BioSpectrum
the business of Bio & Health Sciences
ASIA EDITION

Singapore sees 65% decline in cervical cancer mortality rate since 1990, but screening gaps remain

November 27, 2026 | News

Singaporeâ??s age-standardised incidence rate fell by nearly half between 1990 and 2023 but remains more than twice the WHO elimination threshold



Cervical cancer remains one of the few cancers that can potentially be eliminated through human papillomavirus (HPV) vaccination, regular screening and timely treatment of pre-cancerous changes. Despite the availability of effective prevention and treatment measures, global deaths from cervical cancer are projected to increase by nearly 40% by 2050, according to a study involving researchers from the Yong Loo Lin School of Medicine, National University of Singapore (NUS Medicine) and the Institute for Health Metrics and Evaluation (IHME) at the University of Washington.

Published in Nature Medicine, the study was conducted as part of the Global Burden of Disease (GBD) 2023 Study and analysed cervical cancer incidence, mortality and health loss across 204 countries and territories from 1990 to 2023, with forecasts to 2050. Researchers estimated that 887,000 women developed cervical cancer and 369,000 died from the disease worldwide in 2023. Although the global rates of women developing and dying from cervical cancer are projected to decline after accounting for differences in demographic structure, the total number of cases and deaths is expected to rise as populations grow and age. By 2050, new cervical cancer cases worldwide are projected to increase by 20.2% to 1.08 million annually, while deaths are expected to rise by 39.3% to 522,000, compared with 2024. These findings highlight the need to strengthen prevention, screening and treatment services to meet growing healthcare demands.

In Singapore, the age-standardised incidence rate of cervical cancer fell by 49.8% between 1990 and 2023 to 8.5 cases per 100,000 women, while the age-standardised mortality rate declined by 64.8%. These were among the largest reductions in the region, with Singapore's incidence rate now lower than the high-income Asia Pacific average of 11.9 cases per 100,000 women. However, it remains more than twice the World Health Organization's (WHO) elimination threshold of four cases per 100,000 women. Despite the declining rates, the total number of new cases increased by 44.5% over the same period, largely due to population growth and ageing.

These improvements have occurred alongside sustained national prevention initiatives, including the school-based HPV vaccination programme, which has provided fully subsidised vaccination for Secondary 1 and 2 girls since 2019. Cervical cancer screening is also subsidised through national programmes such as Screen for Life, with recommended screening intervals based on age.

Associate Professor Marie Ng, joint senior author of the study and Director, NUS–IHME Global Burden of Disease Research Centre, NUS Medicine, said, "Singapore's progress demonstrates what sustained investment in cervical cancer prevention can achieve. Over the past three decades, we have seen substantial reductions in both incidence and mortality rates. However, with cervical cancer incidence still above the elimination threshold, continued efforts to improve screening participation remain essential, particularly for women who may not have benefited from HPV vaccination. By strengthening prevention and early detection, we have an opportunity to reduce the disease burden further and move closer to eliminating cervical cancer as a public health problem."

The study revealed considerable disparities between regions. In 2023, sub-Saharan Africa recorded an age-standardised incidence rate of 55.9 cases per 100,000 women, compared with 12.8 in high-income regions. The highest national incidence rates were observed in Eswatini (157.6), Malawi (135.9) and Zambia (112.6). Sub-Saharan Africa recorded the highest number of new cervical cancer cases among the study's major regions, at 241,000, followed by Southeast Asia, East Asia and Oceania with 208,000 cases and South Asia with 198,000 cases. Worldwide, the number of cervical cancer deaths increased by 71.6% between 1990 and 2023, and only a modest change was estimated for age-standardised mortality rates. The findings underscore how population changes and uneven access to healthcare continue to affect disease burden