information about the definitions can be found at [www.wcisu.wales.nhs.uk/definitions-icd-10-codes](http://www.wcisu.wales.nhs.uk/definitions-icd-10-codes)
Overall cancer survival continues to increase in Wales

The long-term trend of increasing one and five year cancer survival continues for the most recent years of diagnosis.

One year survival increased by 3.3 percentage points over five years, from 69.4% for people diagnosed 2005-2009 to 72.7% for the most recent diagnosis period, 2010-2014. Over ten years this increase was 6.8 percentage points.

Five year survival also increased by 3.3 percentage points, from 53.8% to 57.1% for the same years of diagnosis. Over ten years this increase was 7.4 percentage points.

All these improvements are statistically significant.

**Figure 1:** One year and five year cancer survival continues to increase in Wales

![Graph showing cancer survival rates over years](source: Welsh Cancer Intelligence and Surveillance Unit’s National Cancer Registry [www.wcisu.wales.nhs.uk](http://www.wcisu.wales.nhs.uk))
Overall cancer survival is slightly higher in women than men, but the gap is narrowing

Although cancer survival is slightly lower in men than women, one year survival in men increased by 3.4 percentage points to 71.7%, and by 3.2 percentage points to 73.2% in women, during the diagnosis periods of 2005-2009 to 2010-2014.

Corresponding five year survival increases were of similar size. In men it increased by 3.6 percentage points to 55.7%, and by 3.1 percentage points to 58.0% in women.

All these improvements are statistically significant.
Melanoma and cancers of the prostate and breast have the highest cancer survival rates in Wales

The cancer with the highest survival is melanoma. One year survival from melanoma is 96.8%, but this decreases to 89.8% five years after diagnosis. Prostate cancer has a very similar survival profile.

Breast cancer also has a similar one year survival at 95.3%, but its five year survival falls to 83.8%, a greater difference compared to melanoma or prostate cancer.

Liver, lung and pancreatic cancers have the lowest survival. All three have a low one year survival with a further large decrease in survival five years after diagnosis. For example, one year lung cancer survival is just over a third (34.7%), but this is only 12.7% at five years.

Figure 2: Cancer survival varies widely in Wales depending on the type of cancer

Source: Welsh Cancer Intelligence and Surveillance Unit’s National Cancer Registry www.wcisu.wales.nhs.uk
Welsh Cancer Intelligence and Surveillance Unit
Uned Gwybodaeth a Gwyliadwriaeth Canser Cymru

One year survival has improved for most cancer types

Cancers with low to moderate one year survival tended to show the largest percentage point increases during the five year period to 2010-2014. Liver had the largest increase in one year survival of 9.6 percentage points. Next, as a whole group, were cancers of the brain and central nervous system.

Lung cancer is one of the most common cancers in Wales, but it has a low survival rate. However, its one year survival improved by 5.8 percentage points over the same five years – equivalent to a 20% increase.

Cancers that have higher survival tended to have much smaller percentage point increases. One year survival increased by 3.3 percentage points for bowel cancer, and by less than two percentage points for melanoma, breast and prostate cancers.

Unlike other common cancers, there is gradual decreasing trend in one year bladder cancer survival in Wales since 2007-2011, however this is not statistically significant. This has not been shown in figure 3 because there was a change in the coding for bladder cancer in 2007.

**Figure 3:** Percentage point increases in one year cancer survival for different types of cancer between diagnosis years 2005-2009 and 2010-2014

* Statistically significant at the 5% level

Bladder cancer not included due to a coding change in 2007

Only those cancers that are able to be age standardised are included

Source: Welsh Cancer Intelligence and Surveillance Unit’s National Cancer Registry [www.wcisu.wales.nhs.uk](http://www.wcisu.wales.nhs.uk)
There has been a statistically significant improvement in five year survival for melanoma, lung, prostate and bowel cancers

Few cancers showed statistically significant increases in five year survival. Whilst melanoma and prostate cancer only had small increases in one year survival, they showed larger and statistically significant percentage point improvements in five year survival.

Although breast cancer had a small one year survival increase - similar to melanoma and prostate cancer – it showed no statistically significant improvement in its five year survival.

Increases in one and five year survival for bowel cancer were of similar sizes to each other. However, lung cancer had a comparatively large and statistically significant percentage point increase in one and five year survival.

Unlike other common cancers, there is decreasing trend in five year bladder cancer survival since 2007-2011, especially for women but is not statistically significant. This has not been shown in figure 4 because there was a change in the coding for bladder cancer in 2007.

Figure 4: Percentage point increases in five year cancer survival for different types of cancer between diagnosis years 2005-2009 and 2010-2014
* Statistically significant at the 5% level. Bladder cancer not included due to a coding change in 2007
The latest one year cancer survival for men and women is similar in Wales and England for most cancer types

There are no statistically significant differences in one year survival between Wales and England apart from lung cancer in men (2.6 percentage points higher in England) and lung cancer in women (2.3 percentage points higher in England).

Figure 5: One year cancer survival rates (%) for men in England, Wales and Northern Ireland for years of diagnosis 2010-2014

* Northern Ireland statistically significantly higher than England and Wales
** Northern Ireland statistically significantly higher than England
*** England statistically significantly higher than Wales

Source: UK official/national statistics
England:
https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/methodologies/theimpactofupdatingsurvivalmethodologiesfornationalestimates
Northern Ireland:
https://www.qub.ac.uk/research-centres/nicr/CancerInformation/official-statistics/BySite/
Wales:
https://public.tableau.com/profile/welsh.cancer.intelligence.and.surveillance.unit#!/
In Northern Ireland, men’s bowel cancer survival is statistically significantly higher than in Wales and England. Men in Northern Ireland also have a statistically significantly higher oesophageal cancer survival rate than in England by 5.1 percentage points.

Women’s one year survival from melanoma is statistically significantly higher in Northern Ireland than in Wales. For women’s bowel cancer one year survival, Northern Ireland is statistically significantly higher than for Wales and England.

The Welsh Cancer Intelligence and Surveillance Unit is part of the latest Eurocare 6 study of cancer survival in 29 European countries. The results have not yet been published. It will update the old Eurocare 5 study which, on the whole, showed low cancer survival amongst UK countries compared to most of the others.

**Figure 6:** One year cancer survival rates (%) for women in England, Wales and Northern Ireland for years of diagnosis 2010-2014

* Northern Ireland statistically significantly higher than Wales
** Northern Ireland statistically significantly higher than England and Wales
*** England statistically significantly higher than Wales and Northern Ireland

<table>
<thead>
<tr>
<th>Cancer Type</th>
<th>Wales</th>
<th>Northern Ireland</th>
<th>England</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melanoma</td>
<td>97.4</td>
<td>99.4*</td>
<td>98.3</td>
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<tr>
<td>Breast</td>
<td>95.3</td>
<td>96.0</td>
<td>95.4</td>
</tr>
<tr>
<td>Non-Hodgkin lymphoma</td>
<td>77.0</td>
<td>78.8</td>
<td>80.0</td>
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<tr>
<td>Bowel (colorectal)</td>
<td>76.6</td>
<td>80.0**</td>
<td>77.4</td>
</tr>
<tr>
<td>Kidney</td>
<td>74.5</td>
<td>79.9</td>
<td>75.7</td>
</tr>
<tr>
<td>Bladder</td>
<td>61.4</td>
<td>66.3</td>
<td></td>
</tr>
<tr>
<td>Oesophagus</td>
<td>42.3</td>
<td>48.4</td>
<td>44.6</td>
</tr>
<tr>
<td>Lung</td>
<td>38.2</td>
<td>37.7</td>
<td>40.5***</td>
</tr>
</tbody>
</table>

Source: UK official/national statistics

England: [https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/methodologies/theimpactofupdatingcancersurvivalmethodologiesfornationalestimates](https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/methodologies/theimpactofupdatingcancersurvivalmethodologiesfornationalestimates)
Northern Ireland: [https://www.qub.ac.uk/research-centres/nicr/CancerInformation/official-statistics/BySite/](https://www.qub.ac.uk/research-centres/nicr/CancerInformation/official-statistics/BySite/)
There are no statistically significant differences in five year survival between Wales and England for any of the cancer types

There are no statistically significant differences in five year survival between Wales and England for any of the cancer types, in either men or women.

Scotland is yet to publish, but at the time of writing, the latest survival statistics are available for England and now Wales for one and five year survival, but for Northern Ireland only one year survival is available.

**Figure 7:** Five year cancer survival rates (%) for men in England and Wales for years of diagnosis 2010-2014

No differences statistically significant

<table>
<thead>
<tr>
<th>Cancer Type</th>
<th>Wales</th>
<th>England</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melanoma</td>
<td>86.4</td>
<td>87.9</td>
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<tr>
<td>Prostate</td>
<td>89.7</td>
<td>87.2</td>
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<tr>
<td>Non-Hodgkin lymphoma</td>
<td>60.5</td>
<td>63.8</td>
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<tr>
<td>Bowel (colorectal)</td>
<td>58.5</td>
<td>59.7</td>
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<tr>
<td>Bladder</td>
<td>56.4</td>
<td>59.0</td>
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<tr>
<td>Kidney</td>
<td>56.6</td>
<td>57.9</td>
</tr>
<tr>
<td>Oesophagus</td>
<td>15.2</td>
<td>15.1</td>
</tr>
<tr>
<td>Lung</td>
<td>10.9</td>
<td>12.0</td>
</tr>
</tbody>
</table>

Source: UK official/national statistics
England: [Link](https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/methodologies/theimpactofupdatingcancersurvivalmethodologiesfornationalestimates)
Wales: [Link](https://public.tableau.com/profile/welsh.cancer.intelligence.and.surveillance.unit#!/)
**Figure 8:** Five year cancer survival rates (%) for women in England and Wales for years of diagnosis 2010-2014

No differences are statistically significant.

Source: UK official/national statistics

England: [https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/methodologies/theimpactofupdatingcancersurvivalmethodologiesformationalestimates](https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/methodologies/theimpactofupdatingcancersurvivalmethodologiesformationalestimates)

Wales: [https://public.tableau.com/profile/welsh.cancer.intelligence.and.surveillance.unit#!/]
Many factors combine to explain the differences in cancer survival

No single factor explains the differences in cancer survival observed over time in Wales and between different cancer types, countries or other geographical areas.

Different cancer types behave in different ways, which affects how long someone will survive, and the stage at which cancer is first diagnosed is important. Survival and stage at diagnosis may also be affected by the uptake of screening programmes, how long it takes an individual to seek healthcare advice when they first notice a problem and how easily they can access primary care and diagnostic services.

After an individual is diagnosed, access to cost effective treatments and care, and the presence of other health conditions alongside the cancer and someone’s general health when they develop cancer, can also affect survival rates.
The key policy on cancer in Wales is set out in the Cancer Delivery Plan 2016-2020

The key policy on cancer in Wales is set out in the Welsh Government’s recently refreshed Cancer Delivery Plan 2016-2020.