

Cancer Dashboard for Ireland

Bardh Manxhuka and Thomas Hofmarcher



Cancer Dashboard for Ireland

ihe.se

Purpose

In 2023, the Swedish Institute for Health Economics (IHE) launched an international initiative with support from MSD, aiming to facilitate the exchange of best practices in cancer care across European countries. This initiative is called "*Cancer Dashboards in Europe*". It has its background in the launch of the Europe's Beating Cancer Plan and the question of how to translate political commitment into action. The objective is to create country-specific dashboard-style reports with a comprehensive and illustrative description of a selected set of key indicators in all areas of cancer care. These indicators benchmark the current status quo in a country against target values specified in national cancer plans, targets set by international organizations, or values of other countries. The reports also provide evidence-based recommendations on how to improve the current situation in a country.

This dashboard report for Ireland focuses on cancer in general. It is intended to reinforce the implementation of the national cancer strategy and other ongoing initiatives to improve cancer care in the country. The description seeks to support Irish policymakers in the decision-making and prioritization of initiatives in cancer care. The dashboard is intended to be a living document, which can be updated when newer data become available. It can also be extended to additional areas and indicators that become relevant based on developments in Ireland or the EU.

Contents

Foreword.....	3
Dashboard overview for Ireland	5
High-level recommendations.....	6
Background	7
Governance.....	8
Disease burden of cancer	9
Economic burden of cancer	11
Research	13
Prevention	14
Early detection.....	17
Diagnosis and treatment.....	20
Survivorship	26
References.....	28

Prepared by IHE - The Swedish Institute for Health Economics

Authors: Bardh Manxhuka & Thomas Hofmarcher

Version: January 21, 2026

This report was commissioned and funded by MSD. The views and opinions of the authors are not necessarily those of MSD. The responsibility for the analysis and conclusions in this report lies solely with the authors.

Foreword

Cancer continues to pose a major and growing challenge for the people of Ireland. While notable progress has been achieved in early detection, treatment, and survival across many tumour types, cancer is still the leading cause of death in our country. Rising incidence driven by demographic change, persistent challenges in access to timely diagnosis and innovative therapies, and increasing pressures on oncology workforce and infrastructure all underscore the need for sustained, evidence-based action.

Against this backdrop, the **Cancer Dashboard for Ireland** developed by the Swedish Institute for Health Economics (IHE) provides a valuable and comprehensive analysis of the state of cancer care across the country. Drawing on real-world data from national and international sources, the report benchmarks Ireland's performance across all areas of cancer care. By comparing Ireland to European peers and highlighting variation within the country, the Dashboard offers a clear and transparent picture of where the cancer system is progressing and where further effort is needed.

The findings of this report reinforce several national priorities: strengthening prevention and early detection; ensuring timely access to diagnostics and specialist referral; improving access to innovative treatments and survivorship services; and expanding research activity. The insights are particularly relevant as Ireland concludes the implementation of the **National Cancer Strategy 2017-2026** and prepares for the next phase of long-term cancer planning.

The **Irish Cancer Society** has long played a pivotal role in improving cancer outcomes through research funding, patient advocacy, public education, and the delivery of essential support services. Its sustained investment in research and its commitment to amplifying the patient voice have been instrumental in shaping national cancer policy. The **All-Island Cancer Research Institute** has likewise made significant contributions by fostering cross-border collaboration, supporting world-class research programmes, and ensuring that scientific excellence benefits patients throughout the island of Ireland. Together, these efforts strengthen the foundations for a more integrated and research-driven cancer ecosystem.

We commend the authors of this report for delivering an accessible and rigorous resource that will support policymakers, clinicians, researchers, and patient organisations in shaping future improvements in cancer care. It is our hope that the insights contained in this Dashboard will guide continued progress toward better outcomes for all individuals affected by cancer in Ireland.

Steve Dempsey

Irish Cancer Society



Ciaran Briscoe

All-Island Cancer Research Institute



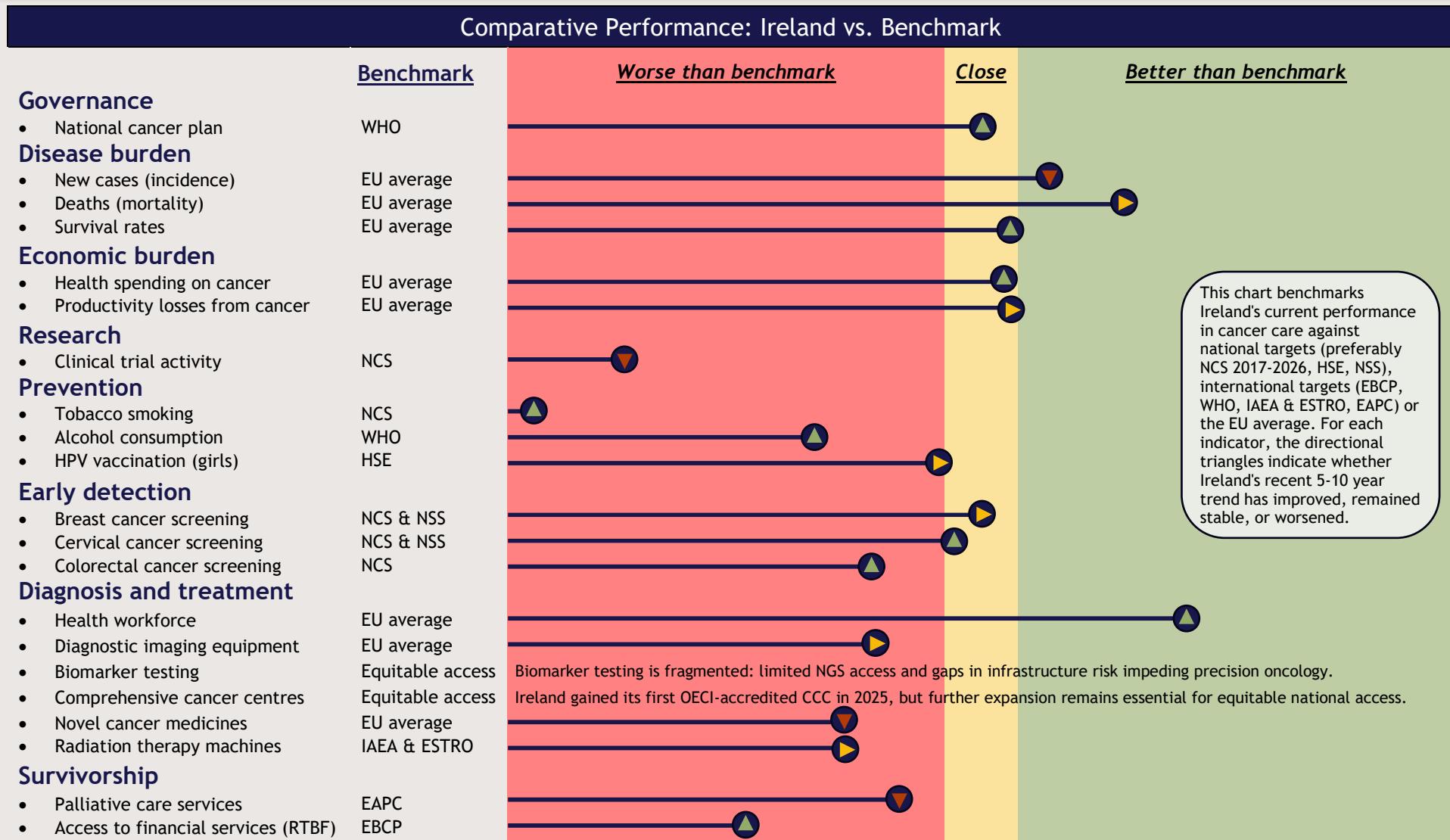
List of abbreviations

A&D	Accreditation and Designation
AICRI	All-Island Cancer Research Institute
CC	Cancer centre
CCC	Comprehensive cancer centre
CHO	Community Health Organisation (Ireland)
CSO	Central Statistics Office (Ireland)
CT	Computed tomography
DIRAC	Directory of Radiotherapy Centres
DNA	Deoxyribonucleic acid
EAPC	European Association for Palliative Care
EBCP	Europe's Beating Cancer Plan
ECIS	European Cancer Information System
EFPIA	European Federation of Pharmaceutical Industries and Associations
EMA	European Medicines Agency
ESMO	European Society for Medical Oncology
ESTRO	European Society for Radiotherapy and Oncology
EUnetCCC	EU Network of Comprehensive Cancer Centres
FIT	Faecal immunochemical test
GDP	Gross domestic product
gFOBT	Guaiac faecal occult blood test
GP	General practitioner
HIV	Human immunodeficiency virus
HPSC	Health Protection Surveillance Centre (Ireland)
HPV	Human papillomavirus
HSE	Health Service Executive (Ireland)
HTA	Health technology assessment
HTAR	EU Health Technology Assessment Regulation
IAEA	International Atomic Energy Agency
IPHA	Irish Pharmaceutical Healthcare Association
KPI	Key performance indicator
Linac	Linear accelerator
MPOWER	WHO tobacco control policy package ("MPOWER" measures)
MRI	Magnetic resonance imaging
MTB	Molecular Tumour Board
NCCP	National Cancer Control Programme
NCD	Noncommunicable disease
NCRI	National Cancer Registry Ireland
NCS	National Cancer Strategy (Ireland)
NDTP	National Doctors Training & Planning (Ireland)
NGS	Next-generation sequencing
NSS	National Screening Service (Ireland)
OECI	Organisation of European Cancer Institutes
ONS	Office for National Statistics (United Kingdom)
PC	Palliative care
PET	Positron emission tomography
PPP	Purchasing power parity
PPS	Personal Public Service (Ireland)
RCSI	Royal College of Surgeons in Ireland
RTBF	Right to be forgotten
VAT	Value-added tax
VCR	Vaccination coverage rate
WHA70.12	World Health Assembly 2017 resolution (70.12: cancer prevention and control)
WHO	World Health Organization

Country abbreviations

AT	Austria	EU	European Union	LV	Latvia
BE	Belgium	EU-27	EU member states	MT	Malta
BG	Bulgaria	FI	Finland	NL	Netherlands
CH	Switzerland	FR	France	NO	Norway
CY	Cyprus	HR	Croatia	PL	Poland
CZ	Czechia	HU	Hungary	PT	Portugal
DE	Germany	IE	Ireland	RO	Romania
DK	Denmark	IS	Iceland	SE	Sweden
EE	Estonia	IT	Italy	SI	Slovenia
EL	Greece	LT	Lithuania	SK	Slovakia
ES	Spain	LU	Luxembourg	UK	United Kingdom

Dashboard overview Ireland



This chart benchmarks Ireland's current performance in cancer care against national targets (preferably NCS 2017-2026, HSE, NSS), international targets (EBCP, WHO, IAEA & ESTRO, EAPC) or the EU average. For each indicator, the directional triangles indicate whether Ireland's recent 5-10 year trend has improved, remained stable, or worsened.

High-level recommendations

Governance

- ✓ Conclude the current National Cancer Strategy with a transparent and comprehensive evaluation, ensuring that lessons learnt directly inform the development of the next strategy.
- ✓ Develop the next cancer strategy in consultation with a wide range of stakeholders. It should set ambitious, achievable, and measurable targets that align with European targets and address critical gaps in access to novel medicines, workforce capacity and distribution, and financial protection for patients and their families. It should include sustained, multiannual investment for its implementation.

Funding and data

- ✓ Accelerate the Digital for Care programme and introduction of unified national electronic health records to ensure real-time access to data for patients and performance tracking for decision-makers. Establish systematic reporting of healthcare spending by disease area to support more effective prioritisation and value assessment in healthcare.
- ✓ Ensure that increased spending on cancer care is directed towards high-impact areas along the care pathway, while applying a societal perspective to capture productivity gains from improved survival.

Research

- ✓ Accelerate efforts to expand cancer clinical trial access by following through on the latest recommendations by the National Clinical Trials Oversight Group and leveraging EU funding opportunities.

Prevention

- ✓ Intensify public awareness campaigns, educational programmes, and taxation to support a tobacco-free Ireland and reduce harmful alcohol consumption.
- ✓ Improve HPV vaccination coverage by strengthening invitation systems, addressing disparities across regions, sexes, and other disadvantaged groups, and following through on catch-up vaccinations.

Early detection

- ✓ Strengthen participation across all national screening programmes with targeted outreach to groups with persistently low uptake.
- ✓ Expand the target age groups of breast and colorectal screening in line with EU recommendations to maximise early detection potential.
- ✓ Publish annual data on stage distribution at diagnosis by cancer type on the NCRI website to support transparent monitoring and timely policy response on early detection outcomes.

Diagnosis and treatment

- ✓ Ensure continued growth of the cancer care workforce and also adopt digital solutions to enable clinicians to work more effectively through electronic health records and decision-support systems.
- ✓ Expand national capacity for biomarker testing, specifically through NGS, supported by multidisciplinary tumour boards to integrate precision oncology into routine care.
- ✓ Ensure timely and equitable patient access to effective and cost-effective EMA-approved cancer medicines by complying with statutory reimbursement timelines and exploring early access schemes.

Survivorship

- ✓ Ensure full implementation of the 2024 National Adult Palliative Care Policy, with strong integration into oncology services, adequate workforce capacity, and equitable access for all patients in need.
- ✓ Enact and enforce the “Right to be Forgotten” law to protect cancer survivors from financial discrimination, supported by survivor education and systematic compliance monitoring.

Background

IHE Cancer Dashboards

Cancer has received growing political attention across the European Union (EU) in recent years. The launch of Europe's Beating Cancer Plan (2021) by the European Commission reflected a strengthened commitment to addressing the burden of cancer in a more systematic and coordinated way (1). Across the EU, cancer is the second-leading cause of death in both men and women, responsible for more than one in five deaths, and has already become the leading cause in several EU countries, including Ireland (2). Substantial inequalities in cancer care persist, both between and within EU countries. A key challenge lies in translating international and national initiatives into action: while the policy landscape is rich in ambition, it often lacks funding and clear and practical tools to support implementation, guide prioritization, and monitor progress at national level.

To help bridge the gap between policy plans and action, the Swedish Institute for Health Economics (IHE) has developed a series of national Cancer Dashboards since 2023 for countries such as Austria, Denmark, Greece, Italy, Lithuania, Poland, and Portugal. These dashboards provide an intuitive and structured overview of how countries perform in cancer care. By combining data, benchmarking, and evidence-based recommendations, they offer policymakers and stakeholders actionable insights, highlighting where progress is being made, where efforts must accelerate, and where strategic investment is required. Ultimately, each dashboard serves as a navigation tool to support the planning, implementation, and evaluation of effective, equitable, and outcome-oriented cancer control.

While some dashboards cover specific cancer types, others take a broader view of cancer care as a whole. Building on this work, the current dashboard turns the focus to cancer care in Ireland.

Structure of the dashboard and choice of indicators

This report begins with an overview of key Irish and European governance frameworks relevant to cancer, including Ireland's National Cancer Strategy (NCS) and Europe's Beating Cancer Plan (EBCP). It then provides an analysis of the disease and economic burden of cancer, highlighting the impact of the disease on patients, the healthcare system, and society at large. These contextual elements set the stage for understanding the urgency of national-level action. The report then mostly follows the cancer care pathway, structured around the four pillars of the EBCP and with a focus on research given its explicit prioritisation in both the NCS and EBCP as a critical enabler of high-quality cancer care. Together, the dashboard presents a comprehensive view of the current status of cancer management in Ireland.

The dashboard is structured as follows:

- **Governance** (1 indicator): National cancer strategy
- **Disease burden** (3 indicators): New cases (incidence), deaths (mortality), survival rates
- **Economic burden** (2 indicators): Health spending on cancer care, productivity losses from cancer
- **Research** (1 indicator): Clinical trial activity & investment in cancer research
- **Prevention** (3 indicators): Tobacco smoking, alcohol consumption, human papillomavirus (HPV)
- **Early detection** (3 indicators): Screening for breast, cervical, and colorectal cancer
- **Diagnosis and treatment** (6 indicators): Health workforce, diagnostic imaging equipment, biomarker testing, comprehensive cancer centres, novel cancer medicines, radiation therapy machines
- **Survivorship** (2 indicator): Palliative care services, access to financial services ("Right to be forgotten")

The starting point for the selection of indicators was the original list of indicators assembled by IHE for the European Cancer Pulse of the European Cancer Organisation (3). The final set of indicators was selected based on discussions with the Irish Cancer Society, All-Island Cancer Research Institute, MSD Ireland, and local data availability.

For each indicator across the cancer care pathway, this report provides:

- A general explanation of its relevance, and how it relates to the NCS and the EBCP
- A description of the current situation in Ireland, with regional and/or international comparisons
- Recommendations for improvement and alignment with national and international targets

Data sources for all indicators are summarised in the Appendix. All data were drawn from publicly available sources.

Benchmarking is conducted internationally against selected Western European countries (Belgium, Denmark, the Netherlands, and the UK), chosen to provide relevant international reference points, as well as the EU average whenever data are available.

Irish National Cancer Strategy (NCS) 2017-2026

Ireland's governance of cancer is in line with the World Health Assembly (the decision-making body of the World Health Organization, WHO) resolution WHA70.12 on cancer prevention and control, which urges governments to develop and implement national cancer control plans (4). The current governance is shaped by the National Cancer Strategy (NCS) 2017-2026, developed by the Department of Health (5). The National Cancer Control Programme (NCCP), established within the Health Service Executive (HSE) in 2007, is responsible for implementing nearly all the strategy's provisions and provides leadership. The NCS 2017-2026 sets out 52 recommendations and 23 key performance indicators (KPIs) across all areas of cancer control - prevention, early detection (including screening), diagnosis and treatment (including optimization of the patient pathway), and survivorship. The KPIs are intended to monitor progress and ensure accountability over the strategy period. The NCS is structured around four main goals:

1. **Reduce the cancer burden** by prioritising prevention and increasing early diagnosis
2. **Provide optimal care** through effective and equitable treatment, patient safety, and modern facilities
3. **Maximise patient involvement and quality of life** by strengthening patient roles and survivorship care
4. **Enable and assure change** by reinforcing the NCCP, ensuring workforce planning, and embedding research and technology

This is Ireland's third cancer strategy, following those of 1996 (6) and 2006 (7). It represents an upgrade, building on earlier reforms (notably the creation of cancer centres and the NCCP) and setting more ambitious targets (e.g., to bring Irish cancer survival rates into the top quartile of European countries by 2026) (5).

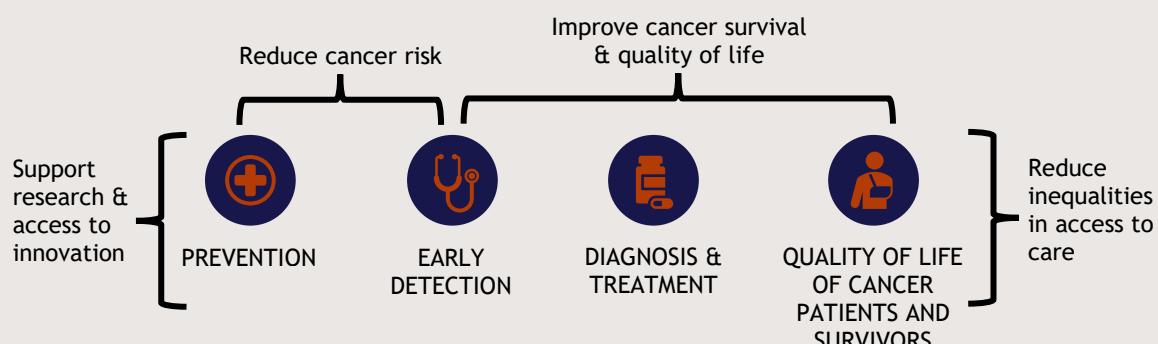
Progress with the NCS is reported in annual implementation reports (available for 2018-2023 as of October 2025) made publicly available by the Department of Health (8), providing a level of transparency that is unusual by international standards. In addition, the Irish Cancer Society published a "scorecard" in October 2025, which compares the latest data with defined targets set out within KPIs in the NCS (9).

While the Government has committed funding the strategy, both the NCCP and the Irish Cancer Society have highlighted significant shortfalls. The NCCP's executive management team have warned that insufficient incremental investment risks missed opportunities to expand services and introduce innovations (10). The Irish Cancer Society estimated a €180 million funding gap between 2017 and 2024, with consequences including delayed surgeries, stalled screening expansion, under-capacity radiotherapy, and slower access to new medicines (11). It has therefore called for ringfenced, multiannual funding to ensure full implementation of the strategy.

Europe's Beating Cancer Plan (EBCP)

In 2021, the European Commission unveiled Europe's Beating Cancer Plan (EBCP), a comprehensive policy initiative aimed at tackling cancer through ten flagship initiatives that cut across four main areas of action - prevention, early detection, diagnosis and treatment, and the quality of life of cancer patients and survivors - and follow the entire disease trajectory (see figure below) (1). There are also several simultaneous goals of cancer care. One goal is to prevent what can be prevented. Approximately 30-50% of cancer cases could theoretically be prevented because they are caused by modifiable risk factors (12). Another goal is to improve the survival and quality of life of patients - through early detection (e.g. screening programs), diagnosis and treatment (e.g. through access to modern diagnostic tools and treatments), and follow-up care for survivors. Cross-cutting goals are to reduce inequalities in access to care (e.g. of different socioeconomic groups) and to support research and access to innovations to advance cancer care from the current status quo. Furthermore, the EBCP aligns with the EU Cancer Mission under the Horizon Europe 2021-2027 research funding program, emphasizing a collaborative approach to reducing cancer prevalence and enhancing patient care across Europe.

Key pillars of cancer care and aims

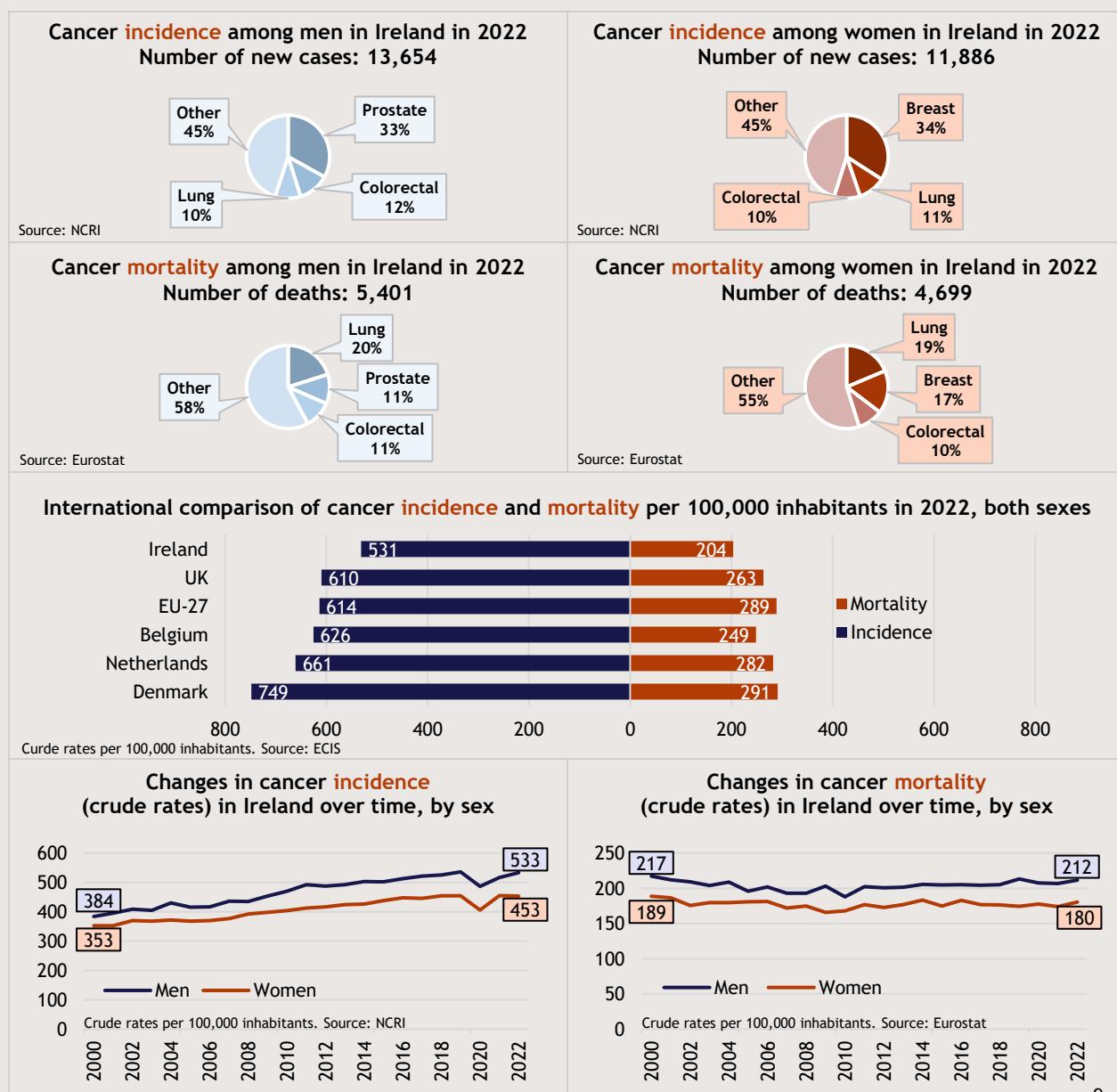


Disease burden of cancer

In 2022, 25,540 new cancer cases (13,654 in men and 11,886 in women, excluding non-melanoma skin cancer) were recorded in Ireland in the National Cancer Registry Ireland (NCRI) (13). The most common diagnosed types were prostate cancer in men (33%) and breast cancer in women (34%), followed by colorectal cancer (12% in men; 10% in women) and lung cancer (10% in men; 11% in women). In the same year, cancer caused 10,100 deaths (5,401 in men and 4,699 in women), making it the leading cause of death in the country (28% of all deaths) (2). Lung cancer was the leading cause of cancer-related death in both sexes (20% in men; 19% in women), followed by colorectal (11% in men; 10% in women), breast (17% in women), and prostate cancer (11% in men) (2).

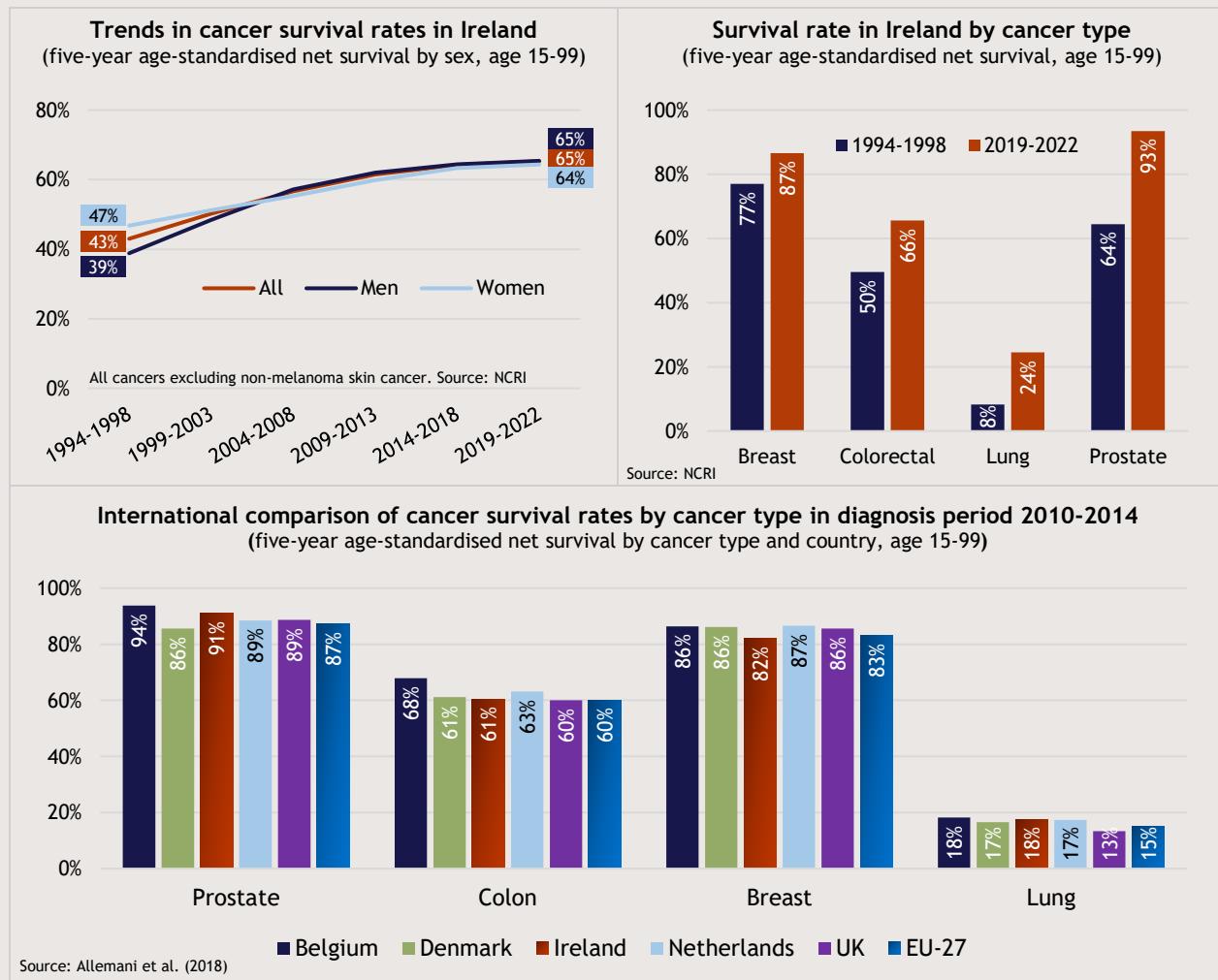
Among comparable European countries, Ireland had the lowest estimated crude incidence and mortality rates in 2022, with 531 new cases and 204 deaths per 100,000 inhabitants, well below the EU average of 614 cases and 289 deaths per 100,000 (14). The low crude incidence rate (which translates into a low crude mortality rate) is mainly a reflection of the younger population in Ireland (median age was 39 years in 2022) than in the EU overall (44 years) (15), as cancer is an ageing-associated disease.

Cancer incidence rates in Ireland increased between 2000 and 2022, from 384 to 533 cases per 100,000 among men and from 353 to 453 cases per 100,000 among women (13). A temporary dip in 2020 for both sexes likely reflects the impact of the COVID-19 pandemic on cancer detection and reporting. Over the same period, cancer mortality rates remained rather stable at around 215 deaths per 100,000 in men and 185 deaths per 100,000 in women (2, 16, 17). When measured as age-standardised rates, there is a decline in cancer mortality over time, reflecting improved outcomes (18).



Cancer survival has improved markedly over the past three decades in Ireland. According to the NCRI, age-standardised five-year net survival rose from 43% in the diagnosis period 1994-1998 to 65% in 2019-2022 (19). Current survival rates are similar for men (65%) and women (64%), with broadly parallel trends since men overtook women in the diagnosis period 2004-2008. Substantial progress has also been seen across major cancer types over this period. Lung cancer survival, while still being comparatively low, tripled from 8% to 24%, breast cancer survival increased from 71% to 88%, prostate cancer survival increased from 64% to 93%, and colorectal cancer survival increased from 50% to 66% (19).

International comparisons of cancer survival are limited and largely outdated. The most recent data, from the CONCORD-3 study for the diagnosis period 2010-2014, show that Ireland's survival rates were broadly in line with EU averages across cancer types and typically in the mid-range among the comparator countries (20). The NCS 2017-2026 includes the target for Ireland to be in the top quartile for five-year (overall) cancer survival among EU countries by the end of the strategy period (5).



Recommendations

- Reduce the current three-year reporting lag in NCRI data by publishing cancer incidence and survival statistics on a timelier basis, enabling faster monitoring of KPIs and more responsive policy action.
- Publish annual data on stage distribution at diagnosis by cancer type on the NCRI website in order to facilitate measurement towards the progress of KPIs related to early detection in the NCS 2017-2026.
- Integrate Central Statistics Office (CSO) data on cancer mortality into the NCRI website to facilitate comprehensive reporting and monitoring of the cancer burden.
- Explore how the NCRI data could be expanded by drawing on data of unified electronic health records [to be established as part of the "Digital for Care - A Digital Health Framework for Ireland 2024-2030" programme] to track details on progression of patients and provided statistics on, e.g., how many people are living with metastatic cancer.
- Encourage closer collaboration between registries in Northern Ireland and the Republic of Ireland, including the development of an All-Island Cancer Atlas.

Economic burden of cancer

In Ireland, the overall economic burden of cancer was estimated at roughly €2 billion in 2018, corresponding to €404 per capita (21). Most of this burden was attributable to healthcare expenditure (58%), followed by lost productivity among working-age patients (33%) and informal care (9%).

The overall economic burden of cancer consists of:



Healthcare expenditure (direct costs):

- Resources of the healthcare system (medical equipment, staff, medicines, etc.) funded both by public and private sources



Costs of lost productivity (indirect costs):

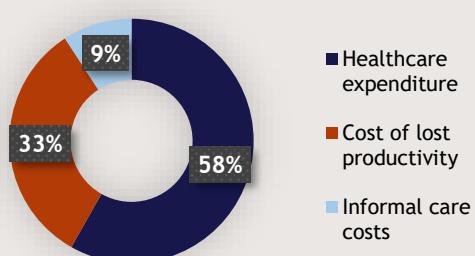
- Productivity losses from absence due to sickness, permanent incapacity/disability, and premature mortality of working-age patients



Informal care costs:

- Value of the time forgone by relatives and friends to provide unpaid care

Composition of the economic burden of cancer in Ireland in 2018

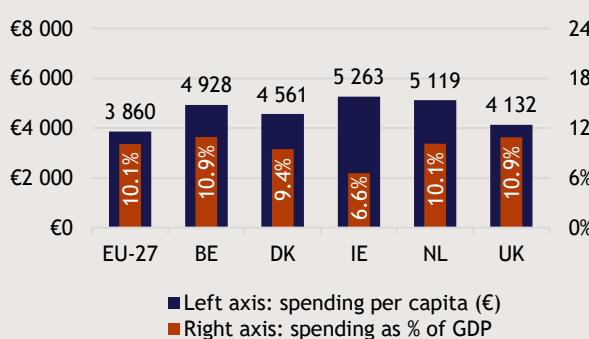


Source: Hofmarcher et al. (2020)

It is important to note that Ireland has no official statistics (by the Department of Health, HSE, or CSO) on how much of its healthcare expenditure is devoted to cancer or to other diseases and how much of spending occurs within private vs public hospitals (22). Previous studies relied on data from similar countries, such as the UK, to estimate the cancer-specific spending in Ireland (21, 23). This lack of transparency makes it difficult to assess to what extent spending matches patient needs and how it has evolved over time along with changes in patient outcomes.

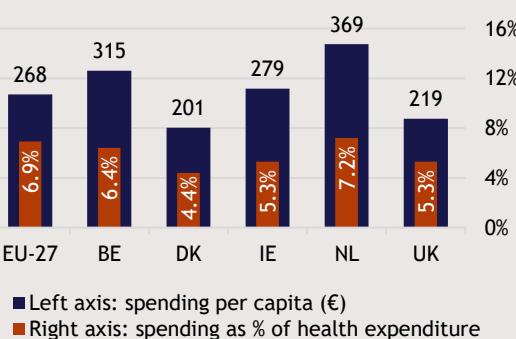
The most recent estimates show that the economic burden of cancer (excluding informal care costs) in Ireland rose from €334 to €501 per capita between 2000 and 2023 (in 2023 prices) (23). Healthcare spending on cancer was estimated to equal 5.3% of the total healthcare expenditure in 2023, corresponding to €335 per capita (€279 after adjusting for purchasing power parity, PPP), which was above the EU average (€268), Denmark (€201), and the UK (€219), but below Belgium (€315) and the Netherlands (€369) (23). Between 2000 and 2023, healthcare spending on cancer was estimated to have increased by 166%. By contrast, the cost of lost productivity declined by 20% over the same period, from €208 to €166 per capita (€140 after adjusting for PPP in 2023) (23). This downward trend, despite the continued rise in the annual number of new cancer cases (see “Disease burden of cancer”) reflects the improving survival rates in Ireland and underlines the economic value of investments in effective cancer care.

Healthcare expenditure in 2023 (PPP-adjusted)



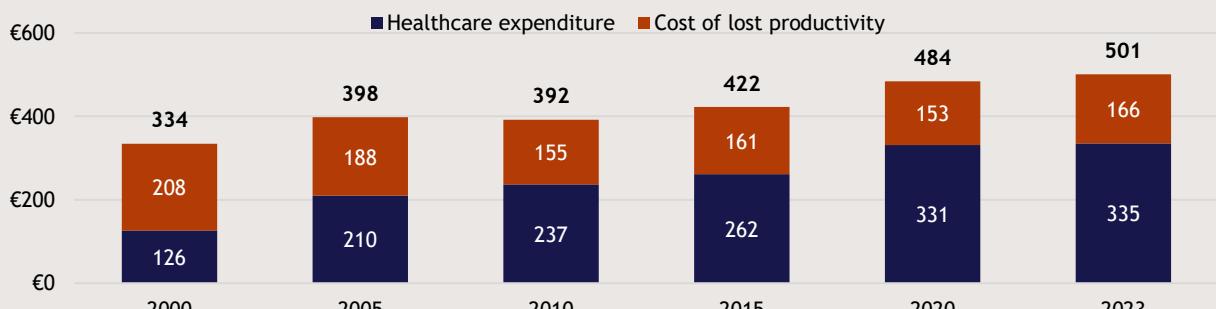
Source: Manzano et al. (2025)

Cancer care expenditure in 2023 (PPP-adjusted)



Source: Manzano et al. (2025)

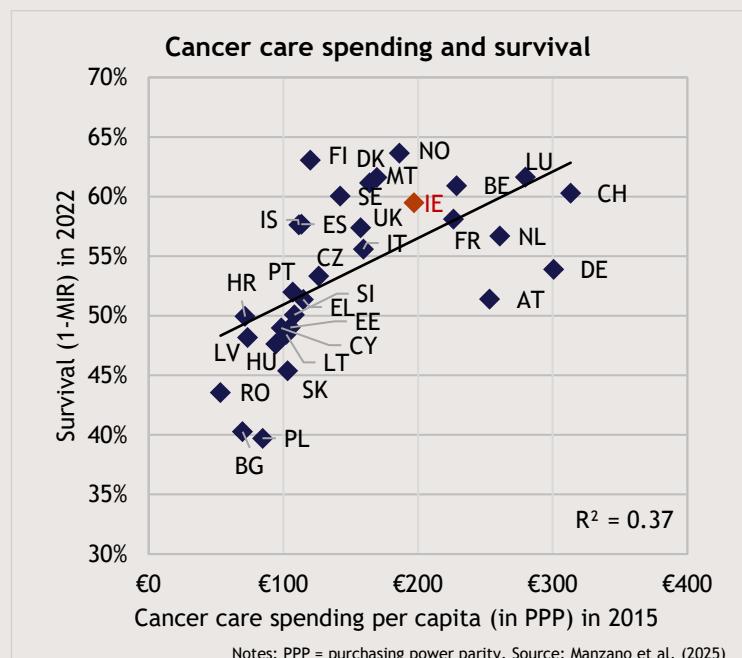
Economic burden of cancer in Ireland in € per capita (2023 prices)



Source: Values for 2000 to 2020 are unpublished data from Manzano et al. (2025)

Health spending on cancer care & survival rates

The ultimate aim of health spending on cancer care is to improve patient outcomes, both in terms of survival and quality of life. The figure to the right offers a crude way of exploring the link between cancer care spending and patient outcomes across European countries; see Manzano et al. (2025) for clarification on methodology (23). The upward-sloping trend line suggests that countries with higher cancer care spending tend to achieve higher survival. In contrast, countries with low spending generally report lower survival (mostly in Central and Eastern Europe). Ireland seems to achieve comparatively high survival in relation to its estimated (but unknown) spending level. While the positive association shown in the graph does not prove causality, it is consistent with previous evidence showing that European countries investing more in cancer care tend to achieve better survival outcomes (24, 25).



The scattered pattern in the graph also underlines that spending alone is not enough. Patient outcomes are shaped by how resources are allocated and used across the entire care pathway. Strategic prioritization, such as early detection, timely diagnosis, and equitable access to effective treatment, is essential to translating spending into tangible survival benefits. Going forward, further gains in survival will likely depend on the broad adoption and expansion of effective technologies, many of which come at a higher cost. Health systems must therefore ensure that investments in cancer care are used in a cost-effective and outcome-oriented way. This means not only evaluating the value of new interventions but also identifying and addressing inefficiencies along the entire care pathway.

Out-of-pocket spending and income losses

Apart from the economic burden of cancer imposed on society, the Irish Cancer Society has also researched and highlighted the economic burden on the individual level (26). Although the costs for cancer treatment (diagnostic and therapeutic interventions) are covered in the public sector by the HSE in Ireland, patients (as well as their caregivers) may still incur considerable out-of-pocket payments. This includes, for instance, co-payments on services, over-the-counter medicines, costs of travel to and from appointments and parking, one-off purchases such as specialist dressings and wigs, as well as increases in day to day living expenses (pay for additional domestic support, childcare costs, etc.). Data released by the Irish Cancer Society show that 61% cancer patients stated that they had medical expenses specific to their treatment and, on average, spent €158 a month on medicines (26). In addition, cancer patients and their families may face a situation of reduced household income, as the employment status of working-age patients and/or informal caregivers in the household changes. Data from the Irish Cancer Society indicate an average reduction in monthly income by around €1,527 (26).

Recommendations

- Establish systematic reporting of healthcare spending by disease area, ideally through disease-specific health accounts to enable accurate cost-of-illness analyses and support effective prioritisation and value assessment in health care.
- Ensure that increased spending on cancer care is directed towards high-impact areas along the care pathway and addresses bottlenecks (see the remaining KPIs in the report).
- Apply a societal perspective in planning and evaluating targeted investments in cancer care in order to acknowledge and capture reductions in productivity losses induced by survival gains.
- Strengthen financial protection for cancer patients and their families by reducing out-of-pocket expenses in line with EU principles of equitable access to care and avoidance of financial hardship.

Research

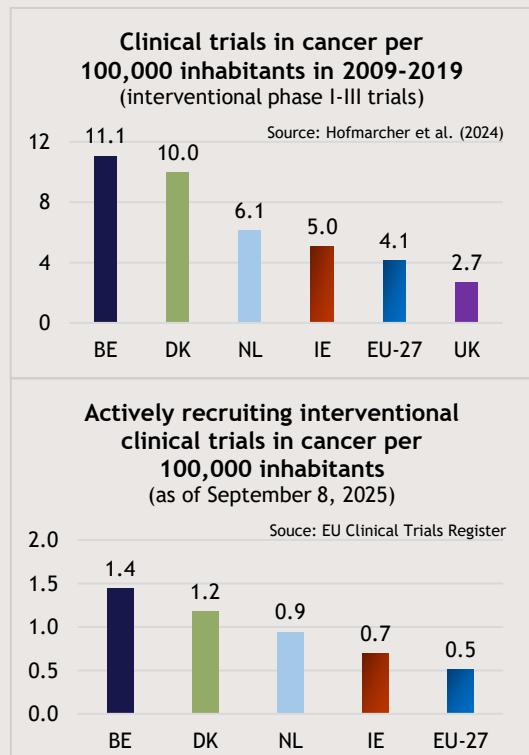
Clinical trial activity & investment in cancer research

Background

- Clinical trials play a crucial role in advancing cancer care by generating evidence on the efficacy and safety of new treatments and provide patients with access to potentially life-saving treatments before they become widely available. As emphasised by the Lancet Oncology European Groundshot Commission (27), strengthening national clinical research capacity helps ensure that innovation reaches patients faster and improves the evidence base for decision-making. Yet as clinical trials are typically conducted in university hospitals, patients treated in less specialised or rural settings may face limited access (28).
- The EBCP calls for strengthened cancer research and improved access to clinical trials across Member States through EU-wide initiatives, including the EU Network of Comprehensive Cancer Centres and the implementation of a legal framework for clinical trials (1). The EU Clinical Trials Regulation (Regulation (EU) No 536/2014), in force since 2022, introduced a centralised system for authorising and monitoring clinical trials across Member States. It streamlines approval procedures, facilitates cross-country collaboration, and aims to strengthen the EU's clinical research environment (29).
- The NCS 2017-2026 aimed to double clinical trial participation by enrolling 6% of cancer patients in interventional trials by 2020, called for full integration of research into cancer care, and mandated a National Cancer Research Group to coordinate, fund, and prioritise cancer research (5).

Current status in Ireland

- Ireland has not met its national target of enrolling 6% of cancer patients in interventional clinical trials, with only about 1.5% in 2023 (30), down from 2% in 2021 (31). On the other hand, overall trial activity is expanding. In 2024, patient participation in all cancer trials increased by about 51% compared to the previous year, and 137 trials were at some point open for patient accrual across 19 hospital-based units (30), up from 100 trials in 2023 (31).
- Ireland lags comparable European countries in terms of number of clinical trials overall and also in oncology (32). An analysis of interventional phase I-III cancer clinical trials in adults (2009-2019) found that Ireland had 5.0 trials per 100,000 inhabitants, above the EU average of 4.1 per 100,000 but well below Belgium (11.1 per 100k), Denmark (10.0 per 100k), and the Netherlands (6.1 per 100k) (28, 33). Newer data from the EU Clinical Trials Information System show that there were 0.7 actively recruiting interventional cancer clinical trials per 100,000 inhabitants in Ireland as of September 8, 2025, above the EU average of 0.5 per 100,000 but behind Belgium, Denmark, and the Netherlands (34).
- A 2024 report reviewed cancer research investment in Ireland in 2019-2022 and found that €106.5 million were awarded across 397 cancer research grants by eight participating funders (35). National funding agencies contributed 79% of the total, with the biggest contributor being the Health Research Board (39%). Most investment targeted treatment evaluation (€34.8 million), treatment development (€28.8 million), and aetiology (€17.7 million), while prevention, underpinning research, and health services research each received under €5 million. Although funding was distributed across over 30 institutions, 60% went to just three universities. The findings of this report are supposed to be used to inform the next National Cancer Strategy or a standalone national cancer research strategy (35).
- In 2025, the Irish government approved final recommendations by the National Clinical Trials Oversight Group to increase the number of clinical trials in Ireland, including establishing future oversight, governance and leadership; fostering efficiency and innovation; and enhancing public and patient involvement (36).



Recommendations

- Accelerate national efforts to expand cancer clinical trial access by addressing the gaps and recommendations identified in the 2025-report of the National Clinical Trials Oversight Group.
- Broaden national cancer research investment to address underserved research areas and develop national strategies to leverage EU funding opportunities.

Prevention

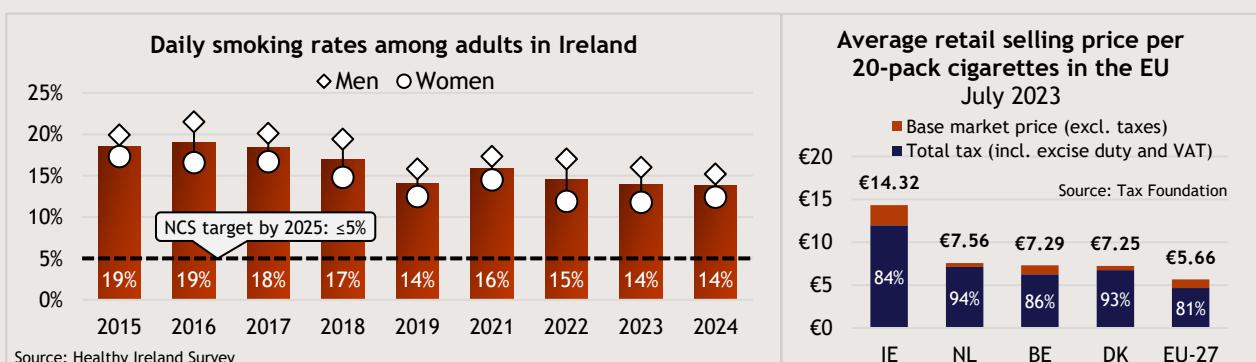
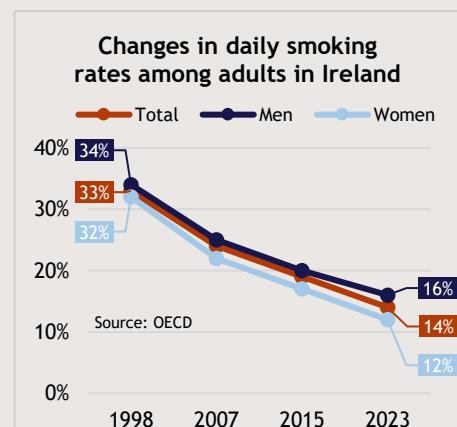
Tobacco smoking

Background

- Tobacco smoking is a major risk factor for developing various cancer types (37), and it has been linked to cancers at 12 different sites (38). Around 80% of all lung cancer cases are linked to cigarette smoking (39).
- The WHO suggests that implementing tobacco control measures can prevent one in five annual cancer cases (40). In 2008, the WHO introduced the MPOWER framework - a package of six evidence-based, cost-effective, high-impact policy measures to help countries reduce the demand for tobacco (41). As part of this framework, best practice for tobacco taxation is defined as a total tax share of at least 75% of the retail price (41, 42). Only one EU country (the Netherlands) had implemented all six MPOWER measures at the best-practice level in 2023 (43).
- The EBCP aims to help create a “Tobacco-Free Generation” where less than 5% of the population uses tobacco by 2040, compared to around 25% today (1).
- Ireland introduced the world’s first nationwide workplace smoking ban in 2004 and has since built one of Europe’s most comprehensive tobacco control frameworks, including a broad indoor smoking ban, a licensing system for tobacco retailers, plain packaging, and strict regulation of tobacco advertising, sponsorship, and nicotine inhaling products (44). In 2024, Ireland became the first EU-country to enact legislation raising the legal age for tobacco sales to 21, with the law taking effect on 1 February 2028 (45). The NCS 2017-2026 adopts the “Tobacco Free Ireland” goal of making Ireland tobacco-free by 2025, defined as reducing the percentage of adults (aged 15+) who smoke daily to at most 5% (5, 46).

Current status in Ireland

- International data from the OECD shows a positive trend of daily smokers in Ireland with a decline from 33% in 1998 to 14% in 2023 (47). The decrease was stronger in women.
- National data from the 2024 Healthy Ireland Survey shows that 14% of adults (aged 15+) smoke daily (48) - down from 19% in 2015, but still nearly three times higher than the 2025 target set in the NCS (at most 5%). The daily smoking rate remains higher among men than women (15% vs. 12% in 2024).
- In total, 17% of adults in Ireland were either daily or occasional smokers in 2024 (49). Smoking prevalence varied by employment status (25% among the unemployed vs. 18% among the employed) and education level (23% among those with Junior Certificate or less vs. 16% among those with Leaving Certificate or higher).
- Approximately 8% of Irish adults use e-cigarettes, either daily (5%) or occasionally (3%) (49). Prevalence is highest among those aged 15-24 years (20% of men; 15% of women), closely mirroring tobacco use in the same group (20% and 16%) (49). Almost 50% of e-cigarette users are ex-smokers and around 20% are daily smokers (49).
- As of July 2023, Ireland had the highest average retail selling prices of cigarettes in the EU (€14.32 per 20-pack) and met the WHO MPOWER best-practice standard for tobacco taxation (50). However, its tax share (84%) was below that of the Netherlands (94%), Denmark (93%), and Belgium (86%).



Recommendations

- Rely on the WHO MPOWER framework to intensify public awareness campaigns and educational programmes, emphasizing the health risks associated with smoking and the benefits of quitting.
- Sustain progress on tobacco taxation by gradually increasing the tax share to levels seen in peer countries, building on the latest excise duty increase announced in the Budget 2026 (51).

Prevention

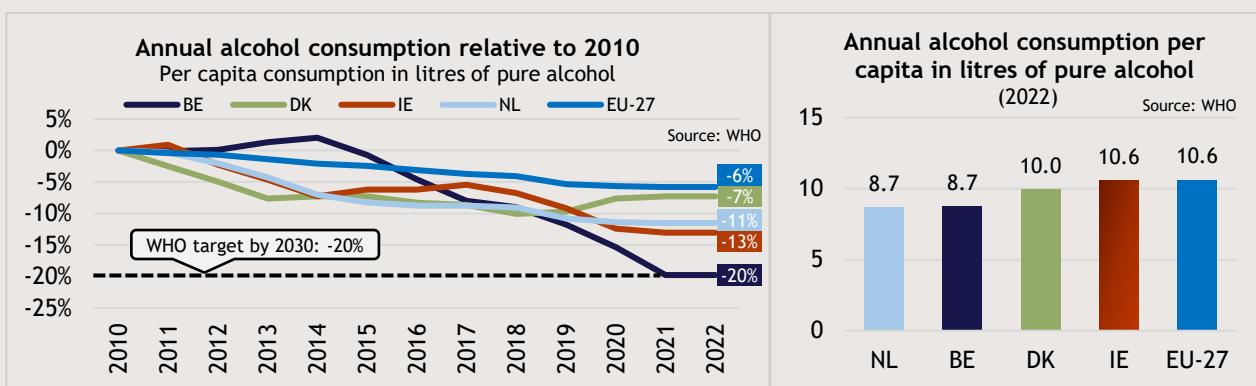
Alcohol consumption

Background

- Alcohol consumption is a major risk factor for noncommunicable diseases (NCD) and caused 2.6 million deaths globally in 2019, including 4.3% of all cancer-related deaths. It is linked to several cancers, including breast, liver, colorectal, oral cavity, pharyngeal, laryngeal, and oesophageal cancers (52).
- The WHO Global Alcohol Action Plan 2022-2030 sets a main global target of at least a 20% relative reduction in the harmful use of alcohol by 2030, compared to 2010 (53). This exceeds the earlier voluntary 10% target set under the NCD Global Monitoring Framework (54). Progress toward these targets is measured through total alcohol per capita consumption, defined as the estimated volume of recorded and unrecorded alcohol consumed per person aged 15 and older in a calendar year, expressed in litres of pure alcohol (53).
- The EBCP supports the global target of a 10% reduction in harmful alcohol use by 2025 and commits to measures such as health warnings and nutrition labelling on alcoholic beverage packaging, stricter monitoring of online alcohol marketing, and support for evidence-based interventions in health care and the workplace (1).
- The NCS 2017-2026 identifies alcohol as a major modifiable risk factor and supports action through the Healthy Ireland framework and the Public Health (Alcohol) Act, which aims to reduce consumption and alcohol-related harm through pricing, labelling, and marketing restrictions (5, 55). A key objective of the Public Health (Alcohol) Act 2018 was to reduce annual alcohol consumption to 9.1 litres of pure alcohol per person by 2020 (55, 56). In July 2025, the Irish Government decided to postpone the implementation of the alcohol labelling measures from 2026 to 2028 in light of economic circumstances (57).

Current status in Ireland

- Alcohol consumption remains common in Ireland, though long-term trends show some improvement. According to the 2024 Healthy Ireland Survey, 73% of individuals aged 15 and over reported drinking in the past 12 months - down from 77% in 2015, but up from 70% in 2023 (58). Individuals drinking at least once a week declined from 41% in 2015 to 38% in 2024 (59). However, binge drinking (defined as consuming six or more standard drinks on a typical drinking occasion) stood at 28% in 2024, up from 24% in 2023 and 15% in 2021, with a wide gender gap: 42% of men compared to 14% of women (60). Binge drinking was most common among men aged 15-24 (50%) and 45-54 (45%), compared to 26% and 13% of women in the same age groups (60).
- In 2022, Ireland's annual alcohol consumption per capita was 10.6 litres of pure alcohol (61), exceeding the 2020 objective of 9.1 litres set by the Public Health (Alcohol) Act 2018. This figure was on par with the EU average but higher than in the Netherlands (8.7 litres), Belgium (8.7 litres), and Denmark (10.0 litres) (61).
- Ireland reduced its per capita alcohol consumption by 13% relative to 2010 (61). This is a greater reduction than most peer countries, but still short of the WHO target of a 20% relative reduction by 2030. To meet this target, Ireland would need to lower consumption to approximately 9.7 litres per capita.



Recommendations

- Intensify public awareness campaigns emphasizing the health risks associated with alcohol consumption.
- Strengthen enforcement of the Public Health (Alcohol) Act 2018 across all its regulatory provisions.
- Address sex-based disparities in alcohol consumption through targeted interventions for high-risk male demographics, particularly those aged 15-24 and 45-54.

Prevention

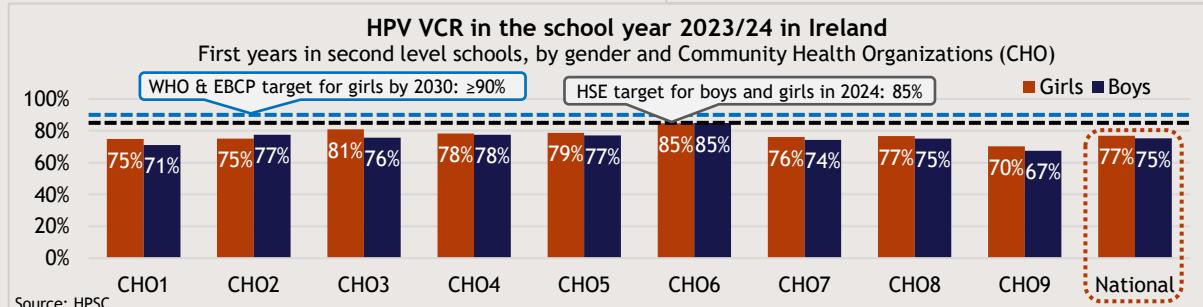
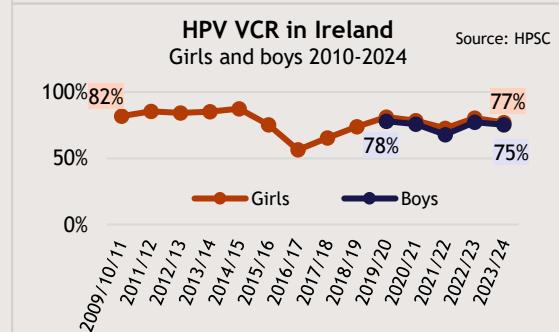
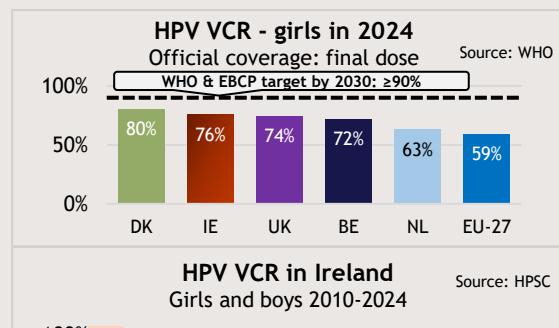
Vaccination against human papillomavirus (HPV)

Background

- HPV is a group of sexually transmitted viruses that causes around 2.5% of all cancers in women and men in Europe (62). The first vaccine against HPV was approved in the EU in 2006. HPV vaccines have been found to be an effective and cost-effective way to prevent cervical cancer and other HPV-related cancers (62). According to the WHO, the best option is to vaccinate girls around age 9-14, just before they become sexually active (63). There is, however, value in vaccinating boys and older teenagers and young adults, at least up to the age of 26 because it can protect against a new infection or re-infection and block transmission to a new partner (62).
- As part of its global strategy to eliminate cervical cancer, the WHO calls on all countries to achieve a 90% HPV vaccination coverage rate (VCR; fully vaccinated) in girls by age 15 by 2030 (62). Reflecting the WHO's target, the EBCP aims to achieve a 90% HPV VCR in girls in the EU by 2030, and to significantly increase the VCR in boys by the same year, although no specific target has been set (1).
- Ireland introduced school-based HPV vaccination for girls in 2010 and extended it to boys in 2019. The vaccine is offered free of charge to all children aged 12-13 (64). The HSE had set a HPV VCR target of 80% among the target population before the 2015/16 school year, subsequently raising it to at least 85% (65). Ireland's Cervical Cancer Elimination Plan from 2024 mirrors the WHO/EBCP target of a 90% HPV VCR in girls by age 15 by 2030 (66). National guidelines recommend a single-dose schedule for individuals aged 9-24, including catch-up vaccination, and two doses for high-risk groups aged 25 or older (such as men who have sex with men), while immunocompromised individuals, including people living with HIV, require three doses regardless of age (67). In addition, in 2025, the government committed to extending the Laura Brennan HPV Catch-up Vaccination Programme, which originally ran from December 2022 to December 2023, to anyone under 25 who missed it (68).

Current status in Ireland

- According to official coverage data from the WHO, Ireland's HPV VCR for girls reached 76% in 2024, well above the EU average of 59% (69). The HPV VCR for boys was 74%, also above the EU average of 54% (69). Data from the Health Protection Surveillance Centre (HPSC) show that there has been a fluctuating trend since the introduction of school-based vaccination in 2010, with the highest VCR of 87% in the 2014/15 school year and the lowest of 56% in 2016/17 (70).
- Disparities in HPV vaccination exist across Community Health Organizations (CHO) and between boys and girls in Ireland. In the 2023/24 school year, HPV VCR varied considerably across the nine CHOs, ranging from 70% to 85% among girls and from 67% to 85% among boys (70). Girls achieved higher rates than boys across most CHOs, with the gender gap being highest in CHO3 at 81% vs 76% and lowest in CHO6 (85% each). See Appendix for CHO clarification.



Recommendations

- Prioritise increasing the HPV VCR to reach the 90% target for girls by 2030, e.g., by adopting the use of digital consent forms for parents and reminders to strengthen the invitation system and boost uptake.
- Monitor and address disparities in HPV vaccination by targeting underperforming areas and disadvantaged groups, as called for in the 2024-recommendation on vaccine-preventable cancers by the Council of the EU (71).
- Follow through on commitments to fully reinstate the Laura Brennan HPV Catch-up Vaccination Programme.

Early detection

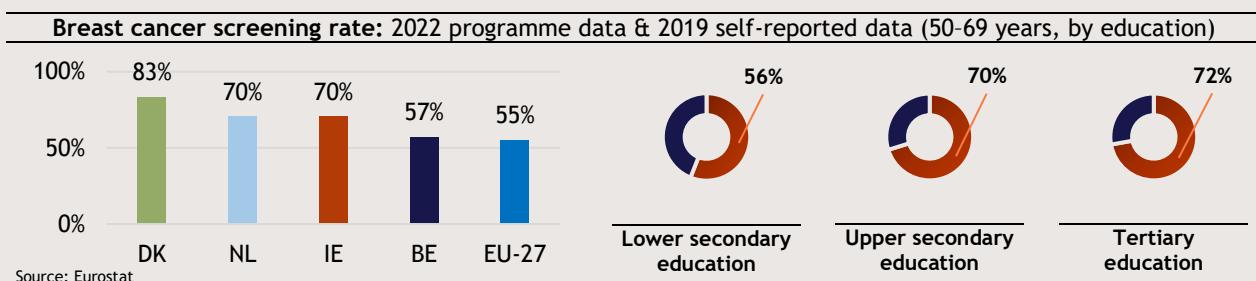
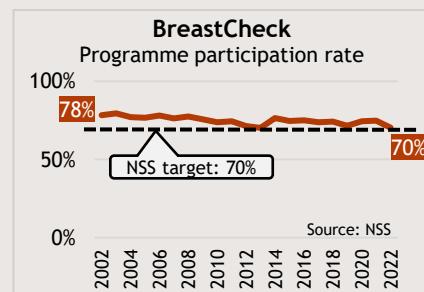
Breast cancer screening

Background

- The goal of breast cancer screening is to detect a tumour as early as possible when it is still small and amenable to curative treatment (72). In early disease stages, survival rates are highest and treatment costs lowest (73).
- The EBCP includes the aim to invite 90% of the target population in each country for breast cancer screening by 2025 (1). Quality guidelines by the European Commission state that a breast screening participation rate above 75% is desirable (74). The updated screening recommendation by the Council of the EU from 2022 states that screening with mammography should be conducted in women aged 45-74 years (previously 50-69 years) (75).
- BreastCheck, Ireland's national breast screening programme, was launched in 2000 and has been delivered by the NSS under the HSE since 2007 (76). It initially targeted women aged 50-64, achieved national coverage by 2009, and expanded eligibility to age 69 by 2021 (77). In 25 years, BreastCheck has performed more than 2.6 million mammograms and detected over 18,000 breast cancers (77). Despite this, breast cancer remains the second leading cause of cancer-related death among Irish women (18% of all cancer-related deaths in 2022) (14).
- Since its launch, BreastCheck has set a 70% participation standard for eligible women (78), a target later reaffirmed in the NCS 2017-2026 (5) and the NSS's five-year strategic plan "Choose Screening 2023-2027" (79).

Current status in Ireland

- BreastCheck offers free mammography every two years to symptom-free women aged 50-69 living in Ireland with a Personal Public Service (PPS) number, as well as eligible transgender, intersex, and non-binary individuals (80). Participation requires registration in the screening register, after which an invitation letter is issued at age 50, followed by an automatic appointment letter (80). Screening is conducted at four hospital-based units and 24 mobile units across 54 locations nationwide (80). Around one-third of all breast cancer cases diagnosed annually in Ireland are identified through the programme (77).
- The BreastCheck programme has contributed to earlier diagnosis and improved health outcomes. In the diagnosis period 2014-2018, 84% of breast cancer cases in the screening age group (50-69 years) were diagnosed at an early stage (stage I and II), compared to 78% in women under 50 and 75% in those over 70 (81). Within the 50-69 age group, 93% of screen-detected cases were diagnosed at an early stage, versus 74% for other detection routes. Five-year net survival in this age group rose from 74% to 94% between the periods 1994-1998 and 2014-2018 (81).
- BreastCheck participation rates declined from 78% in 2002 to 70% in 2022 among eligible women, though consistently meeting the 70% target (78). In 2022, participation was highest among those previously screened (86%), compared to 69% among first-time invitees and just 7% among previous non-attenders (those previously invited but never screened) (82). Due to the ongoing effects of COVID-19, including longer screening intervals and backlogs, recent figures should be interpreted with caution when compared to pre-pandemic levels (83).
- Ireland's breast cancer screening participation rate in 2022 (70%) was higher than the EU average (55%) and Belgium (57%) but remains below Denmark (83%) (84). In addition, self-reported Eurostat data from 2019 highlight persistent disparities: a lower education level is associated with lower participation in breast cancer screening among all EU countries, including Ireland (56% participation rate in women with lower secondary education vs. 72% in women with tertiary education) (85). A similar trend is observed between income levels (86).



Recommendations

- Reverse the declining trend in breast screening participation through targeted outreach to first-time invitees, previous non-attenders, and underserved socioeconomic groups.
- Expand the target age group of the screening programme from 50-69 to 45-74 years in line with the 2022 recommendation by the Council of the EU.

Early detection

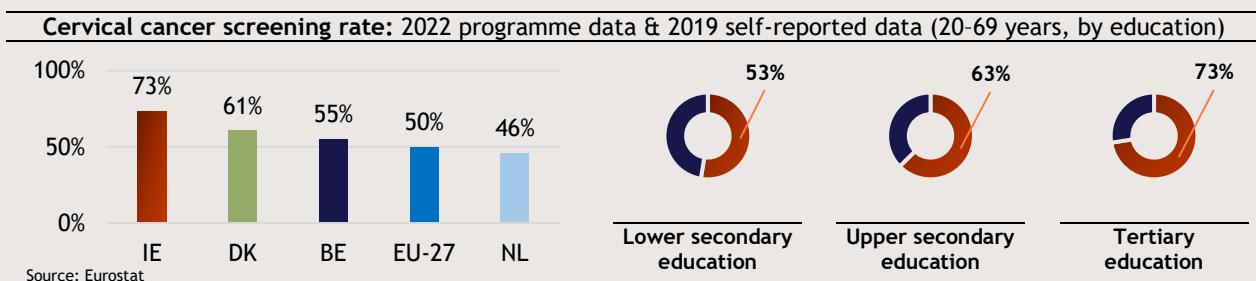
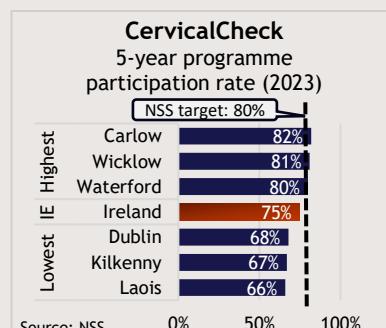
Cervical cancer screening

Background

- The aim of cervical cancer screening is to detect a cancer before the onset of symptoms or even earlier in its pre-stages. In early disease stages, survival rates are highest and treatment costs lowest (87, 88). Cervical cancer screening used to be done with a Pap smear test every three years. The discovery of HPV as the cause of cervical cancer has led to the development of HPV tests as a screening method (63).
- The EBCP includes the aim to invite 90% of the target population in each country for cervical cancer screening by 2025 (1). Quality guidelines by the European Commission state that a cervical screening participation rate above 85% is desirable (89). The updated screening recommendation by the Council of the EU from 2022 states that countries should use HPV tests and screen women aged 30-65 at an interval of five years or more (75).
- CervicalCheck, Ireland's national cervical screening programme, was launched in 2008 and is delivered by the NSS under the HSE (90). In 2020, it became one of the first in Europe to transition to primary HPV testing, extended eligibility to age 65 (previously 25-60), and introduced age- and risk-based screening intervals (91).
- CervicalCheck aims to achieve a 80% participation rate among eligible individuals, as outlined in both the NCS 2017-2026 (5) and the NSS's five-year strategic plan "Choose Screening 2023-2027" (79). The programme is also a central pillar of Ireland's Cervical Cancer Elimination Plan (66).

Current status in Ireland

- CervicalCheck offers free cervical screening to women and people with a cervix aged 25-65 living in Ireland (92). The programme invites individuals every 3 years (ages 25-29) or 5 years (ages 30-65), unless clinical risk factors require more frequent screening (92). Individuals can book a test after receiving an invitation letter, if the register shows they are due (even without a letter), or by contacting a GP or clinic directly if not yet on the register (92). After the test, the sample is analysed for HPV. Depending on the result, individuals are either returned to routine screening, recalled for retesting, or referred for colposcopy (92). Each year, CervicalCheck invites around 270,000 women and people with a cervix for screening (91).
- The CervicalCheck programme has contributed to earlier diagnosis and improved health outcomes. In the diagnosis period 2014-2018, 70% of cervical cancer cases in the screening age group at that point (25-60 years) were diagnosed at an early stage (stage I and II), compared to 41% in women 61 years or older (81). In the 25-60 age group, 88% of screen-detected cases were diagnosed at an early stage, versus 52% for other detection routes. Five-year net survival in this age group rose from 66% to 79% between the periods 1994-1998 and 2014-2018 (81).
- In the five-year period ending in March 2023, 75% of the eligible population were screened through CervicalCheck (i.e., had at least one test in the past five years), up from 73% in the previous period but still below the 80% target (93). Overall coverage has not yet returned to pre-2020 levels due to the programme's expansion in 2020 to include women aged 60-65, who by 2023 had not yet completed a full five-year cycle of invitations; coverage in this age group was just 30%, compared to 66-92% in younger groups (93). There was also considerable regional variation: only three counties met the 80% target, with participation ranging from 66% in Laois to 82% in Carlow.
- Ireland's cervical cancer screening participation rate in 2022 (73%) was the third highest in the EU, well above the EU average of 50% (84). However, self-reported Eurostat data from 2019 highlight educational disparities: a lower education level is associated with lower participation in cervical cancer screening in Ireland (53% participation rate in women with lower secondary education vs. 73% in women with tertiary education) (94).



Recommendations

- Monitor and address regional and age-related disparities to achieve the 80% CervicalCheck participation target.
- Strengthen outreach to underserved groups to reduce inequalities in cervical screening participation.

Early detection

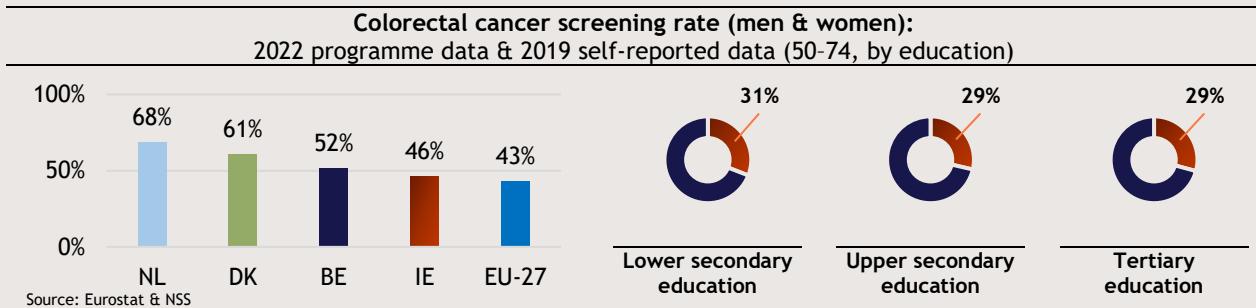
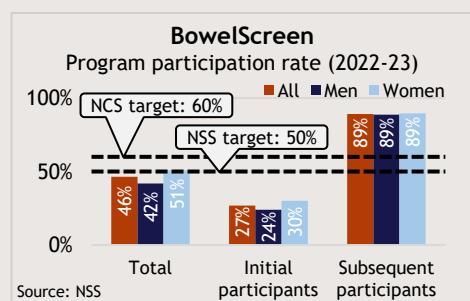
Colorectal cancer screening

Background

- Colorectal cancer is to a large extent curable if diagnosed early and if appropriate treatment is provided (95). Treatment costs are also lowest in early stages of the disease (88, 96). There are multiple colorectal cancer screening methods, including stool-based tests (faecal immunochemical test, FIT; guaiac faecal occult blood test, gFOBT; multitarget stool DNA test), blood-based tests, and imaging-based tests (colonoscopy, computed tomography colonography, colon capsule, flexible sigmoidoscopy) (97).
- The EBCP includes the aim to invite 90% of the target population in each country for colorectal cancer screening by 2025 (1). The updated screening recommendation by the Council of the EU from 2022 confirmed the previous screening recommendation for colorectal cancer in all people aged 50-74 years, and it established FIT as the preferred triage test for referring individuals for follow-up colonoscopy (75). European quality guidelines note that the screening interval with FIT should not exceed three years, with a desirable participation above 65% (98).
- BowelScreen, Ireland's national bowel screening programme was launched in 2012 and is delivered by the NSS under the HSE (99). It initially targeted men and women aged 60-69 and has since expanded eligibility to ages 59-70, with a long-term goal to include the full 55-74 age population (100).
- BowelScreen aims to achieve a 50% participation rate among the eligible population, as outlined in the NSS's five-year strategic plan "Choose Screening 2023-2027" (79). The NCS 2017-2026 set a higher target of 60% participation by 2020 (5), which was not adopted in subsequent programme planning.

Current status in Ireland

- BowelScreen offers free home-based FIT screening every two years to men and women aged 59-70 living in Ireland (101). Individuals must be on the screening register to receive an invitation, typically first issued between their 59th and 61st birthday. Samples are self-collected at home and returned by post for testing. If the level of blood detected is below the screening limit, individuals are reinvited in two years; if above, they are referred for colonoscopy, typically offered within 4-6 weeks (101). In the 2022-2023 screening period, BowelScreen invited over 600,000 eligible individuals (102).
- Compared to BreastCheck and CervicalCheck, BowelScreen has not yet produced a substantial population-level shift toward earlier diagnosis, though clear benefits are observed among screen-detected individuals. In the 2014-2018 diagnosis period, 64% of screen-detected cases in men and 62% in women aged 60-69 (the screening age group at the time) were diagnosed at stage I or II, compared to 37 and 39% for other detection routes (81). However, only 45% of all colorectal cancer cases in this age group were diagnosed early, below the 47% observed in those aged 70 or older. Five-year net survival improved across all age groups between 1994-1998 and 2014-2018, with the largest and most sustained gain in the screening age group, rising from 46% to 66% (81). These findings highlight the need to complete the programme's expansion to the full 55-74 recommended age group.
- In the 2022-2023 screening period, BowelScreen recorded an overall participation rate of 46% (102), up from 40% in 2012-2015 (103) but below the NSS and NCS targets. Men had a lower participation rate than women (42% vs. 51%) and participation was substantially higher among subsequent invitees compared to first-time invitees (89% vs. 27%) (102). Participation in 2022 alone (45%) was slightly above the EU average (43%) but lower than peer countries (84, 102). No notable differences in participation were observed in Ireland across education levels in 2019 (104).



Recommendations

- Strengthen outreach to men and first-time invitees to achieve the 50% BowelScreen participation target.
- Expand the target age group of the programme to 50-74 years to realize the programme's full potential.

Diagnosis and treatment

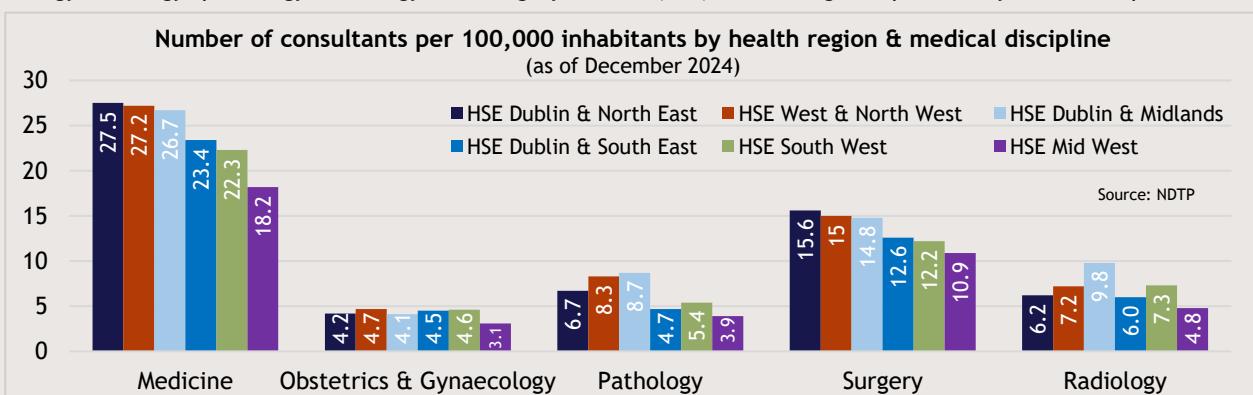
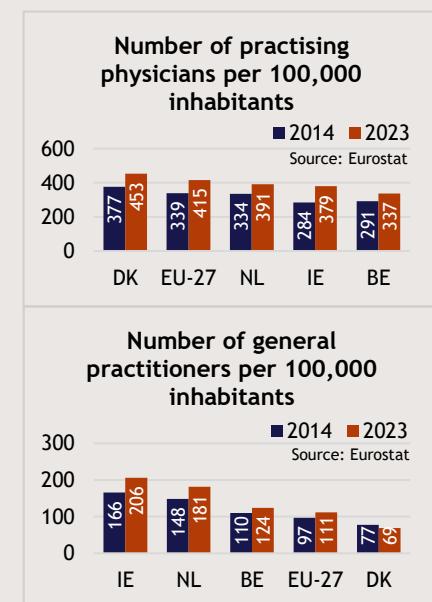
Health workforce

Background

- Modern cancer care is highly specialized and requires competence from different medical fields. This includes pathologists and diagnostic radiologists for the diagnosis of cancer, and surgeons, radiotherapists, medical oncologists, and haematologists for the treatment (105). General practitioners (GPs) play a key role in facilitating early diagnosis in primary care as they refer patients with signs and symptoms to the appropriate specialist (106). Nurses are involved throughout the care process, delivering patient education and treatment support (107).
- The NCS 2017-2026 highlights urgent staffing shortages across surgical, medical, radiation oncology, nursing, and diagnostic services, and mandates a national workforce plan to expand training, scale up specialist and advanced practice roles, and address critical gaps in health and social care professionals (5).

Current status in Ireland

- Ireland had 379 practising physicians (of any speciality) per 100,000 inhabitants in 2023, below the EU average of 415 per 100,000 and lower than Denmark and the Netherlands (108). Yet, Ireland recorded a relative increase of 33% since 2014 from 284 per 100,000. The numbers mask differences between general practitioners - where Ireland had the second highest density in the EU with 206 GPs per 100,000 in 2023 (EU average 111 per 100,000) - and specialist physicians - where Ireland had the second lowest density in the EU with 173 specialists per 100,000 (EU average 295 per 100,000) (109).
- Ireland also had by far the highest density of practising nurses in the EU in 2023 among countries with available data, with 1,366 per 100,000 inhabitants, almost double the EU average of 703 per 100,000 (108).
- According to a 2024 analysis of the Irish medical workforce, consultants (specialist physicians) have increased steadily, reaching 86 per 100,000 inhabitants in 2024 (+34% since 2020), and the training pipeline is also growing (+16% since 2020) (110). However, approvals for new consultant posts fell sharply, with only 148 approved in 2024 compared to 266 in 2023 and 305 in 2022 (110). In addition, recruitment difficulties persist as nearly half of consultant posts take more than 18 months to fill permanently, with temporary appointments often used to bridge gaps (110). At the same time, Ireland relies heavily on non-training hospital physicians, who account for 42% of all hospital physicians below consultant level ("junior doctors"), an unusually high share internationally that signals structural pressure on the system (110).
- There are marked disparities in consultant availability across health regions in Ireland, with the HSE Mid West consistently reporting the lowest numbers across cancer-relevant disciplines such as medicine, obstetrics and gynaecology, pathology, radiology, and surgery in 2024 (110), which might impair timely access for patients.



Recommendations

- Ensure sustainability of the cancer workforce by expanding specialist training, maintaining consultant post approvals, and reducing reliance on non-training physicians through faster recruitment and retention measures.
- Accelerate adoption of digital solutions to enable clinicians to work more effectively through electronic health records, integrated data, and decision-support systems.
- Conduct future workforce needs assessments to anticipate future demand for cancer services.

Diagnosis and treatment

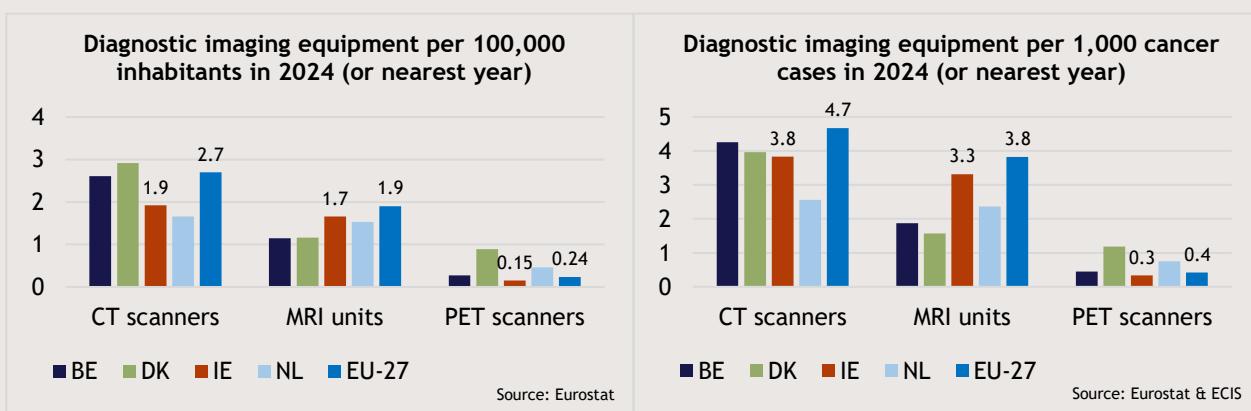
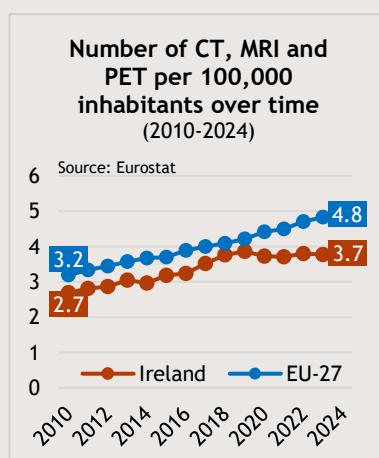
Diagnostic imaging equipment

Background

- Imaging equipment such as computed tomography (CT) scanners, magnetic resonance imaging (MRI) units, and positron emission tomography (PET) scanners are required to support physicians in all areas in the cancer care journey including diagnosis, treatment, and follow-up.
- The investment costs for scanners are high and they require specialised medical personnel to operate them, which naturally restricts their availability. General guidelines or benchmarks regarding the ideal number of scanners per inhabitant or cancer patient do not exist. An undersupply of scanning units may lead to access problems in terms of geographic proximity and/or waiting times.
- The NCS 2017-2026 highlights shortfalls in imaging capacity and calls for increased investment in CT, MRI and PET equipment, staffing, and training (5). It recommends developing referral criteria, setting KPIs for imaging access, and introducing an annual capital investment plan to expand diagnostic capacity across cancer centres.

Current status in Ireland

- Ireland has seen an increase in the availability of diagnostic imaging equipment, with the number of CT, MRI and PET scanners rising from 2.7 to 3.7 per 100,000 inhabitants between 2010 and 2024 (111). This corresponds to an increase of 35% for CT scanners, 47% for MRI units, and 7% for PET scanners over the period, yet the numbers remained stable since 2019 (111). In 2024, Ireland's availability of diagnostic imaging equipment was lower than all comparator countries except the Netherlands and was 23% below the EU average of 4.8 per 100,000 (111).
- Although scanner availability is commonly measured and compared per 100,000 inhabitants to reflect general system capacity, adjusting for cancer incidence offers a more targeted view of how capacity aligns with the specific burden of this disease. In 2024, Ireland had 3.8 CT scanners, 3.3 MRI units, and 0.3 PET scanners per 1,000 cancer cases, all below the EU average (14, 111).
- While the quantity of imaging equipment reflects diagnostic capacity, it does not indicate how effectively imaging is used to support patient care. Availability of healthcare professionals to use the equipment, utilization patterns, including when scans are performed, how findings are interpreted, and whether follow-up is initiated, are critical to assessing system performance. National-level data on the number of diagnostic scans performed in Ireland are not publicly available unlike in nearly all other EU countries.



Recommendations

- Increase investment in diagnostic imaging infrastructure (CT, MRI, PET) in line with the NCS 2017-2026, with annual capital planning to address capacity gaps.
- Expand and sustain an adequate workforce (imaging physicians, radiology technicians, and nurses) who can operate the equipment effectively and avoid idle running.
- Set national KPIs for imaging access, including benchmarks for wait times and referral-to-scan intervals, and introduce annual public reporting of scanner utilisation and diagnostic turnaround times to support planning, transparency, and continuous improvement.

Diagnosis and treatment

Biomarker testing

Background

- The implementation of precision medicine in oncology has accelerated over the past decade, driven by the approval of targeted therapies and advances in biomarker testing. Biomarker testing identifies the molecular characteristics of a tumour and helps select appropriate treatments. Nearly half (47%) of EMA approvals for solid tumours in 2015-2020 were linked to a biomarker (112), underscoring its central role in modern cancer care.
- While single-biomarker tests (e.g., immunohistochemistry for hormone receptors in breast cancer) have been standard for decades, they have become impractical in cancers with multiple actionable targets (e.g., lung cancer). Multi-biomarker testing, specifically with next-generation sequencing (NGS) technology, analyses several biomarkers in parallel rather than sequentially and is increasingly becoming standard of care.
- The EBCP's flagship initiative "Cancer Diagnostic and Treatment for All" includes several action plans and advocates the use of NGS (1). The overall intention is to improve cancer diagnosis and treatment through personalised medicine and the use of the latest innovations in cancer care. The European Society for Medical Oncology (ESMO) issued its first recommendation for routine use of NGS in 2020 for advanced-stage tumours in non-squamous non-small cell lung cancer and cancers of the prostate, ovaries, bile duct, and colon (113). This recommendation was extended to include advanced-stage breast cancer and several rare cancers in 2024 (114).
- The NCS 2017-2026 highlights biomarker testing as essential for modern cancer care but notes that services in Ireland have been fragmented and ad-hoc (5). Its goal is that all patients who need a molecular test receive it in a timely manner, supported by a national framework to coordinate and standardise testing across accredited laboratories, ensuring equitable access and readiness to adopt new tests as therapies evolve (5).

Current status in Ireland

- The most recent data on the availability of biomarker testing across cancer types in Europe come from an ESMO-led survey in 2021, which showed that single-biomarker tests are widely and routinely available across EU countries, including Ireland (115). However, multi-biomarker testing with NGS in the same year varied greatly between countries, reflecting differences in reimbursement, testing infrastructure, and health workforce awareness (115). In Ireland, small NGS panels (<50 genes) were reported as only usually available in routine practice for lung and colon cancer, and restricted to research use only for prostate, bile duct, and breast cancers (115). The 2021 survey reported no nationally coordinated implementation of innovative molecular technologies and no national Molecular Tumour Board (MTB) in Ireland. In comparison, Denmark reported routine NGS use ("always") for lung cancer, while Belgium, the Netherlands, and the UK had broader availability across multiple cancer types (115).
- Since 2021, however, several important developments have been initiated as Ireland continues to develop its genomics infrastructure. In 2022, the HSE published the National Strategy for Accelerating Genetic and Genomic Medicine (116), leading to the establishment of the National Genetics and Genomics Office in 2023 to drive its implementation (117). In January 2025, the National Genomic Test Directory was launched, initially covering rare and inherited diseases, with future updates planned to include oncology (118). In parallel, Cancer Trials Ireland took over the governance of the Irish MTB programme in 2022, which now holds regular virtual meetings across hospitals as a voluntary educational network for healthcare professionals (119). In addition, all-island collaborations such as the All-Island Cancer Research Institute (AICRI) and its flagship AICRIstart programme are building shared North-South research and genomics infrastructure to support precision oncology (120, 121).
- Another positive aspect in Ireland is that reimbursement of the biomarker tests needed for the administration of targeted therapies (companion diagnostics) is decided together with the reimbursement of the medicine, similar as in Denmark and the Netherlands (28).

Availability of small NGS panels (<50 genes) in routine practice by cancer site and country (end of 2021)					
Country	Lung	Prostate	Bile duct	Colon	Breast
Ireland	Blue	Red	Red	Blue	Red
Belgium	Blue	Yellow	Yellow	Blue	Yellow
Denmark	Green	Red	Red	Blue	Yellow
Netherlands	Blue	Yellow	Yellow	Blue	Blue
United Kingdom	Blue	Yellow	Red	Yellow	Yellow

Colour key

Always	Usually	Occasionally	Research only
--------	---------	--------------	---------------

Note: Data were sourced from the supplemental material (section 2.2.4) in Bayle et al. (2023) (115).

Recommendations

- Expand test capacity for NGS and establish a system to monitor the use of molecular testing in eligible patients.
- Embed a national MTB framework to expand genomic expertise and integrate precision oncology into routine care.

Diagnosis and treatment

Comprehensive cancer centres

Background

- A comprehensive cancer centre (CCC) is often characterised by its organizational quality, multidisciplinarity, and integration of research into clinical care (translational research) (122). Patients diagnosed and treated in specialised cancer centres (including, but not limited to CCCs) generally have better access to advanced diagnostics, therapies and clinical trials, seeing better outcomes than those treated in general hospitals (123).
- There is currently no “universal definition” of a CCC. The Organisation of European Cancer Institutes (OECI) facilitates the accreditation of CCCs by means of quality standards which represent the European consensus for evaluating the performance of cancer centres (122). At the EU policy level, the OECI Accreditation and Designation (A&D) system is the most widely acknowledged and is therefore used here for benchmarking. Nevertheless, it should be noted that ESMO also offers an accreditation programme that recognises centres providing highly integrated oncology and palliative care services (124), and some countries might solely rely on national accreditation systems, complicating international comparisons.
- The EBCP sets a target that by 2030, 90% of eligible patients should have access to national CCCs linked through a new EU-wide network, aimed at facilitating the uptake of quality-assured diagnosis and treatment (1). To support this goal, the EUnetCCC Joint Action was launched in October 2024 and is expected to run until September 2028, with the objective of establishing a network of certified CCCs across member states, including the development of a common EU certification scheme (125).
- The NCS 2017-2026 recognises the establishment of CCCs as a crucial step towards strengthening cancer care in Ireland by integrating clinical services, research, and education in line with international best practice (5). The strategy aims to establish at least one CCC during the strategy period.

Current status in Ireland

- Ireland's cancer care is delivered through a structured network of hospitals, including eight NCCP-designated cancer centres for adult oncology and one for paediatric oncology (126). In June 2025, the Trinity St. James's Cancer Institute became the first cancer centre in Ireland to be accredited as a CCC through the OECI A&D programme (127), marking a major milestone for integrated cancer care and research. With this accreditation Ireland has now 0.19 CCCs per 1 million inhabitants (16, 128, 129). This places Ireland just below the Netherlands (0.22), but ahead of Belgium (0.17), the UK (0.03), and Denmark (no CCC).
- Apart from Trinity St. James's, four centres - Beaumont RCSI Cancer Centre, Cork University Hospital/University College Cork, St. Vincent's UCD Cancer Centre, University of Galway Cancer Centre - have been certified as Cancer Centres (CCCs) and two additional centres - Mater Private Network, Mater Misericordiae University Hospital - are currently in the OECI A&D certification process (128). While both CCCs and CCs reflect high standards in cancer care, CCCs are distinguished by their significantly greater research capacity, clinical trial activity, and academic integration (122).



OECI-affiliated cancer centres by country (January 2026)

Country	A&D certified CCCs	A&D certified Cancer Centres (CCs)	In A&D process
Belgium	2	1	0
Denmark	0	1	3
Ireland	1	4	2
Netherlands	4	1	1
United Kingdom	2	0	0

Recommendations

- Create a national roadmap on upgrading existing cancer centres to CCs or CCCs, linking hospitals across the entire country through referral pathways to CCs and CCCs to ensure equitable access for patients.
- Share experiences of the first CCC in Ireland to identify operational challenges and success factors, and use these insights to develop a national blueprint for other cancer centres.

Diagnosis and treatment

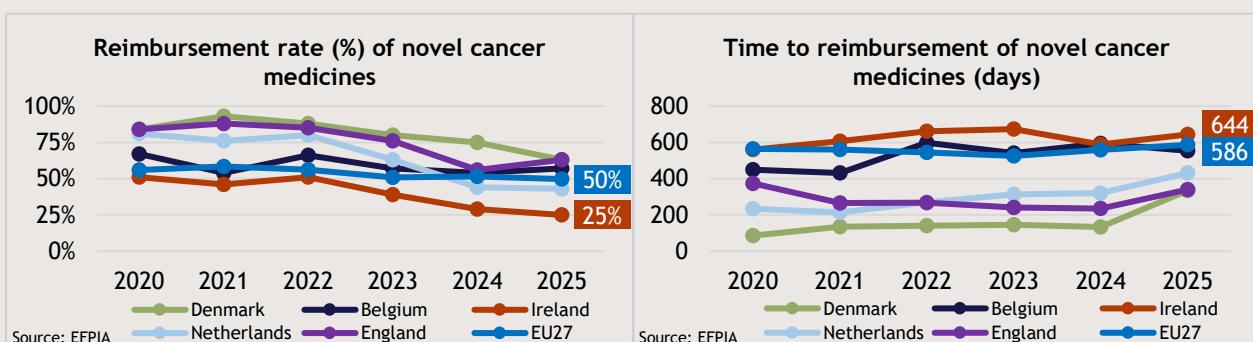
Novel cancer medicines

Background

- Novel cancer medicines introduced over the past decade have transformed treatment standards across many cancer types. Between 2015 and 2024, the European Medicines Agency (EMA) approved 116 new cancer medicines, reflecting a rapid pace of innovation in oncology (23). However, great differences remain in when and to what extent EU countries can ensure access to these new treatments to patients (130, 131).
- At the EU level, a revision of the EU pharmaceutical legislation is underway, where one main objective is to reduce country differences in the availability of new medicines and to shorten the time from EMA approval until patient access (132). In 2025, the EU HTA Regulation (HTAR) entered into application for cancer medicines, introducing a joint (cross-country) clinical assessments of the effectiveness of new treatments (133).
- The Health Act 2013 obliges the HSE to issue a reimbursement decision within 180 days of receiving a completed application, excluding formally documented pauses (“clock stops”) (134). Under the 2021 IPHA Framework Agreement, the HSE also commits to implementing approved reimbursement decisions within 45 days (135), resulting in a 225-day benchmark for timely access to new medicines.
- Ireland’s Programme for Government 2025 commits to investigating ways of earlier reimbursement of certain treatments, including early access schemes for rare diseases, to improve timely access to novel medicines (68). The NCS 2017-2026 acknowledges the need to balance timely patient access and value for money amid rising drug costs but sets no specific target for the availability or timeliness of access to new cancer medicines (5).

Current status in Ireland

- Ireland performs poorly compared to most EU countries on both the availability and timeliness of reimbursement of novel cancer medicines, according to the European Federation of Pharmaceutical Industries and Associations (EFPIA). Only 25% of EMA-approved cancer medicines in 2020-2023 had been reimbursed in Ireland as of January 2025, the lowest rate in Western Europe and well below the EU average of 50% (131). The mean time from EMA approval to local reimbursement was nearly two years (644 days) and above the EU average of 586 days (131). In response to the EFPIA findings, the HSE questioned the methodology for not accounting for factors such as industry-related delays, including late submissions and incomplete dossiers (136). It noted that around 30% of the included cancer medicines had not been submitted for pricing and reimbursement in Ireland, and that a further 40% were still under review due to delays on the side of the pharmaceutical company (136).
- Patient access timelines remain long by both Irish and EU standards even when considering only HSE processes. For cancer medicines submitted between 2022 and 2024, the average time from application to patient access was 704 days, according to IPHA (137). Of this, 492 days were attributable to HSE processes (i.e., state time), more than twice the 225-day benchmark derived from the Health Act 2013 and the IPHA Framework Agreement. State time exceeded 225 days for 96% of these medicines. In January 2026, the Irish government announced new framework agreements in principle with the IPHA and Medicines for Ireland, establishing updated system-level conditions for the pricing and supply of medicines (138).
- The growing role of private health insurers in covering some new cancer medicines before public reimbursement raises equity concerns in Ireland (137). Oncologists report tailoring treatment based on patients’ insurance status, creating a two-tier system that undermines national commitment to equitable, need-based health care.



Recommendations

- Ensure compliance with the 180-day legal limit for reimbursement decisions and the 225-day benchmark for timely patient access, as required under the Health Act 2013 and the 2021 IPHA Framework Agreement, but also examine underlying factors such as procedural inefficiencies and consider updates in light of the new HTAR.
- Follow through on the Programme for Government 2025 commitment to explore early access schemes.
- Future cancer strategies should explicitly address the availability and timeliness of access to cancer medicines.

Diagnosis and treatment

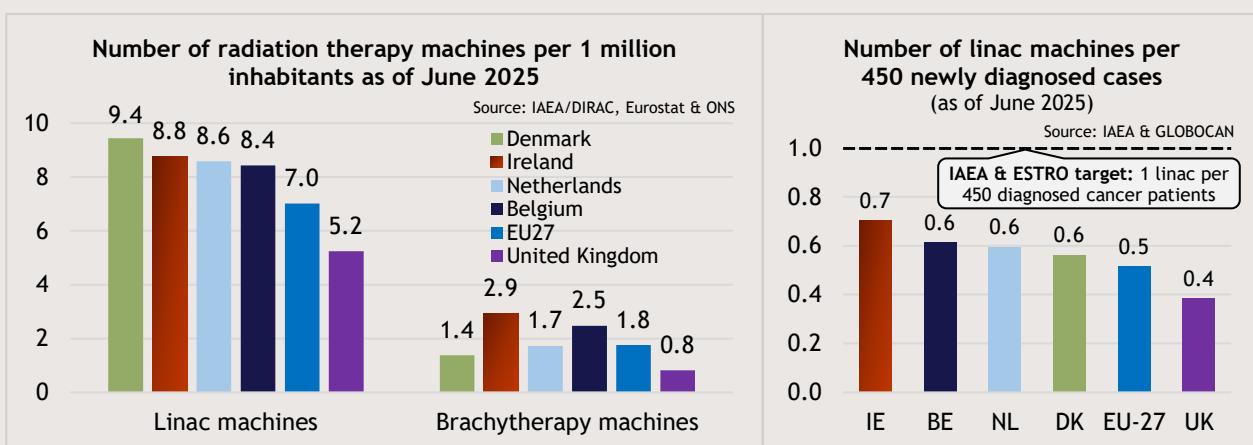
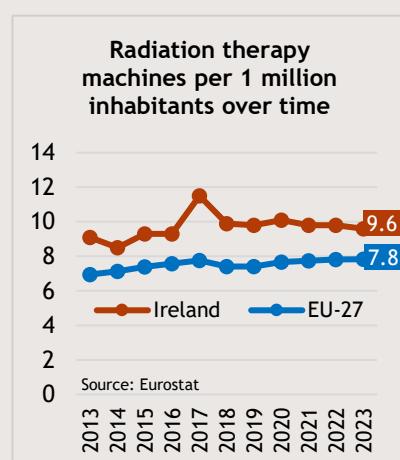
Radiation therapy machines

Background

- Radiation therapy plays a crucial role in the treatment of common cancer types. Approximately 50% of all cancer patients require radiation therapy at some point during their treatment (139). The effectiveness of radiation therapy in targeting and eliminating tumours significantly influences patients' survival rates and quality of life.
- Expanding access to radiation therapy requires both sufficient equipment and trained personnel to operate it. Therefore, it is essential to expand the health workforce and acquire new equipment strategically to ensure that radiation therapy is accessible to all patients in need (140).
- The International Atomic Energy Agency (IAEA) and the European Society for Radiotherapy and Oncology (ESTRO) recommend one linear accelerator (linac) per 450 newly diagnosed cancer patients (140, 141).
- The NCS 2017-2026 recognises the increasing demand for radiation therapy and outlines plans for expanded public facilities in Dublin, Cork, and Galway (5). It includes a National Programme of Equipment Refreshment and Replacement to address capacity and ageing infrastructure. While no numeric targets for machine density are specified, the strategy anticipates that up to 60% of cancer patients will require radiation therapy (5). A related target is that 90% of patients should commence radical radiation therapy treatment within 15 working days of being deemed ready to treat (5), with national compliance reaching 81% in January 2025 (142).

Current status in Ireland

- In 2023, Ireland had 9.6 radiation therapy machines per 1 million inhabitants according to Eurostat data, above the EU average of 7.8 (111). The number of machines has remained relatively stable in recent years.
- As of June 2025, Ireland performs well compared to Western European peers in the availability of radiation therapy machines, based on data from the IAEA's Directory of Radiotherapy Centres (DIRAC) (143). Ireland has 8.8 linac machines per 1 million inhabitants, above the EU average of 7.0 and second only to Denmark with 9.4, and 2.9 brachytherapy machines per 1 million inhabitants, the highest among comparator countries and well above the EU average of 1.8 (16, 129, 143).
- Neither Ireland, the EU average, nor any comparator country currently meet the IAEA and ESTRO benchmark of one linac machine per 450 newly diagnosed cancer cases, although Ireland comes closest with 0.7 machines per 450 patients (143, 144).
- In October 2025, the Irish Radiation Oncology Advocacy Group reported that nearly 75% of linac machines in public hospitals require replacement now or within five years (145). A national replacement programme is underway per the Minister for Health, expected to be completed by 2030 (145). In addition, staffing challenges persist, with vacancies for radiation therapists in public hospitals ranging from 15-22% in 2025 despite recent improvements (146).



Recommendations

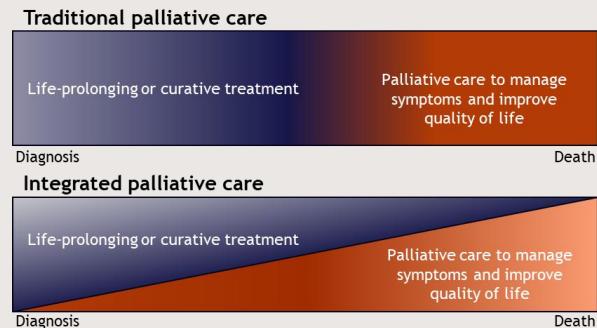
- Ensure timely replacement and strategic expansion of radiation therapy machines to match rising patient demand, avoid capacity constraints, and support timely treatment initiation.
- Ensure a sufficient number of qualified specialists to operate radiation therapy machines.
- Align with the IAEA and ESTRO benchmark of one linac machine per 450 newly diagnosed cancer patients.

Survivorship

Palliative care services

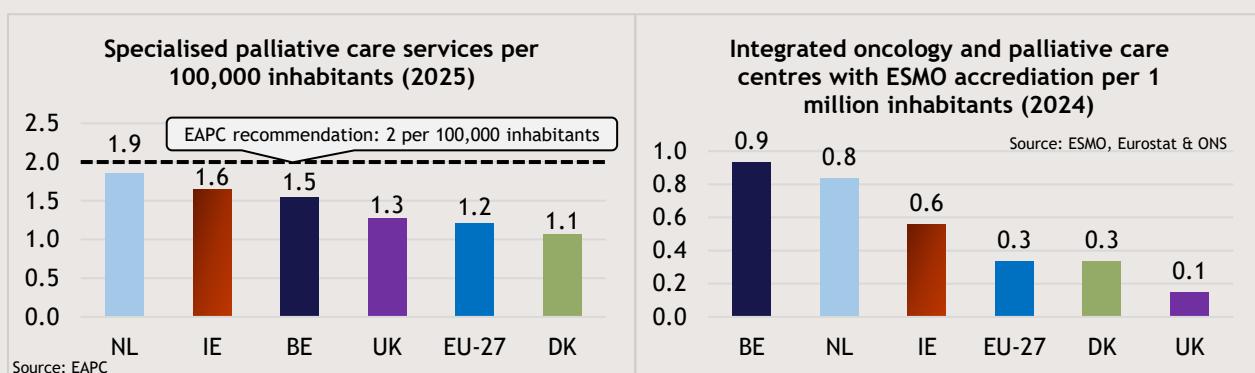
Background

- In 2024, about 16% of Ireland's population was aged 65 or older (147). This share has increased every year since 2007 (11%), reflecting a sustained trend of population ageing and pointing to a growing demand for palliative care (PC) services (147).
- Cancer is the most frequent cause of need for PC among life threatening or life-limiting health conditions (148). Within oncology, PC has traditionally had a strong focus at the end of life, but more recently there is a shift of integrating it earlier in the disease pathway (149).
- The availability of PC services in a country is one metric to assess the capacity and potential access to PC. Another metric is the degree to which PC is integrated with the overall healthcare system (150). The European Association for Palliative Care (EAPC) recommends two specialised PC services per 100,000 inhabitants (151).
- The NCS 2017-2026 recognises PC as a core part of cancer care and calls for timely and universal access based on need rather than prognosis (5). It calls for the phased development of specialist PC services in all designated cancer centres in Ireland, promotes collaboration between cancer services, primary care, and voluntary hospice providers, and aimed to ensure that 90% of patients with stage IV cancer received specialist PC by 2019 (5).



Current status in Ireland

- In September 2024, the Irish Minister for Health launched the country's first National Adult PC Policy in over 20 years (152). Developed by the Department of Health, the policy aims to ensure timely, equitable, and person-centred PC for all who need it, regardless of diagnosis or location. It emphasises expanding home and community-based services, addressing regional disparities, and integrating generalist and specialist care within a publicly funded health system. The policy includes 25 recommendations structured around the principles of right care, right time and place, right people, and good governance (152). To support implementation, €2 million were allocated for initial rollout in 2024, and the total PC budget was increased to over €155 million, marking a 53% increase since 2020 (153).
- According to the EAPC, Ireland has approximately 1.6 specialised (non-cancer-specific) PC services per 100,000 inhabitants in 2025 (148), down from 1.9 in 2019 (151); this is above the EU average (1.2) but below the EAPC recommendation of 2 per 100,000. Among comparator countries, the Netherlands comes closest to meeting the EAPC recommendation (1.9), while Belgium (1.5), the UK (1.3), and Denmark (1.1) all fall below it (148).
- Based on a voluntary ESMO accreditation system of cancer centres, a comparison of the integration of PC with oncology care can be made (154). At present, Ireland has three Integrated Oncology and Palliative Care Centres, corresponding to 0.6 centres per one million inhabitants in 2024 (16, 129, 154) - this is twice the EU average (0.3) and higher than Denmark (0.3) and the UK (0.1), but behind Belgium (0.9) and the Netherlands (0.8).



Recommendations

- Ensure the full implementation of the 2024 National Adult PC Policy, with particular focus on integrating PC with oncology services and providing timely and equitable access for all cancer patients in need.
- Ensure an adequate and optimally distributed PC workforce to meet the growing demand from an ageing population and to support person-centred delivery of PC across all settings.
- Align national efforts with the EAPC recommendation of two specialised PC services per 100,000 inhabitants.

Survivorship

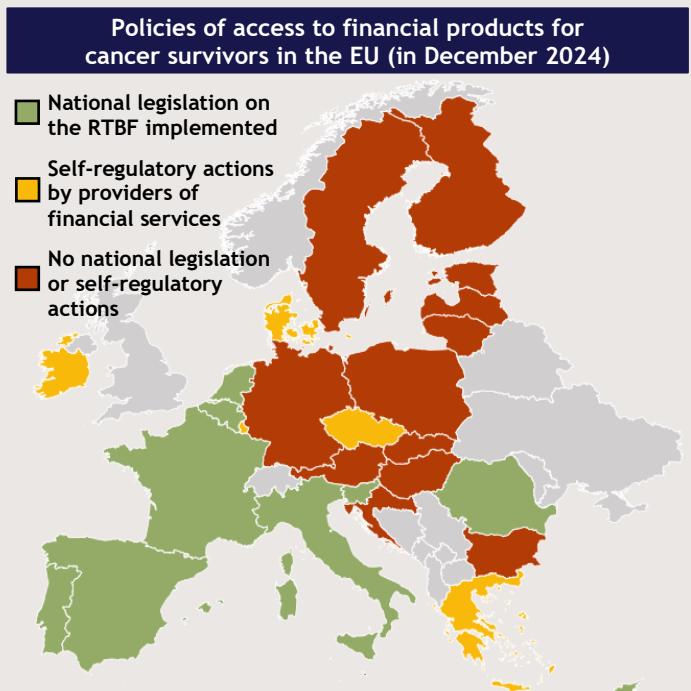
Access to financial services (“Right to be forgotten”)

Background

- There are considerable challenges for cancer survivors to return to a normal lifestyle after recovering from the disease. One obstacle is access to financial services such as health insurance, loans, and mortgages on equal terms with people who never had cancer, if cancer survivors are forced to disclose their previous diagnosis (155).
- To improve access to financial products for cancer survivors, the concept of “the right to be forgotten” (RTBF) was introduced, starting in France with legal provisions introduced in 2016 (155). The concept implies that cancer survivors - after a certain number of years after treatment completion - do not have to report their cancer history when applying for financial products (156).
- The EBCP acknowledges that because of their medical history, cancer survivors may experience unfair treatment in accessing financial products (1). The EBCP states that the European Commission would work with relevant stakeholders to address access to financial products for cancer survivors and engage in dialogue with businesses to develop a code of conduct for business practices of financial service providers (1).
- While the NCS 2017-2026 does not explicitly address access to financial services, it recognises the economic and practical challenges of cancer survivors. It highlights the importance of supporting their return to normal life, including employment, and calls for survivorship programmes that provide financial and practical advice (5).

Current status in Ireland

- As of December 2024, nine EU countries have adopted national legislation granting cancer survivors the RTBF under clear legal terms (157). The required period after treatment completion varies by country, from 5 years in Belgium, France, and Spain, to 7 years in Romania and Slovenia, and up to 10 years in Cyprus, Italy, the Netherlands, and Portugal. Most countries also apply shorter timeframes for childhood or adolescent cancer survivors. An additional five EU countries, including Ireland, have adopted non-legislative frameworks, either in the form of self-regulatory codes of conduct or formal conventions between governments and insurers (157).
- Ireland's self-regulatory approach is based on a voluntary Code of Practice introduced in December 2023 by Insurance Ireland (158, 159). The Code enables cancer survivors to access mortgage protection insurance without their cancer history being considered, provided treatment ended at least seven years earlier (or five years for diagnoses before age 18) (159). It applies to decreasing term life policies of up to €500,000 for a mortgage on a primary residence, covering over 90% of mortgage-related policies. Participating insurers have committed to an external compliance review every three years (159). The first review from May 2025 found the Code is being fully adhered to by all signatory insurers (160).
- On July 8, 2025, the Irish Government announced it would advance legislation enshrining the RTBF under the Central Bank (Amendment) Bill 2025 (160). This bill would replace the 2023 Code by introducing a statutory ban on financial discrimination against all cancer survivors and prohibiting disclosure of cancer history after five treatment-free years (160, 161); currently at Committee Stage and subject to change throughout the legislative process.
- EU legislation on the RTBF has progressed since the publication of the EBCP. A revision of the Consumer Credit Directive came into force on November 19, 2023 (Directive (EU) 2023/2225) (162). It introduces the RTBF for consumer credits that applies for cancer survivors who have completed their medical treatment more than 15 years ago. All EU countries need to apply these rules at the latest by November 20, 2026.



Recommendations

- Ensure timely enactment and implementation of the RTBF law.
- Educate cancer survivors on their RTBF rights and train healthcare staff to protect confidentiality post-remission.
- Establish a national mechanism to monitor compliance with the RTBF law by financial service providers.

References

1. European Commission. Europe's Beating Cancer Plan: Communication from the Commission to the European Parliament and the Council. 2021.
2. Eurostat. Causes of death - deaths by country of residence and occurrence [hlth_cd_aro]. [September 15, 2025]. Available from: <https://ec.europa.eu/eurostat/data/database>.
3. Couespel N, Venegoni E, Lawler M. The European Cancer Pulse: tracking inequalities in cancer control for citizen benefit. *Lancet Oncol.* 2023;24(5):441-2.
4. World Health Organization. Cancer prevention and control in the context of an integrated approach (WHA70.12). 2017.
5. Department of Health. National Cancer Strategy 2017-2026. 2017.
6. Department of Health and Children. Cancer Services in Ireland: A National Strategy. 1996.
7. Department of Health and Children. A Strategy for Cancer Control in Ireland. 2006.
8. Department of Health. National Cancer Strategy 2017 - 2026. [September 25, 2025]. Available from: <https://www.gov.ie/en/department-of-health/publications/national-cancer-strategy-2017-2026>.
9. Irish Cancer Society. National Cancer Strategy Scorecard (October 2025). 2025.
10. Medical Independent. NCCP concerned over lack of funding for cancer strategy. [September 24, 2025]. Available from: <https://www.medicalindependent.ie/in-the-news/nccp-concerned-over-lack-of-funding-for-cancer-strategy>.
11. Irish Cancer Society. €180 million hole in national cancer funding: Cancer Coalition Demand More Money for Cancer in Budget 2025. [September 24, 2025]. Available from: <https://www.cancer.ie/our-news/press-release-eu180-million-hole-in-national-cancer-funding>.
12. World Health Organization (WHO). Cancer: Reducing the burden. [September 17, 2025]. Available from: <https://www.who.int/news-room/fact-sheets/detail/cancer>.
13. National Cancer Registry Ireland (NCRI). Incidence statistics. [September 12, 2025]. Available from: <https://www.ncri.ie/en/statistics/incidence-statistics>.
14. ECIS - European Cancer Information System. Data Explorer: 2022 estimates. [September 12, 2025]. Available from: <https://ecis.jrc.ec.europa.eu/data-explorer>.
15. Eurostat. Population structure indicators at national level [demo_pjanind]. [Sep 17, 2025]. Available from: <https://ec.europa.eu/eurostat/data/database>.
16. Eurostat. Population on 1 January by age and sex [demo_pjan]. [July 17, 2025]. Available from: <https://ec.europa.eu/eurostat/data/database>.
17. Eurostat. Causes of death - absolute number [hlth_cd_anr]. [September 16, 2025]. Available from: <https://ec.europa.eu/eurostat/data/database>.
18. Ervik M, Lam F, Laversanne M, Colombet M, Ferlay J, Miranda-Filho A, et al. Global Cancer Observatory: Cancer Over Time. Lyon, France: International Agency for Research on Cancer. 2024 [September 12, 2025]. Available from: <https://gco.iarc.who.int/overtime>.
19. National Cancer Registry Ireland (NCRI). Survival statistics. [September 12, 2025]. Available from: <https://www.ncri.ie/en/statistics/survival-statistics>.
20. Allemani C, Matsuda T, Di Carlo V, Harewood R, Matz M, Nikšić M, et al. Global surveillance of trends in cancer survival 2000-14 (CONCORD-3): analysis of individual records for 37 513 025 patients diagnosed with one of 18 cancers from 322 population-based registries in 71 countries. *Lancet.* 2018;391(10125):1023-75.
21. Hofmarcher T, Lindgren P, Wilking N, Jönsson B. The cost of cancer in Europe 2018. *Eur J Cancer.* 2020;129:41-9.
22. Hofmarcher T, Ericson O, Lindgren P. Comparator Report on Cancer in Ireland - Disease Burden, Costs and Access to Medicines. Lund: IHE, 2022.
23. Manzano A, Svedman C, Hofmarcher T, Wilking N. Comparator Report on Cancer in Europe 2025 - Disease Burden, Costs and Access to Medicines and Molecular Diagnostics. Lund: IHE, 2025.
24. Jönsson B, Hofmarcher T, Lindgren P, Wilking N. Comparator report on patient access to cancer medicines in Europe revisited. Lund: IHE, 2016.
25. Vrdoljak E, Bodoky G, Jassem J, Popescu R, Pirker R, Cufer T, et al. Expenditures on Oncology Drugs and Cancer Mortality-to-Incidence Ratio in Central and Eastern Europe. *Oncologist.* 2019;24(1):e30-e7.
26. Irish Cancer Society. The Real Cost of Cancer. 2019.
27. Lawler M, Davies L, Oberst S, Oliver K, Eggermont A, Schmutz A, et al. European Groundshot-addressing Europe's cancer research challenges: a Lancet Oncology Commission. *Lancet Oncol.* 2023;24(1):e11-e56.
28. Hofmarcher T, Berchet C, Dedet G. Access to oncology medicines in EU and OECD countries. OECD Health Working Papers No. 170, 2024.
29. European Commission. Clinical trials - Regulation EU No 536/2014. [September 8, 2025]. Available from: <https://health.ec.europa.eu/medicinal-products/clinical-trials/clinical-trials-regulation-eu-no-5362014>.
30. Cancer Trials Ireland. Annual Review 2024. 2025.
31. Cancer Trials Ireland. Annual Review 2023. 2024.
32. Cancer Trials Ireland. The Value of Cancer Trials. 2025.
33. Carneiro A, Amaral TMS, Brandao M, Scheffler M, Bol K, Ferrara R, et al. LBA66_PR Disparities in access to oncology clinical trials in Europe in the period 2009-2019. *Annals of Oncology.* 2020;31:S1196.
34. European Medicines Agency (EMA). Clinical Trials. [September 8, 2025]. Available from: <https://euclinicaltrials.eu/search-for-clinical-trials/trial-map>.
35. Mizzoni C, Lawler G, Ward O. Cancer Research Investment in Ireland (2019-2022): A review of national cancer research investment using the Health Research Classification System (HRCS). Dublin: Health Research Board, 2024.

36. Government of Ireland. Minister for Health publishes recommendations aimed at transforming Ireland's Clinical Trials Landscape. [Dec 12, 2025]. Available from: <https://www.gov.ie/en/department-of-health/press-releases/minister-for-health-publishes-recommendations-aimed-at-transforming-irelands-clinical-trials-landscape/>.

37. World Health Organization (WHO). Tobacco. [May 12, 2025]. Available from: <https://www.who.int/health-topics/tobacco>.

38. U.S. Department of Health and Human Services. A Report of the Surgeon General: The Health Consequences of Smoking—50 Years of Progress. 2014.

39. Wild CP, Weiderpass E, Stewart BW. World Cancer Report: Cancer Research for Cancer Prevention. Lyon, France: International Agency for Research on Cancer. 2020.

40. World Health Organization (WHO). Tobacco-related cancers and prevention. Available from: <https://cancerpreventioneurope.iarc.fr/european-code-against-cancer/tobacco-related-cancers-and-prevention>.

41. World Health Organization (WHO). MPOWER. [May 12, 2025]. Available from: <https://www.who.int/initiatives/mpower>.

42. World Health Organization (WHO). WHO technical manual on tobacco tax policy and administration. 2021.

43. World Health Organization (WHO). The Netherlands at the forefront of tobacco control. [May 12, 2025]. Available from: <https://www.who.int/europe/news/item/31-07-2023-the-netherlands-at-the-forefront-of-tobacco-control>.

44. Tobacco Control Laws. Legislation by Country/Jurisdiction: Ireland. [May 26, 2025]. Available from: <https://www.tobaccocontrollaws.org/legislation/ireland/summary>.

45. Houses of the Oireachtas. Public Health (Tobacco) (Amendment) Act 2024 (Act 47 of 2024). [May 26, 2025]. Available from: <https://www.oireachtas.ie/en/bills/bill/2024/51>.

46. Department of Health. Tobacco Free Ireland. 2013.

47. Organisation for Economic Co-operation and Development (OECD). Health: Risk factors for health: Tobacco consumption. [May 26, 2025]. Available from: <https://data-explorer.oecd.org>.

48. Central Statistics Office. Healthy Ireland Survey: Persons who have smoked in the last 12 months [HIS09]. [May 26, 2025]. Available from: <https://data.cso.ie>.

49. Ipsos B&A. Healthy Ireland Survey 2024 Summary Report. 2024.

50. Tax Foundation. Cigarette Taxes in Europe. 2023 [May 26, 2025]. Available from: <https://taxfoundation.org/data/all/eu/cigarette-tax-europe-2023>.

51. Department of Finance. Budget 2026: Tax Policy Changes. 2025.

52. World Health Organization (WHO). Global status report on alcohol and health and treatment of substance use disorders. 2024.

53. World Health Organization (WHO). Global alcohol action plan 2022-2030. 2024.

54. World Health Organization (WHO). NCD Global Monitoring Framework. Available from: <https://www.who.int/publications/item/ncd-surveillance-global-monitoring-framework>.

55. Houses of the Oireachtas. Public Health (Alcohol) Act 2018 (Act 24 of 2018). [May 29, 2025]. Available from: <https://www.oireachtas.ie/en/bills/bill/2015/120>.

56. Health Service Executive (HSE). Alcohol Legislation: Public Health (Alcohol) Act 2018. [May 29, 2025]. Available from: <https://www.hse.ie/eng/services/list/1/environ/alcohol-legislation.html>.

57. Houses of the Oireachtas. Healthcare Policy: Dáil Éireann Debate, Monday - 8 September 2025. [October 27, 2025]. Available from: <https://www.oireachtas.ie/en/debates/question/2025-09-08/2214/>.

58. Central Statistics Office. Alcohol consumption in last 12 months [HIS45]. [May 29, 2025]. Available from: <https://data.cso.ie>.

59. Central Statistics Office. Alcohol consumption [HIS15]. [May 29, 2025]. Available from: <https://data.cso.ie>.

60. Central Statistics Office. Binge drinking [HIS47]. [May 29, 2025]. Available from: <https://data.cso.ie>.

61. World Health Organization (WHO). Alcohol, total per capita (15+) consumption (in litres of pure alcohol) (SDG Indicator 3.5.2). [May 21, 2025]. Available from: [https://www.who.int/data/gho/data/indicators/indicator-details/GHO/total-\(recorded-unrecorded\)-alcohol-per-capita-\(15\)-consumption](https://www.who.int/data/gho/data/indicators/indicator-details/GHO/total-(recorded-unrecorded)-alcohol-per-capita-(15)-consumption).

62. European Cancer Organisation. A Four Step Plan for Eliminating HPV Cancers in Europe. 2020.

63. World Health Organization (WHO). Cervical cancer. [April 28, 2025]. Available from: <https://www.who.int/news-room/fact-sheets/detail/cervical-cancer>.

64. Health Service Executive (HSE). HPV Vaccination Programme in schools. [May 26, 2025]. Available from: <https://www.hse.ie/eng/health/immunisation/pubinfo/schoolprog/hpv/hpv-vaccination-programme>.

65. Health Service Executive (HSE). Key Performance Indicators. [June 9, 2025]. Available from: <https://www.hse.ie/eng/services/publications/kpis>.

66. Health Service Executive (HSE). Ireland's Cervical Cancer Elimination Plan: Strategic Vision 2025-2040: Action Plan 2025-2030. 2024.

67. National Immunisation Advisory Committee (NIAC). Immunisation Guidelines for Ireland: Chapter 10 - Human Papillomavirus. [May 26, 2025]. Available from: <https://www.hiqa.ie/reports-and-publications/niac-immunisation-guideline/chapter-10-human-papillomavirus>.

68. Department of the Taoiseach. Programme for Government 2025 - Securing Ireland's Future. 2025.

69. World Health Organization (WHO). Human Papillomavirus (HPV) vaccination coverage. [October 19, 2025]. Available from: [https://immunizationdata.who.int/global/wiise-detail-page/human-papillomavirus-\(hpv\)-vaccination-coverage](https://immunizationdata.who.int/global/wiise-detail-page/human-papillomavirus-(hpv)-vaccination-coverage).

70. Health Protection Surveillance Centre (HPSC). HPV/Tdap/MenC/MenACWY uptake statistics. [October 19, 2025]. Available from: <https://www.hpsc.ie/az/vaccinepreventable/vaccination/immunisationuptakestatistics/hpvtdapmencmenacwyuptakestatistics>.

71. Council of the European Union. Council Recommendation of 21 June 2024 on vaccine-preventable cancers (C/2024/4259). 2024.

72. World Health Organization (WHO). A short guide to cancer screening: increase effectiveness, maximize benefits and minimize harm. 2022.

73. Manzano A, Hofmarcher T. Improving the care of women with triple-negative breast cancer. Lund: IHE, 2023.

74. European Commission: Directorate-General for Health and Consumers, Karsa Lv, Holland R, Broeders M, Wolf Cd, Perry N, et al. European guidelines for quality assurance in breast cancer screening and diagnosis - Fourth edition, supplements. Publications Office, 2013.

75. Council of the European Union. 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 2022/C 473/01. 2022.

76. Health Service Executive (HSE). BreastCheck. [May 27, 2025]. Available from: <https://www2.healthservice.hse.ie/organisation/breastcheck>.

77. Health Service Executive (HSE). 25 years of BreastCheck - Saving lives and advancing breast cancer screening in Ireland. [May 27, 2025]. Available from: <https://www2.healthservice.hse.ie/organisation/nss/news/25-years-of-breastcheck-saving-lives-and-advancing-breast-cancer-screening-in-ireland>.

78. BreastCheck - The National Breast Screening Programme. Annual reports. [June 4, 2025]. Available from: <https://www.breastcheck.ie/health-professionals/annual-reports.2720.html>.

79. National Screening Service (NSS). Choose Screening: National Screening Service Strategic Plan 2023-2027. 2023.

80. Health Service Executive (HSE). Breast screening - BreastCheck. [May 27, 2025]. Available from: <https://www2.hse.ie/conditions/breast-screening>.

81. National Cancer Registry Ireland (NCRI). Cancer Trends - Breast, cervical and colorectal cancer 1994-2019: National trends for cancers with population-based screening programmes in Ireland. 2022.

82. National Screening Service (NSS). BreastCheck Statistical Report 2022. 2024.

83. National Screening Service (NSS). BreastCheck: Recovery from COVID. [June 2, 2025]. Available from: <https://www2.healthservice.hse.ie/organisation/nss/news/breastcheck-recovery-from-covid>.

84. Eurostat. Preventive cancer screenings - programme data [hlth_ps_prev]. [May 27, 2025]. Available from: <https://ec.europa.eu/eurostat/data/database>.

85. Eurostat. Self-reported last breast examination by X-ray among women by age and educational attainment level [hlth_ehis_pa7e]. [May 27, 2025]. Available from: <https://ec.europa.eu/eurostat/data/database>.

86. Eurostat. Self-reported last breast examination by X-ray among women by age and income quintile [hlth_ehis_pa7i]. [May 27, 2025]. Available from: <https://ec.europa.eu/eurostat/data/database>.

87. Cancer Research UK. Survival for cervical cancer. [April 15, 2025]. Available from: <https://www.cancerresearchuk.org/about-cancer/cervical-cancer/survival>.

88. McGarvey N, Gitlin M, Fadli E, Chung KC. Increased healthcare costs by later stage cancer diagnosis. BMC Health Serv Res. 2022;22(1):1155.

89. European Commission: Directorate-General for Health and Food Safety, Karsa Lv, Dillner J, Suonio E, Törnberg S, Anttila A, et al. European guidelines for quality assurance in cervical cancer screening - Second edition - Supplements. Publications Office, 2015.

90. Health Service Executive (HSE). CervicalCheck. [May 28, 2025]. Available from: <https://www2.healthservice.hse.ie/organisation/cervicalcheck>.

91. Health Service Executive (HSE). 5 years of HPV cervical screening in Ireland: Providing better outcomes for women who choose screening. [May 28, 2025]. Available from: <https://www2.healthservice.hse.ie/organisation/nss/news/5-years-of-hpv-cervical-screening-in-ireland>.

92. Health Service Executive (HSE). Cervical screening - CervicalCheck. [May 28, 2025]. Available from: <https://www2.hse.ie/conditions/cervical-screening>.

93. National Screening Service (NSS). CervicalCheck Programme Report 2022-2023. 2025.

94. Eurostat. Self-reported last cervical smear test among women by age and educational attainment level [hlth_ehis_pa8e]. [May 28, 2025]. Available from: <https://ec.europa.eu/eurostat/data/database>.

95. Digestive Cancers Europe. Roadmap for the Prevention and Treatment of Colorectal Cancer in Europe. 2020.

96. Cancer Research UK. Survival for bowel cancer. [May 2, 2025]. Available from: <https://www.cancerresearchuk.org/about-cancer/bowel-cancer/survival>.

97. Shaukat A, Levin TR. Current and future colorectal cancer screening strategies. Nat Rev Gastroenterol Hepatol. 2022;19(8):521-31.

98. European Commission: Executive Agency for Health and Consumers, Directorate-General for Health and Consumers, World Health Organization, Karsa Lv, Patnick J, Segnan N. European guidelines for quality assurance in colorectal cancer screening and diagnosis: Publications Office; 2010.

99. Health Service Executive (HSE). BowelScreen. [May 29, 2025]. Available from: <https://www2.healthservice.hse.ie/organisation/bowelscreen>.

100. Health Service Executive (HSE). New BowelScreen programme report highlights importance of screening to prevent bowel cancer. [May 29, 2025]. Available from: <https://www2.healthservice.hse.ie/organisation/nss/news/new-bowelscreen-programme-report-highlights-importance-of-screening-to-prevent-bowel-cancer>.

101. Health Service Executive (HSE). Bowel screening - BowelScreen. [May 29, 2025]. Available from: <https://www2.hse.ie/conditions/bowel-screening>.

102. National Screening Service (NSS). BowelScreen Programme Report 2022-2023. 2025.

103. National Screening Service (NSS). BowelScreen Programme Report 2012-2015 (Round One). 2017.

104. Eurostat. Self-reported last colorectal cancer screening test by sex, age and educational attainment level [hlth_ehis_pa5e]. [May 29, 2025]. Available from: <https://ec.europa.eu/eurostat/data/database>.

105. Soukup T, Lamb BW, Arora S, Darzi A, Sevdalis N, Green JS. Successful strategies in implementing a multidisciplinary team working in the care of patients with cancer: an overview and synthesis of the available literature. J Multidiscip Healthc. 2018;11:49-61.

106. Saab MM, McCarthy M, O'Driscoll M, Sahm LJ, Leahy-Warren P, Noonan B, et al. A systematic review of interventions to recognise, refer and diagnose patients with lung cancer symptoms. *NPJ Prim Care Respir Med.* 2022;32(1):42.

107. Karam M, Chouinard MC, Poitras ME, Couturier Y, Vedel I, Grgurevic N, et al. Nursing Care Coordination for Patients with Complex Needs in Primary Healthcare: A Scoping Review. *Int J Integr Care.* 2021;21(1):16.

108. Eurostat. Health personnel [hlth_rs_prs2]. [September 9, 2025]. Available from: <https://ec.europa.eu/eurostat/data/database>.

109. Eurostat. Physicians by category [hlth_rs_physcat]. [September 9, 2025]. Available from: <https://ec.europa.eu/eurostat/data/database>.

110. National Doctors Training & Planning (NDTP). Medical Workforce Analysis Report 2024-2025. 2025.

111. Eurostat. Devices for medical imaging [hlth_rs_medium]. [September 9, 2025]. Available from: <https://ec.europa.eu/eurostat/data/database>.

112. Falcone R, Lombardi P, Filetti M, Duranti S, Pietragalla A, Fabi A, et al. Oncologic Drugs Approval in Europe for Solid Tumors: Overview of the Last 6 Years. *Cancers (Basel).* 2022;14(4).

113. Mosele F, Remon J, Mateo J, Westphalen CB, Barlesi F, Lolkema MP, et al. Recommendations for the use of next-generation sequencing (NGS) for patients with metastatic cancers: a report from the ESMO Precision Medicine Working Group. *Ann Oncol.* 2020;31(11):1491-505.

114. Mosele MF, Westphalen CB, Stenzinger A, Barlesi F, Bayle A, Bièche I, et al. Recommendations for the use of next-generation sequencing (NGS) for patients with advanced cancer in 2024: a report from the ESMO Precision Medicine Working Group. *Ann Oncol.* 2024;35(7):588-606.

115. Bayle A, Bonastre J, Chaltiel D, Latino N, Rouleau E, Peters S, et al. ESMO study on the availability and accessibility of biomolecular technologies in oncology in Europe. *Ann Oncol.* 2023;34(10):934-45.

116. Health Service Executive (HSE). National Strategy for Accelerating Genetic and Genomic Medicine in Ireland. 2022.

117. Health Service Executive (HSE). National Genetics and Genomics Office. [September 26, 2025]. Available from: <https://www.hse.ie/eng/about/who/national-genetics-and-genomics>.

118. Department of Health. Minister for Health launches the HSE National Genomic Test Directory for Rare and Inherited Disease. [September 26, 2025]. Available from: <https://www.gov.ie/en/department-of-health/press-releases/minister-for-health-launches-the-hse-national-genomic-test-directory-for-rare-and-inherited-disease>.

119. Cancer Trials Ireland. Molecular Tumour Board. [September 26, 2025]. Available from: <https://www.cancertrials.ie/medical-community/molecular-tumor-board/>.

120. All-Island Cancer Research Institute (AICRI). About AICRI. [October 19, 2025]. Available from: <https://www.aicri.org/about>.

121. All-Island Cancer Research Institute (AICRI). About AICRIstart. [October 19, 2025]. Available from: <https://www.aicri.org/aicristart>.

122. Organisation of European Cancer Institutes (OECI). Accreditation and Designation User Manual V. 3.2. 2019.

123. European Cancer Organisation, Organisation of European Cancer Institutes (OECI). Comprehensive Cancer Care Across the EU: Advancing the Vision. 2021.

124. European Society for Medical Oncology (ESMO). ESMO Accredited Designated Centres. [July 17, 2025]. Available from: <https://www.esmo.org/for-patients/esmo-designated-centres-of-integrated-oncology-palliative-care/esmo-accredited-designated-centres>.

125. European Commission. EUnetCCC. [June 25, 2025]. Available from: <https://health.ec.europa.eu/non-communicable-diseases/cancer/europes-beating-cancer-plan-eu4health-financed-projects/projects/eunetccc>.

126. National Cancer Control Programme (NCCP). Regional Cancer Services. [July 21, 2025]. Available from: <https://www.hse.ie/eng/services/list/5/cancer/about/services>.

127. St James's Hospital. Trinity St James's Cancer Institute - Ireland's first Comprehensive Cancer Centre. [July 17, 2025]. Available from: <https://www.stjames.ie/aboutus/news/2025/trinitystjamescancerinstitute-irelandsfirstcomprehencivecancercentre.html>.

128. Organisation of European Cancer Institutes (OECI). The OECI Network: Membership. [January 5, 2026]. Available from: <https://www.oeci.eu/Membership.aspx>.

129. Office for National Statistics. Population estimates. [July 17, 2025]. Available from: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates>.

130. European Federation of Pharmaceutical Industries and Associations. The root cause of unavailability and delay to innovative medicines: Reducing the time before patients have access to innovative medicines. 2023.

131. European Federation of Pharmaceutical Industries and Associations (EFPIA). EFPIA Patients W.A.I.T. Indicator 2024 Survey. 2025.

132. European Commission. Reform of the EU pharmaceutical legislation. [June 18, 2025]. Available from: <https://health.ec.europa.eu/medicinal-products/pharmaceutical-strategy-europe/reform-eu-pharmaceutical-legislation>.

133. European Commission. Implementation of the Regulation on health technology assessment. [June 18, 2025]. Available from: <https://health.ec.europa.eu/health-technology-assessment/implementation-regulation-health-technology-assessment>.

134. Houses of the Oireachtas. Health (Pricing and Supply of Medical Goods) Act 2013 (Act 14 of 2013). [June 18, 2025]. Available from: <https://www.oireachtas.ie/en/bills/bill/2012/63>.

135. Irish Pharmaceutical Healthcare Association (IPHA). Framework Agreement on the Supply and Pricing of Medicines 2021-2025. 2021.

136. Euractiv. Ireland's health authority denies it's to blame for cancer drug delays. [June 19, 2025]. Available from: <https://www.euractiv.com/section/health-consumers/news/irelands-health-authority-denies-its-to-blame-for-cancer-drug-delays>.

137. Irish Pharmaceutical Healthcare Association (IPHA). The Case for Faster and Fairer Access to Medicines: IPHA Position Paper on the 2025 Programme for Government Commitments. 2025.

138. Department of Health. Minister announces new Framework Agreements in principle with Irish Pharmaceutical Healthcare Association (IPHA) and Medicines for Ireland (MFI) on Supply and Pricing of Medicines. [January 21, 2026]. Available from: <https://www.gov.ie/en/department-of-health/press-releases/minister-announces-new-framework-agreements-in-principle-with-irish-pharmaceutical-healthcare-association-ipha-and-medicines-for-ireland-mfi-on-supply-and-pricing-of-medicines/>.

139. Lievens Y, Borras JM, Grau C. Provision and use of radiotherapy in Europe. *Mol Oncol*. 2020;14(7):1461-9.

140. International Atomic Energy Agency (IAEA). Radiotherapy in Cancer Care: Facing the Global Challenge. 2017.

141. Saeedian A, Tabatabaei FS, Azimi A, Babaei M, Lashkari M, Esmati E, et al. PERSpective and current status of Radiotherapy Service in IRan (PERSIR)-1 study: assessment of current external beam radiotherapy facilities, staff and techniques compared to the international guidelines. *BMC Cancer*. 2024;24(1):324.

142. Houses of the Oireachtas. Seanad Éireann debate - Tuesday, 1 Apr 2025. [June 19, 2025]. Available from: <https://www.oireachtas.ie/en/debates/debate/seanad/2025-04-01/3>.

143. International Atomic Energy Agency (IAEA). DIRAC - Directory of RAdiotherapy Centres. [June 19, 2025]. Available from: <https://dirac.iaea.org/Query/Countries>.

144. Bray F, Laversanne M, Sung H, Ferlay J, Siegel RL, Soerjomataram I, et al. Global cancer statistics 2022: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA Cancer J Clin*. 2024;74(3):229-63.

145. Irish Times. Almost 75% of Ireland's radiation machines need to be replaced, group finds. [October 27, 2025]. Available from: <https://www.irishtimes.com/health/2025/10/03/almost-75-of-irelands-radiation-machines-need-to-be-replaced-group-finds/>.

146. Houses of the Oireachtas. Cancer Services: Dáil Éireann Debate, Thursday - 2 October 2025. [October 27, 2025]. Available from: <https://www.oireachtas.ie/en/debates/question/2025-10-02/79/>.

147. The World Bank. Population ages 65 and above (% of total population). [June 30, 2025]. Available from: <https://data.worldbank.org/indicator/SP.POP.65UP.TO.ZS>.

148. Garralda E, Tripodoro VA, Ling J, Brennan J, Montero Á, Bastos F, et al. EAPC Atlas of Palliative Care in the European region 2025. 2025.

149. Kaasa S, Loge JH, Aapro M, Albrecht T, Anderson R, Bruera E, et al. Integration of oncology and palliative care: a Lancet Oncology Commission. *The Lancet Oncology*. 2018;19(11):e588-e653.

150. Arias-Casais N, Garralda E, Sánchez-Cárdenas MA, Rhee JY, Centeno C. Evaluating the integration of palliative care in national health systems: an indicator rating process with EAPC task force members to measure advanced palliative care development. *BMC Palliative Care*. 2021;20(1):36.

151. Arias-Casais N, Garralda E, Rhee JY, de Lima L, Pons JJ, Clark D, et al. EAPC Atlas of Palliative Care in Europe 2019. 2019.

152. Department of Health. National Adult Palliative Care Policy. 2024.

153. Department of Health. Minister launches new National Adult Palliative Care Policy to improve services and supports for patients, families, and carers. [June 30, 2025]. Available from: <https://www.gov.ie/en/department-of-health/press-releases/minister-launches-new-national-adult-palliative-care-policy-to-improve-services-and-supports-for-patients-families-and-carers>.

154. European Society for Medical Oncology (ESMO). ESMO Accredited Designated Centres. [June 30, 2025]. Available from: <https://www.esmo.org/for-patients/esmo-designated-centres-of-integrated-oncology-palliative-care/esmo-accredited-designated-centres>.

155. Scocca G, Meunier F. A right to be forgotten for cancer survivors: A legal development expected to reflect the medical progress in the fight against cancer. *Journal of Cancer Policy*. 2020;25:100246.

156. European Commission. Access to financial products for persons with a history of cancer in EU Member States. 2022.

157. Meunier F. Ending discrimination against cancer survivors. [July 9, 2025]. Available from: <https://endingdiscrimination-cancersurvivors.eu>.

158. Department of Finance. Insurance Ireland Code of Practice for Underwriting Mortgage Protection Insurance for Cancer Survivors enters into force. [July 9, 2025]. Available from: <https://www.gov.ie/en/department-of-finance/press-releases/insurance-ireland-code-of-practice-for-underwriting-mortgage-protection-insurance-for-cancer-survivors-enters-into-force>.

159. Insurance Ireland. Insurance Ireland Code of Practice for Underwriting Mortgage Protection Insurance for Cancer Survivors. [July 9, 2025]. Available from: <https://insuranceireland.eu/news-and-publications/insurance-ireland-code-of-practice-for-underwriting-mortgage-protection-insurance-for-cancer-survivors>.

160. Department of Finance. Right to be Forgotten legislation to be brought forward by Government before Summer recess. [July 8, 2025]. Available from: <https://www.gov.ie/en/department-of-finance/press-releases/right-to-be-forgotten-legislation-to-be-brought-forward-by-government-before-summer-recess>.

161. Houses of the Oireachtas. Central Bank (Amendment) Bill 2025 (Bill 5 of 2025). [July 8, 2025]. Available from: <https://www.oireachtas.ie/en/bills/bill/2025/5/>.

162. European Parliament & Council. Directive (EU) 2023/2225 of the European Parliament and of the Council of 18 October 2023 on credit agreements for consumers and repealing Directive 2008/48/EC. 2023.

163. European Federation of Pharmaceutical Industries and Associations (EFPIA). EFPIA Patients W.A.I.T. Indicator 2022 Survey. 2023.

164. European Federation of Pharmaceutical Industries and Associations (EFPIA). EFPIA Patients W.A.I.T. Indicator 2023 Survey. 2024.

165. European Federation of Pharmaceutical Industries and Associations (EFPIA). EFPIA Patients W.A.I.T. Indicator 2021 Survey. 2022.

166. European Federation of Pharmaceutical Industries and Associations (EFPIA). EFPIA Patients W.A.I.T. Indicator 2020 Survey. 2021.

167. European Federation of Pharmaceutical Industries and Associations (EFPIA). EFPIA Patients W.A.I.T. Indicator 2019 Survey. 2020.

Appendix: Methodology and sources for indicators

Governance	
National cancer plan	<p>Analysis of the National Cancer Strategy 2017-2026 (5).</p> <p>For dashboard overview:</p> <ul style="list-style-type: none"> • Presence of national cancer plan in 2025 (yes = at benchmark)
Disease burden	
Incidence (new cases)	<p>Data were sourced from the NCRI (13) and ECIS (14) databases.</p> <p>For dashboard overview:</p> <ul style="list-style-type: none"> • Incidence crude rate per 100,000 inhabitants in 2022, All sites but non-melanoma skin, All ages, Both sexes (14).
Mortality (deaths)	<p>Data were sourced from Eurostat (2) and the ECIS database (14).</p> <p>For dashboard overview:</p> <ul style="list-style-type: none"> • Mortality crude rate per 100,000 inhabitants in 2022, All sites but non-melanoma skin, All ages, Both sexes (14).
Survival rates	<p>Data were sourced from the NCRI database (19) and Allemani et al. (2018) (20).</p> <p>For dashboard overview:</p> <ul style="list-style-type: none"> • Weighted average of 5-year age-standardised net survival rates of breast, colon, lung, and prostate cancer in the diagnosis period 2010-2014 (20), based on 2022 incidence estimates (14).
Economic burden	
Health spending on cancer	<p>Data on the economic burden of cancer in Ireland in 2018 were sourced from Hofmarcher et al. (2020) (21). Data on the healthcare and cancer care expenditure, as well as the cost of lost productivity among working-age patients, in 2023 were sourced from Manzano et al. (2025) (23); values for 2000 to 2020 are unpublished data from Manzano et al. (2025) (23).</p> <p>For dashboard overview:</p> <ul style="list-style-type: none"> • Healthcare spending on cancer per capita in EUR in 2023 (PPP-adjusted) (23). • Productivity losses from cancer per capita in EUR in 2023 (PPP-adjusted) (23).
Research	
Clinical trial activity & investment in cancer research	<p>1st graph: Hofmarcher et al. (2024) (28). Data include interventional phase I, phase I/II, phase II, phase II/III, and phase III trials in oncology (neoplasms) in adult patients starting between 1st June 2009 to 1st June 2019 and registered in the ClinicalTrials.gov database. Data unavailable for CY and MT. Unweighted EU-average.</p> <p>2nd graph: EU Clinical Trials Information System (34). Specification: Medical condition = “cancer”, Only show recruiting = yes. Data include currently recruiting interventional clinical trials in oncology as of September 8, 2025. Data unavailable for MT. Population data were sourced from Eurostat (16).</p> <p>For dashboard overview:</p> <ul style="list-style-type: none"> • Percentage of patients participating in interventional cancer clinical trials (30).
Prevention	
Tobacco smoking	<p>1st graph: OECD (47). Specification: Health: Risk factors for health: Tobacco consumption; share (%) of population aged 15+ who are daily smokers (years 1998, 2007, 2015, 2023).</p> <p>2nd graph: Central Statistics Office: Healthy Ireland Survey (48). Specification: Persons who have smoked in the last 12 months [HIS09].</p> <p>3rd graph: Tax Foundation (50).</p> <p>For dashboard overview:</p> <ul style="list-style-type: none"> • Daily smoking rates among adults in 2024 (48).
Alcohol consumption	<p>1st graph: Central Statistics Office: Healthy Ireland Survey (58-60). Specification: Alcohol consumption in last 12 months [HIS45]; Alcohol consumption [HIS15]; Binge drinking [HIS47].</p> <p>2nd & 3rd graph: WHO (61). Alcohol, total per capita (15+) consumption (in litres of pure alcohol) (SDG Indicator 3.5.2). Unweighted EU average.</p> <p>For dashboard overview:</p> <ul style="list-style-type: none"> • Reduction in per capita alcohol consumption (litres/year) in 2022 relative to 2010 levels (61).
HPV vaccination	<p>1st graph: WHO (69). Human Papillomavirus (HPV) vaccination coverage. Specification: HPV Female, final dose; Official coverage. Data unavailable for HR, CZ, EL, PL, and RO. Data from 2023 instead of 2024 for FR. Unweighted EU-average.</p> <p>2nd & 3rd graph: Health Protection Surveillance Centre (HPSC) (70). Figures show the proportion the target population being fully vaccinated (i.e., VCR). Note that full vaccination differs between school years based on national guidelines: three doses until the 2014/15 school year, two doses between 2014/15-2021/22, and one dose as of 2022/23. Community Health Organisations (CHOs) in Ireland: CHO1 (Cavan/Monaghan, Donegal, Sligo/Leitrim); CHO2 (Galway, Mayo, Roscommon); CHO3 (Clare, Limerick, Tipperary NR/East Limerick); CHO4 (Kerry, North Cork, North Lee-Cork, South Lee-Cork, West Cork); CHO5 (Carlow/Kilkenny, South Tipperary, Waterford, Wexford); CHO6 (Dublin South, Dublin South East, Wicklow); CHO7 (Dublin South City, Dublin South West, Dublin West, Kildare/West Wicklow); CHO8 (Laois/Offaly, Longford/Westmeath, Louth, Meath); CHO9 (Dublin North, Dublin North Central, Dublin North West).</p> <p>For dashboard overview:</p> <ul style="list-style-type: none"> • HPV VCR among girls in first-year second level schools in the 2023/24 school year (70).
Early detection	
Breast cancer screening	<p>1st graph: BreastCheck - annual reports (78).</p> <p>2nd graph: Eurostat (84). Specification: Preventive cancer screenings - programme data; Malignant neoplasm of breast; Females. Numbers show the share of women who have been screened for breast cancer within the past two years (or per national screening interval), presented as a proportion of those eligible for an organised programme in the given country. Data unavailable for BG, EL, ES, PT, and RO. Data from 2021 instead of 2022 for DK and HU. Unweighted EU average.</p> <p>3rd graph: Eurostat (85). Specification: Self-reported last breast examination by X-ray among women by age and educational attainment level; Ireland; age 50-69 years; within "less than 2 years"; 2019. Unweighted EU-average.</p> <p>For dashboard overview:</p> <ul style="list-style-type: none"> • BreastCheck participation rate in 2022 (82).

Cervical cancer screening	<p>1st graph: CervicalCheck Programme Report 2022-2023 (93).</p> <p>2nd graph: Eurostat (84). Specification: Preventive cancer screenings - programme data; Malignant neoplasm of cervix uteri; Females. Numbers show the share of women who have been screened for cervical cancer within the past three years (or per national screening interval), presented as a proportion of those eligible for an organised programme in the given country. Data unavailable for BG, EL, ES, HR, CY, AT, and PT. Data from 2021 instead of 2022 for DK, FR, and HU. Unweighted EU-average.</p> <p>3rd graph: Eurostat (94). Specification: Self-reported last cervical smear test among women by age and educational attainment level; Ireland; age 20-69; within “less than 3 years”; 2019. Unweighted EU-average.</p> <p>For dashboard overview:</p> <ul style="list-style-type: none"> • CervicalCheck participation rate in 2023 (93).
Colorectal cancer screening	<p>1st graph: BowelScreen Programme Report 2022-2023 (102).</p> <p>2nd graph: Eurostat (84). Specification: Preventive cancer screenings - programme data; Malignant neoplasm of colon, rectosigmoid junction, rectum, anus and anal canal; males and females (“Total”). Numbers show the share of men and women who have been screened for colorectal cancer within the past two years (or per national screening interval), presented as a proportion of those eligible for an organised programme in the given country. Data unavailable for BG, EL, ES, CY, AT, PL, PT, RO, and SK. Data from 2021 instead of 2022 for DK. BowelScreen data instead of provisional Eurostat data for IE (59). Unweighted EU-average.</p> <p>3rd graph: Eurostat (104). Specification: Self-reported last colorectal cancer screening test by sex, age and educational attainment level; Ireland; age 50-74; males and females (“Total”); within “less than 2 years”; 2019. Unweighted EU-average.</p> <p>For dashboard overview:</p> <ul style="list-style-type: none"> • BowelScreen participation rate in 2022-2023 (102)
Diagnosis and treatment	
Health workforce	<p>1st graph: Eurostat (108). Specification: Health personnel. Number of practicing physicians per 100,000 inhabitants in 2014 and 2023. Data unavailable for CZ, EL, PT, and SK in 2014 and EL, LU, PT, SE, and SK in 2023. Unweighted EU-average.</p> <p>2nd graph: Eurostat (109). Specification: Physicians by category. Number of generalist medical practitioners per 100,000 inhabitants. Data unavailable for CZ, HU, and SK in 2024 and HU, SE, and SK in 2023. Unweighted EU-average.</p> <p>3rd graph: Medical Workforce Analysis Report 2024-2025 (110). In Ireland, “consultants” are senior hospital physicians who have completed specialist training, are registered on the Specialist Division of the Medical Council’s register, and hold independent responsibility for patient care, clinical decision-making, and supervision of junior doctors.</p> <p>For dashboard overview:</p> <ul style="list-style-type: none"> • Mean of the two relative differences in practising physicians and nurses per 100,000 inhabitants in 2023 (108).
Diagnostic imaging equipment	<p>1st graph: Eurostat (111). Specification: Devices for medical imaging. Data show the sum of CT scanners, MRI units and PET scanners per 100,000 inhabitants in hospitals and providers of ambulatory healthcare. For CT and MRI: PT data refer to hospitals only; for PET: DE and PT data refer to hospitals only, which may underestimate availability. Data not available for all EU countries. Unweighted EU-average.</p> <p>2nd graph: Eurostat (111). Specification: Devices for medical imaging. By medical imaging techniques (CT, MRI and PET) per 100,000 inhabitants in hospitals and providers of ambulatory healthcare. For CT and MRI: PT data refer to hospitals only; for PET: DE and PT data refer to hospitals only, which may underestimate availability. Data for 2023 instead of 2024 for NL and the EU-average for CT and MRI and DK, NL, and the EU-average for PET. Unweighted EU-average.</p> <p>3rd graph: Eurostat (111). Devices for medical imaging. By medical imaging techniques (CT, MRI and PET) per 1,000 cancer cases. Data from 2023 instead of 2024 for NL and the EU-average (CT, MRI and PET) and DK (PET). Cancer incidence estimates (all sites but non-melanoma skin cancer) from 2022 were sourced from ECIS (14).</p> <p>For dashboard overview:</p> <ul style="list-style-type: none"> • Number of CT, MRI & PET scanners per 100,000 inhabitants in 2024 (111).
Biomarker testing	<p>Data presented in the table were sourced from the supplemental material (section 2.2.4) in the ESMO-coordinated study by Bayle et al. (2023) (115). The table shows whether a small NGS panel (<50 genes) was available always, usually, or occasionally in routine practice, or only in trial or research. Note that “availability” was not defined as “reimbursement” as the costs for a test might be covered by the general hospital budget (especially for research purposes) or a pharmaceutical company rather being a specific reimbursable service through a third-party payer. Bile duct cancer is also referred to as cholangiocarcinoma by the source.</p> <p>For dashboard overview:</p> <ul style="list-style-type: none"> • Benchmarking not applicable: availability of multi-biomarker testing with NGS (115).
Comprehensive cancer centres (CCCs)	<p>The number of Comprehensive Cancer Centres (CCCs) per country is based on publicly available information on the OECI website, current as of 5 January 2026 (128). Population data were sourced from Eurostat for EU countries (16) and the Office for National Statistics for the UK (129), to calculate CCCs per 1 million inhabitants. All figures reflect the status of OECI-affiliated centres at the time of data collection and may not capture ongoing accreditation processes not yet published by the OECI.</p> <p>For dashboard overview:</p> <ul style="list-style-type: none"> • Benchmarking not applicable: number of OECI-accredited CCCs in 2025 (128).
Novel cancer medicines	<p>1st and 2nd graph: EFPIA Patients W.A.I.T. Indicator Surveys (131, 163-167). Data refers to rate of availability and estimates of time to availability of new cancer medicines. For most countries, local availability is defined as the inclusion of a medicine centrally approved by the EMA in a national or regional public reimbursement list. Data in 2020-2021 not available for CY, LU, and MT. Unweighted EU-average. The year 2020 refers to EMA medicine approvals in 2015-2018; 2021 to 2016-2019; 2022 to 2017-2020; 2023 to 2018-2021; 2024 to 2019-2022; and 2025 to 2020-2023. The EFPIA data only refer to new medicines and not new indications of already approved medicines.</p> <p>For dashboard overview:</p>

	<ul style="list-style-type: none"> Mean of the two relative differences in the reimbursement rate and the reimbursement time of novel cancer medicines in 2025 (131).
Radiation therapy machines	<p>1st graph: Eurostat (111). Devices for medical imaging. Specification: Hospitals and providers of ambulatory healthcare, Radiation therapy equipment, 2013-2023, per 100,000 inhabitants. Radiation therapy equipment includes machines like linacs, Cobalt-60 machines, and brachytherapy machines. Data unavailable for SE 2013-2014; NL 2013-2023; BE and HU 2018-2023; LV 2019-2023. For DE, FR, and PT, data refer to hospitals only, which may underestimate availability. Unweighted EU average.</p> <p>2nd graph: Data sourced from the DIRAC website (143). Population data were sourced from Eurostat for EU countries (16) and the Office for National Statistics for the UK (129).</p> <p>3rd graph: Data sourced from the DIRAC website (143). Cancer incidence data were sourced from GLOBOCAN (144).</p> <p>For dashboard overview:</p> <ul style="list-style-type: none"> Number of linac machines per 450 newly diagnosed cases in 2025 (143, 144)
Survivorship	
Palliative care services	<p>1st graph: EAPC Atlas of Palliative Care (148). Palliative care specialised services per 100,000 inhabitants, p.71. Unweighted EU average.</p> <p>2nd graph: Data sourced from ESMO website (154). ESMO Accredited Designated Centers. Population data were sourced from Eurostat for EU countries (16) and the Office for National Statistics for the UK (129).</p> <p>For dashboard overview:</p> <ul style="list-style-type: none"> Number of specialised palliative care services per 100,000 inhabitants in 2025 (148).
Access to financial services (“Right to be forgotten”)	<p>Data sourced from the “Ending discrimination against cancer survivors” website (157).</p> <p>For dashboard overview:</p> <ul style="list-style-type: none"> No legislation is at 10% of benchmark, 50% for code of conduct, 100% for national legislation on the RTBF (157).

