

Screening, survival and mortality for breast cancer

The burden of breast cancer among women is significant in the Asia-Pacific region, where it is the cancer with the highest incidence and mortality rates in South-East Asia and the highest incidence and second highest mortality rates in Western Pacific region. In 2020, according to estimates based on pre-pandemic trend, approximately 948 000 women were expected to be newly diagnosed with breast cancer and over 316 000 died of the disease in the region (International Agency for Research on Cancer (IARC), 2022^[17]; see indicator “Mortality from cancer” in Chapter 3). Several factors are known to increase the risk of breast cancer, such as increasing age, genetic predisposition, oestrogen replacement therapy and lifestyle factors including obesity, physical inactivity, nutrition habits and alcohol consumption (World Cancer Research Fund/American Institute for Cancer Research, 2018^[1]; González-Jiménez et al., 2014^[2]).

In many Asia-Pacific countries, the incidence of breast cancer has increased over recent decades. Over recent decades, age-standardised annual incidence rates per 100 000 women have risen quickly in China, India, Japan and Korea (IARC, 2022^[3]) and the rates reached over 75 per 100 000 women in Japan and Singapore and about 65 per 100 000 women in Fiji and Korea in 2020. Incidence rates were already high (over 90 per 100 000 women) in Australia and New Zealand, where they have increased more slowly in recent years (IARC, 2022^[4]).

In the 1990s, Australia, Japan and New Zealand introduced national breast cancer screening programmes to effectively detect the disease early and reduce mortality (OECD, 2013^[5]; IARC, 2016^[6]). This has contributed to higher proportions of women being diagnosed at an early stage, and in those countries, over 50% of women with breast cancer were diagnosed at an early stage of disease during 2010-14 (OECD, 2021^[7]). Korea and Singapore also introduced a national screening programme around 2000, while China introduced screening programmes at the community level in the late 2000s (IARC, 2016^[6]). In 2015, Indonesia rolled out its screening programme nationally and the roll-out of breast cancer programmes is ongoing in Brunei Darussalam and Viet Nam (Wahidin, 2018^[8]; Pham et al., 2019^[9]; Ministry of Health Brunei Darussalam, 2020^[10]). Most of these countries monitor effective implementation of breast cancer screening programme. Prior to the pandemic, mammography rate was high at above 70% in New Zealand and Korea while low at just over 10% in Brunei Darussalam. However, in 2020, the COVID-19 pandemic disrupted breast cancer screening programmes in countries in Asia-Pacific (Figure 7.7; see Chapter 2 “The health impact of COVID-19”).

Cancer survival is one of the key measures of the effectiveness of health care systems in managing cancer, reflecting both early detection and the effectiveness of treatment. The wide range in age-standardised five-year net survival in Asia-Pacific countries and territories (Figure 7.8; Allemani et al., 2018^[31]) suggests that the quality of breast cancer care varies widely in the region. For women diagnosed during 2010-14, age-standardised five-year net survival was highest in high-income countries such as Australia and Japan (89.5% and 89.4%, respectively), whereas in Malaysia, India and Thailand, the probability that breast cancer patients survive their cancer for at least five years was less than 70%. In most Asia-Pacific countries and territories, five-year net survival for women with breast cancer has improved in recent years, reflecting overall improvement in the quality of cancer care. China, India, Korea and Thailand in particular have seen a large improvement in five-year net survival since 2000-04.

In 2020, mortality rates from breast cancer, reflecting effectiveness in early detection and treatment, and underlying trends in incidence, prevalence and survival, varied over ten-fold between countries and territories in the Asia-Pacific region. The rate was lowest in Mongolia at 3.9 per 100 000 women and the highest in Fiji at 41.0 per 100 000 women. The average age-standardised mortality rate was higher in upper-middle, lower-middle- and low-income countries than in high-income countries (Figure 7.9), although the pattern of incidence rates in the region was opposite.

Definition and comparability

For mammography rate, target population and frequency of screening differ across countries, so data need to be interpreted with care.

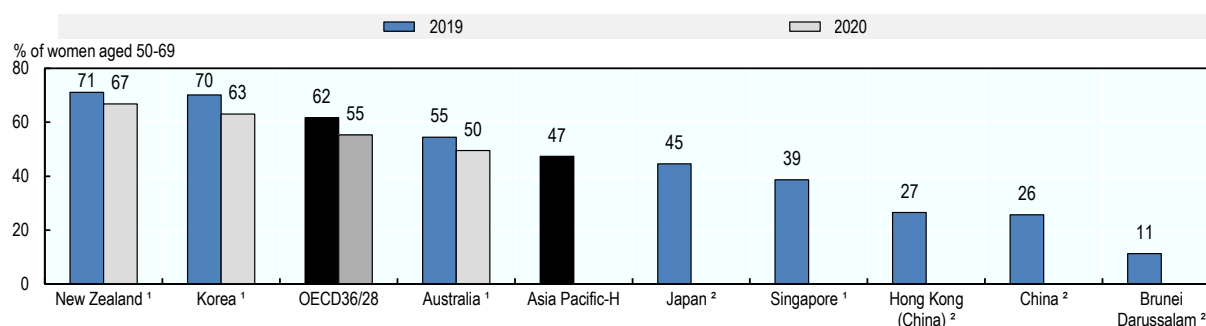
Five-year net survival refers to the cumulative probability that cancer patients survive for at least 5 years after diagnosis, after controlling for the risk of death from other causes. Five-year net survival for patients diagnosed during 2000-04 is based on a cohort approach, since all patients have been followed up for at least 5 years. For patients diagnosed during 2010-14, a period approach is used, which allows estimation of 5-year survival although 5 years of follow-up are not available for all patients. Cancer survival estimates are age-standardised with the International Cancer Survival Standard (ICSS) weights (Allemani et al., 2018^[11]).

See indicator “Mortality from cancer” in Chapter 3 for the definition of cancer mortality rates.

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Figure 7.7. Mammography screening in women aged 50-69 within the past two years, 2020 (or nearest year)

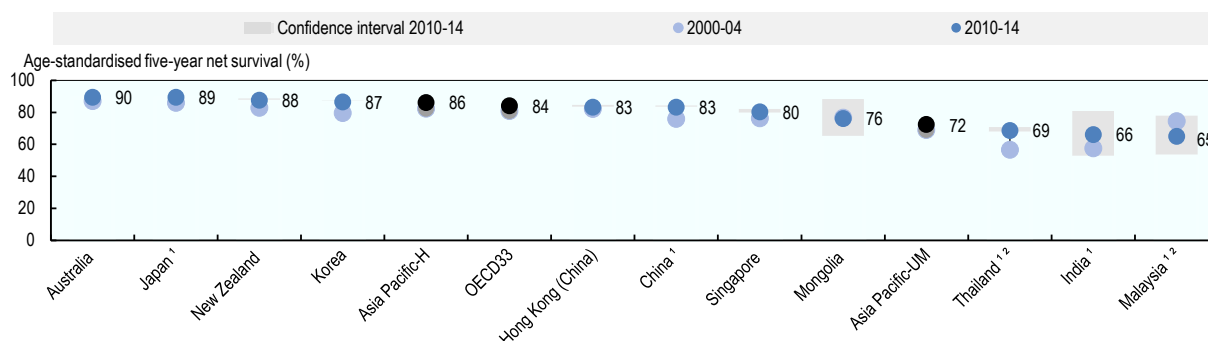


1. Programme data. 2. Survey data.

Source: OECD Health Statistics 2022, Zhang et al. (2021^[12]), "Breast Cancer Screening Rates Among Women Aged 20 Years and Above — China, 2015", <https://doi.org/10.46234/codcw2021.078>; Yeung et al. (2019^[13]), "Hong Kong female's breast cancer awareness measure: Cross-sectional survey", <https://doi.org/10.5306/wjco.v10.i2.98> and Pg Suhaimi et al. (2020^[14]), "Predictors of non-communicable diseases screening behaviours among adult population in Brunei Darussalam: a retrospective study", <https://doi.org/10.1007/s10389-020-01240-z>.

StatLink <https://stat.link/cao2f1>

Figure 7.8. Breast cancer five-year net survival, women diagnosed during 2000-04 and 2010-14

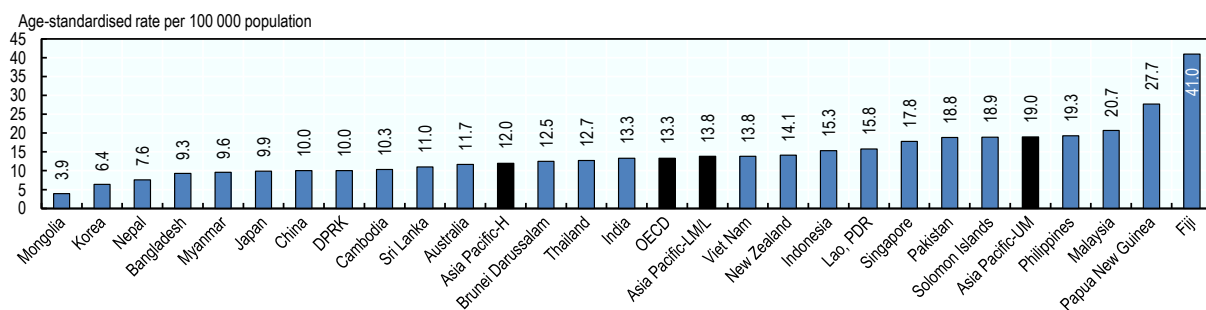


Note: For all countries, 95% confidence intervals for women diagnosed during 2010-14 are represented by grey areas. For Hong Kong (China), Mongolia and Malaysia the estimate in light blue is for 2005-09. 1. Data represent coverage of less than 100% of the national population. 2. Survival estimates are considered less reliable. See Allemani et al. (2018) for more information.

Source: CONCORD programme, London School of Hygiene and Tropical Medicine.

StatLink <https://stat.link/oqtxiz>

Figure 7.9. Breast cancer mortality, 2020



Source: IARC Global Cancer Observatory 2022.

StatLink <https://stat.link/0ohzq4>



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