**European Cancer Inequalities Registry** 



## **Country Cancer Profile** 2025





#### **The Country Cancer Profile Series**

The European Cancer Inequalities Registry is a flagship initiative of Europe's Beating Cancer Plan. It provides sound and reliable data on cancer prevention and care to identify trends, disparities and inequalities between Member States, regions and population groups. The Country Cancer Profiles identify strengths, challenges and specific areas of action for each of the 27 EU Member States, Iceland and Norway, to guide investment and interventions at the EU, national and regional levels under Europe's Beating Cancer Plan. The European Cancer Inequalities Registry also supports Flagship 1 of the Zero Pollution Action Plan. The Profiles are the work of the OECD in co-operation with the European Commission. The team is grateful for the valuable inputs received from national experts and comments provided by the OECD Health Committee and the EU Thematic Working Group on Cancer Inequality Registry.

#### **Data and information sources**

The data and information in the Country Cancer Profiles are based mainly on national official statistics provided to Eurostat and the OECD, which were validated to ensure the highest standards of data comparability. The sources and methods underlying these data are available in the Eurostat Database and the OECD Health Database.

Additional data and information also come from the European Commission's Joint Research Centre (EC-JRC), the EU statistics on income and living conditions (EU-SILC) Survey, the World Health Organization (WHO), the International Agency for Research on Cancer (IARC), the International Atomic Energy Agency (IAEA), the European Society for Paediatric Oncology (SIOPE), the European Union Agency for Fundamental Rights (FRA LGBTIQ), the Health Behaviour in School-aged Children (HBSC) survey as well as from the 2023 Country Health and Cancer Profiles, and other national sources (independent of private or commercial interests). The calculated EU averages are weighted averages of the 27 Member States unless otherwise noted. These EU averages do not include Iceland and Norway. Mortality and incidence rates are age-standardised to the European standard population adopted by Eurostat in 2013.

Purchasing power parity (PPP) is defined as the rate of currency conversion that equalises the purchasing power of different currencies by eliminating the differences in price levels between countries.

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Updated on 26 May 2025 to add the following text to page 7: "The data is based on a modelling approach and should therefore be interpreted with caution."

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#### Key health system and demographic statistics



012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 202 ←←−Czechia ←−EU27

Health expenditure as % of GDP, 2022 or nearest year

15 % 10 % 8.8 % 5 % 0 % Czechia EU27

Age-standardised mortality rate per 100 000 inhabitants, 2021



Source: Eurostat Database.







Share of eligible population participating in screening (%), 2019 and 2022 (or nearest)





#### Cancer in Czechia

Estimated age-standardised cancer incidence in Czechia was similar to the EU average in 2022. Cancer mortality was higher than the EU average in 2021. Between 2011 and 2021, cancer mortality decreased by 17% among men and by 12% among women. Lifetime cancer prevalence increased by 27% in 2010-20 in Czechia, higher than the EU average.

#### **Risk factors and prevention policies**

In comparison to other EU countries, Czechia scores poorly on most cancer risk factors – notably alcohol consumption, physical inactivity and air pollution. However, cigarette smoking is decreasing (to slightly below the EU average in 2021), including among adolescents, supported by comprehensive tobacco control legislation. Overweight and obesity are a major public health challenge in Czechia, with more than half the population overweight or obese in 2022. The social gradient is important: prevalence of overweight is over 50% higher among women with lower education levels than those with higher education levels.

#### **Early detection**

Breast, cervical and colorectal cancer screening programmes are well established in Czechia, and include personalised invitations. Participation rates are high for breast and cervical cancers, but below the screening targets of Czechia's National Cancer Control Plan 2030. About 29% of the target population was screened for colorectal cancer based on programme data, but that figure increases to about half when including early-stage colorectal cancer diagnostics. Population-based cancer screening pilots were launched in 2022 for lung cancer and in 2024 for prostate cancer.

#### Cancer care performance

Cancer survival rates have been improving in Czechia, and access to cancer care is generally good, including for innovative pharmaceuticals. Care is centralised in comprehensive cancer care centres that lead in clinical care, provide multidisciplinary team consultations and co-ordinate palliative care provision. However, regional differences remain, often due to limited oncologist supply and training pathways and a general nurse shortage. Regular monitoring of waiting times is needed to address variations in access and to support policy action on care co-ordination. Between 2023-50, cancer is expected to lead to more cases of depression in Czechia but to reduce life expectancy by less than in the EU on average.

### 2. Cancer in Czechia

#### Estimated incidence rates are comparable to or below the EU averages for the most common cancer sites

Estimated cancer incidence rates in Czechia are comparable to the EU average for both men and women. According to the European Cancer Information System (ECIS) of the Joint Research Centre based on incidence trends from pre-pandemic years, more than 61 000 people were expected to be newly diagnosed with cancer in Czechia in 2022. The age-standardised rate in Czechia was 565 new cancer cases per 100 000 population – slightly below the EU average (572 per 100 000). Among men, the age-standardised rate (685 per 100 000) was on a par with the EU average (684 per 100 000), and among women (484 per 100 000) it was also comparable to the EU average (488 per 100 000) (Figure 1).

Cancer sites with the highest numbers of new cases were expected to be prostate among men (165 per 100 000 population) and breast among women (133 per 100 000), followed by colorectum (94 per 100 000 among men and 53 per 100 000 among women) and lung<sup>1</sup> (79 per 100 000 among men and 41 per 100 000 among women). Incidence rates were expected to be slightly higher than the EU averages for prostate cancer (7% higher) and similar for colorectal cancer among men, and below the EU averages for breast (10% lower), lung (16% lower among men and 7% lower among women) and colorectal cancer among women (9% lower).

Looking forward, ECIS estimates that cancer cases will increase by 16% between 2022-40.

### Figure 1. Estimated cancer incidence in Czechia is similar to the EU average, with rates higher among men

Age-standardised incidence rate per 100 000 population, estimates, 2022 800

Notes: 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 of absolute numbers shown on the ECIS website.



<sup>1</sup> Lung cancer also refers to trachea and bronchus cancers.

#### Differences in cancer incidence rates by gender are large

For the most common cancer sites, incidence rates are consistently higher for men than for women in Czechia. The colorectal cancer incidence rate was expected to be 77% higher among men than women in 2022 – a gender gap greater than the EU average (59%). The lung cancer incidence rate among men was expected to be almost double that among women, although somewhat smaller than the EU average gender gap. In 2022, incidence rates were also expected to be higher among men for bladder (almost 3.6 times as high), kidney (2.3 times as high) and melanoma skin cancer (1.3 times as high).

National data show a significant decrease in newly diagnosed cancer patients during the COVID-19 pandemic in 2020 and 2021. The Institute for Health Information and Statistics (ÚZIS) anticipates an increase in the reported number of cases over the coming years due to the impact of the pandemic, which delayed diagnoses for some patients (MZČR, 2024a).

### The cancer mortality rate shows a decreasing trend, but is still above the EU average

In 2021, almost one in five deaths (18%) in Czechia were due to cancer. The age-standardised cancer mortality rate was 257 deaths per 100 000 population, which is 6% lower than in 2019, but 9% higher than the EU average (235 deaths per 100 000). The decrease in cancer mortality in 2020 and 2021 is at least partly due to underdiagnosis of some cancer sites during the COVID-19 pandemic (ÚZIS, 2024a). National data show a 1.6% increase in cancer deaths in 2022 compared to 2021, although this was still below the number of cancer deaths in 2019.

As in other EU countries, men in Czechia had significantly higher cancer mortality rate (338 deaths per 100 000) than women (204 deaths per 100 000) in 2021 (Figure 2). However, the mortality rate among men decreased by 17% between 2011 and 2021 – a change comparable to that among the country's economic peers<sup>2</sup>. The cancer mortality rate among women decreased by 12% in 2011-21 – a larger change than the reduction among the country's economic peers (8%).



### Figure 2. The cancer mortality rate in Czechia is above the EU average, with pronounced gender differences

Notes: Economic peers are defined as tercile clusters based on 2022 GDP per capita in purchasing power standard terms. Economic peers for CZ are CY, ES, FI, FR, IT, LT, MT and SI. Source: Eurostat Database.

The largest cancer mortality rates in Czechia in 2021 were for lung (45 per 100 000 population), colorectal (32 per 100 000), pancreatic (22 per 100 000), breast (18 per 100 000) and prostate (14 per 100 000) cancers. Age-standardised mortality

rates were above the EU averages for colorectal (19% higher) and pancreatic (27% higher) cancers, just slightly above the EU averages for prostate (3% higher) and breast cancers (2% higher), and slightly below the EU average for lung cancer (5% lower).

<sup>2</sup> Economic peers are defined as tercile clusters based on 2022 GDP per capita in purchasing power standard terms. Economic peers for CZ are CY, ES, FI, FR, IT, LT, MT and SI.

### Regional differences in cancer incidence and mortality are high

In 2018-22, the incidence rate for lung cancer varied across the 14 Czech regions by up to 49%. Large regional differences were also seen in incidence of prostate cancer (up to 33%), colorectal cancer (up to 30%), and breast cancer (up to 20%). Mortality rate differences across the regions were also very high, with variations up to 53% for lung cancer and up to 23-28% for colorectal, breast and prostate cancer (ÚZIS, 2024b).

### Avoidable mortality from cancer has fallen significantly, but gender differences persist

The avoidable mortality<sup>3</sup> rate for lung cancer decreased over the last decade in Czechia – especially among men – reaching rates almost 8% lower than the EU averages among both women and men in 2021. This decline aligns with strengthened anti-tobacco policies over the past decade, including comprehensive tobacco control legislation implemented in 2017 (see Section 3). In 2021, the treatable breast cancer mortality rate in Czechia was 18 per 100 000 women aged under 75, which is 5% lower than the EU average (Figure 3) and represents a decrease of 12% compared to 2011. Czechia's treatable colorectal cancer mortality rates (11 per 100 000 women and 22 per 100 000 men in 2021) were above the EU averages in 2021 (by 15% for women and 29% for men). This is despite decreases of around 25% in each gender over the last decade, which were more pronounced than the reduction across the EU (18% decrease both among women and men). The decreases in treatable mortality rates reflect improved cancer treatment and diagnostics over the last decade, as well as higher uptake of breast and colorectal cancer screening (see Section 4).

Nevertheless, gender-based differences in treatable mortality for colorectal cancer have not changed over the last decade (two-fold higher male mortality in Czechia compared to 1.8-fold higher across the EU average). By contrast, the three-fold gender difference in preventable lung cancer mortality in 2011 decreased to a two-fold gender difference both in Czechia and the EU.



#### Figure 3. Avoidable cancer mortality improved over the last decade, particularly among men

Note: Avoidable mortality figures relate to deaths of people aged under 75. Source: Eurostat Database. Data refer to 2021.

### Almost half a million of people in Czechia are living with cancer or a history of cancer

Cancer prevalence<sup>4</sup> in Czechia has been increasing, due to both increasing cancer incidence and improvements in survival rates. Czechia's five-year age-standardised cancer prevalence rate in 2022 was estimated to be approximately 5% lower than the EU average, at 1 781 cancer cases per 100 000 population (Figure 4). Lifetime cancer prevalence in Czechia increased by 27% in 2010-20, according to EUROCARE-6 data – a slightly greater increase than the EU average of 24%.

<sup>3</sup> Avoidable mortality includes both preventable deaths that can be avoided through effective public health and primary prevention interventions, and treatable deaths that can be avoided through timely and effective healthcare interventions, including secondary prevention and treatment.

<sup>4</sup> 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.

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National data show a total of 462 756 people with cancer or a history of cancer living in Czechia by the end of 2020, which was a lifetime cancer prevalence rate of 4 307 per 100 000 population. Further, a 3.1% average annual increase in lifetime cancer prevalence was recorded in 2016-20 (ÚZIS,

2024b). This upward trend emphasises the growing importance of addressing quality of life and survivorship (see Section 5.4), given the increasing number of people living longer with a history of cancer.



Figure 4. Cancer prevalence in Czechia is increasing slightly faster than the EU average

Sources: IARC Globocan Database 2024; EUROCARE-6 study (De Angelis et al., 2024).

#### Education-based disparities in cancer mortality were greater in Czechia than the EU average

Based on historical trends, the estimated age-standardised cancer mortality rate in Czechia in 2015-19 was 2.5 times as high among men with lower education levels than among those with higher education levels (Figure 5), as compared to 1.8 times as high in the EU on average. Age-standardised cancer mortality was also higher among women with lower education levels than those with higher education levels, with a greater education-based disparity in Czechia (66%) than the EU average (37%). In both genders, the mortality rate among those with higher education levels in Czechia was lower than among their EU peers, leading to higher cancer mortality gaps by education seen in Czechia. The data is based on a modelling approach and should therefore be interpreted with caution.

#### Figure 5. People with lower education levels are likely to have higher cancer mortality rates



Age-standardised overall cancer mortality rates per 100 000 population

Notes: Data come from the EU-CanIneq study and refer to 2015-19 based on historical trends (for Czechia on 1998-2003). Population-based linked data were used for most EU countries, but unlinked data were used for Czechia, associating cancer mortality rates of five-year age cohorts with census data on socio-economic characteristics of each age cohort. EU15 refers to unweighted average of 14 EU countries and Norway. Source: European Commission/IARC/Erasmus MC (2024), Mapping Socio-economic Inequalities in Cancer Mortality across European Countries. ECIR Inequalities factsheet.

## The National Cancer Control Plan 2030 targets prevention, cancer care and patient quality of life

Czechia's National Cancer Control Plan (NOPL) 2030 was approved by the government and launched in mid-2022. The Plan aligns its objectives with Europe's Beating Cancer Plan (Box 1) and the Czech "Health 2030" Strategic Framework for Healthcare Development in Czechia to 2030 (MZČR, 2020). It builds on the strategic programmes of the medical societies – in particular, the Czech Society for Oncology and the Czech Haemato-Oncology Society. As of mid-2024, an evaluation of the first year of the Plan's implementation was under way.

The Czech National Oncology Registry has a long history, including individual tumour entries since 1977. It covers information on cancer incidence, screening and cancer stage at diagnosis, as well as treatment data and survival and mortality data. However, it does not include information on genetics or on patient-reported outcome and experience measures.

#### Box 1. The Czech National Cancer Control Plan 2030 aligns closely with the primary objectives of Europe's Beating Cancer Plan

The NOPL 2030 aims to address behavioural cancer risks, addiction, improve health literacy, and enhance vaccination; enhance screening programmes, implement lung cancer screening, target high-risk groups for selected cancers, engaging primary care physicians; improve cancer diagnosis and treatment, ensuring a skilled oncology workforce, strengthening the oncology care network, establishing a National Institute for Cancer Research, developing regional oncological care, and investing in cancer care infrastructure; establish multidisciplinary teams and home care, ensure availability of rehabilitation and psychological support for cancer patients, and develop general palliative care (Table 1). It also emphasises research to accelerate innovative diagnostic and treatment procedures, foster international co-operation, integrate e-health and telemedicine, and develop an economic data system for transparent oncology reimbursements. Additionally, the NOPL 2030 aims to establish ongoing care for childhood cancer survivors, including extended monitoring and enhanced paediatric palliative care (MZČR, 2022). While the Plan does not specifically prioritise addressing cancer inequalities, the topic is covered.

### Table 1. Czechia's National Cancer Control Plan 2030 is closely aligned with Europe's Beating Cancer Plan

Pillars of EBCP			Transversal themes of EBCP			
Prevention	Early Detection	Diagnosis and treatment	Quality of life	Cancer inequalities	Paediatric cancer	Research and innovation
				•		

Notes: EBCP = Europe's Beating Cancer Plan; Blue indicates that the National Cancer Plan includes a specific section on the topic; orange indicates that the topic is covered in one of the Plan's sections without being the only focus; and pink indicates that this topic is not covered in the Plan.

Sources: Adapted from "Study on mapping and evaluating the implementation of the Europe's Beating Cancer Plan" (not yet published), and the NOPL 2030, Annex 2 (MZČR, 2022).

### 3. Risk factors and prevention policies

### Alcohol consumption and air pollution rates remain high in Czechia

Many cancer deaths in Czechia are attributable to behavioural and environmental risk factors, including tobacco smoking, alcohol consumption, dietary risks and low levels of physical activity. In comparison to other EU countries, Czechia scores poorly on most of these risk factors (Figure 6).

According to the Globocan 2020 study, alcohol-related cancer incidence rate in Czechia was above the EU average, particularly for colorectal cancer (20% higher than the EU average). The alcohol consumption rate in Czechia remains one of the highest among EU countries, at 12 litres of pure alcohol per person in 2022 compared to the EU average of 10 litres. Discussions on imposing consumption tax on wine (sparkling wine is already taxed) are ongoing.

Despite improvements over the last decade, the Czech population had higher exposure to fine particulate matter ( $PM_{2.5}$ ) than most other EU countries in 2020, with a concentration of 14 µg/m<sup>3</sup> compared to 12 µg/m<sup>3</sup> across the EU. The European Environment Agency estimated that more than 80 premature deaths per 100 000 population resulted from air pollution in Czechia in 2021, 43% higher than the EU average.





Notes: The closer the dot is to the centre, the better the country performs compared to other EU countries. No country is in the white "target area" as there is room for progress in all countries in all areas.

Sources: OECD calculations based on 2022 EU-SILC Survey for overweight, obesity, physical activity, fruit and vegetable consumption (in adults); Eurofound Survey for occupational exposure; OECD Health Statistics for smoking, alcohol consumption (in adults) and air pollution; and WHO for HPV vaccination (15-year-old girls).

### Comprehensive tobacco control legislation has contributed to decreased smoking rates

The number of daily smokers in Czechia declined over the last decade, despite minor annual variations. In 2022, 16% of people aged 15 and over smoked daily, below the EU average of 18%. This development was supported by the introduction of comprehensive tobacco control legislation in 2017 – which banned smoking in public places – and continuous increases in tobacco excise taxes since 2020. National data show a further decrease to 15.9% of the population smoking daily in 2023, but with persistently large differences between men

(20%) and women (12%) (SZÚ, 2024). Daily smokers in Czechia smoked an average 12 cigarettes per day and two-thirds of daily smokers smoked more than 15 cigarettes a day in 2023. Despite the ban, 18% of the population continued to be subject to second-hand smoke at their workplace, and 20% of the population at home in 2023.

#### Overweight and obesity are a major public health challenge

In 2022, more than 56% of adult population was overweight (including obesity) in Czechia - higher than the EU average of 51%. Prevalence was lower among Czech women (50%) than men (64%), but

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

higher than the average among EU women (44%). Overall, 18% of the total Czech adult population was obese, compared to the 15% EU average.

As in many other countries, the proportion of overweight or obesity in Czechia in 2022 was considerably higher (by 52%) among women with lower education levels than those with higher education levels (Figure 7). Among women with lower education levels, the proportion decreased by 19% between 2017 and 2022, which is a larger reduction than among women with higher education levels (11% over the same period), while the EU averages remained essentially unchanged.

50 40 30 20 10 un Cechia Sovak Republic 0 Denmark Portugal Greece BUIBATIA Netherlands EU21 Belgium Luxembours Lithuania Iceland HUNBAR Romania Slovenia Croatia Germany AUSTIA Finland Estonia Poland Hornay reland Latina Malta Spain France Total women High education Low education

Figure 7. Half of Czech adult women were overweight or obese in 2022

Note: Overweight (including obesity) includes those with a body mass index (BMI) above 25. Source: Eurostat Database.

The high prevalence of overweight and obesity corresponds with the high levels of physical inactivity among the Czech population. More than three in four adults (76%) were physically active less than three times in a typical week in 2022. Additionally, almost one in two (49%) Czech adults consumed fruit less than once a day - a similar rate to those consuming vegetables less than once a day (50%) in 2022. These shares are higher than the EU averages of 39% for low fruit and 40% for low vegetable consumption.

#### Adolescent behavioural risk factors have shown some positive developments recently, but remain a concern

According to the data from the Health Behaviour in School-aged Children Survey, 14% of 15-year-olds in Czechia reported having smoked in the past month in 2022, which is lower than the EU average of 17% (Figure 8). The decline in recent years in Czechia

(5 percentage points since 2018) was steeper than that across the EU, supported by comprehensive tobacco control legislation introduced in 2017. However, the proportion of 15-year-olds who had ever used electronic cigarettes was 36% in 2022, just above the EU average (35%).

Alcohol abuse among adolescents has improved only marginally since 2018 in Czechia, and the share of 15-year-olds who reported having been drunk more than once in their life in 2022 remained the same as the EU average of 23%. The increasing trend in overweight (including obesity) among 15-year-olds plateaued during the pandemic, and remained at 20% in Czechia in 2022 – just below the EU average (21%). This trend is positive compared to that in many other EU countries, which observed progressively increasing trends in overweight prevalence among adolescents.

Lack of physical activity and poor nutrition contribute to overweight and obesity. The share



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of 15-year-olds engaging in 60 minutes of physical activity daily in Czechia is low – at 20%, although this is substantially higher than the 15% EU average. Among adolescents in Czechia, 35% consumed fruit daily (more than the 30% EU average) while 32% consumed vegetables daily (less than the 34% EU average).

#### Figure 8. More than one in five Czech 15-year-olds had been drunk at least twice in their life in 2022



Notes: The EU average is unweighted. Data refer to 2022, and are based on children aged 15 years. EU26 for smoking and drunkenness; EU25 for overweight. Source: Health Behaviour in School-aged Children Survey.

#### Recent initiatives focus on healthy lifestyle habits

In 2022, spending on prevention represented 8% of current health expenditure - an increase of 5 percentage points from 2019 due to COVID-19-related spending, and higher than the EU average of 6%<sup>5</sup>. Disease prevention, public health promotion and increasing health literacy are among the main goals of the Czech health policy strategy Health 2030 (MZČR, 2020). Czechia continued to raise taxes on tobacco in recent years, and excise duty on alcohol was increased in 2020. To address obesity, a new programme (BUĎ FIT 24) was launched in 2024, initially for 2 years, focusing on overweight children with the goal of increasing their physical activity levels and decreasing their BMI by 5% per year. Further, political discussion on taxing sugar-sweetened beverages is ongoing, but no legislation had yet been proposed by mid-2024. Advances in healthy food provision in schools and in health and social care institutions are supported by recently published healthy nutrition guidelines by the National Public Health Institute.

#### Czechia's HPV vaccination programme has been extended to all children aged 11-15

The NOPL 2030 aims to strengthen the HPV vaccination programme, which has been in place in Czechia since 2012 for girls and since 2018 for boys. Originally designed for girls (and boys) aged 13, the HPV vaccination target group was extended to children aged 11-15 in January 2024. HPV vaccines are free of charge for the target age group, fully

covered by social health insurance (SHI), and administered by paediatric general practitioners and gynaecologists.

After several years of steady decline in HPV vaccination uptake among girls, the trend reversed in 2017, and over 69% of 13-year-old girls were vaccinated in 2022 (ÚZIS, 2024b) – more than in 2020 (65%), but still below Europe's Beating Cancer Plan goal of 90%. Regional analysis reveals differences in vaccination uptake among girls ranging from 63% to 74% in 2022; however this variation is smaller than in 2020. At lower administration levels, all districts but one (75 out of 76) and the capital Prague reported HPV vaccination uptake among 13-years old girls in 2022 of over 60%, with a couple of districts reporting over 80%.

Among boys, the HPV vaccination uptake reached 47% in 2022, demonstrating a steady increase since 2017 (Figure 9). However, geographic variations are more pronounced among boys than girls, ranging from 36% to 56% at the regional level and 24% to 68% at the district level (ÚZIS, 2024b).

<sup>5</sup> Prevention expenditures as reported in health accounts should include activities outside of national programmes (e.g. opportunistic cancer screening), however in practice countries may have difficulty in identifying prevention spending outside of such programmes.

#### Figure 9. Human papillomavirus vaccination uptake is rising swiftly among boys in Czechia, but less so among girls

Proportion of 13-year-olds (%)



Notes: Data refer to girls and boys aged 13 who received the first HPV vaccine in the given year. Only vaccines covered by the SHI are counted; vaccines administered to other ages are not counted.

Source: ÚZIS (2024b).

### Achieving risk factor targets would lead to a reduction in the cancer burden in Czechia

Although the risk of developing cancer is influenced by a complex combination of factors, efforts to reduce lifestyle risk factors have the potential to reduce cancer incidence.

According to the OECD Strategic Public Health Planning (SPHeP) modelling work, achieving tobacco targets could prevent 41 357 new cancer cases in Czechia between 2023 and 2050 (Figure 10). Similarly, meeting alcohol targets could prevent 21 426 new cancer cases over the same period. An additional 10 226 cases could be prevented by meeting pollution targets, and 3 708 cases by achieving obesity targets.

#### Figure 10. Czechia could reduce the cancer burden during 2023-50 by achieving risk factor targets

Number of cancer cases avoided between 2023-50 due to achieving risk factor targets 45 000 41 357 40 000 35 000 30 000 25 000 21 426 20 000 15 000 10 226 10 000 3 708 5 000 0 Air pollution Obesity Alcohol Tobacco

Notes: 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 binge drinking between 2010 and 2030. For air pollution, it is an annual average PM<sub>25</sub> level capped at 10 µg/m<sup>3</sup> by 2030 and at 5 µg/m<sup>3</sup> by 2050. On obesity, the target is a reduction to the 2010 obesity level by 2025.

Source: OECD (2024b), Tackling the Impact of Cancer on Health, the Economy and Society, https://doi.org/10.1787/85e7c3ba-en.

## 4. Early detection

#### Population-based cancer screening programmes in Czechia are well established

Population-based cancer screening programmes for breast, cervical and colorectal cancers are well established in Czechia, and were recently complemented by pilot screening programmes for prostate and lung cancer. Screening programmes are fully covered by the SHI for the eligible population. Since 2014, breast, cervical and colorectal screening programmes include personalised invitations sent by the health insurance funds (HIFs) to people in the target groups who have not participated in screening during the last three years.

Participation rates in breast, cervical and colorectal screening had been stable over the last decade, with a drop in coverage for breast and colorectal screening programmes during the COVID-19 pandemic, which had not recovered for colorectal screening by 2022 (Figure 11). The introduction of personalised invitations helped to increase participation rates modestly after 2014 – especially among first-time participants (Ngo et al., 2018).

### Figure 11. Trends in cancer screening participation in Czechia had been stable before a pandemic-related drop



Notes: Data refer to mammography screening among women aged 50-69 within the past two years, cervical cancer screening among women aged 20-69 within the past three years and colorectal cancer screening among the population aged 50 and over. All data shown comes from programme information, except for the 2008 data point for cervical cancer, which comes from survey data. Source: OECD Health Statistics 2024.

### Breast and cervical cancer screening participation is above the EU average

Programme data for breast cancer screening show a participation rate of 60% among women aged 50-69 in Czechia in 2022. This is slightly above the EU average of 56%. Launched in 2002, the breast cancer screening programme in Czechia offers a mammogram free of charge every two years to women aged 45 and over. Opportunistic screening is also offered to women aged 40-45, but they must pay out of pocket. The self-reported participation rate in breast cancer screening is also higher in Czechia than the EU average, with significantly lower education-related differences in participation rates than the EU average (OECD, 2024a).

The participation rate in cervical cancer screening in Czechia is one of the highest in the EU: 74% of Czech women aged 20-69 had been screened over the past three years in 2022. The organised programme was launched in 2008 and converted into population-based screening in 2014. It provides a fully covered smear test to all women aged 18 and over, once a year, as part of a preventive gynaecological examination. Since 2021, HPV DNA testing is available for women aged 35 and 45 as part of the annual preventive gynaecological examination. Since 2024, negative cytology screening is not required anymore for HPV DNA testing and women aged 55 are included in the target group. Pilot projects have recently been undertaken to explore potentials of reaching non-participating women (Box 2).

#### The colorectal cancer screening rate remains below the national target

A total of 29% of people aged 50-74 were screened for colorectal cancer in 2022 according to programme data in Czechia, which is below the EU average of 42%. However, if an early-stage diagnostic faecal occult blood test (FOBT) or diagnostic colonoscopy is performed, people are not invited to participate in the colorectal screening programme until the next period. Adding early-stage colorectal cancer diagnostics, administrative data show that 50% of the Czech population aged 50 and over were examined during 2017-19 (Ngo et al., 2023), although this is still below the screening target of the NOPL 2030.

Colorectal screening using the FOBT has been available free of charge for people aged 50 and over since 2000. In 2009, the design of the programme was updated to include screening colonoscopy. Eligible people can choose either an FOBT once a year for those aged 50-54 and every other year for people aged 55 and over, or a colonoscopy every 10 years. Screening is usually done as part of the biannual preventive check-up by a registered general practitioner (GP) or gynaecologist.

## Among LGBTIQ people, about seven in ten report cervical cancer screening in the past five years

According to the EU LGBTIQ Survey III, 33% of LGBTIQ cisgender females, trans women and intersex people aged 40-54 years reported having had a mammogram in the previous 12 months, higher than the EU average of 28% (Figure 12). For cervical cancer screening, in both population groups of 25-39 and 40-55 years of age, 71% of the relevant LGBTIQ reported having had a smear test in the previous 5 years. This is a higher rate than the EU average (at 64%) for those aged 25-39, but a lower rate than the EU average (at 74%) for those aged 40-55.

#### Figure 12: LGBTIQ people in Czechia participate in breast cancer screening at slightly higher rates than their counterparts in the EU



Note: LGBTIQ survey results refer to age groups and/or screening intervals that do not align with the population screening approach in EU countries, and should not be compared. Source: The European Union Agency for Fundamental Rights (EU LGBTIQ Survey III).

### Box 2. Pilot projects explore possibilities to increase population coverage of cervical and colorectal cancer screening programmes in Czechia

Three different pilot projects were conducted in 2018-21 for the cervical screening programme. The first, mailing self-sampling HPV tests to almost 5 000 women aged 50-65 who had not participated in regular gynaecological check-ups, had a response rate of only 7%. The second, providing self-sampling HPV tests directly from the National Public Health Institute's mediators to 200 women at risk of poverty and social exclusion, saw over half returned for laboratory examination. The third compared response rates of sending a self-sampling HPV test directly versus via a personalised screening invitation (a control group), and indicated an 8 percentage points higher response rate to direct mailing in never-screened women aged 50-65 (Ngo et al., 2024). The Committee for Cervical Cancer Screening, an advisory body at the Ministry of Health, is reviewing the study results for potential policy recommendations.

Likewise, a pilot project in 2020, implemented by the National Screening Centre of ÚZIS, investigated the possibility of sending self-sampling FOBT kits to individuals who had not participated in regular colorectal cancer screening. No policy decisions on the results have yet been taken by the Committee for the Colorectal Cancer Screening at the Ministry of Health.

### The new lung cancer screening programme suffers from low participation

Since 2022, a five-year pilot lung cancer screening programme has targeted people aged 55-74 with a history of smoking 20 cigarettes a day for 20 or more years (or higher quantities for 10 years). General practitioners select participants from their registered patients and refer them to respiratory physicians, who perform a lung examination and then refer them to an accredited radiology service for a low-dose computed tomography (CT) scan.

As of mid-2024, preliminary pilot monitoring shows lower than expected participation levels, but a higher share of early-stage cancer detected among those diagnosed within the pilot programme than in the general population (ÚZIS, 2024a). The pilot programme currently only has a small effect on overall lung cancer detection, and measures to scale the programme up need to address low active involvement of GPs, low patient participation following GP referrals, and the general need for an information dissemination campaign about the programme.

#### A prostate cancer screening programme was introduced in 2024

A population-based prostate screening programme was launched in Czechia in January 2024 (the first in the EU) and will be piloted for five years. The programme targets men aged 50-70, who are invited for screening by their registering GP or urologist. A prostate-specific antigen (PSA) test is followed by complex urological examination, followed by a magnetic resonance imaging (MRI) scan and fusion biopsy where needed. Prior to this programme, opportunistic prostate cancer screening was available, covered by the SHI. PSA tests were taken by 48% of Czech men aged 50 and over in 2020-21 (MZČR 2024a), but uptake was highest among men aged 75-79, for whom the net benefit of screening is more limited than among those aged 50-69. The new programme is thus about shifting opportunistic screening into a population-based programme, and offering extra financial incentives to GPs, urologists and radiologists to screen the target group aged 50-70 (higher age groups can still be examined, but providers receive only a standard payment.) A network of certified MRI and fusion biopsy providers has been established for the launch of the programme, with a certification process described in the programme methodology.

#### Screening programme support has been made a data custody priority at ÚZIS

The National Screening Centre, a dedicated unit at ÚZIS, has been tasked with supporting all screening programmes in Czechia since 2023, including cancer screening. For cancer screening data custody, it aims to integrate the available administrative screening data into a single registry and complement it with clinical data on test results, now available separately in various clinical registries. Further, linkage to the newly created National Vaccination Registry is planned for HPV vaccination data, as well as inclusion of opportunistic screening data. Creating a unified cancer screening registry will ultimately lead to better understanding of the strengths and limitations of the Czech cancer screening programmes.

A country-wide online booking system for screening appointments and other preventive check-ups is currently in development, with launch expected in 2025.

### 5. Cancer care performance

#### 5.1 Accessibility

### Access to cancer care is free of financial barriers in Czechia

Cancer care is fully reimbursed by the SHI, which covers virtually 100% of Czechia's population. Care costs are reimbursed directly to providers of healthcare by the HIFs. No copayments are required for cancer care surgery, treatment or pharmaceuticals administered by a healthcare provider, including innovative treatments with reimbursed indications. In addition, there are no user fees for hospital stays and outpatient visits. Copayments apply for prescribed pharmaceuticals collected in a pharmacy when price is higher than the cheapest pharmaceutical in a reference group – an annual limit on these copayments is stratified by age and economic situation.

### The cancer care network is centralised and vertically structured

In 2024, Czechia had 15 accredited comprehensive cancer care centres (KOCs), six haemato-oncology centres and two centres for highly specialised oncology and haemato-oncology care for children. Within regions, the KOCs interact with lower-level cancer care providers. Since 2017, each KOC is responsible for forming and acting as the clinical lead of a regional oncology group (ROS), including consultation on treatment decisions and co-ordination of follow-up care (see Section 5.2).

## Access to highly specialised cancer care is generally good, but with limitations in some regions

Every region in Czechia has at least one KOC, except Karlovarský region. The share of cancer patients treated in KOCs nationwide had been increasing gradually, and stabilised at 70% in recent years, including 2022. However, this remains below Europe's Beating Cancer Plan target for 90% of cancer patients to receive consultation in comprehensive cancer centres. Not all cancer cases require treatment, diagnostics or consultation in a KOC according to the Czech Oncology Society guidelines, yet regional differences are significant: 88% of all cancer patients residing in Prague were treated in a KOC while only 43% of cancer patients in Karlovarský region were treated in a KOC in 2022 (Figure 13). Patients have free choice of healthcare provider, and in some regions patients opt to travel to a neighbouring region's KOC.

#### Figure 13. Proportions of cancer patients treated in comprehensive cancer care centres varied widely by region in 2022

Proportion of cancer patients treated by residence

	0%	20 %	40 %	60 %	80 %	100 %
The Capital Prague	2		88.1 %	6	1	1.9 %
Plzeňský regior	1		86.3 %	)	1	3.7 %
Pardubický region	1		82.3 %		17	.7 %
Jihomoravský regior	1		74.0 %		26.0	%
Olomoucký regior	1		73.3 %		26.7	%
Ústecký regior	1		70.5 %		29.5	%
Czechia	1		69.9 %		30.1 9	%
Liberecký region			69.7 %		30.3 9	%
Jihočeský regior	1	6	58.0 %		32.0 %	6
Královéhradecký regior	1	63	3.0 %		37.0 %	
Středočeský regior		62	2.8 %		37.2 %	
Zlínský regior		62	2.7 %		37.3 %	
Moravskoslezský regior	1	60	.3 %		39.7 %	
Vysočina regior		58.	6 %		41.4 %	
Karlovarský region		43.4 %		56	6 %	
		13.17				
Treated in KOC		Trea	ted exclus	ively out	of KOC	

Notes: Data refer to patients treated for solid tumours according to their place of residence. Patients referred by a KOC to another provider for further treatment are counted in the KOC share. Source: ÚZIS (2024a).

Geographical accessibility can be an issue for people needing to travel for their cancer treatment on regular basis – especially for innovative treatments and when a KOC is located far from them. The NOPL 2030 and the Czech National Recovery Plan (NRP) aim to reduce regional inequalities in access to highly specialised cancer care. The NRP supports investments in Karlovarský region's main hospital, and clinical collaboration has been strengthened to support the local ROS by Plzeňský KOC. Accreditation for a KOC in Karlovarský region may be considered in the new 2025 KOC accreditation cycle.

#### Oncologist capacity in regions is heavily dependent on their training pathway

In 2022, there were 737 physicians per 1 000 new cancer cases in Czechia, which is more than the

EU unweighted average of 679 per 1 000. However, differences in physician supply in Czechia exist across specialities and regions. The number of nurses in Czechia (1 549 per 1 000 new cancer cases) was also higher than the EU unweighted average (1 376 nurses per 1 000 new cancer cases) (Figure 14).

### Figure 14. Czechia's density of physicians and nurses per 1 000 new cancer cases is above the EU average



Notes: 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.

In 2023, Czechia had 1 168 actively working oncologists, which includes 291 radiation oncologists, 417 clinical oncologists and 278 surgical oncologists. About 12-13 clinical oncologists, 5-6 radiation oncologists and 4-5 surgical oncologists finished their specialised training annually in 2019-23 (ÚZIS, 2024b). This reportedly sufficient number of Czech oncologists masks differences in their regional availability and age demographic. The current training system favours KOCs over regional cancer care providers. Although residency training places are financially supported by grant money from the Ministry of Health in regional hospitals, physicians in training must spend on average 1.5 years in a KOC, resulting in high reluctance of young physicians to resettle back in rural regions thereafter. Furthermore, a substantial proportion of oncologist capacity is still

taken up by patients with a history of cancer for lifelong follow-up care. HIFs plan to take steps to increase incentives for transferring care of these patients to GPs to free up some oncologist capacity.

#### Nurse shortages are a commonly reported constraint for any cancer care capacity increase

Czechia has a general problem with shortages of highly qualified nurses in hospitals, which also concerns oncology departments. In 2023, a total of 1 125 nurses were employed in clinical oncology departments and 814 in radiation oncology departments in hospitals (ÚZIS, 2024b); however, few have a specialised oncology nurse education, which was only available in Czechia for a few years a decade ago. General nurses qualify for cancer care-related skills by obtaining certificates CZECHIA 2025

while working under supervision in an oncology or radiology department. In 2024, a new specialised oncology nurse study programme was introduced thanks to the Czech Association of Nurses – however, it may take time to become a more widespread study programme at Czech universities and produce its first graduates.

The number of radiology assistants and radiation physicists is reportedly insufficient, except in Brno, where there is an accredited study programme. According to experts, the capacity of university study programmes is a constraint, despite increased interest in these professions following the pandemic.

### Cancer treatment technology density is similar to the EU average

A substantial number of cancer patients receive at least one course of radiotherapy as part of their treatment regime. Availability of radiotherapy equipment for cancer care therapy was 8 units per 1 000 000 population in Czechia in 2022. Spread across 38 radiotherapy centres, this was similar to the EU average (8 units per 1 000 000) and the average among Czechia's economic peers (8.4 units per 1 000 000) (Figure 15).

#### Figure 15. Density of radiotherapy equipment in Czechia has been stable over the previous decade



Notes: The vast majority of radiotherapy equipment in EU countries is found in hospitals. Data for Portugal and France includes equipment in hospitals only while data for other countries refer to all equipment. Economic peers are defined as tercile clusters based on 2022 GDP per capita in purchasing power standard terms. Economic peers for CZ are ES, FI, FR, IT and SI. The EU average is unweighted.

Source: OECD Health Statistics 2024.

### Regular monitoring of waiting times is needed to address regional variation in accessibility

Waiting times for cancer care are not monitored and evaluated systematically in Czechia. Cancer screening and diagnosis are conducted by accredited providers, which are located throughout the country, but densities are different across regions. The population served by the 73 mammography screening centres ranges from 23 000 people per mammogram in Královéhradecký region to 80 000 people per mammogram in Jihočeský region (ÚZIS, 2024b).

Efforts are beginning to monitor patient pathways following a positive screening result to diagnosis, as timely appointments are reported to be an issue – especially for some KOCs. The National Screening Centre at ÚZIS collaborates with the Czech medical societies to identify points in patient pathways for colorectal, breast and lung cancer that could be assessed using administrative data. Preliminary analyses show regional variation in time from a positive mammography to biopsy or treatment; these are used to raise awareness in expert discussions on availability of equipment and providers, as well as on the differences among the types of providers. Such analyses are invaluable for improving cancer care accessibility and steering evidence-based policy decisions in the future.

For colorectal cancer patients, ad hoc monitoring of waiting times for a diagnostic colonoscopy following a positive FOBT has recently been introduced. While patients waited 76 days on average in Czechia in 2022, waiting times varied up to three-fold according to their place of residence – from an average 40 days in some districts to 135 days in others (Figure 16). Patients are, however, free to choose their healthcare provider, and many use the opportunity to travel to different parts of Czechia or to a KOC. Based on provider location, average waiting times for a colonoscopy range from 34 to 152 days among the 76 Czech districts (MZČR, 2024b).

#### Figure 16. Waiting times for diagnostic colonoscopy after a positive screening test vary up to three-fold based on place of residence



Note: Data refer to average district waiting times according to patients' place of residence in October-December 2022 among people aged 50 and over. Source: Adapted from MZČR (2024b) based on the data from the National Registry of Reimbursed Healthcare Services by ÚZIS.

#### Czechia's good access to cancer medicines has improved following 2022 legislation

Access to new cancer pharmaceuticals and biosimilars is better in Czechia than the EU average, according to the OECD study on selected medicines with a marketing authorisation by the European Medicines Agency between January 2016 and the end of March 2023 (Figure 17). As of April 2023, 77% of indications of a sample of medicines with high clinical benefit used in treatments for breast and lung cancer were covered by the SHI in Czechia, which is a higher share than the EU average (59%) and well above the average among Czechia's economic peers (47%). Likewise, of the 19 selected biosimilars for three cancer medicines that gained marketing authorisation over the same period, 74% were reimbursed by the Czech SHI by April 2023 – more than the averages across the EU (65%) and among Czechia's economic peers (56%).



#### Figure 17. Access to new oncology medicines and biosimilars is better in Czechia than the EU average

Notes: The analysis includes a sample of 13 indications of 10 new cancer medicines for breast and lung cancer with a high clinical benefit and 19 biosimilars of three cancer medicines (bevacizumab, rituximab, trastuzumab), with active marketing authorisation by the European Medicines Agency as of 26 March 2023. The data represent the share of the indications or biosimilars that were on the public reimbursement list on 1 April 2023. Economic peers are defined as tercile clusters based on 2022 GDP per capita in purchasing power standard terms. Economic peers for CZ are CY, ES, FR, LT, MT and SI. The EU average is unweighted. Source: Hofmarcher, Berchet and Dedet (2024), "Access to oncology medicines in EU and OECD countries", https://doi.org/10.1787/c263c014-en.

Named-patient early access schemes are also possible in Czechia – strict criteria are applied, such as the medicine being the only therapeutic option for a particular patient. The proportion of clinically eligible patients who benefit from an early access scheme for a given medicine or indication is reported to be less than 50% but more than 10%. Recently, experts have reported that HIFs are more open to cover pharmaceuticals without regular reimbursement in individual cases.

New legislation was implemented in 2022 to improve access to newly marketed innovative cancer treatment by adjustments made to the pricing and reimbursement decision process for pharmaceuticals already approved at the EU level. The legislation also eased the way for innovative pharmaceuticals to obtain permanent reimbursement. Once approved for SHI reimbursement, whether temporary or permanent, there are no restrictions on the number of treated patients within SHI-approved medical indications. Further, patients and medical societies are newly involved in reimbursement decision making on orphan drugs, and social impact and benefit criteria have been added for consideration during the assessment process.

#### Delegated prescription pilot allows selected innovative treatments to be provided closer to patients

Until 2022, all innovative cancer treatments were limited for administration in accredited KOCs. In 2023, a pilot concept was introduced by some HIFs, allowing selected strictly defined innovative treatment to be delegated from a KOC to a cancer care provider within its ROS (via a so-called "delegated prescription") for defined indications of proven, easy-to-administer, safe and complication-limited innovative treatment. This measure has brought some innovative cancer treatments, which were previously restricted to KOC providers, closer to patients – especially to those unable or unwilling to travel. So far, the delegated prescription concept has not yet been implemented equally throughout the country and across the HIFs, mainly due to different organisation of ROSs in regions and for financial reasons (see Section 5.3).

#### 5.2 Quality

### Five-year cancer survival rates have been improving steadily in Czechia

National data show continued improvements in five-year relative survival rates for the main cancer types in Czechia (Figure 18). Using a cohort analysis, patients diagnosed with prostate cancer in 2015-19 had a five-year relative survival rate 5 percentage points higher than patients diagnosed in 2010-14. This survival rate improved by 4 percentage points for breast cancer and by 6 percentage points for colorectal cancer in the same period. The largest improvement was in the five-year relative survival rate for lung cancer, which improved by almost 6 percentage points to 17% for patients diagnosed in 2015-19 compared to those diagnosed in 2010-14. However, survival rates differed according to the cancer stage at disease detection with survival rates much higher for those detected with stage 1 lung cancer (62%) compared to stage 4 lung cancer (6%) (ÚZIS, 2024b), highlighting the importance of increasing participation in the country's lung cancer screening pilot (see Section 4).

![](_page_19_Figure_9.jpeg)

### Figure 18. The five-year relative survival rate for lung cancer is still low, despite continuous improvement

Sources: ÚZIS (2024b) and National Oncology Registry (Krejčí et al., 2024).

Note: The rates refer to cohort analyses.

More than half of breast tumours were detected at an early or localised stage in 2016-20, and 28% were detected at an intermediate stage. Based on Czech National Oncology Registry data, the share of early-stage breast tumour detection increased gradually from 27% in 2000 to 49% in 2019, dropping slightly to around 47% during the pandemic years 2020-21 (ÚZIS, 2024a). This shift reflects the impact of the breast screening programme on detection of breast cancer at an earlier stage over the last two decades. However, a high share of tumours are still detected at a more advanced stage, including for cancer types with organised screening programmes (16% at stages 3 and 4 for breast cancer and 48% at stages 3 and 4 for colorectal cancer in 2019), and among patients who are already being treated for other cancer types, suggesting room for improvement in organised screening and in monitoring patients with history of cancer.

### Czechia's potential years of life lost due to cancer is close to the EU average

In addition to survival data, the overall potential years of life lost (PYLL) due to cancer is a 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 via reductions in premature mortality. In Czechia, the PYLL rate was 1 367 per 100 000 population due to all cancer types in 2021, just slightly higher than the EU average (1 355). Between 2012 and 2021, the PYLL rate due to cancer decreased by 19% in Czechia, which is similar to the EU average decrease of 19%.

Lung cancer was the largest driver of cancer-related PYLL in Czechia, accounting for 16% of total cancer-related PYLL, followed by colorectal (11%) cancer, while breast cancer was the most important PYLL driver among women (Figure 19). In total, the PYLL rates were 229 years per 100 000 women due to breast cancer and 214 years per 100 000 population due to lung cancer in 2021. Two cancer sites registered increases in the PYLL rate in 2012-21, breast cancer (by 7%) and pancreatic cancer (by 5%), while lung cancer was the largest contributor to decreased overall cancer-related PYLL with a 40% decrease over the past decade.

#### The comprehensive cancer care centres liaise with and provide clinical support to regional providers

Following centralisation of highly specialised cancer care since 2008, the KOCs are subject to regular accreditation by the Ministry of Health. Accreditation criteria include minimum staffing and equipment requirements and minimum volume norms. For the next accreditation cycle, experts estimate that a remedy plan may be needed in case a KOC is challenged by the updated criteria, to safeguard at least one KOC in every Czech region. Introduced in 2017, the Regional Oncology Networks (ROSs) of lower-level cancer care providers were originally formed by the KOCs on a voluntary basis; the obligation for a KOC to establish and be the clinical lead of an ROS was added in 2022 as part of the last KOC reaccreditation cycle. A ROS can include hospitals and outpatient cancer care providers, as well as GPs – who gained new competencies to monitor patients with a history of cancer in 2019.

The KOCs are responsible for co-ordinating the full spectrum of cancer care, including palliative care and follow-up care for patients with a history of cancer within their ROS. Dedicated co-operation contracts are signed between a KOC and ROS members to ensure compliance with common clinical protocols and guidelines, and to support standardised oncology care management; however, no accreditation process or criteria are applied to ROS providers.

![](_page_20_Picture_8.jpeg)

#### Figure 19. Czechia's cancer-related potential years of life lost declined by 19% over the last decade, driven by a reduction in lung cancer premature deaths

Percentage change in potential years of life lost 2012-22 (or nearest available year) (%)

![](_page_21_Figure_2.jpeg)

Notes: 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. Pink bubbles signal an increase in the percentage change in PYLL during 2012-22 (or latest available year); blue bubbles signal a decrease. The size of the bubbles is proportional to the PYLL rates in 2022. Source: OECD Health Statistics 2024.

### Multidisciplinary diagnostic teams are widely available, and their use is increasing

Availability of an MDT is required for KOC accreditation. MDTs are generally also available in larger ROS providers, though some have a narrow specialisation; for other ROS patients, MDT consultations are done in co-operation with the supervising KOC. Clinical experts estimate that there is further scope to promote multidisciplinary team (MDT) consultations for treatment decisions and to monitor treatment outcomes. In some regions, lead ROS physicians have regular office hours in a KOC to ease MDT consultations and clinical collaboration.

In certain cases, HIF reimbursement is conditional on an MDT consultation – including pancreatic, breast and rare cancers, robotic surgery and all innovative cancer medicines. The Czech Society for Oncology publishes guidelines on MDT consultations, and estimates that about 80% of newly diagnosed patients should be seen by an MDT, while consultation is not necessary for some, such as first stage colorectal cancer patients.

Use of MDT consultations has been increasing gradually, reaching nearly 60% of patients treated for a solid malignant tumour in a KOC for the first time in 2022 (ÚZIS, 2024a). The data on MDT use may be slightly underestimated for certain diagnoses when providers are not reimbursed for its coding. Nevertheless, experts claim that making the MDT data public promotes its use, and has contributed to better coding and to higher compliance with the MDT guidelines among clinicians.

#### Regular cancer care quality monitoring is missing, but indicators are being prepared

Since 2019, the KOCs in Prague and Brno serve as national oncology centres, co-ordinating cancer research and acting as the contact points for international research collaboration. The Masaryk Memorial Cancer Institute is the only KOC in Czechia accredited by the Organisation of European Cancer Institutes (OECI).

No cancer care quality indicators are currently monitored regularly at the national level. ÚZIS is working with the medical society to develop a set of indicators on cancer care for selected cancer diagnoses. This is the first time the quality indicators will go beyond the structural indicators on workforce, equipment and volume norms. Once ready and approved, indicators should be reported by all accredited KOCs to improve compliance with accreditation criteria and guidelines throughout the accreditation cycle.

### Measures are being introduced to advance cancer surgery centralisation

Some KOCs specialise in specific surgical treatments, and take patients on from other providers. However, there is no formal requirement

for providers to refer patients with a specific surgery need to a particular KOC. In 2023, the Ministry of Health introduced a pay-for-quality component into reimbursement of hospitals to de-incentivise selected surgical procedures in non-specialised providers via reduced reimbursements. The measure aims to support centralisation to highly specialised providers in onco-gynaecological, pneumological and urological surgery; three other specialisations are expected to follow soon, including sarcoma and rectal surgery.

Accreditation for these selected procedures based solely on strict volume norms raises concerns, however, as recently demonstrated by the withdrawal of 5 of the total 18 accreditations for onco-gynaecological surgery. Not all accredited providers always comply with the required volumes due to external circumstances, and waiting times should also be monitored to maintain the necessary time and geographical accessibility within targets.

#### 5.3 Costs and value for money

### Cancer care spending is anticipated to increase substantially in the coming decades

According to OECD SPHeP modelling work, the per capita health expenditure on cancer care is expected to grow by 59% in Czechia between 2023 and 2050, the same rate as the EU27 average. In additon, between 2023 and 2050 on average, there is expected to be a loss of 187 full-time equivalent workers (FTEs) per 100 000 people in Czechia due to the need to reduce employment because of cancer, which is more than the EU average of 178 FTEs per 100 000. It is also expected to result in a loss of 80 FTEs per 100 000 people due to both absenteeism and presenteeism,<sup>6</sup> with an impact similar to the EU average of 81 FTEs per 100 000 (Figure 20).

### Figure 20. Between 2023-50, cancer is estimated to impact labour market participation slightly more in Czechia than in the EU

![](_page_22_Figure_8.jpeg)

Note: The EU average is unweighted.

Source: OECD (2024b), Tackling the Impact of Cancer on Health, the Economy and Society, https://doi.org/10.1787/85e7c3ba-en.

#### Costs for the growing number of patients with innovative cancer treatment are contained by various policy tools

The number of patients treated with innovative medicines for cancer has increased gradually in Czechia over the last decade. A total of 23 034 patients were provided with innovative cancer treatment in 2021 – almost double those treated in 2011. The increase in cancer drug expenditure is mainly driven by this growing number of patients. It reached CZK 8.7 billion (EUR 342 million) in 2021, which is more than double the costs incurred in 2011. However, the innovative treatment expenditure per patient and per month of treatment oscillated around the same cost level during the last decade, and for solid tumours it decreased between 2019 and 2021 (ÚZIS, 2024a).

External reference pricing is used in Czechia for medicines, and managed entry agreements (MEAs) are common for innovative treatments. Costs are controlled by a legislation provision, which states that marketing authorisation holders are responsible for costs above the estimated budget impact considered during the process of setting temporary reimbursement for a given innovative drug. Like other Central European countries, the main role of MEAs and other policies in Czechia seems to be to limit budget impact of new medicines, whereas uncertainty about outcomes and appropriate utilisation seems to be of lower priority.

<sup>6</sup> Presenteeism refers to lost productivity that occurs when employees are not fully functioning in the workplace because of an illness, injury or other condition.

## Multidisciplinary team consultations are used to ensure value for money for innovative treatment

To increase value for money, each patient must have an MDT consultation before a decision to provide innovative treatment is made; otherwise, HIFs will not reimburse the treatment. The MDT consultation is itself reimbursed on a fee-for-service basis that is separate from other cancer care reimbursement.

Innovative treatments and orphan drugs can only be provided in accredited KOCs and haemato-oncology centres, and (since 2023) in ROS providers under a KOC's clinical lead through the delegated prescription concept (see Section 5.1). The General Health Insurance Fund (GHIF) has introduced new cancer care-related budgets for implementation of delegated prescription of innovative cancer treatment at the ROS level, to avoid a negative impact on the budgets of KOCs. As of mid-2024, the GHIF has dedicated reimbursement contracts with about half ROSs around the country. This strategy proved unsustainable for the smaller HIFs, which opted not to agree extra delegated prescription contracts in 2024 due to their tight budget constraints; no accessibility consequences have been reported so far, but the resulting two-tier system seems unsupportable in the medium to long term. In some regions, the ROS providers are an organisational unit of a KOC and do not need an extra contract with a HIF to implement delegated prescription.

#### The Czech National Recovery Plan invests in the cancer care network

The NRP strengthens the centralised oncology care network in regions and via the newly established National Institute for Cancer Research in Prague. Investments in cancer care infrastructure are ongoing, to support development of KOCs in some regions and to strengthen care co-ordination and co-operation between regions.

#### 5.4 Well-being and quality of life

### Cancer is expected to lower population life expectancy in Czechia

According to OECD SPHeP modelling work, cancer is estimated to lower the life expectancy of the Czech population by 1.8 years in 2023-50 compared to a scenario without cancer (Figure 21). This is less than the EU estimated average of 1.9 years, reflecting the relatively high coverage of screening programmes compared to some other EU countries and accessibility of highly specialised cancer care (see Sections 4 and 5.1).

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, Czechia is estimated to have an additional age-standardised rate of 19 cases of depression per 100 000 population annually between 2023 and 2050 because of cancer, which is slightly higher than the 17 per 100 000 across the EU.

### Policy emphasis has been put on development of palliative care

Improved quality of life of cancer patients is one of the strategic aims of the NOPL 2030, which includes a goal on providing accessible palliative care for all. Various action plans support its development through the recently introduced National Palliative Care Strategy, establishing the KOCs as centres of palliative care excellence, defining palliative care standards across provider settings and promoting palliative care provision by GPs and nurses through guidelines and new reimbursement schemes.

All KOCs must have a dedicated palliative team, provide palliative services and have a contract for palliative home care or end-of-life care services as part of their accreditation criteria. The NOPL 2030 supports the development of dedicated palliative care wards, counselling teams and outpatient palliative care offices in all KOCs, to standardise palliative care across the country. However, regional differences in accessibility of home palliative and end-of-life care services are still substantial, due to a combination of a lack of providers and limited capacity. Services offered range from providing a nurse only to a palliative physician being present. Following successful pilots, home care provision of palliative care is included in standard reimbursements by the HIFs since 2017 and the dedicated palliative teams in hospitals since 2023. These developments have contributed to the increasing number of cancer patients receiving palliative care in recent years, and it is estimated that over 80% of cancer patients in their terminal phase received such care in 2022 (ÚZIS, 2024b).

### Figure 21. Cancer is expected to reduce average population life expectancy by almost 2 years in Czechia in 2023-50

![](_page_24_Figure_2.jpeg)

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

### People with a history of cancer benefit from the right to be forgotten for life insurance

Since 2024, Czech patients with a history of cancer can obtain life insurance as if they had never experienced the disease. The "right to be forgotten" has been implemented by the Czech Association of Insurers based on an agreement with the Ministry of Health and in consultations with cancer patient organisations and the medical society. The published guidelines are binding for adhering insurers (ten main insurers as of mid-2024), and provide for life insurance without extra fees for people with a history of defined cancer types after a certain time (ranging from five to ten years) has passed since their last cancer treatment.

### Patient organisations support cancer patients on their pathway and in reintegration

Cancer patient organisations in Czechia play an invaluable role in supporting cancer patients and their families on their patient journey and in reintegrating back to everyday life, including for employment. Patient organisations support health literacy by producing and distributing leaflets and education books, including on prevention, screening, and navigating diagnosis, treatment pathways and social security for various cancer sites. Further, patient organisations have a voice in administrative procedures that set SHI reimbursement for rare disease pharmaceuticals and they take part in various advisory bodies to the Minister of Health.

Cancer care co-ordinators are not a common part of the care team in Czech hospitals. The Masaryk

Memorial Cancer Institute (MOU) in Brno does have such co-ordinators as part of its OECI accreditation. These co-ordinators work to standardise the patient pathway – from diagnosis until ongoing treatment provision is established. According to MOU, this service is generally well-received by patients and could benefit cancer patients in other KOCs if standardised and supported nationally. While palliative care co-ordinators exist in some hospitals, there is no institutionalised support for patients in integrating back into regular life and employment. Patient organisations have recently called for launching a pilot on social co-ordinators for people with a history of cancer, to institutionalise activities currently supported only by patient organisations.

### 6. Spotlight on paediatric cancer

According to ECIS, it is estimated that 153 children and adolescents up to age 15 were diagnosed with cancer in Czechia in 2022. Incidence rates for ages 0-14 in 2022 were estimated at 9 per 100 000 children in Czechia, as compared to 14 per 100 000 the EU average (Figure 22). Incidence rates among boys are higher than among girls, a similar pattern found across the EU. Although cancer incidence rates among ages 0-14 are lower in Czechia compared to the EU, Eurostat data show that mortality rates are similar, with a 3-year average mortality rate of 2.1 per 100 000 children in both Czechia and the EU.

The most common cancer groups are leukaemia, at 3 cases per 100 000 children (32%), brain and central nervous system, at 1.6 cases per 100 000 (18%), lymphoma, at 0.8 cases per 100 000 (9%) and kidney, at 0.3 cases per 100 000 (3%).

#### Figure 22. Cancer incidence rates among children in Czechia are much lower than the EU average

![](_page_25_Figure_5.jpeg)

Age-standardised incidence rate per 100 000 population (aged 0-14), estimates, 2022

Notes: 2022 estimates are based on incidence trends from previous years, and may differ from observed rates in more recent years. "All sites" includes all cancer sites except non-melanoma skin cancer. Source: European Cancer Information System (ECIS) for cancer incidence. From https://ecis.jrc.ec.europa.eu, accessed on 10 March 2024. © European Union, 2024.

The five-year relative survival rate for childhood leukaemia (up to the age of 19) had improved over the last two decades in Czechia, and reached 90% for those diagnosed in 2015-19 (Czech Childhood Cancer Information System, 2024). According to the national data, 9 395 children aged 0-19 were living in Czechia with a malignant neoplasm or a history of this disease in December 2020, which is 4 272 per 1 000 000 children (ÚZIS, 2024a).

Childhood cancer care in Czechia is centralised, provided in two accredited institutions in Prague and in Brno, which also maintain a clinical registry on childhood cancer. For haemato-oncology, primary treatment and transplants are provided in these centres, but follow-up care can also be organised in co-operation with other haemato-oncology centres around the country. The NOPL 2030 aims to extend childhood cancer survivors monitoring, including for establishing ongoing care into their adulthood, and enhance paediatric palliative care with increased financial support.

According to the European Society of Paediatric Oncology (SIOPE), all 13 infrastructural and treatment modalities – such as stem cell transplant, photon radiation therapy, palliative care, survivorship clinic, proton radiation therapy, and brachytherapy- are available. Further, out of the 436 clinical trials involving paediatric and adolescent cancer patients in Europe between 2010 and 2022, 59 were running in Czechia (14%) (SIOPE, 2024). In 2018, 88% of the 68 medicines identified as essential for treating cancer in patients aged 0 to 18 were available in Czechia, compared to 76% in the EU on average (Vassal et al., 2021).

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#### **Country abbreviations**

Austria Belgium Bulgaria Croatia Cyprus Czechia AT Denmark BE Estonia BG Finland HR France CY Germany CZ Greece DK Hungary EE Iceland FI Ireland FR Italy DE Latvia EL Lithuania

HU	Luxembourg	LU	Romania	RO
IS	Malta	MT	Slovak Republic	SK
ΙE	Netherlands	NL	Slovenia	SI
IT	Norway	NO	Spain	ES
LV	Poland	PL	Sweden	SE
LT	Portugal	PT		

# European Cancer Inequalities Registry Country Cancer Profile 2025

The European Cancer Inequalities Registry is a flagship initiative of the Europe's Beating Cancer Plan. It provides sound and reliable data on cancer prevention and care to identify trends, disparities and inequalities between Member States and regions. The Registry contains a website and data tool developed by the Joint Research Centre of the European Commission (https://cancer-inequalities.jrc.ec.europa. eu/), as well as an alternating series of biennial Country Cancer Profiles and an overarching Report on Cancer Inequalities in Europe.

The Country Cancer Profiles identify strengths, challenges and specific areas of action for each of the 27 EU Member States, Iceland and Norway, to guide investment and interventions at the EU, national and regional levels under the Europe's Beating Cancer Plan. The European Cancer Inequalities Registry also supports Flagship 1 of the Zero Pollution Action Plan. The Profiles are the work of the OECD in co-operation with the European Commission. The team is grateful for the valuable comments and suggestions provided by national experts, the OECD Health Committee and the EU Thematic Working Group on Cancer Inequality Registry.

Each Country Cancer Profile provides a short synthesis of:

- the national cancer burden
- risk factors for cancer, focusing on behavioural and environment risk factors
- early detection programmes
- cancer care performance, focusing on accessibility, care quality, costs and quality of life.

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Series: EU Country Cancer Profiles

![](_page_27_Picture_11.jpeg)

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![](_page_27_Picture_20.jpeg)

![](_page_27_Picture_21.jpeg)

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