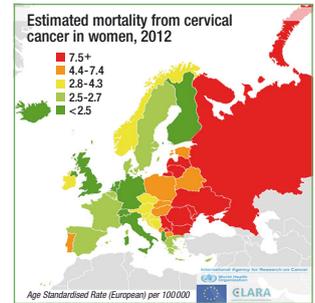
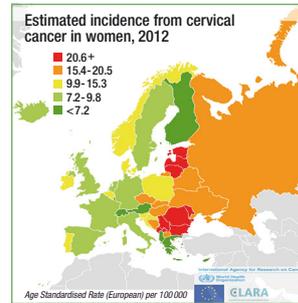
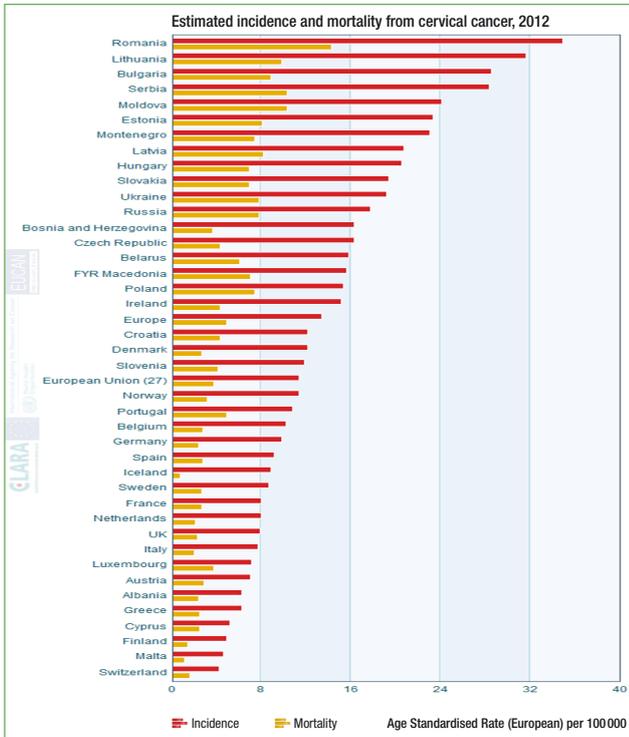


Cervical Cancer (CCU) Factsheet



deaths. The majority of these deaths occurred in less developed regions. Mortality varied 18-fold between Western Asia, Western Europe and Australia/New Zealand (less than 2 per 100 000) and Melanesia, Middle and Eastern Africa (more than 20 per 100 000).²

Regional differences in Europe in 2012 Estimated incidence and mortality¹

- The European estimated average* incidence was 13.4 new cases per 100 000 person-years. The countries with the highest estimated age standardised (ASR-E)** incidence rates were Romania, Lithuania and Bulgaria with an ASR-E of 34.9, 31.6 and 28.5, respectively. The lowest rates were in Finland, Malta and Switzerland, with an ASR-E of less than 5.
- The European estimated average* mortality was 4.9 new deaths per 100 000 person-years. The highest ASR-E mortality rates were in Romania (14.2), Moldova (10.3) and Serbia (10.3). Malta (1.1), Finland (1.4) and Switzerland (1.6) reported the lowest estimated mortality rates.

Temporal changes in selected European countries^{3,4,5}

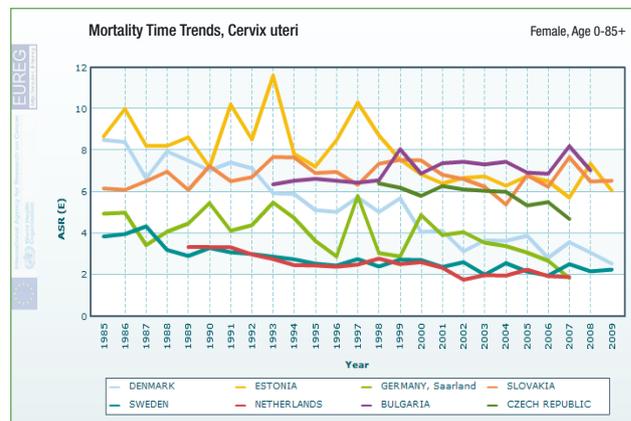
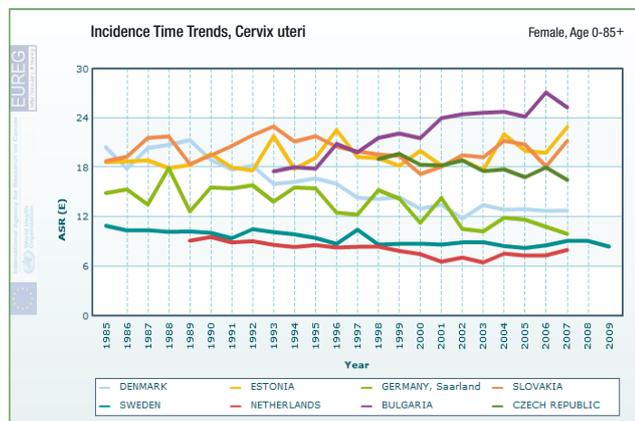
- The incidence of CCU has decreased in Europe (with the exception of Eastern countries) since the 1980s. This decline was earlier and more pronounced in Northern Europe.

- In 2012, an estimated 58 000 European women were diagnosed with CCU. This is the sixth most frequently reported cancer in European women, accounting for 3% of all new cancer cases in 2012.¹
- During 2012, it was estimated that 24 400 European women died from the disease (1% of all cancer deaths in Europe).¹ It is important to note that some CCU deaths may have been coded as uterus, part unspecified.
- Worldwide: CCU is the fourth most common cancer in women, and the seventh overall, with an estimated 528 000 new cases in 2012. A large majority (85%) of the global burden occurs in less developed regions: Eastern Africa, Melanesia and Southern and Middle Africa.²
- Worldwide: An estimated 266 000 deaths from CCU occurred in 2012, accounting for 7.5% of all female cancer

* The European Cancer Observatory (ECO) estimates refers to the European countries (plus Cyprus) defined by the United Nations.²

** ASR-E: age-adjusted rate to the standard European population (Doll & Cook, *Int J Cancer*, 1967) to account for the different age structure in various countries.

- CCU mortality rates have likewise decreased significantly over the past decades in the old Member States of the EU (EU 15). Mortality rates declined more slowly in some Eastern European countries (including the Baltic States) or remained constantly at a higher rate in Estonia, Slovakia and Bulgaria. It should be noted that mortality rates did not increase among women born after 1940.



CCU aetiology

- Human papillomavirus (HPV) infection is the main cause of nearly all cases of CCU. As the virus is sexually transmitted, infections are very common. However, only chronic infections, caused by some oncogenic HPV strains, are linked to the risk of CCU.⁶
- Other risk factors (smoking, oral contraceptives, hormone replacement therapy and starting sexual activity early) may be a proxy for risk of HPV infection.⁷

Screening and prevention

- The Papanicolaou test (the Pap smear) and liquid based cytology have been widely used to screen for pre-cancerous lesions and CCU. Since the implementation of screening programmes, the number of cases, and mortality from CCU, have declined. The incidence of CCU can be reduced by up to 80% if well organised cytological screening programmes are implemented.⁸
- Different CCU screening recommendations exist in Europe for ages (from 20-30 to 60 years) and for intervals between tests (3-5 years).^{9,10}
- The discovery of HPV as the main cause of the disease, prompted the development of several tests to detect the virus as well as the development of prophylactic vaccines.¹¹

- HPV testing has been shown to have considerably higher sensitivity than the low sensitivity characterised by conventional cytology screening, obviating the need for repeated screening at short intervals.¹²
- Women screened for HPV (and treated) had a 50 percent reduction in the number of deaths from CCU compared with unscreened women.^{13,14}
- Several HPV vaccines are available in Europe. The target group is young girls (9-14 years). HPV vaccines prevent the majority of CCU.^{15, 16, 17, 18} Vaccines address types 16, 18, 31, 33, 45, 52 and 58 of oncogenic HPV and are also effective against other HPV related cancers and genital warts.¹⁹ The overall long-term effects of vaccinations, e.g. length of protection, are expected to be known when the vaccinated cohorts reach the ages where CCU risk is high. Vaccination does not exclude the need for screening and further extending screening technologies as well as HPV vaccination, for example for older women, has the potential to accelerate the decline in CCU incidence.²⁰

Conclusions

- CCU is an important public health issue as most cases can be prevented.
- Vaccination is available in many countries. Efficacy has been demonstrated.
- Early detection of precursor lesions to CCU, by regular cytological screening, with possible HPV testing, remains key in the prevention of CCU. Screening is the main tool for decreasing the incidence of the disease and mortality from CCU.
- Public education about transmission of HPV, including the importance of regular use of barrier contraceptives e.g. condoms, is needed.²¹

A list of references (1-21) is available (in PDF) at: http://www.encre.eu/images/docs/factsheets/ENCR_Factsheet_Cervix_2016_References.pdf.

The European Cancer Observatory data (<http://eco.iarc.fr>) were used for the production of this factsheet.