

Introduction

- Cancer remains a significant public health challenge in Europe with a substantial regional disparity in incidence and mortality (Dyba et al., 2021; Elmadani et al., 2025).
- In 2022, Europe recorded 4,471,422 new cancer cases. Incidence rate of cancer was as high as 374.7 per 100,000 in Denmark and only 160.80 per 100,000 in Albania. Cancer mortality, on the other hand, was as high as 143.70 per 100,000 in Hungary and only 77.30 per 100,000 in Belarus (Elmadani et al., 2025).
- In 2020, Europe recoded about 4 million new cases of cancer. For both sexes, cancer incidence was as high as 718.3 per 100,000 in Ireland and only 351.6 per 100,000 in Albania. Highest cancer mortality rates occurred in Slovakia (495.8 per 100,000) and lowest cancer mortality rates occurred in Sweden (272 per 100,000) (Dyba et al., 2021).
- Another country identified to have the highest incidence of cancer is the Netherlands and other countries identified to have lowest incidence of cancer are Bulgaria, Austria and Romania. Another country identified to have the highest cancer mortality rate is Croatia and other countries identified to have lowest cancer mortality rates are Luxembourg, Cyprus and Finland (Lechardoy, 2025).
- Disparities in cancer incidence and mortality across Europe are attributed to regional healthcare inequalities, among other factors (Elmadani et al., 2025). Although advances in cancer prevention, screening, diagnosis, and treatment have improved survival outcomes in many countries in Europe, these benefits are not evenly distributed within and across countries.
- Examining variations in cancer prevalence and access to care across countries in Europe is essential for understanding structural inequities and guiding evidence-based policy responses.

Objectives

- The primary objective of this study was to conduct a cross-national comparison of cancer burden and healthcare accessibility across Europe. Specifically, the study aimed to:
 - Assess variations in self-reported cancer prevalence across European countries.
 - Examine differences in years lived without cancer among individuals with a previous diagnosis.
 - Evaluate inequalities in access to medical consultation or treatment among people with current or previous cancer

Data and Methods

- Data Source, Study Design and Sample
 - Data source: European Social Survey (ESS) Round 11, collected in 2023
 - Study design: Cross-sectional, population-based analysis
 - Sample: Nationally representative samples of adults aged at least 15 years
 - Countries included: 30 European countries spanning Northern, Southern, Eastern, and Western Europe
- Key variables
 - Self-reported current or previous cancer diagnosis
 - Self-reported years lived without cancer among previously diagnosed individuals
 - Ability to obtain medical consultation or treatment within the previous 12 months
 - Country of residence
- Statistical analysis
 - Weighted descriptive cross-tabulations to summarise distributions by country
 - Weighted chi-square tests of association and logistic regression analyses to assess cross-national differences
 - Analyses conducted using SAS version 9.4
 - Statistical significance defined as $p < 0.05$

Results

Self-Reported Cancer Prevalence by Country (2023)

- A significant association was observed between self-reported cancer prevalence and country ($p < 0.001$).

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| <ul style="list-style-type: none">• Countries with highest prevalence:<ul style="list-style-type: none">◦ Montenegro (40.0%)◦ Slovakia (23.7%)◦ Latvia (20.7%)◦ Hungary (19.0%)◦ Bulgaria (15.3%)◦ Denmark (15.3%) | <ul style="list-style-type: none">• Countries with lowest prevalence:<ul style="list-style-type: none">◦ Iceland (3.3%)◦ Spain (7.3%)◦ Austria (7.6%)◦ Norway (7.8%)◦ Ireland (8.3%) |
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- Weighted unadjusted odds of having self-reported cancer currently or previously were 7.42 times higher in Montenegro than in Iceland ($OR = 7.42$, $95\% CI = [5.84, 9.42]$), 3.45 times higher in Slovakia than in Iceland ($OR = 3.45$, $95\% CI = [2.66, 4.48]$) and 2.91 times higher in Latvia than in Iceland ($OR = 2.91$, $95\% CI = [2.22, 3.81]$).
- Weighted unadjusted odds of having self-reported cancer currently or previously were, however, only 13% lower in Spain than in Iceland ($OR = 0.87$, $95\% CI = [0.68, 1.13]$), 8% lower in Austria than in Iceland ($OR = 0.92$, $95\% CI = [0.70, 1.20]$) and 6% lower in Norway than in Iceland ($OR = 0.94$, $95\% CI = [0.71, 1.25]$).

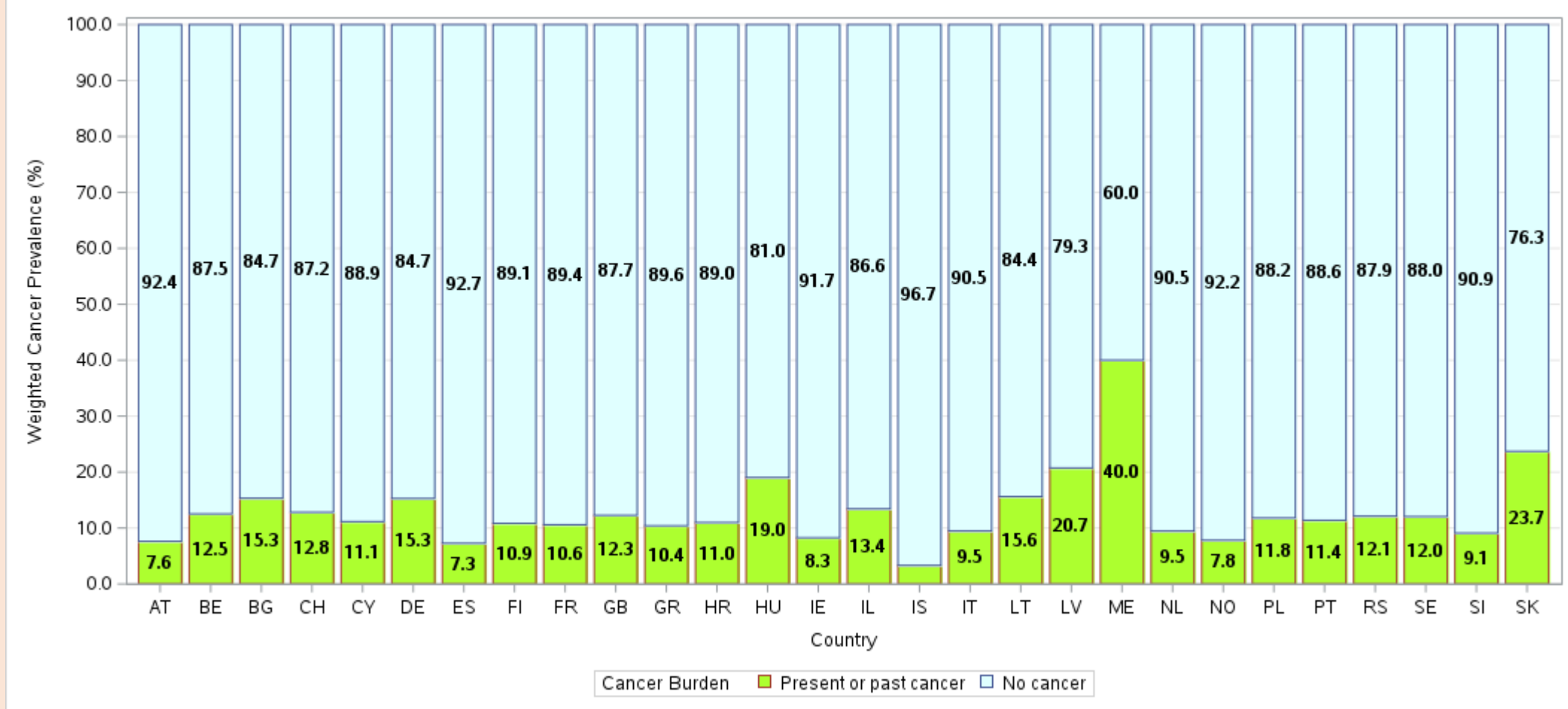


Figure 1: Self-Reported Current or Previous Cancer by Countries in Europe

Years Lived Without Cancer (Previously Diagnosed Individuals)

- Years lived without cancer varied significantly by country ($p < 0.001$).
- Individuals reporting more than 10 years lived without cancer despite having been diagnosed with cancer previously were as many as 55.5% in Latvia and only 25.5% in Cyprus.

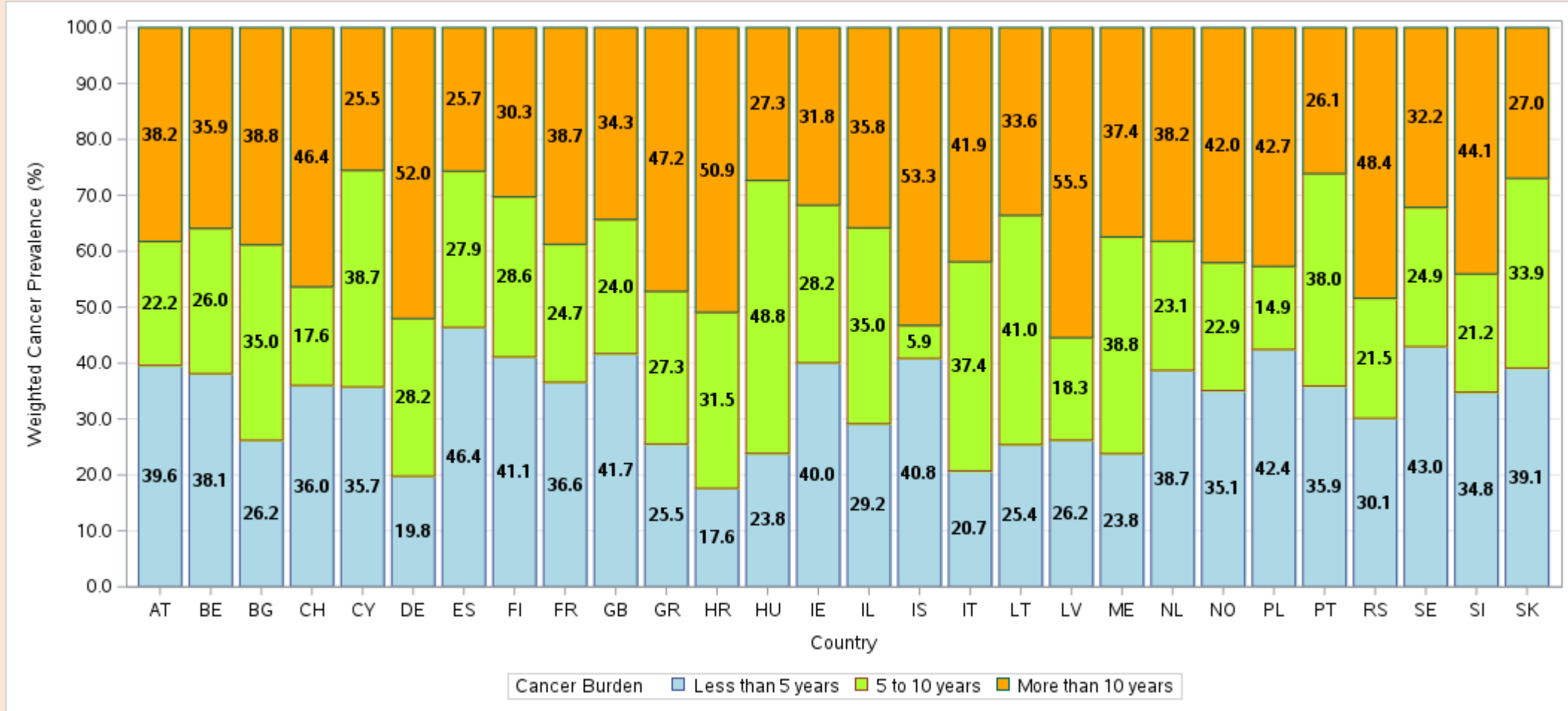


Figure 2: Self-Reported Years Lived Without Cancer by Countries in Europe

Access to Medical Consultation or Treatment (the last 12 months, Individuals with current or previous self-reported cancer)

- Access to care among respondents with current or previous self-reported cancer differed significantly across countries ($p < 0.001$).
- Highest proportions unable to access care:
 - Serbia (38.8%)
 - Portugal (31.0%)
 - Poland (30.3%)
 - Montenegro (29.4%)
 - Great Britain (27.9%)
- Lowest proportions unable to access care:
 - Switzerland (4.7%)
 - Netherlands (5.9%)
 - Sweden (11.4%)
 - Slovenia (12.6%)
 - Belgium (13.7%)
- Weighted unadjusted odds of being unable to get medical consultation or treatment were 12.81 times higher in Serbia than in Switzerland ($OR = 12.81$, $95\% CI = [6.07, 27.00]$), 9.09 times higher in Portugal than in Switzerland ($OR = 9.09$, $95\% CI = [4.36, 18.94]$) and 8.78 times higher in Poland than in Switzerland ($OR = 8.78$, $95\% CI = [4.29, 17.96]$).
- Weighted unadjusted odds of being unable to get medical consultation or treatment were, however, only 27% higher in Netherlands than in Switzerland ($OR = 1.27$, $95\% CI = [0.51, 3.16]$).

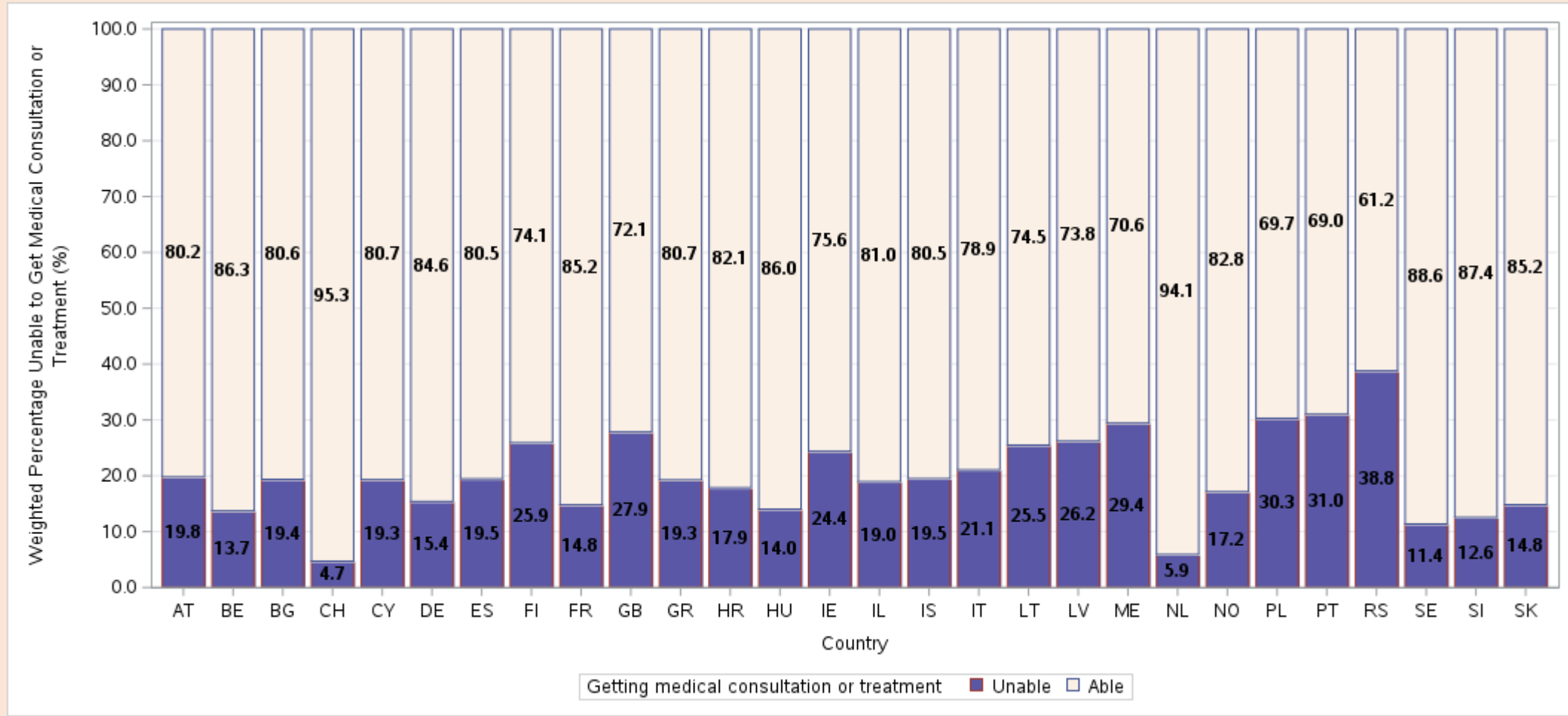


Figure 3: Self-Reported Access to Medical Consultation or Treatment by Countries in Europe

Conclusions and Recommendations

Conclusions

- There is a pronounced and persistent disparities in cancer burden indicated by self-reported cancer prevalence and years lived without cancer across Europe.
- There is a pronounced and persistent disparities in access to healthcare services among current and previous cancer patients across Europe.
- While some countries report relatively low cancer prevalence and strong access to care among cancer patients, others face a dual challenge of higher cancer prevalence and limited access to care among cancer patients.

Recommendations

- Promote cross-border collaboration, shared best practices, and coordinated European cancer control strategies.
- Conduct further research to identify the cause of pronounced and persistent disparities in cancer prevalence and access to care among cancer patients across Europe.

References

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2. Dyba, T., Randi, G., Bray, F., Martos, C., Giusti, F., Nicholson, N., Gavin, A., Flego, M., Neamtiu, L., Dimitrova, N., Carvalho, R. N., Ferlay, J., & Bettio, M. (2022). The European cancer burden in 2020: Incidence and mortality estimates for 40 countries and 25 major cancers. European Journal of Cancer, 157, 308-347. <https://doi.org/10.1016/j.ejca.2021.07.039>
3. Elmadani, M., Mokaya, P. O., Omer, A. A., Kiptulon, E. K., Klara, S., Orsolya, M. (2025). Cancer burden in Europe: A systematic analysis of the GLOBOCAN database (2022). BMC Cancer, 25(447), 1-15. <https://doi.org/10.1186/s12885-025-13862-1>

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