

# Most breast and cervical cancer deaths occur in developing countries, yet many could be prevented

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Every year 800000 women die of cervical and breast cancer, but where a woman lives will largely determine her chance of survival. Two thirds of breast cancer deaths and 9 out of 10 deaths from cervical cancer occur in low- and middle income countries (LMICs). While some diagnostic and treatment services like mammography and radiotherapy are likely unaffordable, several proven, high-impact, cost-effective interventions exist to tackle these common cancers and have the potential to prevent hundreds of thousands of deaths every year, yet are often not available.

The authors of a new three-paper Series published in *The Lancet* say that country-led efforts to tackle breast, cervical, and other women's cancers in LMICs have so far been woefully inadequate and call for international efforts to end [preventable deaths](#) from breast and cervical cancer. The Series will be launched at the 2016 World Cancer Congress in Paris, France.

Cervical cancer, for example, is almost entirely preventable thanks to cost-effective routine human papillomavirus (HPV) vaccination of girls and [cervical screening](#) with treatment of pre-cancers, neither of which require oncologists, or specialist cancer centres.

New estimates produced as part of the Series reveal that the cost of inaction will be huge, with the number of women diagnosed with breast cancer every year worldwide expected to almost double from 1.7 million in 2015 to 3.2 million in 2030; whilst the number of women diagnosed with cervical cancer is predicted to rise by at least 25% to over 700000 by 2030, most in LMICs (Paper 1, figure 4).

"There is a widespread misconception that breast and cervical cancers are too difficult and expensive

to prevent and treat, particularly in resource-poor countries where the burden of these diseases is highest. But nothing could be further from the truth. This Series clearly shows that high-impact, cost-effective interventions exist for countries at all stages of development. Recent estimates suggest that a basic cancer control package could be introduced in low- and middle-income countries for as little as \$1.72 per person—equivalent to just 3% of current health spending in these countries", explains Series leader Professor Ophira Ginsburg from the University of Toronto, Canada.

Persistent underinvestment in LMICs, which receive just 5% of global funding for cancer, has exacerbated the issue. As a result, these 'neglected diseases' have exerted substantial negative effects on women's health, family life, poverty, and economic development.

The Series authors call for international efforts, similar to those that have led to major improvements in maternal health, to end preventable cases and deaths from breast and cervical cancer by 2030, which kill almost three times as many women every year (half a million more) as the complications of pregnancy and childbirth (ie, maternal mortality; 303000 deaths in 2015).

## Global burden of breast and cervical cancer

Worldwide, every year more than 2 million women are diagnosed with breast or cervical cancer, and around 800000 die from these diseases. Where a woman lives, her ethnicity, and socioeconomic and migration status will largely determine whether she will develop one of these common cancers, and ultimately whether she will survive (see Paper 1, figure 1).

5-year survival after diagnosis for breast cancer ranges from around 50% in South Africa, Mongolia, and India, to over 80% in 34 countries including Australia, the UK, Ireland, France, Germany, and the USA (Paper 1, figure 2), highlighting huge inequalities in access to prevention, early detection, and treatment. Furthermore, in high-income countries like Canada, the USA, and the UK where large-scale, cervical cancer screening is common, age-standardised cervical cancer rates are relatively low (less than 7.9 per 100000 women) compared to countries in sub-Saharan Africa (eg, Malawi and Zimbabwe) and central and South America (eg, Guyana and Bolivia) where regular screening is uncommon and incidence rates are especially high (exceeding 40 per 100000 women) (Paper 1, figure 1).

Inequities in cancer survival are not just confined to the world's poorer countries. Survival data across Europe show that 5-year survival from breast cancer varies by as much as 20%, ranging from 86% of women surviving 5 years in Sweden to 66% in Lithuania (Paper 1, panel & figure 2).

### Proven, promising interventions

Yet, breast and cervical cancer are not inevitably fatal and can be prevented and treated, say the authors, particularly if they are detected and treated at an early stage. "With many competing health priorities in low-and [middle-income countries](#), services for women's cancers are given low priority and allocated few resources. But there are several low-cost, feasible interventions that do not require specialised care in hospital or massive capital investment, and which could be integrated into existing health-care programmes", explains co-author Professor Lynette Denny from Groote Schuur Hospital, University of Cape Town, South Africa.

For example, estimates suggest that universal HPV vaccination of all girls aged 12 years using existing national immunisation or child health programmes could prevent 690000 cases and 420000 deaths worldwide over their lifetime, most of which would be in LMICs. Visual inspection with acetic acid to screen for cervical cancer is another promising approach. While mammography and late treatment

of breast cancer are likely unaffordable, clinical breast examination screening and breast awareness campaigns are likely to be cost-effective in diagnosing early stage breast cancer in LMICs, which could in turn help promote early treatment (Paper 2, table).

### Reducing inequities and improving cancer survival for women

The authors argue that the response to women's cancers needs to be seen as a vital part of international commitments to achieve universal health coverage and the new Sustainable Development Goals. Women's cancer threatens many of these goals, especially those related to poverty and health. These global health initiatives provide a perfect platform to address breast and cervical cancer control in LMICs, and to help all women access their right to cancer care.

Powerful political commitment and substantial financial investment is needed to ensure that by 2030, 70% of girls (aged 9-13 years) are immunised against HPV and that all women with [breast cancer](#) have access to early diagnosis and treatment when they need it, say the authors (Paper 3, panel 4). Key to this will be investing in health systems rather than focusing on disease-specific programmes and realigning international health aid with health need. For example, just 2.3% of health aid was allocated to non-communicable diseases (NCDs) like cancer in 2011, yet NCDs constitute over half the burden of disease in LMICs. In contrast, HIV accounted for 3.7% of the disease burden but received 46% of aid.

Additionally, more needs to be done to lessen cancer disparities by reducing poverty, elevating the status of women, and addressing social and cultural attitudes that prevent many women from accessing screening and presenting with early disease (Paper 3, panel 3).

The lack of data collection on the extent and nature of cancer is an enormous challenge to understanding the true burden of cancer in LMICs and needs to be improved. Not only do less than a fifth of cancer patients live in an area where there is a registry, but in India and China—the two countries

with the largest number of women with breast and [cervical cancer](#)—causes of death are registered in just 9% and 4% of cases respectively. Added to this, most cancer data for countries across the African continent are extrapolated from just one country.

According to co-author Richard Sullivan, Professor of Cancer and Global Health at King's College London, UK, "The global community cannot continue to ignore the problem—hundreds of thousands of women are dying unnecessarily every year, and the need for affordable access to cancer care is projected to increase in the coming decades, as many of the poorest countries face rising rates of cancers. Not only are the costs of essential cancer services for women lower than expected, but scale-up of diagnostic, surgical, and treatment services are a highly effective investment compared to the devastating economic cost to countries, communities, and families incurred by the serious shortfall in cancer care. This situation could be turned around by 2030 if the international community, policymakers, politicians, healthcare professionals, and patients address this issue now."

**More information:**

[www.thelancet.com/series/womens-cancers](http://www.thelancet.com/series/womens-cancers)

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