

## 1. HEALTH STATUS

### 1.4. Mortality from cancer

Cancer accounts for over one-fourth of all deaths in OECD countries and, after diseases of the circulatory system, it is the second leading cause of death. The proportion of deaths that are due to cancer has increased over time, and in countries such as Canada, Denmark, France, Japan and the Netherlands it has become the number one cause of death. This rise reflects the fact that mortality from other causes, particularly circulatory diseases, has been declining at a faster pace than the mortality rate for cancer.

There are more than 100 different types of cancers, with most named for the organ in which they start. Cancer occurs when abnormal cells divide without control and are able to invade other tissues. For a large number of cancer types, the risk of developing the disease rises with age. While genetics is a risk factor, only about 5% to 10% of all cancers are inherited. Modifiable risk factors such as smoking, obesity, exercise, and excess sun exposure, as well as environmental exposures, explain as much as 90-95% of all cancer cases (Anand et al., 2008). Prevention, early detection and treatment remain at the forefront in the battle to reduce the burden of cancer.

In 2011, the average cancer mortality rate across OECD countries was 211 per 100 000 population. Mortality was lowest in Mexico, Brazil and Finland, with rates less than 180 per 100 000 population. Central and eastern European countries such as Hungary, Slovenia and the Slovak Republic as well Denmark bear the biggest cancer burden with mortality rates in excess of 240 per 100 000 population (Figure 1.4.1).

Cancer mortality rates are persistently higher for men than for women in all countries (Figure 1.4.1). The gender gap was particularly wide in Korea, Spain and Estonia, along with the Slovak Republic, Japan and France; with mortality rates among men more than twice those for women. This gender gap can be explained partly by the greater prevalence of risk factors among men, notably smoking rates.

Among men, lung cancer imposes the highest mortality burden, accounting for 23% of all cancer-related deaths. In Belgium and Greece, this percentage was in excess of 30%. For women, lung cancer accounted for 16% of all cancer-related deaths. In many countries, lung cancer mortality

rates for men have decreased over the last 20 years, whereas the opposite trend can be observed for women. These conflicting trends are, to a large degree, explained by the large number of females who started smoking several decades later than males (Ahmedin et al., 2011). Mortality, survival and screening rates for cervical, breast and colorectal cancer are discussed further in Chapter 5.

In most OECD countries, cancer-related death rates have fallen since 1990. On average, cancer-related mortality rates fell by nearly 15% between 1990 and 2011 (Figure 1.4.2). Substantial declines in mortality from stomach, colorectal, breast and cervical cancer for women, as well as prostate and lung cancer for men contributed to this reduction. However, these gains were partially offset by increases in the number of deaths due to cancer of the pancreas and liver for both sexes as well as lung cancer for women.

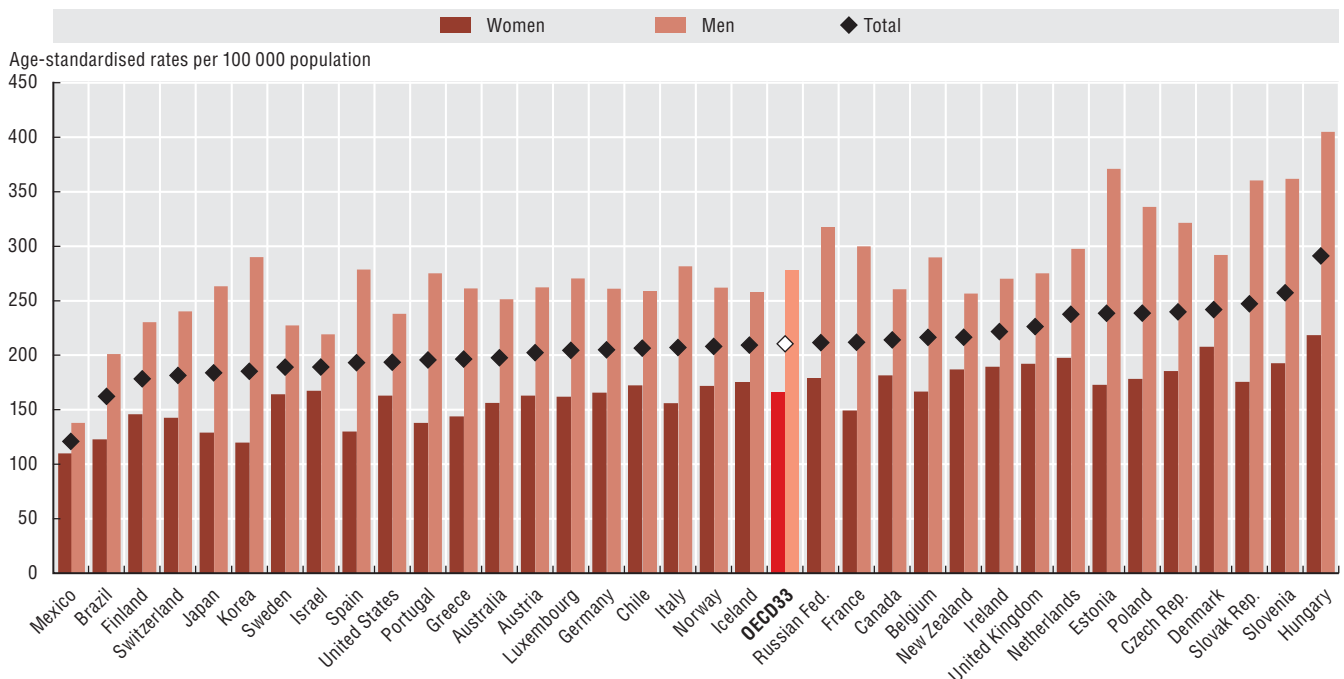
In the case of Brazil, Korea, South Africa and Slovenia, however, cancer-related mortality increased over this period (Figure 1.4.2). In all other countries, mortality rates fell, but there is substantial variation between countries in the rate of decline. Mortality rates fell by a modest 2% to 5% in Greece, the Slovak Republic and Estonia, but by more than 25% in Switzerland, Luxembourg and the Czech Republic.

#### Definition and comparability

Mortality rates are based on numbers of deaths registered in a country in a year divided by the size of the corresponding population. The rates have been directly age-standardised to the 2010 OECD population to remove variations arising from differences in age structures across countries and over time. The source is the *WHO Mortality Database*.

Deaths from all cancers are classified to ICD-10 codes C00-C97. Mathers et al. (2005) have provided a general assessment of the coverage, completeness and reliability of data on causes of death.

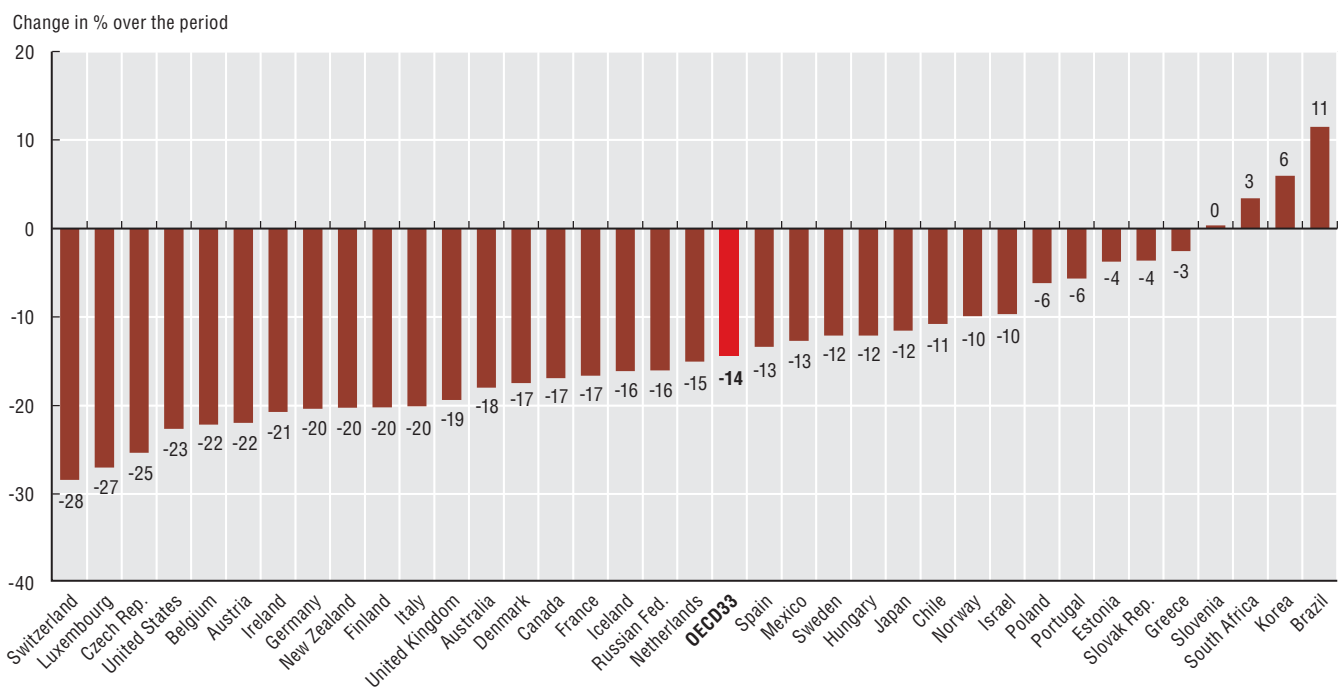
### 1.4.1. All cancer mortality rates, total and by gender, 2011 (or nearest year)



Source: OECD Health Statistics 2013, <http://dx.doi.org/10.1787/health-data-en>.

StatLink <http://dx.doi.org/10.1787/888932916135>

### 1.4.2. Change in all cancer mortality rates, 1990-2011 (or nearest year)



Source: OECD Health Statistics 2013, <http://dx.doi.org/10.1787/health-data-en>.

StatLink <http://dx.doi.org/10.1787/888932916154>



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