

Nearly 170 million years of healthy life lost due to cancer in 2008

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The first detailed study to estimate the global impact of cancer on the number of healthy years of life lost by patients has revealed that nearly 170 million years of healthy life were lost because of cancer in 2008, according to an article published Online First in the *Lancet*.

The study used a measure known as disability-adjusted life-years (DALYs) to take account of not only the effects of fatal cancer, but also the effects of disabling non-fatal disease outcomes (e.g. [mastectomy](#) for [breast cancer](#) or infertility for cervical cancer). The researchers analysed data from the cancer registries worldwide to estimate that globally, 169.3 million years of healthy life were lost due to cancer in 2008.

According to lead author Dr Isabelle Soerjomataram, at the International Agency for Research on Cancer (IARC) in Lyon, France, "While overall DALYs are remarkably similar across different levels of human development*, they reflect a higher average [premature mortality](#) in lower income countries and a higher average disability and impairment in higher income countries. Our study represents an important first step towards establishing an evidence base for fatal and non-fatal cancer-related outcomes that is urgently needed to set priorities in [cancer control](#)."

Dr Freddie Bray, one of the paper's co-authors and Deputy Head of the IARC's Section of [Cancer Information](#), adds "Our findings illustrate quite starkly how cancer is already a barrier to sustainable development in many of the poorest countries across the world and this will only be

exacerbated in the coming years if cancer control is neglected."

Asia and Europe were the main contributors to the global burden of years of [healthy life](#) lost due to cancer, with men in eastern Europe facing the largest cancer burden worldwide (3146 age-adjusted DALYs lost per 100 000 men). For women, the highest burden was found in sub-Saharan Africa (2749 age-adjusted DALYs lost per 100 000 women).

Colorectal, lung, breast, and [prostate cancers](#) were the main contributors to total DALYs rates in most regions, accounting for 18 – 50% of the total cancer burden. The contribution of infection-related cancers to the overall DALYs (primarily liver, stomach, and [cervical cancer](#)) was high in Sub-Saharan Africa (25% of all cancers) and eastern Asia (27% of all cancers), compared to other regions.

The study also highlights the fact that improved access to high-quality treatment has not greatly improved survival for a number of common cancers associated with poor prognoses (especially lung, stomach, liver, and pancreatic cancers), emphasising the crucial role that primary prevention will need to play if the global cancer burden is to be reduced.

Writing in a linked Comment, Dr Ahmedin Jemal, at the American Cancer Society in Atlanta, USA, outlines the difference between the measure used in this study and other commonly used measures: "By contrast with mortality rates and counts, which emphasise deaths occurring at old ages, DALY give more weight to deaths occurring at young ages at which people are more likely to be working, raising children, and supporting other family members."

However, Dr Jemal points out that addressing the challenges highlighted by the new study will require a major effort, adding that, "Implementation of comprehensive and sustainable interventions to challenge the growing [cancer](#) burden in low-income and middle-income

countries will require the coordinated efforts of many stakeholders from the public and private sectors, including national and international public health agencies, health industries, philanthropic and government donors, and local and regional policy makers."

More information: * The researchers grouped estimates of DALYs into four categories, based on countries' Human Development Index (HDI). HDI combines indicators of life expectancy, educational attainment and income, allowing human development to be compared between countries.

Paper online: [www.thelancet.com/journals/lan ... \(12\)60919-2/abstract](http://www.thelancet.com/journals/lan... (12)60919-2/abstract)

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