

5.10. Survival and mortality for colorectal cancer

Colorectal cancer is the third most commonly diagnosed form of cancer worldwide, after lung and breast cancer, with approximately one million new cases diagnosed per year (Parkin *et al.*, 2005). There are several factors that place certain individuals at increased risk for the disease, including age, the presence of polyps, ulcerative colitis, a diet high in fat, and genetic background. The disease is more common in the United States and Europe, and is rare in Asia. In Asian countries where people are gradually adopting western diets, such as Japan, the incidence of colorectal cancer is increasing (IARC, 2011). It is estimated that approximately 610 000 people worldwide died due to colorectal cancer in 2008 (WHO, 2011d). Total spending on the treatment of colorectal cancer in the United States is estimated to reach USD 14 billion per year (Mariotto *et al.*, 2011). Two indicators are presented to reflect variation in outcomes for patients with colorectal cancer across OECD countries: five-year relative survival rates and mortality rates.

Colorectal cancer screening is recommended by using fecal occult blood testing, sigmoidoscopy or colonoscopy in adults, beginning at age 50 and continuing until age 75 (USPSTF, 2008). These diagnostic methods are effective in detecting early-stage cancer and adenomatous polyps. Although organised screening programmes are being introduced or piloted in several OECD countries, data on screening rates for colorectal cancer are not yet available at an international level.

Colorectal survival rates have been used to compare European countries in the EURO CARE study (Sant *et al.*, 2009) and around the world in the CONCORD study (Coleman *et al.*, 2008). Advances in diagnosis and treatment have increased survival over the last decade. There is compelling evidence in support of the clinical benefit of improved surgical techniques, radiation therapy and combined chemotherapy. All countries show improvement in survival between 1997-2002 and 2004-09 (Figure 5.10.1). Japan and

Iceland have the highest relative survival rates, at over 66%. The Czech Republic has the lowest rate, although survival rates have increased remarkably from 41% to nearly 50% between the two periods. Recent data from the EURO CARE project showed that survival for colorectal cancer continued to increase in Europe, and in particular in eastern European countries (Verdecchia *et al.*, 2007).

There are differences in colorectal cancer survival between genders across OECD countries (Figure 5.10.2). In nearly all countries, survival rates are higher for females, with the exception of Korea.

Mortality rates reflect the effect of cancer care and changes in incidence, thus careful interpretation of the relationship between survival and mortality trends is required (Dickman and Adami, 2006). Most countries experienced a decrease in mortality for colorectal cancer between 2000 and 2009 (Figure 5.10.3), with the exceptions of Korea, Portugal, Slovenia, Poland, Mexico, Greece, Chile and Estonia. Central and eastern European countries tend to have higher mortality rates than other OECD countries. Despite a decrease in mortality for colorectal cancer over the past decade, Hungary continues to have the highest mortality rate for colorectal cancer, followed by the Slovak Republic and the Czech Republic. Countries with high relative survival rates, like Japan, Iceland and the United States, also have below-average mortality rates.

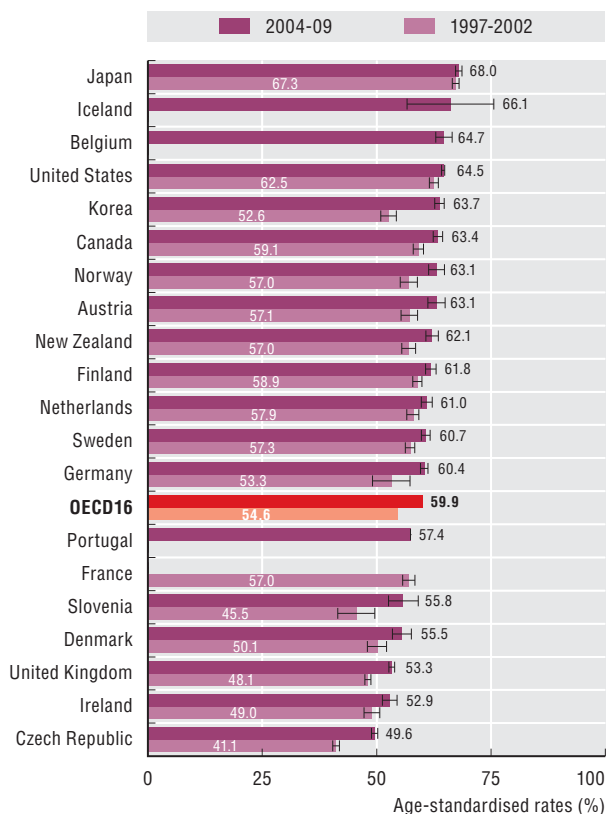
Definition and comparability

Survival and mortality rates are defined in Indicator 5.8 “Screening, survival and mortality for cervical cancer”.

Information on data for Israel: <http://dx.doi.org/10.1787/888932315602>.

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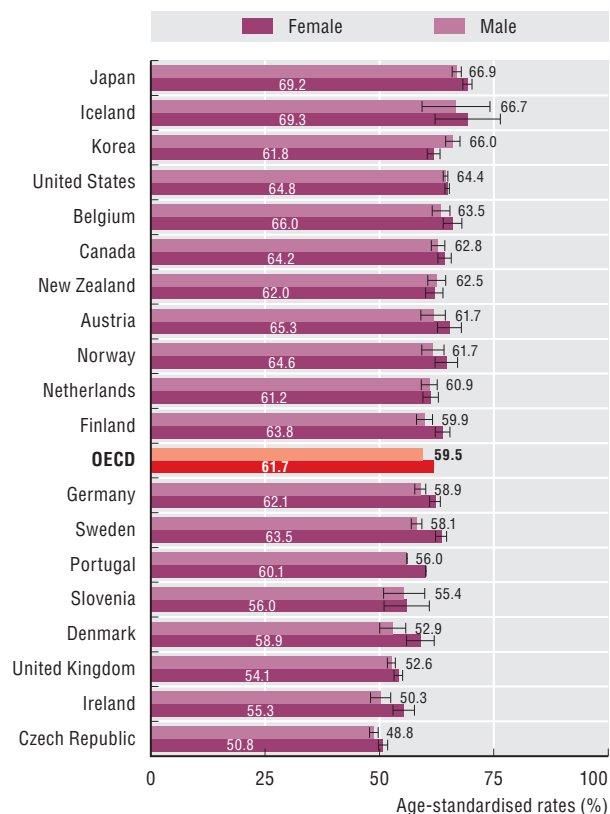
5.10.1 Colorectal cancer, five-year relative survival rate, 1997-2002 and 2004-09 (or nearest period)



Note: 95% confidence intervals represented by I—I.
Source: OECD Health Data 2011.

StatLink <http://dx.doi.org/10.1787/888932525476>

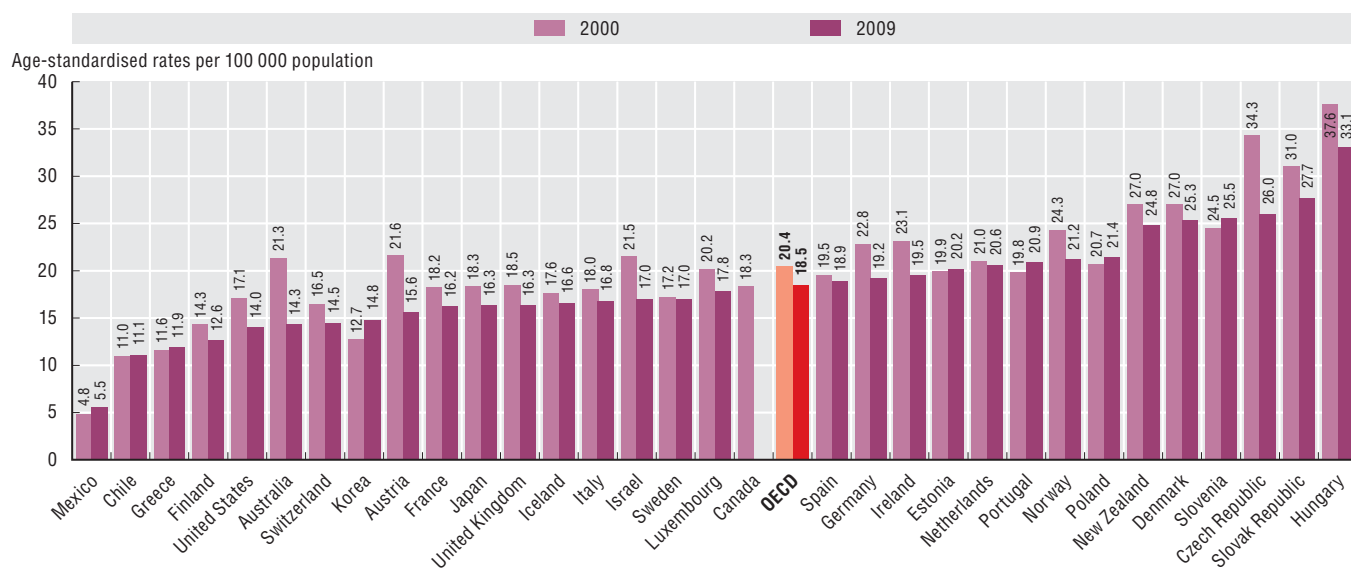
5.10.2 Colorectal cancer, five-year relative survival rate by sex, 2004-09 (or nearest period)



Note: 95% confidence intervals represented by I—I.
Source: OECD Health Data 2011.

StatLink <http://dx.doi.org/10.1787/888932525495>

5.10.3 Colorectal cancer mortality 2000 to 2009 (or nearest year)



Source: OECD Health Data 2011.

StatLink <http://dx.doi.org/10.1787/888932525514>



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