

Country Factsheet Series

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

Malta

Key messages

In Malta, total cancer mortality rates in 2015–2019* were higher in men than in women, but for both sexes lower than the corresponding European average. Cancer mortality varied across educational levels following a social gradient of increasing rates as educational levels decreased. The highest socio-economic inequalities in cancer mortality were observed for lung cancer in both sexes. Although financial and geographical barriers to cancer care in Malta are relatively small, with most cancer services funded through the Social Security Act, inequalities in cancer mortality persist in the country.

Educational inequalities in total cancer mortality

In Malta, total cancer** mortality rates in 2015–2019 were 363 per 100,000 among men and 252 per 100,000 among women, but were characterized by a clear social gradient. Men with primary education had mortality rates about 50% higher than those with tertiary education (393 vs 261 per 100,000). In women, those with primary education had approximately 17% higher mortality rates compared to those with tertiary education (259 vs 221 per 100,000).

The inequality gap (i.e., the difference in mortality rates between primary and tertiary education) was smaller than the European average*** for both sexes but similar to that of other Southern European countries, such as Italy for both sexes and Greece for women.

* In Malta, 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 Austria, Belgium, Spain, and Italy. 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

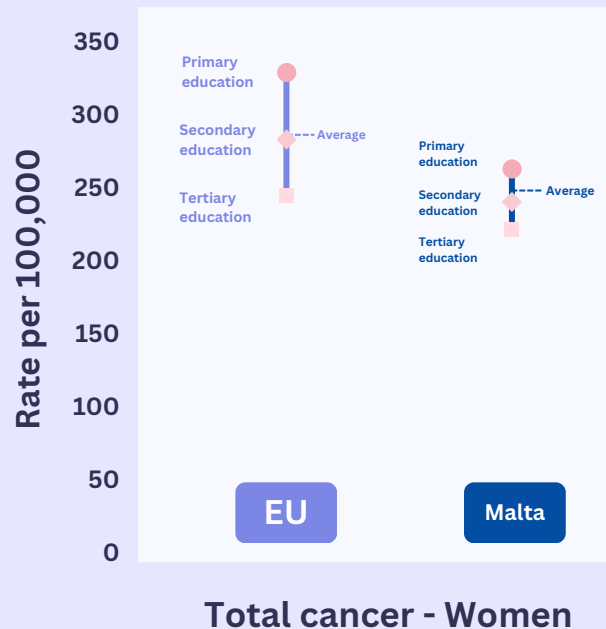
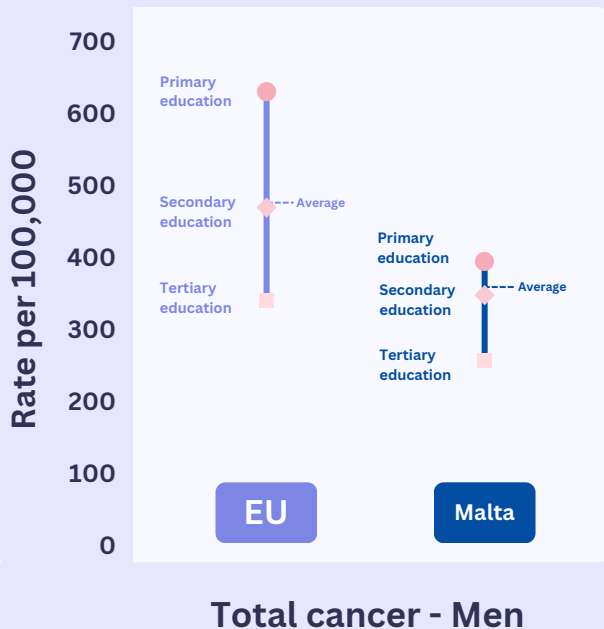


Figure 1. Total cancer mortality by sex and education level

Educational inequalities in mortality by cancer site



Lung cancer

Lung cancer mortality rates in men were three times higher than those in women. In both sexes, the national average rates were lower than the European average. There was a clear social gradient observed, which was more pronounced in men. These educational and sex inequalities could be largely explained by inequalities in tobacco smoking over the past decades. In 2003, still 35% of men and 21% of women in Malta were regular smokers [1]. Another study conducted between 2006–2012 revealed a clear social gradient in cigarette-smoking, with low educated individuals smoking more compared to their more educated counterparts [2].



Colorectal and stomach cancers

The national average death rates for colorectal and stomach cancers were below the corresponding European average for both men and women. For both cancers, mortality rates were higher in men

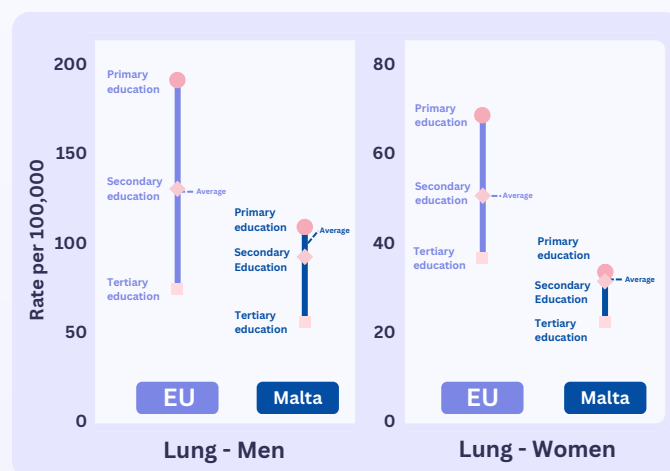


Figure 2.a. Cancer-specific mortality by sex and education level: lung

than in women and varied with a social gradient. Socio-economic and sex inequalities in past exposure to risk factors such as poor diet, physical inactivity, obesity, alcohol consumption, smoking [3, 4] and infection with *Helicobacter pylori* (for stomach cancer) earlier in life [5] may partly explain these inequalities. In Malta, although alcohol consumption rates remains below the European average, increases have been reported over the past two decades [4]. Differences in participation in colorectal cancer screening may also play a role in explaining inequalities in colorectal cancer mortality. In 2019, 52% of people with tertiary education reported to have never being screened for colorectal cancer compared to 57% of people with primary education [6].

Breast cancer

Among all cancer sites, breast cancer had the highest mortality rates among women. Compared to the European average, national rates were slightly higher. Breast cancer in Malta showed a mild reverse gradient as mortality rates increased with increasing educational levels. This may be the combined result of the impact of several factors, including the exposure to breast cancer risk factors, access to early diagnosis and treatment options. The role of screening is unclear as participation rates were similar across groups [4]. In 2019, 10% among tertiary education reported to have never taken a breast exam compared to 12% among primary education [6].

Prostate cancer

For prostate cancer, the national average was lower than the corresponding European average. Prostate cancer was also characterized by a social gradient, with mortality rates decreasing as education levels increased. These inequalities could be partly explained by socio-economic inequalities in access to the healthcare system, in the stage at diagnosis and access to treatment across educational groups [7].

Cervical cancer

Mortality rates for cervical cancer in Malta were the lowest among all cancer types assessed, with national death rates lower than the European average. A social gradient was observed with higher

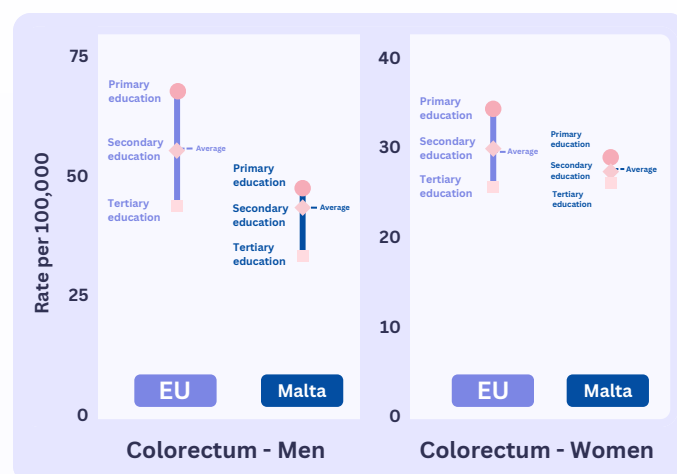


Figure 2.b. Cancer-specific mortality by sex and education level: colorectum

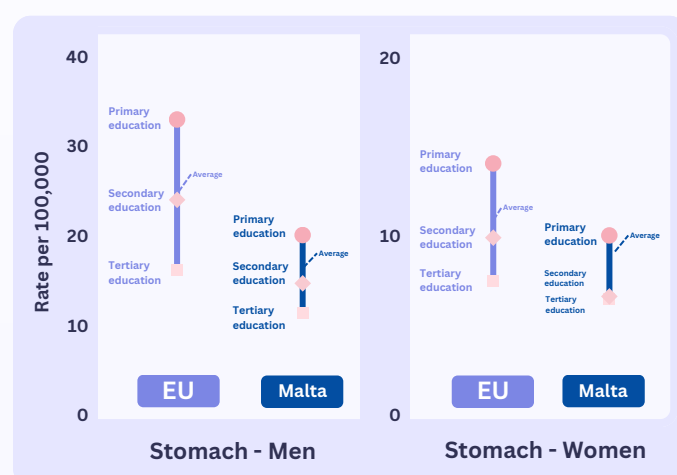


Figure 2.c. Cancer-specific mortality by sex and education level: stomach

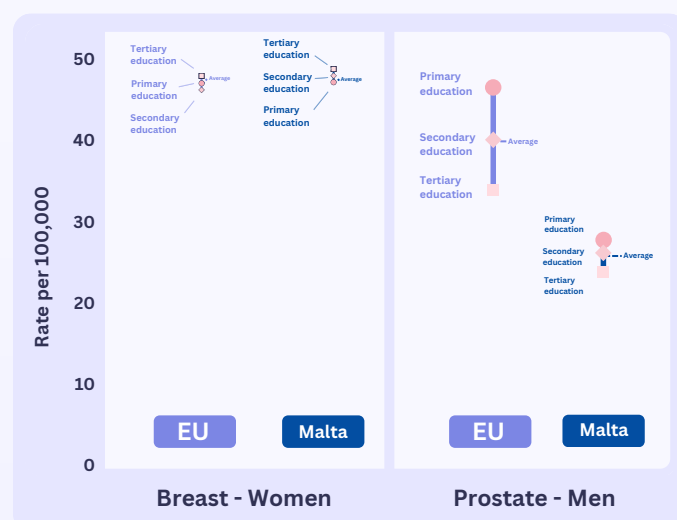


Figure 2.d. Cancer-specific mortality by sex and education level: breast (left), prostate (right)

mortality rates recorded for women with primary education compared to their secondary and tertiary educated counterparts. In 2019, cervical cancer screening participation rates were highest among women with high education attainment (72%) compared to those with low educational attainment (44%) [4], which have likely contributed to explain the differences in cervical cancer mortality across educational groups. Human papillomavirus (HPV) vaccination and HPV-based screening, if equitably implemented, could potentially further decrease the disease burden and reduce associated socio-economic disparities.

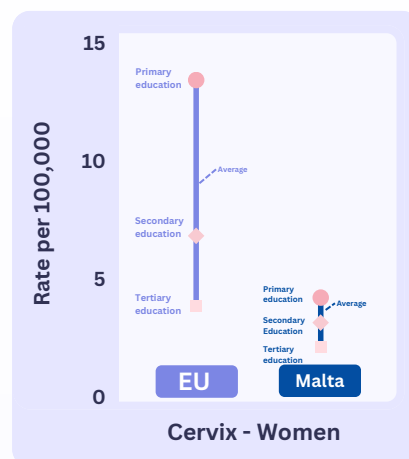


Figure 2.e.
Cancer-specific
mortality by
education level:
cervix

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

For Malta, 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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