European Cancer Inequalities Registry

THE NETHERLANDS

Country Cancer Profile

2025

European Commission

OECD

BETTER POLICIES FOR BETTER LIVES

The Country Cancer Profile Series

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

Data and information sources

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

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

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

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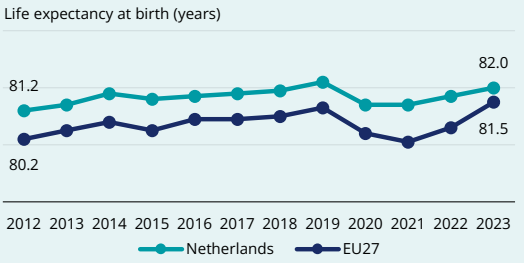
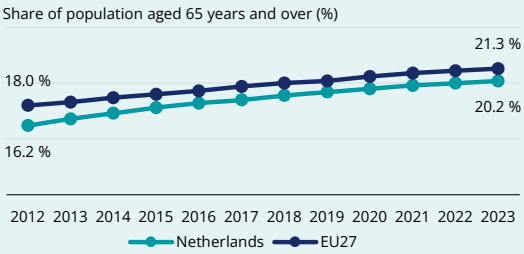
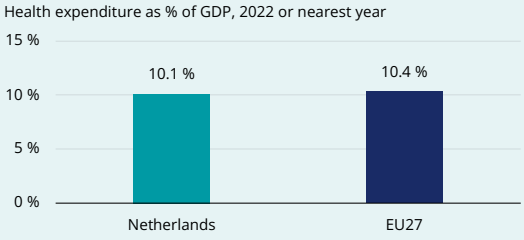
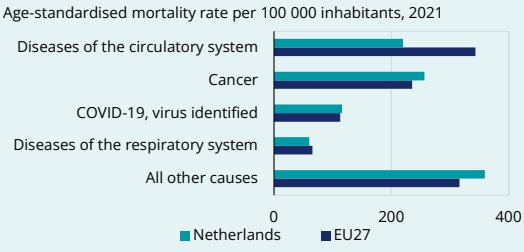


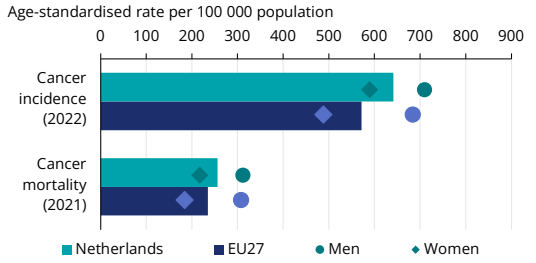






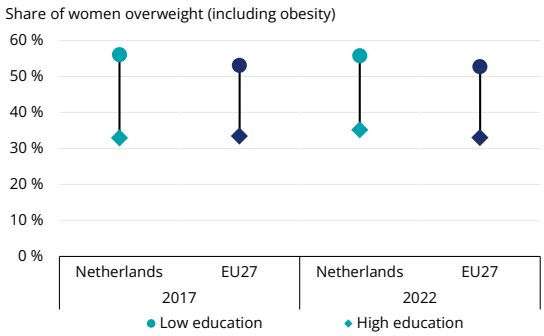
Source: Eurostat Database.

1. Highlights



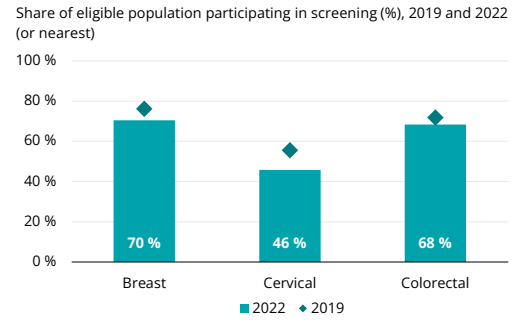
Cancer in the Netherlands

In 2022, estimated cancer incidence in the Netherlands was higher than the EU average, while prevalence was the third highest among EU countries. Cancer mortality declined substantially during 2011-21. Dutch men have significantly higher cancer incidence and mortality rates than women. The country's first national cancer action plan, covering the next 10 years, was launched in November 2023.



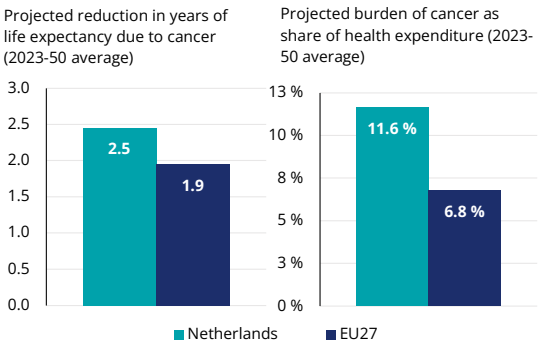
Risk factors and prevention policies

Dutch adults and adolescents generally perform better than the EU average in many risk factors, including smoking, alcohol consumption, and overweight and obesity. There are notable regional and socio-economic disparities regarding overweight and obesity, with an absolute difference of over 20% between women with lower and higher education levels. The country does not perform as well on HPV vaccination, with rates just slightly above the EU average. However, it is developing policies to increase vaccination rates – particularly among individuals with lower socio-economic status and migrant backgrounds.



Early detection

The Netherlands maintains national screening programmes for breast, cervical and colorectal cancers. Participation rates, however, have been decreasing over recent years, and are particularly low among immigrants. To increase awareness and participation among migrant communities, the Netherlands has implemented actions including translating informational materials into multiple languages.



Cancer care performance

Five-year cancer survival rates have improved in the Netherlands over the past decade. This may result in part from the concentration of services, multidisciplinary team meetings and strong cancer care networks. One oncological network has achieved recognition as the second major European cancer centre network to receive the Organisation of European Cancer Institutes Comprehensive Cancer Network accreditation. Through diverse initiatives, the country aims to enhance the quality of life for patients and survivors. However, the burden of cancer on health expenditures in the Netherlands between 2023-50 is projected to be much higher than the EU average, as is the reduction in life expectancy due to cancer.

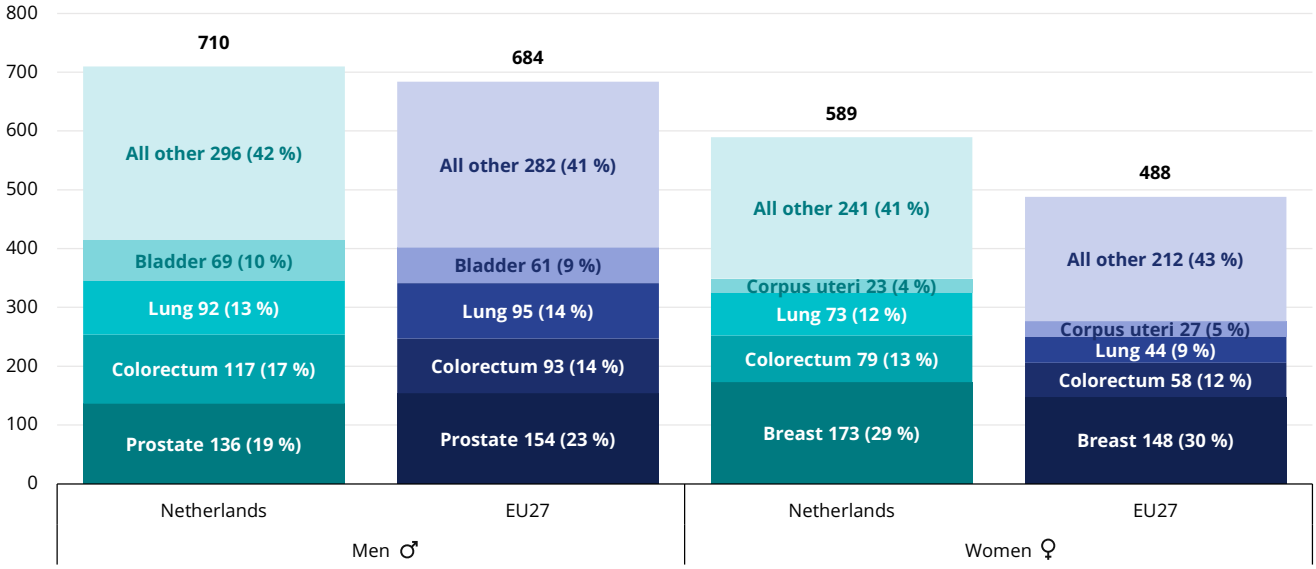
2. Cancer in the Netherlands

The Netherlands has the third highest cancer incidence among the EU countries, Norway and Iceland

According to European Cancer Information System (ECIS) of the Joint Research Centre based on incidence trends from pre-pandemic years, around 116 000 new cancer cases were expected in the Netherlands in 2022. This represents an age-standardised incidence rate of 641 new cases per 100 000 population, compared to the EU average of 572 per 100 000. Incidence was estimated to be 21% higher than the EU average among Dutch women, but only 4% higher among Dutch men. Cancer incidence was about 20% higher among men (710 new cases per 100 000 population) than women (589 per 100 000) in the Netherlands, a smaller gap than the 40% seen in the EU on average (Figure 1). The very high quality, timeliness and comprehensiveness of the Netherlands Cancer Registry is one reason for the particularly high incidence and prevalence rates.

Figure 1. The most frequent cancers among Dutch men and women generally mirror those seen across the EU

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



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

In the Netherlands, prostate cancer is responsible for the highest incidence among men, at 19% of incidence rate (136 new cases per 100 000 population), which is somewhat lower than the 23% EU average. This is followed by colorectal (117 per 100 000) and lung (92 per 100 000) cancers. Among Dutch men, colorectal cancer incidence is 26% higher and bladder cancer incidence is 14% higher than the EU averages.

Among women in the Netherlands, breast cancer represents 29% of incidence rate (173 new cases per 100 000 population). This is followed by colorectal (79 per 100 000) and lung (73 per 100 000) cancers, which represent particularly high incidence among women: colorectal cancer incidence is 36% higher and lung cancer incidence 66% higher than the EU averages.

Looking forward, ECIS estimates that cancer cases will increase by 21% between 2022 and 2040.

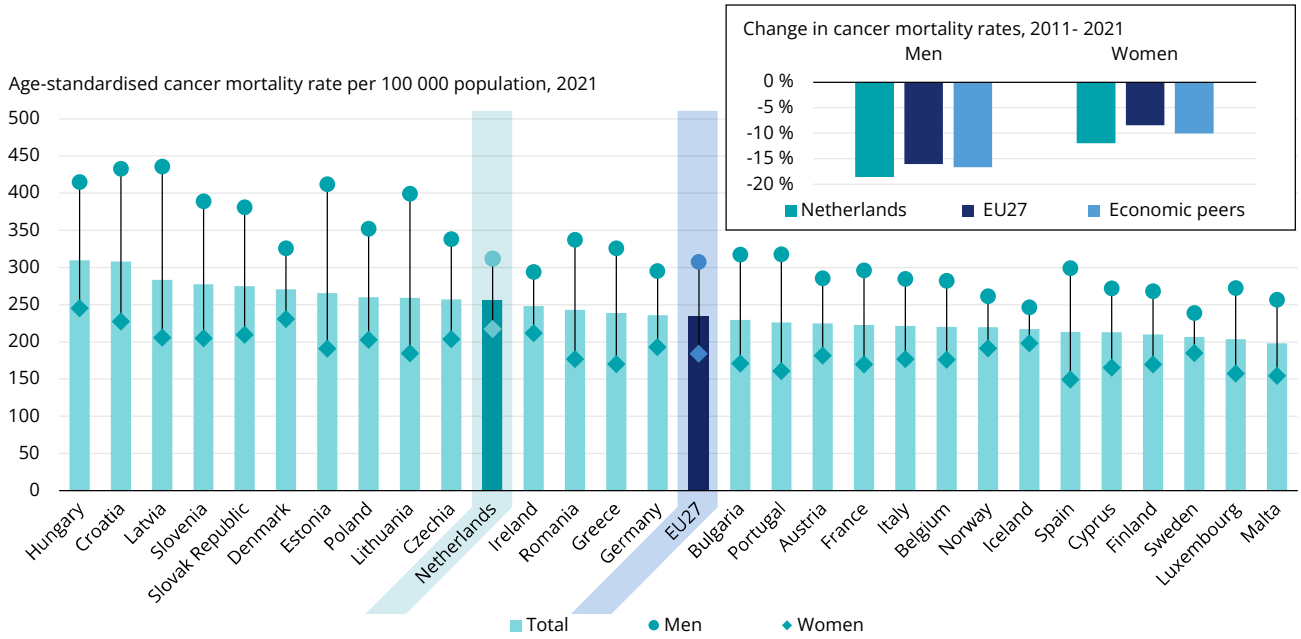
Cancer mortality declined significantly between 2011 and 2021, outpacing reductions seen in the EU and among the country's economic peers

Cancer was the leading cause of death in the Netherlands in 2021, accounting for 25.3% of all deaths. However, between 2011 and 2021 the Netherlands witnessed a considerable decrease of 14.7% – one of the largest declines among EU countries (Figure 2). Despite this, the age-standardised cancer mortality rate in 2021 was 256 deaths per 100 000 population, higher than the EU average (235 per 100 000). As in all other EU+2 countries,[1] men had significantly higher mortality rates (312 per 100 000) than women (217 per 100 000). This gender gap was narrower than the EU average, where men had a comparable mortality rate (308 per 100 000), but women had a notably lower rate (184 per 100 000).

Lung cancer was responsible for the highest mortality among cancers in the Netherlands in 2021, with 56 deaths per 100 000 population.[2] This rate among Dutch men (68 per 100 000) was 3% lower than the EU average. In stark contrast, the lung cancer mortality rate for Dutch women (48 per 100 000) was 63% higher than the EU average.

Between 2011 and 2021, overall cancer mortality rates among men decreased by 19%, surpassing the 17% change seen among the country's economic peers[3]. Similarly, mortality rates among women decreased by 12% during the same period, exceeding the average change observed among the country's economic peers (10%). Age-standardised cancer mortality decreased for most commonly diagnosed cancer types except oesophagus cancer, which increased slightly (0.5%) during 2011-21.

Figure 2. Despite notable advances, the cancer mortality rate remains higher than the EU average



Notes: Economic peers are defined as tercile clusters based on 2022 GDP per capita in purchasing power standard terms. Economic peers for NL are AT, BE, DE, DK, IE, IS, LU, NO and SE.
Source: Eurostat Database.

While women in the Netherlands have higher avoidable mortality rates from cancer than the EU average, the rates among men are lower

Although smoking prevalence among both men and women in the Netherlands was lower than the EU average (see Section 3), the avoidable mortality rate from lung cancer among Dutch women was 55% higher than the EU average in 2021.[4] A few decades ago, Dutch women had higher smoking rates than most EU countries, likely contributing to their above-average avoidable lung cancer mortality today, as the disease develops over many years. In contrast, among Dutch men, the rate was 18% lower than the EU average. Between 2011 and 2021,

1 *EU+2 countries include 27 EU Member States (EU27), plus Iceland and Norway.*

2 *Lung cancer also refers to trachea and bronchus cancers.*

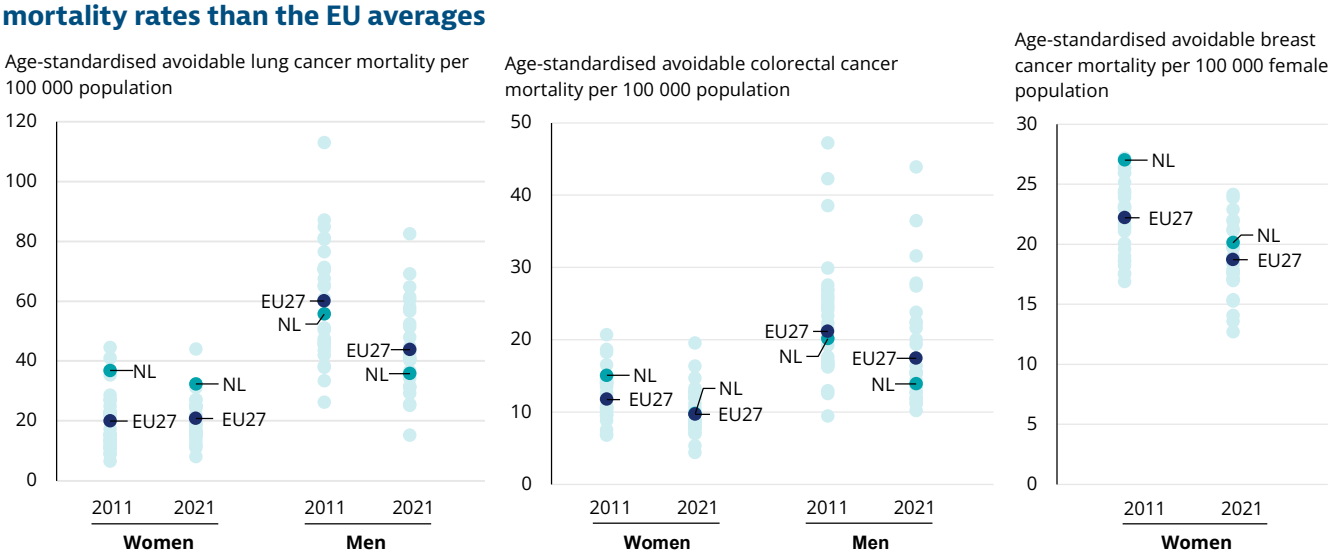
3 *Economic peers are defined as tercile clusters based on 2022 GDP per capita in purchasing power standard terms. Economic peers for NL are AT, BE, DE, DK, IE, IS, LU, NO and SE.*

4 *Avoidable mortality includes both preventable deaths that can be avoided through effective public health and prevention interventions, and treatable deaths that can be avoided through timely and effective healthcare interventions.*

rates decreased by 12% among women (compared to a 4% increase across the EU) and by 36% among men (compared to a 27% decrease across the EU) (Figure 3).

In 2021, avoidable mortality from breast cancer in the Netherlands was 20 per 100 000 women, which was 8% higher than the EU average. The rate has decreased by 26% since 2011 – faster than the EU average of 16%. The avoidable mortality rate from colorectal cancer in 2021 among Dutch women was slightly higher than the EU average, while it was 20% lower among Dutch men than the EU average. Here too, the decreases of 35% among women and 31% among men are much larger than the decreases across the EU. This can be attributed in part to the success of the colorectal cancer screening programme initiated in 2014: the Netherlands has one of the highest participation rates in colorectal screening among EU+2 countries (see Section 4). Efforts to improve cancer care quality, such as oncology networks and monitoring of care quality (see Section 5.2), may have contributed to the faster decreases in both breast and colorectal cancer avoidable mortality.

Figure 3. Both men and women in the Netherlands saw a more significant decline in avoidable mortality rates than the EU averages



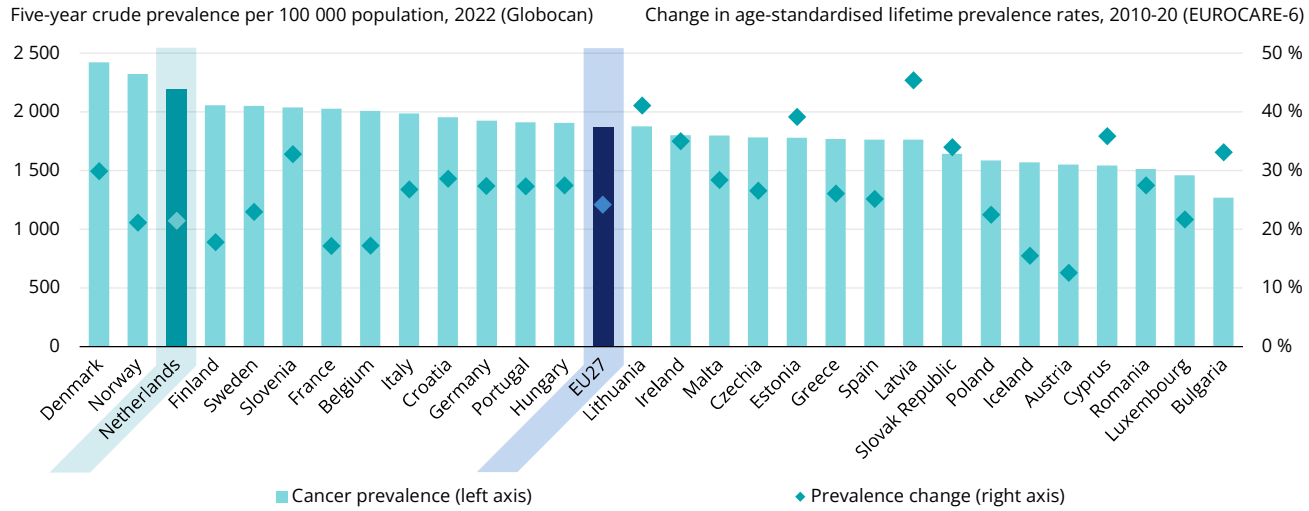
Note: Avoidable mortality figures relate to deaths of people aged under 75.
Source: Eurostat Database. Data refer to 2021.

In line with cancer incidence, the Netherlands ranks third among EU+2 countries in cancer prevalence

In 2022, the Netherlands had five-year prevalence[5] of 2 191 cancer cases per 100 000 population, which is 17% higher than the 1 876 cases per 100 000 across the EU. Among Dutch men it was 12% higher than the EU average, while among Dutch women it was 22% higher than the EU average. Between 2010 and 2020, lifelong cancer prevalence increased by 21% in the Netherlands and by 24% in the EU (Figure 4). This rise highlights the growing importance of focusing on quality of life and survivorship (see Section 5.4), as people are living longer with cancer and more people have a history of the disease.

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

Figure 4. The Netherlands' five-year cancer prevalence rate is among the highest in the EU+2



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

The Dutch Cancer Agenda for the next 10 years was recently launched as the first national cancer action plan

From 2005 to 2010, a national cancer control programme promoted a wide range of activities related not only to prevention and diagnosis but also treatment, follow-up and psychosocial care. Until late 2023, the Ministry of Health, Welfare and Sport invested in initiatives proposed by healthcare professionals, researchers and patient organisations, but the Netherlands remained one of the few EU+2 countries without a comprehensive national cancer plan established by the government.

On 27 November 2023, the Netherlands Cancer Collective launched the Dutch Cancer Agenda (Box 1). This initiative outlines 20 goals for the next decade, covering areas such as prevention, early detection, diagnosis, treatment, follow-up, palliative care and quality of life. The Collective was initiated by the Netherlands Comprehensive Cancer Organisation (IKNL), KWF Dutch Cancer Society and the Dutch Federation of Cancer Patients Organisations. The Ministry of Health, Welfare and Sport, with over 100 other organisations, is involved in this comprehensive plan, which addresses life before cancer, life with cancer and life after cancer.

Insights from the Netherlands Cancer Registry support better cancer care

The Netherlands Cancer Registry, established in 1989, serves as the national database providing comprehensive statistics on cancer within the country. Maintained by IKNL, the Registry offers publicly available data on cancer incidence, prevalence, survival and mortality. By offering insights into the demographics, treatments and prognosis of cancer, it plays a crucial role in enhancing care for cancer patients. It stands out as the sole oncological population-based registry in the Netherlands, covering all cancer patients.

The availability of up-to-date data in cancer registries across EU+2 countries can vary greatly. The Netherlands is noted as one of the countries with the most recent data available, with provisional 2023 figures on both incidence and prevalence already available in early 2024. Additionally, it is among only 5 of the 26 countries that responded to the 2023 OECD Policy Survey on Cancer Care Performance, to include genetic information data (OECD, 2024a).

In 2023, IKNL launched the Dutch Cancer Atlas, which provides an interactive online tool to visualise the disparity in incidence of cancer across regions and on a neighbourhood-level in the Netherlands. It shows the incidence of the 24 most common cancer types based on the location of residence at diagnosis.

Box 1. The Dutch Cancer Agenda aligns closely with Europe's Beating Cancer Plan

The Dutch Cancer Agenda includes proposals for policy measures that aim to (1) combat risk factors like smoking, alcohol, ultraviolet radiation, infectious diseases, environmental pollution and poor nutrition; (2) provide free of charge population-based cancer screening programmes for breast, cervical and colorectal cancer; (3) ensure access to affordable and personalised healthcare provided at specific cancer centres, strengthen the Netherlands Cancer Registry, (4) implement palliative care guidelines and multidisciplinary specialist teams; and (5) offer comprehensive support services for cancer patients to regain their function and improve their mental health, including rehabilitation programmes aimed at returning to everyday activities (Table 1). Additionally, policies to minimise disparities have been implemented, particularly to encourage participation in early detection/screening programmes. Although the Netherlands is recognised for its research in cancer and innovation, the absence until recently of a national cancer strategy and issues with privacy legislation created barriers to further improvements.

Table 1. The Dutch Cancer Agenda aligns with Europe's Beating Cancer Plan

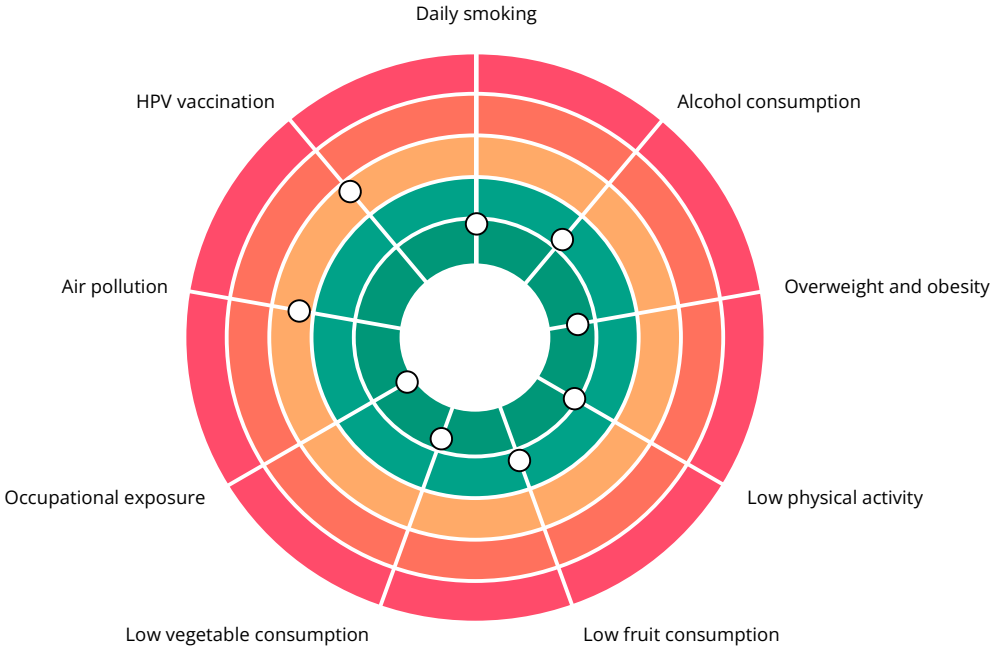
Pillars of EBCP				Transversal themes of EBCP		
Prevention	Early Detection	Diagnosis and treatment	Quality of life	Cancer inequalities	Paediatric cancer	Research and innovation
●	●	●	●	●	●	●

Notes: EBCP = Europe's Beating Cancer Plan; Blue indicates that the Dutch Cancer Agenda includes a specific section on the topic; orange indicates that the topic is covered in one of the Agenda's sections without being the only focus; and pink indicates that this topic is not covered in the Agenda.
Source: Adapted from "Study on mapping and evaluating the implementation of Europe's Beating Cancer Plan" (not yet published).

3. Risk factors and prevention policies

Nearly half (48.4%) of cancer deaths in the Netherlands were attributable to known cancer risk factors (GBD 2019 Cancer Risk Factors Collaborators, 2022). Nevertheless, the Netherlands performs well compared to most EU countries in terms of modifiable risk factor prevalence, and is in the top third of EU+2 countries for alcohol consumption, daily smoking, overweight or obesity, physical activity levels, and fruit and vegetable consumption. It performs the best among EU+2 countries on occupational exposure. While it does not fall into the bottom third for any risk factor, its poorest relative performance is in human papillomavirus (HPV) vaccination coverage (Figure 5).

Figure 5. The Netherlands performs better than the majority of the countries on all risk factors



Notes: The closer the dot is to the centre, the better the country performs compared to other EU countries. No country is in the white "target area" as there is room for progress in all countries in all areas. Air pollution is measured as particulate matter with a diameter less than 2.5 micrometres ($PM_{2.5}$).
Sources: OECD calculations based on 2022 EU-SILC Survey for overweight, obesity, physical activity, fruit and vegetable consumption (in adults); Eurofound Survey for occupational exposure; OECD Health Statistics for smoking, alcohol consumption (in adults) and air pollution; and WHO for HPV vaccination (15-year-old girls).

Several overarching national prevention efforts are under way in the country

In 2018, the Netherlands implemented the National Prevention Agreement, which targets risk factors for cancer and other diseases. This involves collaboration between over 70 parties to reduce smoking, obesity and problematic alcohol use by 2040. However, in January 2024, the National Institute for Public Health and the Environment (RIVM) projected that current initiatives will not be sufficient to meet these 2040 goals.

The Integral Care Agreement signed in September 2022 emphasises cancer prevention policies, including lifestyle interventions for high-risk individuals and public awareness campaigns on skin cancer risks aimed at changing sun exposure behaviour. In response to rising incidence of skin cancer, a campaign was introduced in 2023 to provide free sun protection for Dutch citizens.

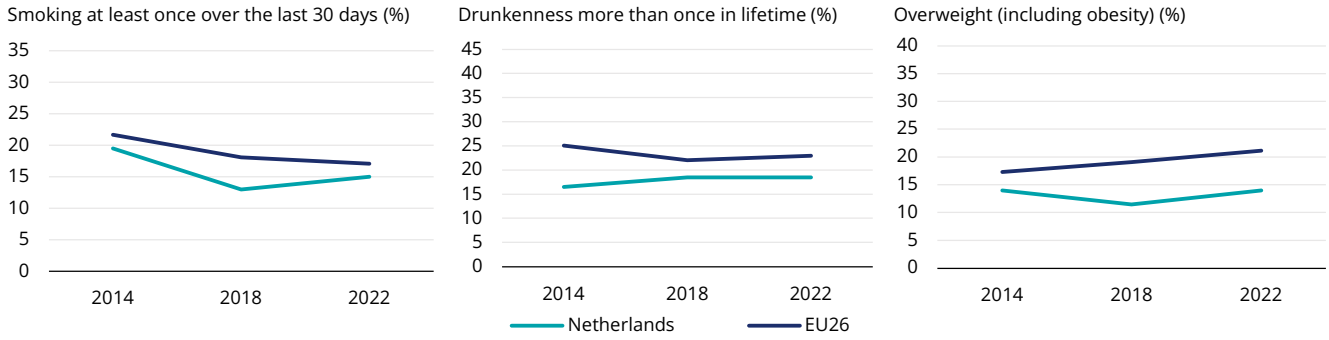
In 2022, spending on preventive measures represented 5.7% of current health expenditure – an increase of 2.4 percentage points from 2019

prior to COVID-19, and slightly lower than the EU average of 6.0%[6].

The share of daily cigarette smokers has declined significantly, with a greater reduction among the younger population

Among people aged 15 and over in the Netherlands, the proportion of daily smokers decreased by 6 percentage points from 2012 to 2022, reaching 13% (below the EU average of 18%). This decline was particularly notable among women and individuals aged 15-24. In 2021, the share of daily smokers among Dutch men was 15% – significantly lower than the EU average of 23%. Among Dutch women, the share was 11%, also much lower than the EU average of 14%. A few decades ago, smoking rates among Dutch women exceeded those of most EU countries for which data are available. This disparity probably accounts for the higher rates of avoidable mortality from lung cancer among Dutch women than the EU average, as lung cancer develops over many years (see Section 2). Among 15-year-olds, tobacco use dropped from 20% in 2014 to 13% in 2018, but then rose to 15% in 2022, unlike the EU average, which saw a decrease. Despite this rise, the rate remained 2 percentage points below the EU average (Figure 6).

Figure 6. Among 15-year-olds, the Netherlands fares better than the EU average for smoking and overweight, but trends in drunkenness require attention



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

In 2022, smoking rates were higher among adults with origins outside of the Netherlands: 17% of individuals of Dutch origin smoked, compared to 23% of those from other European countries and 24% of those from non-European countries. Additionally, smoking was more prevalent among people with lower (23%) than among those with higher education levels (15%) (Netherlands Expertise Centre for Tobacco Control, 2023).

Despite the overall decline in smoking rates, prevalence of e-cigarette use increased from 1% in 2021 to 3% in 2022. Regular e-cigarette use was most common among men, people with a middle level of education, individuals with non-European origins and those aged 18-24, among which age group prevalence increased from 2% in 2021 to 7% in 2022.

The National Prevention Agreement aims for fewer than 5% of residents aged 18 and over, and 0% of young people and pregnant women, to smoke by 2040. However, the Dutch Cancer Agenda sets a more ambitious goal, aiming to achieve these targets by 2032. In the Netherlands, the framework of protecting future generations has propelled implementation of stricter tobacco control policies. The Netherlands has effectively implemented the most stringent level of measures in all six WHO-recommended tobacco control areas (including pricing, advertising restrictions and cessation support). It is one of the few European countries requiring standardised packaging for e-cigarettes and e-liquids, whose visuals have tended to attract interest among young people. Additionally, the Smoke-free Living for Everyone Programme adopts a community-specific strategy to reduce smoking among vulnerable populations.

Alcohol consumption has decreased over the past decade but drunkenness among 15-year-olds has increased

Between 2012 and 2021, alcohol consumption per capita among people aged 15 and over decreased from 9.1 litres to 8.5 litres per person

6 *Prevention expenditures as reported in health accounts should include activities outside of national programmes (e.g. opportunistic cancer screening or counselling for smoking cessation during a routine physician contact), however in practice countries may have difficulty in identifying prevention spending outside of such programmes.*

per year in the Netherlands, which is below the EU average of 10.0 litres. However, drunkenness more than once in a lifetime among 15-year-olds shows a concerning trend: in 2022, 19% reported harmful alcohol use. This represents an increase of 2 percentage points between 2014 and 2022 in the Netherlands, compared to a reduction of 2 percentage points across the EU (Figure 6). Harmful alcohol use showed a reverse social gradient, at 5% among adolescents in the bottom 20% of the Family Affluence Scale – significantly lower than the 10% among adolescents in the top 20%.

The National Prevention Agreement aims to reduce excessive drinking from 7% in 2021 to 5% in 2040, and for 0% alcohol consumption under the age of 18 and during pregnancy. In July 2021, the Alcohol Act entered into force, limiting discounts on alcohol, limiting sales of strong alcoholic beverages via online or phone orders to licensed liquor stores, requiring extra verifications of buyer age, and holding both sellers and other adults liable for passing alcohol to someone underage.

Nearly half of the adult population in the Netherlands are overweight or obese

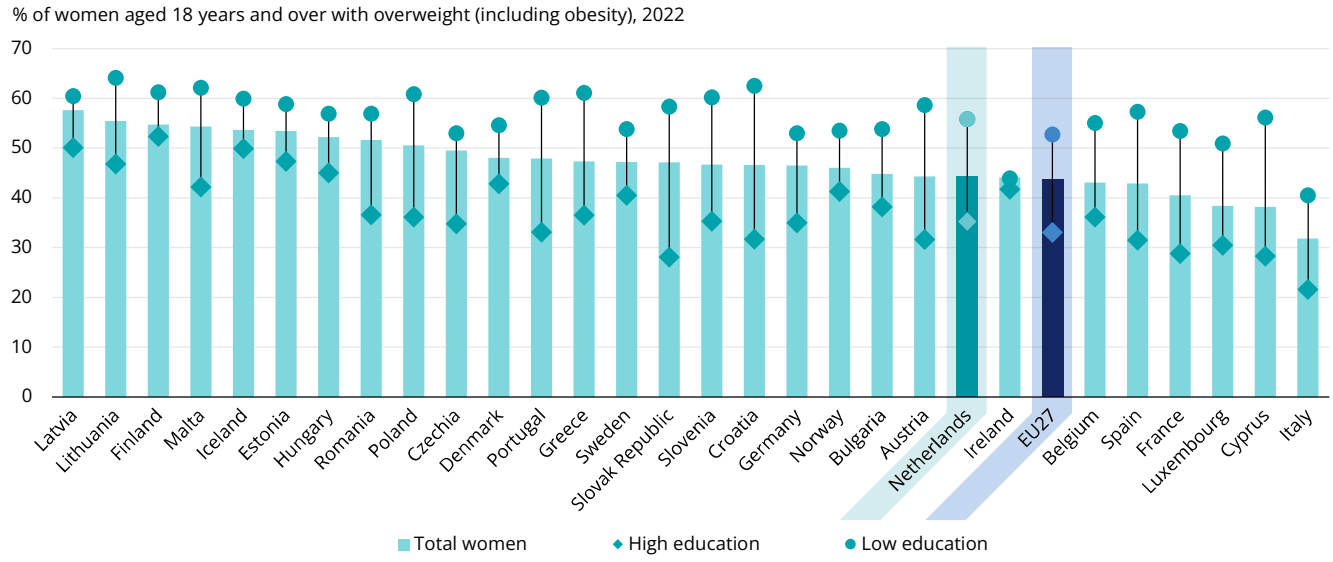
Between 2017 and 2022, the proportion of adults considered overweight or obese increased slightly from 47% to 48% in the Netherlands, even as the EU average saw a slight decrease from 52% to 51%. In 2022, the proportion overweight among Dutch men was 52%, which was lower than the EU average of 60%. Among Dutch women, the proportion overweight was 44% – similar to the EU average.

As in other EU countries, women with lower education levels in the Netherlands were more likely to be overweight, at 56% compared to 35% of their counterparts with higher education levels (Figure 7).

Despite a temporary decline among 15-year-olds between 2014 and 2018, the proportion of overweight rebounded to 14% in 2022, mirroring 2014 levels. Nevertheless, this figure remains 7 percentage points lower than the EU average (Figure 6). Among adolescents, the share of overweight was 20% among the bottom 20% of family affluence – significantly higher than the 10% rate among the top 20%.

The National Prevention Agreement has set ambitious targets to curb overweight and obesity among young people and adults by 2040. Additionally, the Combined Lifestyle Intervention Programme – a national programme covered by basic health insurance – offers support to individuals living with overweight and obesity, tackling risk factors such as stress and sleep disorders. Participants are referred by their general practitioners (GPs) to local providers such as physiotherapists and dieticians for personalised support either individually or in groups.

Figure 7. In the Netherlands, prevalence of overweight among women at high and low education levels is slightly higher than the EU average



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

Further investment is needed in changing dietary and physical activity habits

To meet the targets for reducing overweight and obesity rates, dietary and physical activity habits need to improve even though the Netherlands performed relatively well compared to other EU countries. In 2022, 36% of Dutch adults consumed fruits (compared to 39% in the EU) and 29% consumed vegetables (compared to 40% in the EU) less than once daily.

The government is implementing policies to support healthy eating, including agreements with industry partners to reduce salt, saturated fats and sugar in food products. Efforts are also under way to enhance nutrition labels to highlight high-quality foods, promote health literacy programmes that empower people to make informed, healthy food choices and support healthy diets in schools (OECD, 2024a).

In 2022, the Netherlands had one of the highest proportions of adults participating in sufficient levels of physical activity among EU+2 countries. The National Prevention Agreement fosters a healthy physical living environment by investing in bicycle incentive programmes and cycling infrastructure. The National Sports Agreement focuses on inclusivity, promoting participation and representation in sports among people with disabilities, those with low socio-economic status, and immigrant and refugee communities.

Additional efforts are needed to address risk factors among adolescents in the Netherlands. Among 15-year-olds in the Netherlands, 26% consumed fruits daily (less than the 30% EU average), although 44% consumed vegetables daily (more than the 34% EU average). Only 16% of adolescents in the Netherlands engaged in a daily 60 minutes of physical activity, similar to the low EU rate of 15%.

Exposure to air pollution has decreased more rapidly over the past decade in comparison to the EU average

Exposure to air pollution in the form of $PM_{2.5}$ stood at 11 µg/m^3 in 2020 – a drop of 33% from 2010. In terms of occupational exposure, in 2021, 17% of people aged 15 and over reported exposure to chemical products and substances, which is the lowest share among the EU+2, although higher exposure was noted among men and individuals aged 15-34.

The Netherlands aims to increase the low uptake of human papillomavirus vaccines among minority groups

Dutch girls have received the HPV vaccine since 2010, with the share of 15-year-old girls who have received their full dose regimen rising from 55% in 2012 to 65% in 2023, just slightly higher than the EU average of 64%. Since 2022, the vaccine has been included in the National Immunisation Programme for boys. Within the Netherlands' HPV vaccination programme, 54% of boys received all recommended doses of their vaccine in 2023 (compared to 51% on average in the EU). In 2022 and 2023, as part of a one-off campaign, all unvaccinated individuals aged 11-26 were invited to receive the HPV vaccination.

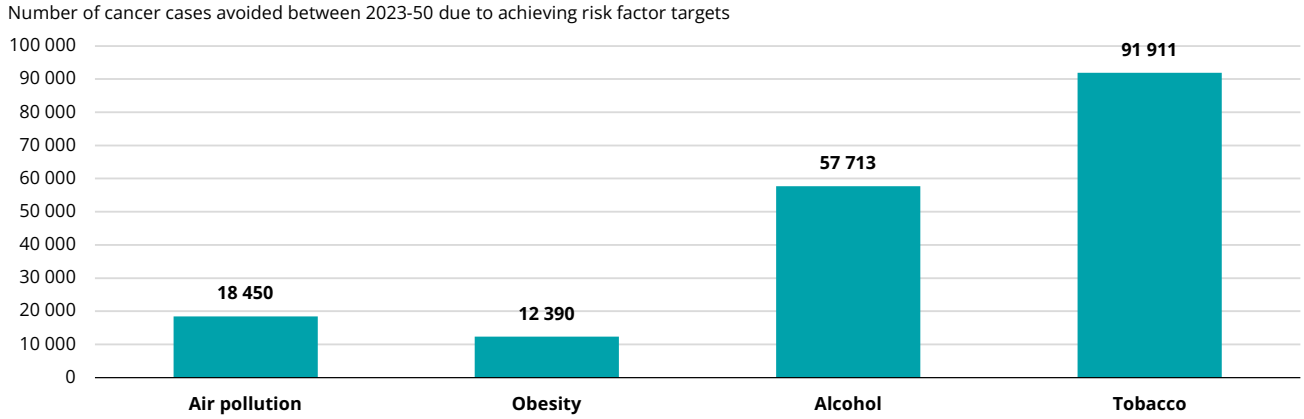
Despite these efforts, the Netherlands has lower HPV vaccination rates among individuals with lower socio-economic status and migrant groups. Uptake was found to be particularly low among children with one or both parents born in Morocco or Türkiye (de Munter et al., 2021). To address this, the EU-funded RIVER-EU Project (2021-26) is developing interventions to increase HPV vaccine uptake among underserved groups, including adolescent girls of Turkish and Moroccan descent in the Netherlands. The project has identified barriers such as insufficient awareness initiatives, accessibility and language. Proposed interventions include organising educational programmes for communities, led by trained healthcare professionals, and offering an accredited online course on HPV vaccination for healthcare professionals, aimed at reaching members of these communities effectively (RIVER-EU, 2024). Additionally, a national information campaign is combined with targeted initiatives to counter vaccine hesitancy.

Many new cancer cases would be avoided between 2023 and 2050 if target reductions in risk factors were achieved

According to OECD Strategic Public Health Planning (SPHeP) modelling work, achieving tobacco targets could result in the Netherlands averting 91 911 new cancer cases between 2030-50. Meeting alcohol reduction targets would further reduce the number of cancer cases by about 57 713 in the same period. Reducing additional risk factors such as air pollution would prevent an estimated 18 450 cancer cases while meeting obesity targets could help prevent 12 390 cases (Figure 8).

Similarly, the IKNL calculated that more than 120 000 lung, bladder and esophageal cancer cases could be prevented between 2024-45 if tobacco ambitions are met already in 2032, as envisioned by the Dutch Cancer Agenda.

Figure 8. Meeting tobacco targets could help avert over 90 000 cancer cases between 2023-50 in the Netherlands



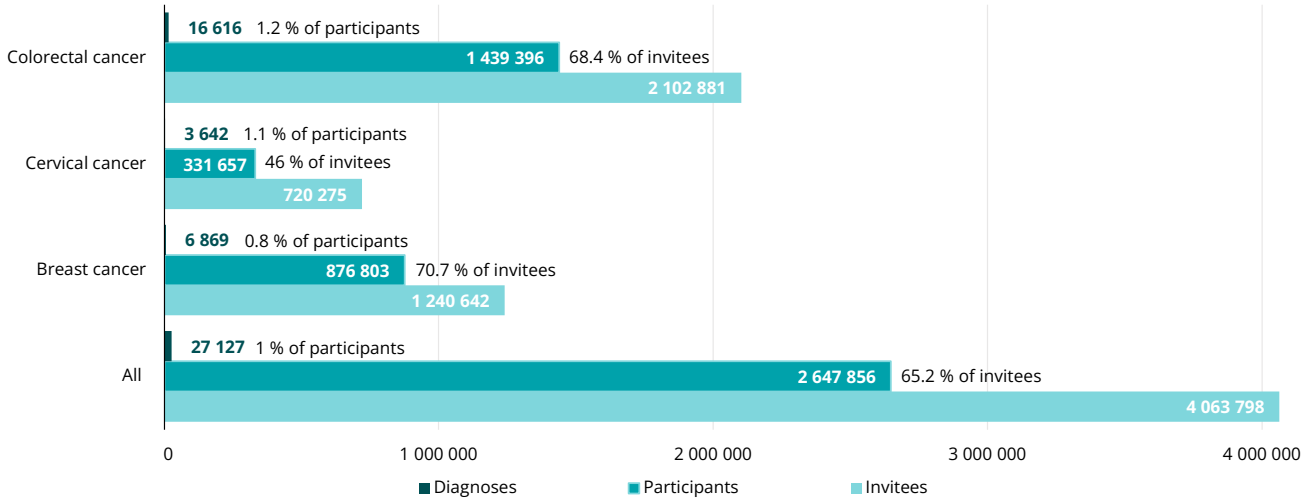
Notes: The target for tobacco is a 30% reduction in tobacco use between 2010 and 2025 and less than 5% of the population using tobacco by 2040. For alcohol, it is a reduction of at least 20% in alcohol consumption and a 20% reduction in heavy drinking (six or more alcoholic drinks on a single occasion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

4. Early detection

Nearly two-thirds of Dutch invitees participate in screening programmes

The Netherlands maintains national population-based screening programmes for breast, cervical and colorectal cancers. Over 4 million people were invited for free screenings in 2022, of whom 65% participated (Figure 9). The country is also involved in projects on early detection of lung, gastric and prostate cancers (Box 2). This is in line with the updated Council of the European Union recommendation on cancer screening.

Figure 9. The participation rate is highest for breast cancer screening and lowest for cervical cancer screening



Source: Bevolkingsonderzoek Nederland 2024. Data refer to 2022.

Box 2. The Netherlands is involved in projects on the early detection of lung, gastric and prostate cancers

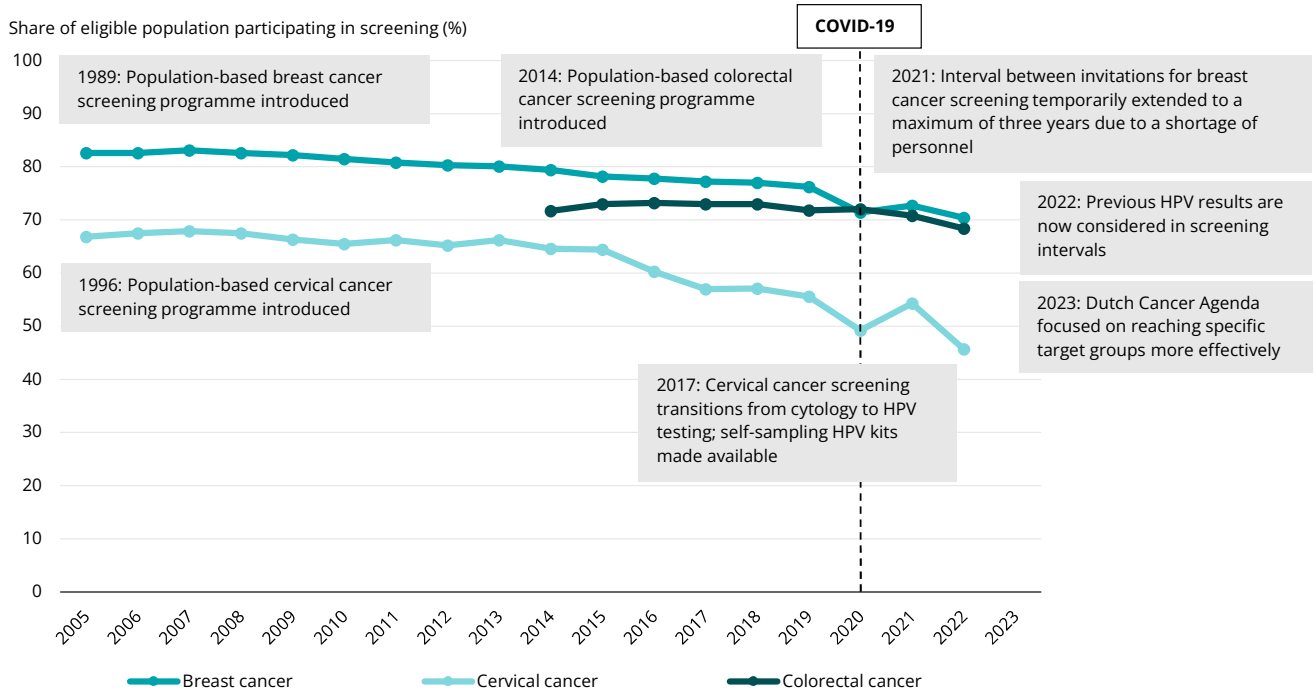
4-In-The-Lung-Run is a European trial that will inform health policy concerning lung cancer screening in the coming years. It aims to include 26 000 participants at high risk of lung cancer in screening sites in six countries including the Netherlands, which has the highest number of participating centres. The study will inform the creation of risk-based screening strategies demonstrated to be effective, affordable, acceptable to people, cost-effective and suitable for implementation.

The Strengthening the Screening of Lung Cancer in Europe Project seeks to enhance lung cancer screening by aiding countries' implementation and optimisation of low-dose computed tomography screening programmes, offering a customisable toolbox to address regional needs and health disparities.

The Netherlands is also involved in early detection initiatives for gastric and prostate cancers. The Towards Gastric Cancer Screening Implementation in the EU Project aims to combat gastric cancer by providing evidence-based guidance to implement new screening methods. The Prostate Cancer Awareness and Initiative for Screening in the EU Project aims to improve early detection and diagnosis of prostate cancer through tailored screening programmes, while also standardising screening protocols across countries.

In recent years, participation rates in all screening programmes have declined, exacerbated by disruptions from the COVID-19 pandemic in 2020 (Figure 10). There was a further decline in 2022, despite a slight recovery in 2021 for breast and cervical cancer screening. From 2017 to 2022, the percentage of diagnoses at stage 1 decreased across all three cancer screening programmes. Specifically, for cervical cancer in 2021, there was a notable decrease in stage 2 diagnoses and an increase in stage 3 diagnoses.

Figure 10. Participation rates for breast, cervical and colorectal cancers have decreased over recent years



Notes: Data refer to mammography screening among women aged 50-69 within the past two years, cervical cancer screening among women aged 30-60 (in some cases, also 65 years) within the past three years, and colorectal cancer screening coverage among people aged 55-75, all based on programme data.
Sources: OECD Health Statistics 2024; Bevolkingsonderzoek Nederland 2024.

Participation rates in breast cancer screening have been declining since 2007

The national breast cancer screening programme for women aged 50-69 was initiated in 1989. In 1998, the upper age limit for invitations was raised to 75. Women are invited for a mammogram every two years, although since early 2021 this interval has been temporarily extended to a maximum of three years due to a shortage of personnel. By early 2023, the average interval between invitations had increased to 29 months. These delays have been accompanied by greater investment in training new screening laboratory technicians and launching labour market campaigns to attract new staff.

In 2022, 70% of women aged 50-69 years old were screened for breast cancer, a substantial decrease from the 81% screened in 2000 (Figure 10). Participation has been declining since 2007, hitting its lowest point during the COVID-19 pandemic in 2020, with a temporary recovery in 2021. The Survey of Health, Ageing and Retirement in Europe wave 8 (2021/22) indicated that women with lower education levels are less likely to receive a mammogram across 19 EU+2 countries – including the Netherlands, where there is an education gap of 13 percentage points (OECD, 2024a).

The Netherlands has primarily human papillomavirus-based screening and offers the option of self-sampling

Smear tests for women have been conducted in the Netherlands since 1970, and a uniformly structured population screening programme was initiated in 1996. In 2017, cervical cancer screening transitioned from cytology to HPV testing. Smears are now primarily tested for HPV and triaged with cytology if the result is positive. The Netherlands is one of the seven EU+2 countries with HPV-based testing as the primary screening test.

Women aged 30-60 receive mail invitations to participate in the cervical cancer screening programme, where they can choose between

using a self-sampling device to test for HPV at home or visiting a GP practice for a smear test. Invitations are sent to women at ages 30, 35, 40, 50 and 60. Since January 2022, previous HPV results have been considered in screening invitations. Women aged 45 and 55 also receive invitations if they previously tested positive for HPV or did not participate in earlier screenings. Women aged 65 receive invitations if they previously tested positive and were not referred to a gynaecologist. Referral policies have been adjusted based on HPV genotype risk stratification, focusing on higher risk strains (HPV types 16 and 18).

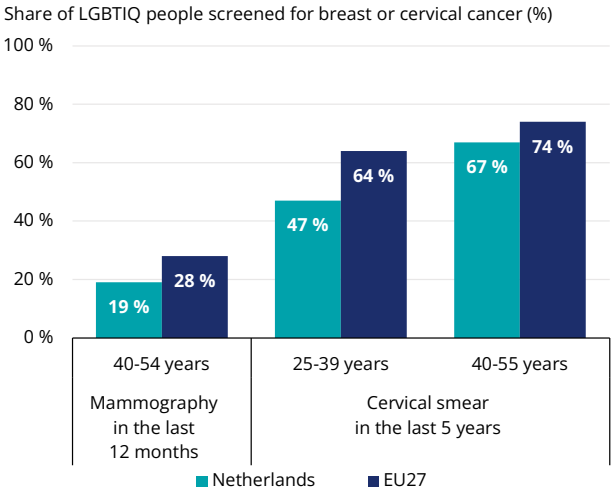
Women from lower socio-economic status groups have lower participation in breast and cervical cancer screening programmes. Younger age is also a determinant of lower attendance in cervical and colorectal cancer screening programmes. To try to improve uptake among this group, the youngest target group (age 30) receives a pre-invitation and a more informally drafted invitation.

In 2022, 46% of eligible women were screened for cervical cancer – a large decrease from 66% in 2000. Attendance rates for cervical cancer screening have always been lower than those for breast and colorectal cancer, and also lower than WHO's target of 70% by 2030 to eliminate cervical cancer. From 2013 to 2020, the rate declined continuously, with a significant drop in 2020 due to the COVID-19 pandemic (Figure 10). Although there was a notable recovery in 2021, where the participation rate was slightly below the EU average, there was another significant decrease in 2022.

LGBTIQ persons in the Netherlands participate less in breast and cervical cancer screening than their counterparts in the EU

According to the EU LGBTIQ Survey III, 19% of LGBTIQ cisgender females, trans women and intersex people aged 40-54 years in the Netherlands reported having had a mammogram in the previous 12 months, much lower than the EU average of 28% (Figure 11). This is in contrast to the relatively high breast cancer screening rates seen in the Netherlands in the general population as compared with the EU. For cervical cancer screening, 47% of the relevant LGBTIQ population aged 25-39 in the Netherlands reported having had a smear test in the previous 5 years (lower than the 64% in the EU), while 67% of those aged 40-55 in the country reported a smear test (lower than the 74% in the EU).

Figure 11. Among LGBTIQ people, screening participation rates are lower compared to the EU average



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

Participation in colorectal cancer screening is significantly lower among individuals from lower socio-economic groups

The colorectal cancer screening programme was introduced in 2014. Since 2019, all individuals aged 55-75 have been invited to participate every two years. An information letter is sent, followed three weeks later by an invitation with a leaflet and the faecal immunochemical test (FIT). Since 2021, citizens who do not respond to two invitations receive only an invitation letter instead of the full package with the leaflet and test. Participants take a stool test at home and send it in for analysis.

GPs provide information to their patients about population screening, and advise those who need follow-up examinations – such as intake interviews and colonoscopies, which are performed at colonoscopy centres. If no abnormalities are found during the follow-up test, the participant is invited for screening again after 10 years.

The participation rate in FIT screening is notably lower for individuals in the lowest socio-economic quintile (67%) compared to those in higher quintiles (ranging from 73% to 75%). Similarly, there is a significant difference in uptake of colonoscopy following a positive FIT result among socio-economic groups (van der Meulen et al., 2022).

In 2022, 68% of the eligible population was screened for colorectal cancer – a small decrease from 72% in 2014. The participation rate in 2020 was nearly the same as in 2019, contrasting with

the significant declines observed in breast and cervical cancer screening due to the COVID-19 pandemic (Figure 10). Notably, women in the Netherlands had higher participation rates (71%) than men (65%) in 2022, and both rates are significantly higher than the EU averages.

Early detection policies aim to increase participation, ensure access for vulnerable populations, and improve early diagnosis and outcomes

Participation rates are particularly low among immigrants. To raise awareness, RIVM has translated information leaflets into English, Turkish and Arabic, and developed simple infographics and video animations about cervical cancer screening in Turkish, Arabic, Berber and English to increase awareness and participation among migrant communities. Recently, changes were introduced to support access to cancer screening programmes among refugees from the war in Ukraine, including making information materials available in Ukrainian and Russian. Moreover, financial resources have been allocated to target socio-economically disadvantaged groups.

To ensure equal access to breast cancer screening for all women and reduce regional disparities, mobile research centres are in use in the Netherlands. Breast and cervical cancer screening are made accessible for transgender and intersex people to whom screening is relevant. For colorectal cancer, people can call a hotline provided by medical students, supported by physicians, with questions about participation.

Since 2017, self-sampling kits for cervical cancer screening have been available to help engage those previously non-responsive to screening invitations and individuals hesitant to participate in a smear test. Of the 29 EU+2 countries, while 22 organise population-based cervical cancer screening, the Netherlands is one of only 7 that currently provide the option of HPV self-sampling (OECD, 2024a).

Primary care plays a pivotal role in cancer screening and follow-up processes in the Netherlands. Smear tests for cervical cancer can be conducted in GP practices. In 2022, 78% of participants opted for a smear test by a GP, while 22% used a self-sampling kit. Furthermore, GPs play a crucial role in referring individuals for follow-up examinations for all cancer types.

Incorporating innovation in screening aims to make activities more cost-effective and increase accessibility. A digital intake tool is being studied to determine whether it can replace face-to-face pre-colonoscopy consultations in colorectal cancer screening. The PERFECT-FIT study in the Netherlands is investigating the effectiveness of adjusting screening intervals based on prior faecal haemoglobin concentrations in a FIT-based screening programme.

In the Netherlands, screening data are utilised to generate performance metrics, which are integrated into quality improvement processes for colorectal, breast and cervical cancers. These metrics ensure consistent quality assurance across screening programmes, enabling monitoring of population screening at local, regional and national levels. The Netherlands is among the few EU+2 countries that collect and link socio-economic data. Moreover, screening databases contain information on migration status and geographical location.

5. Cancer care performance

5.1 Accessibility

The Netherlands is committed to providing accessible and affordable healthcare

The Integral Care Agreement signed in September 2022 by stakeholders from the healthcare sector, municipalities and the Ministry of Health, Welfare and Sport emphasises a commitment to maintaining accessible and affordable healthcare. This includes actions such as standardising care to mitigate variations, improving surgical outcomes and striving for higher survival rates in specific cancer types. The recently launched Dutch Cancer Agenda aims to ensure that individuals with cancer receive the best possible personalised treatment with minimal burden by 2032.

The majority of cancer patients experience reduced income or incur additional expenses

Over the years, the proportion of out-of-pocket payments in current health spending in the Netherlands has steadily decreased from 11% in 2015 to 10% in 2022.

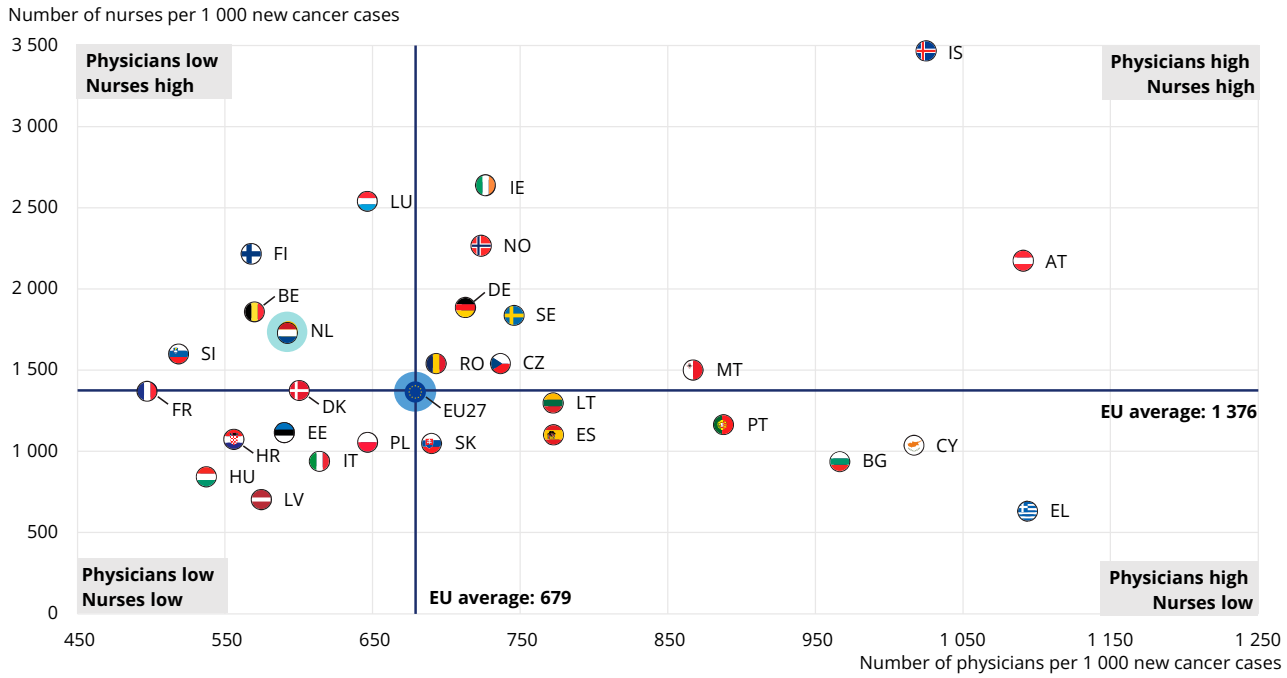
In 2021, the Dutch Federation of Cancer Patients Organisations conducted a survey to assess the financial consequences of cancer. Findings revealed that 76% of respondents experienced reduced income and/or incurred additional expenses – such as for increasing the coverage of supplementary health insurance; unreimbursed costs of treatments; and transport to and from hospital (NFK, 2021).

A social safety net enables individuals to retain 70% of their income during the initial two years of illness. Collective labour agreements often stipulate a higher percentage for the first year of illness. Self-employed people do not qualify for this protection.

The Netherlands faces a shortage of certain types of healthcare professionals

In the Netherlands, there are 593 physicians per 1 000 new cancer cases, which is lower than the EU average of 679 per 1 000. The country has 1 745 nurses per 1 000 new cancer cases, which is higher than the EU average of 1 376 per 1 000 (Figure 12).

Figure 12. The Netherlands is among the countries with a low supply of physicians and a high supply of nurses relative to new cancer cases



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

According to the 2023 OECD Policy Survey on Cancer Care Performance, the Netherlands has shortages of family doctors, inpatient oncology nurses and community-based nurses. The Advisory Committee on Medical Manpower Planning evaluates capacity and training programmes for healthcare professionals, providing a national forecast and recommendations. The 2018 assessment revealed a shortage of paediatric oncology nurses relative to anticipated healthcare needs (Capacity Body, 2019).

According to the European Oncology Nursing Society's index (EONS, 2024), the Netherlands offers specialist education at the university level, as well as a master's programme where nurses complete specialised cancer training through practical experience in their own practice.

Ensuring a well-distributed health workforce is crucial for equitable access to cancer prevention, screening and care nationwide. However, the Netherlands faces challenges in this regard, with the density of primary care physicians ranging from 6 to 8 per 10 000 population across regions in

2023. Urban areas, predominantly in the western part of the country, have a surplus of GPs, while rural regions experience shortages.

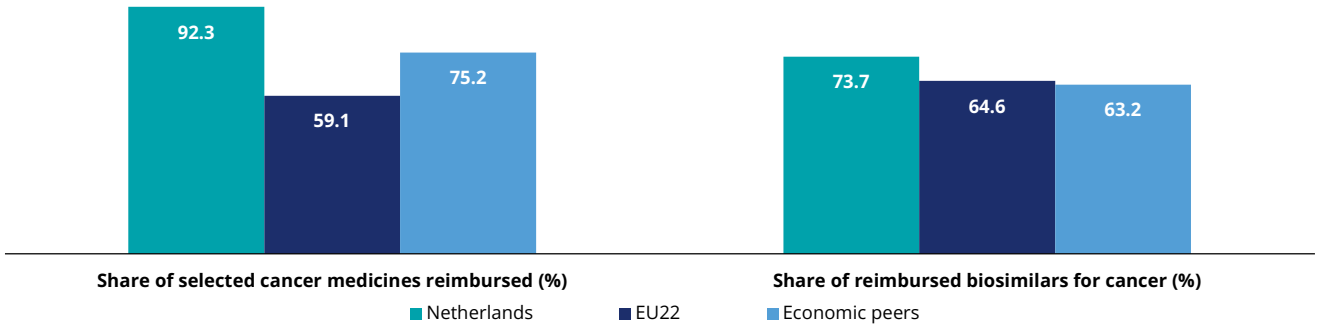
Dutch patients have quick access to a wider range of new oncology medicines

The proportion of indications among a sample of medicines for breast and lung cancer with high clinical benefit that are publicly reimbursed is 92% in the Netherlands – much higher than the average among the country's economic peers (75%) (Figure 13). At 265 days for this sample, the country has among the shortest durations between the pharmaceutical company's application for coverage and issuance of the reimbursement decision. This is attributed in part to agreements that more easily provide coverage of certain indications of oncology medicines on European Medicines Agency (EMA) authorisation.

The Netherlands participates in the Beneluxa Initiative, engaging in regional collaborations for joint evaluations of selected cancer medicines. This arrangement may experience some changes as a result of implementation of Regulation (EU) 2021/2 282 on HTA, which mandates collaborative clinical assessments and scientific consultations involving patients, clinical experts and relevant stakeholders. The Regulation is applicable to all new cancer medicines from January 2025.

In general, availability of biosimilars significantly reduces treatment costs by offering more affordable alternatives to original biologic medicines. In the Netherlands, 74% of biosimilars for cancer medicines are publicly reimbursed, surpassing the 65% average in the EU and the 63% coverage rate among the country's economic peers.

Figure 13. The Netherlands outperforms most EU countries in reimbursement of new oncology medicines



Notes: The analysis includes a sample of 13 indications of 10 new cancer medicines for breast and lung cancer with a high clinical benefit and 19 biosimilars of three cancer medicines (bevacizumab, rituximab, trastuzumab), with active marketing authorisation by the European Medicines Agency as of 26 March 2023. The data represent the share of the indications or biosimilars that were on the public reimbursement list on 1 April 2023. Economic peers are defined as tercile clusters based on 2022 GDP per capita in purchasing power standard terms. Economic peers for NL are AT, BE, DE, DK, IE, IS, NO and SE. The EU average is unweighted.
Source: Hofmarcher, Berchet and Dedet (2024), "Access to oncology medicines in EU and OECD countries", OECD Health Working Papers, No. 170, OECD Publishing, Paris, https://doi.org/10.1787/c263c014-en.

Supply of diagnostic equipment in the Netherlands reflects significant variation

The Netherlands has one of the highest supplies of positron emission tomography (PET) scanners, with 5 scanners per 1 000 000 population – over double the average rate in the EU. In contrast, the availability of magnetic resonance imaging (MRI) units (15 units per 1 000 000 population) is below the EU average (18 per 1 000 000), while the supply of computed tomography scanners is 16 per 1 000 000 population – well below the EU average of 27.

Although WHO suggests that the optimal lifespan of radiotherapy equipment is 10-15 years, in the Netherlands approximately one-third of the country's 191 radiotherapy equipment units is over 15 years old. Nonetheless, the Netherlands is using innovative approaches in cancer, with three proton therapy centres in the country and increasing implementation of MRI-guided radiotherapy.

Waiting times for cancer patients vary depending on the type of appointment

While there are no legal waiting time requirements for cancer patients in the Netherlands, the Oncological Co-operation Foundation (SONCOS) has established standards. These include a maximum waiting time of one week for the first outpatient visit, three weeks for diagnosis after the initial visit, and six weeks for the start of treatment. Health insurers and healthcare providers have also set maximum acceptable waiting times. The norm for a first appointment at a clinic or for

diagnostics is typically four weeks, while treatment should be received within seven weeks. However, if specialised treatment is required from a limited number of specialists, the waiting time may be longer.

Rapid diagnosis options are available in some hospitals, offering quicker assessment and treatment plans to reduce uncertainty for potential cancer patients. Eligibility for rapid diagnosis typically involves a diagnosis interview within 48 hours of referral, with results provided within a maximum of five working days.

5.2 Quality

Five-year survival rates have increased over recent decades

The relative survival rate for all cancer types combined has been increasing in the Netherlands. Five-year relative survival rates for people diagnosed between 1995 and 2004 was 53%. The rate increased to 62% for individuals diagnosed between 2005 and 2014, and to 67% for people diagnosed between 2015 and 2022 (Figure 14). While men historically exhibited lower relative survival rates than women, this discrepancy has been narrowing over time.

Figure 14. Five-year relative survival rates in the Netherlands vary between cancer types

Individuals diagnosed in	Prostate cancer	Breast cancer	Cervix cancer	Colon cancer	Lung cancer	All cancer types
1995-2004	80%	82%	65%	56%	12%	53%
2015-2022	89%	89%	70%	70%	26%	67%

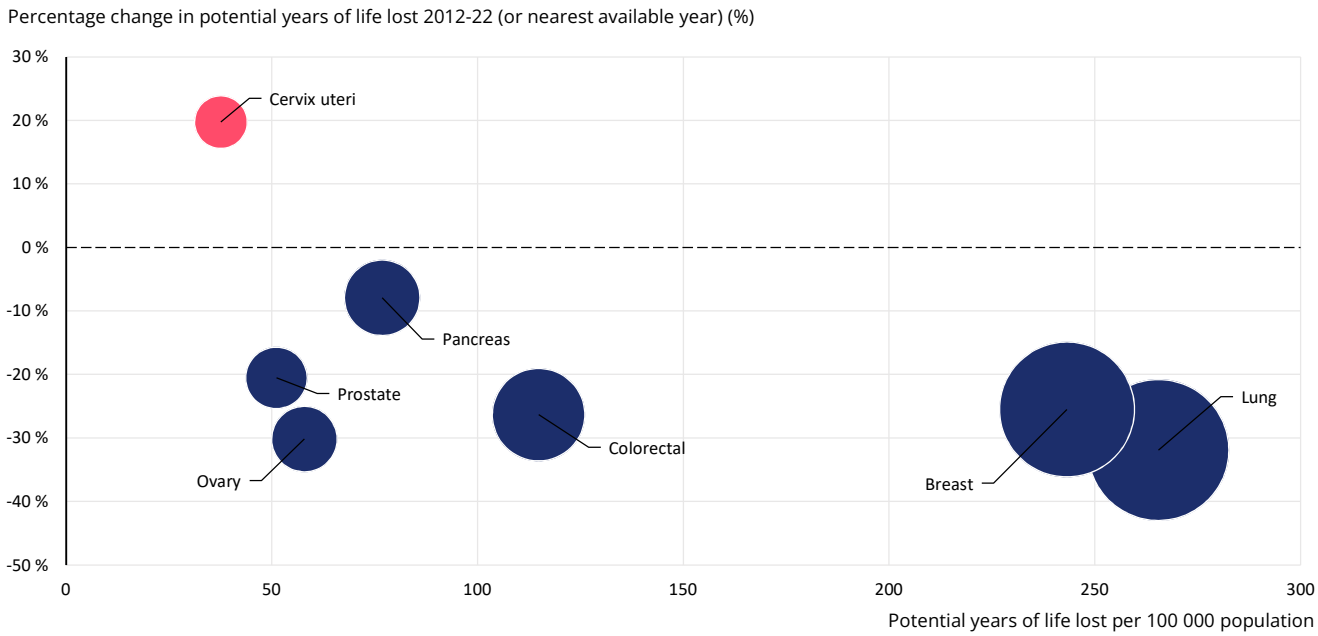
Source: IKNL (2024).

Potential years of life lost due to cancer in the Netherlands are lower and have decreased faster than the EU average

In addition to survival data, potential years of life lost (PYLL) is an interesting complementary measure of the impact of different cancers on society, because it puts a higher weight on cancer deaths among younger individuals. Examining the change in PYLL over time across various cancer sites can point to improvements in cancer care systems via reductions in premature mortality.

In the Netherlands, the number of potential years of life lost due to cancer per 100 000 population in 2022 was 1 180, which is 13% lower than the EU average (1 355). The number has also decreased slightly faster in the Netherlands – by 25% since 2012, compared to a 19% decrease in the EU. While lung cancer was responsible for the most potential years of life lost in 2022, it has seen a major decrease (32%) compared to 2012, in line with decreasing smoking rates. Concerningly, an increase of 20% in potential years of life lost was observed between 2012 and 2022 attributable to cervical cancer, possibly linked to declining participation rates in cervical cancer screening (Figure 15) (see Section 4).

Figure 15. Potential years of life lost decreased for most cancer types, but rates of improvement varied



Notes: The rate of PYLL from breast, cervical and ovarian cancer is calculated in women only, while the rate of PYLL from prostate cancer refers to men. Pink bubbles signal an increase in the percentage change in PYLL during 2012-22 (or latest available year); blue bubbles signal a decrease. The size of the bubbles is proportional to the PYLL rates in 2022.
Source: OECD Health Statistics 2024.

The Netherlands employs numerous initiatives to enhance the effectiveness and person-centredness of cancer care

In the Netherlands, access to high-quality cancer care is strengthened by concentration of services, strong cancer care networks, multidisciplinary teams and monitoring of patient-reported outcome measures (PROMs). This is further supported by the systematic use of guidelines, advancements in diagnostic procedures and treatments, a comprehensive national cancer registry, and a robust clinical auditing system. In 2022, the Dutch Institute of Clinical Auditing and IKNL signed a declaration of intent to enhance the quality of oncological care by improving the efficiency of data collection throughout the cancer patient journey.

The Netherlands focuses on centralising delivery of specific cancer care at certain centres to improve treatment outcomes. A recent study found that this centralisation led to improvement in outcomes for paediatric cancers. The country has an institution dedicated to treating children with cancer.

The Netherlands has seven regional oncology networks, four of which have established comprehensive oncology networks that integrate University Medical Centres, general hospitals, radiotherapy centres, and other healthcare institutions within their regions. These networks emphasise standardised procedures and methodologies across participating institutions, ensuring consistent and high-quality care for patients. One such network, OncoZON, which was established by Maastricht University Medical Centre+ and serves 1.9 million people in southeastern the Netherlands, recently received accreditation as an Organisation of European Cancer Institutes (OECI) Comprehensive Cancer Network – the second major European network to receive this designation.

Multidisciplinary team (MDT) meetings are a standard part of cancer care. These enhance decision making, communication and timely treatment initiation. MDTs also extend their expertise to palliative care.

Cancer care quality is closely monitored using a comprehensive approach based on specific indicators. Hospital data, accessible to the public, includes details such as the frequency and composition of MDTs for various cancer types. These indicators are reviewed annually and set by healthcare professional societies, patient representatives and insurers. For colorectal cancer, publicly published indicators include risk-adjusted 30- or 90-day mortality rates following surgery. For breast cancer, use of targeted therapy for HER-2 positive cases is monitored.

A project on breast cancer PROMs (Regional Oncology Networks, 2024) aimed to develop appropriate treatment plans for breast cancer patients. Validated questionnaires assessed patient

feelings on pain, fatigue, emotional state and other factors throughout the treatment process. The project is now complete and has produced many results, including e-learning modules, training for healthcare professionals, a portal for document collaboration and an aftercare protocol to aid discussions in consultation rooms, which are freely available for all hospitals and oncology networks in the Netherlands.

An observational cohort study in the Netherlands, the Prospective National CRC cohort, with 63 participating centres and over 20 000 participating patients, provides infrastructure for collecting clinical data and PROMs, and for storing bodily material such as blood and tumour tissue from patients with small bowel, colon, rectal and anal cancer. This is done after obtaining consent. The aim of the study is to facilitate scientific research to improve the prognosis and quality of life of (future) patients (PLCRC, 2024).

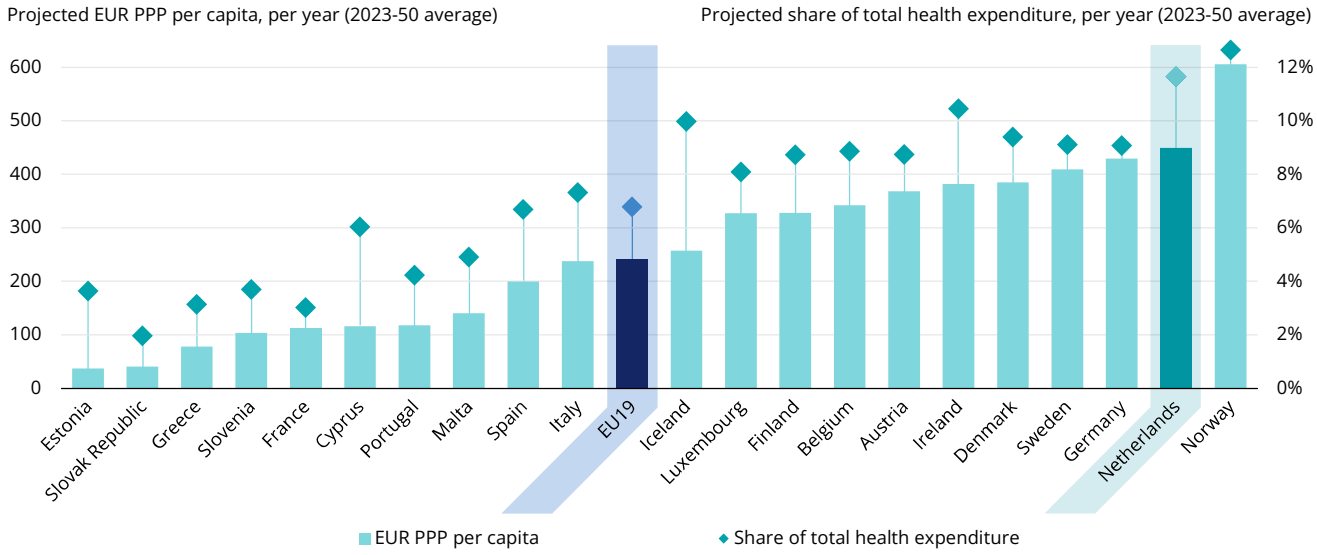
5.3 Costs and value for money

The Netherlands is estimated to have one of the highest burden of cancer on total health expenditure

Related to the high prevalence of cancer patients (see Section 2), the impact of cancer on health spending is higher in the Netherlands than in most EU countries. According to OECD SPHeP modelling work, between 2023 and 2050, total health expenditure is estimated to be 12% higher in the Netherlands due to the burden of cancer. This equates to an average of EUR (PPP) 449 per person per year (Figure 16). This figure is much higher than the EU19 average (EUR 242).

Overall, the per capita health expenditure on cancer care is expected to grow by 51% in the Netherlands between 2023 and 2050, compared to 59% in the EU27.

Figure 16. Between 2023-50, the burden of cancer on health expenditures is expected to be bigger in the Netherlands than in most EU+2 countries



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

The impact of cancer on employment is greater than the EU average

Between 2023 and 2050 on average, there is expected to be a loss of the equivalent of 210 full-time equivalent workers (FTEs) per 100 000 people due to the need to reduce employment because of cancer – significantly more than the EU average of 178 per 100 000. A loss of 117 FTEs per 100 000 people due to both absenteeism and presenteeism[7] is also expected – 44% more than the EU average.

Changes to the criteria for assessing clinical benefits could restrict availability of new oncology medications

The Dutch healthcare system is funded by a mandatory private health insurance with community-based premiums and taxes. Individuals aged 18 and over are subject to a mandatory deductible (EUR 385 in 2024) for initial healthcare services covered by general insurance. Basic health insurance typically covers the treatment costs for cancer patients. However, the rising number of

7 *Presenteeism refers to lost productivity that occurs when employees are not fully functioning in the workplace because of an illness, injury or other condition.*

expenses associated with innovative medicines have led to non-reimbursement of certain medications – particularly those lacking sufficient efficacy data.

In the Netherlands, oncology medicines are only available in inpatient settings. For new expensive medicines, the Minister of Health, Welfare and Sport can place the drugs in a "lock" due to high costs. These medicines can only be accepted after the National Health Care Institute advises on their inclusion, there are guarantees for responsible use and evidence of efficacy, and a reasonable financial arrangement is made with the supplier. Medicines are assessed based on relative therapeutic benefit, medical necessity, cost – effectiveness and budget impact. Recently, the criteria for the lock procedure were adjusted to include medicines with costs over EUR 50 000 per patient and a budget impact above EUR 10 million, as well as those with a budget impact above EUR 20 million.

The clinical benefit of new oncology drugs authorised by the EMA is assessed using the PASKWIL (palliative, adjuvant, specific side-effects, quality of life, impact of treatment and level of evidence) framework. Revised in May 2023, the framework now puts more emphasis on demonstrating a survival benefit. The new criterion may raise reimbursement barriers, potentially limiting accessibility of new oncology drugs in the country. Another measure to address the high costs of new medications is restricting the indications of these drugs to patients who would benefit the most.

Research into innovative financing models is under way

Within regional oncology networks and tumour working groups, various pilot projects aimed at developing innovative financing models for ovarian and breast cancer care, with a focus on quality incentives and outcome management are being conducted. The goal is to determine whether these approaches can improve care quality and reduce costs.

5.4 Well-being and quality of life

Cancer not only reduces life expectancy but also significantly diminishes overall quality of life

According to OECD SPHeP modelling work, from 2023 to 2050, cancer is projected to decrease the life expectancy of the population by almost 2.5 years in the Netherlands compared to a scenario without cancer. This figure exceeds the EU average of 1.9 years and is the highest among EU+2 countries (Figure 17).

Cancer also has a profound impact on patients, affecting their emotional well-being, social interactions and daily functioning, with lasting effects even after successful treatment, underscoring the ongoing efforts to support comprehensive care. According to the OECD's SPHeP model, the Netherlands is anticipated to have an additional age-standardised rate of 14 cases per 100 000 per year – slightly below the EU average of 17 cases per 100 000.

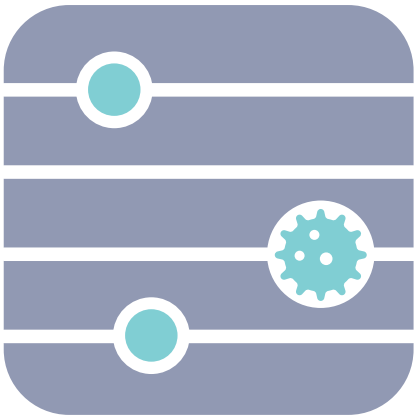
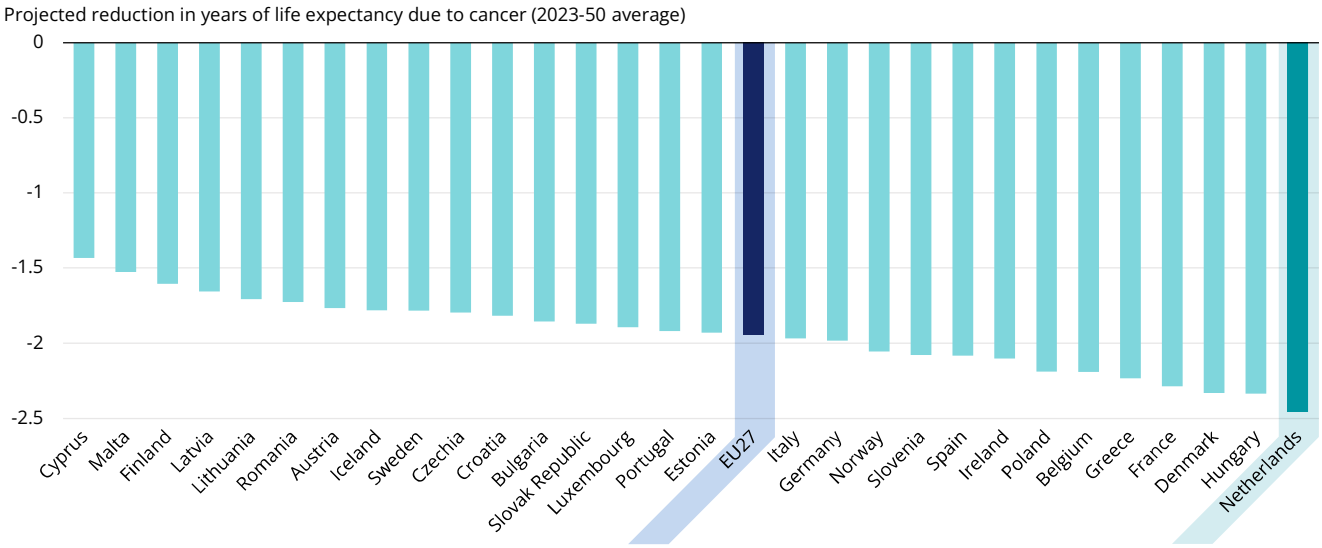


Figure 17. The Netherlands is projected to experience the largest decline in life expectancy due to cancer among EU+2 countries



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

The Netherlands is committed to enhancing quality of life for cancer patients and survivors

IKNL collects quality of life data from Dutch cancer patients and survivors through electronic patient files, and the country implements various policies to support their quality of life. These include strategies to manage emotional and mental health impacts; fertility preservation procedures; health education programmes; strategies to improve co-ordination and communication between specialists and primary healthcare providers; guidance on diet, exercise and healthy lifestyles; and programmes for returning to work after cancer.

The Cancer Survivorship Care Taskforce is an alliance of healthcare professionals, researchers, policy makers and patient organisations dedicated to addressing the continuing needs of individuals with cancer or a history of cancer. It aims to establish a permanent oncology contact point in primary care for all patients living with or after cancer. This specialised healthcare provider will liaise with hospital providers, GPs and local oncology care networks to enhance patient support and self-management. The Taskforce also advocates for the right to be forgotten, which allows individuals to control access to their personal data, including health information. From January 2021, the Netherlands introduced the "clean-slate policy", adopting the right to be forgotten for cancer survivors, and protecting them from financial discrimination after 10 years has passed since the end of their treatment without evidence of relapse. For individuals diagnosed with cancer before the age of 21, the period is reduced to five years.

The Patient-Reported Outcomes Following Initial treatment and Long-term Evaluation of Survivorship registry is a comprehensive system that integrates population-based cancer registry data with PROMs. It facilitates continuous monitoring of the physical and psychosocial impacts of cancer and its treatments through questionnaires completed by cancer survivors.

Innovative solutions are emerging to improve the quality of life for cancer patients and survivors, including apps and websites focused on self-care

Patient-centred tools in the Netherlands offer support in areas such as emotional well-being, choosing appropriate care, and physical and mental rehabilitation after treatment. Some focus on specific populations, such as young adults with cancer. A joint initiative by IKNL, KWF Dutch Cancer Society, and the kanker.nl Foundation aims to better support the growing number of patients living with and beyond cancer by providing financial support to cancer patients to access a wide range of self-care apps.

In the Netherlands, specialised care specific to adolescents and young adults (AYA) aged 18-39 diagnosed with cancer is available to address their unique medical and psychosocial needs. AYA care is characterised by a person-centred approach, led by nurses and provided within the AYA Healthcare Network, which aims to enhance quality of life during and after cancer treatment.

Specially trained nurses co-ordinate AYA basic care, addressing immediate needs and facilitating additional support as required. For complex care needs, such as pregnancy during cancer or multiple interrelated care needs, referral to AYA clinics is arranged. These clinics, led by an AYA nurse and comprising an MDT including a medical oncologist, medical psychologist and a medical social worker, offer comprehensive support tailored to individual needs. AYA care has been included in the SONCOS standards report since 2018.

The Netherlands aims to ensure timely palliative care for all individuals with incurable diseases

In the Netherlands, palliative care is a fundamental component of the regular healthcare system, primarily organised at the community level. GPs and nurses lead provision of home palliative care, with palliative care specialists available for additional support and expertise when needed. Additionally, multidisciplinary specialist palliative care teams for both children and adults are present in every hospital providing cancer care. The revised guideline for palliative care for children was published in 2023, based on the latest scientific insights and methodologies, and addressing practical issues identified by parents, caregivers and healthcare providers. Palliative care education is integrated into all medical schools and some nursing programmes – typically in conjunction with other disciplines.

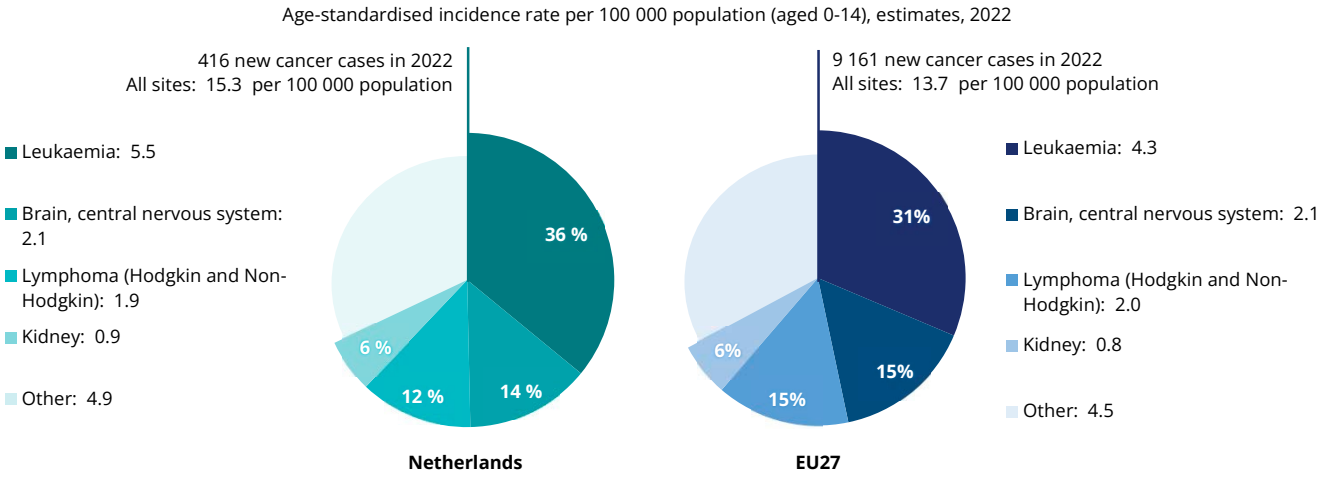
The Netherlands Palliative Care Foundation commissioned by the Ministry of Health, Welfare and Sport leads the National Palliative Care Programme launched in March 2022, aiming to ensure that by 2030, all individuals with incurable diseases receive timely palliative care. Through collaboration with various partners, including patient organisations and healthcare providers, the programme seeks to optimise the quality of life during the palliative phase, support grieving and enhance end-of-life care. The Quality Framework for Palliative Care in the Netherlands, endorsed by patients, healthcare providers and insurers, outlines strategies to improve care quality, accessibility and affordability. Implementation of this framework aligns with the Integral Care Agreement goals, presenting a significant opportunity for healthcare transformation. Under the Palliative Care Transformation Project, regions are initiating the Integral Care Agreement Palliative Care Transformation Plan to address strategic, financial and operational aspects of palliative care delivery. Furthermore, regional oncology networks are actively engaged in projects that focus on implementing and evaluating shared decision making in palliative care, with the goal of more effectively integrating patients' life goals and preferences into their care plans.

6. Spotlight on Paediatric cancer

According to ECIS, it is estimated that in the Netherlands 416 children and adolescents up to age 15 were diagnosed with cancer in 2022. In 2022, the Netherlands had an incidence rate of 15.3 per 100 000 children aged 0-14, higher than the EU27 average of 13.7 (Figure 18). However, in 2021, Eurostat data shows that the 3-year average mortality rate from paediatric cancer in the Netherlands was 1.5 per 100 000 inhabitants, lower than the EU average of 2.1 per 100 000.

In the Netherlands, incidence rates among boys are higher than among girls, mirroring the EU pattern. The most common cancer types are leukaemia with 5.5 cases per 100 000 children (36%), brain and central nervous system cancers with 2.1 cases per 100 000 (14%), lymphoma with 1.9 cases per 100 000 (12%), and kidney cancer, with 0.9 cases per 100 000 (6%).

Figure 18: Cancer incidence rates among children in the Netherlands are higher than in the EU



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

According to the European Society of Paediatric Oncology (SIOPE)'s Organisation of Care & Research for Children with Cancer in Europe (OCEAN) Project, the Netherlands has concentrated its paediatric cancer care in one institution in Utrecht (SIOPE, 2024). This institution is dedicated to treating paediatric cancer patients.

All 13 infrastructural and treatment modalities are provided from the Princess Máxima Centre, including chemotherapy, surgery for solid tumors, stem cell transplant, radiation therapy, palliative care, proton and photon radiation therapy and brachytherapy.

Between 2010 and 2022, 436 clinical trials involving children and young people were conducted in Europe, with 117 of these trials (27%) taking place in the Netherlands. This figure exceeds that of most of the country's economic peers (such as Austria at 14% and Belgium at 19%). In 2018, 85% of the 68 medicines identified as essential for treating cancer in patients aged 0 to 18 were available in the Netherlands, compared to 76% in the EU on average (Vassal et al., 2021).

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Country abbreviations

Austria	AT	Denmark	DK	Hungary	HU	Luxembourg	LU	Romania	RO
Belgium	BE	Estonia	EE	Iceland	IS	Malta	MT	Slovak Republic	SK
Bulgaria	BG	Finland	FI	Ireland	IE	Netherlands	NL	Slovenia	SI
Croatia	HR	France	FR	Italy	IT	Norway	NO	Spain	ES
Cyprus	CY	Germany	DE	Latvia	LV	Poland	PL	Sweden	SE
Czechia	CZ	Greece	EL	Lithuania	LT	Portugal	PT		

European Cancer Inequalities Registry

Country Cancer Profile 2025

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

The Country Cancer Profiles identify strengths, challenges and specific areas of action for each of the 27 EU Member States, Iceland and Norway, to guide investment and interventions at the EU, national and regional levels under the Europe's Beating Cancer Plan. The European Cancer Inequalities Registry also supports Flagship 1 of the Zero Pollution Action Plan.

The Profiles are the work of the OECD in co-operation with the European Commission. The team is grateful for the valuable comments and suggestions provided by national experts, the OECD Health Committee and the EU Thematic Working Group on Cancer Inequality Registry.

Each Country Cancer Profile provides a short synthesis of:

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

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