

CANCER

In 2012, the worldwide incidence of cancer rose to an estimated 14 million new cases per year, with an estimated 8.2 million cancer deaths. Globally, in 2012 the most common cancers diagnosed were those of the lung (1.8 million cases, 13% of the total), breast (1.7 million, 11.9%) and colon (1.4 million, 9.7%). The most common causes of cancer death were cancers of the lung (1.6 million, 19.4% of total cancer deaths), liver (0.7 million, 9.1%) and stomach (0.7 million, 8.8%).⁵¹ For some cancer types such as lung cancer, incidence rates are similar to death rates, indicating that most diagnosed cases end in death, while other cancer types, such as breast or cervical cancer, are less likely to be fatal and can be diagnosed early and effectively treated.

TRENDS

Worldwide age-standardized cancer mortality improved modestly between 2000 and 2012, with a 6% decline overall (Figure 6.9). But that number masks significant regional, gender and disease type variations. The largest regional improvement in cancer mortality during 2000–2012 was in the high-income OECD region, mainly due to improvements in men's lung cancer mortality, stomach cancer and colorectal cancer mortality in both sexes, and women's breast cancer mortality. Age-standardized cancer death rates increased in the South-East Asia Region and the Western Pacific Region, excluding high-income OECD countries.

Among the leading cancers, the largest decline in mortality rates was observed in stomach cancer, which has declined around 20% globally since 2000 (Table 6.1). Cervical cancer was the only other major cancer with a mortality decline since 2000 exceeding 10%.

Lung cancer mortality has fallen 4% for men, but increased for women. There is evidence of considerable regional variability, with an estimated 19% decrease in lung cancer mortality for men in the high-income OECD countries, compared to increases of greater than 10% for men in the South-East Asia Region and both men and women in the Western Pacific Region, excluding high-income OECD countries.

Unlike CVD, total cancer mortality rates are not lowest in the high-income OECD countries. Cancer totals mask diverse patterns in specific cancer types, some of which have higher incidence in wealthier countries (e.g. colorectal and breast cancer), while others have a lower incidence in such settings (e.g. stomach cancer and cervical cancer). Still others vary according to their main cause (e.g. lung cancer is mainly determined by tobacco use, which does not have a linear relationship with wealth). Nearly one third of cancer deaths are caused by five leading behavioural and dietary risks: high body mass index; low fruit and vegetable intake; lack of physical activity; tobacco use; and alcohol use.⁵³ Chronic infections, mainly *Helicobacter pylori*, human papillomavirus, and HBV/HCV are estimated to be associated with around 16% of cancers worldwide (with a larger role in sub-Saharan Africa).⁵⁴

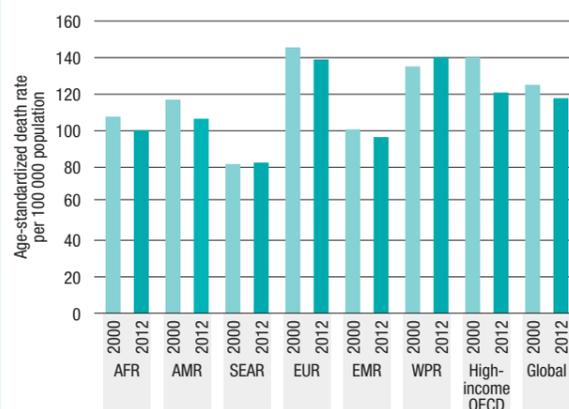
POSITIVE DEVELOPMENTS

Improved prevention: Reductions in tobacco use, as the single most important risk factor for cancer causing about 20% of global cancer deaths, have contributed to declines in cancer mortality, especially lung cancer.⁷ Several other changes in exposures and lifestyles have likely contributed to declines in incidence and mortality from stomach cancer, including reductions in salt intake coupled with increases in fresh fruits and vegetable consumption and improvements in hygiene leading to reduced infection with *Helicobacter pylori*.⁵⁵

Early detection, diagnosis and treatment: In high-income countries, declines in mortality in the face of increasing cancer incidence are likely a result of advanced quality health care.^{56,57} However, low-tech approaches to early detection of cancer have proven their efficacy in developing countries too. A prime example is cervical cancer screening using visual inspection with acetic acid and cryotherapy or cold coagulation treatment of precancerous lesions. This type of "screen-and-treat" programme has been successfully implemented in India.⁵⁸

Legislation to reduce exposure and risk behaviours: Lessons from cancer control measures in high-income countries show that prevention works, but that health promotion needs to be supported by appropriate legislation. For instance, the first international treaty sponsored by WHO, the FCTC, has been critical in reducing tobacco consumption through legislative actions, including those that increase tobacco taxes, which is one of the most effective tobacco control interventions to reduce consumption. Similar approaches need to be evaluated with regard to the consumption of alcohol, and in limiting exposure to occupational and environmental carcinogenic risks, including air pollution.

Figure 6.9
Cancer death rates, by region and globally, 2000 and 2012^{1,8}



CHALLENGES

Lack of access to effective, timely diagnosis and treatment: In the absence of effective early detection programmes such as cancer awareness or screening, patients are diagnosed at very late stages when curative treatment is no longer an option. Population-based screening methods have been implemented for cancer of the cervix, breast and colon-rectum in some high-income countries. Screening, however, is not widely implemented as the necessary resources are not available in most regions. Furthermore, diagnostic services including histopathology and treatment access are poor in many low- and lower-middle-income countries, resulting in high cancer-related mortality. Immediate investment in human resources, health services and sustainable supply chains are needed to provide timely diagnosis and treatment.

Profit-driven disease: Many of the product consumption risks associated with the development of cancers are found in high-sodium processed foods and alcoholic beverages, both of which make companies money.⁵⁹ The sale of tobacco is also extremely profitable. Challenging the production and distribution of profit-generating carcinogens is a major challenge for all countries.

Sedentary lifestyles: Physical inactivity increases the risk of several cancers, both directly⁶⁰ and as a result of increased body mass index (BMI).⁶¹

Spiralling costs: The financial cost of dealing with the growing cancer burden is damaging the economies of even the richest countries. In 2010, the total annual economic cost of cancer was estimated to reach approximately US\$ 1.16 trillion.⁵⁶ The costs of treatment for individuals can be prohibitive, resulting in forgoing treatment or catastrophic medical expenses. At the country level, failing to invest in basic cancer management can result in billions of dollars of economic loss.⁶²

Lack of palliative care: Moderate to severe cancer pain is suffered by over 80% of cancer patients in the terminal phase.⁶³ Effective public health strategies, comprising community- and home-based care, and including improved access to oral morphine are thus essential.

STRATEGIC PRIORITIES

Cancer prevention and control efforts programmes are a critical component for the achievement of the SDG target reduction in premature mortality due to NCDs. The SDG also includes several other targets that aim to reduce the exposure of people to carcinogens by creating a healthier environment with less pollution and contamination of air, water and soil (for example, Target 3.9).

As this brief outline indicates, any cancer response will need to be carried forward on multiple fronts. WHO and the International Agency for Research on Cancer (IARC) are collaborating with other UN agencies on the UN Noncommunicable Diseases Interagency Taskforce (2014) to increase political commitment for cancer prevention and control. Efforts are focusing on coordinating and conducting research on the causes of human cancer and the mechanisms of carcinogenesis, as well as on the monitoring of the cancer burden (as part of the work of the Global Initiative on Cancer Registries).

Going forward, it will be imperative to develop proven strategies for cancer prevention and control, and to generate new knowledge, and disseminate existing knowledge to facilitate the delivery of evidence-based approaches. It will also be essential to develop standards and tools to guide the planning and implementation of interventions for prevention, early detection, treatment and care, and to provide technical assistance for rapid, effective transfer of best practice interventions to developing countries. Implementation of WHO toolkits, such as the WHO Package of Essential Noncommunicable Diseases Interventions, will improve service delivery throughout the health sector by promoting early detection and effective management.²³ Finally, countries themselves need to increase efforts to strengthen health systems at national and local levels to ensure early diagnosis and deliver care for cancer patients.

Table 6.1
Six leading cancer causes of death globally, by sex, 2012, and trends in the death rates globally and by region, 2000–2012^{1,52}

Global 2012 rank	Cancer type	Global	AFR	AMR	SEAR	EUR	EMR	WPR	High-income OECD
Females									
1	Breast cancer	-8							
2	Trachea, bronchus, lung cancers	9							
3	Colon and rectum cancers	-8							
4	Cervix uteri cancer	-12							
5	Stomach cancer	-21							
6	Liver cancer	7							
Males									
1	Trachea, bronchus, lung cancers	-4							
2	Liver cancer	-2							
3	Stomach cancer	-20							
4	Colon and rectum cancers	-7							
5	Prostate cancer	-8							
6	Oesophagus cancer	-8							

■ ASDR decreased by more than 5%
■ ASDR increased by more than 5%
■ Between -5% and 5% change in ASDR