

Uncovering Inequalities Colorectal Cancer Screening in Europe

MARCH 2024



HIGHLIGHTS

- Colorectal cancer is the second leading cause of cancer deaths in Europe, with higher mortality in men than in women.
- Organised, population-based screening for colorectal cancer leads to substantial decreases in cancer incidence and mortality.
- There are differences between Member States in the implementation of screening programmes, their coverage, participation rates and screening methods applied.
- People with lowest level of education and income and people living in rural areas reported lower screening participation rates.

CHALLENGES

Colorectal cancer is a malignant tumor that forms in the tissues of the colon and the rectum. It is a major public health issue in Europe, being the second leading cause of cancer deaths [1]. According to the European Cancer Information System (ECIS) [1], in 2022 in Europe there were an estimated 361,986 new cases of colorectal cancer, accounting for 13% of all new cancer cases, and an estimated 161,182 deaths, accounting for 12% of all deaths due to cancer. Colorectal cancer accounted for 9.6% of the total estimated economic cost of all cancers in the EU in 2018 [2] (Figure 1).

countries with long-standing screening programmes and widespread population coverage, while it either remained stable or increased in countries with no large-scale screening programmes [3].

a. Implementation of colorectal cancer screening programmes

Organised, population-based screening programmes are implemented at regional or national level in European countries. There are differences amongst the countries regarding the first year of implementation, which varies from more than 20 years ago to only within the last two years [4] (Figure 2).

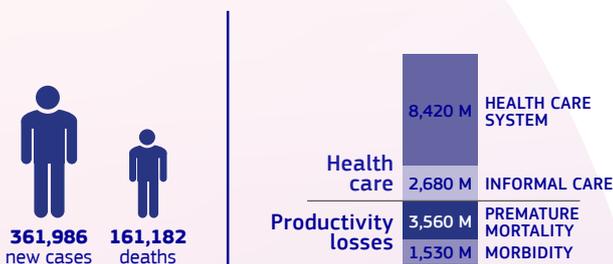


Figure 1 - Left: Estimated burden of colorectal cancer in Europe* in 2022 [1]. Right: Economic burden of colorectal cancer in the EU in 2018 (in millions) [2]

INEQUALITIES

1. INEQUALITIES BY COUNTRY

There are notable differences in colorectal cancer incidence and mortality between European countries [1]. The incidence of colorectal cancer has decreased significantly in the last years (2000 – 2017) in

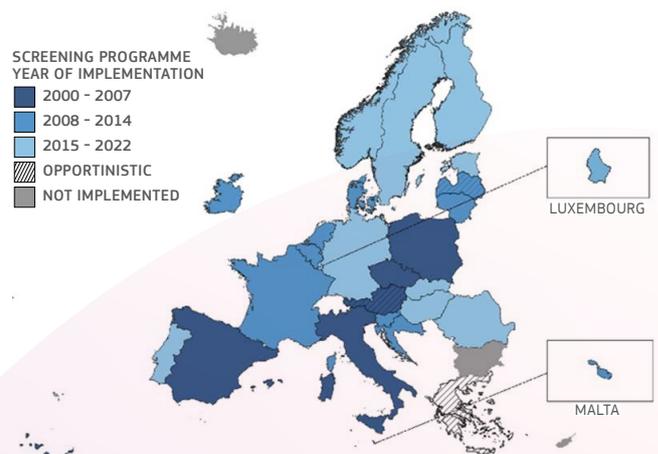


Figure 2 - Implementation of organised, population-based colorectal cancer screening programmes across Europe.

Data source: OECD [4] and Survey on the organisation of colorectal cancer care in Europe (European Commission, Joint Research Centre) (unpublished).

* In this factsheet "Europe" and "European countries" refer to EU-27+Iceland+Norway.

Note: Organised, population-based screening programmes refer to programmes in which a team at national or regional level is responsible for implementing the policy, coordinating the delivery of screening services and ensures that the eligible target population are individually identified and personally invited to attend screening. Opportunistic screening refers to screening activities as a result of a recommendation made by a health care provider during a routine medical consultation, or by self-referral of individuals typically outside of an organised, population-based screening programme [5].

b. Participation in colorectal cancer screening programmes

The rate of participation in screening programmes differs significantly across European countries. The lowest participation is observed in countries where organised, population-based screening programmes are not yet implemented. In 2019, 49% of people aged 50 to 74 reported that they had never attended screening for colorectal cancer, with a lack of participation as high as 94% in some countries and as low as 17% in others (Figure 3).

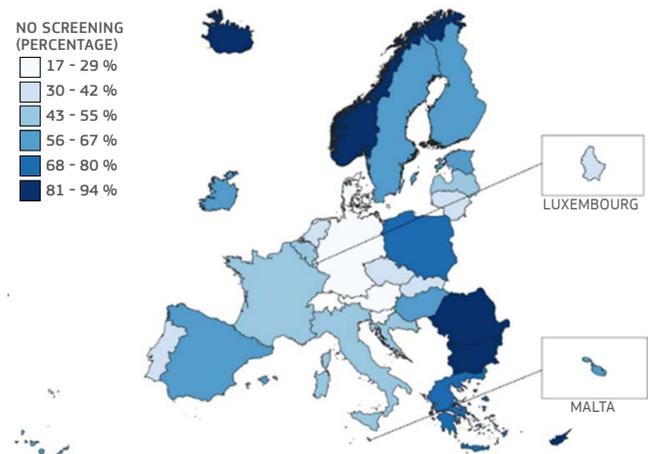


Figure 3 - Percentage (%) of individuals aged 50-74 that self-reported to have never had a colorectal cancer screening (gFOBT), by country (2019 data).

Data source: EUROSTAT, available at [ECIR](#).

c. Target age group and screening method

The target age group and screening methods used also vary. The majority of European countries adhere to the EU Council Recommendation of 2022 [6] that recommends the quantitative fecal immunochemical test (FIT), followed by endoscopy for people aged 50 – 74 years. Some countries offer the guaiac fecal occult blood test (gFOBT, based on the EU Council Recommendation of 2003 [7]) and some countries have multiple screening options (gFOBT/FIT and colonoscopy) available (Figure 4).

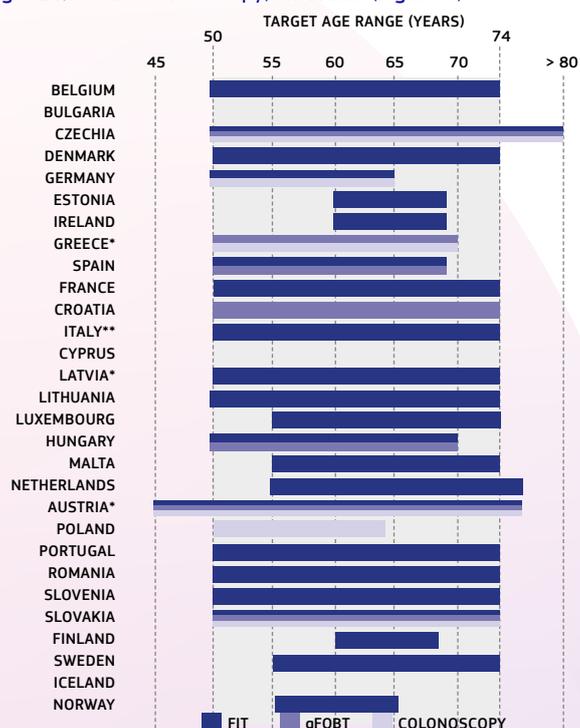


Figure 4 - Target age groups for screening programmes across European countries. (*) Indicates opportunistic testing, and (**) indicates regional and population-based testing.

Data source: OECD [4]

2. INEQUALITIES BY SEX

a. Participation in colorectal cancer screening programmes

The participation in colorectal cancer screening programmes varies by sex across Europe. In some countries women (Figure 5, red) tend to participate more often than men do while in other countries men (Figure 5, blue) participate more often.

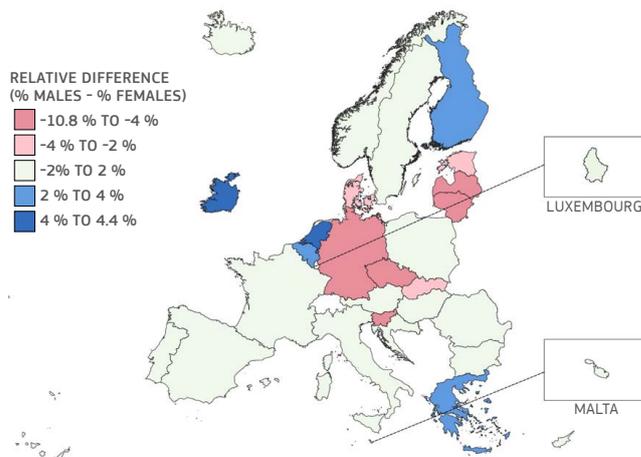


Figure 5 - Differences by sex in the percentages (%) of individuals aged 50-74 that self-reported having participated in a colorectal cancer screening in the last two years (2019 data).

Data source: [EUROSTAT](#).

b. Colorectal cancer mortality

Men have consistently higher mortality rates caused by colorectal cancer than women [8]. However, the degree of inequality in mortality rates between sexes varies across Europe. In nine countries, the male mortality rate is more than double that of females, while in eight the rate is less than 50% higher (Figure 6).

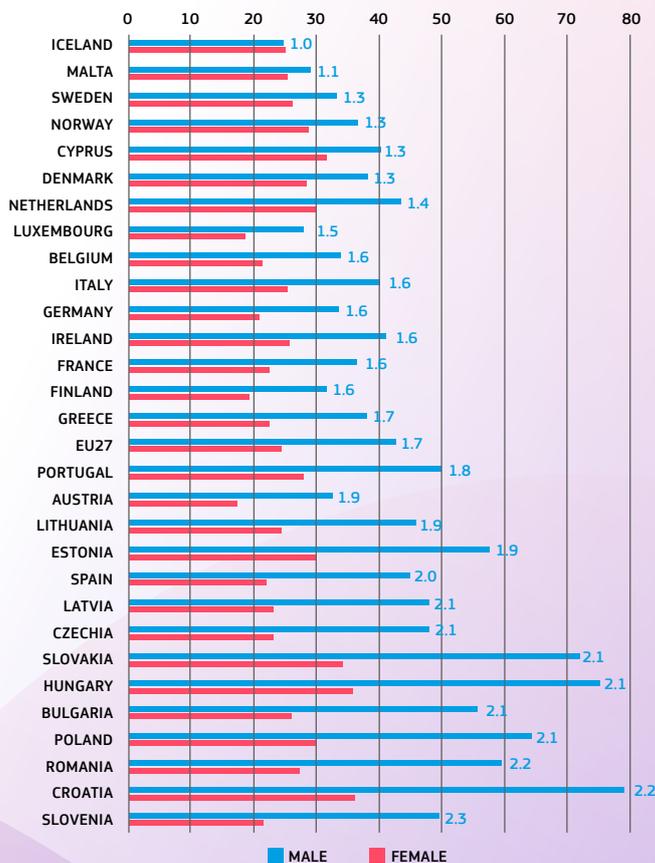


Figure 6 - Death rate of colorectal cancer (2020) by country and sex. The numbers next to the blue bar indicate the number of times in which death rate in men is higher than in women.

Data source: EUROSTAT, available at [ECIR](#)

* In this factsheet "Europe" and "European countries" refer to EU-27+Iceland+Norway.

3. SOCIOECONOMIC INEQUALITIES

There is significant inequality in the uptake of colorectal cancer screening in Europe, associated in many countries with educational level, household income, and rural versus urban living areas [4].

In most European countries, the proportion of people who reported never attending a colorectal screening was higher for those with a lower level of **education**. In 2019, the gap in colorectal cancer screening between people with the highest and lowest education was as high as 18% in some countries (Figure 7). A few countries however showed the opposite pattern.

A comparable pattern is found when comparing the level of income, and, living in rural versus urban areas. In most countries of Europe, people with a lower **income** attended colorectal screening less frequently than those with a higher income (Figure 8). This income-related gap is most pronounced in Southern Europe [9]. Equally so, people living in **rural areas** have less colorectal screening than those living in the cities (Figure 9).

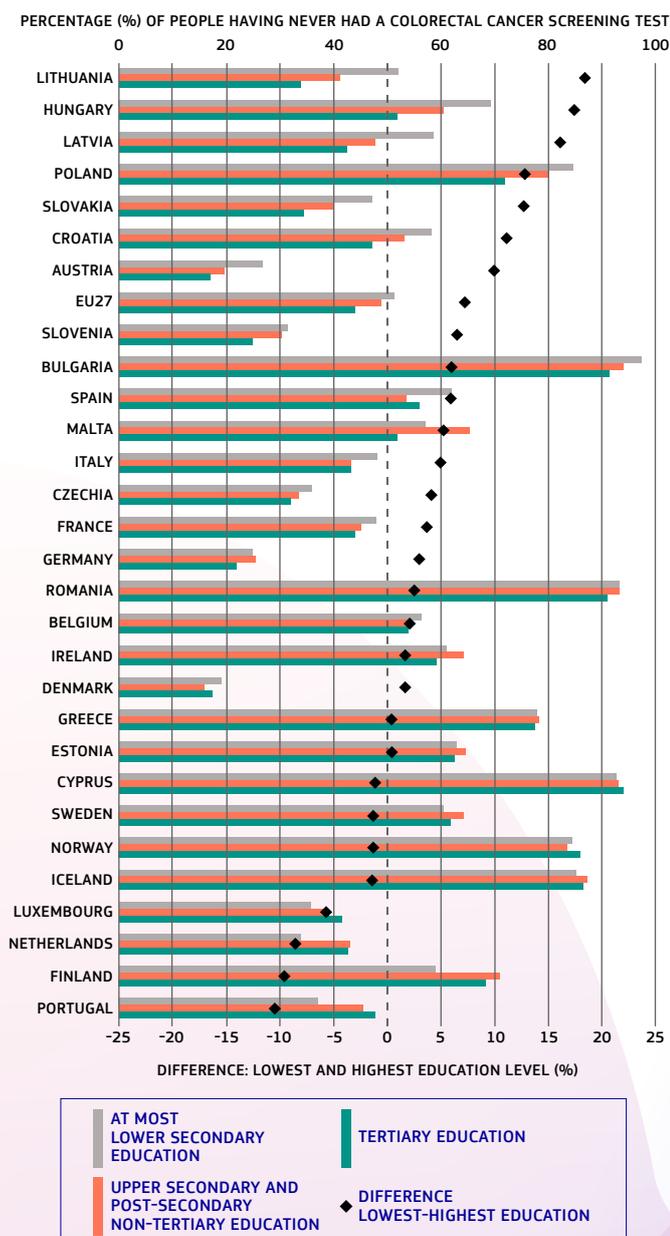


Figure 7 - Proportion of people (aged 50 to 70 years) who reported having never had a colorectal cancer screening test (gFOBT), by education level groups (2019 data).

Data source: EUROSTAT, available at [ECIR](#).

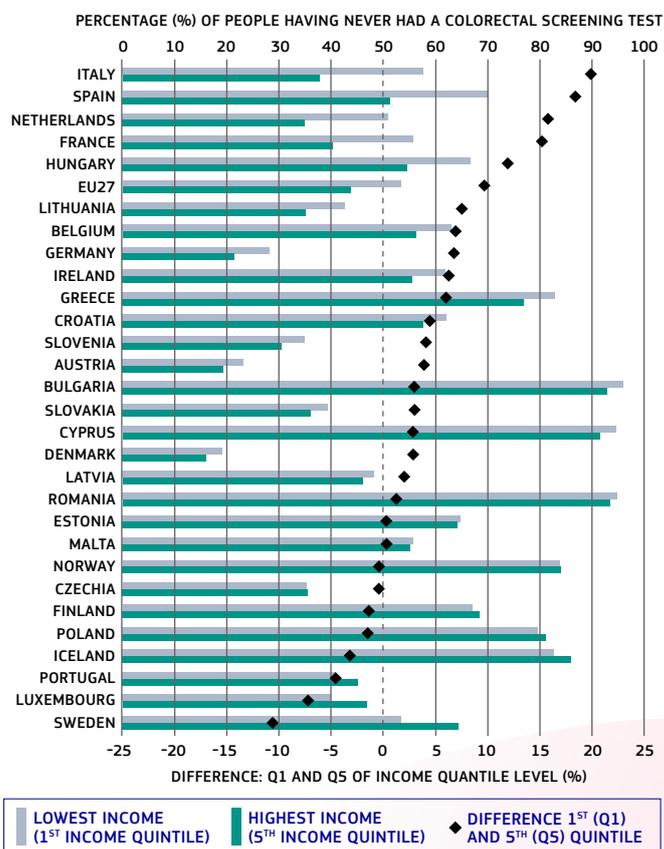


Figure 8 - Proportion of people (50-74 years old) who reported having never had a colorectal cancer screening test (gFOBT), by income quintiles (2019 data).

Data source: EUROSTAT, available at [ECIR](#).

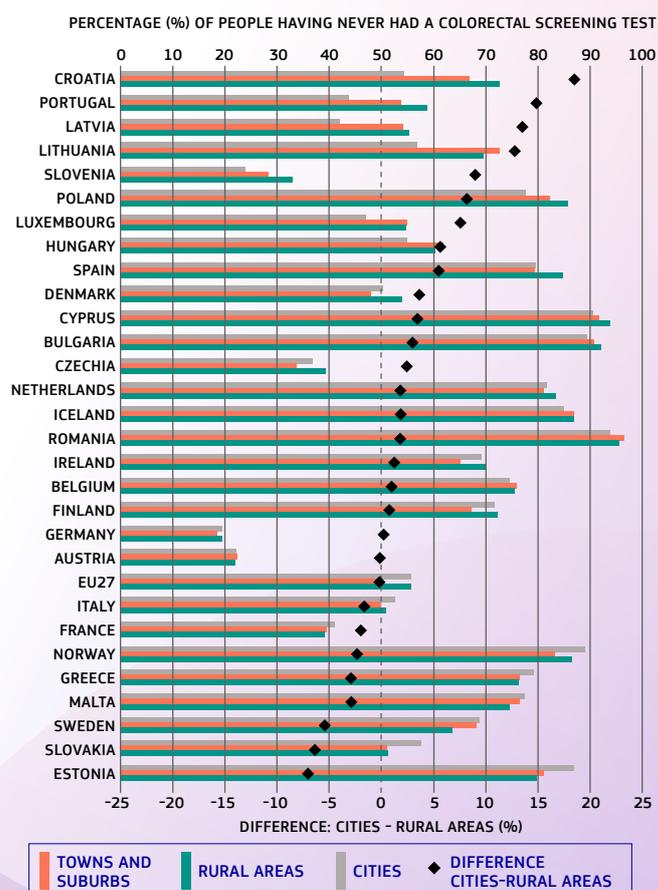


Figure 9 - Proportion of people (50-74 years old) who reported having never had a colorectal cancer screening test (gFOBT), by degree of urbanisation (2019 data).

Data source: EUROSTAT, available at [ECIR](#).

* In this factsheet "Europe" and "European countries" refer to EU-27+Iceland+Norway.

Note: the figures 7-9 are ranked on the highest screening disparity, which measures the greatest difference in the percentage of people aged 50 to 70 years old having never had a colorectal screening test.

CLOSING THE GAP

In light of the significant disparities in colorectal cancer screening across Europe, our focus now turns to initiatives and strategies aimed at closing this gap, with a commitment to equal access and early detection for all. Equal access to early cancer detection can result in improved treatment outcomes and reduced disease burden. Coordinated action at European level can ensure that all citizens have access to cancer care services with an essential level of quality and patient safety.

A number of policy actions to improve access to and quality of colorectal screening programmes in Europe are ongoing.

The [European Commission Initiative on Colorectal Cancer \(ECICC\)](#) is a person-centred, evidence-based initiative that is producing colorectal cancer screening guidelines and a quality assurance scheme for colorectal cancer and care services. [Europe's Beating Cancer Plan](#) supports Member States in improving their screening to lower deaths and incidence; the 2022 Council Recommendation on cancer screening aims at 90% of the EU population to be offered screening by 2025, including colorectal cancer. The [EU Cancer Mission's](#) specific targets are to optimise and improve the access to existing screening programmes and support research on non-invasive cancer screening methods that can be integrated into the screening programmes.

The EU-funded [CanScreen-ECIS](#) project developed and piloted a new cancer screening data management system to systematically monitor screening programmes and report on observed disparities via the [European Cancer Information System \(ECIS\)](#) and the [European Cancer Inequalities Registry \(ECIR\)](#), respectively.

The European Union (EU) is also funding other projects that will help close the gap:

- [BUMPER](#), a mobile application that aims to influence the audience's health behaviour by monitoring their behaviour and help them adopt changes.
- The [ONCOSCREEN](#) project aims to promote accurate, non-invasive, cost-effective screening tests based on new technologies and an increased awareness on the disease.
- The [DIOPTRA](#) project aims to introduce a front-line screening tool that will consider risk factors and protein biomarkers for pinpointing individuals at a high risk for colorectal cancer incidence.
- [Cancer Screening Campaign #GetScreenedEU](#) is up and running and directs people to screening opportunities in their country.

EU countries can also use the Regional Development Fund, European Social Fund Plus and Direct Grants available through [EU4Health](#) to support cancer screening. Some Member States have included cancer screening, diagnosis and treatment as part of their national Recovery and Resilience Plans in the €723.8 billion EU Recovery and Resilience Facility.

FOR MORE INFORMATION

- The [European Cancer Inequalities Registry](#) is a flagship initiative of the Europe's Beating Cancer Plan.

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European Cancer Inequalities Registry (ECIR)
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✎ #EUCancerPlan #EU_ScienceHub

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