Vaccination, survival and mortality for cervical cancer

According to estimates based on the pre-pandemic trend, about 337 000 women in Asia-Pacific countries and territories were expected newly diagnosed with cervical cancer in 2020 (IARC, 2022[19]; see indicator on "Cancer incidence" in Chapter 3), although invasive cervical cancer is preventable if pre-cancerous or pre-invasive changes are detected and treated before progression occurs. WHO recommends human papilloma virus (HPV) vaccination for girls aged 9-14 years (WHO, 2017[1]) since vaccination against the main types of HPV responsible for cervical cancer is expected to effectively reduce incidence.

An increasing number of countries and territories in Asia-Pacific have national HPV vaccination programmes, but the target populations vary, based on epidemiological and other evidence such as cost-effectiveness that is specific to each country. In 2021, HPV vaccination coverage ranges widely between 1% of girls in the target age group in Singapore and almost 90% in Brunei Darussalam (Figure 7.10). A growing number of countries and territories in the region have also started implementing population-based cervical cancer screening programmes, and HPV test or Pap smear test is available through screening programmes in Australia, Brunei Darussalam, China, Fiji, Japan, Korea, Mongolia, New Zealand, Singapore, Sri Lanka, Thailand and Viet Nam (WHO, 2020[2]). Following these preventive services, cervical cancer incidence has decreased in Australia, New Zealand, Korea, Singapore and Thailand. On the contrary, it increased significantly in Japan and China to a smaller extent. In Asia-Pacific region, the incidence rate is lowest in Australia and New Zealand (both 5.6 new cases per 100 000 women) while the rate is almost 30 new cases per 100 000 women in Fiji and Papua New Guinea, followed by Solomon Islands (IARC, 2022[3]).

HPV vaccination and cervical cancer screening participation was sometimes adversely affected by the COVID-19 pandemic, as were childhood vaccination programmes and breast cancer screening (see indicator on "Childhood vaccination" and "Screening, survival and mortality for breast cancer"). Data are available only for a few countries in Asia-Pacific. Although HPV vaccination rate continued to increase in Brunei Darussalam in 2020, it decreased in Australia, New Zealand and Malaysia. The decline was particularly large in Malaysia (13 percentage points from 2019). Cervical cancer screening rates also decreased in at least some countries in the region during the pandemic (see Chapter 2 "The health impact of COVID-19").

During 2010-14, age-standardised five-year net survival for cervical cancer, reflecting effectiveness in early detection and treatment, ranged from 53.9% in Thailand to 77.3% in Korea (Figure 7.11). In most countries and territories in Asia-Pacific, net survival for cervical cancer were stable between 2000-04 and 2010-14 periods. The variation across countries and territories in the region has decreased over time as net survival for China and India improved significantly from 53 to 68% and 45 to 59%, respectively over the decade, converging towards the best performers.

Cervical cancer mortality rates vary almost 14-fold across countries in Asia-Pacific (Figure 7.12). High-income Asia-Pacific countries had low mortality rates in 2020, but the rates were high at around 20 deaths per 100 000 women in Fiji, Papua New Guinea and Solomon Islands where incidence rates for cervical cancer are also high.

Trends in cervical cancer mortality rates reflect coverage of HPV vaccination, effectiveness in early detection and treatment, and underlying trends in incidence, prevalence and survival. The mortality rates for cervical cancer have declined in Australia, New Zealand and Korea, but the mortality rate is slowly increasing in Japan (IARC, 2022[4]) where HPV vaccination was put on pause between 2013 and 2021 (Ministry of Health, Labour and Welfare, 2022[5]).

Definition and comparability

See the indicator "Screening, survival and mortality for breast cancer" for the definition of net survival. See the indicator "Mortality from cancer" in Chapter 3 for the definition of cancer mortality rates.

References

Allemani, C. et al. (2018), "Global surveillance of trends in cancer survival 2000–14 (CONCORD-3): analysis of individual records for 37 513 025 patients diagnosed with one of 18 cancers from 322 population-based registries in 71 countries", *The Lancet*, Vol. 391/10125, pp. 1023-1075, https://doi.org/10.1016/S0140-6736(17)33326-3. [6]

IARC (2022), *Cancer Over Time*, International Agency for Research on Cancer, Lyon, https://gco.iarc.fr/overtime/en. [4]

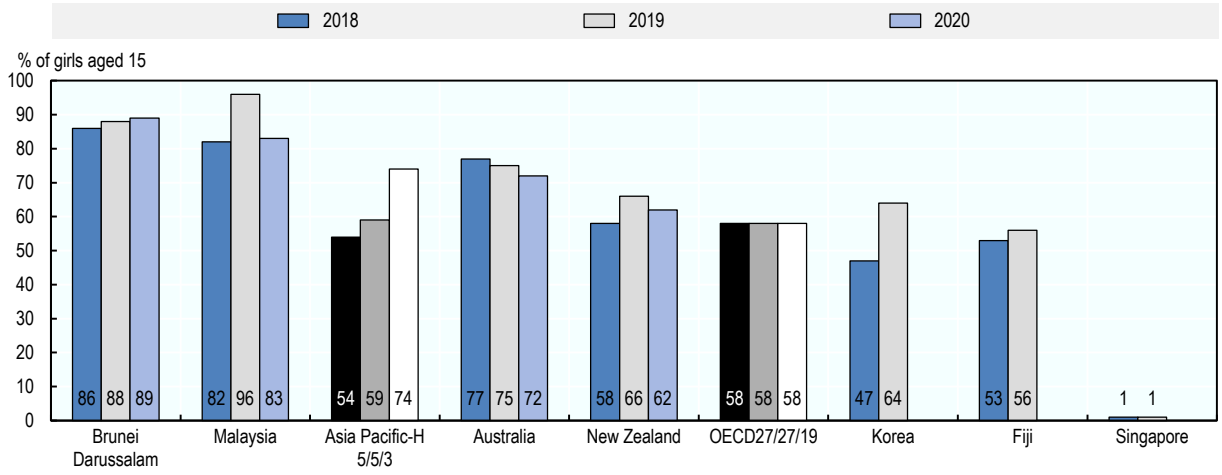
IARC (2022), *Cancer Today*, International Agency for Research on Cancer, Lyon, https://gco.iarc.fr/today/. [3]

Ministry of Health, Labour and Welfare (2022), *HPV vaccine ni kansuru Q&A*, https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles. [5]

WHO (2020), *Cancer Country Profiles*, World Health Organization, https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles. [2]

WHO (2017), *Human papillomavirus vaccines*, World Health Organization, https://www.who.int/teams/immunization-vaccines-and-biologicals/diseases/human-papillomavirus-vaccines-(HPV). [1]

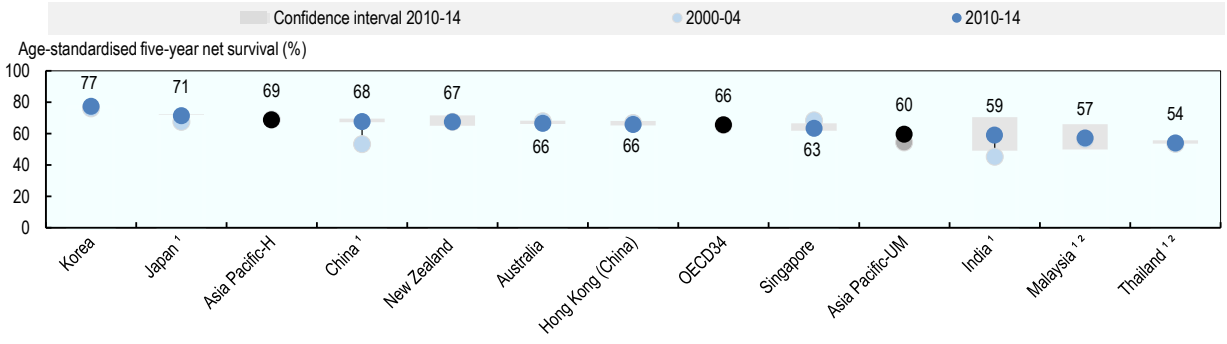
Figure 7.10. Vaccination coverage for human papillomavirus vaccine, complete schedule, females by age 15 (15HPVc), 2018-20



Source: WHO/UNICEF estimates of national immunisation coverage (WUENIC) 2022.

StatLink https://stat.link/73xywm

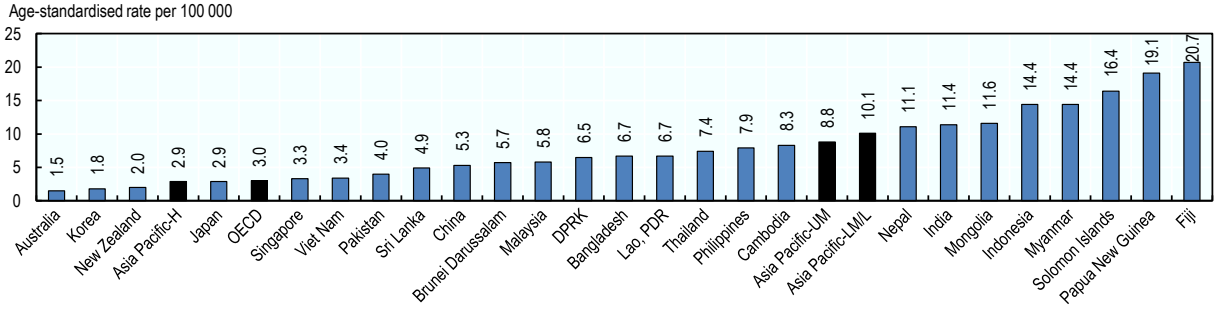
Figure 7.11. Cervical cancer: Age-standardised five-year net survival, 2000-04 and 2010-14



Note: For all countries, 95% confidence intervals for women diagnosed during 2010-14 are represented by grey areas. For Hong Kong (China) 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[6]) for more information.
Source: CONCORD programme, London School of Hygiene and Tropical Medicine.

StatLink https://stat.link/ewla1h

Figure 7.12. Cervical cancer mortality, 2020



Source: IARC Global Cancer Observatory 2022.

StatLink https://stat.link/q34cl1

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