

# Country Factsheet Series

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

## Poland

### Key messages

In Poland, cancer mortality rates from 2015 to 2019\* were higher than the European average and characterized by significant educational inequalities in both sexes and for all selected cancer types. In addition, cancer mortality rates were much higher among men compared to women. Cancer care in Poland is part of the public healthcare system, but access remains limited due to financial barriers, staff shortages, and a lack of cancer care units and radiotherapy centers. Policies, like fast diagnostic pathways and the National Oncology Network, aim to improve access to the health system, yet high out-of-pocket costs and larger socio-economic and sex inequalities in cancer mortality persist.

### Educational inequalities in total cancer mortality

In Poland, total cancer\*\* mortality rates from 2015–2019 were 592 per 100,000 for men and 339 per 100,000 for women, varying markedly with educational attainment, according to a social gradient. This gradient was more marked among men, with those having primary education exhibiting cancer mortality rates nearly twice as high as their tertiary-educated counterparts (850 vs 423 per 100,000). Among women, those with primary

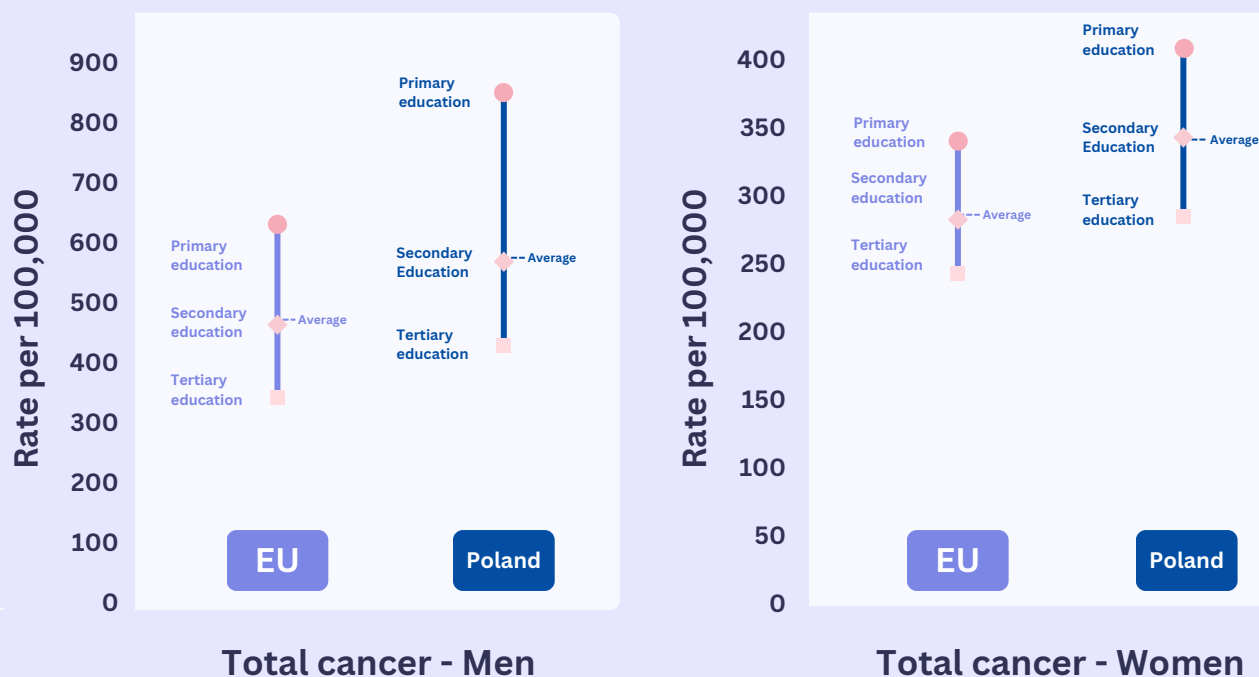
education had rates over 40% higher than those with tertiary education (408 vs 282 per 100,000).

The extent of the educational inequalities in cancer in Poland was larger than the European average\*\*\*, and comparable to that in countries in the same geographical area, like Slovakia and Czechia.

\* In Poland, the estimates were based on the method used for group B countries. 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



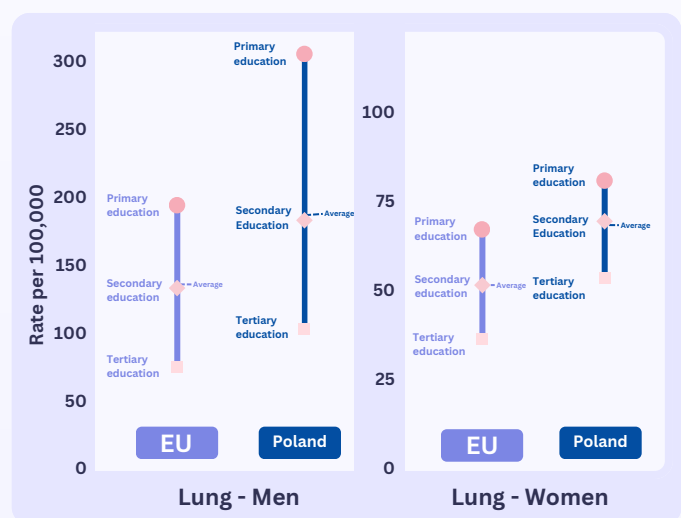
**Figure 1.** Total cancer mortality by sex and education level

## Educational inequalities in mortality by cancer site



### Lung cancer

Lung cancer represented the main contributor to total cancer mortality in both sexes in Poland. The national mortality rates for both sexes exceeded the corresponding European average but rates were over two times greater in men than in women. A clear social gradient was observed in both men and women, with higher mortality rates associated with lower educational levels. Among men, the magnitude of the educational inequalities in lung cancer was much larger than the European average. Among specific cancer sites, lung cancer has the largest disparities in cancer mortality, and inequalities in past tobacco-smoking across educational groups and sex might have likely played an important role [1]. Poland saw marked reduction in the number of individuals smoking daily in the past decade, due to strict tobacco control measures introduced in the 1990s. While smoking restrictions and taxes on electronic nicotine products were expanded in 2016, tax increases on traditional tobacco were paused in 2015. Air pollution is among the highest in the continent and may contribute to the burden of lung cancer [2].



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



## Colorectal and stomach cancers

In Poland, colorectal and stomach cancer mortality rates were between two-to-three times higher in men compared to women, and for both sexes exceeded the corresponding European average. A distinct social gradient was observed for both cancers, with educational inequalities more pronounced among men. Inequalities in colorectal and stomach cancer mortality may be due to inequalities in the prevalence of cancer risk factors (including *Helicobacter pylori* infection for stomach cancer), as well as in the access to screening (for colorectal cancer), detection and treatment [3]. Over half of the population in Poland is currently overweight or obese, predominantly individuals from a low socio-economic background [2]. Alcohol consumption in Poland is among the highest in Europe, while fruit and vegetable intake is relatively low, and physical inactivity is relatively high; these are factors that exhibit a strong social gradient [4, 5]. Participation rates in colorectal cancer screening are quite low, with substantial differences still existing according to socio-economic status. The proportion of individuals aged 50–74 years that were screened for colorectal cancer in the two years preceding 2019 was higher among those with higher education (10%) compared to those with lower education levels (6%) [2].



## Breast cancer

In Poland, breast cancer was the second largest contributor to cancer mortality among women, after lung cancer, with a national average mortality rate exceeding the European average. In Poland, there was a social gradient for breast cancer, with low educated showing the highest breast cancer mortality rates of the disease. This pattern could be explained by educational differences in several factors, including risk factors, screening, early diagnosis, and treatment options [6]. Breast cancer screening rates are among the lowest in Europe, with particularly lower uptake among women with low educational level [7]. The screening rate is more than twice as high among women with higher education (67%) compared to those with lower education levels (33%) [2].



## Prostate cancer

Prostate cancer mortality in Poland was above the European average, on average and for all educational levels. A clear social gradient was observed, as mortality rates rose with decreasing levels of education. This inequality could be partially attributed to disparities in diagnosis stage and delays

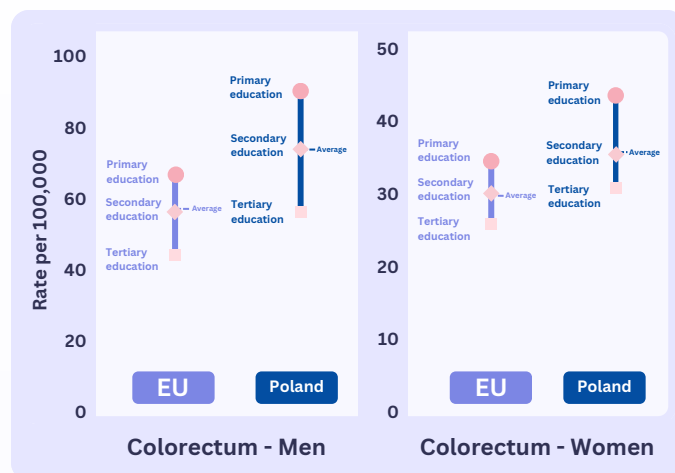


Figure 2.b. Cancer-specific mortality by sex and education level: colorectum

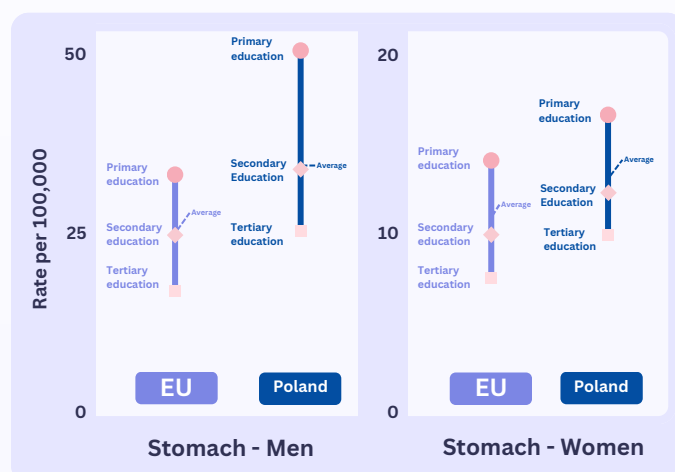


Figure 2.c. Cancer-specific mortality by sex and education level: stomach

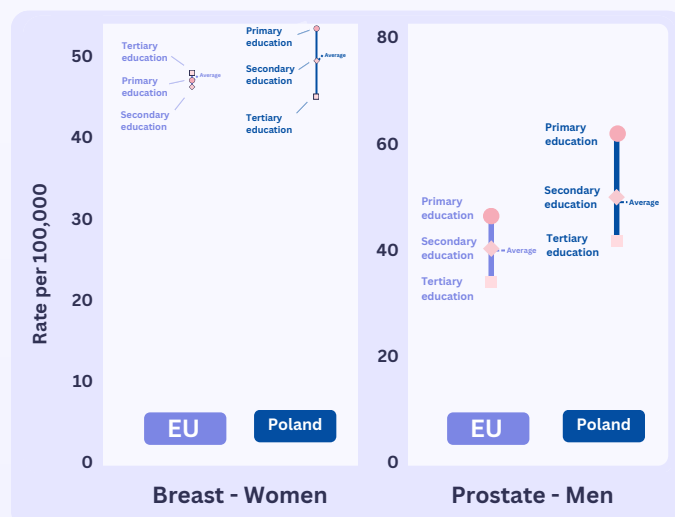


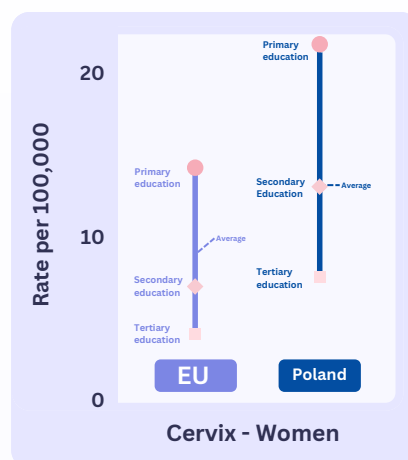
Figure 2.d. Cancer-specific mortality by sex and education level: breast (left), prostate (right)

in timely access to treatment among different educational groups [8].

## Cervical cancer

In Poland, cervical cancer mortality rates were slightly above the corresponding European average. A social gradient was observed, with mortality rates rising as educational levels decreased. In 2019, just 11% of women in Poland participated in cervical cancer screening [2] and educational inequalities in the uptake of screening have been reported. Enhancing the availability and equitable implementation of HPV vaccination and HPV-based screening could significantly reduce the disease

burden and associated inequalities.



**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 a mortality data from different databases with information on educational inequalities in cancer from countries in the same geographical area.

For Poland, the method for group B was used. Since this method is based on a relatively small number of observations, caution is advised when interpreting the results

## Contact information

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