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Delivering High Value Cancer Care

European Cancer Inequalities Registry Analytical Report

Delivering High Value Cancer Care

EUROPEAN CANCER INEQUALITIES REGISTRY
ANALYTICAL REPORT

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Foreword

Cancer remains one of the most significant public health challenges. It is the second-leading cause of death in EU countries, and the rising number of cancer cases – now increasingly affecting people under 50 – poses a growing social and economic burden. Diagnosis at younger ages means longer treatment and monitoring for patients, placing sustained pressure on healthcare systems and affecting patients' well-being and socio-economic situation for many years. By 2050, the EU27 will face markedly higher demand for cancer care, with population ageing driving an estimated 59% rise in real per-capita cancer spending. This surge is occurring at a time when public budgets are already strained by competing priorities and economic uncertainty. Ensuring that cancer care delivers clear value for patients and health systems is essential.

Delivering High Value Cancer Care provides cross-country comparable data and policy perspectives on three pressing priorities to ensure high-value cancer care that contributes to health outcomes and people's quality of life: timely access to services, evidence-based and efficient care, and people-centred approaches. The report uses a mix of quantitative and qualitative analyses, including a collection of new internationally comparable indicators as well as insights gained through a policy survey covering 34 countries, consultations with stakeholders, and an in-depth literature review.

The report shows that opportunities remain to deliver higher value in cancer care for patients and health systems. Delays in cancer diagnosis and treatment, variations in care quality and clinical practice, and services that are not sufficiently aligned with people's needs and preferences lead to poorer survival and quality of life, and can result in unnecessary treatment that wastes precious healthcare resources. Strengthening integrated cancer pathways, aligning on and reinforcing evidence-based standards and performance monitoring, optimising resources and capitalising on innovation, as well as embedding people-centredness across the cancer journey can enhance value and make cancer care more efficient.

This publication is part of the European Cancer Inequalities Registry, one of the ten flagship initiatives of the Europe's Beating Cancer Plan, which aims to address the full disease pathway via partnership, research and innovation. The European Cancer Inequalities Registry provides sound and reliable data on cancer prevention and care to identify trends, disparities and inequalities between Member States and Regions. Under this umbrella, the OECD and European Commission have published two series of Country Cancer Profiles for each of the EU Member States, Norway and Iceland (https://www.oecd.org/en/about/projects/eu-country-cancer-profiles-2025.html), and have produced this second analytical report on *Delivering High Value Cancer Care* following on the 2023 analytical report on Cancer Prevention and Early Detection.

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The project benefited from input from a range of stakeholders, including the Joint Research Centre (JRC), the International Agency Against Cancer (IARC), the Swedish Institute for Health Economics (IHE), the Organisation of European Cancer Institutes (OECI), Deutsche Krebshilfe (German Cancer Aid), Cancer Patients Europe (CPE), Choosing Wisely, Ending discrimination against cancer survivors, the European Cancer Organisation (ECO), the Accreditation Council of Oncology in Europe (ACOE), the European Union of Medical Specialists (UEMS) and IQVIA. All information and data related to the research initiative EuroACT led by EPAI and WECAN Foundation analysing the clinical trial landscape across Europe has been provided by the European Patient Advocacy Institute, with support from the Syreon Research Institute. The data have been anonymised and are presented in an aggregated format to ensure the confidentiality and protection of sensitive information.

This report benefited from comments from and discussions with OECD and EU country representatives and OECD colleagues. The cancer team is grateful for the valuable input received from national experts, and comments provided by the OECD Health Committee, the OECD Working Party of Health Care Quality and Outcomes, and the EU Expert Thematic Group on Cancer Inequalities Registry, as well as various other stakeholders who participated in interviews and provided additional information (including the European Association for Palliative Care, All.Can, the World Health Organization, the European Society of Radiotherapy and Oncology, the European Society for Medical Oncology, the International Cancer Benchmarking Partnership, the ATLANTES Global Palliative Care Observatory, the European Network of Cancer Registries, the Observational Health Data Science and Informatics, the CONCORD programme, the European Oncology Nursing Society and the European Regional and Local Health Authorities Working Group on Cancer). This publication would not have been possible without the efforts of national data correspondents who have provided data to the OECD, as well as the 34 countries that provided valuable responses to the 2025 OECD Policy Survey on High Value Cancer Care. The publication benefited from comments from DG SANTE, JRC, and IARC. We are also very grateful to the patient representatives who shared their personal experiences to be featured in the report.

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Abbreviations and acronyms

AAPC	Average Annual Percent Change
ACOE	Accreditation Council of Oncology in Europe
AGENAS	Agenzia Nazionale per i Servizi Sanitari Regionali (Italy’s National Agency for Regional Health Services)
AI	Artificial Intelligence
APC	Annual Percent Change
ARS	Agence Régionale de Santé (France’s Regional Health Agency)
AYA	Adolescent and Young Adult (age 15-39)
BRCA	BReast CAncer gene
CAR T-cell	Chimeric antigen receptor (CAR)-T cell
CCC	Comprehensive cancer centre
CI	Confidence interval
CME	Continuing medical education
CPPs	Cancer Patient Pathways
CRC	Colorectal Cancer
CT	Computerised tomography
CTC	Circulating tumour cells
CTIS	Clinical Trials Information System
DICA	Dutch Institute for Clinical Auditing
DIRAC	International Atomic Energy Agency Directory of Radiotherapy Centres
EC	European Commission
ECIS	European Cancer Information System
EEA	European Economic Area
EMA	European Medicines Agency
EOC	Early-onset cancer
EOL	End-of-life
EORTC	European Organisation for Research and Treatment of Cancer
ERN GENTURIS	The European Reference Network for patients with one of the rare genetic tumour risk syndromes
ESCAT	Scale for Clinical Actionability of molecular Targets
ESMO	European Society for Medical Oncology
EU	European Union
EU+2	European Union (27 Member States), Iceland and Norway
EU11	11 EU countries in PaRIS primary healthcare survey
EU27	European Union (27 Member States)
EUNetCCC	EU Network of Comprehensive Cancer Centres
EuroACT	European Atlas of Clinical Trials in Cancer and Haematology
EUROHELICAN	Accelerating gastric cancer reduction in Europe through Helicobacter pylori eradication
EU-SILC	European Union Statistics on Income and Living Conditions
EUR	Euro
EUSOMA	European Society of Breast Cancer Specialists
FDA	U.S. Food and Drug Administration
FIT	Faecal Immunochemical Test
GBD	Global Burden of Disease
GDP	Gross domestic product

GISTAR	Multicentric randomised study of H. pylori eradication and pepsinogen testing for prevention of gastric cancer mortality
GP	General Practitioner
gFOBT	Guaiac-based Faecal Occult Blood Test
HCQO	Health Care Quality and Outcomes
HER2+	Human epidermal growth factor receptor 2 positive
HTA	Health Technology Assessments
HPV	Human papillomavirus
IAEA	International Atomic Energy Agency
IARC	International Agency for Research on Cancer
ICBP	International Cancer Benchmarking Partnership
ICD-10	International Classification of Diseases, 10th revision
IHME	Institute for Health Metrics and Evaluation
INCa	French National Cancer Institute
IT	Information technology
LGBTIQ+	Lesbian, Gay, Bisexual, Transgender, Intersex and Queer
LINACs	Linear Accelerators
LSI	Linear Accelerator Shortage Index
MDTs	Multidisciplinary teams
MRI	Magnetic resonance imaging
NGS	Next-generation sequencing
NRR	National Cancer Registry of Hungary
NORDCAN	Association of the Nordic Cancer Registries
OECI	Organisation of European Cancer Institutes
OOP	Out-of-Pocket
P3CEQ	Person-Centred Co-ordinated Care Experiences Questionnaire
PaRIS	Patient-Reported Indicators Survey
PARP inhibitors	Medicines that inhibit the enzyme poly ADP ribose polymerase (PARP)
PET	Positron Emission Tomography
PHC	Primary Health Care
PFOA	Perfluorooctanoic Acid
PNE	Programma Nazionale Esiti (Italy's National Outcomes Evaluation Programme)
p.p.	Percentage points
PRAISE-U	PRostate cancer Awareness and Initiative for Screening in the European Union
PREMs	Patient-Reported Experience Measures
PROMIS	Patient-Reported Outcomes Measurement Information System
PROMs	Patient-Reported Outcomes Measures
PRS	Polygenic risk score
PSA	Prostate-specific antigen
QALY	Quality-adjusted life year
RDC(s)	Rapid Diagnostic Centre(s)
SCPs	Survivorship care plans
SEER	Surveillance, Epidemiology, and End Results (United States)
SES	Socio-economic Status
SHARE	Survey on Health, Ageing and Retirement in Europe
SOLACE	Strengthening the screening of Lung Cancer in Europe
TNF inhibitors	Medicines that inhibit tumour necrosis factor
TNM	Tumour, Node, Metastasis
TOGAS	Towards gastric cancer screening implementation in the European Union
UEMS	The European Union of Medical Specialists
USD	United States dollar
USPSTF	United States Preventive Services Task Force
UV	Ultraviolet

Executive summary

Cancer cases have surged by about 30% in EU countries since 2000 – with concerning increases among young women – posing a large burden on healthcare systems

Cancer is a major public health issue in EU countries, increasingly affecting the younger population. In 2024, there were an estimated five people diagnosed with cancer every minute across the 27 EU countries, representing 2.7 million new cancer cases. Since 2000, the number of new cancer cases has surged by about 30% for both sexes, with estimates predicting half a million new cases by 2040 (an increase of 18% from 2022). Among young women, the rate of new cancer cases relative to the population grew by 16% over the last two decades, from 144 to 167 per 100 000, mainly driven by thyroid, breast, skin melanoma, and colorectal cancers. While evidence is still emerging about the causes of the increase among the younger population, factors such as changing reproductive patterns (breast cancer); increased detection (thyroid cancer), or early-life exposures and diet (colorectal cancer) play a role. Regardless of the cause, diagnoses at younger ages means that patients must undergo more years of treatment and monitoring, placing sustained pressure on healthcare systems and affecting patients' well-being and socio-economic situation for many years.

Cancer-related health spending in the EU has doubled since 1995 (from EUR 54 to 120 billion in 2023), reaching 6.9% of total health expenditure in 2023. By 2050, an increase in the number of cancer cases, linked to population ageing is expected to lead to 59% higher per-capita cancer spending in real terms in EU27 countries. These trends will unfold in the context of public budgets that are under pressure from competing government priorities and an uncertain economic outlook, calling for ensuring that investments in cancer care deliver value for money.

Cancer care could deliver better value for patients and health systems

Opportunities remain to deliver higher value cancer care, as demonstrated by delays in access to cancer care services, unnecessary differences in care quality and outcomes, and services not systematically aligned with people's needs and preferences.

Delays in access to cancer diagnosis and treatment continue to cost lives*.* While population-based cancer screening programmes have proven cost-effective – significantly improving early detection and leading to higher survival – their uptake remains uneven across countries and social groups. These gaps result in delayed diagnoses and missed opportunities for early treatment. Between 15%-40% of patients with colorectal cancer are diagnosed via the emergency department – a route that is associated with significantly worse outcomes. OECD data show that patients undergoing emergency colorectal cancer surgery are up to seven-times more likely to die within 30 days of the procedure than those whose surgeries were planned. Shortages in workforce and diagnostic capacity alongside uncoordinated patient referral systems exacerbate these delays, especially for vulnerable populations and in rural areas.

Unnecessary variations in medical practice and care quality lead to poorer survival or quality of life for some patients and contribute to health system waste. Medical practice for cancer care is extremely heterogeneous across countries, raising questions of whether current care delivers the best value for patients and for health systems. For example, among EU countries, the share of early-stage prostate cancer diagnoses in men aged 75 and older ranges from 53% in the Netherlands to 81% in Luxembourg, reflecting variation in prostate cancer screening practices. These differences lead to some patients being diagnosed too late, while other patients – whose slow-growing cancer would not affect their life expectancy – are diagnosed unnecessarily, leading to needless treatment and generating waste for the health system. In addition, the share of partial mastectomies, which are less invasive and offer similar survival benefits to full mastectomies, ranges from 79% in Spain to 50% or lower in Romania and Poland.

At the same time, evidence demonstrates that four in ten new cancer medicines approved in the last 25 years by the European Medicines Agency show negative or unclear added therapeutic value over existing treatments for patients, highlighting the importance of health technology assessment in shaping reimbursement and pricing policies (and in informing clinical guidelines) to ensure that spending is aligned with value.

The OECD PARIS survey suggests that people living with cancer are more vulnerable than other primary healthcare patients. They report worse physical health, well-being and social functioning, and only one in three report that their care is highly people centred. Poor data integration, lack of care co-ordination, and limited co-production of care with patients are key factors impeding people-centred care for cancer patients. People living with cancer also face lasting challenges in employment, financial security, and psychosocial health: a cancer diagnosis reduces the likelihood of employment by 14% on average, with the largest impact in Central and Southern Europe.

Four priorities to increase the value of cancer care

All EU countries, alongside Norway and Iceland, are already seeking to improve the value of cancer care, through four cross-cutting policy directions.

- ***Building integrated cancer pathways*** that deliver timely, co-ordinated and equitable access to care. Moving away from fragmented services into integrated cancer care pathways linking diagnosis, treatment and survivorship is required to control cancer and its related cost. Experience from Denmark and Sweden, for example, shows that defined referral routes, time-bound diagnostic targets, and multidisciplinary teams reduce waiting times and improve survival. Investments in digital platforms, care navigation roles and regional co-ordination are essential to close inequalities by geography and population groups. Integration also optimises the use of scarce diagnostic and workforce resources, improving both access and efficiency.
- ***Evidence-based standards and performance monitoring***. Systematic quality assurance such as national accreditation and certification systems, enforcing minimum volume standards, and monitoring adherence to clinical guidelines ensures that care is effective. Germany's cancer care certification and clinical quality standards, and the Netherland's transparent quality feedback mechanisms demonstrate examples of continuous care improvements that can raise survival rates. Expanding real-time data platforms that monitor timeliness of cancer diagnosis, follow-up care, and quality of cancer care – including patient-reported indicators, also help track outcomes that matter most to people, driving transparency, accountability and continuous improvement to reduce low-value cancer care.
- ***Optimising resource use and embracing technological innovation***. Policies such as risk-stratified screening, day versus inpatient care, and biosimilar uptake, can yield large efficiency gains without compromising quality. Moving toward specialised infusion centres, ambulatory surgery and treatment at home (as set out in France's 2021-2026 national cancer roadmap) are

good examples of practices that can ensure high quality care in less expensive venues. At the same time, clinician-led recommendations such as Choosing Wisely offer useful initiatives to reduce low-value cancer care. Technological innovation such as AI-assisted screening, molecular diagnostics or robotic-assisted surgery also help ensure resources are directed to interventions that deliver value.

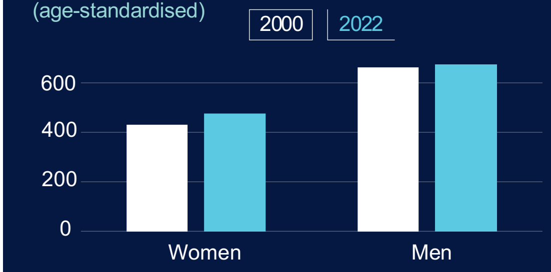
- Making ***people-centredness a pillar of cancer-system performance***. Greater involvement in decision making, self-management support, and co-ordinated follow-up matter greatly to people living with cancer. For example, Denmark offers personalised cancer care plans and navigation support for care co-ordination, while Estonia leverages digital tools for patient empowerment. Addressing the social and economic dimensions of cancer requires going beyond clinical care to support psychological, social and financial well-being. The “Right to be Forgotten” legislation, currently adopted in only a third of EU countries, is key to prevent discrimination and improve life opportunities.

In times of competing government priorities – alongside capacity and workforce limitations in the health system itself – emphasis must be on ensuring high-value cancer care that contributes to health outcomes and people’s quality of life. Now is the time for better cancer care policies to meet growing demand and ensure optimal health outcomes through faster access, early intervention, evidence-based and efficient care; and for people-centred approaches that reflect people’s values and preferences.

Infographic 1. Key facts and figures

New cases of cancer are on the rise, especially for younger women

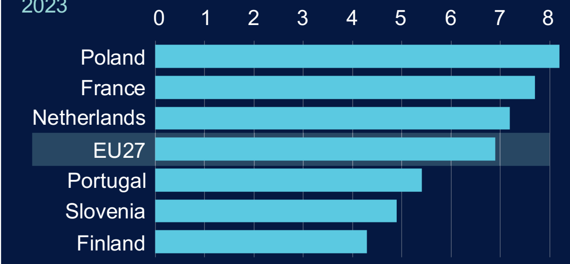
Evolution of cancer incidence rate per 100 000 people (age-standardised)



Between 2000 and 2022, cancer incidence rates across EU countries rose by 10% in women and 2% in men, although rates remain much higher among men. They grew particularly fast among women aged 15-49 (by 16%).

Cancer spending is already relatively high and set to increase sharply

Direct cancer cost as percentage of total health expenditure*, 2023



As cancer cases increase with population ageing, per capita cancer health spending for the total population will increase by 59% by 2050.

*Source: Monzano et al. (2025)

Significant delays in cancer diagnosis and treatment

First contact with health system

33% 33% of lung cancers in the EU are diagnosed late i.e. through the emergency department.

Access to early diagnosis

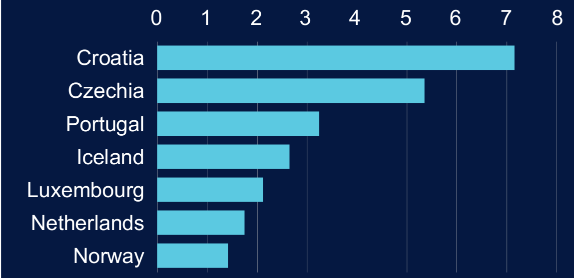
44% 44% of breast cancers in the EU are diagnosed at a later stage (Stage II-IV).

Timely treatment

44% 44% of colorectal cancers in the EU are not treated within 30 days of diagnosis.

Cancer care outcomes differ across EU countries

30-day mortality rate after colorectal cancer surgery, age-standardised, latest 3-year average



This is due to age and health condition of patients, cancer stage, timely access to care, and surgical and care practices.

Countries are shifting care out of hospital to improve access and value for money

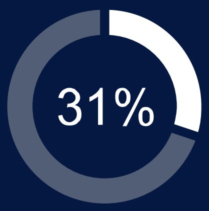
Hospital stays fell by 24% (per case of lung cancer) across EU countries between 2012 and 2022.

More than a quarter of mastectomies are done as day surgery in Nordic countries, with recovery in the outpatient setting.

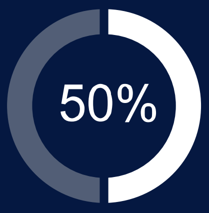
Hospital-at-home programmes deliver inpatient care at home in 12 EU countries.

Cancer patients require more co-ordinated, people-centred care

Percentage of primary healthcare patients in the EU with a cancer diagnosis that...



Needed to repeat information that should be in their health record



Reported not having a care plan

1 Assessment and recommendations

The global burden of cancer continues to rise, with incidence increasing – particularly among younger populations – even as survival rates improve thanks to advances in early detection and effective treatment. This dual trend leads to more people living with cancer, highlighting better performance in cancer care systems, while posing a growing challenge due to the need for increased investments. Given the fiscal constraints facing EU countries, it is critical to assess whether the cancer care delivered represents high value for both health systems and patients. This chapter highlights the key findings and main recommendations of the report, outlining policy directions to deliver high value cancer care, including faster access to care; evidence-based and efficient care; and people-centred approaches.

In Brief

New OECD analysis shows an increase in cancer incidence, especially among young women

In 2024, there were an estimated 2.7 million cancer cases diagnosed in the EU (representing 5.1 new cancer diagnoses per minute), according to European Cancer Information System (ECIS). From 2000 to 2022, age-standardised cancer incidence rose by 10% among women and 2% among men across EU countries. Cancer mortality dropped, across almost all main sites, by 18% in women and 26% in men between 2000 and 2023, and remained higher among men in all EU27 countries, Iceland and Norway (hereinafter referred to as “EU+2 countries” in this chapter). Concerningly, cancer diagnoses among younger people (ages 15-49) have increased more widely among women, driven mostly by thyroid (+120%), skin melanoma (+48%), breast (+16%), and colorectal (+10%) cancers. Among men, skin melanoma (+50%), testicular (+38%) and colorectal (+12%) cancers have also risen. This means that a growing number of people – particularly younger women – are living with a cancer diagnosis that requires treatment and monitoring, placing sustained pressure on health and social care services.

Faster access to cancer care is key to meet the growing demand for care and improve health outcomes

Delays in access to cancer care can occur at any stage of the care pathway, from a person’s first contact with the health system through diagnosis and treatment, leading to poorer health outcomes and higher costs for the health system.

Infographic 1.1. Delays in access to cancer care occur at all stages of the care pathway

First contact with the health system

33%

of lung cancers are diagnosed through the emergency department

Early access to cancer diagnosis

44%

of breast cancers are diagnosed at later stage, among women aged 50-64

Time to treatment initiation

44%

of colorectal cancers are not treated within 30 days after tissue diagnoses

To ensure people seek care, it is essential to prioritise health literacy, targeted awareness campaigns, and the removal of financial barriers. Evidence from the EU shows that financial burden remains a major obstacle, with 16% of cancer patients postponing or forgoing some care, most frequently medication and doctors’ appointments. To ensure equitable access, policy action is required to modernise care delivery systems, including expanding innovative and cost-effective screening modalities, streamlining diagnostic pathways, strengthening community-based and digital solutions, and establishing strong monitoring systems. Interventions to ensure continued access to innovative oncology drugs are equally critical, as oncology clinical trial starts have fallen by 22% in the European Economic Area since 2021. Furthermore, while patients in four larger countries (Germany, France, Italy, Spain) benefit from access to a large share of oncology clinical trials, those in smaller or Central and Eastern European countries have limited opportunities for participation. The EU Clinical Trials Regulation, the ACT EU initiative, and the promotion of decentralised and digital trial models are key policy instruments to promote oncology trial initiation.

Interventions to ensure quality, efficient cancer care are needed to achieve better value for money

Setting and monitoring quality standards is a key step to deliver effective cancer care, yet only 12 EU+2 countries report mechanisms to monitor compliance with cancer clinical guidelines. Risk-stratified cancer screening approaches, including based on genetic mutations (14 EU+2 countries), lifestyle factors like smoking (13 EU+2 countries) or HPV vaccination status (9 EU+2 countries) support high-value care by allocating diagnostic resources more efficiently among those at highest risk of cancer. However, potential cancer overdiagnosis – particularly relevant for thyroid and prostate cancers, as evidenced by empirical findings – has adverse effects on quality of life and wastes limited healthcare resources. As such, updating screening guidelines to target those at highest risk and to improve diagnostic accuracy, as well as adopting evidence-based clinical guidelines to harmonise treatment, are important to reduce potentially harmful and unnecessary care. Clinician-led efforts such as *Choosing Wisely* recommendations against low-value care are a valuable approach in this regard. Policies to shift care from inpatient to outpatient settings, such as payment reforms that encourage day surgery or adoption of hospital-at-home models, further enhance efficiency. The Nordic countries are leaders: in 2023/24, between a quarter to half of mastectomies in Denmark, Finland, Norway and Sweden were performed as day surgeries. With medicines consuming a growing share of cancer spending, countries are promoting high-value cancer care via health technology assessments, use of biosimilars, reduction of medication waste, and optimising dosage for cancer medications.

Primary healthcare systems are not centred enough around the needs of cancer patients

OECD's PaRIS data show that primary healthcare patients with cancer are one-third less likely to report good to excellent health than those without cancer, with wide disparities between countries (20% in Portugal compared to 60% in Iceland) and population groups (30% lower among the less educated). Strengthening people-centred care, such as self-management and co-ordinated care, would enhance the quality of life and outcomes for people living with cancer. Yet fewer than one-third of people with cancer in the EU11 experience high people-centred care. Personalised cancer care plans and structured medication reviews must be consistently utilised to simplify complex treatment choices and reflect patients' values and preferences. These practices can be further enhanced by co-ordinated care pathways and patient navigation support (Denmark and France), after-hours continuity (Germany and Ireland), and digital health tools (Greece and Sweden). Policy must also extend beyond medical treatment to address well-being and quality of life, with early and community-based palliative care integrated into services (such as in Norway's Orkal Model). Fertility preservation, sexual health, psychological care, and lifestyle counselling need consistent provision across EU countries, while survivorship programmes must be scaled up to meet the long-term needs of cancer survivors. Beyond health, cancer also has major economic impact: SHARE data reveal that a diagnosis reduces employment likelihood by 14% in EU countries, highlighting the need for labour market and workplace reintegration policies. Mechanisms such as extended sick leave, structured return-to-work policies and the "Right to be forgotten" are vital to prevent financial toxicity and ensure equity for people with cancer.

1.1. The burden of cancer continues to grow, driven by higher incidence, improving survival and rising rates of early-onset cancers among women

Cancer incidence remains higher among men than women

According to the European Cancer Information System (ECIS), more than five people are estimated to have been diagnosed with cancer every minute across the 27 EU countries in 2024, corresponding to 2.7 million cancer diagnoses. In age-standardised terms, cancer incidence in 2024 is estimated at 547 per 100 000 population across EU countries for both sexes, with 471 cases per 100 000 women and 650 cases per 100 000 men.

Estimated age-standardised incidence rates are higher among men in every EU+2 country, by 38% on average in the EU. Gender gaps in estimated age-standardised incidence rates are the largest in the Baltic countries, namely Estonia, Latvia and Lithuania. By contrast, the lowest estimated gender gaps are in Cyprus, Denmark, Malta, the Netherlands and Sweden.

Overall, ECIS estimated that by 2040, there will be 3.2 million cancer cases in the EU – an increase of half a million cases (18%) as compared to ECIS' previous 2022 estimates.

Crude cancer incidence has risen by about 30% over the last two decades

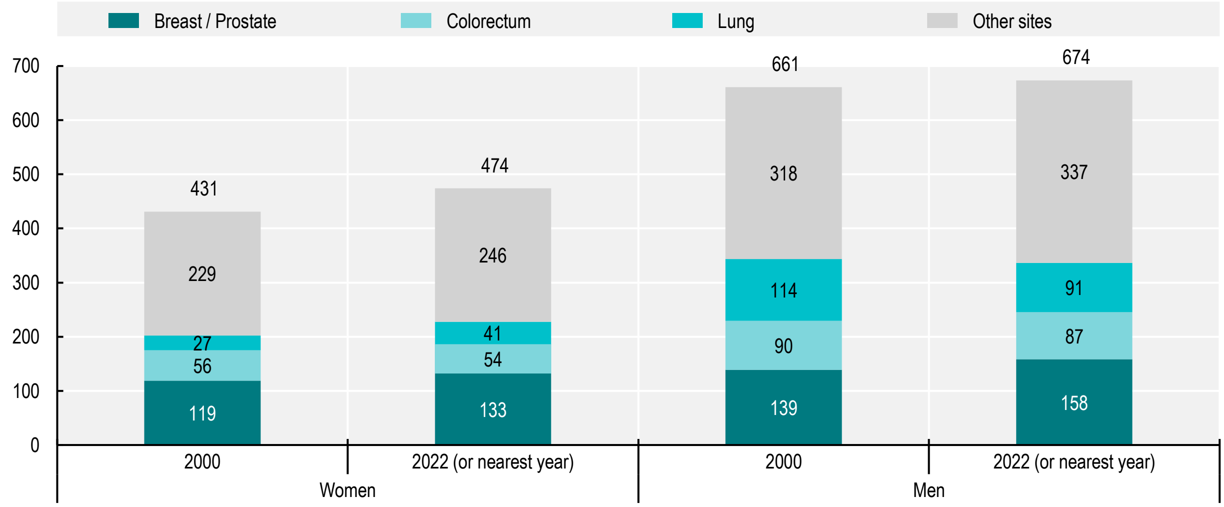
By collecting and harmonising cancer registry data from 24 EU countries, along with Iceland, Norway as well as other OECD countries, the new OECD analysis shows that the crude incidence of cancer has increased by about 30% among both men and women in the EU between 2000 to 2022. When the effect of the ageing population is removed, the trend is more modest. The age-standardised cancer incidence rate rose by 10% in women (from 431 to 474 per 100 000), while increasing slightly by 2% in men (from 661 to 674 per 100 000) over the same period (Figure 1.1).

Analysing the evolution of age-standardised incidence by cancer site reveals that the key drivers of the overall increase among women are breast cancer (+12%) and lung cancer (+52%) (Figure 1.1). The rise in breast cancer is driven by a combination of demographic changes, reproductive patterns (with later and fewer pregnancies), lifestyle habits and metabolic and hormonal factors. Most of the rise in lung cancer among women is explained by a rise in tobacco smoking (where increases in smoking among women started and peaked in more recent birth cohorts as compared men), but also exposure to outdoor and indoor air pollution (OECD/European Commission, 2025[1]). Increases in cancer incidence also relate to improved screening, diagnostic and cancer registration practices.

By contrast, the limited increase in male cancer incidence rates can be explained by a large reduction in the incidence of lung cancer (-20%) and stomach cancer (-34%), which more than offset an increase in prostate (+14%) and skin melanoma (+90%) cancers. A gradual decline in men's smoking rates have likely contributed to this overall trend (OECD/European Commission, 2025[1]).

Figure 1.1. Since 2000, cancer incidence has increased faster among women than men in the EU

Age-standardised cancer incidence rate per 100 000 population by cancer site, all ages, EU average



Note: The EU averages are unweighted and do not include Greece, Luxembourg or Romania. All cancer sites except for non-melanoma skin cancer are included. Age-standardisation is based on the 2013 European Standard Population. The latest available years are 2010 for Portugal and the Slovak Republic, and 2015 for Bulgaria (see Chapter 2).

Source: OECD calculations based on the following data: European Cancer Information System (ECIS) https://ecis.jrc.ec.europa.eu/, accessed on 25 November 2025; International Agency for Research on Cancer (IARC), https://gco.iarc.fr/overtime/en; Lapôtre-Ledoux et al. (2023[2]) "Incidence des principaux cancers en France métropolitaine en 2023 et tendances depuis 1990", http://beh.santepubliquefrance.fr/beh/2023/12-13/2023_12-13_1.html; National Institute of Oncology, National Cancer Registry of Hungary (NRR), https://stat.nrr.hu/.

Younger populations are increasingly affected by cancer, shifting cancer care needs and affecting well-being for many years to come

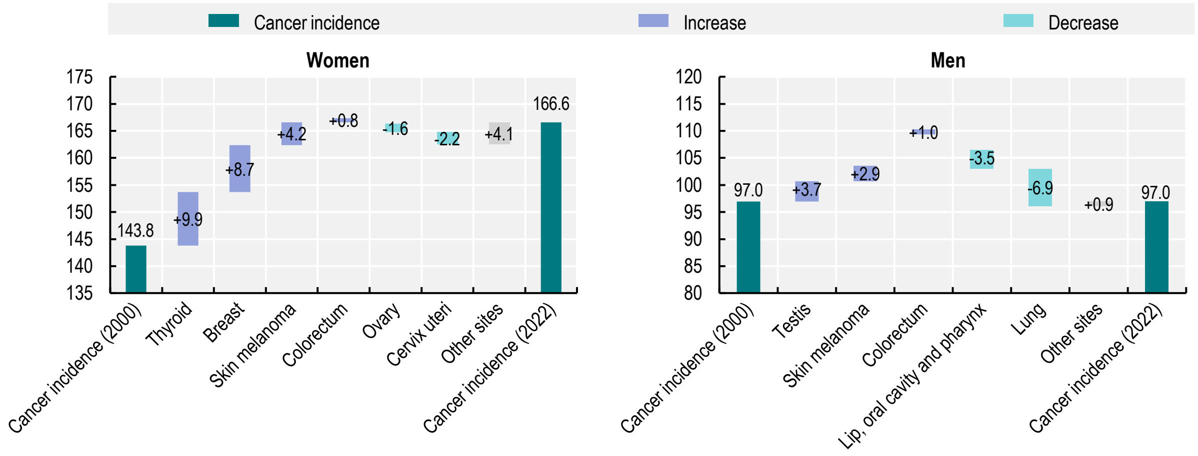
Incidence of early-onset cancer – defined as cancer cases occurring among young adults aged between 15 and 49, has risen faster among women than men. Increased incidence among younger women was observed in 22 of the 24 EU countries with available data, compared to half of 24 EU countries for younger men.

From 2000 to 2022, the age-standardised cancer incidence among younger adults increased by 22.8 per 100 000 women, from 143.8 to 166.6 per 100 000 women (+16%), while remaining stable at 97.0 per 100 000 for men on average across 24 EU countries (Figure 1.2). The most significant drivers of increased cancer incidence among younger women are thyroid cancer (+9.9 per 100 000 women), breast cancer (+8.7 per 100 000), skin melanoma (+4.2) and colorectal cancer (+0.8). A notable decrease of 2.2 per 100 000 women in cervical cancer is likely related to human papillomavirus (HPV) vaccination initiatives.

As for men, testicular cancer is the largest contributor to the rise in age-standardised incidence between 2000 and 2022, with an increase of 3.7 per 100 000 men on average across EU countries. The incidence rate of skin melanoma among young men has also risen by 2.9 per 100 000 and by 1.0 per 100 000 for colorectal cancer. Among EU+2 countries, Croatia, France, Poland, the Netherlands and the Nordic countries saw a significant increase in colorectal cancer incidence among the younger population, whereas Czechia, Italy and Spain registered a decline.

Figure 1.2. Among women, the rise in early-onset cancer is driven by thyroid, breast, skin melanoma and colorectal cancers

Change in age-standardised cancer incidence rates per 100 000 among those aged 15 to 49, EU average, 2000-2022



Note: The EU averages are unweighted and do not include Greece, Luxembourg or Romania. All cancer sites except for non-melanoma skin cancer are included. Age-standardisation is based on the 2013 European Standard Population. The latest available years are 2010 for Portugal and the Slovak Republic, and 2015 for Bulgaria (see Chapter 2). France is not included in the EU averages for testicular cancer, and Cyprus is not included in the EU averages for skin melanoma cancer among men due to limited observations.
Source: OECD calculations based on the following data: European Cancer Information System (ECIS) https://ecis.jrc.ec.europa.eu/, accessed on 25 November 2025; International Agency for Research on Cancer (IARC), https://gco.iarc.fr/overtime/en; Lapôtre-Ledoux et al. (2023[2]) “Incidence des principaux cancers en France métropolitaine en 2023 et tendances depuis 1990”, http://beh.santepubliquefrance.fr/beh/2023/12-13/2023_12-13_1.html; National Institute of Oncology, National Cancer Registry of Hungary (NRR), https://stat.nrr.hu/.

These findings are consistent with previous literature showing the rise in early-onset cancer as a global, multi-cancer phenomenon. In the United States, incidence among those aged 15-39 rose by nearly 30% between 1973 and 2015, with notable increases in kidney, thyroid, and colorectal cancers (Scott et al., 2020[3]), and a faster rise among women under 50 (Shiels et al., 2025[4]). Similar patterns appear in Europe: in the United Kingdom, cancer incidence increased more in young women (27%) than men (9%) from 1993-2019 (Hamilton et al., 2022[5]), while in France, rates rose from 2000-14 before declining slightly from 2015, with testicular, breast, thyroid, and melanoma cancers most affected (Desandes et al., 2025[6]).

In other OECD countries, trends in the cancer incidence among younger populations are similar to those in the EU+2 countries. However, the age-standardised incidence of colorectal cancer among the younger population has increased faster for both sexes in Australia, Canada, Chile, Korea, New Zealand, Türkiye, the United Kingdom and the United States.

The rising incidence of early-onset breast, colorectal, skin melanoma and testicular cancers requires that diagnostic cancer care, treatment and supportive services be adapted to the growing number of people living with cancer for an extended period. A people-centred approach for individuals living with cancer is becoming increasingly important – not only to help them understand and manage their prognosis, but also to foster their social and economic well-being.

Although the underlying causes of rising early-onset cancer require further study, three main factors likely play a role. The first is a genuine increase in the number of early-onset cases due to heightened risk exposures among younger generations. Shifts in metabolic and lifestyle factors and early-life environments – such as obesity, diet, physical inactivity, reproductive patterns and microbiome – are linked to higher cancer incidence in the younger population (Díaz-Gay et al., 2025[7]; Wang et al., 2025[8]). Second, expanded healthcare access and improved diagnostic technologies have increased opportunities for earlier detection among younger populations (Ladabaum et al., 2020[9]; Issa and Noureddine, 2017[10]). Lastly, broader use of diagnostic imaging and testing may have contributed to incidental and overdiagnosis of some cancers, particularly for slow-growing thyroid and prostate cancers (Richman and Gross, 2025[11]; Jiang et al., 2025[12]).

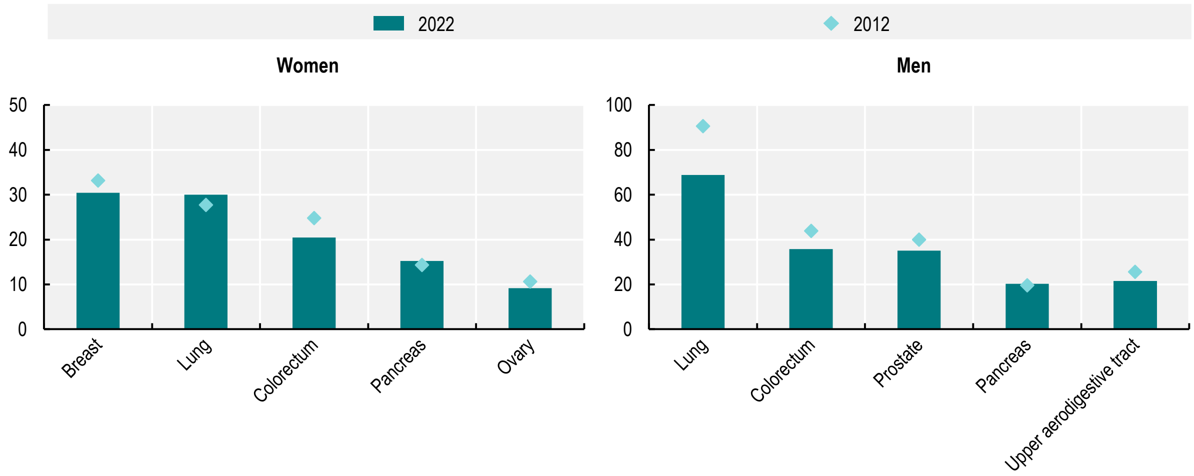
> [Cancer] affected me a great deal. I was sad and depressed and treatment for [side effects] and my cancer took all my time. Losing my job due to my cancer was really tough and my individual financial situation was terrible…I lost many friends due to their fear of meeting me and they did not know how to handle [the] “new” me.
>
> *Margareta, diagnosed with Non-Hodgkin´s lymphoma at age 49*

Cancer is the second largest cause of death in the EU, while cancer mortality rates fell on average by 18% in women and 26% in men from 2000 to 2023

Cancer accounts for 23% of deaths in EU countries, with an age-standardised mortality rate of 208 per 100 000 population as of 2023, remaining the second most significant cause of mortality over the last decade (after cardiovascular disease). Due to advances in cancer detection and treatment, however, cancer mortality has dropped by 18% among women and 26% among men across EU countries between 2000 and 2023. Cancer mortality has declined across almost all main sites (Figure 1.3). For women, improvements chiefly stem from lower colorectal, breast and stomach cancer mortality. For men, gains are driven by reduced lung, colorectal, stomach and prostate cancer mortality.

Figure 1.3. Mortality rates fell across almost all main cancer sites, particularly for male lung cancer and female colorectal cancer

Age-standardised cancer mortality rate per 100 000, by cancer site, EU average



Note: The EU averages are weighted. Age-standardisation is based on the European Standard Population 2013. Upper aerodigestive tract combines lip, oral cavity, pharynx, larynx and oesophagus.
Source: Causes of death (Eurostat), https://doi.org/10.2908/HLTH_CD_ASDR2.

Substantial reductions in cancer mortality were observed for women in Denmark, Czechia, Ireland and Hungary, and for men in Belgium, Czechia, Hungary and Luxembourg. While mortality rates were consistently higher among men than women in both 2000 and 2023 in all EU+2 countries, gender gaps in mortality rates narrowed during this period. Beyond gender disparities, socio-economic inequalities in mortality remain a cause for concern (see Box 1.1).

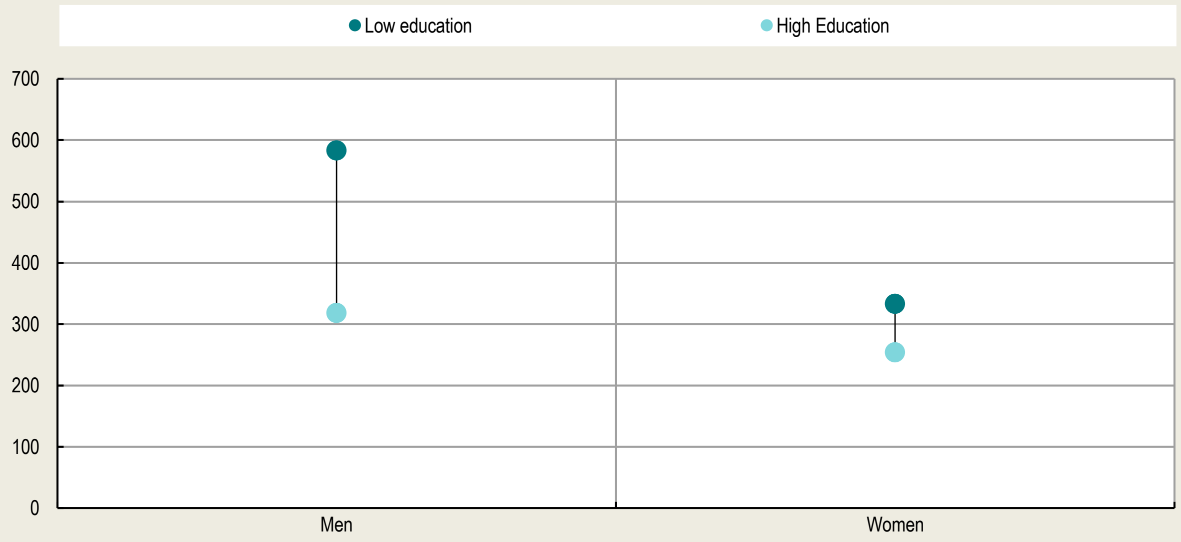
Box 1.1. Monitoring socio-economic inequalities in cancer outcomes is crucial to addressing the root causes of disparities

Growing evidence in EU+2 countries indicates that the pattern of cancer incidence and cancer mortality significantly differs by socio-economic status (SES). Inequalities arising from income, education, occupation, and other social factors have been well documented (Conway et al., 2019[13]).

- For cancer incidence, the meta-analysis by Mihor et al. (2020[14]) covering EU countries shows that lower SES among adults is associated with higher risk of lung, stomach, cervical and pancreatic cancers, while adults with higher SES have higher risk of breast, thyroid, skin melanoma and prostate cancers. A scoping review of cancer inequalities by Li et al. (2024[15]) also highlights that people from lower SES backgrounds are at higher risk of lung cancer, but have a lower incidence of breast cancer.
- The EU Cancer Inequalities Registry country factsheets 2015-2019 demonstrate differences in cancer mortality between those with primary education and those with tertiary education (EC/IARC/Erasmus MC, 2025[16]). Overall, estimated cancer mortality rates are consistently higher among people with a lower level of education, for both sexes (except for women in Slovenia, Spain and France). Across EU countries, men with a low level of education face an 83% higher cancer mortality rate than highly educated men, while women with a low level of education are 31% more likely to die from cancer than highly educated women (Figure 1.4).
- While it is key to monitor cancer inequalities, the majority of European cancer registries lack SES information on registrants or linkage to a database where such information is stored. Less than half of EU+2 countries enable linkages to SES data to monitor socio-economic inequalities, limiting monitoring of socio-economic inequalities in the cancer burden.

Figure 1.4. Cancer mortality rates are higher among individuals with lower levels of education, for both women and men

Estimated age-standardised mortality rate per 100 000 (2015-2019), ages 40-70, by education, EU27 average



Note: The EU averages are unweighted. “Low education” refers to ISCED Levels 0-2 and “High education” to ISCED Levels 5-8.
Source: (EC/IARC/Erasmus MC, 2025[16]).

Improving survival, coupled with higher cancer incidence, has increased the number of people who have ever been diagnosed with cancer

Lower cancer mortality rates are a consequence of higher survival rates, which stem from improved access to early detection and diagnosis (see Chapter 3), as well as progress in cancer treatments including more effective surgical procedures, medicines, and radiotherapy technologies (see Chapter 4). Five-year cancer survival has improved across most EU+2 countries, reflecting these advances.

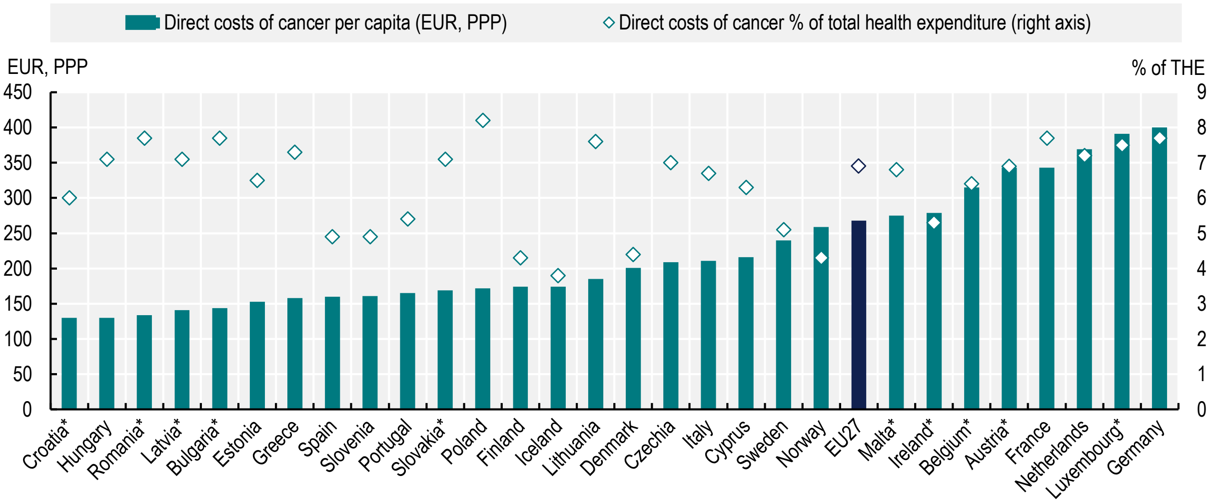
Lung cancer, historically among the lowest-survival cancers, showed the greatest progress among the main sites. Improvements were reported in all 17 EU+2 countries with trend data, particularly in Denmark, Finland, Iceland, Norway and Sweden – all of which saw lung cancer survival increases of eight or more percentage points (p.p.) over the latest decade. Colorectal cancer survival has also improved steadily across all countries, coinciding with the roll-out and expansion of population-based screening programmes. Breast cancer continues to achieve among the highest survival rates – typically above 80% – with moderate increases observed even in countries where screening participation has declined.

The combination of increasing cancer incidence and improving survival rates results in higher cancer prevalence. As highlighted by De Angelis et al. (2024[17]), the share of the EU population living with and beyond cancer grew by 24% between 2010 and 2020, reaching 5% of both women and men. This suggests that cancer diagnostics, treatment and supportive services must meet the needs of a growing number of people living with cancer (Chapter 5).

Health expenditures on cancer in the EU have doubled over time and range from 4% to 8% of health spending in 2023

According to a 2025 report by the Swedish Institute for Health Economics, cancer spending ranged from about 4% of total health expenditure in the Nordic countries (Denmark, Iceland, Finland and Norway) to about 8% in France, Germany and the Central European countries of Bulgaria, Lithuania, Poland and Romania (Manzano et al., 2025[18]), with an average of almost 7% in the EU. On a per-capita basis, this is equivalent to EUR 268 – ranging from EUR 130 in Croatia and Hungary to more than EUR 390 in Luxembourg and Germany (Figure 1.5).

Figure 1.5. In 2023, the EU devoted 7% of health expenditures to cancer, equivalent to EUR 268 per capita



Note: THE = total health expenditure. The direct cost of cancer includes both medical and non-medical expenditure. These costs encompass both public and private expenditures for services within the healthcare system (including treatments as well as preventive measures) and any formal support services outside the healthcare system. Non-medical expenditures cover transportation expenses for patients travelling to healthcare facilities. *The estimated share is based on data from similar countries.
Source: Monzano et al. (2025[19]), *Comparator Report on Cancer in Europe 2025 – Disease Burden, Costs and Access to Medicines and Molecular Diagnostics*, IHE REPORT 2025:2. IHE: Lund, Sweden.

After adjusting for inflation, it is estimated that the direct real costs of cancer in the EU more than doubled from EUR 54 billion in 1995 to EUR 120 billion in 2023 (Monzano et al., 2025[19]). Estimated health expenditures on cancer increased more quickly in the Central European countries than in other countries between 1993 and 2023, leading to some convergence in cancer spending between countries.

According to OECD projections, effective management of the disease will entail considerable financial costs, placing substantial pressure on healthcare systems globally. Driven by population ageing alone – assuming cancer incidence and survival rates remain constant across age groups – the cancer burden is projected to raise average per capita cancer-related health expenditure in EU countries by 59% and in OECD countries by 67% between 2023 and 2050 (OECD, 2024[20]). The costs of cancer on the economy collectively reverberate widely; reduced productivity and hours worked due to cancer are anticipated to reduce the labour supply by 1.1 million full-time workers in EU countries through 2050, at a loss of EUR PPP 49 billion per year. For OECD countries as a whole, the cancer burden through 2050 equates to a loss of 3.1 million workers and EUR PPP 163 billion (OECD, 2024[20]).

The increased spending on cancer care, combined with the substantial economic burden of cancer, calls for assessing how cancer services are delivered, with a stronger focus on value – namely, whether current investments are achieving the best possible outcomes. At a time of fiscal pressure and competing government priorities spanning defence, social welfare and economic growth – alongside capacity and workforce limitations in the health system itself – emphasis must be placed on ensuring high-value cancer care that contributes to the health and quality of life of people in EU countries. This report identifies key levers to improve value for money for patients and healthcare systems: faster access, evidence-based and efficient care that ensures optimal health outcomes; and people-centred approaches that reflect individuals' needs and preferences.

1.2. Faster access to accurate and appropriate cancer diagnosis and treatment is key to control cancer and related cost

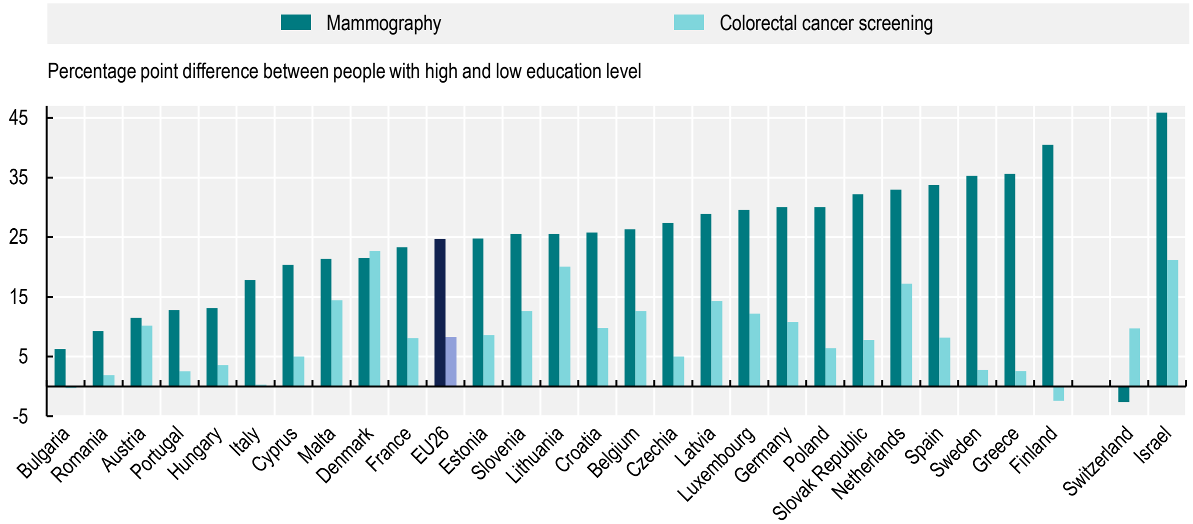
Delays in access to cancer diagnosis and services occur at all stages of the cancer care pathway, pointing to significant unmet needs

Population-based screening programmes do not equally benefit eligible populations

Detecting cancer early (typically stage I-II) improves survival, reduces treatment costs, and continues to inform care by characterising tumour biology and monitoring progression (Crosby et al., 2022[21]). Population-based cancer screening is an effective intervention to detect cancer early, by finding abnormalities associated with cancer in asymptomatic individuals. A recent population-based cohort study shows that breast cancer screening significantly reduces the likelihood of advanced tumour stages at diagnosis and breast cancer mortality over a 25-year period (Ma et al., 2025[22]). All but three EU+2 countries have population-based screening for breast cancer, with Bulgaria, Lithuania and Romania instead relying only on non-population-based screening. Three-quarters of EU+2 countries have established population-based screening programmes for cervical and colorectal cancer. However, uptake of screening varies across countries and population groups, with important implications for timely contact with healthcare services. Breast cancer screening rates vary five-fold between EU countries (from 15% in Greece to 83% in Denmark and Sweden) and cervical cancer screening rates vary 13-fold (from 6% in Romania to 78% in Sweden). Colorectal cancer screening rates are typically lower than for other cancers, and had an eight-fold variation (from 9% in Hungary and 74% in Finland).

Socio-economic inequalities in screening uptake also persist across EU+2 countries. People with high education levels on average have a 25-p.p. higher probability of having had a mammogram in the previous two years than those with low education, with an 8 p.p. gap found for colorectal cancer screening (Figure 1.6).

Figure 1.6. Participation in cancer screening programmes is consistently higher among people with high education levels



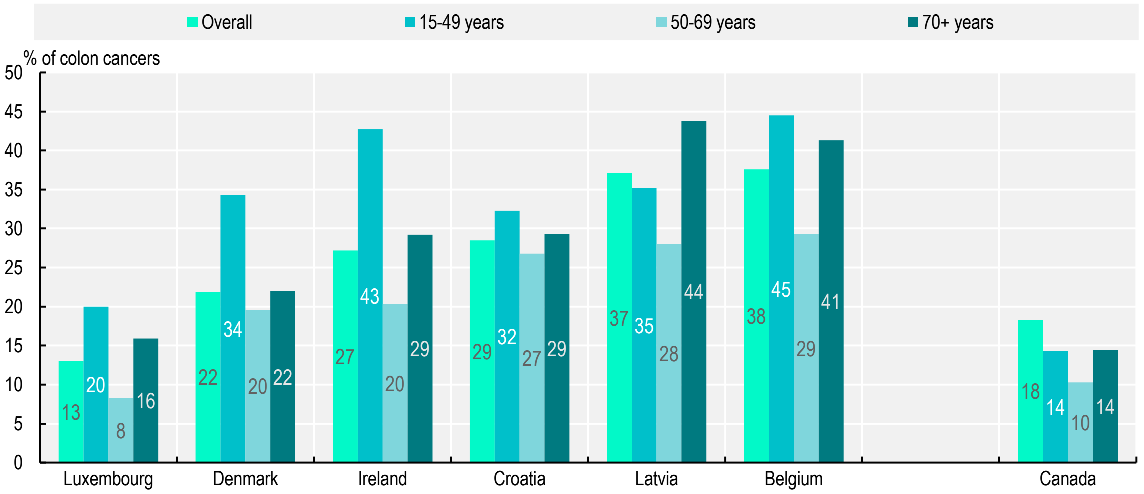
Note: Data refer to people aged 50-74, weighted using the SHARE survey weights. A p.p. difference across population groups is shown. High education level refers to post-secondary or tertiary education, while low education refers to primary or lower secondary education.
Source: Survey of Health Ageing and Retirement in Europe (SHARE) Wave 9 (2022).

Delays in access represent missed opportunities for early-stage cancer diagnosis

Early diagnosis relies on patients seeking care promptly when symptoms emerge, primary care providers spotting red flags and making appropriate referrals, and specialists completing stepwise tests such as imaging and pathology to confirm the disease. The new OECD analysis reveals that between 2018 and 2023, the share of breast cancer cases diagnoses at early stage among screening-relevant ages (women aged 50-64) averaged 56% across 10 EU countries with available data, and varied from 42% in Latvia to 66% in Norway. Early-stage diagnosis of cervical cancer in females aged 15-49 years averaged 62%, ranging from 37% in Latvia to 85% in Iceland. Among EU+2 countries, the share of early cervical cancer diagnoses exceeded 60% in nine EU+2 countries (Belgium, Czechia, Estonia, Iceland, Ireland, the Netherlands, Norway, Slovenia and Sweden). In contrast, the share of colorectal cancer cases diagnosed at an early stage is lower, ranging from 16% in Latvia to 33% in Luxembourg, with an EU average of 22%. These lower rates are partly due to the fact that colorectal polyps removed during colonoscopy screening (a key early detection and treatment mechanism) are generally not recorded in cancer registries.

Rates of emergency diagnoses for lung and colorectal cancers also signal delays in early stage of cancer diagnosis. Across all age groups, between about 15%-40% of patients with colorectal cancer are diagnosed via emergency presentation in six EU countries. Among those aged 50-69 years (the screening age eligible population), the share of colorectal cancers diagnosed through emergency presentation ranges from 8% in Luxembourg to 29% in Belgium (Figure 1.7). Compared to younger or older populations, the screening eligible population consistently reports the lowest proportion of emergency diagnoses of colon cancer. Ireland and Luxembourg report the largest age gap in emergency diagnoses, where the proportion among the screening-age population is half that among those aged 15-49 years. This gap highlights the importance and impact of colorectal cancer screening programmes. Indeed, younger patients with colorectal cancer tend to be diagnosed at a later stage and are more likely to present as an emergency, due to more aggressive cancer, not being eligible for screening, and atypical or unsuspected symptoms of colorectal cancer.

Figure 1.7. The proportion of colon cancers diagnosed by emergency presentation is much lower in the screening eligible population aged 50-69 years



Note: Data refer to proportion of people aged 15+ years diagnosed with cancer who visited an emergency department with a principal diagnosis related to the cancer within 30 days of their confirmed diagnosis. Two exceptions are Croatia, where emergency department visits with a secondary diagnosis related to cancer are also included, and Belgium, where emergency department visits for any reason within 30 days of a cancer diagnosis are included. Data refer to most recent three-year average across years with data available, including 2021-2023 for Denmark and Latvia, 2020-2022 for Belgium, Canada and Croatia, 2018-2020 for Ireland and 2019 for Luxembourg. The data for Canada data includes two provinces, Alberta and British Columbia.
Source: OECD cancer data collection on cancer care quality; OECD (2025[23]), "Assessing cancer care quality in OECD countries: New indicators for benchmarking performance", https://doi.org/10.1787/b3f47ece-en.

Variation in time to treatment highlights gaps in access to cancer care, having adverse impact on cancer survival

Once cancer is confirmed through tissue diagnosis, starting treatment quickly is essential. Shorter time to cancer treatment initiation is associated with lower mortality and is particularly critical for certain cancer types (Neal et al., 2015[24]). A meta-analysis found that for every four-week delay in cancer treatment, the risk of death increases by around 10% (Hanna et al., 2020[25]). However, it is important to note many countries require or recommend the use of multidisciplinary teams (MDTs), which can slightly increase the time to start of treatment but help to improve health outcomes.

The OECD data collection shows that there are major cross-country differences with regard to timeliness of treatment initiation. Four EU+2 countries (Belgium, Denmark, Ireland and Norway) reported that at least 60% of people diagnosed with colorectal cancer began treatment within 30 days of diagnosis. Denmark (83%), Norway (71%) and Belgium (61%) lead with the highest share of people treated within 30 days for female breast cancer. Five EU+2 countries (Belgium, Denmark, Estonia, the Netherlands and Norway) met the 50% threshold for treatment initiation within 30 days of tissue diagnosis for lung cancer, suggesting more efficient care pathways in these countries.

There are some indications of a persistent negative impact of the COVID-19 pandemic on some measures of timeliness of diagnosis and care. There is an upward trend in emergency diagnoses of cancer in some EU countries (Croatia, Denmark, and Ireland) when comparing the proportion before versus after the COVID-19 pandemic (between 2018 and 2023), particularly for lung cancer. Similarly, the share of cervical cancers diagnosed at an early stage decreased by 7 p.p. or more before and after the pandemic among five EU+2 countries (Iceland, Latvia, the Netherlands, Norway and Sweden), although no consistent time trends were seen for breast and colorectal cancer. In addition, the share of breast cancer patients treated within 30 days of diagnosis fell across all countries, with Estonia and the Netherlands particularly affected for both breast and colorectal cancer.

Delays in access to cancer care can be addressed at all three stages of the cancer care pathway: screening and first interaction with health systems (delay 1), diagnosis (delay 2) and treatment (delay 3), through several overarching levers: providing information, changing behaviour, redesigning care delivery, and increasing care capacity (Table 1.1).

Table 1.1. Providing information, changing behaviours, redesigning delivery and increasing care capacity are key levers to address delays in the cancer care pathway

Delays	Main challenge	Policy lever	Country examples
Delay 1: *Screening & first interaction*	Low health literacy, and limited awareness	Changing behaviours - culturally tailored communications and health literacy initiatives.	IE: Runs awareness campaigns on cancer risk factors and early signs, including at schools. FR: Simplified screening information materials for people with disabilities. LT: School and workplace information sessions.
	Barriers to screening participation	Redesigning delivery – adapting screening delivery modes.	FR: Pharmacists distribute colorectal screening kits. IE: Access Officers support vulnerable groups. CZ: Distributing self-sampling kits for HPV testing
Delay 2: *Diagnosis*	Lack of primary care physicians' knowledge of cancer symptoms	Changing behaviours – training materials for primary healthcare.	EE: Decision-support tool for primary care physicians and nurses within clinical software IE: GP training on early symptom recognition.
	Delayed referral, fragmented co-ordination	Redesigning delivery – fast-track pathways and rapid diagnostic clinics.	DK: Cancer Patient Pathways with national time targets. SE: Diagnostic pathways with real-time monitoring. NL: Early Diagnostic Clinics provide same-day results
Delay 3: *Treatment*	Fragmented co-ordination	Redesigning delivery– treatment pathways, protocols, and data exchanges.	SE: 31 cancer-specific care pathways with waiting time targets. NO: Standardised care pathways monitor intervals between diagnosis and treatment.
	Workforce shortages	Increasing care capacity – workforce development	AT: Oncology and community nurse roles BE, CZ: Specialised oncology nurse training NL: Forecasting tools to plan future workforce needs.
	Unequal radiotherapy capacity and ageing equipment	Increasing care capacity – investment in radiotherapy infrastructure.	FR: Shared procurement initiative for radiotherapy equipment, leading to the purchase of 40 particle accelerators. IE: Uses national governance structures to co-ordinate investment in radiotherapy as well as expansion of public facilities. DE, IT: Provide domestic particle-beam therapy capacity.
Delays 1-3	Financial burden on individuals	Changing behaviours – eliminating financial barriers	RO: Provides free transport for vulnerable groups in colorectal cancer screening pilot. LV: Removed co-pays for follow-up testing after screening. PT: Eliminated user charges for cancer-related services.
	Fragmented data flows, limited interoperability	Providing information – digital tools and monitoring systems	SI: Runs real-time dashboards to track patient intervals. NO: Measures diagnostic intervals from first presentation to referral. SE: Publishes timeliness indicators.

Changing behaviours and providing information promote timely access to cancer care

Culturally tailored communication, supported by community engagement, is essential for overcoming barriers and ensuring inclusive cancer care

Health literacy – the ability to understand and use health information – is vital for cancer decision making, as participation in cancer screening programmes and seeking care when experiencing cancer symptoms are influenced by awareness, attitudes, beliefs and ability to navigate relevant health information. Adequate health literacy increases participation in breast, cervical, and colorectal cancer screening (Baccolini et al., 2022[26]) and constitutes an important factor in recognition of symptom seriousness.

Virtually all countries now have initiatives to improve public health literacy regarding early cancer symptoms and screening benefits through awareness campaigns or culturally tailored communication, often involving patient organisations. In addition, 14 EU+2 countries have initiatives that involve collaboration with schools, universities, or employers (e.g. occupational health collaborations or workplace-based screening awareness programmes) to raise health literacy regarding early cancer symptoms and promote screening participation. In Ireland for example, the Marie Keating Foundation delivers a Schools Cancer Awareness Programme to around 10 000 secondary students annually with National Cancer Control Programme support, including education about cancer risk reduction and early signs and symptoms.

Eliminating financial barriers at all stages of the cancer pathway

Ensuring equitable access to cancer care requires removing financial barriers at every stage – from screening and diagnosis to cancer treatment. Most EU+2 countries provide free cancer screenings to encourage participation; however, even minor charges, such as Iceland's arrival fee of ISK 500 (EUR 3.3) which applies to any medical visit (including breast or cervical cancer screening) may deter individuals from attending. Evidence from other OECD countries, such as Japan, indicates that lowering cost barriers significantly increases screening uptake, while the affordability of follow-up diagnostics is equally critical, as patients may forgo screening or not act on positive screening tests if they cannot afford subsequent care. Beyond screening, diagnostic testing continues to impose significant out-of-pocket costs on patients as reported in the OECD Policy Survey on High-Value Cancer Care by Greece, Hungary, Italy, Latvia, Portugal and Spain. Some countries, however, have taken proactive measures to strengthen financial protections in recent years. Latvia removed co-payments for follow-up diagnostic examinations after screening in 2022, while Estonia provides free follow-up tests for positive screening results.

At the same time, financial hardship continues to undermine access to cancer treatment, with cost-related delays and care avoidance leading to poorer health outcomes. A 2025 EU-wide survey found that 16% of cancer patients postponed or avoided care due to financial constraints, with the highest rates in Greece (47%) and Bulgaria (38%) (Vancoppenolle et al., 2025[27]). The most commonly delayed or avoided services were doctor visits and buying medicines, though treatments such as chemotherapy, radiotherapy and surgery were rarely skipped. To ensure cost does not present a barrier to treatment and to enable equal access, 22 EU+2 countries have implemented mechanisms to ensure low or no co-payments for cancer treatment, and many have expanded reimbursement schemes for low-income groups or cover ancillary expenses such as transportation, childcare, and accommodation. Belgium offers a good example, providing enhanced reimbursements for low-income people and full coverage once an annual spending cap is reached, along with partial transport reimbursement.

Primary healthcare education on cancer and decision support tools help overcome knowledge gaps

Developing training and teaching materials on early cancer signs and up-to-date investigation processes, as well as strengthening the use of electronic health records can shorten the time between a patient's first presentation with cancer symptoms in primary healthcare and their referral to secondary care (Harris et al., 2019[28]). These often include brief e-modules, interactive referral checklists, and audit-and-feedback exercises. In 2025, seven EU+2 countries offer dedicated training campaigns on cancer to primary care physicians. At the EU level, the Cancer Prevention Europe programme provides multilingual learning modules covering cancer prevention and control to enhance primary healthcare knowledge on prevention, early signs and referral principles, for which European Union of Medical Specialists accreditation applies.

Use of clinical decision support tools also help primary healthcare providers recognise potential cancer signs and symptoms, directing referrals to specialist services or testing. Pilots show impact: for example, in England such tools prompted referrals that would not have occurred in about 20% of cases. Estonia implements a decision support tool for family physicians and nurses that is integrated into clinical software. It generates recommendations and reminders based on patient data such as diagnoses, medications, tests and treatments from the past five years (Estonian Health Insurance Fund, 2025[29]).

Better information on timeliness is required to address delays in access to cancer care

A well-developed cancer data infrastructure is essential to monitor the timeliness, continuity, and co-ordination of cancer care across the patient pathway. This requires comprehensive cancer registries linked to administrative and mortality databases, supported by unique patient identifiers to ensure interoperability between healthcare providers. However, major data gaps persist in monitoring screening outcomes and diagnostic timeliness. Among EU+2 countries, only a handful systematically track false negatives, link screening and diagnostic data, or measure interval cancers arising between screens – key indicators of early detection performance. Monitoring the time between suspicion, diagnosis, and treatment also remains uneven, with only Denmark, Norway and the Netherlands assessing all steps in the pathway from primary healthcare to treatment.

At the same time, advances in health information systems are improving countries' ability to promote transparency and support quality improvement. Twelve EU+2 countries now use timeliness data for public reporting in order to support individuals in making informed decisions about provider choice; and nine EU+2 countries use it to support quality improvement initiatives (including in Lithuania, Slovenia and Sweden).

A key policy direction to strengthen cancer care performance is to prioritise developing interoperable data systems that enable end-to-end monitoring of cancer care pathways and screening outcomes. Linking registries and screening, as well as diagnostic data is crucial to identify bottlenecks and evaluate programme effectiveness. Expanding disaggregated monitoring by key population and provider characteristics and using digital tools for real-time reporting and provider feedback are key areas for consideration to identify unmet needs and ensure timely and co-ordinated cancer care for all.

Redesigning care delivery can prevent delays in timely access to cancer diagnosis and treatment

Adapting cancer screening delivery modes to the needs of individuals increases uptake among the target population

There are various approaches to increase screening uptake by adapting the delivery model. These policies range from deploying mobile screening units (19 EU+2 countries), distributing self-sampling kits for colorectal cancer screening (20 EU+2 countries) and for cervical cancer screening (12 EU+2 countries), and increasing the role of primary care physicians (11 EU+2 countries) and of pharmacists (seven EU+2). Some of these strategies have already proven effective in increasing participation among the target population. In Ireland for example, there was increased uptake of colorectal screening among first-time invitees when a home test kit was sent directly along with a reminder letter, rather than requiring that individuals request a kit (Health Service Executive, 2025[30]). This approach was effective even among people living in lower socio-economic areas.

Fast-track pathways and rapid diagnostic clinics address waiting times and diagnostic delays

Many patients with non-specific symptoms like fatigue or weight loss face delays in cancer diagnosis due to unclear referral criteria. Fast-track referral pathways help standardise access to specialists and speed up diagnostic tests. These services provide direct access to comprehensive diagnostic and support tools, often supported by national waiting time targets. As of 2025, 18 EU+2 countries have fast-track diagnostic pathways for suspected cancer. Denmark introduced its Cancer Packages which are standardised and time-defined pathways that organise a pre-planned sequence of investigations, multidisciplinary decisions, treatments and follow-up. A recent retrospective observational study in Denmark shows improved survival rates for high-grade soft-tissue sarcoma following the introduction of its cancer patient pathway (Thorn et al., 2024[31]).

Alongside pathways for patients with site-specific symptoms, rapid cancer diagnostic centres are being developed in several countries to provide early diagnostic services for patients. Instead of being referred to multiple specialists, these patients are offered a co-ordinated, multidisciplinary assessment at a single centre, combining multiple steps in the diagnostic pathway. Rapid diagnostic centres have been established in nine EU+2 countries. Ireland has implemented rapid access clinics for breast, lung and prostate cancers, supported by performance monitoring and feedback mechanisms.

> I had to navigate between multiple specialists and tests on my own, with little guidance. The process felt slow and uncoordinated, prolonging the time from the first consultation to the final diagnosis. I felt unsupported in understanding what to expect next, and the absence of psychosocial assistance made the waiting period even more stressful.
>
> *Maria, 52 years old, endometrial cancer*

Structured treatment pathways and protocols with defined time benchmarks address the fragmentation and co-ordination issues that impede access to care

Treatment pathways are also essential policy tools that reduce delays in cancer care by standardising and co-ordinating every step, from a cancer diagnosis to treatment. They help to align primary healthcare, diagnostic services and oncology teams around clear timelines and responsibilities, thereby reducing fragmentation and poor co-ordination.

As of 2025, at least 17 EU+2 countries have developed cancer care pathways, with many embedding clear time benchmarks that should be met. Among them, Sweden stands out with its highly systematised 31 cancer patient pathways for the most common cancers, implemented across 21 regional health authorities, with evidence of success in ensuring more timely, equitable, and quality-assured access to cancer care. By 2023, 83% of people with a history of cancer were managed within one of these pathways (OECD/European Commission, 2025[32]). Recently, France piloted accelerated co-ordinated cancer care pathways in seven hospitals for cancers with poor prognosis.

Increasing care capacity is necessary to meet the growing demand for cancer treatment

Training reforms, workforce planning tools and new professional roles in cancer care

Access to cancer care is frequently hindered by shortages and unequal distribution of specialised healthcare professionals. Among countries where a more comparable definition was feasible, the number of physicians classified as medical, clinical, or radiation oncologists averaged 7.6 per 1 000 estimated incident cancer cases, ranging from 11.6 in Czechia to 2.9 in Bulgaria (where data on radiation oncologists was not available).

Many EU+2 countries already face workforce shortages in the health sector, including in cancer care, due to an ageing workforce, heavy workloads, and burnout intensified by the COVID-19 pandemic. A 2024 European Cancer Organisation survey shows that 1 in 12 cancer professionals plan to leave the field within five years, 19% report high burnout, and 77% work overtime (European Cancer Organisation, 2024[33]). Urgent policies are thus needed to improve working conditions and reduce administrative burden. Building a sustainable cancer workforce requires stronger workforce planning tools, alongside recruitment, retention, and innovation in workforce roles. Such approaches already take place in Austria, Czechia and the Netherlands (Table 1.1).

The projected 25% increase in radiation therapy demand necessitates investments in radiotherapy workforce and equipment

Recent projections estimate a 25% rise in the global demand for radiotherapy services between 2022 and 2050, reaching 2.4 million cancer patients in the EU (Zhu et al., 2024[34]). Correspondingly, the workforce demand for radiotherapy is projected to increase by a quarter, by almost 6 300 new professionals (almost 2 000 radiation oncologists, 1 100 medical physicists, and 3 200 radiation technicians), resulting in a need for close to 31 000 professionals by 2050.

At the same time, linear accelerators (LINACs) are the most common machines used for external beam radiotherapy, making up to almost 80% of all radiotherapy equipment in EU countries. According to recent projections, EU countries on average would need to invest EUR 504 million in LINACs to meet expected utilisation demand in 2045 (Moraes et al., 2025[35]). This corresponds to an average investment of EUR 31 per capita. Substantial variability exists across EU+2 countries, ranging from EUR 47 per capita in Cyprus to EUR 15 per capita in Norway, reflecting differences in current capacity, equipment replacement needs, infrastructure development, and human resources. Across 16 EU+2 countries, efforts are already underway to improve access to radiation therapy through targeted investments, new payment models, and innovative techniques like hypofractionation.

Infographic 1.2. Investments in radiotherapy equipment and workforce are required to meet future demand in the EU

INFRASTRUCTURE INVESTMENT	ADDITIONAL WORKFORCE		
IN LINEAR ACCELERATORS	RADIATION ONCOLOGISTS	MEDICAL PHYSICISTS	RADIOTHERAPY TECHNICIANS
€ 504M	1 947	1 082	3 247

Note: Demand for linear accelerators refers to 2045 and reflects average needed investment per EU country; demand for radiotherapy workforce refers to 2050.
Source: Zhu et al. (2024[34]), "Global radiotherapy demands and corresponding radiotherapy-professional workforce requirements in 2022 and predicted to 2050: a population-based study", https://doi.org/10.1016/S2214-109X(24)00355-3; Moraes et al. (2025[35]). (2025), "Global linear accelerator requirements and personalised country recommendations: a cross-sectional, population-based study", https://doi.org/10.1016/S1470-2045(24)00678-8.

Harmonising EU regulations will help support and streamline implementation of clinical trials in EU countries

Europe's regulatory environment has substantial administrative costs for initiation of clinical trials, and concerningly, oncology clinical trial starts have fallen by 22% in the European Economic Area since 2021. Furthermore, access to oncology clinical trials in Europe remains uneven, largely due to differences in market attractiveness, research capacity and regulatory complexity. Larger Western European countries such as France, Germany, Italy and Spain dominate the trial landscape, while smaller countries in Central and Southern Europe remain underrepresented. However, countries like Denmark, Belgium, Norway, the Netherlands and Austria host more trials relative to population size, demonstrating that agile regulation, strong institutional collaboration, and government-industry partnerships can help achieve relatively higher trial density.

To address these disparities, the EU Clinical Trials Regulation (2022) and the Clinical Trials Information System (CTIS) aim to streamline approvals, improve transparency, and reduce duplication of documentation across 30 European Economic Area countries. Complementary initiatives (like ACT EU and EU-X-CT) seek to integrate research into healthcare systems and facilitate cross-border trial participation.

1.3. Interventions to improve quality and efficiency are needed to achieve higher value for money

Improving the effectiveness of evidence-based cancer screening and diagnosis

Screening and early detection are key elements to ensure that cancer is identified at earlier stages, where outcomes are better and care is more efficient. Opportunities remain to make population-based screening programmes more effective via expanding evidence-based screening programmes and reducing the risk of overdiagnosis and potential overtreatment.

Tailored or targeted cancer screening based on risk-stratification is a strategy for more cost-effective and efficient allocation of healthcare resources, maximising benefits while minimising harms to patients. Targeted screening approaches increase the likelihood of detecting cancer compared to using an identical approach to screening the full population, yielding an increased rate of early diagnosis relative to the resources allocated (O'Mahony, 2021[36]; Zheng et al., 2024[37]). As of 2025, countries are implementing risk-stratified approaches, taking into account lifestyle factors that affect cancer risk such as smoking (13 EU+2 countries), HPV vaccination status (9 EU+2 countries), and genetic mutations (14 EU+2 countries). Genetic testing for people with familial cancer history is, for example, publicly financed under certain conditions in countries such as Austria, Germany, Greece and Italy.

In line with the Council of the EU Recommendations, progress has also been made in piloting screening studies for lung, gastric, and prostate cancer. For lung cancer, 11 countries are involved in pilots in the EU SOLACE project on screening feasibility and cost-effectiveness (European Commission, 2023[38]). France, Portugal and Sweden have undertaken lung cancer screening pilots since 2023, while Croatia has a national screening programme in place since 2020 and Germany will begin national roll-out in 2026. Determining cost-effective population screening approaches will assist in reducing overdiagnosis and potential overtreatment of low-risk cancers. Under the EU PRAISE-U initiative, four countries (Ireland, Lithuania, Poland and Spain) are piloting risk-stratified screening for prostate cancer. Cancer overdiagnosis leads to substantial direct healthcare costs as well as lost productivity, potential complications from unnecessary treatment, and psychological distress to patients. As of 2025, overdiagnosis of prostate cancer is recognised as a policy issue in 13 EU+2 countries, while for thyroid cancer, it is of concern in eight EU+2 countries.

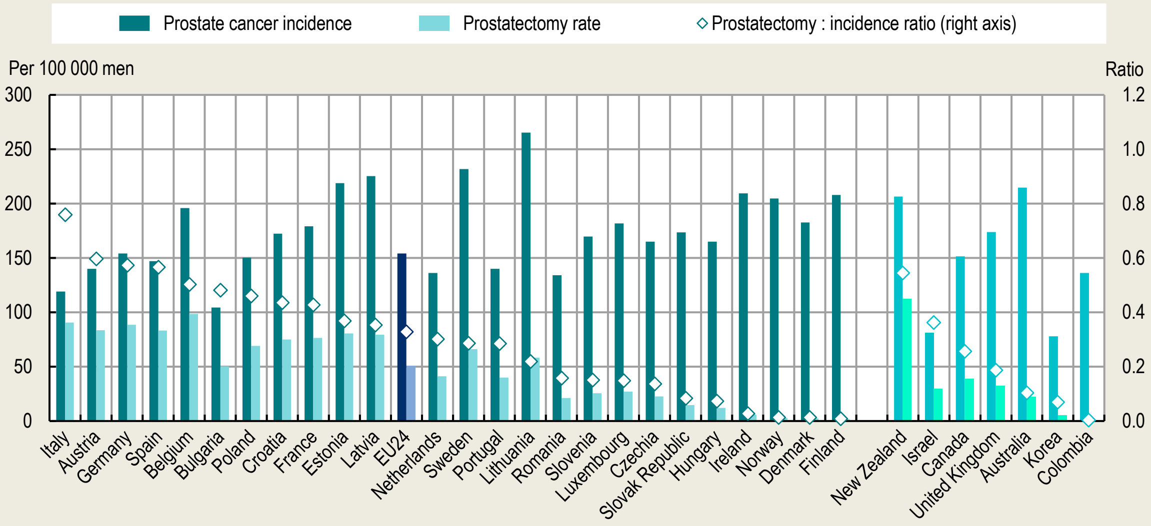
Adoption of evidence-based clinical guidelines for prostate cancer management are needed to harmonise practice and reduce potential overtreatment

Overdiagnosis of prostate cancer often affects older, asymptomatic men whose early-stage cancer would not impact their life expectancy. Among countries with available data, the share of early-stage prostate cancer diagnoses in men aged 75 and older ranges from 53% in the Netherlands to 81% in Luxembourg. The large variation reflects the lack of international consensus and differences in prostate cancer screening practices, and is indicative of overdiagnosis, leading to potential overtreatment. While prostatectomy is the main treatment for prostate cancer, it carries significant long-term side effects and may not be the most people-centred option for many patients when alternatives such as chemoradiotherapy or active surveillance achieve similar survival outcomes (Noble et al., 2020[39]), (Hamdy et al., 2023[40]). Nonetheless, wide international variation in prostatectomy rates persist (Box 1.2). Overall, adoption of evidence-based international clinical guidelines for prostate cancer management, such as those of the European Association of Urology (European Association of Urology, 2025[41]), are needed to harmonise practice and reduce the burden and costs of overdiagnosis and overtreatment. In line with this, the publication of national clinical guidelines for active surveillance of men diagnosed with prostate cancer to reduce the risk of overtreatment, such as in Ireland, sets a good example (Health Service Executive Ireland, 2025[42]), while the EU PRAISE-U pilot will provide key input for future guidance on prostate cancer screening.

Box 1.2. Reliance on prostatectomy varies widely across countries, with no correlation with the number of prostate cancer cases

OECD analyses show large variability in treatment patterns for prostate cancer across EU+2 countries, with little correlation between prostatectomy rates and incidence. Indeed, the share of prostatectomies to cancer cases varies more than 70-fold, with Northern European countries reporting the lowest ratios and Western and Southern European countries the highest (Figure 1.8). Such unwarranted variation in medical practice, signalling either under- or over-utilisation of care, raises questions about efficiency.

Figure 1.8. EU+2 countries reported as much as a 70-fold variation in the ratio of prostatectomy surgeries to prostate cancer cases



Note: Prostate cancer incidence refers to estimated 2022 age-standardised incidence for EU countries and to 2017 age-standardised incidence for Norway and other OECD countries. Prostatectomy rate refers to the number of prostatectomy procedures per 100 000 in 2022, except for the Netherlands and Luxembourg for which data is from 2021.
Source: Incidence data from European Cancer Information System (ECIS) https://ecis.jrc.ec.europa.eu/, accessed in July 2025; Incidence data from IARC (2025[43]), https://gco.iarc.fr/overtime/en for Norway and other OECD countries; Prostatectomy data from OECD Health Statistics (2025[1]) https://www.oecd.org/en/data/datasets/oecd-health-statistics.html.

Countries that offer "watchful waiting" or alternative treatment options that have shown good results, such as active monitoring – reserving surgery for cases of clear need – may avoid overtreatment of prostate cancer, reducing harms to patient quality of life as well as health system expenditures.

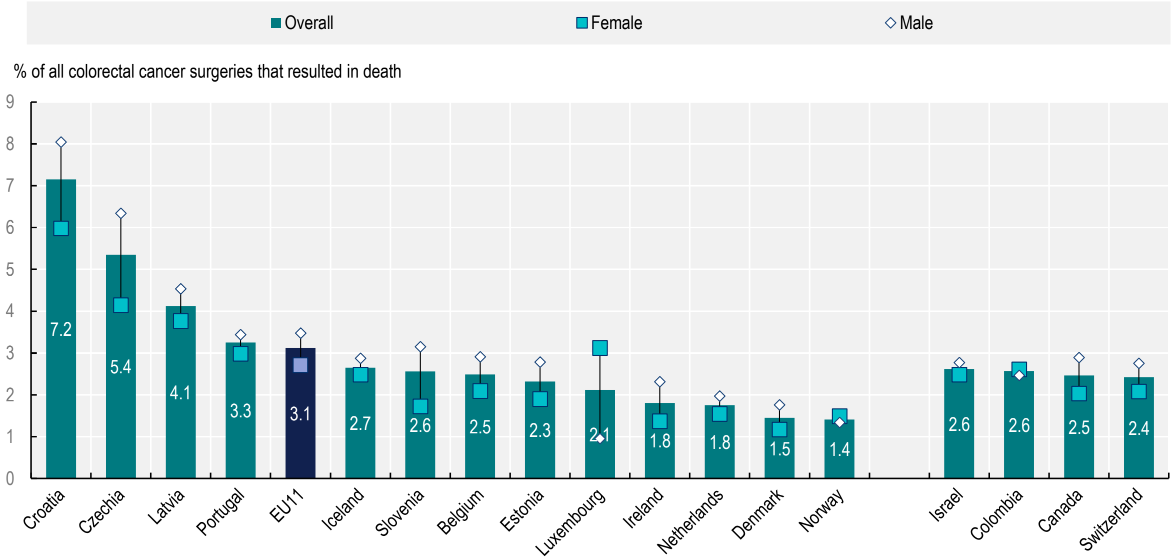
Unwarranted variations in cancer care quality and outcomes must be tackled if cancer care systems are to deliver value

> *Age-standardised mortality rates following colorectal cancer surgery range from 1.4% to 7.2% among EU+2 countries, indicating room for quality improvement*

Differences in surgical approaches and outcomes across countries indicate room for further improvement in quality. For example, many patients with early-stage breast cancer are eligible for breast conservation surgery (partial mastectomy), which has similar or better survival outcomes to full mastectomy and is less invasive with lower risk of complications. About two-thirds of mastectomies in the EU are partial, but this figure ranges from about 80% in Spain to about 50% or less in Romania and Poland. Such variation is too large to be explained solely by patient needs and preferences, indicating low-value care. The OECD data collection on cancer quality also found that age-standardised 30-day mortality rates following colorectal cancer surgery range from about 1.5% in Denmark and Norway to above 5% in Croatia and Czechia (Figure 1.9). Rates of 30-day mortality are higher among men than women in most countries, likely reflecting higher prevalence of co-morbidities and behavioural risk factors among men alongside later stage of disease presentation.

Figure 1.9. 30-day mortality rates after colorectal cancer surgery vary up to five-fold among EU+2 countries

30-day mortality rate after colorectal cancer surgery, age-standardised, latest 3-year average



Note: Standardised based on the disease population.
Source: OECD cancer data collection on cancer care quality; OECD (2025[23]), "Assessing cancer care quality in OECD countries: New indicators for benchmarking performance", https://doi.org/10.1787/b3f47ece-en.

Setting standards for ensuring high-quality cancer care is common across EU countries

To promote quality cancer care, countries set recommended or required quality standards for cancer care, such as structural requirements or minimum volume norms. Minimum volume norms promote better care quality as hospitals and surgeons with higher case volumes for complex cancer surgeries are associated with fewer complications for patients, lower postoperative mortality, and improved survival (Engdahl et al., 2023[44]; Baum et al., 2020[45]; Subramanian et al., 2022[46]; Huhta et al., 2022[47]). As of 2025, 19 EU+2 countries have set quality standards for cancer care in the form of structural requirements in areas such as equipment or personnel, while 17 countries have implemented minimum volume norms to ensure sufficient cases are treated to develop expertise (Table 1.2). However, several countries – Iceland, Latvia, Hungary and the Slovak Republic (where hospital reform including minimum volume norms is underway) do not currently set either structural or minimum volume norms for cancer care.

Table 1.2. Number of countries reporting cancer care standards and quality monitoring

Number of Countries	Standards		Quality monitoring	
	Structural standards	Minimum volume / process norms	National /international accreditation	Adherence to guidelines
EU + 2	19	17	22	12
Other OECD Countries	4	4	3	2

Source: 2025 OECD Policy Survey on High-Value Cancer Care; OECD/European Commission (2025[48]), EU Country Cancer Profile: Belgium 2025, https://www.oecd.org/en/publications/eu-country-cancer-profile-belgium-2025_744aaaba-en.html; OECI (2025[49]), Membership, https://www.oeci.eu/membership.aspx.

Structural or minimum volume standards (Table 1.3) are often set for common cancers as well as for rare and paediatric cancers. In Czechia, minimum staffing and equipment standards and volume norms are set through accreditation of comprehensive cancer centres, while in Denmark, the Health Authority designates institutions that can provide specialised cancer treatment and defines minimum volumes by cancer type. In addition to national efforts, The EU Network of Comprehensive Cancer Centres is developing a harmonised organisational and quality framework for cancer centres.

Table 1.3. Minimum volume norms differ by cancer type: Examples from EU and other OECD countries

Cancer type	Country	Minimum volume norms
Breast	Italy and Spain	150 surgeries per cancer centre; 50 surgeries per surgeon
	Germany	100 surgeries per hospital
	France	70 surgeries per authorised facility
	Ireland and Slovenia	50 surgeries per surgeon
	Belgium	30 surgeries per surgeon; 125 new diagnoses per co-ordinating breast clinic & 60 per satellite clinic
Gynaecological	France	20 surgeries for non-breast and ovarian gynaecological cancers, 20 complete cytoreductive surgeries for ovarian cancer per authorised facility
	Italy	20 cervical cancer surgeries, 20 ovarian cancer surgeries per unit
Thoracic	Italy	85 surgeries per unit
	Germany	75 treatments per hospital
	France	40 surgeries per authorised facility
Urological	France	30 surgeries for urological cancers per authorised facility
	Italy	30 prostate cancer surgeries per unit
Visceral and digestive	Italy	50 colon cancer surgeries, 30 pancreatic cancer surgeries, 25 rectal cancer surgeries, 20 stomach cancer surgeries per unit
	France	30 surgeries for visceral and digestive cancers with organ minimums: oesophagus and gastroesophageal junction (5), stomach cancer (5), liver cancer (5), pancreatic cancer (5), rectal cancer (5)
	England	10 rectal cancer surgeries per hospital, 5 per surgeon

Source: AGENAS (2021[50]), *Intervento chirurgico per tumore maligno della mammella*, https://pne.agenas.it/assets/documentation/Razionale_ind_662.pdf (accessed on 2 September 2025); OECD/European Commission (2025[51]), *EU Country Cancer Profile: Italy 2025*, https://doi.org/10.1787/1e742c63-en; de León Carrillo and Frutos Arenas (2021[52]), "El cirujano ante la patología mamaria, técnicas diagnósticas, clasificación BI-RADS®", https://doi.org/10.37351/2021322.2; AOK Federal Association (2024[53]), *Mindestmengen wirken: Versorgung von Brustkrebs und Lungenkrebs konzentriert sich auf weniger Kliniken mit mehr Routine*, https://www.aok.de/pp/bv/pm/mindestmengen-tranzparenzkarte-2025/#c42995; KCE (2023[54]), *Survival and Quality of care offered in Belgian hospitals with and without recognition for breast cancer*, https://kce.fgov.be/sites/default/files/2023-03/KCE_365_Belgian_Hospitals_Breast_Cancer_Report.pdf (accessed on 2 September 2025); Légifrance (2022[55]), *Décret n° 2022-693 du 26 avril 2022 relatif aux conditions techniques de fonctionnement de l'activité de soins de traitement du cancer*, https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000045668609.

Yet less than half of EU+2 countries report mechanisms to monitor adherence to clinical guidelines

Even with standards in place, gaps between expectations and treatment in practice demonstrate the need for effective monitoring and enforcement. For example, in Italy, more than half of surgeries in 2022 for stomach, rectal and pancreatic cancer were performed in units that did not meet minimum volume thresholds. However, only 12 EU+2 countries report assessing adherence to clinical guidelines for treatment of cancers such as breast, prostate, colorectal and lung. Nonetheless, the OECD's data collection revealed strong compliance (81% – 89%) among six of seven EU+2 countries in the share of women with HER2+ breast cancer receiving evidence-based treatment.

Use of accreditation / certification mechanisms, reported by 22 EU+2 countries, ensure that an independent body assesses whether cancer centres meet required standards of quality and safety. Most EU countries rely on the international certification system of the Organisation of European Cancer Institutes (OECI) although several have national mechanisms instead (e.g. Germany) or in addition (e.g. Spain, the Netherlands). About one in four new cancer cases in the highest-income tercile EU+2 countries with OECI-certified centres are treated in such centres, compared with about one in ten in middle-income and one in five in lower-income EU+2 countries. OECI centres are well-developed technologically, with almost all utilising digital tools for patient records, clinical guidelines, medication prescription, and data exchange.

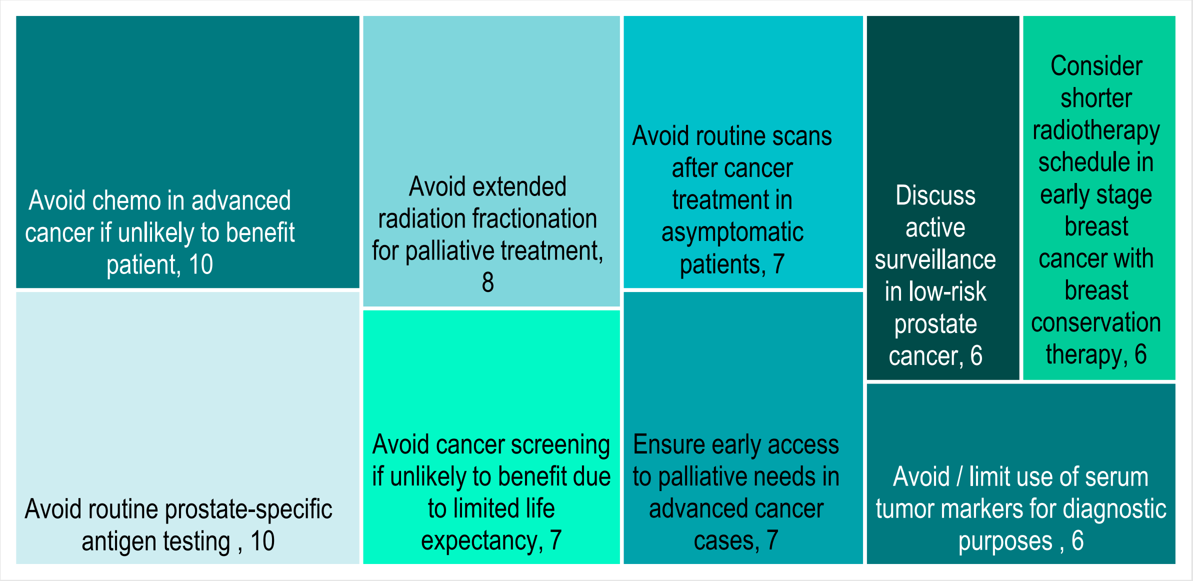
Alongside accreditation / certification, many countries employ other tools to monitor the quality of cancer treatment providers. The two most common uses of quality monitoring processes are provider feedback for quality improvement and public reporting to promote transparency or patient choice. The Netherlands has a clinician-led national system for monitoring cancer care quality that provides hospitals with direct insights into treatment outcomes, enabling continuous care improvements. Belgium also monitors cancer care quality at the hospital level and uses feedback systems for improvement, publicly reporting aggregated quality metrics at the regional level.

Despite international consensus, few countries adopt and promote recommendations to reduce cancer diagnostics and treatments that are deemed low-value

Clinician-led initiatives, such as the global Choosing Wisely campaign, can foster alignment among physicians and support patient communication to reduce unnecessary health interventions. The OECD analysis finds that there are 20 Choosing Wisely recommendations on reducing low-value cancer care that are shared by two to ten EU+2 and OECD countries (Figure 1.10). This highlights substantial opportunities for other countries to widely adopt and promote these recommendations.

One of the most common recommendations – present in Austria, Italy, Norway and Sweden as well as six other OECD countries – is to avoid chemotherapy in advanced cancer when it is unlikely to benefit patients (Figure 1.10). In four out of seven EU+2 countries, 5% or more of patients age 70+ with low-survival cancer types (pancreatic, lung, or stomach) received chemotherapy in the last 30 days of life. As chemotherapy treatment at the end of life as often leads to greater toxicity, lower quality of life and higher healthcare costs without improving survival (Prigerson, Bao and Shah, 2015[56]; Bao et al., 2018[57]), the decision to pursue it must be clearly aligned with patient preferences and made via a shared, informed process with patients. The OECD data collection found that many countries are unable to provide data for this indicator, indicating gaps in monitoring end-of-life cancer care.

Figure 1.10. Top recommendations to reduce low-value cancer care from Choosing Wisely national initiatives



Note: This figure shows recommendations that are found in six to ten EU+2/OECD countries' Choosing Wisely campaigns. The number of countries which adopt these recommendations is listed after the recommendation. The exact language of the recommendations varies slightly across countries.
Source: OECD Secretariat analysis of Choosing Wisely initiatives. Colombia, the Netherlands and Sweden: national experts and guidelines.

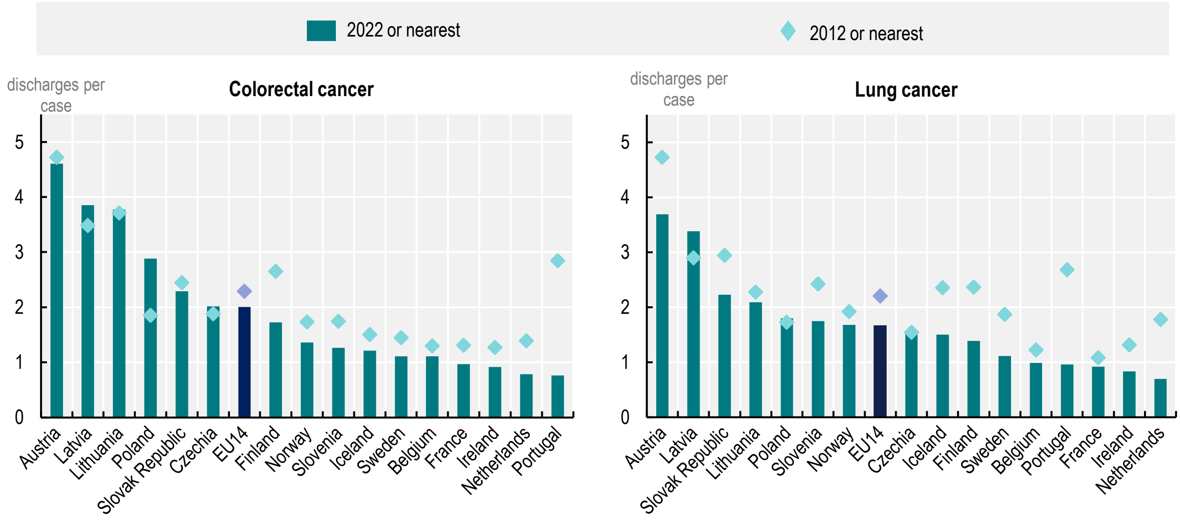
Countries are shifting cancer away from the hospital to improve efficiency

To reduce pressure on inpatient capacity, enhance efficiency, and improve patient experience, EU+2 countries have sought to shift care away from the inpatient setting through strategies such as changes in payment methods to incentivise or require day surgeries, policy targets on share of day surgeries, national strategies promoting the expansion of day surgery units, and implementing hospital-at-home models (Kreutzberg et al., 2024[58]; Milstein and Schreyögg, 2024[59]; Dubas-Jakóbczyk et al., 2020[60]). The Nordic countries have been particularly active in shifting care to the outpatient setting with Denmark, Finland, Norway and Sweden performing about a quarter to half of mastectomies in 2023/24 in the day setting. In addition, Belgium, France, Ireland, Lithuania, Portugal and Spain have all noticeably increased the use of day mastectomies over the last decade, to between 5% and 13% of all such procedures.

In addition, Belgium, Denmark, France, Greece, Hungary, Iceland, Ireland, Lithuania, Poland, Portugal, Slovenia and Sweden report implementing hospital-at-home models for cancer care. These include initiatives such as hospital-supervised in-home chemotherapy, immunotherapy and targeted therapy delivery and personal infusion devices supported by patient training, alongside regulations designed to ensure safety, quality, and cost-neutrality for patients. These policies are also reflected in decreases in hospital cancer care, with colorectal cancer discharges per diagnosed case falling by 12% in the EU between 2012 and 2022, and lung cancer discharges declining by 24% (Figure 1.11).

Figure 1.11. Hospital discharges per cancer case have decreased by 12% for colorectal and 24% for lung cancer since 2012 in the EU

Hospital discharges per new cancer case, 2012 and 2022 (or nearest)



Note: Colorectal discharges also include those for anal cancer. 2022 or nearest refers to estimated incidence; 2012 or nearest refers to observed incidence. For the 2012 incidence and discharge values, data from 2013 were used for Latvia and Sweden, and from 2010 for Portugal and the Slovak Republic. For the 2022 values, data from 2021 were used for Croatia and Poland for incidence and discharges while in the Slovak Republic, 2021 data were used for discharges only.
Source: Hospital discharge data from OECD Health Statistics, https://www.oecd.org/en/data/datasets/oecd-health-statistics.html; incidence data from European Cancer Information System (ECIS) https://ecis.jrc.ec.europa.eu/, accessed on 25 November 2025.

Box 1.3. Home hospitalisation for cancer care is progressing in several EU+2 countries

Belgium: The possibility of home hospitalisation is discussed with the cancer patient and once approved, a detailed care plan is developed in collaboration with the hospital and home care teams. The hospital is responsible for the preparation, transport, and delivery of medications, and the collection of hazardous medical waste. The initiative is designed to be cost-neutral, including for patients, with an evaluation of the processes and costs planned.

France: Home hospitalisation for systemic cancer drug treatments is part of France’s 2021-26 national roadmap. The model relies on close co-ordination between hospitals, community health professionals, and families, supported by information-sharing systems. Injectable cancer drugs, including immunotherapies and targeted therapies can be administered at home if preparation, monitoring, and safety requirements are met. In 2023, nearly 210 000 days of home-based care had been provided in France for cancer chemotherapy by 193 providers.

Greece: Greece’s “*Oikothen*” (“from home”) care programme, launched in June 2023 by one of the leading cancer hospitals in Athens, delivers cancer treatments directly to patients’ homes. By December 2024, 156 patients had benefited from the programme, improving patient well-being and relieving pressure on hospital resources. It has expanded to four additional hospitals, with plans underway to extend coverage to all major cities.

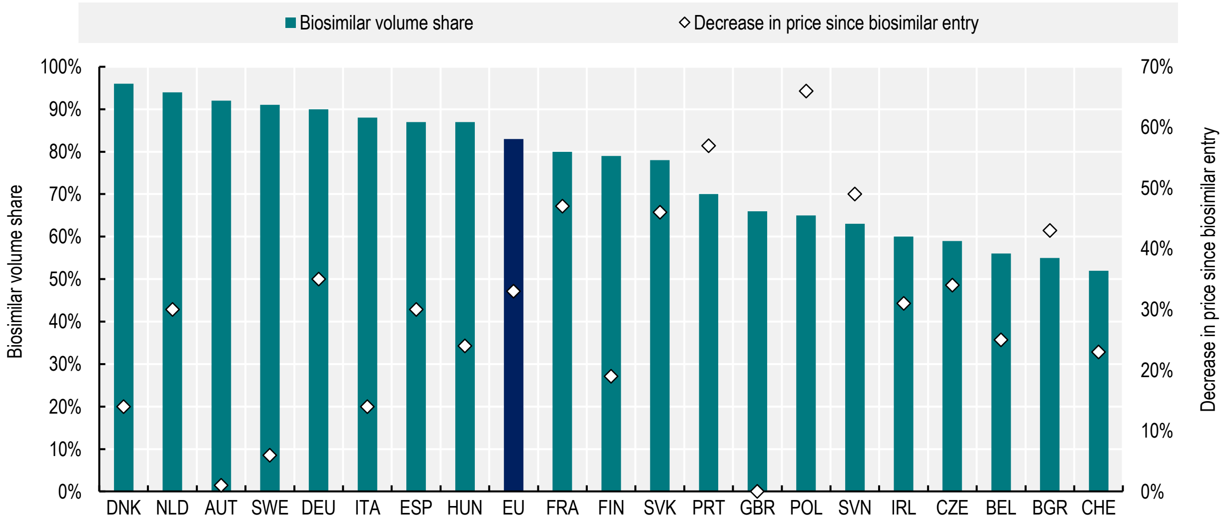
Poland: The National Institute of Oncology in Warsaw offers portable chemotherapy infusers as an alternative to inpatient care – deploying up to 10 000 devices annually. These infusers allow for the prolonged administration of chemotherapy at home and are primarily used in postoperative and palliative treatments for colon, gastric, and pancreatic cancers. Patients receive training on how to use the infuser safely at home and have access to telephone support from their treatment centre.

Alongside these policies, there has also been a reduction in length of hospital stay across the main cancer sites between 2013 and 2023 (ranging from an 11% reduction for skin cancer to a 25% reduction for prostate cancer in the EU on average). Collectively, these changes translate into an average 3.7% per year growth in hospital spending on cancer care between 2015 and 2023 among EU21 countries.

Efficient use of pharmaceuticals requires a multi-pronged approach entailing biosimilars, coverage reassessments, treatment optimisation and reduction of medication waste

Given increased spending on cancer medicines as a share of cancer spending, countries are pursuing various approaches to promote high-value pharmaceutical care. A main policy is to encourage substitution via biosimilars, or medicines that are highly similar to already approved biologic treatments. Compared to other therapeutic areas, there has been good adoption of biosimilars in oncology. However, use of oncology biosimilars varies across EU+2 countries, from 55% of treatment volume in Bulgaria to 96% in Denmark in 2023 (Figure 1.12), where centralised tendering systems have supported rapid uptake. In the EU on average, list price reductions for oncology biologics following biosimilar market entry averaged 33%; however, they were almost negligible in Austria (1%) compared to very substantial (66%) in Poland. Larger price decreases following introduction of biosimilars into a national market is associated with larger increases in treatment volumes.

Figure 1.12. Oncology biosimilars account for about 80% of treatment volumes for drugs with available biosimilars in the EU, with price decreases of 33% in these markets



Note: Biosimilars uptake includes 20 different products for three oncology products: Mabthera (rituximab), Herceptin (trastuzumab), Avastin (bevacizumab).
Source: IQVIA (2025[61]), *The Impact of Biosimilar Competition in Europe* 2024, https://www.iqvia.com/library/white-papers/the-impact-of-biosimilar-competition-in-europe-2024.

With the quick pace of expensive new cancer drugs coming to market, countries seeking to promote high-value cancer care must also implement mechanisms for pricing and coverage reassessment. Learnings from countries such as France, Germany, Italy and Spain on time-limited or outcome-based reimbursement for expensive CAR-T cell therapies can provide examples in this process. In parallel, treatment optimisation – i.e. finding the right dose and schedule to achieve meaningful therapeutic benefit while lowering risks from adverse events – should be a continued priority both before and after market approval of a medicine. Optimisation via post-marketing studies can provide opportunities to reduce dose levels or frequency, thus lowering spending on drugs and treatment of side effects while improving patient quality of life. In parallel, strategies such as adjusting packaging sizes, vial sharing, and improved prescribing practices can help reduce cancer medicine waste. However, regulatory, reimbursement, or operational changes may be needed to support these processes, and safety must be ensured.

Innovation and new technologies are being deployed in cancer care

New technologies and digital infrastructure are being deployed or piloted across EU+2 and other OECD countries to enhance the efficiency and quality of cancer care from diagnosis to treatment. Countries have embraced technological innovations in national or regional programmes or pilots, including robotic-assisted cancer surgery (16 EU+2 countries), AI-assisted imaging in cancer screening to improve diagnostic efficiency and accuracy (10 EU+2 countries) and minimally invasive liquid biopsies to monitor treatment effectiveness or relapse (five EU+2 countries). A German study found that AI assisted double reading of mammography improved detection rates and led to economic savings, while a randomised trial is underway to test outcomes of employing AI in combination with radiologists for breast cancer screening in Norway. Interviews with OECD countries have also revealed use of AI-assisted imagery in lung (Portugal, Lithuania) and skin cancer (Germany, Portugal).

In parallel, the field of molecular diagnostics is rapidly evolving to better classify tumour types and guide optimal treatment decisions. Two of the main cancer types where next-generation sequencing (NGS) is more commonly used are in lung, followed by colorectal cancer. However, availability of small NGS panels (<50 genes) varies widely across EU countries. These are reported as always available in Denmark and Luxembourg for lung cancer (and usually/occasionally for colorectal cancer) and usually available in Austria, Belgium, Czechia, Finland, Iceland, Malta and the Netherlands for both cancer types. In Bulgaria, Estonia and Romania their use is largely limited to research.

Alongside new technologies, health data infrastructure is of growing importance. Data linkage, including via cancer registries, provides both clinical benefits to individual patients as well as a key mechanism for monitoring the quality and efficiency of cancer care systems. Indeed, 25 EU+2 countries responding to the OECD Policy Survey on High Value Cancer Care reported using cancer registries to monitor incidence, survival, stage, and other epidemiological trends, and many can also report on inequalities, although these are often limited to geographic or gender disparities. Eleven EU+2 countries report using cancer registries for research to improve timeliness of care and ten report utilising them to improve treatment or clinical guidelines, although a few countries such as Sweden use quality registries for this purpose as well. One of the challenges, however, is that there is a wide range in the quality and completeness of cancer registry data. Indeed, experience from the OECD data collection shows that data such as treatment information that is supposed to be included in registries is missing or incomplete for many cancer cases. Looking forward, countries must pursue continued progress in health infrastructure to support individual and population-level improvements in delivering high-value quality cancer care.

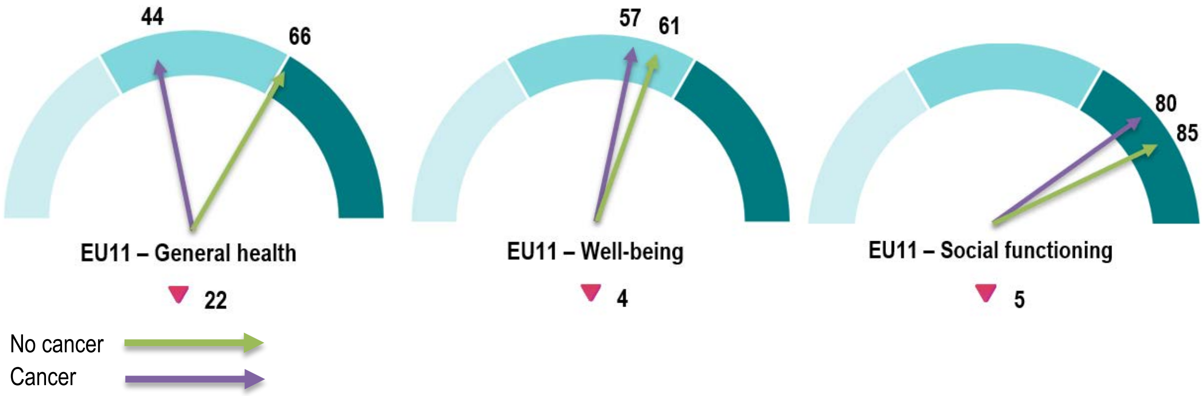
1.4. Primary healthcare systems are not centred enough around the needs of people living with cancer

People with cancer are vulnerable, and in need of social care and support

Cancer patients can experience poorer physical and mental health than individuals with other chronic conditions, due to the complex interlink between the disease and its treatment. Chemotherapy, radiation therapy and surgery can cause fatigue, pain, nausea and loss of appetite, impairing mobility and independence. These symptoms can persist long after treatment, adversely impacting quality of life. Beyond the physical burden of a cancer diagnosis, patients may experience psychological distress, including anxiety, depression and fear of recurrence. This distress is exacerbated by uncertainty, changes in body image and disruption to daily life. Empirical studies based on the SHARE Survey confirm that cancer survivors report higher rates of physical limitations, higher levels of depressive symptoms, and lower subjective well-being (Bültmann, U., Hinzmann, D., & Hasselhorn, H. M., 2023[62]; Veiga, D., Peralta, M., Carvalho, L., Encantado, J., Teixeira, P. J., & Marques, A., 2025[63]).

The OECD PaRIS data examining primary care users above age 45 in 18 OECD countries further confirms these results. Patients with cancer are more vulnerable than other primary healthcare patients. They have worse physical health, well-being and social functioning. On average, only 44% of primary healthcare (PHC) users with a cancer diagnosis in the last five years rated their health as good, very good or excellent, compared to 66% for other primary healthcare users (Figure 1.13). In Italy, Portugal and Romania, less than three in ten PHC users living with cancer report a good health status compared to six in ten PHC users with cancer in Belgium, Iceland and Luxembourg. The gap between PHC users with and without cancer is the largest in Greece (30 p.p.), Portugal (27 p.p.) and Slovenia (26 p.p.), compared to Iceland (6 p.p.) and Norway (15 p.p.).

Figure 1.13. Cancer negatively affects people's well-being and quality of life



Note: For general health: Answer to the question: "In general, would you say your health is "good, very good or excellent" versus "fair or poor". The results reflect the share of patients with good to excellent general health. For well-being: Response to five questions measuring well-being using WHO-5 well-being index (0-100 scale, higher scores represent higher well-being). For social functioning: PROMIS® Scale v1.2 – Global Health. Answer to the question: "In general, please rate how well you carry out your usual social activities and roles", "good, very good or excellent" versus "fair or poor". The results reflect the share of patients with good to excellent social functioning. All within country differences between people with and without cancer are statistically significant (p<0.05).
Source: OECD PaRIS database, 2024.

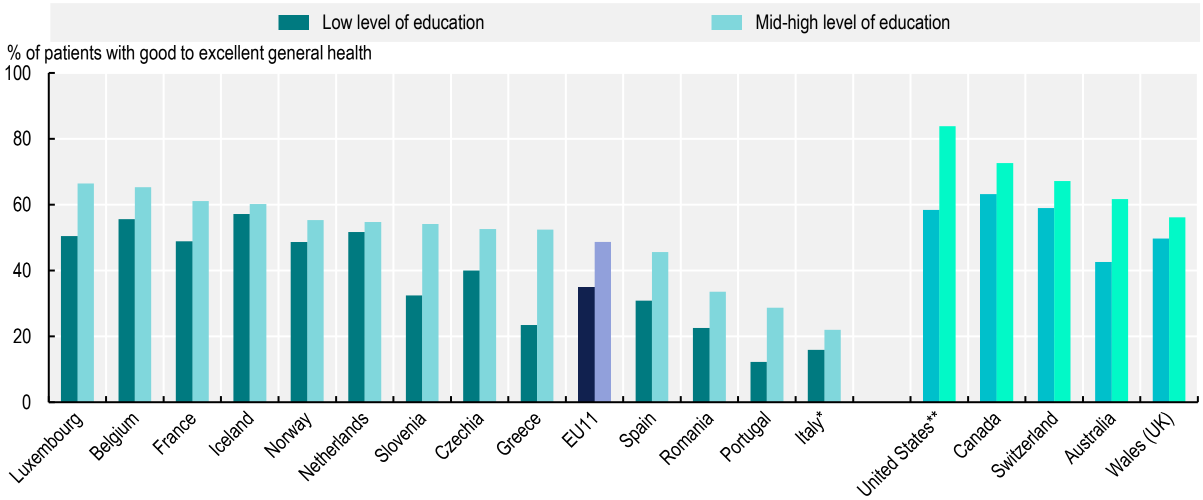
Similar to patients without cancer, socio-economic factors disadvantage people living with cancer

Socio-economic factors – including income, education, and employment status – are key determinants of health, strongly influencing indicators such as life expectancy and self-reported measures of health (Figure 1.14). PaRIS data show that also among people with a cancer diagnosis, socio-economic factors matter. There is a strong social gradient in patient-reported outcomes, with significant differences by education levels in well-being, general health and social functioning.

On average in the EU11 countries, among patients living with cancer, those with a low level of education are almost 30% less likely to report a good to excellent health status. Country-level variations are particularly striking. In Iceland and the Netherlands, there is virtually no gap between education groups, whereas countries such as Greece, Luxembourg, Portugal and Slovenia show disparities of more than 16 p.p. Other key dimensions of health, such as self-reported well-being and the PROMIS physical and mental health score, are consistently worse among cancer patients with lower levels of education.

Figure 1.14. People with cancer and low education face a double disadvantage that accumulates and compounds

Share of primary care patients with cancer reporting good to excellent health, by education level



Note: PROMIS® Scale v1.2 – Global Health. Answer to the question: "In general, would you say your health is …", "good, very good or excellent" versus "fair or poor". * Data for Italy refer to patients enrolled in outpatient settings for specialist visits in selected regions. **United States sample only includes people aged 65 years or older.
Source: OECD PaRIS database, 2024.

Evidence from PaRIS shows that education strongly shapes health outcomes in the general population, and these disparities persist among those with a cancer diagnosis. In practice, this means that cancer patients with lower education face a double disadvantage: they carry both the persistent health inequalities linked to limited education and the added physical and psychological burden of cancer. These disadvantages accumulate, amplifying vulnerabilities. For policymakers, this underscores the need to design cancer care and primary healthcare strategies that explicitly address social health inequalities, ensuring that lower-educated people are not left with disproportionately worse health trajectories.

While people-centred care is associated with better health outcomes, less than a third of people with cancer report high levels of people-centredness in the EU11

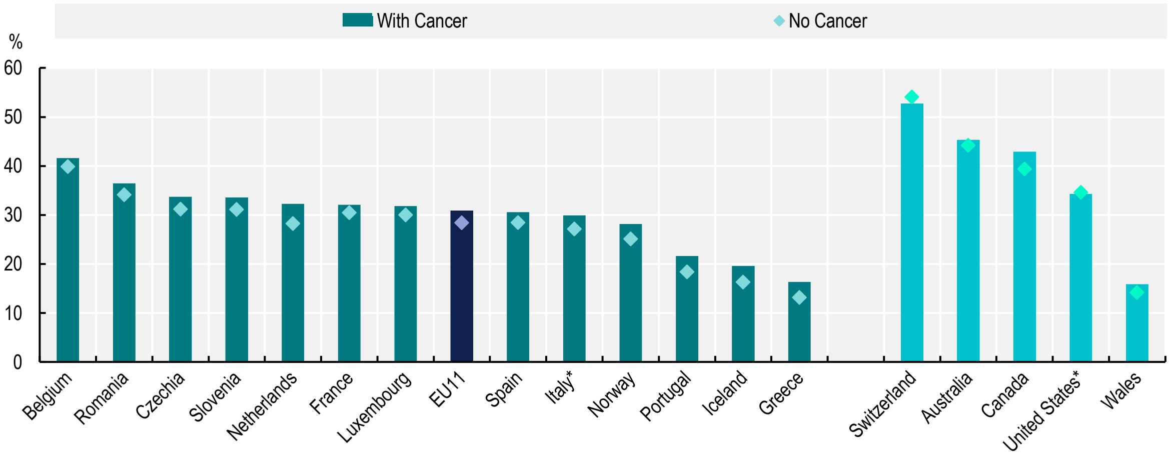
People-centred care places individuals' needs, preferences, and values at the core of healthcare decisions. It is especially critical for cancer patients who face complex pathways across multiple providers and services. A people-centred approach ensures co-ordination, continuity, and communication throughout the care journey. By empowering patients in decision making, it improves support, leading to better well-being and overall health outcomes.

PaRIS data show that in all countries, PHC users living with cancer who report higher levels of people-centredness feel healthier and report better physical health scores than those who report lower people-centredness. On average, there is about a four-point difference on both the PROMIS physical and mental health scales between cancer patients reporting higher and lower level of person-centredness. An interesting finding is that cancer patients who report high levels of person-centredness show even better mental health than patients with other chronic conditions treated in primary care. In terms of physical health, high person-centredness places cancer patients on par with those with other chronic conditions, whereas cancer patients reporting low person-centredness fare significantly worse.

Overall, less than a third of people living with cancer report a high level of person-centred care in the EU11, ranging from 42% in Belgium to 16% in Greece (Figure 1.15). Sufficient consultation time, effective communication with the doctor, and the possibility to talk about health issues are all positively associated with person-centredness among people living with cancer – highlighting the importance of incorporating these attributes in cancer care services.

Figure 1.15. There is a more than a 2.5-fold variation in the percentage of people reporting high person-centred care across countries

Percentage of primary healthcare patients reporting high person-centredness (scores of 19 or over)



Note: P3CEQ People-centredness score (1-24) where a higher score means more person-centredness. P3CEQ scores are only calculated for people with chronic conditions, hence, the "No cancer" group has at least one other chronic condition (other than cancer). *Data for Italy refer to patients enrolled in outpatient settings for specialist visits in selected regions. * United States sample: only includes people of 65 years and older.

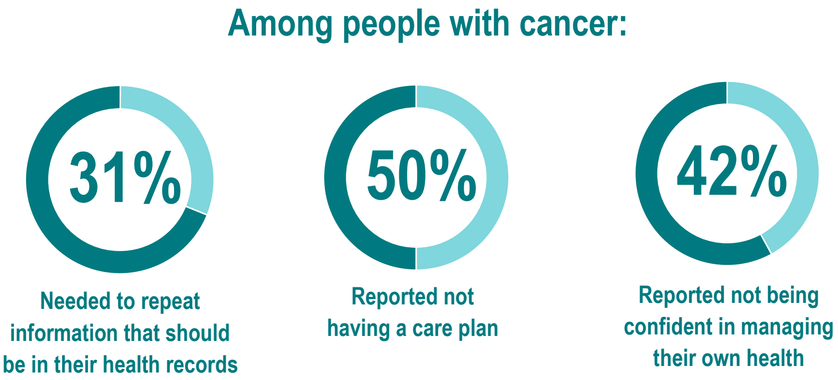
Source: OECD PaRIS database, 2024.

> How a health care provider shares the information about cancer and speaks to a patient change everything, the tone, the language and approach. We always decided to go ahead with the advice of a doctor who explained the diagnosis and the options...
>
> *Rohini, 40 years old, rare and aggressive bile duct cancer*

People-centredness could be improved through more effective use of medical records, care co-ordination processes and better patient engagement

While information continuity is a key component to effective care co-ordination between health professionals, almost one-third of PHC users living with cancer needed to repeat information that should have been in their health records (Figure 1.16). Having to repeatedly provide health information that should already be documented signals weak integration of care, insufficient data systems, and limited capacity to support smooth care transitions. The highest rates were observed in Greece and Italy, where more than half of PHC patients living with cancer reported that they needed to repeat health information that should have been available in their health records. By contrast, this applied to only one in six people living with cancer in Belgium, Czechia and Slovenia.

Figure 1.16. Almost a third of primary healthcare patients living with cancer had to repeat information that should be in their health records, while half reported not having a care plan



Note: Results based on the EU11 average. The item “not being confident in managing your own health” includes those responding being “not confident at all” and “somewhat confident” (versus those responding being “confident and “very confident”).
Source: OECD PaRIS database, 2024.

When it comes to care co-ordination processes, only half of people living with cancer in the EU11 report having a care plan (50%), varying more than six-fold across countries from 12% in the Netherlands to 79% in Italy. Cancer care plans and medication reviews, tailored to an individual’s needs and preferences, translate complex medical decisions into clear, actionable roadmaps to guide patients and their care teams through cancer treatment. However, a quarter of cancer patients did not have a medication review in the last 12 months; ranging from less than 20% in Belgium and Czechia to almost 60% in Iceland and Slovenia. The impact of cancer care plans can be further enhanced by robust care co-ordination and patient navigation protocols (such as in France, Denmark and Estonia), out-of-hours support (such as in Germany and Ireland), and the use of digital solutions (such as in Estonia, Greece and Sweden).

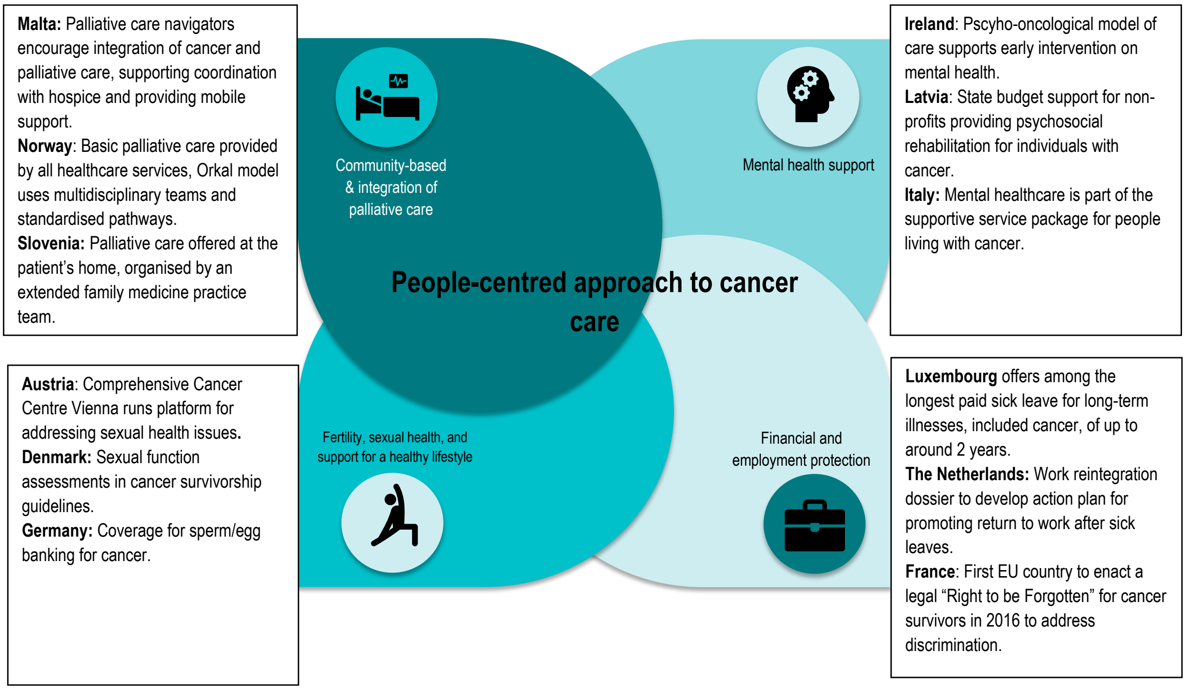
To further improve people-centred care, there is also scope also to invest in co-production of health, involving patients in decision making and supporting them in self-management. In the EU11, just under three out of five PHC users living with cancer report being confident in managing their own health and two-thirds say they receive enough support to manage their own health. For both indicators, Greece, Iceland and Romania perform relatively poorly, whereas Spain and Belgium reported consistently better scores – showcasing stronger policies supporting patient empowerment and engagement in their care.

For people living with cancer, the care pathway must extend beyond curative medical treatment to integrate wider health and social needs

Important actions are needed to expand the cancer care pathway beyond curative medical treatment to encompass broader social and health needs (Figure 1.17). Early integration of palliative care alongside curative treatment significantly improves the well-being of cancer patients and their caregivers. Nonetheless, while all EU+2 countries have palliative care structures, some countries including Bulgaria, Croatia, Cyprus, Greece, Latvia, Lithuania, Malta, Poland and the Slovak Republic rank lowest in advanced care planning related policies, which are key for early integration. Italy and Norway are among the most advanced in areas such as national strategies, recognition of palliative care and advanced care planning polices, but both still experience disparities in care accessibility and implementation. Italy's 2023 National Oncological Plan seeks nationwide palliative care coverage by 2025, while Norway's system offers comprehensive basic care but limited early specialist access. In other OECD countries, Japan provides a strong example with mandatory palliative care training, strong co-ordination between hospital and home-based services, and early integration into cancer care pathways. In addition, as many patients prefer to die at home, several countries – including Belgium, Poland and Slovenia – have expanded community-based palliative care, improving outcomes and reducing hospitalisations. However, effective home-based care depends on robust support for primary healthcare providers and informal caregivers, with education, equipment access, and caregiver leave entitlements playing crucial roles.

Comprehensive, people-centred cancer care also requires integrating fertility preservation, sexual health, mental health support, and survivorship planning into care pathways. Fertility preservation is recognised as a key component of equitable cancer care, given that treatments often cause infertility in both men and women. Evidence from countries such as France, Germany, the Netherlands, Nordic countries, Poland, and Slovenia shows that statutory health insurance can successfully cover sperm or egg banking, ensuring accessibility for patients. However, sexual health support for cancer patients remains underdeveloped across much of the EU. Denmark and Austria offer good policy examples – Denmark includes sexual function assessments in cancer survivorship guidelines, while Austria's Comprehensive Cancer Centre in Vienna runs a dedicated platform for addressing sexual health issues. Mental health and survivorship care are also gaining in importance but remain uneven across EU countries. Sixteen EU+2 countries report integrating psychological support into oncology pathways, combining early assessments, multidisciplinary collaboration, and Non-Governmental Organisations (NGOs) partnerships. Ireland provides a leading model, with national psycho-oncology frameworks, community support centres, and funded survivorship programmes such as "Cancer Thriving and Surviving." In addition, France's legal framework ensures that most cancer patients referred for psychological care use it.

Figure 1.17. A people-centred approach to cancer care is needed to meet the health, social and economic needs of people living with cancer



Malta: Palliative care navigators encourage integration of cancer and palliative care, supporting coordination with hospice and providing mobile support.
Norway: Basic palliative care provided by all healthcare services, Orkal model uses multidisciplinary teams and standardised pathways.
Slovenia: Palliative care offered at the patient's home, organised by an extended family medicine practice team.

Ireland: Psyho-oncological model of care supports early intervention on mental health.
Latvia: State budget support for non-profits providing psychosocial rehabilitation for individuals with cancer.
Italy: Mental healthcare is part of the supportive service package for people living with cancer.

Austria: Comprehensive Cancer Centre Vienna runs platform for addressing sexual health issues.
Denmark: Sexual function assessments in cancer survivorship guidelines.
Germany: Coverage for sperm/egg banking for cancer.

Luxembourg offers among the longest paid sick leave for long-term illnesses, included cancer, of up to around 2 years.
The Netherlands: Work reintegration dossier to develop action plan for promoting return to work after sick leaves.
France: First EU country to enact a legal "Right to be Forgotten" for cancer survivors in 2016 to address discrimination.

Financial and employment protection also support the health and quality of life of patients and their caregivers. The OECD analysis show that the impact of cancer on employment outcomes is large and follows a geographic pattern. Based on the Survey on Healthy Ageing and Retirement in Europe (SHARE), a lower proportion of individuals with a cancer diagnosis are employed, and there is a large social gradient in disfavour of people with low education. On average, a cancer diagnosis reduces the likelihood of employment by 14%, after controlling for individual characteristics. The largest gaps in employment rates between individuals with a cancer diagnosis and those without are observed in Bulgaria, Cyprus, Czechia, Hungary and Ireland, calling for strengthening labour market policies and workplace reintegration support. Extended paid sick leave and return-to-work support are increasingly critical to safeguard employment and avoid financial toxicity (such as in Germany, the Netherlands and Sweden), particularly given the growing number of cancer cases among the younger population. Expanding legislation on the "Right to be Forgotten" beyond the nine EU+2 countries where it currently exists is also key to prevent discrimination and improve life opportunities.

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2

Recent epidemiological trends in the cancer burden

Europe is facing a growing cancer burden, as more people are living with cancer amid rising incidence and falling mortality. From 2000 to 2022, age-standardised cancer incidence in the EU increased by 10% among women and 2% among men. Between 2000 and 2023, cancer mortality declined across EU countries, owing to early detection initiatives and advances in diagnosis and treatment. As a result of these trends, the share of the EU population who have ever been diagnosed with cancer increased from 3.9% to 4.8% between 2010 and 2020. Recent epidemiological evidence also points to a rise in early-onset cancer among adults aged 15-49. Following collection and harmonisation of cancer registry data from 24 EU countries, Iceland and Norway, the chapter presents cross-country comparable evidence on cancer incidence trends in both the general and younger populations.

In Brief

Cancer incidence has increased by 10% among women and 2% among men on average across EU countries in age-standardised terms between 2000 and 2022

- From 2000 to 2022, age-standardised cancer incidence among women increased by +10% (from 431 to 474 per 100 000 women) on average across 24 EU countries and by +2% among men (from 661 to 674 per 100 000 men). In crude terms, cancer incidence surged by about 30% for both sexes. Breast and lung cancers are the key drivers of the overall increase in cancer incidence among women. Among men, the increase in prostate and skin melanoma cancers is mostly offset by a substantial decrease in lung and stomach cancers.
- In 2024, the estimated number of new cancer cases was 1.2 million in women and 1.4 million in men across the 27 EU countries, which means that every minute more than five people are newly diagnosed with cancer in the EU. Estimated age-standardised cancer incidence was 38% higher among men than women. Half of the estimated incidence was accounted for by the three cancer sites: breast (30%), colorectal (12%) and lung (9%) cancers for women and prostate (22%), lung (14%) and colorectal (13%) cancers for men.
- Pancreatic cancer was estimated to be the sixth most common cancer among women in 2024. Its age-standardised observed incidence increased by 17% in women and 11% in men on average across EU countries from 2000 to 2022. This is a cause of concern, given the low survival rates and limited survival improvements in pancreatic cancer to date.
- Cancer mortality dropped across almost all sites, by 18% in women (from 199 to 163 per 100 000 women) and 26% in men (from 372 to 275 per 100 000 men) in age-standardised terms from 2000 to 2023 in EU countries.
    - In 2023, cancer mortality remains higher among men than women across all EU countries, Norway and Iceland (referred to as "EU+2 countries" in the report), but gender gaps have narrowed due to larger declines in male mortality.
    - Age-standardised cancer mortality rates fell by 24% for male lung cancer and 17% for female colorectal cancer. However, mortality from pancreatic cancer increased for both sexes, which is likely driven by increased incidence and limited progress in survival.
- Amid rising incidence and falling mortality, the EU population living with cancer is estimated to have grown by 24% between 2010 and 2020, reaching 5% prevalence in both women and men.
- A large social gradient exists in cancer mortality among both men and women, even though overall cancer mortality is consistently declining. Across EU countries, men with a low level of education face an 83% higher cancer mortality rate than highly educated men, while women with a low level of education are 31% more likely to die from cancer than highly educated women.

Early-onset cancer has risen widely among women in 22 EU+2 countries between 2000 and 2022, while increases among men were noted in 12 EU+2 countries

- Age-standardised cancer incidence among younger women aged 15-49 increased by 16% on average across EU countries from 2000 to 2022 (from 144 to 167 per 100 000 women), based on the harmonised incidence data of 24 EU countries, Iceland and Norway.
    - Among women, the most significant drivers of the increase in early-onset cancers are breast (+16%), thyroid (+120%), skin melanoma (+48%) and colorectal (+10%) cancers.

  - Among men, early-onset cancer incidence has remained stable between 2000 and 2022, at 97.0 per 100 000 men. The incidence of early-onset testicular (+38%), skin melanoma (+50%) and colorectal cancers (+12%) increased during this period, while the incidence of early-onset lung cancer substantially decreased (-57%).
- In other OECD countries, trends in cancer incidence among younger populations are similar to those in EU+2 countries. However, the age-standardised incidence of colorectal cancer among the younger population has increased faster for both sexes in Australia, Canada, Chile, Korea, New Zealand, Türkiye, the United Kingdom and the United States.
- Three main drivers are likely behind the observed increase in early-onset cancer incidence. First, an increase in the risk of developing cancer due to changing risk factors and exposures in the younger population compared to older generations (for example shifts in reproductive patterns, metabolic factors and lifestyles). Second, expanded cancer diagnostic scrutiny (expansion to younger age groups, increased uptake and access to cancer screening programmes) results in earlier age of detection and a higher number of diagnoses. Third, increased use of diagnostic imaging and testing in healthcare increases the detection of asymptomatic cancers which would otherwise have been diagnosed later or remained undiagnosed, known as incidental diagnoses.

The growing number of people living with a cancer diagnosis, together with the rise in early-onset cases, is shifting cancer care needs and will affect well-being for many years to come

- Strengthening cancer registries in EU countries is key. While many countries have well-established cancer registries, it is essential to strengthen the collection of observed prevalence data as well as observed survival data, ensure the quality of clinical data (such as staging and treatment data), and establish linkages with administrative data to enhance cancer burden monitoring and to anticipate needs for survivorship care and rehabilitation services.
- While the overall cancer burden remains higher among men, women are disproportionately affected by early-onset cancers. Given their disadvantaged positions in labour markets and longer life expectancy, the need for strengthened cancer survivorship, employment and financial support increases (Chapter 5).
- It is imperative to enhance access to timely cancer diagnosis and treatment to reduce delays that adversely impact health outcomes (Chapter 3) – particularly among disadvantaged populations at higher risk of cancer. Given the growing cancer incidence among younger populations, it is also vital to provide evidence-based and efficient cancer care (Chapter 4), and to promote social and economic well-being of cancer patients and survivors, notably through a people-centred approach (Chapter 5).

2.1. Introduction

Driven by higher incidence rates and longer survival, the prevalence of cancer continues to rise across the EU. Based on the European Standard Population 2013, the observed age-standardised cancer incidence has increased by 10% among women (from 431 to 474 per 100 000) between 2000 and 2022 (or the nearest available year) and by 2% among men (from 661 to 674 per 100 000) (Figure 2.1, Panel A). Furthermore due to the ageing population, in crude terms, cancer incidence has surged by about 30% for both sexes (Annex Figure 2.A.1), meaning that more men and women are being diagnosed with cancer. This places additional pressure on healthcare resources and services.

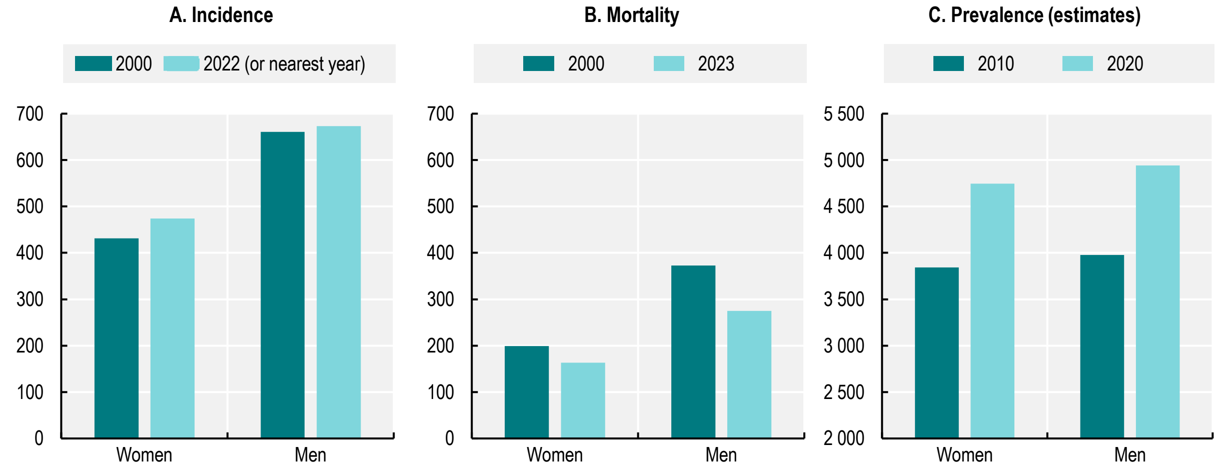
By contrast, there is a downward trend in cancer mortality. From 2000 to 2023, age-standardised cancer mortality rates dropped by 18% for women and 26% for men (Figure 2.1, Panel B). Lower mortality rates are partly explained by a reduced incidence of cancers with poor survival prospects – most notably, lower lung cancer rates among men due to decreased smoking. They also reflect higher survival rates, driven in part by better access to early detection and treatment (see Chapter 3), as well as advances in cancer treatments, including more effective surgical procedures and innovative technologies (see Chapter 4).

As a result of increased incidence and decreased mortality, the prevalence of cancer has risen substantially. According to the EUROCARE-6 study (De Angelis et al., 2024[1]), the share of the EU population ever diagnosed with cancer rose from 3.9% in 2010 to 4.8% in 2020, and the estimated crude prevalence rates increased by 38% overall (35% among women and 42% among men). Even after adjusting for population ageing, prevalence rates grew by more than 24% in both sexes over the same period (Figure 2.1, Panel C). These findings not only indicate that the number of people living with and beyond a cancer diagnosis is increasing across EU countries – adding to the overall cancer burden – but also signal that cancer care systems must adapt to growing demand for follow-up care, rehabilitation, and long-term support for patients, survivors and informal carers (see Chapter 5).

Furthermore, a growing body of epidemiological literature has over the last decade documented an increase in cancer incidence among younger populations, which is commonly referred to as early-onset cancer (EOC) (Scott et al., 2020[2]; Hamilton et al., 2022[3]; Ugai et al., 2022[4]; Koh, Tan and Ng, 2023[5]; Zhao et al., 2023[6]; Ogino and Ugai, 2024[7]; Shiels et al., 2025[8]). These studies consistently demonstrate rising cancer incidence among younger adults, often defined as those aged below 50 or 40 years. In this chapter, early onset cancer is defined as cancer occurring among young adults aged 15-49.

Figure 2.1. In the EU, rising incidence and declining mortality increased the population ever diagnosed with cancer by 24% between 2010 and 2020

Age-standardised rate per 100 000, EU average

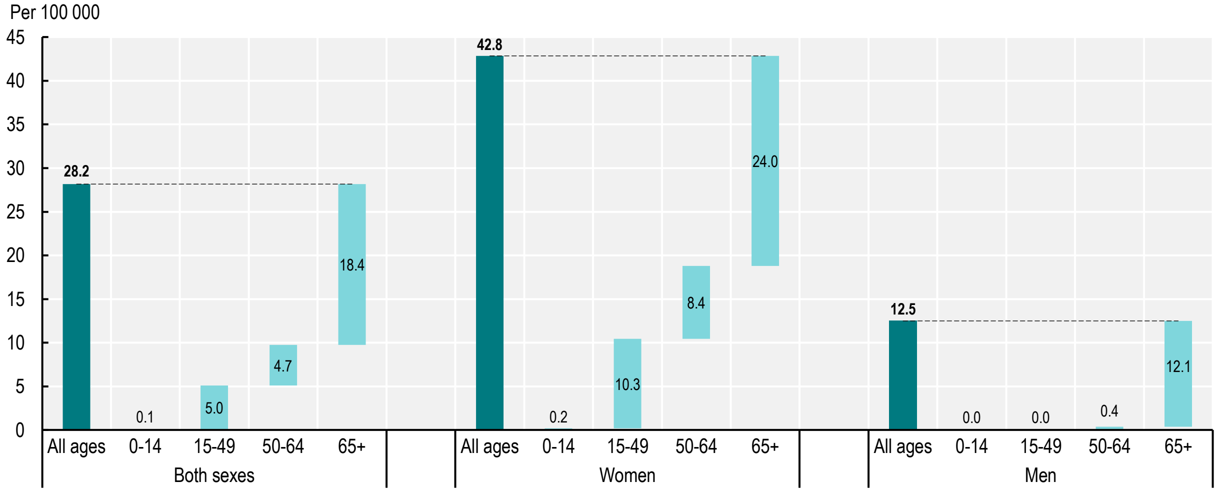


Note: The EU averages are unweighted except for Panel C. All cancer sites except for non-melanoma skin cancer are included. Age-standardisation is based on the 2013 European Standard Population. For Panel A, Greece, Luxembourg and Romania are not included – see also Annex 2.B. For Panel B, Cyprus and Malta are not included – see also the note of Figure 2.7. For Panel C, the cancer prevalence rate is defined as the share of people who have ever been diagnosed with cancer regardless of when the diagnosis occurred.
Source: OECD calculations based on the following data: European Cancer Information System (ECIS) https://ecis.jrc.ec.europa.eu/, accessed on 25 November 2025; International Agency for Research on Cancer (IARC), https://gco.iarc.fr/overtime/en; Lapôtre-Ledoux et al. (2023[9]) "Incidence des principaux cancers en France métropolitaine en 2023 et tendances depuis 1990", http://beh.santepubliquefrance.fr/beh/2023/12-13/2023_12-13_1.html; National Institute of Oncology, National Cancer Registry of Hungary (NRR), https://stat.nrr.hu/; Causes of mortality, OECD Health Statistics; De Angelis, et al. (2024[1]) "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.

EU countries are no exception to this epidemiological trend. The age-standardised cancer incidence of people aged 15 to 49 accounts for 18% of the overall change in incidence on average between 2000 and 2022 (Figure 2.2). Overall, the age-standardised incidence in the EU increased by 28.2 per 100 000 population from 2000 to 2022, with 18.4 per 100 000 attributable to those aged 65 and over, followed by 5.0 per 100 000 attributable to those aged 15-49. Among women, the increase in early-onset cancer contributed to nearly a quarter of the overall change, while it remained almost unchanged among men. Although the cancer burden remains concentrated among adults aged 50 and over, cancer care systems must adapt to meet the needs of a growing number of younger people living with a cancer diagnosis who require treatment, monitoring, and follow-up care.

Figure 2.2. Overall changes in cancer incidence are driven by cases among women and men aged 65 and older, as well as younger women aged 15 to 49

Contribution to the overall change in age-standardised cancer incidence rates by age group, from 2000 to 2022 (or nearest year), EU24 average



Note: The EU24 averages are unweighted and do not include Greece, Luxembourg or Romania. All cancer sites except for non-melanoma skin cancer are included. Age-standardisation is based on the 2013 European Standard Population. See methodological information in Annex 2.B.
Source: OECD calculations based on the following data: European Cancer Information System (ECIS) https://ecis.jrc.ec.europa.eu/, accessed on 25 November 2025; International Agency for Research on Cancer (IARC), https://gco.iarc.fr/overtime/en; Lapôtre-Ledoux et al. (2023[9]) "Incidence des principaux cancers en France métropolitaine en 2023 et tendances depuis 1990", http://beh.santepubliquefrance.fr/beh/2023/12-13/2023_12-13_1.html; National Institute of Oncology, National Cancer Registry of Hungary (NRR), https://stat.nrr.hu/.

This chapter presents recent epidemiological developments in the cancer burden across EU27 countries, Iceland and Norway (hereinafter referred to as "EU+2 countries" in this chapter), focussing on cancer incidence and mortality (see Box 2.1). Section 2.2 presents estimated cancer incidence for 2024 and analyses incidence trends from 2000 to 2022 (or the nearest available year). Section 2.3 then discusses changes in cancer mortality from 2000 to 2023, including a focus on disparities by education levels. Section 2.4 provides a special focus on early-onset cancer in EU+2 countries including details on the most common cancer sites among those aged 15-49. Finally, Section 2.5 discusses policy implications, including the need to address socio-economic inequalities in the cancer burden and to strengthen survivorship programmes and support services, particularly for those diagnosed at a younger age.

Box 2.1. Policy efforts to strengthen cancer registries are needed to address data limitations that hinder effective monitoring of cancer burden

While this chapter primarily focusses on cancer incidence and mortality, the prevalence of people who have ever been diagnosed with cancer is not fully incorporated due to data gaps in cancer registries. Notably, prevalence figures based directly on cancer registries are publicly available in only 15 EU+2 countries: the five Nordic countries (via NORDCAN), Austria, Belgium, Czechia, Ireland, Italy, Latvia, the Netherlands, Poland, Slovenia and Spain.[1]

Estimates of cancer prevalence are also produced by EUROCARE, the International Agency for Research on Cancer (IARC), and the Institute for Health Metrics and Evaluation (IHME). However, the lack of registry-based prevalence constrains policymakers' ability to anticipate needs for survivorship care, long-term follow-up and rehabilitation services (OECD, 2024[10]). Given that 27 EU+2 countries have well-established cancer registries that all record incidence, mortality and survival (Table 2.1) – theoretically enabling the calculation of prevalence – **there is scope to further strengthen the availability of prevalence data derived from registries**. *CancerWatch*, a new EU initiative to improve the quality and timeliness of cancer registry data, represents a meaningful step toward producing timely and more reliable cancer burden indicators.

The completeness of clinical data and mechanisms to ascertain its quality are also critical for the reliability of cancer registries (see Chapter 4). Cancer patients are often required to undergo multiple examinations and treatments from various healthcare providers. Clinical data, screening participation data, cancer staging and treatment information are recorded or linked from relevant sources in the majority of EU+2 countries (Table 2.1). Staging information is particularly important for analysing the cancer burden, as increases in cancer incidence may be a simple product of expansion in screening programmes, resulting in earlier detection and the potential overdiagnosis of some cancers (e.g. thyroid and prostate cancers). Without staging information, it is difficult to distinguish inflated incidence from genuine progress in detection, diagnosis, and treatment, as overdiagnosis may artificially reduce mortality and inflate survival estimates (Cho et al., 2014[11]; Ellis et al., 2014[12]). Linkages between screening programmes and staging information are particularly essential for assessing the effectiveness of early detection programmes.

Lastly, **it is important to establish necessary linkages between cancer registries and other population or administrative databases**. Without such linkages, the capacity to explore the cancer burden remains constrained, limiting, for example, the monitoring of socio-economic inequalities in cancer (see Box 2.2). Equally important patient-reported indicators on quality of life, treatment side effects and psychosocial outcomes remain largely absent from registry data. Although some patient-reported indicators are available in Belgium, Denmark, the Netherlands and Norway, they are not collected systematically for all cancers (Table 2.1). While routine collection of patient-reported information may require additional resources and tools, the lack of these indicators undermines the development of patient-centred cancer care, as highlighted in Chapter 5, and limits countries' ability to assess whether improved survival is matched by improvements in survivors' lived experiences.

Table 2.1. Cancer registries are well established in EU+2 countries, but there are opportunities for improved data collection and linkages

Recorded in the cancer registry or linked to other databases (denoted as ✔)

	Incidence	Mortality & survival	Cancer staging	Screening data	Treatment data	Patient-reported indicators	Socio-economic status	Patient address or region
Austria	✔	✔	✔		✔			✔
Belgium	✔	✔	✔	✔	✔	✔	✔[3]	
Bulgaria	✔	✔	✔		✔			
Croatia	✔	✔	✔	✔	✔			✔
Cyprus	✔	✔	✔		✔			
Czechia	✔	✔	✔	✔	✔			✔
Denmark	✔	✔	✔	✔	✔	✔	✔	✔
Estonia	✔	✔	✔	✔	✔			✔
Finland	✔	✔	✔	✔	✔			
France	✔	✔	✔		✔			✔
Germany	✔	✔	✔	✔	✔			✔
Greece[1]								
Hungary	✔	✔	✔		✔			
Iceland	✔	✔	✔	✔	✔			✔
Ireland	✔	✔	✔	✔	✔		✔	✔
Italy	✔	✔	✔	✔	✔		✔	✔
Latvia	✔	✔	✔	✔	✔			✔
Lithuania	✔	✔	✔		✔		✔	✔
Luxembourg	✔	✔	✔	✔	✔			✔
Malta	✔	✔	✔	✔	✔			✔
Netherlands	✔	✔	✔	✔	✔	✔	✔	✔
Norway	✔	✔	✔	✔	✔	✔	✔[3]	✔
Poland	✔	✔	✔	✔	✔		✔	✔
Portugal	✔	✔	✔	✔	✔			✔
Romania[2]								
Slovak Republic	✔	✔	✔		✔			
Slovenia	✔	✔	✔	✔	✔		✔	✔
Spain	✔	✔		✔	✔			
Sweden	✔	✔	✔	✔	✔		✔	✔

1. Greece's national cancer registry was established in February 2024 and is currently under development.
2. Romania's national cancer registry is under development in accordance with the *National Plan for Preventing and Combating Cancer in Romania 2023-2030* and it is anticipated that all indicators mentioned above will be collected.
3. For socio-economic status information, data collection is occasional in Belgium and a work in progress in Norway.
Source: 2023 OECD Policy Survey on Cancer Care Performance; 2025 OECD Policy Survey on High-Value Cancer Care.

1. National cancer prevalence is estimated in Italy and Spain, because their regional cancer registries do not cover the entire population.

2.2. More than five people are newly diagnosed with cancer every minute across EU countries, with incidence rising since 2000

2.2.1. It is estimated that more than five people were diagnosed with cancer every minute in the EU in 2024

The European Cancer Information System (ECIS) estimates that in 2024, the number of new cancer cases in the EU27 countries stands at 1.2 million among women and 1.4 million among men. In other words, this corresponds to 2.4 women and 2.8 men being diagnosed with cancer every minute, totalling 5.1 new cancer diagnoses per minute. In age-standardised terms, cancer incidence is estimated at 547 per 100 000 population on average across EU countries for both sexes as of 2024, comprising 471 per 100 000 among women and 650 per 100 000 among men (Figure 2.3).

Based on the 2013 European Standard Population, age-standardised incidence rates are 38% higher among men than women on average in EU countries (Figure 2.3, Panel A). Among men, the rates are above 700 per 100 000 in Estonia (793 per 100 000), Lithuania (771), Croatia (736), Denmark (733) and Hungary (732), and below 600 per 100 000 in Cyprus (459), Bulgaria (501), Luxembourg (544), Malta (561), and Austria (588). Among women, estimated age-standardised cancer incidence rates are the highest in Denmark (618) and the Netherlands (555) and the lowest in Bulgaria (344), Cyprus (351), Lithuania (400) and Spain (403).

Gender gaps in age-standardised incidence rates are the largest in the Baltic countries, namely Lithuania (with 371 more men than women diagnosed per 100 000), Estonia (+338) and Latvia (+291). By contrast, the lowest gender gaps are estimated for Malta (+80), Cyprus (+109), the Netherlands (+110), Denmark (+) and Sweden (+119). Regarding socio-economic gaps in cancer incidence, see Box 2.2.

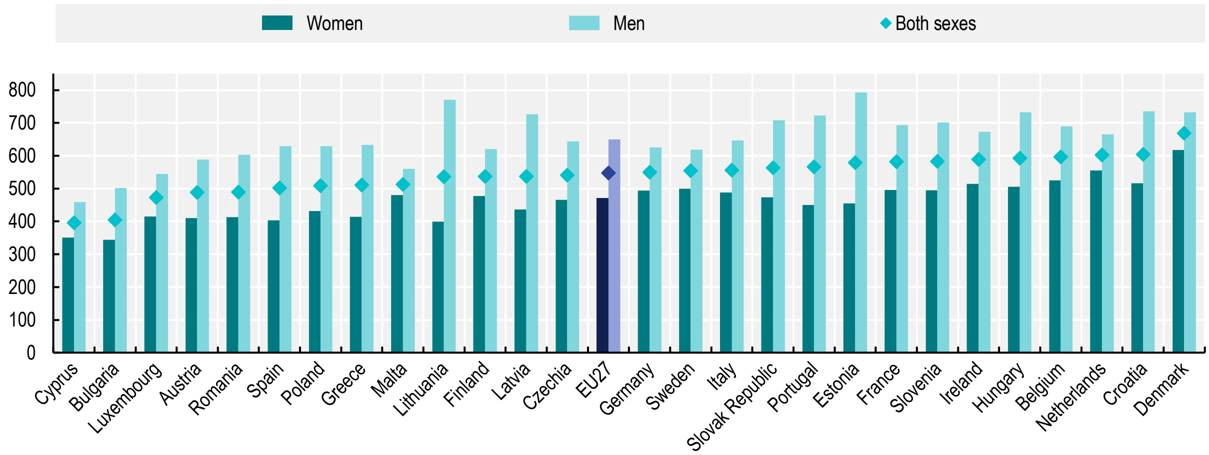
The six most common cancer sites account for approximately two-thirds of age-standardised cancer incidence rates on average across the 27 EU countries for both women and men (Figure 2.3, Panel B). For women, these cancer sites were estimated to be breast, colorectal, lung, corpus uteri, skin melanoma and pancreas. It is estimated that 51% of female cancer incidence can be explained by breast (30%), colorectal (12%) and lung (9%) cancers in 2024, whereas half of the male cancer incidence is accounted for by prostate (22%), lung (14%) and colorectal (13%) cancers. As for female cancer incidence, it is concerning that pancreatic cancer is estimated as the sixth most common cancer (17 per 100 000 women), especially because survival is very low and has not significantly improved over the last two decades.

Overall, ECIS estimated that by 2040, there will be 3.2 million cancer cases in the EU – an increase of half a million cases (18%) as compared to ECIS' previous 2022 estimates.

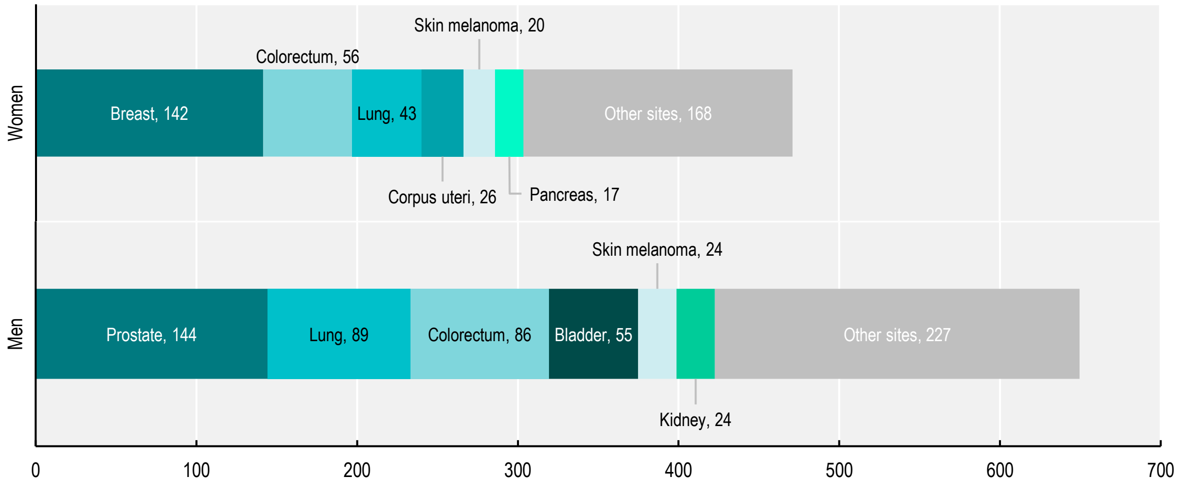
Figure 2.3. Cancer incidence was estimated at 547 per 100 000 population across EU countries in 2024, with men 38% more likely to be diagnosed with cancer than women

Estimated age-standardised cancer incidence rate per 100 000, 2024

A. By country, all cancer sites except non-melanoma skin cancer



B. By cancer site, EU27



Note: Age-standardisation is based on the 2013 European Standard Population. The estimates are based on incidence trends from previous years and may differ from observed rates in more recent years. In Panels A and B, all cancer sites except for non-melanoma skin cancer are included. In Panel B, “lung” indicates trachea, bronchus and lung. According to data from the Cancer Registry of Norway, ECIS estimations overestimate the country’s cancer incidence rate.

Source: European Cancer Information System (ECIS) https://ecis.jrc.ec.europa.eu/, accessed on 12 December 2025.

Box 2.2. Tracking cancer inequalities by socio-economic status in Europe: Evidence from Ireland and Sweden reveal lower detection rates among disadvantaged populations

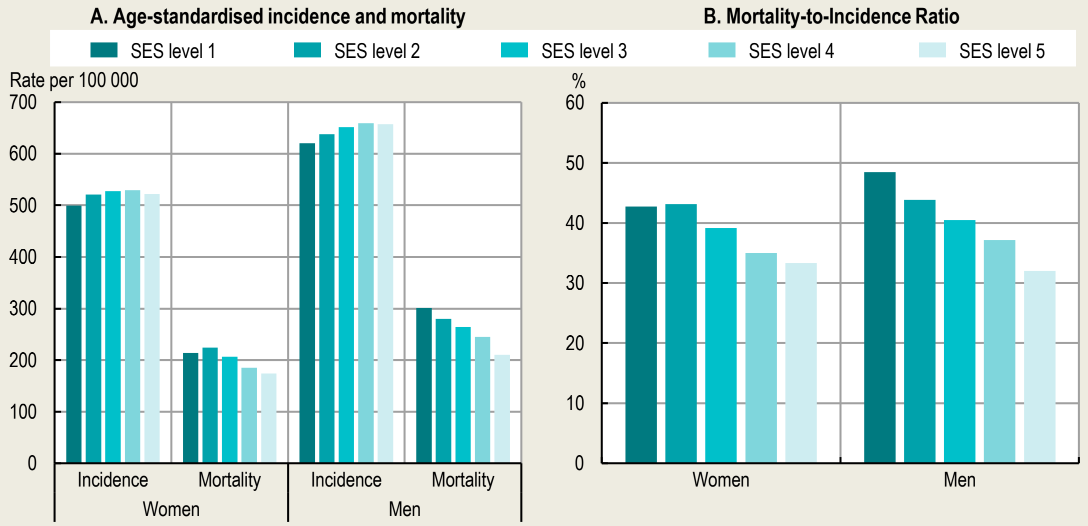
Growing evidence indicates that the pattern of cancer incidence significantly differs by socio-economic status (SES). Inequalities arising from income, education or occupation are widely documented in epidemiological studies (Conway et al., 2019[13]). Accordingly, adults with lower SES are at higher risk of being diagnosed with lung, stomach, cervical and pancreatic cancers, while adults with higher SES have higher risk of breast, thyroid, skin melanoma and prostate cancers (Mihor et al., 2020[14]; Li et al., 2024[15]; Pizzato et al., 2025[16]).

The majority of European cancer registries lack SES information on registrants or do not have linkage to external databases containing these data (Box 2.1). Furthermore, researchers often resort to location-based deprivation indicators or quintiles to proxy the social circumstances of cancer patients and track inequalities in the cancer burden. The National Cancer Registry of Ireland and the Swedish National Board of Health and Welfare for example can link SES data or apply location-based deprivation quintiles where relevant, enabling the dissemination of age-standardised cancer incidence, mortality and survival rates by SES. In Ireland, while people in the most deprived areas are less likely to be newly diagnosed with breast and prostate cancer, they are most likely to be diagnosed at later stages of these cancers, signalling differences in diagnostic patterns among those with lower SES (Bambury et al., 2023[17]).

In Sweden, the age-standardised cancer incidence for men and women in the lowest SES category (Level 1) was 4% and 6% lower, respectively, than those with the highest SES (Level 5) (Figure 2.4, Panel A). However, the mortality rate for men and women in the lowest SES category (Level 1) was 43% and 23% higher, respectively, than for those in the highest category (Level 5) (Figure 2.4, Panel B). These findings suggest lower detection rates among disadvantaged population.

Figure 2.4. Disadvantaged population have lower cancer incidence rates but higher mortality rates than those with higher socio-economic status

Cancer incidence and mortality by area-based socio-economic status level, Sweden, 2023



Note: SES Levels 1 to 5 are ordered from the lowest to the highest level of SES.
Source: National Board of Health and Welfare's Analysis Tool (Socialstyrelsens analysverktyg, Sweden), https://dataanalys.socialstyrelsen.se/superset/dashboard/cis_start/.

Similar evidence is reported for breast cancer patients in a French population-based study (Borghi et al., 2024[18]). The age-standardised incidence rates of breast cancer are on average 15% lower in the least affluent areas than in the most affluent areas during the period of 2008 to 2015, but women in the least affluent areas are 18% more likely to be diagnosed at later stages (stages III-IV) than those in the most affluent areas.

2.2.2. From 2000 to 2022, age-standardised cancer incidence rates increased by 10% among women and by 2% among men across EU countries

With Europe's ageing population and rising life expectancy, the share of the population newly diagnosed with cancer has been on the rise. Drawing on OECD analyses of cancer registry data, this section presents observed incidence trends from 2000 to 2022 or the nearest available year. It should be noted that cross-country comparisons of incidence trends are subject to limitations from variations in the scope and quality of cancer registries. Methodological details and source data are elaborated in Annex 2.B and Annex Table 2.B.1, respectively.

Between 2000 and 2022, cancer incidence has risen among women and men. In crude terms, cancer incidence increased substantially between 2000 and 2022 – by 29% in women and 31% in men (Annex Figure 2.A.1), indicating that more people are being diagnosed with cancer. This rise is largely driven by population ageing and longer living populations: as the share of older individuals grows, the number of cancer diagnoses naturally increases. When the effect of ageing population is removed using the 2013 European Standard Population, the trend is more modest. Age-standardised incidence rates rose by 10% in women (from 431 to 474 per 100 000 women), while increasing slightly by 2% in men (from 661 to 674 per 100 000 men) (Figure 2.5). As such, gender gaps in incidence rates have narrowed across EU countries, with the EU average gender gap falling by 13% from 230 to 200 per 100 000.

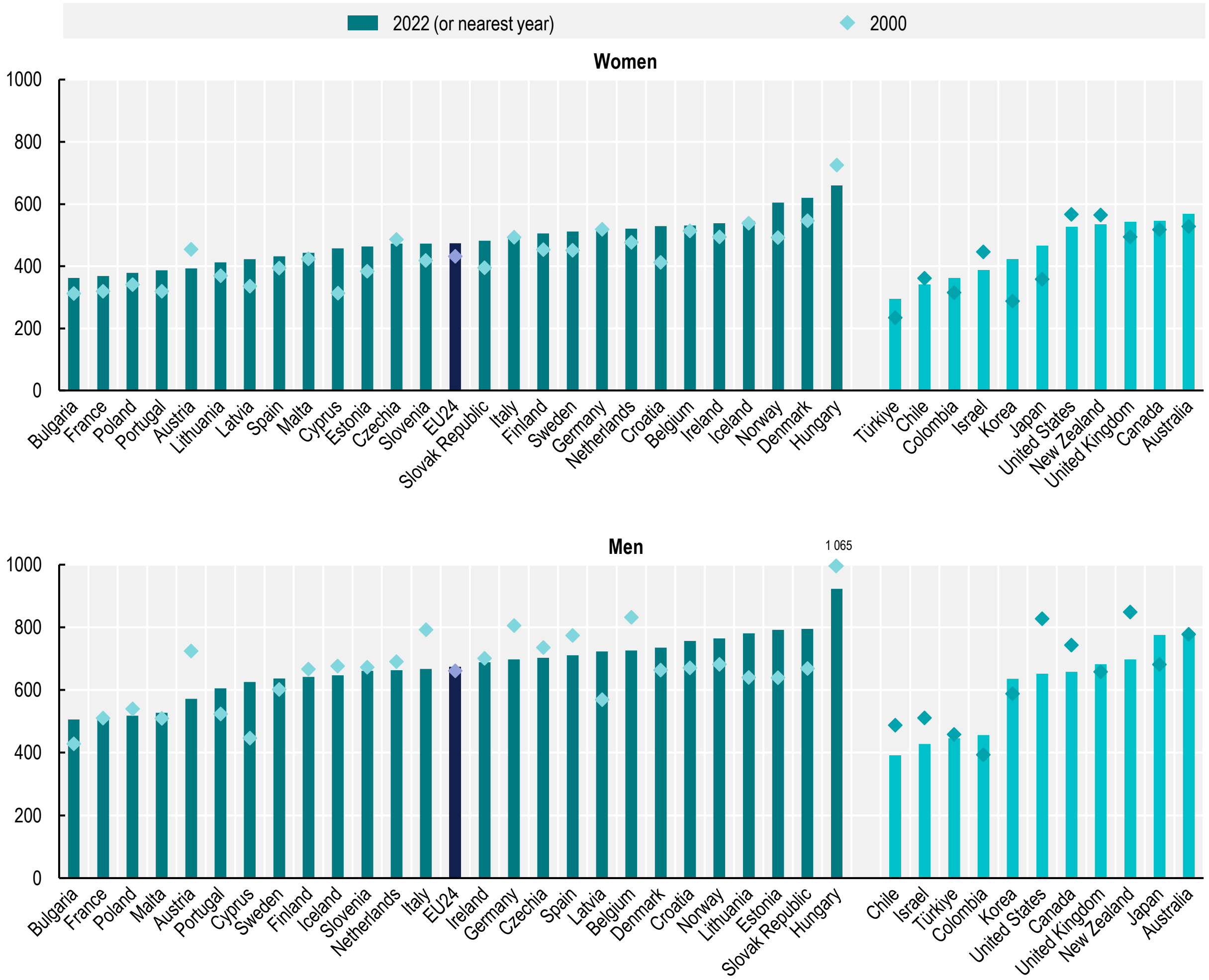
Female cancer incidence rates increased widely in 20 out of the 24 EU countries during this period. Significant increases are observed in Cyprus (+46%), Croatia (+28%), Latvia (+26%) and Norway (+23%), although part of this rise may result from improved screening and diagnostic pathways as noted in Annex 2.B. On the contrary, age-standardised female cancer incidence has declined in Austria (-14%), Hungary (-9%), Czechia (-3%) and Germany (-1%) from 2000 to 2022.

Among men, age-standardised cancer incidence has risen in around half of the 24 EU countries, with the largest increases registered in the Baltic countries – Estonia (+24%), Latvia (+27%) and Lithuania (+22%) – and Cyprus (+40%), whereas substantial reductions were recorded in Austria (-21%), Italy (-16%), Germany (-13%), Hungary (-13%) and Belgium (-13%).

When it comes to other OECD countries, Australia shows the highest cancer incidence for both women and men as of 2017. Substantial increases are observed among women in Korea (+47%) and Japan (+31%), and among men in Colombia (+16%) and Japan (+14%). By contrast, age-standardised cancer incidence rates declined for both sexes in Chile, Israel, New Zealand and the United States.

Figure 2.5. Women experienced a larger increase in cancer incidence than men, with rates rising in more than 80% of EU+2 countries for women

Age-standardised cancer incidence rate per 100 000, all ages, 2000 and 2022 (or nearest year)



Note: The EU24 averages are unweighted and do not include Greece, Luxembourg or Romania. All cancer sites except for non-melanoma skin cancer are included. Age-standardisation is based on the 2013 European Standard Population. The latest available years are 2010 for Portugal and the Slovak Republic, 2015 for Bulgaria and Japan, and 2017 for other OECD countries. Given that population coverage within the referenced registry data differs between countries, the results should be interpreted with caution. See also the methodological information in Annex 2.B.
Source: OECD calculations based on the following data: European Cancer Information System (ECIS) https://ecis.jrc.ec.europa.eu/, accessed on 25 November 2025; International Agency for Research on Cancer (IARC), https://gco.iarc.fr/overtime/en; Lapôtre-Ledoux et al. (2023[9]) “Incidence des principaux cancers en France métropolitaine en 2023 et tendances depuis 1990”, http://beh.santepubliquefrance.fr/beh/2023/12-13/2023_12-13_1.html; National Institute of Oncology, National Cancer Registry of Hungary (NRR), https://stat.nrr.hu/.

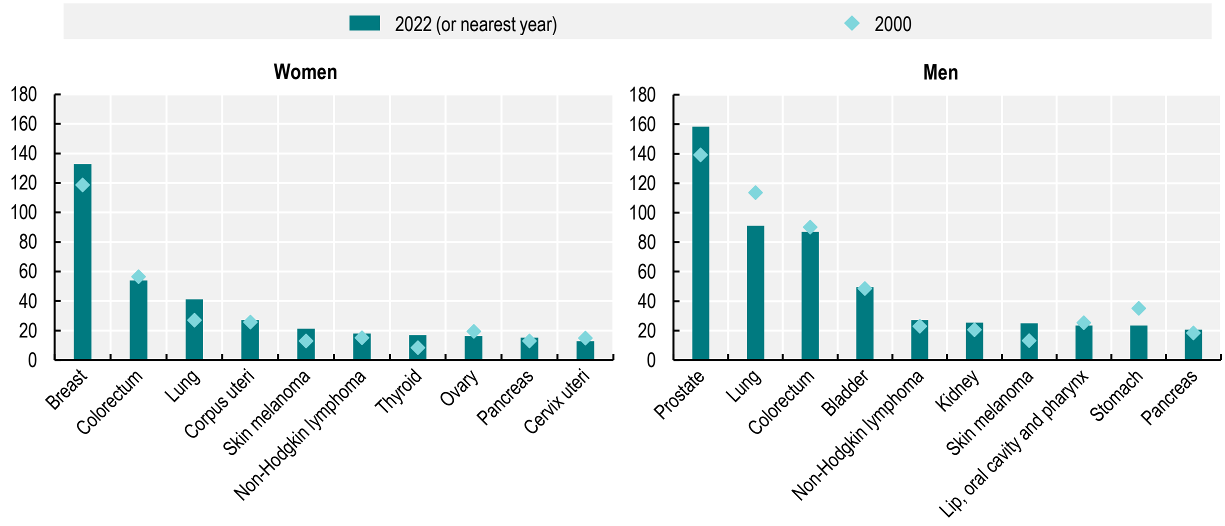
Analysing the evolution of incidence by cancer site reveals that breast and lung cancers are the key drivers of the overall increase in cancer incidence among women from 2000 to 2022 (Figure 2.6). The age-standardised incidence rate of breast cancer has risen by +14 per 100 000 women (from 119 to 133 per 100 000), increasing in 19 out of 24 EU countries. Comprehensive reviews by Mao et al. (2023[19]) and Obeagu and Obeagu (2024[20]) highlight a strong association of late menopause and delayed childbirth with breast cancer incidence. In addition to these reproductive factors, hormone replacement treatment, family history of breast cancer, behavioural risk factors (including alcohol consumption, overweight and obesity) are also noted as risk factors.

The age-standardised incidence of lung cancer increased by +14 per 100 000 women (from 27 to 41 per 100 000). Increasing lung cancer incidence among women is related to smoking rates in the EU area, which reached a peak and started falling over the last decade (OECD/European Commission, 2025[21]). Incidence has also surged by 62% (from 13 to 21 per 100 000) for skin melanoma and by 98% (from 9 to 17 per 100 000) for thyroid cancer. As for thyroid cancer, this trend may reflect issues of cancer overdiagnoses as highlighted in earlier literature (Li, Maso and Vaccarella, 2020[22]). By contrast, ovarian and cervical cancer incidence has declined, the latter likely related to initiatives aimed at vaccinating against human papillomavirus (HPV) (Nygård et al., 2024[23]; Zhang et al., 2025[24]).

The limited increase in cancer incidence rates among men is due to a large reduction in the incidence of lung cancer (by -23 per 100 000 men, from 114 to 91 per 100 000), with the gradual decline in men's smoking rates likely contributed to this trend (OECD/European Commission, 2025[21]), and stomach cancer (by 12 per 100 000 men, from 35 to 23 per 100 000). This decrease more than offset an increase of 19 and 12 per 100 000 men for prostate and skin melanoma cancers, respectively (Figure 2.6). However, between 2000 and 2022, the incidence of prostate cancer has at least doubled in Estonia, Poland and Latvia. Available evidence suggests that the rise in incidence observed in these countries is associated with the broader use of prostate-specific antigen (PSA) testing, while the impact on prostate cancer mortality has remained minimal, indicating potential overdiagnosis (Heijnsdijk et al., 2009[25]; Bray et al., 2010[26]; Patasius, Krilaviciute and Smailyte, 2020[27]; Vaccarella et al., 2024[28]; Hugosson et al., 2022[29]; Patasius et al., 2019[30]).

Figure 2.6. Breast cancer is a key driver of the age-standardised increase in female cancer incidence, while the incidence of lung and stomach cancers among men significantly dropped

Age-standardised cancer incidence rate per 100 000 by cancer site, EU average



Note: The EU averages are unweighted and do not include Greece, Luxembourg or Romania. Age-standardisation is based on the 2013 European Standard Population. See also the methodological information in Annex 2.B.
Source: OECD calculations based on the following data: European Cancer Information System (ECIS) https://ecis.jrc.ec.europa.eu/, accessed on 25 November 2025; International Agency for Research on Cancer (IARC), https://gco.iarc.fr/overtime/en; Lapôtre-Ledoux et al. (2023[9]) "Incidence des principaux cancers en France métropolitaine en 2023 et tendances depuis 1990", http://beh.santepubliquefrance.fr/beh/2023/12-13/2023_12-13_1.html; National Institute of Oncology, National Cancer Registry of Hungary (NRR), https://stat.nrr.hu/.

Lastly, the age-standardised incidence of colorectal cancer slightly decreased in both sexes between 2000 and 2022, from 56 to 54 per 100 000 women and from 90 to 87 per 100 000 men. On the other hand, the age-standardised incidence rate of pancreatic cancer rose by 17% in women (from 13 to 15 per 100 000 women) and by 11% in men (from 19 to 21 per 100 000 men) compared to 2000. A growing body of recent literature indicates that cadmium, a non-nutritive heavy metal widely distributed in the environment, is associated with pancreatic carcinogenesis. The most recent systematic review indicated that individuals exposed to cadmium had more than twice the risk of developing pancreatic cancer compared to those with lower or no exposure (Soleimani et al., 2025[31]).

2.3. Cancer mortality declined in all EU+2 countries from 2000 to 2023

2.3.1. From 2000 to 2023, average age-standardised cancer mortality rates dropped by 18% among women and 26% among men in EU countries

During the period of 2000 to 2023, the EU average of age-standardised cancer mortality rates dropped by 18% in women (from 199 to 163 per 100 000 women) and by 26% in men (from 372 to 275 per 100 000 men) (Figure 2.7).[1] Mortality rates remained consistently higher among men than women in both 2000 and 2023 in all EU+2 countries. However, gender gaps in mortality rates narrowed from 174 per 100 000 in 2000 to 111 per 100 000 in 2023. Combined with stable incidence in men and rising incidence in women, gender gaps in cancer burden are gradually closing.

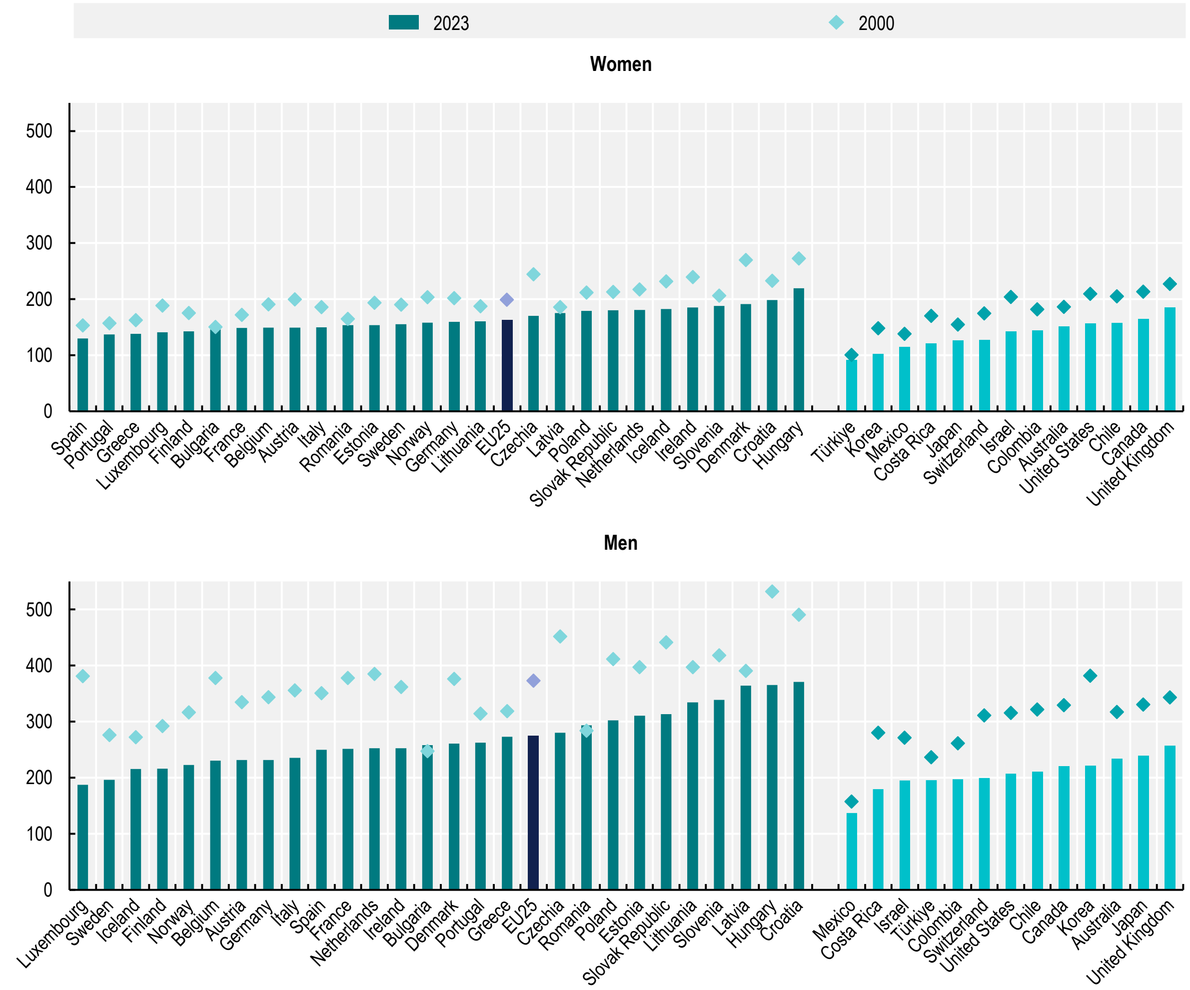
In 2023, female cancer mortality rates were highest in Hungary (219 per 100 000 women), Croatia (199), Denmark (191) and Slovenia (188), whereas they were relatively lower in Southern European countries: Spain (130), Portugal (138) and Greece (138). A significant decrease in female cancer mortality rates was recorded in Denmark, Czechia, Ireland and Hungary, whereas improvements were more moderate in Bulgaria, Latvia and Romania. Malta also saw a large decline in female cancer mortality between 2012 and 2022 (Annex Figure 2.A.2).

Male cancer mortality rates were the highest in Croatia (371 per 100 000 men), Hungary (366) and Latvia (364), whereas they were substantially lower in Luxembourg (188) and the Nordic countries – Sweden (196), Iceland (215), Finland (216) and Norway (223). Moreover, cancer mortality declined almost 40% or more in Luxembourg, Czechia, Hungary and Belgium.

Age-standardised cancer mortality rates are generally lower for both sexes in other OECD countries. In 2023, age-standardised mortality rates in women were most elevated in the United Kingdom (186 per 100 000 women), Canada (165), Chile and the United States (157), with the largest declines recorded in Israel, the United States and Costa Rica during the period of 2000 to 2023. Among men, cancer mortality rates were the highest in the United Kingdom (257 per 100 000 men), Japan (239) and Australia (234) in 2023, but substantially lower in Mexico (137) and Costa Rica (180). Similarly to EU+2 countries, reductions in age-standardised cancer mortality rates have been larger among men.

Figure 2.7. Cancer mortality fell by 18% in women and 26% in men in the EU from 2000-2023

Age-standardised cancer mortality rate per 100 000



Note: The EU24 averages are unweighted and do not include Cyprus and Malta. Age-standardisation is based on the 2015 OECD population. See also note 1. 2022 data are used for Belgium, Bulgaria, Canada, Chile, Costa Rica, Denmark, Estonia, France, Greece, Ireland, Israel, Italy, Korea, Mexico, Portugal, Romania and the United States. 2021 data are used for Colombia, Croatia, Japan and the United Kingdom.
Source: OECD Health Statistics 2025.

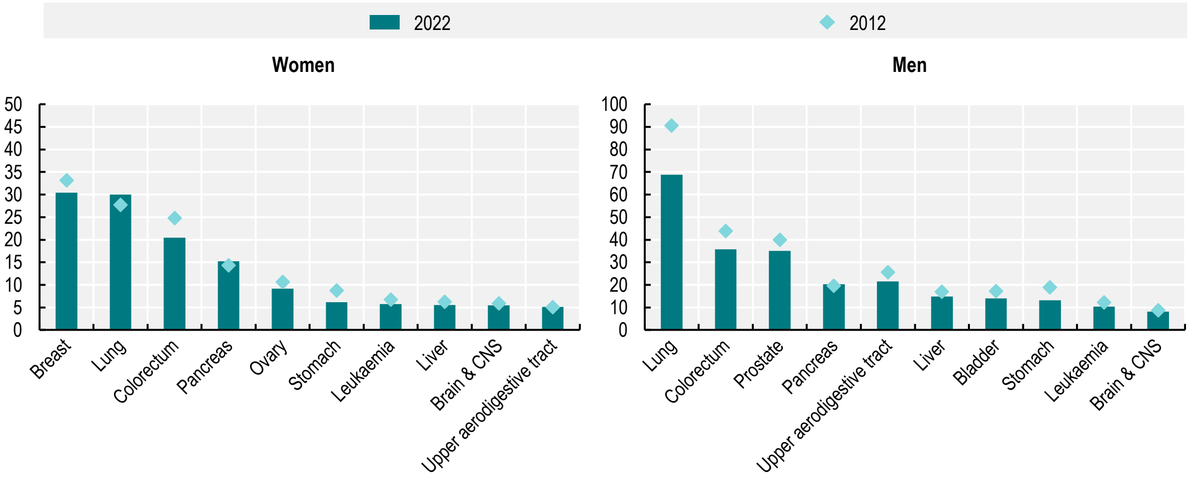
On average across the 27 EU countries, cancer mortality has declined across almost all sites (Figure 2.8). For women, reductions in cancer mortality chiefly stem from colorectal (-4.3 per 100 000 women), breast (-2.7) and stomach (-2.6) cancers, collectively reaching a reduction of -9.5 per 100 000 women, although lung cancer mortality rates increased by +2.3 per 100 000. For men, reductions in cancer mortality rates are substantially higher in general, driven mostly by gains from lung (-21.6 per 100 000 men), colorectal (-8.1), stomach (-5.7) and prostate (-4.8) cancers.

Recent evidence shows that the introduction of early detection programmes is linked to lower cancer mortality rates. A population-based study on colorectal cancer screening found that early adopters of opportunistic screening with guaiac-based faecal occult blood tests (gFOBT) – particularly Austria (1980), Czechia (2000) and Germany (1977) – experienced a sharper decline in colorectal cancer mortality, averaging about 3% per year (Cardoso et al., 2021[32]). A scoping review of breast cancer screening programmes in Europe shows that the decrease in cancer mortality between breast cancer screening participants and non-participants is estimated between 33% and 43% in the Nordic and Baltic countries, between 43 and 45% in Southern Europe (Cyprus, Gibraltar, Greece, Italy, Malta, Portugal and Spain), and between 12% and 58% in Western Europe (Austria, Belgium, France, Germany, Ireland, Luxembourg, the Netherlands, Switzerland, the United Kingdom) (Zielonke et al., 2020[33]).

For both sexes, pancreatic cancer mortality increased, by +0.9 per 100 000 women (from 14.3 to 15.2 per 100 000) and by +0.6 per 100 000 men (from 19.6 to 20.2 per 100 000) in the decade to 2022. This increase is most likely driven by the incidence of this cancer increasing by 17% in women and by 11% in men on average across EU countries since 2000 (Section 2.2.22.2). Given the limited progress in survival, efforts to increase care concentration for pancreatic surgeries to improve outcomes (see Chapter 4) as well as to increase the availability of palliative care are crucial within European cancer care systems to address this burden (see Section 2.5.3and Chapter 5).

Figure 2.8. Mortality rates fell across almost all cancer sites, with the most pronounced reductions observed in female colorectal cancer and male lung cancer

Age-standardised cancer mortality rate per 100 000, by cancer site, EU average



Note: The EU averages are weighted. Age-standardisation is based on the European Standard Population 2013. Upper aerodigestive tract combines lip, oral cavity, pharynx, larynx and oesophagus. See also note 1.
Source: Causes of death (Eurostat), https://doi.org/10.2908/HLTH_CD_ASDR2.

2.3.2. Educational disparities in cancer mortality remain substantial, with estimated mortality gaps reaching 31% for women and 83% for men in the EU

Socio-economic inequalities are a major driver of cancer mortality levels and trends in Europe, particularly for cancer types related to tobacco consumption and infections (OECD/European Commission, 2025[21]; Vaccarella et al., 2023[34]). The EU Cancer Inequalities Registry country factsheets 2015-2019 demonstrate differences in cancer mortality between those with primary education and those with tertiary education (EC/IARC/Erasmus MC, 2025[35]). Estimated age-standardised cancer mortality rates are consistently higher among people with a lower level of education for both women and men (Figure 2.9), with very few exceptions (i.e. only in Slovenia, Spain and France – where estimated educational disparities are insignificant for women).

On average across the 27 EU countries, gaps in cancer mortality are 79 per 100 000 among women aged 40-70 (333 per 100 000 among those with low education vs. 254 per 100 000 among those with high education) and 265 among men (583 vs. 318 respectively) for the period of 2015 to 2019. For women, mortality gaps are the largest in Denmark (179 per 100 000), Norway (179) and Lithuania (168).

Among men, Hungary records the highest cancer mortality rates for people at both education levels (1 127 per 100 000 for the low educated versus 507 for the high educated) with the largest mortality gap (620 per 100 000 men) among all EU+2 countries. Moreover, the Baltic and Central European countries tend to have above-average mortality differences between men with a low level of education and men with a high level of education: e.g. Czechia (548 per 100 000),[2] Latvia (538), Lithuania (538), Croatia (500), Estonia (461), Romania (461).

These gaps in cancer morality may be partially explained by differences in the adherence to cancer screening programmes between people with lower SES and people with higher SES (see also Chapter 4). As noted in Chapter 3, the uptake of mammography over the past two years is on average 25 percentage points (p.p.) higher among people with a high level of education than those with a low level of education, based on the analysis of the Survey on Healthy Ageing and Retirement in Europe (SHARE). In European countries, moreover, analysis of the European Health Interview Survey (EHIS) shows that screening participation rates are lower among people with lower household income – by 45% for breast, 40% for cervical and 18% for colorectal (Bozhar et al., 2022[36]). The same study also documents that those born outside the EU, those who have a lower level of education and unemployed individuals are less likely to participate in early detection programmes.

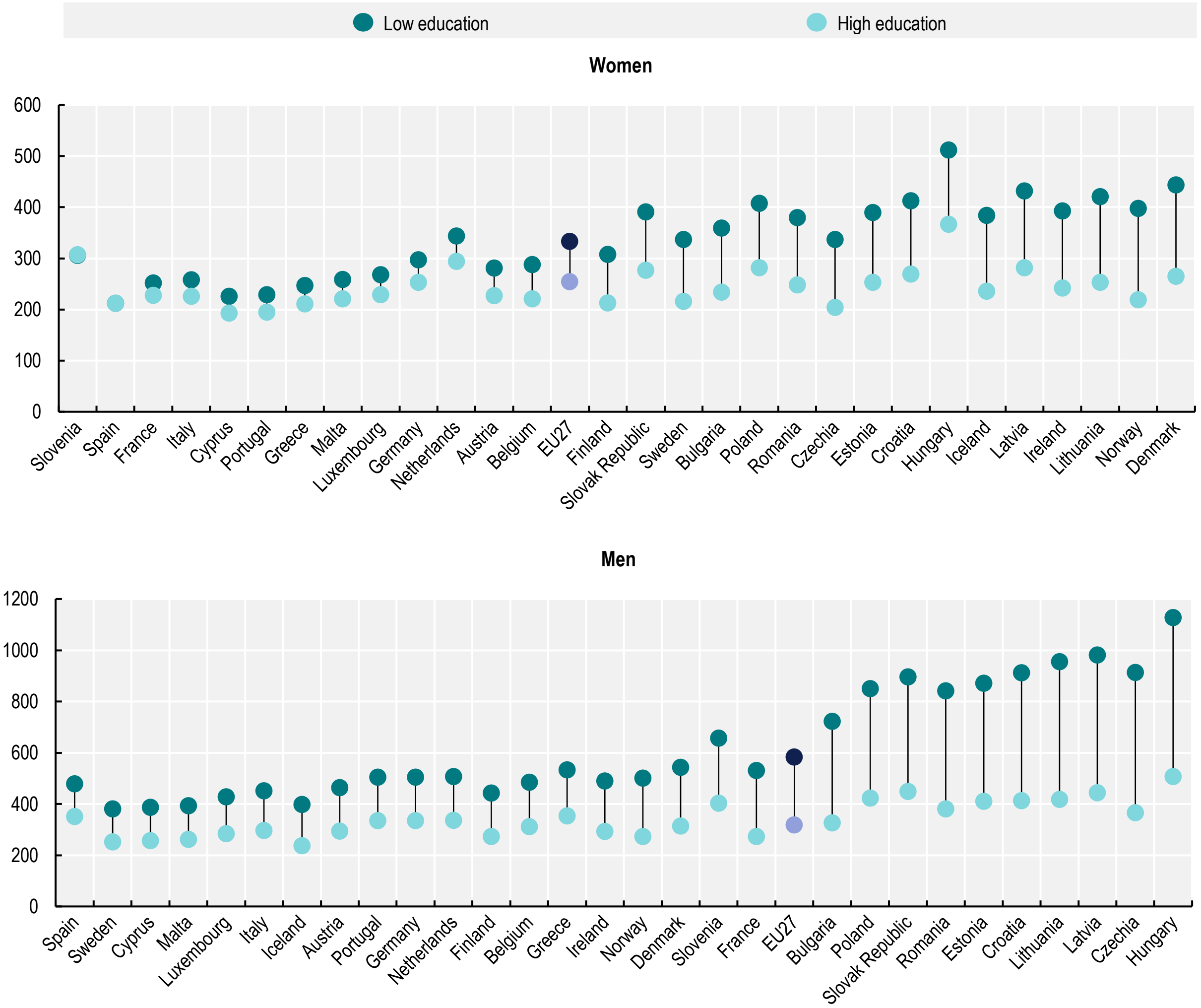
Disparities in estimated cancer mortality rates are generally lower among women than men, which is well aligned with the recent epidemiological literature: For example, an analysis of German health insurance data between 2003 and 2019 by Tetzlaff et al. (2023[37]) reveals that cancer mortality rates were 50% higher in women living in the most deprived area than women in the least deprived region (with a gap of 84 per 100 000), while the gap was estimated at 80% among men. The authors have also noted that these socio-economic disparities have widened over time in Germany.

As presented in Figure 2.7, the leading causes of cancer death among women are breast, lung, and colorectal cancers, whereas those among men are lung, colorectal and prostate cancers. Among these cancer sites, lung cancer is a key driver of socio-economic gaps in cancer mortality (EC/IARC/Erasmus MC, 2025[35]). An umbrella review predominantly focussed on European countries and the United States reveals that an individual with lower SES is more likely to be diagnosed with and die from lung cancer (Redondo-Sánchez et al., 2022[38]). For 18 European countries, Vaccarella et al. (2023[34]) estimate that lung cancer accounts for the largest share of cancer mortality inequalities in both women and men: 10-56% of female cancer mortality and 29-61% of male cancer mortality.

These findings underscore the persistent socio-economic inequalities in cancer burden across European countries, even as overall cancer mortality continues to decline. This suggests a clear need for targeted policy interventions aimed at disadvantaged populations (see Section 2.5.1 and Chapter 3).

Figure 2.9. On average across EU countries, men with a low level of education face an 83% higher cancer mortality rate than highly educated men

Estimated age-standardised mortality rate per 100 000, those aged 40-70, by education, 2015-2019



Note: The EU averages are unweighted. Age-standardisation is based on the 2013 European Standard Population. “Low education” refers to ISCED Levels 0-2 and “High education” to ISCED Levels 5-8. Countries are ranked by gaps in mortality rates between those with low education and those with high education.
Source: IARC, European Commission, Erasmus MC (2025). Country Factsheet Series. Socio-economic inequalities in cancer mortality across the EU27, Norway and Iceland.

2.4. Special Focus: Early-onset cancer incidence has increased widely among younger women across EU countries since 2000

Discussions on early-onset cancer among young adults have rapidly gained attention in the epidemiological literature over the past decade, with evidence pointing to both site-specific and overall increases (Section 2.4.1). For example, Zhao et al. (2023[6]) estimate that more than 3.26 million new cases were diagnosed among those aged less than 50 (i.e. a 79% increase since 1990), based on the Global Burden of Disease 2019 study of 29 cancers in 204 countries. Particularly sharp rises are observed for breast, colorectal, stomach and prostate cancers. Their projections from 2020 to 2030 suggest that cancer incidence among younger population will continue to climb globally, especially in those aged 40-49. Building on this growing body of evidence, Section 2.4.2 analyses cancer incidence trends in the EU from 2000 to 2022 among adults aged 15-49. Section 2.4.3 provides cross-country comparable evidence on incidence trends among younger adults by cancer site. Lastly, Section 2.4.4 reviews emerging evidence on the mechanisms driving early-onset cancer, including shifts in risk profiles, diagnostic expansion and potential overdiagnosis.

2.4.1. Early-onset breast and colorectal cancer has gained prominence in epidemiological literature over the last two decades

Rising colorectal cancer incidence among younger adults (aged under 40 or 50) has been on the research agenda in the United States as early as the 2000s (Ugai et al., 2022[4]). One of the earliest registry-based studies by O'Connell et al. (2003[39]) demonstrated that colorectal cancer incidence had increased among those aged 20-40 based on the Surveillance, Epidemiology, and End Results (SEER) data from 1973 to 1999. At the same time, in Australia, the average annual percent change (AAPC) in age-standardised cancer incidence was reported at 3.0% for colorectal cancer among those aged 15-39 (Troeung et al., 2017[40]). Across 20 European countries, the average annual per cent change in age-standardised colorectal cancer incidence was estimated at 7.9% among those aged 20-29, 4.9% among 30-39 and 1.6% among 40-49 (Vuik et al., 2019[41]).

The epidemiological literature on early onset cancer has also expanded beyond colorectal cancer. In the United States, Barr et al. (2016[42]) analysed SEER data on the 40 most common cancer sites among individuals aged 15-39, reporting significant increases in kidney, thyroid, prostate, and corpus uteri cancers, alongside more moderate increases in colorectal and testicular cancers. Similarly, focussing on newly diagnosed cases in adolescents and young adults (AYAs) aged 15-39 in the United States between 1973 and 2015, Scott et al. (2020[2]) document an increase of 30% in age-standardised cancer incidence and an average annual per cent change of 0.6% for both female and male AYAs, noting the rise of kidney, thyroid and colorectal cancers.

In Europe, the average annual per cent change in breast cancer incidence among women under 40 was estimated at 1.2% from 1990 to 2008 across Belgium, Bulgaria, France, Italy, Portugal, Spain and Switzerland (Leclère et al., 2013[43]). Trama et al. (2023[44]) also documented an overall upward trend in cancer incidence among AYAs across 22 European countries between 1998 and 2012. More recently, in the French cancer registry zone (18% of French population), cancer incidence among AYAs increased at an annual per cent change of +1.6% in crude terms (+1.8% for women and +1.6% for men) from 2000-2014 and then declined at -0.8% from 2015-2020 (Desandes et al., 2025[45]). However, the incidence of breast, colorectal, kidney, glioblastomas, liposarcomas and Hodgkin lymphomas shows a regular increase over the whole period, whereas a decline is observed for head and neck cancers and skin melanomas.

2.4.2. Since 2000, early-onset cancer incidence has risen widely among women

The incidence trend of early-onset cancer – defined as cancer occurring among young adults aged between 15 and 49 – is examined in this section, using harmonised cancer registry data of 24 EU countries, Iceland and Norway and 11 other OECD countries. The analysis covers the period from 2000 to 2022 or the nearest available year for each country (see Annex 2.B for a detailed description of the source data).

Figure 2.10 illustrates the decomposition of changes in age-standardised cancer incidence rates among the population aged 15-49 across EU countries between 2000 and 2022 (see Annex Figure 2.A.3 for country-specific early-onset cancer incidence rates). Across EU countries, the average age-standardised cancer incidence among younger adults aged 15-49 surged by +22.8 per 100 000 women, from 143.8 to 166.6 per 100 000 for women (+16%), while remaining stable at 97.0 per 100 000 for men. Across EU countries, average annual per cent changes in age-standardised cancer incidence rates among younger adults were estimated at +1.0% among women with the 95% confidence interval of 0.6 to 1.4 and at +0.3% among men with the 95% confidence interval of -0.1 to 0.7 (Annex Figure 2.A.4), indicating that on average in the EU, rising early-onset cancer incidence is statistically significant among women but not among men.[3]

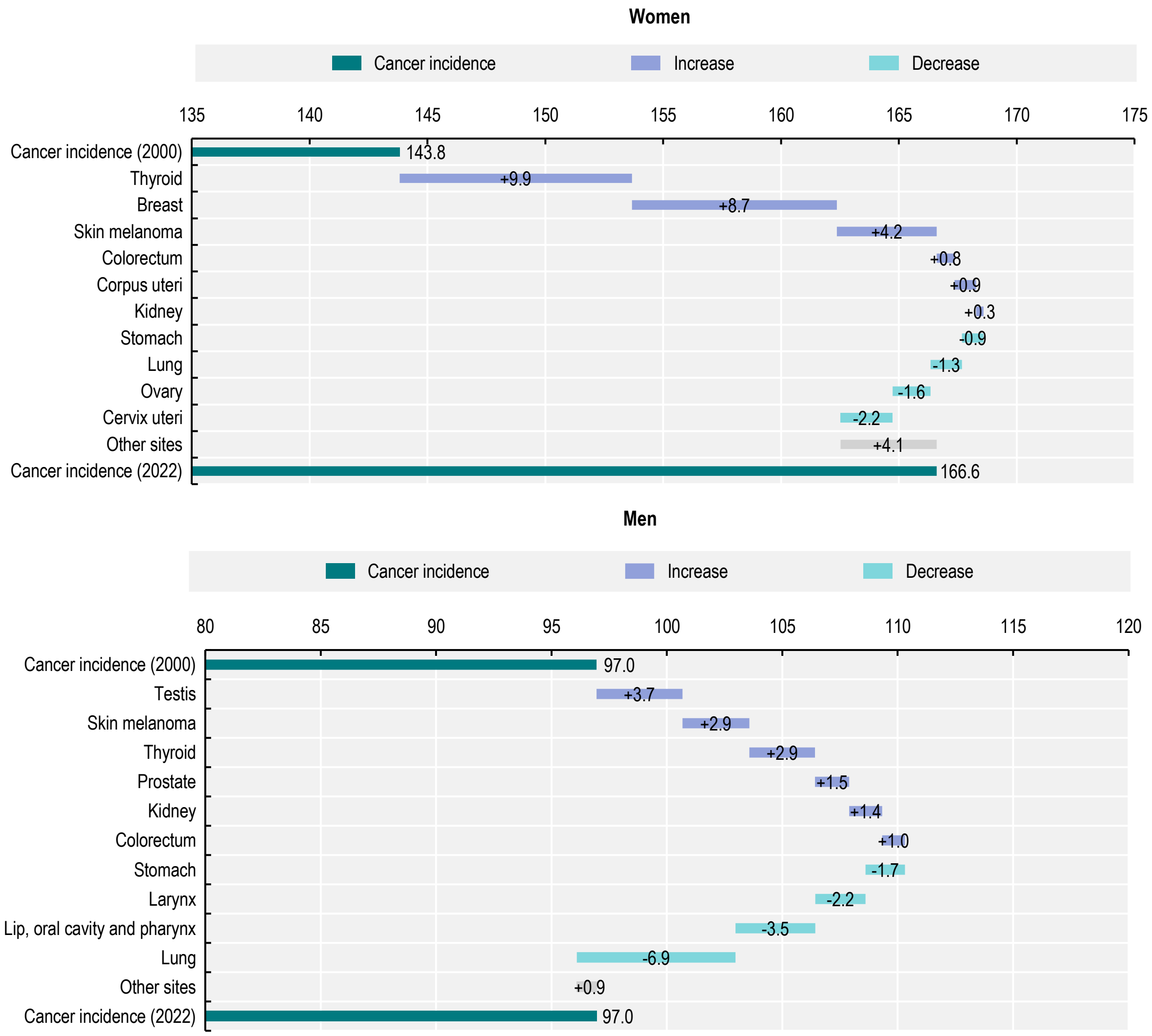
The most significant drivers of the increase in cancer incidence among young women since 2000 are thyroid cancer (+9.9 per 100 000 women), breast cancer (+8.7), skin melanoma (+4.2) and colorectal cancer (+0.8). Simultaneously, reductions in the incidence of cervical cancer (-2.2 per 100 000) and ovarian cancer (-1.6) are also observed, but they are not large enough to offset the increases coming from other cancer types.

As for men, the incidence of early-onset testicular and skin melanoma cancers has risen by +3.7 per 100 000 and +2.8 per 100 000, respectively from 2000 to 2022. Western and Northern European countries tend to show a higher incidence of testicular cancer and the increasing incidence trend among European youth has been noted compared to other regions (Huang et al., 2022[46]). On the other hand, there has been improvement in smoking-related cancers such as lung (a decrease of -6.9 per 100 000), lip, oral cavity and pharynx (-3.5), and larynx cancers (-2.2), which are collectively large enough to offset the other increases in male early-onset cancer incidence. This is consistent with the fact that smoking rates among men have declined in European countries (OECD/European Commission, 2025[21]).

The corollary of these epidemiological developments is that while the overall cancer burden remains higher among men (Sections 2.2 and 2.3), women are disproportionately affected when it comes to early onset cancer. In fact, gender gaps in the age-standardised cancer incidence rate among young adults widened from 47 per 100 000 in 2000 to 70 per 100 000 in 2022, reflecting an increasingly unfavourable trend for women. Given longer life expectancy among women and rising cancer incidence of younger women, the need for strengthened cancer survivorship services increases (see Section 2.5.3).

Figure 2.10. Thyroid and breast cancers account for 80% of the increase in cancer incidence among young women from 2000-2022

Change in average age-standardised cancer incidence rates per 100 000 among those aged 15 to 49, EU24 average



Note: The EU24 averages are unweighted and do not include Greece, Luxembourg or Romania. All cancer sites except for non-melanoma skin cancer are included. Age-standardisation is based on the 2013 European Standard Population. France is not included in the EU averages for testicular cancer, and Cyprus is not included in the EU averages for skin melanoma cancer among men due to limited observations. See the methodological information in Annex 2.B.

Source: OECD calculations based on the following data: European Cancer Information System (ECIS) https://ecis.jrc.ec.europa.eu/, accessed on 25 November 2025; International Agency for Research on Cancer (IARC), https://gco.iarc.fr/overtime/en; Lapôtre-Ledoux et al. (2023[9]) "Incidence des principaux cancers en France métropolitaine en 2023 et tendances depuis 1990", http://beh.santepubliquefrance.fr/beh/2023/12-13/2023_12-13_1.html; National Institute of Oncology, National Cancer Registry of Hungary (NRR), https://stat.nrr.hu/.

2.4.3. In most EU countries, the incidence of thyroid and breast cancer among younger women is increasing

Table 2.2 presents age-standardised cancer incidence rates among those aged 15-49 in 2022 or the nearest available year for each country and changes in age-standardised incidence rates from 2000 (average annual per cent changes are presented for each cancer site and country, alongside 95% confidence intervals, in Annex Table 2.A.1).

Compared to 2000, the age-standardised breast cancer incidence among younger women has risen by +8.7 per 100 000 women, from 53.3 to 62.0 per 100 000, on average across EU countries in 2022 (+16% in relative terms). The estimated average annual per cent change in incidence is 1.1% and is statistically significantly different from zero (Annex Table 2.A.1). The largest increases are observed in Cyprus, Czechia, Estonia, Ireland, Norway, Portugal, Slovenia and Sweden, whereas incidence declined in the following three EU countries: Hungary, Finland and Belgium in the latest available year, compared to 2000. Modifiable risk factors (overweight, smoking and physical inactivity) are associated with increased breast cancer incidence among women aged 40-49 years in Finland (METCA Study Group, 2025[47]), while advanced maternal age is also found to increase the risk of early-onset breast cancer (Londero et al., 2024[48]; Scott et al., 2020[2]). In light of the broad and consistent increase in breast cancer incidence at younger ages across EU countries, the age range of breast cancer screening programmes is being reconsidered, although current evidence does not consistently support the cost-effectiveness of lowering screening age (see Section 2.5.2).

Between 2000 and 2022, the incidence of thyroid cancer in younger women has more than doubled from 8.2 to 18.1 per 100 000 across EU countries (+120%). The highest incidence was recorded in Cyprus, Croatia and Italy. A significant increase is observed in Latvia and the Slovak Republic (with an average annual per cent change of +10.6% and +8.5% respectively), whereas incidence has not significantly increased in Estonia and even decreased in Iceland (Annex Table 2.A.1). Although some of these rapid increases may be due to better surveillance systems (see Annex 2.B), there is also the concern of overdiagnosis of thyroid cancer which has been well documented in the literature (Li et al., 2024[15]; Sung et al., 2021[49]; IARC et al., 2025[50]) – see Chapter 4. This result is consistent with a recent study using the 2021 Global Burden of Disease, showing an increase of +156% in the number of new cases of thyroid cancer among women aged 15-49 years between 1990 and 2021 (Jiang et al., 2025[51]).

Testicular cancer is predominant among young adult men, and it has been the largest contributor to the rise in age-standardised incidence among men aged 15-49 since 2000. Its incidence went up by +3.7 per 100 000 men, from 9.9 to 13.6 per 100 000 on average (+38% in relative terms), with the highest incidence rates recorded, at above 20.0 per 100 000 men, in Croatia and Slovenia. The largest change in incidence rates can be seen in Croatia, the Netherlands and Poland. Portugal saw the fastest increase in terms of average annual per cent change (+8.8%). Meanwhile, there was either no change or a decrease in incidence in Denmark, Germany, Hungary, Iceland, Ireland and Norway. Systemic reviews identify family history, adult height, low fertility, environmental exposure and prenatal or early-life exposures as risk factors (Tateo et al., 2025[52]; Mhamane et al., 2024[53]; McGlynn and Trabert, 2012[54]). Perfluorooctanoic acid (PFOA) – widely used in non-stick cookware and liquid-resistant coatings – has been recently classified by IARC as carcinogenic to humans, with sufficient evidence associated with testicular cancer (Zahm et al., 2024[55]). The growing incidence and improving survival of early-onset testicular cancer across many countries calls for wider support for accompanying fertility-related issues (see Chapter 5) (van der Meer et al., 2024[56]).

Significant reductions in early-onset lung cancer incidence more than offset increases in the incidence of other cancer types among younger men. Compared to 2000, the average incidence dropped by 6.9 per 100 000 men, from 12.2 to 5.3 per 100 000 in 2022 (-57% in relative terms). Reductions in early-onset lung cancer incidence rates were substantial in Central European countries: Hungary, Croatia, Slovenia, Poland and Malta. Gálffy et al. (2024[57]) also reported that Hungary’s lung cancer incidence dropped among those aged 40-49 from 2011 to 2021. However, there was little improvement in Cyprus and Portugal, both of which reported virtually no change in incidence rates among those aged 15-49 during this period (Annex Table 2.A.1).

The incidence of early-onset skin melanoma has increased for both women and men since 2000, on average by +4.2 per 100 000 (+48% in relative terms) and by +2.8 per 100 000 (+50% in relative terms), respectively. During the observation period, substantial increases in the incidence were recorded among women in Slovenia, Italy, Denmark and Sweden and among men in Italy, Denmark and Malta. A statistically significant drop in early-onset skin melanoma cancer incidence was only seen in Iceland for women. This finding is consistent with a recent study showing that the incidence of skin melanoma in Iceland reached a peak in 2002-2006, but has since been declining, thanks to government regulation on the use of sunbeds, public awareness and education campaigns on the risks of UV exposure and tanning beds, and improved access to dermatology services (Thomas et al., 2024[58]).

Lastly, early-onset colorectal cancer incidence has slightly risen across EU countries since 2000, with changes standing at +0.8 per 100 000 women (+10% in relative terms) and +1.0 per 100 000 men (+12%). However, on average in the EU, the average annual per cent change in colorectal cancer incidence among young population is not statistically significantly different from zero for both women and men (Annex Table 2.A.1). Nonetheless, Croatia, France (aligned with Desandes et al. (2025[45])), Poland, the Netherlands and the Nordic countries all saw a significant increase in early-onset colorectal cancer incidence in both sexes, whereas Czechia, Italy and Spain recorded a statistically significant decrease.

These results are in contrast to the early-onset colorectal cancer trend seen in other OECD countries (see also Box 2.3). For Australia, Canada, the United Kingdom (England) and the United States, Downham et al. (2025[59]) have documented the fastest increase in colorectal cancer incidence among those aged under 40. While the reasons behind the rising incidence in these countries are yet to be identified, early-life exposure to bacteria is mentioned as an emerging risk of colorectal cancer among younger populations in recent studies (Díaz-Gay et al., 2025[60]). The consumption of ultra-processed food is also associated with increased risk of early-onset colorectal cancer among women (Wang et al., 2025[61]).

Table 2.2. Evolution of cancer incidence among the young population aged 15-49, by cancer site

Age-standardised cancer incidence per 100 000, 2022 or nearest year (and change from 2000), age 15-49

	Women				Men			
	Breast	Thyroid	Skin melanoma	Colorectum	Testis	Lung	Skin melanoma	Colorectum
EU24 average	**62.0 (+8.7)**	**18.1 (+9.9)**	**13.0 (+4.2)**	**8.3 (+0.8)**	**13.6 (+3.7)**	**5.3 (-6.9)**	**8.6 (+2.8)**	**9.0 (+1.0)**
Austria	52.7 (+4.9)	14.1 (+5.8)	8.6 (-0.1)	7.6 (+0.6)	15.2 (+1.4)	3.8 (-6.0)	5.2 (-0.7)	8.2 (-0.5)
Belgium	83.2 (-2.9)	11.8 (+2.5)	22.2 (+7.4)	8.1 (+1.6)	14.3 (+5.9)	6.1 (-3.3)	11.2 (+2.9)	8.3 (-0.3)
Bulgaria	51.0 (+9.7)	9.5 (+5.5)	3.2 (+1.1)	7.1 (0.0)	8.5 (+1.7)	10.5 (-6.1)	2.5 (+0.5)	9.2 (-0.2)
Croatia	64.7 (+14.8)	35.2 (+24.1)	10.5 (+3.3)	11.5 (+2.8)	22.8 (+14.2)	7.0 (-13.4)	9.0 (+2.9)	11.8 (+1.2)
Cyprus	76.9 (+26.6)	76.3 (+62.9)	4.2 (+2.4)	6.0 (+1.1)	15.3 (+6.8)	5.4 (+0.7)	3	4.2 (+1.1)
Czechia	53.5 (+18.3)	15.1 (+8.9)	11.8 (+3.1)	7.3 (+0.1)	13.9 (+0.8)	3.5 (-7.9)	8.3 (+2.4)	9.6 (-0.9)
Denmark	62.4 (+6.0)	11.8 (+7.8)	29.5 (+9.4)	9.4 (+3.0)	17.3 (-0.3)	3.9 (-2.6)	19.0 (+9.0)	9.3 (+1.8)
Estonia	51.0 (+17.0)	6.1 (+0.5)	11.6 (+4.2)	7.1 (+0.2)	8.1 (+4.9)	4.7 (-3.5)	8.8 (+5.1)	6.7 (+1.9)
Finland	58.6 (-4.3)	11.6 (+2.8)	15.1 (+7.6)	9.2 (+2.4)	10.8 (+4.4)	3.0 (-0.2)	12.6 (+6.7)	9.0 (+3.7)
France	79.3 (+13.3)	17.7 (+3.4)	14.9 (+5.1)	9.2 (+2.3)	1	8.5 (-6.5)	9.4 (+3.3)	8.2 (+0.3)
Germany	67.4 (+9.0)	12.0 (+5.4)	15.9 (+0.3)	8.1 (+0.4)	18.0 (+0.7)	4.9 (-2.8)	9.3 (+0.7)	8.5 (+0.7)
Hungary	71.7 (-17.3)	16.9 (+9.5)	20.2 (+2.3)	14.1 (-2.8)	19.4 (-4.3)	10.6 (-44.3)	10.9 (-0.8)	15.1 (-5.8)
Iceland	68.0 (+8.7)	10.6 (+2.3)	13.4 (-2.7)	18.3 (+9.3)	7.6 (-7.4)	3.5 (-3.1)	12.6 (+3.6)	12.4 (+4.4)
Ireland	69.6 (+15.3)	10.4 (+6.8)	13.9 (+3.0)	9.0 (+1.2)	13.9 (+4.6)	3.3 (-0.9)	8.7 (+2.0)	9.9 (+1.5)
Italy	76.4 (+4.5)	29.4 (+7.6)	18.7 (+9.7)	6.5 (-1.7)	14.1 (+3.8)	4.1 (-2.5)	13.9 (+7.3)	7.2 (-1.2)
Latvia	50.4 (+11.3)	17.0 (+12.9)	6.4 (+3.8)	6.5 (+2.0)	5.2 (+0.4)	5.0 (-4.8)	1.9 (+1.1)	7.8 (+3.4)
Lithuania	40.0 (-1.5)	14.5 (+8.2)	8.0 (+2.7)	5.5 (+0.8)	5.2 (+1.1)	6.6 (-7.9)	3.4 (+1.0)	5.4 (+0.8)
Malta	49.4 (+3.7)	23.6 (+7.0)	10.0 (+6.5)	9.7 (-1.6)	12.7 (+4.3)	0.9 (-11.0)	8.3 (+7.2)	10.0 (+6.7)
Netherlands	77.2 (+7.3)	6.2 (+2.6)	22.6 (+6.3)	9.2 (+2.4)	18.7 (+7.7)	5.2 (-2.2)	13.3 (+4.4)	10.1 (+2.9)
Norway	69.4 (+16.3)	11.8 (+4.8)	21.6 (+5.6)	12.0 (+2.5)	18.9 (-0.4)	2.7 (-3.4)	13.4 (+3.3)	11.9 (+4.6)
Poland	48.0 (+13.3)	24.0 (+18.1)	7.3 (+3.8)	6.4 (+1.3)	13.0 (+7.4)	2.4 (-11.1)	4.4 (+1.8)	6.9 (+1.8)
Portugal	67.8 (+16.3)	25.1 (+12.0)	6.0 (+1.9)	9.1 (+0.4)	6.8 (+3.9)	9.1 (-1.1)	4.5 (+2.3)	11.9 (+1.1)
Slovak Republic	40.9 (+6.6)	10.3 (+4.9)	8.0 (+1.3)	9.4 (+1.6)	15.4 (+3.4)	6.3 (-5.8)	5.1 (+1.1)	11.4 (+1.2)
Slovenia	64.2 (+18.6)	10.7 (+6.5)	18.3 (+10.1)	8.7 (+1.4)	20.3 (+6.0)	3.9 (-13.1)	11.0 (+2.8)	10.2 (+0.1)
Spain	62.5 (+2.7)	15.4 (+5.5)	7.4 (-1.8)	6.2 (-3.0)	11.2 (+4.9)	5.6 (-7.9)	4.5 (-0.9)	7.4 (-1.5)
Sweden	68.7 (+15.5)	9.8 (+5.3)	18.9 (+8.1)	8.1 (+1.6)	12.3 (+1.9)	2.3 (-0.9)	11.6 (+3.4)	9.0 (+3.7)
Australia	67.8 (+5.8)	18.7 (+8.9)	26.5 (-4.7)	14.4 (+4.5)	12.8 (+2.3)	3.8 (-1.0)	23.9 (-5.0)	14.0 (+2.8)
Canada	58.2 (+5.5)	23.5 (+9.4)	10.5 (+0.6)	11.3 (+3.1)	10.6 (+1.9)	3.0 (-3.3)	7.3 (+0.1)	11.8 (+3.2)
Chile	29.7 (+5.9)	29.8 (+23.4)	4.4 (+0.8)	5.3 (+2.4)	29.7 (+13.5)	2	3	9.0 (+3.8)
Colombia	33.4 (-0.4)	27.3 (+14.6)	1.6 (-0.7)	6.5 (+0.8)	7.3 (+4.0)	1.7 (-0.3)	0.9 (+0.3)	6.3 (+3.4)
Israel	62.3 (-8.2)	18.9 (+2.9)	6.5 (-2.4)	9.4 (-0.2)	8.1 (+1.5)	3.8 (-3.7)	5.6 (-2.4)	10.1 (+2.8)
Japan	72.0 (+27.9)	11.6 (+6.2)	0.6 (+0.2)	10.8 (+2.6)	4.9 (+1.9)	5.7 (-1.4)	0.6 (+0.3)	13.4 (+1.5)
Korea	71.2 (+42.2)	89.0 (+76.5)	0.3 (+0.0)	10.8 (+3.6)	1.7 (+1.1)	4.5 (-1.9)	0.4 (+0.2)	12.3 (+3.3)
New Zealand	70.5 (+4.7)	9.6 (+2.2)	18.0 (-15.2)	14.7 (+5.1)	13.1 (-0.4)	3.0 (-2.0)	17.6 (-6.2)	13.9 (+7.6)
Türkiye	56.7 (+22.1)	39.9 (+34.1)	0.9 (+0.3)	7.1 (+3.7)	7.3 (+2.9)	9.4 (-10.9)	1.5 (+1.0)	8.3 (+1.5)
United Kingdom	66.3 (+6.0)	9.3 (+5.3)	14.1 (+2.8)	10.3 (+3.9)	12.0 (+0.3)	3.8 (-0.9)	8.6 (+1.8)	10.1 (+3.3)
United States	66.7 (+3.4)	24.0 (+10.4)	14.6 (+0.6)	12.6 (+5.1)	10.9 (+0.7)	3.2 (-4.1)	9.2 (-2.1)	14.3 (+4.6)

Note: The EU24 averages are unweighted and do not include Greece, Luxembourg or Romania. Age-standardisation is based on the 2013 European Standard Population. The latest available years are 2010 for Portugal and the Slovak Republic, 2015 for Bulgaria and Japan, and 2017 for other OECD countries. Given that population coverage within the referenced registry data differs between countries, the results should be interpreted with caution. See also the methodological information in Annex 2.B.

1. For testicular cancer, data for France are unavailable in the 2023 study.
2. For lung cancer, data for Chile are excluded due to limited observations.
3. For skin melanoma, data for Cyprus and Chile are likewise excluded. Average annual per cent changes (AAPCs) are presented in Annex Table 2.A.1.

Source: OECD calculations based on the following data: European Cancer Information System (ECIS) https://ecis.jrc.ec.europa.eu/, accessed on 25 November 2025; International Agency for Research on Cancer (IARC), https://gco.iarc.fr/overtime/en; Lapôtre-Ledoux et al. (2023[9]) “Incidence des principaux cancers en France métropolitaine en 2023 et tendances depuis 1990”, http://beh.santepubliquefrance.fr/beh/2023/12-13/2023_12-13_1.html, pp. 188-204; National Institute of Oncology, National Cancer Registry of Hungary (NRR), https://stat.nrr.hu/.

Box 2.3. Early-onset cancer incidence trends in the EU+2 largely mirror those in other OECD countries for breast, thyroid, testicular and lung cancers, but diverge for colorectal cancer

Early-onset breast and thyroid cancers are also the major contributors to the rise of cancer incidence among young women in other OECD countries between 2000 and 2017.

- The largest increases in age-standardised early-onset breast cancer incidence are recorded in Korea (+42.2 per 100 000 women), Japan (+27.9) and Türkiye (+22.1): or +4.7%, +3.5% and +2.3%, respectively, on the basis of average annual per cent change (Annex Table 2.A.1).
- The incidence of early-onset thyroid cancer has statistically significantly increased in all other OECD countries, with an estimated average annual per cent change of over 8% in Korea, Türkiye and Chile.

Similarly to EU+2 countries, the incidence of early-onset testicular cancer has increased in a number of other OECD countries, while that of early-onset lung cancer has broadly decreased.

- Absolute changes in the incidence of early-onset testicular cancer are largest in Chile (+13.5 per 100 000 men) and Colombia (+4.0). The largest estimated changes are seen in Korea (+6.6%), Japan (+5.5%), Colombia (4.3%) and Türkiye (+3.2%).
- For early-onset lung cancer, age-standardised incidence rates have declined in almost all other OECD countries, with substantial reductions registered in Türkiye (-10.9 per 100 000 men), the United States (-4.1), Israel (-3.7) and Canada (-3.3).

The pattern of early-onset cancer differs markedly between the EU+2 and other OECD countries for both skin melanoma and colorectal cancer in men and women. The early-onset skin melanoma cancer incidence has generally increased in EU+2 countries, but has not increased substantially in other OECD countries (Annex Table 2.A.1). Declines in skin melanoma cancer incidence among the young population are significant for both women and men in Australia and New Zealand, where changing demographics and public awareness campaigns are cited as potential reasons for these declines (Whiteman et al., 2024[62]; Wen et al., 2024[63]).

For early-onset colorectal cancer, age-standardised incidence has increased broadly, except for women in Colombia and Israel (Annex Table 2.A.1). Large increases are observed in Australia, Chile, Canada, the United Kingdom and the United States, as reported by Downham et al. (2025[59]). In the United States, Shah et al. (2021[64]), analysing the colorectal cancer incidence trend among young adults over a similar observation period (2001-2017), also confirmed that the increase represents a genuine epidemiological phenomenon rather than a detection artefact, as incidence rose across all stages at diagnosis.

Note: See methodological information in Annex 2.B. For Chile, Colombia, Japan, Türkiye and the United States, the registry data cover less than 10% of the population. Results should therefore be interpreted with caution.

2.4.4. The rise in early-onset cancer reflects changing risk profiles, broader diagnostic activity and, for some cancers, potential overdiagnosis

While fundamental reasons behind the rise of early-onset cancer incidence are yet to be determined and remain to be further investigated, there are potentially three main drivers. The first one is a genuine increase in the number of early-onset cases due to heightened risk exposures among younger generations. Shifts in metabolic factors and early-life environments – including changes in obesity, diet, physical inactivity, reproductive patterns, microbiome alterations and other exposures – explain the observed increase in cancer incidence among younger population (Díaz-Gay et al., 2025[60]; Wang et al., 2025[61]). For breast cancer, the recent change in reproductive patterns such as delayed and fewer childbirths is repeatedly cited as a prominent risk factor (Mao et al., 2023[19]; Obeagu and Obeagu, 2024[20]). The consumption of ultra-processed food has also been associated with increased risk of early-onset colorectal cancer among women (Wang et al., 2025[61]). Ugai et al. (2022[4]) also argue that the persistent rise in some cancers, including colorectal and pancreatic cancers, points to early-life exposures.

The second factor relates to advancement and expansion of healthcare access and cancer detection over time (including increased use of imaging, endoscopy, or earlier healthcare contact), which likely expanded detection opportunities among younger population. For colorectal cancer, increased diagnostic evaluation – including colonoscopy, CT colonography and faecal immunochemical test (FIT) – has been associated with increased detection of early-onset cases (Ladabaum et al., 2020[65]; Issa and Noureddine, 2017[66]). For skin melanoma, while exposure to ultraviolet radiation still explain 80% of cutaneous melanoma cases in 2022 worldwide, some recent evidence suggests diagnostic scrutiny playing a role. The cross-sectional analysis of cancer incidence and UV radiation exposure in the United States for example suggests that increased incidence correlates more strongly with measures of diagnostic scrutiny and more frequent biopsies (Adamson, Welch and Welch, 2022[67]).

Lastly, the increased use of diagnostic imaging and testing may have contributed to overdiagnosis for some cancers, via detection of slow-growing cancers among young adults who would otherwise die from other causes before the cancer became clinically relevant. For thyroid cancer, Jiang et al. (2025[51]) note a strong correlation between the economic development of a country and the rise in cancer incidence rates, most likely due to increased detection capacity leading to overdiagnosis and overtreatment. Based on available evidence, the number of overdiagnoses cases for thyroid, prostate and kidney cancers can be substantial (Richman and Gross, 2025[68]).

2.5. Adjusting policies to better reflect changes in the cancer burden

2.5.1. Continued policy efforts are needed to monitor socio-economic disparities in the cancer burden

The cancer burden disproportionately affects people with lower socio-economic status – see Box 2.2 and Section 2.3.2. The social gradient in cancer outcomes partly reflects the higher prevalence of modifiable behavioural risk factors, lower participation in early detection programmes, and reduced health literacy and awareness of cancer risks and symptoms among disadvantaged populations (Pacheco et al., 2024[69]; Li et al., 2024[70]; OECD/European Commission, 2023[71]; Tran et al., 2023[72]). To reduce inequalities in cancer outcomes, targeted policy measures are necessary. Reinforcing primary care to raise awareness of symptoms, scaling up screening programmes in deprived areas, improving health literacy and ensuring access to timely and high-quality cancer care are key options for consideration (see Chapters 3 and 4).

While there is some room for more targeted primary care and public health interventions to better serve people with lower SES, inequalities in cancer burden are not uniformly addressed and integrated into cancer care policies across EU+2 countries. For instance, only six EU+2 countries (France, Germany, Ireland, the Netherlands, Poland and Sweden) have a dedicated section on inequalities in their national cancer plans as of 2025, even though more than 90% of EU+2 countries have implemented a national cancer plan (OECD/European Commission, 2025[21]).

Likewise, disparities in the cancer burden are not regularly monitored or reported with national or regional cancer registry data in Europe (see Box 2.1 and Box 2.2). Less than half of EU+2 countries enable linkages to SES data to monitor socio-economic inequalities, according to the 2025 OECD Policy Survey on High-Value Cancer Care. SES information is either recorded or linked from other data sources in some

EU+2 countries: Belgium, Denmark, Ireland, Italy, Lithuania, Norway, the Netherlands, Poland, Slovenia and Sweden, but not in others.

2.5.2. Breast cancer screening programmes may need adjusting to detect early-onset cases, under the condition that the benefits outweigh the costs

From 2000 to 2022, age-standardised early-onset breast cancer incidence among women has increased by 16%, reaching 62 cases per 100 000 women aged 15-49 on average across EU countries in 2022. This epidemiological trend highlights the need to re-examine current screening age ranges, using up-to-date, evidence-based guidance that carefully weighs potential benefits against the risks of overdiagnosis and overtreatment, without extending screening to younger populations unless robust data on effectiveness and cost-effectiveness clearly support doing so. According to the 2022 EU Council Recommendation on Cancer Screening, breast cancer screening for women aged 50-69 with mammography is recommended. Lowering the age limit for screening to 45 and raising the upper age limit to 74 is also suggested for consideration.

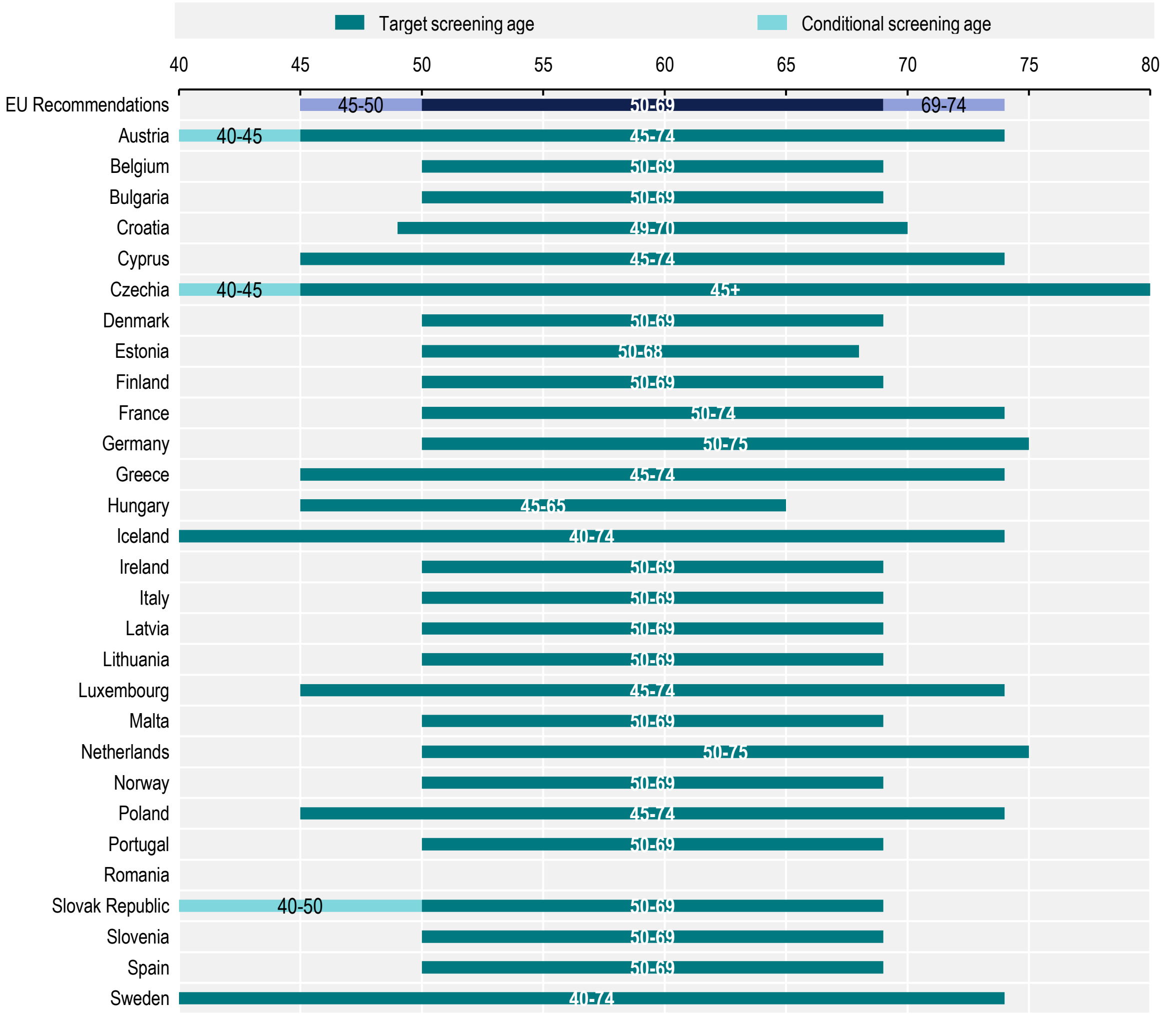
Population-based breast cancer screening is implemented in 26 EU+2 countries, while opportunistic screening is in place in Bulgaria, Lithuania and Romania (see Chapter 3). Figure 2.11 presents the target age ranges covered by breast cancer screening programmes as of 2025. Ten EU+2 countries organised population-based breast cancer screening programmes that are accessible to women aged 45-49 as of 2025: namely, Austria, Cyprus, Czechia, Greece, Hungary, Iceland, Luxembourg, Poland, the Slovak Republic and Sweden. For women aged 40-44, Iceland and Sweden include this group in their target population, while opt-in screening is available in Austria, Czechia (with out-of-pocket expense) and the Slovak Republic.

Adjustment of the target ages for breast cancer screening needs to be supported by robust evidence to ensure cost-effectiveness, as is the case for the current target age range of 50-69 (Sidiropoulou and Fonseca, 2025[73]; Pokharel et al., 2023[74]). Cost-effectiveness analyses on lowering the screening age rely mainly on modelling studies and emerging observational data, with little evidence from randomised-control trials demonstrating a clear benefit for screening in younger age groups. For instance, one Finnish study reports net benefits from screening women aged 45-49 for breast cancer (Siegfrids et al., 2025[75]), but a systematic review of European screening programmes finds that screening below age 50 is far less cost-effective – approximately EUR 105 000 per life-year gained, five times higher than for older women.

Overall, screening age adjustments should be informed by well-established evidence since the existing studies remain insufficient to justify the cost-effectiveness of universally expanding breast cancer screening to younger populations in some countries. Alternatively, risk-stratified screening – already implemented in some EU countries to target high-risk individuals (such as those with high breast tissue density, family history or genetic susceptibility) – could offer a more efficient and cost-effective way to expand early detection (see Chapter 4).

Figure 2.11. Women aged 45-49 are included in the eligible age group for breast cancer screening in 30% of EU+2 countries

Breast cancer screening age coverage, 2025



Note: Both population-based and opportunistic screening programmes are considered. In Austria, Czechia and the Slovak Republic, women younger than the main target group can opt in to the organised breast cancer screening programme. In Austria, women aged 40-45 may voluntarily register for mammography within the national programme, although they are not systematically invited. In Czechia, women aged 40-45 can also opt in but examinations in this age group are not reimbursed and must be paid out of pocket. In the Slovak Republic, women aged 40-50 may self-enrol for screening on a voluntary basis within the organised programme. For Estonia, the target age for breast cancer screening is expected to expand up to 74 years old. In some regions of Spain, women aged 45-49 are included for breast cancer screening.

Source: OECD (2024[10]), *Beating Cancer Inequalities in the EU: Spotlight on Cancer Prevention and Early Detection*; OECD/European Commission (2025[76]), *EU Country Cancer Profiles 2025*; Croatian Institute of Public Health.

2.5.3. People are being diagnosed with cancer at younger ages and are living longer with the disease, having a lasting impact on care needs and well-being

The rising incidence of early-onset breast, colorectal, skin melanoma and testicular cancers, coupled with improved survival, not only increases cancer burden – especially among women – but also suggests that diagnostic cancer care, treatment and supportive services must be adapted to the growing number of people living with cancer for an extended period. This is particularly true for breast and colorectal cancers, which are more common and where 5-year survival estimates have improved across almost all countries (see Chapter 4). A people-centred approach for individuals living with cancer is becoming increasingly important – not only to help them understand and manage their prognosis, but also to prevent their exclusion from the labour market by addressing long-term sick leave and promoting return-to-work initiatives before, during, and after treatment (see Chapter 5).

Measures to support people living with cancer are particularly crucial for women. The incidence of early-onset cancer has increased by 16% among women between 2000 and 2022, whereas it has remained stable among men (see Section 2.4.2). Since women in OECD and EU countries generally face fewer labour market opportunities than men – characterised by lower wages, fewer paid hours, and greater unpaid work (OECD, 2025[77]), policies such as extended paid sick leave, return-to-work programmes, and support for working-age informal carers are increasingly vital to help women navigate treatment and safeguard their economic and social well-being. For men, increasing early-onset testicular cancer may not necessarily adversely affect men's survival rates (which are already high), but their access to sexual health treatment and fertility preservation needs consideration (Hamilton et al., 2022[3]). In Germany, for example, sperm cryopreservation is covered by public health insurance from 2019 (Fernández-González et al., 2022[78]). This is also the case in France, the Netherlands, Scandinavian countries, Slovenia and Poland. The Slovak Republic also implemented a survivorship programme for testicular cancer (see Chapter 5).

Lastly, this chapter has highlighted limited progress in the burden of pancreatic cancer, with both increasing age-standardised cancer incidence and mortality rates since 2000. Ensuring greater concentration of pancreatic cancer surgeries to improve outcomes (see Chapter 4) as well as the availability and early integration of palliative care into the cancer care pathway – particularly through the development of home-based services – is critical to support better quality of life (see Chapter 5).

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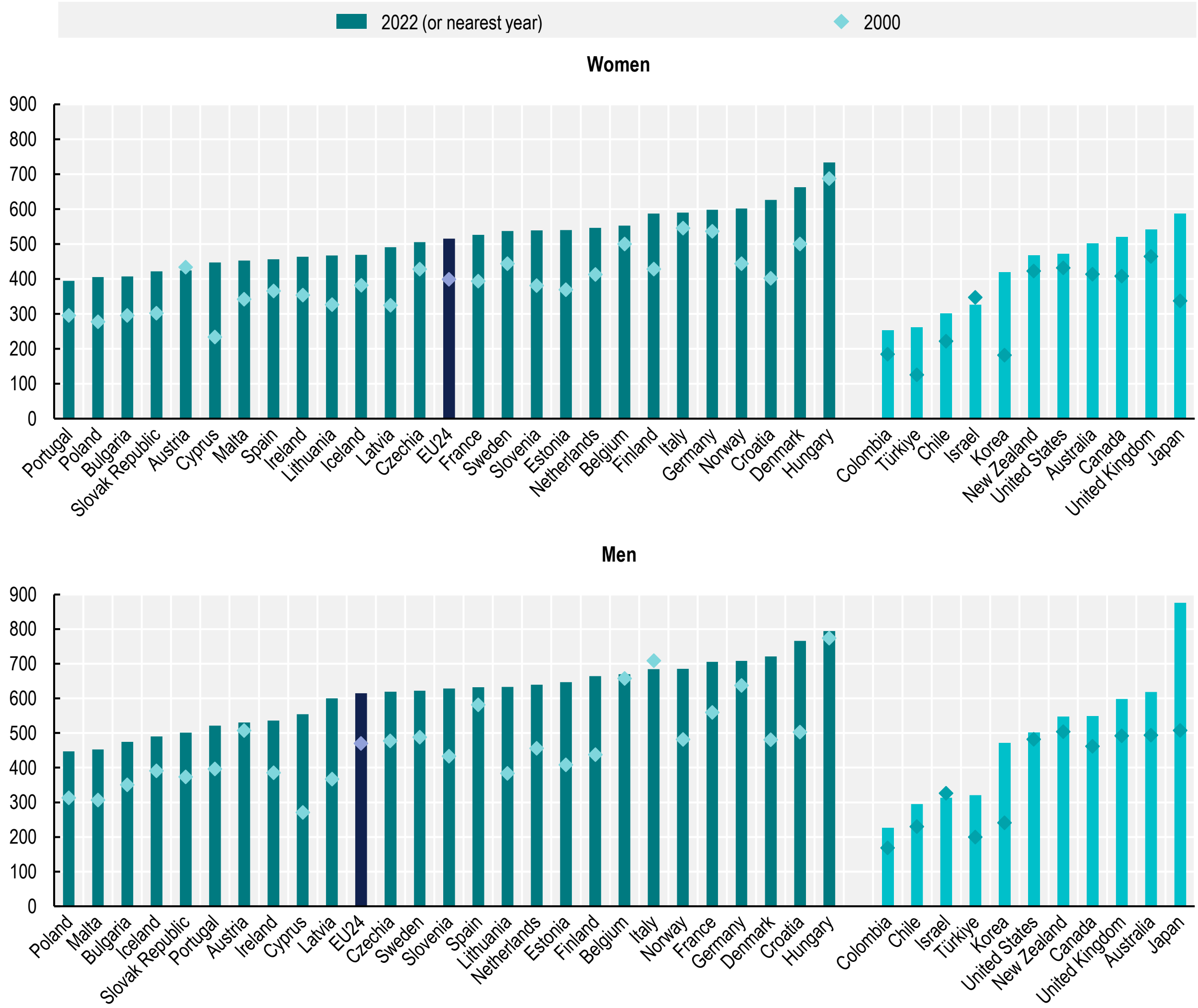
Annex 2.A. Supplementary data

Annex Figure 2.A.1. The crude incidence of cancer in the EU has increased by 29% in women and by 31% in men from 2000-2022

Crude cancer incidence rate per 100 000, all ages, 2000 and 2022 (or nearest year)

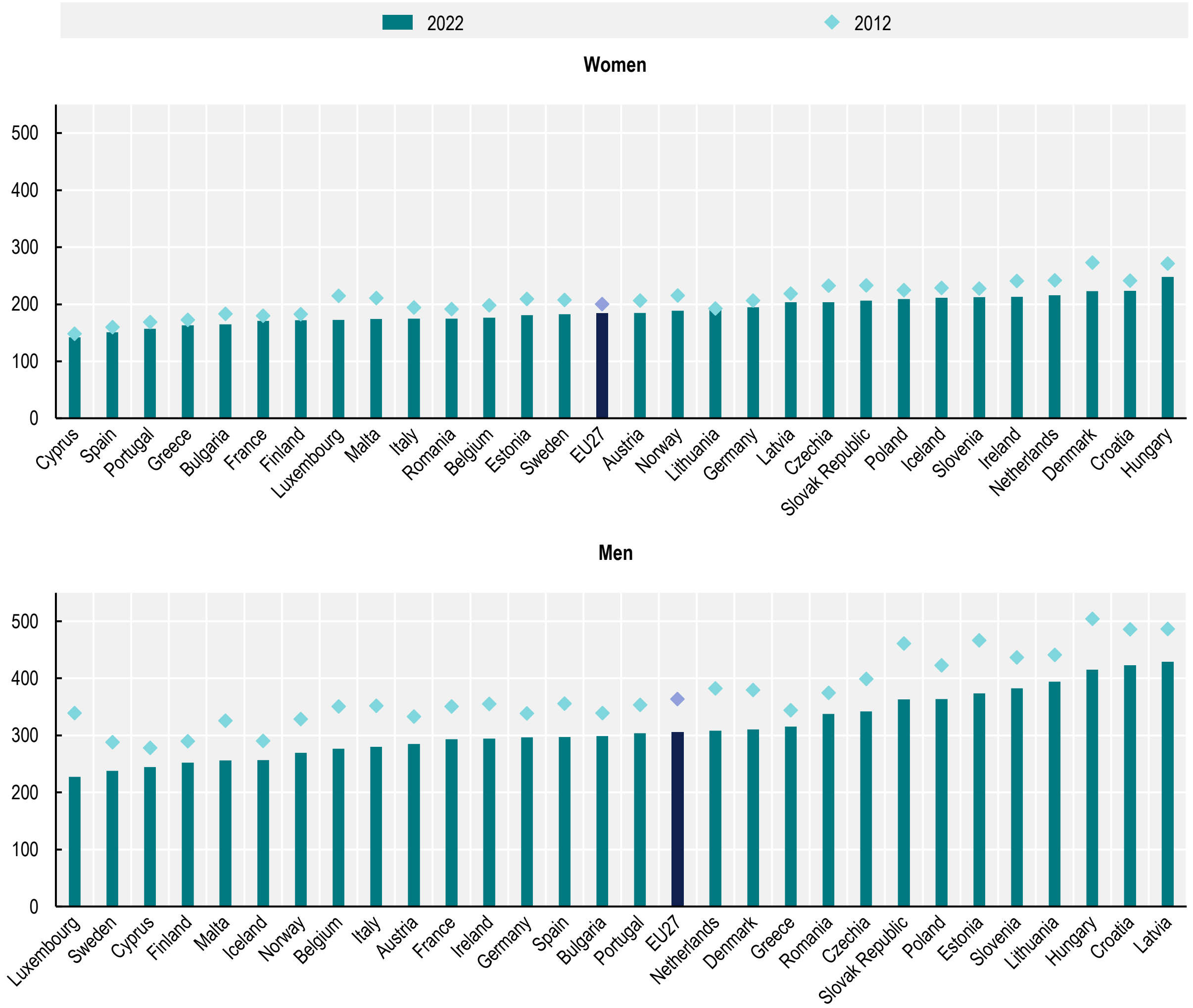


Note: The EU24 averages are unweighted and do not include Greece, Luxembourg or Romania. All cancer sites except for non-melanoma skin cancer are included. Age-standardisation is based on the 2013 European Standard Population. The latest available years are 2010 for Portugal and the Slovak Republic, 2015 for Bulgaria and Japan, and 2017 for other OECD countries. Given that population coverage within the referenced registry data differs between countries, the results should be interpreted with caution. See also the methodological information in Annex 2.B.

Source: OECD calculations based on the following data: European Cancer Information System (ECIS) https://ecis.jrc.ec.europa.eu/, accessed on 25 November 2025; International Agency for Research on Cancer (IARC), https://gco.iarc.fr/overtime/en; Lapôtre-Ledoux et al. (2023[9]) "Incidence des principaux cancers en France métropolitaine en 2023 et tendances depuis 1990", http://beh.santepubliquefrance.fr/beh/2023/12-13/2023_12-13_1.html; National Institute of Oncology, National Cancer Registry of Hungary (NRR), https://stat.nrr.hu/.

Annex Figure 2.A.2. Cancer mortality declined 8% among women and 16% among men in the decade to 2022

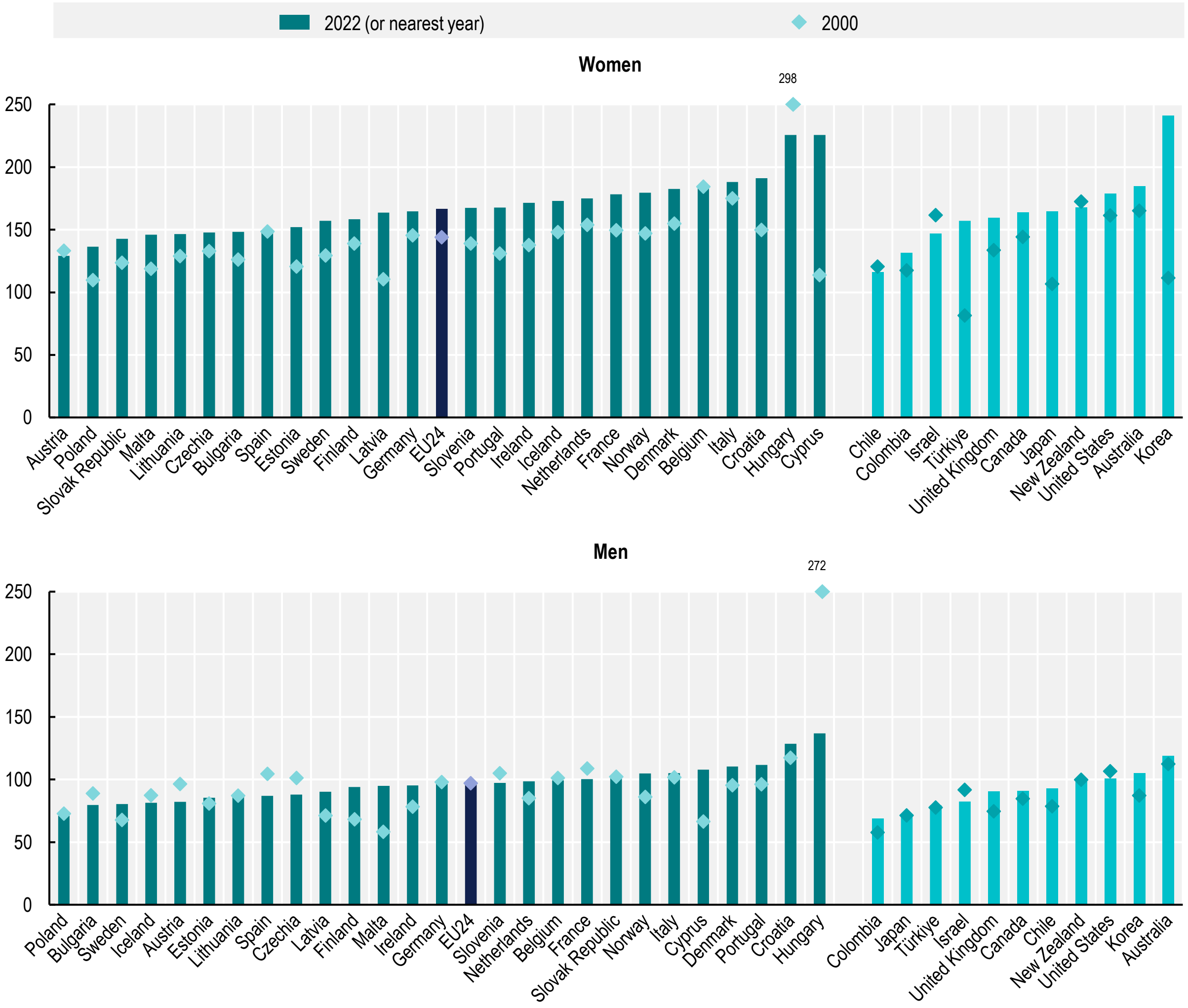
Age-standardised cancer mortality rate per 100 000



Note: The EU27 averages are weighted. Age-standardisation is based on the 2013 European Standard Population. See also endnote 1.
Source: Causes of death (Eurostat), https://doi.org/10.2908/HLTH_CD_ASDR2.

Annex Figure 2.A.3. Early-onset cancer incidence has increased widely among women in 22 out of 24 EU+2 countries but among men in just half of 24 EU+2 countries

Age-standardised cancer incidence rate per 100 000, age 15-49, 2000 and 2022 (or nearest year)

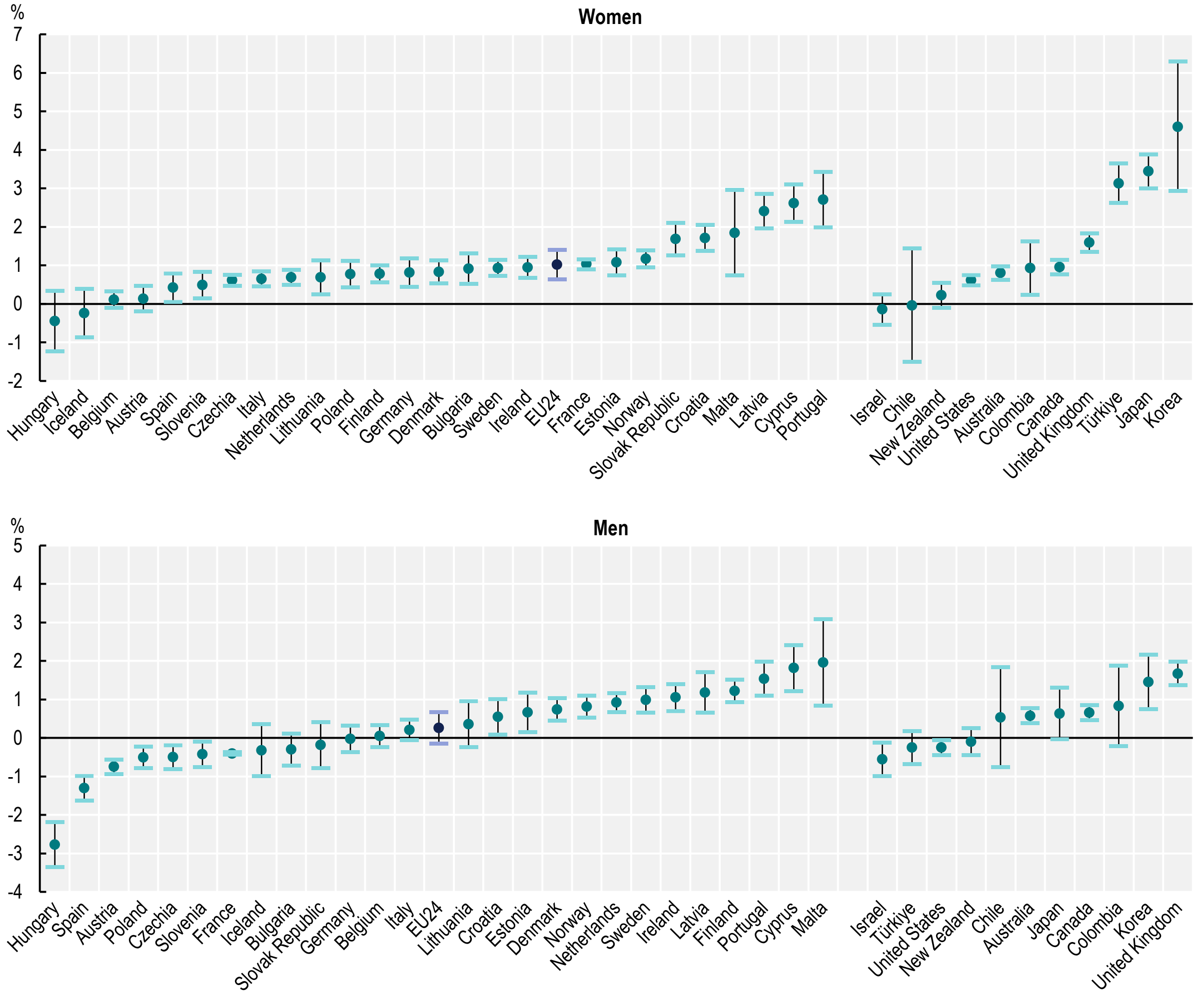


Note: The EU24 averages are unweighted and do not include Greece, Luxembourg or Romania. All cancer sites except for non-melanoma skin cancer are included. Age-standardisation is based on the 2013 European Standard Population. The latest available years are 2010 for Portugal and the Slovak Republic, 2015 for Bulgaria and Japan, and 2017 for other OECD countries. Given that population coverage within the referenced registry data differs between countries, the results should be interpreted with caution. See also the methodological information in Annex 2.B.

Source: OECD calculations based on the following data: European Cancer Information System (ECIS) https://ecis.jrc.ec.europa.eu/, accessed on 25 November 2025; International Agency for Research on Cancer (IARC), https://gco.iarc.fr/overtime/en; Lapôtre-Ledoux et al. (2023[9]) "Incidence des principaux cancers en France métropolitaine en 2023 et tendances depuis 1990", http://beh.santepubliquefrance.fr/beh/2023/12-13/2023_12-13_1.html; National Institute of Oncology, National Cancer Registry of Hungary (NRR), https://stat.nrr.hu/.

Annex Figure 2.A.4. Rising early-onset cancer incidence is statistically significant among women but not among men on average in the EU27

Average annual per cent change (95% CI) in age-standardised cancer incidence, age 15-49, from 2000 to 2022 (or nearest year)



Note: The EU24 averages are unweighted and do not include Greece, Luxembourg or Romania. All cancer sites except for non-melanoma skin cancer are included. Age-standardisation is based on the 2013 European Standard Population. The latest available years are 2010 for Portugal and the Slovak Republic, 2015 for Bulgaria and Japan, and 2017 for other OECD countries. Given that population coverage within the referenced registry data differs between countries, the results should be interpreted with caution. See also the methodological information in Annex 2.B. Age-standardised cancer incidence trends are assessed using a log-linear regression model consistent with the Joinpoint framework (with zero joinpoints).

Source: OECD calculations based on the following data: European Cancer Information System (ECIS) https://ecis.jrc.ec.europa.eu/, accessed on 25 November 2025; International Agency for Research on Cancer (IARC), https://gco.iarc.fr/overtime/en; Lapôtre-Ledoux et al. (2023[9]) "Incidence des principaux cancers en France métropolitaine en 2023 et tendances depuis 1990", http://beh.santepubliquefrance.fr/beh/2023/12-13/2023_12-13_1.html; National Institute of Oncology, National Cancer Registry of Hungary (NRR), https://stat.nrr.hu/.

Annex Table 2.A.1. Average annual per cent change in early-onset cancer incidence rates

Average annual per cent change (95% CI) in age-standardised cancer incidence among those aged 15-49, from 2000 to 2022 (or nearest year)

	Women				Men			
	Breast	Thyroid	Skin melanoma	Colorectum	Testis	Lung	Skin melanoma	Colorectum
EU24 average	**1.1*** (0.6, 1.6)	**4.6*** (3.1, 6.1)	**2.5*** (0.9, 4.2)	0.5 (-0.6, 1.6)	**2.5*** (1.3, 3.6)	**-4.1*** (-5.3, -2.9)	**2.6*** (1.1, 4.2)	0.3 (-0.7, 1.4)
Austria	**0.4*** (0.0, 0.8)	**2.1*** (0.6, 3.6)	1.2 (-0.2, 2.6)	0.3 (-0.4, 1.1)	**0.6*** (0.0, 1.1)	**-4.1*** (-4.8, -3.3)	0.3 (-1.3, 1.8)	0.3 (-0.6, 1.3)
Belgium	**-0.4*** (-0.7, -0.2)	**2.2*** (0.9, 3.5)	**3.3*** (2.3, 4.2)	0.4 (-0.3, 1.1)	**2.7*** (2.1, 3.3)	**-3.2*** (-4.0, -2.4)	**2.9*** (1.6, 4.2)	0.0 (-0.7, 0.6)
Bulgaria	**0.9*** (0.4, 1.3)	**6.0*** (4.5, 7.6)	**4.5*** (2.1, 6.9)	0.0 (-1.3, 1.2)	**2.4*** (1.1, 3.8)	**-3.0*** (-3.7, -2.2)	**1.5*** (0.1, 2.9)	-0.8 (-1.9, 0.4)
Croatia	**2.3*** (1.8, 2.8)	**6.1*** (5.4, 6.8)	**2.8*** (1.7, 3.8)	**1.8*** (0.9, 2.7)	**4.3*** (3.7, 4.9)	**-6.2*** (-6.9, -5.4)	**3.3*** (2.4, 4.3)	**1.1*** (0.4, 1.8)
Cyprus	**1.3*** (0.7, 2.0)	**7.0*** (5.0, 8.9)	1.2 (-1.1, 3.6)	-0.5 (-2.1, 1.1)	**2.2*** (0.8, 3.5)	1.7 (-0.4, 3.8)	[3]	-1.1 (-2.9, 0.8)
Czechia	**2.0*** (1.7, 2.3)	**5.7*** (4.7, 6.7)	**2.2*** (1.2, 3.1)	**-0.4*** (-0.7, 0.0)	**1.0*** (0.4, 1.5)	**-6.7*** (-7.5, -5.9)	**2.1*** (1.4, 2.9)	**-1.3*** (-2.1, -0.4)
Denmark	**0.5*** (0.2, 0.8)	**5.9*** (5.1, 6.7)	**2.5*** (1.3, 3.7)	**1.5*** (1.0, 2.0)	0.3 (-0.3, 0.9)	**-4.0*** (-4.8, -3.2)	**2.9*** (1.8, 4.0)	**0.9*** (0.5, 1.4)
Estonia	**1.6*** (0.9, 2.3)	0.3 (-1.8, 2.3)	**4.6*** (2.7, 6.5)	0.9 (-1.1, 3.0)	**3.3*** (1.3, 5.3)	**-5.1*** (-6.7, -3.5)	**5.2*** (2.6, 7.9)	**2.2*** (0.2, 4.2)
Finland	-0.1 (-0.4, 0.2)	**1.6*** (0.9, 2.4)	**4.5*** (3.0, 6.0)	**1.2*** (0.5, 1.9)	**2.6*** (1.6, 3.6)	**-1.9*** (-3.1, -0.8)	**3.2*** (2.4, 4.0)	**2.2*** (1.3, 3.1)
France	**1.0*** (0.8, 1.1)	**1.9*** (1.2, 2.7)	**2.3*** (2.2, 2.5)	**1.7*** (1.6, 1.9)	[1]	**-3.2*** (-3.3, -3.0)	**2.5*** (2.1, 2.8)	**0.2*** (0.1, 0.4)
Germany	**0.7*** (0.5, 0.9)	**3.1*** (1.9, 4.4)	0.9 (-0.8, 2.5)	0.3 (0.0, 0.6)	0.1 (-0.2, 0.5)	**-3.2*** (-3.6, -2.8)	0.9 (-0.5, 2.3)	0.3 (-0.1, 0.7)
Hungary	0.1 (-1.0, 1.3)	**5.2*** (4.1, 6.4)	**2.7*** (1.3, 4.2)	-0.5 (-1.1, 0.1)	0.5 (-0.4, 1.3)	**-8.2*** (-8.9, -7.4)	**2.5*** (1.2, 3.9)	**-1.4*** (-2.0, -0.9)
Iceland	**0.8*** (0.2, 1.5)	-1.6 (-4.4, 1.2)	**-4.5*** (-6.5, -2.4)	**4.2*** (1.6, 6.9)	0.1 (-1.9, 2.1)	-3.8 (-7.6, 0.1)	-2.6 (-5.2, 0.0)	**2.9*** (0.4, 5.5)
Ireland	**0.8*** (0.5, 1.2)	**4.9*** (3.2, 6.7)	**1.3*** (0.6, 2.0)	0.7 (0.0, 1.5)	0.6 (-0.2, 1.3)	**-1.6*** (-2.8, -0.4)	**1.5*** (0.8, 2.2)	0.5 (-0.4, 1.4)
Italy	**0.6*** (0.4, 0.9)	**2.7*** (1.8, 3.7)	**4.0*** (2.8, 5.2)	**-1.9*** (-2.9, -1.0)	**3.3*** (2.5, 4.1)	**-3.8*** (-5.1, -2.5)	**4.4*** (3.5, 5.2)	**-1.6*** (-2.1, -1.1)
Latvia	**1.8*** (1.0, 2.6)	**10.6*** (8.8, 12.6)	**2.7*** (1.0, 4.5)	0.8 (-1.1, 2.8)	**2.5*** (0.6, 4.5)	**-3.0*** (-4.4, -1.6)	2.8 (-0.8, 6.5)	0.7 (-1.1, 2.4)
Lithuania	**0.8*** (0.2, 1.4)	**3.1*** (1.4, 4.8)	**2.3*** (0.7, 4.0)	0.5 (-0.8, 1.9)	**2.2*** (0.5, 4.0)	**-4.3*** (-5.4, -3.2)	**2.3*** (0.3, 4.4)	-0.8 (-2.0, 0.3)
Malta	1.0 (-0.2, 2.2)	**3.8*** (1.4, 6.2)	3.6 (-2.4, 9.9)	0.4 (-3.2, 4.0)	**4.8*** (1.7, 8.0)	**-7.1*** (-12.0, -2.0)	**6.2*** (2.9, 9.6)	0.7 (-3.6, 5.1)
Netherlands	**0.5*** (0.3, 0.8)	**3.8*** (3.0, 4.5)	**1.8*** (1.1, 2.4)	**1.3*** (0.9, 1.7)	**2.9*** (2.5, 3.3)	**-1.5*** (-2.0, -0.9)	**2.0*** (1.3, 2.8)	**1.6*** (1.2, 2.0)
Norway	**1.1*** (0.8, 1.4)	**4.1*** (3.3, 4.8)	**1.5*** (1.0, 2.1)	**1.4*** (0.8, 2.1)	0.0 (-0.6, 0.6)	**-4.2*** (-4.9, -3.4)	**1.6*** (1.0, 2.2)	**1.7*** (1.1, 2.4)
Poland	**1.4*** (1.1, 1.8)	**7.1*** (6.3, 8.0)	**3.8*** (3.2, 4.3)	**0.6*** (0.2, 1.0)	**3.0*** (2.6, 3.4)	**-7.8*** (-8.3, -7.3)	**2.5*** (2.1, 3.0)	**0.6*** (0.3, 1.0)
Portugal	**3.1*** (2.2, 4.1)	**7.5*** (6.1, 8.9)	**4.1*** (1.3, 6.9)	0.8 (-1.0, 2.6)	**8.8*** (5.6, 12.0)	0.1 (-1.5, 1.7)	**5.0*** (1.6, 8.6)	**1.9*** (0.1, 3.8)
Slovak Republic	**2.0*** (1.5, 2.6)	**8.5*** (3.4, 13.9)	0.7 (-2.5, 4.1)	1.1 (-0.7, 2.8)	**2.7*** (0.9, 4.5)	**-6.1*** (-7.5, -4.7)	2.2 (-0.6, 5.0)	1.1 (-0.5, 2.7)
Slovenia	**1.6*** (1.1, 2.1)	**3.1*** (1.5, 4.8)	**2.6*** (1.2, 4.0)	**1.7*** (0.2, 3.3)	**1.5*** (0.3, 2.7)	**-7.5*** (-9.1, -5.9)	**2.0*** (0.5, 3.5)	0.1 (-0.7, 0.9)
Spain	**1.0*** (0.6, 1.3)	**4.1*** (2.3, 5.9)	-0.4 (-1.6, 0.8)	**-2.0*** (-3.1, -1.0)	**3.9*** (3.1, 4.7)	**-6.4*** (-7.6, -5.2)	0.4 (-1.8, 2.6)	**-1.6*** (-2.7, -0.5)
Sweden	**0.7*** (0.5, 1.0)	**4.4*** (3.6, 5.1)	**2.0*** (1.0, 3.0)	**1.7*** (1.1, 2.2)	**0.7*** (0.2, 1.3)	**-2.5*** (-3.3, -1.6)	**1.7*** (1.0, 2.4)	**1.9*** (1.4, 2.4)
Australia	**0.7*** (0.5, 0.9)	**3.6*** (3.2, 4.0)	**-1.0*** (-1.4, -0.6)	**2.5*** (2.0, 3.1)	**0.9*** (0.4, 1.4)	**-1.2*** (-2.1, -0.3)	**-1.3*** (-1.8, -0.8)	**2.4*** (1.8, 3.0)
Canada	**0.6*** (0.4, 0.7)	**3.5*** (2.4, 4.6)	**0.4*** (0.1, 0.7)	**2.5*** (2.0, 3.0)	**1.7*** (1.3, 2.1)	**-4.6*** (-5.2, -4.0)	**-0.4*** (-0.7, 0.0)	**2.5*** (2.0, 3.0)
Chile	0.0 (-2.1, 2.2)	**10.9*** (7.2, 14.7)	-0.9 (-5.4, 3.9)	**4.6*** (0.6, 8.7)	2.1 (-0.1, 4.4)	[2]	[3]	**5.2*** (1.3, 9.2)
Colombia	0.1 (-0.7, 0.9)	**7.0*** (5.4, 8.6)	0.0 (-3.0, 3.1)	0.7 (-0.7, 2.1)	**4.3*** (2.2, 6.3)	**-4.5*** (-7.7, -1.1)	-1.8 (-6.2, 2.8)	**2.1*** (0.2, 4.1)
Israel	0.1 (-0.5, 0.6)	**2.4*** (1.4, 3.3)	**-1.7*** (-2.6, -0.8)	-0.1 (-1.0, 0.8)	**1.1*** (0.1, 2.1)	**-3.0*** (-4.6, -1.4)	**-1.4*** (-2.2, -0.5)	**1.2*** (0.5, 1.9)
Japan	**3.5*** (3.1, 3.9)	**6.6*** (5.3, 7.9)	**3.6*** (0.2, 7.2)	**2.3*** (1.6, 3.0)	**5.5*** (3.9, 7.0)	**-1.6*** (-2.6, -0.7)	**4.2*** (0.5, 8.0)	**1.1*** (0.1, 2.2)
Korea	**4.7*** (4.3, 5.1)	**8.0*** (2.9, 13.5)	**2.2*** (0.7, 3.7)	**2.0*** (1.0, 3.0)	**6.6*** (5.9, 7.3)	**-2.3*** (-2.7, -1.8)	**2.1*** (0.2, 4.0)	**2.0*** (0.6, 3.4)
New Zealand	**0.9*** (0.4, 1.4)	**3.6*** (2.3, 4.9)	**-3.1*** (-3.9, -2.3)	**2.1*** (1.1, 3.1)	-0.2 (-1.2, 0.8)	-0.8 (-2.5, 0.9)	**-2.4*** (-3.2, -1.6)	**3.5*** (2.3, 4.6)
Türkiye	**2.3*** (1.9, 2.8)	**8.9*** (6.6, 11.2)	2.1 (-0.4, 4.6)	**2.4*** (1.2, 3.7)	**3.2*** (2.2, 4.2)	**-5.7*** (-7.0, -4.3)	0.5 (-2.2, 3.2)	**1.6*** (0.8, 2.4)
United Kingdom	**1.0*** (0.7, 1.4)	**6.3*** (5.6, 6.9)	**1.4*** (0.8, 2.0)	**3.8*** (3.3, 4.3)	0.4 (-0.1, 1.0)	**-1.0*** (-1.6, -0.4)	**1.4*** (0.7, 2.1)	**2.8*** (2.2, 3.4)
United States	**0.2*** (0.1, 0.4)	**3.6*** (2.7, 4.5)	0.0 (-0.4, 0.4)	**2.4*** (1.9, 3.0)	**0.3*** (0.0, 0.6)	**-4.6*** (-5.1, -4.2)	**-0.9*** (-1.4, -0.5)	**2.0*** (1.6, 2.4)

Note: The EU24 averages are unweighted and do not include Greece, Luxembourg or Romania. Age-standardisation is based on the 2013 European Standard Population. The latest available years are 2010 for Portugal and the Slovak Republic, 2015 for Bulgaria and Japan, and 2017 for other OECD countries. Given that population coverage within the referenced registry data differs between countries, the results should be interpreted with caution. See also the methodological information in Annex 2.B. Age-standardised cancer incidence trends are assessed using a log-linear regression model consistent with the Joinpoint framework (with zero joinpoints). *Statistically significant at the 95% confidence interval.

1. For testicular cancer, data for France are unavailable.
2. For lung cancer, data for Chile are excluded due to limited observations.
3. For skin melanoma, data for Cyprus and Chile are likewise excluded.

Source: OECD calculations based on the following data: European Cancer Information System (ECIS) https://ecis.jrc.ec.europa.eu/, accessed on 25 November 2025; International Agency for Research on Cancer (IARC), https://gco.iarc.fr/overtime/en; Lapôtre-Ledoux et al. (2023[9]) “Incidence des principaux cancers en France métropolitaine en 2023 et tendances depuis 1990”, http://beh.santepubliquefrance.fr/beh/2023/12-13/2023_12-13_1.html; National Institute of Oncology, National Cancer Registry of Hungary (NRR), https://stat.nrr.hu/.

Annex 2.B. Methodological approach to analysing cancer incidence trends from registries

To illustrate the epidemiological evolution of cancer across European countries, the cancer incidence data are compiled from the cancer registries of 24 EU countries as well as Iceland and Norway, drawing on sources available from the European Cancer Information System (ECIS) and the International Agency for Research on Cancer (IARC). IARC data are also used for other OECD countries.

For France, national estimates in the metropolitan area are referenced from a recent study undertaken by the French National Institute of Cancer (INCa) (Lapôtre-Ledoux et al., 2023[9]). For Hungary, the National Cancer Registry (Nemzeti Rákregiszter, NRR) data are used in the absence of other data sources. The description of sources is available in Annex Table 2.B.1.

Age-standardised incidence rates are computed using the European Standard Population 2013. For overall cancer incidence, non-melanoma skin cancers (C44 according to ICD-10), malignant neoplasms of other and ill-defined sites (C76), malignant neoplasms without specification of site (C80) and malignant neoplasms of independent (multiple) primary sites (C97) are excluded.

For countries with regional cancer registries, the same set of regional registries is kept for the entire observation period to ensure within-country consistency. Priority is given to regions with larger population share to maximise data representativeness, while maintaining the longest possible observation period. Based on the 2022 population data, the population coverage of selected regional cancer registries is approximately 59% in Germany, 37% in Italy, 78% in Portugal and 21% in Spain. For Chile, Colombia, Japan, Türkiye and the United States, the population coverage of referenced registry data is below 10%.

Trend analysis enables smoothing out country-specific heterogeneity arising from screening practices and better focussing on underlying changes in cancer incidence. However, the latest available years are not within the last decade in Bulgaria (2015), Portugal (2010) and the Slovak Republic (2010). Hence, interpreting the incidence trend data from these countries requires caution.

Furthermore, the quality of cancer surveillance systems varies greatly across countries and thus significantly affects the coverage and completeness of confirmed or estimated cancer cases, which impacts the comparability of incidence data across countries. For example, incidence data often present striking increases in Cyprus: the age-standardised cancer incidence rate has increased by 24% for men and by 50% for women since 2000, whereas the corresponding changes in the EU average are 0% for men and 10% for women (Figure 2.5). This likely reflects the expanded scope and coverage of Cyprus' national cancer registry since its launch in 1998, rather than a substantially higher cancer risk compared to the EU average (OECD/European Commission, 2025[76]). National cancer registries have been established more recently in some Baltic and Central European countries, and thus changes in their cancer incidence rates may also appear high, such as in Hungary.

For Greece, Luxembourg and Romania, data from representative cancer registries were unavailable at the time of writing.

Annex Table 2.B.1. Cancer registry data sources

Country	Data source	Coverage (%)	Time period	Data description
EU+2 countries				
Austria	ECIS	National	2000-2019	
Belgium	ECIS	National	2004-2020	
Bulgaria	ECIS	National	2000-2015	
Croatia	ECIS	National	2001-2022	Age-standardised rates are based on age 0-85+.
Cyprus	ECIS	National	2000-2022	The registry's scope of and coverage has expanded during the observation period.
Czechia	ECIS	National	2000-2018	
Denmark	ECIS	National	2000-2022	
Estonia	ECIS	National	2000-2019	Age-standardised rates are based on age 0-85+.
Finland	Cancer Over Time (IARC)	National	2000-2022	
France	Institut national du cancer (INCa), Sante Publique France, HCL and Francim network	National[1]	2000-2018	Nationwide incidence is estimated using the French regional registry data. Data for testicular cancer are unavailable in the 2023 study.
Germany	ECIS	Regional (59%)[2]	2003-2019	Age-standardised rates are based on age 0-85+.
Hungary	National Institute of Oncology (OOI)	National	2000-2019	Age-standardised rates are based on age 0-85+.
Iceland	Cancer Over Time (IARC)	National	2000-2022	
Ireland	ECIS	National	2000-2021	
Italy	ECIS	Regional (37%)[3]	2003-2016	Age-standardised rates are based on age 0-85+.
Latvia	ECIS	National	2000-2017	
Lithuania	ECIS	National	2000-2017	
Malta	Cancer Over Time (IARC)	National	2000-2017	
Netherlands	ECIS	National	2000-2020	
Norway	ECIS	National	2000-2022	Age-standardised rates are based on age 0-85+.
Poland	ECIS	National	2000-2022	
Portugal	ECIS	Regional (78%)[4]	2000-2010	Age-standardised rates are based on age 0-85+.
Slovak Republic	ECIS	National	2000-2010	
Slovenia	ECIS	National	2000-2020	
Spain	ECIS	Regional (21%)[5]	2004-2017	Age-standardised rates are based on age 0-85+.
Sweden	ECIS	National	2000-2023	
Non-EU+2 OECD countries				
Australia	Cancer Over Time (IARC)	National	2000-2017	
Canada	Cancer Over Time (IARC)	Regional (75%)[6]	2000-2017	
Chile	Cancer Over Time (IARC)	Regional (2%)[7]	2000-2017	
Colombia	Cancer Over Time (IARC)	Regional (9%)[8]	2003-2017	
Israel	Cancer Over Time (IARC)	National	2000-2017	
Japan	Cancer Over Time (IARC)	Regional (9%)[9]	2000-2015	
Korea	Cancer Over Time (IARC)	National	2000-2017	
New Zealand	Cancer Over Time (IARC)	National	2000-2017	
Türkiye	Cancer Over Time (IARC)	Regional (8%)[10]	2000-2017	
United Kingdom	Cancer Over Time (IARC)	National	2003-2017	
United States	Cancer Over Time (IARC)	Regional (9%)[11]	2000-2017	

Note: Age-standardised cancer incidence rates are computed using the 2013 European Standard Population.

1. For France, INCa has estimated the nationwide number of cancer cases based on the regional registry data observed in 1990-2018.
2. For Germany, the registries of Hamburg, Lower Saxony, Rhineland-Palatinate, Saarland, Bavaria, North Rhine-Westphalia and Schleswig-Holstein are included.
3. For Italy, the registries of Emilia-Romagna, Veneto, Catania-Messina-Enna, Liguria, Brescia, Friuli-Venezia Giulia, Mantova and Cremona, Umbria, Palermo, Pavia, Trento, Basilicata, South Tyrol, Siracusa, Sassari, Ragusa, Nuoro and Sondrio are included.
4. For Portugal, the registries of North (RORENO), South (ROR-Sul) and Azores (RORA) are included.
5. For Spain, the registries of Basque Country, Canary Islands, Castellón, Girona, Granada, La Rioja, Murcia, Navarra and Tarragona are included.
6. For Canada, the registries of Nova Scotia, Northwest Territories, Nunavut, Quebec and Yukon are excluded.
7. For Chile, the registry of Valdivia is included.
8. For Colombia, the registries of Cali, Bucaramanga, Manizales and Pasto are included.
9. For Japan, the registries of Miyagi and Osaka are included.
10. For Türkiye, the registries of Izmir and Antalya are included.
11. For the United States, SEER 9 (San Francisco-Oakland and Los Angeles Cancer Registries (California), Connecticut Tumor Registry, Atlanta Tumor Registry (Georgia), Hawaii Tumor Registry, State Health Registry of Iowa, Detroit Cancer Registry (Michigan), New Mexico Tumor Registry, Utah Cancer Registry, Seattle-Puget Sound Tumor Registry (Washington State) are included.

Source: European Cancer Information System (ECIS) https://ecis.jrc.ec.europa.eu/, accessed on 25 November 2025; International Agency for Research on Cancer (IARC), https://gco.iarc.fr/overtime/en; Lapôtre-Ledoux et al. (2023[9]) "Incidence des principaux cancers en France métropolitaine en 2023 et tendances depuis 1990", http://beh.santepubliquefrance.fr/beh/2023/12-13/2023_12-13_1.html; National Institute of Oncology (OOI), National Cancer Registry of Hungary (NRR), https://stat.nrr.hu/.

Notes

[1] Note that Figure 2.7 is based on the 2015 OECD population between 2000 and 2023, while Figure 2.8 and Annex Figure 2.A.2 are based on the 2013 European Standard Population between 2012 and 2022, although country ranking is largely consistent across these figures.

[2] Note that the underlying data of the EU-CanIneq study are based on historical trends (1998-2003 for Czechia) for the 2015-2019 results. Population-based linked data were used for most EU countries, but unlinked data were used for Czechia by associating cancer mortality rates of five-year age cohorts with census data on socio-economic characteristics of each age cohort (European Commission/IARC/Erasmus MC, 2024[79]).

[3] There are substantial changes in Cyprus and Hungary (see Annex Figure 2.A.3). Nonetheless, the overall trend in early-onset cancer incidence remains robust even without these two countries. Excluding Cyprus and Hungary, the EU average cancer incidence rates among younger adults would change by +23.1 per 100 000 women (compared with +22.8 across all 24 EU+2 countries with available data) and +4.3 among men (compared with no change across all 24 EU countries with available data). The average annual percentage changes in age-standardised cancer incidence rates would be +1.0% for younger women (95% CI: 0.7 to 1.4) and would remain unchanged at +0.3% for younger men (95% CI: -0.1 to 0.7). These robustness checks confirm that the observed rise in early onset cancer incidence is driven by women, while trends among men remain largely stable.

3 Timely access to cancer care

Timely cancer care is crucial for improving health outcomes and survival rates. However, delays can occur at multiple points along the cancer care pathway, from missed opportunities for timely cancer screening, symptom recognition and first contact with health services, to diagnosis and treatment – with negative consequences on treatment efficacy, people's quality of life, and the health and economic costs of cancer. Many of these delays are avoidable and vary in length both across and within countries, by geography, gender, socio-economic status and ethnicity. EU countries, Iceland and Norway are addressing these access challenges through communication, organisational and system-level interventions, as well as innovative solutions using digital tools and expanded professional roles. This chapter examines how health systems can ensure timely access to cancer care for all people who need it, regardless of where they live, their financial resources, or their social and cultural background.

In Brief

Delays in cancer care can occur at any stage of the care pathway, from a person's first contact with the health system through diagnosis and treatment, leading to more complex therapies, poorer health outcomes, and higher costs for the health system. Such delays in accessing cancer services point to significant unmet needs.

Participation in cancer screening and contact with the health system

- Population-based breast cancer screening is implemented in all but three EU+2[1] countries, while three-quarters run cervical and colorectal programmes. In 2023, breast cancer screening participation among women aged 50-69 averaged 57% in the EU, while cervical cancer screening stood at 54% of the eligible population and colorectal cancer screening at 44%. Highly educated individuals are more likely to participate, while groups such as migrants and LGBTIQ+ people experience barriers. Personalised invitations and plain-language materials boost screening uptake, as do convenient options such as self-sampling for cervical screening, faecal immunochemical test (FIT) tests for colorectal cancer, mobile or flexible mammography options and involvement of primary healthcare.
- Around nine in ten cancer diagnoses originate outside of screening programmes. Even among screening-relevant cancers such as colorectal, robust screening programmes capture up to 40-60% of cancer diagnoses. Timely help-seeking from health systems is key for early detection of such cancers but is challenged by ambiguous symptoms or masked by multimorbidity.
- Across the EU, 4% of people reported they have unmet needs for medical examination in 2022, mainly due to waiting times and high cost, though geographical barriers played an important role in some countries. Personal and health literacy related reasons (such as deciding to wait, fear, or time constraints) were reported by more than 4% of respondents in Denmark and Norway. To reduce geographic barriers, countries implement telemedicine solutions for primary healthcare and specialist visits, accounting for more than a quarter of physician consultations in Denmark, Estonia, Portugal and Sweden. Almost half of EU+2 countries do not have co-payments for primary care visits, reducing delays in access to care particularly for low-income and older populations, while others aim to keep co-payments low with small fees and annual caps.

Timely cancer diagnosis

- Early cancer diagnosis, critical for improving survival and treatment effectiveness, varies across EU+2 countries. An average of 56% of breast cancers in the EU were diagnosed at early stages (from 42% in Latvia to 66% in Norway), however this figure drops to 22% for colorectal cancer (from 16% in Latvia to 33% in Luxembourg). For cervical cancer, early diagnoses comprised 62% of diagnoses (from 37% in Latvia to 85% in Iceland). Cancer diagnoses made in emergency departments also indicate missed opportunities for earlier detection, with up to 37% of lung cancers in Croatia diagnosed via emergency presentation. For colorectal cancer, the proportion of emergency diagnoses was highest in Belgium, at 45% among people aged 15-49 years and 29% among those in the screening-eligible age group.
- Despite their crucial role, only seven EU+2 countries offer cancer early-diagnosis training for primary healthcare providers. Seven EU+2 countries also use decision support tools in primary healthcare for cancer detection, as pilots show impact: for example, in England such tools prompted referrals that would not have occurred in about 20% of cases. Countries are removing

financial barriers to imaging, with more than two-thirds of EU+2 countries not charging co-payments for diagnostic testing. Fast-track diagnostic pathways and rapid diagnostic centres are increasingly implemented to cut time to diagnosis.

- Monitoring systems using actionable indicators can drive improvements in timely and equitable access to cancer diagnosis. Only three EU+2 countries (Denmark, the Netherlands and Norway) systematically track the cancer care pathway from first attendance in primary care to referral to a specialist and the start of treatment. 14 EU+2 countries monitor cancer care timeliness, and some, like Sweden, use near-real-time dashboards. Yet, equity monitoring is rare, and countries use different indicators, which makes international comparisons challenging.

Timely cancer treatment

- Delays in initiating cancer treatment following diagnosis are strongly linked to increased mortality across multiple cancer types, with each four-week postponement significantly raising the risk of death. In three EU+2 countries (Belgium, Denmark and Norway), more than 60% of people diagnosed with colorectal, breast or lung cancer started treatment within 30 days of tissue diagnosis.
- Financial hardship can discourage or delay cancer treatment, with 16% of Europeans with cancer across 25 countries reporting delaying some aspects of treatment, usually doctor visits or medicines. However, three-quarters of EU+2 countries have implemented specific mechanisms to ensure low or no co-payments in cancer treatment.
- As cancer care often involves multiple providers, initiatives such as patient navigation and case management can facilitate care transitions. Standardised pathways have been developed in 17 EU+2 countries, establishing waiting time benchmarks between several care steps. Sweden stands out with 31 cancer-type-specific pathways, introduced in 2015, based on Denmark’s cancer package approach established in 2007.
- Shortages of oncologists, radiotherapists and nurses remain a challenge across many EU+2 countries. In response, countries are implementing training reforms and workforce planning tools, while also testing new professional roles and establishing well-being initiatives to address staff burnout and increase retention. However, effective monitoring to inform strategic workforce planning remains difficult given cross-country differences in professional definitions, workload and scope of practice.
- Access to radiotherapy is uneven across Europe, while projections estimate a 25% increase in radiotherapy demand by 2050, which needs to be met with workforce and equipment availability. To keep up with the demand for radiation therapy by 2045, EU+2 countries would need to invest an estimated EUR 504 million in linear accelerators. As of 2025, 11 EU+2 countries can provide high-cost, high-precision particle-beam therapy domestically.
- Delays in accessing cancer medicines after European Medicines Agency (EMA) approval result in missed opportunities for treatment, while variations across countries in reimbursement timelines lead to substantial health and economic losses. Some European countries, such as Austria and France, continue to have higher uptake of newer oncology medicines across cancer types, partly because the timelines between marketing authorisation and reimbursement are often shorter. Oncology clinical trials are concentrated in four large European countries (France, Germany, Italy and Spain), with smaller countries and those in Central Europe benefitting less.

1. EU+2 countries refer to EU27, Iceland and Norway.

3.1. Introduction

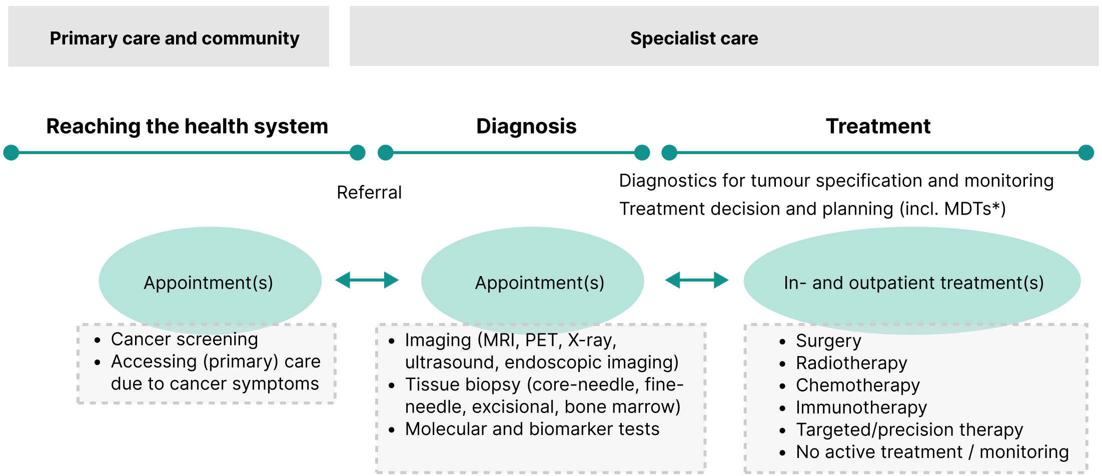
Timely cancer care depends on people's ability to access health services they need. People with cancer have various touchpoints with the health system, from screening or initial referral for a symptom, to diagnostic services, to various treatment modalities and, ultimately, survivorship care. Barriers related to the approachability, acceptability, availability and organisation of services, as well as affordability and appropriateness (Levesque, Harris and Russell, 2013[1]), can lead to long waiting times and, in some cases, harmful delays in care.

Tumour growth rates can vary significantly depending on the cancer site and subtype. Because aggressive cancers can progress to advanced stages within weeks, early detection improves the likelihood of a successful response to treatment and contributes to better health outcomes and survival, while delays can lead to more complex and costly treatment. After diagnosis, even a four-week delay in starting cancer treatment is associated with increased mortality across treatment modalities for seven cancer types (Hanna et al., 2020[2]).

Detecting cancer at an early stage also has implications for spending by health systems. A systematic review found that, compared with Stage I breast cancer, treatment costs increase by a third for Stage II and nearly double for Stage III (Sun et al., 2018[3]). A US-based study found similar significant cost increases across cancer types, with particularly steep increases for metastatic cancer (McGarvey et al., 2022[4]). In addition to direct treatment costs, timely care also improves people's quality of life and experience of care, and decreases indirect societal costs such as productivity losses from premature mortality or long-term sick leave (see Chapter 5).

The duration of delays at each stage of cancer care depends on several factors, including tumour characteristics and person-level factors. While some delays are unavoidable, others arise from access barriers within the health system, pointing to significant unmet needs. Disparities in timely access result in inequities in cancer outcomes, including mortality and survival. This chapter examines delays in cancer care and policy actions to improve timely access to cancer care. It is organised around key components of the cancer care pathway, from first contact with healthcare services (Section 3.2) to receipt of timely diagnosis (Section 3.3) and treatment (Section 3.4) (Figure 3.1). Survivorship and support services are discussed in Chapter 5.

Figure 3.1. People with cancer have multiple contacts and varied needs during their care trajectory



Note: *Multidisciplinary tumour boards. Care pathways vary by cancer type and individual needs. Figure does not capture all touchpoints along the cancer care pathway.
Source: Adapted from OECD (2020[5]), *Waiting Times for Health Services: Next in Line*, https://doi.org/10.1787/242e3c8c-en.

3.2. Participation in cancer screening and early contact with the healthcare system is the first step to timely access to cancer care

3.2.1. Access to healthcare services remains uneven and needs strengthening

Population-based cancer screening programmes do not equally benefit all people across Europe

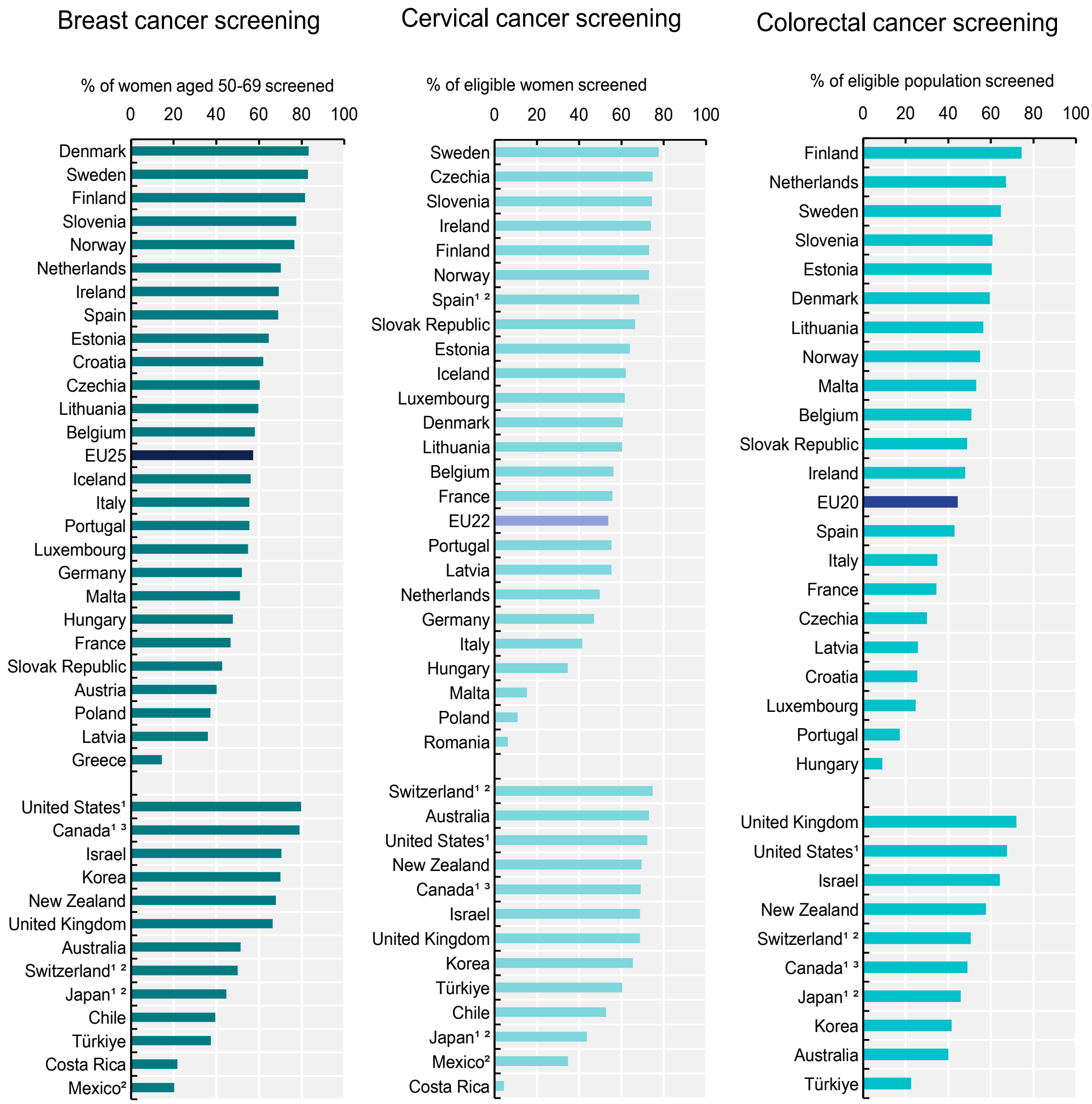
Population-based cancer screening is an effective intervention to detect abnormalities associated with cancer in asymptomatic individuals, thus catching cancer at an earlier stage, when treatment is less complex and less costly for the health system. All but three EU+2 countries have population-based screening for breast cancer, with Bulgaria, Lithuania and Romania instead relying on non-population-based screening. Three-quarters of EU+2 countries have established population-based screening programmes for cervical and colorectal cancers (OECD/European Commission, 2025[6]). In addition, the updated 2022 EU Council Recommendation[2] proposes to examine evidence-based feasibility to introduce gastric, lung and prostate cancer screening programmes, which by 2025 are being piloted or implemented in some countries (see Chapter 4).

Screening participation is associated with better outcomes. For example, the International Agency for Research on Cancer (IARC) estimates that women who attend breast cancer screening have a 40% lower risk of dying from breast cancer (Aapro M, 2021[7]). Similarly, a Swedish registry-based study found higher breast cancer mortality among women who did not attend breast cancer screening when first invited, largely because they were less likely to participate in subsequent screening rounds, leading to later diagnosis (Ma et al., 2025[8]).

Population-based screening for breast, cervical and colorectal cancers is a highly cost-effective public health intervention. The updated 2022 Council of the EU Recommendation endorses these programmes and sets targets to increase participation and reach vulnerable groups. A 2025 Dutch study of the three screening programmes found that all remain cost-effective in the Netherlands, providing substantial health benefits at relatively low costs to the health system. The analyses found that cervical (unvaccinated cohort) and colorectal cancer screenings are both cost-saving, with annual savings of EUR 23 million and EUR 72 million respectively, while breast cancer screening remains cost-effective at around EUR 4 000 per quality-adjusted life year gained. Women in the age cohort vaccinated against HPV were included in the Dutch cervical cancer screening programme for the first time in 2023, with initial data suggesting that the programme is less cost-effective in this group (Erasmus Medical Centre, 2025[9]).

Uptake of screening varies across OECD countries and population groups, with important implications for timely contact with healthcare services. Figure 3.2 shows participation rates among the target population for breast, cervical and colorectal cancer screening programmes.

Figure 3.2. Participation in breast, cervical and colorectal cancer screening programmes is uneven across EU countries



Note: EU averages are unweighted. Data represents administrative data from screening programmes in 2023, if not otherwise stated. 1. Survey data. 2. Data refers to 2020-2022. 3. Data refers to 2024. For cervical and colorectal cancer, the differences between countries in target age groups, screening frequency and screening methods lead to variations in the data coverage reported across countries.
Source: OECD Health Statistics 2025. Data for Canada are sourced from Statistics Canada (2025[10]) and data for Malta are sourced from Eurostat (2025[11]).

In EU+2 countries, breast cancer screening is typically offered every 2 years to women aged 50-69 to detect abnormalities at an early stage. In 2023, an average of 57% of women in the target population in the EU participated, although uptake ranged from 83% in Denmark and Sweden to 15% in Greece (Figure 3.2). Overall, the average coverage across the EU has returned to approximately its 2019 level, following a decrease during the COVID-19 pandemic. At country level, however, screening rates have increased compared with pre-pandemic levels in Estonia and Lithuania, by 8.6 and 7.5 percentage points (p.p.) respectively, while Iceland, Italy and the Netherlands have seen declines of 5 p.p. or more compared with 2019.

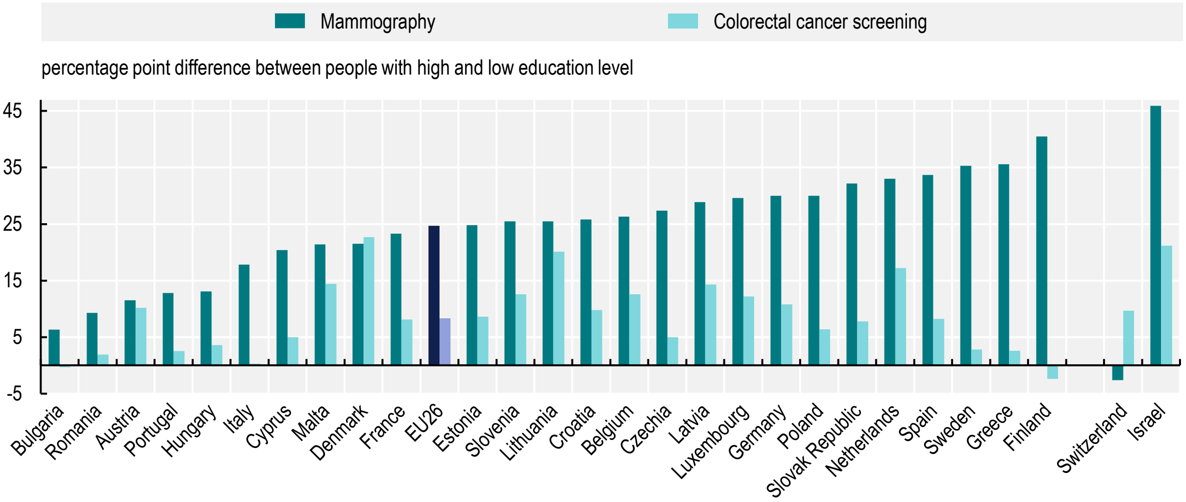
Cervical cancer screening allows detection of cervical cell changes before they develop into cancer and is therefore a preventive intervention. The WHO global strategy for the elimination of cervical cancer recommends 70% coverage of cervical cancer screening at ages 35 and 45, alongside vaccination and early treatment targets (WHO, 2021[12]). Across countries, cervical cancer screening is often provided every three to five years to women aged 20-69, with programmes often tailored by test type and age group. For example, in Spain, women aged 25-34 are invited for a pap smear every three years and women aged 35-65 are invited for an HPV test every five years. In Sweden, women aged 23-49 are invited for HPV-based screening every five years, and women aged 50-70 every seven years (OECD Health Statistics, 2025[13]). In 2023, an average of 54% of eligible women in the EU participated in cervical cancer screening, ranging from 78% in Sweden to 11% in Poland and 6% in Romania (Figure 3.2). Czechia, Ireland, Slovenia, Norway and Finland also reached coverage above 70%. Compared with 2019, several countries observed important increases in screening uptake, most notably Estonia (up 16.4 p.p.) and Latvia (up 15.5 p.p.). However, coverage dropped by 5 p.p. or more in Iceland, Ireland, Luxembourg and the Netherlands.

For colorectal cancer, country guidelines typically recommend biennial faecal occult blood tests for people in their 50s and 60s, although some countries use other methods, including colonoscopy. Differences in recommended screening intervals make cross-country comparisons challenging, but coverage generally remains lower than for breast and cervical cancer screening because programmes have been introduced more recently in many countries. In 2023, screening participation averaged 44% in the EU (Figure 3.2), below the desirable level of 65% set out in the European guidelines for quality assurance in colorectal cancer screening and diagnosis (European Commission, 2010[14]). The desirable level was reached only in Finland (74%), the Netherlands (67%) and Sweden (65%). The 45% level defined as acceptable in the European guidelines was reached in 11 countries, while screening rates were the lowest in Hungary (9%) and Portugal (17%). Compared with 2019, colorectal cancer screening rates increased the most in Latvia (from 15% to 26%) and Estonia (from 54% to 60%).

Twelve of the 26 EU+2 countries that responded to the OECD 2025 Policy Survey on High Value Cancer Care highlighted low screening participation as one of the main barriers to early cancer diagnosis, which also undermines the effectiveness of screening programmes. Czechia, despite overall high rates of screening for cervical cancer (Figure 3.2), reported misunderstandings about screening benefits, while low awareness of the programmes is considered a barrier in Bulgaria, Czechia, Greece, Ireland, Lithuania, Poland, Romania and Spain. Estonia, the Netherlands and Sweden reported concerns over particularly low uptake among groups with lower socio-economic status and migrant backgrounds.

Data from the Survey on Healthy Ageing and Retirement in Europe (SHARE) highlights that educational inequalities in screening uptake persist across EU+2 countries (Figure 3.3). On average, people with high education levels had a 25-p.p. higher probability of having had a mammography in the previous two years than those with low education, with an 8-p.p. gap for colorectal cancer screening. For breast cancer screening, the largest gaps between people with high and low education were observed in Finland, Greece and Sweden (all above 35 p.p.), as well as in Israel (46 p.p.). Conversely, in Bulgaria and Romania differences by education are less than 10 p.p. while in Switzerland the difference is slightly negative. For colorectal cancer screening, the largest gap between people with high and low education (above 20 p.p.) was found in Denmark and Lithuania, as well as in Israel.

Figure 3.3. Uptake of cancer screening programmes is consistently lower among people with lower education



Note: Data refer to people aged 50-74, weighted using the SHARE survey weights. A p.p. difference across population groups is shown. High education level refers to post-secondary or tertiary education, while low education refers to primary or lower secondary education. In Finland, rates for colorectal cancer screening reflect participation in opportunistic screening, as a population-based programme with coverage shown in Figure 3.2 was introduced in 2022.
Source: Survey of Health Ageing and Retirement in Europe (SHARE) Wave 9 (2022).

In all 15 EU countries with available data, women had higher participation rate in colorectal cancer screening than men, by an average of 6 p.p. in 2023. Estonia, Norway and Sweden reported larger gender differences at 10 or more p.p., followed by Denmark and Finland with differences of more than 9 p.p. Gender differences are also observed for other screening programmes as well, such as lung and gastric cancer screening, which are being piloted for both sexes in many European countries. Lower participation among men reflects a broader pattern of reduced use of preventive health services, influenced by social norms and attitudes that discourage help-seeking, as well as fear, embarrassment and lower risk perception (Teo et al., 2016[15]). Social support has also been identified as a key enabling factor for screening participation across European countries (Jolidon et al., 2024[16]). Addressing these issues calls for gender-sensitive interventions, strong provider recommendations, and tailored strategies like home-based stool tests and community outreach.

Screening rates are also consistently lower among people who identify as lesbian, gay, bisexual, transgender, intersex and queer (LGBTIQ+), attributable to disparities in risk factors, healthcare access and preventive service utilisation (Heer et al., 2023[17]). Barriers include pain and embarrassment during procedures, limited awareness of screening options, and anticipation of discrimination in healthcare settings, highlighting the role of provider-patient relationships in equitable care delivery. According to the 2024 EU LGBTIQ survey among people aged 15 and above, 14% of respondents reported discrimination by healthcare or social services personnel due to their sexual orientation or gender identity, with national rates ranging from 21% in Cyprus and Hungary to 6% in Estonia (European Union Agency for Fundamental Rights, 2024[18]). Aligned with the literature, the survey also found lower mammography uptake rates in the previous two years among lesbian, gay or bisexual women who are also cisgender (14%), transgender men and women, and non-binary people (7-9%), compared with 36% in the general population, based on the 2019 European Health Interview Survey. Cervical cancer screening rates were similarly lower across LGBTIQ+ groups. However, gay and bisexual men were more likely to participate in anal and colorectal cancer screening, with 12% undergoing colonoscopy in the past year versus 4% in the general population based on the 2019 European Health Interview Survey. Evidence from the United States identified similar patterns for prostate cancer screening, as gay and bisexual men were more likely to participate, while transgender individuals were less likely (Ma et al., 2021[19]).

Screening rates are also lower among migrants, who are often less likely to be diagnosed with early-stage cancer, partly due to perceived and experienced barriers to accessing healthcare services. Data from the European Health Interview Survey indicated that women born outside of the EU were 45% less likely to have had a mammogram in the last two years, 55% less likely to be up to date with cervical cancer screening, and 15% less likely to be up to date with colorectal cancer screening, while migrants from within the EU were less affected (Bozhar et al., 2022[20]). Country-specific studies similarly show lower likelihood of receiving recommended screenings among people with a migration background for colorectal screening in Norway (Bhargava et al., 2023[21]), cervical cancer screening in Germany (Brzoska, Aksakal and Yilmaz-Aslan, 2020[22]), and mammography in Austria (Wahidie, Yilmaz-Aslan and Brzoska, 2024[23]), although not all migrant groups were equally affected. Administrative data similarly indicated lower uptake of both breast and cervical cancer screening among women with foreign passports in Iceland (OECD/European Commission, 2025[24]) and among speakers of non-domestic languages in Finland (languages other than Finnish, Swedish and Sami) (OECD/European Commission, 2025[25]).

A scoping review from across the EU identified barriers and facilitators influencing cervical cancer screening among underserved populations, including ethnic minorities and migrants (Greenley et al., 2023[26]). Macro-level barriers include financial challenges such as lack of insurance coverage and concern about out-of-pocket costs; bureaucratic challenges related to service registration or inaccurate information included in registries that send invitations, and lack of trust in the health system. At the screening service level, cultural relevance and inclusivity, as well as translations were important. At the individual level, low awareness, stigma, fear, and competing life priorities were frequently cited as key barriers.

Delays in contact with healthcare following cancer symptom onset are a persistent issue

Most cancers are diagnosed outside of population-based screening programmes. This is due to several factors, including that screening is not conducted for many cancer types where epidemiological and cost-effectiveness evidence does not support population-based screening, that screening is limited to specific age ranges, and that some cancers are diagnosed between scheduled screening rounds (interval cancers). Estimates from 2022 indicate that people aged 70 and older, who are not included in most screening programmes, accounted for 56% of new colorectal cancer cases, 36% of new breast cancer cases and 18% of new cervical cancer cases in the EU (IARC, 2025[27]).

Although the exact proportion of cancer cases identified by different means of detection is rarely available, international estimates suggest that around nine in ten cancers are detected by means other than screening. For example, among all people diagnosed with cancer in Denmark between 2014-2017, 7.5% were diagnosed via population-based screening, 45.9% in primary care and 20% in secondary care (Danckert et al., 2021[28]). Data from the United States estimates that 14% of all cancers were detected through a screening test (NORC at the University of Chicago, 2022[29]). For colorectal cancer, where population-based screening programmes are available, an analysis across nine European countries (Belgium, Denmark, England, France, Italy, Ireland, the Netherlands, Slovenia and Spain) found that the proportion of screen-detected cancers remains below 30% in most countries (Cardoso et al., 2022[30]). The proportion was higher at 40-60% in Slovenia, the Netherlands and the Basque Country in Spain, where colorectal cancer screening programmes have been fully rolled out. In Germany, around one in four colorectal cancer cases are diagnosed through population-based screening (Hornschuch, Schwarz and Haug, 2024[31]).

Outside of screening, recognition of cancer symptoms and prompt engagement with healthcare services is the first step in access to cancer care. Cancer symptoms vary widely depending on the type and location of the disease, which makes it challenging to ensure awareness among patients to identify them as serious enough to see a doctor. Delay is also dependent on symptom type – particularly for some cancers, such as brain and central nervous system, and haematological cancers, symptoms are broad and non-specific. Common warning signs across many cancer types include unexplained weight loss, persistent fatigue, pain, lumps or swelling, and skin changes such as jaundice or sores that fail to heal. Some cancers, however, present with more distinct and recognisable symptoms – for example breast cancer may cause a lump in the breast or changes to the nipple; while bladder cancer often leads to visible blood in the urine (Koo et al., 2018[32]). According to the OECD Patient-Reported Indicators Survey (PaRIS), among primary healthcare users aged 45+ living with cancer, more than three in four (76%) had other comorbid chronic diseases. Among these people, unspecific symptoms may be easily attributed to preexisting conditions.

Across cancer sites, non-recognition of symptom seriousness has been found to be the main individual-level factor for delays, with older age, lower socio-economic status, and lower education levels contributing to longer delays (Macleod et al., 2009[33]). In women with new breast cancer symptoms, perception that the symptoms were not dangerous was the main factor associated with delayed care while adults with low health literacy were more likely to report avoiding doctor's visits (Morris et al., 2013[34]). Emotional barriers such as fear of diagnosis or stigma further delay care-seeking.

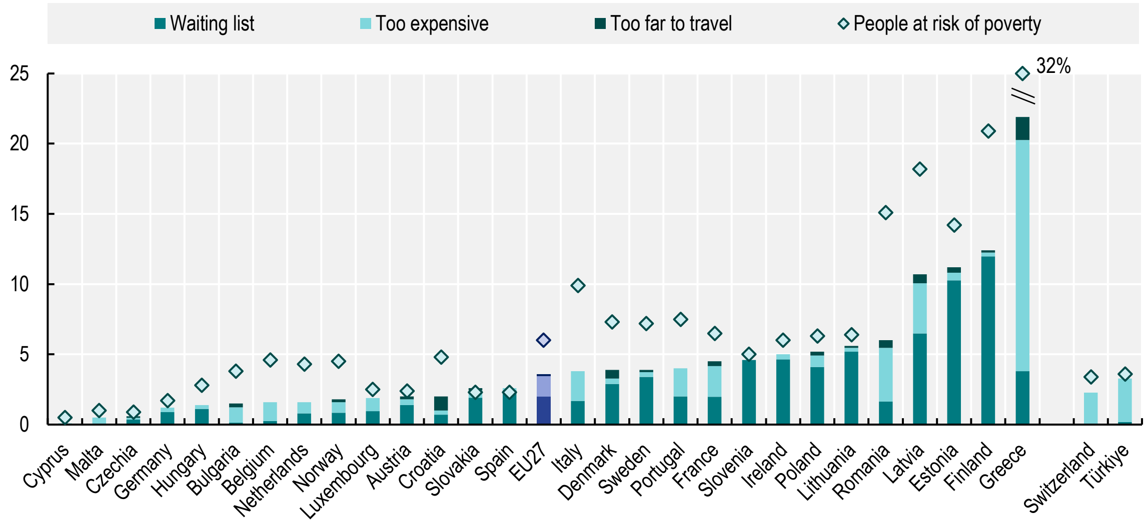
Long patient intervals, i.e. the time from symptom onset to first consultation, are common across countries. A United States-based survey among people with cancer noted that 21% waited more than three months before seeking care (Forbes et al., 2014[35]). People with prostate and rectal cancers were most likely to delay healthcare contact, with 44% and 37% respectively waiting more than three months before seeking care. People with breast cancer were least likely to delay, with only 8% reporting delays of more than three months, largely attributable to breast cancer symptoms being widely known and relatively non-ambiguous. Socio-economic deprivation was associated with greater delays. Primary care data from the English National Audit of Cancer Diagnosis (Lyratsopoulus, 2015[36]) further showed that the longest median patient intervals (over 30 days) were observed for laryngeal and oropharyngeal cancers, followed by cervical, oesophageal and vulval cancers.

In most EU+2 countries, primary care is positioned as the preferred first contact point with the healthcare system (13 among 23 responding to the 2023 OECD Health System Characteristics Survey (OECD Health Statistics, 2025[13])) where referral is obligatory to access most types of specialist care, including further diagnostic services or co-ordinated care pathways (see section "Countries address waiting times and diagnostic delays by streamlining capacity through fast-track pathways and rapid diagnostic centres"). In four countries (Belgium, France, Latvia and Sweden), individuals have financial incentives to obtain a referral, although direct access remains possible, while six countries (Austria, Czechia, Germany, Greece, Iceland and Luxembourg) do not require or incentivise primary care referrals. For some cancers, organ-specific specialists such as gynaecologists, dermatologists or dentists may also be an appropriate first contact point when symptoms appear. At a population level, having a central point of contact, usually primary healthcare, enhances trust and helps people interact more effectively with the healthcare system (see Chapter 5).

In 2022, across the EU, 4% of people reported unmet needs for a medical examination (including primary or specialist healthcare), with waiting times being the most commonly reported reason. More than 20% in Greece and more than 10% in Finland, Estonia and Latvia reported that their needs were not met due to waiting lists, cost of services or distance to services (Figure 3.4). These reasons were least often cited in Cyprus, Malta and Czechia, where fewer than 1% of people with a need for a medical examination reported them.

Figure 3.4. The most common reason for unmet medical needs in the EU is due to waiting times

Population reporting unmet needs for medical examination by main reason, and total among those at risk of poverty



Note: Data refer to the proportion of people aged 16 and over living in private households and who reported having medical needs. The coloured bars show proportion of people who report having unmet needs for a medical examination in primary care or specialist care, among all people with medical needs, by main reason. The diamond marker shows total reporting unmet needs due to these reasons, among people at risk of poverty, which is defined as those with an equivalised disposable income below 60% of the national median disposable income.
Source: Eurostat, EU-SILC 2024 (https://doi.org/10.2908/HLTH_SILC_08 and hlth_silc_08b).

Waiting times were most commonly declared as the main reason for unmet needs for medical examinations, with an average of 2% of people in the EU needing medical exams citing this reason for their unmet needs (Figure 3.4). Some countries had particularly high rates, such as Finland (12%), Estonia (10%), Latvia (7%) and Lithuania (5%). The 2023 Commonwealth Fund International Health Policy Survey of Adults found that waiting times for primary care is a concern in other countries as well. The proportion of people who had to wait more than a week for a primary care appointment was nearly one in three in Canada (32%) and close to one in five in France, Germany, Sweden, the United Kingdom, the United States and New Zealand. Although people describing severe symptoms may sometimes be fast-tracked for care, some individuals with acute symptoms instead reach the healthcare system through emergency services (see section “A high rate of emergency diagnoses for lung and colorectal cancers signals a critical gap in access to early detection services”), pointing to unmet needs and care being provided in a less appropriate setting. Anticipated long waits can also discourage initial help-seeking and cause distress while people wait for their appointment.

High cost was the second most frequently reported reason for unmet medical examination needs, especially in Greece, where 16% of the people with a need reported that it was unmet because of cost (Figure 3.4). Travel distance was less commonly declared as the primary reason for unmet need. However, people in rural or remote areas often have to travel long distances, have limited access to transport and face fewer available health facilities – with the highest proportion in Greece, where 2% of people with a need reported that it was unmet mainly because of travel distance. These factors delay care and may lead to reduced or less timely access across the cancer care continuum.

Figure 3.4 reveals stark disparities, as people at risk of poverty are more likely than the general population to report unmet need in all but two countries. The gaps were highest in Greece (10 p.p.), Romania (9 p.p.), Finland (9 p.p.), Latvia (8 p.p.) and Italy (6 p.p.). In addition to reasons highlighted in Figure 3.4, in some countries a substantial proportion of people reported unmet needs for a medical examination for reasons such as wanting to wait and see if the problem got better on its own, not having time, fear of doctor, hospital, examination or treatment, and not knowing any good doctor or specialist. Unmet needs for these reasons were highest in Denmark and Norway, where more than 4% of all survey respondents listed them as the main reason for their unmet need. These reasons are related to health literacy and help-seeking behaviour, as well as perceptions of the approachability and accessibility of health services.

3.2.2. Timely engagement with health services can be improved by addressing barriers at the individual, provider and health system levels

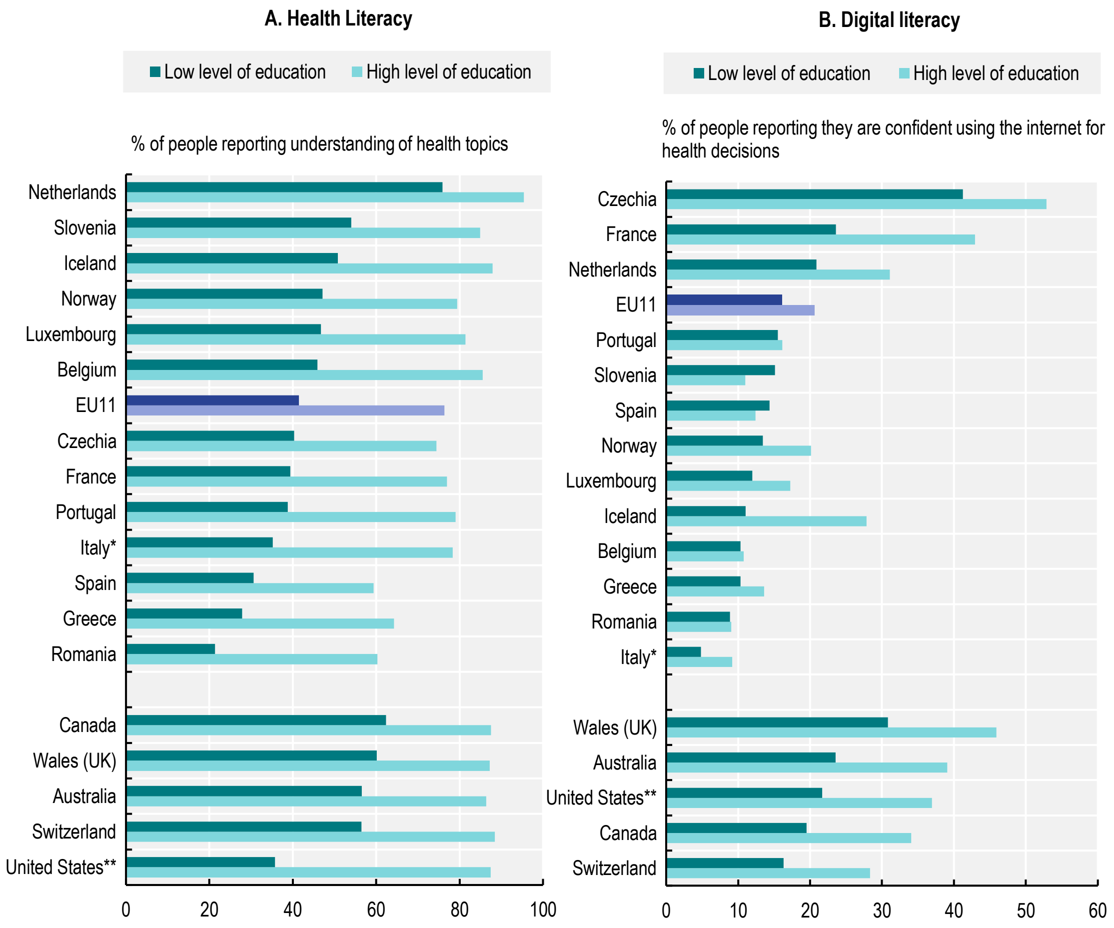
Low health literacy and cancer awareness, combined with cultural factors and the health system context, influence people's decision to engage with health workers

Awareness of cancer, along with digital and health literacy, shapes healthcare-seeking behaviour

The WHO defines health literacy as the ability to access, understand, appraise and use information and services in ways that promote and maintain good health and well-being. Health literacy is vital for cancer decision making, as participation in cancer screening programmes and healthcare seeking when experiencing cancer symptoms is influenced by awareness, attitudes, beliefs and ability to navigate relevant health information. Adequate health literacy increases participation in breast, cervical, and colorectal cancer screening (Baccolini et al., 2022[37]) and constitutes an important factor in recognition of symptom seriousness.

This represents an important avenue to increase health service contact, as approximately half of Europe's population is estimated to have insufficient health literacy (M-POHL, 2021[38]; Baccolini et al., 2021[39]). Figure 3.5 highlights an education gap among primary healthcare users with chronic conditions, across all countries participating in the PaRIS survey. The average proportion reporting they understand health information across participating EU countries is close to two times higher among those with high, compared with low education level. Among people with low education level, self-reported understanding of health information was highest in the Netherlands, followed by non-EU countries Canada and Wales (United Kingdom), and lowest in Southern and Central Europe (Romania, Greece, Spain and Italy).

Figure 3.5. Among primary care users with chronic conditions, education gaps in health and digital literacy emerge across EU+2 countries



Note: Data refer to primary healthcare users with chronic conditions aged 45 and above. Health literacy is measured as the percentage of people reporting that health issues are not complex to understand and they do not experience difficulties in understanding the health information they read, while digital literacy is measured as the percentage of people reporting confidence in using information from the internet to make health decisions. *Data for Italy refer to people enrolled in outpatient settings for specialist visits in selected regions. **United States sample only includes people aged 65 years and older.
Source: OECD PaRIS 2024 Database.

Most people in the EU (58%) use the internet to help make decisions about their health, highlighting the importance of digital literacy (Eurostat, 2025[11]). However, across EU countries, fewer than one in five people aged 45 and over with chronic conditions report feeling confident using the internet to make health decisions (Figure 3.5), with confidence levels lower among people with low education in nearly all countries. Among people with low education, confidence was highest in Czechia, where around two in five people reported feeling confident, followed by Wales (United Kingdom). Across EU+2 countries participating in the PaRIS survey, people with high education were more likely to feel confident using the internet for health decisions in nearly all countries.

Decisions to seek formal care can be influenced by the widespread prevalence of misleading and inaccurate information about cancer symptoms and their implications. For example, Suarez-Lledo and Alvarez-Galvez (2021[40]) identified misinformation in 40% of social media posts about cancer. People with lower digital literacy are more vulnerable to misinformation and may lack the skills to critically evaluate the credibility and sources of the health information they encounter online (Arias López et al., 2023[41]).

Additionally, the approachability and acceptability of health services influence decisions about consulting a medical doctor. Beyond individual capacities, contextual factors such as system-level barriers and cultural attitudes play a role in care-seeking behaviour and are particularly important for reaching individuals with low health literacy. Distrust of medical institutions and previous negative experiences can also reduce a person's willingness or ability to seek care (Shukla, Schilt-Solberg and Gibson-Scipio, 2025[42]). Across OECD countries, 78% of patients aged 45 and over with a chronic condition reported trusting the last healthcare professional they consulted, ranging from 88% in Switzerland to 57% in Greece (OECD, 2025[43]).

> At 45 years old, as a woman who didn't smoke or drink and had no family history of cancer, I didn't bother with mammograms or any other examination. I discovered it completely by accident.
>
> *Maria, 53 years old, breast cancer*

EU+2 countries aim to improve cancer literacy and adapt the health system to patients' needs, with simple, targeted messaging considered most effective

Among respondents to the OECD 2025 Survey on High Value Cancer Care, all but two EU+2 countries (Norway and Poland) reported they have initiatives to improve public health literacy regarding early cancer symptoms and screening benefits. To better reach people in their daily lives, 14 EU+2 countries reported initiatives in collaboration with schools, universities, or employers (e.g. occupational health partnerships or workplace-based screening awareness programmes) aimed at improving health literacy on early cancer symptoms and encouraging participation in screening programmes.

Given lower than average screening uptake and engagement with health services in vulnerable populations, such as migrants, targeted interventions are crucial. Tailored, culturally sensitive approaches to develop information, resources and interventions are more effective than generic campaigns to reach diverse communities with information that is accessible and culturally relevant to them, both in terms of language and content (Whitehead et al., 2025[44]). To influence behaviour, Abdul Latip et al. (2023[45]) found that combining patient navigation, education, and cultural tailoring increased colorectal cancer screening uptake among ethnic minority groups. Because multiple factors can hinder screening, developing a one-size-fits-all solution that works across different cultures and countries is highly complex. To address growing population diversity, there is scope to strengthen interventions by addressing language barriers, cultural differences and discriminatory attitudes (see Table 3.1).

Table 3.1. Selected initiatives to improve cancer awareness and cancer-related health literacy from EU+2 and other OECD countries

Initiative type	Selected examples
Tailoring of communication to population groups	- **Ireland**'s National Cancer Control Programme leads a broad range of initiatives, including annual paid social media campaigns and targeted regional educational sessions with high-risk groups. The National Screening Service has patient/public partnerships and includes the patient voice in the development of messages and resources. There are tailored resources for certain groups and links to these are shared widely on the National Screening Service website and on social media. NGO partnerships through the Irish Cancer Prevention Network, and community-based work by Regional Cancer Prevention Officers are dedicated to delivering cancer prevention and early diagnosis programmes to communities. - The **Netherlands** shares information and videos about screening, and posts on social media in various languages spoken by migrants. - **France** has online resources for disabled cancer patients, their families or caregivers (simplified and/or adapted format regarding screening, early diagnosis and cancer treatments).
Involvement of patient organisations and community	- In **Slovenia**, the Institute of Public Health, regional healthcare centres, and NGOs jointly implement various community-based activities, including those tailored to specific populations such as the Roma community. Screening programmes have different features on their web sites and among their materials (for visually or hearing impaired, and for ethnic minorities). - **Malta** leverages community events by embedding cancer awareness to reach low-literacy and underserved groups.
Engagement of schools and workplaces	- In **Ireland**, the Marie Keating Foundation delivers a Schools Cancer Awareness Programme to around 10 000 secondary students annually with National Cancer Control Programme support, including education about cancer risk reduction and early signs and symptoms. - **Lithuania**'s National Cancer Center organises school visits to address cancer prevention and early diagnosis. - **Slovenia** implements broad initiatives involving schools, municipalities, and workplaces through its Network of Health Promoting Schools and mandatory Workplace Health Promotion Programmes. - **Australia** provides funding to States and Territories to increase access to cervical screening services, which the state of Victoria uses to provide education on cervical screening and a popup clinic for cervical screening testing at workplaces.

Source: 2025 OECD Survey on High Value Cancer Care.

Health decisions should be based on reliable information, yet fragmented sources make it difficult to separate facts from misinformation. Clear, accessible, and trustworthy content, especially from official sources, is vital for individuals navigating screening processes and symptom interpretation, often via digital platforms. Several countries develop central resources that the population can refer to, making it clear and easy to distinguish official communication from unofficial. For example, Sweden's *1 177.se* provides inclusive, multilingual health information and tools on lifestyle and cancer risk, adapted for disabilities and LGBTIQ+ communities. Denmark also offers online resources outlining the benefits and risks of screening participation. In Germany, legislation in place since 2013 mandates that people invited to breast, cervical or colorectal cancer screening receive balanced, comprehensive information to support informed choices. To address misinformation concerns on non-official websites, the EU's Digital Services Act (DSA) (European Commission, 2025[46]) seeks to create a safer online environment by holding platforms accountable for the content they host, including health information.

A review from OECD countries (Duffy et al., 2017[47]) emphasised the role of convenience in screening, with personalised invitations, GP endorsements and plain-language materials significantly increasing screening uptake, especially among underserved populations. To increase convenience, the Netherlands sends invitations, leaflets and test kits for colorectal cancer screening directly to eligible people. By contrast, in Hungary, people receive invitations only if their GP has joined the screening programme and must still order a test kit themselves (OECD, 2024[48]), contributing to a 6-fold difference in screening uptake between the two countries. In Denmark, invitations to breast cancer screening include a pre-booked appointment. In Slovenia, the DORA programme sends reminders for mammography appointments and in Malta invitations are accompanied by phone reminders the day before. Self-sampling and the engagement of various health professionals in screening likewise increase the approachability of services, as well as their geographical accessibility (see section "Making health services available close to people increases accessibility and participation in cancer screening programmes").

Six EU+2 countries report early-phase activities that leverage data stored in patient records to detect possible undiagnosed cancer cases

To reach people who are not integrated into cancer care pathways at an earlier point, six EU+2 countries reported activities and pilots that use data stored in electronic health records to identify patients with possible undetected cancer, drawing on information collected by healthcare professionals during routine care, including laboratory and imaging tests. AI-supported data mining of electronic medical records is being implemented at regional or national levels in Czechia, Hungary and Sweden, as well as in Canada. In Germany, Luxembourg and the Netherlands, pilot activities are underway in select facilities, as is the case in Australia and Israel. Although these initiatives remain at the research and pilot phases, some milestones have been achieved. For example, in Germany, a new legislative permission enables statutory health insurance funds to use data-based evaluation of claims data to identify people with a possible cancer diagnosis and to recommend they seek medical advice. In Sweden, predictive machine-learning models have been developed to identify metastatic colorectal cancer (Abedi et al., 2025[49]) and non-metastatic colorectal cancer (Nemlander et al., 2023[50]) using diagnostic data from primary care users.

Although these models show promising results, they have not yet been implemented nationally. In other OECD countries, such as Australia, work on AI use in electronic health records and pathology reports focusses on identifying cancer cases before they are reported to the cancer registry, with the aim of improving registry data quality and streamlining recruitment to clinical trials. While several such tools are in development, they require robust validation for effectiveness, safety and impact when implemented at the population level.

Making health services available close to people increases accessibility and participation in cancer screening programmes

Adapting screening delivery modes to the needs of individuals and populations increases uptake, alongside leveraging contacts with healthcare professionals

EU+2 countries are implementing a wide range of initiatives to improve accessibility and increase participation in screening programmes (Table 3.2). To enhance geographical access, 19 EU+2 countries deploy mobile screening units. These usually constitute mobile digital mammograph units (specially equipped buses) that travel across the country, offering high-quality mammography examinations for women closer to their place of residence. For example, Estonia has operated mobile mammography buses since 2009 (OECD/European Commission, 2025[6]), and Ireland has offered breast screening in wheelchair-accessible mobile units since the start of its screening programme. However, regions in Denmark are shifting to permanent screening sites distributed across regions. This approach is considered to increase accessibility by offering greater appointment flexibility and better access for people with disabilities who cannot use bus stairs, as well as improving working conditions for staff.

Table 3.2. Most EU+2 countries are taking action to increase uptake of screening programmes among the target population by adapting delivery modes

	Use of mobile screening units	Distribution of FIT self-sampling kits by mail or in communities	Use of self-sampling for HPV testing	Expanding the role of primary care	Expanding the role of pharmacists or other community health workers
Austria		Yes			
Belgium[1]	Yes[1]	Yes	Yes[1]		Yes
Bulgaria[2]			[2]	[2]	
Czechia		Yes	Yes	Yes	
Denmark[3]	Yes[3]	Yes	Yes		
Estonia	Yes	Yes	Yes	Yes	Yes
France	Yes	Yes	Yes		Yes
Germany	Yes			Yes	
Greece	Yes	Yes	Yes		Yes
Hungary	Yes	Yes	Yes	Yes	
Iceland	Yes	Yes			
Ireland	Yes	Yes			
Italy	Yes			Yes	
Latvia	Yes			Yes	
Lithuania		Yes			
Luxembourg		Yes			Yes
Netherlands	Yes	Yes	Yes	Yes	
Norway	Yes	Yes	Yes		
Poland	Yes			Yes	
Portugal	Yes	Yes	Yes		
Romania	Yes	Yes		Yes	
Slovak Republic		Yes		Yes	
Slovenia[4]	Yes	Yes		Yes	Yes
Spain[5]	Yes	Yes[5]	Yes		Yes[5]
Sweden	Yes	Yes	Yes		
Australia	Yes	Yes	Yes	Yes	
Canada	Yes	Yes	Yes	Yes	Yes
Japan	Yes	Yes		Yes	Yes
Israel	Yes	Yes		Yes	
Korea	Yes			Yes	
Türkiye	Yes	Yes		Yes	Yes

Note: Country responses reflect adopted policies but may in some cases refer to broad pilot programmes.

1. In Belgium, mobile breast cancer screening units and the use of self-sampling for HPV testing (currently in a pilot phase) are available only in Flanders.
2. In Bulgaria, self-sampling for HPV testing is due to be introduced under the National Plan for Combating Cancer in the Republic of Bulgaria 2027, while the role of primary healthcare will expand in screening for colon and cervical cancer, following approval by the Ministry of Health in 2024.
3. In Denmark, mobile buses are being replaced with enhanced availability of permanent clinics, considered to better fit population needs, with some regions having already shifted fully to this model.
4. In Slovenia, self-sampling for HPV testing has been piloted and is under consideration for stepwise national implementation.
5. In Spain, home delivery of FITsampling kits is implemented in some autonomous communities (Andalucia, Cantabria, Valencian Community, Galicia, La Rioja, Navarra and the Basque Country), though generally an acceptance card is sent before the kit and the role of pharmacies is expanded in Ceuta, the Balearic Islands and Murcia, where self-sampling kits can be obtained.

Source: 2025 OECD Policy Survey on High-Value Cancer Care.

A review from OECD countries (Duffy et al., 2017[47]) found that offering more comfortable or convenient testing methods, such as FIT over colonoscopy or guaiac FOBT, and self-sampling for cervical cancer screening, improves participation. Activities to expand screening availability through self-sampling are present in 20 EU+2 countries for colorectal cancer screening and 12 EU+2 countries for cervical cancer screening. In Ireland, uptake of bowel screening (colon, rectal or colorectal) among first-time invitees increased when home test kits were sent directly along with a reminder letter, rather than requiring individuals to request a kit (Health Service Executive, 2025[51]). This approach was effective even among people living in lower socio-economic areas. In Luxembourg, mailing FIT kits directly to eligible residents who have previously participated has improved uptake compared with an invitation-only system. Other countries, such as Norway, Finland and Cyprus, also send FIT self-sampling kits as part of their colorectal cancer screening programmes.

Recent research from EU countries shows that HPV self-collection tests are a powerful tool for reducing barriers to access to early diagnosis of cervical cancer. By allowing women to collect samples at home and return them by mail, these programmes address common obstacles like limited access to providers, travel barriers, time constraints, and discomfort with clinician-based screening. In Czechia, direct mailing of self-sampling kits significantly increased participation among women who had not attended traditional screenings by almost 8% (Ngo et al., 2024[52]). In the Netherlands, real-world data from the national screening programme showed that self-sampling is a reliable alternative to clinician-collected samples, with only a slight reduction in sensitivity, demonstrating the feasibility of large-scale mail-in HPV self-sampling in a national population-based screening programme (Inturrisi et al., 2021[53]).

Countries are also exploring innovations in how screening is delivered, including expanding the role of primary healthcare providers (11 EU+2 countries) and pharmacists (seven EU+2 countries). For example, pharmacists in several countries are allowed to distribute self-sampling screening kits, most commonly for colorectal cancer screening. In France, Luxembourg and Belgium, pharmacists actively contribute to colorectal cancer screening by distributing free self-sampling kits. Some countries have additionally introduced new roles, such as Access Officers for each cancer screening programme in Ireland, who can be contacted directly by participants.

Eight EU+2 countries (Austria, Czechia, Estonia, Hungary, Latvia, Lithuania, Portugal, Romania) also aim to better leverage primary healthcare contacts to promote screening by offering financial incentives to healthcare providers. Payments for achieving performance indicators related to screening have been found to increase screening rates among eligible populations, with stronger effects when payments are made to individual providers rather than practices (Matthews et al., 2024[54]). In Estonia, an indicator on percentage of a physician's patient list who have had a colorectal cancer screening test or received counselling on colorectal cancer screening is linked to annual supplementary funding to primary care practices amounting to 4% (Estonian Health Insurance Fund, 2025[55]). In Latvia, there are quality payments to general practitioners (GP) related to the stage of detection of cancer, as well as for colon, prostate, cervical, and breast cancer screening coverage. Korea takes a different approach through workplace-based health screening programmes, where employers are legally required to conduct health screenings for workers, with penalties for non-compliance, in addition to the provision through the national cancer screening programme.

Telemedicine can improve people's access to healthcare by reducing the time and travel burden associated with in-person visits

People who experience new, ambiguous symptoms that are not yet severe may be hesitant to seek care. To reduce time and travel burdens, including for those who are unsure how urgently they need to be seen and for those living in remote areas, innovative delivery models such as telemedicine can help to fill access gaps. In 2023, teleconsultations made up more than a quarter of all consultations with primary care doctors and specialists in Denmark, Estonia, Portugal and Sweden (OECD, 2025[56]). By contrast, they remained rare in Luxembourg, Germany, France and Finland with 0.3 or fewer teleconsultations per person.

Eliminating financial barriers to screening and healthcare visits is particularly important to reach vulnerable populations

Nearly all EU+2 countries reported in the 2025 OECD Policy Survey on High Value Cancer Care that screening tests are offered free of charge to the target population as a measure to increase access. Some charges may, however, still apply. For example, in Iceland, an arrival fee of ISK 500 (EUR 3.30) applies to any doctors' visit, including those for breast or cervical cancer screening. In other OECD countries such as Japan, screening participation was previously found to increase when cost barriers are reduced (Tabuchi et al., 2013[57]), and national support is provided to municipalities for screening, while municipalities set out-of-pocket costs for individuals. However, an effective screening programme must similarly consider the ability of individuals to follow up on positive results. In a study from the United States, one in five patients said they would not have a breast cancer screening test if they knew they had to pay for follow-up on positive results (Ngo et al., 2023[58]). Ensuring the affordability of diagnostic tests is therefore crucial for the overall impact of screening programmes.

To encourage uptake by reducing the financial burden of screening, some countries also cover ancillary expenses, such as transportation or time off work. Romania's colorectal cancer screening pilot (Manuc et al., 2023[59]) offered free transportation for vulnerable groups and for follow-up testing as part of the pilot, although in the absence of a population-based programme most people did not benefit. In Canada, screening is managed on a jurisdictional level; some jurisdictions cover transportation services, but such support is not universally available across all jurisdictions or to all screening participants. In other countries, transportation coverage often concerns follow-up testing.

In many EU+2 countries, co-payments for healthcare visits can create financial barriers for people with limited income, particularly when payment amounts vary widely across services or regions. For some, these costs can delay or prevent timely medical attention. Studies also indicate that vulnerable populations are disproportionately affected. People on lower incomes, older adults and individuals with chronic conditions are more likely to reduce their use of care when subject to co-payments due to the disproportionate burden on household budgets. Removing out-of-pocket costs for primary care is associated with significant increases in consultation rates and can shift healthcare use from secondary to primary care (Yee et al., 2024[60]; Kiil and Houlberg, 2014[61]), as reflected in co-payment arrangements at the point of care for primary care in EU+2 countries (Table 3.3).

Table 3.3. About half of EU+2 countries do not have co-payments at point of care for primary care

	Free at point of care for the whole population (public providers)	Free at point of care for a part of the population	Fixed co-payment	Percentage co-payment
EU+2	Bulgaria, Czechia, Denmark, Estonia, Greece, Hungary, Lithuania, the Netherlands, Poland, Portugal, the Slovak Republic, Slovenia, Spain	Austria, Germany, Ireland	Belgium, Finland, France, Iceland, Latvia, Norway, Sweden	Luxembourg
Other OECD Countries	Australia, Canada, Costa Rica, Israel, the United Kingdom			Japan, Korea, Switzerland

Note: Austrians pay a fixed annual e-card fee, or alternatively fees of 10-20% cost-sharing for some professional groups. In Germany, visits are free with social health insurance and most private health insurance schemes. In Ireland, approximately 40% of the population have access to free visits. Belgium, France, Iceland and Latvia apply fees of EUR 1-6.5 per visit. Finland, Norway and Sweden apply fees of EUR 10-26, but annual caps apply. Luxembourg applies 20% co-payments for GP visits, with exemptions for children, people with certain medical conditions and subject to an annual cap. Co-payments are 30% in Japan and Korea, while several exemptions apply, including for people on low incomes, and an annual cap. Switzerland has 10% co-payment after a general deductible, subject to an annual cap.
Source: Health System Characteristics survey 2023, Country Health Profile 2025: Slovenia.

3.3. Receiving an accurate and appropriate cancer diagnosis is a vital step in delivering timely care

3.3.1. Early cancer diagnosis is indicative of timely access to diagnostic services

Early diagnosis refers to the identification of people with cancer at an earlier stage of disease progression, often before symptoms become severe or the cancer has metastasised. Achieving early diagnosis requires both patient engagement with healthcare services and timely, effective responses from the health system. This process depends on the cancer type and usually involves a sequence of diagnostic tests, ranging from imaging to pathology, often requiring multiple steps before a definitive diagnosis is established, usually via tissue diagnosis (Figure 3.1).

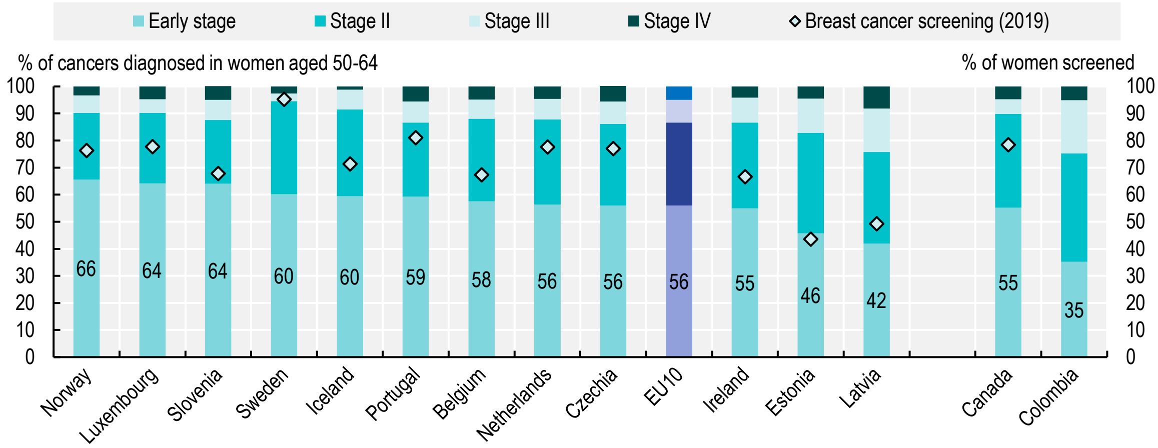
> It took 7 months to get my diagnosis, and the issue …is getting from GP to a hospital setting. Once you are in the system, I can honestly say I was so well looked after, but it is getting to the hospital stage that took the longest.
>
> *Pamela, diagnosed at 46 with pancreatic cancer*

The proportion of cancers diagnosed at an early stage varies across countries and by cancer type

On average, more than half of breast cancers across EU countries are diagnosed at an early stage

The proportion of cancers identified at an early stage offers valuable insight into the effectiveness of screening programmes and clinical diagnosis of cancer across countries. For breast cancer, between 2018 and 2023, the share of cancer cases diagnoses at early stage (stage 0 and stage I) among women aged 50-64 averaged 56% across 12 EU+2 countries with available data, varying from 42% in Latvia to 66% in Norway (Figure 3.6). The share of early diagnosis exceeded 50% in ten EU+2 countries (Belgium, Czechia, Iceland, Ireland, Luxembourg, the Netherlands, Portugal, Norway, Slovenia and Sweden), linked to more obvious symptomatology and longstanding population-based screening programmes in EU countries, as well as well-established diagnostic processes. Analyses indeed find a higher proportion of early-stage diagnoses among screening-age women compared to women outside the screening age (OECD, 2025[62]).

Figure 3.6. Participation in breast cancer screening contributes to the high share of breast cancers diagnosed at an early stage in EU countries



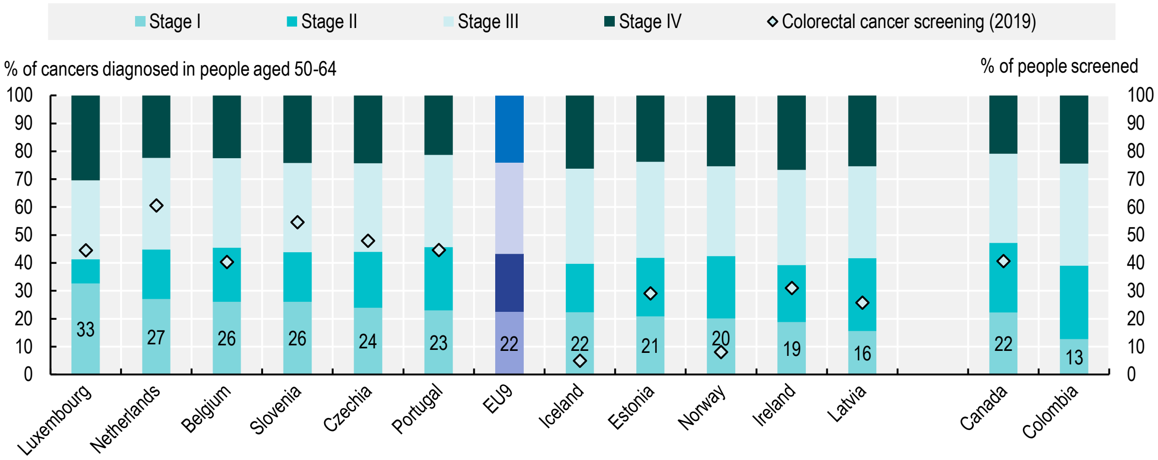
Note: Early stage refers to TNM stage 0 and stage I. Stage data refer to a three-year average across years with data available, including 2021-2023 for Belgium, Slovenia, Czechia, Norway, the Netherlands, Sweden, Latvia and Estonia, 2020-2022 for Canada and Iceland, 2019-2021 for Portugal, 2018-2020 for Ireland, 2018-2019 for Luxembourg and 2023 for Colombia. Data coverage for Canada varies by cancer type and reference years for different provincial and territorial cancer registries. The reported rates exclude data for tumours where the stage of diagnosis is unknown or not reported. Canada and Iceland did not include Breast cancer in situ in Stage 0 tumours. Screening rates for EU+2 countries are based on the 2019 data from the European Health Interview Survey (EHIS) and refer to self-reported screening in the last two years among women aged 50-69. For Canada, screening data refers to women aged 50-74 who have had a test in the last three years, for 2017.
Source: OECD (2025[62]), "Assessing cancer care quality in OECD countries: New indicators for benchmarking performance", https://doi.org/10.1787/b3f47ece-en; OECD Health Statistics 2025.

Over the five-year period from 2018 to 2022, the proportion of breast cancers detected at an early stage has been largely stable in most reporting countries. Notable exceptions are Portugal, where this share rose by 9 p.p., and Iceland, which recorded a 6-p.p. increase. These increases are consistent with evidence that Portugal's organised breast cancer screening programme rebounded strongly after COVID-19–related disruptions, restoring and expanding effective coverage by 2022 (OECD/European Commission, 2025[63]). Iceland's increase can be linked to targeted measures to remove financial barriers and encourage first-time attendance, which led to marked rises in mammography uptake just before and during this period (OECD, 2023[64]).

The share of colorectal cancer diagnosed at an early stage is lower, associated with lower participation in colorectal cancer screening programmes

OECD data shows that for colorectal cancer, among the screening age population (50-64 years), the share of cancers diagnosed at an early stage (stage I) averaged 22% across EU countries, ranging from 16% in Latvia to 33% in Luxembourg (Figure 3.7). In EU+2 countries, the share of early diagnosis exceeded 25% in only four countries (Belgium, Luxembourg, the Netherlands and Slovenia). This lower proportion of early-diagnosed colorectal cancers is associated with the more recent introduction of population-based screening programmes for colorectal cancer, compared with breast and cervical cancers (OECD/European Commission, 2025[6]). It is also associated with relatively lower screening uptake, the appearance of symptoms at later stages of the disease and the non-specific nature of the symptoms. In addition, part of the reason why lower rates of early detection are reported for colon cancer compared to breast cancer is that colorectal pre-cancers and polyps detected and treated during colonoscopy are not routinely entered into cancer registries. Thus, pre-cancerous polyps removed via colonoscopy during colorectal screening are not captured and reported in the data, despite being identified at a very early stage.

Figure 3.7. A higher share of colorectal cancers is diagnosed at an early stage in countries with population-based programmes and higher participation in colorectal cancer screening



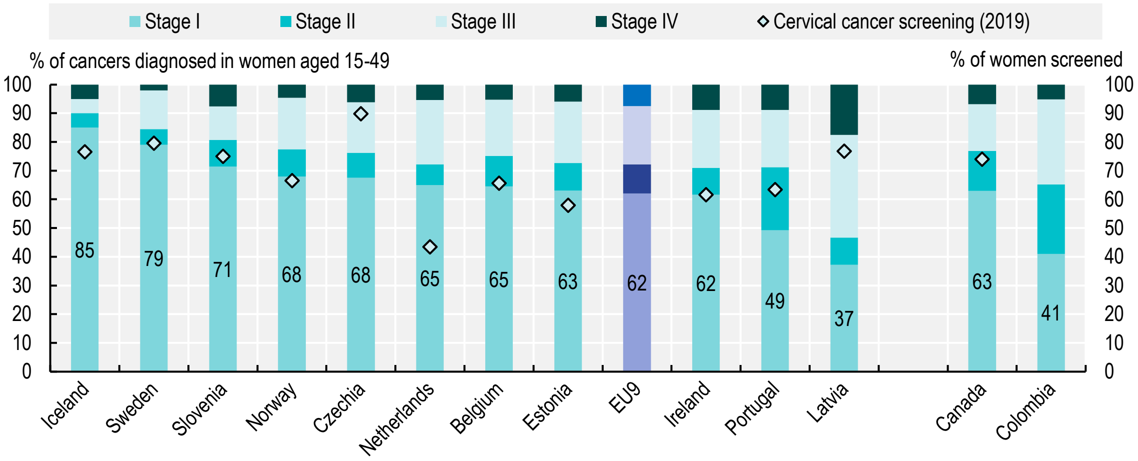
Note: Data refer to a three-year average across years with data available, including 2021-2023 for Belgium, Slovenia, Czechia, Norway, the Netherlands, Latvia and Estonia, 2020-2023 for Iceland, 2020-2022 for Canada, 2019-2021 for Portugal, 2018-2020 for Ireland, 2023 for Colombia and 2019 for Luxembourg. Luxembourg is based on a very small number of colorectal cancers with available staging. Data coverage for Canada varies by cancer type and reference years for different provincial and territorial cancer registries. The reported rates exclude data for tumours where the stage of diagnosis is unknown or not reported. Screening rates are based on the 2019 data from the European Health Interview Survey (EHIS) and refer to self-reported screening in the last two years among people aged 50-74. For Canada data refers to 2017.
Source: Health Statistics 2025; OECD (2025[62]), "Assessing cancer care quality in OECD countries: New indicators for benchmarking performance", https://doi.org/10.1787/b3f47ece-en.

Between 2018 and 2022, the proportion of colorectal cancers detected at an early stage stayed broadly stable in most countries. The main exceptions were the Netherlands and Portugal, which each saw a three-p.p. drop. In contrast, Latvia and Estonia reported notable gains in early-stage diagnosis over this period, with increases of 9 and 5 p.p., respectively, since 2018. These patterns are in line with evidence that colorectal cancer screening in the Netherlands and Portugal was disrupted and participation reduced during the COVID-19 pandemic, leading to fewer screen-detected early-stage cancers (Toes-Zoutendijk et al., 2023[65]; Morais et al., 2021[66]). By contrast, Latvia and Estonia progressively expanded and strengthened organised screening programmes over this period, increasing coverage and shifting diagnoses towards earlier stages (OECD/European Commission, 2025[67]; OECD/European Commission, 2025[68]).

Early-stage diagnosis of cervical cancer varies as much as two-fold between countries

According to the OECD data, the share of early cervical cancer diagnosis (stage I) among females aged 15-49 averaged 62% in EU countries, ranging from 37% in Latvia to 85% in Iceland (Figure 3.8). The share of early diagnosis exceeded 60% in nine EU+2 countries (Belgium, Czechia, Estonia, Iceland, Ireland, the Netherlands, Norway, Slovenia and Sweden). Seven of these nine countries had higher participation in cervical cancer screening, exceeding 60% in 2019. Differences may also be explained by historical variations in the organisation of and access to cervical cancer screening, including the starting age of screening, whether a medical consultation is required, the availability of self-sampling options, and the extent to which costs are covered for follow-up diagnostic testing.

Figure 3.8. Countries with a high share of cervical cancers diagnosed at an early stage tend to have high rates of cervical cancer screening



Note: Early stage refers to TNM stage I. Data refer to a three-year average across years with data available, including 2021-2023 for Belgium, Slovenia, Czechia, Norway, the Netherlands, Sweden and Latvia, 2020-2022 for Canada and Estonia, 2019-2021 for Portugal, 2018-2022 for Iceland, 2018-2020 for Ireland and 2023 for Colombia. Data coverage for Canada varies by cancer type and reference years for different provincial and territorial cancer registries. The reference age group of 15-49 for the stage of diagnosis data does not align exactly with the recommended screening age groups in most countries. The reported rates exclude data for tumours where the stage of diagnosis is unknown or not reported. Screening rates are based on the 2019 data from the European Health Interview Survey (EHIS) and refer to self-reported screening in the last three years among women aged 20-69. For Canada, data refers to women aged 25-69, for 2017.

Source: OECD Health Statistics 2025; OECD. (2025[62]), “Assessing cancer care quality in OECD countries: New indicators for benchmarking performance”, https://doi.org/10.1787/b3f47ece-en.

From 2018 to 2022, the proportion of cervical cancers detected at an early stage fell by at least 7 p.p. in five EU+2 countries (Iceland, Latvia, the Netherlands, Norway, Sweden). The sharpest declines were observed in Norway (down 12 p.p.) and in Sweden and Latvia (each down 11 p.p.). This broad drop in early diagnosis is likely linked to reduced participation in cervical cancer screening and delays in diagnostic work-up, due to disruptions to screening programmes and wider health services following the COVID-19 pandemic (Smith et al., 2021[69]).

In the case of some cancers, a note of caution however concerns the risk of overdiagnosis, where early detection can lead to diagnosis of cancers that are unlikely or uncertain to impact patients’ health or risk of death from cancer. Very high rates of early-stage diagnosis may be driven in part by overdiagnosis of cancer through opportunistic cancer screening, such as for thyroid, prostate and lung cancers (see Chapter 4).

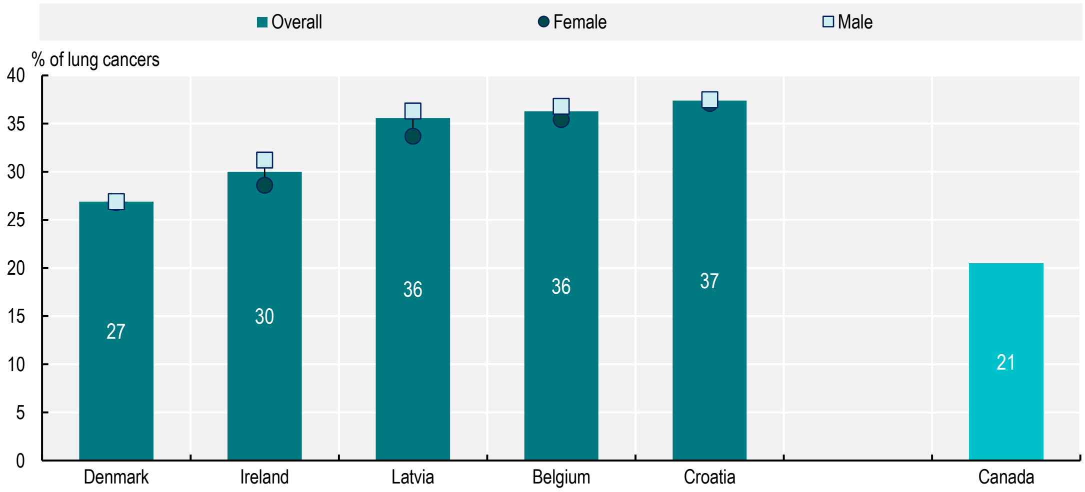
A high rate of emergency diagnoses for lung and colorectal cancers signals a critical gap in access to early detection services

People who do not reach the health system at an early cancer stage often present via emergency care, typically with more severe symptoms. The share of cancer diagnoses resulting from emergency presentation indicates gaps in timely diagnosis by capturing late-stage cancer diagnoses identified when symptoms have become severe. This represents low-value care as more costly inputs are used for diagnosis and treatment, and it often results in poorer patient outcomes (Zhou et al., 2016[70]). Diagnosis following emergency presentation has been found to be associated with lower survival and higher mortality (McPhail et al., 2022[71]). Among a Danish cohort, one-year mortality among people diagnosed with any invasive cancer following unplanned hospitalisation was more than three times higher than for people diagnosed in primary healthcare, and 37 times higher than among those diagnosed through screening programmes, who are usually asymptomatic (Danckert et al., 2021[28]).

For some cancers, an emergency presentation reflects the rapid progression of the disease and cannot be prevented. However, for some types such as lung cancer, emergency presentation often signals delayed care-seeking or prolonged intervals between the onset of symptoms and diagnosis, suggesting issues in access to timely diagnostic services. Delays reflect differences in diagnostic capacity, care co-ordination and access to timely referral pathways. Additionally, delayed presentation for lung cancer may also be exacerbated due to smokers being less likely to seek medical care for lung cancer symptoms (Friedemann Smith et al., 2016[72]; Kotecha et al., 2020[73]). A systematic review found that individuals under 60 years of age, as well as those with obesity, who smoke, or who lead a sedentary lifestyle, were more likely to forgo screening and less likely to visit a doctor (Unanue-Arza et al., 2021[74]).

Among EU countries with available data, the overall share of lung cancers diagnosed via emergency presentation ranged from 27% in Denmark to 37% in Croatia (Figure 3.9), though data for Belgium and Croatia may be slightly overestimated due to calculation methods. Country differences are affected by differences in clinician awareness and detection of lung cancer symptoms, or delays in access to diagnostic investigations, all of which underscore the importance of robust, timely, and equitable diagnostic pathways to prevent late-stage diagnoses and reduce reliance on emergency care. On average, across countries, emergency diagnoses are slightly more common among men than women. Under the SOLACE project funded by EU4Health (European Commission, 2025[75]), 11 countries have begun to pilot risk-stratified lung cancer screening programmes using low-dose CT scanning (see Chapter 4). If effective, these pilots can be extended to population-level coverage among those at heightened risk (e.g. due to smoking status) and can reduce emergency presentations while increasing diagnoses of lung cancer at an earlier stage.

Figure 3.9. The proportion of lung cancers diagnosed via emergency presentation varies across EU countries, and is slightly higher among men than women

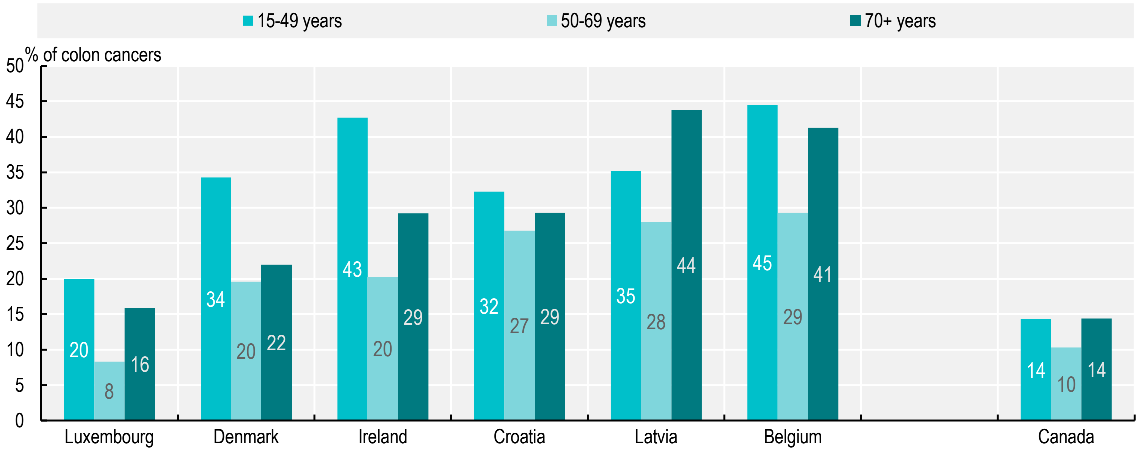


Note: Data refer to proportion of people aged 15+ years diagnosed with cancer who visited an emergency department with a principal diagnosis related to the cancer within 30 days of their confirmed diagnosis. Two exceptions are Croatia, where emergency department visits with a secondary diagnosis related to cancer are also included, and Belgium, where emergency department visits for any reason within 30 days of a cancer diagnosis are included. Data refer to a three-year average across most recent years with data available, including 2021-2023 for Denmark and Latvia, 2020-2022 for Belgium, Canada and Croatia and 2018-2020 for Ireland. Canada's data includes two provinces, Alberta and British Columbia.
Source: OECD Health Statistics 2025 ; OECD (2025[62]), "Assessing cancer care quality in OECD countries: New indicators for benchmarking performance", https://doi.org/10.1787/b3f47ece-en.

Between 2018 and 2023, the share of lung cancers diagnosed via emergency presentation increased in almost all countries. The largest rises were seen in Denmark (+15 p.p.), Croatia (+13 p.p.) and Ireland (+11 p.p.). These increases are consistent with evidence that the COVID-19 pandemic disrupted timely access to primary healthcare, imaging and specialist assessment for respiratory symptoms, leading to diagnostic delays and a higher likelihood that lung cancer was first identified during acute hospital attendance rather than through planned outpatient pathways (Pennisi et al., 2024[76]; Vella et al., 2023[77]).

For colorectal cancer, across all ages, between about 15-40% of patients in the EU+2 countries are diagnosed via the emergency department. When analysed by age group, there is large variation in the share of cancers diagnosed through the emergency department. Among those aged 50-69 (the screening-eligible population), the share diagnosed following emergency presentation ranges from 8% in Luxembourg to 29% in Belgium (Figure 3.10). In all EU countries with available data, the screening-eligible age group consistently had the lowest proportion of emergency colon cancer diagnoses. Ireland and Luxembourg report the largest age gradients, with the proportion of emergency diagnoses among the screening age population less than half that among those aged 15-49. This pattern is potentially indicative of the impact of colorectal cancer screening in these countries.

Figure 3.10. The proportion of colon cancers diagnosed by emergency presentation is much lower in the screening eligible population aged 50-69 in most countries



Note: Data refer to proportion of people aged 15+ years diagnosed with cancer who visited an emergency department with a principal diagnosis related to the cancer within 30 days of their confirmed diagnosis. Two exceptions are Croatia, where emergency department visits with a secondary diagnosis related to cancer are also included, and Belgium, where emergency department visits for any reason within 30 days of a cancer diagnosis are included. Data refer to most recent three-year average across years with data available, including 2021-2023 for Denmark and Latvia, 2020-2022 for Belgium, Canada and Croatia, 2018-2020 for Ireland and 2019 for Luxembourg. The data for Canada data includes two provinces, Alberta and British Columbia.
Source: OECD Health Statistics 2025; OECD (2025[62]), "Assessing cancer care quality in OECD countries: New indicators for benchmarking performance", https://doi.org/10.1787/b3f47ece-en.

Indeed, younger people with early-onset colon cancer tend to be diagnosed at a later stage and are more likely to present to the emergency department, due to more aggressive cancer, not being invited for screening, and atypical, unsuspected or unrecognised symptoms of colorectal cancer. More than two in five colon cancers among those aged 15-49 years are diagnosed following an emergency presentation in Belgium and Ireland. Among older people (above 70 years), the share diagnosed following emergency presentation ranges from 16% in Luxembourg to 44% in Latvia.

Between 2018 and 2023, the share of colon cancers diagnosed via emergency presentation increased in most reporting countries. The largest rises were observed in Croatia (+12 p.p.), Ireland (+10 p.p.), Denmark (+9 p.p.) and Belgium (+7 p.p.). By contrast, Latvia recorded a marked decline of 12 pp. The increase in most countries is attributable to COVID-19-related disruptions in routine colorectal cancer screening and diagnostic services, leading to delays in diagnosis and more advanced disease at presentation (Pennisi et al., 2024[76]; Shinkwin et al., 2021[78]).

Overall, variations in the organisation, accessibility, and participation rates of colorectal screening programmes may help explain some of the observed cross-country differences. Croatia established national colorectal screening programmes in 2008, however participation rates remain low. Although Latvia formally has a colorectal cancer screening programme, no centralised invitations are issued; instead, free colorectal screening is offered to individuals in the target group through primary healthcare checkups, resulting in a more opportunistic invitation approach. Following changes to screening tests and introduction of a financial incentive for general practitioners, screening participation in Latvia has gradually increased between 2020-2023 (OECD/European Commission, 2025[68]).

3.3.2. Prioritising timely and equitable access to cancer diagnostic services

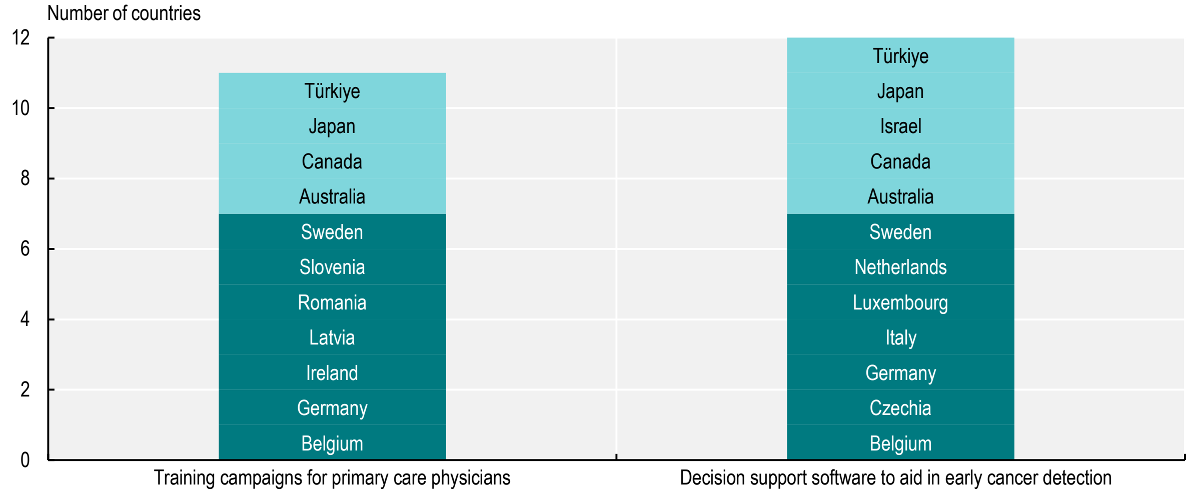
Delays in cancer diagnosis stem from multiple factors, including clinical assessment, test availability, and poor co-ordination between care settings, often leading to loss of follow-up. A study of 158 primary care physicians in 23 European countries found that key challenges included non-specific symptoms, poor communication among providers, and low cancer risk perception among general practitioners (Hajdarevic et al., 2023[79]). Systemic barriers in the diagnostic process (e.g. poor continuity of care, inadequate follow-up, limited specialist collaboration and insufficient cancer-specific training) further contributed to delays. Countries address these challenges through interventions such as raising clinician awareness of cancer, establishing timely and equitable diagnostic pathways, reducing financial barriers to diagnostics, and capitalising on strong monitoring systems to identify and address bottlenecks in cancer diagnostics.

EU+2 countries boost primary healthcare capacity to detect and act on cancer symptoms through education and decision-aid tools, supporting referral to diagnostic services

The primary care interval is a key cancer care efficiency metric. It refers to the time between a patient's first presentation in primary healthcare and their referral to secondary care (such as a specialist, diagnostic service, or hospital) for further cancer investigation. Longer primary care intervals delay cancer diagnosis and ultimately worsen health outcomes. Additionally, according to a 2018 pan-European survey performed by All.Can International among almost 4 000 people with cancer and carers, nearly one-third of those whose cancer was detected outside a screening programme reported that it had initially been diagnosed as something else (All.Can, 2025[80]). Developing training and teaching materials on early cancer signs and up-to-date diagnostic pathways, as well as strengthening the use of electronic health records, can help shorten the time to a correct diagnosis (Harris et al., 2019[81]).

Targeted education campaigns for primary healthcare providers aim to improve early cancer recognition and appropriate referral by focussing on practical, accessible learning formats. These often include brief e-modules, interactive referral checklists, and audit-and-feedback exercises. As of 2025, seven EU+2 countries offer dedicated training campaigns on cancer for primary care physicians, while seven EU+2 countries reported implementing decision support software to aid in early cancer detection (Figure 3.11).

Figure 3.11. Cancer-specific training for primary healthcare professionals and clinical decision support tools are implemented in less than a quarter of EU+2 countries



Note: EU+2 countries are represented in dark green, while other OECD countries are represented in light green.
Source: 2025 OECD Policy Survey on High Value Cancer Care.

In Ireland, the National Cancer Control Programme provides an Early Diagnosis of Cancer eLearning course for primary healthcare and allied healthcare professionals on recognising cancer symptoms and making timely referrals for eight common cancer types (National Cancer Control Programme, 2024[82]). Among other OECD countries, Cancer Australia offers a valuable example as it provides a wide range of resources to support healthcare professionals in cancer detection and management, including guidelines tailored specifically for general practitioners. Cancer Australia has also developed six online breast cancer courses that provide up-to-date, evidence-based training for primary care professionals, equipping clinicians with practical knowledge for early detection, diagnosis and management (Australian Government/Cancer Australia, 2025[83]).

Clinical decision support tools can effectively help primary healthcare professionals recognise potential cancer signs and symptoms and direct referrals to specialist services or testing as relevant. Since 2020, Estonia implements a decision support tool for family physicians and nurses that is integrated into clinical software. It generates recommendations and reminders based on patient data such as diagnoses, medications, tests and treatments from the past five years (Estonian Health Insurance Fund, 2025[84]). Another notable example comes from the United Kingdom, where a Cancer Decision Support tool can help GPs decide whether further testing or a referral to a specialist is needed. Evidence from a pilot study indicated that around 20% of patients who were referred for further investigation would not have been referred if the software had not been in place (NHS England, 2021[85]). Following evaluation, the programme was expanded nationally. In Australia, a leading research cancer centre launched an online decision-support tool as part of the Colonoscopy Referral Education for Primary healthcare project, to support primary care practitioners in New South Wales with guideline-appropriate assessment, triage, and referral for colonoscopy services (Cancer Institute NSW, 2025[86]).

According to the 2025 OECD Policy Survey on High-Value Cancer Care, 13 EU+2 countries (Belgium, Denmark, Estonia, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Portugal, Spain and Sweden) reported using telemedicine in diagnosis as a measure to reduce delays, including by facilitating correct referrals. Estonia uses e-consultations to connect primary healthcare physicians with specialists, allowing for referrals to take place virtually without an additional visit for the patient, speeding up the joint decision on next steps (Estonian Health Insurance Fund, 2025[84]). In Portugal, referrals from primary healthcare for first hospital specialty consultations in dermato-venereology should be made through the use of dermatological tele-screening, combining clinical images with relevant clinical information, unless patients explicitly refuse (Office of the Assistant Secretary of State for Health, 2018[87]). This approach has substantially reduced waiting times. In 2016, the average waiting time for an in-person consultation was 225 days, compared with 27 days for a tele-dermatology screening consultation, while maintaining similar levels of quality and safety. To encourage compliance, financial incentives and penalties are applied: hospitals receive a 10% payment increase for consultations referred via tele-screening, but face penalties if less than 80% of referrals use this system. Similarly, primary healthcare facilities are assigned performance targets to ensure at least 80% of dermatology referrals are made through tele-screening. In France, telemedicine is used by specialists for remote evaluation in skin cancer diagnosis in several regions, and tele-pathology is applied within rare cancer networks to support centralised diagnostic expertise, with the National Cancer Institute (INCa) co-ordinating the structuring and missions of these networks.

Reducing financial barriers to accessing diagnostic services should remain a critical priority across countries

Despite EU countries covering many essential services, diagnostic tests can represent a significant cause of financial strain within EU health systems. A study among Italian people with cancer found that diagnostic examinations represent the primary source of out-of-pocket (OOP)[3] medical expenses among those with cancer, with an average yearly OOP cost for diagnostics of EUR 260 per patient (Lillini et al., 2023[88]). Several countries, including Greece, Hungary, Italy, Latvia, Portugal and Spain, reported in the 2025 OECD Policy Survey on High Value Cancer Care that financial barriers to accessing diagnostic services can be an obstacle, with a particularly negative impact on people with lower incomes and education levels.

According to the 2025 OECD Policy Survey on High Value Cancer Care, 22 EU+2 countries reported low or no co-payments for imaging services (e.g. CT or MRI) and 20 EU+2 countries reported the same for biomarker detection (such as liquid biopsies) (Table 3.4). In recent years, Portugal and Latvia have reported proactive steps to reduce financial barriers. In 2022, Portugal eliminated user charges for all cancer-related health services, including diagnostic services, which are now fully covered by the National Health System and provided free of charge (OECD/European Commission, 2025[6]). In Latvia, following the National Cancer Plan assessment in 2022, co-payments were removed for diagnostic examinations prescribed after cancer screening to ensure seamless diagnostic follow-up (OECD/European Commission, 2025[6]). This is also an ongoing policy in Estonia, where any follow-up examinations identified during screening are free of charge, removing the need for individuals to pay for diagnostic services after a positive result (Estonian Health Insurance Fund, 2025[89]).

Table 3.4. More than two thirds of countries in the EU ensure low out-of-pocket payments for diagnostic testing, expected to improve access

	Low or no co-payments for imaging services (e.g. CT or MRI)	Low or no co-payments for biomarker detection
EU+2	Austria, Belgium, Bulgaria, Czechia, Denmark, Estonia, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, the Netherlands, Portugal, Romania, the Slovak Republic, Slovenia, Spain, Sweden	Austria, Bulgaria, Czechia, Denmark, Estonia, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, the Netherlands, Portugal, Romania, the Slovak Republic, Slovenia, Spain
Other OECD Countries	Canada, Israel, Japan, Korea, Türkiye	Canada, Israel, Japan, Türkiye

Note: In the Netherlands, while visits to general practitioners are fully covered without copayment, this is not the case for other care such as diagnostics services. The compulsory deductible is EUR 385 in 2026, paid by the insured person; all remaining costs are covered by the health insurer.
Source: 2025 OECD Policy Survey on High Value Cancer Care.

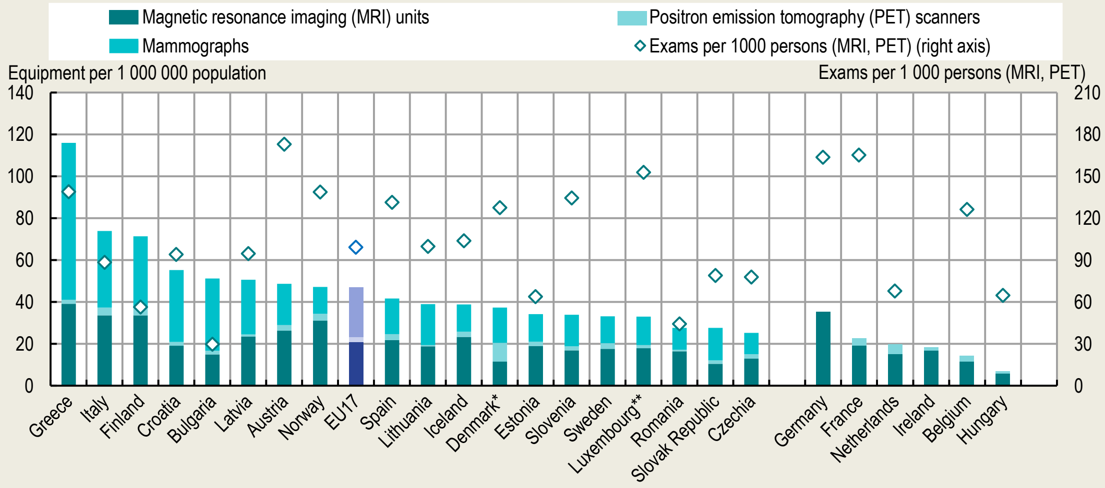
Countries address waiting times and diagnostic delays by streamlining capacity through fast-track pathways and rapid diagnostic centres

In the 2025 OECD Policy Survey on High Value Cancer Care, 11 EU+2 countries (Czechia, Denmark, Estonia, Germany, Greece, Ireland, Lithuania, Portugal, Romania, Slovenia and Spain) identified long waiting times for specialist consultations, diagnostic tests and imaging as a key concern. At a physician appointment, a person may be referred for diagnostic testing, which for many cancers begins with imaging. Imaging relies on specialised equipment and countries differ in both equipment density and utilisation (Box 3.1).

Box 3.1. Imaging equipment availability and efficiency varies across countries

Imaging using diagnostic technologies is a crucial component of clinical decision making, including diagnosis, therapy and follow-up. Availability of mammographs, used almost exclusively for breast cancer, is highest in Greece at more than 70 per million population, whereas 13 EU+2 countries have fewer than 20 mammographs per million people (Figure 3.12). Among EU+2 countries, the combined availability of magnetic resonance imaging (MRI) and positron emission tomography (PET) scanners, crucial for cancer diagnostics, was highest in Greece at 40 per million population, followed by Italy and Finland with more than 37 per million. However, the highest number of exams was performed in Austria, France, Germany and Luxembourg, at more than 150 per 1 000 population, despite ranking lower on equipment availability. This underscores the importance of efficiency in equipment utilisation as lower equipment density does not result in lower examination rates in these countries. While optimal planning of availability should account for how equipment numbers affect waiting times and geographic access, excessive use can lead to inefficiencies from repeated examinations and may even be harmful. In 2025, 13 EU+2 countries reported targeted investment in diagnostic capacity to reduce waiting times. For instance, in Luxembourg, recent policy priorities have focussed on expanding advanced diagnostic technologies, including PET-CT scanners.

Figure 3.12. Diagnostic imaging equipment availability is uneven across EU+2 countries, yet countries with lower equipment density can have a higher number of exams per capita



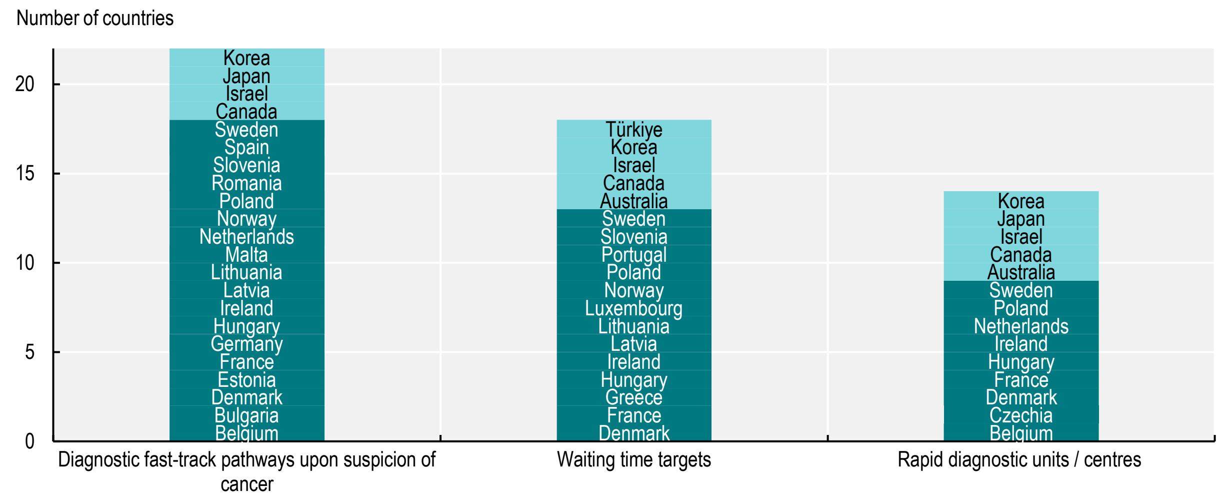
Note: Data refer to 2023. Countries separated on the right of the figure include those where data on mammographs is not available. *Number of MRIs is underestimated in Denmark as only MRIs from the Capital region and Northen Denmark are included. **Luxembourg's examinations include those performed for cross-border workers, who are not included in the denominator.
Source: OECD Health Statistics 2025.

In the EU, the Organisation of European Cancer Institutes (OECI) grants certification to cancer centres, representing a high-level quality label for oncology facilities (see Chapter 4 Section 2.3). To maintain this certification, OECI-accredited centres must provide data on waiting times for diagnostic tests, including CT and MRI scans, as well as on turnaround times for radiology reports. These assessments show substantial variation between centres. OECI data indicate higher median waiting times for MRI scans (14-19 days) than for CT scans (9-14 days). Some centres report scan-to-results reporting turnaround times of 1-2 days, while others take several months; across nine EU countries, the median time from scan-to-reporting was three days.

Eighteen EU+2 countries have implemented fast-track diagnostic pathways to streamline triage

Individuals presenting in primary healthcare with non-specific symptoms often experience delays in receiving a cancer diagnosis due to the absence of clear referral criteria. Dedicated referral pathways offer these individuals structured, standardised referral access to specialists, ensuring timely investigations and results. Specialist services have rapid and direct access to a full range of diagnostic and support services. In most cases, national cancer waiting time targets exist alongside these pathways. According to the 2025 OECD Policy Survey on High Value Cancer Care, 18 EU+2 countries now have fast-track diagnostic pathways for suspected cancer and 13 EU+2 countries have introduced waiting time targets (Figure 3.13).

Figure 3.13. Countries are aiming to streamline access to diagnostic services by strengthening co-ordination between providers and implementing waiting time targets



Note: EU+2 countries are represented in dark green, while other OECD countries are represented in light green.
Source: 2025 OECD Policy Survey on High Value Cancer Care.

Denmark's cancer packages are standardised, time-defined pathways that organise a pre-planned sequence of investigations, multidisciplinary decisions, treatments and follow-up, including rehabilitation and palliative services (Sundhed.dk, 2025[90]) (see also Box 3.3). Introduced in response to the high prevalence of late-stage diagnoses, these cancer packages provide a structured, three-pronged fast-track referral system aimed at reducing diagnostic delays and improving cancer outcomes by strengthening co-ordination between primary healthcare, hospitals, and specialist diagnostic centres (Vedsted and Olesen, 2015[91]). These referral pathways are categorised according to symptom types: 1) urgent referral for symptoms of a specific cancer, 2) urgent referral to diagnostic centres for non-specific symptoms, and

3) direct diagnostic access for GPs to fast-track investigations for vague symptoms. The pathways were found to expedite diagnosis for some patients with significantly lower diagnostic intervals (i.e. time elapsed from patient's first presentation to healthcare until receipt of diagnosis), though patients not referred to a specific pathway had longer intervals (Jensen et al., 2015[92]). A recent retrospective observational study in Denmark shows improved cancer survival rates for high-grade soft-tissue sarcoma following the introduction of a specific cancer pathway (Thorn et al., 2024[93]).

Other recent evaluations of fast-track diagnostic pathways, such as the Swedish Cancer Patient Pathways and regional fast-track cancer pathways in Spain, demonstrate clear improvements in terms of both timeliness and patient experience, particularly for individuals presenting with non-specific yet concerning symptoms. In Spain, one study showed a reduction in the time interval between GP referral, specialist testing and cancer diagnosis (Martinez et al., 2021[94]), with good communication and co-ordination between primary healthcare and specialised services identified as the key success factor. In Sweden, Cancer Patient Pathways also helped to reduce the time taken to diagnose patients with colorectal cancer (Fjällström et al., 2023[95]) and have been found to be an effective approach to detecting cancer (Borg et al., 2023[96]). In the Netherlands Cancer Institute, monitored throughput and access times were lower after implementation of fast-track diagnostics for 18 cancer types (van Harten et al., 2018[97]).

Malta, through its Directorate for Cancer Care Pathways (DCCP), operates a national fast-track referral system designed to accelerate the diagnostic pathway for patients with suspected cancer. Through this framework, GPs can issue fast-track referrals that route patients rapidly to specialist assessment and diagnostic services across multiple tumour types, including colorectal, lung, breast, prostate, haematological and skin cancers (Ministry of Health, 2025[98]).

Nine EU+2 countries have established rapid diagnostic centres to streamline diagnosis

In addition to pathways for people with site-specific symptoms, several countries are developing Rapid Diagnostic Centres (RDCs), which also offer early diagnostic services for people with non-specific symptoms that may indicate cancer. Instead of being referred to multiple specialists, these people are offered a co-ordinated, multidisciplinary assessment at a single centre, combining multiple steps in a diagnostic pathway. They often have access to imaging and laboratory tests, as well as specialist input, on the same day. Usually, RDCs are embedded in hospitals or clinics, where imaging, pathology and specialist staff are concentrated, allowing for a seamless integration into cancer-specific pathways after receipt of diagnosis.

Rapid diagnostic centres have been established in nine EU+2 countries (Belgium, Czechia, Denmark, France, Hungary, Ireland, the Netherlands, Poland and Sweden) (Figure 3.13). In France, 30 RDCs specialising in oncology have been accredited, covering various specialities. Ireland has rapid access clinics for breast, lung and prostate cancers, supported by performance monitoring and feedback mechanisms. Similarly, the Netherlands has an early diagnostics clinic as part of the Netherlands Cancer Institute Centre for Early Diagnostics in Amsterdam, specialising in referred people at increased risk of colorectal, prostate, breast and skin cancer (NKI Centre for Early Diagnosis, 2026[99]).

In the United Kingdom, the Suspected CANcer (SCAN) Pathway for people with non-specific symptoms was piloted in 2017 and adopted as standard care in 2020, having proven effective in identifying a relatively high proportion of cancers that are harder to diagnose (Smith et al., 2025[100]). Among 4 823 patients referred, 9% received a cancer diagnosis, most commonly lung, pancreatic and colorectal cancers. The median interval from referral to diagnosis was 37 days. Setting of waiting time targets can be a useful tool to define and communicate standards, with measurable success. The Faster Diagnosis Standard in the United Kingdom aims for 75% of patients to receive a diagnosis or rule-out within 28 days of urgent referral. Between 2024 and 2025 and following targeted investments in the service, the target was met for 76% of patients, up from 72% the previous year, resulting in 80 000 more timely diagnoses (Open Access Government, 2025[101]).

Evidence suggests that RDCs in Wales can shorten the mean time taken to make a diagnosis, from 84 days in usual care to 6 days if a diagnosis is made at clinic (Sewell et al., 2020[102]). RDCs also reduce the number of unnecessary repeat consultations in primary healthcare and improve the experience of patients (Russel et al., 2025[103]). Another evaluation from Scotland similarly found that the country's RDCs improved care experiences, reduced pressure on primary healthcare, and were cost-effective compared with standard primary care pathways, particularly for people presenting with vague or non-specific symptoms (Maguire et al., 2024[104]).

Interventions integrated in population-based screening programmes for structured follow-up increase retention for diagnostic testing

Primary healthcare can additionally play a role in ensuring adequate follow-up of abnormal cancer screening or diagnostic test results, which is essential to realise the full benefits of screening programmes. Evidence from the Netherlands indicates a loss to follow-up of around 4% after direct referral for colposcopy from a laboratory after an abnormal pap smear, where patients are contacted directly by the colposcopy service. However, loss to follow-up is higher when patients with an inconclusive result are referred for repeat testing, reaching up to almost 14% among women who initially self-sampled (Olthof et al., 2024[105]). In Denmark, about 10% of women with abnormal or inadequate primary cervical cancer screening results did not receive follow-up within 18 months (Fogh Jørgensen et al., 2024[106]).

Effective follow-up requires clear protocols, robust information systems, and accountability mechanisms to ensure that no abnormal result is overlooked. Interventions such as electronic health record reminders, structured outreach to the patient and navigation support have been shown to improve timely completion of diagnostic work-up, yet gaps remain, particularly where communication between primary and specialist care is fragmented. In cases where clear guidelines and protocols do not address when and how follow-up should take place, it tends to be uneven and heavily reliant on the patient. Embedding systematic follow-up within cancer care pathways, supported by monitoring and quality indicators , is critical to reducing diagnostic delays and improving equity in cancer outcomes. A reminder system for cervical cancer screening follow-up, coupled with higher engagement by GPs over gynaecologists, was linked to better follow-up rates, as seen for example in comparisons between Denmark (with reminders) and Flanders (without reminders) (Fogh Jørgensen et al., 2024[106]).

Strong monitoring systems with robust indicators are needed to highlight inequalities and improve timeliness of cancer diagnostic processes

A mature cancer data ecosystem makes it possible to monitor diagnostic timeliness and to safeguard continuity and co-ordination of care. It depends on key datasets, including cancer screening registries, cancer registries, administrative and reimbursement databases for healthcare activities, and mortality registries (see Chapter 2). Developing comprehensive cancer registries with high-quality, timely data, linking them to other health databases, and using unique patient identifiers is crucial for identifying bottlenecks at different stages of cancer care and shortcomings in the existing services.

Quality assurance and monitoring of cancer screening programmes are vital to ensure identification and development of strategies to reach underserved groups

Monitoring cancer screening outcomes is critical for evaluating programme effectiveness to understand gaps in coverage and develop targeted strategies to reach underserved populations. Studies linking risk factors, social inequalities and participation in prevention to screening are important to determine patterns related to non-participation in screening (Unanue-Arza et al., 2021[74]), with robust population-based data and cancer registries serving as a crucial basis.

Among 12 EU+2 countries surveyed in OECD work on patient safety, nine (Austria, Czechia, Latvia, Luxembourg, Germany, Iceland, Norway, Slovenia and Sweden) reported conducting a general or clinical audit of their national cancer screening programme(s) (Slawomirski et al., 2025[107]). However, only five track false negatives (Austria, France, Luxembourg, Norway and Slovenia), representing missed opportunities to identify delays and improve timeliness of care. Just five countries (Czechia, Germany, Norway, Slovenia and Sweden) report linking screening data with diagnostic services or cancer registries to monitor follow-up. Recall rates after a positive screen are reported in nine EU+2 countries, while referrals to diagnostic services are tracked in seven.

Commonly used indicators include participation rates (among people who receive an invitation) and coverage (among the population eligible for screening). Additionally, the rate of interval cancers arising between screening rounds is an important quality assurance indicator for screening programmes. Countries where this is calculated include Austria, Germany, Norway and Slovenia (Slawomirski et al., 2025[107]), as well as in Iceland and Ireland. In Iceland, 17% of women diagnosed with breast cancer in 2024 had received a normal mammography result in the preceding 24 months (Iceland Directorate of Health, 2025[108]), while for Ireland, the proportion was below 12% (Health Service Executive, 2025[109]).

Some countries link screening coverage indicators to quality monitoring or performance-based funding for primary healthcare facilities. Additionally, in Israel, incorporating screening into the national quality indicators programme for primary care physicians (who receive reminders through the electronic health record during patient visits) was associated with increased rates of colorectal and breast cancer screening and reduced socio-economic disparities in screening rates (Weisband et al., 2021[110]).

Capturing the full cancer pathway in data allows identifying gaps in care continuity that may lead to bottlenecks in timeliness

Capturing the full cancer pathway in routinely collected data makes it possible to identify where continuity of care may be breaking down. Gaps or delays at any point in the pathway affect outcomes, people's experience of care and system efficiency. A comprehensive view of the pathway allows health systems to pinpoint where patients wait the longest, where co-ordination is weakest, and which phases of care require targeted improvement. Many countries monitor waiting times at multiple touchpoints along the pathway; however, the specific indicators, definitions and timepoints used differ substantially across systems, making cross-country comparison challenging.

In the 2025 OECD Policy Survey on High Value Cancer Care, 14 EU+2 countries reported monitoring timeliness indicators (Table 3.5). Specifically, the primary care interval is monitored in three EU+2 countries; nine collect data on the time between a suspected cancer referral and a diagnostic procedure; and eight measure time from suspicion of cancer to diagnosis. Time from diagnosis to treatment is the most commonly monitored indicator, used by all 14 countries who reported monitoring of timeliness.

Table 3.5. Time-related performance information collected by countries varies across the EU

Indicators	Primary care interval	Time from referral of suspected cancer to diagnostic procedure	Time from suspicion of cancer to diagnosis	Time from diagnosis to first treatment	None
EU+2 Countries	Denmark, the Netherlands and Norway	Denmark, France, Iceland, Ireland, Lithuania, the Netherlands, Norway, Poland and Sweden	Denmark, France, Ireland, Lithuania, the Netherlands, Norway, Poland and Sweden	Czechia, Denmark, France, Germany, Hungary, Iceland, Ireland, Lithuania, Luxembourg, the Netherlands, Norway, Poland, Slovenia, Sweden	Austria, Bulgaria, Estonia, Greece, Latvia, Romania, the Slovak Republic, Spain
Other OECD Countries	Colombia, Türkiye	Canada, Colombia, Türkiye	Colombia, Japan, Türkiye	Canada, Colombia, Japan, Korea	Switzerland

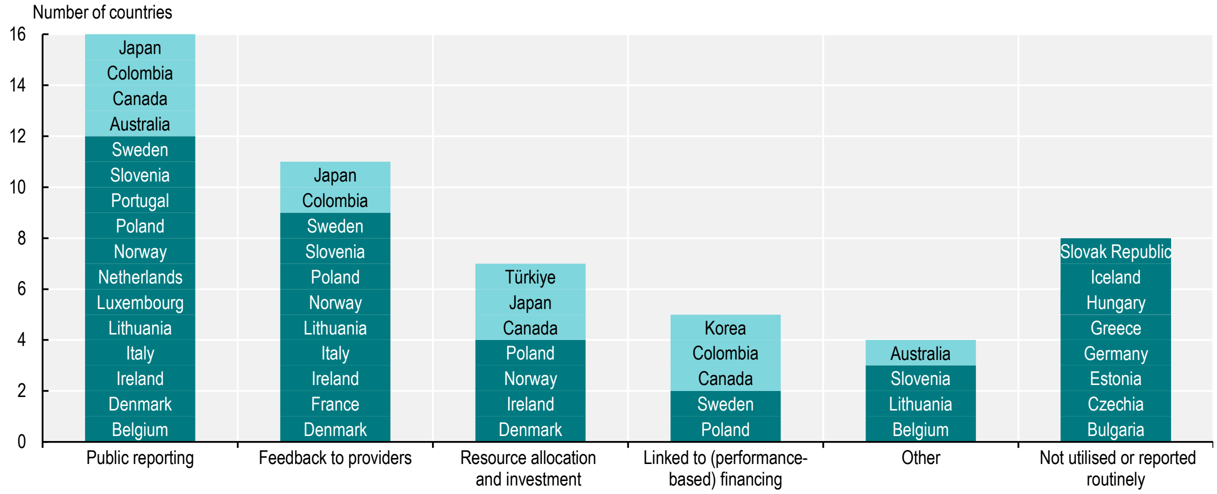
Note: Primary care interval refers to the time from first presentation with symptoms in primary care to date of referral to a specialist. Belgium, Italy, Lithuania, Luxembourg, Portugal, Slovenia, as well as Australia and Israel reported monitoring other aspects of timeliness.
Source: 2025 OECD Policy Survey on High Value Cancer Care.

Among EU+2 countries, only Denmark, the Netherlands and Norway monitor all the selected timeliness indicators from the point of initial presentation in primary healthcare. Beyond this, monitoring the full cancer pathway can involve tracking each touchpoint in detail and following the person through consecutive treatments and care outcomes. There is considerable variation across countries in how time-related performance metrics are defined, particularly regarding the precise start and end points of the measured intervals. For instance, Portugal measures the time between the first primary healthcare referral and the first specialist appointment, while Italy measures the time between booking a consultation and the first treatment at a regional cancer network facility, with the aim of ensuring compliance with a maximum waiting time of 30 days. Slovenia monitors time intervals such as the turnaround time for pathology reports and the time between a multidisciplinary team decision and the initiation of treatment for the five most common cancers (breast, colorectal, melanoma, lung and prostate). Luxembourg measures the time from multidisciplinary team meeting to first treatment. By contrast, eight EU+2 countries reported that monitoring the timeliness of these critical aspects has not yet been fully implemented. In Spain, cancer timeliness indicators are not systematically recorded at the national level (although they may be used in some regions), but the National Cancer Plan includes timeliness indicators in its periodical evaluations.

Additional challenges concern the capacity to monitor timeliness by provider characteristics and by patient-level characteristics (e.g. sex, age, socio-economic status, ethnicity, migration background). Understanding timeliness across providers and patient subgroups is crucial, as missing or incomplete data can conceal performance variation and potential inequalities, limiting the ability to target improvements and ensure equitable care. According to the 2025 OECD Policy Survey on High Value Cancer Care, eight countries (i.e. Belgium, Czechia, Germany, Hungary, Luxembourg, Norway, Poland, Slovenia) reported monitoring timeliness of cancer care by both sex and age, while Iceland and Sweden reported monitoring by sex only. Only Norway reported having the capacity to monitor timeliness by ethnicity or migration background. Regarding provider-level characteristics, 12 countries monitor timeliness of cancer care by both hospital and region, while three countries monitor only by hospital and another three only by region.

Data on cancer care performance offers opportunities to meaningfully assess, compare, and improve cancer services delivery and outcomes. 12 EU+2 countries reported using data on the timeliness of cancer care for public reporting, primarily to support individuals make informed decisions about provider choice and to build trust (Figure 3.14). Timeliness data are also frequently used in feedback mechanisms to providers as part of ongoing quality improvement initiatives (nine EU+2 countries). For example, in Sweden, the Linköping Comprehensive Cancer Centre has developed a dashboard to monitor waiting times along cancer care pathways and drive improvements (see Box 3.2). In Slovenia, in addition to making timeliness of cancer care data available in public reports, findings are discussed with expert groups and other stakeholders to improve the overall accessibility and quality of care. In Lithuania, upgraded systems now enable monitoring of diagnostic and treatment pathways for cervical, colorectal and breast cancers, enhancing the ability to identify delays and address bottlenecks in care delivery (OECD/European Commission, 2025[6]). In Belgium, while timeliness data are generally used to inform the quality of cancer programmes, specific data on time delays (e.g. between diagnosis and treatment) are not publicly reported.

Figure 3.14. EU+2 countries are using information on timeliness of cancer care in various ways to reduce delays and improve access



Note: EU+2 countries are represented in dark green, while other OECD countries are represented in light green.
Source: 2025 OECD Policy Survey on High Value Cancer Care.

Box 3.2. Regular monitoring of cancer care processes supports data-driven improvements in Sweden and Slovenia

In Sweden, the Linköping University Comprehensive Cancer Centre employs near-real-time monitoring via dashboards to drive improvements in cancer care delivery

In June 2024, the Linköping University, in collaboration with Region Östergötland in Sweden, was accredited as a Comprehensive Cancer Centre by the Organisation of European Cancer Institutes. (see also Chapter 4). One of the centre's key initiatives focusses on monitoring waiting times at various stages of the cancer care pathway. To support this effort, a dashboard has been developed to assist the teams responsible for each care pathway in monitoring their respective patient groups, providing a daily updated overview of the number of individuals at each stage of the care process, as well as the time spent in each stage. Key stages include the suspicion of cancer (start of the process), receipt of first referral; initial consultation within specialised care; first multidisciplinary team meeting; joint decision with the patient on the treatment plan and initiation of treatment (end of the process). This information has been essential for the continuous optimisation of care processes and has supported care teams in working towards the national target of completing 80% of cancer treatment pathways within the recommended timeframes.

Slovenia's cervical cancer screening programme utilises digital records to monitor the programme and provide detailed feedback to screening service providers

Slovenia's national cervical cancer screening programme ZORA combines cytology-based screening with HPV testing to detect and manage cervical cancer (Institute of Oncology Ljubljana, 2025[111]). It is centrally co-ordinated by the ZORA office at the Institute of Oncology Ljubljana, which is responsible for developing guidelines, collecting data, and monitoring and evaluating all stages of the screening process. A major advancement has been the transition from paper-based to digital records, which has considerably improved the development of a data-driven approach to decision making across key actors. These data support quality assurance mechanisms such as annual performance reports submitted to the government, the National Cancer Control Plan, and the Health Insurance Institute. Screening service providers receive personalised performance reports with indicators allowing comparisons over five years and against national averages. ZORA's performance is also discussed publicly in forums such as the annual ZORA Educational Day, contributing to transparency and continuous improvement.

3.4. Timeliness of appropriate treatment for cancer is an important determinant of survival

3.4.1. Timely treatment initiation varied across countries

The period between a cancer diagnosis and the start of treatment is a crucial stage in the cancer care continuum but is vulnerable to delays, interruptions in care and ultimately, poorer clinical outcomes. While the specific treatment modalities depend on tumour and patient characteristics, many people with cancer need more than one treatment modality, including radiotherapy, chemotherapy, or surgery (Figure 3.1). Barriers to timely diagnosis and diagnostic accuracy can limit the ability to match individuals to the most appropriate, evidence-based therapies to which they are most likely to respond. Even after an accurate diagnosis of cancer is established, additional diagnostic testing is often needed to further characterise tumours and guide treatment selection. Many countries require or recommend the use of multidisciplinary teams (MDTs), also called multidisciplinary tumour boards, which can slightly increase the time to treatment initiation but support the selection and co-ordination of appropriate treatment and have been shown to improve outcomes, including treatment planning, care experiences, and survival (OECD, 2024[48]) (see Chapter 4). Overcoming barriers to both timely and appropriate treatment is essential to reduce the use of low-value interventions, minimise adverse effects, and improve overall care experiences and outcomes for people living with cancer (see Chapter 4). The availability of a range of supportive services that address the broader needs of people with a history of cancer, including help with physical symptoms, emotional well-being and lifestyles, can also be limited by systemic, geographic and socio-economic factors (see Chapter 5).

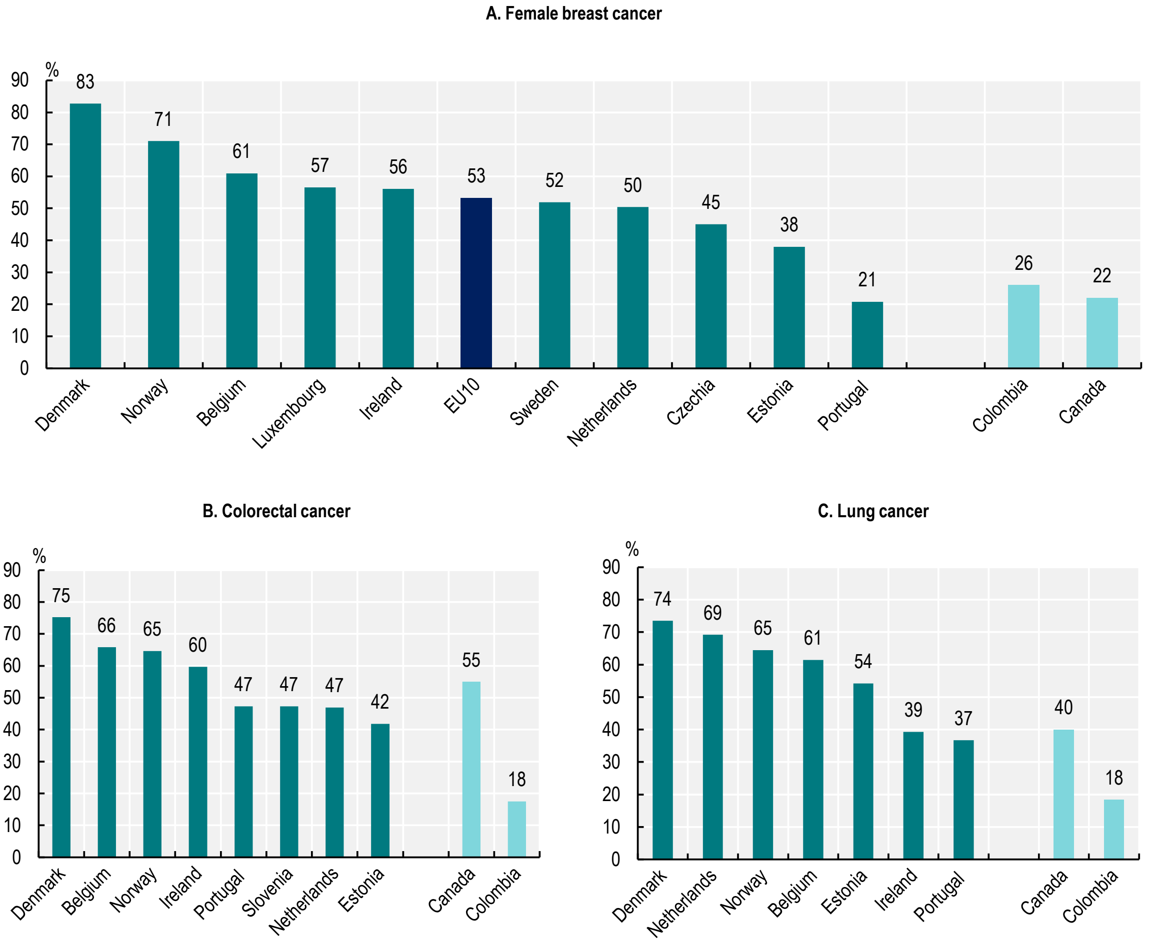
Variation in time to treatment highlights gaps in access to cancer care and impacts cancer survival

Once cancer is confirmed through diagnosis (Section 3.3), initiation of treatment within a short timeframe improves clinical outcomes, including patient-reported outcome measures. Shorter time to cancer treatment initiation is associated with reduced mortality and is particularly critical for certain cancer types. Time from tissue diagnosis to treatment is an important indicator of care quality, with 30-days often used as a benchmark (OECD, 2025[62]).

A meta-analysis found that for every 4-week delay in initiating cancer treatment, the risk of death increases by around 10% (Hanna et al., 2020[2]). Moreover, for each 4-week delay in surgery, mortality risk increases significantly for bladder and colon cancers (by 6%), head and neck cancers (by 6%), and breast cancer (by 8%). Another meta-analysis showed that each 4-week delay in treatment for colorectal cancer was associated with a progressively higher risk of death, from a 12% increase after a 4-week delay to a 39% increase after a 12-week delay, underscoring the critical importance of timely care for improving survival (Ungvari et al., 2025[112]). Similar findings were found for cervical cancer, where each 4-week delay was significantly associated with a 27% increase in mortality risk at 5-year follow-up after radiotherapy (Shimels, Gashawbeza and Fenta, 2024[113]).

Among countries with available data (Figure 3.15), there are marked cross-country inequalities concerning treatment initiation within 30 days of tissue diagnosis. Treatment initiation within 30 days for female breast cancer was highest in Denmark (83%) and Norway (71%). Seven out of ten countries (Denmark, Norway, Belgium, Luxembourg, Ireland, Sweden and the Netherlands) met the 50% threshold for treatment initiation within 30 days of tissue diagnosis, suggesting more efficient care pathways in these countries. Four EU countries (Denmark, Norway, Ireland and Belgium) reported that at least 50% of people diagnosed with colorectal cancer began treatment within 30 days of diagnosis, with Denmark performing highest at 75%. For lung cancer, treatment initiation rates within 30 days ranged from 37% in Portugal to more than three in five in Denmark (74%), the Netherlands (69%), Norway (65%), and Belgium (61%). Similarly, the VENUSCANCER project (Allemani et al., 2025[114]) found substantial variation in time to treatment for breast, cervical and ovarian cancer treatment initiation across countries.

Figure 3.15. The share of female breast, colorectal and lung cancer cases where treatment was initiated within 30 days of tissue diagnosis was above 50% for all cancer types in three countries



Note: Data refer to a three-year average across years with data available, including 2022-2024 in Denmark, 2021-2023 in Canada, Czechia, the Netherlands, Norway and Sweden, 2020-2022 in Belgium and Estonia, 2019-2021 in Portugal and 2018-2020 in Ireland. Data for Colombia and Slovenia refer to 2023 and Luxembourg's data refer to 2017-2019 for breast cancer and 2019 for lung cancer. Data for Canada are based on two provinces: Alberta and Prince Edward Island.
Source: OECD Health Statistics 2025; OECD (2025[62]), "Assessing cancer care quality in OECD countries: New indicators for benchmarking performance", https://doi.org/10.1787/b3f47ece-en.

Differences across cancer types may reflect variations in clinical decision making and care modalities, which can extend time to treatment initiation and complicate cross-cancer comparisons. Across countries, delays in starting treatment and in transitions between modalities are influenced by service availability and accessibility, as well as co-ordination and continuity of care. Interpretation can additionally be influenced by the mix of years included in the data, including periods affected by the COVID-19 pandemic. Between 2018 and 2023, the largest declines in the share of breast cancer cases treated within 30 days after diagnosis were observed in Estonia and the Netherlands (both –15 p.p.) and Belgium (–11 p.p.) (OECD, 2025[62]). For colorectal cancer, Estonia and the Netherlands also showed declines of more than 10 pp. By contrast, lung cancer exhibited mixed time trends, with increases in the share treated within 30 days in Estonia, Ireland and Norway, and slight to moderate decreases in Belgium, Portugal and Canada.

Observed declines in the proportion of breast and colorectal cancer cases treated within 30 days of diagnosis may reflect pandemic-related disruptions in service delivery, including delayed diagnostics, reduced surgical and oncological capacity, and increased strain on healthcare systems in some countries (Pennisi et al., 2024[76]; Tang et al., 2022[115]), while others may have adapted cancer pathways during the COVID-19 period (Scanagatta et al., 2025[116]).

> After I felt the lump, I was very lucky to go straight to the doctor, who performed all the tests, including a biopsy, on the same day…Within a week of receiving the diagnosis, I was already undergoing my first chemotherapy. The more problematic period is after treatment, during remission, when I am constantly dealing with health issues.
>
> *Nikol, 37 years, breast cancer*

3.4.2. Cancer treatment timeliness is affected by care fragmentation and gaps in workforce and radiotherapy capacity, while access to innovative treatment varies

To improve timeliness through co-ordination of cancer care, many EU countries have implemented treatment pathways and protocols with defined time benchmarks

Fragmentation and poor co-ordination of care significantly contribute to delays in cancer treatment. A 2023 qualitative study conducted in-depth interviews with seven individuals who had been enrolled in a standardised cancer patient pathway in Norway between 2018 and 2020, before, during, and one-year after completion of treatment (Solberg, Berg and Andreassen, 2023[117]). These participants described having to manage care involving multiple clinicians, with implications for continuity and collaboration at various levels of care delivery. Similarly, another qualitative study interviewed 40 individuals with a history of cancer across five countries (Greece, Cyprus, Spain, Italy and Serbia) (Hesso et al., 2022[118]). The findings revealed that cancer care pathways were frequently experienced as fragmented, with poor co-ordination between providers and departments, often resulting in delays in diagnosis and treatment.

To improve co-ordination, 17 EU+2 countries responding to the 2025 OECD Policy Survey on High Value Cancer Care have developed cancer care pathways and embedded clear time benchmarks that should be met. From these countries, Sweden stands out with its highly systematised 31 cancer patient pathways, implemented across 21 regional health authorities. These cover the most common cancer types, with evidence indicating the pathways have succeeded in ensuring more timely, equitable, and quality-assured access to cancer care (see Box 3.3). France piloted accelerated co-ordinated cancer care pathways in seven hospitals for cancers with poor prognosis, reducing time to treatment, and streamlining communication with other providers to expedite access to supportive and palliative care.

Box 3.3. Most cancer cases in Sweden are managed within standardised care pathways

In Sweden, standardised cancer patient pathways (CPPs) were introduced in 2015, based on Denmark's approach established in 2007 (Regionala Cancercentrum, 2025[119]). Developed by national cancer guideline working groups, their objectives include reducing waiting times, harmonising diagnostic approaches, improving care experiences and outcomes, and minimising regional disparities in timely access to care. Between 2015 and 2018, 31 CPPs were implemented. By 2023, 83% of people with a history of cancer were managed within one of these pathways (OECD/European Commission, 2025[120]).

Each CPP sets out the symptoms and signs that establish a well-founded suspicion of cancer, the principles for referral to specialised care, and any required pre-diagnostic investigations. Some CPPs include a filter function, requiring confirmation of the suspicion by a specialist. Most CPPs also define a maximum lead time between the point of well-founded suspicion and the initiation of treatment. These limits, established in the National Clinical Cancer Care Guidelines, vary by diagnosis.

Two national CPP performance targets are defined: one is an inclusion target (at least 70% of people diagnosed with cancer should be investigated through the relevant CPP) and the other is a lead time target (at least 80% of people included in a CPP should complete investigation and start treatment within the diagnosis- and treatment-specific lead time). In 2024, almost 157 000 people were investigated for cancer through CPPs, and all regions met the 70% inclusion target (Regionala Cancercentrumen, 2025[121]). Across 27 CPPs, the inclusion target was achieved for 22 pathways. Despite improvements in lead times across all regions, with five regions meeting the lead-time target for at least half of patients, the 80% of people starting treatment within the lead time target is currently reached only for people diagnosed with acute leukaemia.

Regions also receive government funding conditional on reporting waiting times to a national database. Publicly available statistics include the number of cancer cases investigated and treated within CPPs and adherence to time limits. Care experience is measured using a questionnaire administered 6-10 weeks after investigation, targeting both people diagnosed with cancer and those in whom cancer was ruled out. Since the implementation of CPPs, reported care experiences have generally been reported as positive in both groups (Regionala Cancercentrumen, 2025[121]). Although lead-time targets are not yet fully met, most people in a CPP remain satisfied with the duration of the diagnostic process, and results are broadly comparable across regions.

Among EU+2 countries, 14 countries have implemented patient navigation and case management initiatives to enhance access to and co-ordination within cancer care services (Chapter 5). For instance, in Spain, many Autonomous Communities have established the role of healthcare liaison co-ordinators or case managers, and in 2024, a national recommendation was issued to expand this role across the country. In addition, 17 EU countries have also adopted solutions to support scheduling and co-ordination. For instance, Slovenia employs call centres for this purpose, while certain regions in Austria have established dedicated hotlines to support information provision and appointment management.

Across EU+2 countries, a range of policies address financial and geographical barriers to cancer care, aiming to reduce delays from the patient side

Individuals experiencing financial hardship are significantly more likely to delay, forgo, or discontinue recommended treatments, leading to poorer clinical outcomes, including reduced survival and increased recurrence risk. Medication non-adherence and missed appointments are common among those unable to meet care-related costs (Reshma et al., 2024[122]). These challenges disproportionately affect socioeconomically disadvantaged and marginalised populations, thereby exacerbating existing health disparities.

A survey among people with cancer across 25 EU countries found a high prevalence of financial hardship among participants, with 16% of respondents postponing or avoiding some care altogether (Vancoppenolle et al., 2025[123]). The highest proportions of people reporting postponed or forgone care were in Greece (47%), Bulgaria (38%), Belgium (23%), Germany (22%) and France (21%). The services most commonly delayed or avoided were doctor visits (6%) and buying medicines (7%), while treatments such as chemotherapy, radiotherapy and surgery were less frequently skipped. In Bulgaria, where out-of-pocket costs are high, 28% of respondents reported delaying or forgoing doctor visits, 18% did so for medicines and 3% for surgeries. Certain groups were at particular risk, including young adults (of whom up to 80% reported financial difficulties and 65% reported income loss), as well as divorced individuals, self-employed people, those with lower household incomes, and individuals with dependent children at the time of diagnosis.

To ensure cost does not present a barrier to treatment and to enable equal access, 22 EU+2 countries have implemented mechanisms to ensure low or no co-payments for cancer treatment. In Belgium, individuals with a Beneficiary of Increased Intervention status, primarily individuals on low-incomes and social allowance beneficiaries, receive higher reimbursements for medical care under the preferential reimbursement scheme. They could also be entitled to additional benefits, including a lower annual cap on OOP expenses. Once this cap is reached, all further medical costs in that year are fully reimbursed by compulsory health insurance. In Ireland, hospital-administered cancer treatments are free for patients treated in a public ward-type bed, which may however be subject to longer wait times. Outpatient treatments have capped co-payments, with reduced rates for those holding a medical card, which gives eligible residents free or reduced-cost access to public outpatient and inpatient services, GP visits and most prescribed medicines.

In addition to direct treatment costs, patients face additional barriers to accessing treatment such as travel distance to care facilities. The burden of travel extends beyond distance, encompassing time, financial costs and psychological stress, all of which can negatively affect care experiences and treatment outcomes. Nine EU+2 countries reimburse ancillary expenses such as transportation, childcare, or income loss. For example, Belgium offers partial reimbursement for transport through national and private insurance schemes, and in Ireland, the Irish Cancer Society provides volunteer driving services and transportation assistance funds. In France, people with cancer receive comprehensive support to maintain quality of life during and after treatment, including medical supplies after mastectomy, travel and accommodation support, home care services, financial aid for daily assistance, housing adaptations, remote assistance technologies, and psychological and social support (see also Chapter 5). These services are co-ordinated by institutions such as the National Cancer Institute and the League Against Cancer.

Additional support includes child sickness benefits for parents of children with cancer in Germany and access to medical supplies in Ireland, such as post-mastectomy products, based on clinical need and eligibility. In Japan, all people enrolled in the public health insurance system are eligible for the high-cost medical expense benefit system, which caps monthly out-of-pocket medical costs based on age and income. This substantially reduces the financial burden experienced by people undergoing cancer treatment. The cap is lower for people on lower incomes and for most older people, and the health insurer bears the difference between the ceiling and the statutory co-payment that would otherwise apply.

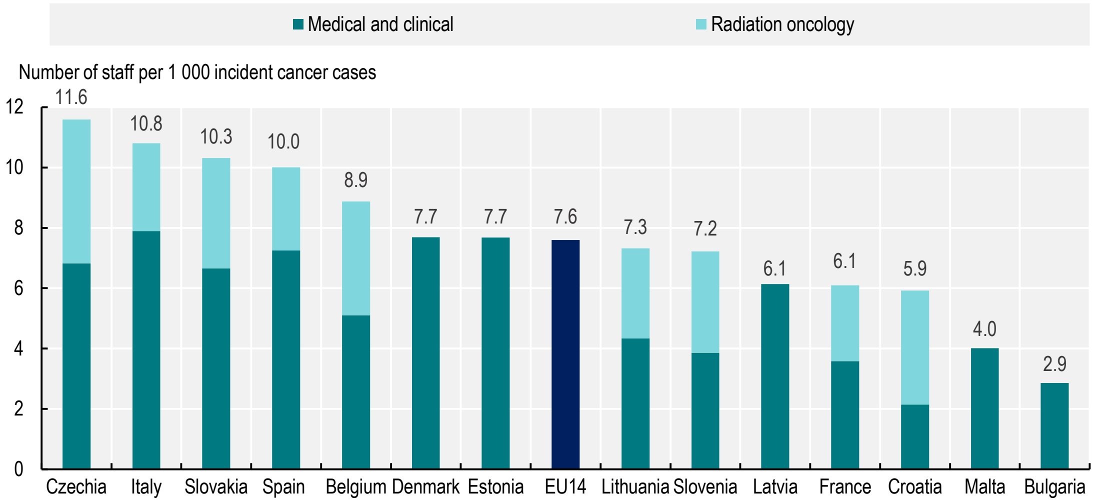
Investing in cancer care capacity, including workforce and infrastructure, is key to meet the growing demand

Availability of a resilient and skilled oncology workforce must be a cornerstone of national cancer control plans

Accessibility to cancer care is frequently hindered by shortages and unequal distribution of specialised healthcare professionals. In 2022, EU countries faced a shortage of 1.2 million doctors, nurses and midwives, while over one-third of doctors and a quarter of nurses in the EU are aged over 55 and expected to retire in the coming years (OECD/European Commission, 2024[124]). Available projections estimate the workforce numbers will not meet the demand increase due to population ageing in coming decades (Bernini et al., 2024[125]). This has implications across medical fields, including cancer care.

Monitoring oncology workforce numbers is challenging, given differences in definitions, workload and responsibility of professionals. Among countries where application of a more comparable definition was feasible, the number of physicians classified as medical and clinical oncologists, and radiation oncologists averaged 7.6 per 1 000 estimated incident cancer cases, ranging from 11.6 in Czechia to 2.9 in Bulgaria, where data on radiation oncologists was not available (Figure 3.16).

Figure 3.16. The number of physicians classified as medical, clinical or radiation oncologists available per cancer case varies 4-fold across countries, subject to measurement challenges



Note: Data refers to the nearest available year. Categories of physicians are based on national systems and reported data. Interpretation should account for limitations in data availability, disaggregation, or scope of definitions. Data exclude paediatric, haematological, and other oncologists which are not defined as separate categories in many countries. Data for Czechia refer to active physicians in any healthcare setting; data for Italy refer to active physicians; data for Slovenia includes medical oncologists and internal medicine specialists with special oncology training; data for Bulgaria refer to medical oncologists only (radiation oncology is a separate specialty); data for Malta and Denmark refer to clinical oncologists only; data for France refer to licensed physicians.
Source: Oncologist data from OECD 2024 survey, EU Country Cancer Profiles 2025, https://www.oecd.org/en/about/projects/eu-country-cancer-profiles-2025.html, Incidence data from European Cancer Information System (ECIS) https://ecis.jrc.ec.europa.eu/, accessed in July 2025.

Nursing shortages are similarly critical for timely cancer care. The European Cancer Nursing Index 2022, based on a survey of 436 cancer nurses across 29 countries, found an association between nursing shortages and bed closures and treatment delays (Catania et al., 2025[126]). Notably, preparing hazardous drugs in the workplace more than doubled the likelihood of treatment delays, while each additional patient per nurse significantly increased the odds of delays.

Cancer centres certified by the Organisation of European Cancer Institutes (OECI) monitor staffing levels of physicians, and nurses, as well as vacancies. Across centres submitting data, average capacity was around 32-36 cancer cases per full-time equivalent physician employed. The proportion of cancer cases treated in OECI-certified centres differs by country (see Chapter 4), and standardised monitoring activities enable centres with OECI Cancer Centre certification to maintain high standards of care. Vacancies remain a significant concern: over half of centres reported open positions for medical oncologists and radiologists, while unfilled positions were most acute in oncology nursing.

The ageing of the healthcare workforce and difficult working conditions, exacerbated by the COVID-19 pandemic, are contributing to staff retention problems and anticipated future shortages. These challenges are further compounded by increasing levels of burnout and turnover among healthcare professionals, as highlighted by the Mental Health of Nurses and Doctors survey conducted by the WHO Regional Office for Europe in collaboration with the European Commission (WHO Regional Office for Europe, 2025[127]) (Box 3.4).

Another survey by the European Cancer Organisation underscores the scale of the problem (European Cancer Organisation, 2024[128]). One in 12 cancer professionals plans to leave the field within the next five years, 19% experience high levels of burnout, 52% describe their workload as “endless,” 55% say administrative burdens make their job too difficult and 77% often work overtime. The situation is particularly severe in Central Europe, where professionals report higher burnout, lower workplace support and reduced job satisfaction compared with their Western counterparts. The crisis also reveals a persistent gender gap: although women account for around 70% of the health and care workforce, they remain underrepresented in senior oncology roles.

Box 3.4. Strengthening resilience in cancer care pathways requires targeted investment in interventions to prevent burnout among oncology professionals

Burnout among oncology healthcare professionals, largely driven by psychosocial risks such as high workloads and limited opportunities for professional development, poses a serious threat to both the quality of care and the long-term sustainability of the workforce. A meta-analysis with a pooled sample of 4 705 oncologists reported average proportions of 32% for emotional exhaustion, 26% for depersonalisation, and 25% for low personal accomplishment, similar to 32%, 21%, and 26%, respectively, among 6 940 oncology nurses (HaGani, Yagil and Cohen, 2022[129]).

Further evidence from a survey of 83 nurses affiliated with the German Cancer Society revealed a high rate of burnout among German oncology nurses: 20% showed strong signs of disengagement, and 53% reported high levels of exhaustion. While age and disengagement were only mildly correlated, oncology nurses aged 50 and older were found to be three times more likely to experience disengagement than their younger counterparts (Helaß and Maatouk, 2024[130]).

Effectively addressing these interconnected challenges in oncology will require sustained attention, building on existing EU policies, while adapting solutions to national and subnational contexts. To support this effort, the European Society for Medical Oncology (ESMO) Resilience Task Force has issued 11 recommendations to improve professional well-being. These span from information and training, access to resources and advocacy, and targeting action at individual, institutional, and societal levels (Lim, 2024[131]). This initiative aligns with broader efforts such as the WHO European Region’s Bucharest Declaration (March 2023), adopted by 50 member states. The declaration calls for strong political commitment to protect, support, and invest in health and care workers across Europe and Central Asia, aiming to improve recruitment, retention, workforce performance, and planning.

Recruitment, retention, education and interprofessional collaboration are emerging as essential pillars of sustainable cancer workforce development. Insights can be drawn from a rapid review that identified existing planning tools for the health and care workforce based on different approaches, such as needs-based, workforce-to-population ratio and utilisation-based (WHO, 2025[132]). Across EU+2 countries, efforts to strengthen the oncology workforce and related services are emerging through various mechanisms (Table 3.6), including workforce planning and training reforms, task reallocation, recognition of foreign qualifications and financial incentives. In addition, the EU-funded Joint Action on health workforce planning and forecasting (HEROES JA) is promoting progress in workforce planning through supporting the capacities of EU+2 countries in developing and putting to use specific planning and forecasting tools.

Table 3.6. A range of policies to improve recruitment and retention are being implemented across EU countries

Policy	Selected examples
Development or strengthening of workforce planning mechanisms and tools	• The Netherlands: Used national forecasting tools to assess future needs, including for oncology nurses. • Luxembourg, Malta and Slovenia: Invested in long-term planning and cross-sector collaboration to align education with healthcare needs.
Changes in training capacities	• Czechia: Developed a specialised oncology nursing programme and trained GPs in cancer follow-up care. In the hospital setting, the role of cancer co-ordinator has been developed to reduce the burden on healthcare staff. • Denmark: Expanded postgraduate clinical training. • France: Offers a national master's programme for advanced practice nurses in oncology since 2018.
Development of new roles and changes in task allocation among healthcare professionals	• Austria: Implemented the role of oncology nurse in some regions and that of community nurses in some municipalities. • Belgium: Offered a specialised programme in oncology for nurses.
Recognition of qualifications of foreign-trained doctors and nurses already in the country	• Iceland: Recruited Icelandic-trained doctors back to the health system and increased numbers of foreign-born doctors. • Slovenia: Improving processes and language support for recognising foreign-trained healthcare professionals.
Provision of financial incentives	• Belgium (Wallonia): Provided financial support for young doctors establishing practices in underserved areas (first 18 months). • Greece: Offered financial benefits to physicians working in remote regions. • Iceland and Malta: Financed specialised oncology training abroad due to limited domestic capacity.

Source: 2023 OECD Policy Survey on Cancer Care Performance and 2025 OECD Policy Survey on High Value Cancer Care.

> Even if a diagnosis can be made quickly, another problem arises – the availability of treatment. There is a shortage of places in wards, there is a shortage of staff, sometimes even medicines or equipment... Patients have to "fight" for their place in the system, and this generates enormous stress and a sense of helplessness.
>
> *Renata Anielak, head of an association supporting cancer patients and their families*

With a projected 25% increase in radiation therapy demand across EU+2 countries, addressing capacity gaps in the workforce remains critical

Expanding access to radiotherapy through strategic planning and investment ensures equal access in meeting increasing need for specialised therapies. Limited equipment availability constrains service capacity and leads to waiting lists, while outdated equipment increases the risk of failures and further treatment delays. Together, these factors contribute to higher mortality, poorer care experiences, and persistent health inequalities across and within European countries. A meta-analysis found that each 4-week delay in adjuvant radiotherapy was associated with higher mortality for breast (9%) and colon cancers (13%), while neoadjuvant radiotherapy delays increased mortality risk for breast (28%) and bladder cancers (24%) (Hanna et al., 2020[2]). Addressing these challenges through investment, modernisation and equitable geographic distribution of structures is crucial for Europe to achieve optimal outcomes and fair access to care (Lievens, Borras and Grau, 2020[133]).

The 2015 Lancet Oncology Commission on expanding global access to radiotherapy highlighted that radiotherapy can be effectively standardised and delivered irrespective of socio-economic, political and cultural contexts. While some progress has since been made, the new Lancet Oncology Commission on radiotherapy and theranostics (see Box 3.5), underscores that significant disparities in access persist (Abdel-Wahab et al., 2024[134]).

Box 3.5. Advancing theranostics, an emerging field in personalised cancer care, is a key priority for Europe

The emerging area of theranostics, an innovative field of personalised, precision medicine, combines diagnostic imaging and targeted therapy by administering a radioisotope bound to molecules that specifically attach to cancer cells, enabling highly precise location, followed by delivery of a similar molecule carrying a therapeutic isotope. This approach, particularly relevant for neuroendocrine tumours and prostate cancer, presents significant opportunities but also faces challenges in ensuring those that can benefit from it receive it in a timely manner. These include supply chain fragility for radioisotopes (often concentrated in a few countries), shortages of trained workforce, insufficient funding, and limited information on access and availability to inform decision making.

Three large-scale projects are expected to position Europe at the forefront of the emerging field of theranostics: Thera4Care (Innovative Health Initiative, 2024[135]) aims to foster a collaborative European ecosystem for theranostics; ILLUMINATE (Innovative Health Initiative, 2024[136]) focusses on advancing new imaging techniques to enhance theranostic effectiveness, with a particular emphasis on prostate cancer that has spread to other organs; and ACCELERATE.EU (Innovative Health Initiative, 2024[137]), which aims to pioneer novel radiotheranostic pairs, targeting pancreatic, breast, and brain cancers. To improve equitable access to radiotherapy and theranostics globally, the new Lancet Oncology Commission recommends eight key actions focussing on enhanced co-ordination, workforce alignment, infrastructure standards, radioisotope availability, data sharing, research priorities, innovative financing and intensified collaboration (Abdel-Wahab et al., 2024[134]).

A population-based study using GLOBOCAN 2022 cancer incidence estimates analysed current and projected demand for radiotherapy services following the 2013 CCORE model, which sets the optimal radiotherapy utilisation rate at 64% of cancer cases. The study estimates that between 2022 and 2050, the number of individuals needing radiotherapy in the EU will increase on average by 25%, reaching about 2.4 million people with cancer in 2050 (Zhu et al., 2024[138]). Correspondingly, the workforce demand for radiotherapy is projected to increase by a quarter, by almost 6 300 new professionals (almost 2 000 radiation oncologists, 1 100 medical physicists, and 3 200 radiation technicians), resulting in a need for close to 31 000 professionals in 2050. The projections show large variation across EU countries in the estimated growth of radiotherapy workforce demand, with demand growth of over 40% anticipated in Cyprus, Ireland, Luxembourg, Malta and the Slovak Republic.

However, relying solely on workforce expansion is unsustainable given demographic pressures, including ageing populations and shrinking working-age groups. Artificial intelligence (AI) and digital tools are positioned as essential to reconcile rising demand with limited workforce capacity and budgetary resources (Putz and Fietkau, 2025[139]). AI should be treated as a medical tool operating under clinical judgement, with radiation oncologists and medical physicists maintaining oversight of automated planning and delivery. Furthermore, professional training guided by scientific societies such as European Society for Radiotherapy and Oncology (ESTRO) and national radiation oncology associations helps to embed AI expertise in teams, while safeguarding professional roles and enabling safe, patient-centred innovation.

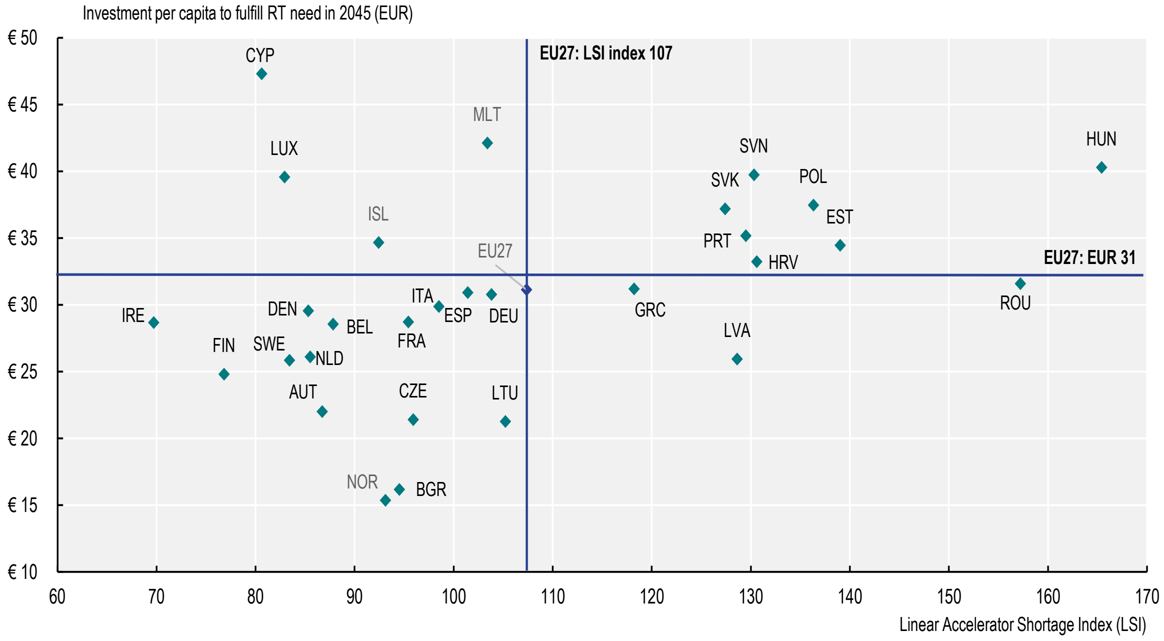
Projected increases in demand necessitate targeted investment in radiation equipment to ensure therapies remain available and are not subject to preventable delays

According to June 2025 data from the International Atomic Energy Agency Directory of Radiotherapy Centres (IAEA DIRAC), linear accelerators (LINACs) – the most common machines used for external beam radiotherapy (photon and electron/MV units), which deliver high-energy X-rays or electrons from outside the body to destroy cancer cells – account for almost 80% of the available radiotherapy equipment across the EU. In contrast, brachytherapy equipment, where radioactive sources are placed directly inside or next to the tumour, represents about 20%. Only 11 EU+2 countries report having particle-beam (proton or light ion) capacity, an advanced technique that uses charged particles for highly precise dose delivery: seven in Germany, four in France, three in each of Italy, the Netherlands and Spain, two in Poland, and one in each of Austria, Belgium, Czechia, Denmark and Sweden. In countries where high-investment radiotherapy equipment such as particle-beam systems is not available, patient referrals for treatment abroad may be needed, depending on tumour site, stage, and treatment goals (tumour control and/or toxicity reduction).

A recent study applied the Linear Accelerator Shortage Index (LSI) to estimate future shortages of equipment based on cancer incidence, number of LINACs, and current availability of radiotherapy centres (Moraes et al., 2025[140]). The LSI reflects the ratio of LINAC demand in 2045 to current availability and serves as a tool to prioritise the investment in LINACs within a country. Across EU countries, half recorded an LSI below 100 (Figure 3.17), indicating that no capacity shortage is anticipated to meet utilisation demand in 2045 at a projected 450 patients or less per LINAC (Moraes et al., 2025[140]). Eight countries (Germany, Greece, Latvia, Lithuania, Malta, Portugal, Spain and the Slovak Republic) show relatively low additional needs, with increase needs of 1-30% of current capacity by 2045. However, six EU countries present LSI scores between 131 and 300, indicating substantial shortages to meet projected utilisation in 2045. Slovenia and Croatia each face an estimated shortfall of around 30%, Poland and Estonia around 40%, while Romania (57%) and Hungary (65%) showed the highest projected needs.

Overall, countries with higher LSI scores may need targeted infrastructure improvements to meet the growing demand for radiotherapy, requiring both financial investment in new linear accelerators and the replacement of outdated equipment. On average, EU countries would need to invest about EUR 504 million in LINACs to meet expected utilisation demand by 2045. This corresponds to an average investment of EUR 31 per capita (Figure 3.17). Substantial variability exists across EU+2 countries, ranging from EUR 47 per capita in Cyprus to EUR 15 per capita in Norway, reflecting differences in current capacity, equipment replacement needs, infrastructure development, and human resources. All countries with no anticipated capacity shortage to meet utilisation demand by 2045, except for Cyprus, Iceland and Luxembourg, have a per capita investment requirement for linear accelerators that is lower than the EU average.

Figure 3.17. Across EU countries, there is substantial variability in required investment to meet the demand for linear accelerators in 2045



Notes: The projected financial investment per capita required to meet radiotherapy needs in 2045 (including both new installations and replacement of obsolete LINACs) is shown in EUR following a conversion from US dollar at the rate of USD 1= EUR 1.0824 (2024 average) and based on 2024 population figures. Costs account for equipment, infrastructure, and human resources. Estimates assume a standard radiotherapy department design (8 h/day schedule, fixed staffing). A Linear Accelerator Shortage Index (LSI) below 100 indicates no estimated need for additional LINACs. Countries with an LSI between 101 and 130 have a modest need for additional LINACs, while those with an LSI above 131 have a high need.
Source: Adapted from Moraes et al. (2025[140]), "Global linear accelerator requirements and personalised country recommendations: a cross-sectional, population-based study", -https://doi.org/10.1016/S1470-2045(24)00678-8.

Across the EU+2 countries, policies are being implemented to enhance the availability of radiation therapy, notably through different techniques (hypofractionation) and payment mechanisms that encourage better value and innovation in radiotherapy (see Chapter 4). According to data from the 2025 OECD Policy Survey on High Value Cancer Care, 16 EU+2 countries have adopted targeted investment approaches for radiation therapy. In France, the first European shared procurement initiative for radiotherapy equipment was launched in 2020, involving over 50 experts from French Comprehensive Cancer Centres and resulting in the joint purchase of 40 particle accelerators and related technologies. Ireland's investment strategy is co-ordinated through national governance structures, including the National Radiation Oncology Working Group and a Capacity Subgroup, which oversee timely access, strategic equipment replacement, and the expansion of public facilities based on demand. Targeted efforts also focus on developing centres of excellence for specialised treatments and facilitating international access to proton beam therapy until domestic capacity is established. Spain has made substantial investments through the INVEAT Plan, which is part of the country's Recovery, Transformation and Resilience Plan, enabling the acquisition of 81 new linear accelerators to modernise and expand high-tech oncology infrastructure nationwide. This is embedded in a broader strategy to improve timely cancer treatment, including national targets for initiating radiotherapy within four weeks of diagnosis.

People living in larger and wealthier countries have better access to new cancer medicines and innovative clinical trials in oncology

Access to new cancer medicines varies substantially across countries and is not sufficiently supported by real-world evidence on patient outcomes

A key challenge to health system sustainability is the rising cost of new pharmaceuticals, including oncology medicines (see Chapter 4). This trend places strain on financial resources and exacerbates disparities in access to medicines across Europe, particularly for individuals in countries with smaller populations (Cancer Patients Europe, 2025[141]) and in those with lower purchasing power (Hofmarcher, Berchet and Dedet, 2024[142]).

Delays in accessing cancer medicines can result in health and economic losses. Differences in national public reimbursement timelines following regulatory approval by the EMA impact the availability of and timely access to new treatments across countries. According to a study commissioned by the European Federation of Pharmaceutical Industries and Associations measuring the wait time-to-access to new therapies (IQVIA, 2025[143]), the average time to availability of oncology products in the EU after market approval has increased by 33 days compared to 2023, from 553 days to 586 days. Delays between marketing authorisation and reimbursement still vary widely across countries, ranging from an average of 4 months in Germany to 34 months in Lithuania. Such delays can negatively affect timely access and health outcomes. For instance, an analysis focussing on two medicines (ipilimumab and abiraterone, both approved by the EMA in 2011) suggests that delays in reimbursement and market entry in the first year after approval across 26 European countries may have resulted in an estimated loss of around 21 600 life-years (Uyl-de Groot et al., 2020[144]). At the same time, part of this interval is often used by countries for price negotiations and managed-entry agreements, which can improve affordability and broaden coverage.

However, differences in reimbursement status and time to reimbursement alone only partially account for the variation in the uptake of new cancer medicines. Broader use of medicines once they are on coverage lists often requires adaptation of clinical routines, staff training and supporting infrastructure and is impacted by early access pathways, health system and financing capacities. For these reasons, spending levels on cancer medicines represent a stronger predictor of uptake, with countries that devote more resources having consistently higher use of newer treatments (Manzano et al., 2025[145]).

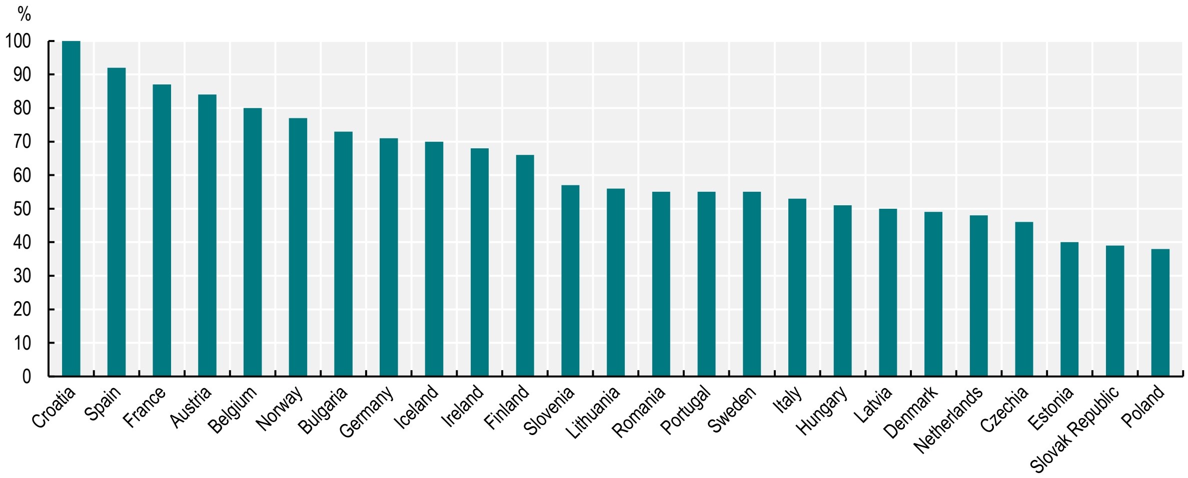
A recent analysis carried out by the Swedish Institute of Health Economics shows wide variation in the uptake of newer cancer medicines in 2023 (Manzano et al., 2025[145]). Across 12 cancer types, Austria, Switzerland and France displayed the highest average overall consumption of newer cancer medicines per cancer case, with Austria achieving 88% of the theoretical maximum uptake, followed by Switzerland (76%) and France (73%). In contrast, uptake was substantially lower in Latvia (23%), Poland (27%), Estonia (35%) and the Slovak Republic (35%).

Looking at consumption of breast cancer medicines per cancer case in 2023, the highest-uptake country was Croatia (representing 100% for this cancer type), followed by Spain (92% of the uptake in Croatia), France (87%) and Austria (84%), while Estonia (40%), the Slovak Republic (39%) and Poland (38%) had the lowest uptake relative to the highest-uptake country (Figure 3.18 Panel A). For prostate cancer, France was the highest-uptake country, followed by Ireland (95% of the uptake in France) and Austria (87%), while Romania and Latvia (24%), and Poland (16%) had the lowest uptake (Figure 3.18 Panel B). Overall, the consumption of newer cancer medicines was more evenly distributed for breast cancer (with a 2.5-fold variation across countries) than for prostate cancer (with a 6-fold variation). The Swedish Institute of Health Economics shows some convergence over time in uptake level across countries for both breast and prostate cancers.

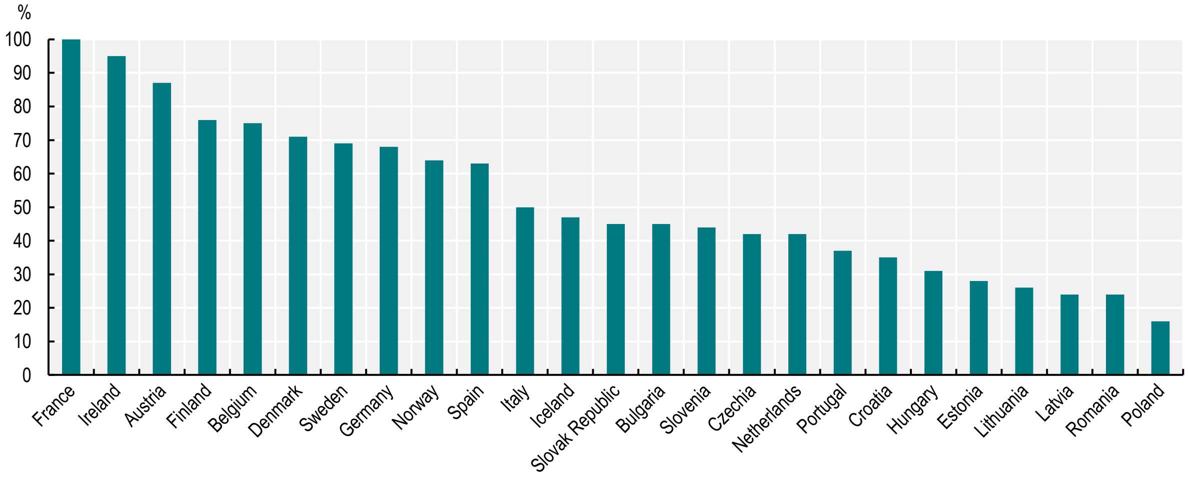
Figure 3.18. Cross-country variation in the consumption of new cancer medicines is more pronounced for prostate cancer than for breast cancer

Uptake of new cancer medicines, 2023

A. Breast cancer



B. Prostate cancer



Notes: Data refer to volume of selected newer oncology medicines (standard weekly dose) per cancer case, relative to the highest-volume country (Croatia for breast cancer and France for prostate cancer). Data were not available for Cyprus, Greece, Luxembourg and Malta.
Source: Manzano et al. (2025[145]), *Comparator Report on Cancer in Europe 2025 – Disease Burden, Costs and Access to Medicines and Molecular Diagnostics.*

Not all new medicines have led to substantial improvements in health outcomes and survival, leading EU+2 countries to pursue various approaches to promote high-value pharmaceutical care (see Chapter 4). One of these approaches is to rely on health technology assessment in shaping reimbursement and pricing policies, and in informing clinical guidelines, to ensure that spending is aligned with value. At the same time, post-marketing reassessment of coverage and pricing decisions is another option for consideration. For this to happen, real-world evidence on treatment patterns and cancer survival is needed to evaluate how therapies perform in routine practice and to determine which deliver the greatest cost-benefit. Stronger data systems, supported by comprehensive cancer registries, would allow for better alignment of spending with clinical and patient-reported outcomes and help guide decision making, thereby promoting high-value pharmaceutical care and more equitable access.

Large cross-country differences in access to clinical trials emphasise the benefits of harmonising regulations and enabling cross-border clinical trial participation

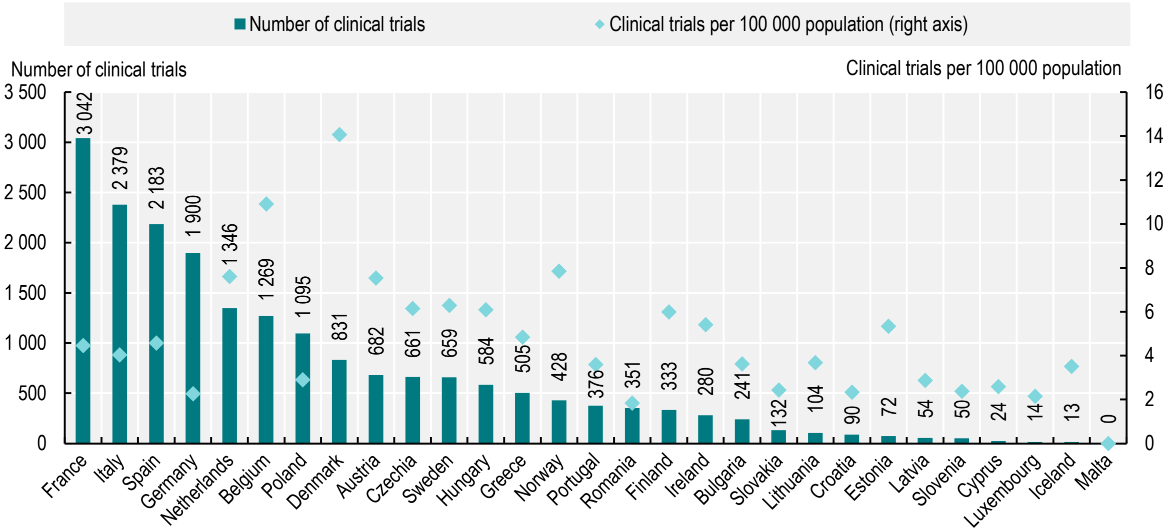
The research capacity of EU+2 countries influences their attractiveness to industry sponsors for conducting clinical trials. This, in turn, affects the earliest-possible access to innovative treatments for people with cancer, who may be disadvantaged by limited access to clinical research that could benefit their treatment outcomes. The landscape of oncology clinical trials in Europe remains uneven. Larger countries in Western Europe benefit disproportionately from the cancer research ecosystem, while smaller countries, as well as parts of Central and Southern Europe remain underrepresented (EFPIA and Vaccines Europe, 2024[146]).

According to data from the European Atlas of Clinical Trials in Cancer and Haematology (EuroACT) (Cases et al., 2025[147]), France, Italy, Spain and Germany have the highest number of oncology clinical trials initiated since 2015 (Figure 3.19). Although trial activity is concentrated in large countries with broad patient pools, some smaller countries, notably Denmark, Belgium, Norway, the Netherlands and Austria host more trials relative to population size. This could be partially explained through a combination of robust research infrastructure, agile regulatory processes, strong government and industry support, and centralised recruitment systems for clinical trials (EFPIA and Vaccines Europe, 2024[146]; EURACTIV, 2025[148]). Austria, for example, has historically had a "fast-mover advantage" in approving clinical trials, which has benefited cancer patients via access to new therapies as well as contributed economically via job creation and increased productivity (OECD/European Commission, 2025[149]). Small countries such as Malta, Iceland, Luxembourg and Cyprus, as well as others in Central Europe, face challenges in attracting and initiating trials, with lower numbers of trials per capita compared to countries in Western and Northern Europe (e.g. Belgium, the Netherlands, Finland, Ireland).

Europe's regulatory environment has administrative costs for initiation of clinical trials, contributing to a decline in its share of commercial clinical trials, from 25% in 2013 to 19% in 2023, with a geographic shift towards Asia (Castelo-Branco et al., 2025[150]). Oncology trial initiations in the European Economic Area (EEA) have declined by 22% since 2021 and are now below 2018 levels (EFPIA and Vaccines Europe, 2024[146]). Key barriers include regulatory fragmentation, lack of harmonised processes, limited research capacity, logistical and financial burdens for patients, insufficient training and education, and increasingly complex trial designs and eligibility criteria (Hofmarcher, Berchet and Dedet, 2024[142]; Castelo-Branco et al., 2025[150]).

However, the trial initiation rate across the EEA is expected to increase in coming years, particularly after the implementation of the EU Clinical Trials Regulation in 2022. This regulation represents a major shift toward harmonised clinical trial applications across 30 EEA countries via the Clinical Trials Information System (CTIS), enhancing transparency and minimising redundant documentation (European Medicines Agency, 2025[151]). Building on this regulatory foundation, the Accelerating Clinical Trials in the EU (ACT EU) initiative was launched to optimise the initiation, development, and conduct of clinical trials, with the goal of more effectively integrating clinical research into European health systems and supporting the development of high-quality, safe, and effective medicines (European Union, 2025[152]). While CTIS offers the potential to reduce geographic disparities in oncology trial access, structural barriers such as limited workforce capacity at trial sites and suboptimal funding models for trial implementation continue to restrict equitable clinical trial participation.

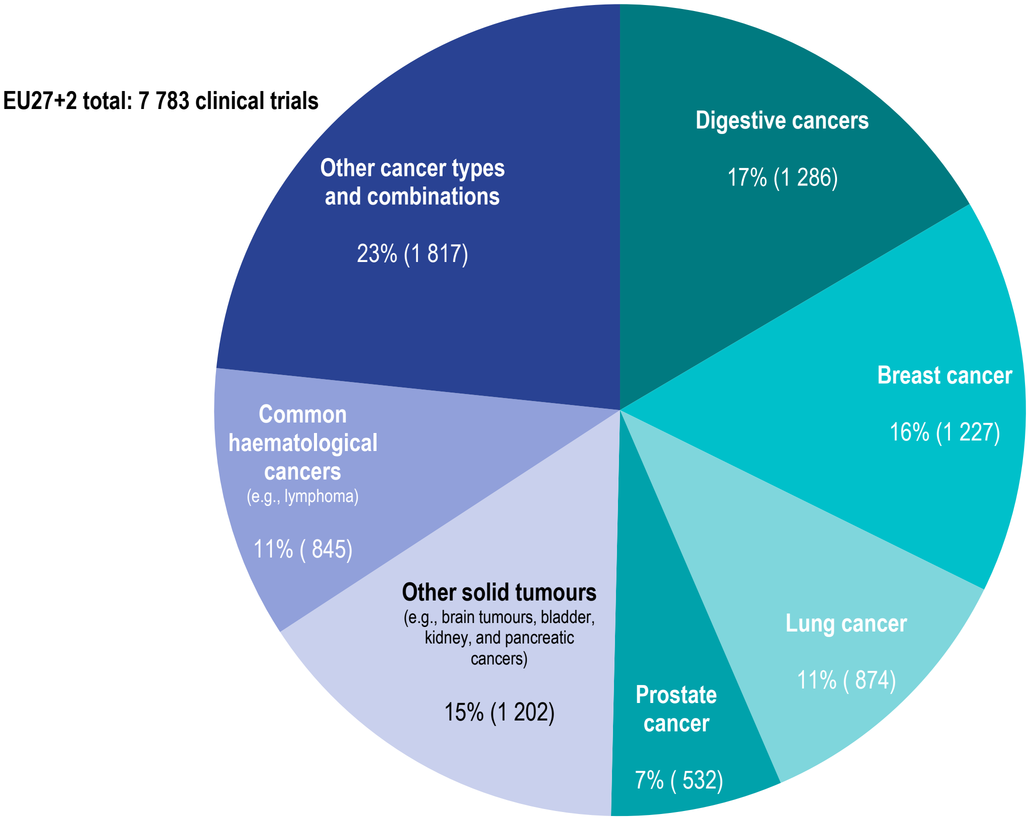
Figure 3.19. There is marked variation in availability of interventional cancer clinical trials across EU+2 countries, with strong concentration in four countries



Note: Data refer to interventional oncology trials in phases II-IV registered between 2015 and mid-2025. Data retrieved in July 2025. Methodology of the underlying data is described in Cases et al. (2025[147]). Most trials are multi-country, thus the number is not additive.
Source: EuroACT data from European Patient Advocacy Institute and WECAN Foundation.

Across the EU, Iceland and Norway, between 2015 and 2024, the cancer types most often targeted in trials were digestive cancers (Figure 3.20), followed by breast, lung and prostate cancers. While some more common cancers consistently attract research attention, others such as pancreatic cancer may be underrepresented. Rare cancers show the least research activity, with fewer than 50 trials initiated during this period.

Figure 3.20. Across EU+2 countries in the decade since 2015, interventional clinical trials most frequently targeted digestive, breast and lung cancers



Note: Data refer to interventional oncology trials in phases II-IV registered between 2015 and mid-2025 across EU+2 countries. Data retrieved in July 2025. Other cancer types include types with less than 100 trials in total, including neuro-endocrine cancer, thyroid cancer, acute leukaemia, myelodysplastic syndromes, chronic myeloid leukaemia and less common combinations of cancer types addressed. Methodology of the underlying data is described in Cases et al. (2025[147]).
Source: EuroACT data from European Patient Advocacy Institute and WECAN Foundation.

Ongoing efforts aim to enhance clinical trial access across Europe. The EU-X-CT initiative aims to map and address barriers to cross-border trial participation while safeguarding safety, rights and data protection of participants (EFGCP and EFPIA, 2025[153]). Its recommendations highlight the regulatory gap from the absence of EU regulation on cross-border participation in clinical trials, despite opportunistic agreements among countries such as the Nordic Trial Alliance (Nordic Trial Alliance, 2025[154]). This regulatory gap, combined with fragmented national requirements, imposes logistical, legal, ethical, and financial barriers, often resulting in delayed or lost opportunities for participation.

Innovative trial designs such as decentralised clinical trials and pragmatic approaches are rapidly advancing across Europe. Initiatives like Trials@Home and the RADIAL project leverage digital technologies such as telemedicine, wearable devices, and electronic consent to increase accessibility, reduce participant burden, and improve recruitment and retention, particularly for individuals in remote or underserved regions. At the regulatory and infrastructure level, harmonisation efforts driven by the EU Clinical Trials Regulation and the Clinical Trials Information System are standardising trial oversight, reducing administrative complexity. Moreover, EU and national investments are supporting digital recruitment platforms, AI-powered patient matching, and e-consent tools, which are proving effective in accelerating enrolment and increasing participant diversity (Lu et al., 2024[155]).

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Notes

[1] EU+2 countries refer to EU27, Iceland and Norway.

[2] Council Recommendation of 9 December 2022 on strengthening prevention through early detection: A new EU approach on cancer screening, replacing Council Recommendation 2003/878/EC – OJ C 473, 13 December 2022, p. 1 (2022/C 473/01).

[3] Direct payments made by individuals to healthcare providers at the time-of-service use, without reimbursement.

4

Providing evidence-based and efficient cancer care

Providing effective and efficient cancer care is as crucial as ensuring timely access to cancer care. High-quality cancer care must be evidence-based, aligned with clinical guidelines, delivered in facilities subject to quality standards and monitored to ensure compliance. This promotes effective and appropriate treatment for various cancer types and stages, while minimising patient harm and waste. This chapter outlines the policies countries are undertaking to ensure quality and monitor the performance of their cancer care systems. It also examines strategies to provide more efficient cancer care, including targeted approaches to screening and diagnosis, shifting of care from the hospital setting, uptake of biosimilars, reduction of low-value treatments and deployment of new technologies and artificial intelligence to optimise diagnosis and treatment.

In Brief

- Delivering evidence-based and efficient cancer care is essential for both individual patients and health systems.
- As a key marker of high-quality care, 5-year survival rates have shown moderate to notable improvements for lung, colorectal, and breast cancer over the years, facilitated by earlier diagnosis and effective treatments.
- Differences in cancer treatment practices and outcomes are seen across countries:
    - Partial mastectomy is less invasive and has similar survival outcomes to full mastectomy surgery, however EU+2[1] countries show a more than two-fold difference in share of partial mastectomies out of all mastectomies (from 30% in Poland to 79% in Spain).
    - Age-standardised 30-day mortality rates following colorectal cancer surgery range from about 1.5% in Denmark and Norway to above 5% in Croatia and Czechia.
- While cancer care accounts for between 4-8% of healthcare spending in EU+2 countries, the direct real costs of cancer care in the EU more than doubled from EUR 54 to EUR 120 billion between 1995-2023.
- To support high quality, evidence-based care, 21 EU+2 countries report having either structural standards (such as equipment or personnel requirements) or minimum volume norms for cancer care, with many utilising both approaches.
- However, gaps between standards and clinical practice demonstrate the importance of monitoring and enforcement mechanisms to ensure adherence.
    - Accreditation / certification is widely used to promote quality: 22 EU+2 countries report having such mechanisms for evaluating cancer centres by outside parties.
    - While 18 EU+2 countries report having other cancer care quality monitoring systems – often used to provide feedback to providers for improvement or for public reporting – only 12 report monitoring adherence to clinical guidelines for treatment of common cancers.
    - The OECD finds high compliance (76% – 89%) among the seven reporting EU+2 countries in the share of women with HER2+ breast cancer receiving evidence-based treatment. Nonetheless, rates were still below the 90% target set by the European Society of Breast Cancer Specialists and half of OECD countries participating in the data collection were unable to report on this indicator.
- Many countries have implemented risk-stratified cancer screening to improve the effectiveness and efficiency of cancer screening based on prevalence of factors such as family history (e.g. Czechia, Greece, Luxembourg, Slovenia), genetic mutations (e.g. Belgium, France, Germany, Slovenia, Spain), smoking (Estonia, Italy, the Netherlands, the Slovak Republic), or HPV vaccination (e.g. Hungary, Iceland, Sweden).
- Opportunistic cancer screening contributes to potential overdiagnosis of thyroid and prostate cancer through detection of early-stage, low-risk tumours that are unlikely to affect life expectancy and quality of life, suggesting low-value care:
    - Prostate cancer overdiagnosis is a concern in 13 EU+2 countries while thyroid cancer overdiagnosis is considered problematic in eight EU+2 countries.

  - Among EU+2 countries, the share of early-stage prostate cancer diagnoses among men aged 75+ ranged from 53% in the Netherlands to 81% in Luxembourg, reflecting the lack of international consensus on and variation in prostate cancer screening practices.
  - The ratio of prostatectomies to prostate cancer cases in EU countries varies up to 70-fold (from almost none in Finland to three out of four in Italy) highlighting an unwarranted level of diverging cancer care practices and potential over or under-treatment of prostate cancer.
  - This underlines the need for adoption of evidence-based clinical guidelines to improve the quality of prostate cancer care for patients and to reduce harmful or low value care.
- To reduce pressure on inpatient capacity, improve efficiency of care and enhance patient experience, EU+2 countries are shifting some cancer care away from the hospital setting. Strategies include changes in payment methods to incentivise or require use of day procedures instead of inpatient admissions and implementation of hospital-at-home models.
  - These approaches manifest in decreased hospital admissions, with colorectal cancer hospital discharges per diagnosed case decreasing 12% in the EU between 2012 and 2022 and lung cancer discharges falling by 24%.
  - Nordic countries (Denmark, Finland, Norway, Sweden) substantially shifted more than a quarter of mastectomies from the inpatient to the day procedure setting.
  - Belgium, Denmark, France, Greece, Hungary, Iceland, Ireland, Lithuania, Poland, Portugal, Slovenia and Sweden all report implementing hospital-at-home models for cancer care.
- With more and higher cost of new cancer medicines, health technology assessments mechanisms, reassessment of coverage decisions after market entry, and treatment optimisation to identify the most effective dose are key policies to ensure high value cancer care.
  - Market entry of cancer biosimilars is associated with a 33% decrease in drug prices in the EU. While biosimilars uptake is relatively high, it ranges from 55% in Bulgaria to 96% in Denmark, where centralised tendering systems support a rapid shift towards biosimilars use.
  - Adjusting packaging sizes or vial sharing can reduce waste of infused cancer medicines, while better prescribing practices can help for oral medicines – however, regulatory, reimbursement or operational changes may be required, and safety must be ensured.
- Clinician-led efforts like the *Choosing Wisely* initiatives can build alignment among physicians and support communication with patients towards reducing low-value care. There are 20 *Choosing Wisely* national-level recommendations to reduce low-value cancer care that have been adopted by between two to ten EU+2 and other OECD countries, highlighting international alignment in these areas and opportunities for other countries to promote these practices.
  - One of the most common recommendations – reported in Austria, Italy, Norway and Sweden along with six other OECD countries – is to avoid chemotherapy at advanced cancer stage if it is unlikely to benefit the patient. Four of seven EU+2 countries in the OECD data collection report that more than 5% of older patients with low-survival cancers received systemic treatment in the last 30 days of life.
- Countries have embraced technological innovations via national and regional programmes, pilots and EU4Health initiatives to support gains in precision, efficiency and accuracy of cancer diagnosis and treatment.
  - These include minimally invasive liquid biopsies in monitoring cancer treatment response and relapse (5 EU+2 countries), AI-assisted imaging in cancer screening to improve the efficiency and accuracy of diagnosis (10 EU+2 countries) and robotic-assisted cancer surgery (16 EU+2 countries).

1. EU+2 countries refer to EU27, Iceland and Norway.

4.1. Introduction

Chapter 2 showed the increasing number of people living with a cancer diagnosis is putting pressure on health systems to ensure delivery of high-quality cancer care in a sustainable manner.

Furthermore, delivery of effective, efficient, and evidence-based cancer care is essential, as failing to do so has enormous consequences for individual patients and for the health system overall. For patients, ineffective care can potentially cause harm and missed opportunities for longer survival and gains in quality of life. The opportunity costs of ineffective low-value cancer care can result in delays in access to healthcare for other patients, wasteful healthcare expenditure and consumption of scarce healthcare resources including healthcare workers and diagnostic equipment.

Chapter 3 outlined the many investments needed to increase access to and reduce delays in cancer care – including in awareness and health literacy, screening and early detection initiatives, workforce, innovative medicines and radiotherapy. Similarly, Chapter 5 highlights the importance of supporting patients throughout the care journey via care co-ordination processes and sufficient consultation times, as well as survivorship programmes including mental health, fertility preservation, and reintegration support. These all require substantial investments – resources that should not be lost to inefficient, low-quality care. This is particularly relevant in the current context of governments operating under a range of geopolitical, social, and economic budget pressures and increasingly tight health budget constraints.

A high-value care perspective takes into account the quality and outcomes of care relative to the resources which provide such care. As such, Section 4.2 examines the issue of high-quality efficient cancer care in the framework of two key goals – that is, how effective is the cancer care system (in terms of survival rates and quality variation) and at what financial cost (spending on care). Section 4.3 of the chapter explores how countries are designing their cancer care systems to promote high quality, evidenced-based care via system-level organisation and monitoring. The final section delves into the range of policies and practices undertaken by various stakeholders in the healthcare ecosystem to optimise both quality and efficiency across the realm from diagnosis to treatment – touching upon areas such as improving efficiency of diagnosis, shifting care from the inpatient setting, optimising use of cancer pharmaceuticals, and incorporating new technologies.

4.2. There are large differences in cancer outcomes, care practices and spending across and within the EU

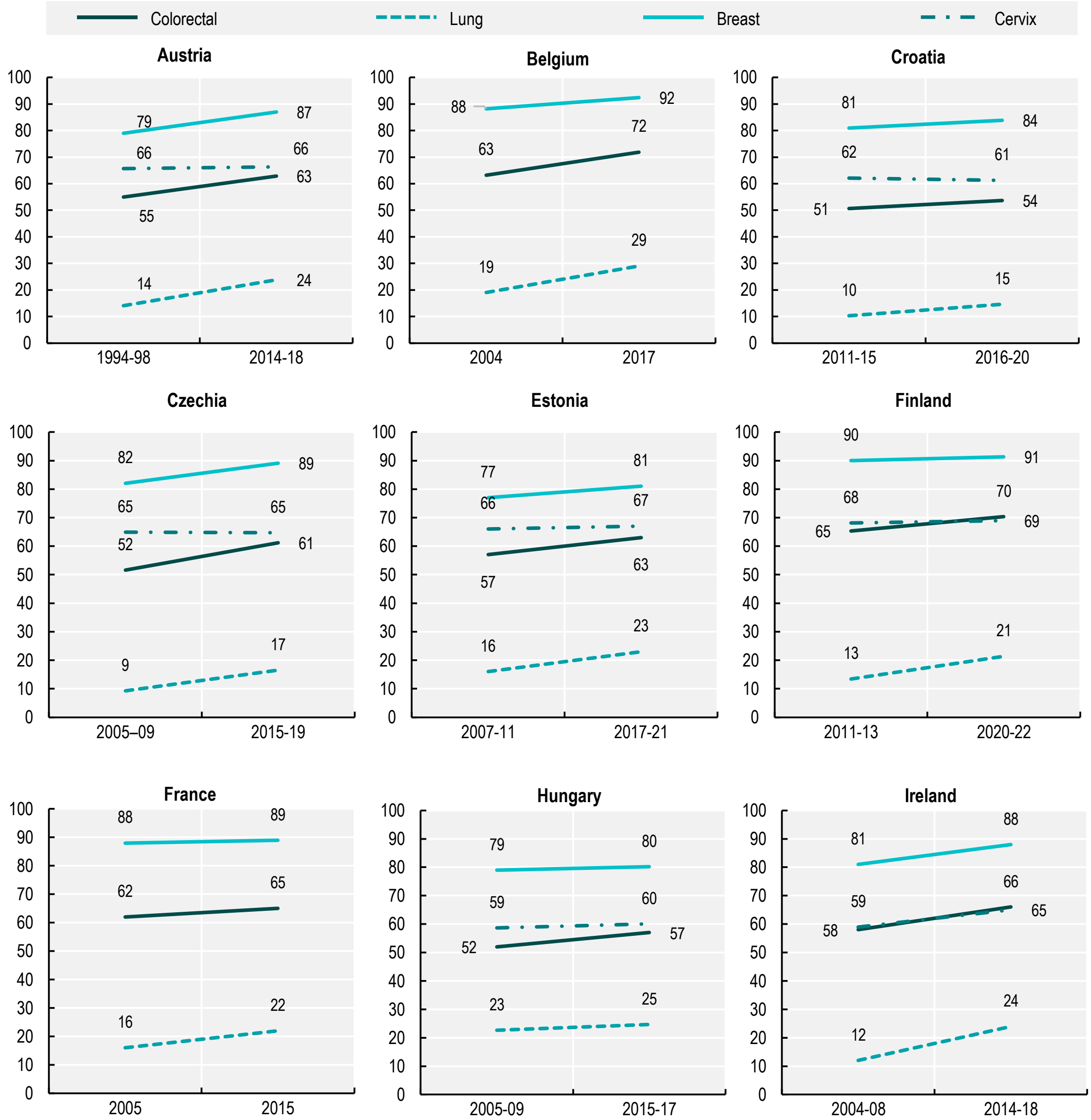
4.2.1. Survival estimates show moderate to notable improvements for lung, breast and colorectal cancer, but stagnation for cervical cancer

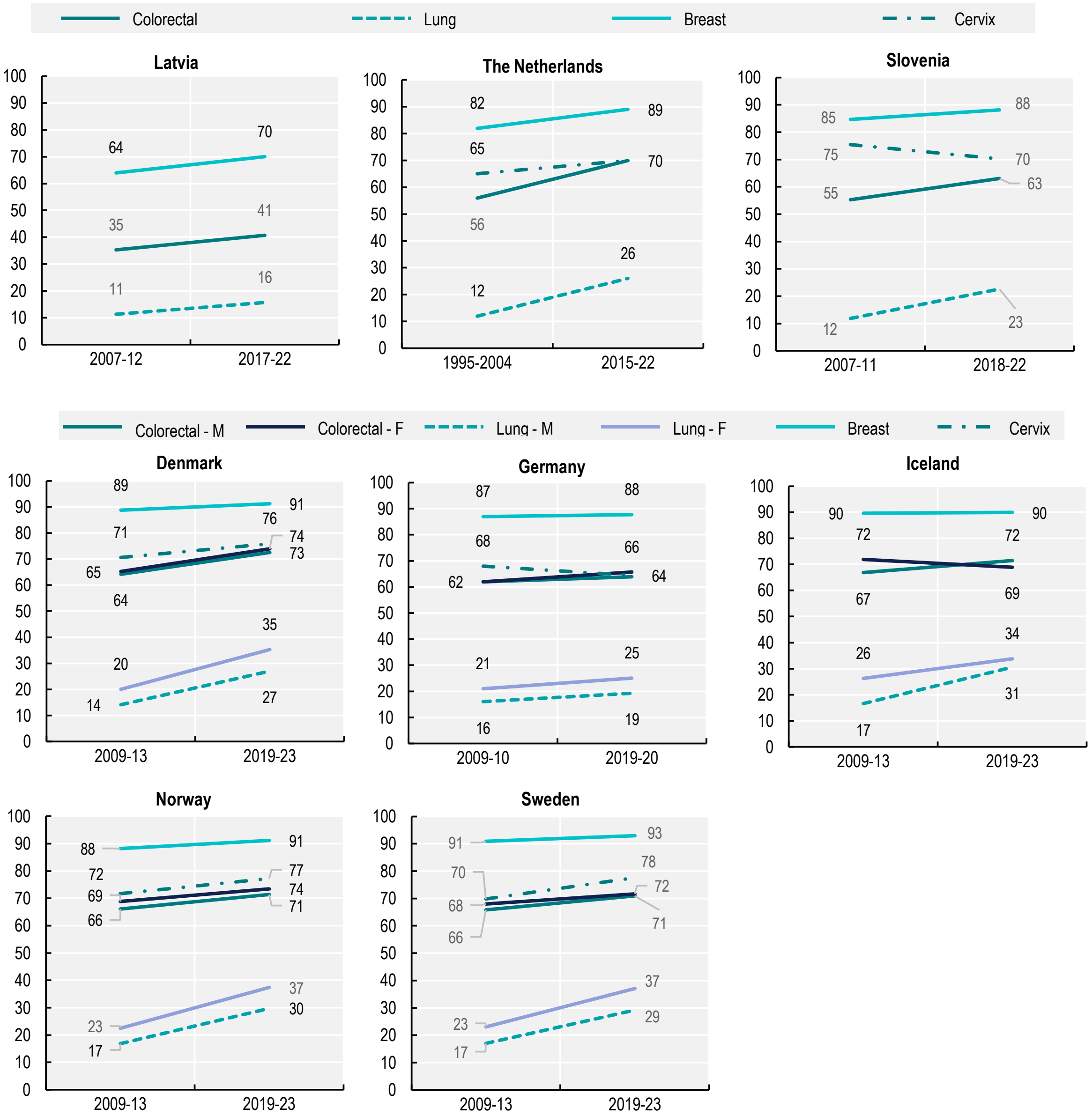
Survival rates are one of the most important markers of cancer care quality because they relate to a main goal of treatment – prolonging life. Higher survival rates point to early and effective cancer detection and treatment.

Among EU+2 countries with national data, overall five-year cancer survival has improved over the last decades. For example, the Netherlands saw an increase in five-year overall cancer survival from 53% for patients diagnosed with cancer in 1995-2004 to 67% for the 2015-2022 period, while in Estonia, five-year survival increased from 54% (2007-2011) to 58% (2017-2021). Latvia and Slovenia also reported gains, with survival estimates slightly higher for women (60%) versus men (56%) in Slovenia, but rates improving faster among men over the most recent decade with available data (OECD/European Commission, 2025[1]).

Among the main cancer types, lung cancer survival estimates are typically quite low but have seen the biggest improvement in five-year survival. All 17 EU+2 countries with trend data reported increases for this cancer type (See Figure 4.1).

Figure 4.1. National 5-year survival estimates show notable improvements in lung cancer, and moderate improvements in breast and colorectal cancer over recent years





Note: M stands for rates among Males; F for rates among Females. Data refer to colon cancer for Estonia, Hungary and the Netherlands instead of colorectal cancer as for the other countries. National level estimates are provided by countries based on different methodologies and thus estimates are not comparable across countries. For information on methodologies and data, see individual Country Cancer Profiles and sources below.

Source: For Norway, Sweden, Denmark and Iceland: Nordcan (2025[2]), Survival Trends, https://nordcan.iarc.fr/en/dataviz/survival?cancers=160&set_scale=0&years_available=1943_2023; For Slovenia: Zadnik, et al. (2021[3]), Survival of cancer patients, diagnosed in 1997-2016 in Slovenia, https://www.onko-i.si/fileadmin/onko/datoteke/rrs/kr/mon/Survival_of_Cancer_Patients_Diagnosed_in_1997-2016_in_Slovenia.pdf and Slovenian Cancer Registry, (2025[4]) Cancer in Slovenia 2022, https://www.onko-i.si/fileadmin/onko/datoteke/rrs/lp/LetnoPorocilo2022_online.pdf; OECD / European Commission (2025[5]), EU Country Cancer Profiles 2025, https://www.oecd.org/en/about/projects/eu-country-cancer-profiles-2025.html for all other countries.

Screening programmes, through their ability to detect earlier stage cancers that are more responsive to treatment (see Chapter 3), can improve survival trends. Breast cancer continues to feature among the highest survival rates, with estimates increasing moderately across all countries. As screening participation rates declined between 2014-2022 in more than half of EU+2 countries with programme data (OECD/European Commission, 2025[1]), these gains may reflect improvements in treatment or other early detection approaches. Colorectal cancer survival has improved in nearly all 17 countries with data, coinciding with expanded screening programmes in the EU+2, but remains lower than for breast cancer. In contrast, cervical cancer survival trends are mixed. In eight of the 13 countries with available data, five-year survival has stagnated or declined. However, Denmark, Ireland, the Netherlands, Norway and Sweden have seen modest improvements. For cervical cancer, stagnating survival rates are occurring alongside declines in screening participation in EU+2 countries (OECD/European Commission, 2025[1]). In addition, prostate cancer (not shown) also has very high survival rates, with improvements in most countries with available data – though some of the increase may reflect overdiagnosis (see Section 4.4.1).

For both lung and colorectal cancer for most countries, survival estimates are slightly higher for women, particularly for lung cancer. Research indicates that the survival gap in favour of women may be due to gender differences in cancer stage, histological type, and mutation patterns in lung cancer as well as hormonal differences and differences in risk factors and comorbidities between the genders (Li et al., 2025[6]; Tsokkou et al., 2025[7]; Kinoshita et al., 2017[8]).

4.2.2. Cancer care practices vary substantially between and within countries

Large variation in chemotherapy, radiotherapy and surgical practices and outcomes in cancer care are found across countries

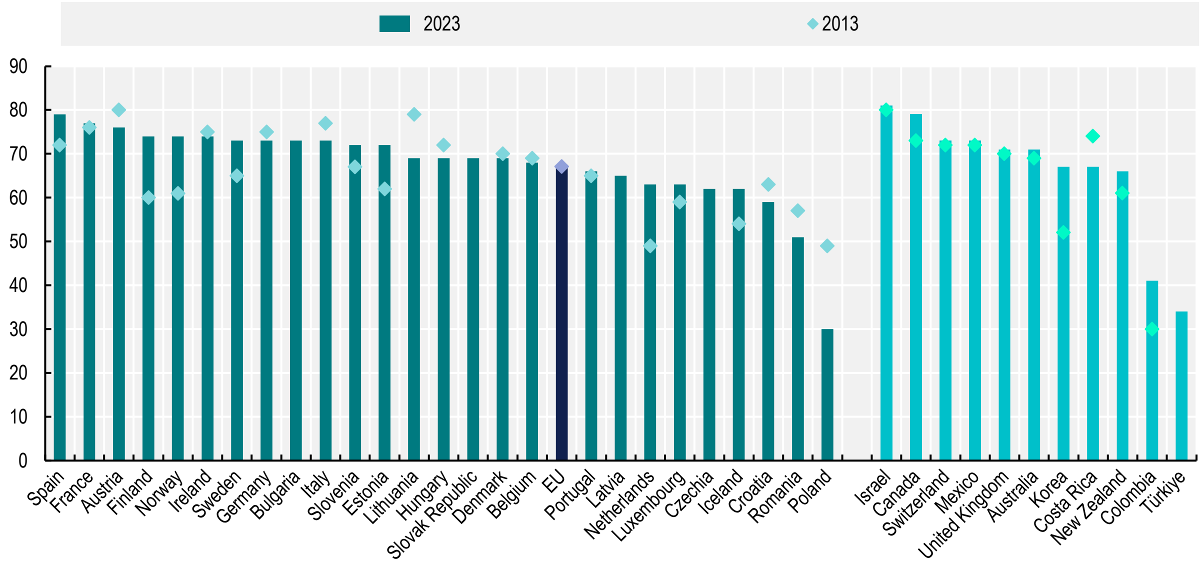
Differences in survival estimates relate to differences in diagnosis and treatment. An International Cancer Benchmarking Partnership (ICBP) study examining variations in referral pathways for suspected cancer identified differences across ten countries, including lack of referral routes for non-specific symptoms, varying levels of primary care decision making autonomy and access to diagnostic testing, and reliance on emergency referrals (Lynch, Harrison and Emery, 2022[9]) (see Chapter 3). Another ICBP study revealed substantial variation in chemotherapy use across countries and cancer types. For example, the proportion of patients receiving chemotherapy ranged from 48% to 81% for ovarian cancer and from 4% to 51% for liver cancer (McPhail et al., 2024[10]). A parallel study assessing radiotherapy use found similarly wide international differences, ranging from 18% to 82% for oesophageal cancer and from 37% to 85% among stage II-III rectal cancer patients (McPhail et al., 2024[11]).

International differences in care practices are seen in breast cancer. Many patients with early stage breast cancer are eligible for breast conservation surgery (partial mastectomy) which has shown to have similar or better survival outcomes to full mastectomy while being less invasive, with shorter recovery periods and lower risk of complications (Chatterjee et al., 2015[12]; Christiansen et al., 2022[13]; de Boniface, Szulkin and Johansson, 2021[14]). In addition, OECD data from a pilot measuring patient-reported indicators generally shows higher levels of breast satisfaction following breast-conserving therapy compared to mastectomy and reconstruction (Kendir, Barrenho and Klazinga, 2022[15]), in line with studies showing more favourable patient-reported outcomes from breast conserving surgery (Panayi et al., 2024[16]).

In the EU on average in 2023, about two-thirds (68%) of mastectomies were breast-conserving, with the rest being full mastectomies (Figure 4.2). Large differences are seen in rates of partial mastectomy in the EU+2. In Spain, about 80% of mastectomies are partial while this share stands at 50% or lower in Poland and Romania. Overall, the share of partial mastectomies in the EU has stayed relatively steady since 2013, although Norway, Finland and the Netherlands have seen increases of more than 20% while Poland has seen a decrease of almost 40%.

Figure 4.2. The share of breast conserving surgeries out of total mastectomies ranges from 60% to 80% in most EU+2 countries

Percentage share of partial out of all mastectomies performed, 2013 and 2023 (or nearest)



Note: For the 2023 values, data from 2021 were used for the Netherlands, and 2022 data were used for Luxembourg, Australia and New Zealand. For the 2013 values, 2014 data were used for Switzerland.
Source: OECD Health Statistics.

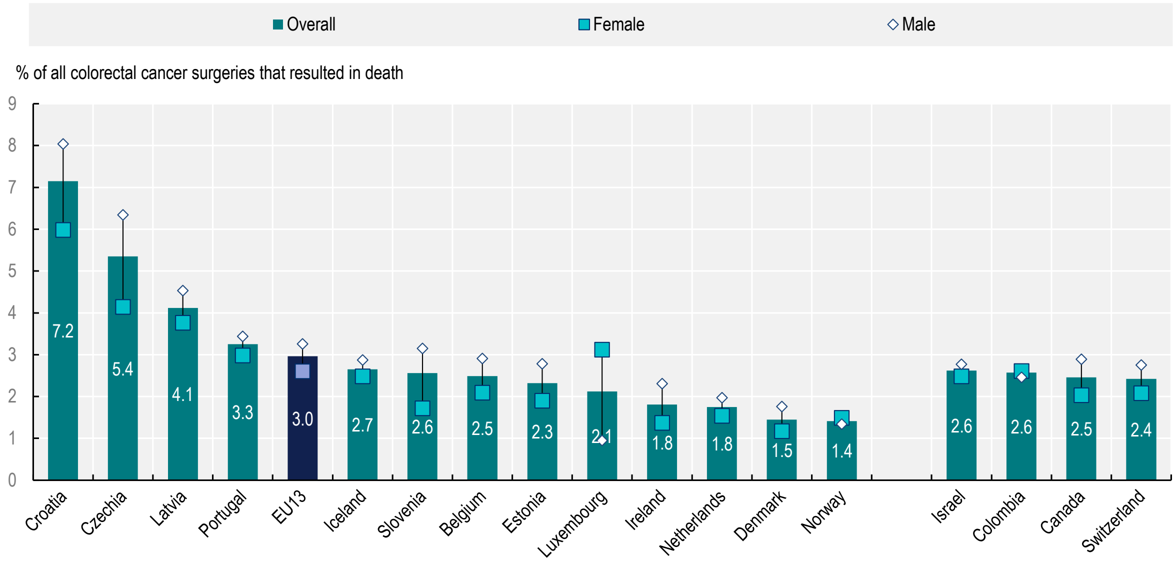
Findings from the literature show higher rates of full mastectomy in countries with scarce radiotherapy coverage and high rates of late-stage diagnosis (Pfob and Dubsky, 2023[17]). In addition, an evaluation of the national cancer database in the United States found that longer travel distance to a treatment facility and lower income is associated with higher rates of full mastectomy. It is important to note, however, that decisions on type of breast cancer surgery are dependent on social and cultural factors and that they must consider patients' own preferences. For example, a small qualitative study found that the decision to undergo full double mastectomies in cases where it was not medically necessary was driven by patients and based on their family history, perceptions and concerns (Padamsee et al., 2023[18]). Hearing feedback from breast cancer survivors' experiences with total or partial mastectomy can help provide valuable insight to providers and patients in the decision making process (Admoun and Mayrovitz, 2021[19]).

Mortality rates after colorectal cancer surgery differ substantially across countries and by planned versus emergency procedures

Mortality rates following colorectal cancer surgery also vary substantially across EU countries, as well as by age, gender and type of procedure (emergency or planned) (OECD, 2025[20]). As expected, 30-day colorectal cancer mortality rates are highly correlated with age: wherein mortality rates among those ages 25-44 are below 2%, rates among those ages 75-84 were over 5%. After age-adjusting the rates to the disease population, the 30-day mortality figures for Norway (1.4%) and Denmark (1.5%) are on the low end, while those of Croatia and Czechia are above 5% (Figure 4.3). In addition, gender disparities are observed, with higher 30-day mortality rates among men versus women in most countries. These findings align with previous studies that have consistently reported higher 30-day mortality among men after colorectal cancer surgery, due to factors such as higher rates of co-morbidities and behavioural risk factors among men, alongside presentation at more advanced stage of disease.

Figure 4.3. 30-day mortality rates following colorectal cancer surgery in EU+2 countries range from 1% to 7%

30-day mortality rate after colorectal cancer surgery, age-standardised, most recent 3-year average



Note: Standardised based on the disease population.
Source: OECD (2025[20]), "Assessing cancer care quality in OECD countries: New indicators for benchmarking performance", https://doi.org/10.1787/b3f47ece-en.

In three of four EU+2 countries with available data (Denmark, Latvia, the Netherlands), 30-day mortality rates for emergency colon surgery were at least three times higher than those for planned surgery. In the Netherlands, that difference stood at seven times (with 30-day crude mortality of 11.1% for emergency colon cancer surgery versus 1.5% for planned surgery). This major difference shows the importance of colorectal cancer diagnosis via early detection mechanisms, rather than via emergency presentation (see Chapter 3). Early detection not only supports better survival through intervention at a less advanced cancer stage, but also allows appropriate time for surgical planning and patient preparation prior to the procedure.

Standardisation of surgical techniques and processes helps improve outcomes for colorectal surgery (Eto et al., 2018[21]). Furthermore, mortality rates are related to surgical and post-surgical care safety and effectiveness, as these affect the likelihood of surgical wound infections and the major mortality risk of anastomotic leak (de la Portilla et al., 2018[22]). A German study found that implementation of quality-based standards contributed to a 41%-reduction in 30-day mortality following colon cancer surgery for patients treated in certified hospitals that met structural and procedural standards as compared to non-certified hospitals (Trautmann et al., 2018[23]). As Box 4.1 discusses, in general, there are opportunities for countries to increase the safety of cancer care across the care pathway.

Box 4.1. Medical errors in cancer care have not always received much visibility, but efforts are underway to address this

Medical errors in cancer care refer to preventable incidents that occur during diagnosis, treatment, or follow-up, potentially harming patients or compromising outcomes. “Never events” such as administering the wrong treatment to the wrong patient or performing surgery on the wrong site are considered entirely avoidable. Other errors include preventable adverse drug reactions, treatment-related infections and equipment or therapy failures, whose occurrence can be significantly reduced using intuitive tools. Fostering a strong therapeutic relationship with patients and involving them as partners in their care, clear communication, and proper safeguards can make medical care less prone to error (Karp, Osburn and Gouda, 2024[24]). A recent commentary highlights the often-overlooked issue of patient safety in cancer care, where many risks remaining unacknowledged and unaddressed. It emphasises the need for a cultural shift to recognise and address these hidden risks through fostering openness about safety concerns, providing oncologists with adequate resources, empowering patients to speak up, advancing patient safety research, and convening national stakeholders to develop systemic solutions (Jacobson and Brooks, 2024[25]).

Eight EU+2 countries responding to the 2025 OECD Policy Survey on High-Value Cancer Care report having policies or programmes to reduce medical errors in cancer care. The National Cancer Institute in France provides an organisational framework to support continuous improvement in the safety of injectable anticancer drugs in oncology-haematology day hospitals (National Cancer Institute, 2025[26]). In Ireland, the National Cancer Information System is a centralised electronic system designed to record and manage cancer-related patient information, supporting the safe delivery of systemic anticancer treatments as well as e-prescribing and e-administration of cancer drug treatment in publicly funded hospitals, operating in 22 sites nationwide (Health Service Executive, 2025[27]). In Slovenia, a dedicated 2024 law introduced new quality control processes for healthcare providers, guided by the principle of patient safety and involving proactive risk management to minimise harm and promote safe care delivery. Continuous learning from errors and sharing best practices also form key pillars of Slovenia’s approach to improving patient safety (PISRS, 2024[28]).

> [For] the last 3 radiotherapy treatments…the doctor designed them wrong. The radiologist discovered it…and intervened to re-plan. The radiation therapy technicians that I had were very knowledgeable and excellent support for patients. But patients….with different technicians had several problems (e.g. early burns).
>
> *Maria, 53 years old, breast cancer*

Studies from OECD countries find that individuals with lower socio-economic status are less likely to receive multidisciplinary care, curative treatment or targeted therapies

As shown by the data on colorectal cancer mortality, there are also within-country variations in treatment, not only based on age and sex, but by geography, socio-economic background, and ethnicity. In Italy there are regional differences in access to and reimbursement for molecular diagnostics (Rimassa, Khanc and Koerkamp, 2025[29]) as well as in the use of multi-disciplinary teams (MDTs), even though MDTs have been shown to improve outcomes in terms of treatment planning, patient satisfaction, and survival (OECD, 2024[30]). Other OECD countries provide examples on geographic variations in care as well. A report on lung cancer in England highlights significant variation in curative treatment between Trusts (which provide healthcare services under the National Health Service), with the share of non-small cell lung cancer patients with stage I – II cancer and good performance status receiving curative treatment ranging from 50% to 100%. In addition, the number of clinical trials available across the Trusts ranged from none to 45, and there were also substantial differences in the use of multimodality therapies and access to specialist palliative care (Beckett, Doffman and Toy, 2021[31]). A study of over 12 000 patients in the United States with bile duct cancer in the liver found that surgery (which offered the best outcomes), was more commonly performed in the Middle Atlantic region compared to the Mountain States (29% versus 18%) and that patients with lower income and African American males with Medicaid insurance were less likely to receive treatment (Uhlig, Sellers and Cha, 2019[32]).

Socio-economic disparities in cancer care are pronounced. One study found that patients in the most deprived income regions in Italy were less likely to receive curative treatment for liver cancer, and that moving from the most deprived to less deprived regions increased probability of receiving curative treatment by 10% (Cucchetti et al., 2021[33]). A Swedish study of over 83 000 patients with stage I-III colorectal cancer found that patients with higher income were less likely to undergo emergency surgery and more likely to have MDT discussions, neoadjuvant, and adjuvant treatments (Osterman et al., 2024[34]). In Canada, those in the lowest income quintile were 18 percentage points (p.p.) less likely to receive curative surgery for lung cancer than those in the highest income quintile (Canadian Partnership Against Cancer, 2020[35]). A 2024 umbrella review of meta-analyses (with studies mostly from North America and Europe) found that individuals with lower socio-economic status had less access to immunotherapies, targeted cancer therapies and precision treatments (Li et al., 2024[36]).

In addition to providing high quality diagnosis and treatment to all patients, cancer care systems must be sustainable, ensuring resources are available for other therapeutic areas and investments in overall public health. This requires assessment of spending on cancer care.

4.2.3. Spending on cancer care in the EU ranges from about 4% to 8% of health spending

It is challenging to know the true cost of cancer care as many countries do not provide data on cancer-specific health spending, and even when available, there is often a significant time lag. A 2025 report by the Swedish Institute for Health Economics estimated that 2023 cancer spending ranged from about 4% of health spending in the Nordic countries (Denmark, Finland, Iceland and Norway) to about 8% in France, Germany and the Central and Eastern European countries of Bulgaria, Lithuania, Poland and Romania (Manzano et al., 2025[37]), with an average of 6.9% in the EU (see Chapter 1).

After adjusting for inflation, it is estimated that the direct real costs of cancer in the EU more than doubled from EUR 54 billion in 1995 to EUR 120 billion in 2023 (Manzano et al., 2025[37]). Estimated health expenditures on cancer increased more quickly in the Central and Eastern European countries than in other countries between 1993 and 2023, leading to some convergence in cancer spending between countries. Growth in spending on cancer has outpaced growth in total health spending in some countries (Czechia, France, Germany, Poland, the Netherlands), but not in others (Estonia, Finland, Norway and Slovenia).

In addition to the direct costs of cancer care, the indirect burden of cancer on the workforce and the quality of life of cancer patients is substantial (see Chapter 5). These costs highlight the importance of country policies to improve provision of high-value cancer care, as described in this chapter, as well as policies to improve the overall well-being of patients and survivors.

4.3. Countries are organising cancer care systems to support high quality and safe care

To promote quality cancer care, countries set recommended or required quality standards for cancer care. These standards include structural requirements (such as quantity of equipment or number of oncologists that must be available) and process norms (such as a minimum volume of patients treated). Minimum volume norms can help promote better care as hospitals and surgeons with higher case volumes for complex cancer surgeries are associated with fewer complications for patients, lower post-operative mortality, and improved survival. Positive relationships between volume and quality of cancer care are found for breast cancer (Peltoniemi et al., 2011[38]; Vrijens et al., 2012[39]), paediatric cancers (Kowalczyk et al., 2014[40]), colorectal cancer (Huo et al., 2017[41]; Engdahl et al., 2023[42]), lung cancer (Baum et al., 2020[43]; Subramanian et al., 2022[44]), prostate cancer (Pohle et al., 2018[45]; Ploussard et al., 2022[46]) and pancreatic cancer (Krautz et al., 2018[47]; Huhta et al., 2022[48]; Thobie et al., 2023[49]). Nonetheless, in the process of concentrating cancer care at higher-volume centres, it is important to ensure that geographical access to or support for patients to reach cancer treatment facilities is available (Chapter 3).

Alongside defining standards of care, countries also implement mechanisms for oversight to ensure that standards are being met and care quality upheld. These include promoting accreditation or certification, a process by which an independent body evaluates a healthcare provider to assess whether it meets required standards of quality and safety, as well as quality monitoring processes to assess adherence to clinical guidelines. Nonetheless, adopting quality standards and maintaining accreditation or certification mechanisms requires sufficient workforce and infrastructure to meet the established requirements, which can be a challenge on both a national level and particularly in certain regions due to geographic disparities (Chapter 3).

The 2025 OECD Policy Survey on High-Value Cancer Care found a range of practices across EU+2 countries in terms of standards and oversight to assure high quality of cancer care (Table 4.1). This section of the chapter will review these topics in brief.

Table 4.1. Most countries in the EU+2 have established standards to promote high quality cancer care but only 12 report monitoring adherence to clinical guidelines

Country	Standards[1]		Quality monitoring	
	Structural standards	Minimum volume / process norms	Accreditation or certification: National (Ntl) /international (Int)	Adherence to guidelines
Czechia	Yes	Yes	Yes (Ntl & Int)	Yes
Denmark	Yes	Yes	Yes (Int)	Yes
France	Yes	Yes	Yes (Ntl & Int)	Yes
Germany	Yes	Yes	Yes (Ntl)	Yes
Luxembourg	Yes	Yes	Yes (Int)	Yes
Norway	Yes	Yes	Yes (Int)	Yes
Sweden	Yes	Yes	Yes (Int)	Yes
Netherlands	Yes	Yes	Yes (Ntl & Int)	Yes
Poland	Yes	Yes	Yes (Ntl)	Yes
Slovenia	Yes	Yes	Yes (Int)	Yes
Estonia	Yes	No	Yes (Int)	Yes
Romania	Yes	No	Yes (Ntl)	No
Bulgaria	Yes	Yes		
Finland			Yes (Int)	Yes
Belgium	Yes	Yes	Yes (Ntl & Int)	No
Spain	Yes	Yes	Yes (Ntl & Int)	No
Italy	Yes	Yes	Yes (Int)	
Greece	Yes	No	Yes (Int)	No
Ireland	No	Yes	Yes (Int)	No
Lithuania	Yes	No	Yes (Int)	No
Portugal	No	Yes	Yes (Int)	No
Hungary	No	No	Yes (Int)	No
Slovak Rep	No	No	Yes (Int)	No
Austria	Yes	Yes	No	No
Iceland	No	No	No	No
Latvia	No	No	No	No
Japan	Yes	Yes	Yes (Ntl & Int)	Yes
Canada	Yes	Yes	Yes (Ntl)	Yes
Israel	No	No	Yes (Int)	No
Korea	No	Yes	No	No
Australia	Yes	No	No	No
Switzerland	Yes	Yes		

Note: Cells in dark teal refer to standards being used for each of breast, prostate, colorectal, lung and rare/paediatric cancers; aqua cells refer to standards being used for at least one of the above-mentioned cancers, sky blue cells indicate that standards are not used for any cancers. Blank cells indicate no information available on that topic.

1. In Austria, structural standards are available for breast and rare/paediatric cancers, and minimum volume/process norms are available for pancreatic cancers. In Belgium, minimum volume/process norms are available for breast, pancreatic and head/neck cancers and cancers for adolescent and young adults. In Greece, structural standards are available for breast and rare/paediatric cancers. In Ireland, minimum volume/process norms are available for breast cancer. In Lithuania, structural standards are available for breast, prostate, colorectal and lung cancers. In the Netherlands, structural standards are available for rare/paediatric cancers, and minimum volume/process norms are available for prostate and rare/paediatric cancers. In Poland, structural standards and minimum volume/process norms are available for breast, prostate, colorectal, lung cancers and others such as ovarian, stomach, skin, and pancreatic cancers. In Portugal, minimum volume/process norms are available for breast cancer. In Slovenia, structural standards and minimum volume/process norms are available for rare/paediatric cancer. In Spain, structural standards are available for colorectal, lung, rare/paediatric cancers and minimum volume/process norms are available for colorectal, oesophageal-gastric and central nervous system cancers. In Sweden, minimum volume/process norms are available for rare/paediatric cancers. In Canada, structural standards and minimum volume/process norms are available for breast, colorectal and lung cancers. In Switzerland, structural standards and minimum volume/process norms are available for rare/paediatric cancers. In some countries, such as Greece, Italy, Slovenia, Spain and Sweden, standards are recommended but not required.

Source: 2025 OECD Policy Survey on High-Value Cancer Care; OECD/European Commission (2025[50]), EU Country Cancer Profile: Belgium 2025, https://www.oecd.org/en/publications/eu-country-cancer-profile-belgium-2025_744aaaba-en.html; OECI (2025[51]), Membership, https://www.oeci.eu/membership.aspx.

4.3.1. Most EU+2 countries set either structural and/or minimum volume norms for cancer care

Table 4.1 shows that 19 EU+2 countries report having structural standards while 17 EU+2 countries have minimum volume/process norms to promote high quality cancer care. In some countries, such as Greece, Italy, Slovenia, Spain and Sweden, standards are recommended but not required and may be set at the regional level (e.g. Sweden).

Most countries that set standards utilise both structural requirements and process/minimum volume norms, as seen in 15 EU+2 countries. However, Estonia, Greece, Lithuania and Romania set only structural standards, while Ireland and Portugal have opted for process/volume standards only. Several countries – Iceland, Latvia, Hungary and the Slovak Republic (where hospital reform to centralise provision of speciality care via minimum volume standards is underway (OECD/European Commission, 2025[52])) – do not currently have either structural or process standards for cancer care.

Examples of countries that have both structural and process norms are Czechia, Denmark and France. In Czechia, minimum staffing and equipment standards, as well as minimum volume norms, are set via accreditation requirements for comprehensive cancer care centres, while in Denmark, the Danish Health Authority regulates the institutions that are allowed to provide specialised treatment as well as minimum volume norms for different types of cancer. In France, requirements for cancer care providers are based on three pillars: 1) cross-disciplinary quality criteria applying to all cancer treatment modalities (radiotherapy, surgical oncology and systemic therapies); 2) technical and clinical infrastructure specific to each treatment modality; and 3) minimum activity thresholds (OECD/European Commission, 2025[53]).

4.3.2. Standards are often set for the most common cancer types

Countries often set structural standards for many cancer types, most commonly breast, colorectal and paediatric/rare cancers (between 16 to 17 EU+2 countries depending on cancer type) and lung and prostate cancers (14-15 EU+2 countries). France and Poland also have standards for other cancers including ovarian, stomach and pancreatic while Czechia has structural standards for treating cervical cancer.

As part of structural standards, many of these countries also require or recommend the use of multidisciplinary teams (MDTs). In France, an MDT is mandatory to evaluate treatment plans for each cancer patient; for radiotherapy, for example, a team composed of a minimum of qualified radiotherapists, medical physicists, and medical electroradiology technicians is required. Similarly in Germany, for certification of oncological treatment centres by the German Cancer Society, multidisciplinary tumour boards meeting specific requirements must be available (Hermes-Moll et al., 2021[54]) while in Austria, Breast Health Centers must have mechanisms to ensure certain specified departments are available for participation in tumour boards.

Similar to structural standards, process/minimum volume norms are also commonly set for breast and rare/paediatric cancers (12-13 EU+2 countries) and colorectal, prostate and lung cancer (9-10 EU+2 countries). Austria, Belgium, France and Poland also set minimum volume norms for pancreatic cancer. Thresholds for minimum volume norms vary across countries by cancer type such as for breast, and in some cases, by type of service (e.g. surgery, radiotherapy and systemic therapy) as in France (Box 4.2). For example, for cancer originating in the chest cavity, the minimum volume requirement is 40 treatments per year in France and 75 in Germany (The Federal Joint Committee, 2025[55]). Volume norms can be established at the facility or the physician level, or both – in England, for example, hospitals must perform at least 10 surgeries for rectal cancer while individual surgeons should perform at least five per year (NICE, 2021[56]).

Minimum volume norms are not specifically used in some EU+2 countries such as Latvia and Lithuania (with relatively small population size), Greece (with population dispersed widely across archipelagos) as well as the Slovak Republic (implementation in progress) and in Hungary. In other smaller countries, instead of minimum volume norms, concentration of cancer care takes places via provision of care in one (Iceland) or three (Estonia) main facilities, or via sending specialised paediatric cancer cases abroad for specific treatments (Estonia, Luxembourg).

Box 4.2. Minimum volume norms can differ by cancer type and setting across countries

For **breast cancer**, the European Society of Breast Cancer Specialists requires accredited centres to have sufficient caseloads, which includes annually: a minimum of 150 new cases of breast cancer treated, each surgeon operating on at least 50 cases; each radiologist reading a minimum of 1 000 mammograms per year and diagnosing one cancer per week (Biganzoli et al., 2020[57]). Italy and Spain both follow this threshold for treatment volumes by breast centre and surgeon (AGENAS, 2021[58]; de León Carrillo and Frutos Arenas, 2021[59]). Similarly, Ireland sets the threshold for breast cancer at a minimum of 50 new patients operated per surgeon per year, as does Slovenia. In Belgium, the standard had been 50 operations per surgeon annually, but this was reduced in 2014 to 30 per year to increase access to care. Co-ordinating breast clinics in Belgium must diagnose at least 125 new breast cancer cases a year and satellite breast clinics must diagnose at least 60 cases (KCE, 2023[60]). While France requires certified facilities to perform at least 70 breast cancer surgeries per year, Germany sets a higher threshold of 100 surgeries per hospital annually.

France has minimum volume norms not only for cancer surgeries, but also for radiation therapy and systemic treatment. With regards to minimum annual activity, France requires certified cancer facilities to meet the following thresholds:

For cancer surgery, the minimums are:

- Breast cancer (70); head and neck and maxillofacial surgery (20); urological (30); thoracic (40); non-breast and ovarian gynecological (20); complete cytoreductive surgery for ovarian cancer (20).
- Digestive cancers (30), with organ minimums: oesophagus and gastroesophageal junction (5), stomach cancer (5), liver cancer (5), pancreatic cancer (5), rectal cancer (5).

For radiotherapy: 600 patients for external beam radiotherapy; no threshold for brachytherapy.

For systemic cancer treatments: 100 patients treated per year, including at least 65 intravenous injections on an outpatient basis (Légifrance, 2022[61]).

4.3.3. While standards are important, countries must have mechanisms in place to monitor and ensure that they are met

While establishing quality standards and care guidelines is important to safeguard and promote the delivery of high-quality cancer care, mechanisms must be in place to monitor whether these are met. However, such monitoring is not always undertaken systematically. This can lead to gaps between structural and minimum volume standards and actual practice, as described in Box 4.3.

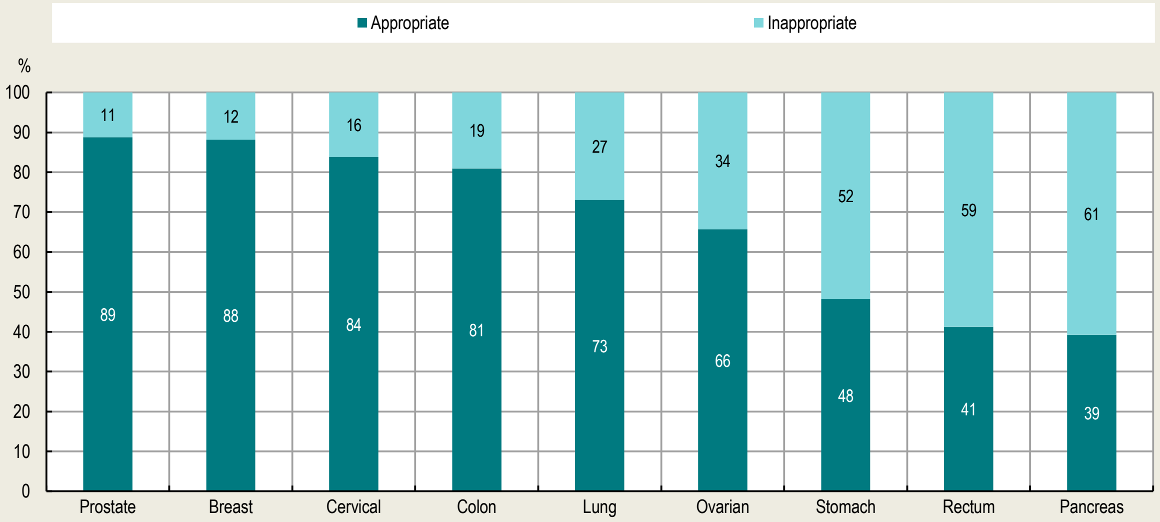
Box 4.3. Gaps between standards and clinical practice demonstrate the importance of monitoring and enforcement mechanisms

In Italy, since 2015, the National Outcomes Evaluation Programme (PNE) has set recommended minimum annual volume thresholds for specific surgical procedures, including cancer surgery. For prostate, breast, cervical and colon cancer, more than four in five procedures took place in hospitals that met these recommendations (Figure 4.4). In contrast, more than half of surgeries in 2022 for stomach, rectum and pancreatic cancer were performed in units below these volume thresholds.

For breast cancer specifically, 12% of surgeries took place in units performing fewer than 135 operations annually. Significant regional variations exist on this indicator: in Emilia-Romagna, Marche, Tuscany and Umbria, less than 5% of breast cancer surgeries occurred in low-volume units, while the figure exceeded 25% in Friuli-Venezia Giulia, Molise and the Autonomous Province of Bolzano. Even in high-capacity regions with centres of excellence such as Lombardy, a non-negligible share of breast cancer surgeries (13%) took place in low-volume units.

Figure 4.4. In 2022, between 11% and 61% of surgical oncology procedures in Italy were performed in hospitals with patient volumes below the optimal threshold

Share of surgical oncology procedures



Note: The “inappropriate” category refers to the proportion of surgical oncology procedures performed in facilities that failed to meet the cancer-specific minimum annual volume of patients for breast 135), lung (85), colon (50), prostate (30), cervical (20), rectum (25), stomach (20), ovarian (20) and pancreatic (30) cancers.
Source: OECD/European Commission (2025[62]), EU Country Cancer Profile: Italy 2025, https://doi.org/10.1787/1e742c63-en based on data from AGENAS (2023[63]), Fifth National Survey on the Status of Implementation of Regional Oncology, https://www.agenas.gov.it/images/2023/13_dic/5_indagine_Rapporto_ROR_12_12_2023.pdf.

Following observation of gaps between clinical standards and practice, Belgium and Germany introduced reforms to enforce evidence-based clinical practice. In Belgium, following a 2023 report that found a 30% higher mortality rate among women treated in non-specialised centres, the government has ceased reimbursing facilities for breast cancer treatment (except for follow-up) administered outside of fully recognised clinics as of August 2024 (OECD/European Commission, 2025[50]).

Similarly, Germany's programme for minimum volumes, in place since 2004, has faced challenges with implementation and adherence. A report found that 34% of hospitals in Germany (205 out of 605) failed to meet the minimum annual requirement of ten complex pancreatic surgeries in 2017, while 52% (198 out of 378 hospitals) did not meet the threshold of ten annual procedures set for oesophageal surgery (Hemschemeier, Bittkowski and Stollorz, 2017[64]). Since this period, Germany has strengthened sanctions on non-compliance to minimum volumes, although about 40% of cancer cases were still treated in general non-certified hospitals in 2024. Nonetheless, the hospital reform started in 2024 is leading to stronger concentration of cancer treatment in fewer specialised hospitals based on minimum volume requirements (OECD/European Commission, 2025[65]). Between 2024 and 2026, the number of providers fulfilling the minimum requirement and authorised to provide surgery in Germany was expected to decrease from 425 to 377 for breast cancer and 169 to 142 for lung cancer (AOK Federal Association, 2025[66]).

Cancer care quality is assessed via certification / accreditation and other monitoring mechanisms

One important approach to monitor alignment with expected structural and process standards and ensure quality of care is via certification / accreditation. In addition to providing oversight, implementing such processes can improve quality. A recent analysis from Germany found that access to accredited cancer centres significantly reduces breast, colon, and prostate cancer mortality risk and increases five-year survival estimates by 2-7 p.p. for five cancer types (Brand and Blankart, 2025[67]). The OECD survey on high-value cancer care shows that 22 EU+2 countries report using some mechanism for certification / accreditation of cancer care (Table 4.1).

Many countries in Europe place emphasis on international certification / accreditation, namely via the Organisation of European Cancer Institutes (OECI) (Box 4.4). Fourteen EU+2 countries use international certification or accreditation mechanisms only, while five EU+2 countries (Belgium, Czechia, France, the Netherlands and Spain) have both national and international accreditation or certification for cancer care. In Czechia's national accreditation programme, outcome indicators including inpatient mortality, post-operative mortality, and survival rates are assessed alongside structural and process standards. Three EU+2 countries (Germany, Poland and Romania) currently have national mechanisms only. In an example from another OECD country (Canada), the process is primarily co-ordinated through Accreditation Canada and provincial cancer agencies and is based on quality, safety and best practices in oncology care.

> In the Netherlands, every rare form of lung cancer needs to be treated in an Expert centre. We are really a team. We have a research programme together. In my work as a patient advocate, they consult me, as well as I consult them.
>
> *Merel, 56 years old, lung cancer*

Box 4.4. Certification mechanisms set comprehensive standards for cancer care: OECI and Deutsche Krebshilfe examples

OECI certification includes both qualitative and quantitative assessment of governance and organisational structure, patient centredness, multidisciplinary teams/care, research, education and training, as well as of the entire patient pathway from prevention, diagnosis and treatment. Comprehensive cancer centres (CCCs) must meet structural standards including an annual budget of EUR 50 million or more for cancer care, an annual budget of over EUR 8 million for cancer research, a total of 150 cancer care inpatient beds and beds in the ambulatory care setting, more than 50 full-time equivalent physicians dedicated to cancer, and minimum volume norms such as 2 500 newly treated patients. Since the certification highlights the importance of research, criteria include more than 125 peer-reviewed scientific publications, high impact scientific publications, and having phase I trials, among others. Certified OECI cancer centres need to meet criteria in similar areas as CCCs (except for in research), although requirements differ somewhat, and threshold levels are lower.

OECI certification also sets and assesses process and quality standards, including multi-disciplinary teams (frequency of meetings, team composition, the number or percentage of patients listed who were not discussed in the MDT) and quality of cancer care provided (e.g. re-operation rates within 30 days by cancer type, 30-day mortality after open and robotic surgery by cancer).

Use of electronic systems for cancer care can facilitate provision of evidence-based care using real-time information shared across providers, improve patient engagement and care continuity and reduce medical errors. As such, OECI certification processes also assess use of information technology. Results indicate high uptake of IT in OECI certified centres: across the board almost all centres have electronic patient records, electronically available clinical guidelines, and electronic medication prescription and administration systems. The vast majority of centres also have the capability to process and exchange information electronically with external providers. Use of electronic patient portals shows slightly lower availability (ranging from 71% to 75% by country income tercile[1]), while anywhere between two-thirds (Tercile 2) and 100% (Tercile 3) of centres have electronic patient referral systems.

Instead of the OECI programme, **Germany relies on a national CCC programme initiated, monitored and designated by the Deutsche Krebshilfe (German Cancer Aid).** At present there are 14 designated Comprehensive Cancer Centres (with a total of 26 Comprehensive Cancer sites). In order to apply to become a CCC, a centre must first be certified as an Oncology Centre by the German Cancer Society via assessment of treatment according to German national clinical guidelines for the respective cancer types. The Oncology Centre certification process includes yearly internal audits on technical and medical requirements. The evaluation and designation process as a CCC is then based on meeting criteria related to translational research, access to innovation and clinical trials, outreach and regional network structure and multidisciplinary care. In Germany's Deutsche Krebshilfe programme, Comprehensive Cancer Centres also have well-developed information technology use. The centres generally utilise electronic tools for clinical guidelines, patient tracking systems, and medication prescription systems, as well as electronic patient medical records. Technology infrastructure to process and exchange patient information and biomedical images is well-developed and effectively utilised in processes such as MDTs or virtual tumour boards. Nonetheless, German privacy policies pose challenges to adequate sharing of patient information within and between CCCs.

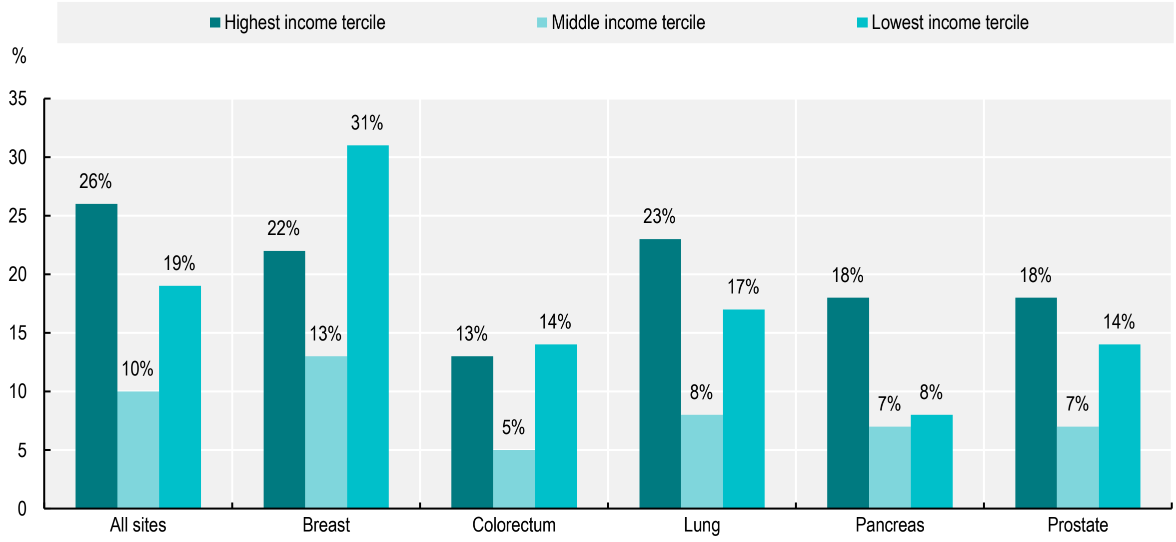
Source: OECI (2021[68]), OECI data analysis, Deutsche Krebshilfe (Germany Cancer Aid).

1. The country income terciles divide EU+2 countries into three terciles based on GDP per capita for the purpose of OECI data analysis (see Figure 4.5).

OECI certification is of growing importance in the EU+2. Thirteen EU+2 countries have at least one CCC certified by the OECI, four other EU+2 countries (Denmark, Greece, Lithuania and Slovenia) have an OECI certified cancer centre, and three more (Iceland, Latvia and Poland) are in the process of OECI certification.

The OECI provided data about the number of newly treated cancer cases by country income tercile of EU+2 countries (Figure 4.5). About one in four new cases (26%) across all cancer sites are treated at OECI certified cancer centres in countries falling within the highest income tercile (Tercile 1). The figures are somewhat lower, at about one in ten (10%) in Tercile 2 and one in five (19%) in Tercile 3, the lowest income tercile. The shares for "all sites" together are higher than the shares treated for each of the common cancer types shown in the figure (except breast cancer for Terciles 2 and 3) as, in general, a greater proportion of less common cancers are treated in OECI-certified centres because these larger centres tend to specialise in more complex or rarer cancers.

Figure 4.5. Cancer patients newly treated at OECI comprehensive cancer centres as a share of cancer incidence, by cancer type and country income tercile



Note: "All sites" includes both cancer sites shown in the figure as well as other cancer sites not shown. Terciles are based on 2023 GDP per capita in purchasing power standard terms. The first tercile includes the highest-income countries with Organisation of European Cancer Institutes (OECI) accredited cancer centres (Belgium, Denmark, Ireland, the Netherlands, Norway and Sweden); the middle tercile includes the middle-income countries (Czechia, Finland, France, Italy, Lithuania, Slovenia and Spain); the third tercile includes the lowest income-countries (Estonia, Greece, Hungary and Portugal). Data on cases treated are from 2019, 2021 – 2023 (depending on the centre), while incidence data is from 2022.

Source: Incidence data from European Cancer Information System (ECIS) https://ecis.jrc.ec.europa.eu/, accessed on July 2025; newly treated patients data from OECD analysis of OECI-provided data.

Alongside existing accreditation and certification mechanisms, the flagship EUNetCCC initiative aims to ensure that cancer patients have access to co-ordinated, high-quality and comprehensive care across Europe via certified cancer centres (Box 4.5).

Box 4.5. Supporting structured cancer care delivery: The EU Network of Comprehensive Cancer Centres (EUnetCCC)

The EU Network of Comprehensive Cancer Centres (EUnetCCC), supported under the EU4Health programme, is developing a harmonised organisational and quality framework for cancer centres and the regional networks in which they operate. The initiative aims to ensure that cancer patients have access to co-ordinated, high-quality and comprehensive care across Europe.

EUnetCCC is defining requirements in four main areas:

- **Governance**, including clear leadership structures covering care, research and education, mechanisms for cross-institutional co-ordination, patient involvement in decision making, and data-driven monitoring of performance.
- **Care organisation**, including multidisciplinary tumour boards, defined patient pathways, risk management processes, access to specialised diagnostics and treatments, and collaboration with other hospitals to support equal access to services.
- **Research and innovation**, including integration of research within care pathways, access to clinical trials and molecular tumour boards, capacity to support innovation uptake, and collaboration with academic and industrial partners.
- **Education and training**, including structured programmes for health professionals and participation in European learning networks.

The approach combines **centre-level requirements** with provisions for **regional collaboration**, reflecting the diversity of cancer care systems across Europe. Centres are expected to organise and document how necessary services are provided either directly or through formal partnerships with external institutions.

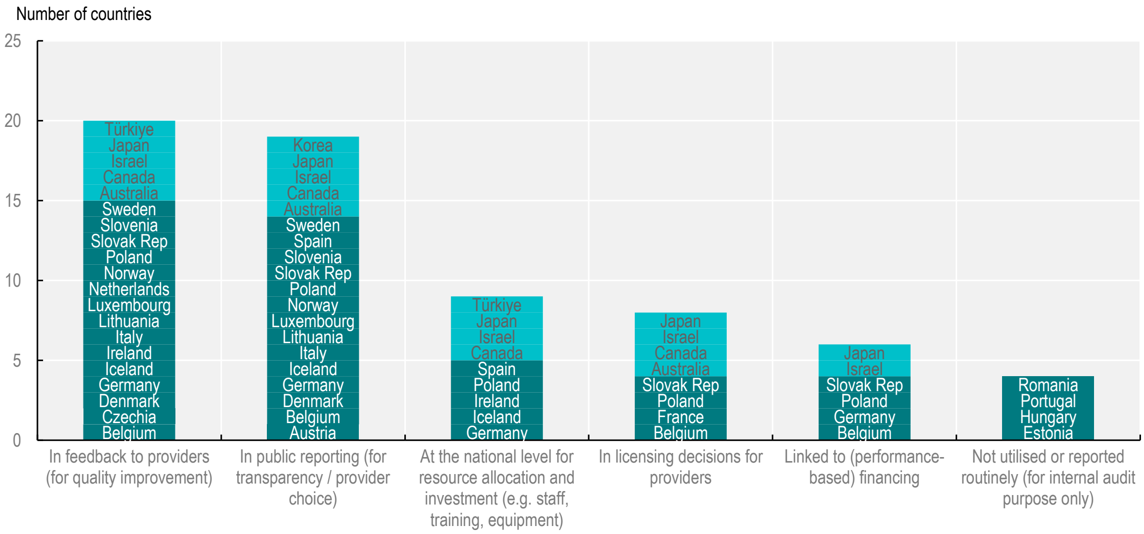
EUnetCCC is also developing a **stepwise certification scheme**, based on self-assessment and peer review, with regular monitoring and improvement cycles. The certification standards take into account existing national and international mechanisms, with work underway to explore mutual recognition where appropriate. Supporting tools, including an electronic platform, are being designed to facilitate data collection and comparability.

By creating a shared framework and terminology for organisation, quality management and co-operation, EUnetCCC supports the improvement of cancer care across countries and regions, including in settings where access to highly specialised expertise is limited. The framework is currently under development and will be progressively tested and adapted as Member States engage in its implementation.

Source: French National Cancer Institute (INCa), co-ordinator of EUNetCCC initiative

In addition to accreditation or certification systems, many countries have implemented other processes to monitor cancer care quality. A total of 18 EU+2 countries report having such mechanisms to monitor quality of cancer treatment providers. The two most common uses of quality monitoring processes, (each used by 14-15 EU+2 countries), are for 1) provider feedback for quality improvement and 2) public reporting to promote transparency or patient choice (Figure 4.6).

Figure 4.6. Quality monitoring or audit mechanisms on cancer treatments are commonly used to provide feedback to providers and for public reporting



Note: The figure shows the number of countries reporting use of cancer quality monitoring or audit mechanisms for each of the following purposes. EU+2 countries are represented in dark green, while other OECD countries are represented in light green.
Source: 2025 OECD Policy Survey on High-Value Cancer Care.

The Netherlands has a clinician-led national system for monitoring cancer care quality, managed by the non-profit Dutch Institute for Clinical Auditing (DICA), which oversees 20+ audits across major cancer types such as colorectal, breast, lung, gynaecological, head and neck, prostate, and skin cancers. DICA's validated registration system provides hospitals with direct insights into treatment outcomes, enabling continuous care improvements (DICA, 2024[69]). While Belgium undertakes quality monitoring for cancer care at the hospital level and has feedback systems to improve quality, publicly reporting of aggregated quality metrics takes place at the regional level. In Poland, there is public reporting on a list of indicators by cancer provider, while Italy undertakes monitoring of cancer care quality and outcomes at the regional level, publicly highlighting strengths and weaknesses for improvement.

Nordic countries including Denmark, Iceland and Sweden each have a comprehensive website available to monitor differences in quality of cancer care by cancer type, region and providers (Quality Registry). In Sweden, over 30 cancer-specific National Quality Registries facilitate monitoring via collection of individual-level data on diagnosis, treatment, and outcomes (RCC, 2025[70]). National care programmes are developed for each cancer type by the six Regional Cancer Centres and include a dedicated section on quality indicators and target levels based on national or international guidelines (RCC, 2025[71]). Performance compared to target levels is regularly assessed and forms the basis for reporting within the National Quality Registries. Slovenia is in the process of developing five clinical registries for monitoring the quality of cancer care, including the meeting of minimum volume norms. In other OECD countries, Canada provides another valuable example. Quality monitoring and audits support continuous improvement, transparency, and accreditation in cancer care. The Canadian Partnership Against Cancer also collects pan-Canadian indicator data to monitor system performance and identify priority areas for improvement.

Fewer countries report using quality monitoring mechanisms in cancer care to guide investment decisions such as staffing, training and equipment at the national level, or for licensing or performance-based financing (4-5 EU+2 countries). In Belgium, payment for breast cancer care, complex pancreatic and oesophageal surgical procedures are limited to providers meeting volume and/or structural standards

(OECD/European Commission, 2025[50]). Furthermore, hospitals receive a financial incentive based on results obtained in relation to indicators (such as reporting data on clinical and pathological status of cancers, mortality, and increasingly, patient experiences). In Germany, hospitals must meet criteria in areas such as structural standards, minimum volume norms, training, co-operation and research to receive add-on payments.

In Estonia, Hungary, Portugal and Romania, results from monitoring and auditing are not regularly reported or utilised beyond internal auditing purposes or as part of the licensing process.

Adherence to clinical guidelines is not monitored systematically in EU+2 countries

While two-thirds of EU+2 countries have clinical guidelines for cancer in place (OECD, 2024[30]), it is critical that these guidelines are systematically updated, accessed and implemented in practice in order to promote high-quality cancer care. For example, in breast cancer, a systematic review of observational studies across EU countries found that adherence to treatment guidelines was associated with significantly improved survival outcomes, with 138 more survivors and 336 more women free of recurrence per 1 000 patients at five-year follow-up among those receiving guideline-adherent care (Ricci-Cabello et al., 2020[72]).

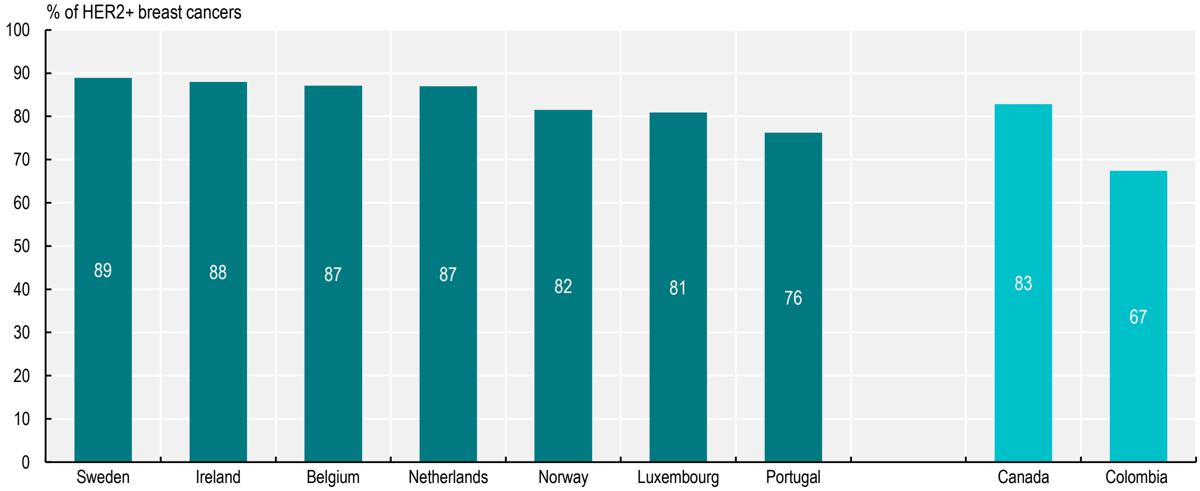
However, evidence from across EU+2 countries indicates that adherence to clinical guidelines in routine practice remains inconsistent, which can have important consequences for patient outcomes. A population-based study in France using European Society of Breast Cancer Specialists (EUSOMA) indicators reported good compliance for most treatment indicators, yet lower adherence for staging procedures such as sentinel lymph node biopsy and imaging, with marked geographic and institutional variation (Cowppli-Bony et al., 2019[73]). A broader review also highlighted that adherence to breast cancer guidelines across Europe was suboptimal in many settings, with median adherence to treatment processes ranging from 58% for overall treatment to 76% for systemic therapy, impacted by physician perceptions, lack of awareness, and intentional deviations (Niño de Guzmán et al., 2020[74]).

In lung cancer, studies from Finland have documented under-treatment among elderly patients, even when performance status would have allowed for guideline-based care (Lindqvist et al., 2022[75]), (Paakkola et al., 2023[76]). For prostate cancer, nearly half of men aged 70 and older in a multicentre French cohort received treatments that did not comply with international guidelines, with guideline-discordant treatment linked to reduced survival (González Serrano et al., 2021[77]). In ovarian cancer, only 30% of patients received fully guideline-adherent care in a French multicentre study, and deviations were associated with a two-fold increase in mortality risk (Jochum et al., 2021[78]). In radiotherapy, a key study among European countries found that the share of radiotherapy courses performed versus the optimal utilisation ranged from 55% to 90% across countries (Borras et al., 2015[79]). These findings reinforce the importance of systematic monitoring to reduce unwarranted variation from clinical guidelines.

The OECD's data collection included an indicator on the use of targeted therapy for HER2+ breast cancer – a well-established care guideline to increase survival rates for this aggressive cancer. It found that adherence to this guideline was relatively high among the EU+2 countries reporting data, ranging from 76% in Portugal to 89% in Sweden (Figure 4.7). Across all countries, rates were still below the 90% target set by the European Society of Breast Cancer Specialists. Some of this gap, in Ireland for example, may be due to receipt of HER2+ treatment in community settings that are then not recorded in hospital medical records. Only half of OECD countries participating in the data collection reported on this indicator, suggesting room for improvement on data and monitoring for guideline-concordant care in many countries. Compared to the OECD data collection, results from the Venus study for patients diagnosed in 2015-2018 find slightly lower rates for use of targeted therapies in HER2+ breast cancer in Belgium, Ireland, the Netherlands and Portugal, but higher rates for Luxembourg (Allemani et al., 2025[80]).

Figure 4.7. Use of appropriate treatment for HER2+ breast cancer is consistently high across EU+2 countries with available data

Proportion of female patients with HER2+ breast cancer under age 70 receiving targeted HER2+ treatment, latest 3-year average



Note: Reference years are from 2021-2023 (Netherlands, Norway, Sweden, Portugal), 2018-2020 (Ireland), 2020-2022 (Canada, Belgium), Luxembourg (2017-2019) and Colombia (2023). Data for Canada includes Alberta and Prince Edward Island provinces.
Source: OECD (2025[20]), "Assessing cancer care quality in OECD countries: New indicators for benchmarking performance", https://doi.org/10.1787/b3f47ece-en.

It can be challenging to monitor adherence to clinical guidelines given new developments in cancer treatment and frequently changing recommendations that require effective real-time health data systems to allow oversight. Indeed, only 12 EU+2 countries monitor adherence to clinical guidelines for treatment of cancers such as breast, prostate, colorectal and lung cancer. One example of monitoring is in Germany, whose published quality reports by cancer centre includes a list of indicators based on adherence to clinical guidelines. For breast cancer, for example, indicators cover areas such as appropriate use of sentinel lymph node biopsy, endocrine therapy in metastatic settings, and radiotherapy after breast-conserving surgery along with use of targeted therapy in treatment of HER2+ cancer (German Guideline Program in Oncology, 2021[81]). In Denmark, use of clinical guidelines is monitored for various cancers including haematological, bladder, head and neck, brain, renal and pancreatic cancers; if treatment does not follow clinical guidelines, information on and reasons for such needs to be recorded in the patient record.

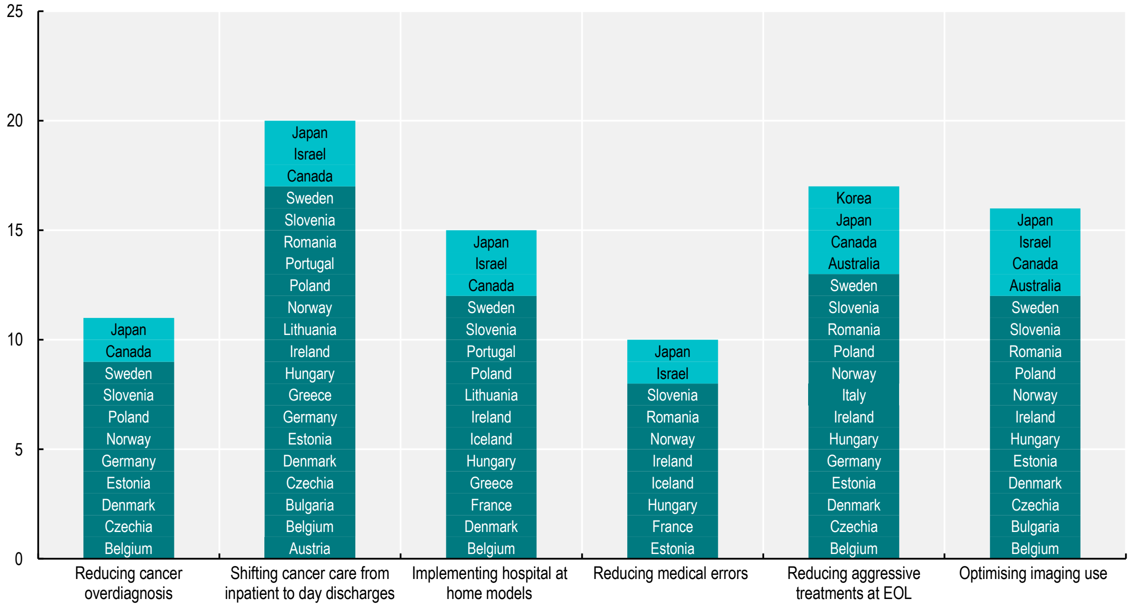
Often, cancer care protocols call for use of MDTs, which are common in cancer care in almost all EU+2 countries (OECD, 2024[30]). However, the implementation and organisation of MDTs vary significantly across countries. For example, in Estonia, practice by MDTs is inconsistent due to a lack of specific guidelines, leading to disparities in how cases are managed and treated. In Latvia, MDT conferences, known as "*consilia*", are generally established in major hospitals; however, they lack standardised protocols. There are no regional or national MDTs, whether convening in person or virtually (OECI, 2023[82]).

Only 14 EU+2 countries reported evaluating the use of multidisciplinary teams for cancer care. Belgium, Ireland and the Netherlands measure the number or share of patients treated by MDTs for various cancer types (OECD, 2025[20]). In France, Regional Health Agencies (ARS) audit a sample of licensed cancer care providers to examine adherence of MDT recommendations to clinical guidelines and to check alignment between treatment given and MDT recommendations.

4.4. Policymakers, payers and providers are seeking ways to increase high-value care in cancer diagnosis and treatment

Across the cancer care spectrum, from diagnosis, to hospitalisation and cancer pharmaceuticals, there are initiatives to increase the value of cancer care by improving outcomes and efficiency. This section examines the current situation, trends, programmes and policies with regards to these efforts, which are summarised in Figure 4.8.

Figure 4.8. Countries have numerous policies and initiatives underway to promote high value cancer care



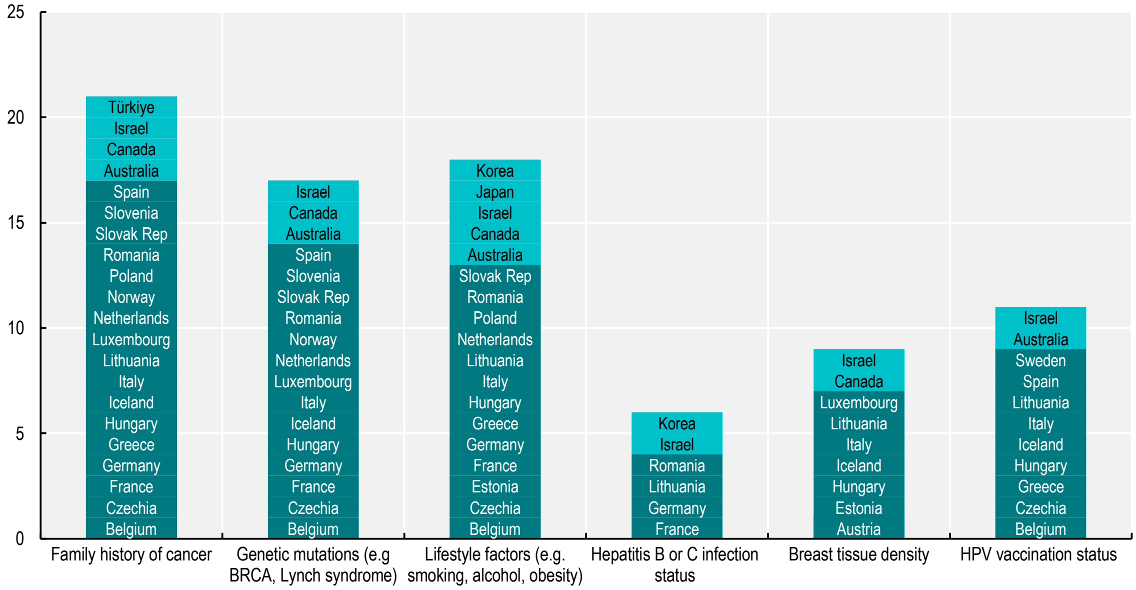
Note: EOL: End of life. EU+2 countries are represented in dark green, while other OECD countries are represented in light green.
Source: 2025 OECD Policy Survey on High-Value Cancer Care.

4.4.1. To increase effectiveness, countries are adapting existing screening programmes and piloting new ones, while addressing overdiagnosis

> *EU+2 countries are adopting targeted screening initiatives to make existing screening programmes more effective*

Population-based screening programmes have shown high evidence of cost-effectiveness, allowing earlier detection and better outcomes (Chapter 3). Beyond age-based criteria, some countries are implementing risk-stratified screening of specific populations with higher prevalence of cancer risk factors, such as smoking history, family history, chronic infection, high breast tissue density, or carriers of genetic mutations (Figure 4.9). These initiatives involve inviting cohorts of eligible patients or adapting screening type or frequency based on risk factor profile. Targeted cancer screening based on risk-stratification is important for cost-effective and efficient allocation of healthcare resources, maximising benefits while minimising harms to patients. Targeting screening through risk-stratification increases the likelihood of detecting cancer in those at highest risk of developing cancer compared to screening the age-eligible population, yielding an increased rate of early diagnosis relative to the resources allocated. Additionally, targeting screening may reduce the screening burden and potential harms to those at lower risk of developing cancer in the population, offering a more person-centred approach to prevention (Fitzgerald et al., 2022[83]).

Figure 4.9. EU+2 countries have implemented risk-stratified approaches to improve the effectiveness of cancer screening



Note: EU+2 countries are represented in dark green, while other OECD countries are represented in light green.
Source: 2025 OECD Policy Survey on High-Value Cancer Care.

A majority of EU+2 countries report targeting existing screening programmes at patients with a family history of cancer, or genetic mutations (such as BRCA genes or Lynch syndrome) which predispose to certain cancer types. In Greece, screening for breast cancer takes place starting at younger ages in cases of strong family history, while in Czechia, individuals with a family history of cancer are not included in the general screening programme but are monitored under a different screening protocol. In Belgium, follow-up cancer screening for genetically at-risk individuals takes place according to guidelines from ERN GENTURIS (the European Reference Network for patients with one of the rare genetic tumour risk syndromes). There are special screening protocols for those at high risk of colon cancer in the Slovak Republic, and in Germany, a consortium of clinics manages patients with familial colorectal cancer. In Iceland, BRCA gene carriers are screened more frequently for breast, cervical cancer and melanoma. To help identify those at higher cancer risk, genetic testing for people with familial cancer history is publicly financed under certain conditions in countries such as Austria, Germany, Greece and Italy. In an example from other OECD countries, some genetic testing (such as for BRCA genes) at the population level is fully (Israel) or partially (Australia) covered.

Additionally, 13 EU+2 countries (Belgium, Czechia, Estonia, France, Germany, Greece, Hungary, Italy, Lithuania, the Netherlands, Poland, Romania, the Slovak Republic) reported risk-stratifying cancer screening by lifestyle factors – mainly lung cancer screening pilots based on smoking history. Nine EU+2 countries (Belgium, Czechia, Greece, Hungary, Iceland, Italy, Lithuania, Spain and Sweden) reported adapting their cervical cancer screening programme based on HPV vaccination status, to ensure unvaccinated women at highest risk for cervical cancer are screened more often, and vaccinated women at lower risk are screened less. As of 2025, few countries have introduced liver cancer screening based on risk from chronic hepatitis B or C infection in the population. However, a number of countries are piloting screening for *Helicobacter pylori*, a leading risk factor for stomach cancer, to reduce cancer mortality. In addition to the above initiatives, Estonia is piloting an Artificial Intelligence guided approach to risk-based stratification of women for breast cancer screening (see Section 4.4.5).

Adapting breast cancer screening modalities and frequency according to breast tissue density is an evolving area and there have been recent calls in some EU countries to integrate breast density measurement into cancer screening (NIH National Cancer Institute, 2024[84]). This is because higher breast density can affect the accuracy of mammography, and is itself an independent risk factor for breast cancer; however, the evidence regarding the benefits versus risks is uncertain (Tse et al., 2024[85]). This approach to screening women at higher risk based on higher breast density with MRI or ultrasound imaging or at a younger age, is currently reported by seven EU+2 countries (Austria, Estonia, Hungary, Iceland, Italy, Lithuania, Luxembourg).

New data from lung, prostate and stomach cancer screening pilots are providing insights on feasibility and cost-effectiveness of expanding to population screening programmes

In addition to recommendations related to the three main cancer screening programmes, the Council of the EU Recommendation (2022) on cancer screening invites countries to take a stepwise approach to consider screening programmes for lung, prostate and stomach cancer (European Parliament, 2022[86]), as per the following:

- Lung: Explore feasibility and effectiveness of screening programmes via low-dose CT, starting with heavy smokers and ex-smokers;
- Prostate: Explore feasibility and effectiveness of organised programmes with prostate-specific antigen (PSA) testing in combination with follow-up MRI scanning;
- Stomach: Consider screen-and-treat strategies for *Helicobacter pylori (H. pylori)* in areas with high stomach cancer incidence and mortality, as well as identification and surveillance of patients with precancerous stomach lesions.

This guidance aligns with and builds on existing knowledge on cost-effectiveness in a range of OECD countries. For example, lung cancer screening using low-dose CT scanning was found to be cost-effective in 87% of reviewed trials and modelling studies (Grover et al., 2022[87]), especially when targeted at smokers aged 55-75 years with at least 20 years of smoking history. Similarly, with the cost-effectiveness threshold for a screening intervention commonly set at EUR 30 000 per life year or quality-adjusted life year (QALY) gained, screening studies in Australia (Behar Harpaz et al., 2023[88]), Belgium (Desimpel F, 2024[89]), the United Kingdom (Field et al., 2016[90]), the Netherlands (Al Khayat et al., 2022[91]), Spain (Gómez-Carballo, Fernández-Soberón and Rejas-Gutiérrez, 2022[92]), and Switzerland (Tomonaga et al., 2024[93]) have fallen within this threshold. Among non-smokers, lung cancer screening was not found to be cost-effective in the United States, while it was in Japan due to higher incidence of lung cancer among non-smokers in Asia (Kowada, 2022[94]). For stomach cancer screening, the cost-effectiveness of test-and-treat strategies for *H. pylori* infection is determined by stomach cancer incidence, *H. pylori* prevalence, age at screening, and the costs of testing and treatment of stomach cancer (Lansdorp-Vogelaar and Sharp, 2013[95]). These factors should be accounted for when assessing the cost-effectiveness of implementing stomach cancer screening in EU countries.

In line with the Council Recommendation, progress has been made on implementing pilot screening studies for lung, stomach and prostate cancer in EU+2 countries (Table 4.2). For lung cancer, 11 countries are involved in pilots in the EU SOLACE project on screening feasibility and cost-effectiveness (European Commission, 2023[96]), while France, Portugal and Sweden have undertaken lung cancer screening pilots since 2023. Looking at all OECD countries, Croatia (in 2020) and Australia (in 2025) have taken the next step by implementing nationwide lung cancer screening programmes, with Germany planning to start national roll-out in 2026 and England expecting national roll-out to be completed by 2029. Similarly, Canada has implemented population-based lung cancer screening in two provinces (Ontario and British Columbia), with partial implementation or planned introduction in eight other jurisdictions.

Table 4.2. EU+2 countries have implemented organised screening programmes or pilots for lung, stomach and prostate cancers, in line with the Council Recommendation

Participating Country	Screening programmes or pilots
Lung	
Australia	The National Lung Cancer Screening Programme is a nationwide initiative using low-dose CT scans to detect lung cancer in asymptomatic high-risk individuals, aiming to detect cancer early and save lives, with screening begun in July 2025 (Australian Government[97]).
Canada	Ontario and British Columbia have fully implemented province-wide lung cancer screening programmes in Canada, five jurisdictions have partially implemented programmes and three are planning for implementation. These programmes include integrated smoking cessation supports, screening parameters, referral strategies, promotional strategies, and integrated IT systems (Canadian Partnership Against Cancer[98]).
Croatia	A nationwide lung cancer screening programme launched in October 2020, targeting individuals aged 50-75 with a history of heavy smoking. By May 2025, 43 000 participants had enrolled and more than 60 000 low-dose CT scans performed across 23 centres (Miroslav Samaržija, 2025[99]).
Germany	A nationwide lung cancer screening programme using low-dose CT to detect lung cancer at an early stage in high-risk individuals is planned for implementation in April 2026 (Gemeinsame Bundesausschuss, 2025[100]), following the adoption of the Lung Cancer Early Detection Ordinance (Deutsche Röntgengesellschaft, 2024[101]).
Croatia, Czechia, Estonia, France, Germany, Greece, Hungary, Ireland, Italy, Poland, Spain	Screening pilots using low-dose CT to detect lung cancer in current or former smokers, under the SOLACE project funded by EU4Health (2023 to 2026). Will report on screening guidelines, feasibility, cost-effectiveness, and benefit-harms of screening implementation (European Commission, 2023[96]).
England	The pilot lung cancer early screening programme launched in Northern England (Northumbira Healthcare NHS Foundation Trust[102]) is progressing to a national roll-out by 2029.
France	A national lung cancer screening pilot study was set to launch in 2025, aiming to enrol 20 000 current or former smokers aged 50 to 74 to evaluate the effectiveness of low-dose CT screening in detecting lung cancer early (Healthcare in Europe, 2025[103]).
Portugal	The PULMONALE Pilot Project is a lung cancer screening initiative in Portugal, launched in 2024 to assess the feasibility of implementing a low-dose CT screening programme (Estevinho et al., 2024[104]).
Sweden	Pilot studies for lung cancer screening based on smoking history were rolled out in the Stockholm, Western and Northern regions of Sweden in 2022, with plans for extension to other regions in 2024.
Stomach	
Japan	National screening programme for stomach cancer recommends gastric endoscopy for patients aged 50 years and over every 2-3 years. Gastric radiography screening is offered as an alternative (Yashima et al., 2022[105]).
Korea	The Korean National Cancer Screening Programme for stomach cancer, launched in 2002, provides screening every 2 years with endoscopy or upper gastrointestinal series for individuals aged 40 years and older (Kim et al., 2025[106]).
Croatia, France, Germany, Latvia, Ireland, Lithuania, the Netherlands, Poland, Portugal, Romania, Slovenia	Pilot studies to assess the suitability and efficacy of various stomach cancer-screening methods under TOGAS initiative funded by EU4Health from 2023 to 2026 (TOGAS, 2025[107]). One pilot is examining the effectiveness of screening and treating *H. pylori* infection in young adults aged 30-35. A second pilot is assessing the feasibility of extending endoscopy screening for stomach cancer among patients already undergoing colonoscopy.
Latvia, Slovenia	EUROHELICAN is an EU4Health-funded initiative (2022-2025) to evaluate and guide the implementation of population-based stomach cancer screening (European Commission, 2022[108]). Slovenia piloted *H. pylori* test-and-treat strategies in young adults aged 30-34. In Latvia, long-term effects of *H. pylori* eradication and testing on reducing stomach cancer mortality are being assessed through follow-up of middle-aged participants who had previously participated in the 2013 GISTAR project (GISTAR, 2025[109]).
Portugal	A pilot population-based screening programme for *H. pylori* infection among asymptomatic adults aged 18+ via faecal samples distributed and collected at local pharmacies (Sousa, 2025[110]).
Prostate	
Czechia	Organised screening programme using PSA testing for prostate cancer in men aged 50-59, implemented in 2024 (Europe Uomo, 2024[111]).
Lithuania	Nationwide opportunistic PSA-based Early Prostate Cancer Detection Programme, available from general practitioners, in place since 2006 for men aged 50-74 years (Beyer et al., 2024[112]).
Ireland, Lithuania, Poland, Spain	Pilot screening to assess the functionality, feasibility, and sustainability of organised prostate cancer screening using PSA testing followed by risk-stratified MRI in men aged 50-69 years (Chandran et al., 2024[113]; UCD, 2025[114]). Funded by PRAISE-U initiative of EU4Health from 2024.

Note: Programmes are shown in green shading; pilots in purple shading.

For stomach cancer, screening programmes have been implemented in higher incidence countries of Japan and Korea. The EU-funded TOGAS initiative (11 piloting EU countries) is examining a test-and-treat screening approach for *H. pylori* infections in young adults, while other stomach cancer pilots are underway via the EU-funded EUROHELICAN (2 piloting EU countries) and in Portugal.

For prostate cancer, the EU-funded PRAISE-U initiative is assessing feasibility and sustainability of initial PSA testing followed by risk-stratified MRI in men aged 50-69 in Ireland, Lithuania, Poland, and Spain. Meanwhile Czechia implemented a population-based PSA screening programme in 2024 for men aged 50-69, while nationwide opportunistic prostate cancer screening has been in place in Lithuania (men aged 50-69 or those aged 45 and over with a family history) since 2006 (Gondos et al., 2015[115]).

Risk-stratified screening strategies in combination with screening algorithms and standardised diagnostic approaches can improve the effectiveness of cancer care

In addition to considering clinical and cost-effectiveness, new proposals for implementing risk-stratified screening programmes for prostate and lung cancer are also aiming to reduce overdiagnosis from overly broad opportunistic screening approaches. Overdiagnosis of cancer refers to detection and diagnosis of cancers that would otherwise have remained asymptomatic and not impacted an individual’s health in their lifetime had they remained undetected. The relative proportion of overdiagnosis depends on both the cancer type and the screening technology and strategy applied to the population.

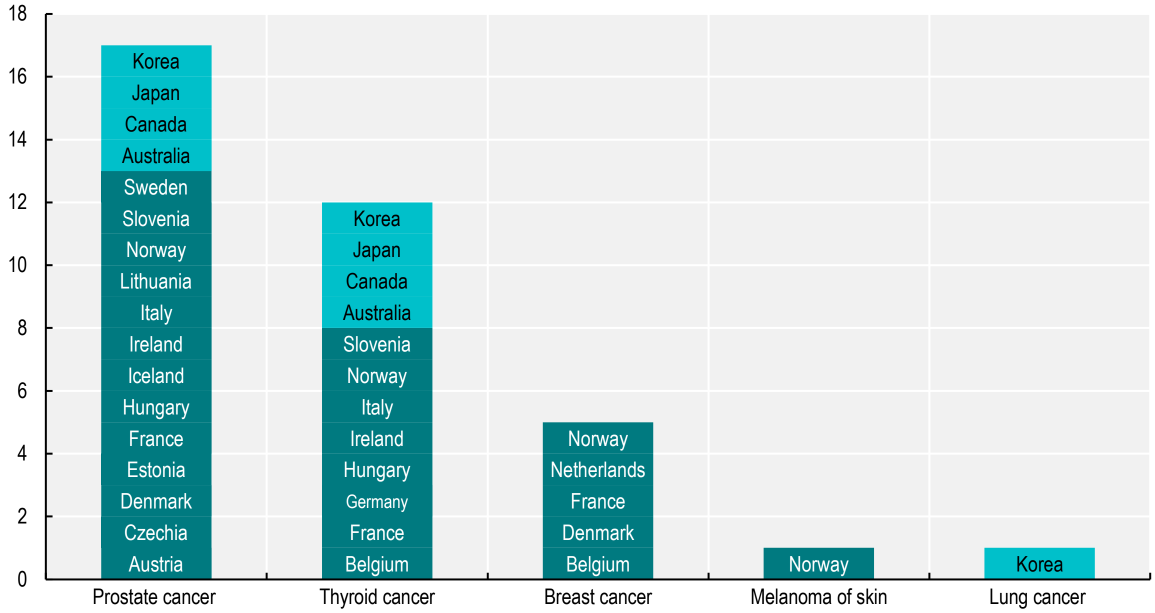
In *The Economics of Diagnostic Safety*, the OECD outlined the considerable economic costs of overdiagnosis of cancer from screening and diagnostic testing (Slawomirski et al., 2025[116]). The risk of overdiagnosis from cancer screening ranges from 60% for prostate cancer screening using PSA testing to 4-19% for lung cancer screening, contributing to substantial direct healthcare costs (through unnecessary tests, treatments and follow-up care). Overdiagnosis also generates significant indirect costs, including lost productivity, later complications from surgery and chemotherapy, and psychological distress.

The risk of overdiagnosis can be mitigated by clinical decision making and by patient-informed discussion. Not all positive screening tests result in a diagnosis of cancer, and not all overdiagnosis results in overtreatment. The availability and application of evidence-based shared decision making, screening algorithms informed by best practice guidelines, and adherence to rigorous cancer diagnostic standards ultimately determine the effectiveness of these screenings at reducing cancer mortality in health systems.

Application of algorithms based on combined demographic and biomedical patient data to determine who best to screen for cancer, and how to better interpret the risk of a clinically significant cancer based on the results of a screening test can mitigate the risk of cancer overdiagnosis (Crosby et al., 2022[117]). An example is polygenic risk scoring of individuals with detected anomalies suggestive of cancer, to profile patients into stratified risk categories and further improve cancer screening efficiency. This technological approach could be used to stratify screening test results into high versus low risk of cancer for the patient, such as for prostate cancer in the Finnish arm of the European Randomised Study of Screening for Prostate Cancer, in order to reduce the risk of overdiagnosis (Pashayan et al., 2015[118]).

The OECD Survey on High-Value Cancer Care revealed that overdiagnosis of prostate cancer is a real concern in 13 EU+2 countries (Austria, Czechia, Denmark, Estonia, France, Hungary, Iceland, Ireland, Italy, Lithuania, Norway, Slovenia and Sweden). Overdiagnosis of thyroid cancer is of concern in eight EU+2 countries (Belgium, France, Germany, Hungary, Ireland, Italy, Norway and Slovenia), and has been a major area of change in cancer screening policy in Korea (Sik, Jung and Gilbert, 2025[119]; Yi, 2016[120]) (Box 4.6). Overdiagnosis of breast cancer, given the high numbers participating in screening programmes, was reported as a problem by five EU+2 countries (Belgium, Denmark, France, the Netherlands and Norway). In contrast, only Norway reported overdiagnosis of melanoma as a concern (see Figure 4.10).

Figure 4.10. Overdiagnosis of prostate and thyroid, and to some extent breast cancer, is considered a problem in a number of EU+2 countries



Note: EU+2 countries are represented in dark green, while other OECD countries are represented in light green.
Source: 2025 OECD Policy Survey on High-Value Cancer Care.

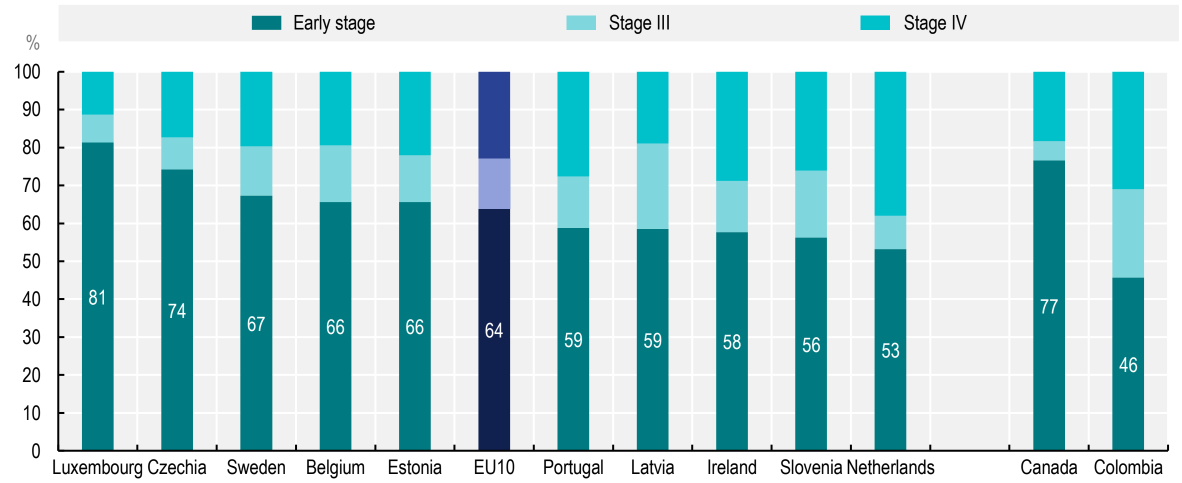
Highly variable opportunistic screening practices and lack of uniform policies on diagnostic approaches contribute to overdiagnosis of prostate cancer

The risk of overdiagnosis of prostate cancer is particularly large, estimated at 42% to 57% for cases identified by screening, as well as for cases diagnosed clinically (Heijnsdijk et al., 2009[121]). Overdiagnosis of prostate cancer in older patients, where the disease is less likely to impact health or mortality, carries the risk of overtreatment and generating low-value care (Directorate-General for Health and Food Safety, 2025[122]). The economic costs due to overdiagnosis were estimated to account for 40% of total healthcare costs of prostate screening (EUR 24 million to screen 100 000 men) in a modelling scenario in the Netherlands (Heijnsdijk et al., 2009[121]). Much of this overdiagnosis is driven by opportunistic screening using PSA testing alone, resulting in 20-fold variation in prostate cancer incidence internationally (Vaccarella et al., 2024[123]).

Based on the 2025 OECD data collection, the share of early-stage (stage I and II) prostate cancer diagnoses among men aged 75 years and older ranged from 53% in the Netherlands to 81% in Luxembourg (see Figure 4.11). This is among the largest variability by stage at diagnosis among breast, colorectal, cervical and prostate cancers (OECD, 2025[20]), and likely reflects large international variation in prostate cancer screening practices, and the lack of evidence-based consensus on who and when to screen (IARC, 2024[124]; OECD, 2024[30]). Indeed, Luxembourg reported among the highest number of diagnostic exams performed per 1 000 persons in the EU, after Austria (see Chapter 3, box 3.1). Among countries included in Figure 4.11, only Czechia has a structured national prostate cancer screening programme, implemented in 2024. A lack of standardised screening policy results in opportunistic prostate cancer screening practice, which drives overdiagnosis and potential overtreatment of prostate cancer in EU countries.

Figure 4.11. Large variation in the share of early-stage prostate cancer diagnosed in older men reflects the lack of international consensus and clear guidelines on prostate cancer screening

Stage of prostate cancer diagnosis, among men age 75+



Note: Most recent 3-year average for each country (ranging from 2018 to 2023). Early-stage combines TNM stage I and II.
Source: OECD (2025[20]), "Assessing cancer care quality in OECD countries: New indicators for benchmarking performance", https://doi.org/10.1787/b3f47ece-en.

Updated screening strategies and pilot studies can inform screening policy on who and how to screen for prostate cancer

Screening strategies aimed at those more likely to benefit from early cancer diagnosis, and using more accurate and precise technology, can help reduce overdiagnosis of prostate cancer. In line with the Council Recommendation (Council of the European Union, 2022[125]), the stepwise design of the PRAISE-U screening pilots in Ireland, Lithuania, Poland and Spain wherein initial PSA testing is followed-up with MRI aims to reduce the risk of overdiagnosis based on elevated PSA results alone using more accurate imaging technology.

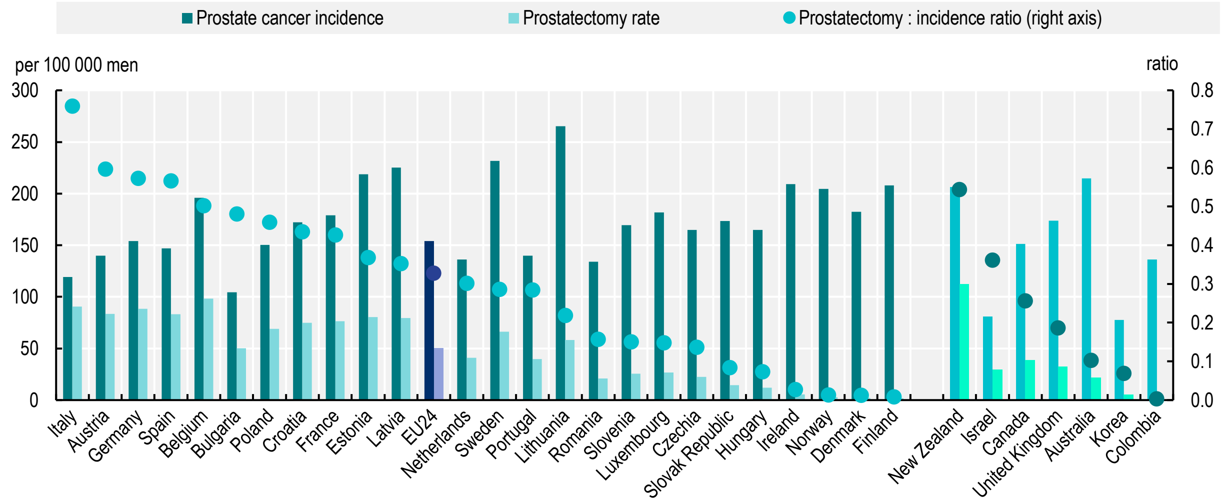
Similarly, screening beyond age 70 is less likely to confer survival benefit and more likely to cause harm and incur costs from low value care and from detection of less aggressive prostate cancers in older patients. The Canadian Urological Association recommends careful consideration of when and who to screen for prostate cancer based on patient age and life expectancy, and shared decision making about proceeding to further diagnostic investigation of suspected prostate cancer (Mason et al., 2022[126]). Among national clinician led-initiatives such as *Choosing Wisely* (described further in Section 4.4.4), three EU+2 countries (Austria, the Netherlands, Spain) have recommendations to avoid routine PSA testing.

Adoption of evidence-based clinical guidelines for prostate cancer management are needed to harmonise practice and reduce potential overtreatment and associated costs

A major concern about cancer overdiagnosis is that it leads to potential overtreatment. Once a cancer diagnosis is made, there is pressure on clinicians as well as patient expectations to provide curative or life-extending care. Radical prostatectomy is the main surgical procedure for active treatment of prostate cancer; however it may not be the most cost-effective, or patient-centred approach for all patients with prostate cancer (Noble et al., 2020[127]). As a major surgery, prostatectomy can result in considerable long-term consequences for patient quality of life, including impotence and urinary incontinence. Alternative treatment approaches such as chemoradiotherapy and active surveillance of prostate cancer have been shown to yield similar overall survival (Hamdy et al., 2023[128]), and offer a less aggressive treatment option for patients.

OECD data shows large variation in prostatectomy rates in EU+2 countries (Figure 4.12), while there is little country variation in the high rates of 5-year survival for prostate cancer. Furthermore, there is little correlation between the incidence of prostate cancer and the number of prostatectomy surgeries performed. Indeed, the ratio of prostatectomies to prostate cancer cases varies more than 70-fold from almost none (0.01) in Finland to three out of four cases (0.76) in Italy. Northern European countries (Finland, Denmark, Norway, Ireland) reported the lowest ratios, while Central and Southern European countries (Italy, Austria, Germany, Spain) reported the highest. Some of the observed variation may be attributed to availability and infrastructure of radiotherapy treatments (see Chapter 3) or patient preferences between treatment modalities and/or active surveillance; however, the lack of consensus on optimal treatment for high-risk prostate cancer may be driving unwarranted surgical treatment in some countries and leading to under-treatment in others.

Figure 4.12. EU+2 countries reported as much as a 70-fold variation in the ratio of prostatectomy surgeries to prostate cancer cases



Note: Prostate cancer incidence refers to estimated 2022 age-standardised incidence for EU countries and to 2017 age-standardised incidence for Norway and other OECD countries. Prostatectomy rate refers to the number of prostatectomy procedures per 100 000 in 2022, except for NLD and LUX which are from 2021.
Source: Incidence data from European Cancer Information System (ECIS), https://ecis.jrc.ec.europa.eu/, accessed in July 2025 for EU countries; Incidence data from IARC (2025[129]), https://gco.iarc.fr/overtime/en for Norway and other OECD countries; Prostatectomy data from OECD Health Statistics (2025[130]), https://www.oecd.org/en/data/datasets/oecd-health-statistics.html.

Countries that promote “watchful waiting” or offer alternative treatment options such as active surveillance – reserving surgery for cases of clear need – may avoid overtreatment of prostate cancer and thus reduce expenditures for patients and the healthcare system. For prostate cancer, shared decision making (see Chapter 5) on screening and treatment choices (considering patient age, preferences and expectations, and the likelihood of aggressive or indolent cancer) is particularly important for ensuring people-centred care and reducing costs to patients and healthcare systems from lower quality care.

Clinical guidelines for prostate cancer aim to reduce the risk of overdiagnosis and overtreatment by providing specific indications on how and when to treat prostate cancer, and in which patients. The European Association of Urology provides evidence-based guidelines for treatment options for prostate cancer to guide decision making, however it acknowledges lack of consensus regarding the optimal treatment of men with high-risk prostate cancer (European Association of Urology, 2025[131]). Ireland recently published national clinical guidelines for active surveillance of men diagnosed with prostate cancer, to reduce the risk of overtreatment (Health Service Executive Ireland, 2025[132]). Two other EU+2 countries (the Netherlands, Portugal) have clinician-led recommendations to discuss active surveillance in patients with low-risk prostate cancer (see Section 4.4.4). Among the countries surveyed in 2025, 11 EU+2 countries (Czechia, Denmark, France, Germany, Hungary, Luxembourg, the Netherlands, Norway, Poland, Slovenia and Sweden) and one other OECD country (Canada) monitor adherence to clinical guidelines (Section 4.3.3) for treatment of prostate cancer.

While survival outcomes may be similar, the long-term post-prostatectomy complications borne by patients and the costs of additional surgeries to healthcare systems differ greatly. As such, adoption of evidence-based guidelines and developing consensus on best practices can help to harmonise care and reduce the variation in rates of surgical treatment for prostate cancer across health systems.

Thyroid imaging is a major driver of cancer overdiagnosis internationally, and national guidelines advise against screening

Overdiagnosis of thyroid cancer is a global problem, due to increased detection of small indolent tumours unlikely to be of clinical significance for patients in their lifetime. Despite a recent decrease in thyroid cancer incidence from 2015 onwards in Austria, France, Ireland, Italy, Canada, Israel, Korea, and the United States, more than half of cases diagnosed are estimated to represent overdiagnosis (Li et al., 2024[133]). In EU countries from 2013 to 2017, the proportion of thyroid cancers representing overdiagnosis ranged from 26% in Estonia to 89% in Cyprus, despite changes in screening policies and clinical guidelines. In France, overdiagnosis was reported to account for 29-57% of thyroid cancer diagnoses from 2011-2015, with estimated economic costs of EUR 60-160 million (Li et al., 2023[134]).

Regional variation in rates of overdiagnosis, such as in France, underscores the importance of implementing national clinical guidelines to standardise investigation, diagnosis and management of thyroid cancer and to reduce the volume of low quality care (Li et al., 2021[135]). The high burden from overdiagnosis and overtreatment of thyroid cancer in Italy (Dal Maso et al., 2018[136]) spurred national stakeholders working with the International Agency for Research on Cancer (IARC) to report new guidelines to limit the risk of thyroid cancer overdiagnosis, emphasising the psychological and physical harms of aggressive treatments to patients and the costs to the healthcare system (IARC, 2025[137]). To address overdiagnosis in Canada (Topstad and Dickinson, 2017[138]), the clinician-led *Choosing Wisely* initiative recommends limiting routine use of thyroid ultrasound (Choosing Wisely Canada[139]). Similarly, countries can learn from the experience and evidence-based policies of Korea in thyroid cancer when implementing cancer screening policy, diagnostic imaging and treatment guidelines (Box 4.6).

Technological advances in the availability of medical imaging and testing biomarkers for cancer can risk driving demand for early cancer diagnosis and treatment. Careful evaluation of cancer screening and diagnostic technology by health policymakers is needed to ensure only evidence-based and cost-effective methods are implemented for early diagnosis in health systems (Fitzgerald et al., 2022[83]), and that these are made equally available to those at highest risk. Otherwise, the extra volumes generated by unregulated testing and incidental and overdiagnosis may exceed the capacity of health systems to provide urgent and routine cancer care.

Box 4.6. Korea’s experience with thyroid cancer highlights the risk of overdiagnosis

Overdiagnosis driven by opportunistic screening

In Korea, a 15-fold increase in thyroid cancer diagnoses occurred from 1993 to 2011, due to thyroid ultrasound screening being added as a fee-for-service reimbursed by the government and offered in tandem with breast cancer screening (Kim, 2024[140]). This epidemic of overdiagnosis of papillary thyroid cancer resulted in significant economic burden and harm to patients, without substantial changes in thyroid cancer mortality (Sik, Jung and Gilbert, 2025[119]).

Policy changes to reduce harms

Intervention by the Coalition for Prevention of Overdiagnosis of Thyroid Cancer led to a reduction in overdiagnosis and updated evidence-based national guidelines for diagnosis and treatment being implemented in 2015 (Yi, 2016[120]). The updated Korean national thyroid association guidelines do not recommend routine screening for thyroid cancer and cancer guidelines advise against biopsy and surgical treatment for small tumours, instead recommending active surveillance (Yi et al., 2015[141]).

National guidelines for lung cancer screening are needed to limit the burden and costs of screening to low risk patients

For lung cancer, the issue of overdiagnosis can arise when screening is offered to non-smokers (Gao et al., 2022[142]). This can result in increased detection of early-stage adenocarcinoma tumours, associated with a low risk of cancer mortality (Welch et al., 2025[143]). As a result, non-risk stratified lung cancer screening is less likely to improve overall cancer survival, while causing harm to patients from the anxiety, medical interventions and healthcare costs associated with diagnosis and treatment. In Korea for example, private opportunistic screening for lung cancer in non-smokers is considered a policy challenge due to overdiagnosis. The Council Recommendation (Council of the European Union, 2022[125]) advises exploring the feasibility and effectiveness of risk-stratified lung cancer screening limited to high risk individuals with a history of smoking, to minimise costs to health systems and harms to low risk individuals.

Additionally, five EU+2 countries reported overdiagnosis as an issue for breast cancer, stemming from breast cancer screening (Belgium, Denmark, France Netherlands, Norway) (see Figure 4.10). While overdiagnosis is a known inherent risk of breast cancer screening and diagnosis, particularly among older women (Ding et al., 2022[144]), the proportion of breast cancers which represent overdiagnosis is less than for prostate or lung cancer, and this inherent risk is generally tolerated given the proven benefits of screening.

Nine EU+2 countries have policies to address the issue of overdiagnosis in cancer and 12 have policies to optimise imaging use

Among countries participating in the 2025 OECD Survey on High-Value Cancer Care, nine EU+2 countries (Belgium, Czechia, Denmark, Estonia, Germany, Norway, Poland, Slovenia and Sweden) reported policies to reduce cancer overdiagnosis. These namely include implementation of organised as opposed to opportunistic cancer screening, and updated screening guidelines and treatment protocols to reduce overtreatment. A further 12 EU+2 countries reported efforts to optimise the use of imaging (in either screening or treatment), aiming to reduce overuse via cancer-specific clinical guidelines (Ireland, Poland, Slovenia), or as part of the National Cancer Plan (Czechia). These should enable better management of cancers that are detected incidentally or of uncertain clinical consequence. Other examples cited included working under the European Cancer Imaging Initiative (European Commission, 2023[145]), which aims to improve the accuracy and efficiency of imaging for cancer screening (Belgium), and rationalising imaging for certain cancer types to avoid unnecessary use (Denmark).

Once a cancer is appropriately diagnosed, the emphasis shifts to ensuring the quality and efficiency of the cancer treatment delivered.

4.4.2. Countries are shifting cancer care away from the inpatient setting

Over the years, provision of healthcare has shifted away from inpatient and towards ambulatory and day procedures, which offer potential savings in infrastructure and staff and can reduce pressure on inpatient capacity. Compared to inpatient, same-day discharges also benefit the patients in terms of scheduling, ease of access, lower risk for hospital acquired complications, and better patient experience (Kreutzberg et al., 2024[146]; Wu, Lim and Koh, 2021[147]). Studies indeed find lower procedure costs of day compared to inpatient surgeries, with better or similar morbidity, mortality and cost outcomes in the follow-up period (Madsen et al., 2022[148]; Brüngger et al., 2021[149]; Friedlander et al., 2021[150]). A cancer-specific study using the American College of Surgeons' registry data found mortality and morbidity outcomes for prostatectomies and mastectomies performed in the day setting were similar or better than those in the inpatient setting, indicating effective patient selection for day surgeries (younger, fewer co-morbidities, lower risk status) (Madsen et al., 2022[148]).

The shift to day surgeries is seen across a number of EU+2 countries, supported by policy measures such as defined lists of permitted day surgery procedures, changes in payment mechanisms to require or incentivise use of day surgeries (such as in Austria, Bulgaria, Estonia and France), policy targets on share of day surgeries, and national strategies promoting the expansion of day surgery units (Kreutzberg et al., 2024[146]; Milstein and Schreyögg, 2024[151]; Dubas-Jakóbczyk et al., 2020[152]). Poland and Lithuania as well have undertaken or updated reforms in recent years to require or incentivise day procedures (Ministry of Health, 2025[153]; Lithuania Parliament, 2025[154]).

For cancer, the shift towards day treatment has included use of specialised infusion centres, ambulatory surgery centres and treatment at home, supported both by developments in cancer therapies allowing their administration outside of hospitals as well as the COVID-19 pandemic (Sabbagh Dit Hawasli, Barton and Nabhani-Gebara, 2021[155]; McDevitt et al., 2024[156]; Wu, Lim and Koh, 2021[147]). Indeed, as shown in Figure 4.8, this shift is of high priority, with 17 EU+2 countries responding to the 2025 OECD Policy Survey reporting policies shifting cancer care away from the inpatient setting.

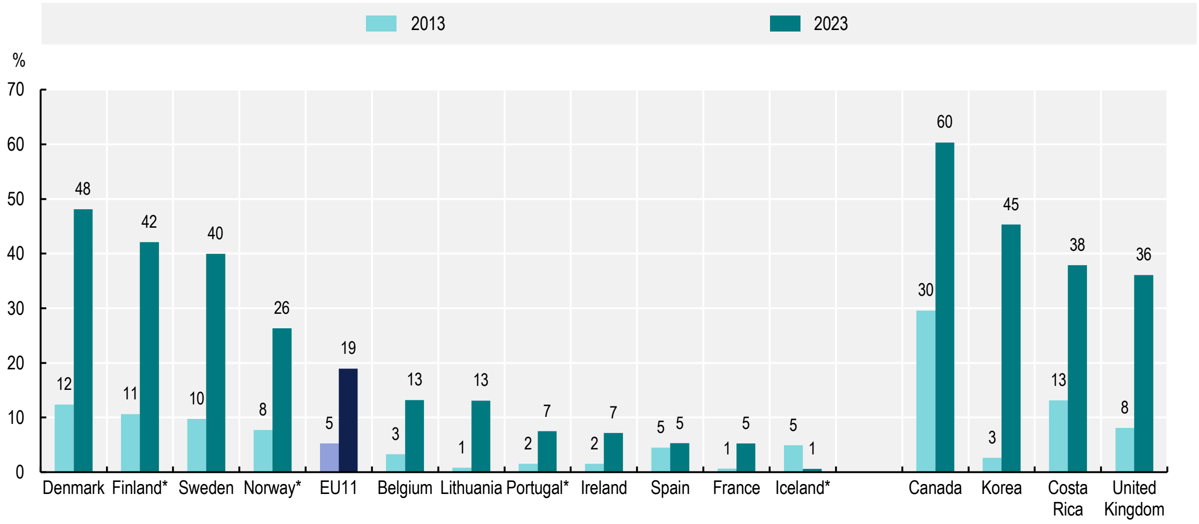
In Greece, the Oncology Hospital of Athens Agios Savvas has established a day centre with a capacity of 45 beds and provides chemotherapy, radiotherapy and day surgeries for cancer patients, freeing up capacity for other operations at the main hospital and offering a more efficient and patient-centred experience (Agios Savvas Oncology Hospital, 2021[157]). In Bulgaria, the emphasis has been on the provision of chemotherapy and radiotherapy outside of hospitals, while Ireland has adopted a model of care (with implementation not yet complete) for systemic anti-cancer therapy that focusses on delivering services as close to the patient as possible, including via high-quality ambulatory centres and at home (National Cancer Control Programme, 2024[158]). In Slovenia, a stepwise shift away from higher intensity settings after the main treatment is completed is being implemented, whereby primary care and specialists at the local level conduct the follow-up and monitoring of patients, guided by survivorship plans detailing ongoing care needs of patients (Cancer Association of the Slovenian Medical Association; Institute of Oncology Ljubljana, 2024[159]). Outside the EU, Canada developed ambulatory chemotherapy services standards in 2011.

The trend towards day cancer surgeries is seen in some EU+2 countries, with Nordic countries leading the way

Certain procedures that were previously always done in the inpatient setting, such as mastectomies, are now occasionally taking place via same-day discharges. While most EU countries still do few mastectomies in the day setting, there has been an increase over time. Nordic countries have substantially shifted mastectomies to the day setting, with a quarter to half of procedures done on a day basis in Denmark, Finland, Norway and Sweden (Figure 4.13). These results align with other studies showing that the Nordic countries have rapidly shifted surgeries such as tonsillectomies, hernia, and cataract surgery to the day setting (Kreutzberg et al., 2024[146]). Among non-EU+2 countries, Korea, Costa Rica and the United Kingdom also had a third or more mastectomies in 2023 performed in the day setting, while Canada reached 60%. A major increase in the share of day mastectomies compared to a decade prior is seen in nearly all countries shown in (Figure 4.13).

Figure 4.13. Nordic countries have embraced the use of day surgeries for mastectomies, while some other EU+2 countries have seen notable increases as well over time

Share of mastectomy day procedures out of all mastectomies, 2013 and 2023



Note: Only countries with at least 5% of mastectomies performed as day procedures in 2013 or in 2023 are included in the figure. *Data refers to 2024 for Finland, Iceland, Norway and Portugal.
Source: OECD Health Statistics (2025[130]), https://www.oecd.org/en/data/datasets/oecd-health-statistics.html.

Home hospitalisation is becoming more common to replace or shorten hospital stays, although many countries have not yet fully adapted this approach

A number of countries have introduced hospital-at-home-programmes designed to either fully replace inpatient hospital stays for some patients or enable earlier discharge by providing enhanced monitoring and care in the patient's home (OECD, 2025[160]). While such programmes began in the 1970s, these initiatives have gained renewed momentum particularly during the COVID-19 pandemic, as they promote safe, home-based care while alleviating hospital capacity pressures and managing rising healthcare needs (Mittaine-Marzac et al., 2021[161]; Nogués et al., 2021[162]). In hospital-at-home programmes, patients usually receive home visits by doctors and nurses, services such as intravenous therapy, imaging, treatment, monitoring, and chemotherapy, and have a 24-7-hotline for assistance as well as digital support tools. Programmes are generally hospital-led and while some are aimed at or limited to non-cancer conditions such as cardiovascular, respiratory or infections, many instead use criteria regarding age, clinical stability, self-management or other safety aspects. Costs per hospital-at-home stays are around 20-30% lower than for inpatient admissions while patients value receiving care in their familiar surroundings (OECD, 2025[160]). A systematic review of oncology hospital-at-home programmes found high patient satisfaction with and preference for home treatment, with cost savings found in the majority of studies (Cool et al., 2018[163]).

In the 2025 OECD Policy Survey on High-Value Cancer Care, Belgium, Denmark, France, Greece, Hungary, Iceland, Ireland, Lithuania, Poland, Portugal, Slovenia and Sweden all report hospital-at-home-models for cancer care. While a couple of countries note that this is limited to palliative cancer care (e.g. Portugal and Slovenia), in other countries the services go well beyond (Box 4.7). In Spain, recommended guidelines for home administration of oncologic treatments, developed via a national expert consensus process, were published in 2024 with the aim of supporting roll-out and implementation of such services (Villegas et al., 2024[164]).

Box 4.7. EU+2 countries have implemented hospital-at-home programmes or pilots for cancer

Belgium

In Belgium, parenteral administration of cancer treatments can be delivered at home under strict conditions and hospital supervision. The possibility of home hospitalisation is discussed with the patient and once approved, a detailed care plan is developed in collaboration with hospital and home care teams. Quality and safety are ensured through close co-ordination between healthcare providers. The hospital is responsible for the preparation, transport, and delivery of medications, and the collection of hazardous medical waste. The initiative is designed to be cost-neutral, including for patients, with an evaluation of the processes and costs planned (INAMI, 2024[165]).

France

Home hospitalisation for systemic cancer drug treatments is part of France’s 2021-2026 national roadmap (ONCO AURA, 2025[166]). The model relies on close co-ordination between hospitals, community health professionals, and families, supported by information-sharing systems. There are both facility-integrated and stand-alone models, under which injectable cancer drugs, including immunotherapies and targeted therapies can be administered at home if preparation, monitoring, and safety requirements are met. In 2023, nearly 210 000 days of home-based care had been provided in France for cancer chemotherapy by 193 providers, with an average length of stay of 3.9 days. However, there is substantial variation in use of home hospitalisation for systemic therapy by region. In Normandy, where rates of utilisation for home-based chemotherapy are particularly low, the Regional Health Agency launched a three-year experimental programme in February 2025 whereby selected hospitals authorised for cancer treatment will receive fixed payments for referring patients to home hospitalisation and these services will receive fees for treatment administration (ARS Normandie, 2025[167]).

Greece

Greece’s “*Oikothen*” (“from home”) care programme, launched in June 2023 by one of the leading cancer hospitals in Athens, delivers cancer treatments directly to patients’ homes. By December 2024, 156 patients had benefited from the programme, improving patient well-being and relieving pressure on hospital resources. It has expanded to four additional hospitals, with plans underway to extend coverage to all major cities (Bouloutza, 2024[168]).

Poland

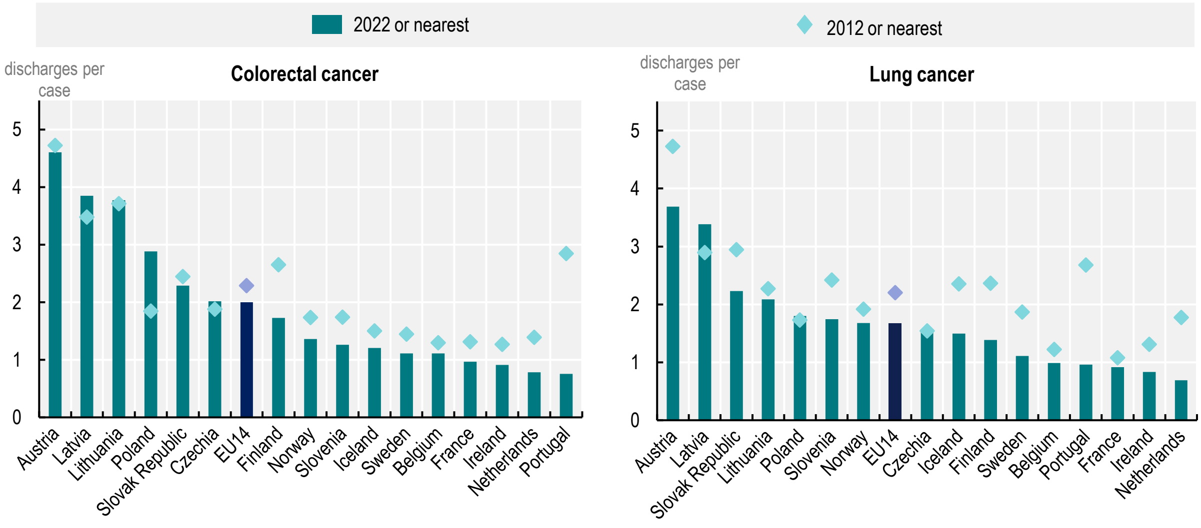
The National Institute of Oncology in Warsaw offers portable chemotherapy infusers as an alternative to inpatient care – deploying up to 10 000 devices annually. These infusers allow for the prolonged administration of chemotherapy at home and are primarily used in postoperative and palliative treatments for colon, stomach and pancreatic cancers. Patients receive training on how to use the infuser safely at home and have access to telephone support from their treatment centre (Wyrwicz, 2023[169]).

Given the efforts described above, the number of hospital discharges relative to cancer cases has decreased over the past decade, falling in virtually all countries with available data (Figure 4.14). On the EU level, annual colorectal cancer hospital discharges per new case decreased 12% between 2012 and 2022, from 2.3 discharges per case to 2.0. Notably, there remains large variation by country in where patients are treated – central European countries tend to treat more colorectal cancer cases in hospitals, while western European countries tend to utilise hospitals less.

There is a similar, but larger, reduction in hospital discharges for lung cancer over time, decreasing by 24% from 2.2 to 1.7 discharges per new cancer case in the EU on average. This is also supported by changes in treatment modalities, which now includes an emphasis on molecular diagnostics to guide care (see Section 4.4.5) and a rapid increase in new medicines entering the market (NICE, 2025[170]). In breast cancer as well, use of systemic therapies (i.e. pharmaceutical treatment) as the first course of treatment is supporting a shift in treatment modalities away from more hospital-centred surgeries (Boersma, Mjaaland and van Duijnhoven, 2023[171]).

Figure 4.14. Hospital discharges per cancer case in the EU have decreased by 12% for colorectal and 24% for lung cancer since 2012

Hospital discharges per new cancer case, 2012 and 2022 (or nearest)



Note: Colorectal discharges also include those for anal cancer. 2022 or nearest refers to estimated number of cancer cases; 2012 or nearest refers to observed incidence. For the 2012 incidence and discharge values, data from 2013 were used for Latvia and Sweden, and from 2010 for Portugal and the Slovak Republic. For the 2022 values, data from 2021 were used for Croatia and Poland for incidence and discharges while in the Slovak Republic, 2021 data was used for discharges only.
Source: Hospital discharge data from OECD Health Statistics (2025[130]), https://www.oecd.org/en/data/datasets/oecd-health-statistics.html; incidence data from European Cancer Information System (ECIS) https://ecis.jrc.ec.europa.eu/, accessed on 25 November 2025.

Even with the shift away from hospital care, hospital spending on cancer care has increased over the past years

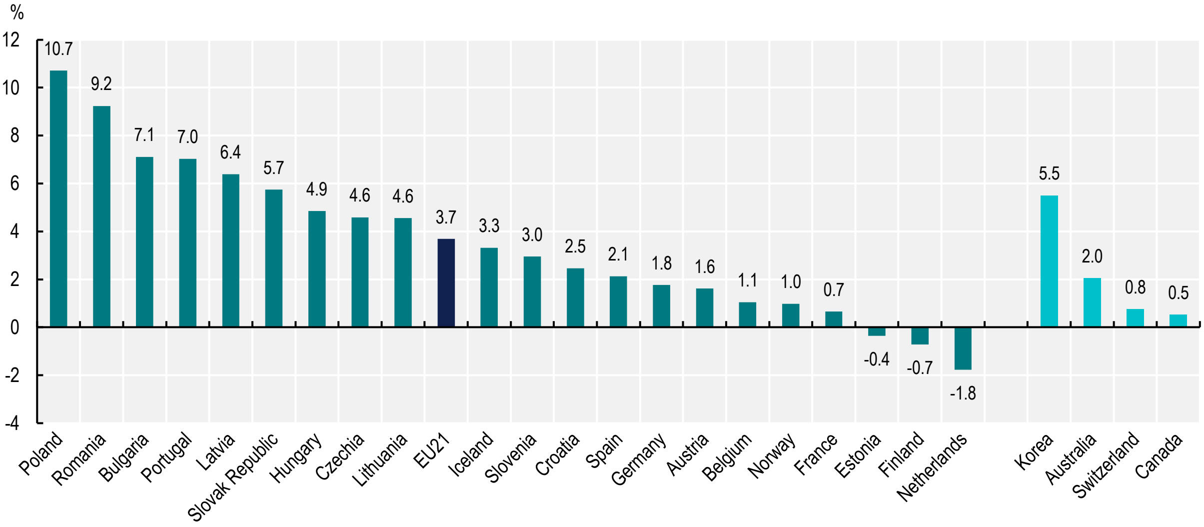
The shift of some care away from hospitals is occurring alongside decreases in hospital length of stay for cancer cases; nonetheless hospital spending on cancer care is still increasing.

Among the common cancer types, average length of stay for inpatient hospital cancer care in 2023 in the EU ranged from about 4.5 days (skin cancer) to 9.4 days (colorectal cancer). Across these cancer types, there has been a decrease in average length of stay in the EU between 2013 and 2023, ranging from an 11% reduction for skin cancer to a 25% decrease for prostate cancer. These reductions reflect advances (not limited to cancer care) in surgical techniques, improved pharmacological treatments, enhanced surgery recovery protocols, telehealth-supported discharge planning (Hirani et al., 2025[172]) and home hospitalisation programmes. Some countries or cancer centres also prioritise prehabilitation (interventions such as exercise, nutrition or psychosocial interventions to improve the health and well-being of cancer patients prior to surgery), potentially shortening length of stay (Lambert et al., 2020[173]; Voorn et al., 2023[174]). However, there is some concern that the evidence base for prehabilitation is not well established and that lower socio-economic groups may have less access (Stewart et al., 2025[175]).

Between 2015 and 2023 (or latest year), annual hospital spending on cancer care in real terms grew by an average of 3.7% in EU countries (Figure 4.15). Spending on hospital care for cancer tended to grow faster in Central European countries compared to Western European countries. In Poland, Romania, Bulgaria, Portugal and Latvia, average annual hospital spending on cancer care grew between 6% and 11% during the 2015-2023 period, while in France, Belgium and Norway, annual increases were much more moderate, at around 1% or less on average. In Estonia, Finland and the Netherlands, the growth in annual hospital spending on cancer care in real terms was negative.

Figure 4.15. Annual growth in hospital spending for cancer care stood at 3.7% in the EU over the past years

Annual growth in hospital spending on cancer care (real terms), 2015-2023 (or latest years).



Note: Hospital spending on cancer care was estimated using cancer discharges as a share of total hospital discharges in 2015 and in 2023 (or latest years) multiplied by total inpatient expenditures in real terms of the national currency unit for each country.
Source: OECD Health Statistics (2025[130]), https://www.oecd.org/en/data/datasets/oecd-health-statistics.html.

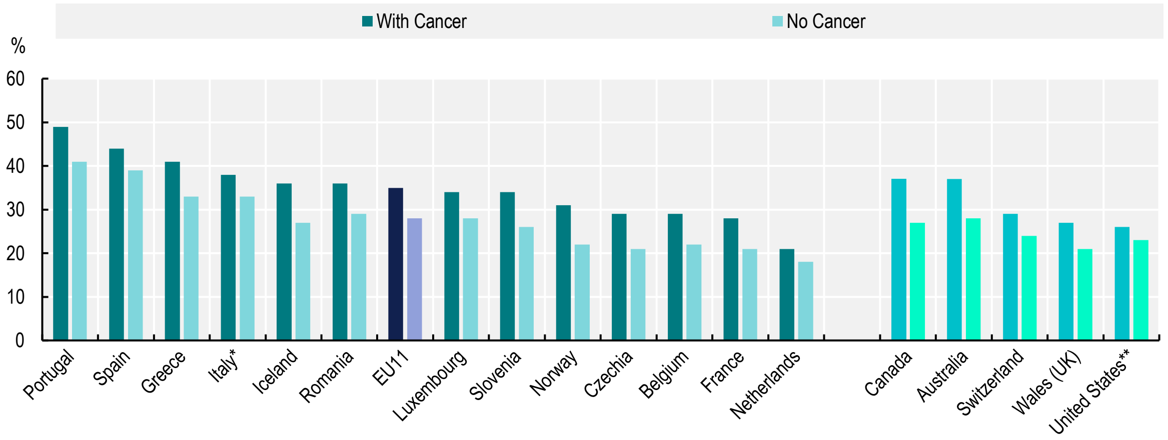
Spending increases can be driven by increasing prices of hospital care including due to new technologies and increasing complexity of cases treated. They can also be driven by growing cancer incidence due to ageing populations as well as for certain cancer types on an age-standardised basis, such as breast and lung cancer among women (see Chapter 2). Regardless, the increase highlights the importance of continuing to find safe and effective opportunities to shift cancer care out of the hospital given the higher costs of care in this setting.

> *Even with efforts to provide care in less intensive settings, the emergency care route is frequently used by cancer patients*

Cancer can often lead to challenging emergency situations for patients, as they encounter a sudden worsening of their condition or serious side effects from treatment. Indeed, data from PaRIS (see Chapter 5 Box 5.1 and (OECD, 2025[176])) shows that more than a third of adults with a cancer diagnosis (35%) attending primary care clinics had an emergency care visit during the past year (ranging from 21% in the Netherlands to 49% in Portugal) (Figure 4.16). This is a statistically significant higher rate than among other primary healthcare patients (27%). In addition, on average, patients with a cancer diagnosis and low education were about 20% more likely to report an emergency room discharge in the previous year than those with higher education, with this social gradient found in 14 out of the 18 OECD countries participating in PaRIS. The fact that primary care patients with a cancer diagnosis in the past five years, who mainly represent stable, post-acute patients – and particularly those with lower education – have more emergency visits, highlights the higher risk of "sudden worsening" among this population and the need for tailored care practices for those with a history of cancer.

Figure 4.16. The share of primary care patients with a cancer diagnosis seeking care in the emergency department is significantly higher than among those without cancer

Primary care patients reporting emergency department visit in previous 12 months



Note: *Data for Italy refer to patients enrolled in outpatient settings for specialist visits in selected regions. **United States sample only includes people aged 65 years or older.
Source: OECD PaRIS 2024 Database.

4.4.3. Due to high costs of cancer drugs, countries are looking to optimise spending on cancer pharmaceuticals

Countries are undertaking various approaches to reduce spending on cancer pharmaceuticals. These efforts are driven by increased spending stemming from many new cancer medications coming to market and high prices (Hofmarcher, Berchet and Dedet, 2024[177]). Data from the OECD 2025 Country Cancer Profiles show that cancer medicines accounted for about 20-30% of pharmaceutical spending in Italy, Norway and Portugal, while (Manzano et al., 2025[37]) shows that in Sweden, that figure increased from 12% in 2018 to 17% in 2022.

Post-marketing reassessment of coverage and pricing decisions, as well as treatment optimisation are increasingly important to limit low-value pharmaceutical spending

Since 1995, all cancer medicines in Europe have been approved through a centralised process, granting marketing authorisation (i.e. regulatory approval) across all EU Member States, Iceland and Norway. Subsequent decisions on coverage and pricing are made at the national level, often informed by Health Technology Assessments (HTA) that determine the clinical and economic value of the medicine. HTA processes are key in shaping reimbursement and pricing policies, as well as for informing clinical guidelines to ensure that use of and spending on cancer medicines is aligned with value. Concerningly, a study of 131 oncology drugs approved by the European Medicines Agency (EMA) between 1995 and 2020 that evaluated their added clinical benefit using ratings from health technology assessment bodies found that 41% of ratings indicated negative or non-quantifiable added benefit (Brinkhuis et al., 2024[178]).

Follow-up of medicines after marketing authorisation and changes in coverage status or pricing is also important given that many cancer medications are approved based on surrogate endpoints or via accelerated approval processes that ensure quicker access for patients in need. In Sweden, a study examined cancer drug indications that were reimbursed even though they initially lacked evidence of improvements in overall survival and quality of life. After an average follow-up of 6.6 years, only seven of 22 indications showed conclusive evidence of benefits in either overall survival or quality of life (Strand et al., 2023[179]). Similarly, a 2024 study found that more than half of 46 indications of cancer medicines approved by the Food and Drug Administration (FDA) in the United States between 2013-2017 showed no clinical benefit in terms of survival or quality of life within five years of approval (Liu, Kesselheim and Cliff, 2024[180]). Among those with no clinical benefit, only ten drugs were withdrawn from the market.

Some countries have established formal processes for using post-market evidence to support or adjust coverage and reimbursement decisions for very costly medicines, such as Chimeric antigen receptor (CAR)-T cell therapies that have transformed care for some blood cancers but at the cost of hundreds of thousands of euros per treatment (Litvinova et al., 2024[181]). These therapies have successfully entered the European market over the past years, often through time-limited or outcome-based reassessment mechanisms as in France, Germany, Italy and Spain (Jørgensen, Hanna and Kefalas, 2020[182]; Remap Consulting, 2022[183]). In England, after temporary funding allowed for reimbursement of certain CAR-T cell therapies during a process of evidence development, regular coverage was granted for some indications based on data collected. Belgium has implemented automated collection of clinical data on use of CAR-T in multiple myeloma to inform reimbursement decisions and serve other research objectives (RWE4Decisions, 2025[184]), while in Canada, the CanREValue Collaboration recently developed a framework for generation and use of real-world evidence to inform cancer drug coverage reassessment (Chan et al., 2025[185]).

One important example of reassessment of cancer pharmaceuticals came in June 2025, when the Dutch Health Care Institute removed coverage for the expensive PARP-inhibitors for many cancer indications, based on new international evidence regarding their ineffectiveness at extending life span or quality of life. This decision is anticipated to reduce by half the number of patients in the Netherlands using PARP-inhibitors, with 2022 spending on this drug amounting to about EUR 33 million in 2022 (NL Times, 2025[186]; National Health Care Institute, 2025[187]). As challenging as it is to implement in practice, reassessment of coverage and pricing decisions based on emerging evidence is key to ensuring efficient use of funding in cancer care.

In addition to reassessments on reimbursement, cancer treatment optimisation also holds potential to improve patient well-being and reduce costs. This is because even though a cancer drug is on the market, it does not necessarily mean that the treatment course is optimised – i.e. that it achieves meaningful therapeutic benefit while minimising risks from adverse events and negative impact on patient quality of life (Tannock et al., 2025[188]). Indeed, in practice, dosing regimens used in trials for clinical approval by the EMA and other regulatory agencies are often based on the maximum tolerated dose established in early phase trials, resulting in higher, more frequent, or more prolonged dosing than may be necessary to achieve the desired clinical benefit. These regimens not only increase side effects and reduce quality of life, but they also lead to unnecessary spending on drugs and on treating avoidable side effects.

Highlighting the opportunities for treatment optimisation, a recent review of the cancer medicines approved by the EMA and FDA between 2020 and 2023 found that 65% (or 20 medicines) were potential candidates for either dose reduction or an adjusted dosage regimen to improve patient safety or convenience (Hoog et al., 2024[189]). An older, but well-publicised example of dose optimisation came via a trial of abiraterone (an expensive prostate cancer drug), which found that one-quarter of the standard dose was effective if the medicine was taken with a low-fat breakfast instead of on an empty stomach (Szmulewitz et al., 2017[190]). Various articles in the Lancet over the years have called for seeking the “minimum” rather than “maximum” effective dose for cancer treatments and customising trial design to focus on modelling of optimal dose (The Lancet Oncology, 2018[191]; Tannock et al., 2025[188]). Other recommendations include incorporating post-marketing evidence via post-licensing registries and randomised clinical trials to support new lower-intensity regimens that provide similar outcomes. The optimisation process could be considered a continuum, with an emphasis on dosage optimisation before products come to market, and a focus on duration and sequencing of the medicine after market approval.

Along these lines, the European Medicines Agency’s Cancer Medicines Forum fosters collaborative efforts to help advance research into optimising cancer treatments (EMA, 2025[192]). Similarly, the FDA has also recently released new guidance on dose optimisation in oncology, underscoring the importance of early, data-driven dosing strategies, and is undertaking Project Optimus to improve dose optimisation in the cancer drug development process (FDA, 2024[193]).

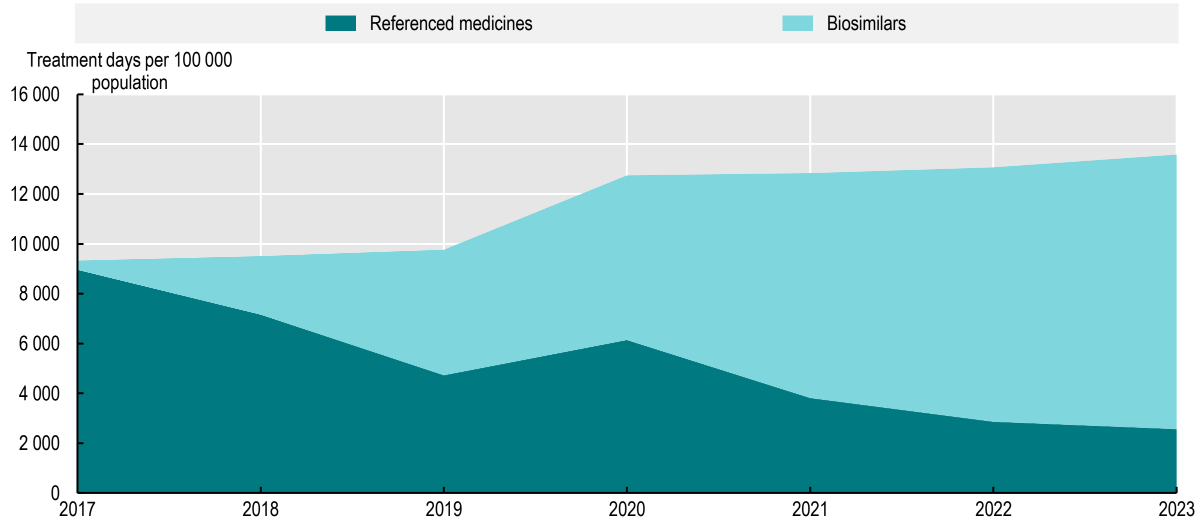
Use of biosimilars is higher in cancer than in other disease areas, but varies greatly among countries

Biosimilars are medicines that are highly similar to already approved biologics (medicines that come from living organisms), without clinically meaningful differences. A key approach by countries to reduce cancer drug spending is to encourage take-up of generic or biosimilar medicines where these options are available, as prices may be up to 80% lower for generics (Hofmarcher, Berchet and Dedet, 2024[177]) and 20% to 50% or more lower for biosimilars depending on the product and market (IQVIA, 2025[194]). With 152 new cancer medicines approved by the EMA between 2004-2022, and a marked annual increase in annual approvals over the last decade, there are increasing opportunities for products to come off patent protection and face competition from generics or biosimilars.

The top three selling cancer medicines in 2015 in Europe (bevacizumab, rituximab and trastuzumab) each have biosimilar competitors approved (Hofmarcher, Berchet and Dedet, 2024[177]). An analysis of biosimilars consumption from IQVIA suggests fairly rapid uptake of biosimilars in the cancer space since the first biosimilars became available in the EU in 2017 (rituximab and trastuzumab) (Figure 4.17), and higher uptake than in other therapeutic areas. While in 2017, oncology biosimilars represented less than 5% of the market, by 2023 this figure stood at around 80% (IQVIA, 2025[194]). Uptake varies from 55% in Bulgaria to 96% in Denmark.

Figure 4.17. Uptake of cancer biosimilars in the EU27 has been relatively rapid since the first biosimilar came to market in 2017

Treatment days consumed, for referenced products and biosimilars in cancer

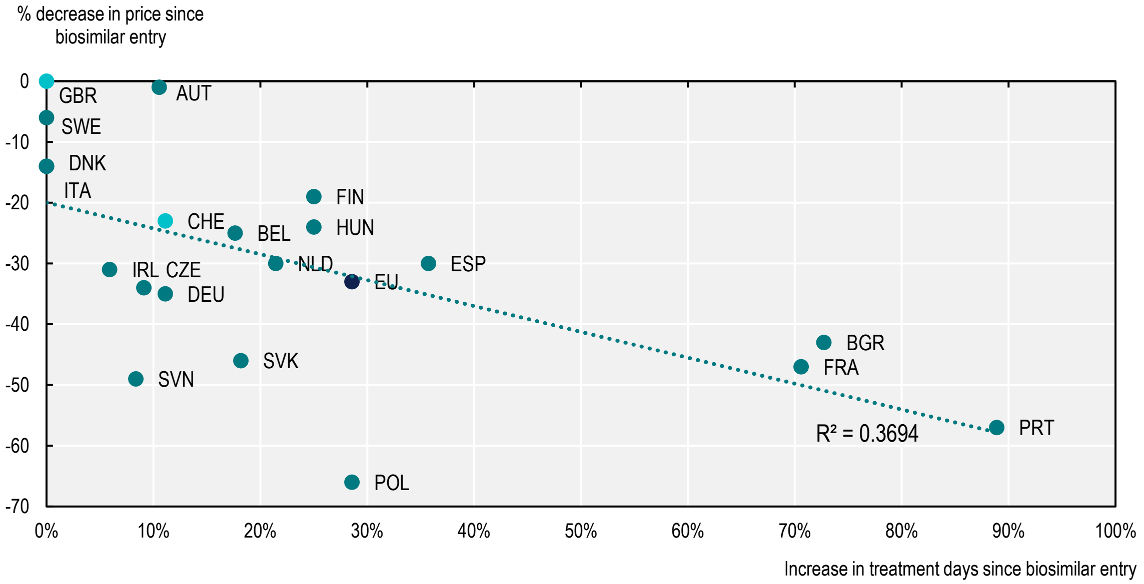


Note: Referenced products refer to the original cancer biologic medicine: Mabthera (rituximab), Herceptin (trastuzumab), Avastin (bevacizumab). Biosimilars include 20 different products for these three referenced products. Treatment days is an estimate of the number of days patients are treated based on the volume of product sold and typical dosing patterns.
Source: IQVIA *The Impact of Biosimilar Competition in Europe 2024* (published January 2025) KPI data (page 29).

Similarly, a 2025 OECD analysis showed that biosimilar uptake both in terms of volume and spending has increased faster in oncology compared to other disease areas (TNF inhibitors and insulin), across the seven OECD countries assessed (Australia, Belgium, Denmark, France, Germany, Italy, Korea) (Barrenho et al., 2025[195]). This may be aided by the greater use of oncology biosimilars in the hospital setting compared to other therapeutic areas that are distributed in the retail arena.

In the EU on average, list price reductions for oncology biologics following biosimilar market entry averaged 33%; however, they were almost negligible in Austria (1%) compared to very substantial (66%) in Poland (IQVIA, 2025[194]). The introduction of cancer biosimilars in Europe has been accompanied by an overall increase in treatment volumes, as measured by treatment days, with the largest gains observed in countries where list prices declined most significantly (Figure 4.18). For example, Bulgaria, France and Portugal all saw price decreases of 40% or more for cancer biologics with biosimilars on the market, and these three countries have seen increases of 70% or more in treatment days per capita with these biologics (IQVIA, 2025[194]).

Figure 4.18. Use of cancer biologics has increased more in countries with greater price reductions following the introduction of biosimilars



Note: Changes for price and treatment days are calculated by comparing the value in 2023 to the year prior to biosimilar market entry for cancer products with biosimilars (i.e. Mabthera (rituximab), Herceptin (trastuzumab), Avastin (bevacizumab)). Analysis excludes Norway, which was an outlier given that it had a price increase in 2023 relative to the year before biosimilar entry. Prices refer to list prices (the manufacturer's published price for a drug before negotiated discounts or rebates); since list prices do not reflect negotiated discounts, actual price decreases are likely higher than the figures shown.
Source: OECD Secretariat analysis of IQVIA, *The Impact of Biosimilar Competition in Europe 2024* (published January 2025), KPI data (page 30).

Countries have undertaken various policies to increase biosimilar consumption, including mandating or allowing substitution – that is using/dispensing one medicine instead of an equivalent prescribed medicine. Several countries pointed to procurement policies as a key driver of biosimilar uptake, where centralised tendering systems allow rapid shifts to biosimilars (for example, in Denmark) (Barrenho et al., 2025[195]). Pricing policies, such as in Belgium and Italy, require biosimilars to be priced at a certain discount (e.g. 20%) to the reference product, which creates direct financial incentives for their use by healthcare providers. However, originator companies can negotiate discounts directly with hospitals in some countries, such as in Belgium, which can limit biosimilar use and lead to differences in biosimilar uptake across institutions in the same country.

Medication reviews may be particularly needed for patients with a history of cancer

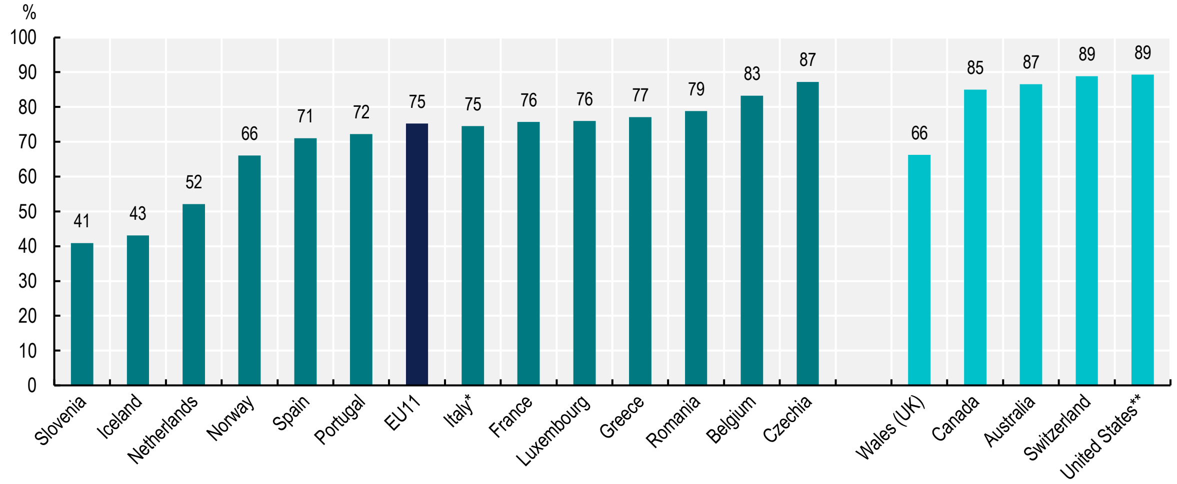
PaRIS data on patients aged 45+ with a cancer diagnosis seen in primary healthcare shows that 92% take medications regularly, which is fairly similar to the share among non-cancer patients. However, patients with a history of cancer take more medications, with almost a quarter (23%) of cancer patients taking 5-9, statistically significantly more than the 20% figure among non-cancer patients. An additional 4% of patients with a history of cancer take 10+ medications (compared to 3% among non-cancer patients).

This highlights the importance of regular reviews of medications to avoid an excess number of prescriptions and ensure rationale medicine use. About three-quarters of PaRIS patients in the EU11 with a history of cancer had a health professional review their medication with them in the last 12 months (Figure 4.19). However, substantial cross-country differences are revealed. Only about four in ten cancer patients in Iceland and Slovenia had a medication review, while the figure was more than eight in ten in Belgium and

Czechia. With rates of medication reviews similar among cancer and non-cancer patients in the same country, the likelihood of medication reviews appears to be based on country policies and practices in primary healthcare rather than related to cancer specifically.

Figure 4.19. There are large country differences in the share of cancer patients in primary healthcare who have had a medication review

Primary healthcare patients with a cancer diagnosis who had a medication review with a health professional in the last 12 months



Note: *Data for Italy refer to patients enrolled in outpatient settings for specialist visits in selected regions. **United States sample only includes people aged 65 years or older.
Source: OECD PaRIS 2024 Database.

There are opportunities to reduce waste of infusion and oral cancer medication

The large number of medicines required by patients with cancer points to opportunities to examine medication waste, which refers to expired, unused, or contaminated medicines that are no longer needed or safe to use. Reducing medication waste not only minimises safety and environmental risks (arising from toxic cancer medicines) but also helps decrease unnecessary healthcare spending.

For injectable drugs, weight- or body size-based dosing can lead to medication waste as available vial sizes do not align with the amount needed by the patient, with the remaining often discarded due to limited shelf-life (Chapman, Paris and Lopert, 2020[196]). One way to reduce this waste is to use vial sharing, that is, using one medication vial to prepare doses for multiple patients. A survey of 74 oncology pharmacist respondents from 20 countries found that 53% used vial sharing for commonly used cancer drugs. This practice was associated with reduced drug waste (reported by 61% of respondents), alleviation of medication shortages (noted by nearly half), and cost savings in 74% of cases (Gilbar, Chambers and Musicco, 2022[197]). In Slovenia, robotic systems for medication preparation have been implemented in central pharmacies of hospitals to reduce waste while in Estonia, the Health Insurance Fund reimburses hospitals for medicines in a way that incentivises minimising waste, encouraging practices including vial sharing. In Australia as well, vial sharing is supported by large hospital manufacturing units and pharmaceutical compounding companies.

Another way to reduce infusion medication waste is to engage in safe dose rounding. The Haematology/Oncology Pharmacy Association recommends allowing for rounding doses of monoclonal antibodies and other biologic agents to the nearest vial size, within 10% of the prescribed dose (Fahrenbruch et al., 2018[198]). In the National Health Service (NHS) in England, dose rounding, via the advanced bulk preparation of standardised doses for patients based on national dose banding tables, as well as vial sharing, is used (Gilbar, Chambers and Musicco, 2022[197]).

Other sources of waste in oral cancer medicines arise due to changes in treatment plans, patient non-adherence, or adverse effects. In such cases, prescribing or dispensing of lower quantities based on need, particularly for patients at the end of life or starting new therapies, can reduce waste. Furthermore, in June 2025, a group of EU clinicians, pharmacists and researchers published a call for legalisation on re-dispensing unused oral anticancer drugs under strict quality controls, emphasising the need for re-evaluation of existing legislation to enable evidence-based, sustainable healthcare practices (Smale et al., 2025[199]). Table 4.3 summarises key challenges and corresponding strategies for reducing medication waste in cancer care, highlighting implementation barriers and supporting measures.

Table 4.3. Waste-minimising measures for cancer drugs

Strategy	Main barriers to implementation	Supporting policies / measures
Challenge: Mismatch between vial sizes and patient-specific doses (institution setting)		
Ensure greater variety in vial sizes available.	Manufacturer financial incentives to produce limited vial size options.	Requiring manufacturers to offer more appropriate vial size options or mandate refunds for unused medication.
Support safe dose rounding (adjusting the dose up or down to better match nearest vial size).	Concerns about efficacy and safety.	Developing formal dose rounding policies through multidisciplinary consensus, including clear criteria.
Implement vial sharing.	Preventative government legislation Guidelines such as US Pharmacopeia (USP) 797 stipulating use of single-use vials within 6 hours of opening. Insurance companies' policies on unused portion belonging to specific patient.	International collaboration on guidelines. Re-evaluating existing legislation to support vial-sharing practices. Using external compounding to prepare orders through vial-sharing techniques, e.g. central preparation of products on per mg basis delivered to smaller hospitals.
Challenge: Unused oral medications (retail setting)		
Dispense lower amounts more frequently (particularly for patients at end-of-life phase or starting new therapies)	Decreasing patient satisfaction and adherence due to frequent pharmacy visits. Increased costs due to more frequent dispensing and higher pharmacy workload. Restrictions on dispensing of opened drug packages in some countries.	Home medication delivery services or 24-hour automated pickup lockers. Targeting limitations on prescription quantities to high-cost medications. Promoting specialty pharmacists as members of care team who assess refill requests based on medication on hand and upcoming appointments. Revisiting regulations to ensure both patient safety and waste reduction.

Source: OECD Secretariat based on Bach et al. (2016[200]), "Overspending driven by oversized single dose vials of cancer drugs", https://doi.org/10.1136/bmj.i788; Fahrenbruch, R. et al. (2018[198]), "Dose Rounding of Biologic and Cytotoxic Anticancer Agents: A Position Statement of the Hematology/Oncology Pharmacy Association", https://doi.org/10.1200/JOP.2017.025411; Gilbar, Chambers and Musicco (2022[197]), "Preventing drug vial wastage and reducing expenditure associated with injectable cancer drugs: International oncology pharmacy survey", *Journal of Oncology Pharmacy Practice*, doi: https://doi.org/10.1177/10781552211024723; Smale et al. (2023[201]), "Feasibility of an Individualized Dispensing Program for Patients Prescribed Oral Anticancer Drugs to Prevent Waste", https://doi.org/10.1200/OP.22.00553; Smale et al. (2021[202]), "Waste-minimising measures to achieve sustainable supply and use of medication", https://doi.org/10.1016/j.scp.2021.100400; Staskon. et al. (2019[203]), "Estimated Cost and Savings in a Patient Management Program for Oral Oncology Medications: Impact of a Split-Fill Component", https://doi.org/10.1200/JOP.19.00069; Looney et al. (2024[204]), "Financial impact of integrated specialty pharmacy efforts to avoid oral anticancer medication waste", https://doi.org/10.18553/jmcp.2024.30.5.465.

4.4.4. Choosing Wisely initiatives aim to reduce low-value cancer care while improving patient-centredness

The *Choosing Wisely* campaign, active in over 30 countries globally including over ten EU+2 countries, aims to reduce unnecessary medical interventions through clinician – patient dialogue to encourage alignment with national clinician-led care recommendations. An analysis of *Choosing Wisely* recommendations in cancer care across EU+2 and other OECD countries shows that certain recommendations are more common across countries. Although they differ somewhat in their specific wording, Table 4.4. shows that there are 20 overarching recommendations that can be found in at least two or more countries' *Choosing Wisely* initiatives.

The two most common recommendations across countries, each found in ten OECD countries, is to avoid chemotherapy in advanced cancer if it is unlikely to benefit patients (including in four EU+2 countries) and to be cautious in undertaking routine PSA testing in order to reduce prostate cancer overdiagnosis (including in three EU+2 countries). Eight OECD countries (among them four EU+2 countries) advise avoiding use of extended radiation fractionation in palliative treatments. Seven OECD countries have the following recommendations: avoiding cancer screening in individuals unlikely to benefit due to limited life expectancy (two EU+2 countries), avoiding routing scans after cancer treatment in asymptomatic patients (two EU+2 countries), and ensuring early access to palliative care (five EU+2 countries). Noting areas where there is particularly high alignment across countries in these policies can help prioritise awareness, communication and monitoring of these recommendations at the country level where they already exist, and diffuse good practices to other countries.

Table 4.4. There are 20 recommendations to reduce low-value cancer care that can be found in two or more OECD countries

Choosing Wisely recommendations related to low-value cancer care that are common across OECD countries

Recommendation		# of countries	Countries
Screening & diagnosis	Avoid routine PSA testing / or it should only be undertaken after discussing benefits and harms	**10**	AUT, ESP, NLD, AUS, CHE, GBR, ISR, KOR, NZL, USA
	Avoid cancer screening in individuals unlikely to benefit due to limited life expectancy	**7**	DEU, PRT (colorectal), AUS (prostate), CAN, ISR (dialysis patients), NZL, USA
	Avoid routine scans after cancer treatment in asymptomatic patients	**7**	ITA (breast), NOR, AUS (breast), CAN, COL (breast), GBR, USA
	Avoid prescription of serum tumour markers for diagnostic purposes / limit these to monitoring of a cancer known to produce the markers	**6**	AUT, ITA, AUS, JPN, NZL, USA
	Avoid PET/CT for cancer screening in asymptomatic individuals	**5**	DEU (lung), ITA, CHE, JPN, USA
	Avoid thyroid screenings among older patients / undertake thyroid examinations only in cases of disease suspicion or high-risk	**3**	AUT, DEU, USA
	Don't routinely order breast MRI in new breast cancer patients	**2**	AUT, USA
Advanced/ metastatic disease	Avoid chemotherapy in advanced cancer if unlikely to benefit patient	**10**	AUT, ITA, NOR, SWE, AUS, CAN, CHE, COL, GBR, USA
	Avoid extended radiation fractionation when purpose of treatment is palliative (and particularly for bone metastases)	**8**	ITA, NOR, PRT, SWE, AUS, CAN, NZL, USA
	Ensure early assessment and access to palliative needs of patients with advanced cancer	**7**	AUT, DEU, DNK, ESP, PRT, CAN, USA
	Don't routinely use extensive locoregional therapy in most cancer situations where there is metastatic disease and minimal symptoms attributable to the primary tumour	**3**	AUS, CAN, NZL
	Do not perform routine cancer screening, or surveillance for a new primary cancer, in the majority of patients with metastatic disease	**2**	AUS, CAN
	Parenteral nutrition is not indicated in late-stage cancer with short life expectancy	**2**	DEU, ITA
Specific cancer types	Discuss active surveillance in low-risk prostate cancer	**6**	NLD, PRT, AUS, CAN, NZL, USA
	Consider shorter radiotherapy treatment schedules in women with early-stage invasive breast cancer undergoing breast conservation therapy	**6**	NLD, PRT, AUS, CAN, NZL, USA
	Avoid bone scans in low-risk prostate cancer	**4**	ITA, NLD, CAN, USA
	Avoid whole brain radiation for limited brain metastases	**4**	AUS, CAN, NZL, USA
	Avoid routine use of proton therapy for prostate cancer	**2**	PRT, USA
Care delivered	Use virtual care where clinically appropriate	**2**	DNK, CAN
	Avoid tests in cancer patients when unlikely to affect care	**2**	NOR, SWE

Note: Exact recommendations differ in wording by country and in some cases refer to the specific cancer type shown in parentheses. Colombia's recommendations are in the consultation process and have not yet been finalised. In the Netherlands, the recommendations are not within the *Choosing Wisely* initiative but are found in guidelines for providers.

Source: DianaHealth (2025[205]), *Dissemination of Initiatives to Analyse Appropriateness in Healthcare*, https://dianasalud.com/index.php (accessed on 20 June 2025); Choosing Wisely Canada (2024[206]), Oncology, https://choosingwiselycanada.org/recommendation/oncology/ (accessed on 20 June 2025); Choosing Wisely (2022[207]), Recommendations, https://www.choosingwisely.org.au/recommendations (accessed on 20 June 2025); Choose Wisely (2020[208]), One list of Choosing Wisely recommendations on on tests, treatments, and procedures health professionals should question, https://www.hqsc.govt.nz/assets/Resource-library/Choosing-Wisely/Publications-resources/Combined-list-of-AU-and-NZ-recommendations-March-2020.pdf (accessed on 20 June 2025); Academy of Medical Royal Colleges (2020[209]), *Choosing Wisely recommendations archive*, https://www.aomrc.org.uk/projects-and-programmes/choosing-wisely/choosing-wisely-recommendations-archive/ (accessed on 20 June 2025); Vælg Klogt (Choose Wisely) (2024[210]), *Recommendations*, https://vaelgklogt.dk/anbefalinger (accessed on 20 June 2025); The American Society of Breast Surgeons (2023[211]), Choosing Wisely® Campaign, https://www.breastsurgeons.org/resources/choosing_wisely (accessed on 20 June 2025); Choosing Wisely Japan (2017[212]), FAQ, https://choosingwisely.jp/service/ (accessed on 30 June 2025); Institute for Quality in Medicine (2017[213]), *Choose Wisely*, https://www.ima.org.il/MedicineQuality/ChoosingWisely.aspx (accessed on 30 June 2025); Die Deutsche Gesellschaft für Innere Medizin (The German Society for Internal Medicine) (2024[214]), *Overview of "Decide Wisely" recommendations*, https://www.klug-entscheiden.com/empfehlungen/uebersicht (accessed on 30 June 2025); Gemeinsam gut entscheiden – Choosing Wisely Austria (2019[215]), *Recommendations by area*, https://gemeinsam-gut-entscheiden.at/bereich/empfehlungen/ (accessed on 30 June 2025); Smarter medicine – Choosing Wisely Switzerland (2024[216]), *Medical Oncology*, https://www.smartermedicine.ch/de/top-5-listen/medizinische-onkologie (accessed on 30 June 2025); Medicina Interna Lugo (Internal Medicine Lugo) (2019[217]), *"Choosing Wisely" recommendations from SEMI and the Family Medicine Societies*, https://medicinainterna-lugo.es/recomendaciones-choosing-wisely-de-la-semi-y-las-sociedades-de-medicina-de-familia/ (accessed on 30 June 2025); Kim, Lee and Kim (2020[218]), "Choosing Wisely: The Korean Perspective and Launch of the 'Right Decision in Cancer Care' Initiative", https://doi.org/10.4143/crt.2020.221; Gjør kloke valg (Make wise choices) (2024[219]), *Norwegian Oncological Society*, https://legeforeningen.no/kloke-valg/anbefalinger/legeforeningens-anbefalinger/norsk-onkologisk-forening/ (accessed on 30 June 2025); Choosing Wisely Portugal (2024[220]), *Recommendations for Healthcare Professionals*, https://ordemdosmedicos.pt/amp-divulgacao-cientifica/choosing-wisely-portugal/recomendacoes (accessed on 30 June 2025); NHG (2024[221]), *Prostate Cancer*, https://richtlijnen.nhg.org/standaarden/prostaatkanker#volledige-tekst-richtlijnen-diagnostiek; Federatie Medisch Specialisten; (2014[222]), Prostate Carcinoma – Expected Outcomes with Active Monitoring, https://richtlijnendatabase.nl/richtlijn/prostaatcarcinoom/gelokaliseerd_prostaatcarcinoom/actief_volgen.html; Federatie Medisch Specialisten (n.d.[223]), Breast Cancer – Radiotherapy, https://richtlijnendatabase.nl/richtlijn/borstkanker/behandeling_invasief_carcinoom/primair_chirurgische_behandeling/radiotherapie.html; Sweden & Colombia: national experts.

In order to promote implementation, healthcare provider awareness of and education on these recommendations, as well as effective patient communications skills among healthcare professionals, are key. This highlights the importance of continued professional learning in cancer care (Box 4.8).

Box 4.8. Continuing medical education ensures physicians are up to date on developments in cancer care and have the skills to provide better quality care

Continuing medical education (CME) helps ensure that professionals are up to date with evidence in the field, new technologies and developments and good practices across the cancer care pathway. The Accreditation Council of Oncology in Europe (ACOE) is the main body providing accreditation to providers of continuing medical education in oncology in the EU. Accreditation ensures high quality, independent and unbiased education as well as monitoring of training attendance by physicians.

A 2025 survey conducted by ACOE and the European Union of Medical Specialists (UEMS)[1] in collaboration with the OECD found that among nine of the ten countries responding, national CME requirements in terms of credit hours were consistent for physicians regardless of specialty. In Luxembourg, no official CME programme exists. In the Netherlands, oncologists must have all their education credits relate to oncology. In Romania, two-thirds of credits must be from the physician speciality, while in Slovenia, 50 of the 75 credits must be from the physician specialty and five credits must be in ethics and communication. Physicians in Ireland must develop a Continuing Professional Development Plan related to their specialty that includes practice review, work based learning and accredited learning programmes. Seven of the nine countries with CME (Austria, Bulgaria, Ireland, the Netherlands, Romania, the Slovak Republic and Slovenia) reported that it is mandatory, required for relicensing or recertification, or results in investigations or sanctions such as fines or loss of license if not undertaken. In Spain, CME is voluntary but can be required by hospitals for admissions or treatment privileges and can come with financial incentives. In Portugal, CME is not required but encouraged and supported.

Furthermore, an ACOE data analysis for this report found that in 2024, there were 188 event applications for oncology CME events accepted by the organisation, a small increase from 167 events in 2019. Starting during the COVID-19 pandemic, there was a substantial shift in events to distance learning, with 69 distance learning events held in 2024 as compared to only 20 in 2019. Distance-learning events may facilitate knowledge transfer across geographies, providing access to EU-wide learning for participants in countries that may have been less likely to attend events in person.

In addition to CME for physicians, some countries have Continuing Professional Development (CPD) for other healthcare providers working in the oncology space. For example, in Ireland, Romania and the Slovak Republic, nurses, radiation therapists and pharmacists have requirements for continuing education while Switzerland requires it for radiation therapists and pharmacists (but not nurses). Given the interdisciplinary nature of cancer care and importance of ensuring quality along the cancer care pathway, ACOE has expanded its accreditation efforts to include distance learning opportunities for non-physician healthcare providers. This initiative is designed to complement existing systems by addressing accreditation gaps, particularly in areas or professions where formal CPD accreditation processes are currently lacking.

CME is an important aspect of certified cancer centres. OECI data shows that OECI certified centres in Tercile 2 held a median of 14 educational sessions annually, while 18 were held in Tercile 1 and 21 in Tercile 3.[2] More of the courses in Tercile 1 and 2 had an international audience, which may be because those centres are in larger countries and treat a slightly higher number of patients on average. Similarly, in a sample of eight of the 14 CCCs in the German Deutsche Krebshilfe evaluation and designation programme, an average of 18 educational courses were offered in CCCs in 2022.

1. UEMS is the representative organisation of medical specialists from across Europe and beyond, working to promote the highest standards of training, practice and continuing education. Through its European Accreditation Council for Continuing Medical Education (EACCME®), the UEMS accredits high-quality CME/CPD activities across all medical specialties in Europe and internationally.
2. The country income terciles divide EU+2 countries into three terciles based on GDP per capita for the purpose of OECI data analysis (see Figure 4.5 or more details).

Reducing aggressive cancer treatments at the end of life is a priority among EU+2 countries

In line with the *Choosing Wisely* recommendations, the 2025 OECD Policy Survey on High-Value Care reveals that reducing aggressive treatments near the end-of-life (EOL) is of high priority in 13 EU+2 countries. While aggressive chemotherapy, radiotherapy, surgery, or intensive care admission during the final weeks of life may aim to prolong life or relieve symptoms, it often results in limited therapeutic benefit. Instead, it can lead to increased physical and emotional burden, reduce patients' quality of life, lower family satisfaction with care, and contribute to higher medical costs (Ma et al., 2024[224]).

Aggressive EOL cancer care can have significant financial strains globally. A US study found that aggressive interventions significantly raised healthcare spending during the final month of life in cancer patients, whereas early initiation of palliative care was associated with cost reductions of USD 3 000 and advanced directives with reductions of USD 4 000-5 000 (Davis et al., 2023[225]). In France, aggressive EOL care significantly increased costs during the last 30 days of life for lung cancer patients – EUR 9 480 compared to EUR 6 378 for those who did not receive aggressive care (Bylicki et al., 2021[226]).

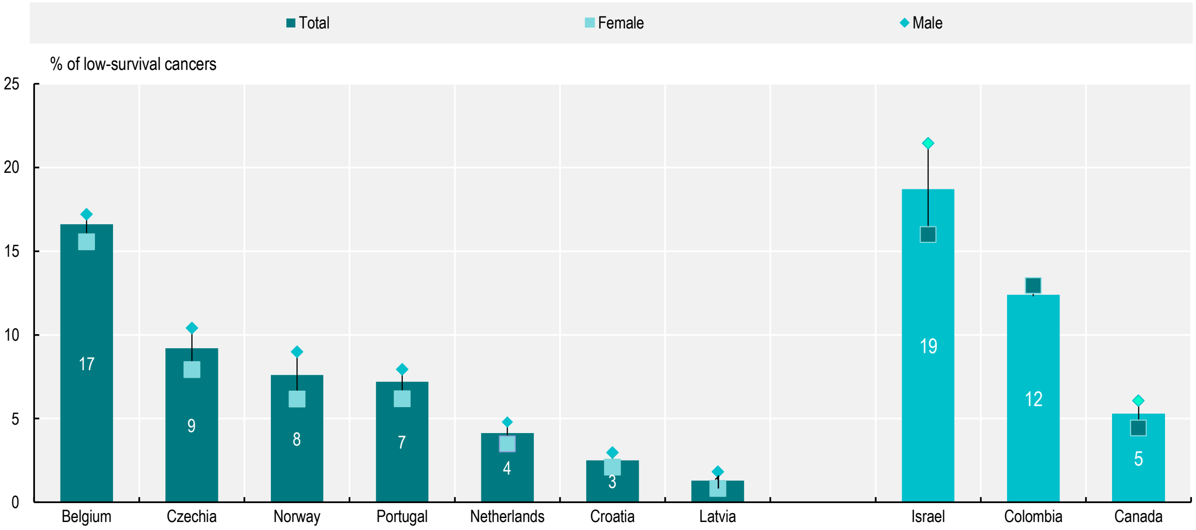
The OECD data collection measured the use of systemic anti-cancer therapies in the last 30 days of life. Among patients aged 70+ with low-survival cancers (pancreatic, lung, or stomach cancer), use of aggressive therapies ranged from about 1 patient per 100 in Latvia to 17 in Belgium (Figure 4.20). In all EU+2 countries reporting, men aged 70+ with low-survival cancers were more likely than women to receive aggressive treatment at the end of life. It is important to note that part of the reason for variation in end-of-life care practices is due to personalised ethical and clinical considerations as well as patient-informed choice. Nonetheless, although this issue is of high priority in OECD countries, numerous countries were unable to provide data for this indicator via the pilot. Even among those submitting, there were notable methodological differences, suggesting that many countries have challenges in effectively monitoring cancer care quality at the end-of-life.

In other countries, studies found that 10% of cancer patients received chemotherapy in the last month of life in 2017 (Germany) (van Baal et al., 2020[227]) and 17% received anticancer treatment in the last two weeks of life in 2019 (Ljubljana, Slovenia) (Golob et al., 2024[228]). Notable rates of aggressive EOL cancer care have also been reported in France (Bylicki et al., 2021[226]) and Sweden (Szilcz et al., 2022[229]).

The OECD's data collection and studies from France, Germany, and Slovenia show that younger cancer patients are more likely to receive aggressive end-of-life (EOL) care. Haematological malignancies were linked to more intensive EOL care, possibly due to their more unpredictable prognosis, a higher chance of curative success (Martins-Branco et al., 2020[230]; Mehlis et al., 2020[231]) and less frequent and later initiation of palliative care (Gebel et al., 2024[232]). Enrolment in palliative care reduced the likelihood of aggressive interventions in studies from Denmark, Slovenia, the Netherlands, Finland, and Italy (Gerhardt et al., 2024[233]; Vestergaard et al., 2023[234]; Golob et al., 2024[228]; Boddaert et al., 2022[235]; Miinalainen et al., 2022[236]; Chiaruttini et al., 2024[237]). Evidence supports the early integration of palliative care, showing it can help align treatment with patient values, reduce unnecessary or burdensome interventions, and improve quality of life and end-of-life outcomes (See Chapter 5).

Figure 4.20. The share of older cancer patients receiving aggressive treatments at the end-of-life ranges from about 1% to 17% in EU+2 countries

Share of cancer patients age 70+ receiving systemic anti-cancer therapies in the last 30 days of life, latest 3-year average



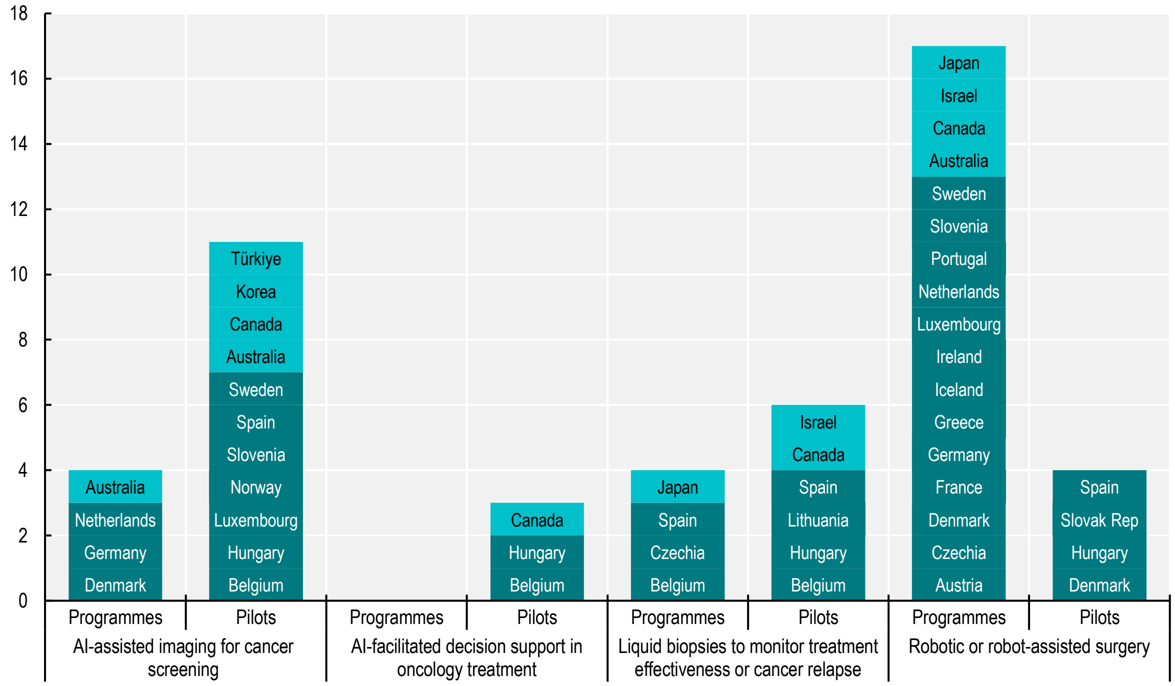
Note: The share is out of patients with low-survival cancers (pancreatic, lung or stomach cancer) who died during the course of the year. Most recent three-year average: for Israel, Norway, the Netherlands, Latvia, Belgium and Portugal (2021-2023); Croatia, Czechia and Canada (2020-2022); and Colombia (2023). Data for Canada refers to the provinces of Alberta and Prince Edward Island. There are methodological differences in the definition of treatment in last 30 days of life across countries.
Source: OECD (2025[20]), "Assessing cancer care quality in OECD countries: New indicators for benchmarking performance", https://doi.org/10.1787/b3f47ece-en.

4.4.5. New technologies and digital infrastructure are being deployed or piloted to improve cancer care efficiency and quality – from diagnosis to treatment

AI promises improvements in accuracy and feasibility of cancer screening and diagnosis

The majority of EU+2 countries surveyed in the 2025 Policy Survey on High-Value Cancer Care, reported implementation of AI-assisted imaging/radiology for cancer screening (see Figure 4.21), either as national or regional programmes (Denmark, Germany and the Netherlands), as national or regional pilots (Belgium, Hungary, Luxembourg, Norway, Slovenia, Spain, Sweden), or in selected private facilities (Austria, Czechia, Iceland, Lithuania, Luxembourg, Romania; not shown in figure). In terms of treatment, the majority of countries reported that they have not implemented AI-facilitated decision making in cancer treatment as of 2025. However, two EU+2 countries (Belgium and Hungary) reported use on a pilot basis and others (Czechia, France, Ireland, Romania, Sweden; not shown in figure) in select private healthcare facilities.

Figure 4.21. Key technological innovations in cancer detection and care are being deployed across countries via national programmes or pilots



Note: Programmes and pilots refer to those at the national and / or regional level. Liquid biopsies refer to their use for cancer treatment effectiveness or relapse. Additional countries report use of these technologies in select private facilities (not shown). EU+2 countries are represented in dark green, while other OECD countries are represented in light green.
Source: 2025 OECD Policy Survey on High-Value Cancer Care.

AI-assisted imagery is primarily reported for breast cancer mammography. In addition, interviews with 20 OECD countries found that eight used AI for cancer diagnosis – for breast (Norway), as well as lung (Portugal and Lithuania) and skin (Germany and Portugal). Use was mainly limited to AI-assisted imaging in Czechia, Estonia, Germany, Greece, Lithuania, the Netherlands and Portugal, often localised to applications or pilots in certain care settings.

In Germany, a study demonstrated improved breast cancer detection rates in screening eligible women aged 50-69 years by using AI-assisted double reading of mammography (Eisemann et al., 2025[238]), without increasing recall rates, with the benefits including cost savings from reduced workload for radiologists in reviewing results (University of Lübeck, 2025[239]). In Norway, a randomised controlled trial is underway to investigate whether artificial intelligence in combination with radiologists is as good as or better at detecting breast cancer than the current standard procedure where two radiologists evaluate the images (Norwegian Institute of Public Health, 2025[240]). The Belgian Precision pilot is demonstrating the usability of a new data platform for the purposes of the European Cancer Imagining Initiative (a flagship of Europe's Beating Cancer Plan), which aims to create a platform of over 60 million images that can be used for developing, testing, and benchmarking AI-driven tools to advance personalised cancer care (EUCAIM Consortium, 2025[241]).

As part of the EU-funded BRIGHT project, Estonia is piloting a personalised, genetic risk-based breast cancer screening model for women aged under 50 (Antigenes, 2024[242]). This AI-supported approach generates polygenic risk scores (PRS) derived from genetic and health data to stratify individuals by their predicted susceptibility to breast cancer. Women identified as high-risk are invited to undergo more frequent and targeted screening to detect cancer earlier, while those at lower risk follow a less frequent schedule to reduce over-screening and optimise the use of healthcare resources. In other diagnostic applications, Israel is using AI in pathology via its Imagine AI system to identify cancer-related mutations from biopsy samples within two days. AI systems for pathology are used in prostate, breast and gastrointestinal cancers.

Liquid biopsies promise a minimally invasive means of detecting and monitoring cancer, but must be balanced with minimising harms to patients

In the 2025 OECD Survey on High-Value Cancer Care, five EU+2 countries reported use of liquid biopsies to monitor cancer treatment effectiveness or relapse in either regional or national programmes or pilots (see Figure 4.21). An additional six EU+2 countries report use in select private facilities.

There are a few purposes for using liquid biopsies, which detect circulating tumour cells (CTCs) in the blood (Smit and Pantel, 2024[243]). One is for patients with a known cancer, for surveillance of recurrence (Lawrence et al., 2023[244]), without the need for costly and uncomfortably new tissue biopsies or radiological imaging. Liquid biopsies through simple blood samples could reduce travel requirements for patients, waiting times, and costs from more expensive and invasive cancer tests during cancer treatment and follow-up. The EU-funded Joint Action on Personalised Cancer Medicine launched in November 2025 includes a transnational pilot that is examining whether implementation of personalised liquid biopsy-based risk-stratified surveillance can help achieve earlier recurrence detection in cancer survivors.

There is an additional possibility of using CTC detection to distinguish aggressive from indolent tumours at an early stage, and therefore potentially avoiding the harms from overdiagnosis and overtreatment of certain prostate and lung cancers; however as of 2025, this remains an area for further research and innovation. Finally, another use of liquid biopsies is as a minimally invasive method of detecting early-stage cancers without the need for more invasive tissue biopsy. The feasibility and accuracy of using this innovation is undergoing clinical research studies to determine if it can be applied to screening for lung and colorectal cancers (Lawrence et al., 2023[244]). However recent results suggest that the CTC sensitivity may not be sufficient for detection of early-stage tumours, thus limiting effectiveness (Shaukat et al., 2025[245]).

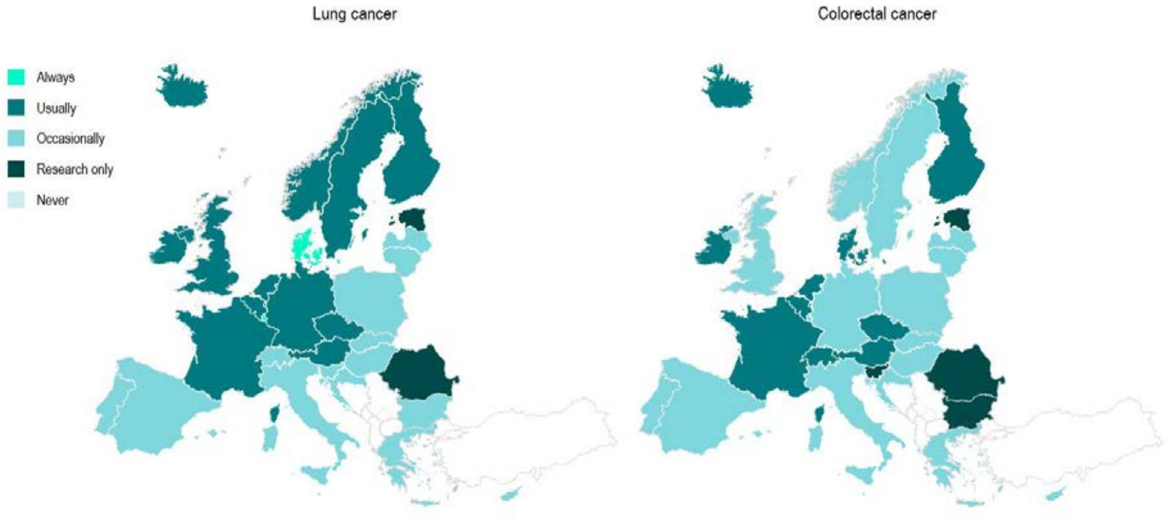
The field of molecular diagnostics is rapidly developing to help classify tumour types and guide optimal treatment for patients

Biomarker testing forms the foundation of precision medicine, enabling a shift from generalised treatment approaches to individualised strategies (Bayle et al., 2023[246]). While equitable access to cost-effective biomarker testing across Europe is important for the timely delivery of precision oncology and improved cancer outcomes, access remains highly variable. Basic single-gene testing is widely available in Europe, but due to its much higher costs, access to advanced methods such as large next-generation sequencing (NGS) panels and complete genomic profiles is often limited to clinical trials or research settings. The main challenges to implementing multigene testing include inadequate reimbursement for tests and treatment, prescribing limitations, and limited opportunities for clinical trial enrolment (Bayle et al., 2023[246]).

Two of the main cancer types where NGS is more widely used are lung and colorectal. Figure 4.22 illustrates that small NGS panels (<50 genes) in routine practice across European countries are somewhat more available for lung than colorectal cancer, and that there is significant variation across countries. Among EU+2 countries, NGS panels were reported as always available for lung cancer (and usually/occasionally for colorectal cancer) in Denmark and Luxembourg, while experts in countries such as Austria, Belgium, Czechia, Finland, Iceland, Malta and the Netherlands reported that panels were usually (but not always) available for both cancer types. In contrast, in countries such as Bulgaria, Estonia, and Romania, NGS was limited to research settings (Bayle et al., 2023[246]; Manzano et al., 2025[37]).

To reduce unequal access to personalised cancer care, an initiative within the EU-funded Can.Heal project is using NGS technology to allow efficient genetic profiling of tumour cells, allowing cancer centres across countries to collaborate and apply similar diagnostic and therapeutic approaches to patients with comparable cancer profiles.

Figure 4.22. Availability of small NGS panels (<50 genes) in routine practice in lung cancer and colorectal cancer in EU countries in 2021



Note: Availability refers to the presence of the test but does not imply formal reimbursement, as costs may be covered by the general hospital budget or a pharmaceutical company rather than through third-party payer reimbursement.

Source: OECD Secretariat using Bayle et al. (2023[246]), ESMO study on the availability and accessibility of biomolecular technologies in oncology in Europe https://doi.org/10.1016/j.annonc.2023.06.011; Manzano, A. et al., (2025[37]), Comparator Report on Cancer in Europe 2025 – Disease Burden, Costs and Access to Medicines and Molecular Diagnostics, https://ihe.se/en/rapport/comparator-report-on-cancer-in-europe-2025-disease-burden-costs-and-access-to-medicines-and-molecular-diagnostics-2/. For Malta and Slovenia: information provided by Ministry of Health.

> One major challenge was that clinical protocols were rigid and not always adapted to the patient’s sex, current blood chemistry, or overall health status. This sometimes led to treatments being prescribed based on “average” scenarios rather than personalized needs. There were delays in adjusting therapies or performing certain investigations because protocols did not provide flexibility for tailored decisions.
>
> *Maria, 52 years old, endometrial cancer*

Given the many biomarkers that could be tested for and the rapid developments in the space, the European Society for Medical Oncology in 2018 began publishing a Scale for Clinical Actionability of molecular Targets (ESCAT). ESCAT categorises molecular targets into six tiers based on clinical evidence and relevance for patient care – ranging from those ready for routine use to those with no evidence of actionability. ESCAT provides a standardised framework to prioritise genomic alterations that could benefit from targeted cancer therapies, aiming to guide clinical decision making. Between 2021 and 2024, ESCAT scores were progressively integrated into the European Society for Medical Oncology's clinical practice guidelines for various cancers such as metastatic and early breast cancer, metastatic colorectal cancer, metastatic non-small cell lung cancer as well as thyroid, stomach and pancreatic cancers.

Beyond clinical decision making, ESCAT tiers can also support reimbursement decisions. Notably, in 2023, Italy approved the reimbursement of targeted therapies for genomic alterations classified as ESCAT Tier I, based on NGS profiling (ESMO, 2025[247]). While Germany does not have a national policy formally linking ESCAT to reimbursement, a recent study showed that off-label molecular therapy reimbursement in metastatic breast cancer was significantly more likely when supported by strong ESCAT evidence (Tier I and II) (Pixberg et al., 2024[248]).

Many countries are deploying robotic-assisted laparoscopy in cancer treatment

Robotic-assisted laparoscopic surgery is a technological innovation used to improve the precision of and reduce complications from cancer surgery such as prostatectomy. This surgical innovation requires considerable short-term capital investment and surgical training, but can provide long-term sustainable benefits in terms of surgical outcomes and patient complications, which include reductions in blood loss, post-operative pain and length of hospital stay (John Hopkins Medicine, 2025[249]). For prostate cancer, robotic-assisted laparoscopic prostatectomy offers faster recovery, better urinary continence and potency outcomes compared to conventional laparoscopic surgery (Rifai Fauzi and Alemina Ramadhani Ginting, 2024[250]). A systematic review concluded that robotic-assisted surgery is potentially cost-effective in 28 of 33 economic evaluations, mainly for prostate and kidney cancer (Sadri et al., 2023[251]). Norway is conducting a formal economic evaluation of robotic-assisted prostatectomy to inform how access to robotic-assisted surgery should be prioritised (Gaustad JV, 2024[252]).

Robotic or robot-assisted surgery is available on some basis in 19 EU+2 countries participating in the 2025 OECD Survey on High-Value Cancer Care. In 13 EU+2 countries (Austria, Czechia, Denmark, France, Germany, Greece, Iceland, Ireland, Luxembourg, the Netherlands, Portugal, Slovenia and Sweden) robot-assisted surgery is already available through regional or national programmes, while three other EU+2 countries (Hungary, the Slovak Republic and Spain) currently offer it only on a pilot basis at the population level. In Belgium, Lithuania and Romania, it is available in select private facilities.

EU European Regional Development Funding has enabled rollout of the *da Vinci surgical system* for robotic-assisted cancer surgery in Poland (EUR 2.7 million) and in Spain (EUR 1.8 million) (European Commission, 2020[253]; European Commission, 2017[254]). The use of the technology is being expanded to urological, gynaecological and colorectal cancer surgeries and in recent years, France has been using it in cervical, colorectal and liver cancer surgeries in select cancer care facilities (Gustave Roussy, 2025[255]).

For both surgery and radiotherapy, however, there are challenges in understanding the value of and supporting innovations in technology and processes (Borras, Corral and Aggarwal, 2022[256]). Indeed, new approaches are being developed to promote high-value radiotherapy and optimise treatment (Box 4.9).

Box 4.9. New efforts are underway to ensure high-value radiotherapy and optimise treatment

A framework to support clinical and reimbursement decisions for radiotherapy is being developed

Health Technology Assessment approaches, as used with pharmaceuticals, are not yet well-developed in evaluating radiotherapy investments and reimbursement, as benefits such as lower toxicity and better quality of life may only be evident months or years following treatment. Furthermore, factors such as training, operator skills and quality processes make it difficult to isolate the causal impact of radiotherapy innovations (Borras, Corral and Aggarwal, 2022[256]).

Most European health systems reimburse radiotherapy primarily through budget-based, fee-for-service, or fraction-based models. This creates considerable variability in reimbursement across countries and often incentivises volume over value. To address these challenges, the EU-funded Joint Action Innovative Partnership for Action Against Cancer brought together 24 EU Member States and recommended that reimbursement policies shift toward using episodes of care as the fundamental payment unit using a two-tiered approach: 1) episode-based reimbursement for standard of care and 2) additional funding mechanisms to support the adoption and evaluation of emerging innovative treatments with uncertain value (Borras, Corral and Aggarwal, 2022[256]). This approach was used with stereotactic body radiotherapy (SBRT) in Belgium, which was initially not reimbursed due to clinical and economic uncertainties (Lievens et al., 2024[257]).

The Value-Based Radiation Oncology initiative by the European Society for Radiotherapy and Oncology is establishing a rigorous evaluation framework to assess the value of radiotherapy innovations. It will support investment decisions, clinical implementation, and reimbursement of new radiotherapy technologies and techniques (ESTRO, 2025[258]).

Radiotherapy hypofractionation can be as effective and safe as conventional radiotherapy

Radiotherapy hypofractionation is a treatment innovation in which the total prescribed dose of radiation is divided into fewer fractions, typically administered once daily or less frequently, with each session delivering a higher dose compared to conventional radiotherapy. This results in shorter overall treatment time – often completed in days or weeks rather than several weeks or months. By reducing the number of treatment sessions, hypofractionation can enhance patient convenience, improve access to radiotherapy services, and potentially lower treatment costs. Hypofractionation gained prominence during the COVID-19 pandemic as its fewer treatment visits benefitted both patients and healthcare systems (Thomson et al., 2020[259]). However, hypofractionation is associated with increased complexity in treatment planning and delivery. Reassuringly, a recent systematic review on hypofractionation concluded that for individuals with breast, prostate, or rectal cancer, hypofractionation likely results in little to no difference in overall survival compared to conventional radiotherapy (Landsteiner, Sowerby and Ullman, 2023[260]).

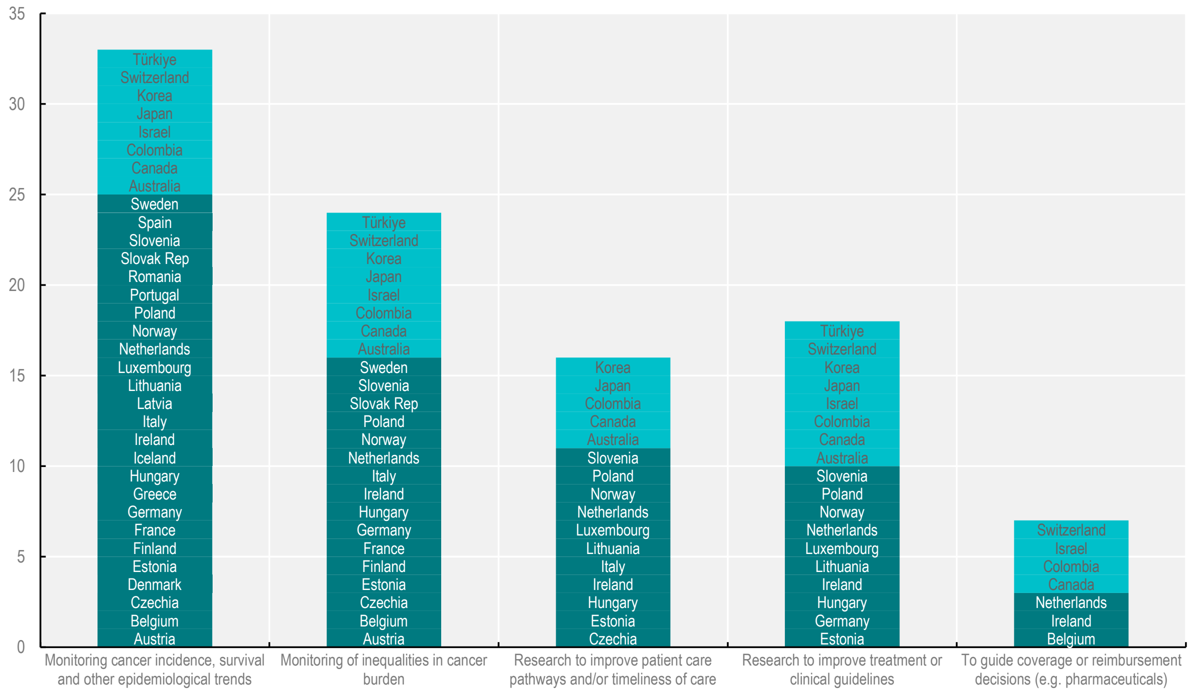
Digital health infrastructure allows for more efficient, higher quality cancer care at the patient level alongside benefits to quality monitoring at the system level

Cancer diagnosis and treatment often requires numerous investigations and tests from multiple providers, with need for sharing and transfer of results between specialists and healthcare settings. Individual health record identifiers and electronic data linkage are thus critical to improve the safety and efficiency of information flow by reducing medico-administrative error and delays, to ensure that the right care is provided to the right patient in a timely manner. Stronger health data infrastructure can support clinical practice in real time, such as in Estonia, where evidence-based support is available to Estonian doctors in decision making and tracking a patient's health information, including diagnoses, medications, analyses and procedures (OECD/European Commission, 2025[261]).

In addition to the patient-level benefits, data linkage, primarily via cancer registries, provides a key mechanism for monitoring the quality and efficiency of cancer care systems. However, there is a wide range in the quality and completeness of the data recorded. While almost all registries have epidemiological data, some are not linked to screening information and most do not have patient-reported indicators (see Chapter 2). Experience from the OECD cancer data collection shows that even when registries are supposed to be populated with certain information, in many cases this may be missing for a share of patients (e.g. treatment data). The EU4Health-funded Joint Action CancerWatch, launched in 2025, will support Member States to improve the timeliness, quality and completeness of cancer burden data collected by cancer registries. The Joint Action will also help assess registries' capability of collecting information such as staging and treatment and define common quality and comparability criteria. This will contribute to ensuring more accurate, comparable and timely data for assessing cancer control.

A total of 25 EU+2 countries responding to the OECD Policy Survey on High-Value Cancer Care report using cancer registries to monitor incidence, survival, stage and other epidemiological trends (Figure 4.23). Many can also report on inequalities, although this is often limited to geographic or gender inequalities, with socio-economic data available in only about a third of EU+2 countries (Chapter 2). Eleven EU+2 countries report using cancer registries for research to improve timeliness of care and ten report utilising them to improve treatment or clinical guidelines (although countries such as Denmark, Iceland and Sweden are not shown in the figure but have quality registries for such purposes). Only three EU+2 (Belgium, Ireland, the Netherlands) countries report using cancer registries to guide coverage or reimbursement decisions for pharmaceuticals. However, as shown in Section 4.4.3 above, this type of real-world evidence on patient outcomes is critical for supporting better coverage and pricing decisions.

Figure 4.23. While most countries use the cancer registry for monitoring cancer burden, fewer use registries to improve patient care pathways or treatment, or to guide reimbursement decisions



Note: For improving patient pathways, timeliness of care and/or treatment or clinical guidelines, Denmark, Iceland and Sweden are not shown in the above graph because they don't use cancer registries for this purpose; however, they may use quality registries to do so. EU+2 countries are represented in dark green, while other OECD countries are represented in light green.
Source: 2025 OECD Policy Survey on High-Value Cancer Care.

Ultimately, cancer registries have a significant role in oversight of cancer care in countries. As shown in Chapter 2, they are instrumental for monitoring developments in cancer incidence, and when data registration is thorough, they provide important insight into timeliness of cancer care (as seen in Chapter 3). Cancer registries and quality registries can also provide input on the quality of cancer care and adherence to clinical guidelines, as well as providing survival estimates – all key aspects explored in this chapter. Finally, all these topics are of great importance, but must be put in the context of what matters most to patients – their overall well-being and quality of life – which is explored in Chapter 5.

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5

Prioritising people-centred care

Based on the OECD PaRIS Data, this chapter examines the impact of living with cancer on people's health and well-being across EU countries and shows how improving people-centredness can support better health outcomes for those living with cancer. The chapter also provides guidance on how to improve people-centred care for patients living with cancer, looking at key dimensions including participation in decision making, self-management, and care co-ordination. The chapter lastly emphasises the importance of integrated policies combining medical, social and economic support for better quality of life and social well-being. The findings aim to inform policymakers on how to reduce inequalities and promote more co-ordinated, people-centred care pathways for the growing number of people living with cancer.

In Brief

Cancer reduces health, social and economic well-being

- According to the OECD PaRIS Survey, which focusses on primary care patients aged 45 years and older, patients with a cancer diagnosis had significantly lower physical health than other patients – mainly driven by a higher level of fatigue and pain, as well as poorer well-being and social functioning.
- On average, people with a cancer diagnosis are a third less likely to report their health as good, very good or excellent, compared to other primary healthcare patients.
  - There is a 3-fold variation in people living with cancer reporting good health across countries, ranging from 20% in Portugal and Italy to 60% Iceland and Belgium.
  - The health gap between those with and without cancer is the largest in Greece, Portugal, Slovenia and Spain.
- Similar to patients without cancer, there is a large social gradient in patient-reported outcomes among those living with cancer, in favour of higher educated groups.
  - On average in the EU11 countries included in PaRIS, among people living with cancer, those with a low level of education are almost 30% less likely to report good to excellent health.
  - Primary care patients with cancer and lower levels of education face a double health burden: 1) the health disadvantages associated with limited education and 2) the additional challenges imposed by the disease, which together accumulate and compound.
  - Country-level variations are striking. In the Netherlands and Iceland, there is no gap between education groups, whereas Greece, Luxembourg, Portugal and Slovenia show disparities of more than 16 percentage points (p.p.) on general health.
- The impact of cancer on employment outcomes is large.
  - According to the SHARE survey, employment rates among those having a cancer diagnosis are 26% lower compared to those without such a diagnosis, and with a large social gradient in disfavour of people with low education.
  - On average, a cancer diagnosis reduces the likelihood of employment by 14%.
  - The largest gaps in employment rates between individuals with a cancer diagnosis and those without are observed in Bulgaria, Czechia, Cyprus, Hungary and Ireland, calling for labour market policies and workplace reintegration support.

Strengthening people-centred care is key to improving quality of life and health outcomes of people living with cancer

- People living with cancer who report more people-centred care tend to report better physical and mental health, as well as higher overall well-being. Similar patterns of better reported health are observed among those who report being confident in self-managing their care and those reporting higher level of care co-ordination.
- However, less than a third of patients living with cancer in the EU11 report a high level of people-centred care, ranging from 42% in Belgium to 16% in Greece. Sufficient consultation time, effective communication with one's doctor, and the possibility to talk about health issues are all associated with a more positive people-centred score.

- There is large potential to improve people-centredness through more effective use of medical records. Almost one-third of people living with cancer need to repeat information already available in their health records during consultation, signalling weak integration of care and insufficient data systems. This is a key concern in Italy and Greece, where at least half of people living with cancer need to repeat information already available in their health records.
- To further improve people-centred care, there is scope to invest in co-production of health, including patient involvement in decision making and supporting patients in self-management (particularly in Greece, Iceland and Romania which are lower performers). In addition, care co-ordination processes, including setting up a care plan, would allow cancer patients to experience care that is seamless and well-integrated (particularly in Iceland, the Netherlands and Spain).

More can be done to meet broader health, social and economic needs of people living with cancer

- Cancer care plans and medication reviews, tailored to an individual's needs and preferences, translate complex medical decisions into clear, actionable roadmaps to guide patients and their care teams through cancer treatment. To maximise their effectiveness, these tools should be supported by robust care co-ordination and patient navigation protocols (such as in France, Denmark and Estonia), out-of-hours support (such as in Germany and Ireland), and the use of digital solutions (such as in Greece and Sweden).
- Important actions are needed to expand the cancer care pathway beyond curative medical treatment to encompass broader social and health needs. These range from integrating palliative care as early as possible and developing community-based palliative care (as done in Belgium, Italy, Norway, Poland, Slovenia). A variety of supportive services have also gained prominence, such as fertility preservation programmes (as done in Germany, the Netherlands or Poland), sexual health support (as done in Austria or Denmark), and lifestyle guidance and psychological support (as done in France, Ireland and Latvia). Survivorship programmes are also slowly emerging to address comprehensively the broader health and social needs of cancer survivors (as developed in the Netherlands and the Slovak Republic).
- Financial and employment protection matters to the health and quality of life of cancer patients and their caregivers. Expanding legislation on the "Right to be Forgotten" beyond the nine EU+2 countries where it currently exists is key to prevent discrimination and improve life opportunities. Given the growing burden of early onset cancer, return-to-work support is increasingly critical to safeguard employment and avoid financial toxicity (such as is done in Germany, the Netherlands and Sweden).

5.1. Introduction

Advancements in early cancer detection and treatment have significantly improved survival rates, but they have also brought greater visibility to the challenges patients face in life after diagnosis and treatment. A cancer diagnosis brings with it a wide range of needs and challenges, underscoring the importance of supporting well-being and quality of life for patients living with cancer. These challenges often span multiple dimensions of life, including physical, psychological, social, financial, and spiritual well-being. Ensuring effective access to supportive cancer and survivorship services requires a fundamental shift in perspective – from focussing solely on treating the disease to addressing the comprehensive needs and expectations of the person (Bower, 2014[1]).

Beyond supportive care and survivorship services, people-centred care is also crucial to enhance quality of life and well-being, as it puts the needs, preferences, values and goals of people at the heart of decision making and care delivery. Unlike traditional models, which focus primarily on diseases, people-centred care emphasises comprehensive, respectful and co-ordinated care that supports individuals throughout their health journey – not only during periods of illness, but also during prevention, survivorship and end-of-life care. It goes beyond “patient-centred” care by recognising individuals as active partners in managing their own health, and by addressing the social, emotional and cultural factors that affect health outcomes.

People-centred care improves health outcomes and patient experiences by focussing on individual preferences, strong patient engagement and effective care co-ordination (OECD, 2025[2]). This approach is particularly beneficial for managing complex conditions such as cancer – which involves multiple specialists, diagnostic procedures, treatments (surgery, chemotherapy and radiotherapy), follow-ups, supportive care and palliative care. A people-centred system helps to manage the complexity and reduce the fragmentation in cancer care, fostering communication between patients and providers, thus leading to greater trust, well-being and improved health outcomes.

Based on the OECD PaRIS data (see Box 5.1), this chapter starts by analysing the health, social and economic outcomes of people living with cancer. It shows how strengthening people-centred care for people living with cancer can lead to improved health outcomes and well-being. It then evaluates how people-centred primary healthcare systems are performing for people living with cancer and compares key dimensions of people-centred care across EU countries, including participation in decision making, self-management, and care co-ordination. Finally, it explores opportunities to make health systems more people-centred through co-ordinated clinical care processes, supportive services and financial and workplace programmes.

Box 5.1. PaRIS and description of cancer patients

The Patient Reported Indicator Surveys (PaRIS)

PaRIS captures patient reported outcomes and experience measures (PROMs and PREMs respectively), which matter most to people living with chronic conditions, such as their mental and physical health, social functioning, and psychological well-being, together with their experiences of care co-ordination and people-centredness. The survey is the first of its kind to provide harmonised performance indicators for 19 countries on people aged 45 years and older living with chronic conditions and managed in primary healthcare (PHC).

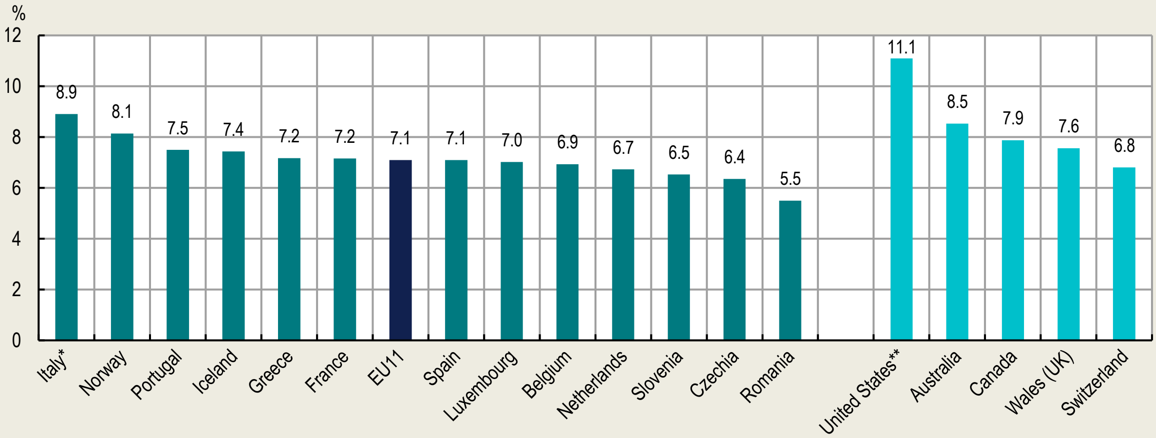
PaRIS includes PHC patients living with cancer, and those who have been diagnosed with or treated for cancer in the five years prior to the survey. This focus provides insight into the treatment and post-acute or survivorship phase of cancer care, where people-centred approaches shift from supporting quality of life during treatment to ensuring effective care co-ordination and managing recurrence risk, side effects, and long-term consequences of treatment. The analysis is limited to those patients who have access to PHC. PaRIS echoes the voices of around 107 000 patients in more than 1 800 primary care practices in 19 countries (Australia, Belgium, Canada, Czechia, France, Greece, Iceland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Romania, Saudi Arabia, Slovenia, Spain, Switzerland, Wales (United Kingdom) and the United States), representing nearly 104 million primary care patients.

Sample of patients living with cancer

Overall, 7% of patients in the PaRIS sample reported living with cancer. Cancer patients in PaRIS tend to be older, with a notably higher proportion aged 65 to 74 (33%) and 75+ (27%) compared to the overall PaRIS population. When examining the prevalence of chronic conditions, cancer patients appear to be broadly similar to non-cancer patients, although the prevalence of some conditions is slightly higher among those with cancer. They exhibit a higher prevalence of arthritis (33% versus 32% overall), cardiovascular disease (24% versus 20%), diabetes (19% versus 17%), and hypertension (49% versus 44%). Education levels are also comparable, with 40% of people with cancer having a higher education compared to 41% among the rest of the population. Men make up a slightly larger share of cancer patients (47%) than in the general group (44%).

Figure 5.1. Cancer prevalence across countries in PaRIS varies from 11.1% to 5.5%

Percentage of primary healthcare patients aged 45 and older that have or have had cancer in the last five years



Note: *Data for Italy refer to patients enrolled in outpatient settings for specialist visits in selected regions. **United States sample only includes people aged 65 years or older.
Source: OECD PaRIS 2024 Database.

5.2. Health and economic outcomes of primary healthcare patients living with cancer

5.2.1. Cancer patients have worse health outcomes and are less likely to report good social functioning than other patients

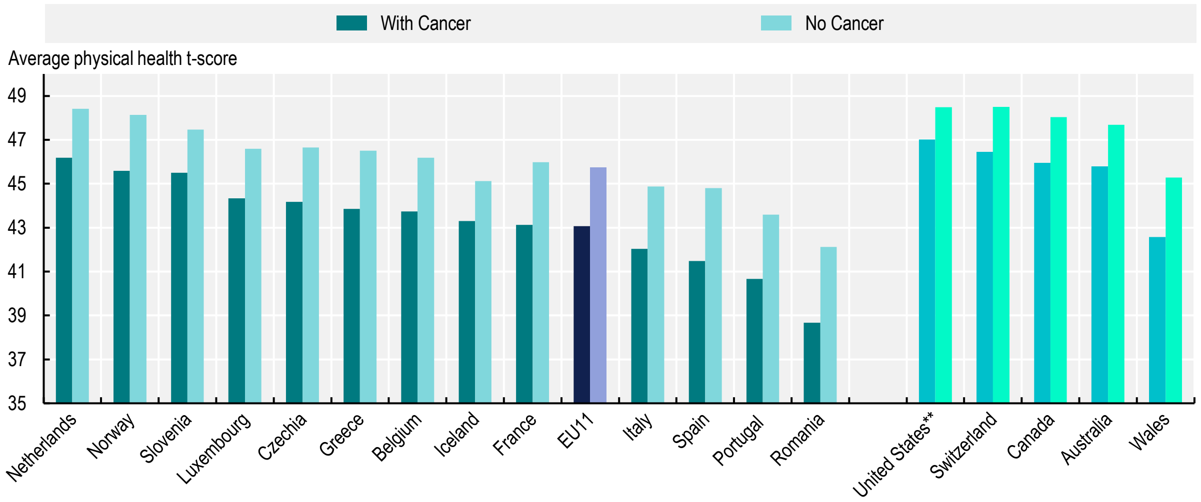
Cancer patients frequently experience poorer physical and mental health than individuals with other medical conditions due to the multifaceted aspects of the disease, its treatment and long-term impact. Treatments such as chemotherapy, radiation, and surgery, can cause side effects including chronic fatigue, pain, nausea, or loss of appetite, all of which reduce mobility, independence and overall functioning. These symptoms often persist long after treatment ends, leading to lasting impairments. Long-term effects of cancer treatment can significantly impact quality of life; for example, men treated for prostate cancer may experience persistent sexual dysfunction or urinary incontinence following prostatectomy. These late effects are often under recognised but can endure for years and require ongoing management (Lustberg et al., 2023[3]). Mentally, the diagnosis of cancer is also often associated with high levels of psychological distress, including anxiety, depression, and fear of recurrence. The uncertainty surrounding prognosis, frequent hospital visits, body image changes, persistent symptoms, and the disruption to daily life and work further exacerbate emotional strain. Together, these physical and psychological burdens place cancer patients at a higher risk of poor physical and mental health and quality of life compared to those with other chronic conditions.

Empirical studies consistently reported that cancer patients or survivors frequently experience persistent fatigue, reduced physical capacity, and impairments in daily functioning. Based on the Survey of Health, Ageing and Retirement in Europe (SHARE), older adults with a history of cancer reported higher rates of physical limitations – such as mobility issues or difficulties with activities like climbing stairs or carrying groceries – than individuals without cancer (Bültmann, U., Hinzmann, D., & Hasselhorn, H. M., 2023[4]; Veiga, D., Peralta, M., Carvalho, L., Encantado, J., Teixeira, P. J., & Marques, A., 2025[5]). In a similar vein, cancer survivors in SHARE survey waves tend to show higher levels of depressive symptoms and lower subjective well-being than non-cancer peers, especially if they experience functional limitations or lack social support (Vasconcelos, Peralta and Marques, 2025[6]; Veiga, D., Peralta, M., Carvalho, L., Encantado, J., Teixeira, P. J., & Marques, A., 2025[5]). Cancer, especially when occurring alongside conditions like cardiovascular disease or diabetes, was associated with elevated EURO-D depression scores,[1] highlighting the impact of co-morbidities on mental health (Feng et al., 2023[7]).

The PaRIS data support earlier findings reported in the literature. Compared to other patients, those with a cancer diagnosis had a significantly lower average self-rated physical health T-score (43 compared to 46 on the PROMIS Physical Scale) (Figure 5.2). The difference in scores is primarily driven by a higher proportion of cancer patients reporting moderate to high levels of fatigue (16%) and pain (20%), compared to 11% and 15%, respectively, among other primary care patients. PHC patients living with cancer in Romania and Portugal have the lowest self-rated physical health (with a score of 40 or less) and the largest gap compared to patients without cancer, alongside Spain (3 points or more). By contrast, Iceland, Luxembourg, the Netherlands and Slovenia have the smallest gap in self-rated physical health between PHC patients with and without cancer (at 2.2 points or less).

Figure 5.2. Cancer patients report lower physical health than other PHC patients

Physical health T-score

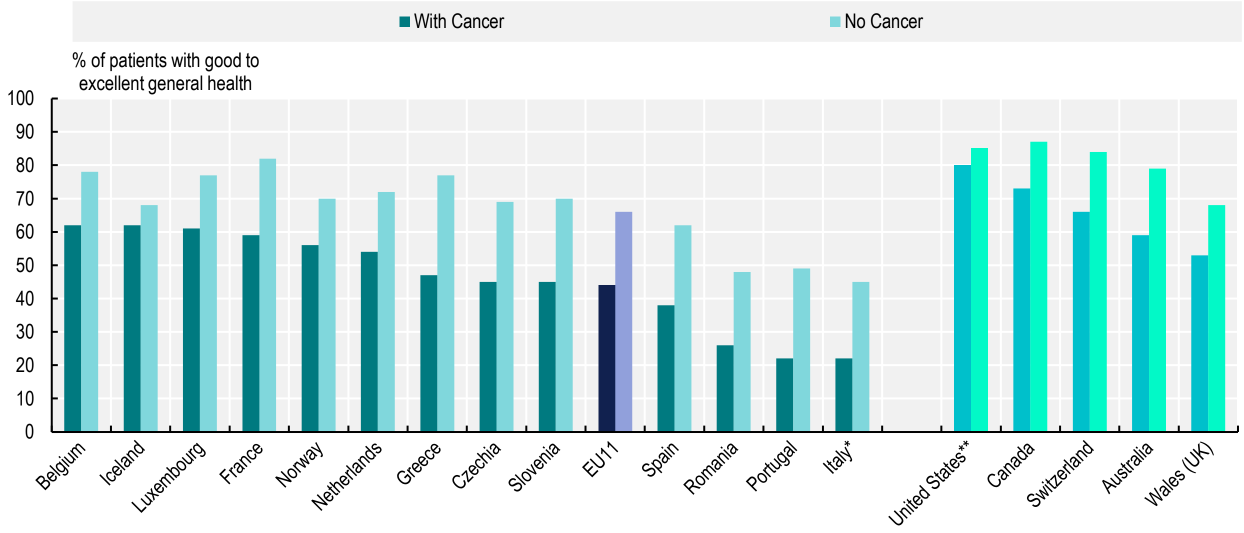


Note: PROMIS® Scale v1.2 – Global Health component for physical health is a T-score metric with a range of 21-68, and a good-fair cutoff of 42 (physical health), higher values represent better physical health. *Data for Italy refer to patients enrolled in outpatient settings for specialist visits in selected regions. **United States sample only includes people aged 65 years or older. All within country differences of the PROMIS physical scale between people with and without cancer are statistically significant (p<0.05).
Source: OECD PaRIS 2024 Database.

Smaller gaps are observed for the self-rated mental health indicator. Compared to other patients, those with a cancer diagnosis in the past five years had lower average self-rated mental health (45 compared to 46 on the PROMIS Mental Scale) (data not shown). Nevertheless, the gap between the two patient groups was not significant at 5% error in any of the participating countries.

Much larger differences appear between PHC patients with and without cancer for the likelihood to report good, very good or excellent health. On average in the EU11, only 44% of PHC patients with a cancer diagnosis in the last five years rated their health as good, very good or excellent, compared to 66% of other primary healthcare patients (Figure 5.3). In Romania, Portugal and Italy, less than three in ten PHC patients living with cancer report a good health status compared to six in ten PHC patients with cancer in Belgium, Iceland and Luxembourg. The gap between PHC patients with and without cancer is the largest in Greece (30 p.p.) and Portugal (27 p.p.), and the lowest in Iceland (6 p.p.) and Norway (14 p.p.).

Figure 5.3. In all countries, cancer patients are less likely to report good general health than other primary healthcare patients



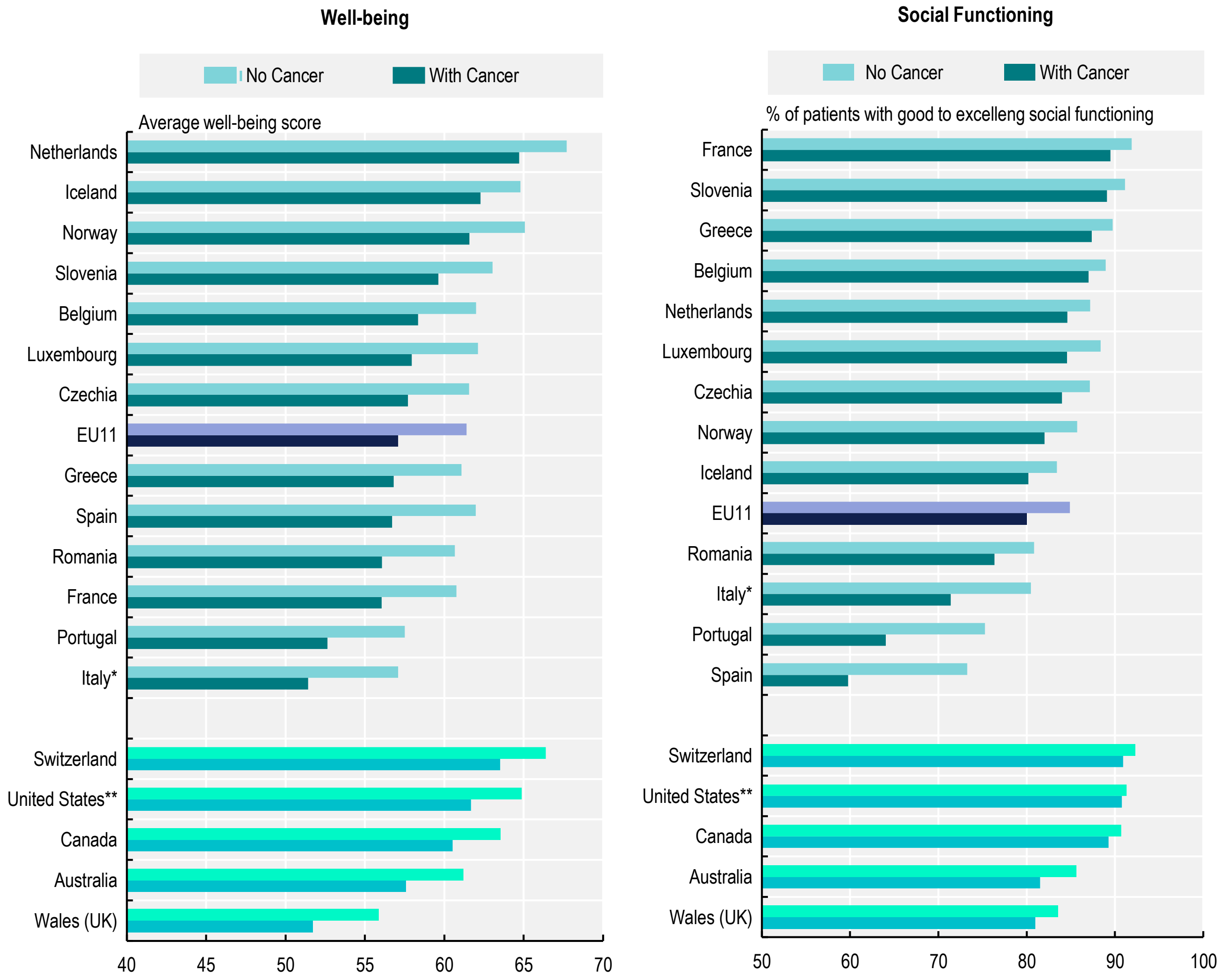
Note: Answer to the question: "In general, would you say your health is …", "good, very good or excellent" versus "fair or poor". *Data for Italy refer to patients enrolled in outpatient settings for specialist visits in selected regions. **United States sample only includes people aged 65 years or older. All within country differences between people with and without cancer are statistically significant ($p<0.05$).
Source: OECD PaRIS 2024 Database.

Looking at other patient reported outcome measures (PROMs), the PaRIS results show that PHC patients with cancer are less likely than other primary healthcare patients to report favourably in terms of social functioning and well-being (Figure 5.4). On average in the EU11, the well-being score of cancer patients is 4 points lower than those without cancer (57 versus 61 on a 0-100 scale). In addition, only 80% of primary care patients with cancer are positive on average about their social functioning compared to 85% of other primary care patients.

For social functioning, the cross-country variation ranges from 60%-90%. Southern Europe, including Spain, Portugal and Italy have the lowest share of PHC patients with cancer reporting positive outcomes for their social functioning (around 70% or less), while France, Slovenia, Greece and Belgium have the highest, with almost 90% of cancer patients reporting favourably in terms of social functioning and well-being.[2]

> Cancer affected my wellbeing because of several surgeries, chemotherapy and endocrine treatment, that caused a lot of physical problems such as nausea, vomit, fatigue and pain…I still continue having pain and fatigue.
>
> *Conchi, 68 years old, breast cancer*

Figure 5.4. Cancer patients are less likely to report higher levels of well-being and social functioning than other primary healthcare patients



Note: WHO-5 well-being index. Response to five questions measuring well-being. Raw scale 0-25 converted to 0-100 scale, higher scores represent higher well-being. PROMIS® Scale v1.2 – Global Health. Answer to the question: “In general, please rate how well you carry out your usual social activities and roles”, “good, very good or excellent” versus “fair or poor”. * Data for Italy refer to patients enrolled in outpatient settings for specialist visits in selected regions. **United States sample only includes people aged 65 years or older.
Source: OECD PaRIS 2024 Database.

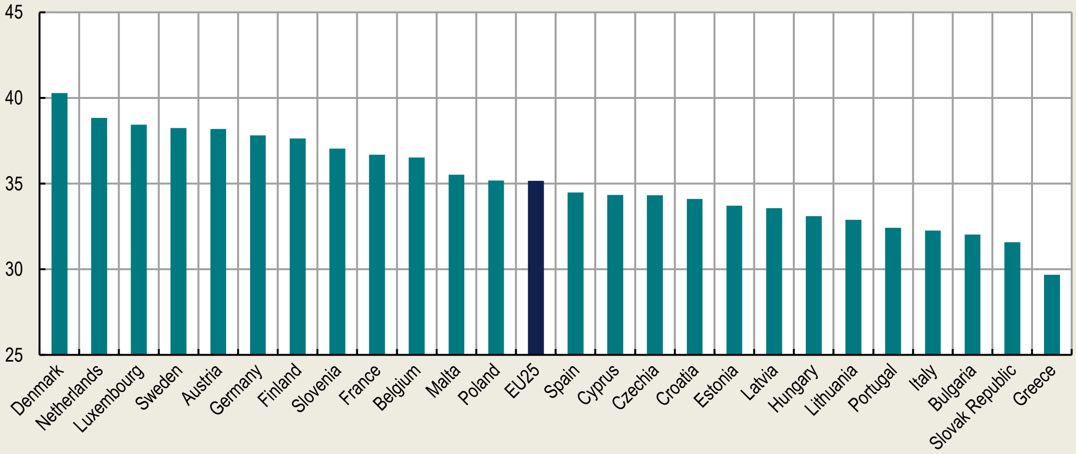
Box 5.2. There is a geographic gradient in quality of life among people living with cancer, with lower scores among South and Central European countries

SHARE is a longitudinal survey providing internationally comparable data on individuals aged 50+, encompassing domains such as health, employment, income, family, and well-being. The sample of this analysis includes all SHARE respondents aged 50 and above who self-reported a diagnosis of cancer (excluding minor skin cancers) between 2004 and 2022, at any point prior to or during their participation in the survey. Rather than focussing exclusively on recent diagnoses, this population captures a broad spectrum of cancer survivors at various stages of post-diagnosis, including long-term survivors.

The CASP-12 scale is used as a proxy to assess quality of life in older adults, encompassing four domains: control, autonomy, self-realisation, and pleasure. CASP-12 scores range from 12 to 48, with higher scores indicating better quality of life. Results revealed substantial variation in CASP-12 scores among people living with cancer across European countries (Figure 5.5). The highest scores were observed in Denmark (40), the Netherlands and Luxembourg (39), pointing to relatively favourable survivorship experiences. In contrast, the lowest averages were recorded in Greece (30), the Slovak Republic (31) and Bulgaria (32), underscoring poorer outcomes in Southern and Central European countries. Countries such as Poland, Malta, France, Belgium, are closer to the EU27 average, with scores around 35. Overall, the results suggest a marked geographical gradient, with Northern and Western European countries generally providing environments more conducive to well-being after a cancer diagnosis, while survivors in Southern and Central Europe experience systematically lower quality of life. These findings are consistent with earlier SHARE-based analyses that documented persistent East-West inequalities in older adults' well-being (Bazilainsky et al., 2023[8]), and they reinforce the need for comprehensive survivorship policies that address not only medical care but also social and economic determinants of quality of life.

Figure 5.5. People living with cancer in Nordic and Western European countries report better quality of life than those living in Southern and Central European countries

CASP-12 score among people living with cancer



Note: CASP-12 scale measures quality of life among older adults, with higher scores indicating better quality of life. The analytic sample includes 15 849 respondents. To ensure a longitudinal perspective, individuals were required to have participated in at least two survey waves. An exception was made for those who already reported a cancer diagnosis at their baseline interview, who were also included even if they contributed only one wave. This approach preserves representativeness of cancer survivors while allowing for within-person change to be observed.
Source: SHARE Survey, Wave 1 (2004) to Wave 9 (2021/22).

Across all surveyed countries and waves, people living with cancer reported significantly lower quality of life compared to their peers without cancer, which persisted after adjusting for age, sex, comorbidities, education, and marital status. The gap in quality of life between people living with cancer and those without varied widely across Europe: cancer survivors reported the largest quality of life losses in Greece, Hungary, the Slovak Republic and Spain, where scores were well below those of their peers, while differences were smallest in Denmark, Finland, the Netherlands and Sweden.

The SHARE analysis also shows that barriers to specialist care are a key driver of reduced well-being. Individuals who reported being unable to access a specialist because care was unavailable scored systematically worse on CASP-12, regardless of whether they had cancer. This illustrates how unmet medical needs undermine quality of life (see Chapter 3). Crucially, the analysis also reveals that cancer survivors bear an extra burden in contexts where specialist care is lacking. In countries such as Latvia and Croatia, the cancer – no cancer gap in quality of life nearly doubled when respondents reported that a specialist was unavailable.

Education-related inequalities compound challenges for cancer patients. Across Europe, survivors with lower educational attainment consistently reported poorer quality of life than their more educated peers. This gradient was visible even after accounting for comorbidities and other socio-demographic factors. Taken together, these results reinforce the case for integrated survivorship policies that combine medical follow-up with health literacy initiatives, targeted support for disadvantaged groups, and social protection.

Note: Estimates are derived from regression models of standardised CASP-12 scores. All models included as regressors: cancer status (β1), barriers to specialist care (β2), and their interaction (β3), along with covariates for age, sex, education (ISCED groups), marital status, and comorbidity count. Country and wave fixed effects were included in pooled OLS regressions, while individual fixed-effects models additionally controlled for time-invariant characteristics of respondents by excluding person-level fixed effects, together with wave (and country, for the pooled model).

5.2.2. PHC patients with cancer and lower education are almost 30% less likely to report good to excellent health compared to those with higher levels of education

PaRIS data show that among PHC patients who live with cancer, there is a strong social gradient in patient-reported outcomes. There are significant differences between education levels in well-being, general health and social functioning (data not shown) in favour of higher educated groups (Figure 5.6).

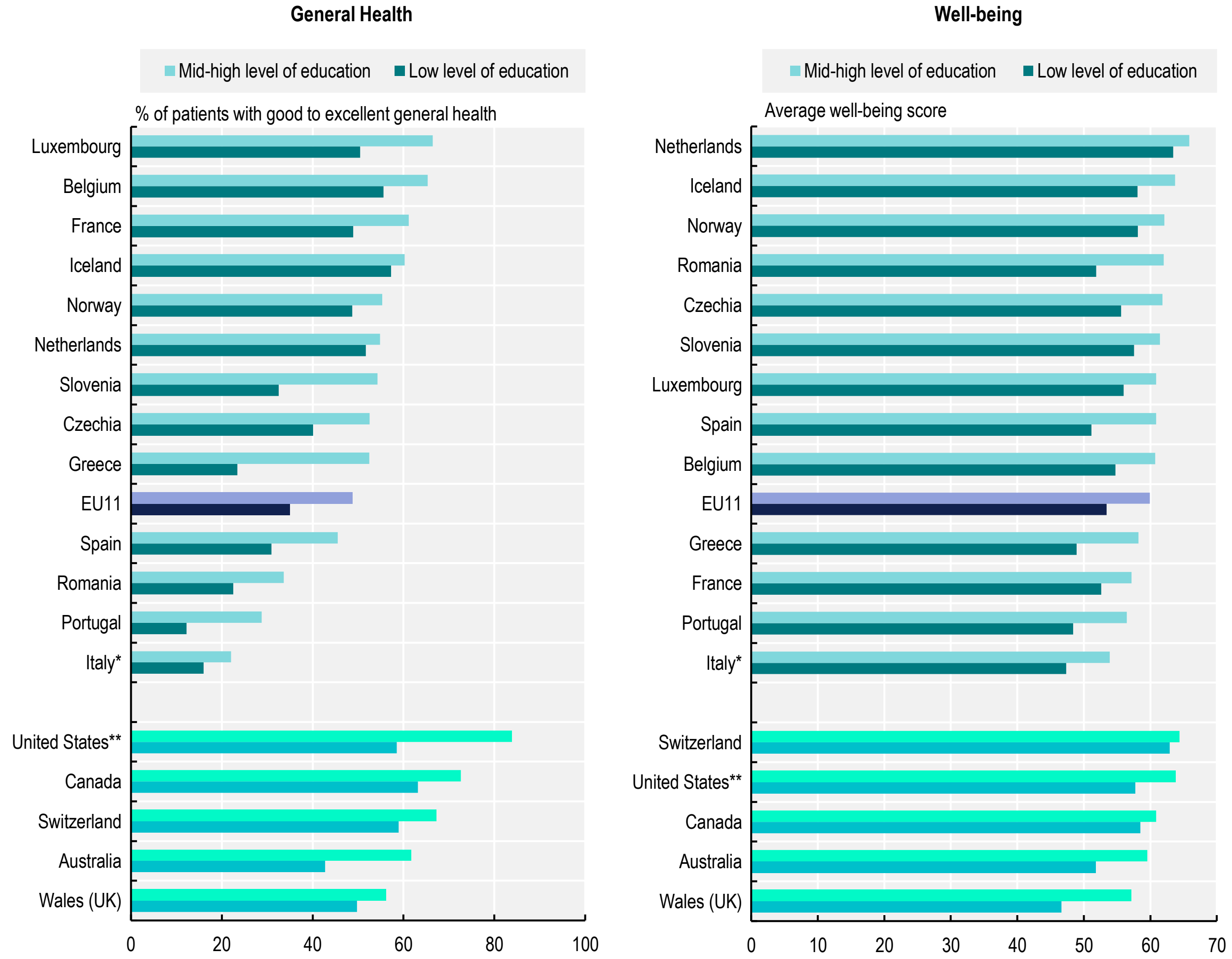
This finding has already been demonstrated in the general population (OECD, 2023[9]). However, the social gradient between PHC patients with and without a cancer diagnosis does not differ. In other words, receiving a cancer diagnosis does not diminish the education-related health gap. As a result, PHC patients with cancer and lower levels of education face a double health burden: the health disadvantages associated with limited education and the additional challenges imposed by the disease, which together accumulate and can compound over time.

On average in the EU11 countries, among PHC patients living with cancer, those with a low level of education are almost 30% less likely to report good to excellent health status. Country-level variations are particularly striking for general health. In the Netherlands and Iceland, there is virtually no gap between education groups, whereas countries such as Greece, Slovenia, Luxembourg and Portugal show disparities of more than 16 p.p. On average there is a tenfold variation in the size of the gap between countries.

While differences in well-being by education groups between countries are somewhat less pronounced, notable disparities still exist. On average in the EU11 countries, the gap in the well-being score between education groups remains at seven points, with well-being score being 11% lower among those with a lower level of education compared to those with a higher-level education. Cross-country variation in the educational gap is also evident. It ranges from a gap of two points in the Netherlands to ten points in Spain and Romania.

Figure 5.6. The educational gap in general health varies more than 10-fold between countries

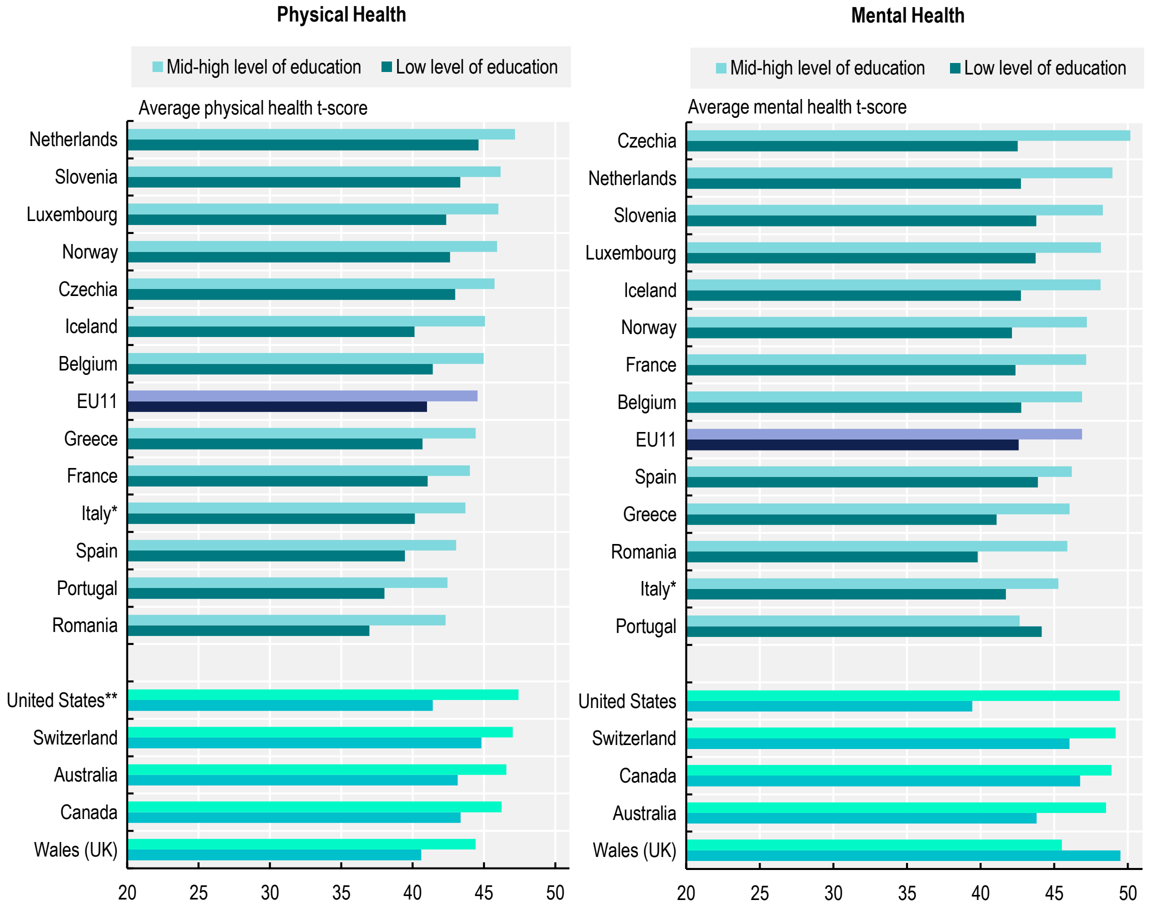
General health and well-being among PHC patients living with cancer



Note: WHO-5 well-being index. Response to five questions measuring well-being. Raw scale 0-25 converted to 0-100 scale, higher scores represent higher well-being. PROMIS® Scale v1.2 – Global Health. Answer to the question: “In general, would you say your health is …”, “good, very good or excellent” versus “fair or poor”. *Data for Italy refer to patients enrolled in outpatient settings for specialist visits in selected regions. **United States sample only includes people aged 65 years or older.
Source: OECD PaRIS 2024 Database.

In addition, among PHC patients living with cancer, those with higher education show more favourable scores on physical and mental health. There are statistically significant gaps of four points on average among the sample of patients for self-rated physical and mental health T-scores (Figure 5.7). For physical health, the largest educational gaps are found in Iceland and Romania, while for the mental health score, the largest social gradient is found in Czechia, the Netherlands and Romania. Among other OECD countries, the United States displays the largest social gradient for both self-rated physical (6 points) and mental health (10 points) T-scores.

Figure 5.7. Physical and mental health scores are higher in cancer patients with mid-high level of education



Note: PROMIS® Scale v1.2 – Global Health component for physical and mental health is a T-score metric with a range of 21-68, and a good-fair cutoff of 42 (physical health) and 40 (mental health), higher values represent better physical and mental health respectively. *Data for Italy refer to patients enrolled in outpatient settings for specialist visits in selected regions. **United States sample only includes people aged 65 years or older.

Source: OECD PaRIS 2024 Database.

5.2.3. Cancer diagnosis reduces the likelihood of employment by 14%

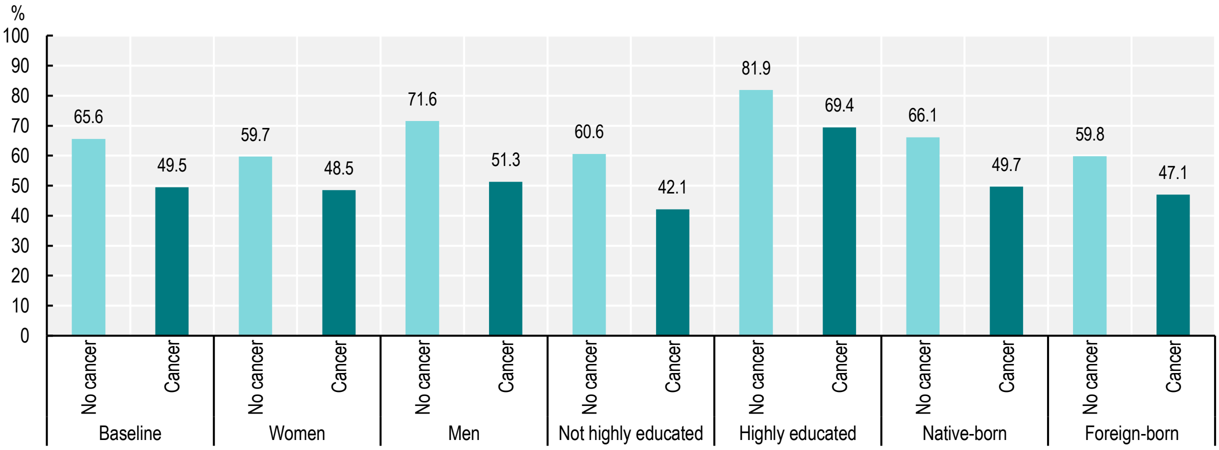
A handful of studies consistently shows that cancer has a substantial and multi-faceted impact on employment and productivity, both at the individual and societal levels. A systematic review analysing the impact of lung cancer on the employment status of cancer survivors shows that lung cancer survivors are two to three times more likely to be unemployed compared to individuals without a cancer diagnosis (Vayr et al., 2019[10]). Among breast cancer survivors, employment outcomes are particularly concerning: around 30% of those who were employed at the time of diagnosis were no longer working four years later, with chemotherapy increasing this risk of unemployment by 40% (Jagsi et al., 2014[11]). The long-term impact on lost earnings and unemployment is particularly of concern where cancer is diagnosed at a younger age (Bentley et al., 2022[12]).

In terms of work capacity and productivity, many patients living with cancer report significant challenges. A national survey in the United States found that 70% of employed cancer patients experienced work disruptions during treatment, including missed days (32%), wage losses (18%), and reduced work quality (10%) (Kansal et al., 2024[13]). People living with colorectal and breast cancer exhibit higher rates of long-term disability and more frequent absenteeism (Zheng et al., 2015[14]). For example, one study based on the 2008-2012 Medical Expenditure Panel Survey in the United States found that colorectal and breast cancer survivors had 14% and 5% (respectively) higher disability rates compared to those without cancer (Zheng et al., 2015[14]). Overall, at the macro level, the indirect cost of cancer on productivity and workforce participation is large, as it is estimated that OECD countries lose the equivalent of 3.1 million full-time workers due to cancer (1.1 million in the EU) (OECD, 2024[15]). This translates into a lost workforce output of EUR PPP 180 per capita per year, or EUR PPP 163 billion per year.

Figure 5.8 demonstrates average employment rates across the 27 EU countries in the SHARE sample. The results indicate that the proportion of individuals employed or self-employed among those having a cancer diagnosis is 26% lower compared to those without such a diagnosis (49% vs. 66%). The estimated effect is aligned with a synthetic study by de Boer et al. (2020[16]), who estimated the loss of work being 27% immediately after a cancer diagnosis. The employment rate is consistently lower among respondents with a history of cancer, regardless of gender, educational attainment, or country of birth. However, among respondents with a cancer diagnosis, the employment rate is 39% lower among those with a low level of education compared to those with higher education levels. Disparities are less pronounced when considering country of birth: the employment gap between native-born and foreign-born respondents with a cancer diagnosis is 3 p.p. (50% vs. 47%, respectively).

Figure 5.8. Among people living with cancer, those with a low level of education are almost 40% less likely to be employed or self-employed than those with higher education levels

Percentage of employment and self-employment, EU average over 2004-2022



Note: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, the Slovak Republic, Slovenia, Spain and Sweden are included. SHARE is among people aged 50 and above.
Source: Survey of Health, Ageing and Retirement in Europe (SHARE), Wave 1 (2004) to Wave 9 (2021/22).

Controlling for individual and country-specific effects, regression analysis largely confirms the negative and significant association between a cancer diagnosis and employment prospects. Having a cancer diagnosis is consistently associated with a statistically significant reduction in the likelihood of being employed, with coefficients ranging from -0.161 to -0.142 from Ordinary Least Squares models and from -0.065 to -0.068 from fixed effects models (Table 5.1), meaning that having a cancer diagnosis reduces the likelihood of employment by between 14%-16%, compared to not having a cancer diagnosis This negative association remains robust even after adjusting for demographic characteristics, chronic conditions, and fixed effects for country and year.

Table 5.1. The negative and significant association between a cancer diagnosis and employment prospects is confirmed across all model specifications

	Likelihood to be employed or self-employed Ordinary Least Squares (OLS)			Likelihood to be employed or self-employed Fixed Effects (FE)		
Cancer diagnosis	**-0.161*** **	**-0.148*** **	**-0.142*** **	**-0.065*** **	**-0.068*** **	**-0.065*** **
Higher education	-	0.216***	0.167***	-	0.047	0.123
Foreign born	-	-0.073***	-0.085***	-	-	-
Other controls	-	Age, Age^2, Sex	Age, Age^2, Sex, Multi-morbidity, Country FE, Year FE	-	Age, Age^2, Country FE, Year FE	Age, Age^2, Multi-morbidity, Country FE, Year FE
Adjusted R^2	0.004	0.080	0.152	0.664	0.677	0.678

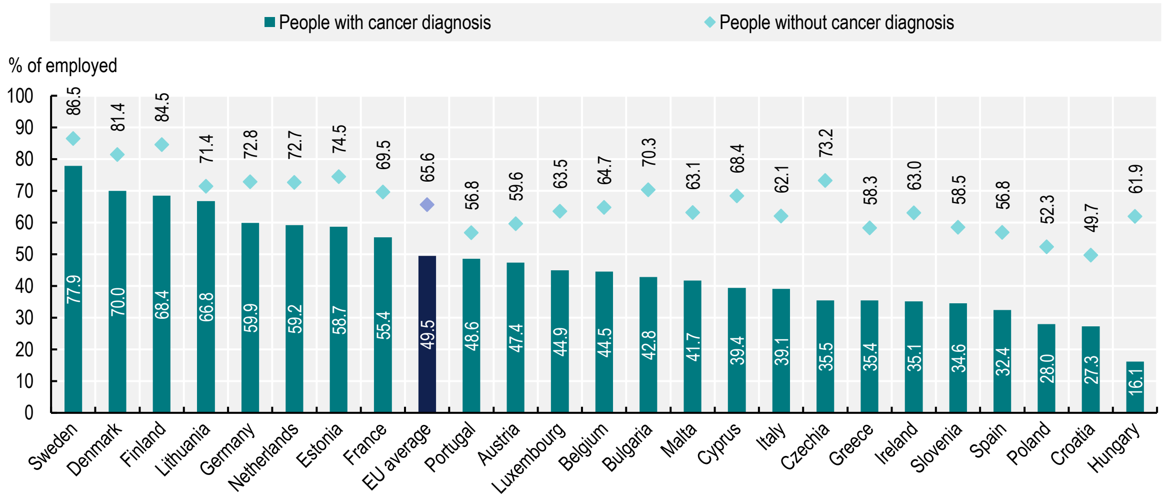
Note: Level of significance: NS: non-significant, *p<0.10, **p<0.05, ***p<0.01. Standard errors are clustered at the individual level. The number of observations is 112 692 in all models. The constant term is included in all OLS models. Probit estimation of the likelihood to be employed or self-employed yield similar results (data not shown). Age^2 refers to the square of the age variable, which allows the model to capture non-linear effects of age.

Source: Survey of Health, Ageing and Retirement in Europe (SHARE), Wave 1 (2004) to Wave 9 (2021/22).

At the country level, the employment gap between individuals living with a cancer diagnosis and those without tends to be smallest in countries with the highest proportion of people employed/self-employed, including the Nordic countries and Lithuania (Figure 5.9). The most substantial employment gaps are observed in Hungary (-46 p.p.), Czechia (-38), Cyprus (-29), Ireland (-28) and Bulgaria (-28). It highlights significant cross-country disparities in the employment impact of cancer, suggesting that national-level factors – such as labour market policies, social protection systems, and workplace reintegration support – play a key role in shaping labour market outcomes for people living with cancer. In Denmark, for example, a population-based study finds that employment outcomes between cancer survivors and the general population become negligible after five years during the observation period of 2000 to 2015, except for those who experienced lung, colorectal, upper gastrointestinal and blood cancers (Brink et al., 2024[17]).

Country-specific fixed-effects regression results (data not shown) further support these findings. Among countries performing above the EU average, the negative effect of a cancer diagnosis on employment is statistically significant in Estonia and France; as well as in Cyprus, Italy, Czechia and Hungary among underperforming countries, indicating a negative impact of cancer on employment outcomes all things being equal (holding all other characteristics constant). These findings suggest both structural and policy-related differences across countries that may influence the ability of individuals with cancer to remain in or return to employment.

Figure 5.9. The employment gap between individuals living with a cancer diagnosis and those without is highest in Central and Eastern European countries



Note: Latvia, Romania and the Slovak Republic are not presented as the share of people with a cancer diagnosis is too small in the sample (with less than 1.5% of observations in each country) but are included for the EU average. SHARE is among people aged 50 and above.
Source: Survey of Health, Ageing and Retirement in Europe (SHARE), Wave 1 (2004) to Wave 9 (2021/22).

The increasing incidence of early-onset cancer (see Chapter 2) is expected to have significant long-term economic consequences, particularly due to lost productivity and reduced workforce participation and working hours among younger patients. Greater attention must be given to return-to-work support for people living with cancer (see Section 5.5). Moreover, the impact extends beyond patients themselves, affecting family members and caregivers – many of whom face job disruptions, stress-related absenteeism, and financial hardship due to their caregiving responsibilities.

5.3. How can people-centred care improve health outcomes and quality of life for cancer patients?

People-centred care puts the needs, preferences, values and goals of individuals and communities at the heart of decision making and care delivery, emphasising respectful and co-ordinated care that supports individuals throughout their health journey. People-centredness is particularly critical for people living with cancer, who often navigate complex care pathways involving multiple providers and settings – such as primary healthcare, oncology, palliative care, and support services. For these patients, people-centred care can help ensure better co-ordination and continuity across the full spectrum of care, improve communication with providers, and empower them to actively participate in decisions about their treatment and support, ultimately leading to better health outcomes. In PaRIS, people-centredness is measured by the concept of person-centred care using the P3CEQ scale (Lloyd et al., 2018[18]), which includes eight items ranging from discussion on what is important and involvement in decision making, to having confidence to self-manage care (see Box 5.3).

Box 5.3. Measuring person-centredness with the P3CEQ scale

PaRIS measures people-centredness using the P3CEQ scale, which refers to the concept of person-centredness. The scale combines the following eight items that are equally weighted from 0 to 3 (the higher the score, the higher the person-centredness). The final scale ranges from 0 to 24:

- Discuss what is important, derived from the question “Do you discuss with the healthcare professionals involved in your care what is most important for you in managing your own health and well-being?”
- Involved in decisions, derived from the question “Are you involved as much as you want to be in decisions about your care?”
- Considered as a whole person, derived from the question “Are you considered as a ‘whole person’ rather than just a disease/condition in relation to your care?”
- Need to repeat information, derived from the question “Were there times when you had to repeat information that should have been in your care records?”. The positive item is when the patient indicates that there is no need to repeat information.
- Care organisation, derived from the question “Is your healthcare organised in a way that works for you?”
- Support to self-manage, derived from the question “Do you receive enough support from healthcare professionals to help you manage your own health and well-being?”
- Information to self-manage, derive from the question “To what extent do you receive useful information at the time you need it to help you manage your own health and well-being?”
- Confidence to self-manage, derived from the question “How confident are you that you can manage your own health and well-being?”

Cross-country variations in person-centred care might also reflects differences in patient expectations regarding the degree of person-centred care, which varies by age, gender, and individual preferences.

Source: Lloyd et al. (2018[18]), “Validation of the person-centred coordinated care experience questionnaire (P3CEQ)”, https://doi.org/10.1093/intqhc/mzy212; OECD (2025[2]), *Does Healthcare Deliver?: Results from the Patient-Reported Indicator Surveys (PaRIS)*, https://doi.org/10.1787/c8af05a5-en.

5.3.1. PHC patients living with cancer who experience more person-centred care report better physical and mental health, and have higher well-being

PaRIS data show that in all countries, PHC patients living with cancer who report higher levels of person-centred care (corresponding to a person-centred score of 19 or more out of 24) feel healthier and report better physical health score than those who report lower person-centred care (score below 17). On average, the difference between cancer patients reporting higher and lower levels of person-centred care stands at about four points for both the PROMIS physical scale and the mental health scores (Figure 5.10).

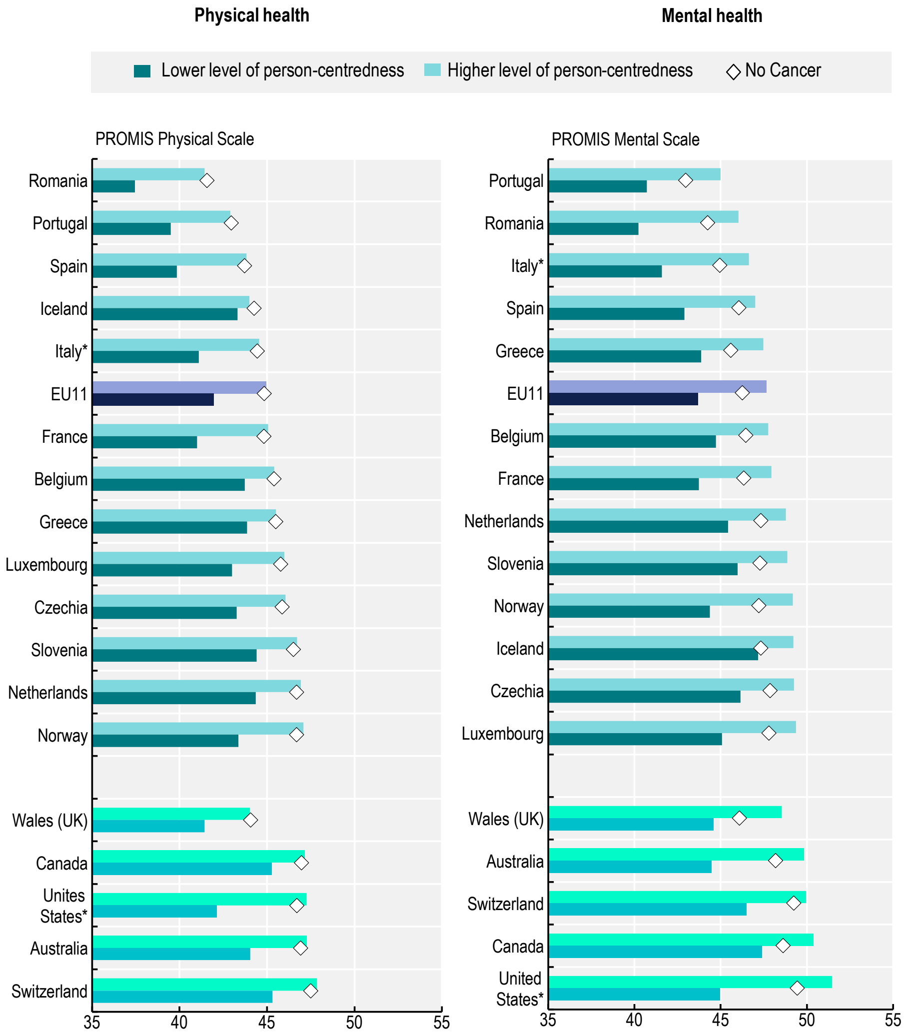
An interesting finding is that cancer patients who report high levels of person-centredness show even better mental health than patients with other chronic conditions treated in primary healthcare. In terms of physical health, high person-centredness places cancer patients on par with patients with other chronic conditions, whereas cancer patients reporting low person-centredness have significantly worse health outcomes (Figure 5.10).

When comparing cancer patients with high versus low levels of person-centred care, the largest absolute differences in physical scores are seen in France, Spain and Romania, as well as the United States.

Conversely, countries like Belgium, Greece and Iceland displayed relatively small gaps in physical scores between cancer patients with high and low levels of person-centred care. The largest differences in mental health between cancer patients with high versus low person-centred care are seen in Romania, Italy and Norway, as well as in Australia and the United States. On the other hand, Iceland and Slovenia showed the smallest gaps. Overall, increasing person-centred care is of particular importance in Romania, Portugal, Italy and Spain – which are countries that present the lowest physical and mental health scores among cancer patients reporting low levels of person-centredness. A key policy direction to mitigate the indirect health impact of cancer is to enhance people-centred primary healthcare.

Figure 5.10. Cancer patients experiencing more person-centred care report higher physical and mental health scores

PROMIS Physical and Mental health score by levels of P3CEQ Person Centredness



Note: PROMIS® Scale v1.2 – Global Health component for physical and mental health is a T-score metric with a range of 21-68, and a good-fair cutoff of 42 (physical health) and 40 (mental health), higher values represent better physical and mental health respectively. The figure compares physical and mental health score of people with low-medium person-centredness care (score below 17 points out of 24) and the group with high person-centredness care (score above or equal to 19 points out of 24). The "no Cancer" group comprises only people with chronic conditions (other than cancer). *Data for Italy refer to patients enrolled in outpatient settings for specialist visits in selected regions. ** United States sample: only includes people of 65 years and older.
Source: OECD PaRIS 2024 Database.

Looking at the well-being index provides similar results (data not shown). On average in the EU11, those living with cancer and with high levels of person-centred care report a higher well-being score (64) than their counterparts with low levels of person-centred care (53). Overall, the highest gap in well-being among cancer patients having high and low levels of person-centred care was found in France, Portugal and Italy.

While direct evidence from trials demonstrating that P3CEQ scores lead to improved clinical outcomes such as reduced hospitalisations or mortality is still emerging, there are consistent correlations with higher quality of care and improved self-management (Rijken et al., 2022[19]). Higher person-centred care experience translates into better health engagement and satisfaction, which are intermediate predictors of longer-term health and social benefits (Kuipers, Cramm and Nieboer, 2019[20]).

5.3.2. PHC patients living with cancer who are confident in self-managing care have better physical and mental health

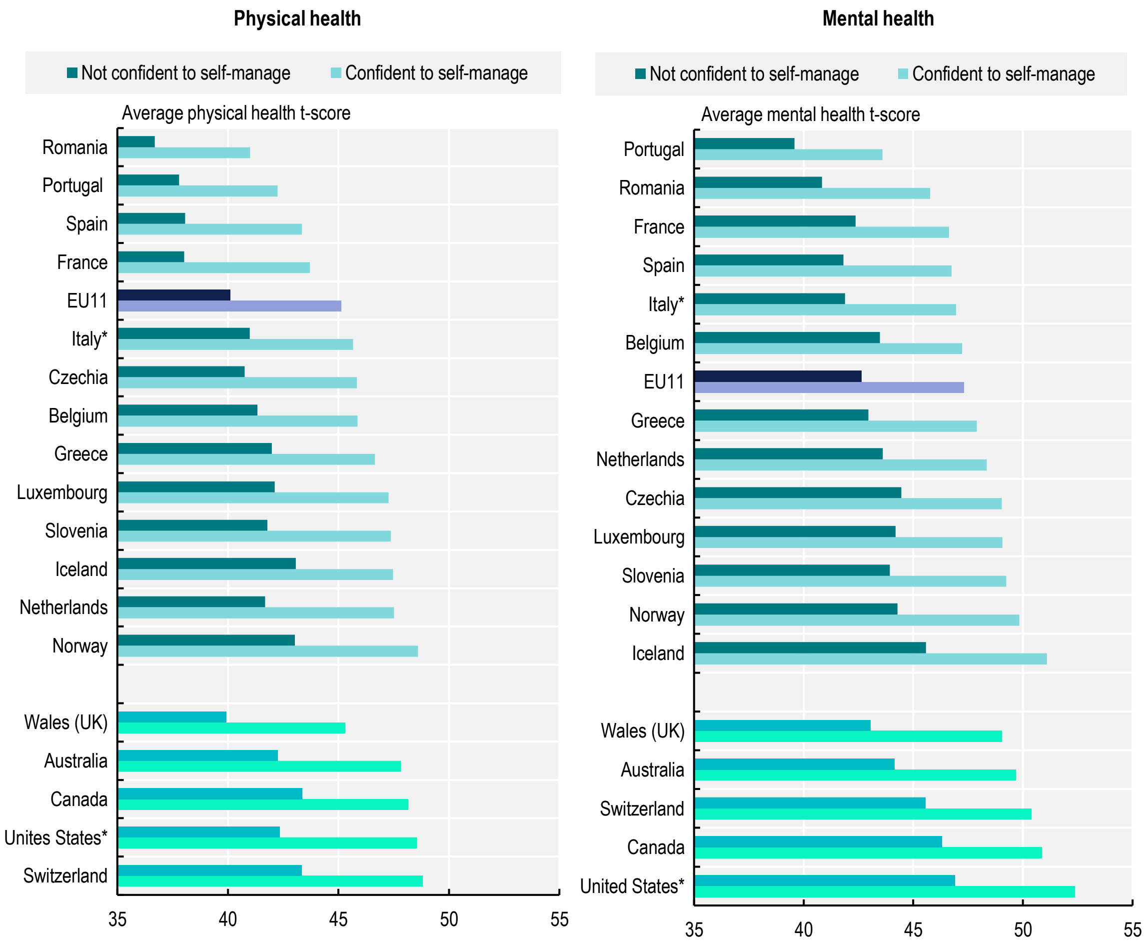
Confidence to self-manage, which measures how confident patients living with cancer are in managing their own health and well-being, is a key component of person-centred care. According to PaRIS data, in all countries, PHC patients living with cancer who are more comfortable self-managing their health have higher physical and mental health outcomes (Figure 5.11). On average, the difference in health outcomes between cancer patients reporting confidence and no confidence in self-management is of five points on both the PROMIS physical and mental health scores. The health gap between respondents being confident and those not being confident is the largest in the Netherlands, France and the United States for physical health, and in Iceland, Norway, Wales (United Kingdom) and Australia for mental health. For both health outcomes, Romania, Portugal, Spain and France present the lowest physical and mental health scores among those not being confident in self-managing their health, highlighting the scope for improvement in these countries. Similar results are found looking at the well-being index (data not shown).

These results align with several studies showing that self-management support is associated with improved physical and mental health outcomes for cancer patients, but the reverse relationship also holds true (patients with poorer health outcomes often feel less capable of managing their own health). A 2024 systematic review examining 32 self-management programmes for cancer patients, shows that two-thirds led to improvement in quality of life, associated most often with combined individual and group delivery on topics such as lifestyle advice and support, training for psychological strategies or information about the condition and its management (Rimmer et al., 2023[21]). A more recent randomised controlled trial has shown that colon cancer survivors who followed a structured exercise regimen saw survival rates rise to 90%, compared to 83% in controls, alongside reduced fatigue and pain (Courneya et al., 2025[22]). A 2023 scoping review also showed that self-management exercise programmes among breast cancer survivors improved physical function, decreased fatigue, and enhanced emotional well-being (Bo et al., 2023[23]).

Lastly, similar results are found using the indicator on experienced co-ordination, another key component of person-centredness. Cancer patients who reported a seamless and continuous journey through different healthcare practices and settings experience higher levels of physical, mental, and overall well-being (data not shown). These findings are consistent with observational studies which show that survivors who receive co-ordinated care – characterised by clear information exchange, emotional support, and continuity – report better physical, social, and functional outcomes (Monterosso et al., 2019[24]; Bell et al., 2020[25]). Recent systematic reviews also corroborate these findings, demonstrating that co-ordination yields the largest quality of life gains in people living with cancer and with social disadvantage (Chen M, Wu VS, Falk D, Cheatham C, Cullen J, Hoehn R., 2024[26]).

Figure 5.11. Confidence to self-manage is associated with better health outcomes among PHC patients living with cancer

PROMIS Physical and Mental health scores by having confidence in self-managing care



Note: PROMIS® Scale v1.2 – Global Health component for physical and mental health is a T-score metric with a range of 21-68, and a good-fair cutoff of 42 (physical health) and 40 (mental health), higher values represent better physical and mental health respectively. Confidence to self-manage: Response to question: “How confident are you that you can manage your own health and well-being?”, response options range from not confident at all (0) to very confident (3). *Data for Italy refer to patients enrolled in outpatient settings for specialist visits in selected regions. * United States sample: only includes people of 65 years and older.
Source: OECD PaRIS 2024 Database.

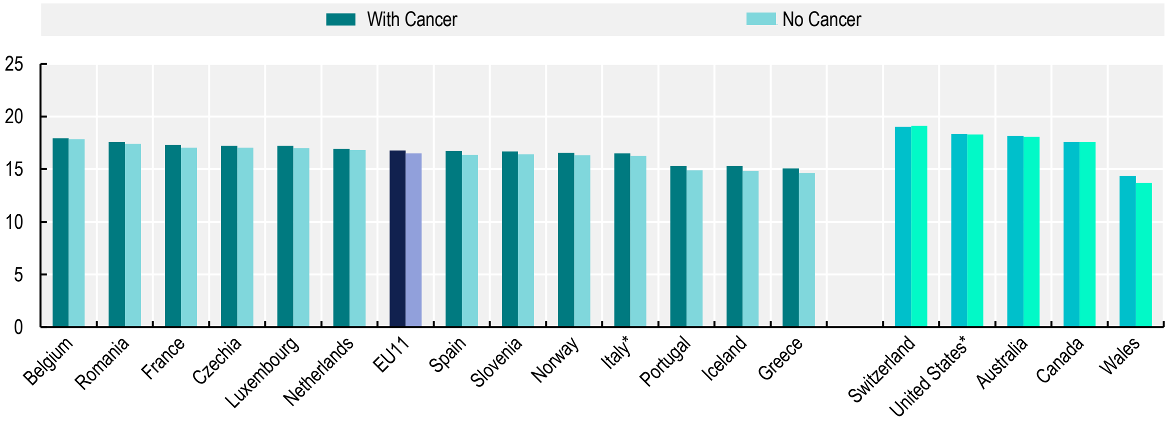
5.4. How people-centred are primary healthcare systems for people living with cancer?

5.4.1. PHC patients living with cancer reported similar experiences of person-centredness compared to patients with other chronic conditions

Using the P3CEQ scale, PaRIS results show that primary healthcare patients with cancer and other chronic conditions do not differ significantly in their experience of person-centred care, with the score averaging 17 (out of a maximum 24) for both populations. In addition, in all countries, patients living with cancer scored on average above the cutoff value indicating positive experience (>=12). This means that on average, in each country, over 50% of patient living with cancer responded positively to the 8 questions. Among the EU11 countries, P3CEQ score was highest in Belgium and Romania, and lowest in Portugal, Iceland and Greece (Figure 5.12).

Figure 5.12. PHC patients with and without cancer do not differ significantly in their experience of person-centred care

P3CEQ Person centredness score



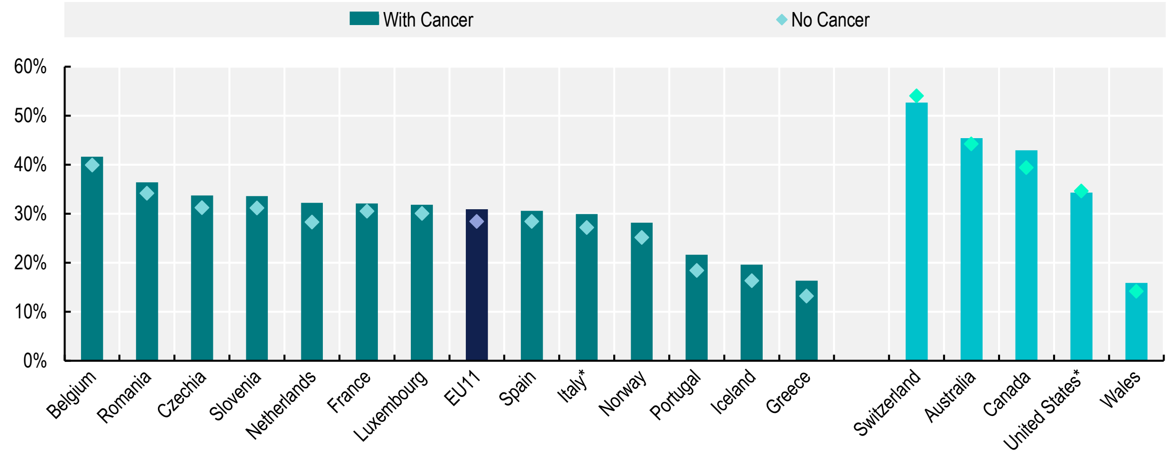
Note: P3CEQ Person-centredness score (1-24) where a higher score means more person-centredness. P3CEQ scores are only calculated for people with chronic conditions, hence, the "No cancer" group has at least one other chronic condition (other than cancer).
Source: OECD PaRIS 2024 Database.

5.4.2. A third of PHC patients with cancer report high levels of people centredness in the EU11

Figure 5.13 presents the percentage of people reporting high person-centredness (score at or above 19). Among EU11 countries, about four in ten PHC patients living with cancer in Belgium consider their primary healthcare highly person-centred. In contrast, only 1.6 out of ten PHC patients living with cancer reported this in Greece. Overall, there is a 2.5-fold variation across countries in the percentage of PHC patients living with cancer reporting high person-centred care. As mentioned in Box 5.3, some of the observed variation likely reflects differences in patient expectations regarding the degree of person-centred care, highlighting the importance of tailoring cancer care to individual needs and preferences.

Figure 5.13. There is a more than 2.5-fold variation in the percentage of people reporting high person-centred care across countries

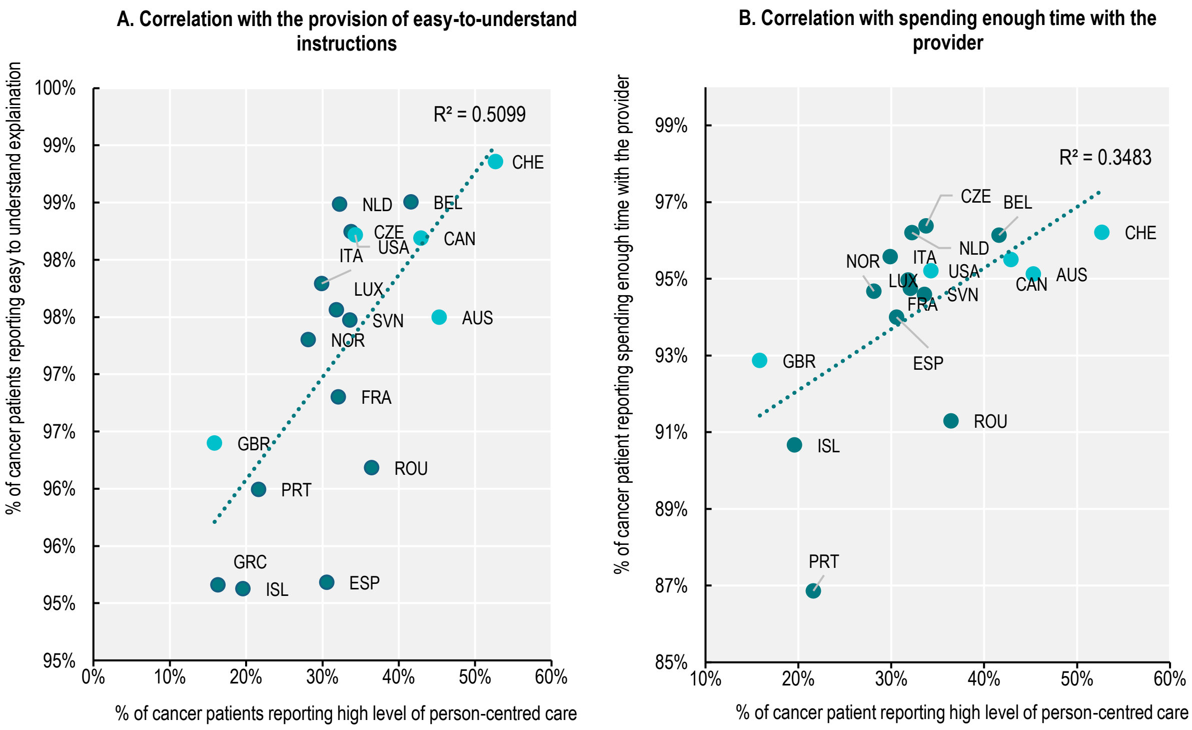
Percentage of patients reporting high person-centredness (score of 19 or over)



Note: P3CEQ Person-centredness score (1-24) where a higher score means more person centredness. P3CEQ scores are only calculated for people with chronic conditions, hence, the "No cancer" group has at least one other chronic condition (other than cancer). *Data for Italy refer to patients enrolled in outpatient settings for specialist visits in selected regions. * United States sample: only includes people of 65 years and older.
Source: OECD PaRIS 2024 Database.

According to PaRIS analyses, sufficient consultation time, effective communication with one's healthcare professional, and use of digital tools contribute to person-centred care experiences in general. Spending enough time during consultations and the provision of easy-to-understand instructions are particularly important for more person-centred care, as well as the use of digital tools (OECD, 2025[2]). These results are also confirmed among PHC patients living with cancer. There is a positive correlation between the proportion of people reporting a high level of person-centred care and those receiving easy-to-understand explanations, and the time spent with health professionals (Figure 5.14), as well as the possibility to talk about health issues (data not shown).

Figure 5.14. The provision of easy-to-understand instructions and spending enough time with health professionals is strongly correlated with a high level of people-centred care



A. Correlation with the provision of easy-to-understand instructions

B. Correlation with spending enough time with the provider

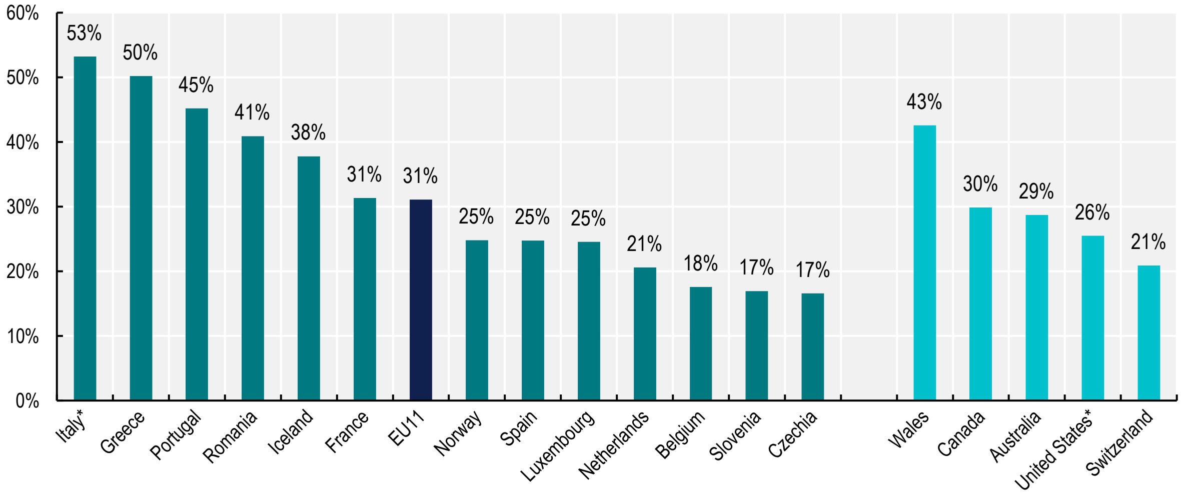
Note: High-level of person-centredness refers to score of 19 or more based on P3CEQ Person-centredness score (1-24). P3CEQ scores are only calculated for people with chronic conditions, hence, the "No cancer" group has at least one chronic condition (other than cancer).
Source: OECD PaRIS 2024 Database.

5.4.3. Person-centredness could be improved through more effective use of medical health records

According to PaRIS, almost one-third of PHC patients living with cancer needed to repeat information that should have been in their health records (Figure 5.15). Having to repeatedly provide health information that should be documented in a patient's care record signals weak integration of care, insufficient data systems, and limited capacity to support smooth care transitions. The highest percentages were observed in Italy and Greece, where more than half of people living with cancer reported that they needed to repeat health information that should have been available in their health records. By contrast, this applied to only one in six people living with cancer in Belgium, Slovenia and Czechia.

Figure 5.15. A third of patients in EU+2 countries had to repeat information that should have been available in their health record

Percentage of cancer patients who needed to repeat information that should have been available in their health records



Note: *Data for Italy refer to patients enrolled in outpatient settings for specialist visits in selected regions. * United States sample: only includes people of 65 years and older.
Source: OECD PaRIS 2024 Database.

5.4.4. A range of additional attributes can help strengthen the co-production and co-ordination of care

Two key dimensions of person-centredness are co-production of health and co-ordination of care. These dimensions reflect different but interrelated aspects of person-centredness:

- Co-production of health refers to the extent to which patients are involved in shaping their care and managing their health. It includes experiences such as being involved in decision making, feeling confident in managing one's own health and being supported with the right information and resources to manage care (see Table 5.2).
- Co-ordination of care relates to the organisation and continuity of care across different providers and settings, so that patients experience care that is seamless, consistent, and well-integrated. It includes receiving co-ordinated services, being treated in practices well-prepared to co-ordinate care, and having an overall care plan.

Table 5.2 presents a set of indicators that summarise these two dimensions based on PaRIS. While not exhaustive, these indicators provide a meaningful overview of each concept and provide guidance to policymakers on how to improve person-centred care in primary healthcare settings for people living with cancer[3].

Table 5.2. Heatmap on co-production of health and co-ordination of care for PHC patients living with cancer

	Co-production of health			Co-ordination of care		
	Patient involved in decision making (% of patients)	Confidence in managing their own health (% of patients)	Patient receives enough support to manage health and well-being (% of patients)	Experienced co-ordination of care (P3CEQ Co-ordination score 0 to 15)	Patients treated in practices well-prepared to co-ordinate care (% of patients)	Having a care plan (% of patients)
Australia	98%	61%	75%	9.8	30%	51%
Belgium	96%	63%	72%	9.3	39%	43%
Canada	97%	59%	77%	9.2	37%	38%
Czechia	96%	65%	70%	9.4	30%	47%
France	89%	85%	64%	8.9	41%	59%
Greece	90%	36%	56%	7.4	38%	62%
Iceland	96%	33%	56%	6.7	56%	31%
Italy	92%	24%	69%	9.6	50%	79%
Luxembourg	95%	55%	71%	8.9	39%	45%
Netherlands	90%	76%	57%	7.4	31%	12%
Norway	93%	43%	64%	8.5	40%	47%
Portugal	93%	60%	72%	7.6	44%	49%
Romania	91%	40%	51%	10.6	42%	71%
Slovenia	92%	62%	67%	8.4	46%	54%
Spain	85%	68%	83%	8.7	43%	31%
Switzerland	89%	67%	73%	10.4	33%	52%
United states	85%	72%	47%	9.4	38%	39%
Wales (UK)	82%	52%	66%	5.7	30%	13%
EU11	**92%**	**58%**	**67%**	**8.7**	**40%**	**50%**

Note: P3CEQ Co-ordination score (0 to 15), based on response to five questions measuring care co-ordination (care joined up, single named contact, overall care plan, support to self-manage, information to self-manage). Cells are shaded darker green for values above the 95% confidence interval of the EU11 average, and lighter green for values below it. *Data for Italy refer to patients enrolled in outpatient settings for specialist visits in selected regions. ** United States sample: only includes people of 65 years and older.
Source: OECD PaRIS 2024 Database.

EU countries like Belgium, Czechia and Spain consistently perform well across most indicators of co-production, alongside Australia, Canada and Switzerland. On the other hand, Greece, Iceland and Romania show weaker results, in addition to other OECD countries like Wales (United Kingdom) and the United States. On average in the EU11, most patients with cancer report being involved in decision making (92%), and over 95% of patients report involvement in Australia, Belgium, Canada, Czechia, Iceland and Luxembourg.

Just under three out of five (58%) PHC patients living with cancer in the EU11 report being confident in managing their own health and a higher proportion (67%) say they receive enough support to manage their own health. Confidence in managing one’s own health varies widely, with rates ranging from 85% in France and 76% in the Netherlands to just 24% in Italy and 33% in Iceland, pointing to wide disparities in how empowered patients feel to manage their own health. These results suggest that even health systems with high patient engagement may lack the organisational capacity to deliver fully integrated, supportive care.

On the co-ordination of care side, Italy and Romania consistently perform well across most indicators, while the Netherlands and Spain (as well as Canada and Wales (United Kingdom)) show weaker results. The contrast between Romania's comparatively weaker position in co-production and stronger position in co-ordination can reflect a historical paternalistic approach of primary healthcare doctors with more recent improvements in care pathways guidelines. Nevertheless, in 2023 Romania implemented a pioneering law establishing the right to personalised medicine, with important elements regarding co-production of health (Geanta et al., 2024[27]). The effects of this reform will most likely be seen in the coming years.

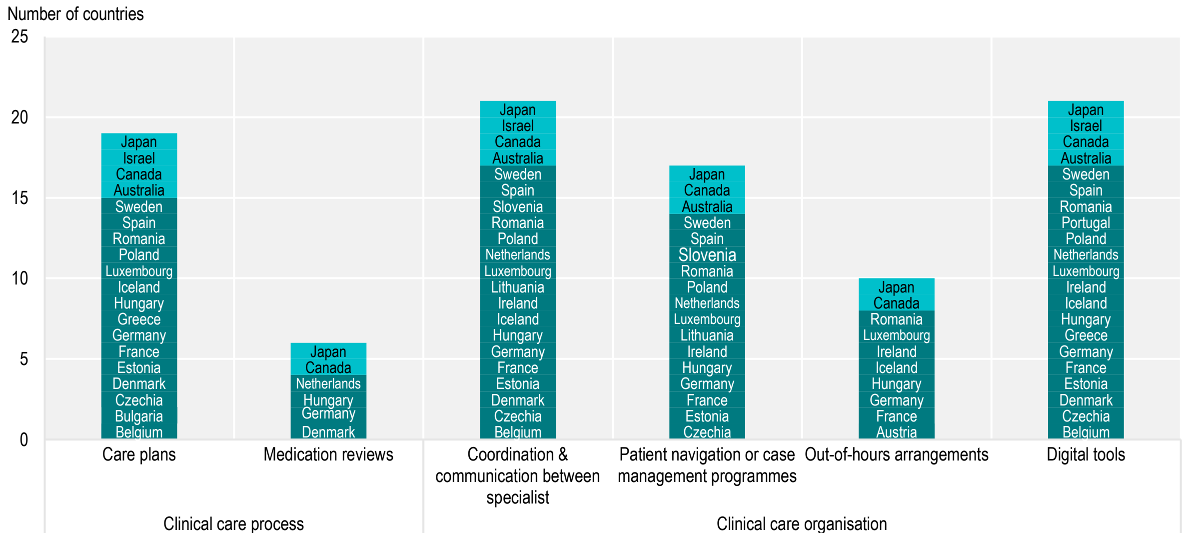
The average score of co-ordination of care reported by PHC patients living with cancer was just above half of the total possible score (8.7 out of 15), ranging from 10.6 in Romania and 10.4 in Switzerland to 6.7 in Iceland and 5.7 in Wales. On average across the 11 EU countries, 40% of PHC patients living with cancer receive primary care in practices that report being well-prepared to co-ordinate care. Only Iceland (56%), Italy (50%), Slovenia (46%) and Portugal (44%) report better results than the EU11 average. In addition, half of PHC patients living with cancer report having a care plan (50%). This proportion varies more than 6-fold across countries, from a low of 12% in the Netherlands to a high of 79% in Italy. As highlighted in the following section of this Chapter, establishing a care plan is a key policy option to enhance care co-ordination and to guide both patients and care teams throughout treatment.

5.5. Implementing policies to meet broader health, social and economic needs of people living with cancer

5.5.1. People-centred cancer care: Shaping clinical care processes and organisation around patients' needs

A range of policies can make care more people centred. Cancer care plans and medication reviews address a person's needs and preferences. These tools translate complex medical decisions into clear, shared roadmaps that guide patients and their care teams through treatment and beyond, and can be supported by effective care co-ordination, patient navigation or case management, out-of-hours support, and digital tools (Figure 5.16).

Figure 5.16. A range of policies is implemented to make cancer care more people-centred



Note: Countries reporting "Yes" to the question "Has your country introduced policies to promote people-centred cancer care?" are included. EU+2 countries are represented in dark green, while other OECD countries are represented in light green.
Source: 2025 OECD Policy Survey on High Value Cancer Care.

Cancer care plans and medication reviews help to put patient needs at the centre

Providing personalised cancer care plans is a widely adopted approach across EU+2 countries to foster people-centred cancer care. According to the 2025 OECD Policy Survey on High-Value Cancer Care, a personalised care plan was reported in 15 EU+2 countries. These are typically structured as a comprehensive document to guide patients and their healthcare teams through active treatment and are updated regularly to reflect patient preferences. Key components range from details of diagnosis and staging, test results, planned treatment with dosage, timing and scheduling, identification of responsible providers at each stage of care, and anticipated side effects and their management via supportive services (Prabhu Das et al., 2018[28]). Such plans support care co-ordination, enhance teamwork among professionals, and empower patients to actively participate in treatment decisions. Integration into electronic health records further facilitates their use and relevance.

Adoption of personalised cancer care plans grew substantially throughout the 2000s and 2010s, with early implementation in European countries such as France. Ensuring that all patients can access such care plans can be done with a regulatory framework mandating the systematic use of care plans, as in France, or with a guideline framework, as in Denmark. In France for example, healthcare establishments authorised to treat cancer must systematically provide patients with a written *Programme Personnalisé de Soins* (PPS). This is mandatory for all newly diagnosed cancer patients since 2009 as part of the national *Plan Cancer*. Developed by the multidisciplinary oncology team in consultation with the patient, the PPS sets out the diagnosis, the sequence and objectives of planned treatments, anticipated side effects, supportive care options, and the healthcare professionals involved. It is provided in writing at the time of diagnosis and updated as needed throughout the treatment journey. The PPS serves as both a clinical co-ordination tool and a communication document, ensuring that patients, their families, and all members of the care team share the same information and treatment objectives.

> My first oncologist included my husband and me in all discussions and treatment decisions…A hospital curator met my children, husband and me for information, talks and advice; we drafted together a survivorship care plan, she connected me to psychological services and health education classes and listened to my worries and suicidal thoughts...
>
> *Margareta, diagnosed with Non-Hodgkin's lymphoma at age 49 years*

Other countries, such as Denmark, but also the United Kingdom and South Korea, promote care plans as part of a national guideline framework. These guideline frameworks include the standardisation of treatment. In Denmark's Cancer Plan V for example, the written treatment plan is described as a core people-centred tool given to every individual diagnosed with cancer. It is developed in collaboration between the patient and the multidisciplinary cancer team and is intended to be individualised and accessible. The written treatment plan outlines the diagnostic and therapeutic steps to follow, describing the overall path of cancer care. It is to be reviewed and updated throughout the care pathway to reflect changes in the patient's condition, preferences, or treatment options.

In the United Kingdom, the guideline framework also states that each patient diagnosed with cancer should receive a tailored care package that addresses physical, emotional, social, and practical needs, following a broad needs assessment. One valuable lesson for EU countries is the importance of ensuring that structured primary care cancer reviews are carried out by local general practitioners or nurses, giving patients a dedicated opportunity to discuss their concerns and receive guidance on available community services. Additionally, the care plan should include end-of-treatment summaries that outline completed treatments, possible side effects, recurrence warning signs, and follow-up contact points. In 2022, the NHS England estimated that 80% of cancer multidisciplinary teams offered such care plans (NHS England, 2025[29]).

Expanding the role of hospital pharmacists is another way to place patients' values and preferences at the centre of cancer care (see also Chapter 4). Despite medication reviews being a core clinical responsibility of pharmacists, the 2025 OECD Policy Survey on High-Value Cancer Care reports that such reviews are implemented in oncology in only four EU+2 countries. Involving oncology pharmacists can bring clear benefits: a recent systematic review of 20 randomised controlled trials across multiple countries found that pharmacist-led interventions improved cancer treatment adherence nearly five-fold and reduced medication related problems by about half compared with standard care (Fentie et al., 2024[30]). Slovenia has been gradually introducing clinical pharmacists into hospital settings in recent years, progressing incrementally due to limited human resource capacities. In France, since 2023, hospital pharmacists can now adapt and renew prescriptions for hospitalised patients, including those undergoing cancer treatment. In Germany, the state of Lower Saxony has made it mandatory for hospitals to have ward pharmacists. These medication experts advise and support doctors and nursing staff, thereby ensuring greater patient safety, including in oncology wards.

This is also the case in other OECD countries, such as Australia, where hospital pharmacists play an active role in oncology care by participating in prescribing decisions, monitoring toxicities, and adjusting anti-cancer drug dosages. The Australian Government is considering expanding their scope of practice in order to improve medication safety and relieve pressure from doctors and nurses in hospitals (Australian Government, 2022[31]). England is also implementing the most ambitious expansion of pharmaceutical prescribing authority in Europe, with plans for all new British pharmacy graduates to automatically qualify as independent prescribers from 2026. This means that many more independent prescribing pharmacists will be able to initiate, adjust, and manage medications for cancer patients.

> *The delivery of a personalised care plan requires effective care organisation to meet patients' needs, preferences and expectations*

The delivery of a personalised care plan requires putting in place systems that ensure co-ordination and continuity, such as communication protocols between specialists, patient navigation or case management programmes, out-of-hours support, and digital tools.

Co-ordination and communication protocols between specialists, reported by 17 EU+2 countries, often take the form of systematic multidisciplinary team reviews for cancer patients. Their effectiveness stems from the involvement of a wide range of professionals with complementary expertise, tailored to the type and stage of cancer.

Many EU countries mandate systematic multidisciplinary reviews, such as Czechia, Denmark and Germany. In Czechia, all newly diagnosed patients and those requiring treatment changes are required to undergo a multidisciplinary team review. About 60-80% of newly diagnosed cancer patients currently undergo multidisciplinary team consultation. Comprehensive Cancer Centres have higher rates, with for example, over 80% of stage I-III breast cancer patients in such centres receiving multidisciplinary assessment compared to only 45-55% in regional centres. The Ministry of Health is addressing this gap through standardisation initiatives, planned support for regional oncology groups, and development of a unified communication platform (Zdravotnický deník, 2024[32]). In Malta, the Cancer Nurse Navigator is part of the multidisciplinary team to co-ordinate care and support patients and families across the entire cancer pathway, from suspicion and diagnosis through treatment, and into survivorship or palliative care.

Examples from other OECD countries offer valuable lessons for EU countries. In Switzerland, patients receiving treatment at Geneva University Hospitals receive care and support from the Interprofessional Specialised Oncology Team (IMAD, 2024[33]). The team includes oncology and palliative care nurses, community health assistants, home help staff, a co-ordinator, and a team leader. They work in collaboration with dietitians, occupational therapists, social workers, and a liaison nurse, ensuring that care is closely co-ordinated with Geneva University Hospital oncologists. Available seven days a week, with multiple visits per day if needed, this service ensures continuity of care and a rapid response to changing needs. Access is based on a medical prescription, with costs covered 90% by basic health insurance.

In Japan, the mandatory multidisciplinary team approach integrates diverse healthcare professionals across hospitals, long-term care homes and home care providers. Designated Cancer Care hospitals are required to establish multidisciplinary meetings involving multiple healthcare professionals for discharge planning processes, and they systematically integrate palliative care specialists, GPs, visiting nurses, and community providers to support transitions. Multidisciplinary meetings are required to annually bring together hospital teams with regional medical facilities and home care providers to align treatment approaches and better understand regional capacities (Ministry of Health, Labour and Welfare, 2024[34]).

Multidisciplinary teams also have scope to measure PREMS and PROMS in oncology, for example on treatment side effects, quality of life, and well-being. In Malta for example, PREMs indicators are in development, structured around five patient-centred domains: respectful person-centred care, managing physical health and symptoms, emotional and spiritual well-being, navigating and co-ordinating care, and communication and responsiveness. As mentioned in Box 5.4, while there is growing interest in measuring PROMs for cancer patients, these efforts are often limited to the local or regional level, or to research initiatives, and are not integrated into patients' electronic health record. Even though patient-reported initiatives at the national level are still limited in scope, there is increasing recognition that PROMs are critical tools for assessing the value of new cancer medicines (Box 5.5).

Box 5.4. There are few initiatives to measure PROMs and PREMs in oncology

While there is some interest in measuring PROMs for cancer patients, they are often limited to the local or regional level, or research initiatives:

- Belgium: In Flanders, the Patient-Reported Outcomes in Oncology initiative includes patients diagnosed with a primary invasive cancer of the lung or rectum, with individual hospitals responsible for data collection from their patients. The Belgian Cancer Registry will be responsible for merging of the hospital-specific datasets and linkage with other available healthcare information.
- Canada: The Provincial and Territorial cancer care programmes/agencies carry out PROMs data collection.
- Denmark: PROMs for cancer patients are collected in the Danish Healthcare system.
- Luxembourg: National data collection is carried out among patients with breast cancer.
- The Netherlands: PROMs are collected in 9 DICA registries, including for cancer patients (head and neck, colon, uterine body, ovarian, cervical, and vulvar cancer, breast cancer, melanoma, oesophagus and stomach cancer), and patients receiving palliative care.
- In Norway, PROMs are collected through the national quality registries. Patients receive questionnaires at multiple points throughout the disease trajectory, allowing quality of life to be measured both during and after cancer treatment.
- Sweden: A majority of National Quality Registries have developed and are collecting PROMs data in Sweden. A national service/platform has been developed with digital PROMs. As of 2024, the platform includes about 30 different PROMs, including in the area of cancer.
- Slovenia: The Oncology Institute in Ljubljana, the major institution for cancer care in Slovenia, has recently introduced PROMs instruments in some areas.

National efforts such as in Denmark, the Netherlands and Sweden focus on PROMs use for clinical purposes (individual care improvement) rather than for system-wide use. This also limits international data collection as the tools chosen and target patient groups remain very context-specific. At EU level, the EUonQoL (Quality of Life in Oncology) initiative is a European project to develop and pilot a European Oncology Quality of Life Toolkit (EUonQoL-Kit) – a patient-centred, unified tool for use by cancer patients, survivors, and patients in palliative care across Europe.

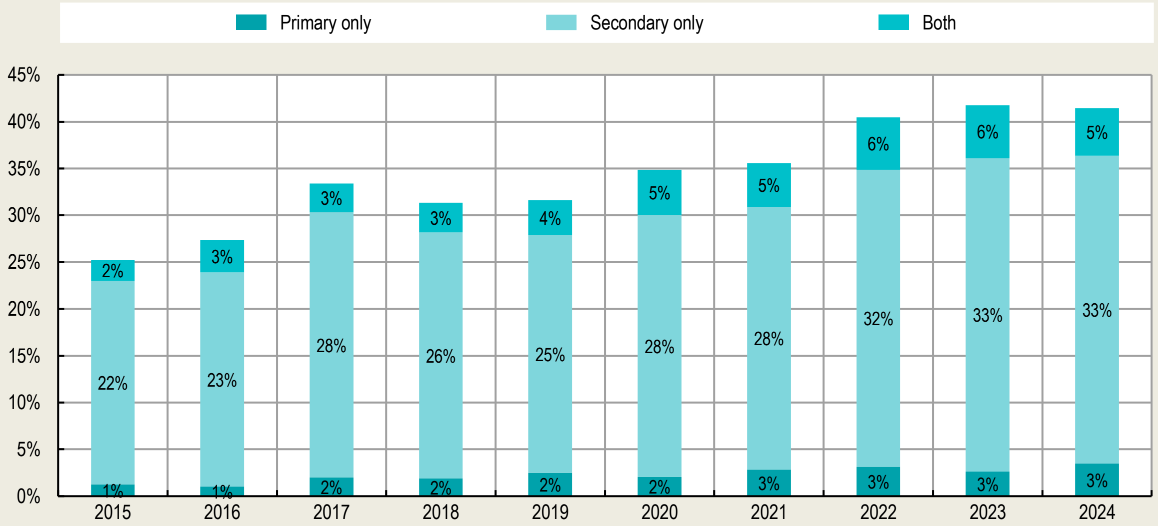
Source: OECD Policy Survey on the Systematic PROMs data collection and use for quality improvement and assurance.

Box 5.5. Patient-reported outcomes are still not incorporated in over half of cancer clinical trials in Europe

Cancer clinical trials usually assess a medicine’s effect on overall survival or surrogate endpoints such as progression-free survival or overall response rate. In recent years, patients, clinicians, and regulators have shown increasing interest in understanding how new drugs affect quality of life. PROMs in clinical trials offer direct insight into how patients feel and function during treatment, highlighting the real-world impact of therapies. Both the U.S. Food and Drug Administration (FDA) and the European Medicines Agency (EMA) now increasingly use PROMs to evaluate tolerability and treatment impact in the drug approval process (Bellino and La Salvia, 2024[35]), while health technology assessment agencies consider it in coverage and reimbursement decisions. Across EU+2 countries, EuroACT shows that between 2015 and 2024, the use of PROMs as either a primary or secondary outcome measure in cancer clinical trials almost doubled, increasing from about one in four clinical trials in 2015 (25%) to four in ten (41%) in 2024 (Figure 5.17) (Cases et al., 2025[36]; 2025[37]). In later phase trials, which serve to provide the pivotal data used for marketing approval and coverage decisions, PROMs play an increasingly important role: while only 25% of Phase II trials between 2015-2024 had PROMs as an outcome measure, that figure grew to 47% among Phase III trials.

Figure 5.17. The use of PROMs as a primary or secondary outcome measure in oncology clinical trials has increased over the last decade

Share of oncology clinical trials using PROMs as a primary and/or secondary outcome measure, by year



Note: Data represent the number of interventional clinical trials in oncology initiated since 2015 across EU27+2 countries. Data retrieved in July 2025.
Source: EuroACT data from European Patient Advocacy Institute and WECAN Foundation.

As expected, countries with a large number of oncology clinical trials (France, Spain and Italy) (see Chapter 3) had the largest number of trials with PROMs as primary or secondary outcomes. Trials for breast and prostate cancers, which have among the highest survival rates, were more likely to measure PROMs (with respectively 43% and 41% of clinical trials for these cancers incorporating PROMs as primary or secondary outcomes), compared to 30% for lung and pancreatic cancers clinical trials. Requiring PROMs in drug development ensures new cancer therapies address patient needs and deliver value, and collecting real-world evidence on both PROMs and clinical data is necessary to reassess pricing and coverage decisions to secure sustainable care (Chapter 4).

Patient navigation or case management programmes were also reported in 14 EU+2 countries. Navigation programmes may be delivered by health professionals (e.g. nurses, social workers), voluntary workers (e.g. peer supporters), or digital systems. Navigators help address barriers to timely and appropriate care based on patient needs and care goals. A recent systematic review found that navigation programmes shorten delays between screening, diagnosis and treatment (see Chapter 3). Other benefits included reduced hospital readmissions during both active treatment and survivorship (Chan et al., 2023[38]). As for case management programmes, they involve co-ordinated assessment, planning and care delivery to address the comprehensive needs of patients and their families. While evidence of its impact on quality of life, patient satisfaction, and survivorship is mixed and inconclusive, case management is found to enhance symptom control, cognitive function, and treatment adherence (Wang et al., 2022[39]). In Estonia, the Estonian Cancer Center, established in 2024, is mandated to oversee the implementation of the national cancer plan, which includes the development of services to improve navigation in cancer care pathways (Ministry of Health, 2024[40]).

Out-of-hours care arrangements, reported by only 8 EU+2 countries, represent another key organisational innovation to further meet people's needs. These arrangements usually cover specific groups of cancer patients and can provide 24/7 telephone access to nurses who can assess symptoms, provide guidance on treatment side effects, and determine when patients need immediate medical attention. They help to reduce emergency visits and hospitalisations. For instance, in Germany, only cancer patients with complex needs are legally allowed to access Specialised Outpatient Palliative Care, where multiprofessional teams comprising doctors, nurses, and co-ordination staff deliver 24/7 care to manage symptoms outside standard hours. In Ireland, The Cancer Society provides a night nursing service, which offers up to 10 nights of free, end-of-life nursing care in the patient's home for palliative care cancer patients. Access is by referral from a specialist palliative care nurse, public health nurse, or GP. In 2024, the organisation provided over 6 000 nights of nursing care to cancer patients across Ireland (Irish Cancer Society, 2025[41]). In Canada, Ontario's CARE path After Hours Programme allows patients from the 72 cancer care sites who receive chemotherapy or radiation treatment to speak with oncology nurses during evenings, weekends and holidays (Cancer Care Ontario, 2025[42]). The first evaluation of the provincial programme showed that only about 24% of the callers were referred to the emergency department, and that an estimated annualised 5 211 emergency department visits were avoided, resulting in cost-savings of CAN 3.8 million (Martelli et al, 2023[43]).

Finally, digital tools are increasingly essential to support care planning and communication, as well as to empower patients in self-management. A large body of evidence shows that these tools are effective in enhancing patient empowerment, self-efficacy, and core self-management skills such as decision making and goal setting (Tuominen et al., 2024[44]; Lim, 2023[45]). The interactive features of digital platforms also help connect patients with health professionals and peers. While the benefits are greatest among younger, more educated patients with higher digital literacy, overall patient feedback is positive (Tuominen et al., 2024[44]; Lim, 2023[45]). Digital tools were reported by 17 EU+2 countries. Digital communication tools, secure data-sharing platforms and symptom trackers are empowering cancer patients to engage as active partners in their care. For instance, in Sweden, the six regional cancer centres developed the "My Care Plan", a digital tool aligned with the National Cancer Strategy, to store and share treatment summaries, follow-up schedules, and standardised clinical information, and to provide secure patient-provider communication. In the EU, the ongoing European Cancer Patient Digital Centre project aims to develop a novel approach to present cancer information in a standardised way for citizens and patients, and develop personalised access to and sharing of personal cancer-related data in a uniform and interoperable way across all EU countries (ECPDC et al., 2022-2023[46]). Real-time symptom monitoring represents another growing application of digital tools in cancer care, with projects implemented across and within several countries. The Advanced Symptom Management System project, which is implemented across multiple European countries, aims to enable real-time remote symptom monitoring for patients undergoing chemotherapy (Box 5.6). In addition, the EU-funded Joint Action eCAN showed that telerehabilitation and telepsychology appear to be an appropriate support for cancer care, according to the results of pilot projects conducted with breast, head and neck, and advanced cancer patients. The results show an improvement in patient-reported outcomes such as quality of life, pain and distress when telehealth interventions are used. The follow up Joint Action eCAN plus, launched in June 2025, is now working towards the implementation of telemedicine tools in different cancer care settings to enhance the digital collaboration between cancer centres.

Box 5.6. The Advanced Symptom Management System

The Advanced Symptom Management System (ASyMS) is a real-time, mobile phone-based remote monitoring and management platform. It is designed to help patients undergoing chemotherapy report their symptoms daily, triggering alerts to clinicians when intervention is needed. The overarching objective is to reduce symptom burden, enhance quality of life and improve the timeliness and appropriateness of clinical responses. The ASyMS platform is being tested in multiple European countries via the eSMART study, which is being conducted in five European countries (Austria, Greece, Ireland, Norway and the United Kingdom). Over 1 000 cancer patients have been enrolled in the trial. Initial evaluations yielded positive perceived results (McCann et al., 2024[47]), with beneficial effects on cancer care experiences, psychological well-being and quality of life.

5.5.2. People-centred cancer care pathways should encompass palliative care and supportive services such as mental health care, lifestyle guidance and fertility preservation

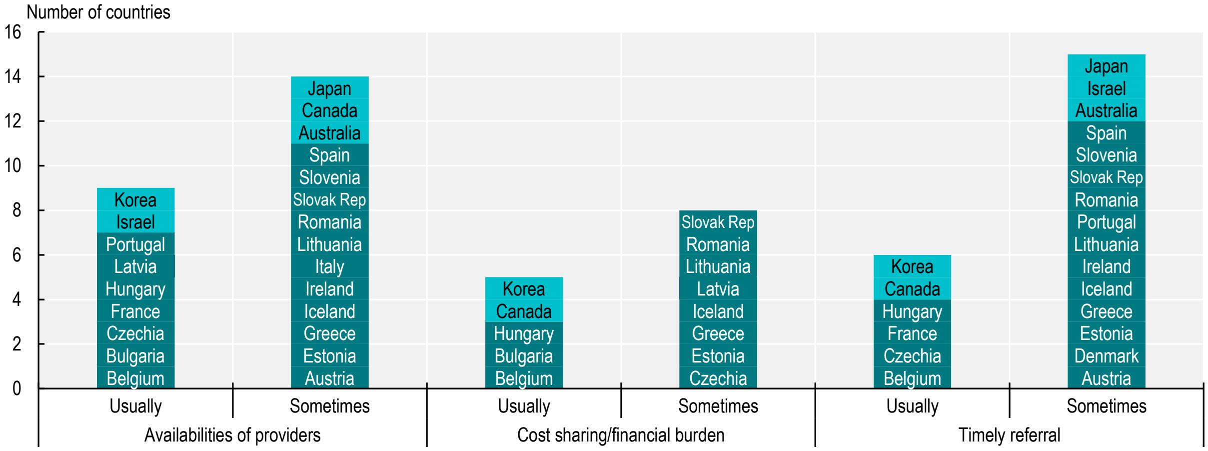
Palliative care access is recommended as early as possible for patients diagnosed with cancer

Palliative care aims to improve the overall quality of life of people and their families by addressing the physical, psychosocial, and spiritual consequences of the disease. Evidence shows that for people living with cancer, palliative care reduces pain and distress, improves emotional well-being, strengthens communication, decreases unnecessary hospitalisations, and helps patients receive care aligned with their preferences (Petrillo et al., 2024[48]). According to the WHO Palliative Care Atlas of Europe, cancer is the leading condition for which palliative care is needed by a significant margin, ahead of cerebrovascular diseases (European Association for Palliative Care, 2025[49]).

Access to palliative care for cancer patients is a policy concern, primarily due to a lack of available providers

The 2025 OECD Policy Survey on High Value Cancer Care indicates that access to palliative care is often a policy concern due to a shortage of providers in seven EU+2 countries (Figure 5.18). Problems with timely referrals to palliative care for cancer patients are also a common policy concern in four EU+2 countries, followed by cost-sharing and the financial burden on cancer patients.

Figure 5.18. Access to palliative care is a challenge reported in more than two-thirds of EU countries due to a lack of available providers



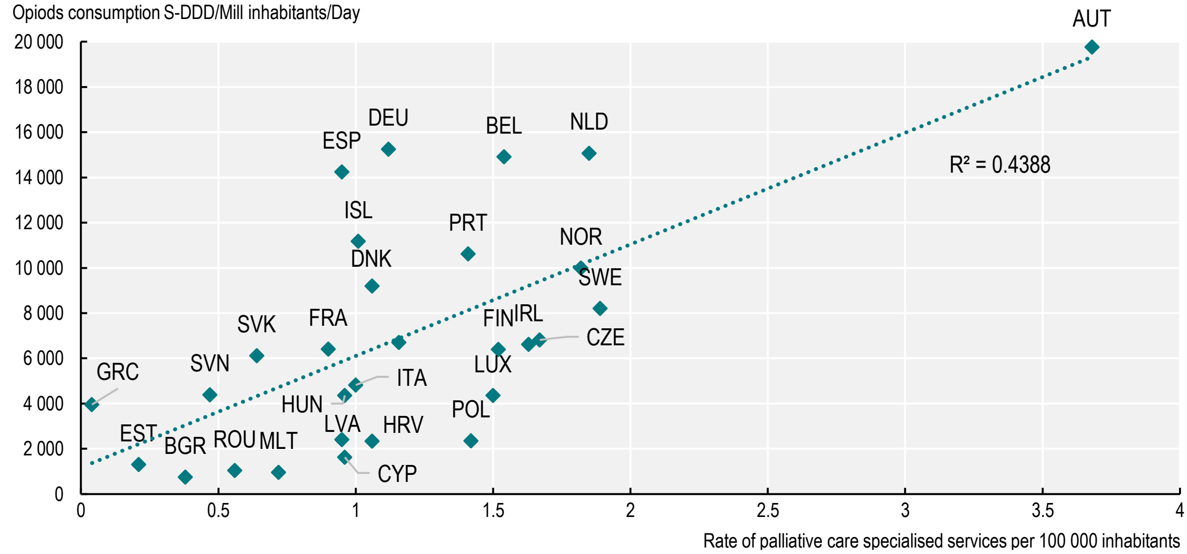
Note: Only countries reporting "Usually" and "Sometimes" to the question "To what extent is access to palliative care for cancer patients a challenge or a policy concern in your country with regards to…?" are shown. EU+2 countries are represented in dark green, while other OECD countries are represented in light green.
Source: 2025 OECD Policy Survey on High Value Cancer Care.

The most recent Atlas on Global Access to Palliative Care and Pain Relief confirms large inequalities in the availability of palliative care services across EU+2 countries. On average, there are 1.2 specialised palliative care services per 100 000 inhabitants across EU+2 countries (Garralda et al., 2025[50]), with large variability across countries. For example, Austria and Lithuania report 3.7 and 2.5 services per 100 000 inhabitants, respectively, while Estonia and Greece report a significantly lower 0.2 and 0.04 services per 100 000 inhabitants respectively (Garralda et al., 2025[50]). In addition, according to the Atlas, paediatric palliative care services are not available in Cyprus, Estonia and Iceland.

Another major barrier to accessing palliative care services also relates to misconceptions among both clinicians and the public that palliative care is only appropriate at the end of life, which often leads to late referrals. This is compounded by cultural barriers and emotional factors that impede discussing death and dying.

Disparities in the supply of palliative care services translate into disparities in access to pain management medication (such as morphine, codeine, fentanyl, hydromorphone, buprenorphine, and oxycodone). This is demonstrated by the positive correlation between the availability of palliative care services and annual opioid consumption (Figure 5.19). Austria, the Netherlands, Belgium, Portugal, Norway and Sweden are countries having higher supply of specialised palliative care services and higher reported annual opioid consumption, while Greece, Slovenia, Bulgaria, Romania and Estonia have the lowest supply of palliative care and lowest annual opioid consumption. Barriers to the availability of pain management medication in community settings tend to reduce providers' ability to deliver quick and convenient patient-centred palliative care to cancer patients. This increases the risk of avoidable and costly hospital admissions for pain management, which represents poor care quality for patients and their families.

Figure 5.19. There is a positive correlation between the availability of specialised palliative care services and opioids consumption



Notes: Defined Daily Doses for Statistical Purposes (S-DDD) per million inhabitants per day, based on the average consumption of narcotic drugs (excluding methadone) during the years 2020-2022.
Source: EAPC Atlas of Palliative Care in the European Region 2025.

Integrating palliative care into the cancer care pathway from an early stage is essential for improving quality of life

In cancer, early integration of palliative care alongside curative or life-prolonging treatments is recommended to support patient and caregiver well-being from the time of diagnosis (Jordan, Aapro and Kaasa, 2018[51]). Among high-income countries in 2017, an estimated 60% of adults requiring palliative care due to cancer were not in the terminal phase of illness but rather were still living with the disease (Worldwide Hospice Palliative Care Alliance/WHO, 2020[52]). This figure highlights the importance of integrating palliative care from the time of diagnosis. As indicated by evidence from Ireland, late palliative care referrals (defined as ≤ 3 months before death) were associated with increased hospitalisations during the final month of life (O'Sullivan, Conroy and Power, 2025[53]) (See also Chapter 4 on aggressive treatments at the end of life). All EU+2 countries have developed palliative care structures and policies, with some countries more advanced than others (Table 5.3).

Table 5.3. National palliative care structures and policies across EU+2 countries

	Recognition of PC specialty	National PC plan or strategy	Responsible authority for PC in the Ministry of Health	Inclusion of PC in the basic health package at the primary care level	Advanced care planning-related policies
Italy	Advanced	Advanced	Advanced	Advanced	Advanced
Norway	Advanced	Advanced	Advanced	Advanced	Advanced
Austria	Advanced	Advanced	Advanced	Established	Advanced
France	Advanced	Advanced	Advanced	Advanced	Established
Germany	Advanced	Advanced	Established	Advanced	Advanced
Luxembourg	Established	Advanced	Advanced	Advanced	Advanced
Netherlands	Established	Advanced	Advanced	Advanced	Advanced
Spain	Progressing	Advanced	Advanced	Advanced	Advanced
Iceland	Advanced	Established	Established	Advanced	Advanced
Sweden	Advanced	Advanced	Progressing	Advanced	Advanced
Ireland	Advanced	Advanced	Established	Established	Established
Poland	Advanced	Advanced	Advanced	Advanced	Emerging
Portugal	Established	Established	Advanced	Established	Advanced
Hungary	Advanced	Progressing	Established	Advanced	Established
Romania	Advanced	Advanced	Progressing	Advanced	Progressing
Latvia	Advanced	Advanced	Progressing	Advanced	Emerging
Malta	Advanced	Advanced	Emerging	Advanced	Emerging
Slovenia	Progressing	Established	Established	Established	Established
Belgium	Progressing	Progressing	Emerging	Advanced	Advanced
Czechia	Advanced	Established	Emerging	Established	Progressing
Finland	Established	Established	Progressing	Emerging	Advanced
Denmark	Progressing	Progressing	Emerging	Advanced	Established
Lithuania	Established	Emerging	Established	Advanced	Emerging
Slovak Republic	Advanced	Progressing	Advanced	Emerging	Emerging
Greece	Progressing	Established	Emerging	Advanced	Emerging
Croatia	Emerging	Progressing	Progressing	Advanced	Emerging
Bulgaria	Emerging	Emerging	Emerging	Advanced	Emerging
Estonia	Emerging	Emerging	Progressing	Emerging	Established
Cyprus	Progressing	Emerging	Emerging	Progressing	Emerging

Note: PC refers to palliative care. The maturity levels, ranked from highest to lowest, are: "Advanced", "Established", "Progressing", and "Emerging", in line with the original data source.
Source: EAPC Atlas of Palliative Care in the European Region 2025.

While Central European countries have made strides, these countries still have gaps in certain areas of their palliative care policies. For example, Bulgaria, Croatia, Cyprus, Greece, Latvia, Lithuania, Malta, Poland and the Slovak Republic rank lowest in advanced care-planning related policies, which are key for early integration. By contrast, Italy and Norway have among the most advanced palliative care structure and policies in Europe (Table 5.3), although many barriers and gaps remain. Italy has recognised the right to palliative care through law since 2010, with delivery through hospitals, hospices, and community home care. As of 2021, nearly all regions had established palliative care networks and nearly all local health authorities have at least one multidisciplinary team offering palliative care in the community. However, in practice, only a minority of Italian regions were considered to deliver adequate levels of palliative care to cancer patients, with better served regions located in the North and the Centre of Italy. In response, the 2023 National Oncological Plan aims to ensure comprehensive coverage by the end of 2025. In a similar vein, in Norway, while basic palliative care is provided by all healthcare services – including in community settings, specialist care is delivered only by dedicated hospital and nursing home teams which can limit early initiation of palliative cancer care (OECD/European Commission, 2025[54]). There have been positive developments in some regions, such as the Orkdal region which introduced an outpatient clinic to provide both cancer and palliative care in the region through collaboration between specialist services (hospital oncology and palliative teams) and primary care services (see Box 5.7). Malta has also introduced a palliative care navigator to encourage greater integration of cancer and palliative care. The palliative care navigator supports care co-ordination with hospice, facilitates home transfers and provides mobile support.

In addition, the Designated Centres of Integrated Oncology and Palliative Care initiative, launched by the European Society for Medical Oncology (ESMO), accredits cancer centres that provide high-quality palliative care fully integrated into oncology services. The programme promotes best practices in symptom management, communication, and end-of-life care, encouraging a comprehensive approach to patient needs. As of 2025, there are more than 250 centres accredited in 56 countries (ESMO, 2025[55]).

Box 5.7. In Norway, the Orkdal model is a good practice to integrate cancer and palliative care

The Orkdal model is an outpatient clinic based in a rural hospital (Orkdal Hospital) whose mission is to deliver both oncology and palliative care, integrating symptom relief, supportive care, and patient needs alongside cancer treatment. It serves a region comprising many municipalities, so that patients can access these services closer to home, reducing travel burden and improving continuity.

The model uses a multidisciplinary team: oncologists and oncology nurses with palliative care training, working together with physiotherapists, occupational therapists, social workers, dietitians, and chaplains as well as community-based health services (home care, GPs, nursing homes). There are standardised care pathways for different disease stages: referral to the integrated clinic, during active treatment/follow-up, and end-of-life care. The standardised care pathway includes criteria and checklists, symptom/functional assessment tools, templates for documentation, and mechanisms for communication and co-ordination across hospital, community and primary care including an electronic patient record. In response to the shortage of oncologists formally trained in palliative medicine, the clinic employed oncology residents with mandatory palliative care training and specialised cancer nurses with additional palliative care expertise. To strengthen competence, weekly team education was established, and staff systematically trained colleagues across hospital wards and community care settings.

Source: Brenne et al. (2020[56]), "Fully Integrated Oncology and Palliative Care Services at a Local Hospital in Mid-Norway: Development and Operation of an Innovative Care Delivery Model", https://doi.org/10.1007/s40122-020-00163-7.

Across other OECD countries, Japan also provides a good practice example as the country places strong emphasis on early integration of palliative care and care co-ordination. Designated Cancer Care Hospitals in Japan are required to establish regional information systems that map available palliative care services, including specialised hospital and home-based teams. Mandatory training is required for all doctors involved in cancer care, with targets for completion rates. Training is also extended to nurses, pharmacists and other professionals through multidisciplinary programmes. Palliative care teams also take part in discharge planning and collaborate with primary care and rehabilitation services to ensure that palliative care needs are met during care transitions (Ministry of Health, Labour and Welfare, 2024[34]).

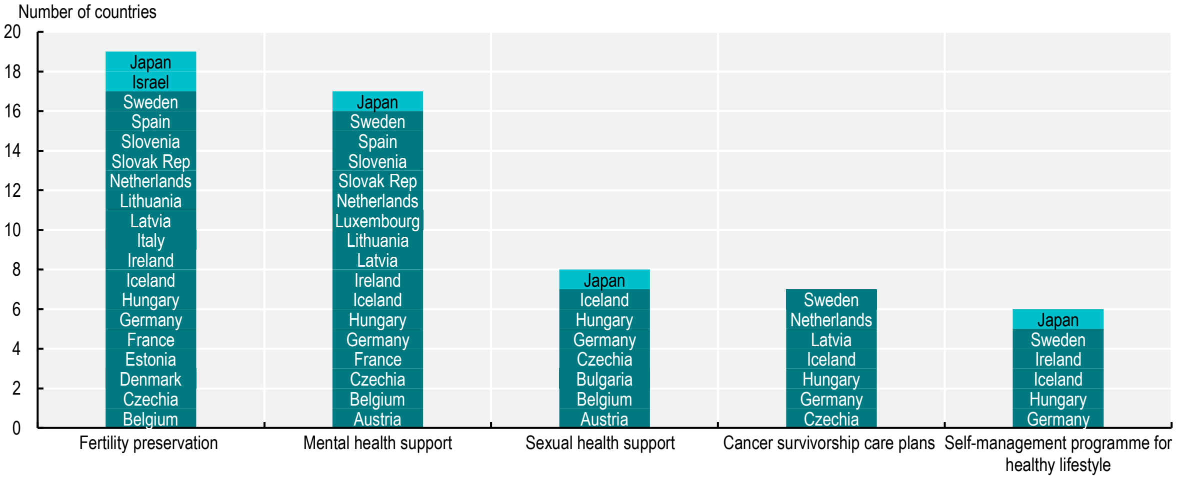
As many patients express a preference to die at home, several countries have strengthened community-based palliative care models. Home-based palliative care often results in better outcomes, including fewer unplanned hospital visits and lower psychological distress for patients and families (OECD, 2023[57]). In Poland, over half of palliative care patients receive such care at home. The National Health Fund finances home hospice care, offering at least two weekly nurse visits, two monthly physician visits, and free rental of medical equipment, with adjustments based on patient need. A 2024 policy reform extended financial coverage from only life-saving procedures to any medically required service for cancer patients in palliative care (OECD/European Commission, 2025[58]). In Slovenia, palliative care can be offered at the patient's home, organised by an extended family medicine practice team (including family doctor, community nurse, and an out-of-hours and emergency service). There are also some specialised mobile palliative teams that have been developed in some Slovenian regions, to support primary care palliative teams (Homar and Pogocar, 2023[59]). Belgium also offers free of charge palliative home care supported by general practitioners, nurses and (partially) physiotherapists. In addition, cancer patients and their families can claim a lump sum to offset costs such as medication and medical equipment. In 2020, about 23% of cancer patients died at home, two-thirds in hospital, and 7% in residential care (For a healthy Belgium, 2024[60]).

Providing palliative care at home requires strong support systems. Advanced care planning and the involvement of primary care providers, particularly general practitioners and community nurses, plays an important role (Driller et al., 2022[61]). Educational tools, such as video education, can also help patients and their families increase their knowledge and preparedness for at-home palliative care (Cruz-Oliver, 2020[62]). Supporting informal caregivers is also critical to develop home-based palliative care. In home settings, most personal and domestic care falls on another family member when people become very dependant. Leave entitlements for those caring for someone who is dependent or terminally ill are therefore an important enabler (see Section 5.5).

Integrating fertility preservation options, mental health care and survivorship plans to create comprehensive people-centred cancer care pathways

Comprehensive cancer care pathways include not only palliative care but also mental health support along with lifestyle guidance, fertility preservation services, sexual health support, and cancer survivorship plans (Figure 5.20).

Figure 5.20. Cancer patients most often receive supportive services focussed on fertility preservation and mental health support



Note: Only countries reporting "Usually" to the question "To what extent do cancer patients who need it receive the following support services?" are shown. EU+2 countries are represented in dark green, while other OECD countries are represented in light green.
Source: 2025 OECD Policy Survey on High Value Cancer Care.

Reproductive preservation options are a core component of a people-centred cancer care pathway

Fertility impairment is often a life-altering late effect of treatment, affecting body image, sexuality, relationships, and overall well-being. A study in Canada on female adolescents and young adults found that cancer survivors had a 30% higher risk of receiving an infertility diagnosis compared to women without cancer (Velez et al., 2021[63]). As for men, between 15-30% of male cancer patients may become sterile after treatment for cancer, making fertility preservation a growing priority (Yumura et al., 2023[64]).

According to the OECD Policy Survey on High Value Cancer Care, 17 EU+2 countries reported that fertility preservation options were integrated into the cancer care pathway and usually accessible to patients. Fertility preservation options can include different treatment for sperm, embryo, oocyte or ovarian tissue cryopreservation, as well as temporary ovarian suppression during chemotherapy. In France, Germany, the Netherlands, Nordic countries, Poland or Slovenia, the statutory health insurance covers the cost of fertility preservation for medical reasons. In addition, offering oncofertility counselling in young patients to discuss fertility and pregnancy-related issues in parallel with oncological follow-up is also essential..

In addition, recent EU policy initiatives (including the Europe’s Beating Cancer Plan), highlight that sexual health support are an important but often underdeveloped service in EU countries (Rossi A, 2025[65]). More systematic assessment and management of sexual health within the oncology pathway is necessary and could follow international initiatives. For example, the European Organisation for Research and Treatment of Cancer (EORTC) validated a Sexual Health Questionnaire that offers practical tools and guidance to enable routine assessment, and ESMO provides guidance on assessment and treatment pathways. In Denmark, the Danish colorectal cancer survivorship guideline explicitly recommends assessment for sexual dysfunction after treatment and offers concrete interventions for post-treatment sexual problems. In Austria, the Comprehensive Cancer Centre Vienna runs a platform called “Sexual Health in Cancer Patients” to assess and address sexual health issues among cancer patients.

Mental health care is increasingly acknowledged as an essential pillar of the cancer care pathway

As shown with PaRIS data, cancer diagnosis and treatment often trigger significant emotional and psychological distress, with anxiety and depression commonly reported. In response to the growing recognition of these needs, a range of evidence-based psychotherapies for patients living with cancer has been developed, including cognitive behavioural therapy (Wangjie et al., 2024[66]), mindfulness-based interventions (Lee et al., 2022[67]), and acceptance and commitment therapy (Jiang et al., 2023[68]). Group formats can be as effective as one-on-one therapies and are more cost-effective for cancer patients (Nicklas et al, 2022[69]). They tend to foster mutual understanding, reduce social isolation and create space for emotional expression.

In 2025, 16 EU+2 countries reported having integrated psychological support in the cancer care pathway to ensure it is usually accessible to patients. Common elements across countries include early assessment of psychological needs, multidisciplinary collaboration between oncology teams and mental health professionals, and involvement of Non-Governmental Organisations (NGOs). In Ireland, the Adult Psycho-Oncology Model of Care (published in 2020) and the Psycho-Oncology Model of Care for Children, Adolescents and Young Adults (published in 2023) aim to enhance psychological well-being through early diagnosis and intervention. Community cancer support centres have been established to provide ongoing psychosocial support in local communities. In 2021, over EUR 500 000 in grants was awarded to 24 cancer support centres and national organisations to improve and expand survivorship programmes. For example, the Cancer Thriving and Surviving Programme, a six-week initiative, helps individuals transition from active treatment to living well with cancer through self-management and well-being modules. The LACES Workshop for post-treatment cancer patients offers information to improve quality of life and access to community support, while the CLIMB® Programme supports children aged 6-12 whose parents have cancer to help them cope. In Slovenia, psycho-oncological support is offered at the Institute of Oncology Ljubljana, and delivered by a multidisciplinary team, including a psychiatrist, clinical psychologist, and specialised nursing staff. It can be offered both in inpatient and outpatient settings, providing individual counselling, psychotherapy, crisis support and – when needed – psychiatric treatment. This service forms an integral part of cancer care, aiming at identifying psychological distress early and supporting patients' emotional well-being, treatment adherence and long-term rehabilitation.

In France and Italy, mental healthcare is part of the supportive service package. A 2022 study by the French National League Against Cancer found that 69% of cancer patients referred to a psychologist or psychiatrist during their care used the service (Ligue nationale contre le cancer, 2022[70]). In Italy, despite laws and guidelines, access remains limited. A study of about 3 000 people with cancer showed that only 20% reported receiving psychological support and just 16% said that a therapist was present throughout their cancer treatment (Corriere della sera, 2024[71]). In Canada and Australia, national cancer agencies describe psychosocial care as part of standard cancer care, from diagnosis through survivorship and palliative care.

Countries can collaborate with NGOs to provide further mental health support. For example, recently, Latvia introduced additional strategies to manage the emotional and mental health impact of cancer. Since 2018, state budget is allocated to the Oncological Patient Support Association "Tree of Life" to provide psychosocial rehabilitation for individuals with cancer and their relatives, and to the Society for Children's Palliative Care for psychosocial rehabilitation for children in palliative care and their family members. To increase access and facilitate cancer patients' return to social and economic life, a psycho-emotional support day centre was also established in 2019. A hotline for psychological support is available 24 hours a day. In addition, digital tools support psychosocial well-being by facilitating access to information, therapies and peer support. For example, the OACCUS (Outdoor Against Cancer Connects Us) project has developed virtual platforms with 280 resources for young people living with cancer and a trained network of 500 Ambassadors in 15 EU countries (European Commission, 2024[72]) (Box 5.8).

Box 5.8. The Outdoor Against Cancer Connects Us project aims to support well-being among young people living with cancer in six EU countries

Launched in 2022 and completed in 2024, the OACCUS project aimed to promote healthy, active lifestyles and facilitate social connection among young people living with or surviving cancer. Funded under the EU4Health programme (EUR 3 million) and co-ordinated by Umeå University in Sweden, the project brought together 14 partners from six EU member states (Germany, Greece, Italy, Portugal, Spain and Sweden).

OACCUS developed the OACCUS Network Toolbox, a multilingual, interactive platform offering more than 280 evidence-based resources, including articles, podcasts, videos, infographics, training exercises, a cookbook, interactive databases and games. These resources focus on four pillars:

- Outdoor physical activity and sports
- Balanced nutrition
- Mental and physical well-being (psychoeducation)
- Sustainable, healthy lifestyles within nature

Between January and March 2024, OACCUS trained over 500 ambassadors – young cancer survivors, their families, friends and professionals – across 15 EU countries.

Source: https://oac-connect.eu/.

There is a need to more systematically embed self-management programmes supporting heathier lifestyles directly within personalised cancer care plans

Few countries reported self-management programmes to lead a healthier lifestyle as usually accessible to patient in order to improve people-centred care. According to the OECD Policy Survey on High Value Cancer Care, self-management programmes to lead a healthier lifestyle was reported in five EU+2 countries. Such efforts support long-term behaviour change such as smoking cessation, alcohol reduction, improved nutrition, and greater physical activity. These modifications are associated with significantly better cancer outcomes when adopted after diagnosis (Rabbani et al, 2025[73]).

Lifestyle guidance is most often delivered by health professionals but approaches to integration vary in depth and structure. Across countries, a common challenge lies in ensuring that lifestyle support is not limited to information provision alone. Evidence shows that long-term behaviour change requires structured and sustained interventions beyond written or oral advice (Cannioto et al., 2023[74]). In some countries, lifestyle guidance is embedded directly within personalised cancer care plans or survivorship plans (with referral and/or public coverage), while others rely more on broader public health initiatives. NGOs frequently play a complementary role, particularly in awareness campaigns and patient support.

For example, in France, the cancer care pathway, which includes survivorship (see next section), integrates lifestyle guidance as well as financial support for dietician consultations. In contrast, in Central European countries, prevention programmes are not routinely embedded in cancer care pathways (Cedzynska-Peregoy et al., 2022[75]), but prevention programmes are widespread for the general population. For instance, Poland puts more focus on broader population-level preventive programmes. A platform called “I am planning a long life” was launched to educate on healthy lifestyles and screening. Several social campaigns dedicated to lung cancer, colorectal cancer, malignant skin cancer, breast cancer, cervical cancer and prostate cancer were disseminated through television, radio and the internet. In addition, since 2020 the National Health Fund co-ordinates a free-of-charge “8 weeks to health” online training programme to encourage healthy lifestyles and regular physical activity (Planujedlugiezycie, 2025[76]). In Czechia, similarly, smoking cessation programmes are not specifically embedded in cancer care, but they are widely available. There are more than 40 centres for the treatment of tobacco addiction, which operate on an outpatient basis at hospitals. These centres are complemented by about 200 specialised outpatient physicians and several dozen pharmacies providing expert advice on smoking cessation (Národní zdravotnický informační portál, 2023[77]).

Cancer survivorship care plans are emerging as a comprehensive strategy to address people’s needs and preferences

Survivorship care plans (SCPs) are post-treatment documents designed to guide patients after active treatment has ended to support long-term health, monitoring and quality of life. While they typically include medical surveillance schedules, SCPs address broader needs such as psychological support, fertility, lifestyle promotion, and rehabilitation. By clarifying what follow-up is needed, by whom, and when, SCPs aim to ease the transition from active treatment to long-term survivorship care. Evidence suggests SCPs can improve survivors’ awareness of their treatment history and follow-up needs, facilitate communication with healthcare providers, and support shared decision making (Joshi et al, 2021[78]; Hill et al, 2020[79]).

Cancer survivorship care plans were reported in only seven EU+2 countries. However, in most EU countries, professional organisations or public bodies provide evidence-based recommendations and guidelines for cancer survivorship care plans. They typically have the following features:

- Treatment summary outlining diagnosis, therapies received, and key clinical findings.
- Follow-up schedule including surveillance tests, frequency, and responsible providers.
- Supportive care such as referrals for rehabilitation, psychosocial support, nutrition, and physical activity.

- Patient-friendly format to encourage understanding and self-management, increasingly integrated in secure digital portals.
- Shared-care principles linking oncology, primary care, and other providers to ensure continuity.

In France, a survivorship care plan is integrated in the care plan. Since 2020, cancer patients can receive prescribed assessments and consultations as part of their post-cancer treatment care. This includes an assessment for adapted physical activity, potentially leading to a personalised physical activity plan; nutritional and/or psychological assessments; and consultations for nutrition and/or psychology. The programme is slowly being deployed through targeted health professionals and centres identified by the regional health agencies. As part of the National Cancer Strategy 2021-2030, the National Institute of Cancer is also tasked with proposing a set of measures that will improve the transition from active treatment to survivorship. In Germany, the National Cancer Plan recognises survivorship as a key pillar of cancer control, with the aim of improving quality of life and long-term outcomes for cancer survivors. The German Cancer Aid has invested EUR 8 million to support research into the prevention and management of late effects of cancer treatment. The German Cancer Research Center (DKFZ) is also co-ordinating innovative projects such as IMPULS-A, a randomised controlled trial that provides older cancer survivors with structured need assessments, personalised care navigation and connections to regional support networks.

There are also some initiatives that focus on specific cancer populations, rather than systematic delivery for all cancer patients. For instance, in the Slovak Republic, the National Cancer Institute has established a dedicated testicular cancer survivorship programme focussed on long-term annual follow-up of germ cell tumour survivors. This programme aims to monitor and manage late toxicities of treatment and therefore improve quality of life. In the Netherlands, the BETER consortium is a survivorship programme for Hodgkin and non-Hodgkin lymphoma survivors organised within the Netherlands Cancer Institute (NKI). Patients attend dedicated survivorship clinics where follow-up care is tailored to their risk profile, and long-term outcomes are tracked through a national registry. Slovenia has also piloted two comprehensive cancer-survivorship programmes developed by the Institute of Oncology Ljubljana. The first pilot, carried out between 2019 and 2022 among women with breast cancer, demonstrated clear benefits, including higher quality of life, fewer treatment-related problems and shorter sick leave – and has therefore been integrated at national level (Institute of Oncology Ljubljana, 2025[80]). A second pilot programme for colorectal cancer patients has been under implementation since 2022, testing a similar co-ordinated, multidisciplinary rehabilitation pathway aimed at addressing physical, psychological, social and functional needs throughout the cancer journey (Institute of Oncology Ljubljana, 2025[81]). Malta has introduced the National Oncology Survivorship Services to help cancer survivors reintegrate after active treatment. Initially, the service was piloted for colorectal and urological cancer patients, with the goal to extend to other cancer types. It includes a survivorship co-ordinator, alongside a survivorship pathway developed in co-ordination with multi-disciplinary teams across different cancer sites (Innovative Partnership for Action Against Cancer, 2021[82]).

At the EU level, the Pan-European Network for Care of Survivors after Childhood and Adolescent Cancer has launched a comprehensive initiative to improve survivorship care delivery through the Horizon 2020-funded *PanCareFollowUp* project. This project involves 14 partners across ten European countries, including survivor representatives, and aims to develop and evaluate two complementary interventions: a person-centred, guideline-based survivorship care model and an innovative eHealth lifestyle coaching platform. The project involves prospective evaluation of 800 survivors in Belgium, Czechia, Italy and Sweden for the survivorship care intervention assessment. Upon completion, the project will produce freely available Replication Manuals containing tools and implementation guidance (van Kalsbeek et al., 2022[83]).

5.5.3. Financial and employment protection matter to the health and quality of life of patients and their caregivers

Employment protection policies support individuals both during and after cancer treatment

Support during cancer treatment: extended paid leaves and work accommodations

Cancer-related financial toxicity is a major cancer policy challenge in EU and other OECD countries, affecting both health outcomes and economic security. A recent study of over 2 500 people across Europe showed that 56% of cancer patients lost income following diagnosis, and 86% faced additional treatment-related costs. This dual burden led 16% of people to delay or avoid necessary care, risking poorer health outcomes and potentially higher long-term healthcare costs (see also Chapter 3). People most vulnerable to financial toxicity are those self-employed, on lower incomes, and with children (Vancoppenolle et al., 2025[84]). Financial toxicity has also been demonstrated recently in the Netherlands, Germany, Finland, Spain. A meta-analysis on cross-country differences in financial hardship suggested stronger social protection and income replacement as key policies to reduce financial hardship during cancer treatment (Pauge et al, 2021[85]).

Keeping a job during cancer treatment protects from financial hardship. But during treatment, many cancer patients are temporarily unable to work, so they become at risk of workplace discrimination. In recognition of this, cancer is often covered under disability or anti-discrimination legislation, which protects individuals from unfair treatment based on a cancer diagnosis or history. Countries can monitor dismissals to protect the disabled workers. For example, Austria and Germany require prior approval from public bodies before dismissing a registered disabled worker. At the EU level, the European Equal Treatment Directive (2000/78/EC) prohibits workplace discrimination on the basis of disability – including cancer. In addition, the Occupational Safety and Health framework Directive (Directive 89/391/EEC), requires employers to prevent occupational risks through risk assessment and to take special protective measures for particularly sensitive risk groups, including workers with disabilities or long-term health conditions such as cancer, by identifying necessary workplace adaptations and reasonable accommodations to ensure their safety and continued participation in work.

To help patients remain in the workforce, most EU and non-EU OECD countries offer extended paid sick leave for long-term illnesses, which includes cancer, according to a 2018 Policy Survey (World Policy Analysis Center, 2018[86]). They are generally of 12 months or more with wage replacement rates of at least 80%. Thirty-six OECD countries, including 22 EU countries, provide extended paid leave entitlements, with only Korea and the United States lacking such provisions. Among these countries, 23 OECD countries, including 18 EU countries, offer a paid leave of 12 months or more (the Netherlands and Luxembourg offering among the longest leave of up to around 2 years, and France up to 3 years for severe illnesses). In addition, in Slovenia, there is no upper limit on the duration of paid sick leave; however, when a patient’s condition is deemed permanent, the personal physician must refer them for a disability assessment, which may lead to eligibility for a disability benefit.

Adequate wage replacement is also critical to avoid falling into poverty especially for people on low incomes. Nineteen OECD countries, including 14 EU countries, provide wage replacement rates of at least 80%, and 10 countries provide wage replacement rates between 60% and 80%. Only the Slovak Republic provides a wage replacement rate below 60%. In Germany, cancer patients can receive paid sick leave for over a year, with 70% of their gross income covered; it may not exceed 90% of their net wages (§ 47 Absatz 1 SGB V). In EU countries, employers typically have to fund the first two to six weeks of the leave.

In addition, to help patients remain in employment during treatment, many EU and other OECD countries allow part-time sick leave (e.g. Belgium, Denmark, Finland, France, Ireland, Norway, Slovenia, Sweden, as well as Canada, Chile, Israel, and New Zealand). Employer obligations to provide reasonable workplace accommodations – together with occupational health specialists – are also common across these countries, including measures such as reduced working hours, modified duties, telework, and paid time-off for medical appointments.

Support for return to work after leaves: Encouraging gradual return to work

There are nationwide reintegration frameworks to promote return to work after illness-related leaves, but only a handful of countries have cancer-specific projects to support return to work, such as Belgium, Germany, Italy, the Netherlands and Spain. Instead, cancer patients typically rely on general measures supporting people with disabilities or chronic illnesses (European Commission: European Health and Digital Executive Agency, ECORYS, 2024[87]).

Denmark, France, Germany, the Netherlands, Norway, Spain and Sweden (as well as Australia and Canada among other OECD countries), implemented nationwide reintegration frameworks to promote return to work after leaves. They aim to support early intervention, sometimes within weeks of leave commencement. Cancer survivors frequently require a gradual return, rather than the "0% or 100%" work binary. They need gradual, part-time reintegration. Frameworks usually involve multiple people and organisations (healthcare providers, social insurance, employers and sometimes local authorities) who work towards a gradual return-to-work plan tailored to worker health status and job demands.

Countries can implement a legal right for gradual return, work adjustments and career prospect. Spain introduced an explicit "right to return" law that allows reduced working hours or remote work following treatment. France and the Netherlands mandate workplace adjustments, such as lighter duties or part-time work.

In Sweden, Germany and the Netherlands, the nationwide reintegration frameworks are well-developed. Sweden put more focus on early medical co-ordination and structured multidisciplinary collaboration, while Germany and the Netherlands emphasise the employer's obligation to arrange a process backed by medical and rehabilitation services:

- Sweden's return-to-work system aims to provide early, co-ordinated, and medically supervised rehabilitation plans designed by rehabilitation co-ordinators if needed. They co-ordinate with healthcare providers, employers, and the Swedish Social Insurance Agency (Försäkringskassan) (Svärd et al., 2023[88]).
- In Germany, the return-to-work programme targets employees absent for more than six weeks within a 12-month period. Employers are mandated to offer an individualised reintegration plan, in collaboration with occupational health professionals and the employee. The process emphasises workplace accommodation and a graduated return (Gesund.bund de, 2020[89]).
- In the Netherlands, similarly, employers must maintain "reintegration dossiers", conduct regular progress meetings, and provide at least 70% of previous salary for up to two years. This "dossier" must include an action plan, periodic progress reports, and correspondence with the health service, and is required for Employee Insurance Agency assessments.

> I was very lucky because I received my salary during all my treatment: 18 months out of work but receiving 100% of my salary. The problems I faced concerns returning to work…The returning to work must be gradual depending on the patient situation - once you finish your treatments, you are not ill neither healthy.
>
> *Conchi, 68 years old, breast cancer*

The Right to be Forgotten is enacted in only nine EU countries, but could be expanded across EU and other OECD countries

While cancer survival is increasing over time (See Chapter 4), cancer survivors routinely encounter discrimination when accessing financial services, including loans, mortgages, and insurance products. They can face higher premiums or refusal of services based on medical history (Lawler et al., 2024[90]; Meunier, Scocca and Tulkens, 2025[91]). A 2021 survey in Ireland showed that cancer survivors faced three times the difficulty of the general population in accessing appropriate insurance products, with one-quarter unable to obtain quotes for financial services solely due to their previous cancer diagnosis (Irish Cancer Society/Core Research, 2022[92]). In France, a quasi-experimental study shows that difficulties in accessing loan-related insurance were reported by 65% of breast and childhood cancer survivors, compared to only 15% of individuals without a history of cancer (Bougas et al., 2025[93]).

In response, nine EU countries (France in 2016, Belgium in 2020, the Netherlands in 2021, Portugal and Romania in 2022, Spain, Italy and Cyprus in 2023, and Slovenia in 2024) have enacted the “Right to be Forgotten” legislation which establishes that individual’s past history with cancer is no longer taken into account when applying for loans or associated insurance products, provided that the individual has finalised their active treatment and has not relapsed (Lawler et al., 2024[90]; Meunier, Scocca and Tulkens, 2025[91]; Grazia and Meunier, 2022[94]). In addition, Ireland, Malta and Poland are countries moving toward the introduction of the Right to be Forgotten, as well as Luxembourg, which will move from a convention to a law.[4] Luxembourg has a non-binding Convention with the Association des Compagnies D’assurance et de Réassurances (Ministère de la Santé, 2019[95]). In Ireland, the government has announced an upcoming law that will prevent insurers and lenders from requiring disclosure of a past cancer diagnosis after a remission period of seven years for adults above age 18. Malta is at the proposal stage, with a draft bill under discussion that would introduce similar protections and set a 10-year remission limit. Meanwhile, Poland has not yet introduced a specific law, although debate is ongoing, and policymakers have expressed interest in aligning with EU policies. As of 2025, current protections for cancer survivors in Poland remain limited to general anti-discrimination and data protection rules.

The length of mandatory waiting periods varies across countries, ranging from five years in France, Belgium and Spain, to seven years in Romania and Slovenia, and up to ten years in the Netherlands, Portugal, Italy and Cyprus. These timelines apply to adults who have remained free from relapse or recurrence, with additional conditions in some countries – such as a financial threshold in the Netherlands, where it applies only to mortgages not exceeding EUR 278 004 per person. Special provisions can also exist for younger people. Romania reduces the waiting period to five years for diagnoses occurring before age 18, while Belgium, Cyprus, the Netherlands, Portuga, and Slovenia apply similar reductions for diagnoses before age 21. Belgium, France, the Netherlands and Slovenia have also introduced reference grids to provide shorter timelines for cancers with better prognoses.

In addition, several other EU countries have adopted voluntary-based alternatives, but most often these only apply for certain insurance companies, or certain cancers. Czechia, Denmark, Greece and Ireland for example have implemented self-regulatory codes of conduct within their financial and insurance sectors.

Binding legal measures around the Right to be Forgotten are key to adequately protect cancer survivors against financial discrimination. In France, the introduction of the Right to be Forgotten law has reduced the likelihood of experiencing difficulties in obtaining a loan, from 65% in 2010 to 35% in 2022 (Bougas et al., 2025[93]). This calls for the expansion of a binding legal framework in all EU and other OECD countries in the coming years, considering each country’s specific financial, employment and legal framework. In the EU, the Consumer Credit Directive, entered into force in 2023 with transposition required by November 2026, requires countries to ensure that consumer credit is not based on personal health data up to 15 years following the end of treatment. Currently, these protections remain concentrated in the EU. Aside from Chile, no other OECD countries provide equivalent legal Right to be Forgotten through national legislation. Chile recently adopted such a law, while in Costa Rica, a 2024 draft law proposed implementation of the Right to be Forgotten, without success yet.

> I wanted to take out a mortgage to build a house on my own, about ten years after my diagnosis. Since I receive disability benefits, the bank asked me why, and I answered truthfully. Despite my high and sufficient income and collateral, the bank required a co-signer.
>
> *Nikol, 37 years, breast cancer*

Support for working-age informal carers is key to maintaining their employment and well-being when caregiving is burdensome

For people of working age, caregiving responsibilities can significantly influence both labour force participation and working hours. Evidence suggests that providing 20 or more hours of care per week is associated with a reduction in labour market participation and working hours, with much more pronounced effects observed among those providing over 40 hours of care weekly (European Commission, Directorate-General for Employment, Social Affairs and Inclusion, 2021[96]).

Flexible work arrangements, such as telework, flexible scheduling, or reduced working hours, can help carers, particularly those providing low-intensity care, to better reconcile work and caregiving responsibilities. At the EU level, the 2019 Work-Life Balance Directive underlines the right for carers to request flexible working conditions, including flexible hours, reduced working time, and flexibility in the place of work. However, such measures may not sufficiently support those providing moderate to high levels of care.

For more intensive caregiving needs, care leave schemes may be more appropriate. These schemes are particularly relevant in situations requiring substantial but time-limited support, such as caring for a terminally ill relative with cancer or providing informal post-hospital and rehabilitation care. The design of compensation levels of care leaves involves a trade-off: if too high, they may discourage return to work, especially when care needs become prolonged; if too low, they may increase the risk of financial strain for caregivers.

About 16 EU countries grant entitlements to either paid or unpaid leave to care for a dependent person, regardless of the cause of the dependency. Thus, these entitlements are applicable only when a cancer patient becomes dependent. They are typically defined based on the caregiver's relationship to the dependent person and the assessed level of care needs (Rocard and Llena-Nozal, 2022[97]).

The duration of leave varies from five days in Spain[5] to three months (renewable once) in France, and with no set limit in Denmark. In four countries, Estonia, the Netherlands, Norway and Spain, paid care leave for non-terminally ill recipients is restricted to less than one month. In Germany, the caregiver allowance provides compensation for loss of earnings in the event of a short-term absence from work, allowing up to ten working days per calendar year per person in need of care to organise appropriate support.

Eligibility criteria often include family or co-residency ties: in all EU countries with paid leave, except for the Nordic countries, Belgium, Germany and Ireland, the care recipient must be a family member and/or live in the same household. In all Nordic countries except Norway, municipalities set eligibility criteria and directly employ informal carers. Nordic countries and Poland tend to offer the most generous financial wage compensation. In five EU countries (Belgium, Denmark, France, Luxembourg and Sweden), paid care leave is specifically targeted at those caring for a terminally ill relative. Other eligibility criteria can include the age of the carer, the carer or household income, and the informal caregiving intensity.

Belgium stands out with one of the most comprehensive paid leave systems among EU countries, with three different types of care leave: one related to terminal illness of up to 2 months, one related to long-term care of up to 1 year, and one in the form of time credit of up to 5 years related to palliative care. This time credit involves either completely suspending work or reducing working hours, and employees do not need a specific reason, thus providing extensive flexibility for the employees to manage their work-life balance.

Unpaid care leave has been developed in seven EU countries. Conditions of unpaid leave vary to a lesser extent than for paid leave. Unpaid leave entitlements tend to be longer than paid ones. The care recipient has to be a member of the family and/or be a co-resident. Eligibility criteria may be strict, and can depend on employers' approval, and the sector in which workers are employed (whether public or private). Duration varies between three months in the Netherlands to about six months to two years in Hungary and Spain, with the exception of Belgium (ten days in the private sector, two months in the public sector). In Austria and the Netherlands unpaid leave is targeted only to those caring for terminally ill relatives.

In addition to paid and unpaid leaves, expanding access to respite services is essential to prevent caregiver burnout. While most EU countries offer in-kind respite care (such as in-home respite or short-term residential respite to allow the caregiver to take a break), uptake remains limited due to low financial compensation, limited availability, and organisational barriers (Rocard and Llena-Nozal, 2022[97]). Providing counselling and psychological support also plays a key role in safeguarding the well-being of informal caregivers.

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Notes

[1] The EURO-D is a standardised depression screening scale developed to assess and compare levels of depression across European population. It gives a score from 0 to 12, where higher scores mean more depression.

[2] Given that country rankings are similar when examining PHC patients without cancer, cross-country differences may also reflect cultural factors that influence how respondents answer questions.

[3] The assessment of co-ordination and coproduction reflects a general assessment from primary healthcare patients living with cancer, not necessarily specific to cancer care system.

[4] Luxembourg has introduced a convention "Droit à L'oubli" in 2019. Further information is available at https://www.aca.lu/wp-content/uploads/2022/06/CONVENTION-DROIT-A-LOUBLI-.pdf.

[5] In Spain, workers are entitled to paid leave to care for a family member with cancer, though the type and duration of support vary. A five-day paid leave is available in cases of hospitalisation, serious health condition or surgery of a close relative up to the second degree. In addition, parents of children under 18 diagnosed with cancer may request a reduction of at least 50% of their working hours with corresponding financial compensation; this benefit can be extended and remains available until the child turns 23, or up to 26 years of age in cases of severe disability.

Delivering High Value Cancer Care

European Cancer Inequalities Registry Analytical Report

The global burden of cancer continues to rise, with an increasing number of cancer cases over the past two decades – particularly among younger women – placing sustained pressure on healthcare services and affecting well-being and economic outcomes. This report provides new, cross-country evidence and policy insights on how to deliver cancer care that ensures value for patients and healthcare systems. Drawing on quantitative and qualitative analyses – including new internationally comparable indicators and a policy survey – the report examines three pressing priorities to deliver high value cancer care: faster access to care, evidence-based and efficient care that ensures the best health outcomes; and people-centred approaches that reflect individuals' needs and preferences.

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