

Country Factsheet Series

Socio-economic inequalities in cancer mortality across the EU27, Norway and Iceland

Latvia

Key messages

Latvia is characterized by high mortality rates for total cancer in 2015–2019*, for both sexes exceeding the corresponding European averages. Cancer mortality rates among men are approximately twice those among women. A strong social gradient was observed for all selected cancer types, except for breast cancer in women. Despite efforts by the Government of Latvia to decrease the prevalence of risk factors and improve access to cancer screening and care services, inequalities in cancer mortality are, at present, quite large.

Educational inequalities in total cancer mortality

In Latvia, mortality rates for total cancer** in 2015–2019 were 654 per 100,000 in men and 312 per 100,000 in women. There was a clear social gradient in mortality rates, that was more pronounced in men than in women. Men with primary education had cancer mortality rates over two times higher than those with tertiary education (981 vs 443 per 100,000). Among women, cancer mortality rates among those with primary education were more than 50% higher than those with tertiary education (432 vs 282 per 100,000).

For both sexes, the difference in rates between primary and tertiary education (i.e., inequality gap) was larger than the corresponding European average*** and than that in all countries in Western/Southern Europe but similar to Central/Baltic/Eastern European countries, like Lithuania.

* In Latvia, estimates of cancer mortality by education level were based on the "back-calculation" method, which consists in borrowing information from countries with observed data in the same geographical area, specifically Hungary, Lithuania and Estonia. See methodological notes at the end and the Methodological report for more information.

** All cancers combined

*** European average is calculated considering 27 EU Member states + Norway and Iceland

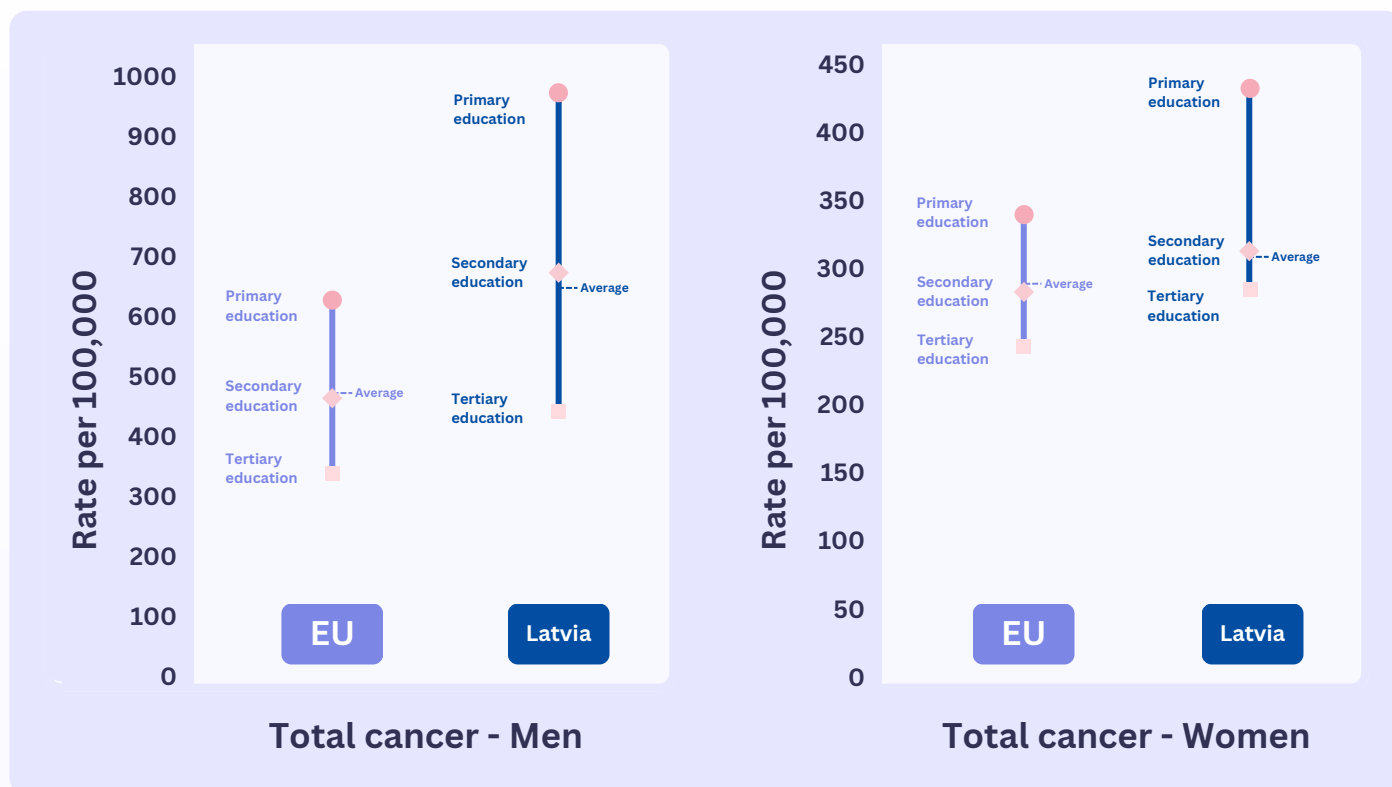


Figure 1. Total cancer mortality by sex and education level

Educational inequalities in mortality by cancer site



Lung cancer

Lung cancer mortality in Latvia was over six times higher in men compared to women. Compared to the corresponding European average, national cancer mortality rates in Latvia were higher in men but lower in women. A clear social gradient for lung cancer was observed in both sexes, though more pronounced in men. Inequalities in past exposure to tobacco smoking and the different patterns of the tobacco epidemic across sexes and educational level could largely explain the observed differences. In 1997, the prevalence of smoking in Latvia among men (56%) was higher than in women (11%), and among those with low, compared to high, educational attainment [1, 2].

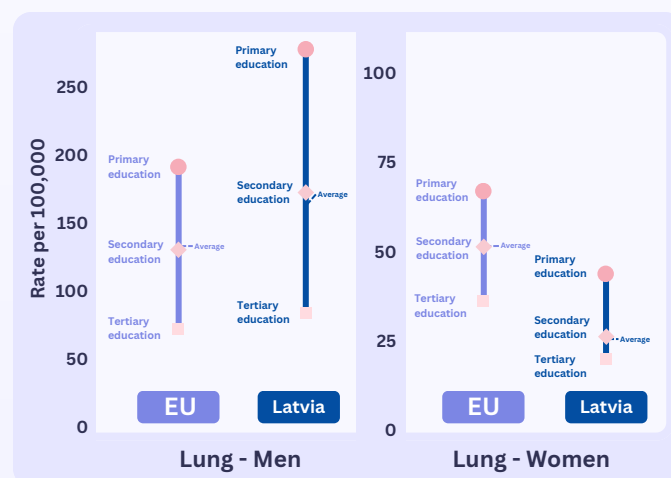


Figure 2.a. Cancer-specific mortality by sex and education level: lung



Colorectal and stomach cancers

The national average mortality rates for colorectal and stomach cancers in Latvia were above the

European average in both men and women. A social gradient was observed for both sexes with increasing mortality rates as educational levels decreased. The observed gradient could partly be explained by inequalities in the exposure to risk factors like alcohol consumption, smoking, poor diet, obesity [3] and *Helicobacter pylori* infection (for stomach cancer) over time and across socio-economic groups and sexes [4]. Average alcohol consumption among adults in Latvia is among the highest in the EU and in 2018, and higher among men with low educational attainment (8%) compared to their more educated counterparts (5%) [3]. The uptake of colorectal cancer screening also shows a clear gradient with the highest non-participation rates in 2019 reported in people with primary education (59%) compared to those with secondary (48%) and tertiary education (43%). [5]. This may also play a role in the observed inequalities.

Breast cancer

Breast cancer was the largest contributor to total cancer mortality among women and national rates were higher than the European average. The uptake of breast cancer screening in 2019 in Latvia was higher among women with high educational attainment (51%) compared to those with low educational attainment (31%) [3]. However, no socio-economic gradient in breast cancer mortality was observed. This pattern may be due to a balanced impact of different factors across educational groups, including reproductive factors (age at first childbirth, number of children and breastfeeding practices) and uptake of screening activities.

Prostate cancer

Prostate cancer was a major contributor to total cancer mortality among men, second only to lung cancer, with national average mortality rates almost twice as the corresponding European average. A clear social gradient in mortality rates was evident across educational levels. These observed inequalities may be partially explained by differences in the stage at diagnosis and disparities in timely access to treatment among educational groups [6].

Cervical cancer

Cervical cancer had the lowest mortality rates among all the cancers assessed in Latvia, although the national rates were much higher than the

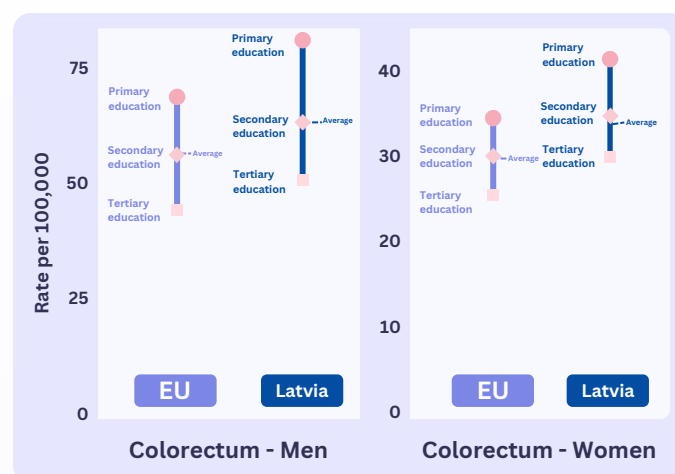


Figure 2.b. Cancer-specific mortality by sex and education level: colorectum

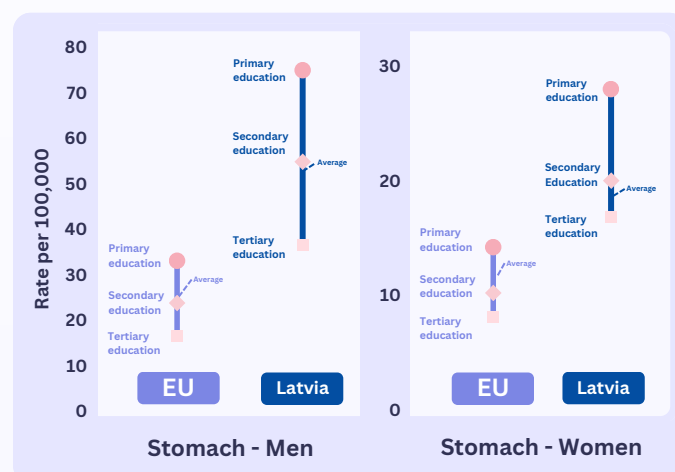


Figure 2.c. Cancer-specific mortality by sex and education level: stomach

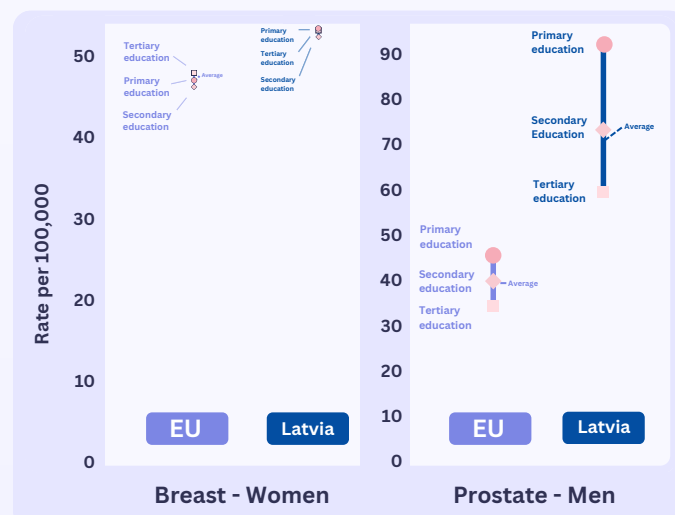


Figure 2.d. Cancer-specific mortality by sex and education level: breast (left), prostate (right)

corresponding European average. A clear social gradient was observed, with a progressive decline in mortality rates as educational levels increased. Differences in screening participation rates across educational groups could contribute to this disparity. In 2019, 37% of women with primary education reported to have never had a smear test compared to 17% of those with secondary education and 15% of those with tertiary education [5]. Human papillomavirus (HPV) vaccination and HPV-based screening, if equitably implemented, could potentially further decrease the relatively large burden of this disease and reduce associated socio-economic disparities.

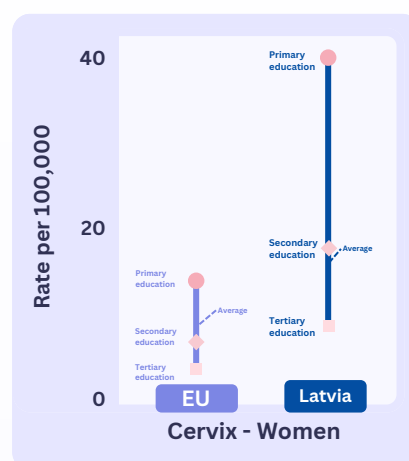


Figure 2.e.
Cancer-specific
mortality by
education level:
cervix

Methodological notes:

Findings are based on the ERAINHE dataset, which includes mortality data by educational attainment, age group, sex, period, country and cause of death. For most countries, the data are derived from individually-linked records, collected and harmonized in different periods in different projects (for the full description see the Methodological report). Geographical and temporal gaps in the ERAINHE dataset were addressed using complementary data sources and appropriate estimation methodologies tailored to the availability of the data. Age-standardised (European Standard Population) mortality rates by educational level for individuals aged 40–79 years were thus estimated for 2015–2019, using four different methods:

- **Method for group A countries**, for countries with at least 3 recorded observations over different periods of time: actual observed data for 2015–2019 (when available) or projections based on linear regression models;

- **Method for group B countries**, for countries with 1 or 2 recorded observations only: incomplete data combined with trends from other databases;
- **Method for group C countries**, for countries with no observations for certain cancer sites: integration of data from different databases with information from countries in the same geographical area;
- **“Back-calculation” method**, for countries without available data in the ERAINHE dataset: combination of population and mortality data from different databases with information on educational inequalities in cancer from countries in the same geographical area.

For Latvia, the “back-calculation” method was used.

Disclaimer: As this method also integrates information from countries within the same geographical area, the degree of uncertainty associated with the estimates is higher compared to estimates based solely on national data.

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