

5.9. Survival and mortality for colorectal cancer

Colorectal cancer is the third most common form of cancer in both women (after breast and lung cancer) and men (after prostate and lung cancer). It is estimated that approximately USD 8.4 billion is spent in the United States each year on the treatment of colorectal cancer (Brown *et al.*, 2002). Advances in diagnosis and treatment have increased survival over the last decades.

Evidence exists that demonstrates the clinical benefit of screening with routine colonoscopy and stool tests for occult blood (USPSTF, 2008) and various treatment modalities, such as surgery (Govindarajan *et al.*, 2006) and chemotherapy (CCCG, 2000), even for advanced stages of the disease. The same literature suggests that screening and treatment options are not sufficiently utilised. However, although organised screening programmes are being piloted in several OECD countries, data on screening rates for colorectal cancer are not yet available at an international level.

Variation in outcomes for patients with colorectal cancer is captured by five-year relative survival rates and mortality rates. Colorectal cancer survival rates have been used to compare European countries in the EUROCARE study (Sant *et al.*, 2009), to compare countries around the world in the CONCORD study (Coleman *et al.*, 2008), and in many national reporting activities.

Figure 5.9.1 presents the most recent five-year relative survival rates for patient with colorectal cancer. Japan has the highest relative survival rate of 67%, followed by Iceland and the United States with rates above 65%. Poland has the lowest rate with 38%, followed by the Czech Republic and the United Kingdom, Ireland and Denmark.

All countries show improvement in survival rates over time (Figure 5.9.2), although the increase is often not statistically significant. The United States which had the highest survival rate of 62.5% for patients diagnosed in 1997 improved to 65.5% for those diagnosed in 2000. The Czech Republic improved from 41% to 47% for the periods 1997-2002 and 2001-06.

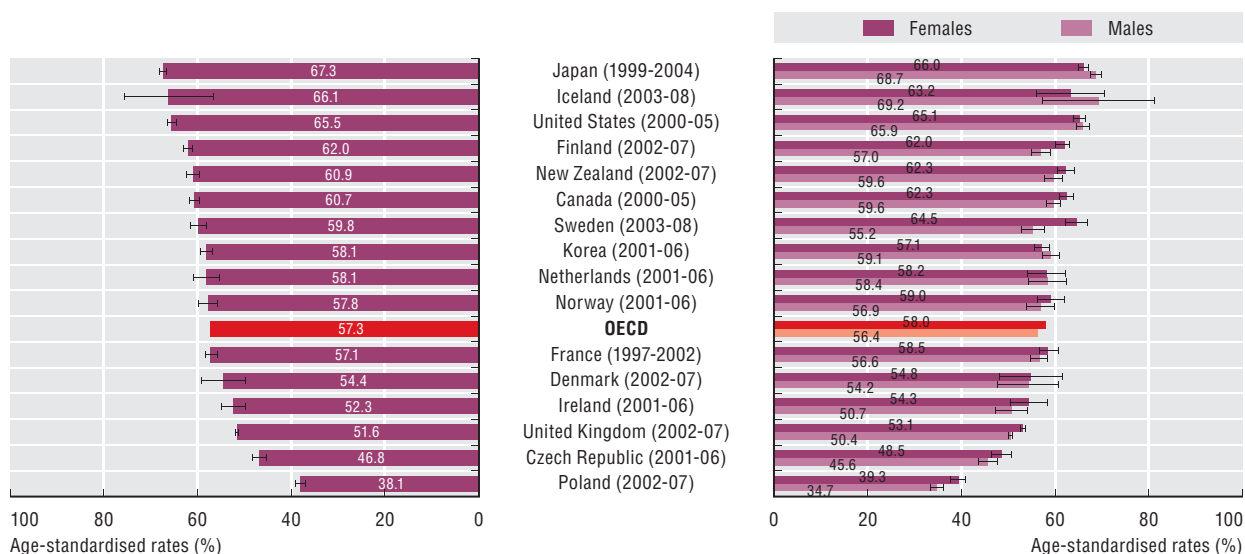
Historical data from France shows that the five-year survival rate between 1976 and 1988 increased from 33% to 55%, which is attributed to a higher resection rate with lower post-operative mortality, earlier diagnosis and increasing use of chemotherapy (Faivre-Finn *et al.*, 2002). These findings are consistent with results from other European countries (Sant *et al.*, 2009) and the United States (SEER, 2009). Recent data from the EUROCARE project showed that survival for colorectal cancer continued to increase in Europe, and in particular in eastern European countries (Verdecchia *et al.*, 2007).

Mortality trends from colorectal cancer for the period from 1995 and 2005 are shown in Figure 5.9.3. Most countries experienced a decrease in mortality for colorectal cancer in these ten years. While Korea's rates have increased markedly over time, these rates are still among the lowest in OECD countries. The rapid introduction of western-type diet is a possible explanation for this increase. As Figure 5.9.2 illustrates, Korea has achieved a significant increase in relative survival rates over recent years, indicating that the health care system is addressing this new challenge. Central and eastern European countries tend to have higher mortality rates with no clear geographic pattern emerging for the other OECD countries. Countries with high relative survival rates, like Japan and the United States also have below-average mortality rates, which supports the hypothesis that the differences in relative survival reflect better cancer care.

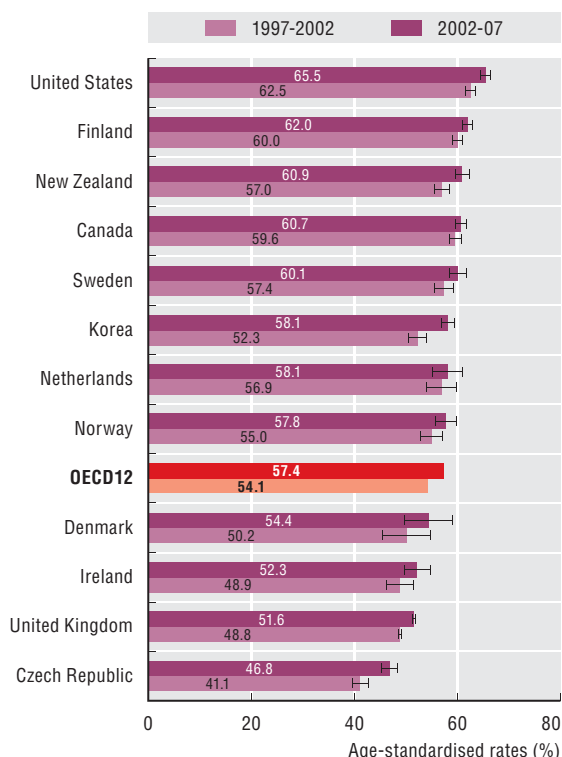
Definition and deviations

Survival rates and mortality rates are defined in Indicator 5.7 "Cervical cancer" and vary from the ICD 10 definition of colorectal cancer employed in *Health at a Glance 2007* by also including anal cancer.

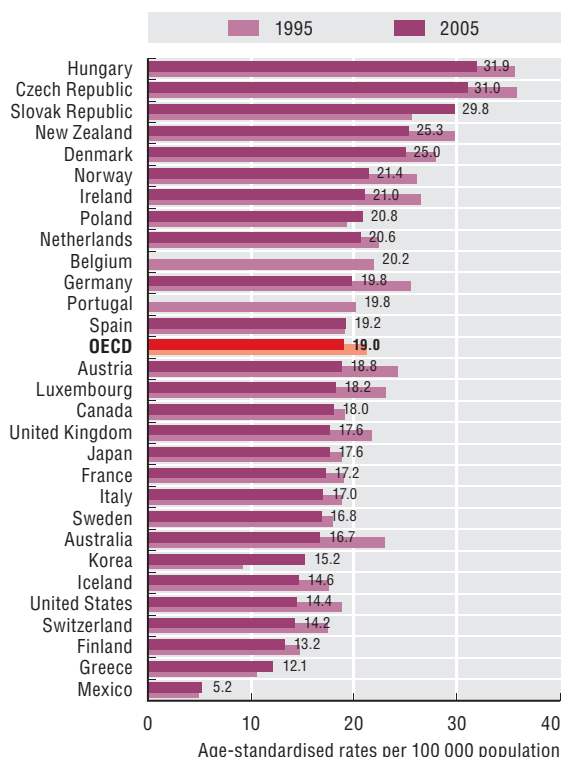
5.9.1 Colorectal cancer, five-year relative survival rate, total and male/female, latest period



5.9.2 Colorectal cancer, five-year relative survival rate, 1997-2002 and 2002-07 (or nearest period)



5.9.3 Colorectal cancer mortality, 1995 to 2005 (or nearest year)



Source: OECD Health Care Quality Indicators Data 2009. Survival rates are age standardised to the International Cancer Survival Standards population. OECD Health Data 2009 (mortality data extracted from WHO Mortality Database and age standardised to 1980 OECD population). 95% confidence intervals are represented by |—| in the relevant figures.

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