European Cancer Inequalities Registry

EU Country Cancer Profiles Synthesis Report

2025

European Commission

OECD
BETTER POLICIES FOR BETTER LIVES

EU Country Cancer Profiles

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Foreword

Europe's Beating Cancer Plan (EBCP) addresses the longstanding threat posed by cancer. One of the Plan's ten flagship initiatives, the European Cancer Inequalities Registry assesses inequalities in cancer. Under this umbrella, the OECD and European Commission present this synthesis report, highlighting findings from the 2025 Country Cancer Profiles. These country-specific assessments, authored by the OECD and the European Commission, provide the latest data and developments across the cancer spectrum, from prevention to survivorship in EU Member States, Iceland and Norway.

The 2025 synthesis report brings to light four main messages. First, cancer is only growing as a public health concern in the EU, as the share of people under active treatment or living with a history of cancer expands due to population ageing and notable decreases in cancer mortality. However, even with the reductions, mortality rates remain much higher among lower income countries in the EU, as well as among men and those with lower levels of education.

Second, there is evidence of improvement on a number of cancer risk factors in the EU over time, with the notable exception of overweight and obesity, which are an increasing challenge. Smoking rates have decreased in the vast majority of EU countries. Trends in alcohol use show more variability by country, but point to an overall decrease at the EU level. However, even with substantial policy measures addressing the intersecting risk factors of overweight, low physical activity and poor diet – over half of adults in EU countries are overweight and rates are rising among adolescents.

Third, early detection efforts via screening programmes show worrying trends. One in two EU countries saw a decline in breast cancer screening participation, while two out of three saw decreases in cervical cancer screening. However, many countries have introduced population-based colorectal cancer screening in the last 15 years, promoting earlier detection and improved outcomes. Other positive efforts aim at making self-sampling for cancer screening more widely available and closing gaps in screening participation between population groups.

Finally, improved cancer survival rates and increasing cancer prevalence are propelling efforts to develop rehabilitation and quality of life programmes for people with cancer. Countries are making wide-ranging investments in palliative care services and developing new programmes to address the psychological, social, occupational and economic reintegration of cancer survivors.

This synthesis report provides insight on the performance of countries across the cancer care spectrum, identifying common challenges and parallel improvements. The second part of the report presents a Cancer Performance Tracker (CaPTr) for each country across several cancer domains: prevention, early detection, care capacity, and outcomes. The Country Cancer Profiles and synthesis report reveal that there is still great need to collect better, more comprehensive, internationally comparable data. Actionable and comparable information on cancer incidence trends, effectiveness of screening programmes, timeliness and quality of cancer care, patient-reported outcomes, and cancer survival have the potential to catalyse improved cancer care monitoring and policy making across the EU, in line with the vision of EBCP.

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Acronyms and abbreviations

ASMR	Age standardised mortality rate
BGN	Bulgarian lev
CaPTr	Cancer Performance Tracker
CT	Computed tomography
EBCP	Europe's Beating Cancer Plan
eCAN	Joint Action on strengthening eHealth for Cancer Patients
ECIS	The European Cancer Information System
EU	European Union
EU CraNE	Joint Action on network of Comprehensive Cancer Centres
EUNetCCC	European Network of Comprehensive Cancer Centres
EUR	Euro
FIT	Faecal immunochemical testing
FTE	Full-time equivalent
GDP	Gross domestic product
HPV	Human papillomavirus
HTA	Health Technology Assessment
ICER	Incremental cost-effectiveness ratio
MRI	Magnetic resonance imaging
NCP	National Cancer Plan
OECD	Organisation for Economic Co-operation and Development
PET	Positron emission tomography
PM	Particulate matter
PRAISE-U	Prostate cancer Awareness and Initiative for Screening in the European Union
PROMs	Patient Reported Outcome Measures
PPP	Purchasing power parities
PSA	Prostate-specific antigen
PYLL	Potential years of life lost
QALY	Quality-adjusted life years
SIOPE	European Society for Paediatric Oncology's
SOLACE	Strengthening the screening of Lung Cancer in Europe
SPHeP	OECD Strategic Public Health Planning model
TOGAS	Towards gastric cancer screening implementation in the European Union

1 Cancer burden

Large variation across countries is seen in both age-standardised cancer incidence and mortality rates. Cancer mortality rates remain highest in the lower-income countries in the EU but have decreased across almost all countries between 2011-21. Cancer mortality rates are also much higher among men than women and among people with low education levels. The combination of population ageing, which increases cancer incidence, and declining cancer mortality rates is resulting in higher cancer prevalence. Recognising the growing burden of cancer, most countries have developed national cancer plans that align closely with the key elements in Europe's Beating Cancer Plan.

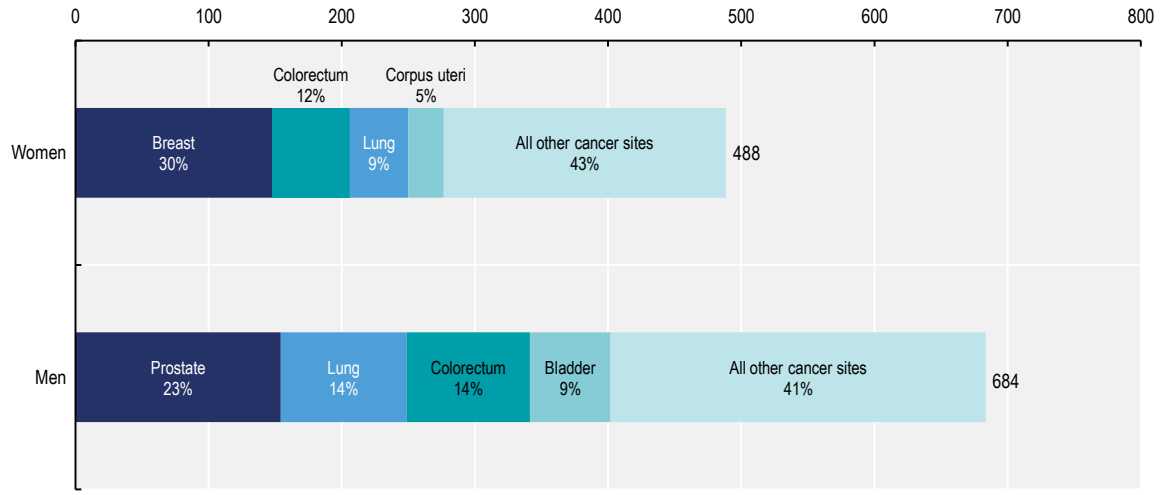
In Europe, the ageing population and lower cancer mortality rates are leading to an increase in the number of people living with cancer

Every minute, five people in the EU find out they have cancer

According to the European Cancer Information System (ECIS) of the EC Joint Research Centre based on incidence trends from pre-pandemic years, a total of 2 742 447 new cancer cases were expected to be diagnosed in the EU in 2022. Estimated age-standardised cancer incidence in the EU is 572 per 100 000 population. Cancer incidence is higher among men (684 per 100 000) compared to women (488 per 100 000) (Figure 1.1), partly due to higher prevalence of cancer risk factors among men. Countries with the highest incidence rates include Denmark, Ireland, the Netherlands and Croatia. In addition to cancer risk factors, estimated cancer incidence is influenced by the quality of national cancer surveillance and coding systems, by cancer screening programmes that can facilitate earlier detection of asymptomatic cancer cases and by access to diagnostic capacity.

Figure 1.1. Breast cancer is responsible for almost one in three new cancer cases among women in the EU, while prostate cancer accounts for almost one in four new cases among men

Age-standardised incidence rate per 100 000, EU average, 2022 estimates



Note: 2022 figures are estimates based on incidence trends from previous years, and may differ from observed rates in more recent years. Includes all cancer sites except non-melanoma skin cancer. Corpus uteri does not include cancer of the cervix.
Source: European Cancer Information System (ECIS). From https://ecis.jrc.ec.europa.eu, accessed on 10 March 2024. © European Union, 2024. The incidence percentage breakdown was re-computed based on age-standardised incidence rates and as such differs from the percentage breakdown based on absolute numbers shown on the ECIS website.

About half of cancer incidence is driven by four main cancer types: Colorectal, lung, prostate and breast

In 2022, three cancer sites (prostate, colorectal and lung) accounted for 51% of all age-standardised cancer cases in men in the EU. A similar share of 51% of cancers among women were caused by breast, colorectal and lung cancer, with breast cancer accounting for the majority, or 30% of all cancer cases. Colorectal cancer accounted for a similar proportion of all cancers among men (14%) and women (12%). In contrast, lung cancer accounted for a greater proportion of cancer cases among men (14%) than women (9%), related to higher smoking prevalence among men over time.

Prostate cancer incidence varies 2.5-fold and breast cancer incidence 2-fold across EU countries

Countries with the highest incidence of prostate cancer were Lithuania, Norway and Sweden. Incidence ranged from 104 per 100 000 in Bulgaria to 265 per 100 000 in Lithuania, 72% higher than the EU average of 154 per 100 000 population. Prostate cancer incidence is highly influenced by prostate cancer screening practices, which differ considerably across the EU and may explain the much higher incidence observed in some EU countries (Vaccarella et al., 2024[1]).

Breast cancer incidence ranged from 88 per 100 000 in Bulgaria to 190 per 100 000 in Luxembourg, 28% higher than the EU average of 148 per 100 000 population. Other countries with breast cancer incidence above 170 per 100 000 women were Belgium, Cyprus, France, the Netherlands, Denmark, Finland and Norway.[1] Differences in breast cancer incidence are largely accounted for by differences in prevalence of obesity and alcohol consumption, as well as genetic factors and cancer screening participation. Some national data reported in the Country Cancer Profiles indicate concerning trends in incidence, such as an

increased risk of breast cancer each year from 2012 to 2021 (Finland) or a faster increase in breast cancer incidence among younger ages (the Slovak Republic), mirroring trends observed in France (Hassaine et al., 2022[2]) and the United States (Sung et al., 2024[3]).

Men have more than double the lung cancer incidence and 60% higher colorectal cancer incidence rates than women

Lung cancer incidence in men ranged from 39 per 100 000 in Sweden to 139 per 100 000 in Hungary, 46% higher than the EU average of 95 per 100 000. Lung cancer rates among women in the EU (at 44 per 100 000) are about half those of men, but there are also large differences among countries, with incidence ranging from 19 per 100 000 women in Latvia to 79 per 100 000 women in Denmark. While Hungary, Poland and Croatia have the highest lung cancer incidence among men, it is the Western European countries of Denmark, the Netherlands and Ireland that have some of the highest rates among women. Differences in lung cancer incidence are mainly driven by differences in historical rates of smoking prevalence.

Gender gaps in colorectal cancer are also notable, with men in the EU having average incidence rates at 93 per 100 000, 60% higher than rates among women (58 per 100 000). Similarly, there are large differences across countries. Hungary had the highest estimated incidence among men (at 138 per 100 000), double the rate of Austria, with the lowest incidence (63 per 100 000). Among women, estimated colorectal cancer incidence varied even more – from 104 per 100 000 in Norway[2] to 38 per 100 000 in Austria. Differences in colorectal cancer incidence are largely accounted for by differences in prevalence of obesity, consumption of alcohol and processed foods and cancer screening participation. Similar to breast cancer, there are concerning trends indicating an increasing incidence of colorectal cancer among younger birth cohorts in Europe and North America (Vuik et al., 2019[4]; Sung et al., 2025[5]).

According to ECIS, the number of new cancer cases in the EU is projected to grow by 18% from 2022 to 2040. Increases are expected to be greatest for Luxembourg (57%), Ireland (47%) and Malta (44%) and smallest for Latvia (2%), Bulgaria (3%) and Croatia (4%).

Every minute, cancer kills more than two people in the EU

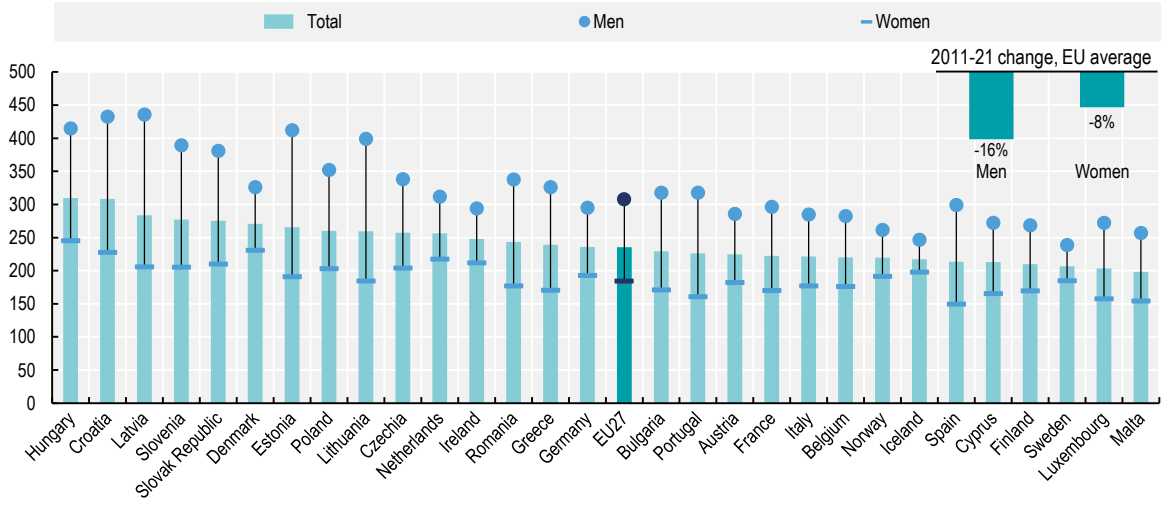
In EU countries in 2021, 1.15 million people died from cancer, which was the second-leading cause of mortality on average after cardiovascular disease. The average age-standardised cancer mortality rate in the EU was 235 per 100 000 population (Figure 1.2), with rates ranging from about 200 per 100 000 in Malta and Luxembourg to about 310 per 100 000 in Hungary and Croatia. Mortality rates were generally lower in wealthier countries: 235 per 100 000 in the top tercile compared to 257 in the bottom tercile.[3]

Age-standardised cancer mortality rates in the EU decreased by 12% on average from 2011 to 2021. All countries saw decreased cancer mortality for both men and women, except Bulgaria and Cyprus, which experienced increases for both genders. The largest decreases for men were in Luxembourg (25%), Norway (23%) and Iceland (22%), while the largest decreases for women were in Luxembourg (24%), Malta (23%) and Ireland (16%). Higher reductions were seen among the top and middle income terciles of countries (13% each), as compared to a reduction of 10% in the bottom tercile.

In 2021, the cancer mortality rate was 67% higher among men (308 per 100 000) than women (184 per 100 000). From 2011 to 2021, the cancer mortality rate in men decreased by 16% on average in the EU compared to an 8% decrease among women. The faster decline in cancer mortality rates among men partly reflects the large decrease in lung cancer mortality rates among men, who have historically had much higher smoking rates and lung cancer mortality than women.

Figure 1.2. While decreasing over the last decade, cancer mortality rates are almost 70% higher among men than women

Age-standardised mortality rate per 100 000 population, 2021



Source: Eurostat Database.

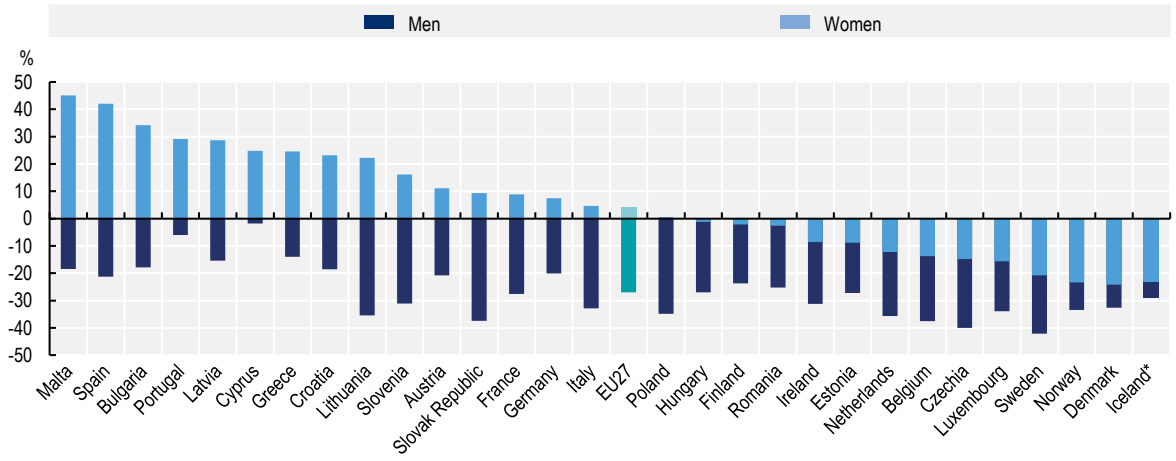
From 2011 to 2021, avoidable mortality fell 16% for breast cancer and 17% for colorectal cancer

Avoidable mortality refers to deaths among people aged under 75 and includes both preventable deaths (such as lung cancer) that can be avoided through effective public health and prevention interventions, and treatable deaths (such as colorectal and breast cancer) that can be avoided through timely and effective healthcare interventions. On average in the EU from 2011 to 2021, avoidable mortality rates decreased for breast cancer by 16% among women and for colorectal cancer by 17%, for both men and women. These decreases suggest improvements in diagnosis and treatment for both cancers.

In contrast, while avoidable lung cancer mortality decreased by 27% among men, it increased by 4% among females. Decreases among men were seen in all EU countries, ranging from 42% in Sweden to 2% in Cyprus. Among women however, avoidable lung cancer mortality increased in 16 EU countries, and varied from a 45% increase in Malta to a 29% decrease in Iceland (Figure 1.3). These diverging trends reflect the fact that although men have historically had higher smoking prevalence, increases in smoking rates (followed by their subsequent decline) occurred in more recent birth cohorts of women as compared to men. In addition to a reduction in smoking, improvements in diagnosis and treatment of lung cancer (See Cancer care performance section) have contributed to improved outcomes in lung cancer for both genders.

Figure 1.3. Avoidable lung cancer mortality among men decreased in all EU countries, but increased among women in 16 countries

Percentage change in avoidable lung cancer mortality, from 2011 to 2021



Note: Avoidable mortality is based on causes of deaths for those aged under 75. *In Iceland, the relative decline in mortality rates was greater among women than among men.
Source: Eurostat Database.

Educational inequalities in cancer mortality are much larger among men than women, and gaps vary greatly across EU countries

Large differences exist in overall cancer mortality by socio-economic status in EU countries, with higher mortality rates reported among more vulnerable populations. Across 15 EU+2 countries[4] with available data, cancer mortality among men with low education levels was 84% higher (583 age-standardised cancer mortality rates per 100 000), compared to men with high education levels (318 per 100 000) (European Commission/IARC/Erasmus MC, 2024[6]). Mortality rates among lower-educated men were over twice those of higher educated men in Czechia, Estonia, France, Hungary, Lithuania and Poland – while the smallest gaps (below 45%) were in Sweden and Spain.

Socio-economic gaps in cancer mortality, albeit smaller, also appear among women. Cancer mortality among women with low education levels was 37% higher (333 per 100 000), than among women with high education levels (243 per 100 000). The largest gaps in cancer mortality in women were reported in Norway (82%), Denmark (78%), Czechia (66%) and Estonia (59%), and the smallest gaps, at 10% or lower, were in Spain, Italy and France. Slovenia was the notable exception that did not report any difference in cancer mortality in women by education level.

Overall, the social gradient holds true when looking at other cancer outcomes such as cancer incidence and cancer survival, as well as other markers of vulnerability such as income, geographical location, migration status or ethnicity. In Ireland for instance, individuals in the most deprived areas faced, on average, a 43% higher risk of mortality within five years following cancer diagnosis compared to their counterparts in the least deprived regions. A 2024 study in the Netherlands found that 5-year cancer survival rates were 10% lower among those from lower income groups compared to those from higher income groups (Aarts et al., 2024[7]).

Educational inequalities in cancer mortality reflect higher prevalence of modifiable cancer risk factors among lower socio-economic groups, along with differences in health literacy and knowledge of cancer risk factors and symptoms. In addition, they reflect lower participation in screening programmes that

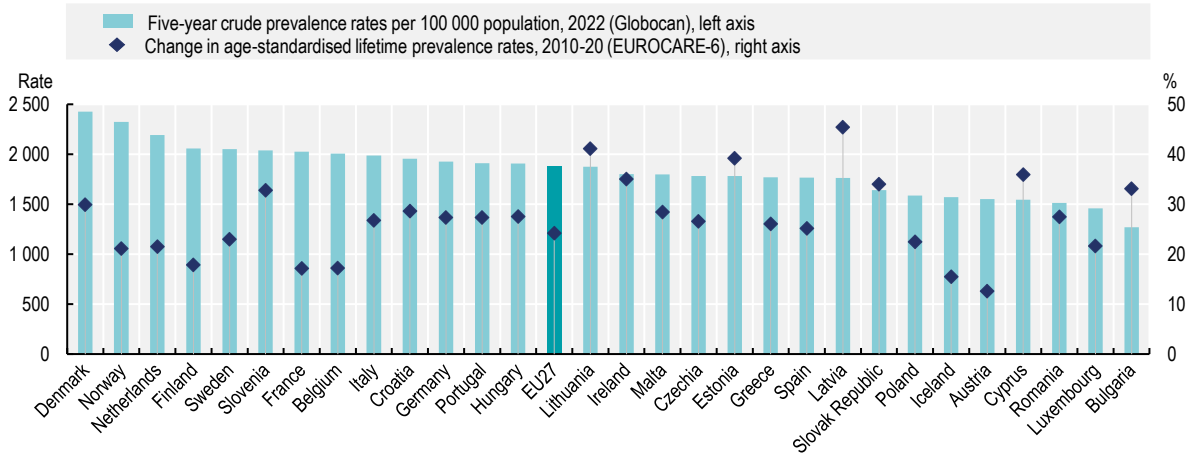
support earlier detection and may also reflect differences in access to and quality of cancer diagnosis and treatment (OECD, 2024[8]).

Cancer prevalence in the EU increased by a quarter in the last 10 years, as improvements in early detection and treatment have increased cancer survival

In 2022, five-year cancer prevalence[5] was estimated at 1 876 cases per 100 000 population in the EU (Figure 1.4), or about two people out of every 100. This ranged from 1 268 cases per 100 000 population in Bulgaria, which has relatively low incidence and lower survival rates among EU countries to 2 424 cases per 100 000 in Denmark, which has high incidence but also higher survival.

From 2010 to 2020 the average age-standardised lifetime cancer prevalence in the EU increased by 24%. The relative increase in cancer prevalence was highest in Latvia (45%), Lithuania (41%) and Estonia (39%). Conversely, prevalence increases were lowest in Austria (13%), Iceland (16%) and France (17%). Trends in prevalence are influenced by increased cancer incidence and survival, in addition to demographic changes (De Angelis et al., 2024[9]). Looking forward, increased population ageing and further improvements in cancer survival will lead to higher cancer prevalence and more people living with a history of cancer, calling for investment in quality of life and survivorship programmes.

Figure 1.4. Cancer prevalence increased by over 20% in 24 EU+2 countries over the last ten years



Source: IARC Globocan Database 2024; De Angelis, R. et al. (2024), "Complete cancer prevalence in Europe in 2020 by disease duration and country (EUROCARE 6): a population-based study", https://doi.org/10.1016/s1470-2045(23)00646-0.

In virtually all EU countries, national cancer plans align with Europe's Beating Cancer Plan

Overall, national cancer plans in EU+2 countries are aligned with the four pillars of Europe's Beating Cancer Plan (EBCP): Prevention, Early detection, Diagnosis and treatment, and Quality of life (Table 1.1). All countries reported having a section of their national cancer plan that is focused on the Prevention pillar, with the exception of Cyprus, and all have a section dedicated to Diagnosis and treatment.

There is more variability with regards to alignment of national cancer plans with the transversal themes established by the EBCP (Paediatrics, Inequalities and Research and innovation). France, Poland, Spain and Sweden had a section specifically focused on each transversal theme of the EBCP in their national cancer plans and the majority of countries had a national cancer plan with a section focused on Research

and innovation. However, only about half of countries had sections specifically focused on Paediatric cancer and two countries did not address this topic in their plans. Furthermore, most countries lacked a specific section in their national plans around cancer inequalities, with two countries not covering the topic at all.

Table 1.1. While EU+2 countries closely align national cancer plans with the four pillars of the Europe's Beating Cancer Plan, inequalities and paediatrics are not always fully addressed

Adoption of the topic in the National Cancer Plan (NCP), marked by **blue** (a dedicated section exists), **orange** (a section partially covering the topic exists), or **pink** (not covered)

	Pillars of Europe's Beating Cancer Plan (EBCP)				Transversal themes of EBCP			Number of full alignments
	Prevention	Early detection	Diagnosis & treatment	Quality of life	Inequalities	Paediatrics	Research & innovation	
France	●	●	●	●	●	●	●	7
Poland	●	●	●	●	●	●	●	7
Spain	●	●	●	●	●	●	●	7
Sweden	●	●	●	●	●	●	●	7
Croatia	●	●	●	●	●	●	●	6
Czechia	●	●	●	●	●	●	●	6
Germany	●	●	●	●	●	●	●	6
Ireland	●	●	●	●	●	●	●	6
Italy	●	●	●	●	●	●	●	6
Lithuania	●	●	●	●	●	●	●	6
Netherlands	●	●	●	●	●	●	●	6
Bulgaria	●	●	●	●	●	●	●	6
Estonia	●	●	●	●	●	●	●	5
Finland	●	●	●	●	●	●	●	5
Malta	●	●	●	●	●	●	●	5
Norway	●	●	●	●	●	●	●	5
Portugal	●	●	●	●	●	●	●	5
Romania	●	●	●	●	●	●	●	5
Slovenia	●	●	●	●	●	●	●	5
Iceland	●	●	●	●	●	●	●	5
Hungary	●	●	●	●	●	●	●	5
Cyprus	●	●	●	●	●	●	●	4
Latvia	●	●	●	●	●	●	●	4
Luxembourg	●	●	●	●	●	●	●	4
Slovak Republic	●	●	●	●	●	●	●	4
Austria	●	●	●	●	●	●	●	3
Denmark	●	●	●	●	●	●	●	3

Note: Countries are ordered first by the number of alignments and then alphabetical by name. Greece does not have a cancer-specific national plan, although the National Action Plan for Public Health 2021-25 touches on cancer screening and palliative care for cancer patients. In Belgium, the Cancer Centre of Sciensano is currently developing the Belgium Cancer Inventory in line with Europe's Beating Cancer Plan.
Source: Adapted from "Study on mapping and evaluating the implementation of Europe's Beating Cancer Plan" (forthcoming).

2 Risk factors and prevention policies

The EU could prevent millions of new cancer cases in the coming decades through concerted efforts to meet policy targets on cancer risk factors. In 2021, about 40% of cancer deaths in the EU were attributable to known behavioural, metabolic and environmental risk factors (Global Burden of Disease Collaborative Network, 2021[10]). This figure has remained relatively constant over the last decade (at 43% in 2011 and 42% in 2021), although there has been some improvement in the performance of EU countries on various cancer risk factors. Tobacco use has fallen in almost all countries (although there is concern about a shift towards e-cigarettes and other new tobacco and nicotine products), and on average, there has been a small reduction in alcohol consumption. Similarly, progress has been made on reducing air pollution and in expanding human papillomavirus (HPV) vaccination coverage. However, overweight and obesity and the accompanying issues of poor diet and low physical activity are growing challenges. Over half of adults are overweight in the EU and overweight rates among adolescents are increasing, while socio-economic gaps in overweight rates remain substantial.

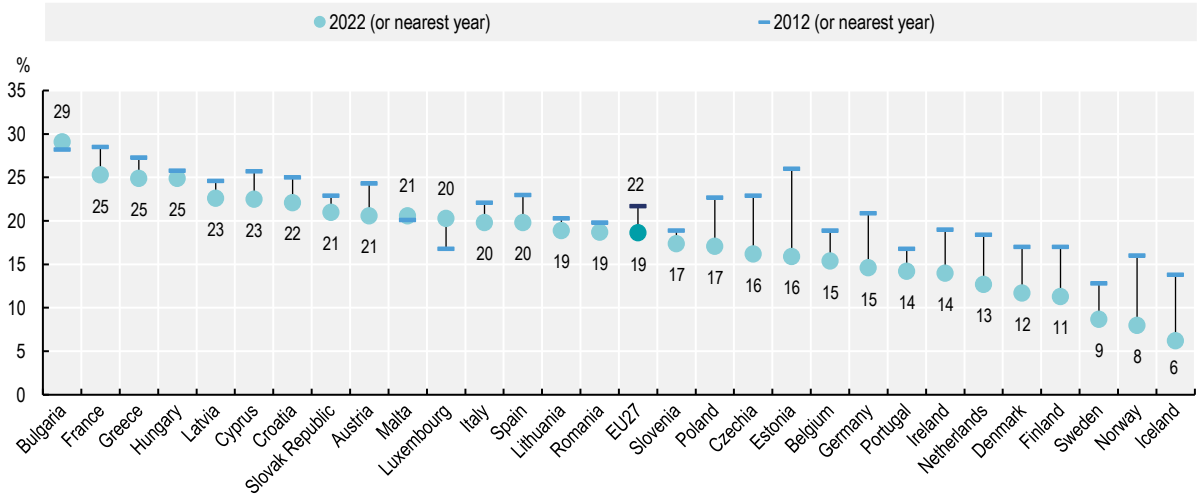
Tobacco smoking has decreased in all but three EU+2 countries between 2012 and 2022

Tobacco continues to be the leading driver of cancer cases in Europe, accounting for nearly 20% of all cancer deaths in the EU in 2021 according to the Global Burden of Disease data tool. The share of daily smokers among those aged 15+ varies widely across EU+2 countries, with Iceland having the lowest rate (6%) and Bulgaria the highest rate (29%) (Figure 2.1). Countries in Central and Eastern Europe, along with France, tend to have the highest smoking rates, while the Nordic countries (Iceland, Norway, Sweden, Finland and Denmark), along with the Netherlands, have the lowest. Among adults, smoking rates are higher among men in all EU+2 countries, with an EU average of 23% for men compared to 14% for women.

Intensified efforts to reduce tobacco consumption in recent years, including increases in taxation, enactment of smoking bans in public places, restrictions on tobacco advertisement, use of visual health warnings on tobacco products, and treatment to help people quit are paying off. Across the EU the share of smokers has decreased from 22% in 2012 to 18% in 2022 on average, with all but three EU+2 countries (Bulgaria, Luxembourg, Malta) seeing reductions. Decreases of more than 5 percentage points were seen in Czechia, Denmark, Estonia, Finland, Germany, Iceland, the Netherlands, Norway and Poland. In Czechia and Denmark, reductions in smoking rates reflect policies implemented over the last 5-8 years as reported in the Country Cancer Profiles, including comprehensive tobacco control legislation, restrictions on smoking in public places and increases in tobacco excise taxes. In 2024, both Slovenia and Spain enacted tougher anti-smoking legislation, including further regulation of e-cigarettes (as well as heated tobacco products in Slovenia), expansion of smoke-free areas, and new warning labels on nicotine products (Slovenia) or standardised packaging (Spain).

Figure 2.1. Tobacco smoking rates among adults have decreased across almost all EU countries over the past decade

Share of adults (aged 15 and over) reporting smoking on a daily basis



Note: The EU average is unweighted.
Source: OECD Health Statistics 2024.

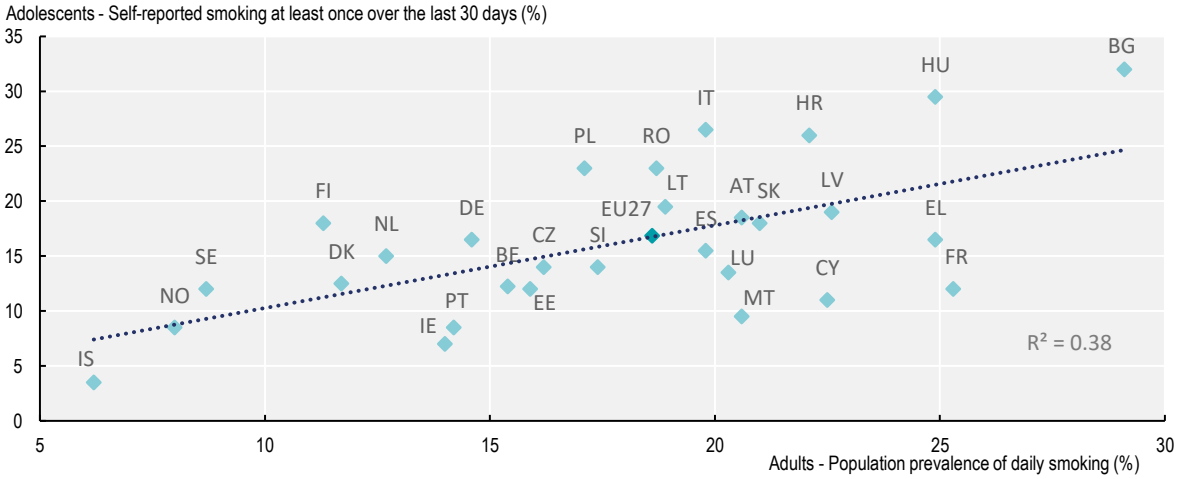
Alcohol consumption has decreased in two out of three EU countries between 2010 and 2022

Alcohol consumption averaged 10.0 litres per person aged 15 and over in the EU in 2022. Consumption is highest in Austria, Czechia, Latvia, Romania and Spain (at 11.6 litres or above) and lowest in Finland, Greece, Iceland, Italy, Norway and Sweden (at less than 7.7 litres). Between 2010 and 2022 there was a small decrease of 0.3 litres in average alcohol consumption in the EU. Underlying this figure, however, are major differences, with nine EU+2 countries reporting decreases of 10% or more (Belgium, Croatia, Cyprus, Denmark, Finland, France, Greece, Ireland and Lithuania), while seven EU+2 countries showed increases of 10% or more (Bulgaria, Italy, Latvia, Malta, Poland, Romania and Spain).

Trends in tobacco and alcohol consumption among adolescents reflect those seen in adults

Behavioural patterns often emerge during childhood and become engrained over the life course; thus, examining risk factors among adolescents provides insight into future cancer risk factors and calls for greater investments in prevention. For example, adolescent smoking rates tend to be higher in countries with higher rates of adult smoking, with a correlation coefficient of 0.61 reported among EU+2 countries (Figure 2.2).

Figure 2.2. Adolescent smoking is strongly associated with the prevalence of smoking among adults

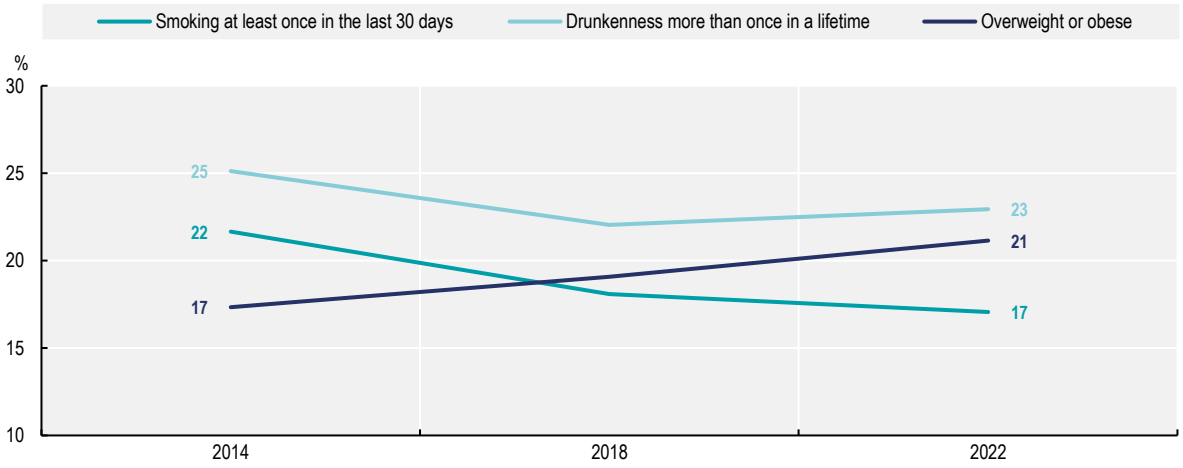


Note: The EU averages are unweighted. Adults are those aged 15 and over, while adolescents are those aged 15. Data refer to 2022 or nearest year.
Source: OECD Health Statistics; Health Behaviour in School-Aged Children Survey.

Like the trend seen among adults, Figure 2.3 shows that the smoking rate among 15-year-olds in the EU dropped from 22% in 2014 to 17% in 2022. This trend was seen in all countries except Bulgaria, Romania and Spain. Among adolescents, girls have slightly higher rates of smoking (18%) compared to boys (16%). In addition, there is concern that reductions in smoking are partly due to a shift towards e-cigarettes and other new tobacco and nicotine products. In the EU on average, more than one in five 15-year-olds (21%) reported using e-cigarettes at least once in the last 30 days in 2022, with rates above 30% in Bulgaria, Hungary, Lithuania and Poland.

Figure 2.3. Tobacco smoking and drunkenness have decreased among adolescents in the EU

Percentage of 15-year-olds reporting various cancer risk factors



Note: The EU average is unweighted with 26 EU countries for smoking and drunkenness (excluding Cyprus) and 25 countries for overweight and obesity (excluding Cyprus and Ireland).
Source: Health Behaviour in School-Aged Children Survey.

Alcohol use among adolescents similarly reflects the mixed trend seen among adults. Overall, the rates of 15-year-olds reporting being drunk more than once in their life decreased slightly by 2 percentage points between 2014-22. The largest decreases, of eight or more percentage points, were seen in Estonia, Lithuania, Malta, Portugal and the Slovak Republic. In ten of the EU+2 countries, increased rates of repeated drunkenness were reported between 2014-22 among adolescents. Increases by six or more percentage points were seen in Austria, Denmark, Germany and Italy. Decreases were driven by boys, among whom rates decreased from 27% in 2014 to 23% in 2022, while rates remained steady at 23% among girls.

Countries showing large reductions in alcohol use among adults or adolescents have prioritised alcohol control initiatives over the past years. In 2011, the Slovak Republic became the first EU country to introduce minimum unit pricing, followed by Ireland in 2022. Lithuania implemented a 2018 ban on alcohol advertising, including on social media.

More than half of the adult population is overweight in 23 EU+2 countries, while overweight rates among adolescents have increased in all but three countries

Despite a slew of polices to address the high rates of overweight and associated issues of poor diet and low physical activity, the share of overweight adults in the EU remained persistently high (at 51%) in 2022, close to the 52% figure in 2017. In 2022, there were only six countries that had a self-reported overweight prevalence of less than 50% of the adult population (Belgium, Cyprus, France, Italy, Luxembourg and the Netherlands). In Iceland, Latvia and Malta, overweight rates were 60% or above. Men are more likely to be overweight than women in all EU+2 countries, with overweight rates standing at 60% for men in the EU compared to 44% of women.

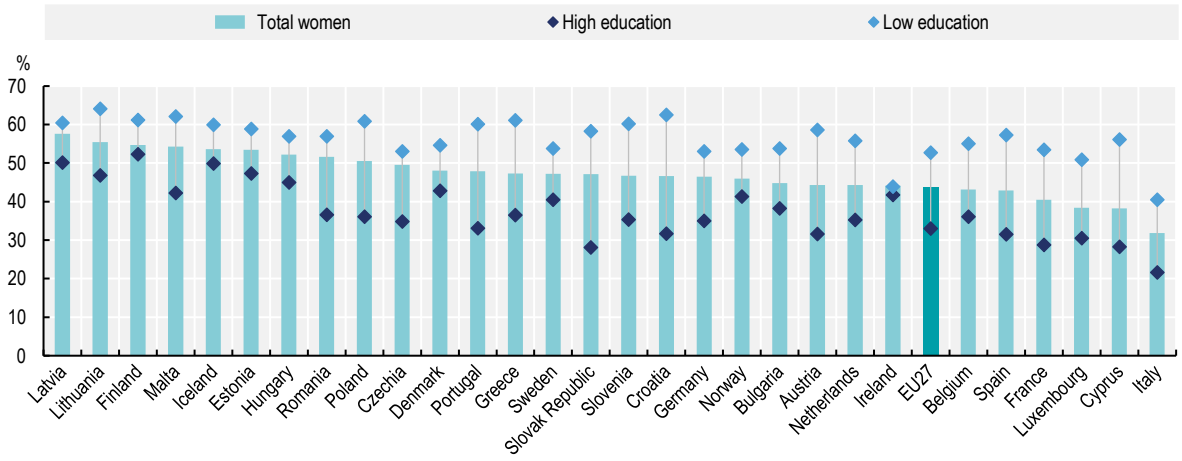
High rates of overweight are driven by poor diets and lack of physical activity. In 2022, about four in ten adults (40%) in the EU consumed vegetables less than once daily and a similar share (39%) consumed fruit less than once a day. For both fruits and vegetables, men reported lower consumption than women, and consumption was slightly lower in 2022 than in 2017. A total of 69% of adults reported engaging in physical activity less than three times per week in 2022, with rates being fairly similar among men and women.

Efforts to battle overweight and obesity among adolescents in the EU appear insufficient, with rates increasing to 21% in 2022, up from 17% in 2014. During this period, overweight and obesity rates increased in all but three (the Netherlands, Spain and Sweden) of the 25 EU+2 countries with available data. In 2022, overweight rates among boys were much higher (26%) than among girls (16%). Only three in ten adolescents reported daily fruit consumption in 2022 (similar to the rate in 2014) and slightly more than a third (34%) reported daily vegetable consumption, an increase from the 30% rate in 2014. Few adolescents reported engaging in daily physical activity of at least 60 minutes in 2022 – 15% – a rate similar to that in 2014.

Given the increasing challenge of overweight in EU countries, it is concerning to see the large socio-economic gaps in overweight rates among women (Figure 2.4). In 2022, 53% of women with low education reported being overweight, which is 20 percentage points higher than the 33% rate of overweight among those with high education levels. Gaps of over 25 percentage points between low and high educated groups were reported in Austria, Croatia, Cyprus, Portugal, the Slovak Republic and Spain. Socio-economic gaps are large among children as well. In each of the 25 EU+2 countries with available data, children aged 11-15 in the bottom quintile based on family affluence had higher rates of overweight than those in the top quintile in 2022, with gaps of over 15 percentage points in Belgium, Bulgaria and Luxembourg.

Figure 2.4. While about a third of women with high education levels are overweight in the EU, that figure jumps to over half of women with low education

Percentage of women aged 18 and over with overweight (including obesity), 2022



Notes: Overweight (including obesity) includes those with a body mass index above 25. Low education refers to lower secondary education or less (ISCED 0-2); high education refers to tertiary education (ISCED 5-8).
Source: Eurostat Database.

To address the overweight challenge, the German federal government's food and nutrition strategy introduced in 2024 aims to make healthy and sustainable diets more easily accessible, thereby also supporting health and contributing to the prevention of obesity. Under this strategy, specific initiatives supporting healthy diets in daycare centres and schools are being undertaken, among others.

Similarly, recent efforts in Malta and Italy aim to promote physical activity and reduce overweight and obesity among school-age children, with Italy relying on educational campaigns and collaboration with industry on food reformulation. Greece launched a National Action Plan for Childhood Obesity in 2023, while Belgium also has new programmes that provide coverage to dieticians for overweight children and a three-tier system including multidisciplinary care in recognised paediatric centres for obese children. Finland, which has the third highest rate of overweight in the EU, is taking a comprehensive approach to the issue – entailing excise taxes on sugar-sweetened beverages, front-of-package food labelling, school food regulation and the Fit for Life cross-sectoral project to encourage physical activity among those ages 40+.

Although countries are investing in prevention, additional efforts are needed to reduce the key cancer risk factors

In 2021, EU countries spent an average of 6.1% of their health spending on prevention policies, such as informational and educational campaigns, healthy condition monitoring, and disease surveillance (4.6% in 2022). This reflects a substantial increase from spending levels of about 3% between 2014-19, prior to the onset of the COVID-19 pandemic. However, much of the increase in recent years is attributed to spending on vaccination and personal protective equipment, rather than wide-ranging public health initiatives aimed at improving underlying population health.

HPV vaccination programmes have become gender-neutral in virtually all EU+2 countries

One of the areas that countries have invested in is vaccination against HPV to eliminate six types of HPV-related cancers including cervical cancer. While many EU countries have been vaccinating girls for HPV for over a decade, vaccination of boys is more recent. The addition of Estonia in 2024 to this list means that all but one of the EU+2 countries already have gender-neutral vaccination programmes in place, with Bulgaria's updated national programme planning for inclusion of boys in 2025.

HPV vaccination uptake among 15-year-old girls averaged 64% in 2023 in the EU. Figures vary widely across the 22 EU countries with available data, with rates below 50% in five countries and above 90% in Iceland, Norway and Portugal. With its relatively low vaccination rate, France rolled out its first school-based HPV vaccination campaign in 2023, seeing an increase in vaccination rates from 31% to 48% among 12-year-olds between the end of 2022 and the end of 2023. Via the RIVER-EU Project targeting underserved groups, the Netherlands is developing interventions to increase HPV vaccine uptake among adolescent girls of Turkish and Moroccan descent while the Slovak Republic is aiming to increase vaccination among the Roma population. In Romania, which has cervical cancer incidence rates three times the EU average, efforts include vaccination campaigns around January's cervical cancer awareness month and March's HPV awareness day. A number of countries have implemented catch-up programmes for those who were not adequately vaccinated at younger ages; for example, in Poland the vaccine is reimbursed 50% for those older than 18 when purchased at pharmacies and in Sweden, a newer version of the vaccine is temporarily being offered free of charge to women born 1994-99 in an effort to eliminate HPV-related cancer by 2027.

Air pollution has decreased substantially over the decade between 2010-20

EU countries have similarly invested in reducing air pollution, with average particulate matter $(PM)_{2.5}$ levels decreasing to 11.7 µg/m³ in 2020, down over 30% from the 2010 figure of 16.9 µg/m³. Decreases were seen in all countries. In Europe in particular, occupational exposure is a large driver of mortality, accounting for 6% of cancer deaths in the EU in 2021. Reported rates of occupational exposure to chemical products or substances among those aged 15+ ranged from 17% in the Netherlands to 37% in Poland. Rates were higher among men than women in about two-thirds of EU countries. Regions in Belgium have different policies against asbestos in both occupational and residential settings, with Flanders requiring an asbestos inspection prior to building sales, which can only be undertaken by certified experts. In Poland, the National Fund for Environmental Protection and Water Management carried out a national programme for safe removal of asbestos and hosted an asbestos database for 2019-24.

Millions of cancer cases could be prevented in the EU over the coming decades via concerted action on the key cancer risk factors

Much opportunity remains to reduce risk factors in EU countries in order to lower the cancer burden. According to the OECD's Strategic Public Health Planning (SPHeP) modelling work, the biggest potential lies in meeting tobacco targets. Almost 1.9 million new cancer cases could be prevented in the EU between 2023 and 2050 if tobacco reduction targets were met (Figure 2.5), with over a million cases prevented in Germany, France, Italy and Poland alone. If alcohol consumption targets were met, an additional 1 million cancer cases could be prevented during this period. In Sweden and Norway, which already have relatively low smoking rates, meeting alcohol targets holds the biggest potential for a reduction in cancer cases. Meeting other risk factor targets would also reduce the number of new cancer cases substantially in the EU: air pollution by about 430 000 cases and obesity by about 310 000 cases.

Figure 2.5. Almost 2 million cancer cases could be prevented in the EU between 2023-50 by meeting tobacco reduction targets

Total number of cancer cases prevented between 2023-50 by meeting risk factor targets, by risk factor and country

	Tobacco	Alcohol	Pollution	Obesity
EU27	1 872 544	1 034 701	428 500	309 426
Austria	40 129	21 874	7 241	5 652
Belgium	43 694	34 579	11 161	7 029
Bulgaria	24 663	9 920	4 783	2 067
Croatia	22 170	7 031	4 543	1 886
Cyprus	4 396	2 277	1 077	854
Czechia	41 357	21 426	10 226	3 708
Denmark	30 842	15 301	5 116	2 276
Estonia	3 980	2 007	123	317
Finland	10 756	9 468	1 109	1 910
France	303 249	196 439	59 658	40 730
Germany	352 766	218 700	74 336	61 558
Greece	67 413	17 676	16 270	5 024
Hungary	56 466	17 147	12 374	2 467
Iceland	1 044	770	90	155
Ireland	20 536	15 368	2 439	7 794
Italy	226 111	160 237	72 872	50 645
Latvia	6 121	2 113	761	386
Lithuania	7 027	2 108	667	927
Luxembourg	2 363	2 062	295	434
Malta	985	916	273	203
Netherlands	91 911	57 713	18 450	12 390
Norway	8 729	13 104	2 111	3 152
Poland	200 537	20 053	60 304	18 387
Portugal	23 731	18 135	2 515	7 736
Romania	65 745	18 386	17 435	6 767
Slovak Republic	21 054	8 329	4 230	3 518
Slovenia	6 714	529	2 403	1 059
Spain	178 762	134 552	36 490	59 157
Sweden	19 069	20 356	1 347	4 547

Note: The target for tobacco is a 30% reduction in tobacco use between 2010 and 2025, and less than 5% of the population using tobacco by 2040. For alcohol, the target is a reduction of at least 20% in overall alcohol consumption and a 20% reduction in heavy drinking (six or more alcoholic drinks on a single occasion for adults) between 2010 and 2030. For air pollution, it is an annual average $PM_{2.5}$ level capped at 10 µg/m3 by 2030 and at 5 µg/m3 by 2050. For obesity, the target is a reduction to the 2010 obesity level by 2025.
Source: OECD (2024), *Tackling the Impact of Cancer on Health, the Economy and Society*, https://doi.org/10.1787/85e7c3ba-en.

3 Early detection

Screening and early diagnosis increases the proportion of cancers detected at an early stage, improving the likelihood of a successful response to treatment and contributing to better patient outcomes and more sustainable health expenditures. Approximately 90% of EU+2 countries introduced population-based breast cancer screening programmes as of 2022, and three-quarters of them have implemented cervical and colorectal cancer screening programmes. While an increasing number of countries adopted a population-based approach to boost participation and to systematically invite the relevant target populations, uptake has recently stalled or even declined for breast and cervical cancer screening. As the 2022 Council Recommendation was adopted, countries are making efforts to reach out to socio-economically disadvantaged communities and using outreach activities, self-sampling and digital solutions to improve accessibility and participation. Moreover, additional cancer screening initiatives for lung, prostate and gastric cancers are on the horizon, with pilot projects to establish the scientific rationale for potential screening programmes implemented under the EU4Health Programme 2021-27.

Although cancer screening programmes are expanding and using new outreach methods, participation rates are stagnating or even declining

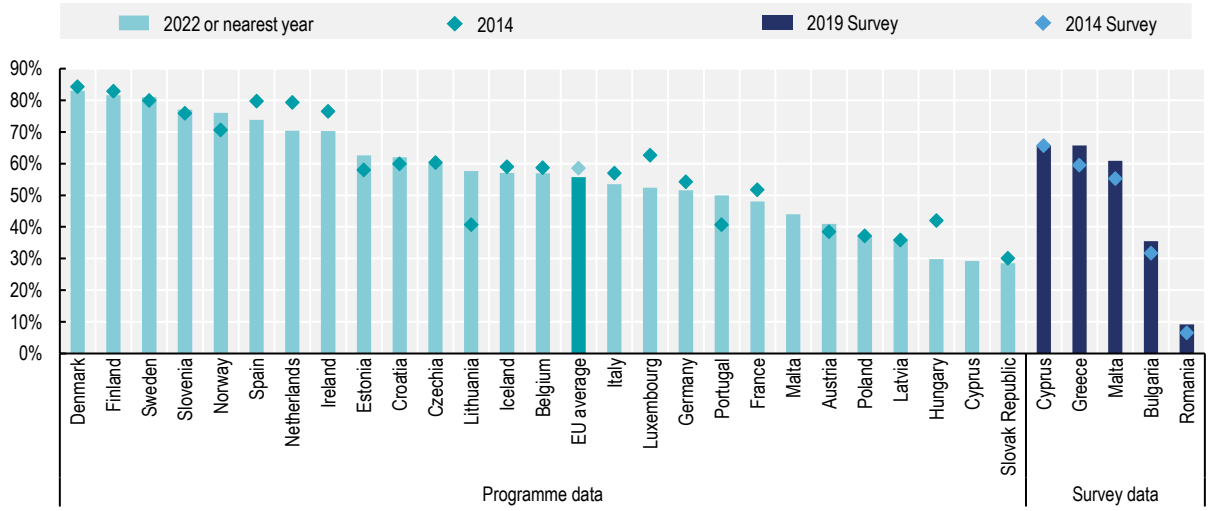
Breast cancer screening participation rates have dropped in more than half of EU+2 countries

The breast cancer screening participation rate reached 56% on average across 24 EU countries with programme data available in 2022 (Figure 3.1). Participation rates were notably high (above 75% of eligible women) in the Nordic countries (Denmark, Finland, Sweden and Norway) as well as in Slovenia. In contrast, fewer than 40% of the target population underwent mammograms in Poland, Latvia, Hungary, Cyprus and the Slovak Republic, according to programme data.[6] Low participation was also observed in Bulgaria (36%) and Romania (9%) according to 2019 survey data.

Uptake has been declining over the last decade, even prior to the additional challenges posed by the COVID-19 pandemic. More than half of countries with programme data reported a drop in participation from 2014 to 2022. During this period, the downward trend was most pronounced in Hungary (-12 percentage points), Luxembourg (-10 percentage points), the Netherlands (-9 percentage points) and Ireland (-6 percentage points). In these countries, participation rates were already lower in 2019 compared to 2014.

Figure 3.1. Breast cancer screening coverage declined in more than half of EU+2 countries over the last decade

Breast cancer screening participation rates among the eligible population, by year and data source



Note: The EU average is based on the unweighted average among the 24 EU countries with programme data for 2022 and the 22 EU countries with programme data for 2014. For the 2014 programme data, different years are referenced for Austria (2015), Poland (2017), Portugal (2017) and Sweden (2017).
Source: OECD Health Statistics; Programa Nacional para as Doenças Oncológicas (Directorate General of Health, Portugal); Institute of Oncology Ljubljana, National Institute of Public Health (Slovenia).

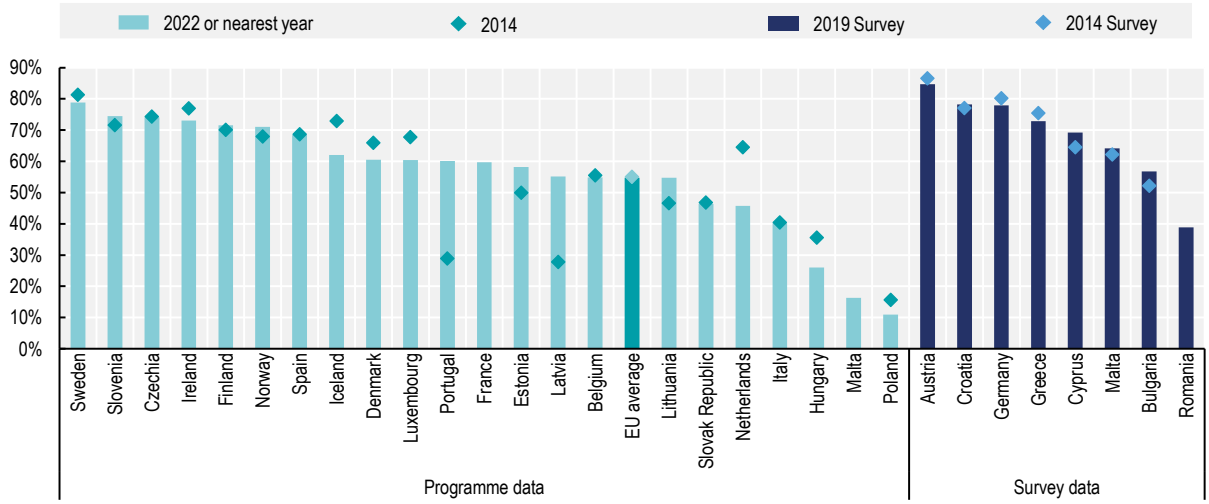
Cervical cancer screening rates declined in two-thirds of countries over the last decade

For cervical cancer screening programmes, cross-country variation in participation rates is substantial. In the EU, based on programme or administrative data, 55% of eligible women were screened for cervical cancer within the past 3 years in 2022 (Figure 3.2). However, while some Nordic countries (Sweden, Finland and Norway), as well as Slovenia, Czechia and Ireland recorded high participation rates exceeding 70%, the uptake was poor in Poland (11%), Malta (16%) and Hungary (26%). A similar pattern can be observed among countries with survey data, as the 2019 uptake ranged widely from a high of 85% in Austria to a low of 39% in Romania. In Malta, the proportion of women aged 20-69 who were screened for cervical cancer is much higher based on survey data (at 64%) than programme data (16%), reflecting the important role of opportunistic screening for cervical cancer in the country.

Similar to breast cancer, falling participation is also evident in cervical cancer screening programmes, with two-thirds of countries with programme or administrative data registering a decline in uptake during the period of 2014 to 2022. The size of the decrease is particularly noticeable in the Netherlands (-19 percentage points), Iceland (-11 percentage points), Hungary (-10 percentage points) and Luxembourg (-7 percentage points), and these four countries all experienced a falling trend even in the pre-pandemic years from 2014 to 2019. By contrast, Portugal and Latvia observed substantial improvement: Portugal saw participation rates rapidly rising from 29% to 60% due to the programme's geographic expansion, whereas Latvia's participation rates nearly doubled to 55%, a possible contributing factor being that invitation letters became available electronically and eligible women were allowed to participate without presenting a letter.

Figure 3.2. Cervical cancer screening participation rates decreased in two-thirds of EU+2 countries

Cervical cancer screening participation rates among the eligible population, by year and data source



Note: The EU average is based on the unweighted average among the 20 EU countries with programme/administrative data for 2022 and the 18 EU countries with programme/administrative data for 2014. For the 2014 programme data, different years are referenced for Poland (2017) and Portugal (2017).
Source: OECD Health Statistics; Programa Nacional para as Doenças Oncológicas (Directorate General of Health, Portugal); Institute of Oncology Ljubljana, National Institute of Public Health (Slovenia).

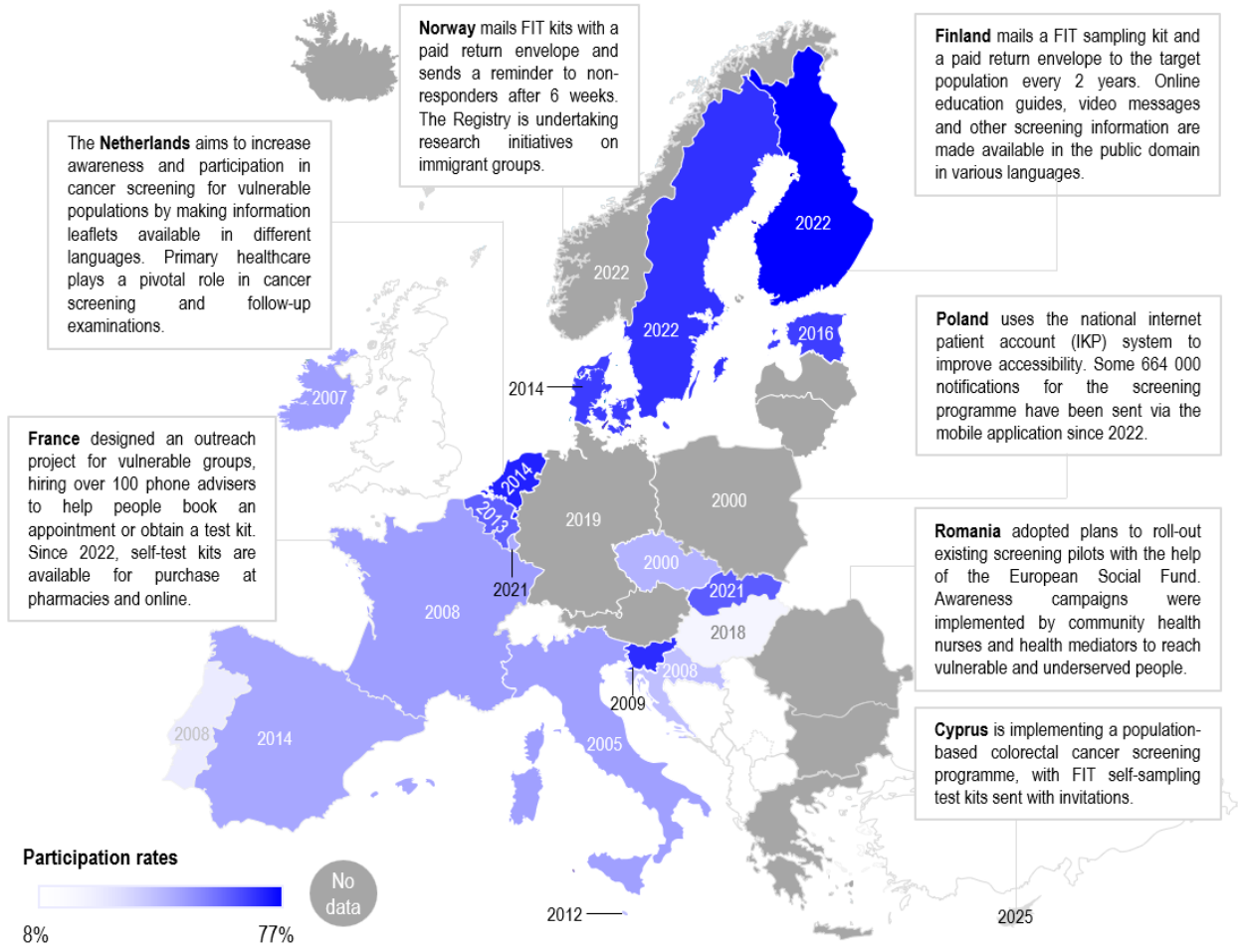
Most EU+2 countries have introduced colorectal cancer screening programmes

A total of 22 EU+2 countries have implemented population-based colorectal screening programmes (Figure 3.3). Finland, Norway and Sweden joined this list as recently as 2022, whereas Cyprus, Iceland and Romania are in the process of launching population-based programmes. The 2022 Council recommendation on screening noted that the faecal immunochemical test (FIT) is considered the preferred colorectal cancer screening method, although colonoscopy may be used as well for a combined strategy. In recent years, countries have intensified their efforts to improve accessibility by making self-sampling FIT test kits more accessible, adopting new technologies and targeting socio-economically disadvantaged groups.

Based on programme data, the share of the target population participating in colorectal cancer screening programmes stood at 42% on average across EU countries in 2022. The uptake was highest in Finland (77%), the Netherlands (68%) and Slovenia (65%). On the other hand, participation rates were less than a third of the EU average in Portugal (14%) and Hungary (8%). Additionally, 2019 survey data shows a high participation of 64% in Austria, but limited participation in Cyprus (22%) and Romania (3%).

Figure 3.3. Colorectal cancer screening programmes have recently expanded in EU countries alongside initiatives to better reach target populations

Colorectal cancer screening programme, launch years and participation rates (colouring) in 2022 or the nearest year



Note: Only participation rates based on programme data are shown in figure. Twenty-two EU+2 countries implemented population-based colorectal screening programmes as of 2022. Colorectal cancer screening programmes are not population-based in Austria, Iceland, Latvia, Lithuania and Romania. Bulgaria and Greece do not have a national colorectal cancer screening programme.
Source: OECD Health Statistics; Programa Nacional para as Doenças Oncológicas (Directorate General of Health, Portugal); National Oncology Institute (Slovak Republic); Institute of Oncology Ljubljana, National Institute of Public Health (Slovenia).

Countries are working to overcome screening inequalities and are making self-sampling more accessible

Growing evidence reveals that screening participation is significantly lower among socio-economically disadvantaged groups, including low-income earners, individuals with lower education, rural populations and people with a migration background. In Iceland, for example, the 2023 uptake of cervical cancer screening was 72% among Icelandic citizens and 27% among the foreign population. In Sweden in 2019-20, only 64% of women with lower education levels participated in the breast cancer screening programme in contrast to 82% among women with higher education levels. National data from Germany, Hungary, Ireland and Sweden also demonstrate that people with low income and people with a low level of education have a lower likelihood to participate in cancer screening programmes. These countries have

implemented targeted awareness campaigns to encourage their participation. In addition, the Country Cancer Profiles note that countries such as Finland, Germany, Ireland, the Netherlands and Norway have identified low uptake among migrant communities and made screening invitations and guidelines available in different languages. Slovenia, which has among the highest screening participation rates in the EU, uses a targeted approach to reach vulnerable populations for each screening programme as well as a general public communications strategy.

To overcome socio-economic disparities, community outreach and mobile screening solutions are increasingly adopted by EU+2 countries. France has hired 100 telephone operators to specifically connect vulnerable groups with the colorectal cancer screening programme since 2024 (see also Figure 3.3). In Estonia, Germany, Iceland, Ireland, Poland, Romania and Slovenia, mobile breast cancer screening vehicles are authorised to perform mammography on the spot, often in remote areas. Hungary's Mobile Health Screening Programme mainly targets socio-economically disadvantaged communities including the Roma population, for melanoma, cervical and oral cavity cancers, with records obtained during visits feeding into the Hungarian e-Health Infrastructure platform.

Moreover, self-sampling kits are increasingly made available to address barriers to screening for vulnerable populations and to improve the effective inclusiveness of programmes. For colorectal cancer screening, the FIT kits have become a feasible self-sampling tool. Practical steps differ by country and region. In France, Luxembourg and the Flemish, Walloon and Brussels regions of Belgium, self-sampling is available, but individuals can get a test kit from general practitioners (Wallonia), order online (France, Luxembourg, Wallonia, Flanders), or go to physical pick-up spots such as pharmacies (France, Luxembourg, Brussels and Wallonia). On the other hand, countries such as Finland, the Netherlands and Norway, as well as Brussels and the Flanders regions of Belgium, send an invitation with a FIT kit and a paid return envelope included at the same time (see also Figure 3.3).

When it comes to cervical cancer screening, HPV self-sampling is already used in Denmark, Norway and the Netherlands: it is optional in the Netherlands, while it is primarily limited to non-responders in the other countries. In Norway, it is provided through general practitioners to women who face barriers to traditional screening. Meanwhile, several EU+2 countries are in a pilot phase on HPV self-sampling and the development has been promising. The Czech pilot has found that this approach supports better participation from women at risk of poverty and social exclusion. In a Spanish study, HPV self-sampling turned out to be more used among populations with migrant backgrounds. Belgium is exploring how to scale up screening via a pilot comparing various HPV self-sampling kit delivery methods such as mail and GPs.

Digital solutions are also being used to enhance screening awareness and support screening implementation. Estonia's digitalised health information system contributes to identifying the target population, sending screening invitations and reminders, and reaching out to non-participants during their interaction with healthcare workers. In Poland, the Ministry of Health launched a mobile phone application in 2021 to inform the target population of screening opportunities. In the Netherlands, cancer screening data are linked to other information systems to identify the socio-economic and migration status of individuals in the target population, which then produce performance indicators to ensure quality and coverage.

Lung, prostate and gastric cancer screening and expanded genetic testing are under consideration

Consistent with the 2022 update of the Council Recommendation, which proposes to examine evidence-based feasibility studies to introduce gastric, lung and prostate cancer screening programmes, a number of EU+2 countries are already operating or about to launch additional screening programmes for these three cancers. As part of the EU4Health Programme 2021-27, moreover, the TOGAS project (for

gastric cancer), SOLACE project (for lung cancer) and PRAISE-U project (for prostate cancer) have been launched to support these screening efforts.

Regarding lung cancer, the cost-effectiveness of the low-dose computed tomography (CT) screening is recognised in Belgium under specific considerations for a high-risk population of current and recent ex-smokers aged 50-75 years old (Desimpel F, 2024[11]), and in Sweden, while it is still under examination in several EU countries. Although not population-based, in October 2020, Croatia became the first country in Europe to introduce a lung cancer screening programme. It invites active smokers aged 50-70 and former smokers who quit within the last 15 years to undergo a CT scan every year. Similar targeting is piloted in Estonia, Germany, Hungary, Italy and Poland, for example.

For prostate cancer, Czechia transitioned to a population-based organised programme in January 2024. The programme invites men aged 50 to 70 through their registered family doctors or urologists, who are offered financial incentives to screen this target group. A prostate-specific antigen (PSA) test and a urological test are performed and, if necessary, a magnetic resonance imaging (MRI) scan will also be included. Similarly, Latvia and Lithuania introduced national, opportunistic prostate cancer screening in May 2021 and January 2006, respectively. In Lithuania, guidelines call for men aged 50-69 as well as those aged 45 and over with a family history of prostate cancer to be tested every 2 years. However, the screening interval may be stretched to 5 years depending on the individual's PSA level and age. Meanwhile, in Latvia, men aged 50-75 as well as those aged 45 and over with a family history of prostate cancer can be referred for screening every 2 years.

Furthermore, genetic counselling and testing are recommended and offered in a few countries to improve early detection for individuals with a family history of cancer. Recent evidence suggests that targeted BRCA genetic testing could be cost-effective for breast and ovarian cancers with an incremental cost-effectiveness ratio (ICER) of USD 21 700 per quality-adjusted life years (QALYs) compared to no genetic testing (Koldehoff et al., 2021[12]). Similarly, a meta-analysis of targeted genetic testing for colorectal cancer finds that the estimated ICERs range from USD 32 322 to USD 76 750 per QALYs (Teppala et al., 2023[13]). In Italy, all regions are expected to make genetic risk assessment available by the end of 2025. In Austria, genetic testing is offered in six medical centres for individuals and recommended to those who have a family history of cancer, have multiple tumours, or cancer occurring at a young age. Predictive testing is free for patients suspected of hereditary breast and ovarian cancer syndromes.

In addition to screening, early diagnosis to enable the prompt detection of symptomatic people is key to improving survival rates, patient quality of life and sustainability of health spending. Improving early detection via fast-track pathways (See Cancer care performance section), raising awareness of cancer symptoms among the general population, and engaging primary care physicians in early detection efforts are vital to improving cancer outcomes (OECD, 2024[8]).

4 Cancer care performance

Countries are undertaking different policies, ranging from increasing health professional training capacities, using online tumour boards, investing in diagnostic and radiotherapy equipment, and implementing managed entry agreements to improve access to the cancer care system. In parallel, improvements in cancer survival have occurred in breast, prostate, colorectal and lung cancer, although cervical cancer survival estimates are stagnant. To improve quality of cancer care, countries are centralising cancer care at specialised centres supported by larger oncology networks, as well as incorporating use of patient-reported outcomes and regular quality monitoring. Given that cancer is anticipated to take a large toll on society in the coming decades, notably through a reduction of the workforce and its productivity and an increase in mental health disorders, a number of countries are also investing in psychological, social and occupational rehabilitation to improve the quality of life of people with cancer.

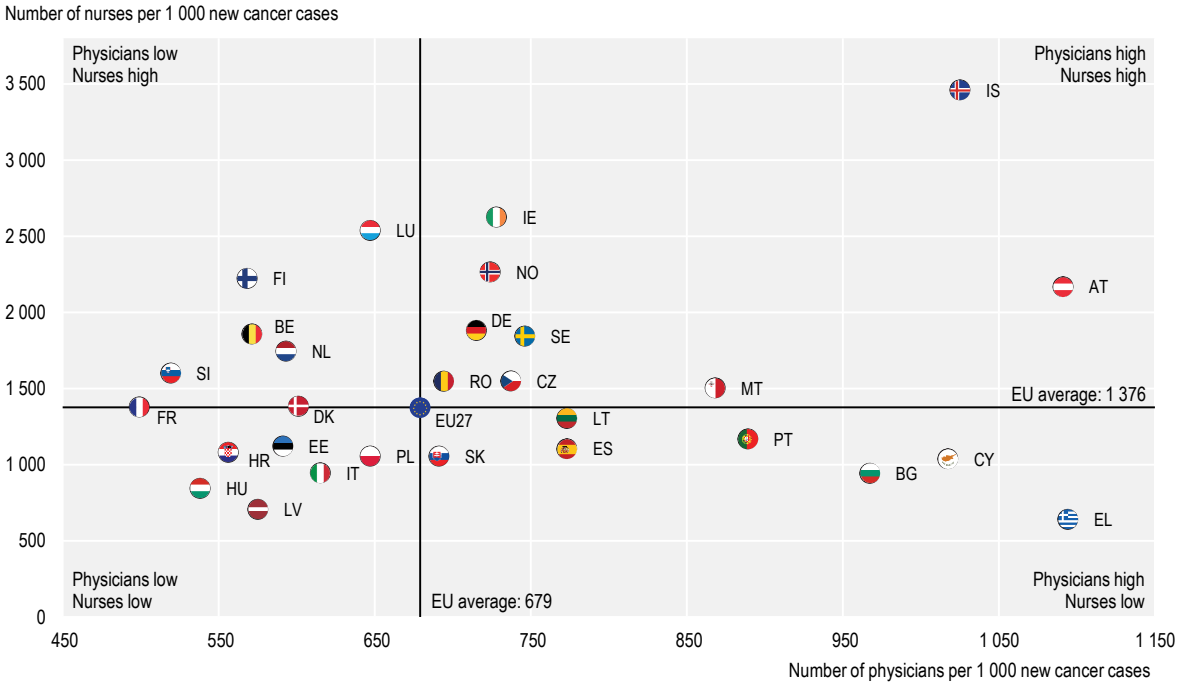
Growing cancer prevalence is driving efforts to improve accessibility and quality of cancer care

There are shortages in the healthcare workforce involved in primary prevention, early detection, and management of cancer care

Cancer care has increasingly become more specialised, requiring the collaboration of multidisciplinary teams across all levels of care. With the growing number of cancer diagnoses, rising cancer prevalence and efforts to shift health systems towards primary care, general practitioners and nurses play a vital and expanding role in cancer-related prevention, early detection, rehabilitation, and follow-up. Consequently, shortages in any links in the care process can create bottlenecks and affect patient outcomes, highlighting the importance of an adequately staffed and skilled workforce.

Figure 4.1 illustrates the relationship between the number of physicians and nurses per 1 000 cancer cases across EU+2 countries in 2022. In the EU on average, there are about twice as many nurses (1 376) per 1 000 new cancer cases as there are doctors (679). The Nordic countries (Iceland, Norway and Sweden), along with Austria, Czechia, Germany, Ireland, Malta and Romania are characterised as having a higher-than-average number of both doctors and nurses per cancer case. In contrast, many countries in Central and Eastern Europe, as well as Southern Europe (Croatia, Estonia, Hungary, Italy, Latvia and Poland) are characterised as having a lower-than-average number of doctors and nurses.

Figure 4.1. The availability of nurses per cancer case varies more than 5-fold across EU+2 countries



Note: The data on nurses include all categories of nurses (not only those meeting the EU Directive on the Recognition of Professional Qualifications). Data refer to practising nurses except in Portugal and the Slovak Republic, where they refer to professionally active nurses. In Greece, the number of nurses is underestimated as it only includes those working in hospitals. In Portugal and Greece, data refer to all doctors licensed to practise, resulting in a large overestimation of the number of practising doctors. The EU average is unweighted.
Source: OECD Health Statistics 2024. Data refer to 2022 (or latest available year) for all countries except Luxembourg (2017).

The shortage of general practitioners is particularly pronounced and was identified as an issue in 16 Country Cancer Profiles. Moreover, shortages of medical specialists essential to cancer care, such as medical and radiation oncologists, radiologists, pathologists, and surgeons, are reported across the Profiles. Among the 15 countries with available data, the density of medical, radiation or clinical oncologist was the highest in Italy and Czechia (with more than 6 physicians per 100 000 population) and lowest in Malta and Bulgaria (with 2 or fewer oncologists per 100 000 population).

In addition, there are significant geographical disparities in the distribution of oncologists within countries, particularly between urban and rural areas. This is reported in countries such as Austria, Belgium, Czechia, Greece and Latvia. In Greece, for example, the density of clinical oncologists ranges almost 10-fold from 53 per 1 000 000 population in urban Attica to 5.6 in remote Peloponnese. With nearly two-thirds of oncology hospitals and clinics concentrated in Athens and Thessaloniki, rural patients face significant challenges accessing diagnosis, treatment, and follow-up services.

Increasing training capacity, introducing digital solutions and re-envisioning the role of oncology nurses can help address workforce shortages

Several countries have increased training capacity in cancer care to address shortages and uneven distribution of the workforce, such as France, Ireland, Italy, Latvia and Norway. France implemented a significant reform of its medical education programmes in 2017, particularly focusing on cancer specialists, which led to a doubling of trained medical oncologists and a one-third increase in radiation oncologists by

2023. Increasing training capacity and recruitment efforts in Norway has led to a rise in the annual number of newly recognised medical oncologists by almost 50% between 2013 and 2023.

To bridge gaps in underserved regions, some countries have also implemented innovative solutions such as regional or online tumour boards and multidisciplinary meetings. Iceland extensively uses online tumour boards to link its limited and geographically dispersed cancer specialists both among themselves and with international experts. In Austria, the use of teleconsultations by oncologists and other specialists allows for virtual consultations to discuss symptoms, treatment plans, and therapy progress, reducing travel requirements and waiting times. Estonia also offers e-consultations with oncologists while Croatia is expanding teleconsultation to promote multidisciplinary collaboration and enhance access to care in isolated areas. The EU Joint Action "eCAN" is exploring the impact of teleconsultation and telemonitoring on cancer care to reduce inequalities across the EU.

To better address the increasing health needs of people with cancer and tackle oncologist shortages, several countries have started to implement more advanced roles for nurses in cancer care, such as "oncology nurses" and "nurse co-ordinators". Denmark and Sweden have well-developed advanced practice nursing roles in cancer care that help mitigate physician shortages through task-sharing opportunities. In 2018, France introduced a new two-year master's degree for nurses, creating the role of *infirmiers en pratiques avancées* [advanced practice nurses], with four specialisations: chronic pathologies (primary care), oncology, kidney diseases and mental health. Specialisation for oncology nursing in Croatia was initiated and a curriculum proposal submitted to the legislature. Slovenia has introduced nurse co-ordinators to encourage substitution among healthcare workers at hospitals, while hospitals in Luxembourg offer a continuous training programme for oncology nurses.

Addressing shortages of different categories of health workers requires a multi-pronged strategy targeting both supply-side (e.g. expanding education, increasing retention) and demand-side policies (e.g. making more effective use of the health workforce by changing skill-mix and supporting effective use of technologies), with the optimal policy mix dependent on each country's specific circumstances and guided by a comprehensive workforce strategy (OECD/European Commission, 2024[14]).

Workforce shortages lead to increased waiting times for patients seeking diagnosis, treatment, and follow-up care for cancer. Despite several countries reporting challenges in maintaining acceptable waiting times, most struggle with effectively tracking and monitoring them. To address this issue, some countries have set specific targets and actively monitor waiting times for various aspects of cancer care (Denmark, Estonia, Finland, Ireland, Lithuania, Latvia, Luxembourg, the Netherlands, Norway, Poland, Portugal and Slovenia). Additionally, fast-track pathways and referral mechanisms have also been introduced in countries such as Croatia, Ireland, Lithuania, Latvia, Luxembourg, the Netherlands, Poland and Slovenia to streamline the patient journey and reduce delays in accessing care. Lithuania, for instance introduced the "Green Corridor" in 2023, connecting newly diagnosed patients with a dedicated care manager who provides logistical and emotional support, as well as co-ordinates medical care.

Despite investments in diagnostic and treatment capacity, uneven geographical distribution and skill gaps hinder access

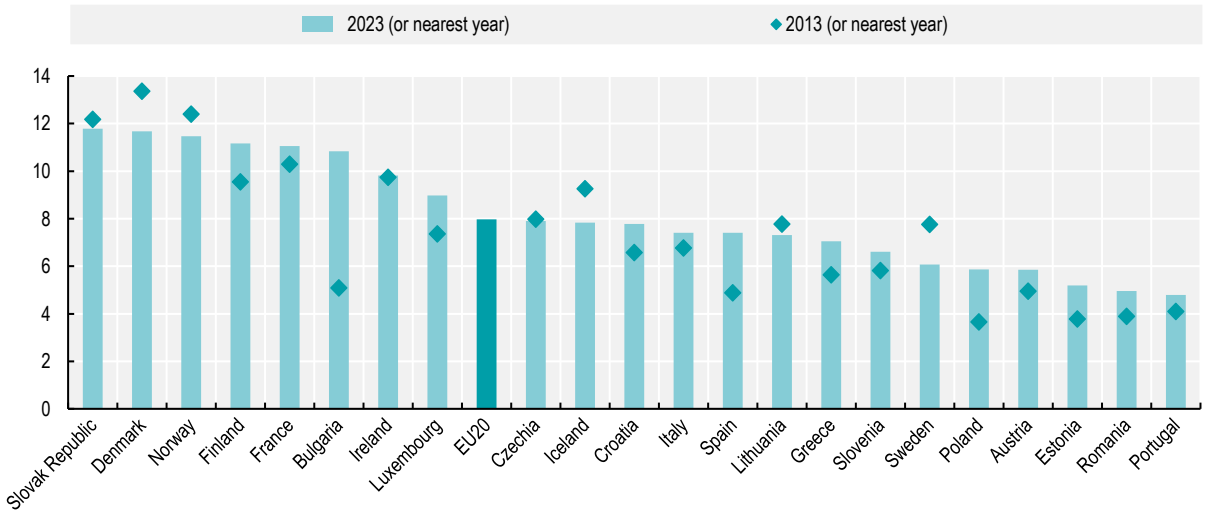
Access to cancer diagnostic and treatment equipment is crucial for cancer care across EU+2 health systems. Over 2012-22, EU countries registered substantial increases in the number of CT scans (28%), MRIs (58%), and positron emission tomography (PET) scans (53%) per million inhabitants. Some of these developments have been supported through joint efforts between countries and the EU. Portugal, for example, is leveraging Recovery and Resilience Plan funds to increase and renew dated therapy and imaging equipment and introduce new capabilities like robotic surgery across its national health service.

The density of radiotherapy equipment varies almost 3-fold among the 22 EU+2 countries with available data, ranging from slightly less than 5 per million people in Portugal to 12 per million people in the

Slovak Republic (Figure 4.2). Countries in the top economic tercile had an average radiotherapy equipment supply of 8.8 per million people compared to 7.3 per million among countries in the bottom economic tercile. Over the decade between 2013-23, most countries have also prioritised increasing radiotherapy equipment. Bulgaria and Poland reported the highest increases (by 60% or more), while Sweden, Iceland and Denmark experienced a decrease in the volume of radiotherapy equipment over the same period.

Figure 4.2. Volume of radiotherapy equipment varies almost threefold across EU countries

Volume of equipment per 1 000 000 population



Note: The vast majority of radiotherapy equipment in EU countries is found in hospitals. Data for Portugal and France include equipment in hospitals only while data for other countries refer to all equipment.
Source: OECD Health Statistics 2024.

Effective access to radiotherapy treatment can be restricted due to poor geographical distribution of equipment, health workforce shortages and cost-sharing arrangements. Uneven geographic distribution of diagnostic and treatment capacity is evident in countries such as Belgium, Cyprus, Czechia, Estonia, Finland and Italy. To address this issue, several countries have pursued policies such as providing financial support for travel or hotel costs (Ireland, Finland and Romania).

In addition, the low supply of a specialised health workforce and gaps in skills necessary to operate equipment and provide treatment hinder effective access to medical equipment. Shortages of radiation therapists and radiologists have, for example, been reported in Bulgaria, Czechia and the Slovak Republic. In the Netherlands, a shortage of personnel in 2021 led to an increase from two to three years in the invitation cycle for mammography screening, alongside campaigns and investments to boost the supply of technicians. In Sweden, the decrease in available radiation therapy equipment over the last decade has been attributed to the lack of specialised health personnel.

There is a three-fold difference in the reimbursement of cancer medicines with a high clinical benefit across EU+2 countries

Alongside radiotherapy, traditional chemotherapy and novel medications are a mainstay of cancer treatment. However, national coverage of cancer medications and the timelines for making coverage decisions vary widely among EU countries. The proportion of indications among a sample of new cancer

medicines for breast and lung cancers with high clinical benefit that are reimbursed stood at 100% in Germany, 92% in the Netherlands, and 85% for both Bulgaria and Sweden (Hofmarcher, Berchet and Dedet, 2024[15]). In contrast, Malta did not reimburse any indications, while Cyprus and Latvia reported that only about a third of indications were covered (both 31%). Both Malta and Cyprus however had some indications available through named-patient early access programmes. Time from European-wide marketing authorisation of an indication until national reimbursement approval also ranged widely – from around 100 days or less in Germany and Sweden to more than three years in Cyprus, Latvia and Lithuania.

Similarly, among 19 biosimilars of three cancer medicines, the share reimbursed also exhibits substantial differences across countries. In Malta, only three biosimilars (16%) are available on the Government Formulary while in Estonia, that figure stood at 100%. However, all countries had at least one biosimilar reimbursed for each of the three medicines examined. Considering countries' GDP per capita, there is a positive correlation between higher-income countries and share of public reimbursement of new oncology medicines. The reverse holds true for biosimilars, which are cost-saving alternatives to original biologics.

Performance- or financial-based managed entry agreements are available across most countries to help patients gain faster access to new cancer medicines despite limited or immature evidence, while controlling the budget impact on health spending. Other efforts aimed at addressing potential barriers to patient access of new cancer medicines include population-based early access schemes (e.g. Cyprus), creating specific budgets to finance pharmaceutical innovation (e.g. France), centralisation of price negotiations and increases in reimbursement ceilings (e.g. the Slovak Republic), and joint health technology assessments (HTA) to evaluate cost-effectiveness of new oncology medicines (such as the Beneluxa initiative or the Joint Nordic HTA-bodies). The implementation of Regulation (EU) 2021/2 282 on HTA from 2025 is a step forward in this direction, mandating collaborative clinical assessments and scientific consultations involving patients, clinical experts and relevant stakeholders.

Out-of-pocket costs can be an obstacle in accessing cancer care

In addition to national medication coverage decisions and supply of medical equipment, the degree of cost-sharing can significantly impact access to cancer care, especially for less affluent populations. Although out-of-pocket payments (based on EUR PPPs) have decreased by 11% in the EU in 2012-22, they still account for 15% of all health spending in 2022. While a broad range of cancer care is publicly financed, the Country Cancer Profiles show that financial barriers persist in accessing certain services.

For instance, in Bulgaria, a 2024 survey revealed average copayments of BGN 1 465 (EUR 733) for cancer treatment, with surgery accounting for the largest share. Until November 2023, 44% of CT scans and 21% of MRI scans in Belgian hospitals incurred fee supplements, while in Finland, patients face copayments for sequential therapy in hospitals. Financial barriers also extend to other aspects of cancer care, such as copayments for screening activities in Iceland and reliance on private financing for genetic testing to identify optimal treatment and for palliative care services in the Slovak Republic.

Improvements in survival estimates and cancer care quality initiatives are evident across EU countries

Estimated cancer survival has improved over the past years, although the pace of progress varies substantially by cancer site

Cancer survival estimates are the best indicator of care quality, since they reflect the health system's ability to detect cancer at earlier stages and provide access to effective treatment. Based on the 17 EU+2 countries that had recently available survival estimates reported in the Country Cancer Profiles, there has been an improvement in five-year survival. For example, in the Netherlands, the estimate of

overall five-year relative survival increased from 53% in 1995-2004 to 67% in 2015-22. In Estonia, five-year relative survival estimates increased over the most recent ten-year window, from 54% in 2007-11 to 58% in 2017-21, while estimates in Latvia increased to 48% in 2017-22 from 44% a decade prior. In Slovenia, five-year survival estimates for patients diagnosed in 2012-16 improved for both genders compared to a decade earlier, although improvements among men (46% to 56%) were larger than among women (58% to 60%).

According to data presented in the Country Cancer Profiles, lung cancer (which has low survival rates), has seen the largest increase in survival estimates among the main cancer types. Notable improvements were seen in all 15 of the EU+2 countries with available trend data. In Ireland, the estimated five-year net lung cancer survival stood at 24% in 2014-18 and in Denmark, the estimated lung cancer survival among men stood at 25% and at 32% among women in 2017-21. In both Ireland and Denmark, 5-year survival for lung cancer almost doubled or more compared to the previous decade.

Survival estimates tend to be highest for breast and prostate cancers. Five-year survival estimates have moderately increased in all countries for breast cancer and in the majority of countries for prostate cancer where data is available. In Austria, estimated prostate cancer survival improved from 84% to 94% during the 20-year window leading up to 2014-18, while in Finland, it increased from 93% to 95% in the nine years between 2011-13 and 2020-22.

Unlike breast cancer, there are concerning trends in survival for cervical cancer. Over the last 10-20 years, there has been a stagnation in five-year survival estimates for cervical cancer in most of the 12 EU+2 countries with available data, even though cervical cancer survival estimates were already notably lower than those of breast cancer. Some countries have even seen worsening survival estimates. Iceland has seen particular improvement in breast cancer five-year survival estimates, increasing from 75% to 88% in the ten-year period between 1998-07 to 2008-17. In contrast, data from the Icelandic Cancer Registry shows that estimated five-year survival rates for cervical cancer in the country have fallen from 69% to 67% during this period. Similarly, Croatia has seen breast cancer survival estimates increase to 84% in 2016-20 while cervical cancer survival estimates have decreased slightly to 61%, as compared to figures in 2011-15. In Germany, breast cancer survival remained stable between 2009-10 (87%) and 2019-20 (88%) while cervical cancer survival decreased by 4 percentage points from 68% to 64% during this period.

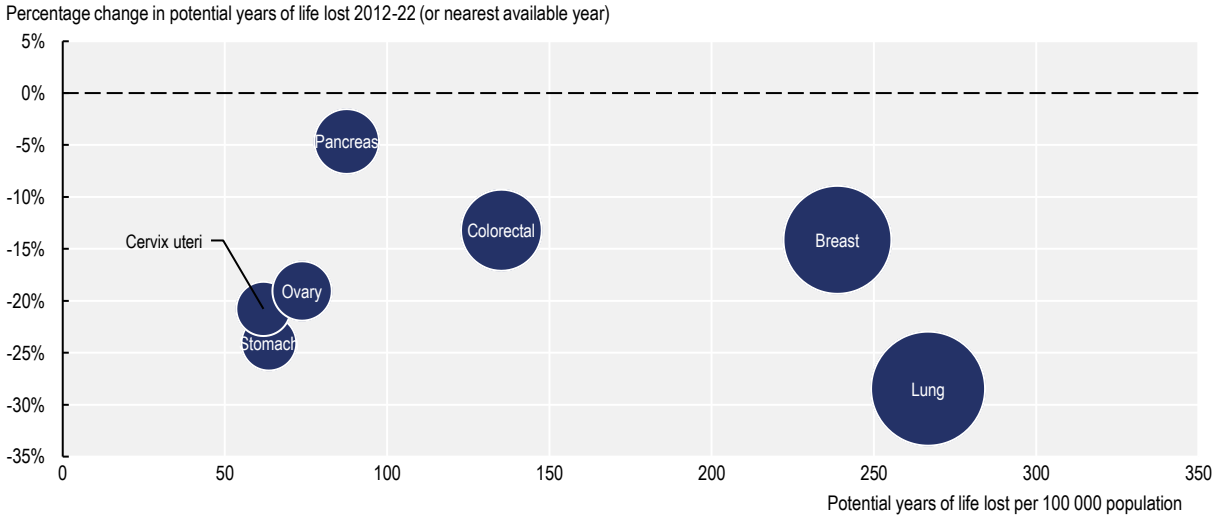
Screening programmes play a role in survival rates. Notable improvement in five-year survival estimates for colorectal cancer for all countries with available data comes alongside the introduction of population-based colorectal screening programmes in numerous EU countries over the past 15 years (see Section 3). Given that breast cancer screening participation rates have fallen over time in many EU countries, improved breast cancer survival estimates may relate to better treatment options that are compensating for the challenges in uptake of breast cancer screening. For cervical cancer however, the decrease in screening participation in the majority of EU countries may be contributing to stagnation in survival rates for this cancer.

Between 2012 and 2022, premature mortality due to cancer has fallen by almost 20%

In addition to survival data, potential years of life lost (PYLL) is an interesting complementary measure of the impact of different cancers on society, because it puts a higher weight on cancer deaths among younger individuals. Examining the change in PYLL over time across various cancer sites can point to improvements in cancer care systems (prevention, early detection and/or treatment) via reductions in premature mortality. In 2022, cancer was responsible for 1 355 potential years of life lost per 100 000 population in the EU, which is a decrease of 19% compared to the 1 679 figure in 2012. Decreases were seen in all EU countries, signifying improvements in cancer care across countries.

Decreases in PYLL were seen on average in the EU across the main cancer types, with the largest decrease (28%) seen in lung cancer (Figure 4.3). This decrease is likely due to reductions in smoking rates over the years as well as the improvements seen in lung cancer survival. Similarly, reductions in colorectal (13%) and breast cancer (14%) PYLL may be related to improvements in treatment, which have increased survival rates and have come alongside introduction or expansion of population-based colorectal cancer screening. In contrast, given the stagnant cervical cancer survival rates seen over time in EU countries, the large reduction in PYLL from cervical cancer (21%) could point to effectiveness of the introduction and expansion of HPV vaccination programmes over the years.

Figure 4.3. Over the last decade, there has been a reduction in potential years of life lost across all main cancer sites



Note: The rate of PYLL from breast, cervical and ovarian cancer is calculated in women only, while the rate of PYLL from prostate cancer refers to men. The size of the bubbles is proportional to the PYLL rates in 2022 (or latest available year).
Source: OECD Health Statistics 2024.

Development of concentrated cancer care is a key priority for EU countries

Recognising the benefits of the concentration of cancer care in terms of patient outcomes, countries have been moving towards organising cancer care around specialised care centres supported by broader cancer networks.

Specialised cancer care has been centralised in Czechia since 2008, and as of 2022, such centres must ensure co-ordination of the full spectrum of cancer care within their regional network. A similar centralised care model with national and regional networks exists in Finland, while in Denmark, a comprehensive cancer centre was established in 2017 to centralise national efforts on cancer research, prevention and treatment.

Some countries are implementing important changes towards centralisation of cancer care. In Greece, it was announced that Agios Savvas Hospital will become the country's first comprehensive cancer centre. In recent years, both Germany (2024) and the Slovak Republic (2021) have decided on or launched major hospital reform efforts geared at centralising specialty care, including based on minimum volume requirements. In addition to greater care concentration, the reforms also aim to improve cancer care via allowing patients to compare hospitals on various criteria (Germany) and via the development of quality indicators (the Slovak Republic). To leverage national efforts on a larger scale across borders, the Joint Action CraNE laid the groundwork to establish the first Network of Comprehensive Cancer Centres in the

EU. The work has been continued in the follow up Joint Action, EUnetCCC, started in October 2024. All EU member states plus Norway, Ukraine, Moldova and Iceland are partners to this project.

Countries are upgrading data infrastructure and starting to collect patient-reported outcomes to improve the quality of cancer care

EU countries are improving care quality via a range of methods such as enhancement of data infrastructure for cancer control, implementation of multidisciplinary tumour boards, use of clinical guidelines, and assessments and measurement of quality indicators. Italy has an observatory for monitoring the quality of Regional Oncology Networks, including assessing their ability to meet cancer care pathways designed to promote timely diagnosis and high-quality care across regions. In Lithuania, the existing health information system was upgraded in 2023-24, and can now monitor the cancer patient's diagnosis (for cervical, colon and breast cancers) and treatment pathway over time. Romania is at an earlier stage in its cancer quality processes but has made significant recent strides by developing patient pathways for major tumours and undertaking efforts to establish a national cancer registry by 2025.

Countries are also increasingly recognising the importance of patient-reported outcome measures (PROMs), although many have not yet implemented standardised, national processes to collect such information. In Denmark, prostate and breast cancer-specific PROMs are reported at the regional level while many of Sweden's 30+ cancer quality registries also incorporate information on patient-reported outcomes and experiences. Austria collected patient-reported measures for hospitalised patients, including those with cancer, in 2022, and has various local initiatives underway, including a digital PROMs reporting tool for young cancer patients at the Medical University of Innsbruck.

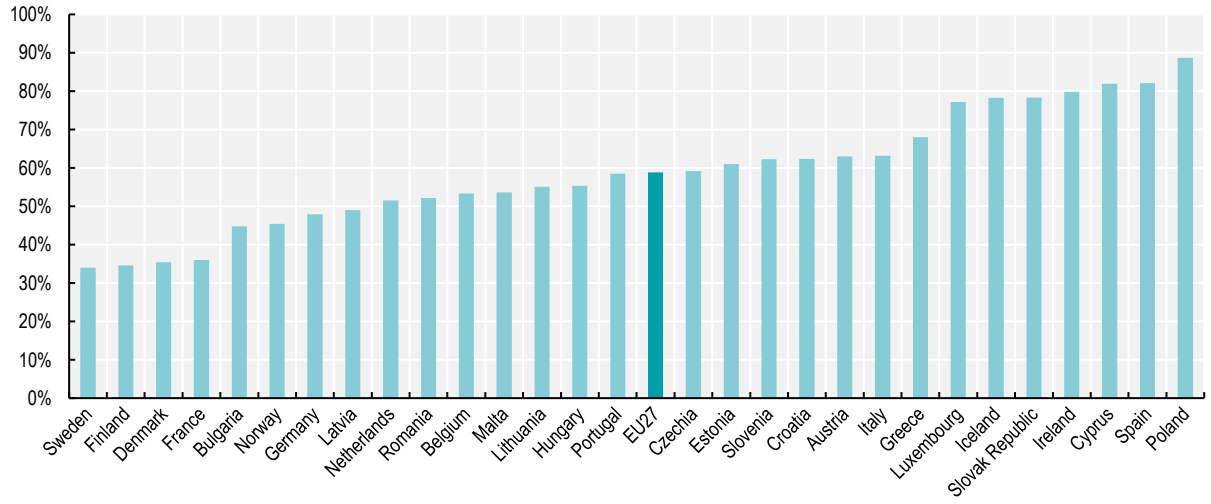
The increasing cancer burden has wide-ranging impact on the health system and the economy

As populations age and the number of cancer diagnoses increases, per capita healthcare spending on cancer is projected to increase by 59% in the EU

Cancer imposes a direct financial burden on societies through healthcare expenditures related to its treatment. As populations age and the incidence of cancer increases, the prevalence of cancer is expected to rise, leading to larger associated treatment costs. According to OECD SPHeP modelling work, per capita health expenditure on cancer care is projected to grow by an average of 59% in the EU between 2023 and 2050 (OECD, 2024[16]). Assuming the current standard of care and cost per case of cancer remain the same, the growth in per capita health expenditure on cancer is projected to be the lowest in Sweden, Finland, Denmark and France – at less than 36% (Figure 4.4). By contrast in Cyprus, Spain and Poland, the per capita health expenditure on cancer care is projected to grow by an average of more than 80%.

Figure 4.4. On average in the EU, health expenditure on cancer is projected to increase by more than 50% in 2050 compared to 2023

Projected increase in per capita cancer health expenditure, in real terms, from 2023 to 2050



Note: The EU average is unweighted.
Source: OECD (2024), *Tackling the Impact of Cancer on Health, the Economy and Society*, https://doi.org/10.1787/85e7c3ba-en.

The burden of cancer not only includes the cost associated with treating cancer, but also cancer's broader impact on other healthcare expenditures as it affects other conditions such as mental health or the need for rehabilitative care. Looking at the burden of cancer on total health expenditure, the OECD SPHeP modelling work shows that on average over the period 2023-50, health expenditure in 19 EU+2 countries is estimated to be 7.0% higher due to the presence of cancer. Per person adjusted for purchasing power parities (PPPs), this equates to EUR PPP 242 per year. Countries with higher average health expenditure, like Norway, the Netherlands, Germany and Sweden also see higher per capita health spending due to cancer, above EUR PPP 400 per year.

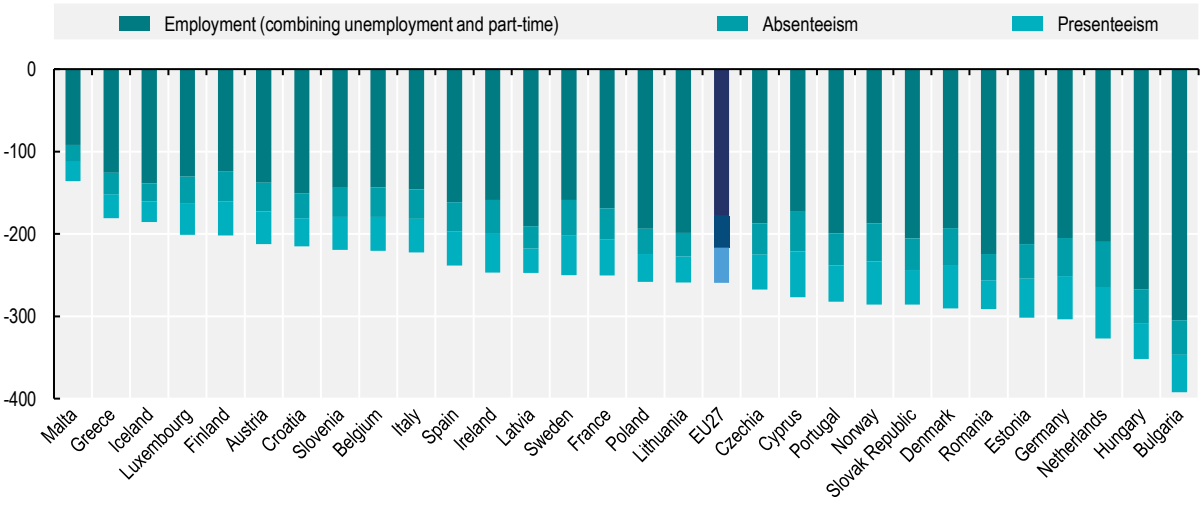
Cancer is projected to reduce workforce participation and productivity

Beyond its burden on health systems, cancer has a large impact on the economy via its effects on workforce participation and productivity. People diagnosed with cancer often need to take leave from work for treatment, recovery, and medical appointments, reducing employment. In addition, people with cancer may experience fatigue, mental health impairments, and other side effects that can impact their ability to work effectively, leading to absenteeism and presenteeism (OECD, 2024[16]). According to OECD SPHeP modelling work, between 2023 and 2050, cancer is expected to lead to a loss of 178 full-time equivalent (FTE) workers per 100 000 people on average in the EU, due to the need to reduce employment (Figure 4.5). In addition, a loss of 38 and 43 FTE workers per 100 000 people is also anticipated due to absenteeism and presenteeism, respectively.

Based on the countries' average wages, this equates to a loss in workforce output of EUR PPP 49 billion per year for EU countries. On a per capita basis, EU countries lose on average EUR PPP 161 per year (OECD, 2024[16]).

Figure 4.5. Cancer is expected to have a large impact on workforce participation and productivity

Projected reduction in full-time equivalent workers due to cancer per 100 000 population, average over 2023-50



Note: The EU average is unweighted.
Source: OECD (2024), *Tackling the Impact of Cancer on Health, the Economy and Society*, https://doi.org/10.1787/85e7c3ba-en.

Addressing the issue of well-being and workforce participation among people with cancer is key to minimising income loss at both the micro and macro levels. There are various policies reported in the Profiles, ranging from workplace adaptations, psycho-social support in the workplace or physical activity interventions that have been shown to increase return-to-work rates among people with cancer. Return-to-work programmes are reported in Belgium, Czechia, Finland, France, Germany, Hungary, Iceland, Luxembourg, the Netherlands, Portugal and Slovenia. Return-to-work programmes are also key to promote improved quality of life of people with cancer and social reintegration. Germany has invested in occupational rehabilitation, including continuing education and training for people who need to change their profession following a cancer diagnosis. The country also offers opportunities for gradual reintegration into the workplace, including specifying different stages of workload during which people can continue to receive sickness benefits. In Belgium, initiatives that support a return to work following cancer include the *Kankerenwerk* website, financed by the non-governmental organisation *Kom Op Tegen Kanker*, which provides information to assist employers and employees in the reintegration process. Hungary has adopted policies guiding labour market reintegration of people who were previously ill.

Given increasing cancer prevalence, countries are developing follow-up and rehabilitative care, and implementing policies to address quality of life

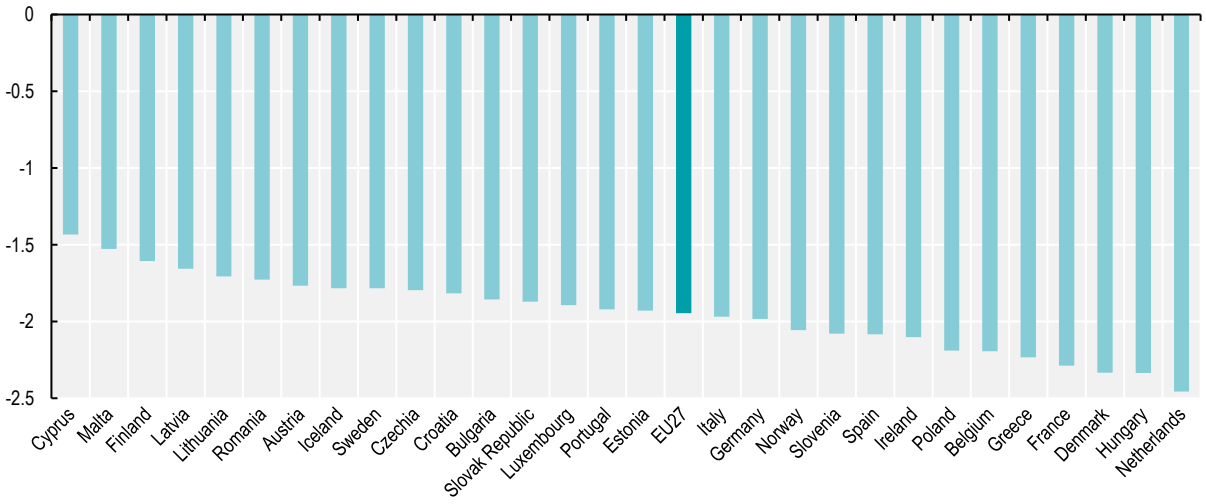
Cancer is expected to reduce life expectancy by 1.9 years in the EU and result in an additional 85 000 more people with depression symptoms annually

Cancer is one of the main causes of death and disability in EU countries, and has a significant impact on well-being through reducing life expectancy and increasing mental health disorders. According to OECD SPHeP modelling work, between 2023 and 2050, cancer will reduce population life expectancy on average by 1.9 years in the EU compared to a scenario without cancer. In some countries this figure is as high as 2.3 years (France, Denmark, Hungary and the Netherlands) (Figure 4.6).

Recent evidence suggests that cancer-specific disability led to a decline in healthy life expectancy, reducing the number of years that a person lives in full health (OECD, 2024[16]). On average in the EU, cancer reduces healthy life expectancy by 1.6 years, related to activity limitations of cancer from symptoms like fatigue, pain and nausea.

Figure 4.6. Cancer is projected to reduce life expectancy by between 1.4 and 2.5 years across EU countries

Projected reduction in years of life expectancy due to cancer, average over 2023-50



Note: The EU average is unweighted.
Source: OECD (2024), *Tackling the Impact of Cancer on Health, the Economy and Society*, https://doi.org/10.1787/85e7c3ba-en.

In addition, cancer takes a substantial toll on the mental health of the population, through its associated symptoms and treatment side effects, and impact on daily life, social roles and work. According to the OECD's SPHeP model, it is estimated that cancer leads to an additional 85 000 cases of depression annually in the EU. This equates to an age-standardised rate of 17 cases per 100 000 people per year. This rate varies significantly across countries, from roughly 5 per 100 000 people per year in Poland to 31 per 100 000 people in Portugal.

The impact of cancer on the mental health of the population is also reflected in national data. In Greece, a 2022 study showed that 80% of cancer patients receiving chemotherapy reported feeling of anxiety, fear and fatigue, 30% reported depressive symptoms and more than 60% reported major challenges in performing social activities.

Improving quality of life for people with cancer is a policy priority in many EU countries

A range of policies can contribute to increasing quality of life for people living with cancer, including greater efforts to address psychological health needs, investments in expanded palliative care services in hospitals and the community, and better management of cancer through rehabilitative care or improved health literacy.

As reported in 25 Country Cancer Profiles, mental health support for people with cancer has been extensively developed over the past years. Portugal ensures access to psychological evaluations and at least five counselling sessions annually for cancer patients and their families. Norway and Sweden have

mental health support networks, ensuring timely access to psychological care for cancer patients. Ireland and Belgium have developed specialised psycho-oncology services, incorporating mental health care into standard cancer treatment, enhancing patients' overall well-being, with Ireland publishing a psycho-oncology model of care in 2023 specifically designed to identify and provide for the comprehensive needs of children, adolescents and young adults with cancer.

Palliative care, which focuses on alleviating suffering and enhancing the quality of life for patients with life-threatening conditions, is a key lever to meet the physical, emotional, and spiritual needs of cancer patients. Belgium, Germany, Ireland, Lithuania, Luxembourg, the Netherlands and Sweden have well-developed palliative care systems, with services fully integrated into their national healthcare systems and covered by public health insurance. These countries provide comprehensive care both in hospitals and through community-based services, ensuring that palliative care is accessible and free of charge for those in need. Estonia and Slovenia are also investing in training health professionals, increasing awareness of palliative care, and developing a national palliative care services model, while Croatia has established mobile palliative care teams operating across its 21 counties and practical palliative care learning programmes in health centres. In 2020, Lithuania introduced a requirement that palliative care is available 24/7 and increased the number of reimbursable visits for outpatient palliative care services.

Development of supportive cancer care and health literacy programmes are also being integrated in the care pathway of cancer patients. France for example provides supportive oncology care as part of the cancer care pathway. The supportive care package is comprised of nine services, including four core services (pain management, dietary support, psychological support and social, family and professional support) and five supportive services (physical activity, fertility preservation, management of sexual disorders, lifestyle advice, and psychological support for relatives and informal caregivers). Iceland focuses on rehabilitation services for people with cancer based on a holistic assessment of the individual's well-being to provide counselling, lectures, and educational materials about regaining and maintaining the best possible physical functioning, health and quality of life. Portugal has launched a patient resource guide focusing on cancer literacy and informing patients of their rights and available resources.

In addition, protecting people from discrimination based on their medical history, and ensuring fair treatment in areas such as employment, insurance and financial services can help promote social inclusion, emotional well-being and financial security. In October 2023, the Directive (EU) 2023/37 was introduced to reinforce the "right to be forgotten", ensuring that health information after a certain period of cancer survival cannot be used for assessing financial creditworthiness. Eight EU countries already had such a "right to be forgotten" in place before this Directive (Belgium, France, Italy, Luxembourg, the Netherlands, Portugal, Romania and Spain), with disclosure requirements ranging from limits of five to ten years.

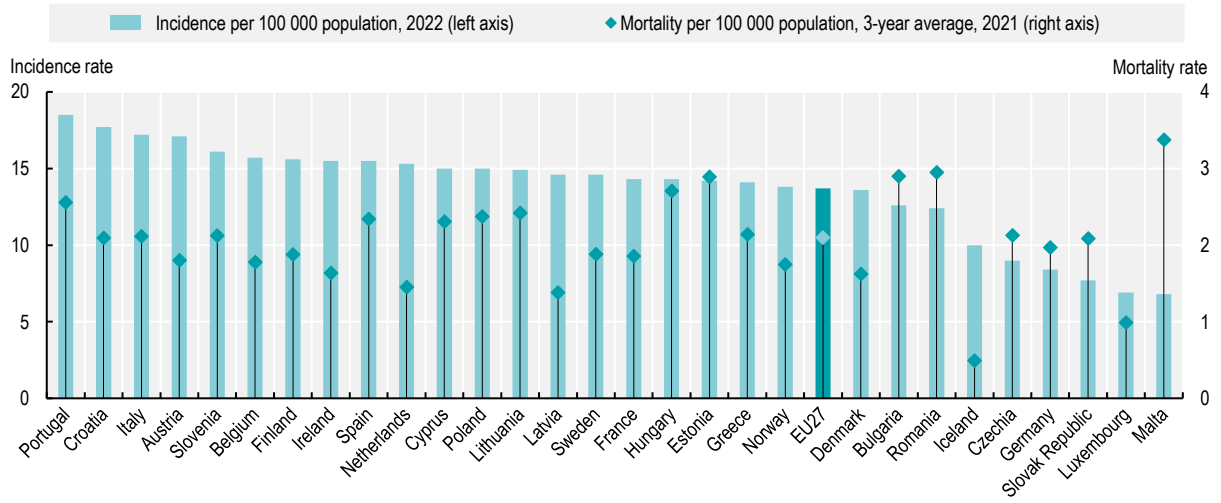
5 Spotlight on paediatric cancer care

Over 50% of new cancer diagnoses among children stem from three main cancer types: Leukaemia, brain and non-Hodgkin's lymphoma

According to ECIS, it is estimated that 4 161 girls and 5 000 boys up to age 15 were diagnosed with cancer in 2022 in the EU, for an age-standardised incidence rate of 13.7 per 100 000 (Figure 5.1). Age-standardised incidence rates are slightly lower among girls (12.8 per 100 000) than boys (14.6 per 100 000). The most common cancer is leukaemia, representing a little under a third of childhood cancers in the EU (31%), followed by brain and central nervous system cancers (15%) and non-Hodgkin's Lymphoma (8%). Eurostat data shows that 3-year average age-standardised mortality rates from cancer among children stood at 2.1 per 100 000 in the EU as of 2021, with rates ranging from 0.5 (Iceland) to 3.4 (Malta).

Figure 5.1. The paediatric cancer mortality rate in the EU stood at 2.1 per 100 000 children

Age-standardised incidence (estimates) and 3-year average paediatric cancer mortality rates per 100 000 population



Note: 2022 incidence estimates are based on incidence trends from previous years, and may differ from observed rates in more recent years. Incidence data includes all cancer sites except non-melanoma skin cancer. Incidence and mortality rates refer to children aged 0-14.
Source: European Cancer Information System (ECIS) for cancer incidence. From https://ecis.jrc.ec.europa.eu, accessed on 10 March 2024. © European Union, 2024. Eurostat Database for cancer mortality.

In 12 EU+2 countries, paediatric cancer patients had access to less than 5% of oncology clinical trials running in Europe

In Europe between 2010 to 2022, there were 436 oncology clinical trials that enrolled children and young people, 76% of which involved novel agents. However, access to these trials varied widely by country. The greatest access was in France, which had 226 paediatric oncology trials (or 52%) taking place in the country, followed by Spain (43%) and Italy (41%). In contrast, 12 EU+2 countries had each less than 5% of paediatric oncology clinical trials running in their country (SIOPE, 2024[17]). Access to trials is related to the population size of a country and the number of paediatric cancers diagnosed, with larger countries having more paediatric cancer cases and greater access in clinical oncology trials.

Assessing the availability of medicines that are most critical to paediatric oncology care in EU countries also reveals substantial cross-country disparities. On average, 76% of essential medicines for treatment of paediatric cancer were available across EU countries in 2018 (Vassal et al., 2021[18]). Access to less than 60% of essential medicines for treatment of paediatric cancer was reported in five countries: Romania, Estonia, Latvia, Lithuania and Bulgaria.

The European Society for Paediatric Oncology (SIOPE) evaluated the availability of 13 treatment modalities and infrastructure for treating paediatric cancer (SIOPE, 2024[17]). Six countries in the top income tercile (Austria, Belgium, Denmark, Germany, the Netherlands, and Sweden) have all 13 modalities available, as do four countries in the middle income tercile (Czechia, France, Italy, and Spain). Only one country (Poland) in the bottom income tercile had all treatments available within the country. However, the fewest number of treatments available was in the low population countries of Malta and Luxembourg. In the 27 EU+2 countries assessed, all provided both inpatient and outpatient chemotherapy as well as surgery for both solid and central nervous system tumours within the country. Paediatric palliative care was available in all but one country (Greece) and paediatric survivorship clinics were available in 21 countries. Proton radiation therapy was available in the least number of countries – only 11 – followed by brachytherapy (17) and access to phase I/II treatments (19).

Through bilateral agreements, EU countries with a low number of paediatric cancer cases may arrange referral of patients to larger treatment centres in neighbouring EU countries. Estonia relies on international collaboration to ensure access to proton therapy and the Estonian Cancer Control Plan 2021-30 prioritises improved international co-operation and expansion of access to treatments and clinical trials for paediatric patients. Iceland funds travel and care costs in other Scandinavian countries for treatment of rare cancers and in Malta, paediatric cancer patients are referred for care abroad via the Treatment Abroad Unit if the recommended treatment is unavailable in the country. Such arrangements, which support countries that have gaps in access to certain treatment modalities, could also be developed to help to address the challenges of low access to paediatric clinical trials.

6 Cancer performance trackers

Overview: This section includes a Cancer Performance Tracker (CaPTr) for each of the 27 EU countries, Iceland and Norway that summarise performance on key indicators in the following domains: cancer prevention, cancer early detection, cancer care capacity and cancer care outcomes. Each tracker (from Figure 6.1 to Figure 6.29) shows the position of the country relative to the EU average, minimum and maximum values on each indicator. If comparable national data is not available, the indicator is not shown for that country. For most indicators, performance refers to 2021, 2022, or 2023, or nearest available year. The tracker also shows the change in performance over time where trend data is available and relevant. Moreover, Figure 6.30 shows the distribution of countries by indicator and Figure 6.31 shows the definitions, time period assessed, number of countries in the EU average, and source for each indicator.

Colours are used to indicate performance compared to the EU and over time:

- **Blue** lines connect indicator dots when the country's performance is better than the EU average; **blue** text in "Trend over time" column refers to any improvement in performance;
- **Pink** lines connect indicator dots when the country's performance is worse than the EU average; **pink** text in "Trend over time" column refers to any deterioration in performance;
- Grey lines and grey text for "Trend over time" are used for cancer care capacity, as most indicators cannot be classified as better or worse and thus no value judgement is made.

EU average: EU averages are weighted for overweight and obesity, air pollution, cancer mortality, and educational inequalities but unweighted for all other indicators. EU averages do not include Iceland and Norway.

Age-standardisation: Cancer mortality rates are reported as age-standardised to the revised European standard population adopted by Eurostat in 2013.

Specific indicator comments:

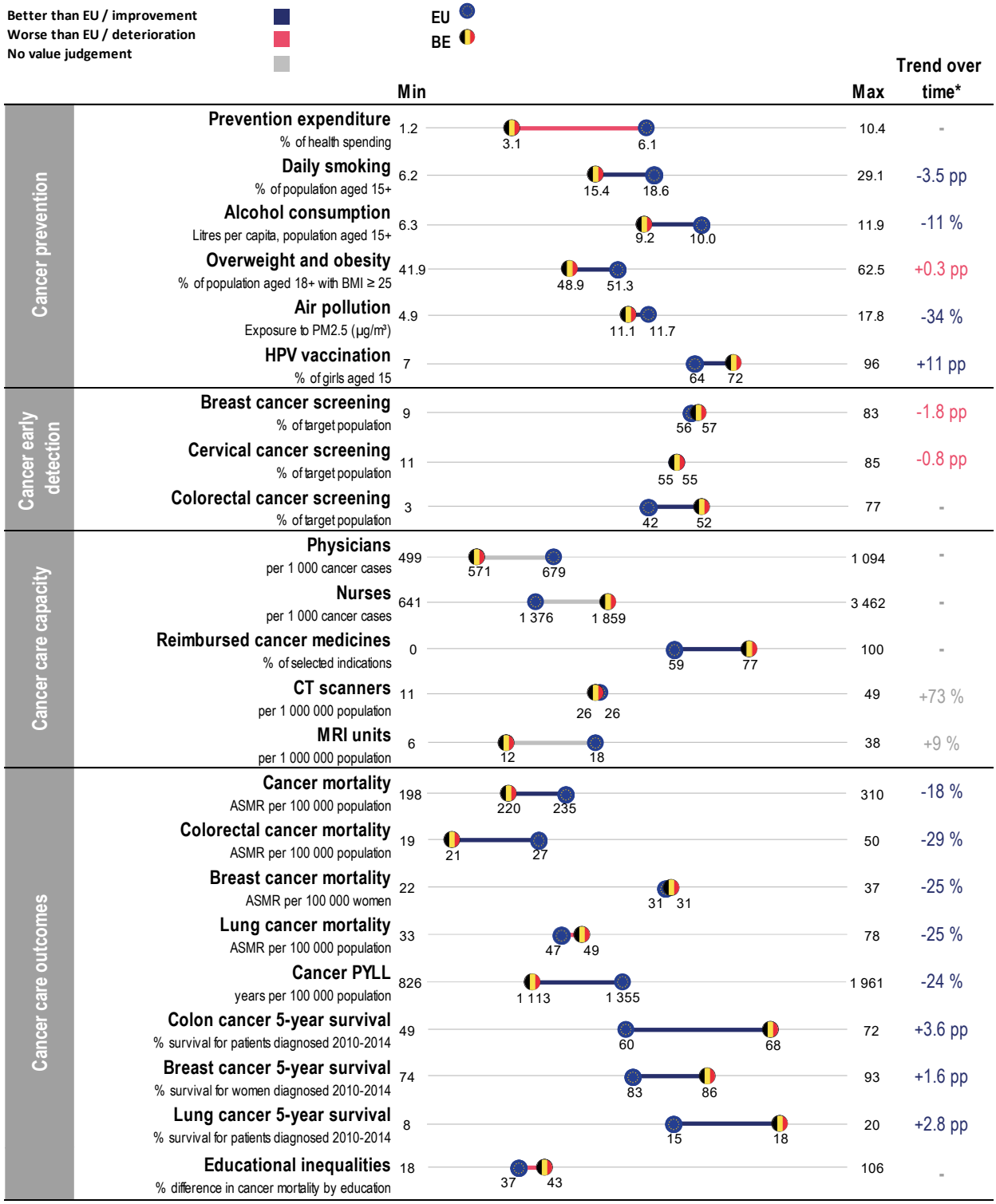
Screening: The EU average shown in each tracker is based on programme data. For the following screening sites and countries, the value and trend refer to 2019 survey data as programme data are not available:

- Breast: Bulgaria, Greece and Romania;
- Cervical: Austria, Bulgaria, Croatia, Cyprus, Germany, Greece and Romania;
- Colorectal: Austria, Cyprus, Greece, Germany and Romania.

Workforce: Workforce data and definitions can be found in Figure 4.1.

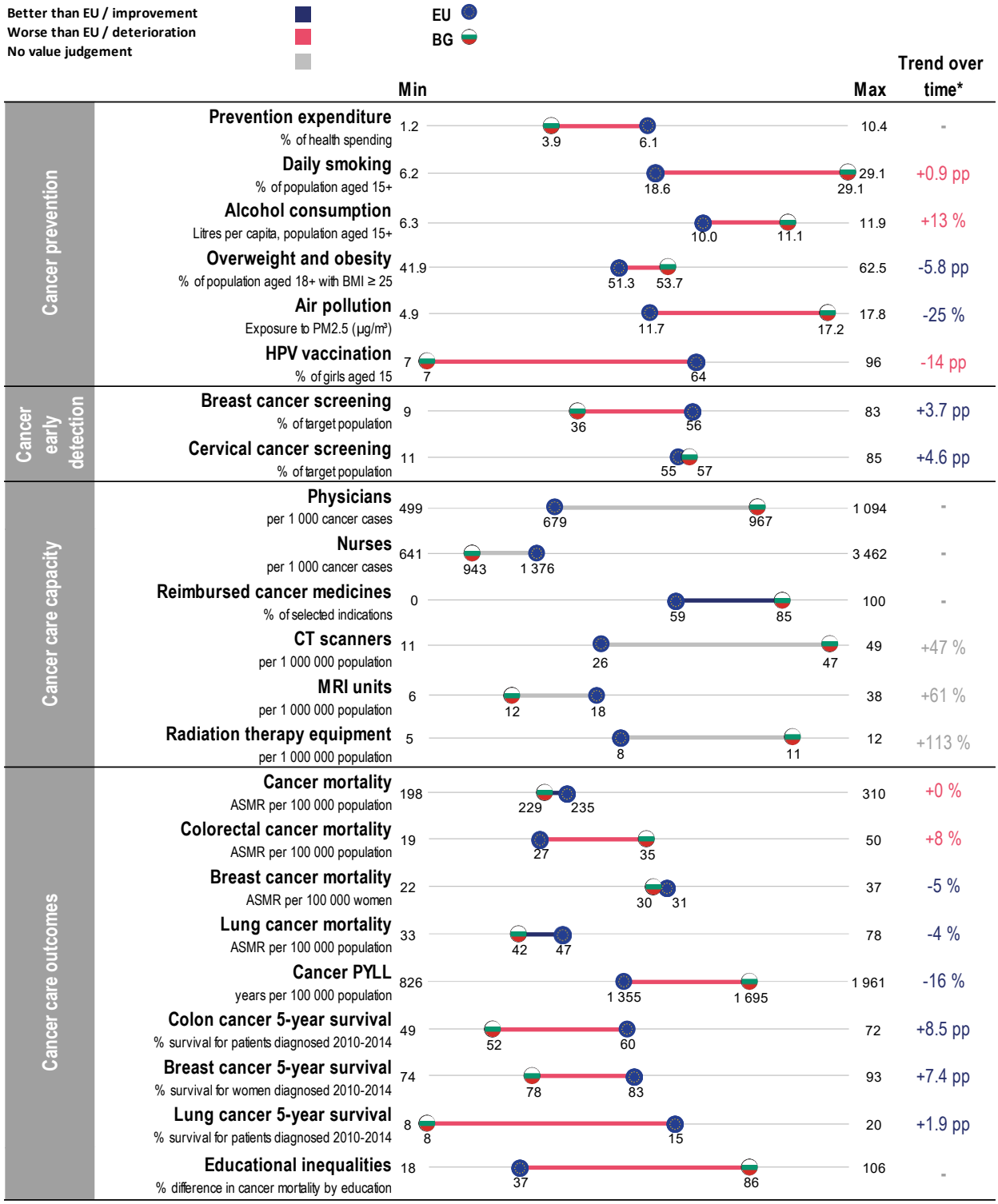
Survival: To allow for cross-country comparison purposes, cancer survival estimates used in the trackers come from the CONCORD-3 project, while the survival estimates used in the Country Cancer Profiles and the Synthesis report are based on more recent national data.

Figure 6.1. Belgium's Cancer Performance Tracker (CaPTr)



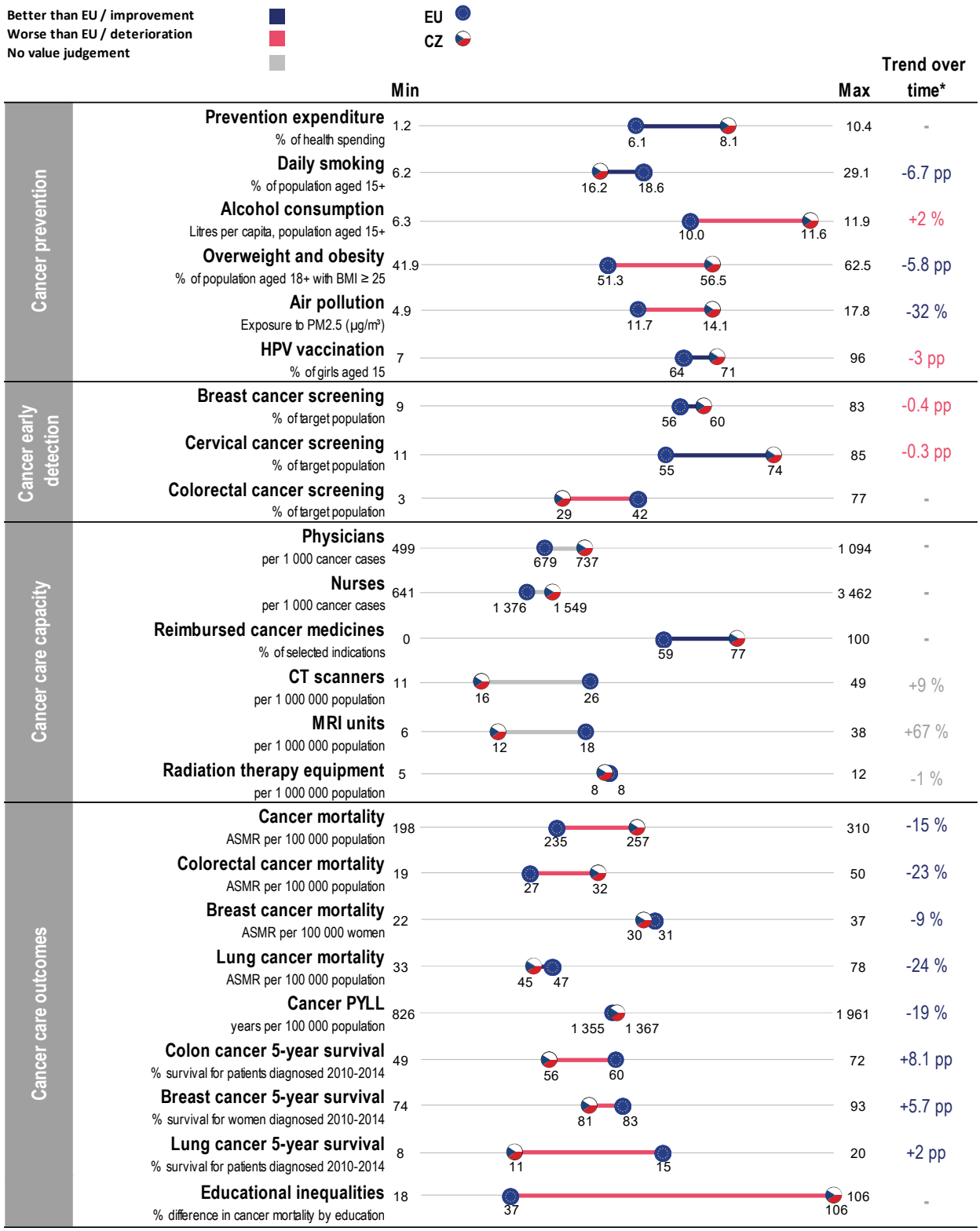
Note: ASMR = Age-standardised mortality rate; PYLL = potential years of life lost; pp = percentage point. No data available on radiation therapy equipment. *Please see Figure 6.31 for information on trend.

Figure 6.2. Bulgaria's Cancer Performance Tracker (CaPTr)



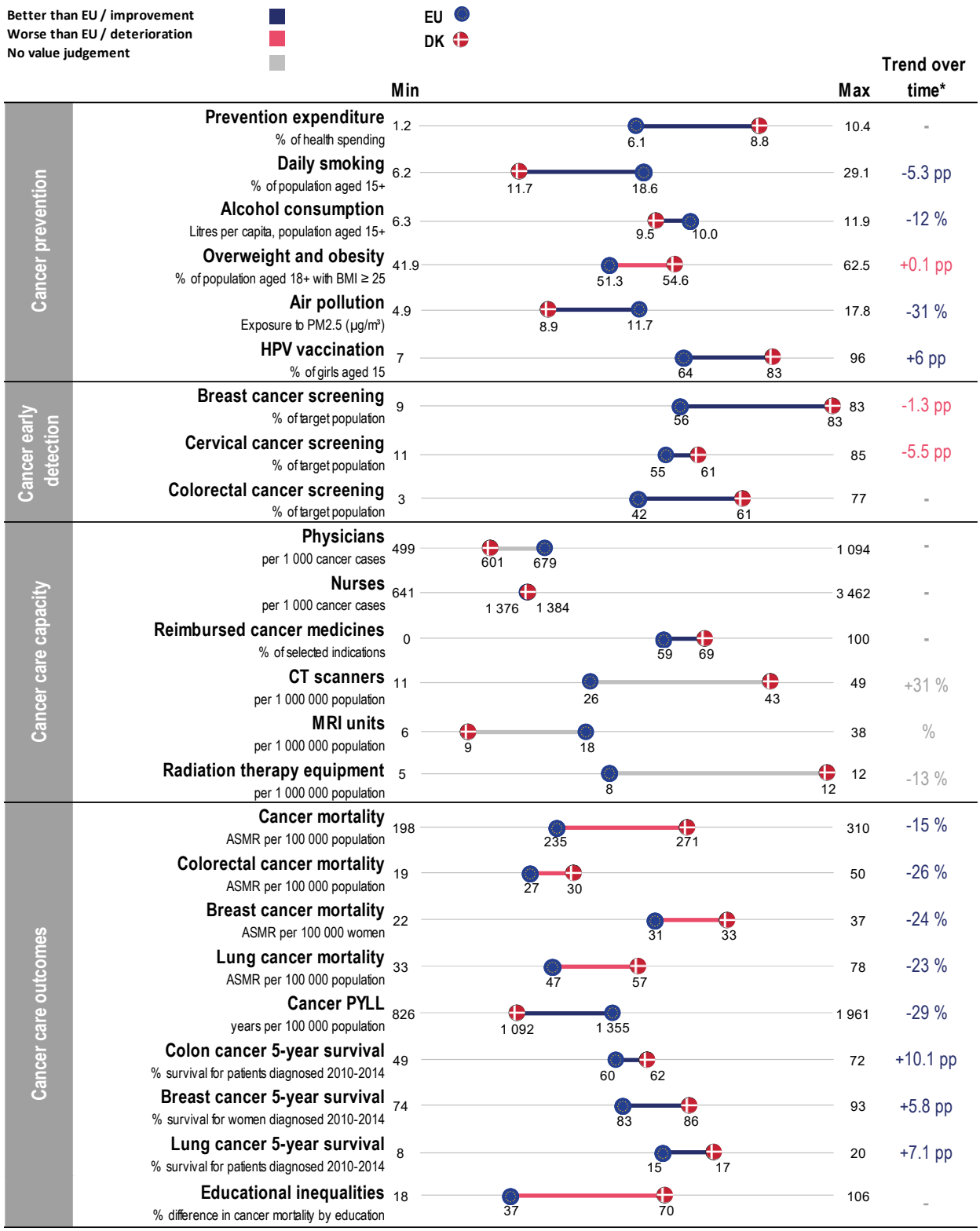
Note: ASMR = Age-standardised mortality rate; PYLL = potential years of life lost; pp = percentage point. No data available for colorectal cancer screening. Breast and cervical cancer screening values for Bulgaria come from 2019 survey data while the EU averages are based on 2022 programme data. *Please see Figure 6.31 for information on trend.

Figure 6.3. Czechia's Cancer Performance Tracker (CaPTr)



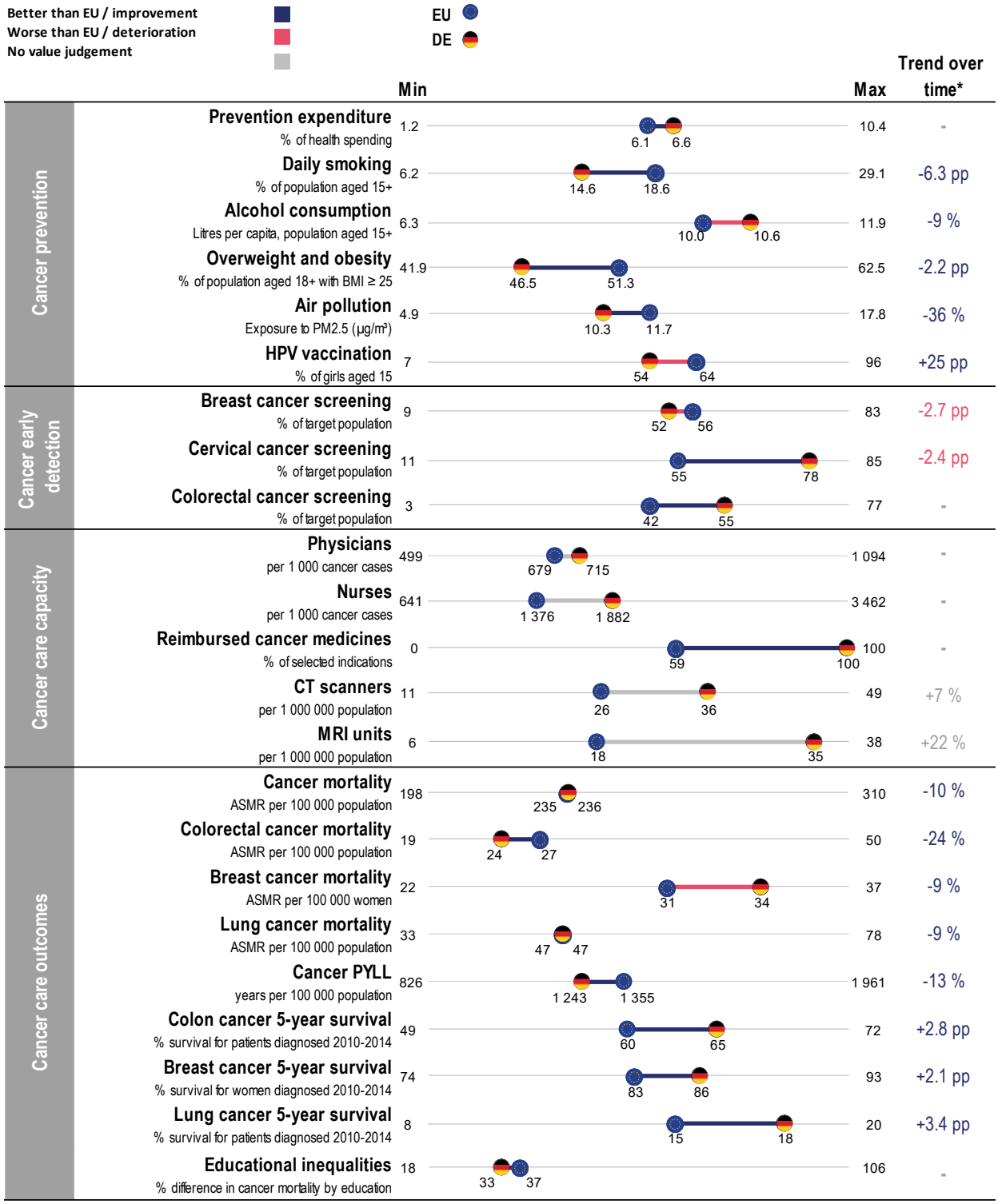
Note: ASMR = Age-standardised mortality rate; PYLL = potential years of life lost; pp = percentage point. *Please see Figure 6.31 for information on trend.

Figure 6.4. Denmark's Cancer Performance Tracker (CaPTr)



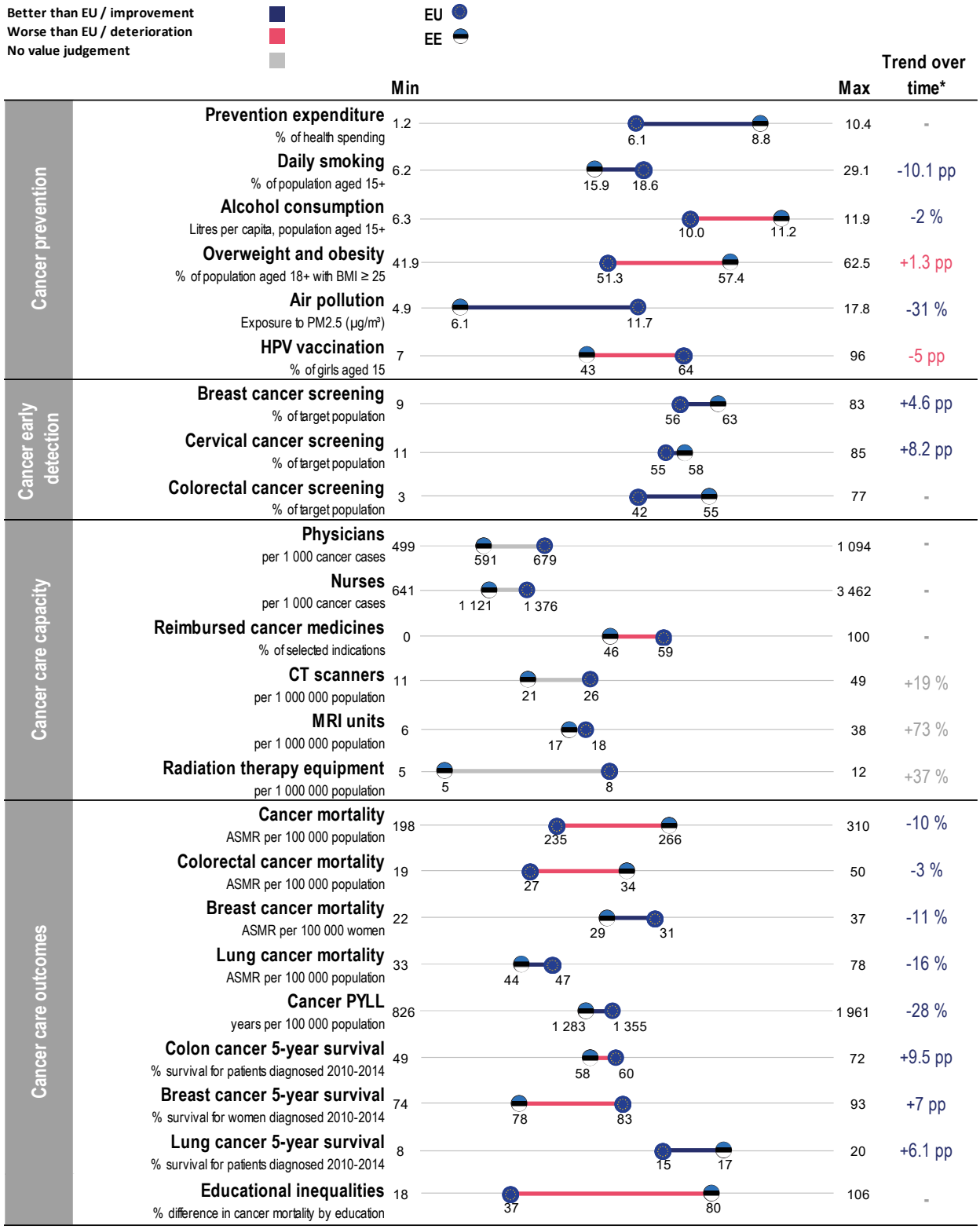
Note: ASMR = Age-standardised mortality rate; PYLL = potential years of life lost; pp = percentage point. *Please see Figure 6.31 for information on trend.

Figure 6.5. Germany's Cancer Performance Tracker (CaPTr)



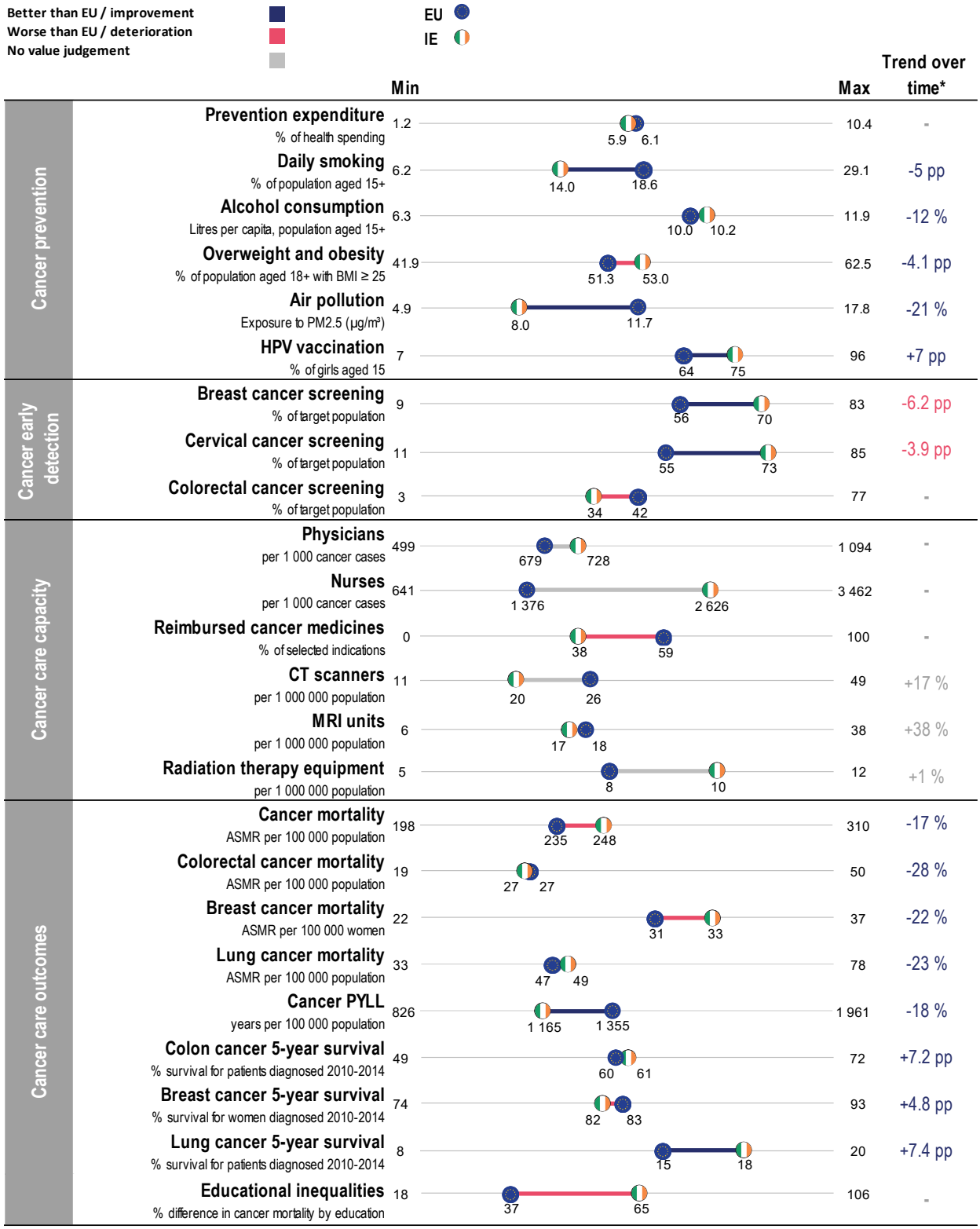
Note: ASMR = Age-standardised mortality rate; PYLL = potential years of life lost; pp = percentage point. No data available for radiation therapy equipment. Cervical and colorectal cancer screening values for Germany come from 2019 survey data while the EU averages are based on 2022 programme data. *Please see Figure 6.31 for information on trend.

Figure 6.6. Estonia's Cancer Performance Tracker (CaPTr)



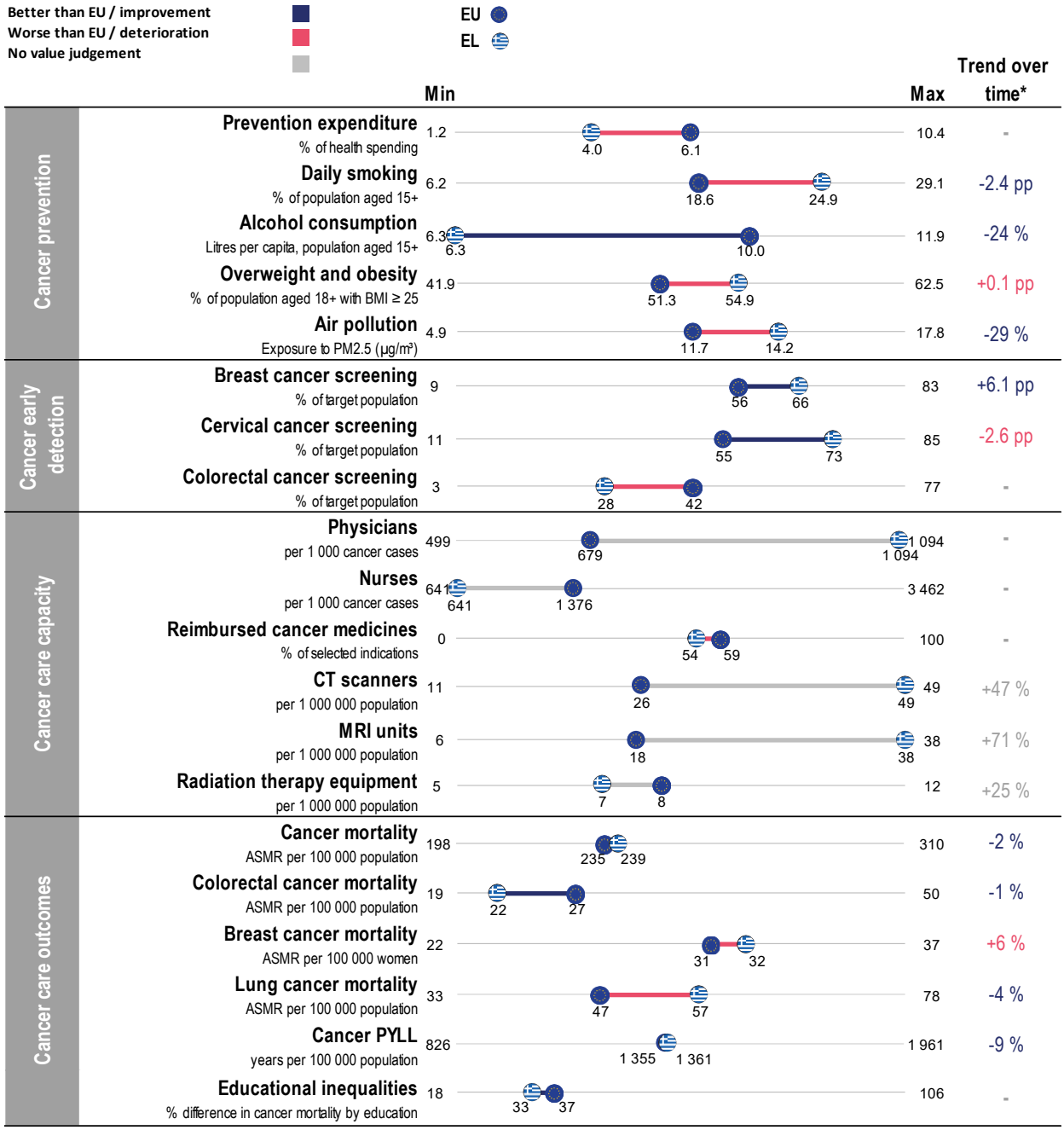
Note: ASMR = Age-standardised mortality rate; PYLL = potential years of life lost; pp = percentage point. *Please see Figure 6.31 for information on trend.

Figure 6.7. Ireland's Cancer Performance Tracker (CaPTr)



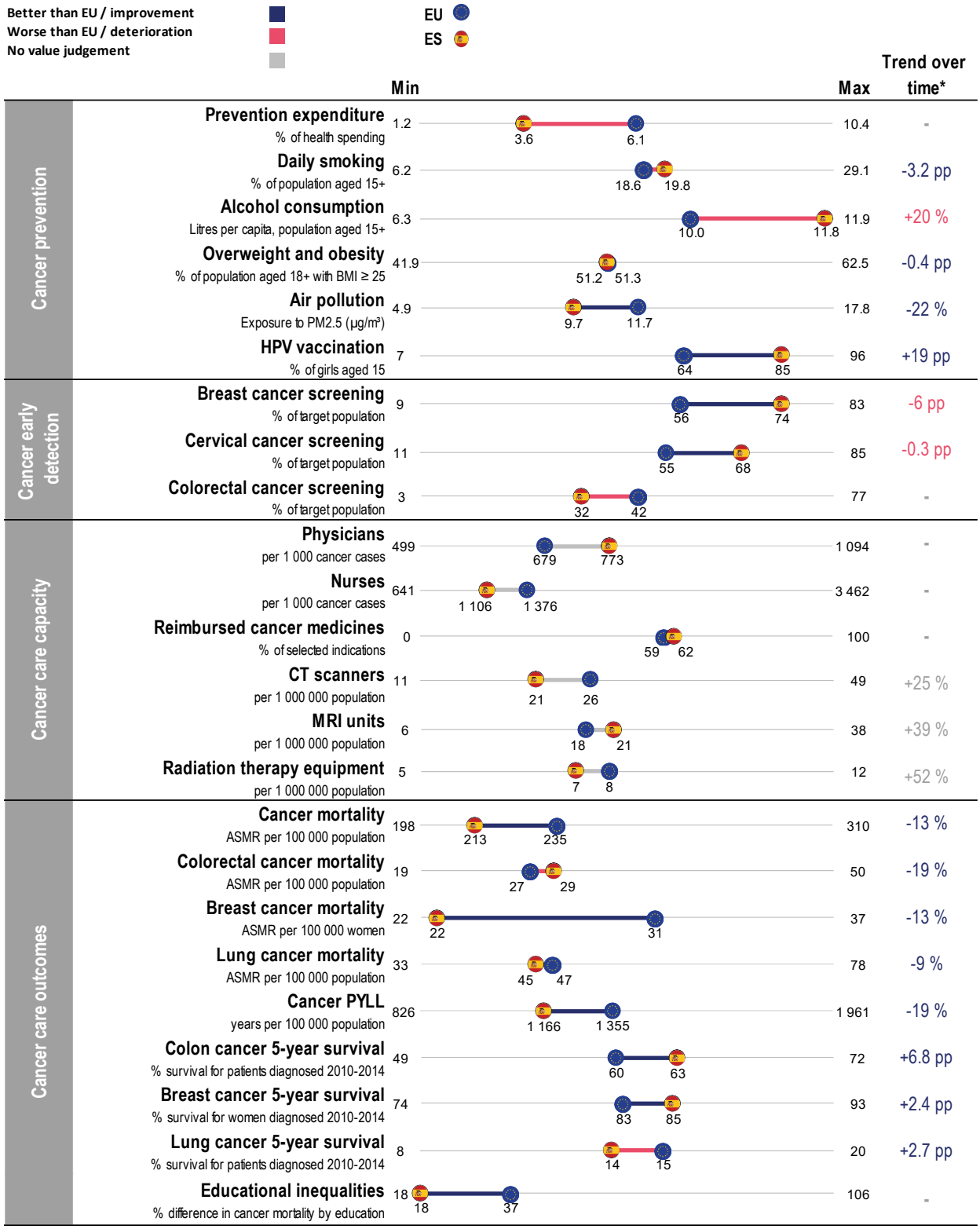
Note: ASMR = Age-standardised mortality rate; PYLL = potential years of life lost; pp = percentage point. *Please see Figure 6.31 for information on trend.

Figure 6.8. Greece's Cancer Performance Tracker (CaPTr)



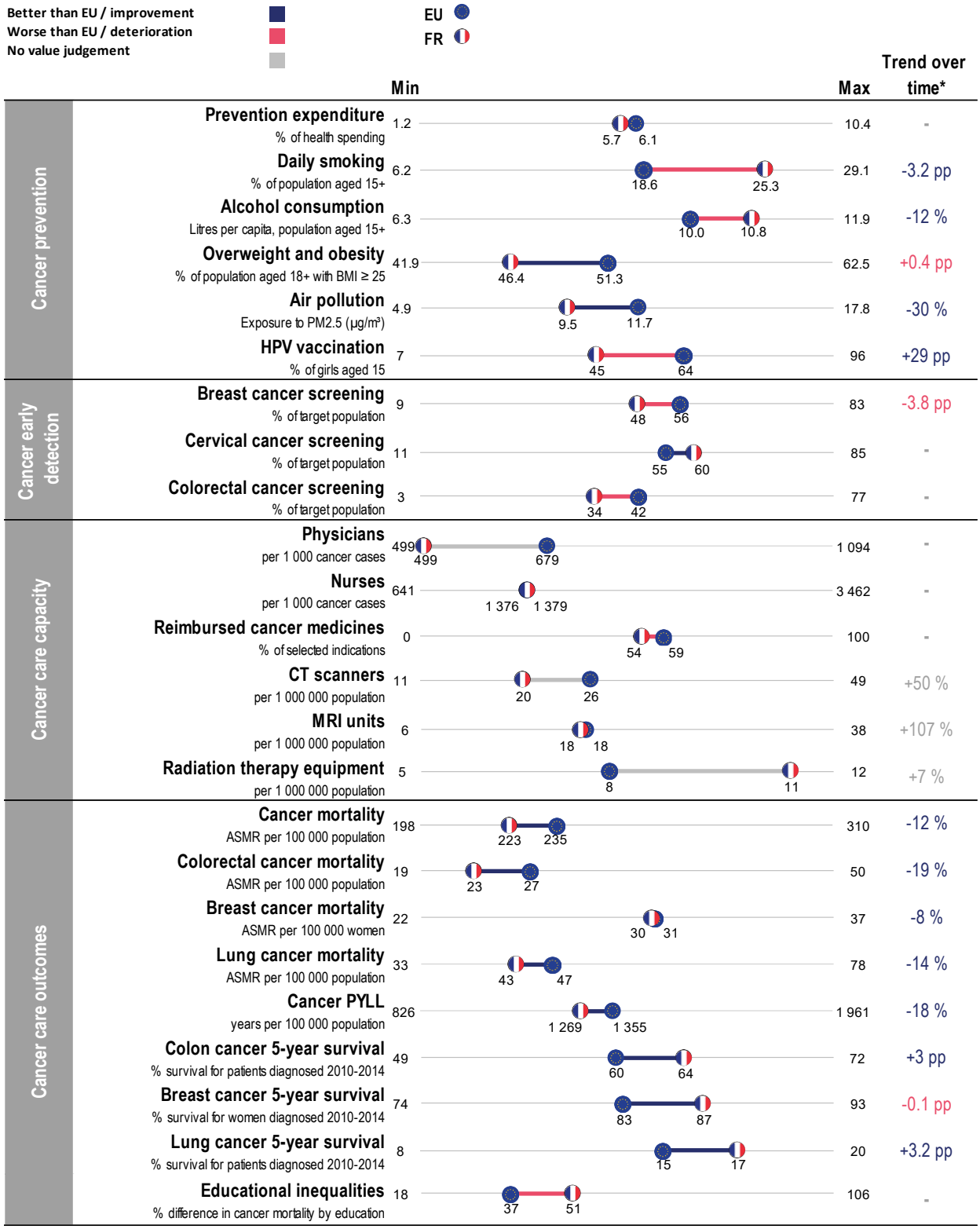
Note: ASMR = Age-standardised mortality rate; PYLL = potential years of life lost; pp = percentage point. No data available on HPV vaccination and cancer survival. Breast, cervical and colorectal cancer screening values for Greece come from 2019 survey data while the EU averages are based on 2022 programme data. *Please see Figure 6.31 for information on trend.

Figure 6.9. Spain's Cancer Performance Tracker (CaPTr)



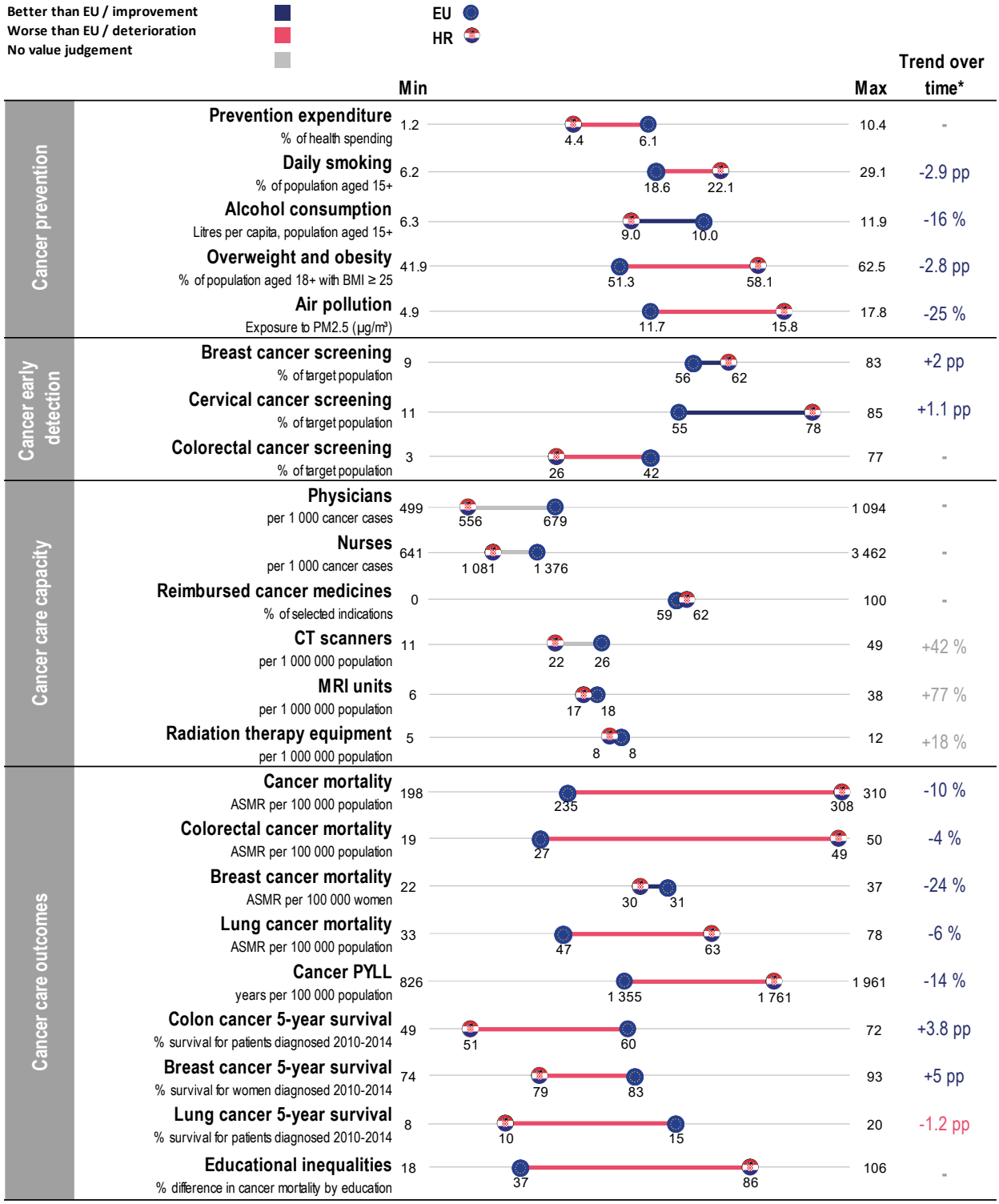
Note: ASMR = Age-standardised mortality rate; PYLL = potential years of life lost; pp = percentage point. *Please see Figure 6.31 for information on trend.

Figure 6.10. France's Cancer Performance Tracker (CaPTr)



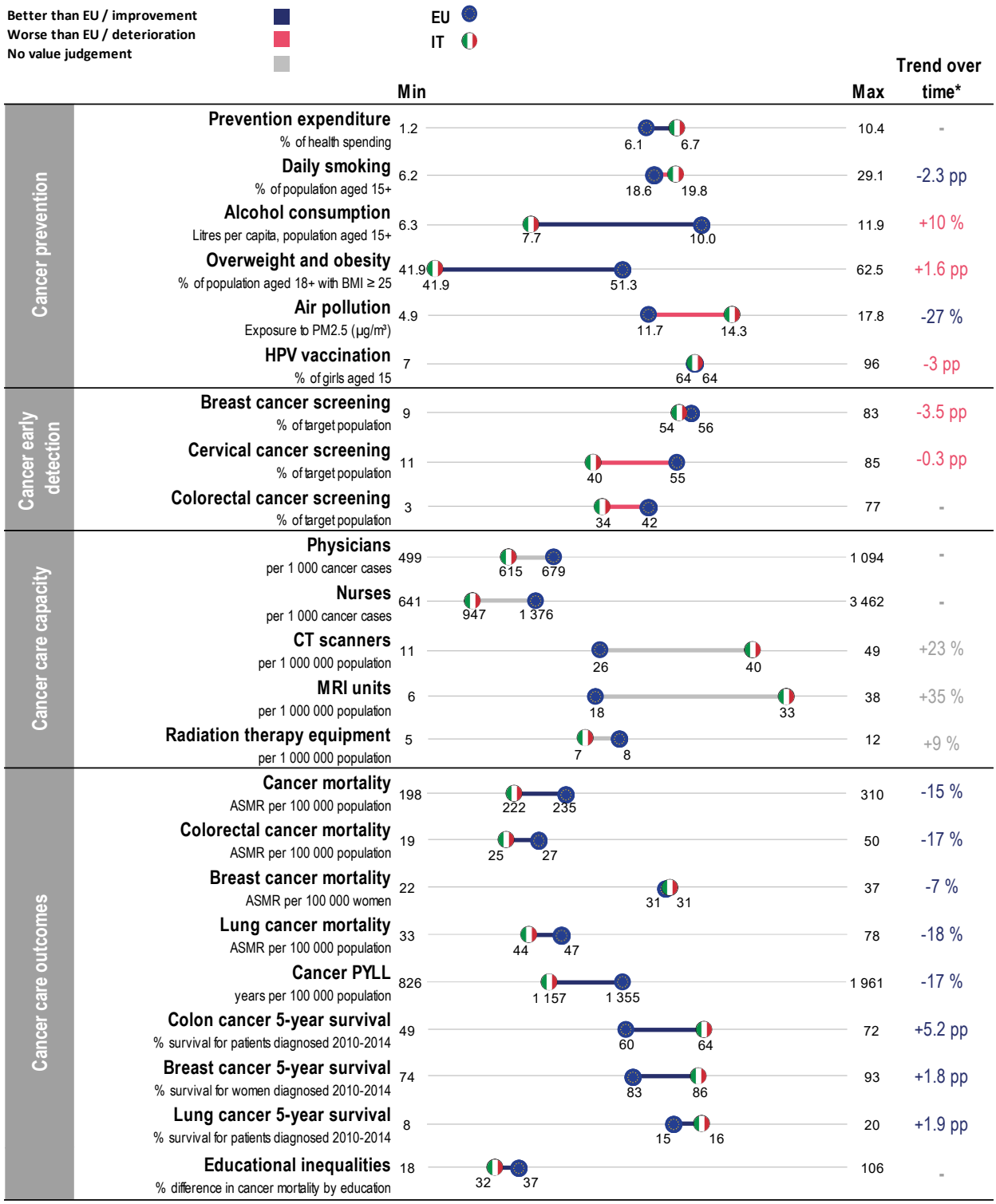
Note: ASMR = Age-standardised mortality rate; PYLL = potential years of life lost; pp = percentage point. *Please see Figure 6.31 for information on trend.

Figure 6.11. Croatia's Cancer Performance Tracker (CaPTr)



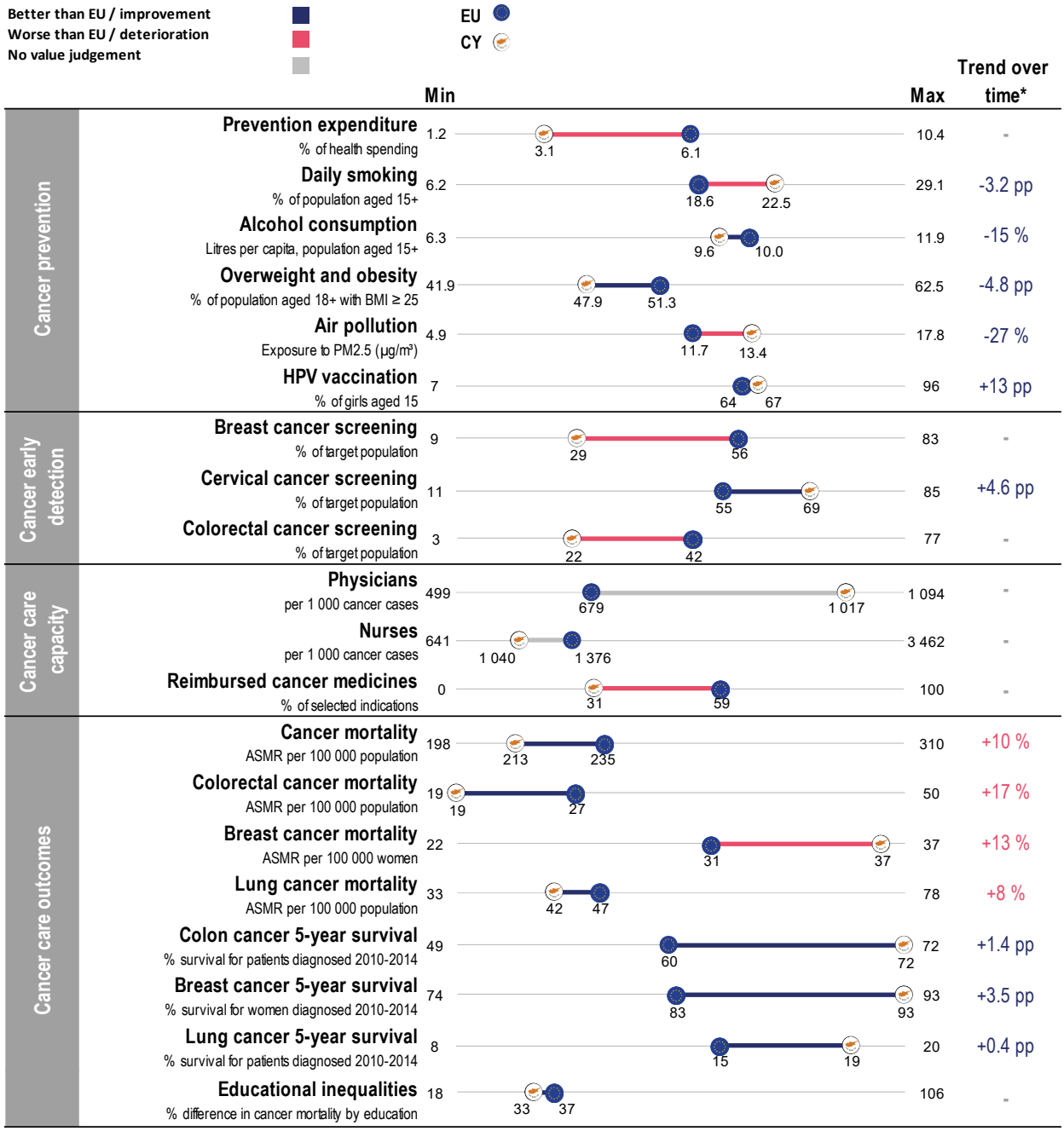
Note: ASMR = Age-standardised mortality rate; PYLL = potential years of life lost; pp = percentage point. No data available for HPV vaccination. The cervical cancer screening value for Croatia comes from 2019 survey data while the EU average is based on 2022 programme data. *Please see Figure 6.31 for information on trend.

Figure 6.12. Italy's Cancer Performance Tracker (CaPTr)



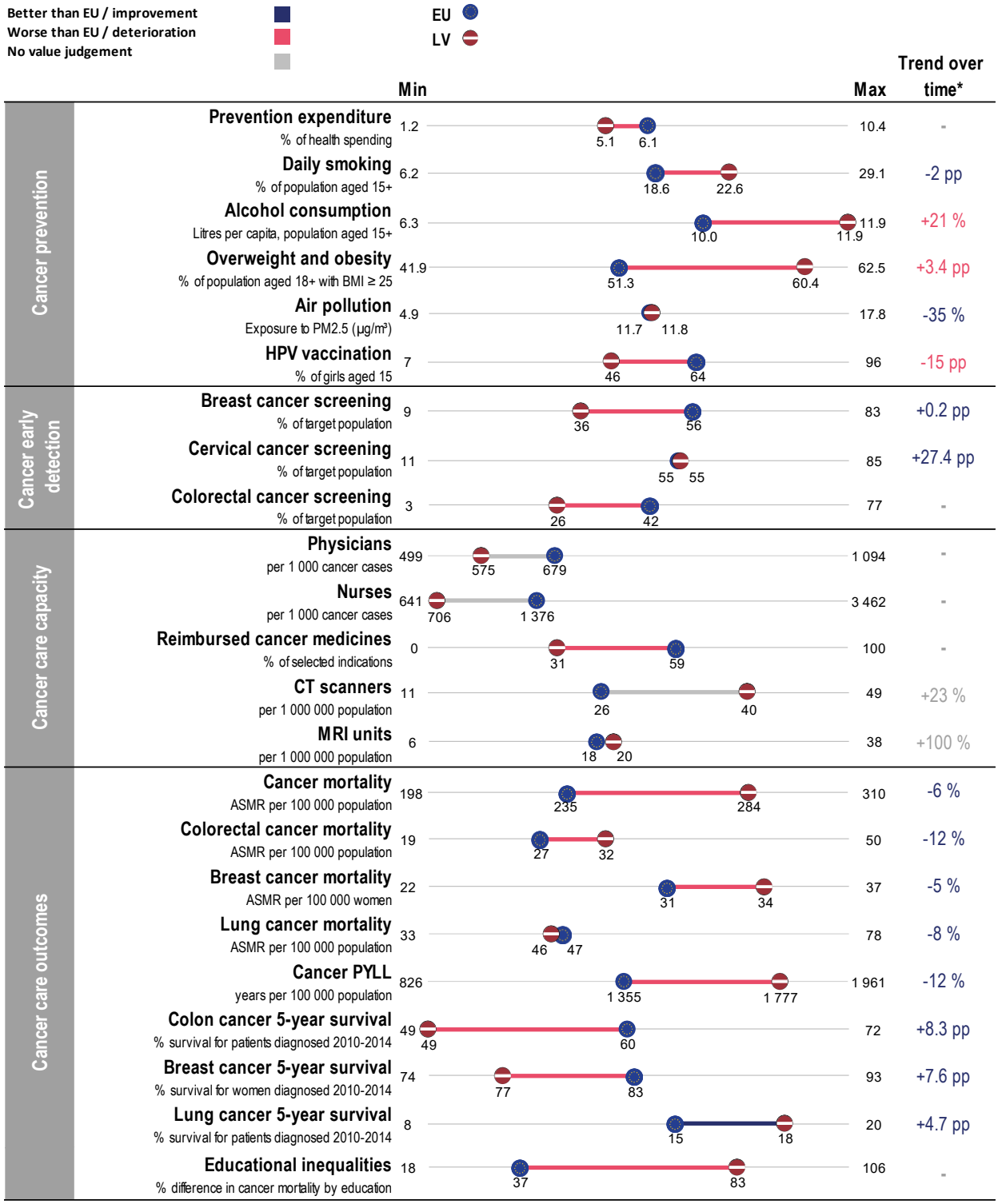
Note: ASMR = Age-standardised mortality rate; PYLL = potential years of life lost; pp = percentage point. No data on reimbursed medicines.
*Please see Figure 6.31 for information on trend.

Figure 6.13. Cyprus' Cancer Performance Tracker (CaPTr)



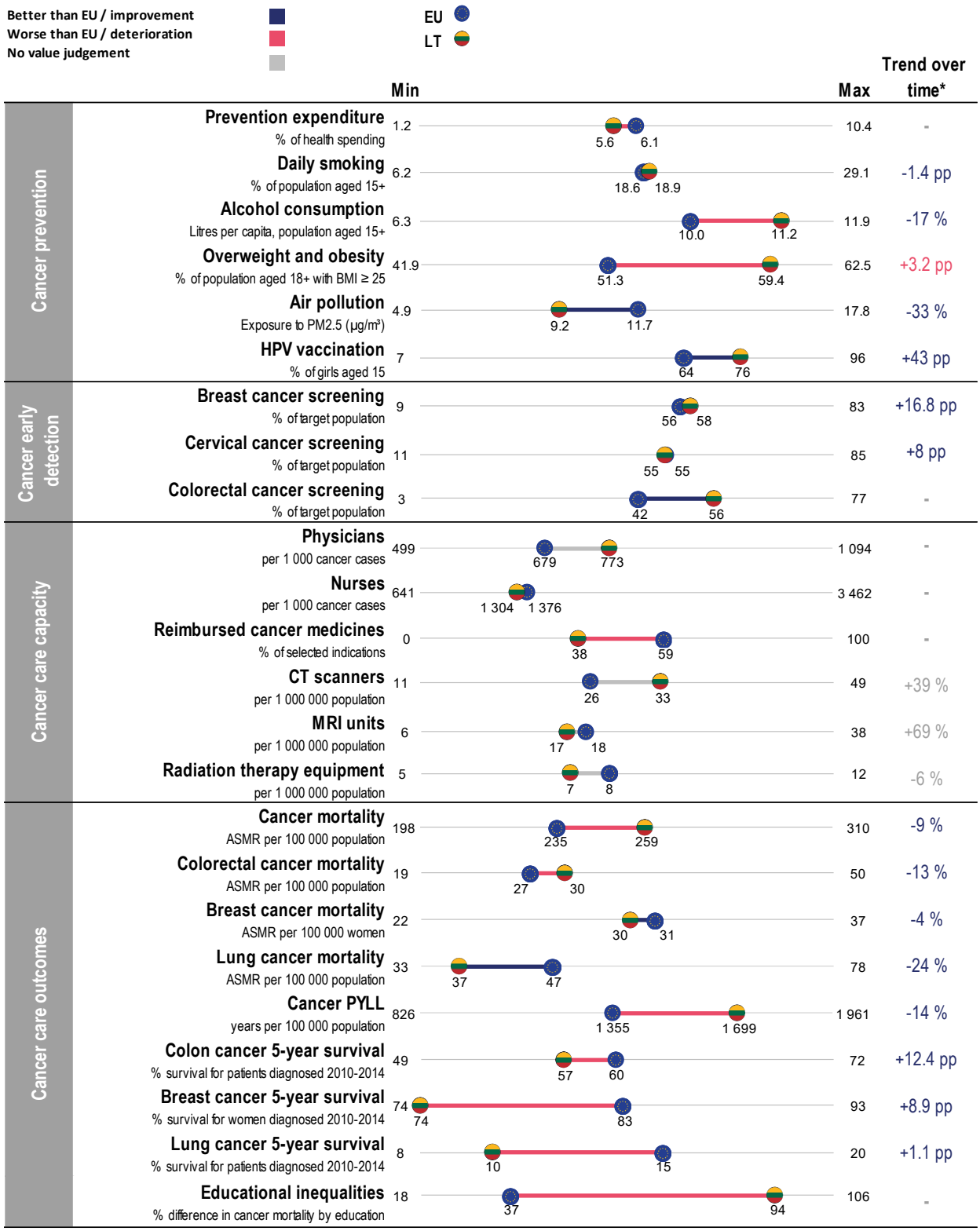
Note: ASMR = Age-standardised mortality rate; PYLL = potential years of life lost; pp = percentage point. No data available for CT scanners, MRI units, radiation equipment and cancer PYLL. Cervical and colorectal cancer screening values for Cyprus come from 2019 survey data while the EU averages are based on 2022 programme data. In addition, 2019 survey data for breast cancer screening shows substantially higher uptake (66%) than that of the programme data reported here. *Please see Figure 6.31 for information on trend.

Figure 6.14. Latvia's Cancer Performance Tracker (CaPTr)



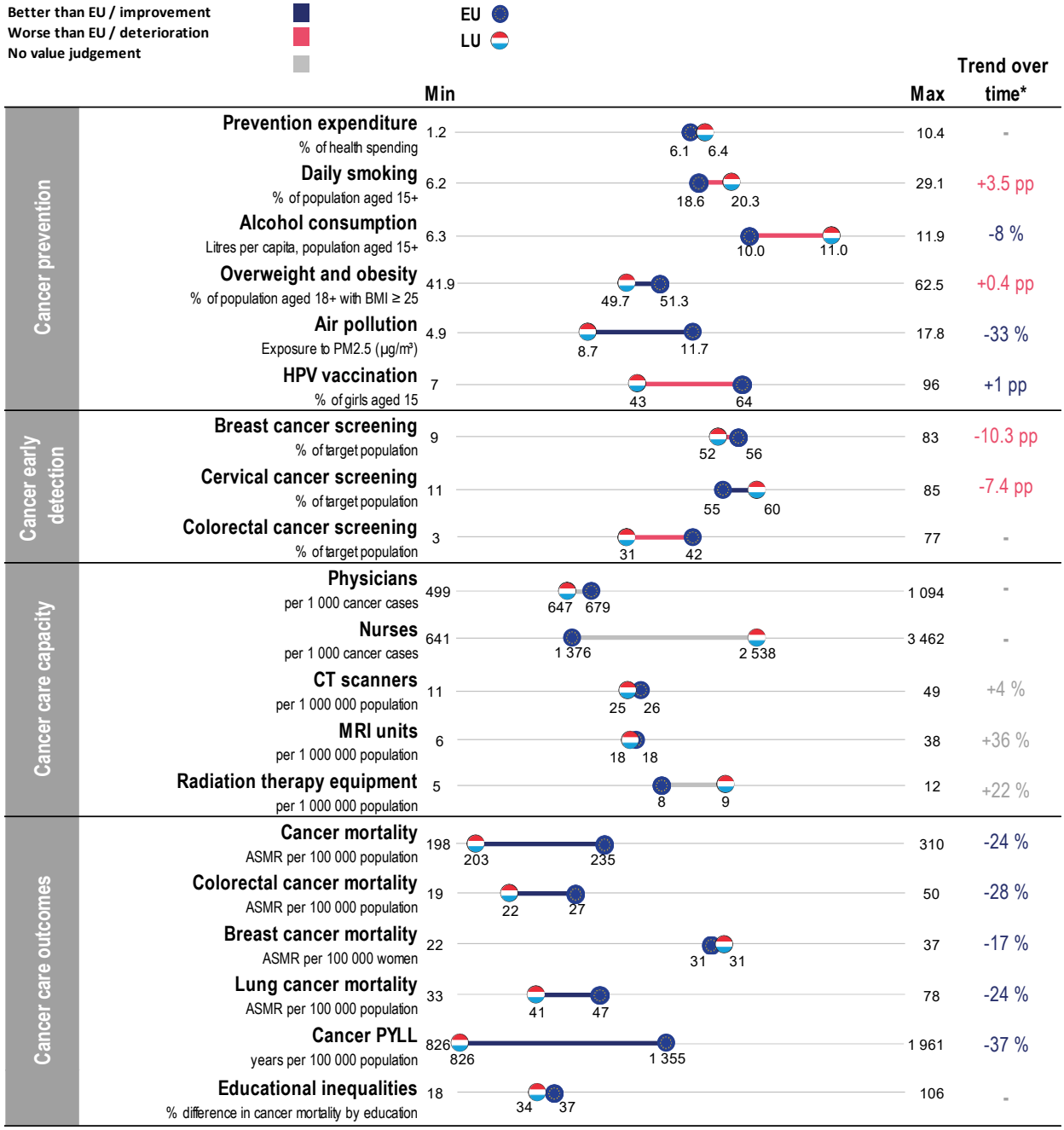
Note: ASMR = Age-standardised mortality rate; PYLL = potential years of life lost; pp = percentage point. No data on radiation therapy equipment.
*Please see Figure 6.31 for information on trend.

Figure 6.15. Lithuania's Cancer Performance Tracker (CaPTr)



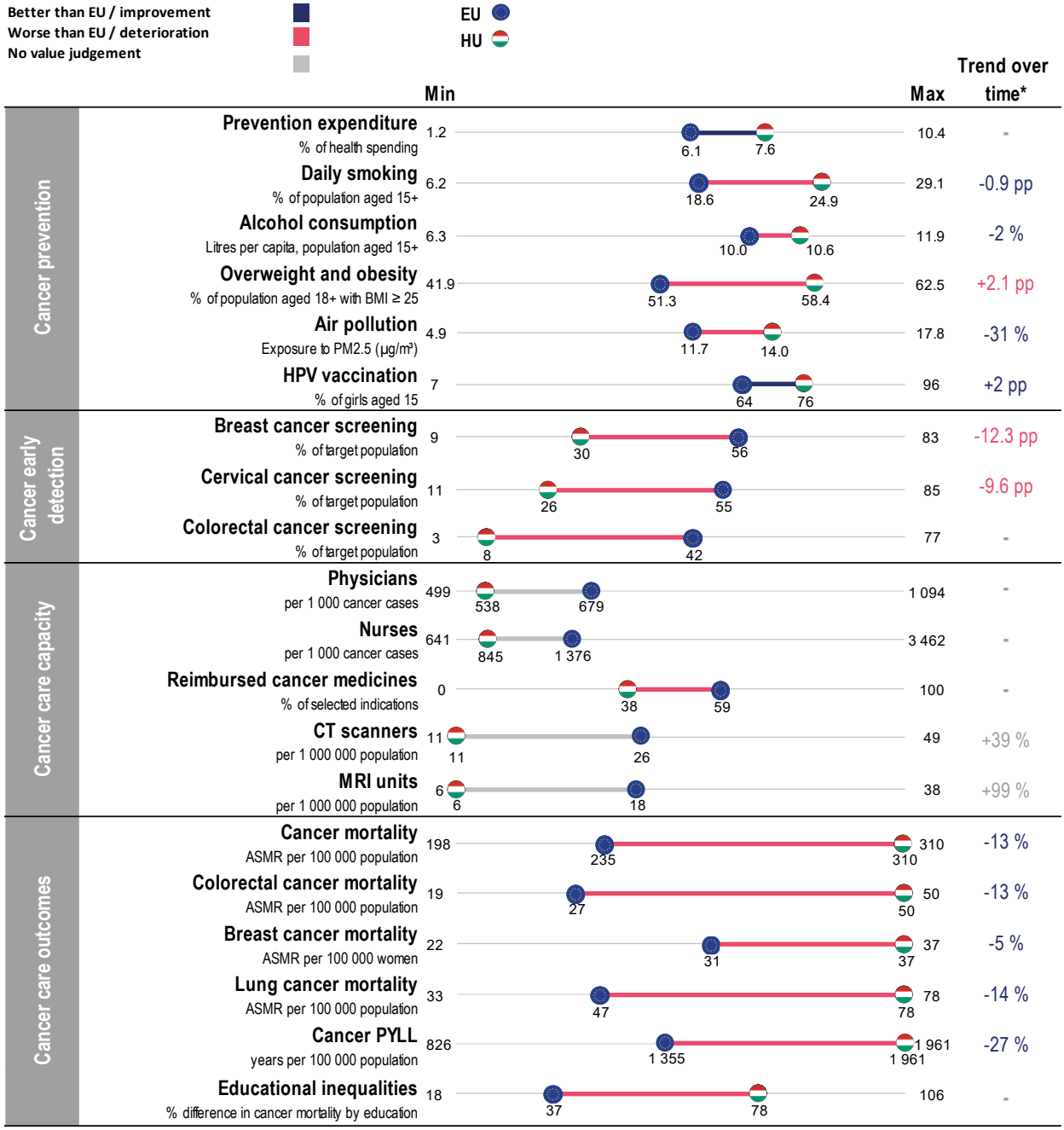
Note: ASMR = Age-standardised mortality rate; PYLL = potential years of life lost; pp = percentage point. *Please see Figure 6.31 for information on trend.

Figure 6.16. Luxembourg's Cancer Performance Tracker (CaPTr)



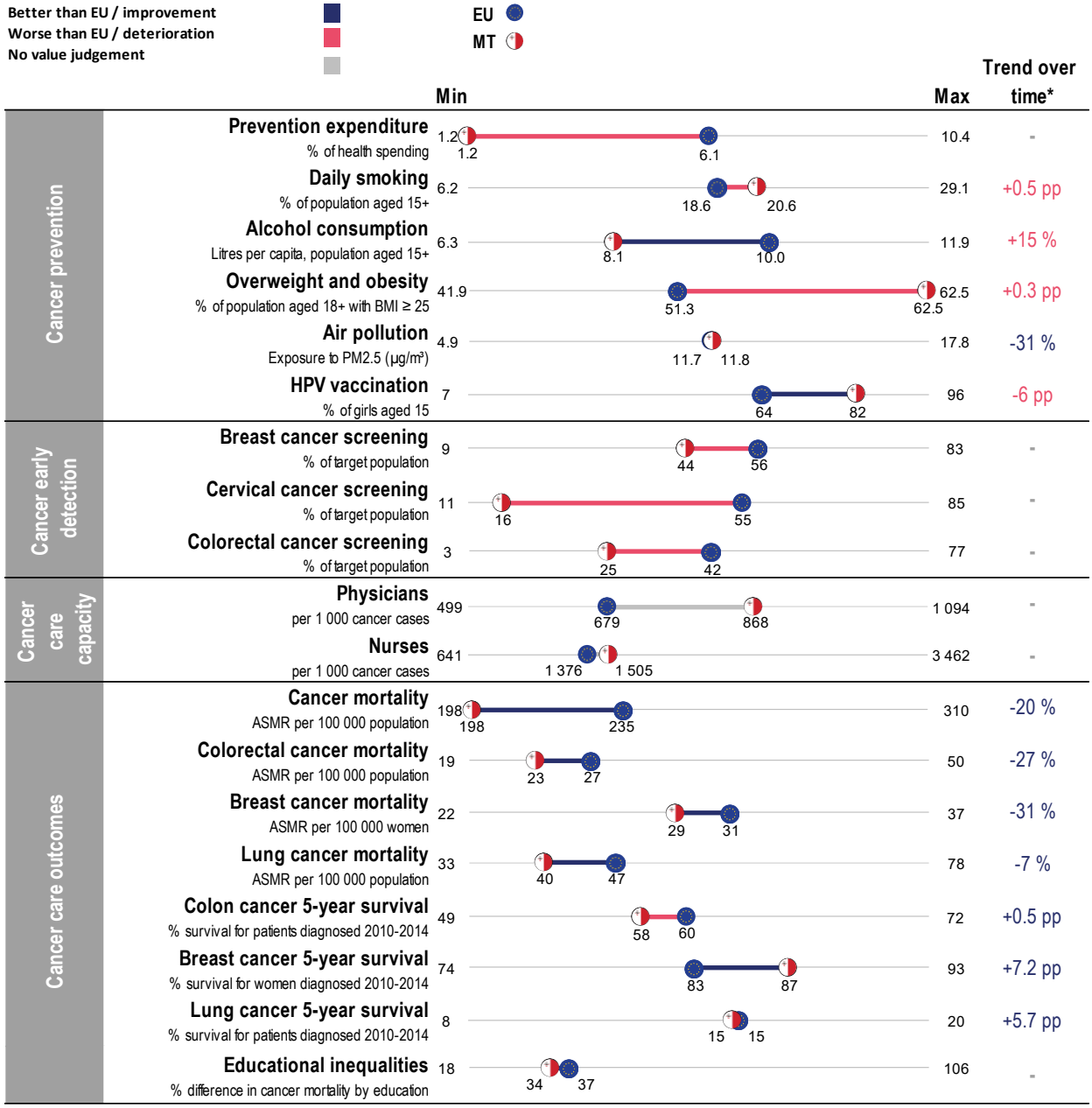
Note: ASMR = Age-standardised mortality rate; PYLL = potential years of life lost; pp = percentage point. HPV vaccination coverage comes from WHO data using estimates based on 2016. No data available for cancer medicine reimbursement and cancer survival. *Please see Figure 6.31 for information on trend.

Figure 6.17. Hungary's Cancer Performance Tracker (CaPTr)



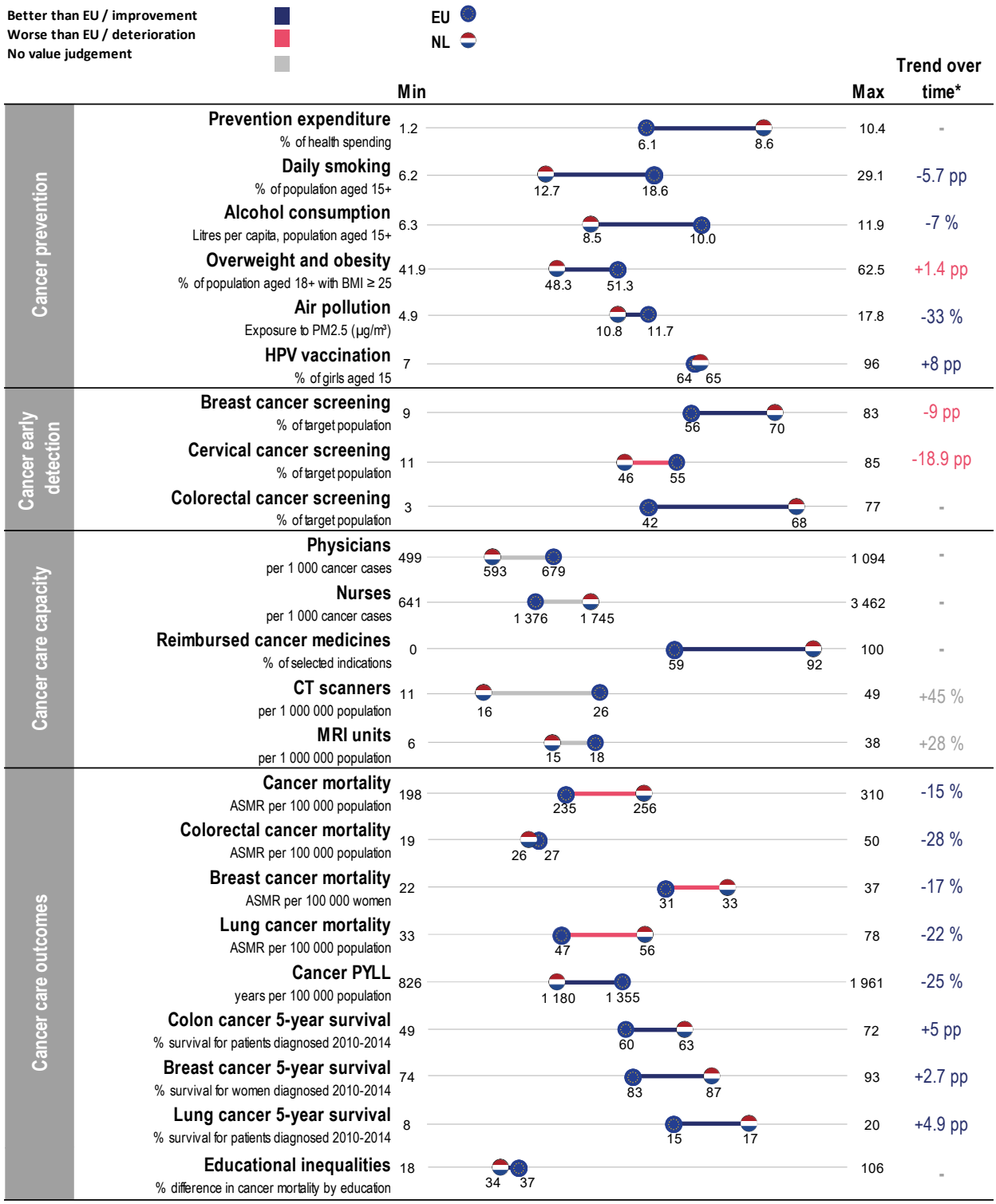
Note: ASMR = Age-standardised mortality rate; PYLL = potential years of life lost; pp = percentage point. No data available on radiation therapy equipment and cancer survival. *Please see Figure 6.31 for information on trend.

Figure 6.18. Malta's Cancer Performance Tracker (CaPTr)



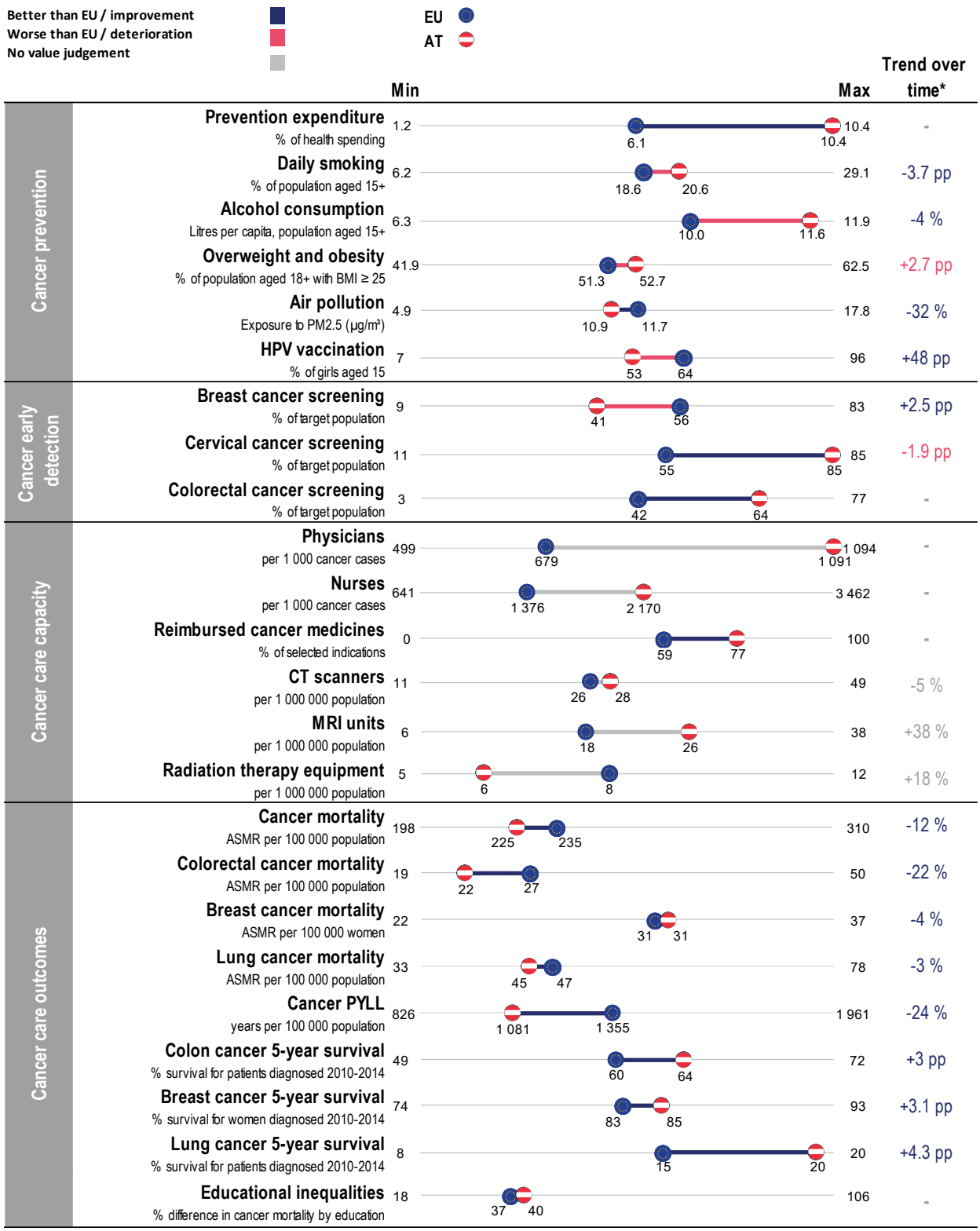
Note: ASMR = Age-standardised mortality rate; PYLL = potential years of life lost; pp = percentage point. No data for CT scanners, MRI units, radiation therapy equipment and cancer PYLL. No data on cancer medicines reimbursement for Malta is shown as there were no indications from the sample assessed that were included in the national coverage list, but the country provides other methods to help ensure access to cancer medicines. In addition, 2019 survey data shows substantially higher screening uptake (breast: 61%; cervical: 64%; colorectal: 40%) than that of the programme data reported here. *Please see Figure 6.31 for information on trend.

Figure 6.19. The Netherlands' Cancer Performance Tracker (CaPTr)



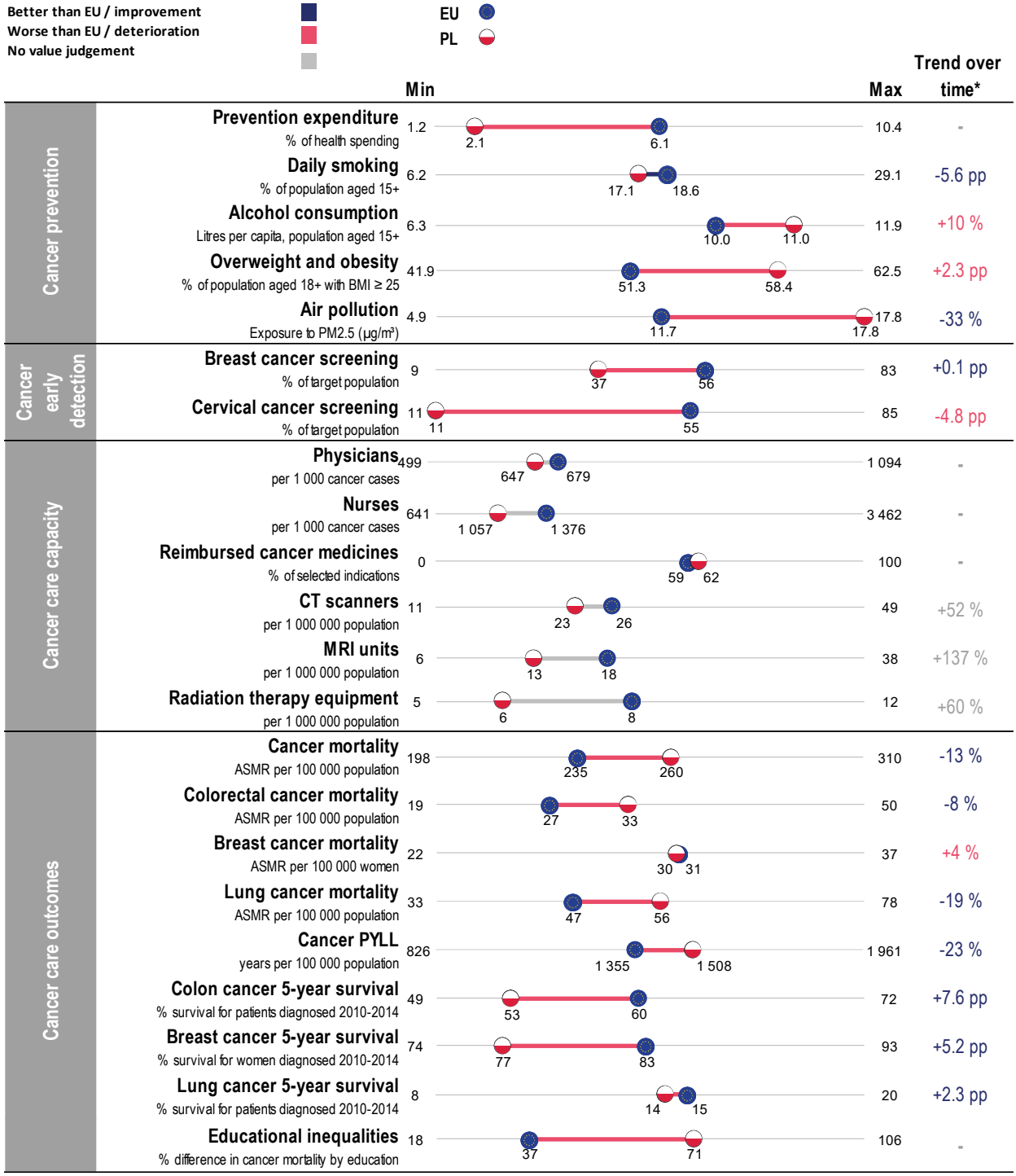
Note: ASMR = Age-standardised mortality rate; PYLL = potential years of life lost; pp = percentage point. No data available on radiation therapy equipment. *Please see Figure 6.31 for information on trend.

Figure 6.20. Austria's Cancer Performance Tracker (CaPTr)



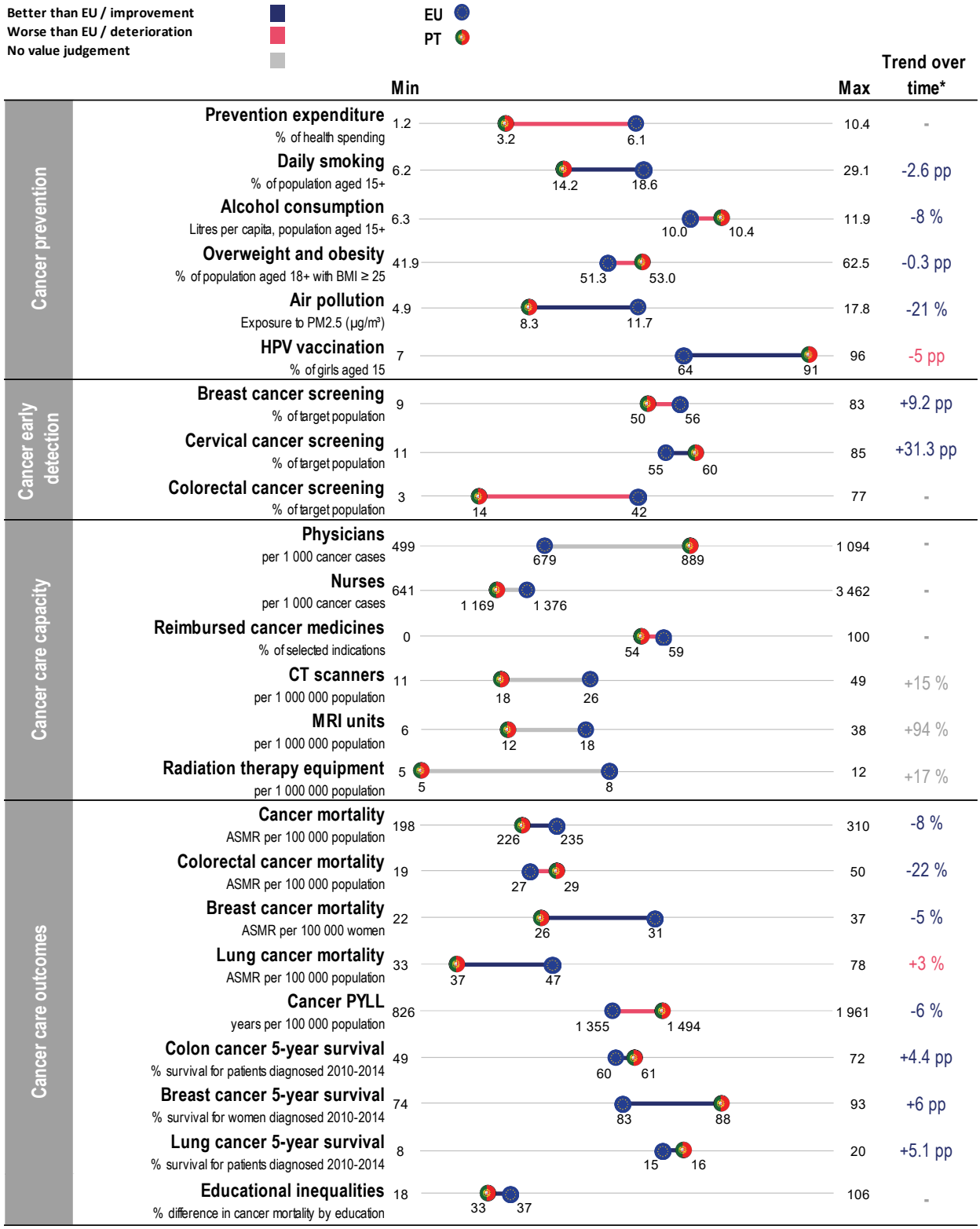
Note: ASMR = Age-standardised mortality rate; PYLL = potential years of life lost; pp = percentage point. Cervical and colorectal cancer screening values for Austria come from 2019 survey data while the EU averages are based on 2022 programme data. *Please see Figure 6.31 for information on trend.

Figure 6.21. Poland's Cancer Performance Tracker (CaPTr)



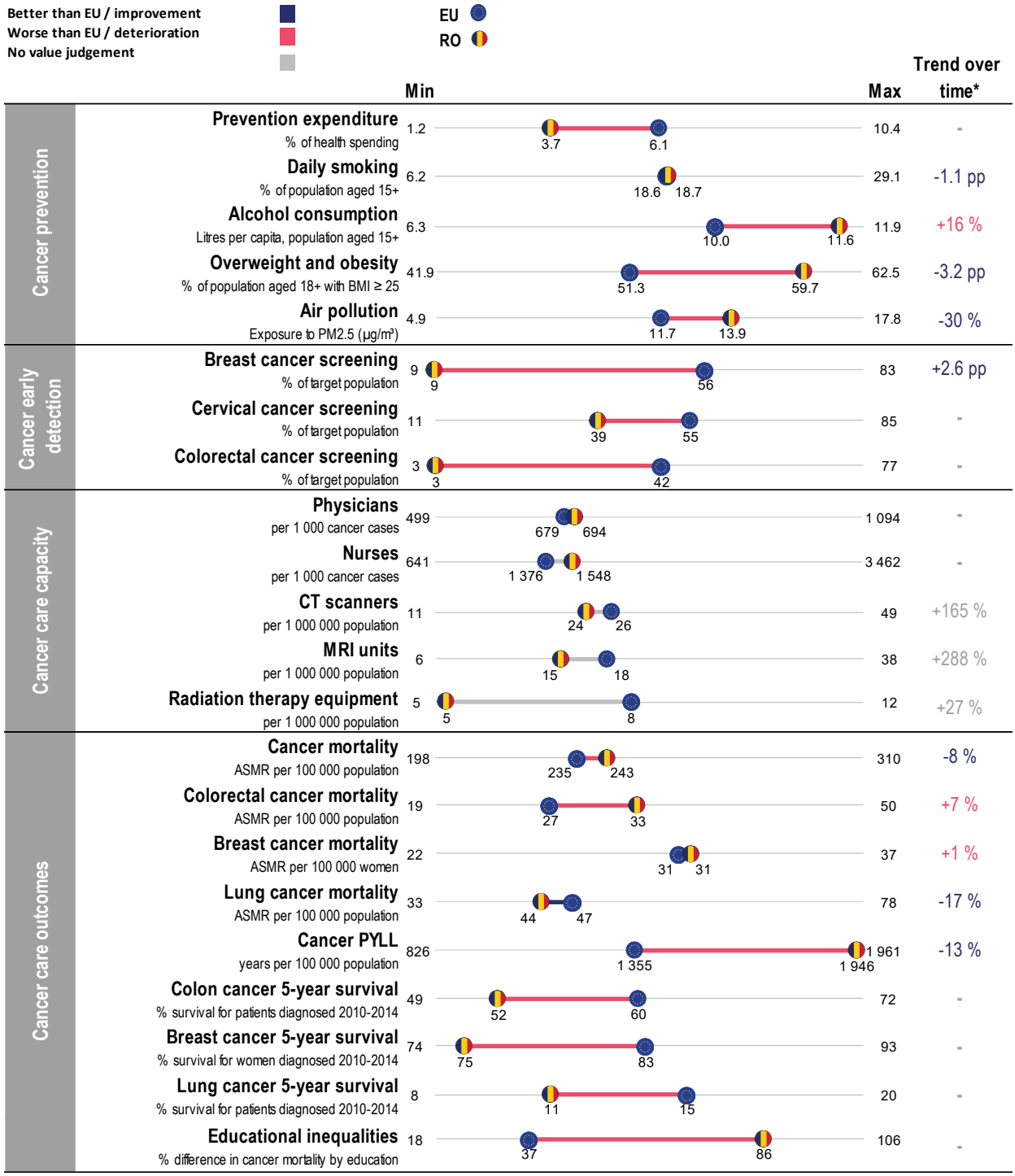
Note: ASMR = Age-standardised mortality rate; PYLL = potential years of life lost; pp = percentage point. No data available on HPV vaccination and colorectal cancer screening. *Please see Figure 6.31 for information on trend.

Figure 6.22. Portugal's Cancer Performance Tracker (CaPTr)



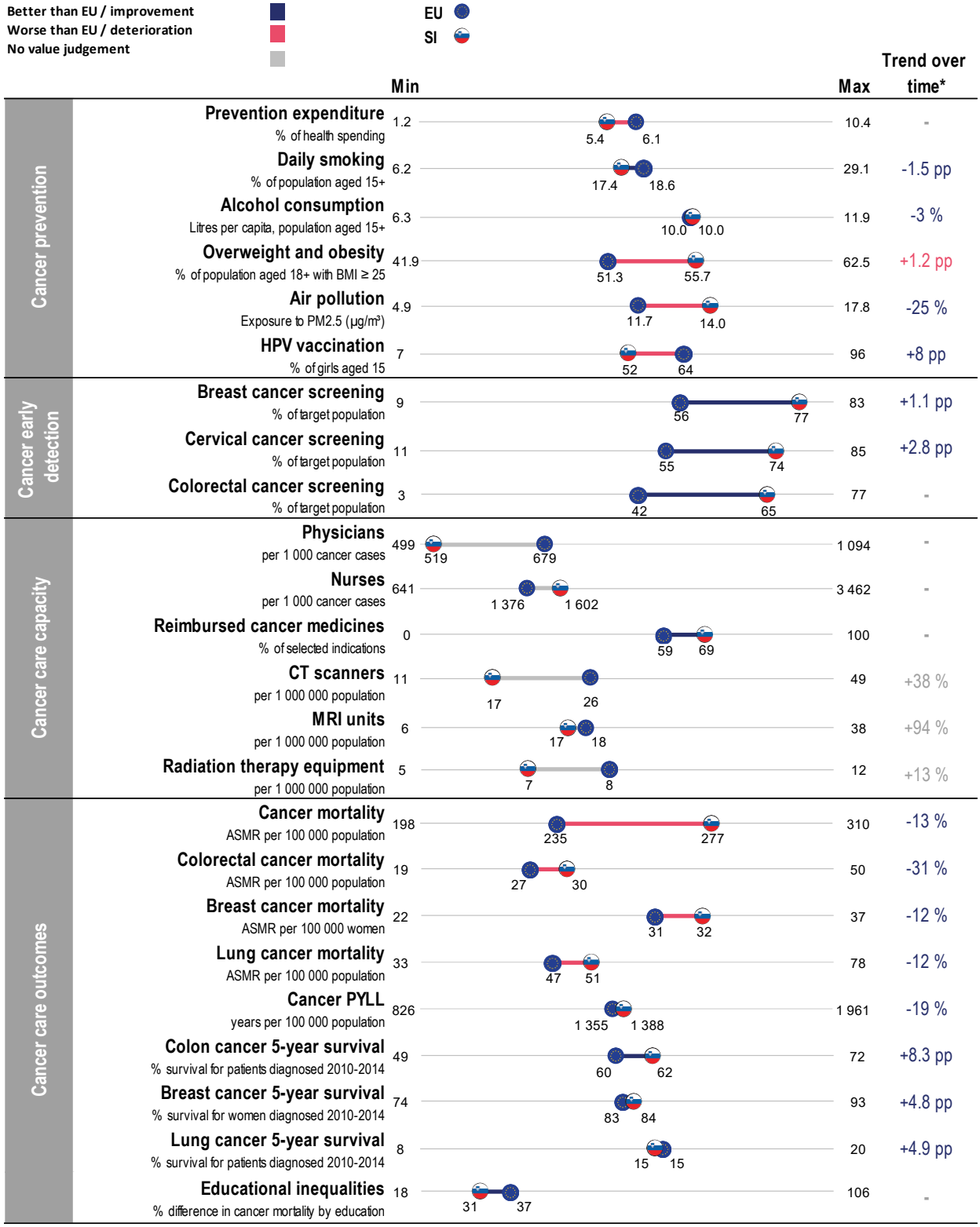
Note: ASMR = Age-standardised mortality rate; PYLL = potential years of life lost; pp = percentage point. *Please see Figure 6.31 for information on trend.

Figure 6.23. Romania's Cancer Performance Tracker (CaPTr)



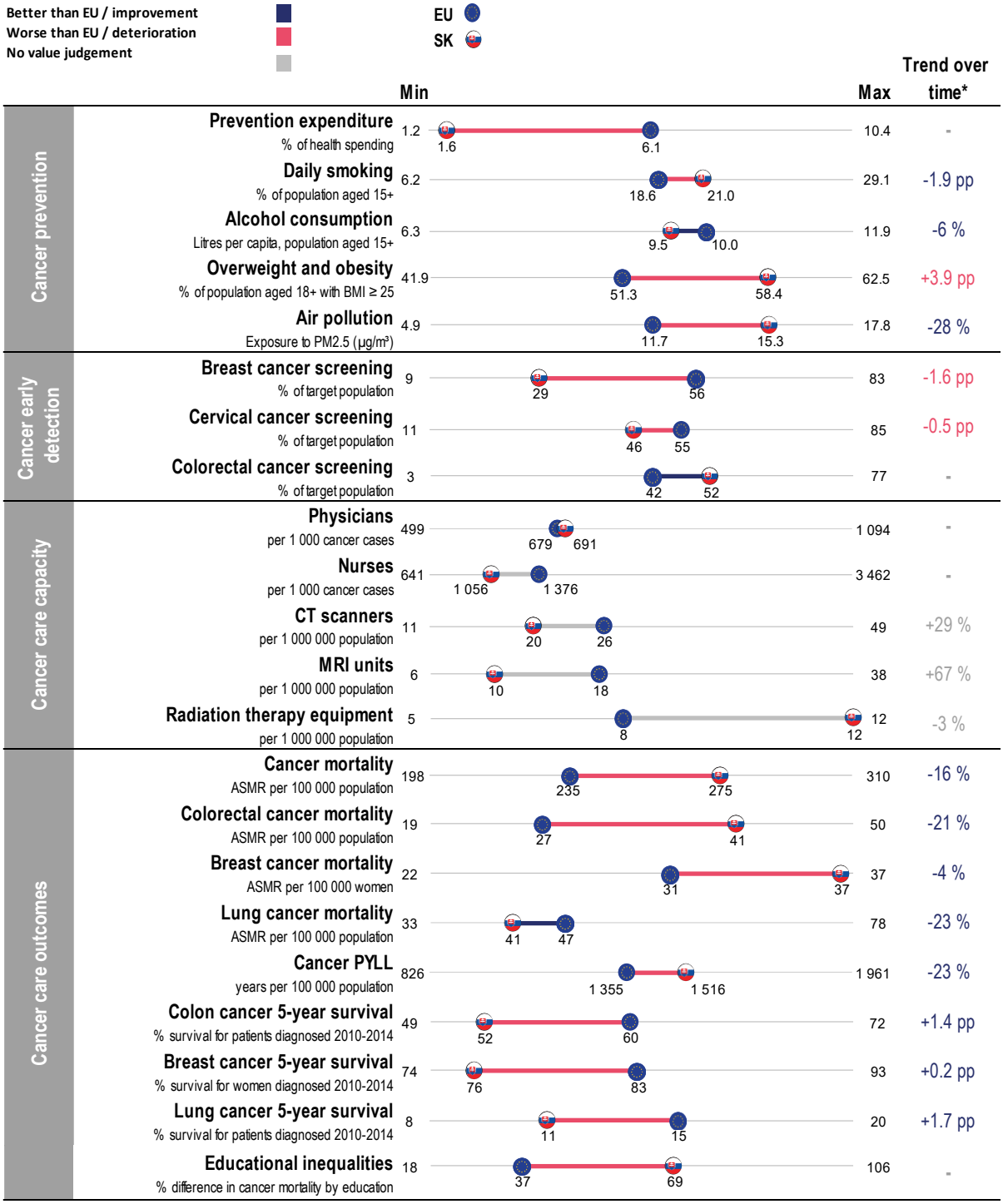
Note: ASMR = Age-standardised mortality rate; PYLL = potential years of life lost; pp = percentage point. No data on HPV vaccination and cancer medicines reimbursement. Breast, cervical and colorectal cancer screening values for Romania come from 2019 survey data while the EU averages are based on 2022 programme data. *Please see Figure 6.31 for information on trend.

Figure 6.24. Slovenia's Cancer Performance Tracker (CaPTr)



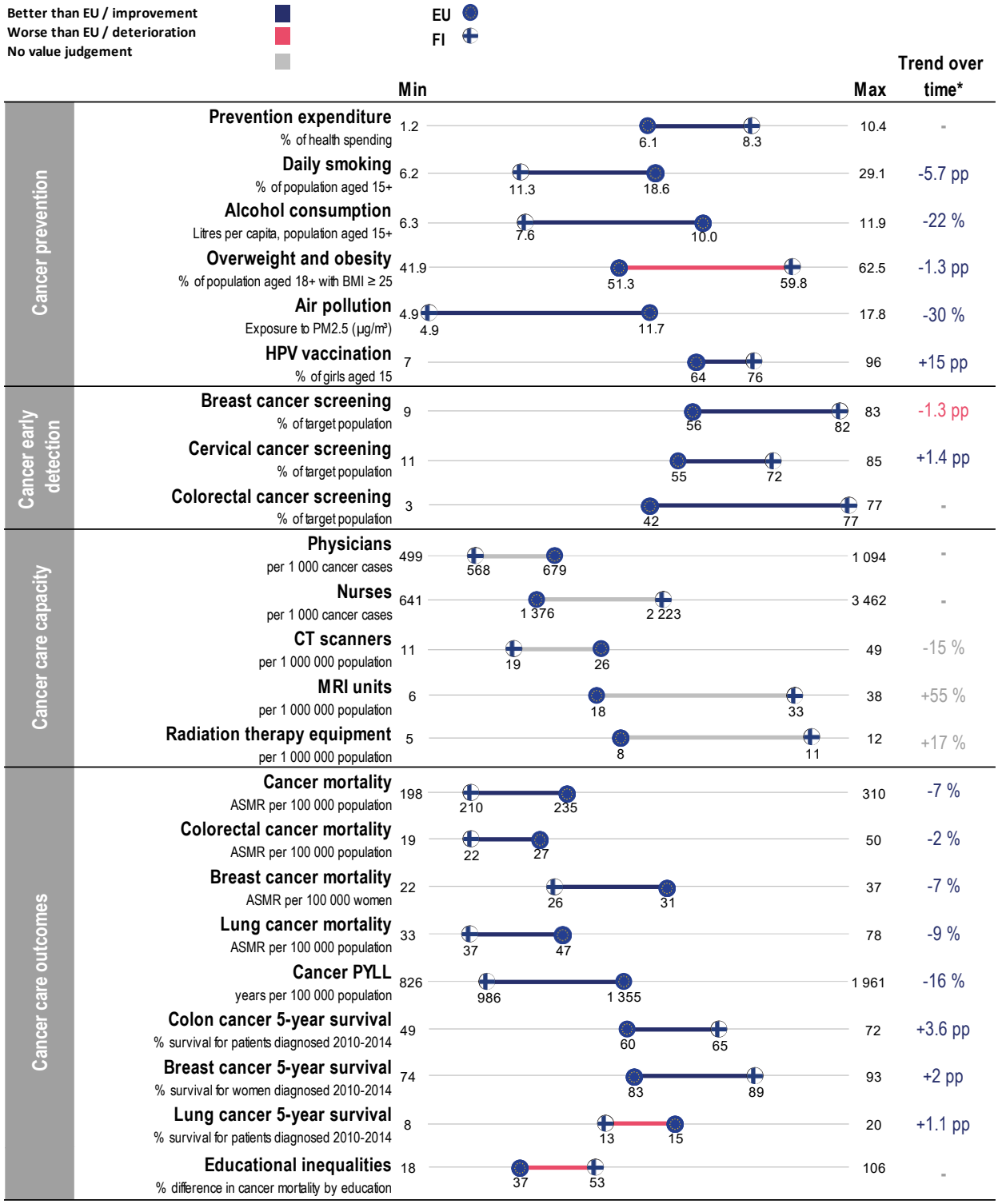
Note: ASMR = Age-standardised mortality rate; PYLL = potential years of life lost; pp = percentage point. *Please see Figure 6.31 for information on trend.

Figure 6.25. Slovak Republic's Cancer Performance Tracker (CaPTr)



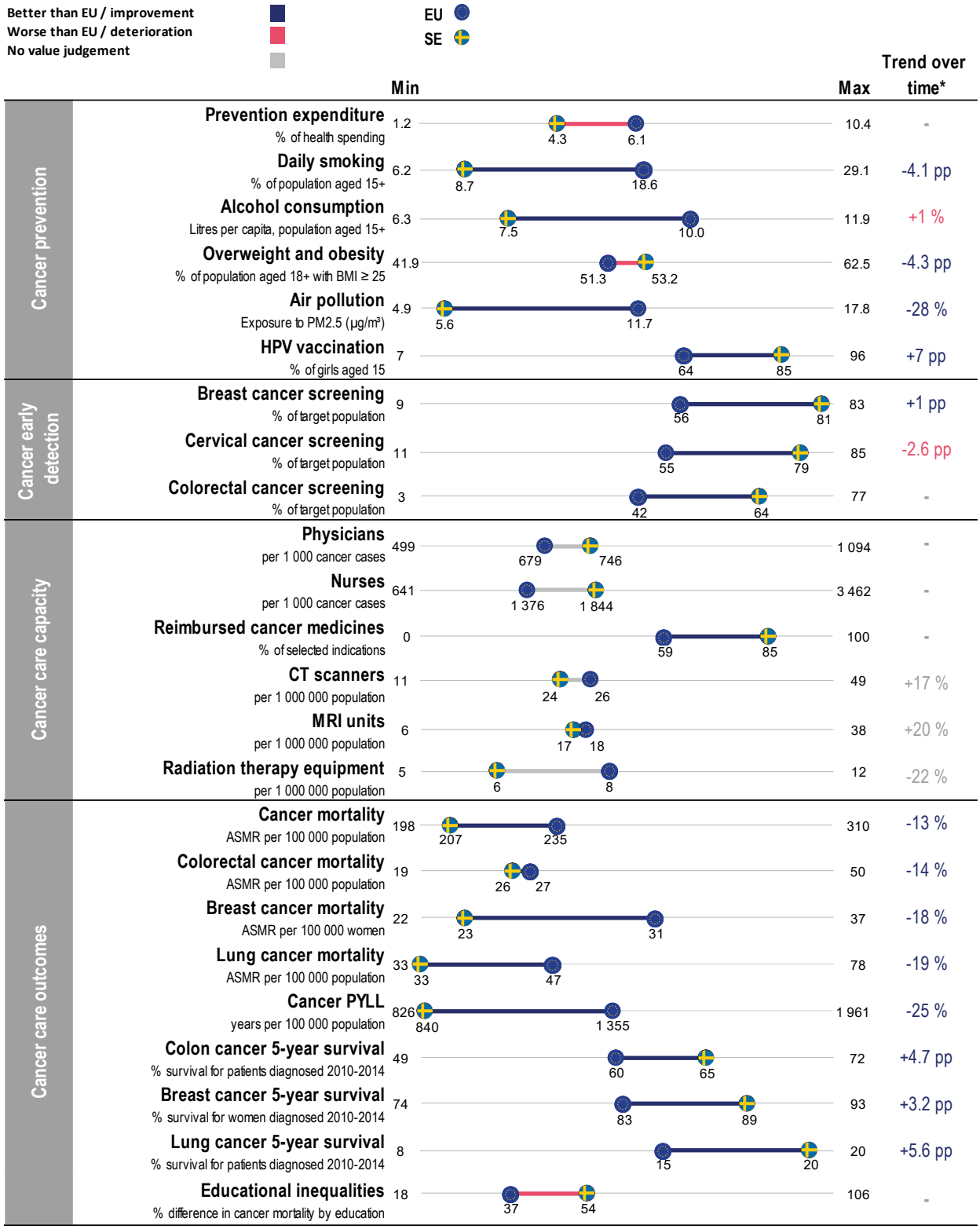
Note: ASMR = Age-standardised mortality rate; PYLL = potential years of life lost; pp = percentage point. No data on HPV vaccination and cancer medicines reimbursement. *Please see Figure 6.31 for information on trend.

Figure 6.26. Finland's Cancer Performance Tracker (CaPTr)



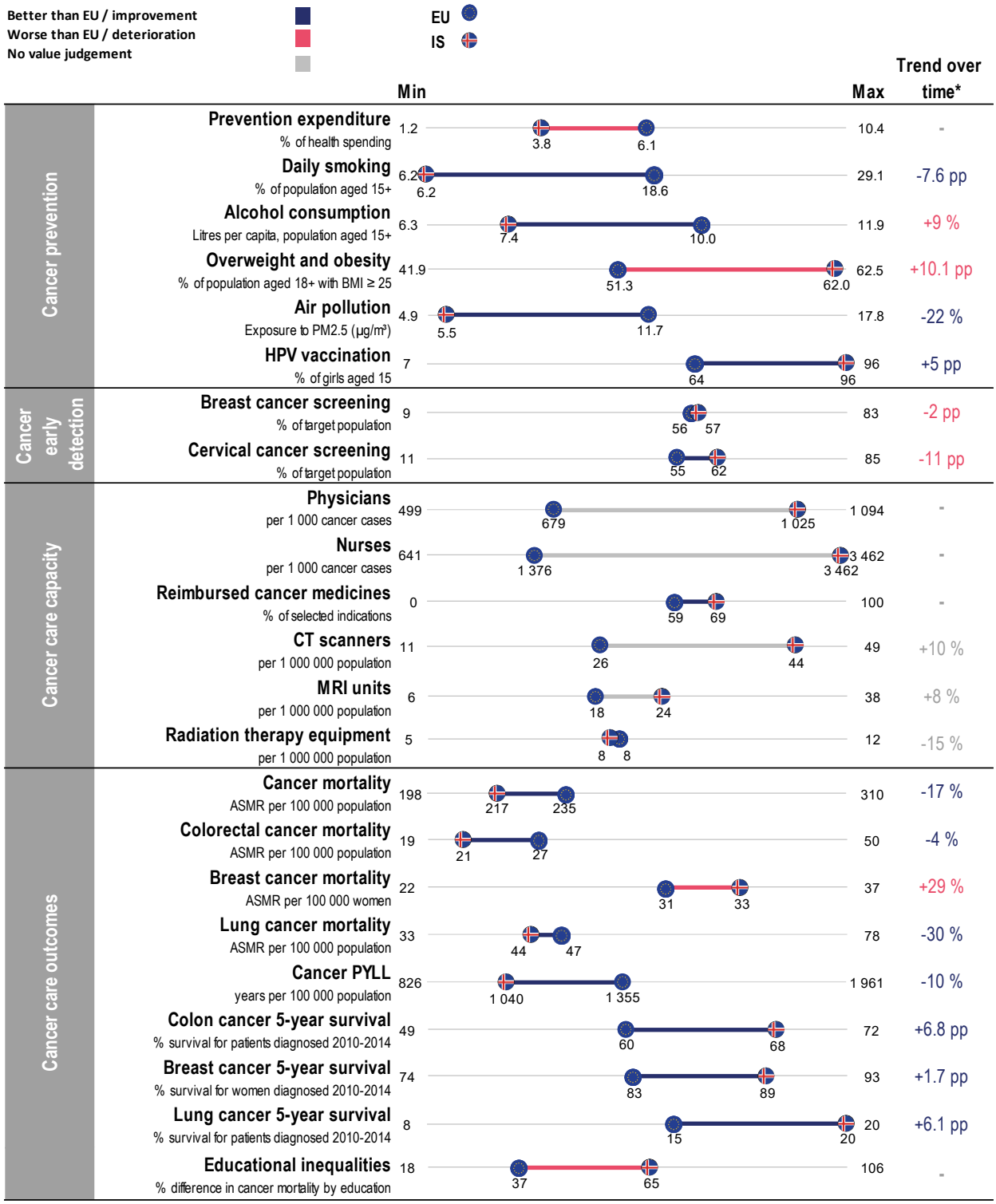
Note: ASMR = Age-standardised mortality rate; PYLL = potential years of life lost; pp = percentage point. No data available for reimbursed medicines. *Please see Figure 6.31 for information on trend.

Figure 6.27. Sweden's Cancer Performance Tracker (CaPTr)



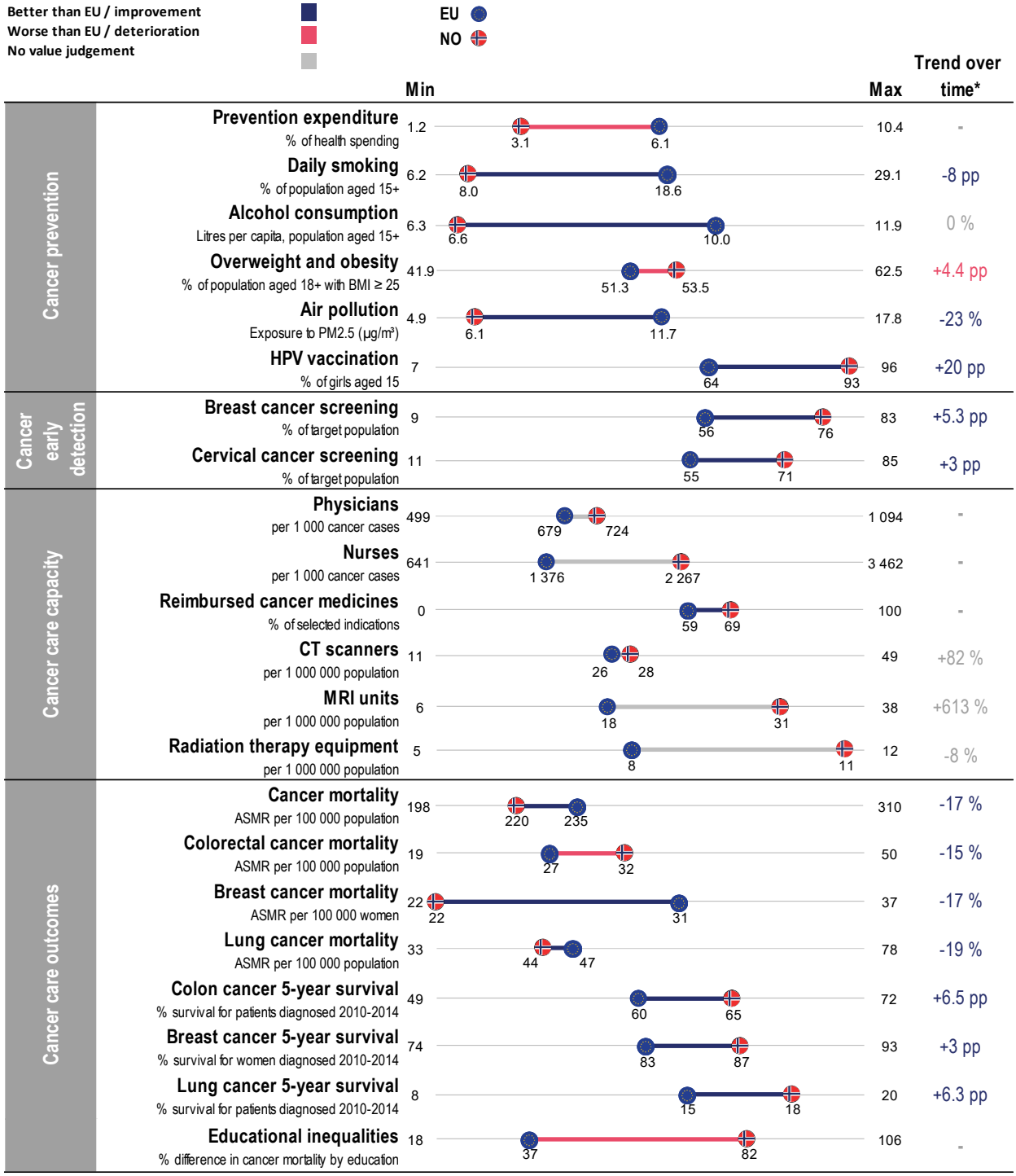
Note: ASMR = Age-standardised mortality rate; PYLL = potential years of life lost; pp = percentage point. *Please see Figure 6.31 for information on trend.

Figure 6.28. Iceland's Cancer Performance Tracker (CaPTr)



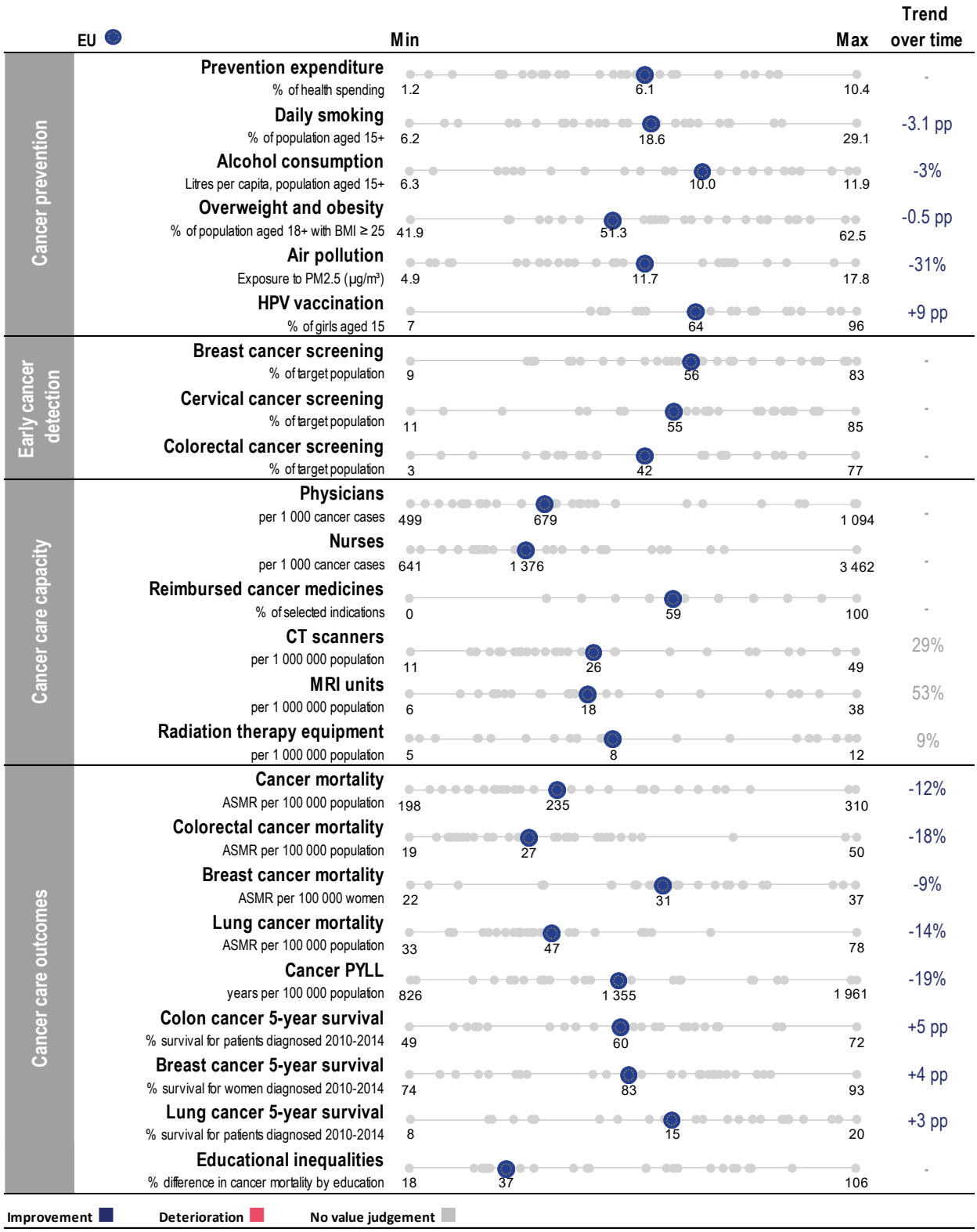
Note: ASMR = Age-standardised mortality rate; PYLL = potential years of life lost; pp = percentage point. *Please see Figure 6.31 for information on trend.

Figure 6.29. Norway's Cancer Performance Tracker (CaPTr)



Note: ASMR = Age-standardised mortality rate; PYLL = potential years of life lost; pp = percentage point. No data available on colorectal cancer screening available for 2022 as the programme was gradually rolled out, and no data available on cancer PYLL. *Please see Figure 6.31 for information on trend.

Figure 6.30. EU's Cancer Performance Tracker (CaPTr)



Note: ASMR = Age-standardised mortality rate; PYLL = potential years of life lost; pp = percentage point. Grey circles represent EU+2 countries.
*Please see Figure 6.31 for information on trend.

Figure 6.31. Cancer Performance Tracker (CaPTr) methods table

Dimension	Indicator	Definition	Year/Period of change	EU average (number of countries)	Source
Cancer prevention	**Prevention expenditure**	Share of total current health expenditure allocated to preventive care	2021	27	Eurostat
	Daily smoking	Share of people aged 15 and over reporting smoking daily	2012-22	27	OECD Health Statistics and Eurostat
	Alcohol consumption	Average litres of alcohol consumption per person aged 15 and over	2010-22	27	OECD Health Statistics and Eurostat
	Overweight and obesity	Percentage of individuals aged 18 and over reporting body mass index is >=25	2017-22	27	EU-SILC and EHIS
	Air pollution	Estimated mean population exposure to PM2.5 (µg/m³)	2010-20	27	OECD Environment Database
	HPV vaccination	% of 15-year-old girls who received their full dose of HPV vaccinations	2013-23	22	WHO
Cancer early detection	**Breast cancer screening**	Proportion of target population who have undergone breast cancer screening based on the country's breast cancer screening policy or EHIS survey definition	2014-22	24	OECD Health Statistics and EHIS
	Cervical cancer screening	Proportion of target population who have undergone cervical cancer screening based on the country's cervical cancer screening policy or EHIS survey definition	2014-22	20	OECD Health Statistics and EHIS
	Colorectal cancer screening	Proportion of target population who have undergone colorectal cancer screening based on the country's colorectal cancer screening policy or EHIS survey definition	2022	20	OECD Health Statistics and EHIS
Cancer care capacity	**Physicians**	Number of practising physicians per 1 000 new cancer cases	2022	27	OECD Health Statistics and European Cancer Information
	Nurses	Number of practising nurses per 1 000 new cancer cases	2022	27	OECD Health Statistics and European Cancer Information
	Reimbursed cancer medicines	Proportion of reimbursed indications among a sample of new cancer medicines for breast and lung cancers with high clinical benefit	2023	22	Hofmarcher, T., C. Berchet and G. Dedet (2024)
	CT scanners	Number of CT scanners per 1 000 000 population	2013-23	25	OECD Health Statistics
	MRI units	Number of MRI units per 1 000 000 population	2013-23	25	OECD Health Statistics
	Radiation therapy equipment	Number of radiation therapy equipment per 1 000 000 population	2013-23	20	OECD Health Statistics
Cancer care outcomes	**Cancer mortality**	Malignant neoplasms age-standardised mortality rate per 100 000 population	2011-21	27	Eurostat
	Colorectal cancer mortality	Colon, rectosigmoid junction, rectum, anus and anal canal cancer age-standardised mortality rate per 100 000 population	2011-21	27	Eurostat
	Breast cancer mortality	Breast cancer age-standardised mortality rate per 100 000 women	2011-21	27	Eurostat
	Lung cancer mortality	Trachea, bronchus and lung cancer age-standardised mortality rate per 100 000 population	2011-21	27	Eurostat
	Cancer PYLL	Potential Years of Life Lost due to cancer per 100 000 population	2012-22	25	OECD Health Statistics
	Colon cancer 5-year survival	Age-standardised 5-year net survival estimates (%) for patients diagnosed with colon cancer, 2010-14	2000/04-2010/14	24	CONCORD-3
	Breast cancer 5-year survival	Age-standardised 5-year net survival estimates (%) for women diagnosed with breast cancer, 2010-14	2000/04-2010/14	24	CONCORD-3
	Lung cancer 5-year survival	Age-standardised 5-year net survival estimates (%) for patients diagnosed with lung cancer, 2010-14	2000/04-2010/14	24	CONCORD-3
	Educational inequalities	Socio-economic inequality gap in cancer mortality between people with higher and low education (%)	2015/19	27	IARC

Note: EU-SILC = European Statistics on Income and Living Conditions; EHIS = European Health Interview Survey; IARC = International Agency for Research on Cancer. Information from the EU-CanIneq study led by IARC is available at EU-CanIneq - European Commission.

Notes

[1] According to data from the Cancer Registry Norway, ECIS estimations overestimate the country's breast cancer incidence rate (by around 6%).

[2] According to data from the Cancer Registry Norway, ECIS estimations overestimate the country's colorectal cancer incidence rate (by around 19% among women and 15% among men).

[3] Iceland, Norway and 27 EU countries are grouped into three distinct terciles based on 2022 GDP per capita in purchasing power standard terms: the top tercile includes the highest-income countries (Austria, Belgium, Denmark, Germany, Iceland, Ireland, Luxembourg, the Netherlands, Norway and Sweden); the middle tercile includes the middle-income countries (Cyprus, Czechia, Finland, France, Italy, Lithuania, Malta, Slovenia and Spain); the bottom tercile includes the lowest income-countries (Bulgaria, Croatia, Estonia, Greece, Hungary, Latvia, Poland, Portugal, Romania and the Slovak Republic).

[4] EU+2 countries include 27 EU Member States (EU27), plus Iceland and Norway. EU averages refer to EU27 countries only.

[5] Cancer prevalence refers to the proportion of the population who have been diagnosed with cancer and are still alive, including those currently undergoing treatment for cancer and those who have completed treatment. Five-year cancer prevalence includes people who have been diagnosed within the previous five years, while lifetime prevalence considers those who have ever received a cancer diagnosis.

[6] While programme data are collected from administrative data or national/regional cancer registries, survey data are obtained from international surveys, limiting the international comparability as responses may be affected by recall bias.

References

Aarts, M. et al. (2024), *Socioeconomic Differences in the Consequences of Cancer*, Integraal Kankercentrum Nederland (IKNL). [7]

De Angelis, R. et al. (2024), "Complete cancer prevalence in Europe in 2020 by disease duration and country (EUROCARE-6): a population-based study", *The Lancet Oncology*, Vol. 25/3, pp. 293-307, https://doi.org/10.1016/s1470-2045(23)00646-0. [9]

Desimpel F, L. (2024), *Lung cancer screening in a high risk population - Synthesis. Health Technology Assessment (HTA)*, Federal Knowledge Centre for Health Care (KCE), Brussels. [11]

European Commission/IARC/Erasmus MC (2024), *Mapping Socio-economic Inequalities in Cancer Mortality across European Countries*. [6]

Global Burden of Disease Collaborative Network (2021), *Global burden of disease study 2021 (GBD 2021) results*, https://vizhub.healthdata.org/gbd-results/ (accessed on 4 November 2024). [10]

Hassaine, Y. et al. (2022), "Evolution of breast cancer incidence in young women in a French registry from 1990 to 2018: Towards a change in screening strategy?", *Breast Cancer Research*, Vol. 24/1, https://doi.org/10.1186/s13058-022-01581-5. [2]

Hofmarcher, T., C. Berchet and G. Dedet (2024), "Access to oncology medicines in EU and OECD countries", *OECD Health Working Papers*, No. 170, OECD Publishing, Paris, https://doi.org/10.1787/c263c014-en. [15]

Koldehoff, A. et al. (2021), "Cost-Effectiveness of Targeted Genetic Testing for Breast and Ovarian Cancer: A Systematic Review", *Value in Health*, Vol. 24/2, pp. 303-312, https://doi.org/10.1016/j.jval.2020.09.016. [12]

OECD (2024), *Beating Cancer Inequalities in the EU: Spotlight on Cancer Prevention and Early Detection*, OECD Health Policy Studies, OECD Publishing, Paris, https://doi.org/10.1787/14fdc89a-en. [8]

OECD (2024), *Tackling the Impact of Cancer on Health, the Economy and Society*, OECD Health Policy Studies, OECD Publishing, Paris, https://doi.org/10.1787/85e7c3ba-en. [16]

OECD/European Commission (2024), *Health at a Glance: Europe 2024: State of Health in the EU Cycle*, OECD Publishing, Paris, https://doi.org/10.1787/b3704e14-en. [14]

SIOPE (2024), *Childhood cancer country profile*, https://siope.eu/activities/joint-projects/OCEAN-Country-Cancer-Profiles. [17]

Sung, H. et al. (2024), “Differences in cancer rates among adults born between 1920 and 1990 in the USA: an analysis of population-based cancer registry data”, *The Lancet Public Health*, Vol. 9/8, pp. e583-e593, https://doi.org/10.1016/S2468-2667(24)00156-7. [3]

Sung, H. et al. (2025), “Colorectal cancer incidence trends in younger versus older adults: an analysis of population-based cancer registry data”, *The Lancet Oncology*, doi: 10.1016/S1470-2045(24)00600-4, pp. 51-63, https://doi.org/10.1016/S1470-2045(24)00600-4. [5]

Teppala, S. et al. (2023), “A review of the cost-effectiveness of genetic testing for germline variants in familial cancer”, *Journal of Medical Economics*, Vol. 26/1, pp. 19-33, https://doi.org/10.1080/13696998.2022.2152233. [13]

Vaccarella, S. et al. (2024), “Prostate cancer incidence and mortality in Europe and implications for screening activities: population based study”, *BMJ*, p. e077738, https://doi.org/10.1136/bmj-2023-077738. [1]

Vassal, G. et al. (2021), “Access to essential anticancer medicines for children and adolescents in Europe”, *Annals of Oncology*, Vol. 32/4, pp. 560-568, https://doi.org/10.1016/j.annonc.2020.12.015. [18]

Vuik, F. et al. (2019), “Increasing incidence of colorectal cancer in young adults in Europe over the last 25 years”, *Gut*, Vol. 68/10, pp. 1820-1826, https://doi.org/10.1136/gutjnl-2018-317592. [4]