



CYPRUS

# Country Cancer Profile

2025

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## 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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*Note by all the European Union Member States of the OECD and the European Union: The Republic of Cyprus is recognised by all members of the United Nations with the exception of Türkiye. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.*

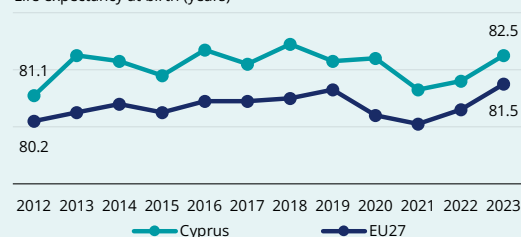
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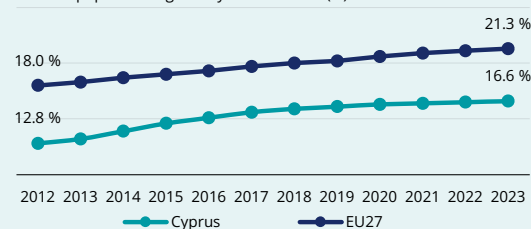
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## Key health system and demographic statistics

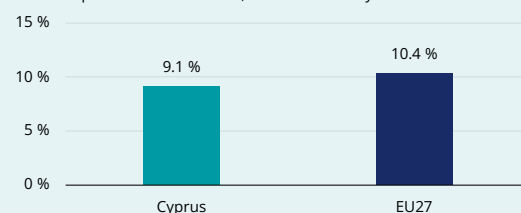
Life expectancy at birth (years)



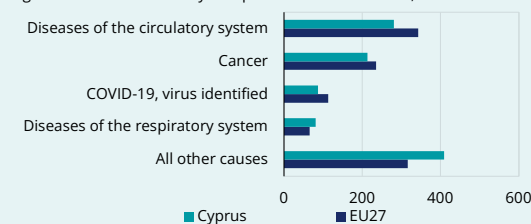
Share of population aged 65 years and over (%)



Health expenditure as % of GDP, 2022 or nearest year

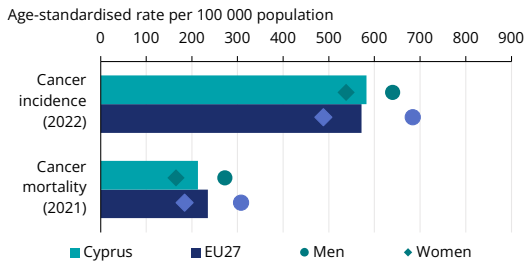


Age-standardised mortality rate per 100 000 inhabitants, 2021



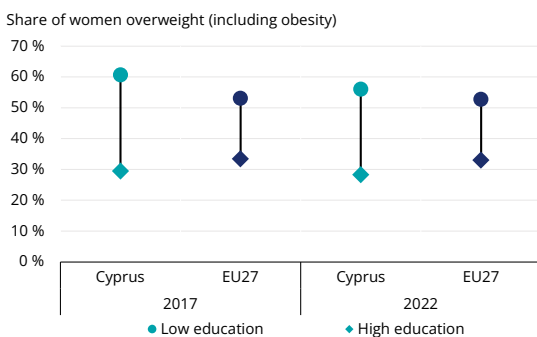
Source: Eurostat Database.

# 1. Highlights



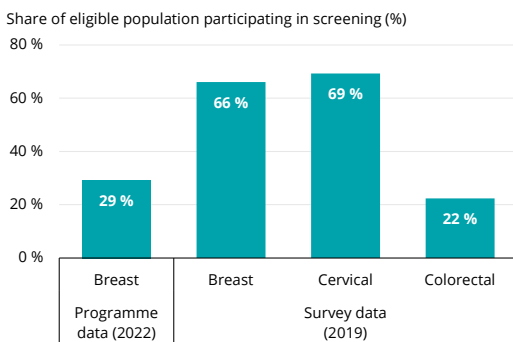
## Cancer in Cyprus

An estimated 4 637 new cancer cases were diagnosed in Cyprus in 2022. The age-standardised incidence rate among men was 640 cases per 100 000 population – slightly lower than the EU average – whereas incidence among women (538 cases per 100 000) was above the EU average. Cancer mortality in Cyprus is among the lowest in the EU, but it shows an increasing trend. Lung, colorectal and breast cancers were the leading causes of cancer death in Cyprus in 2022.



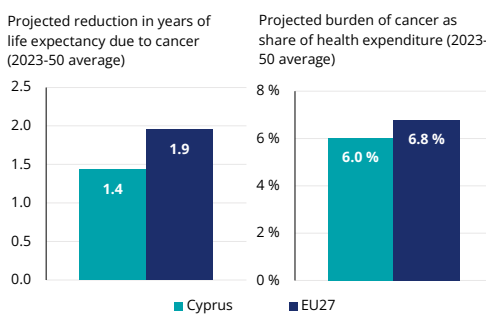
## Risk factors and prevention policies

Cyprus performs better than most EU countries in the field of dietary habits and overweight, but performs poorly on smoking and air pollution. While obesity and overweight rates show a decreasing trend, socioeconomic inequalities are large: rates are twice as high among women with lower education levels than those with higher education levels. This is one of the widest education gaps across the EU. Although Cyprus has an adult and a child obesity strategy, other popular strategies such as sin taxes and subsidies, voluntary front-of-pack labelling and restrictions on sales of sugar-sweetened beverages in school canteens are lacking.



## Early detection

Cyprus established a population-based programme for breast cancer screening in 2003, and is in the final stage of implementing a national screening programme for colorectal cancer. The programme is expected to be based on personalised invitations, which will be sent with screening kits to perform a faecal immunochemical test. The implementation of a population-based approach is key to increase participation rates in colorectal cancer screening which remain low in Cyprus. Cyprus is also implementing a population-based cervical cancer screening programme, and several information activities are mandated in the National Cancer Strategy to promote participation.



## Cancer care performance

Establishment of the General Health System in Cyprus in 2019 led to higher levels of financial protection. To address challenges in quality and co-ordination of care, Cyprus is planning to establish a National Cancer Institute and a Cancer Research Institute, while also developing multidisciplinary team practices. However, quality monitoring and quality assurance mechanisms are lacking. To support quality of life, Cyprus has recently introduced fertility preservation and the right to be forgotten. Overall, over 2023-50, the burden of cancer on health system is estimated at 6% health expenditure, lower than the EU average.

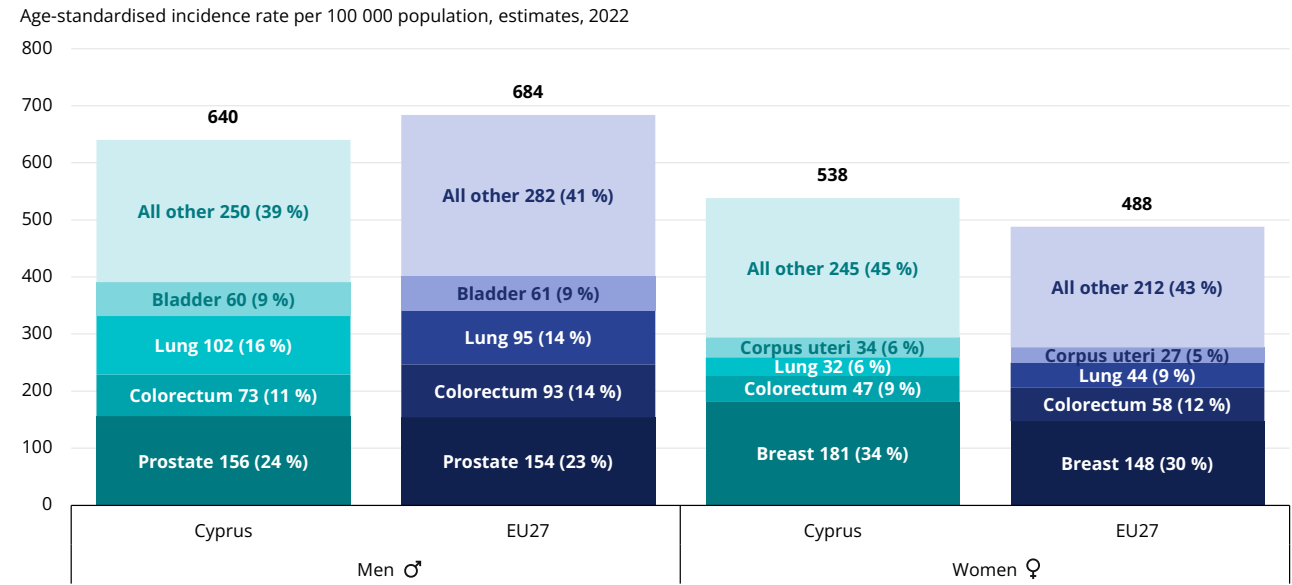
# 2. Cancer in Cyprus

## Estimated cancer incidence in Cyprus is on a par with the EU average

Using data from Cyprus's National Cancer Registry, according to the European Cancer Information System (ECIS) of the Joint Research Centre based on incidence trends from pre-pandemic years, 4 637 new cases of cancer were expected to be

diagnosed in the country in 2022 (Figure 1). The age-standardised incidence rate among men was 640 cases per 100 000 population, which is slightly lower than the EU average (684 per 100 000), whereas incidence among women (538 cases per 100 000) was above the EU average (488 per 100 000).

**Figure 1. Age-standardised cancer incidence rates in Cyprus are close to the EU average**



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.

Prostate cancer in Cyprus is responsible for the majority of cancer diagnoses among men (24% of incidence rates) – a figure close to the EU average – followed by lung,<sup>1</sup> colorectal and bladder cancers. The share of lung cancer is above the EU average (14%), probably owing to the longstanding high prevalence of smoking in the country (see Section 3). Among women, breast cancer remains the most frequently diagnosed type of cancer (34%), accounting for almost a third of all cancer diagnoses – 4 percentage points higher than the EU average (30%). According to recent data, there is a notable upward trend in breast cancer incidence. The age-standardised incidence rate increased from 62 cases per 100 000 population in 2004 to 69 cases per 100 000 in 2017 (Spartiati et al., 2024). Colorectal, lung and corpus uteri cancers jointly

account for 21% of cancer incidence rates, which is slightly lower than the EU average (26%) for the same sites (see Figure 1).

When accounting for changes in estimated incidence of cancer diagnoses between Cyprus and the EU, a striking difference emerges in the case of thyroid cancer. Age-standardised incidence of thyroid cancer in Cyprus (42 cases per 100 000 population) is almost four times higher than the corresponding average for the EU (11 cases per 100 000). This finding has been a subject of discussion, but no solid evidence on proven causality has been reported.

Looking forward, ECIS estimates that cancer cases will increase by 30% between 2022 and 2040.

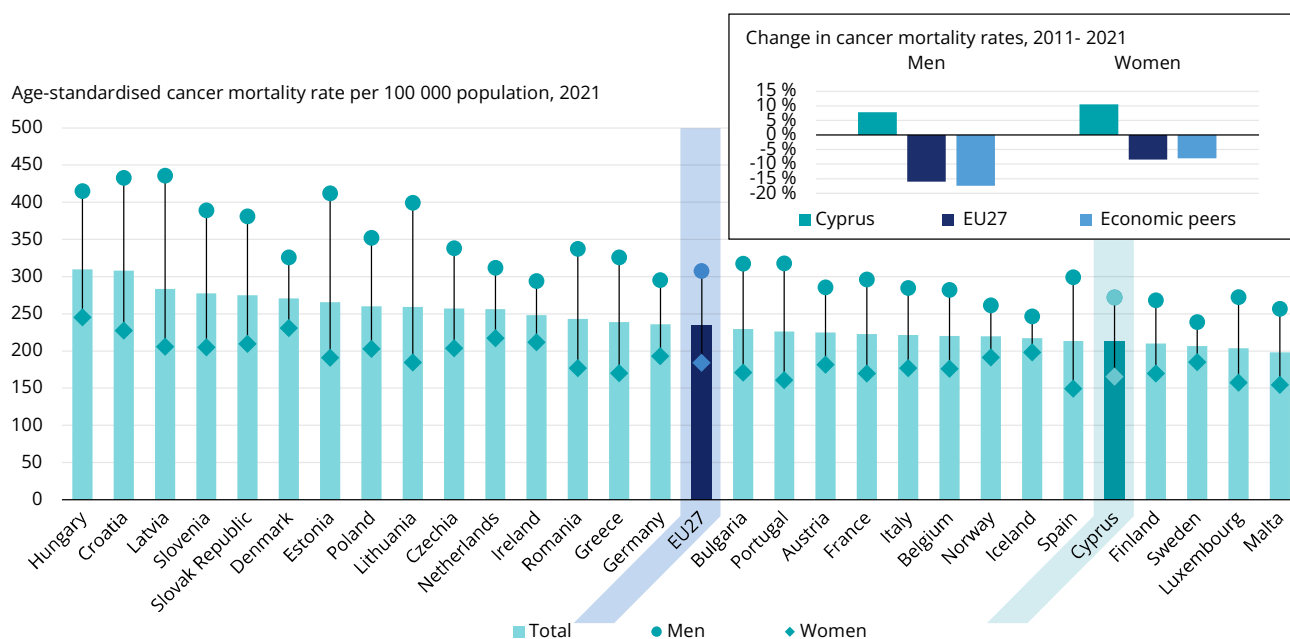
<sup>1</sup> Lung cancer also refers to trachea and bronchus cancers.

## Cancer mortality in Cyprus is among the lowest in the EU, but increases in rates are worrying

Age-standardised mortality rates from cancer in Cyprus were well below the EU average in 2021 – the fifth lowest after Malta, Luxembourg, Sweden and Finland. In 2021, cancer mortality stood at 213 deaths per 100 000 population (compared to an EU average of 235 deaths per 100 000). Nevertheless, cancer mortality in Cyprus has

increased substantially compared to a decade ago: an increase of 8% among men and 10% among women was recorded during 2011-21, compared to a decreasing trend in cancer mortality across the EU (with reductions of 16% among men and 8% among women), and among the country’s economic peers<sup>2</sup> (with reductions of 17% among men and 8% among women). Gender disparities in mortality, however, are below the EU average (Figure 2).

**Figure 2. Mortality rates from cancer in Cyprus are lower than in most EU countries, but they increased in the last decade, contrary to the general trend**



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

Lung, colorectal and breast cancers were the three leading causes of cancer deaths in Cyprus in 2021. Lung cancers accounted for 20% of all cancer deaths, followed by breast (10%), colorectal (9%), and prostate (7%) cancers.

### Avoidable mortality from breast and colorectal cancer among women has decreased over time

Avoidable mortality<sup>3</sup> from lung cancer increased by 25% between 2011 and 2021 among women (much higher than the EU increase of 4%). Among men, a slight reduction was observed (by 2%), compared to a decrease of almost 27% across the EU. Recent evidence suggests that Cyprus is one of the few countries where lung cancer incidence rates continue to increase, in contrast to a general decreasing trend across EU countries (Luo et al., 2023). By 2035, lung cancer incidence rates in

Cyprus are expected to reach a peak of 48 cases per 100 000 population. These findings suggest that more effective primary prevention and public health interventions are needed to reduce exposure to tobacco smoking.

In contrast, Cyprus performs well in terms of lowering avoidable mortality due to breast and colorectal cancers among women (classified as treatable cancers) since 2011 (Figure 3). Treatable deaths from breast cancer decreased by 13%, and those from colorectal cancer among women decreased by 35% in Cyprus between 2011 and 2021. Avoidable deaths among women across the EU also decreased at a similar or slower pace (by 16% for breast cancer and 18% for colorectal cancer). However, treatable mortality from colorectal cancer among men increased by 17% in

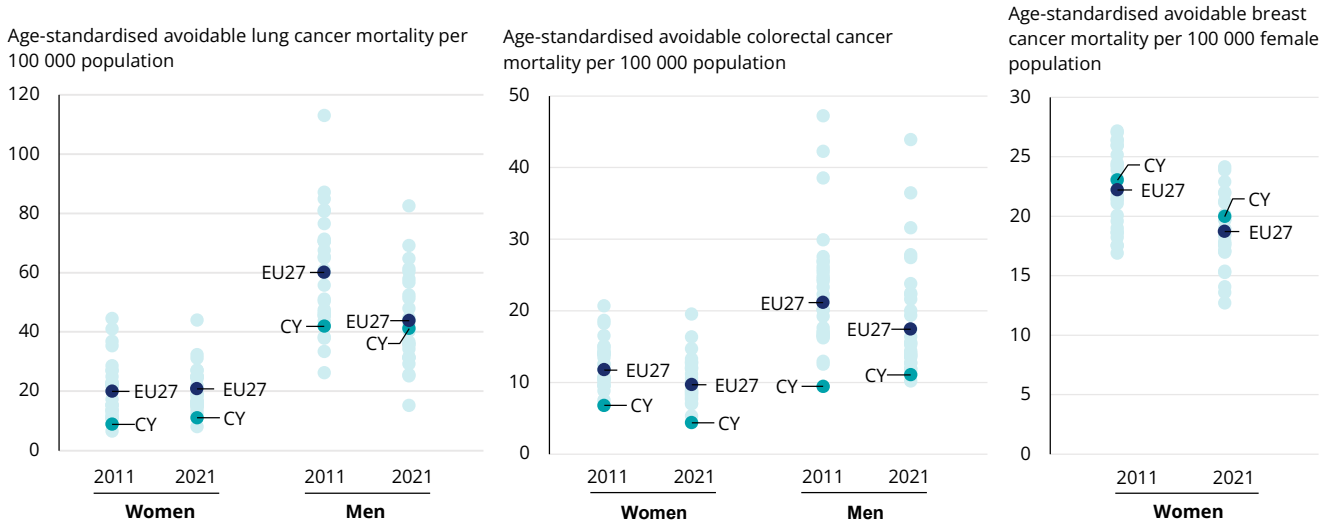
<sup>2</sup> Economic peers are defined as tercile clusters based on 2022 GDP per capita in purchasing power standard terms. Economic peers for CY are CZ, ES, FI, FR, IT, LT, MT and SI.

<sup>3</sup> 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.

Cyprus over 2011-21, in contrast to a decrease of 17% across the EU. Improved uptake of screening and early diagnosis initiatives, and more effective

and timely healthcare interventions are needed to reduce avoidable colorectal cancer mortality among men.

**Figure 3. Avoidable mortality due to breast and colorectal cancer among women in Cyprus has decreased over the past decade**



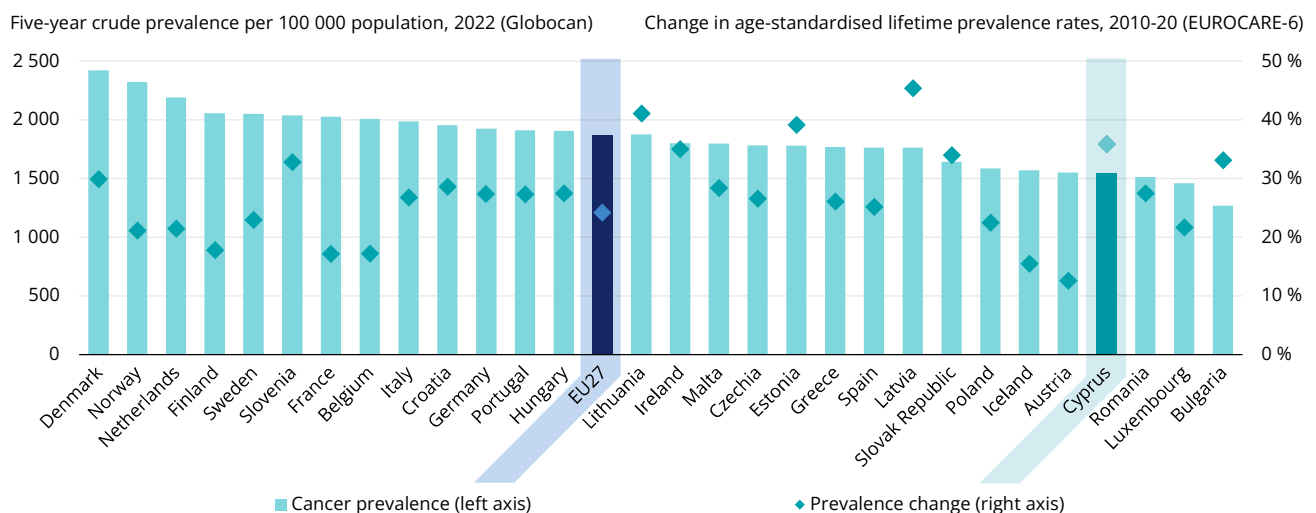
Note: Avoidable mortality figures relate to deaths of people aged under 75. Source: Eurostat Database. Data refer to 2021.

**The number of people living with cancer in Cyprus is among the lowest in the EU**

According to data from IARC’s GLOBOCAN database, in 2022 approximately 20 000 people in Cyprus were living with cancer. This ranks Cyprus as the country with the fourth lowest five-year cancer prevalence<sup>4</sup> in the EU (with 1 543 cancer cases per 100 000 population). However, according to estimates from the EURO CARE-6 project,

Cyprus saw one of the highest increases in cancer prevalence between 2010 and 2020 (Figure 4). Cancer prevalence among the general population increased by 36%, compared to an EU average of 24%, signifying the fourth highest growth in the EU. 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.

**Figure 4. Cancer prevalence in Cyprus increased steadily between 2010 and 2020**



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

<sup>4</sup> Cancer prevalence refers to the proportion of the population who have been diagnosed with cancer and are still alive, including those currently undergoing treatment for cancer and those who have completed treatment. Five-year cancer prevalence includes people who have been diagnosed within the previous five years, while lifetime prevalence considers those who have ever received a cancer diagnosis.

### A systematic process for data collection is necessary to monitor cancer inequalities in Cyprus

Cyprus has maintained and operated a National Cancer Registry since 1998 (see Section 5.2). Although the Registry provides highly detailed and up-to-date information on cancer incidence and mortality, currently there is no linkage to socio-economic variables, which could facilitate use of the data as a tool to monitor disparities in incidence or outcomes of care.

Available survey-based evidence on gender and socio-economic inequalities in exposure to risk factors, participation in cancer prevention and access to early diagnosis imply that differences in disease outcomes may be marked. Independent small-scale (i.e. not at the national level) studies have shown evidence of geographical variation in incidence and mortality, as well as divergence in outcomes due to socio-economic deprivation (Giannakou & Lamnisis, 2022). Specifically, parts of the east coast of Cyprus appear to have up to 15% higher standardised incidence ratios and standardised mortality ratios than the country’s averages, and higher mortality-to-incidence ratios are observed in rural and remote areas

of the country compared to metropolitan areas. A systematic national process to monitor socio-economic inequalities in access to cancer services and outcomes of cancer care is needed.

### Establishment of the National Cancer Institute is ongoing

Following the update to the National Cancer Strategy in 2019 (the first version of which was published in 2009), Cyprus is in the process of revamping and expanding a series of core activities on population screening and data collection. The 2019 Strategy was created with a mission to organise all available cancer resources in the country into a unified network, to create a network of data and information that will be available to the scientific community, to organise prevention on a country-wide basis, to promote research and to improve cancer care overall, using a multidisciplinary approach. The Strategy is set to align with Europe’s Beating Cancer Plan (Box 1), with current core actions focusing on early detection programmes and access to care. The country has invested in infrastructure (facilities and equipment) in an effort to expand its national screening programme for cancer (see Section 4).

#### Box 1. Cyprus updated its National Cancer Strategy in 2019

Cyprus’s National Cancer Strategy aims to combat cancer risk factors like smoking, alcohol, unhealthy diet, inactivity, obesity, occupational hazards, environmental factors and genetic predisposition (although prevention is not a major focus); enhance early detection by establishing a National Cancer Institute, expanding screening programmes and implementing self-testing for colorectal cancer; improve timely diagnosis and palliative care services; and enhance psychological support and patient reintegration (although this is not covered extensively) (Table 1). Additionally, the Strategy seeks to improve research and innovation by upgrading the National Cancer Registry, integrating it into the National Cancer Institute, training health professionals and improving registry interconnectivity. Paediatric cancer is also a focus, and the Strategy outlines several measures to be implemented, while cancer inequalities are less emphasised, but better access is discussed.

**Table 1. Cyprus’s National Cancer Strategy is partly aligned with Europe’s Beating Cancer Plan**

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

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

Source: Adapted from “Study on mapping and evaluating the implementation of Europe’s Beating Cancer Plan” (not yet published).

In December 2023, the Cypriot Government announced an allocation of designated funding to establishment of a National Cancer Institute. This announcement followed extensive public debate and disagreements after the government's initial decision to omit the allocation from its 2024 state budget (Das, 2024). Nevertheless, according to recent statements by government

officials, funding has been secured. The Institute will be a significant addition to the cancer policy framework in Cyprus, as it will be responsible for the organisation, evaluation, and accreditation of all oncology services, focusing on the key pillars of action: prevention, early diagnosis and treatment, research, and innovation, as outlined in the National Cancer Strategy.

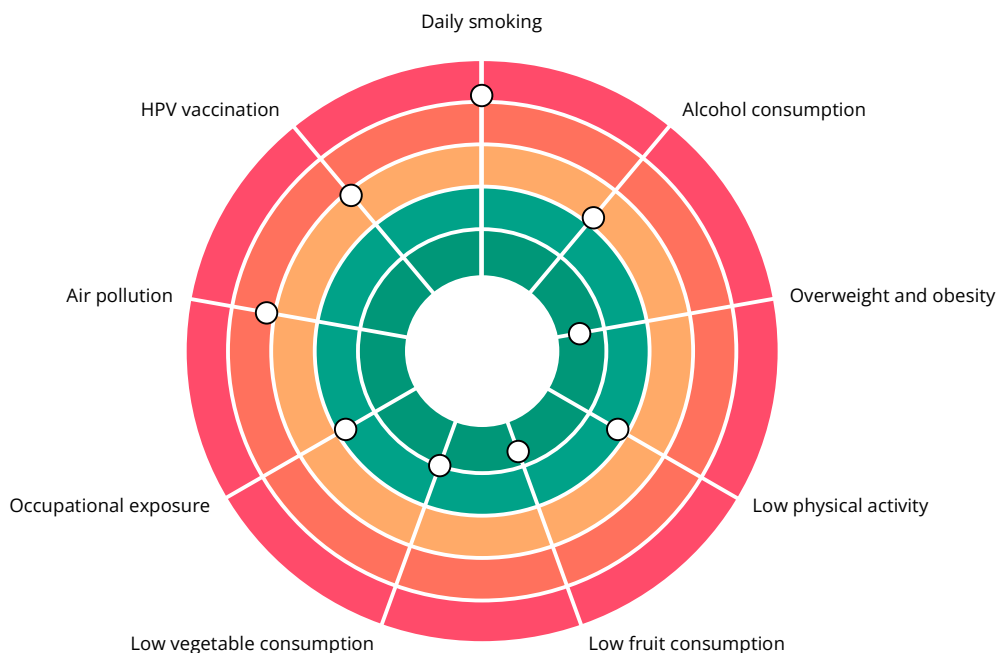
### 3. Risk factors and prevention policies

#### The reduction of population exposure to risk factors is the key to efficient cancer control

In Cyprus, daily smoking, alcohol use, dietary habits, overweight and occupational hazards account for over 50% of total cancer deaths. A

snapshot of the prevalence of behavioural and environmental risk factors for cancer reveals that Cyprus performs better than most EU countries in the field of dietary habits, such as vegetable and fruit consumption (Figure 5).

**Figure 5. Cyprus performs worse than other EU countries on smoking prevalence and high levels of air pollution**



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

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

The overweight and obesity rate (48% of the population) is also lower than the EU average (54%), but shows a growing trend compared to a decade ago. In terms of primary prevention, in 2023, the proportion of girls who received all

recommended doses of the HPV vaccine by age 15 was 67% in Cyprus, compared to 64% on average in the EU. For boys, this figure stood at 50%. The higher HPV vaccination rate likely results from extensive campaigns that took place during

recent years in Cyprus, and the school-based HPV vaccination programme (Box 2). On the other hand, air pollution and daily smoking continue to be

the most pronounced threats, compared to other EU countries.

### Box 2. Human papillomavirus vaccination in Cyprus is a success story

Cyprus was not among the first countries in Europe that implemented vaccination against HPV. However, although other countries in the EU started introducing the vaccine in the late 2010s, Cyprus initiated a country-wide vaccination schedule in 2016. Discussions about the possibility of eradicating HPV began in 2010, following a set of initiatives from the Cyprus Association of Cancer Patients and Friends. These mainly focused on awareness and screening for HPV-related illness, and on advocating introduction of the HPV vaccine in the national vaccinations schedule. In 2016, the vaccine was made available, free of charge, to girls aged 12. In 2020, coverage was expanded to girls and boys aged 11-13. As an exception to the general rule, fully reimbursed HPV vaccination became available to people aged up to 19 until the end of 2023, to increase coverage (as a catch-up vaccination policy). Furthermore, in 2022, coverage was further expanded to immunocompromised men and women aged 18-26. Combining awareness campaigns with reduced barriers to access and support from the medical community has led to significant progress in vaccination coverage.

### Daily smoking remains a major public health issue, although the rate has decreased faster in Cyprus than across the EU

Smoking in Cyprus follows a declining trend, both in terms of the percentage of people that smoke on a daily basis (falling from 26% in 2014 to 23% in 2019) and in terms of cigarettes smoked per day. As in most countries, the percentage of daily smokers is higher among men (32%) than women (13%). This also shows a declining trend since 2014, when the prevalence of smoking was 38% among men and 14% among women. Income plays a pronounced role in daily smoking prevalence, with significant differences in smoking prevalence between the lowest (24%) and highest (19%) income quintiles.

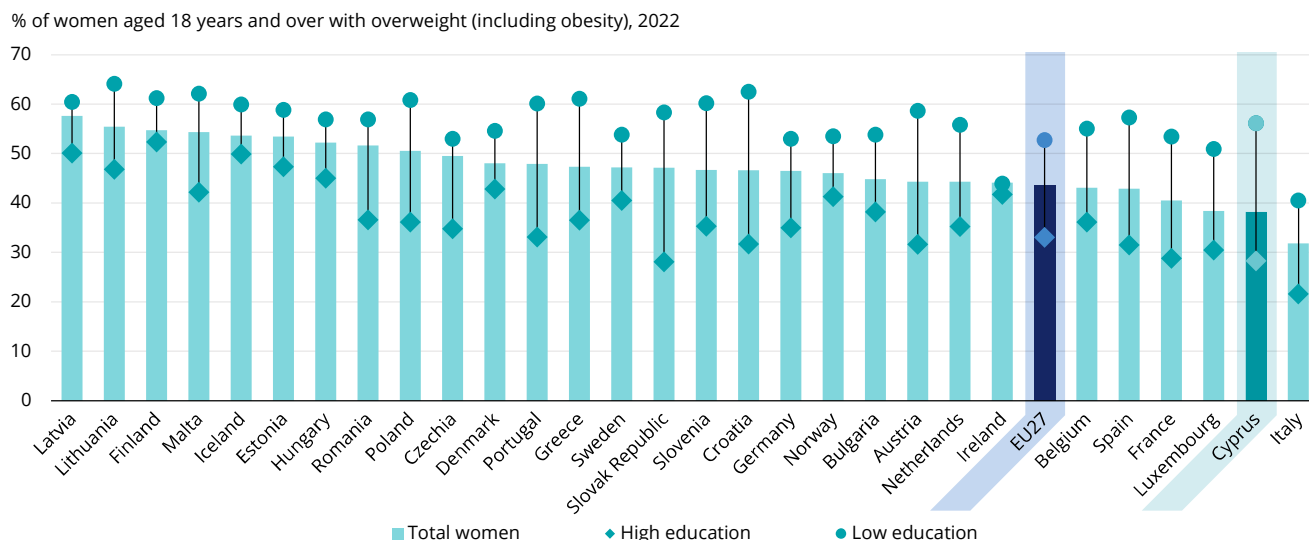
Cyprus is among the countries that have implemented risk factor-specific interventions in recent years. With the aim of tackling smoking, the predominant risk factor for cancer, Cyprus has undertaken a number of activities, in accordance with its signing and ratifying of the WHO Framework Convention on Tobacco Control (in 2005). The country has enforced bans on tobacco advertisements, levied taxes on cigarettes and banned smoking in public places (in 2009, with follow-up legislation to strengthen this policy in 2017). In 2017, Cyprus established the Cyprus National Addictions Authority, which is responsible

for organising smoking cessation programmes. Health insurance fully reimburses nicotine replacement therapies – Cyprus is one of only three countries in the EU to do so – for those who wish to quit smoking, alongside a consultation intervention with a physician. In terms of efficiency of cancer policies, according to WHO's MPOWER indicator, Cyprus performs well in the domains of monitoring tobacco use, protecting people from smoke, offering help for quitting and warning about the dangers of tobacco.

### Overweight and obesity continue to be a major issue in Cyprus, with large socio-economic gaps

Although lower than the EU average (51%), overweight rates constitute a key concern for Cyprus, as almost half of the population (48%) has a body mass index (BMI) above 25 in 2022. Gender imbalances are quite pronounced: 58% of men have a BMI above 25, whereas among women the rate is estimated at 38% (below the EU average of 44%). Education plays a key role in the prevalence of obesity among women in Cyprus. According to 2022 data, 56% of women with lower education levels in Cyprus are overweight or obese, compared to 28% of women with higher education levels. This is the third highest education-related gap in the EU (after Croatia and the Slovak Republic) (Figure 6).

**Figure 6. Prevalence of obesity among women is low in Cyprus compared to the EU, but socio-economic differences are pronounced**



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

Among adolescents, overweight and obesity is marked by a social gradient, with 23% of children from the top 20% of family affluence based on the Family Affluence Scale overweight or obese compared to 35% of those among the bottom 20% of family affluence.

Cyprus’s slightly better performance in overweight and obesity rates can be attributed to modest improvements in dietary habits and physical activity. In 2022, 32% of Cypriot adults consumed fruits less than once daily (compared to 39% in the EU), and 35% consumed vegetables less than once daily (compared to 40% in the EU). Additionally, 42% of adults engaged in physical activity at least three times a week, surpassing the EU average of 31%. Among 15-year-olds, 33% consumed fruits daily (compared to 30% in the EU on average), while 38% consumed vegetables daily (compared to 34% in the EU). Physical activity rates among this age group were also slightly above the EU average, with 16% exercising daily compared to the 15% EU average.

Obesity policies are less well-developed in Cyprus than in other EU countries. Although the country has an adult and a child obesity strategy, other popular strategies used in EU countries that aim to tackle obesity are lacking. Health-related food taxes or tariffs – such as sugar taxes or soft drink taxes – have not been implemented. The same applies for voluntary front-of-pack labelling (positive and/or negative). The types of food and drink available in schools are regulated, but no restrictions apply to sales of sugar-sweetened beverages from school canteens. Health service activities – such

as nutrition advice and counselling or physical activity counselling, assessment and prescriptions in primary care – are not offered on a systematic basis. These are important omissions in view of the rising prevalence of obesity in recent years.

**Alcohol consumption in Cyprus is decreasing and close to the EU average**

According to the WHO Global Health Observatory, alcohol consumption in Cyprus decreased slightly over the past decade among people aged 15 and over, from 10.6 litres per person in 2012 to 9.6 litres in 2019. This is slightly lower than the EU average of 10.0 litres. The frequency of heavy episodic drinking in Cyprus is the lowest in the EU for both men and women. In 2019, only 4% of adults reported heavy episodic drinking at least once a month (1% of women and 7% of men, compared to 11% of women and 27% of men across the EU).

Cyprus enforces a restriction on density of both on- and off-premises alcohol outlets, and has banned sales of alcohol products to people aged under 18. To reduce heavy episodic drinking among children and adolescents, the Cyprus National Addictions Authority, among other initiatives, supports training activities on responsible sales and service of alcohol for hospitality professionals, and develops actions among young people in the school environment. In general, Cyprus performs well in policy areas such as access to health services for counselling on alcohol use, school and workplace policies, and reducing availability for minors. However, more effort is needed to strengthen regulation of marketing – especially for

advertisements that target younger people through new media – and to implement pricing policies, such as taxation or minimum unit pricing, so that cheap alcohol becomes less affordable.

### Policies to reduce air pollution need to be strengthened

Air pollution in Cyprus, measured through particulate matter classified according to size (PM<sub>2.5</sub> refers to particles less than 2.5 micrometres in diameter) was 13 µg/m<sup>3</sup> in 2020. This rate is higher than the EU average of 12 µg/m<sup>3</sup>. Cyprus’s figures have improved since 2014 (16 µg/m<sup>3</sup>), probably owing to a set of policies implemented to counter exposure to environmental factors. Among these, the Law on Environmental Impact Assessment of Certain Works, passed in 2018, made it necessary for project developers to submit a dossier of information to the Environment Service in order to acquire an environmental permit. The Law specifically mandates detailing of the potential impact of the project on the environment. However, mortality rates from PM<sub>2.5</sub> were still higher in

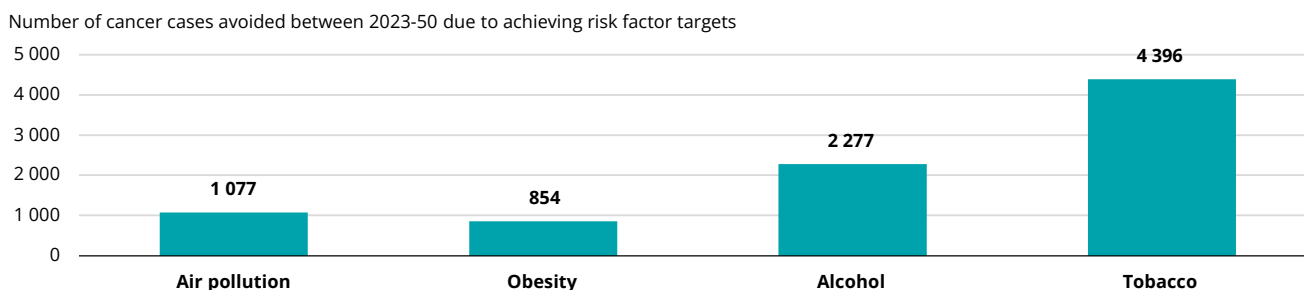
Cyprus in 2021, where premature death rates were almost a quarter higher than the EU average.

The National Cancer Strategy prioritises control of air quality in schools by the Ministry of Health, as well as occupational exposure to known risk factors.

### Reductions in prevalence of the main cancer risk factors would prevent new cancer cases

Like all countries in Europe, Cyprus has a substantial opportunity to prevent new cancer cases in the country by focusing on primary prevention. According to OECD Strategic Public Health Planning (SPHeP) modelling work, the biggest potential reduction – of 4 396 cancer cases between 2023 and 2050 – would occur if tobacco reduction targets were met (Figure 7). Meeting the alcohol target could reduce the cancer burden by 2 277 cases over the same period; an additional 1 077 cases could be avoided if air pollution targets were met, and 854 cases if obesity targets were met.

**Figure 7. By controlling tobacco and other risk factors, Cyprus could see a substantial reduction in new cancer cases**



Notes: The target for tobacco is a 30% reduction in tobacco use between 2010 and 2025, and less than 5% of the population using tobacco by 2040. For alcohol, the target is a reduction of at least 20% in overall alcohol consumption and a 20% reduction in 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<sub>2.5</sub> level capped at 10 µg/m<sup>3</sup> by 2030 and at 5 µg/m<sup>3</sup> by 2050. For obesity, the target is a reduction to the 2010 obesity level by 2025.

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

### Spending on prevention is low in Cyprus

Cyprus currently spends around 2.5% of total health expenditure on prevention<sup>5</sup> in 2022. Although this is higher than in previous years (spending on prevention was as low as 0.7% of total healthcare spending in 2013), it remains considerably lower than the EU average of almost 6%. Most of the funds allocated to prevention are directed towards early disease detection programmes. This represents an almost seven-fold increase compared to 2013, and is mainly due to the gradual establishment

of population screening programmes. However, other policies on prevention – such as information programmes or healthy condition monitoring programmes by general practitioners – appear to be underfunded.

<sup>5</sup> 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.

## 4. Early detection

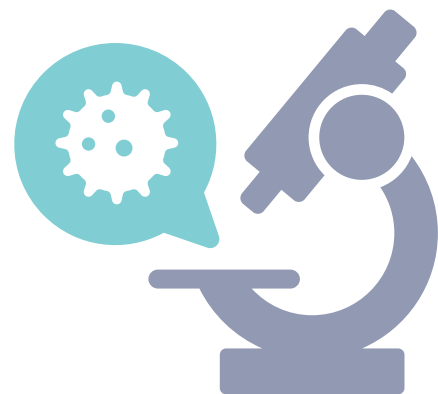
### Cyprus has made significant efforts to align with the Council recommendation on cancer screening

Before the establishment of the General Health System (GeSY) in Cyprus in 2019, no institutionalised efforts for early detection were in place, in the form of country-wide, population-based screening programmes. The only exception was a district-based screening programme for breast cancer, initiated in 2003, that covered a narrow segment of the population (with a target age of 50-69). Attempts were made to expand the programme to other districts, which led to increases in the number of screening sites. Until recently, there were no other national organised screening activities for any cancer type apart from breast cancer. As a result, early detection was done mainly on an opportunistic basis – an approach that is known to create issues of efficiency and inequalities in access (De Prez et al., 2023). This is especially important for Cyprus, given that the system had a very high share of private out-of-pocket payments, which created and sustained significant socio-economic inequalities in access to a number of services – including screening. In this light, substantial socio-economic inequalities were observed, according to the European Health Interview Survey (EHIS). Women with lower education levels had approximately 15% lower probability of participating in screening (49%) than those with higher education levels (57%).

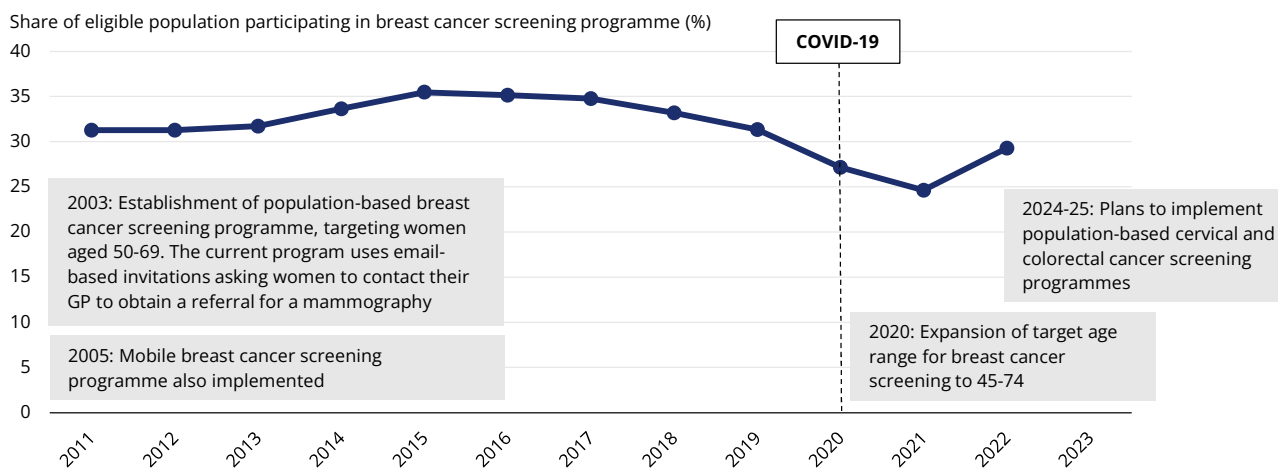
In 2019, the country initiated operation of GeSY in an attempt to create – for the first time in the history of the country – a social health insurance system. This is funded from public sources and from employee, employer and pension contributions. The aim of the system is to secure universal coverage and equity in access to health services through provision of a package of services with no (or minimal) co-payments. Following the establishment of GeSY and its mandate to secure universal access, Cyprus actively attempted to align with EU recommendations on cancer screening. For this purpose, a set of policies on the setup and expansion of population-level early diagnosis programmes has been implemented, and investments have been made in facilities and equipment, to assist this national effort.

### Cyprus has expanded the breast cancer screening programme

Using a step-wise approach, Cyprus has expanded its national population-based screening programme for breast cancer in recent years, both geographically and in terms of eligibility. After 2020, increases were made in the target age range to include a higher percentage of women in the general population. Currently, Cyprus has the second most inclusive (in terms of eligible ages) breast cancer screening programme in the EU (after Iceland and Sweden, which both use a 40-74 age range), with a target range of 45-74. The programme uses an email-based invitation strategy. Women who receive an invitation should contact their general practitioners (GPs) to obtain a referral for mammography. Testing is repeated every two years. In 2022, based on programme data, the proportion of women of screening age (usually 50-69 years of age) receiving mammography over the past two years was 29% (Figure 8). Based on the 2019 EHIS however, the proportion of women aged 20-69 who had been screened for breast cancer within the past two years is much higher at 66%, reflecting the important role of opportunistic screening in Cyprus.



**Figure 8. Cyprus's population-based programme for breast cancer screening has been expanded over time**



Notes: Programme-based data. The data refer to the proportion of women aged 50 to 69 years who received a mammography within the previous 2 years.

Source: OECD Health Statistics 2024.

### Cyprus is implementing a population-based programme for colorectal cancer screening

Early detection of colorectal cancer in Cyprus is based on opportunistic checks, mainly via the use of colonoscopy. The invasive nature of the test and the need to pay for the examination out of pocket are reasons explaining the low participation rates. According to EHIS, in 2019 only 22% of the population aged 50-74 had undergone a colorectal screening test, which is among the lowest percentage in the EU.

In response to this situation, Cyprus is in the final stages of implementing a national cancer screening programme for colorectal cancer. The eligible age range is 50-74, in accordance with the updated Council recommendation of 2022. The method of choice for screening is faecal immunochemical testing, a practice that has been documented to provide increased rates of participation, in a cost-effective manner. Operationally, the programme will be based on personalised invitations that will be sent with screening kits, with results tested by designated laboratories. The time interval for repeated examinations has been set at two years, as performed in most other EU countries.

### Cyprus plans to implement a population-based cervical cancer screening programme

In an effort to align with Europe's Beating Cancer Plan goal of eliminating cervical cancer through vaccination against HPV and setup of screening with HPV-based testing, Cyprus plans to implement a cervical cancer screening programme. Currently, opportunistic screening takes place via

conventional cytology/pap tests and HPV-DNA tests, following a physician's recommendation. Although this has led to an uptake in cervical cancer screening within the previous three years in Cyprus (69% in 2019), there are marked differences across income and education groups. Specifically, 79% of women with higher education levels reported having had a smear test within the past three years, whereas the participation rate among women with lower education was at 50% in 2019. Geographical imbalances also appear, as women in metropolitan areas are more likely to have undergone a cervical cancer screening test within the past three years (72%) than those in rural or remote areas (62%).

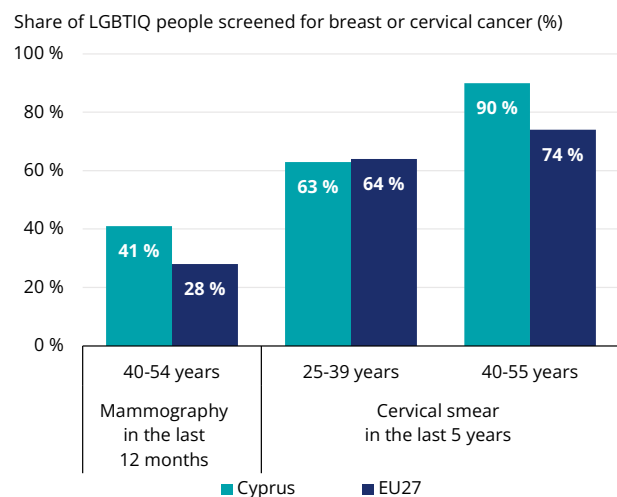
Civil society efforts, such as the HPV Eradication Programme carried out by the Cyprus Association of Cancer Patients and Friends – a voluntary non-profit non-governmental organisation (NGO) that provides a spectrum of sociomedical services to cancer patients and their families – have contributed to improve participation in cervical screening and HPV vaccination coverage.

Alongside the set-up of nationwide population-level testing for cervical cancer, a series of information activities are mandated in the National Cancer Strategy to promote participation, with a target of 80% of eligible women. Quality assurance certification and accreditation of laboratory providers by an independent authority is also planned.

## LGBTIQ people in Cyprus participate more in breast and cervical cancer screening than their counterparts in the EU

According to the EU LGBTIQ Survey III, participation in cancer screening among LGBTIQ persons is higher in Cyprus than in other EU countries. For breast cancer screening, 41% of LGBTIQ cisgender females, trans women and intersex people aged 40-54 years reported having had a mammogram in the previous 12 months, much higher than the EU average of 28%. For cervical cancer screening, 63% of the relevant LGBTIQ population aged 25-39 in Cyprus reported having had a smear test in the previous 5 years (on par with the 64% in the EU), while 90% of those aged 40-55 in Cyprus reported a smear test (much higher than the 74% in the EU) (Figure 9).

**Figure 9. Participation in cancer screening among LGBTIQ people aged over 40 is higher in Cyprus than in other EU countries**



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).

## A plan is under way to expand the screening programme against cancer

Cyprus is also considering implementation of lung and prostate cancer screening programmes in the near future. Based on parliamentary discussions that have taken place in 2024, the goal is to implement a population-based prostate cancer screening programme that will be based on EU standards, to be set up in 2025.

## Several initiatives aim to increase the reach of cancer screening

The establishment of GeSY created radical change in many aspects of the health system in Cyprus, mainly in terms of service delivery. An expanded

network of primary healthcare service providers was put in place, based on the enrolment of citizens with a GP. In this new landscape, GPs are expected to play a crucial role in cancer screening activities by encouraging their eligible enrollees to take part in designated tests.

To address disparities, public awareness campaigns and initiatives to reach vulnerable populations are under way, organised by both the government and civil society. In addition to the standard “reactive” practices in screening, i.e. participation of the eligible population through making appointments in designated facilities, Cyprus has also implemented a mobile cancer screening programmes for breast cancer. Moreover, for remote populations, collaboration between local authorities and the Ministry of Health aims to facilitate participation of the target population by providing transport to screening centres.

## Cyprus plans to link cancer-related data to improve quality and efficiency of care

The issue of data management is acknowledged to be of high importance. Cyprus plans to integrate the existing National Cancer Registry with the facilities that constitute the screening network, to ensure an uninterrupted flow of information. Currently, the data collected in existing cancer screening databases include information on socio-economic status, but no reports are publicly available. Data collected from population-based and non-population-based screening are used in quality improvement cycles. Cyprus is also in the process of taking advantage of evolutions in the field of machine learning, with an end goal of introducing artificial intelligence as part of its breast cancer screening programme.

# 5. Cancer care performance

## 5.1 Accessibility

### **Healthcare expenditure in Cyprus has shifted from predominantly private to predominantly public spending**

The healthcare system in Cyprus was historically financed through private contributions. Private expenditure accounted for over 50% of total expenditure throughout 2010-18, and currently accounts for 35% in 2022. The great majority of private expenditure consisted of out-of-pocket payments and, to a lesser extent, of voluntary healthcare insurance schemes. This reliance on out-of-pocket payments, which is now the sixth highest among EU countries, led to gaps in population coverage for essential services, low levels of supply from the public providers due to underfunding of the system, fragmented service delivery and barriers in access – especially for lower-income groups. Access problems among specific population groups became increasingly pronounced during the 2013 financial crisis (Petrou, 2019).

The introduction of GeSY in the late 2010s led to significant changes in the structure of fund pooling in Cyprus. The system uses a mix of tax (i.e. state budget funds) revenues and wage/pension contributions, in an effort to guarantee universal access. This has led to both an increase in total healthcare spending (at 9.1% of GDP in 2022) and a dramatic decrease in out-of-pocket spending (at 30% in 2022). Nevertheless, total healthcare spending in Cyprus remains below the EU average (10.4% of GDP), albeit with a smaller gap than in previous years.

### **Unmet needs for health services are low, but financial protection from catastrophic expenditure remains an issue for poorer households**

According to recent data (2023) from the EU-SILC Survey, Cyprus has one of the lowest percentages of self-reported unmet needs for medical examination (0.1%) in the EU, where the average is 2.4%. This figure for Cyprus rose from 0.6% in 2015 to 1.5% in 2019, but has remained between 0.1% and 0.3% since 2019. This period coincides with the establishment of GeSY and the strengthening of public expenditure on health.

Data from 2015 showed that 5% of households in Cyprus suffered from catastrophic health expenditure (Thomson, Cylus & Evetovits, 2019). Although this was lower than the EU average (5.4%), it constitutes an important problem. Poorer households in Cyprus in 2015 had an almost 8-fold higher probability of incurring catastrophic expenditure than more affluent ones. There are no up-to-date data on catastrophic health spending in Cyprus. The reduction in out-of-pocket spending on health due to the establishment of GeSY could mean that incidence of catastrophic spending is lower, but solid and updated data are necessary. This is especially important in the case of cancer, as the disease is a key driver of catastrophic health expenditure.

### **Delivery of cancer care in Cyprus mainly follows a hospital-centred model**

Delivery of care in Cyprus, following the establishment of GeSY, is mainly done through a contractual model between the Health Insurance Organisation and its certified providers. Providers can be either public or private entities. Currently, GeSY, through its Health Insurance Organisation (a legal entity established to oversee its implementation) has contracts with 64 providers of inpatient healthcare services, five providers of palliative care and three rehabilitation centres. GeSY beneficiaries can access inpatient services at low or no cost. Among the providers of care, the State Health Services Organisation (SHSO) is the largest in Cyprus, with 9 hospitals and 37 health centres in all cities and districts.

All major cities in the country have a general hospital. Oncology clinics are mostly concentrated in large urban centres, such as Nicosia and Limassol; in other hospitals operated by the SHSO, onsite visits by oncologists take place at regular intervals. The Bank of Cyprus Oncology Centre handles a major part of the demand for tertiary oncology services in the country, essentially operating as a public oncology centre. Non-beneficiaries of GeSY can visit either an SHSO facility or a private sector facility for cancer services, on a private basis – paying either out of pocket or through voluntary health insurance. In 2022, there were 50 172 recorded visits to GeSY-contracted oncologists in Cyprus. This figure is considerably higher compared to 2020 (27 819 visits) and 2021

(39 507 visits). In 2022, the numbers of patients in receipt of oncology services were 4 069 for chemotherapy, 21 714 for radiotherapy and 1 927 for positron emission tomography (PET) and CT scans.

### Cyprus has more physicians per 1 000 new cancer cases than the EU average

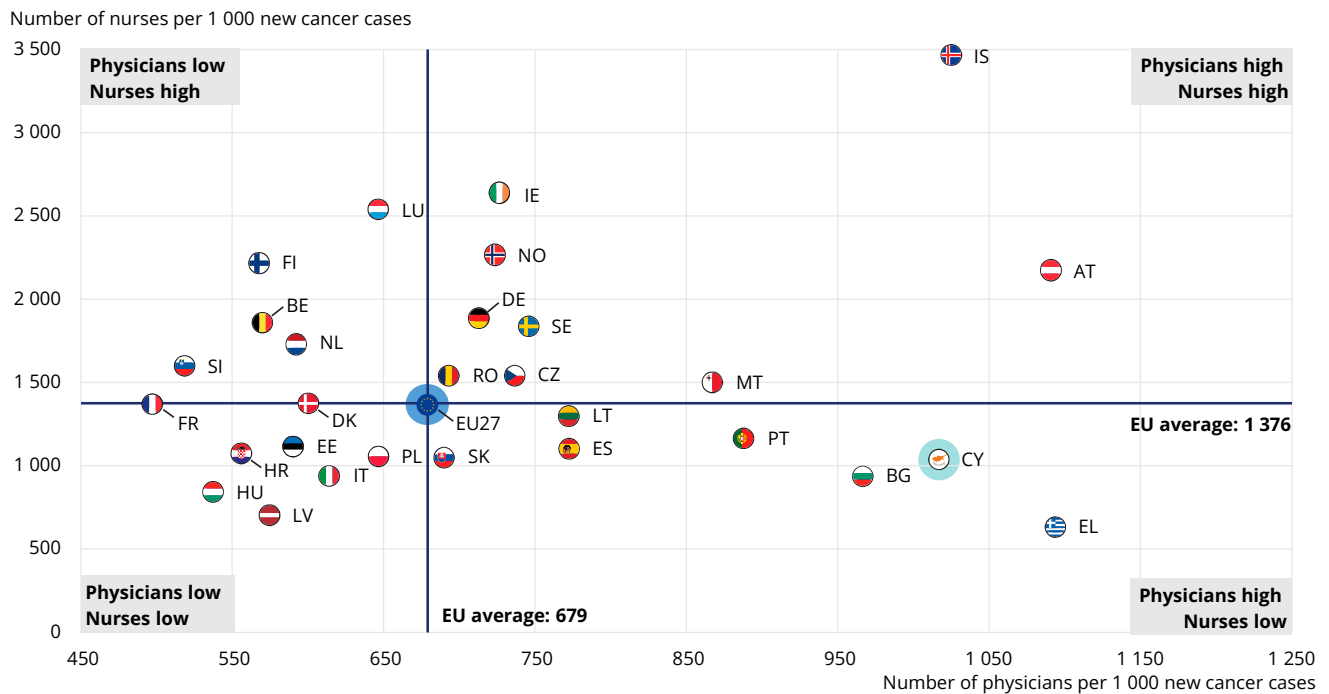
The healthcare workforce is an integral prerequisite for future sustainability of health systems internationally (Athanasakis et al., 2022). Adequate numbers of healthcare workers with newer and more diverse skills are required to meet future demand for health services, and to deliver innovative models of care. This is especially important in a field of constant evolution, such as cancer.

In Cyprus, the number of practising physicians in the healthcare system is above the EU average, with approximately 5 physicians per 1 000 population. The number of practising physicians has almost doubled compared to a decade ago, especially following the introduction of GeSY and the introduction of financial incentives for physicians to work as “preferred” doctors in primary healthcare or public hospitals. Incentives include higher remuneration for those acting as

“preferred” physicians, via a capitation system complemented by pay-for-performance components on activities to increase participation of enrolled people in screening programmes and home visits to patients with mobility restrictions. Physicians working in public hospitals received an increase in wages and activity-based bonuses. These changes created a strong financial motive that attracted physicians who worked in neighbouring countries – such as Greece – and Cypriots working abroad to relocate to Cyprus.

The situation is different when it comes to nurses. The number of practising nurses in Cyprus is well below the EU average, with a density of almost 5 per 1 000 population (compared to 9 per 1 000 in the EU). The total number of practising nurses increased by approximately 10% during the last decade – a rate well below that of physicians. Specifically, regarding cancer, In Cyprus there are 1 017 physicians per 1 000 new cancer cases, which is higher than the EU average ratio of 679 per 1 000 (Figure 10). The country has 1 040 nurses per 1 000 new cancer cases, which is lower than the EU unweighted average of 1 376 per 1 000. Therefore, Cyprus belongs to the group of countries with a high supply of physicians and a low supply of nurses relative to new cancer cases.

**Figure 10. Cyprus has a higher density of physicians but lower density of nurses per cancer case**



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.

Although Cyprus does not specifically report a shortage of inpatient oncology nurses, the ratio of physicians to nurses implies an imbalance that could affect the quality and outcomes of care. The ratio also hinders the introduction of policies that could enhance the sustainability of the system, such as task-sharing or task-shifting. According to the European Oncology Nursing Society (EONS), Cyprus has a low performance in the domains of patient and occupational safety and recognition (EONS, 2024). Continuous investment in human capital is necessary to support this integral aspect of cancer care.

In response to the growing issue of staff shortages, Cyprus plans to implement a series of actions to strengthen its human capital in health. The Capacity Master Plan for Health incorporates as clear objectives the retention, recruitment and reskilling of the health workforce. Regarding physicians, the opening of university schools in the country during the last decade is expected to expand the available workforce. Financial incentives for physicians implemented during the establishment of GeSY helped to attract physicians from abroad, but the issue of nursing shortages has not been adequately addressed

**Radiotherapy equipment supply is close to the EU average, but units are only located in major urban centres**

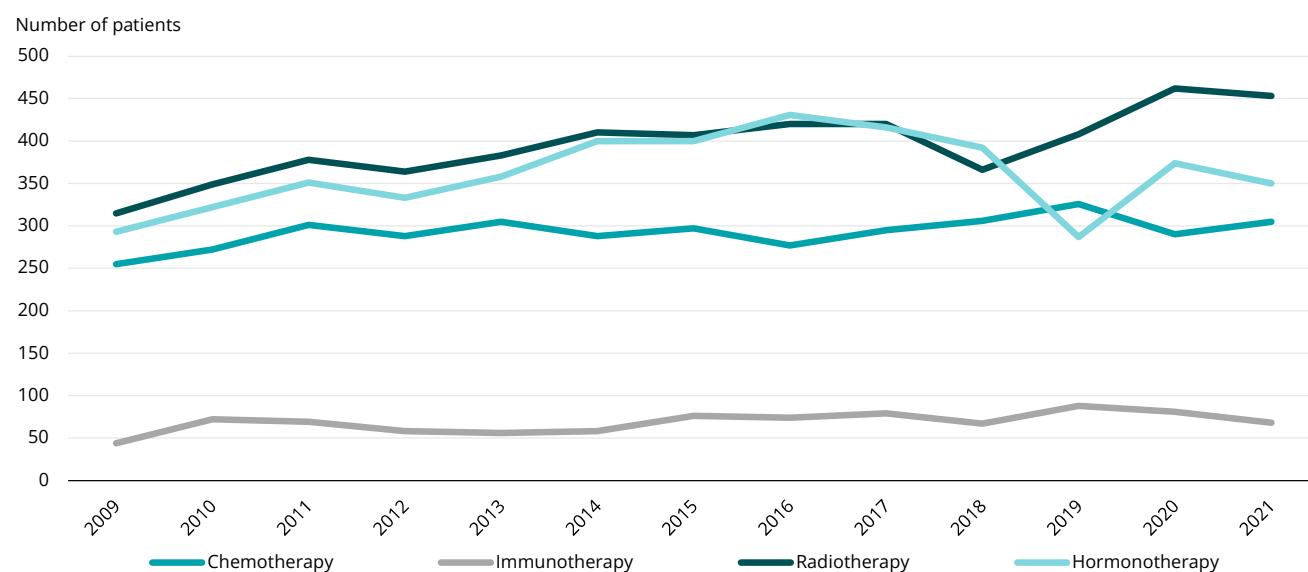
In the context of the EU’s Recovery and Resilience Facility, Cyprus has agreed to subsidise purchasing of new equipment – or substitution of obsolete equipment – for healthcare facilities. According

to the ongoing plan, the country will subsidise purchasing of innovative and/or digital equipment such as single photon emission computed tomography (CT) devices, magnetic resonance imaging (MRI) devices, telemedicine systems, radiation therapy, linear accelerators and biomarker systems for cancer or non-malignant tumours.

In 2020 Cyprus had 0.8 operational machines per 100 000 inhabitants for cancer treatment with X-rays or radionuclide. This includes linear accelerators, Cobalt-60 units, Caesium-137 therapy units, low to orthovoltage X-ray units, high dose and low dose rate brachytherapy units and conventional brachytherapy units. This ratio matches the EU average, following a period of investment in Cyprus – mainly in the private but also in the public sector – in recent years. Of note, according to the IAEA, almost all available particle therapy devices in Cyprus are below 15 years of age (and 40% are below 10 years), compared to 73% across the EU. Most of the devices, however, are located in major urban centres, highlighting a geographical imbalance and a need for patients from rural areas to travel and find accommodation – in most cases at their personal expense – for treatment administration. Given that multiple sessions are usually necessary for a course of treatment, such personal expenditure is a cause for concern regarding equal access to care.

Nevertheless, according to the National Cancer Registry, the number of women living with breast cancer who have access to radiotherapy treatment has grown, especially since 2018 (Figure 11).

**Figure 11. The number of breast cancer patients receiving radiotherapy in Cyprus is increasing**



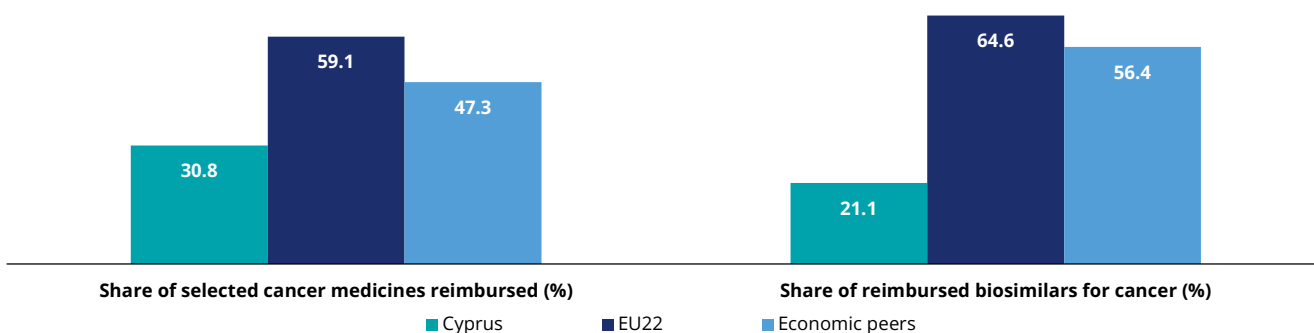
Source: National Cancer Registry 2024.

## Access to oncology medicines is lower than across the EU

To facilitate timely access to new cancer medicines Cyprus operates two types of early access schemes. The first is population-based schemes, which give access to the entire target population within the scope of an authorised indication. The second is a named-patient scheme, where individual patient access is granted in response to requests by physicians on a case-by-case basis. As a prerequisite, the medication should have obtained approval for the named indication from the European Medicines Agency (EMA). Among the policies used to improve efficiency of spending, Cyprus employs a system of mandatory switching to generics and biosimilars, when such a treatment option becomes available.

The shares of selected indications of cancer medicines that receive public reimbursement or coverage is lower in Cyprus than in the EU. In 2023, Cyprus was reimbursing about 31% of selected indications, compared to averages of almost 60% across the EU and 47% among the country’s economic peers (Figure 12). A similar picture applies for biosimilars. The share of biosimilars for cancer medicines with public reimbursement or coverage is 21%, which is lower than both the EU average (65%) and the average among its economic peers (56%). In addition, the mean time from EMA approval to public reimbursement or coverage of biosimilars is the highest across the EU (almost 1 400 days).

**Figure 12. The share of new oncology medicines and biosimilars for cancer that are reimbursed in Cyprus is below the EU average**



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

Regarding access to other elements of personalised care for cancer, such as biomarkers, Cyprus is among the countries with the highest availability and access to next-generation sequencing testing methods in the EU (Pousette & Hofmarcher, 2024).

## Waiting times are not systematically monitored in Cyprus

In cancer care, problems with waiting lists mainly pertained to availability of appointments for screening in public facilities (Kefallonitou et al., 2023). The contracting approach to service provision that was applied, as a general strategy in purchasing of services through public and private providers by the Health Insurance Organisation, alleviated the pressure.

The system currently does not report waiting times systematically or use such data as key performance indicators, as in other countries. The increase

in cancer incidence and prevalence, however, is expected to build up pressure on the system in the foreseeable future. In this light, systematically implementing such measures as accessibility indicators could help policy makers to identify and prevent such problems, especially for socio-economically disadvantaged population groups.

## 5.2 Quality

### Cyprus is moving towards centralised management of cancer cases through co-ordinated efforts

The Bank of Cyprus Oncology Centre plays a key role in the management of newly diagnosed cases of cancer. Founded in 1998, the Centre manages over 80% of cases each year. Apart from providing care, the Centre has created and sustained a network of institutions, facilities and health professionals working on detection, diagnosis, treatment and continuity of cancer care.

In an effort to address challenges in quality and co-ordination of care, Cyprus decided to set up the National Cancer Institute (see Section 2). The Institute aims to co-ordinate cancer care strategies throughout the course of the disease, including screening, access to treatment, palliative and long-term care, as well as organising research efforts. It is set to act as an aligning body for all stakeholders, including social insurance, providers, facilities, patient associations and academia.

To further bolster research, the country also established the Cyprus Cancer Research Institute (CCRI), which became operational in 2019. The founding partners of the CCRI were the University of Cyprus, Bank of Cyprus Oncology Centre and Karaiskakio Foundation. The CCRI acts as a centre of excellence in cancer research that will both be a hub for researchers throughout the country and focus on international collaboration. Research and care delivery co-ordination will be an important step forward, as the field of cancer is fragmented in Cyprus.

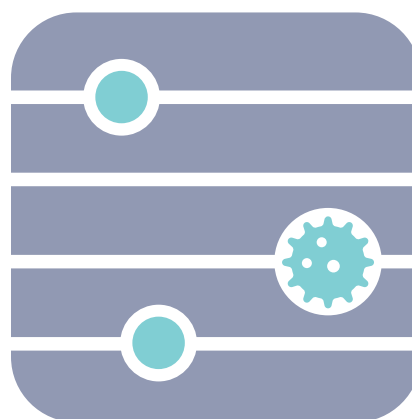
### A more holistic use of the National Cancer Registry is necessary to monitor cancer survival

Cyprus's National Cancer Registry was initiated in 1998. It records all cancer diagnoses, classified using WHO's International Statistical Classification of Diseases and Related Health Problems, 10th revision (ICD-10) codes according to age and gender. It includes data on cancer staging, diagnosis and treatment, and is linked with mortality data. However, the country does not report data on cancer incidence disaggregated by region or socio-economic status. Moreover, no data on cancer survival are systematically produced at the national level from the Registry, which could be used to monitor performance of cancer care.

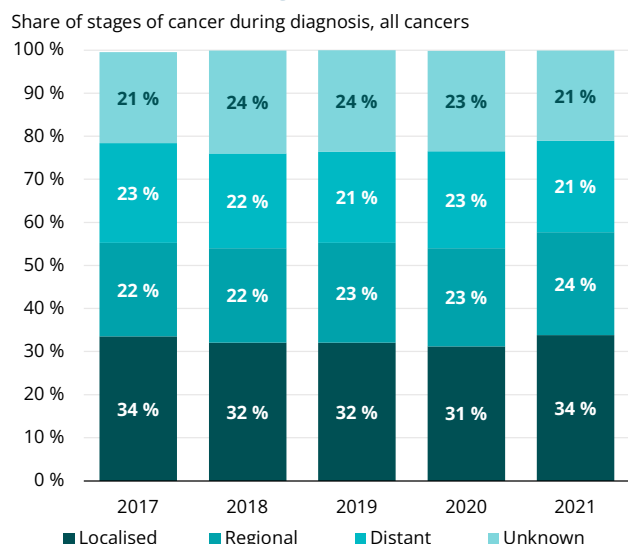
A recent analysis used data on adult women diagnosed with breast cancer between 2004 and 2017 with follow-up until 2019 (Quattrocchi et al., 2022). Increases in the age-adjusted incidence rate of breast cancer were reported in the study, mainly for localised cancers. This suggests that participation in screening might have increased early diagnosis. Five-year age-adjusted survival estimates, however, did not improve during the period of the study.

The Registry also collects information on disease staging during diagnosis (classified as localised, regional, distant, or unknown), that can be valuable inputs for monitoring the progress of reforms such as the introduction of early diagnosis policies. Regarding all cancers, in 2021, stages at cancer diagnoses were 34% localised, 24% regional and 21% distant. These figures are unchanged since 2017 (Figure 13).

For breast cancer specifically, a slight increase in patients with cancer diagnosed at an early (localised) stage is reported (Figure 14). Localised cancers constituted 58% of all breast cancer diagnoses in 2021 compared to 53% in 2017. Improved quality of breast cancer screening and increased screening participation rates (see Section 4) contribute to better disease prognosis.

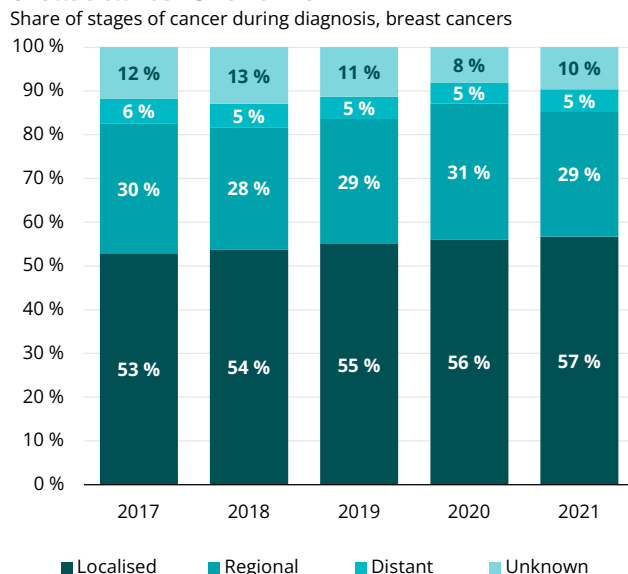


**Figure 13. Stage at cancer diagnosis for all cancers did not change over time**



Source: National Cancer Registry 2024.

**Figure 14. Cyprus saw an increase in early stage breast cancer over time**



Source: National Cancer Registry 2024.

**Steps are required to improve accountability of providers and quality of care**

Until recently, cornerstone decisions for the clinical pathway of patients – such as the choice of cancer treatment – was done on an individual (physician) basis, without an accountability mechanism that could control the quality of decisions. In a step forward, Cyprus has introduced the practice of multidisciplinary teams to deal with treatment decisions. This was done in an effort to promote transparency, accountability and evidence-based care. Alongside this, technologies that promote tele-consultations and tele-expertise are also used. A process of accreditation of healthcare facilities and professionals providing cancer services is also in place. Supply of care follows the use of international (or locally adjusted/developed) guidelines.

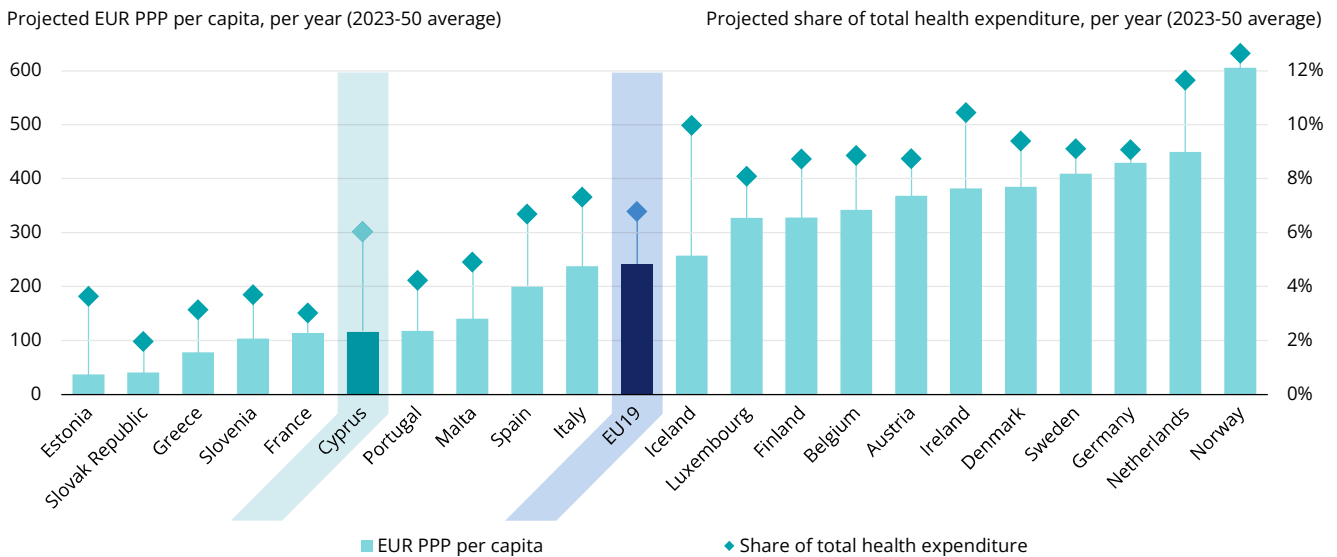
Currently, there is an effort to use patient-reported outcome and experience measures as feedback for the quality of service provision. Facilities in the national health system collect self-completed questionnaires or forms. Although this signifies some progress, major steps are required to institutionalise a more systematic approach, for both data collection and use of collected data to inform decisions or reimbursement of services provided.

**5.3 Costs and value for money**

**The burden of cancer care on health expenditure in Cyprus is anticipated to be lower than the EU average**

According to OECD SPHeP modelling work, between 2023 and 2050, total health expenditure is estimated to be 6% higher in Cyprus due to the burden of cancer. This equates to an average of EUR (PPP) 116 per person per year (Figure 15). This figure is much lower than the EU19 average (EUR 242). Overall, the per capita health expenditure on cancer care is expected to grow by 82% in Cyprus between 2023 and 2050, compared to 59% in the EU27.

**Figure 15. The projected burden of cancer on health expenditure in Cyprus is below the EU average**



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>.

**Societal costs of cancer are important, but not adequately addressed**

An important amount of cancer expenditure pertains to elements such as informal care and productivity losses, which are not typically listed in health accounts. Recent estimates show that cancer-related premature mortality costs in Cyprus per cancer death are higher than in other southern European countries (Hanly, Ortega-Ortega & Soerjomataram, 2022). Potential onset of the disease in younger ages, in accordance with trends in age incidence of cancer internationally, will aggravate this situation in the future, leading to a large impact on the economy and on society as a whole. According to OECD SPHeP modelling work, it is estimated that cancer will have a major impact on the workforce in Cyprus. During 2023-50 on average, there is expected to be a loss of 173 full-time equivalent workers (FTEs) per 100 000 people in Cyprus due to the need to reduce employment because of cancer, slightly lower than the EU average of 178 FTEs per 100 000. Additionally, cancer-related absenteeism is expected to lead to a loss of 48 FTEs per 100 000 while presenteeism will cause the loss of 55 FTEs per 100 000.<sup>6</sup>

**Cyprus is investing in cancer care, while leveraging efficiency gains**

To support efforts to control cancer financially and increase the level of services provided, the Government of Cyprus has pledged to allocate EUR 1.2 million to establishment of the National Cancer Institute. The 2024 state budget also

includes an 11% increase in the funds allocated to the Ministry of Health. Part of this increase is set to be directed towards support of screening activities.

To control cost increases and enhance efficiency, GeSY has established a process of negotiation for healthcare technologies, focusing on both pharmaceuticals and medical devices. Cyprus is also a part of the Valletta Declaration (alongside Croatia, Greece, Ireland, Italy, Malta, Portugal, Romania, Slovenia and Spain) – a co-operative effort to increase price transparency and promote joint negotiations and procurement. Cyprus is also currently in the process of strengthening its Health Technology Assessment initiatives, in an effort to align with evolutions taking place in the field at the EU level. With the aim of reducing uncertainty and improving efficiency, Cyprus operates a mechanism of managed entry agreements. This was initiated alongside establishment of GeSY and has, so far, delivered promising results (Pitsillidou, Petrou & Postma, 2023). Striving for efficiency in cancer spending on medications is also complemented by finance-based agreements (mainly price – volume agreements). An ongoing discussion is attempting to evaluate the feasibility of pay-for-performance schemes introduced within the changes to remuneration of primary care physicians (see Section 5.1), alongside a set of key performance indicators, in the national screening programme. The pay-for-performance scheme is set to act as an incentive for providers to urge their patients/enrolees to participate in organised screening activities.

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

## 5.4 Well-being and quality of life

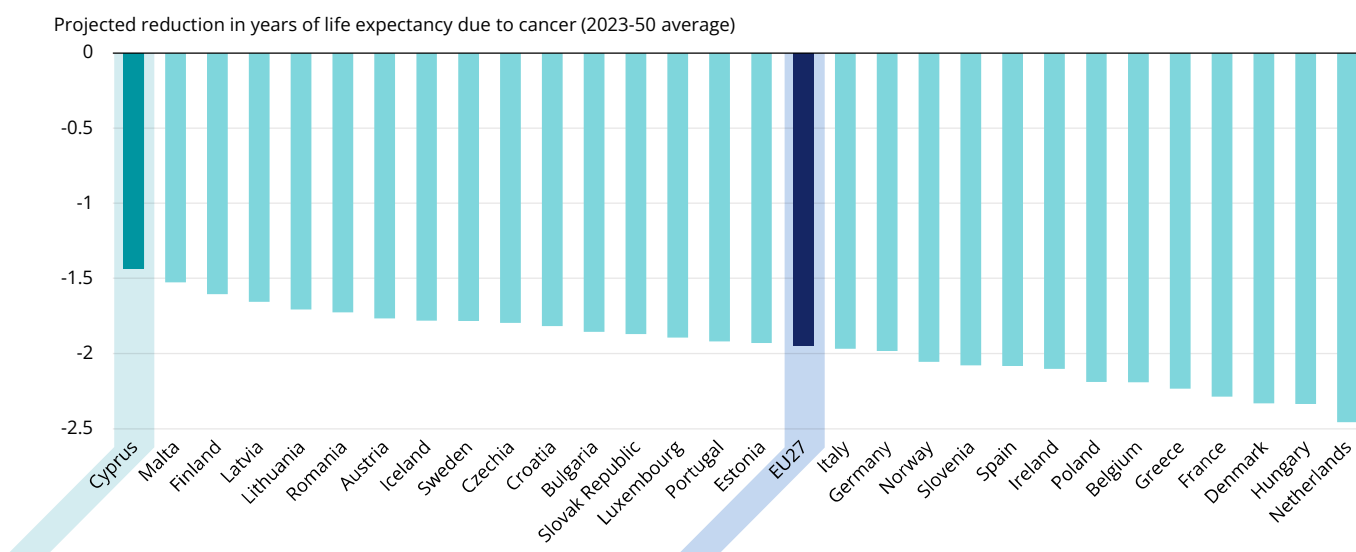
### Cancer is anticipated to reduce life expectancy and increase mental health disorders

Cancer places a heavy toll on patients and their families, but also on society as a whole. Life expectancy at birth in Cyprus was 82.5 years in 2023: one year above the EU average. However, cancer is among the causes expected to have a detrimental effect on life expectancy in the country: according to OECD SPHeP modelling work, in Cyprus between 2023 and 2050, cancer is

expected to reduce life expectancy by an average of 1.4 years compared to a scenario with no cancer (Figure 16).

In addition, cancer takes a substantial toll on the mental health of the population through its associated symptoms and treatment side effects, and impact on daily life, social roles and work. According to the OECD’s SPHeP model, Cyprus is also expected to have much higher depression rates because of cancer, at an additional age-standardised rate of 10 cases per 100 000 population per year.

**Figure 16. Cancer is expected to reduce life expectancy in Cyprus by 1.4 years between 2023 and 2050**



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>.

### Cyprus is in the process of implementing a set of policies to support the quality of life and the rights of patients with cancer

In order to support the quality of life of people with cancer and those with a history of cancer, Cyprus implements strategies such as health education programmes regarding treatment exposure and potential late and long-term effects (including dealing with pain); guidance about diet, exercise and a healthy lifestyle; and strategies for management of the emotional and mental impact of the disease, during and after the acute phase. Cancer centres are staffed with social workers, psychologists, physiotherapists and other healthcare workers, in an effort to provide holistic care. Family members are supported with allowing for leave (days off from work – unpaid) or flexible working arrangements, and family support is provided through an NGO. All recipients of the guaranteed minimum income and those not eligible for this but with insufficient income to cover their social care needs may receive additional

subsidies for coverage of these needs from the Welfare Benefits Administration Service.

A newer set of policies, that were introduced recently to support people with cancer, include fertility preservation procedures before commencing of active treatment, for which 85% of expenses are covered by the government and the remainder by patient copayment. A recent discussion in the Parliamentary Committee for Health highlighted the need for a systematic approach to timely information for cancer patients regarding fertility issues and the designated steps and choices for fertility preservation.

A law on the right to be forgotten – i.e. the right not to be discriminated against when a former cancer patient requests specific bank (credit) services or life insurance following a period of time after the disease – was passed unanimously in November 2023. For people under the age of 21, this right will be applicable from five years after

completion of their therapeutic procedures. For those aged over 21, this period is 10 years.

### **Efforts are under way to develop the supply of palliative care services**

Palliative care remains an issue, as such services have been undersupplied in recent years. The government collaborates with NGOs to support palliative care facilities in four cities. Palliative care is offered on an inpatient and outpatient basis. Typically, inpatient services include pain and symptom management, supportive treatment, psycho-social support and physiotherapy. For outpatients, care is limited to pain management, consultations with physicians, day care (mainly respite care) and physiotherapy. To improve the accessibility and quality of palliative care, a series of training programmes for physicians and nurses is in place, including training on communication skills with the patient and the family. Cyprus is also attempting to establish home-based and community-based palliative care programmes, mainly in collaboration with NGOs such as the

Cyprus Association of Cancer Patients and Friends. Efforts are under way to develop a legal framework that will pave the way for palliative services to be provided through GeSY.

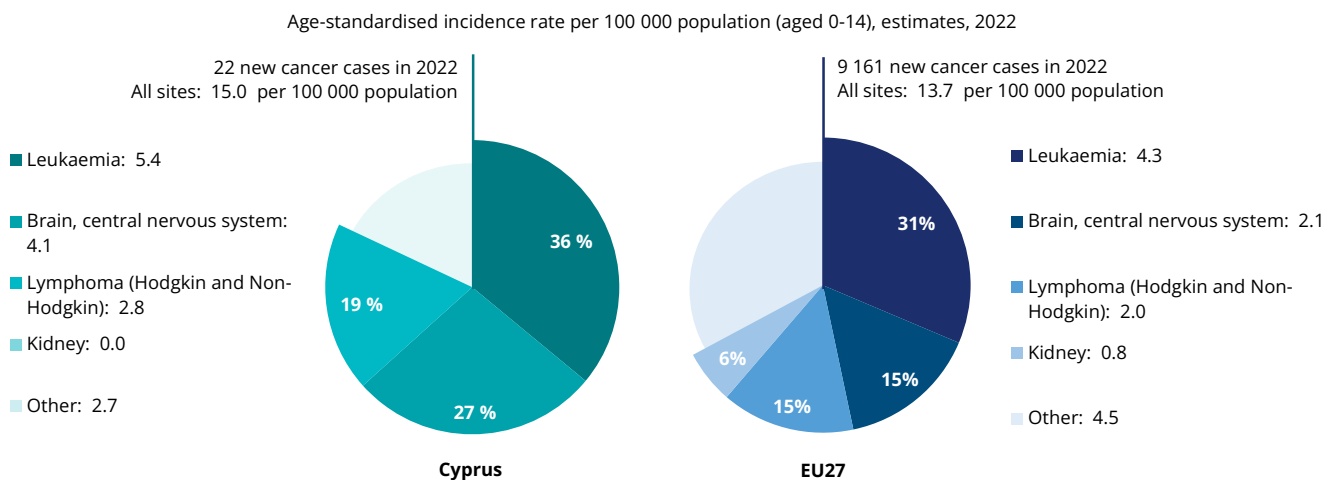
A new law is being prepared, with provisions for several types of palliative care facilities – among them hospital palliative care units, inpatient hospices, outpatient palliative services, home-based services and mobile hospital palliative care teams. For palliative care centres that are contracted with GeSY, patient admission will be based on a referral by the GP. Referral will be done on the grounds of supportive documents, such as patient history, biopsies, lab work and similar. The centres will work with patients, physicians and families to organise a treatment plan. To oversee this system, a National Council on Palliative Care will be appointed. Among other things, the Council will establish accreditation criteria for palliative centres, as well as organising and overseeing training of health professionals in palliative care.

# 6. Spotlight on paediatric cancer

According to ECIS, it is estimated that in Cyprus 22 children and adolescents up to age 15 were diagnosed with cancer in 2022. Incidence rates among children aged 0-14 were 10% higher in Cyprus (15 per 100 000 children) compared to the EU27 average of 13.7 (Figure 17). Incidence rates among boys are slightly higher than among girls, mirroring the EU pattern. The most common

cancer types are leukaemia with 5.4 cases per 100 000 children (36%), brain and central nervous system cancers with 4.1 cases per 100 000 (27%), and lymphoma, with 2.8 cases per 100 000 (19%). Eurostat data shows that mortality rates are also higher in Cyprus, with a 3-year average mortality rate of 2.3 per 100 000 children as compared to 2.1 in the EU.

**Figure 17. Cancer incidence rates among children in Cyprus are 10% 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 recent studies, incidence rates of thyroid cancer among children and adolescents is showing a rapidly increasing trend. During 1998-2017, 81 cases were identified, mainly among females, with a crude rate of 2 cases per 100 000 individuals. The annual percentage changes of crude and standardised rates were 8%, placing the incidence figures for Cyprus among the highest in the world (Loizou et al., 2021).

According to the European Society of Paediatric Oncology (SIOPE)'s Organisation of Care & Research for Children with Cancer in Europe (OCEAN) Project, organisation of care is highly centralised in Cyprus, as one institution treats children and adolescents with cancer (SIOPE, 2024). Nine of 13 infrastructural and treatment modalities are

available in the centre. It provides chemotherapy services – both inpatient and outpatient, surgery, photon radiation therapy and brachytherapy. In terms of essential cancer medicines, in 2018, 82% of the 68 medicines identified as essential for treating cancer in patients aged 0 to 18 were available in Cyprus, compared to 76% in the EU on average (Vassal et al., 2021).

The institution also operates a survivorship care clinic and provides palliative care services. However, a notable omission is the absence of any clinical trial that enrol paediatric cancer patients in Cyprus. The country needs further investment in the field of paediatric oncology – namely a specialised centre for treatment of cancer in children and adolescents.

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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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