

# Country Factsheet Series

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

## Italy

### Key messages

In Italy, total cancer mortality rates in 2015–2019\* were higher in men than in women, and for both sexes, below the European average. Rates varied across educational levels, according to a social gradient, i.e., with a progressive increase as educational levels decreased, although the gradient was stronger in men. Mortality rates and socio-economic inequalities were particularly high for lung cancer in men. A social gradient was found for all selected cancer types except for lung and breast cancer among women. In Italy, equitable access to health care is ensured at national level by universal coverage and cancer services are generally free of charge. Nevertheless socio-economic and sex inequalities in cancer mortality still persist in the country.

### Educational inequalities in total cancer mortality

In Italy, mortality rates for total cancer\*\* in 2015–2019 were higher in men than in women (400 vs 249 per 100,000) but, for both sexes, lower than the corresponding European averages\*\*\*. A social gradient was observed, which was more pronounced in men. Men with primary education had cancer mortality rates approximately 50% higher than men with tertiary education (451 vs 296 per 100,000). Women with primary education had about 10% higher cancer mortality rates compared to

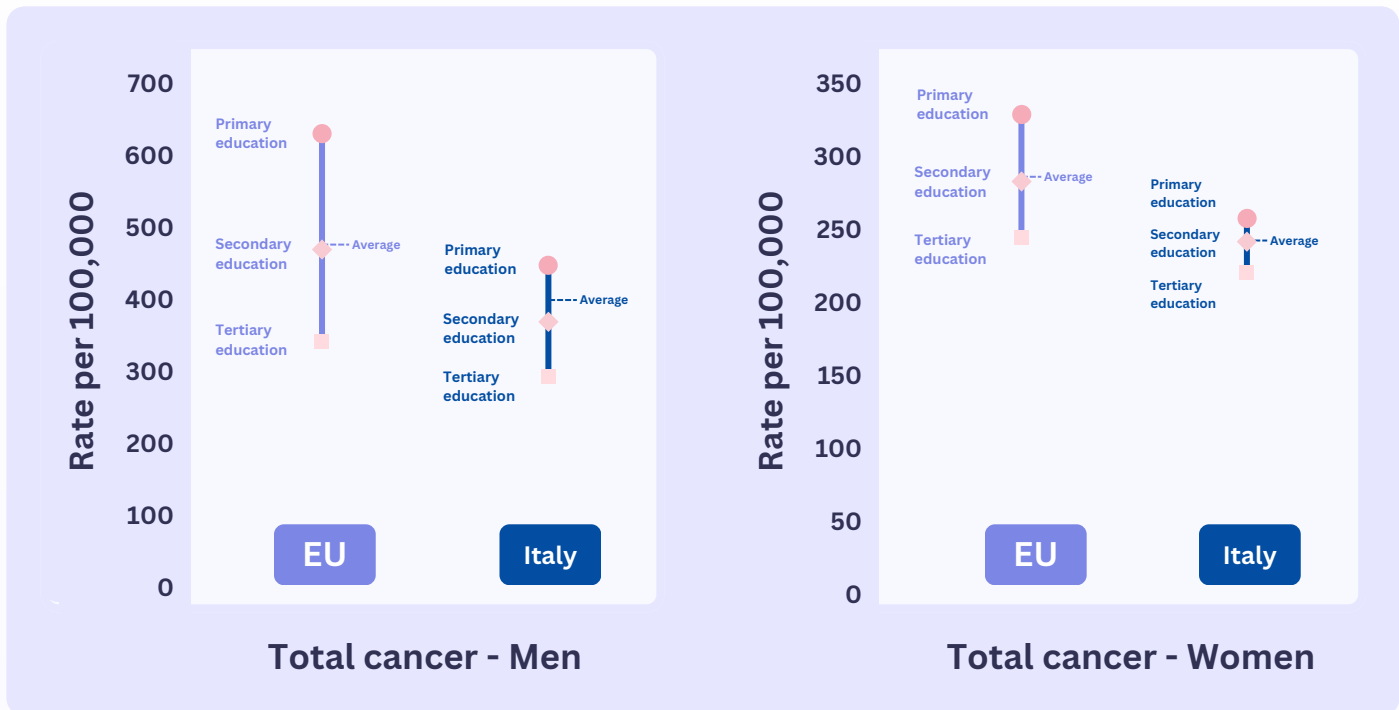
those with tertiary education (258 vs 226 per 100,000).

The difference in rates between primary and tertiary education (i.e., inequality gap) was lower than the European average but similar to that of certain Western/Southern European countries, such as Portugal, and generally smaller compared to Central and Eastern European countries like Croatia, Hungary and Czech Republic.

\* In Italy, estimates were obtained using the method for group A 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

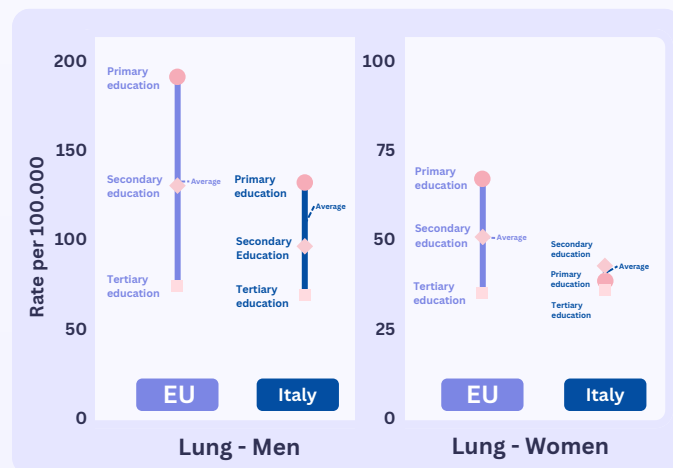


**Figure 1.** Total cancer mortality by sex and education level

## Educational inequalities in mortality by cancer site

### Lung cancer

Lung cancer mortality was lower than the European average for both sexes, although in men rates were more than two times higher than in women. A social gradient for lung cancer emerged only in men, for whom the disease was the largest contributor to inequalities in total cancer mortality. Observed inequalities in lung cancer mortality may be largely explained by past sex and socio-economic differences in smoking habits [1]. Although several non-smoking programmes established at both regional and national level have probably contributed to the reduction of smoking cigarettes in the last decades, sex and socio-economic differences still exist [2, 3]. Moreover, exposure to air pollution remains a public health problem in Italy and adequate policies and guidelines are still lacking at the national level [2].



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

## Colorectal and stomach cancers

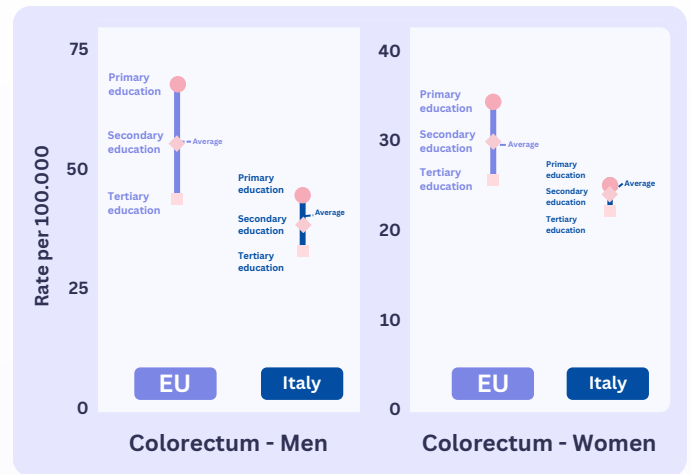
National average rates for colorectal and stomach cancer mortality in Italy were below the corresponding European average in both sexes, although in men mortality rates were more than 50% higher than in women. A social gradient was found for both cancer types and sexes. The sex and socio-economic inequalities observed in colorectal and stomach cancer mortality may partly stem from differences across social groups in the past prevalence of cancer risk factors – such as alcohol consumption, smoking, poor diet, and obesity – and, in the case of stomach cancer, *Helicobacter pylori* infection [4]. These disparities have likely evolved over time, perhaps differently across socio-economic groups and sexes. Socio-economic inequalities in the recent prevalence of overweight and obesity are among the highest in EU [2, 3, 5]. Differences according to socio-economic status in recent heavy alcohol consumption are also quite marked, with low-educated people being more than twice as likely to report heavy consumption [6].

## Breast cancer

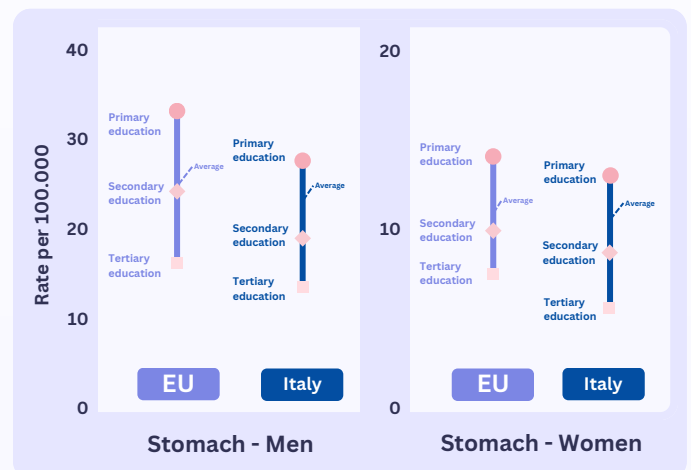
Breast cancer was a large contributor to cancer mortality among women. Mortality rates were in line with the European average, and without evidence of a clear social gradient. Breast cancer mortality rates showed minimal variations across educational levels, likely indicating a balanced influence of education on key determinants such as exposure to risk factors, early detection, and equitable access to diagnostic and treatment services in the country. Participation to breast cancer screening is higher in Italy compared to the EU average (71% vs 66% in 2019) [2]. Despite that, socio-economic differences in screening uptake still exists [2].

## Prostate cancer

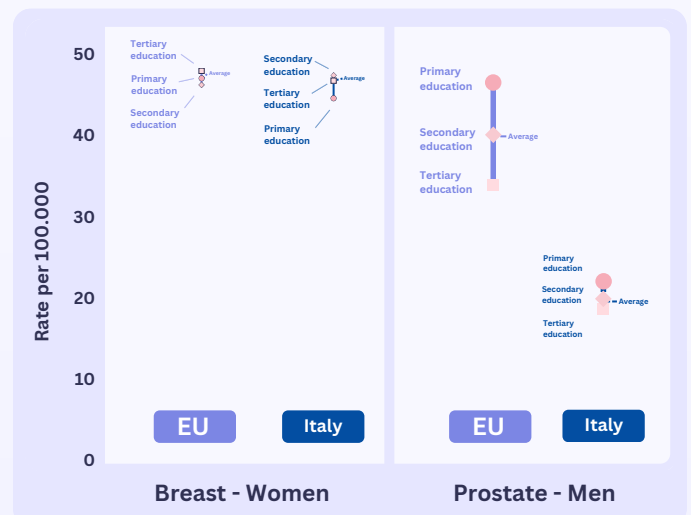
Prostate cancer mortality in Italy was lower than the European average. The mild social gradient observed may be, at least partially, explained by inequalities in utilization of diagnostic and treatment services [7].



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



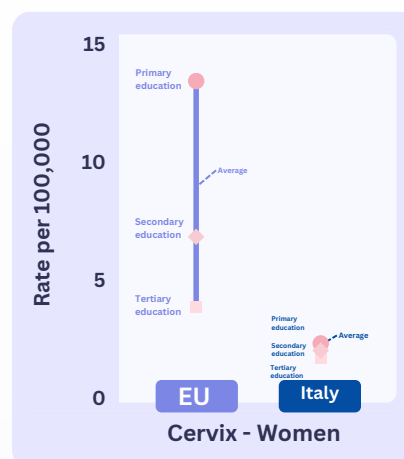
**Figure 2.c.** Cancer-specific mortality by sex and education level: stomach



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

## Cervical cancer

Cervical cancer mortality rates were very low compared to the other cancer types and much lower than the European average, with minimal differences across educational groups. Cervical cancer screening rates in Italy are slightly lower than the EU average (57% vs 60% in 2019) [2]. The introduction of human papillomavirus (HPV) vaccination and HPV-based screening might further contribute to reduce the future burden of the disease.



**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.

In Italy, the method for group A countries was used.

## Contact information

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