Screening, survival and mortality for cervical cancer

Cervical cancer is highly preventable if precancerous changes are detected and treated before progression occurs. The main cause of cervical cancer, which accounts for approximately 95% of all cases, is exposure to the human papilloma virus (HPV) through sexual activity (IARC, 2005).

Countries follow different policies with regards to the prevention and early diagnosis of cervical cancer. About half of OECD countries have cervical cancer screening organised through population-based programmes but their periodicity and target age groups vary (OECD, 2013). Some countries with low cervical cancer incidence such as Israel and Switzerland do not have an organised screening programme but women in the eligible age group can have a Pap smear test performed every three years for free. WHO recommends HPV vaccinations as part of national immunisation programmes, primarily for girls aged 9-13 years, in countries where the prevention of cervical cancer is a public health priority, the introduction is feasible and financially sustainable, and cost-effectiveness has been evaluated (WHO, 2014). Nowadays, most OECD countries have HPV vaccination programmes.

Screening rates for cervical cancer ranged from 20.7% in Mexico to 84.5% in the United States in 2013 and have increased from 57.0% to 61.6% on average across OECD countries over the past decade (Figure 8.25). The coverage increase was particularly large in Korea where the screening programme was rolled out nationwide in the mid-2000s. In about half of OECD countries, however, screening coverage declined, which may be related to the introduction of HPV vaccinations, starting from the late 2000s (OECD, 2013).

Cancer survival is one of the key measures of the effectiveness of cancer care systems, taking into account both early detection of the disease and the effectiveness of treatment. Five-year relative cervical cancer survival ranges widely from 45.3% in Chile to 81.2% in Norway in recent years (Figure 8.26). Some countries with relatively high screening coverage such as the United States, Austria, the United Kingdom, New Zealand and Ireland have lower survival, but four of the five countries have low mortality. During the past decade, five-year relative survival for cervical cancer improved in many countries.

Mortality rates reflect the effect of cancer care over the past years and the impact of screening, as well as changes in incidence. The mortality rates for cervical cancer declined in most OECD countries between 2003 and 2013 (Figure 8.27). In Greece, however, the mortality rate from cervical cancer increased substantially by 47% during the same period, although it is still below the OECD average. The incidence is low and decreasing over time and it is likely that Greece can control the increasing burden of cervical cancer by providing more effective cervical cancer treatment.

Definition and comparability

Screening rates are based on surveys or encounter data, which may influence the results. Survey-based results may be affected by recall bias. Programme data are often calculated for monitoring national screening programmes and differences in target population and screening frequency may also lead to variations in screening coverage across countries.

Relative survival is the ratio of the observed survival experienced by cancer patients over a specified period of time after diagnosis to the expected survival in a comparable group from the general population in terms of age, sex and time period. Survival data for Chile, Germany and Italy are based on a sample of patients. The number of countries which monitor and report cancer survival has been increasing in recent years and an international study (Allemani et al., 2015) also shows that a wide range of countries have cancer registries which enable international comparisons of cancer survival.

Countries use either period analysis or cohort analysis to calculate cancer survival. Period analysis gives an up-to-date estimate of cancer patient survival using more recent incidence and follow-up periods than cohort analysis which uses survival information of a complete five-year follow-up period. The reference periods for diagnosis and follow-up years vary across countries.

Cancer survival presented have been age-standardised using the International Cancer Survival Standard (ICSS) population.

See indicator "Mortality from cancer" in Chapter 3 for definition, source and methodology underlying cancer mortality rates.

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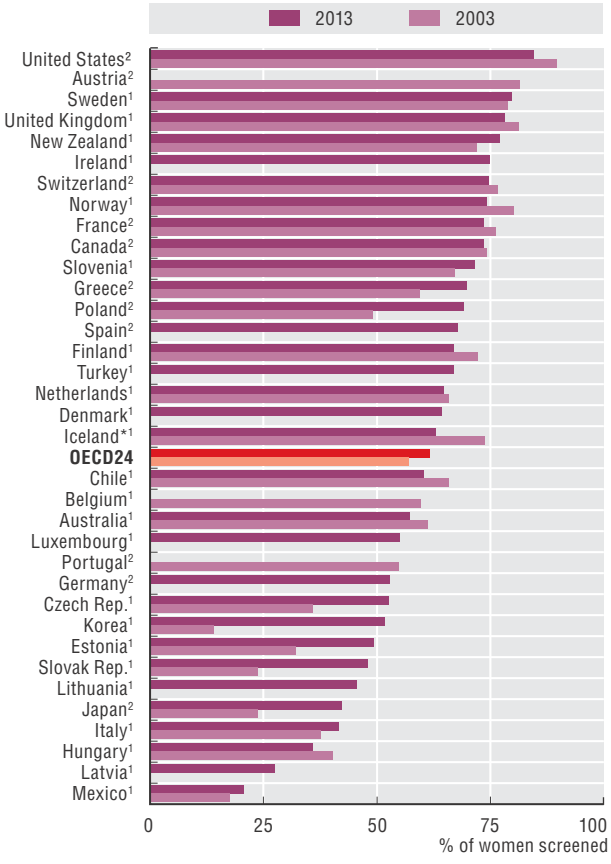
8.25. Cervical cancer screening in women aged 20-69, 2003 to 2013 (or nearest years)

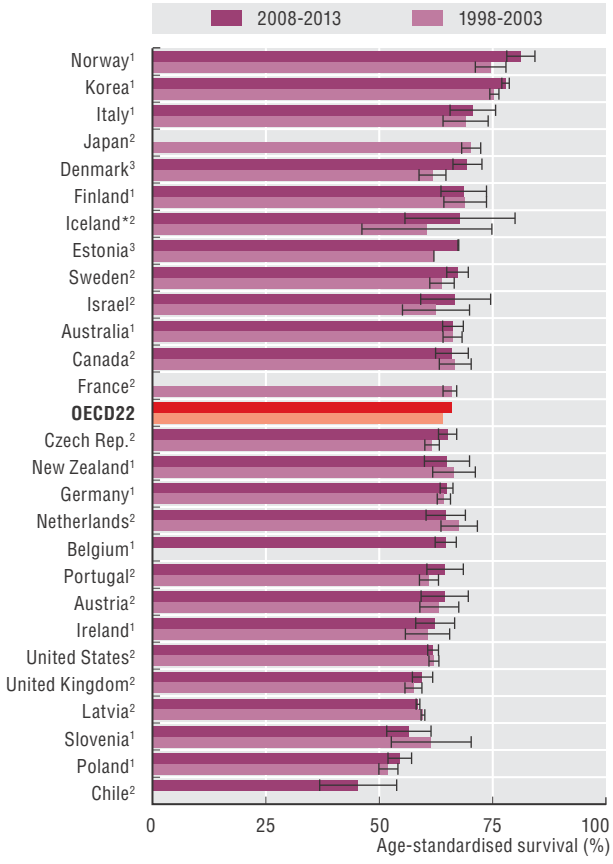


1. Programme. 2. Survey. * Three-year average.

Source: OECD Health Statistics 2015, http://dx.doi.org/10.1787/health-data-en.

StatLink http://dx.doi.org/10.1787/888933281196

8.26. Cervical cancer five-year relative survival, 1998-2003 and 2008-2013 (or nearest periods)

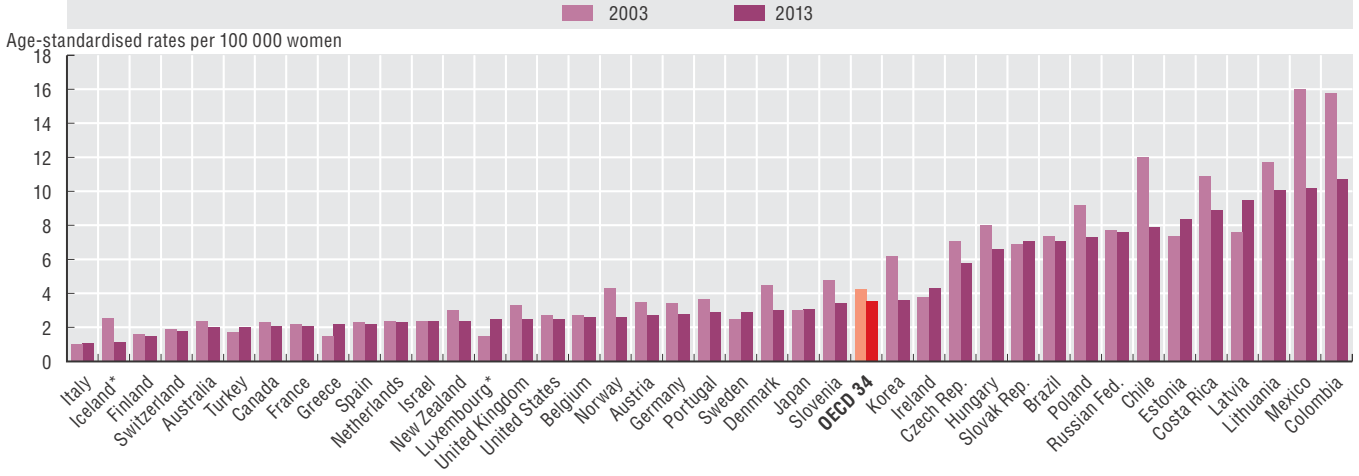


1. Period analysis. 2. Cohort analysis. 3 Different analysis methods used for different years. * Three-period average. 95% confidence intervals represented by H.

Source: OECD Health Statistics 2015, http://dx.doi.org/10.1787/health-data-en.

StatLink http://dx.doi.org/10.1787/888933281196

8.27. Cervical cancer mortality, 2003 to 2013 (or nearest years)



* Three-year average.

Source: OECD Health Statistics 2015, http://dx.doi.org/10.1787/health-data-en.

StatLink http://dx.doi.org/10.1787/888933281196

Information on data for Israel: http://oe.cd/israel-disclaimer