Cancer is a leading cause of death worldwide. Cancer was the cause of an estimated 3.6 million deaths (or 13% of total deaths) in Asia/Pacific countries in 2008. Cancer deaths in the region total almost half of all worldwide cancer deaths (Boyle and Levin, 2008).

Countries with higher cancer mortality rates, based on 2008 estimates, include China, New Zealand, Papua New Guinea, the Lao PDR and the Republic of Korea, all with over 125 deaths per 100 000 population (Figure 1.6.1). However, the country with the highest rate was Mongolia, at over 200 deaths per 100 000 population. A large proportion of this was due to deaths from liver cancer, precipitated by hepatitis B infection.

Cancer deaths were less common in India, Sri Lanka, the Philippines, the Solomon Islands, Pakistan and Brunei Darussalam, with 100 deaths per 100 000 population or less. The average rate of death in 20 Asian countries was lower than that in OECD countries (114 *versus* 131 deaths per 100 000 population). Cancer also accounts for a much higher proportion of deaths in OECD countries, at 28% in 2009 (OECD, 2011).

There are differences in cancer mortality among countries. Lung cancer remains the main cause of cancer mortality, averaging 19% of all cancers in 20 Asian countries (Figure 1.6.2). Rates are comparatively high in China, DPR Korea, Brunei Darussalam, Singapore and the Republic of Korea. It is anticipated that rates will continue to rise if strong anti-smoking initiatives are not undertaken. Mortality from stomach cancer is also common (13% of all cancer deaths), linked to *Helicobacter pylori* infection, with deaths more prevalent in Mongolia, China and the Republic of Korea.

Besides Mongolia, liver cancer deaths occur more frequently in Lao PDR, Viet Nam, Thailand and China. Incidence is expected to fall in coming decades, with increased immunisation for hepatitis B. Colorectal cancer deaths are higher in New Zealand, Singapore and Indonesia. Breast cancer deaths, the most common cause among women, are responsible for close to 10% of all cancer deaths in Pakistan, Brunei Darussalam, Sri Lanka and Indonesia. Although early detection and therapy can reduce mortality, these services are inaccessible to large numbers of women, mostly poor or living in rural areas, in the region (WHO, 2008a).

Age-specific mortality rates in European countries are similar to those in the Western Pacific region (Figure 1.6.3). Rates in Southeast Asian countries are lower than for Europe and the Western Pacific after the age of 45. A large proportion of cancer deaths occur in the economically productive age group, with around half occurring below the age of 60 years. In a five-city study in India, nearly 50% of cancer mortality was reported among those below 55 years of age (WHO, 2011c).

As with cardiovascular disease, an ageing population will lead to many more cases of cancer in coming decades, and Asia alone can expect up to 5 million annual cancer deaths by 2030, taxing underprepared health systems. Since the drugs and technologies for treating patients are expensive, cancer control planning in the Asia/Pacific region might more effectively target smoking, physical activity, overweight/obesity and nutrition.

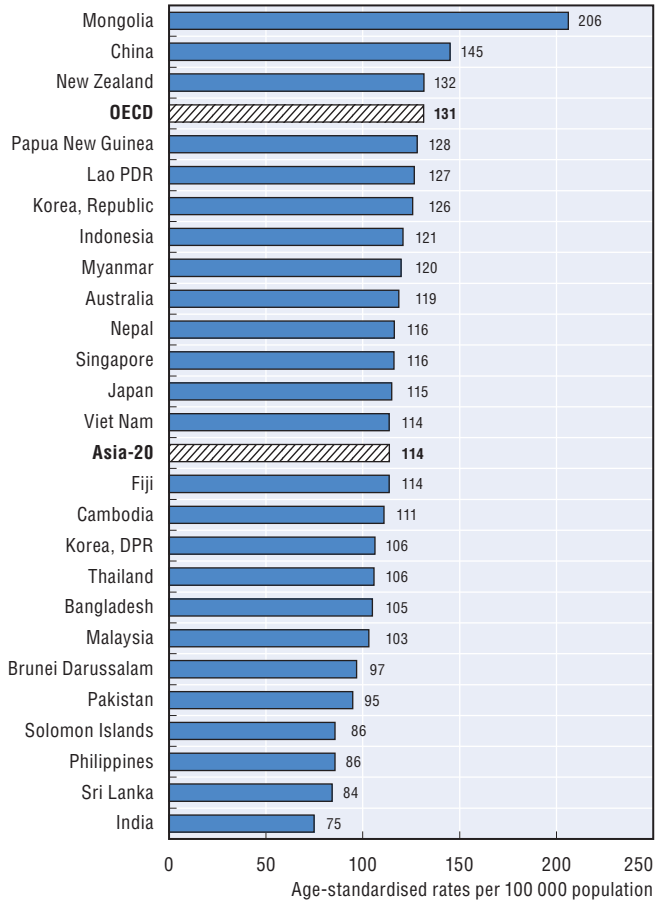
Definition and comparability

Mortality rates are calculated by dividing annual numbers of deaths by mid-year population estimates. Rates have been age-standardised to the World Standard Population to remove variations arising from differences in age structures across countries.

Complete vital registration systems do not exist in many developing countries, and about one-third of countries in the region do not have recent data (WHO, 2008a). Misclassification of causes of death is also an issue. A general assessment of the coverage, completeness and reliability of causes of death data has been published by WHO (Mathers *et al.*, 2005).

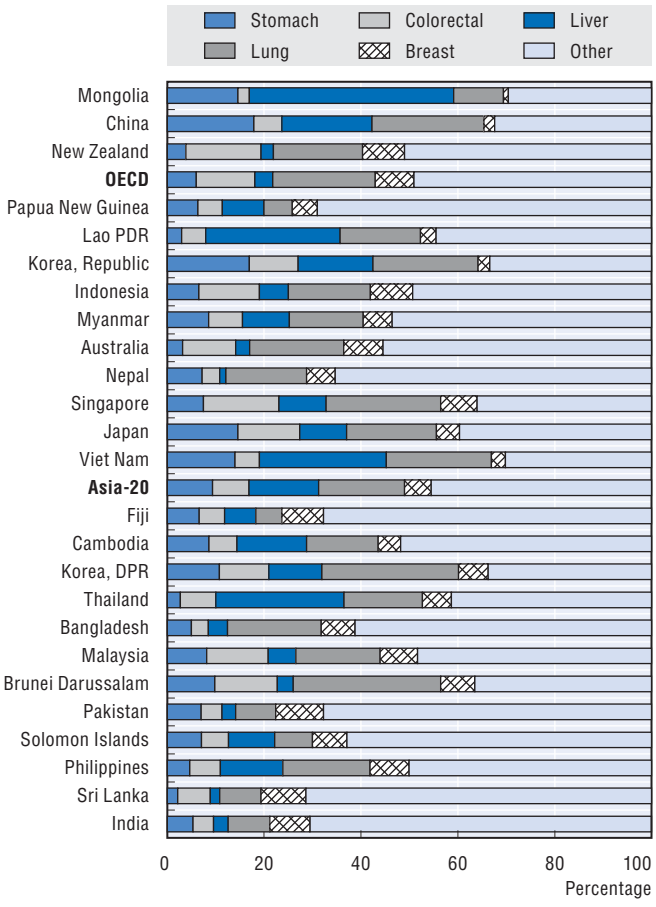
The WHO Global Burden of Disease project draws on a wide range of data sources to quantify global and regional effects of diseases, injuries and risk factors on population health. The latest assessment of GBD is for 2008.

1.6.1. All cancers, estimated mortality rates, 2008



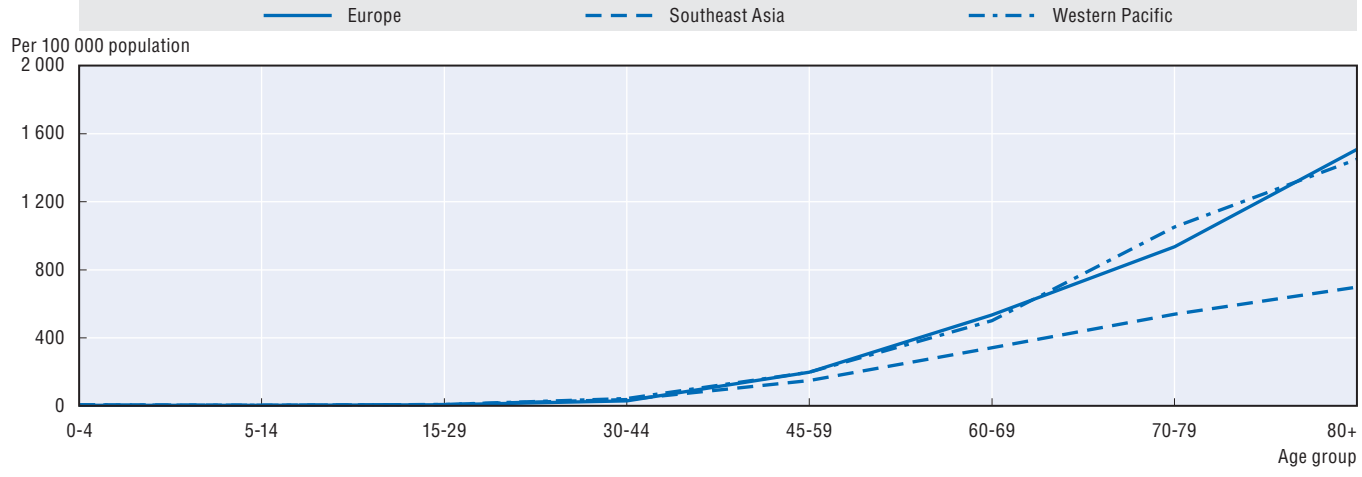
Source: WHO Global Burden of Disease, 2011.

1.6.2. Proportions of cancer deaths, 2008



Source: WHO Global Burden of Disease, 2011.

1.6.3. All cancers, age-specific mortality rates by region, 2008



Source: WHO Global Burden of Disease, 2011.

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