Welsh Cancer Intelligence Surveillance Unit
Cancer Survival in Patients Diagnosed between 2002 – 2019: Caveats and Key messages

Caveats

Survival analysis estimates the net survival (%) of patients with cancer. These survival figures have been used to produce unstandardised and age-standardised estimates. The model uses population life tables to remove background mortality, and assumes the remaining mortality is due to cancer.

Net survival analysis involves comparing the survival of patients with cancer with background mortality (the survival of the general population). For reasons of practicality, our background mortality data includes cancer deaths. This is unlikely to skew our net survival figures for specific cancer sites, but it would likely have an effect on deaths from all cancers, because cancer accounts for about a quarter of all deaths. For that reason, we have not included survival figures for all cancers combined.

The life tables don't account for known differences in background mortality across different geographies and deprivation fifths. Caution is advised when comparing five-year survival estimates across health boards. However, survival across different deprivation fifths is not reported due to the differences in background mortality.

Please note that patients were followed up until the 31st December 2021 for this analysis. The effect of COVID-19 may be seen for five-year net survival in the following five year diagnosis periods; 2011-2015, 2012-2016, 2013-2017, 2014-2018 and 2015-2019. This analysis uses ONS published life tables which do not fully account for changes in background mortality due to the Covid pandemic. For more information about the limitations of published life tables see ONS lifetable caveats (published 23rd September 2021).

We are currently considering methods to adjust for these issues, and intend to implement these in future analyses.

Key messages

General

- For the most recent diagnosis period, 2015-2019, melanoma of the skin, prostate and breast cancer had the highest five-year unstandardised survival estimates. Pancreas, liver and lung cancer have the lowest five-year unstandardised survival estimates.

Trends and Geography – *please note that the increased background mortality due to Covid is not accounted for in the model. This means that actual survival may be better than our estimates suggest.*

- Across Wales, one-year and five-year cancer survival has been increasing for many commonly diagnosed cancer types such as lung and prostate. In contrast, there has been a levelling off and even a decrease in recent years for less commonly diagnosed cancers such as bladder, anus, larynx and uterine.
- After accounting for age, colorectal cancer one-year and five-year survival has levelled off in recent years with a slight decrease in figures for the latest diagnosis period, 2015-2019.
- One-year and five-year lung cancer survival has increased across all health boards since 2010-2014.
- Prostate cancer five-year survival is higher across all health boards for the most recent period 2015-2019 compared with 2010-2014.
- One-year pancreatic cancer survival has increased for Aneurin Bevan, Hywel Dda and Swansea Bay for the most recent period 2015-2019 compared with 2010-2014.

Stage

- For all cancer types diagnosed during the latest period of 2015-2019, survival decreases as stage at diagnosis advances. However, the gradient of the decrease varies between cancer types.
- The majority of cancer types diagnosed at stage 1 during the latest period of 2015-2019 had a high one-year survival figure, above 90%.
- For many cancers, there is a relatively big drop in survival from stage 3 to stage 4. One-year survival for prostate cancer diagnosed during the latest period of our analysis (patients diagnosed between 2015-2019) remains at 100% up until stage 3 and drops to 86% at stage 4. Breast cancer diagnosed in the same period has a one-year survival of 96% at stage 3 which drops to 62% at stage 4 and colorectal cancer has a one-year survival of 87% at stage 3 which more than halves to 41% at stage 4.
- A similar pattern is observed for five-year survival, although with larger falls. Five-year survival for prostate cancer is 99% up until stage 3 and drops to 50% at stage 4. Breast cancer has a five-year survival of 76% at stage 3 and drops to 21% at stage 4. Colorectal cancer has a five-year survival of 63% at stage 3 which drops to 9% at stage 4.
- Other cancer types have steeper declines across the stages at diagnosis. One-year survival for lung cancer diagnosed during the latest period of 2015-2019 is relatively high at 86% for stage 1 but this drops by almost 20 percentage points to 67% at stage 2. There is then another large drop between stages 3 and 4 (44% to 16%).

- Five-year survival for lung cancer diagnosed during the latest period of 2015-2019 is 53% for stage 1. This drops to 34% at stage 2. There is another large drop between stages 3 and 4 (12% to 3%).

COVID-19 Pandemic Impact

- Although the apparent recent improvements in cancer survival are encouraging, the extent to which the COVID-19 pandemic will affect patient outcomes remain unknown. Early detection of cancer is a key predictor for improved cancer survival. Further research is underway in Wales to investigate how cancer detection and treatment have changed since the pandemic.

UK comparison

Due to differences in the life tables between different cancer registries, we advise against making direct comparisons between the different UK Jurisdictions. We are working with other registries towards improving comparability. In the interim, the European/world studies is suitable for comparisons between the different UK Jurisdictions as the same methodology was applied, however data for recent periods is not yet available (Eurocare).