European Cancer Inequalities Registry

LITHUANIA

Country Cancer Profile

2023

European Commission

OECD

BETTER POLICIES FOR BETTER LIVES

The Country Cancer Profile Series

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 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 inputs received from national experts and comments provided by the OECD Health Committee and the EU Expert Thematic 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 also come from the World Health Organization (WHO), the International Agency for Research on Cancer (IARC), the International Atomic Energy Agency (IAEA), the Institute for Health Metrics and Evaluation (IHME) 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.
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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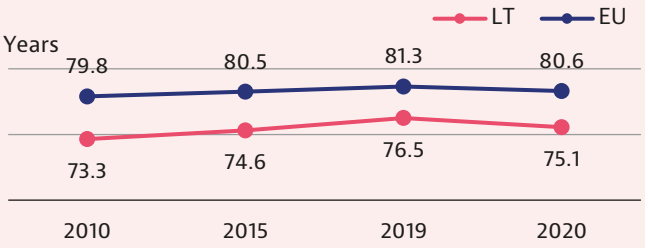
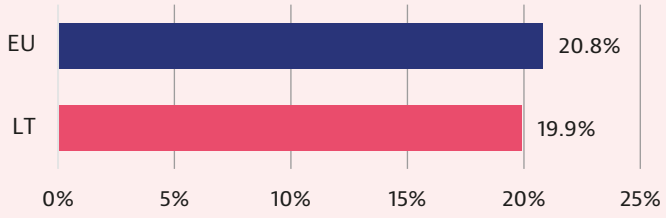
Summary of the main characteristics of the health system

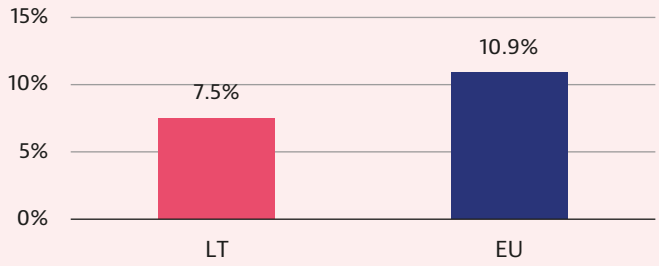
LIFE EXPECTANCY AT BIRTH (YEARS)



SHARE OF POPULATION AGED 65 AND OVER (2021)

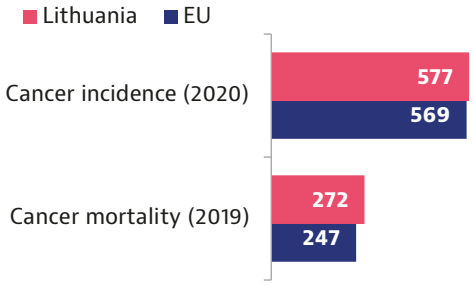


HEALTH EXPENDITURE AS A % OF GDP (2020)



Source: Eurostat Database.

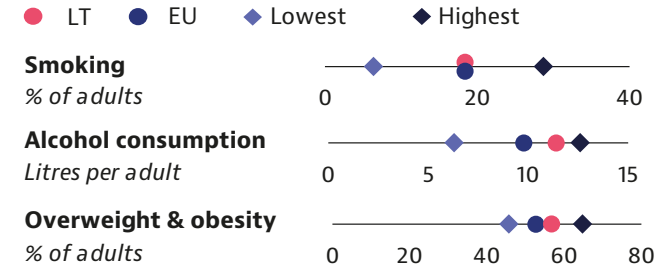
1. Highlights



Age-standardised rate per 100 000 population

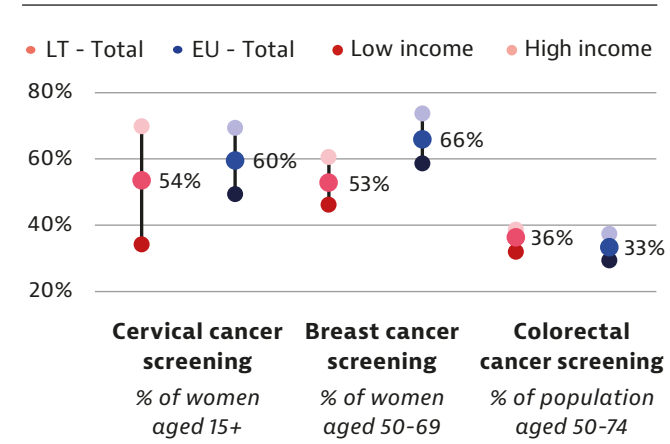
Cancer in Lithuania

Overall estimated cancer incidence in Lithuania is slightly above the EU average and disproportionately high among men. Progress on reducing cancer mortality is slower than the EU average. However, the National Cancer Prevention and Control Plan has potential to enhance cancer care and produce better outcomes for people with cancer.



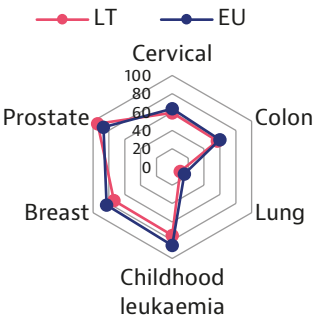
Risk factors and prevention policies

Policies to reduce the burden of smoking, alcohol consumption and unhealthy diets have been implemented. Although improvements in smoking rates are noticeable, overweight and obesity rates still represent a large burden for the health care system than in other EU countries. Dedicated programmes have been developed to address these risk factors.

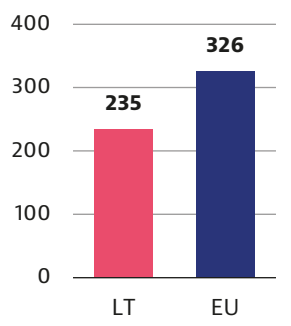


Early detection

While improvements have been made in cancer screening rates in the past decade, further investment is needed to increase participation, particularly for breast and cervical cancers. Substantial inequalities by education and income suggest the need for targeted policies.



Five-year net survival rate by cancer site, 2010-14



Total cost of cancer (EUR per capita PPP), 2018

Cancer care performance

Costs of cancer care per capita in Lithuania are among the lowest in the EU. Nonetheless, cancer survival rates have improved, although they are still below the EU averages for most common cancers. Cancer care coverage by the National Health Insurance Fund is comprehensive, but long waiting times and steep out-of-pocket payments hinder access to care. Cancer care services remained fully operational during the COVID-19 pandemic, despite restrictions.

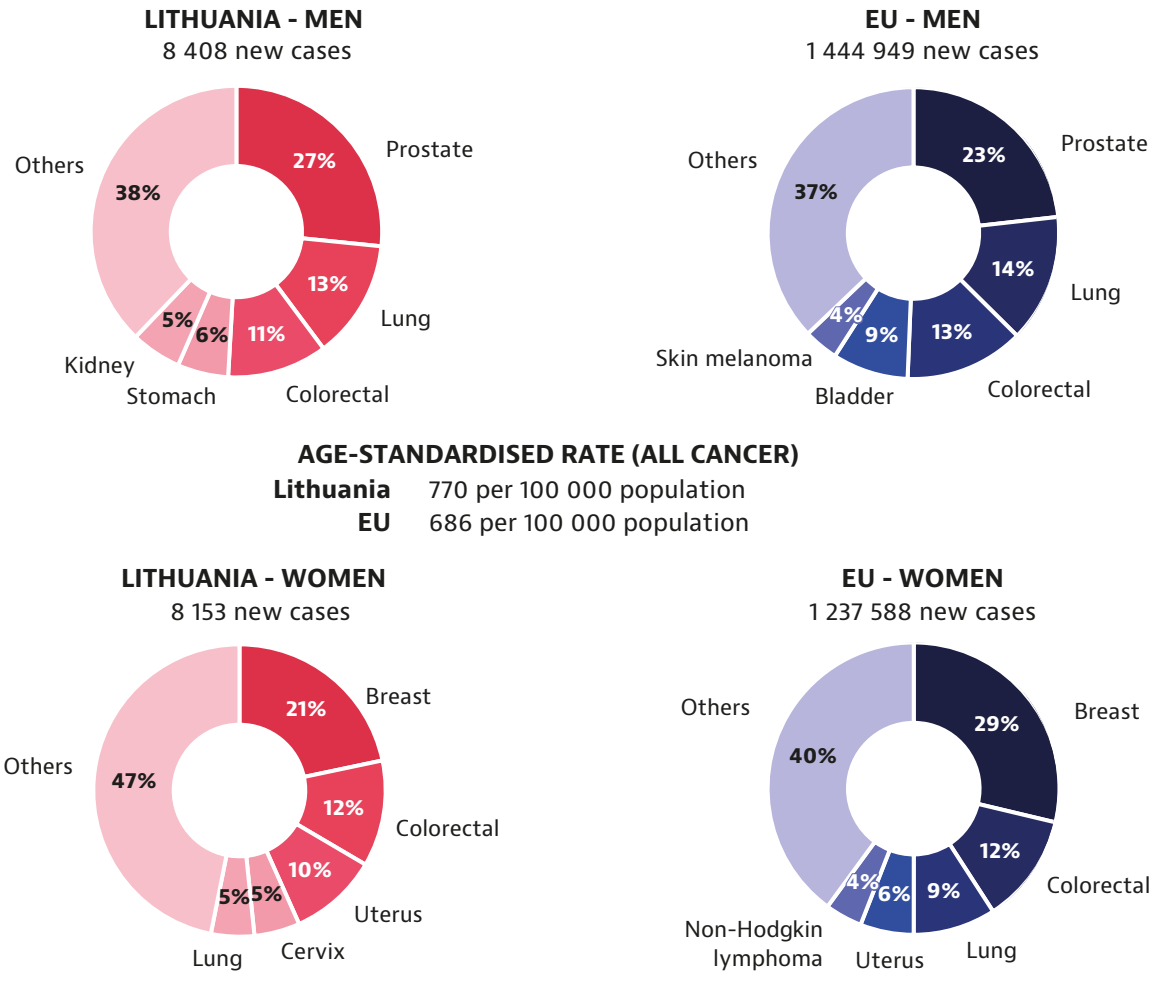
2. Cancer in Lithuania

Cancer incidence rates in Lithuania are slightly above the EU average

Overall estimated incidence of all cancer types in Lithuania is slightly higher than the EU average. According to European Cancer Information System (ECIS) of the Joint Research Centre based on incidence trends from pre-pandemic years, around 16 500 new cancer cases were expected in Lithuania in 2020, representing an incidence rate of 577 new diagnoses per 100 000 population (Figure 1). Cancer incidence was expected to be around 64 % higher among men (770 new cases per 100 000 population) than women (470 new cases per 100 000). The incidence rate among Lithuanian men is 12 % higher than the EU average; the incidence rate for women is just below the EU average.

Figure 1. Cancer incidence among men is disproportionally high relative to women in 2020

Distribution of cancer incidence by sex in Lithuania and the EU



Note: Corpus uteri does not include cancer of the cervix. These estimates were created before the COVID-19 pandemic, based on incidence trends from previous years, and may differ from observed rates in more recent years.
Source: European Cancer Information System (ECIS). From https://ecis.jrc.ec.europa.eu, accessed on 09/05/2022. © European Union, 2022.

The main cancer types among men and women are, for the most part, consistent with EU averages. Among men, prostate cancer leads (198 new cases per 100 000 population), followed by lung (103) and colorectal (89) cancers. Among women, breast cancer is most common (107 new cases per 100 000 population), followed by colorectal (52) and lung (21) cancers. Although the share of expected new colorectal cancers is the same in Lithuania and the EU average for women, age-standardised new cases expected in Lithuania was 7 % below the EU average (56 new cases per 100 000).

Age-standardised cancer incidence among the paediatric population in Lithuania in 2020 was expected to be similar to the EU average of 15 new cases per 100 000 children aged up to 14 years. Cancer incidence among people aged 15-64 years (377 new cases per 100 000 population) was expected to be 12 % higher than the EU average. Among people aged 65-85 years (1 700 new cases per 100 000 population), cancer incidence was expected to be 5 % lower than the EU average. In 2013, the estimated number of rare new cancer cases in Lithuania was 3 664 (Box 1).

Cancer mortality has been decreasing more slowly in Lithuania than in other EU countries

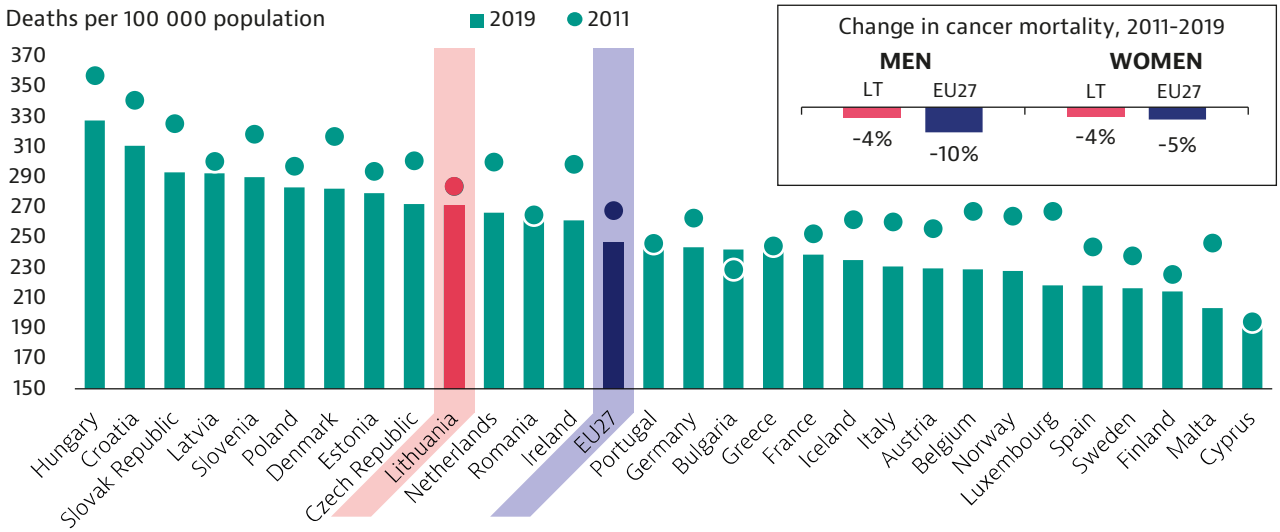
Lung and colorectal cancers are among the leading causes of death in Lithuania. During 2010 and 2020, potential years of life lost due to malignant neoplasms saw a relative decrease of 15 %, and it accounted for 1 796 years of life lost among 100 000 people aged up to 75 years in 2020. The relative decrease was somewhat larger among men (22 %) than women (13 %), accounting for 2 332 and 1 383 potential years of life lost in 2020, respectively.

Cancer mortality decreased by 4 % during 2011-2019 to 272 deaths per 100 000 population (Figure 2). Despite this progress, the cancer mortality rate in 2019 was 10 % higher than the EU average of 247 deaths per 100 000. Among people less than 65 years, the cancer mortality rate decreased by 15 % to 94 deaths per 100 000 population in 2019; for people aged 65 years and over, no improvement was achieved in cancer mortality, which accounted for 1 005 deaths per 100 000 population in 2019. According to the International Agency for Research on Cancer, in 2020, the estimated age-standardised cancer mortality among people aged 0-19 years was 3.3 deaths per 100 000 population.

Box 1. Access to care for people affected by rare cancers was strengthened in 2016

People affected by rare health conditions (one newly diagnosed case per 200 000 population per year) benefit from a 2016 change in the law to strengthen reimbursement conditions for treatment and drugs. All cases are examined by a dedicated commission of the Ministry of Health. In tandem with this new legislation, the National Health Insurance Fund (NHIF) almost doubled the budget for treatment of very rare human health conditions, from almost EUR 8 million in 2019 to EUR 15.6 million in 2022. The budget for purchasing orphan drugs also increased by 87 % from 2019 to EUR 19.8 million in 2021.

Figure 2. Progress on reducing cancer mortality is slower in Lithuania than the EU average



Note: The EU average is weighted (calculated by Eurostat for 2011-2017 and by the OECD for 2018-2019).
Source: Eurostat Database.

Cancer mortality is much higher among people with lower than higher education levels

In 2013, age-standardised cancer mortality was greater among men, older people (65-89 years) and people with lower education levels. Among men aged 25-64 years, cancer mortality was more than four times greater among those with lower (332 deaths per 100 000 population) than higher (75 deaths per 100 000) education levels. Among men aged 65-89 years, it was more than three times higher among those with lower (2 799 deaths per 100 000) than higher (814 deaths per 100 000) education levels.

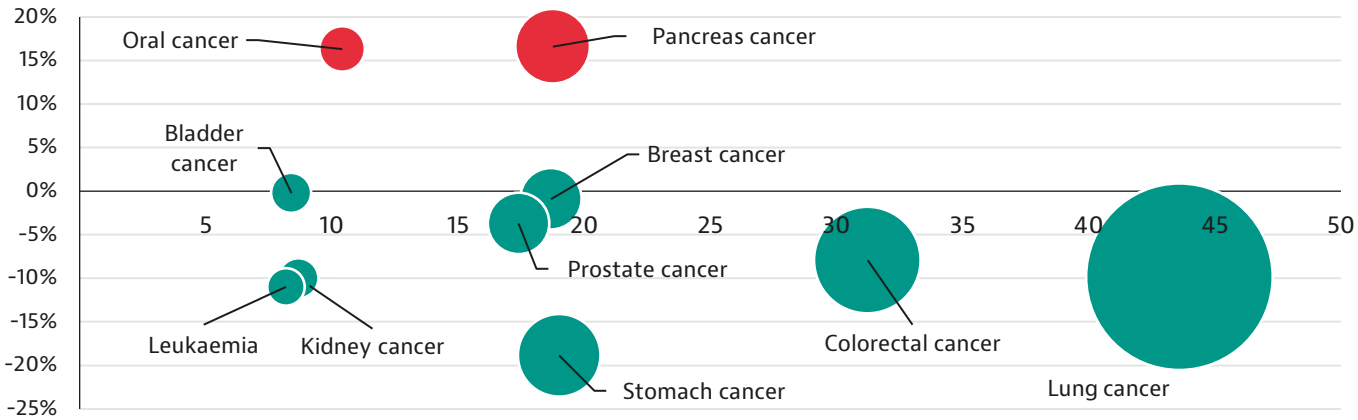
The situation among women was similar, although less pronounced. Among younger women, cancer mortality was three times greater among those with lower (205 deaths per 100 000 population) than higher (66 deaths per 100 000) education levels. Among older women, cancer mortality was also almost three times higher among those with higher (1 091 deaths per 100 000) than lower (411 deaths per 100 000) education.

Cancer mortality decreased for most cancer types, but magnitudes differ substantially

Lithuania was able to reduce mortality rates for most cancer types in 2011-2019, except for pancreas and oral cancers. In 2019, pancreas cancer had an age-standardised mortality rate of 19 per 100 000 population and oral cancer a rate of 10 per 100 000 (Figure 3). In 2011-2019, the largest percentage change in cancer mortality occurred for gastric (stomach) cancer (with a reduction of 19 %); and in 2019, gastric (stomach) cancer accounted for 19 deaths per 100 000 population. Although progress was achieved for kidney, lung, colorectal and prostate cancers, the percentage changes in mortality were modest (reductions between 4 % and 10 %). Death by skin cancer was most prevalent among people aged 65 years and over, and among men (19 deaths per 100 000 population) more than women (12 deaths per 100 000).

Figure 3. Cancer mortality declines were achieved for most cancer types

Change in cancer mortality, 2011-2019 (or nearest year)



Age-standardised mortality rate per 100 000 population, 2019

Note: Red bubbles signal an increase in the percentage change in cancer mortality during 2011-2019; green bubbles signal a decrease. The size of the bubbles is proportional to the mortality rates in 2019. The mortality of some of these cancer types is low; hence, the percentage change should be interpreted with caution. Bubble sizes for mortality rates are not comparable between countries. Source: Eurostat Database.

Lithuania's National Cancer Prevention and Control Plan sets ambitious goals

The National Cancer Prevention and Control Programme 2014-2025 (NCCP) is under way and committed to the overarching goal of reducing cancer mortality by 2025. The NCCP was developed with broad engagement of stakeholders, including non-governmental organisations (NGOs), university hospitals providing complex diagnostics and treatments for oncological conditions, patient organisations and professional organisations.

The NCCP outlines eight objectives: a) improvement of cancer care management and coordination; b) expansion of cancer prevention and creation of informed and healthy societies; c) strengthening cancer screening programmes and their uptake; d) ensuring quality of cancer care, including detection and treatment, while reducing inequalities in access; e) improvement of quality of life and end-of-life care for cancer patients; f) strengthening cancer research and oncology education and training; g) collaboration with NGOs on cancer care and expansion of NGO activities;

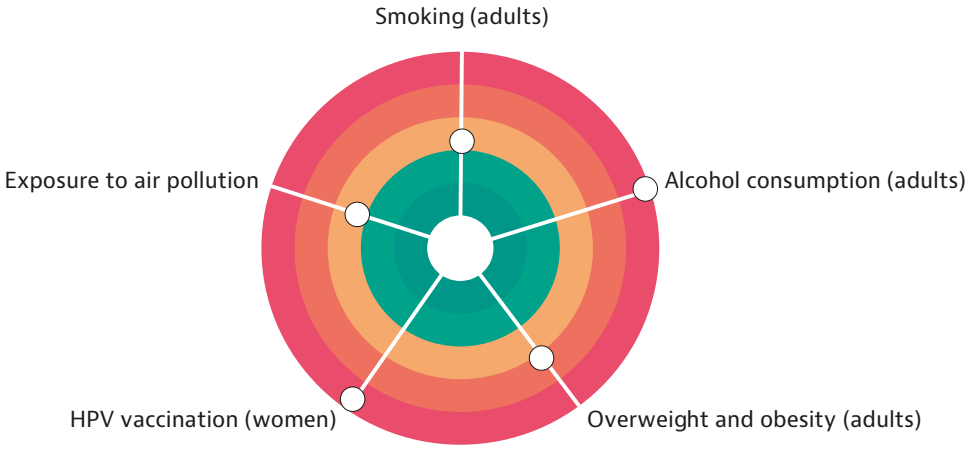
and h) strengthening cancer data collection and ensuring data quality and availability. All these objectives are aligned with the Europe's Beating Cancer Plan (European Commission, 2021), but they are less specific on policies addressing the right to be forgotten (a right that gives individuals the ability to exercise control over their personal data, including health information, by deciding what should be accessible to the public) and to return to work. The NCCP has a strong focus on tackling inequalities, with a dedicated action for 2014-2023. This aims to reduce health inequalities – particularly in certain regions and among vulnerable populations, including young people. The plan also aims to improve access to disease prevention activities and to nurture health promotion.

3. Risk factors and prevention policies

Lithuania performs relatively poorly on alcohol consumption, HPV vaccination, overweight and obesity compared to other EU countries, while performing better on smoking and exposure to air pollution (Figure 4). Nearly half of all deaths in Lithuania are attributable to unhealthy lifestyle – such as smoking, alcohol consumption, dietary habits and low physical activity – and environmental risk factors such as air pollution.

According to the Institute for Health Metrics and Evaluation (2022), cancer accounted for 6 191 disability-adjusted life years in 2019, which is 5 % higher than the EU average (5 757). The burden of cancer expressed as disability-adjusted life years has increased by 14 % over the past two decades – one of the largest relative changes among EU countries.

Figure 4. High alcohol consumption and low human papillomavirus vaccination uptake are key public health concerns



Note: The closer the dot is to the centre, the better the country performs compared to other EU countries. No country is in the white "target area" as there is room for progress in all countries in all areas.
Sources: OECD calculations based on the European Health Interview Survey (EHIS) 2019 for smoking and overweight/obesity rates, OECD Health Statistics 2022 and WHO Global Information System on Alcohol and Health (GISAH) for alcohol consumption (2020), WHO for HPV vaccination (through the WHO/UNICEF Joint Reporting Form on Immunization) (2020) and Eurostat for air pollution (2019).

Although improvements have been made in recent years, some challenges remain – such as uptake of human papillomavirus (HPV) vaccination (Box 2). The NCCP recognises the need to invest further in prevention policies, and outlines establishment of infrastructure for scientific research aimed at better understanding and monitoring cancer risk factors. In 2020, spending on prevention accounted for 3.9 % of current health expenditure (higher than the EU average of 3.4 %). Additionally, specific activities on healthy nutrition and obesity prevention will take place among the population, with the support of municipalities and other social partners.

Box 2. Human papillomavirus vaccination coverage is among the lowest in the EU

HPV infection is a well-established cause of cervical cancer, and HPV vaccines have the potential to reduce incidence. Current estimates suggest that 412 women are diagnosed with cervical cancer and 193 die from the disease every year in Lithuania. The HPV vaccination programme was introduced in 2016, funded by the NHIF and covering girls aged 11-12 years. In 2020, HPV vaccination coverage was 35 %, which is one of the lowest shares among EU countries and 41 % lower than the EU average of 59 %.

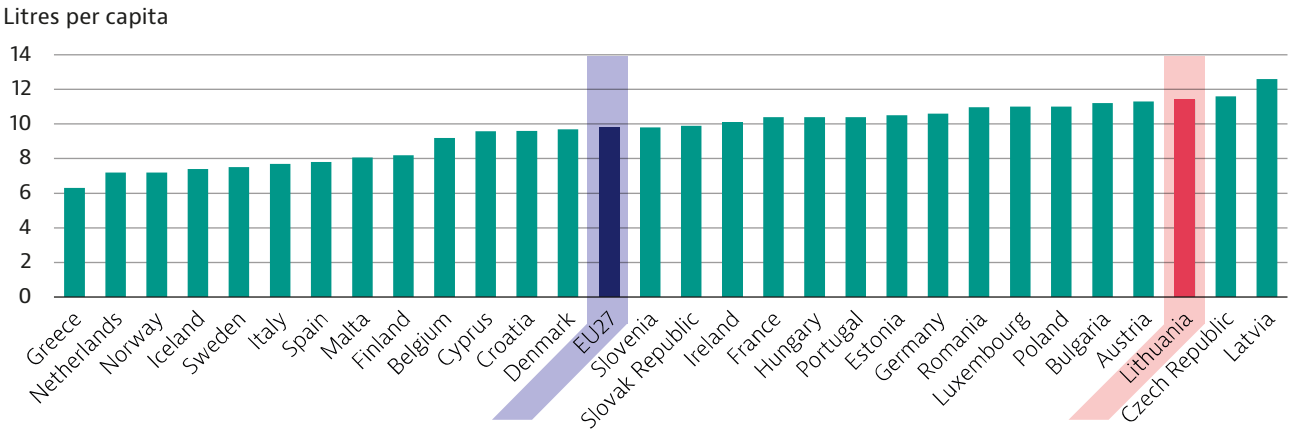
Alcohol control policies are responsible for a consistent decline in consumption rates

Alcohol consumption has decreased consistently in recent years – particularly among younger people – but remains a major public health concern.

During 2010-2020, thanks to stricter alcohol control measures targeting younger people, alcohol consumption decreased by more than 20 % to 11.4 litres of pure alcohol on average per capita per year among the population aged 15 years and over, but this is still higher than the EU average of 9.8 litres (Figure 5).

In 2019, the proportion of men who were hazardous alcohol drinkers (5.9 %) was four times the proportion of women (1.5 %). This may in part explain estimates of new cancer cases attributable to alcohol drinking, which were 23 cases per 100 000 men and 8 cases per 100 000 women in 2020. Hazardous drinking was more prevalent among people with lower (5 %) than higher (2.2 %) education levels, and more prevalent among people on lower (4.7 %) than higher (2.5 %) incomes.

Figure 5. Per capita alcohol consumption in Lithuania is the third highest among European countries



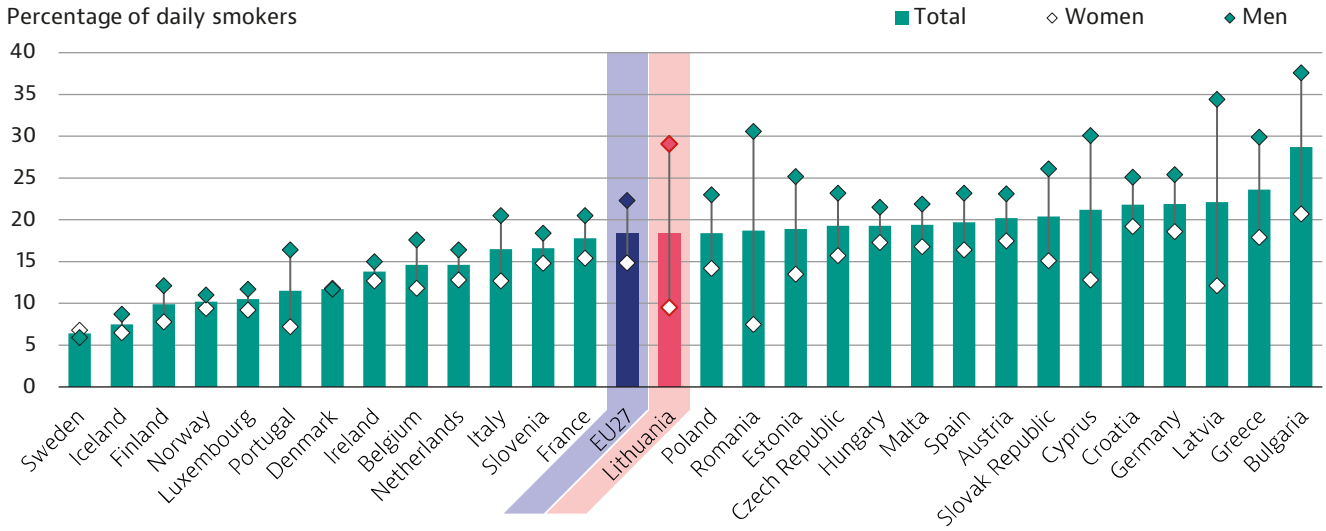
Note: The EU27 average is unweighted (calculated by the OECD).
Sources: OECD Health Statistics 2022; WHO GISAH.

Recent efforts have been made to strengthen alcohol control policies. These include a tax increase for all alcohol products, limiting availability during the week, increasing the legal age to purchase and possess alcohol products from 18 to 20 years and banning alcohol advertising. In June 2021, however, amendments submitted to the Alcohol Control Act suggested a relaxation of some regulations (including extending sales hours and allowing more advertising). In January 2022, the proposed amendments were rejected, mainly because of stakeholders' pressure in support of the results achieved to date from the alcohol control policies (Nacionalinė Tabako ir Alkoholio Kontrolės Koalicija, 2022).

Smoking habits are not changing as fast as in other EU countries

In 2019, 18.4 % of Lithuanians reported smoking cigarettes every day, which is similar to the EU average (Figure 6). The rate among men was three times that among women (29 % vs. 10 %). However, smoking had decreased by 13 % (to 29.1 %) among men during 2014-2019, while among women it had increased by 3 % (to 9.5 %). Smoking also increased by 6 % between 2014 and 2019 to reach 14.5 % among people with lower education levels and 11 % among people with higher education levels. Among people on lower incomes, smoking rates decreased from 26.7 % in 2014 to 17.4 % in 2019, which is below the EU average (22.4 %) for this population subgroup. Among people on higher incomes, the rate fell to 17.3 % in 2019, which is 16 % higher than the EU average (14.9 %). According to Statistics Lithuania based on the 2019 Health Interview Survey, regular use of vaping products among people aged 15 years and over was low compared to the EU average (1.6 % vs. 2.3 %).

Figure 6. Smoking is three times more prevalent among men than women



Note: The EU average is weighted (calculated by Eurostat).
Source: Eurostat Database (EHIS). Data refer to 2019.

Lithuania has made significant steps in tobacco control. For example, the Law on Control of Tobacco, Tobacco Products and Related Products forces e-cigarettes to have the same regulation as other tobacco products, including licensing of manufacturing, wholesale and retail sale. This results in strengthening the control system of e-cigarettes to reduce their availability and banning vaping in places where smoking is banned, including most indoor public places, café terraces, outdoor sports venues, bus stops and children's playgrounds since January 2021. Some municipalities have also declared specific outdoor public places such as town squares and smoke-free zones. In 2021, the Drug, Tobacco and Alcohol Control Department set up an interactive website[1] with information and available resources to support people wishing to quit smoking. Since July 2022, a ban on flavoured and nicotine-free electronic cigarette refills was introduced, except of tobacco flavour.

Deaths attributable to air pollution have reduced in the past decade

In 2019, exposure to air pollution in the form of fine particulate matter such as PM_{10}[2] reached 21.9 µg/m³ in Lithuania, which is higher than the EU average (20.5 µg/m³). However, the concentration of $PM_{2.5}$ was lower than in the EU (11.1 µg/m³ vs. 12.6 µg/m³). According to the Institute for Health Metrics and Evaluation, ozone and $PM_{2.5}$ exposure accounted for an estimated 5.6 % of all deaths in Lithuania in 2010, whereas in 2019 the rate was 3.5 %, a rate lower than the average across the EU (4 %).

Some 11 % of the population is exposed to air pollution: a fifth of workers in Lithuania are estimated to be exposed to smoke, fumes, powder or dust, which is higher than the EU average (16 %). This particularly affects men in high-skilled manual jobs. In 2022, the National Audit Office concluded that although the government aims to reduce air pollution by half in towns and cities by 2030, there is still a lack of systematic and comprehensive monitoring of the ambient air condition.

Overweight and obesity rates have increased to above the EU average

In 2019, 57 % of Lithuanians aged 15 years and over were overweight or obese. Among those aged 65 years and over, prevalence was higher among men (72 %) than women (69 %). A quarter of all deaths were attributable to dietary risks (including low fruit and vegetable consumption, and high sugar and salt consumption), which is much higher than the EU average (17 %). Additionally, some 6 % of cancer deaths were attributable to dietary risks in Lithuania, according to the Institute for Health Metrics and Evaluation. Only 47 % of the population aged 15 years and over consumed fruit daily, which is below the EU average (56 %). Fruit consumption was 38 % greater among people with higher (55 %) than lower (40 %) education levels. Frequency of daily vegetable consumption (54 %) was slightly higher than the EU average (51 %). Only a fifth of Lithuanians reported maintaining aerobic physical activity for 150 minutes or over per week. Although this proportion increased during 2014-2019, it was still below the EU average (33 %).

1 *https://nerukysiu.lt*

2 *Particulate matter (PM) is classified according to size: PM_{10} refers to particles less than 10 micrometres in diameter; $PM_{2.5}$ to particles less than 2.5 micrometres in diameter.*

The Lithuanian Health Programme 2014-2025 aims to foster healthier lifestyles and healthy nutrition, while creating a safer social environment and reducing health inequalities. It is aligned with the Public Health Strategy for 2016-2023, which promotes health in all policies – notably by enhancing health literacy over the life course. The Action Plan for Healthy Ageing Protection in Lithuania 2014-2023 also aims to encourage all age populations to invest in their health.

4. Early detection

Further investment is needed to increase participation rates in cancer screening activities

Lithuania has four screening programmes for breast, cervical, colorectal and prostate cancers. These follow a nationwide opportunistic approach rather than a population-based approach (screening offered to a specific at-risk target population). Invitation to cancer screening programmes is via GPs, who receive a capitation payment combined with fees incentivising delivery of preventive services (including cancer screening), as well as a pay-for-performance element. A recall system is not established; if suspicious findings are detected during screening, the GP refers to a specialist for further investigation.

People insured by compulsory health insurance may take part in preventive programmes such as cancer screening free of charge if they are referred to providers with a contract with the Territorial Health Insurance Funds[3]. While cancer screening is fully funded by the Territorial Health Insurance Funds, participation rates are low. Further investigation of explanatory factors from the perspective of citizens would be helpful to identify strategies to improve screening coverage and participation. A large public awareness campaign is planned to improve screening attendance. Other initiatives to enhance participation rates can be implementation of systematic population-based screening.

Despite improvements in the past decade, participation in breast cancer screening remains low

Nationwide opportunistic population-based breast cancer screening started in 2005, offering women aged 50-69 years a mammogram every two years. In 2014, Lithuania was among the EU countries with the lowest participation rates (46.5 %) – far below the EU average (70.1 %). In 2019, 52.8 % of women aged 50-69 years reported having a mammogram in the past two years, but this was still substantially below the EU average of 65.9 % (Figure 7). Participation rate was over 14 percentage points higher among women on higher (60.6 %) than lower incomes (46.2 %). The difference between women with higher (55.4 %) and lower (45.1 %) education levels was also large. In 2017, around 30 centres were equipped to support breast cancer screening, but only a fifth were specialised for additional examinations (such as ultrasound or core needle biopsy).

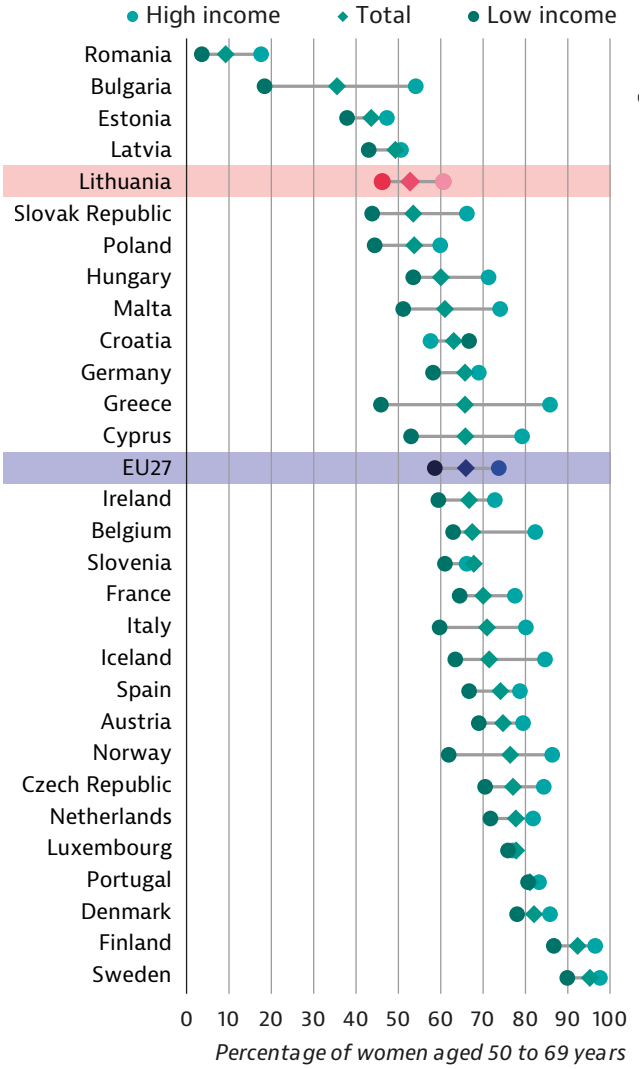
Education, geographical and income inequalities in cervical screening participation rates are high

A cervical screening programme has been available nationwide since 2004. Since 2022, women aged 25-34 years are eligible for a cervical cytology smear test every three years, and women aged 35-59 years are eligible for high-risk cervical papillomavirus (HR HPV) test and a liquid-based cervical cytological smear every five years if the HR HPV test is positive. Cervical smear results may be followed by a biopsy to objectively confirm the diagnosis. Like breast cancer screening, cytological screening of cervical cancer is largely opportunistic, which may again explain the low participation rates. Recent evidence in Lithuania suggests that moving to an invitation letter approach is a cost-effective strategy to increase participation rates compared with the current practice of GP invitation.

In 2019, 64.3 % of women aged 15-64 years reported having their last smear test in the past three years, which is below the EU average of 68 %. A three-fold

3 *The Territorial Health Insurance Funds was founded by the National Health Insurance Fund (NHIF) under the Ministry of Health. It has at its disposal a part of the funds of the Compulsory Health Insurance Fund transferred to the NHIF, which is used to pay for the services provided by medical institutions and to reimburse the costs of purchasing medicines and medical aids.*

Figure 7. Uptake of breast cancer screening doubled in a decade, but remains below the EU average in 2019



Note: The EU average is weighted (calculated by Eurostat). The figure reports the percentage of women aged 50 to 69 years who reported receiving a mammogram in the past two years. Source: Eurostat Database (EHIS). Data refer to 2019.

gap was registered between women with higher (64.9 %) and lower (20.8 %) education levels, and rates were substantially below the EU averages for both groups (75.9 % vs. 41.6 %). Geographical and income inequalities are also marked in Lithuania. Cervical screening coverage was lower among women in rural areas (44.9 %) than among those in cities (56.4 %). Rates were twice as high among women on higher (69.8 %) than lower incomes (34.2 %).

Education and income inequalities are substantial in colorectal cancer screening

The colorectal cancer screening programme was initiated in 2009. Since 2014, it has covered the population aged 50-74 years, offering an examination every two years. In 2014, based on national estimates, uptake was 57.7 % for women and 47 % for men. Recent evidence suggests low participation rates, varying between 16 % and 18 % during 2014-2018 (Dulskas et al., 2021). In 2019, according to the EHIS, 36.3 % people reported having had colorectal screening, which is slightly above the EU average (33.3 %). Participation was considerably higher among women than men (41.0 % vs. 30.2 %), which is the largest gender gap in the EU. A rate more than 13 percentage points higher was registered among people with higher (43.5 %) than lower (30.3 %) education levels – the second largest gap in the EU. The difference was almost 6 percentage points between people on lower (32.0 %) and higher (38.6 %) incomes, and more than 1.5 times higher among people in cities (29.5 %) than those in rural areas (18.7 %).

More than a decade past its launch, prostate cancer screening uptake remains low

Nationwide prostate cancer screening was launched in 2006. Since 2017, the program covers men aged 50-69 years and men aged 45 years if their father or brother had prostate cancer; they are offered blood tests for prostate-specific antigen every two or five years (depending on age and prostate-specific antigen level). Like other cancer screening programmes in Lithuania, invitation is opportunistic rather than population-based. On average, about 27 % of the target population participated in this programme every year during 2013-2019, although participation dropped to 13 % in 2020 because of the COVID-19 pandemic. Since the programme was instituted, prostate cancer incidence rates have increased. In 2020, the age-standardised incidence rate was 198 new cases per 100 000 people, which is higher than the EU average of 159 cases per 100 000. Although progress has been made in the last decade, incidence of prostate cancer in Lithuania is still one of the highest in the EU, only surpassed by eight other countries.

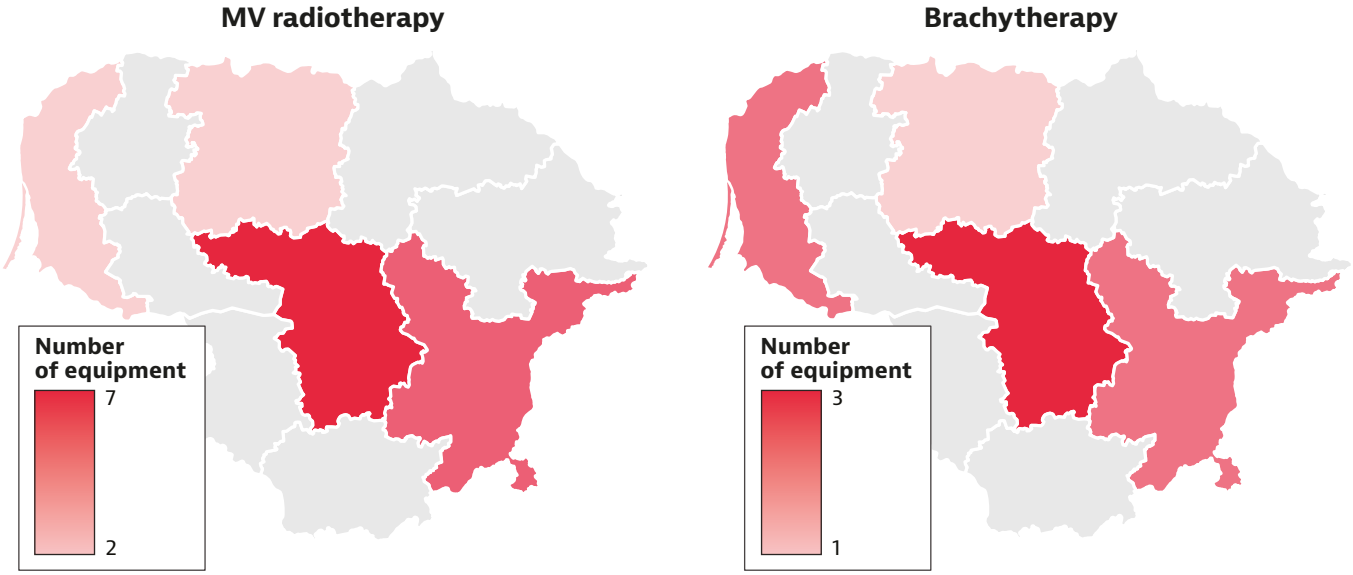
5. Cancer care performance

5.1 Accessibility

Availability of radiation therapy equipment seems sufficient to address current needs

Lithuania has five radiation therapy centres, at which treatment is covered in full by the NHIF. Based on data reported by radiation therapy centres to the International Atomic Energy Agency, 16 megavolt (MV) radiotherapy and eight brachytherapy units are available across four counties (Figure 8). In 2019, according to Eurostat, radiation therapy equipment per 100 000 inhabitants in hospitals and ambulatory sectors was just above the EU average (0.9 vs. 0.8). Half of the equipment available is recent (below 10 years old), yet monitoring is necessary to ensure timely renewal of radiation therapy infrastructure and introduction of new advanced technologies.

Figure 8. Radiotherapy equipment is evenly available across counties in Lithuania



Note: Compilation of self-reported data from public and private care providers in 2021 (or nearest year).
Source: International Atomic Energy Agency.

More people are reimbursed for listed medicines to reduce out-of-pocket payments

In 2017, changes were made to pharmaceutical policy by introducing a tighter reference pricing system; placing caps on price differences between reimbursement tariffs and retail prices; and increasing reimbursement levels for some groups (such as children under 18 years, people with severe disabilities, retired people on low incomes and people aged 75 years and over). More recently, reforms aligned with the European Commission's pharmaceutical strategy for Europe have been outlined. In 2020, the government broadened the population groups entitled to full reimbursement for listed medicines and medical products; in 2021, additional changes were made to pharmaceutical reimbursement. These reforms are expected to lessen the burden of out-of-pocket payments for pharmaceuticals, particularly among the most deprived groups.

Long waiting times hinder availability of care for people with cancer

Ensuring availability of care to people with cancer is a key aspect of the NCCP (see Section 2). Monitoring of waiting times has been regulated since 2007, but insufficient interoperability of health information systems hinders this. In 2014, the Ministry of Health approved a plan to reduce waiting times, including allowing providers to adjust work schedules of specialists and requiring providers to publish waiting times monthly. Despite these initiatives, territorial disparities in availability of services persist in larger cities and rural areas, according to the National Audit Office (2018).

In 2017, maximum waiting times were established related to the accessibility to cancer diagnostics and treatment. For example, the time from first visit to a specialist to cancer diagnosis should be no longer than 28 days. Since 2019, health care providers have been obliged to register people in the Information System for Pre-registration of Patients for services covered by the NHIF as a means of monitoring maximum waiting times. Care providers can define priority eligibility criteria for treatment and therapy services in hospitals, which may lead to unequal accessibility.

The National Health Insurance Fund covers treatment abroad, but out-of-pocket payments are steep

Most patients receive cancer treatment abroad when services cannot be provided in Lithuania, yet systematic data collection about this practice and on care quality is missing. Dedicated legislation specifies the rules under which people are eligible to seek cancer treatment abroad. Approval of treatment in other European countries under compulsory health insurance requires a specialist referral and prior authorisation by the NHIF. When a patient has a prior authorisation issued by the NHIF, treatment is covered by the social health insurance scheme in accordance with the tariffs applicable in the country of treatment. If a patient seeks treatment abroad without prior authorisation of the NHIF, treatment payments are initially paid by the patient and only later reimbursed by the NHIF up to the equivalent cost of the treatment in Lithuania.

Most oncology pharmaceuticals are covered free of charge by the compulsory health insurance

Some pharmaceuticals dispensed to people with cancer for self-administration are fully covered by compulsory health insurance, while others are paid for by patients, unless they belong to a vulnerable group such as children or pensioners. A copayment system also exists where a patient pays the difference between the retail price and reimbursed price, with a cap of EUR 4.71 per prescription. Medicines administered by public providers in inpatient and outpatient specialist cancer services are free of charge. Off-label use of oncology medicines is possible, but is often not covered by compulsory health insurance; coverage is possible in specific circumstances such as ultra-rare diseases. Recent survey data based on a sample of 109 oncology products/indication pairs show that almost two thirds were approved and covered in Lithuania, and about a third were approved but not covered (Chapman, Paris and Lopert, 2020).

Availability of palliative care services is higher in Lithuania than in the EU

Specific legal provisions for palliative care are in place, and these are well embedded in the NCCP, which seeks to develop provision of palliative care at home in tandem with provision of psychosocial assistance (see Section 2). There are no palliative care specialists in Lithuania, but since 2005 a postgraduate palliative care course is available. In total, 49 palliative care specialised services are available for adults, representing 1.7 per 100 000 inhabitants; this is higher than the EU average of 1.1 per 100 000 inhabitants, and close to the recommendation of the European Association for Palliative Care. Paediatric palliative care is available through three hospital programmes and two home care programmes. The first children's hospice in the country is being built as part of an adult hospice complex in Vilnius.

5.2 Quality

Despite improvements, many cancer survival rates remain below the EU averages

Cancer survival rates in Lithuania for people diagnosed in 2010-2014 are below the EU averages for most common cancers (Figure 9). The exception is prostate cancer, for which Lithuania has had a national screening programme since 2006 (see Section 4). Important progress was achieved between 2000 and 2014, however. Five-year survival rates for prostate cancer improved by 19 percentage points and for colon cancer by 12 percentage points. Improvements to survival rates for breast cancer (9 percentage points) and cervical cancer (5 percentage points) were more modest, and for lung cancer (1 percentage point) and childhood leukaemia (0.4 percentage points) somewhat limited. The five-year survival rate for lung cancer remains disproportionally low relative to other cancers. In 2010-2014, lung cancer survival stabilised at around 8 % among men, whereas among women it improved by 8 percentage points, reaching 20 %. The survival rate for acute lymphoblastic leukaemia in children (75 %) is the second lowest in the EU, where the average is 82 %, and has not shown signs of improvement since the 2000s.

Figure 9. Five-year survival rates for many of the most common cancers are below the EU averages

Prostate cancer	Childhood leukaemia	Breast cancer	Cervical cancer	Colon cancer	Lung cancer
Lithuania: 94% EU24: 87%	Lithuania: 75% EU24: 82%	Lithuania: 74% EU24: 83%	Lithuania: 59% EU24: 64%	Lithuania: 57% EU24: 60%	Lithuania: 10% EU24: 15%

Note: Data refer to people diagnosed between 2010 and 2014. Childhood leukaemia refers to acute lymphoblastic cancer.
Source: CONCORD Programme, London School of Hygiene and Tropical Medicine.

Implementation of quality assurance mechanisms is under way

With the ambition of achieving the goals set by the NCCP (see Section 2), several quality assurance mechanisms are being implemented. Quality of health care services is monitored by the State Health Care Accreditation Agency, which measures waiting times and quality of care, and ensures that patients' rights are adhered to health care institutions. The Agency is also responsible for licensing all health care services nationally. Although payment for performance is not implemented in the health care system, the NHIF has dedicated teams to monitor whether care provision occurred in accordance with the rules (such as by checking claims data against reimbursement entitlement).

Provision of cancer care is concentrated in six providers

A few years ago, the Ministry of Health planned to establish a formal cancer care network and to implement national standards and guidelines for cancer care, but these efforts have not borne fruit. Cancer care pathways underpinned by notions of care coordination and integration are being outlined following good practices set out by the European Commission and World Health Organization. Specialised cancer care is available in six centres, which provide complex services of diagnostics and treatment of oncological diseases, including radiation therapy (except in one centre). Paediatric cancer care is concentrated in two centres. Rare cancers are treated in university hospitals with all the necessary infrastructure and expertise, following a multidisciplinary approach led by a medical oncologist specialised in a specific rare cancer type.

An oncology centre provides psychological support to people with cancer and their relatives

Construction of the St Francis Oncology Centre in Klaipėda (western Lithuania) started in 2011 and was finished in 2015. The main funders were the EU and private donors; in addition, EU funding facilitated employment of four staff. The Centre is run as a non-profit public body and aims to provide spiritual, psychological and social care to people with cancer and their relatives. Its objectives include a) educating and teaching patients and family members about cancer; b) encouraging staff to learn more about cancer as a disease and to strive for higher standards of care; c) carrying out an educational programme on how lifestyle changes can help prevent cancer; d) helping the public understand the value of early diagnosis; e) changing people's attitudes to cancer; and f) reducing the social isolation that people with cancer can sometimes experience. The Centre has capacity for 40 people, and some 1 500 people used its services in 2017.

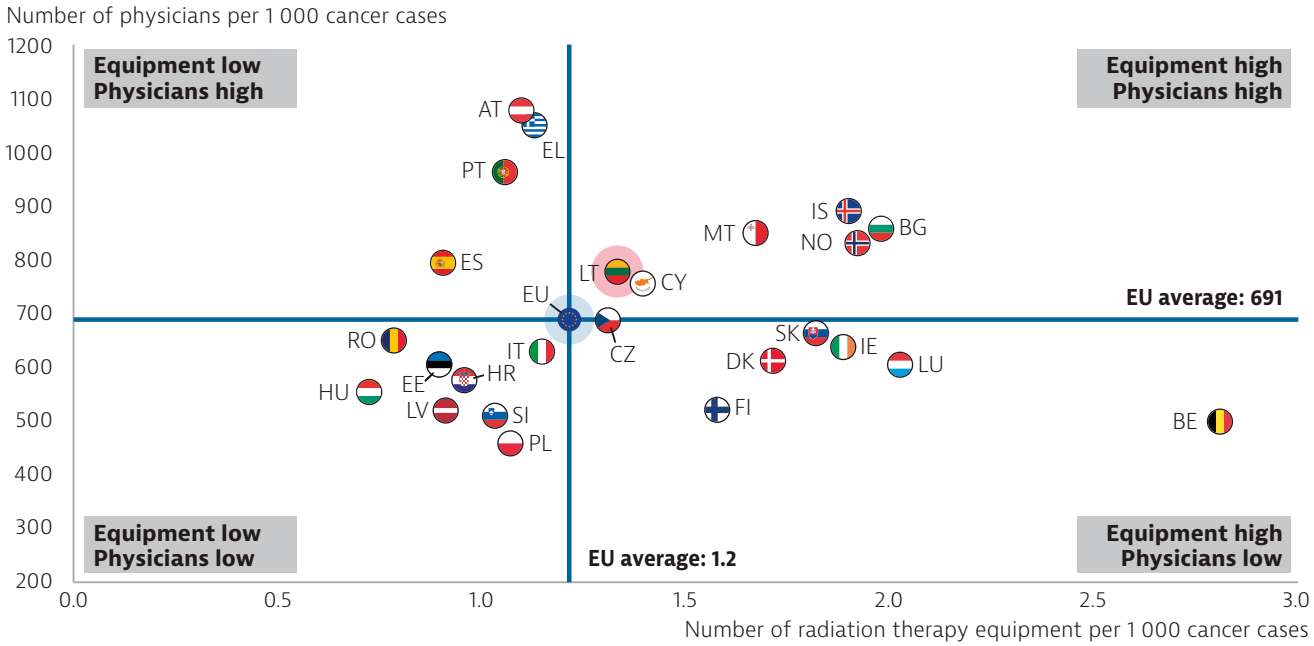
Nurse shortages remain a persistent issue, but the number of doctors is increasing

In 2019, Lithuania had 7.7 nurses per 1 000 population, which is below the EU average (8.4 per 1 000), but the number of doctors was among the highest in the EU (4.6 vs. the EU average of 3.9 per 1 000). This may be explained by Lithuania's higher proportion of medical graduates per 100 000 population (20 %) annually than the average across the WHO European Region (15.3 %). In 2019, the ratio of 1.7 nurses per doctor was the lowest since 2000. Further, around 35 % of nurses are aged 55 years and over – a much larger share than in most EU countries (18 %). In 2020, the number of physicians per 1 000 cancer cases was 771, which is higher than the EU average of 691 (Figure 10). Similarly, the number of radiation

therapy equipment per 1 000 cancer cases (1.3) was slightly higher than the EU average (1.2).

The National Health Strategy 2014-2025 aimed to restoring the nurse–doctor ratio to 2:1, but this has not yet been achieved. In 2015, 2.3 physicians per 100 000 population had an oncology specialty, which is 56 % higher than in 2005, when only 1.5 physicians per 100 000 population were oncologists. Recent evidence suggests imbalances in the composition of the physician workforce by specialty, but the extent to which this is affecting cancer care remains undetermined.

Figure 10. The number of physicians and radiation equipment is slightly higher than the EU average



Note: EU average is unweighted (calculated by the OECD). Radiation therapy equipment from hospitals and providers of ambulatory care. Data refer to medical doctors (excluding nursing and caring professionals).
Source: Eurostat and OECD Health Database (data refers to 2020, or nearest year).

Challenges related to data sharing limit the activities of the National Cancer Registry

The National Cancer Registry collects data on incidence, prevalence, treatment, staging and survival, whereas monitoring of screening activities is undertaken by the NHIF. Since 2012, the Registry has faced challenges with accessing data in a timely fashion, which limits understanding of the health care system's performance in cancer care. For example, data from the cancer screening programmes are not currently centralised at the cancer screening registry. The National Cancer Registry has established links with the death registry, but links to NHIF-operated databases are lacking. The Registry is thus unable to collect socioeconomic data at the patient level, which limits understanding of existing inequalities. Patient-reported data – notably on outcomes and experiences of care – are also not yet embedded.

Digitalisation is a key strategic goal, underpinned by a new e-health system

Since 2015, Lithuania has been developing a centralised e-health system capable of storing patient information from various health care institutions in one database. This makes it possible to reuse health records, avoid duplication of diagnostic procedures and enhance quality care. Patients will be able to access their e-health history online. The system is also expected to support more efficient planning of disease prevention and health promotion programmes. National monitoring of cancer prevention programmes using the new system is planned for 2024-2026.

Since 2008, remote care from various medical specialities has been available at large in Lithuania. This technological advance has contributed to improving access to specialised care in areas with a shortage of qualified medical professionals or where access to health care remains difficult. In 2019, the Ministry of Health defined procedures related to provision of telemedicine services in support of enhancing care quality as uptake of remote care continues.

5.3 Costs and value for money

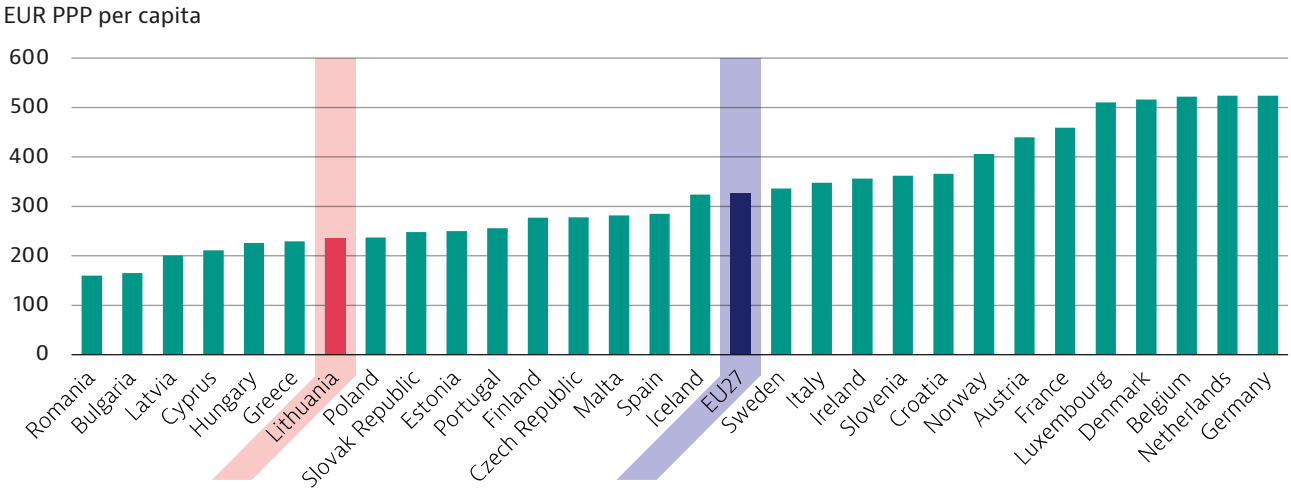
Population coverage is comprehensive, but out-of-pocket spending remains high

In 2020, 99 % of the population were covered by compulsory health insurance; only a minority were not covered – mostly because of their residency status. However, people who are not insured are still entitled to access emergency services. The benefits package covered by compulsory health insurance is broad, and public funding accounted for two thirds of health spending in 2019. The remaining spending comes from private sources – mainly out-of-pocket payments, which remain high (32.3 % of overall health spending compared with the EU average of 15.4 %), mainly driven by pharmaceuticals (12.5 %). Just over 9 % of households experienced catastrophic out-of-pocket spending in 2012, and outpatient medicines were the largest single cause (Murauskienė and Thomson, 2018). The situation has worsened over time: catastrophic payments reached 15.2 % in 2016 (OECD/European Observatory on Health Systems and Policies, 2021).

Among EU countries, Lithuania shows one of the lowest per capita costs with cancer care

The costs associated with cancer care vary greatly among EU countries. In 2018, among EU Member States, the cost per capita adjusted for purchasing power parity (PPP) ranged from EUR 160 in Romania to EUR 524 in the Netherlands (Hofmarcher et al., 2020). In Lithuania, the cost per capita was EUR 235, which is 28 % less than the EU average (EUR 326) (Figure 11).

Figure 11. Spending on cancer care in Lithuania is the seventh lowest among EU countries



Note: The EU27 average is unweighted (calculated by the OECD).
Source: Hofmarcher et al. (2020).

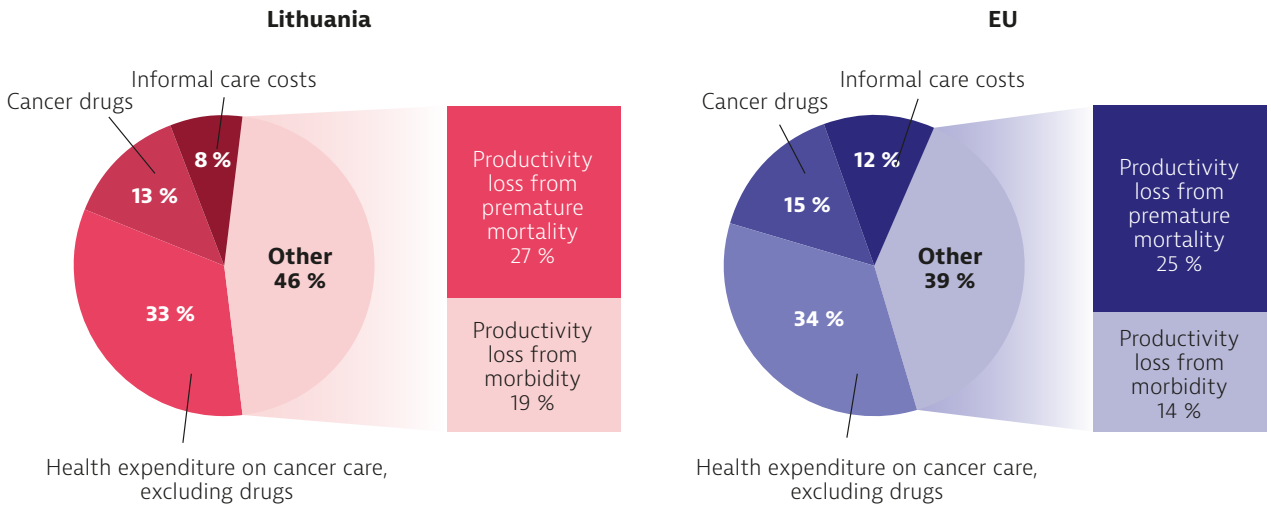
The total cost of cancer in Lithuania was EUR 426 million, which is disproportionally low compared to the EU average (EUR 6 129 million). Direct costs accounted for 46 % of health expenditure on cancer care, of which 13 % related to cancer drug expenditure (Figure 12). Productivity losses accounted for 46 % of health expenditure on cancer care, which is higher than the EU average (39 %). Productivity loss from premature mortality caused the largest impact (EUR 113 million), followed by productivity loss from morbidity (EUR 82 million). Informal care, which represents the opportunity cost of time forgone by relatives and friends to provide unpaid care, accounted for an estimated 8 % of expenditure on cancer care (EUR 34 million) – far less than the EU average (EUR 822 million). However, the EU average is driven by significant health expenditure on informal cancer care in Germany, France, Italy and Spain.

5.4 COVID-19 and cancer: building resilience

Cancer care services remained fully operational despite restrictions related to COVID-19

Organisation of health care services during the pandemic – including during more strict measures followed by declaration of a state-level emergency – was steered by legislation. Care provision for people with cancer was considered a priority from the onset of the pandemic and was not restricted. This is substantiated by a survey of disruption to health services by COVID-19 conducted in 2020 by the Institute for Health Metrics and Evaluation.

Figure 12. Cancer costs attributed to productivity losses are higher than the EU average



Note: Data refer to 2018. Cancer drug expenditure does not include confidential rebates.
Source: Hofmarcher et al. (2020).

The findings show that prevention, screening and treatment were not interrupted by the pandemic, and reductions from past performance were mainly because of people's fear of becoming infected or a lack of specialists to provide care because they were infected with COVID-19. Findings of a study by the National Cancer Institute of Lithuania with data from its hospital information system and the NHIF reported that 13 % of patients did not undergo chemotherapy during March-May 2020 and had to wait until the end of quarantine to resume treatment (Dabkeviciene et al., 2021). Also, 29 % of patients reported that they did not have surgery during March-May 2020.

Another survey conducted by the Lithuanian Cancer Patient Coalition looked at specific disruptions to care among 670 people, most of them were people with cancer (92.5 %). Almost three quarters of respondents sought medical care during quarantine, and a third with a suspected malignancy were told to wait until the end of quarantine for a first consultation (Petrauskas et al., 2021). Where a specific treatment had already been initiated, 30 % of respondents did not receive a consultation. Treatment was also postponed for chemotherapy (12.5 % of respondents), radiotherapy (21.7 %) and surgery (29 %) until the pandemic subsided. Newly diagnosed people with cancer treated by surgery decreased by around 10 % across all tumour types. During February-December 2020, surgery rates fell by 36 % for lung, 18 % for colon and 8 % for breast cancer, compared to same period in 2019.

Fewer people participated in cancer screening programmes in 2020

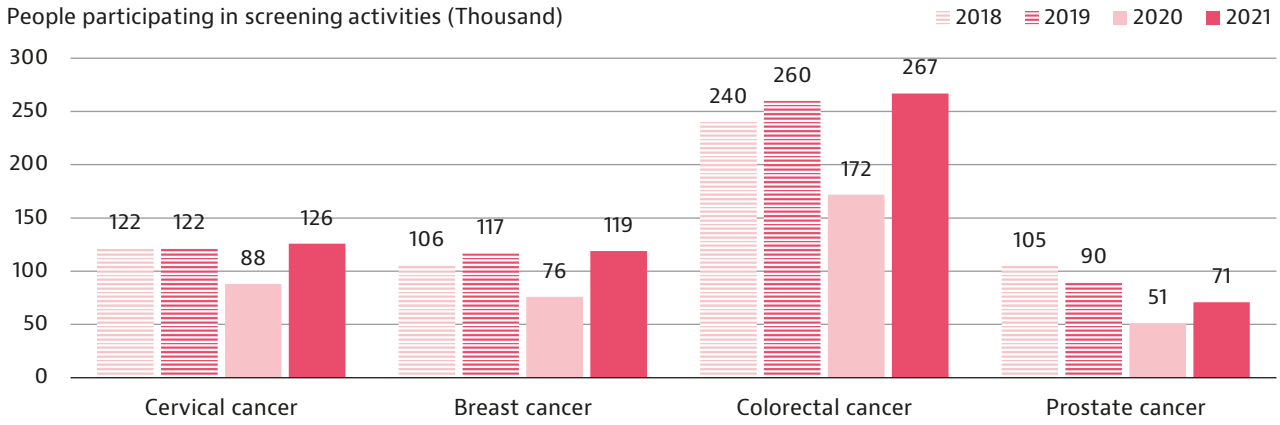
The full impact of delays in seeking care during the pandemic is still unknown, but attendance at cancer screening decreased substantially in 2020 (Figure 13). Participation in screening programmes for colorectal and breast cancers decreased by slightly more than a third in 2020 compared to 2019; the reduction was less pronounced for cervical cancer screening (-28 %).

The largest reduction (-43 %) was in prostate cancer screening, although participation had also slightly decreased (-14 %) in 2019 relative to 2018. In 2021, the screening programmes for cervical (3.3 %), breast (1.7 %) and colorectal (2.7 %) cancers rebounded from the impact of the pandemic and showed higher participation rates relative to 2019; participation in prostate cancer screening in 2021 is 21 % behind compared to 2019.

Although remote care increased during the pandemic, many want face-to-face consultations to resume

As in many other countries, the COVID-19 pandemic in Lithuania served as a lever to increase uptake of remote care. During a period of stricter measures, remote care (often by means of a telephone consultation) was seen as an alternative to continue care trajectories of people with cancer. Early estimates suggest that the number of remote consultations in 2021 was higher than in 2020. Sensitive to this evolution, the NHIF covered all costs related to remote care provision. Although doctors have shown interest in continuing remote consultations, the NHIF and many patients have sought to resume face-to-face consultations.

Figure 13. Cancer screening uptake was substantially affected during the pandemic



Source: NHIF.

6. Spotlight on inequalities

The Lithuanian health care system offers coverage to the whole population, based on residence. The compulsory health insurance benefits package is broad, but out-of-pocket spending is high and prevents the most deprived people from seeking care and treatment. Inequalities in cancer outcomes, prevention and diagnosis are marked across gender, age and socioeconomic groups.

- Overall incidence of cancer in Lithuania is on a par with the EU average, and affects a larger share of men than women. The reduction in cancer mortality was small (4 %) during 2011-2019, and no improvement was achieved among people aged 65 years and over.
- Sex and education are key drivers of inequalities in cancer mortality. Among men aged 25-64 years, cancer mortality was over four times higher among those with lower than higher education levels; among women aged 25-64 years, the gap was smaller.
- Unhealthy lifestyle is a major driver of cancer mortality in Lithuania. Smoking decreased by 13 % among men during 2014-2019, while among women it increased by 3 %. Smoking increased more among people with lower (14.5 %) than higher (11 %) education levels, but decreased among people on lower incomes (17.4 %), reaching the level among people on higher incomes (17.3 %).
- Alcohol consumption has decreased consistently over recent years, but Lithuania has the third highest alcohol consumption per capita (11.4 litres) among European countries. Hazardous alcohol consumption is four times more prevalent among men than women, and is more prevalent among people with lower (5 %) than higher (2.2 %) education levels.
- Inequalities in cancer screening uptake show that initiatives targeting specific groups could be beneficial for improving participation rates. For example, breast cancer screening was about 14 percentage points higher among women on higher than lower incomes. Education and income inequalities were also substantial in colorectal cancer screening, in tandem with geographical inequalities: people in cities were 1.5 times more likely to participate than people in rural areas.

Several policies have been implemented to improve prevention and cancer care performance. Examples include intensification of alcohol and tobacco control policies, developing programmes to enhance health literacy over the life course and implementation of a new electronic health information system.

Cancer care services remained fully operational during the COVID-19 pandemic. However, participation rates decreased substantially across all cancer screening programmes. This situation will require close monitoring in the coming years to understand the effects of the pandemic on cancer.

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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
Czech Republic	CZ	Greece	EL	Lithuania	LT	Portugal	PT		

European Cancer Inequalities Registry

Country Cancer Profile 2023

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 Expert Thematic 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 the impact of COVID-19 on cancer care.

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