

The Progress of Cancer Survival Information in Europe: A Review

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ABSTRACT

Aim of the Study: In recent decades, with the registration of data related to cancer patient survival in Europe, the survival rate for these patients on the continent has increased. The survival of a cancer patient depends on various factors such as the type and stage of cancer, the patient's age and general health, and the treatment method. Statistics published in this field in Europe give doctors and researchers a better understanding of prevention, early diagnosis, treatment, improving quality of life, and supportive care to increase the survival rate of cancer patients. In this regard, in 2021, the European Union also introduced a program called "Europe's Beating Cancer Plan" with the aim of combating the decline in cancer rates. The fight against cancer and increasing cancer patient survival is a comprehensive, multifaceted, and combined program that is pursued in Europe at both the continental and EU levels.

Methodology: This study affords a top-level view of statistics related to most cancers in the European Union and makes a specialty of three components: deaths from most cancers, most cancers healthcare and the supply of expert day care and system for the treatment of most cancers. A number of the facts furnished in this text are most effective available for the wider class of neoplasms, which incorporates benign and uncertain neoplasms further to malignant ones (most cancers).

Findings: Europe's Beating most cancers Plan helps EU countries' paintings to prevent most cancers and to make sure a excessive first-rate of existence for cancer patients, survivors, their families and careers. It's far based round some of key regions in which the European can upload most fees: prevention, early detection, diagnosis and remedy and high-quality of lifestyles of most cancers' sufferers and survivors.

Conclusion: The implementation of the movement Plan towards cancer is, of route, being pursued by way of the implementation of several complementary applications by way of the ecu Union to sell more healthy life.

Keywords: Cancer; Europe; Risk; Survival; European Union; Economic Conditions; Healthcare System; Health Services; Effective Treatments; Government Support; Social Security; European Countries.

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1. INTRODUCTION

Cancer turned into the second one leading cause of dying in the EU Union in 2021, claiming more than one million lives, accounting for almost 22% of all deaths in the place. Notwithstanding scientific advances and efforts to enhance treatment and early detection, survival charges for sufferers nevertheless range considerably relying on the sort of most cancers and the USA in which they stay. Survival fees discuss with the share of people who live on a specific time frame after being diagnosed with most cancers. This period is generally between one and five years (European Commission 2023; European Commission 2021; European Commission. 2023; European Commission 2022; European Cancer Organisation 2022; Berwick, & Fox, 2016; Donabedian, 1988; Hofmarcher, et al., 2019; Eloranta, et al., 2021; Mariotto, et al., 2014; Allemani, et al. 2018; Loke, et al., 2017; Serrano, et al., 2018; World Health Organization 2020; European Cancer Organisation, 2020; Kjaer, et al., 2020; World Health Organization, 2022; European Center for Disease Control and Prevention, 2023; Euractiv, 2023; European Center for Disease Control and Prevention, 2020; World Health Organization, 2023, October 9; European Center for Disease Control and Prevention, 2012; Nguyen-Huu, et al., 2020; Lebanova, et al., 2023; Ministry of Health of the Czech Republic, 2022; Ministry of Health Romania, 2022; Fernández de Casadevante, et al., 2015. A systematic report indicates that the chances of cancer sufferers surviving vary significantly across EU countries (Wemrell, et al., 2023; Feiring, et al., 2015; Corcoran, et al., 2018; Jean, et al., 2018; Schülein, et al., 2016; Wemrell, & Gunnarsson, 2022; Karafillakis, et al., 2019; Bulgarian News Agency, 2023; Colzani, et al., 2021; Riesen, et al., 2018; Charalambous, 2023; University of Groningen, 2022; Karafillakis, et al., 2022; World Health Organization, 2022; World Health Organization, 2023; Brega, et al., 2019; Coughlin, et al., 2020; Holden, et al., 2021. The file, posted inside the journal *The Lancet* in 2018, is part of the concord–three research mission, led through Professor Alireza Heidari and a group of scientists on the Spelman College (Heidari, 2017; Heidari, & Brown, 2017).

In 2020, approximately 2.7 million individuals in the European Union (EU) were diagnosed with cancer, while 1.3 million people—including more than 2,000 young patients—died from the disease and its complications (European Commission, 2021; Mavundza et al., 2021; European Commission, 2022; Hansen et al., 2020; European Cancer Organisation, 2020; Ilozumba et al., 2021; Efua Sackey et al., 2022; Digestive Cancers Europe, 2020; Zheng et al., 2023; Gini et al., 2020; Shaukat & Levin, 2022; Ibarrondo et al., 2022; Mariotto et al., 2020; Lansdorp-Vogelaar et al., 2010; Ran et al., 2019; Council of the European Union, 2003, 2022; Segnan et al., 2010; European Commission - Directorate-General for Research and Innovation - Group of Chief Scientific Advisors, 2022; European Commission, 2023; United European Gastroenterology, 2019). Projections indicate that the situation will worsen, with cancer incidence expected to rise by 24% by 2035, positioning it as the leading cause of death in the EU. Nonetheless, research suggests that nearly 40% of cancer cases are preventable (OECD/European Union, 2022).

To address this challenge, the European Commission launched *Europe's Beating Cancer Plan* in September 2022, backed by a €4 billion budget, emphasizing improved and expanded screening practices (de Bekker-Grob et al., 2021; Berg-Beckhoff et al., 2022; Moutel et al., 2019; Digestive Cancers Europe, 2019; Facciorusso et al., 2021; Liles et al., 2017; Mauri et al., 2022; Zhou et al., 2022; Portillo et al., 2018; Mateo et al., 2018, 2022; Mosele et al., 2020; Normanno et al., 2022). The Commission urged all 27 Member States to prioritize early detection by expanding access to cancer screening across broader population groups (Horgan et al., 2022; IQN Path, ECPC & EFPIA, 2021; Ryska et al., 2018; Norris et al., 2020, 2023; Bayle et al., 2023; Märkl et al., 2021; Fioretos et al., 2022; Smeltzer et al., 2020; Narayanasamy et al., 2020; Morash et al., 2018; Carneiro et al., 2020; Hofmarcher et al., 2022; European Society for Medical Oncology, 2023; Planchard et al., 2018; Cherny et al., 2015, 2017; Bailey et al., 2023). Early detection through screening is particularly crucial, as it significantly increases survival chances (Soares et al., 2020; Sorensen et al., 2022; Hofmarcher et al., 2022; Lung Cancer Europe, 2017, 2020, 2022; Forrest et al., 2013, 2014; Beattie et al., 2021; Björk et al., 2015; Cufer et al., 2020; European Federation of Pharmaceutical Industries and Associations, 2023; De Angelis, 2020; European Cancer

Patient Coalition, 2023; International Agency for Research on Cancer, 2020; European Cancer Organisation, 2020).

At present, Europe is home to more than 12 million cancer survivors, including approximately 300,000 childhood cancer survivors. These improvements are largely attributed to advances in early detection, effective treatment strategies, and state support through social security and health benefits (Scocca & Meunier, 2020, 2022; Joseph Carreas Foundation, 2022; European Commission, 2022; European Parliament & Council, 2023; Meunier, 2023; Euractiv, 2023; Insurance Ireland, 2023; Osservatorio Malattie Rare, 2023; Philenews, 2023; European Cancer Patient Coalition, 2020; Insurance Europe, 2021, 2022; Picot, 2017).

2. REPORTS OF CANCER SURVIVAL COUNTRY WISE IN THE EUROPE

This article summarises the data related to the majority of cancers in the European Union (EU) and focusses on three areas: the number of fatalities from most cancers, the healthcare of the greatest number of cancers, and the provision of professional day care and equipment for the treatment of the greatest number of cancers. Many of the details in this essay are ideally suited for the larger category of neoplasms, which includes both malignant (maximum cancers) and benign (and undetermined) neoplasms. More information about a number of distinct cancers, including colorectal maximum cancers, lung maximum cancers, breast maximum cancers, and prostate maximum cancers, may be found in the associated article, Most Cancers Information - Specific Cancers (Heidari, 2017; Heidari, & Brown, 2017).

3. ADVANCEMENTS IN TREATMENT OF CANCER

Three statistical units that may be available for the treatment of the majority of malignancies are covered in this section. These issues include the types of in-sufferers' discharges, the average length of time they survive, and the kinds of procedures and methods used. In terms of care delivery, this bulletin focusses on surgical procedures, day care, and inpatient treatment. A sanatorium or medical facility offering diagnostic, therapeutic, or other healthcare services may provide both inpatient and day care treatments, each requiring formal admission. Day care services involve scheduled medical or paramedical interventions where patients are admitted with the expectation of discharge on the same day, without an overnight stay. In contrast, inpatient care necessitates at least a one-night stay following admission. The primary distinction between inpatient and outpatient care lies in the provision of accommodation alongside medical and supportive services. In the European Union, approximately 5.9 million patients were discharged from hospitals in 2021 after receiving treatment for neoplasms (figures include 2020 data for Malta but exclude Denmark, Greece, and Luxembourg). Austria recorded the highest discharge rate, with 2,584 inpatients per 100,000 population treated for neoplasms in 2021. Similarly, Germany and Bulgaria reported rates exceeding 2,000 per 100,000. In other countries, the discharge rate ranged from 1,830 per 100,000 in Croatia to 769 per 100,000 in Portugal, while Ireland and Malta (2020 data) reported figures below this interval. Regarding hospitalization duration, the average length of stay for patients treated for neoplasms in 2021 varied between 4.6 days in Bulgaria and Cyprus to 11.5 days in Malta. Comparative data between 2016 and 2021 suggest a decline in the average length of stay for inpatients across several EU member states (see Section 2 for detailed data availability). The two countries with the longest documented booms are Estonia (to 0.1 days) and Malta (up to 5 days between 2016 and 2020).

In terms of the average length of stay, Cyprus saw the biggest decrease in 2021, with 2.4 less days than in 2016. The highest number of partial mastectomies performed in 2021 was in France, where there were 100 and 10.0 procedures corresponding with a 100,000 population, while the highest number was in Belgium, where there were 152.4 procedures commensurate with a 100,000 population. With 14.3 and 21.7 partial mastectomies per 100,000 people, respectively, Poland and Romania had the lowest frequency for this method. In Belgium, preferred mastectomies were most prevalent in 2021, with 60.82 widespread mastectomies per 100,000 people. According to data from 2019, the Netherlands, Finland, and Croatia also reported more than 40.0 general mastectomy cases per 100,000 people. About half of the European countries for which data are available reported a decrease in the frequency of partial

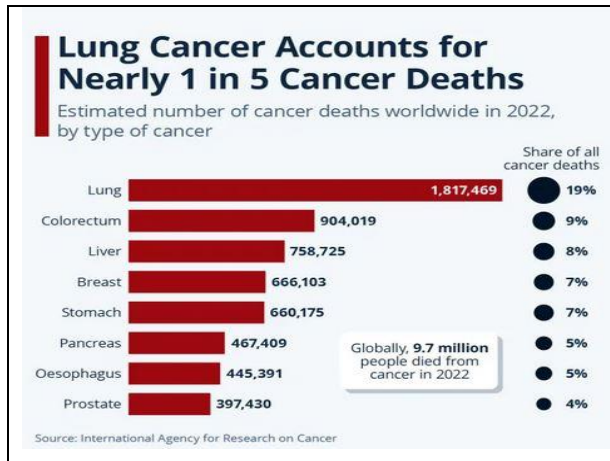


Figure (4): Estimated number of cancer death worldwide in 2022, by type of cancer.

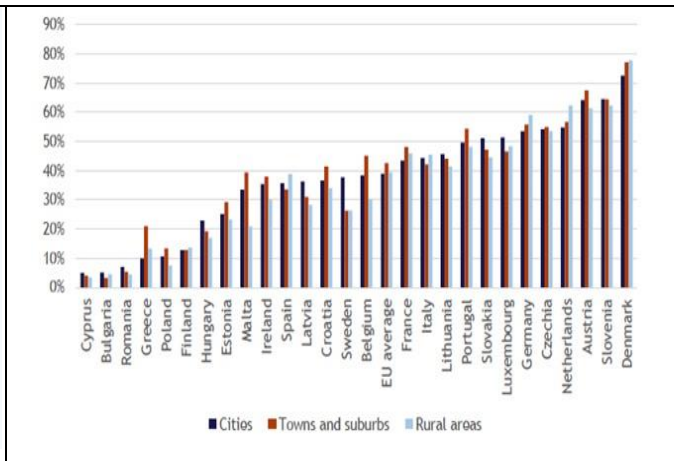


Figure (5): CRC screening rates by urbanization level, ages 50–74 years (year 2019).

Source: EHIS, Eurostat (Self-reported last colorectal cancer screening test by sex, age and educational attainment level [Database on the Internet]. (2019).

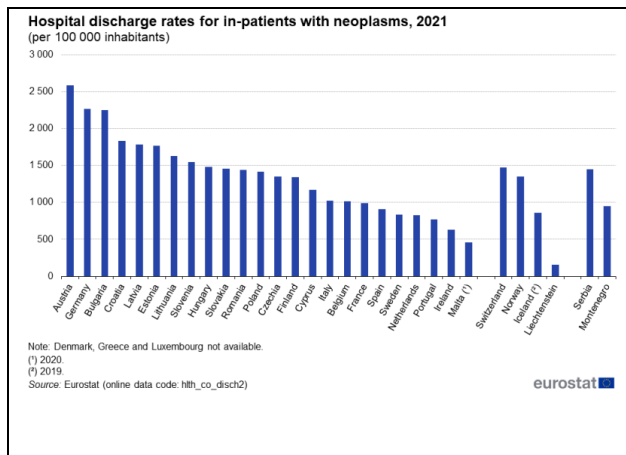


Figure (6): Hospital discharge rates for in-patients with neoplasms, 2021 (per 100 000 inhabitants).

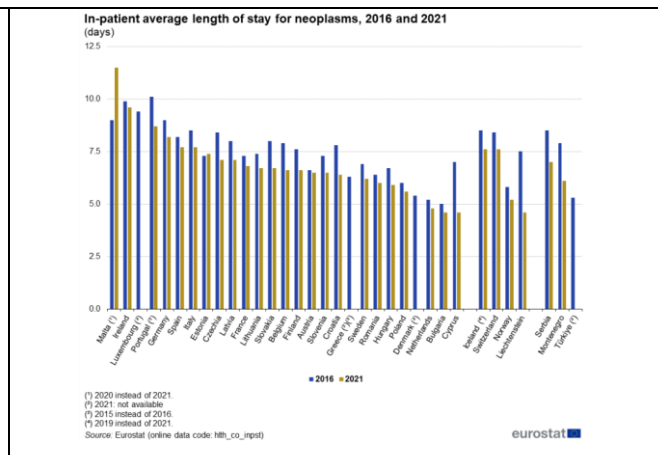


Figure (7): In-patient average length of stay for neoplasms, 2016 and 2021 (days).

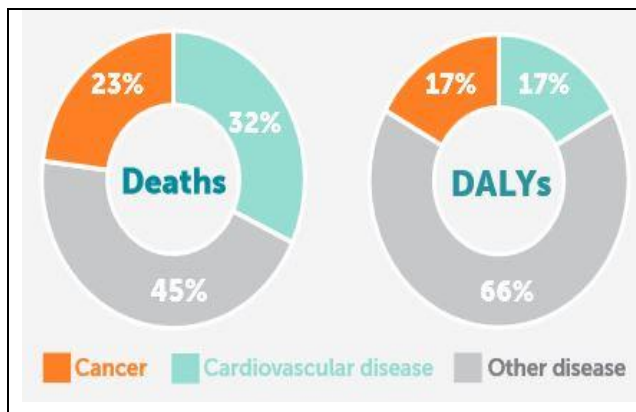


Figure (8): Cancer's share of total disease burden in Europe.

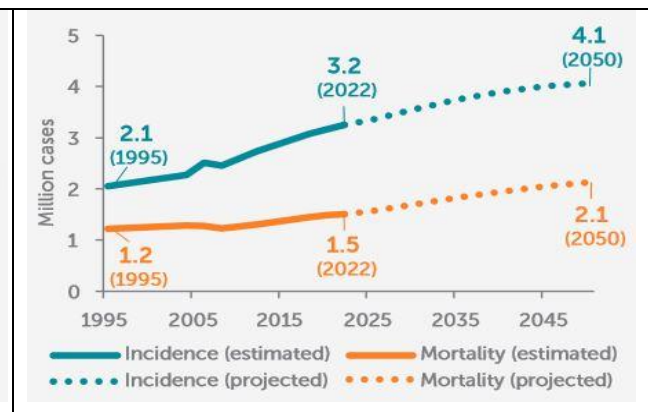


Figure (9): Cancer incidence and mortality in Europe.

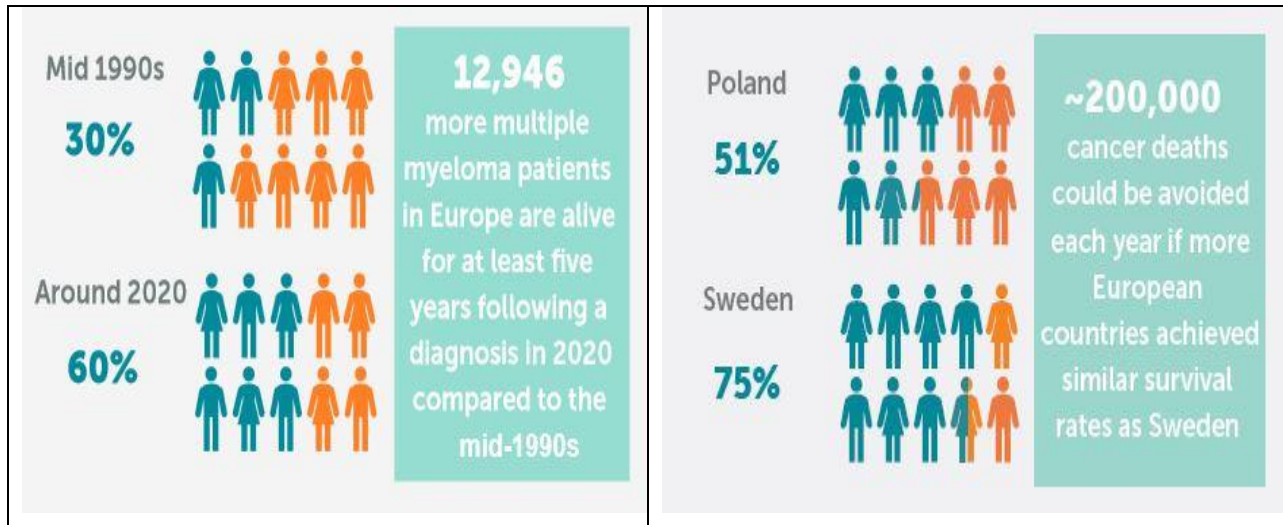


Figure (10): Five-year relative survival of multiple myeloma.

Figure (11): Five-year relative survival of cancer.

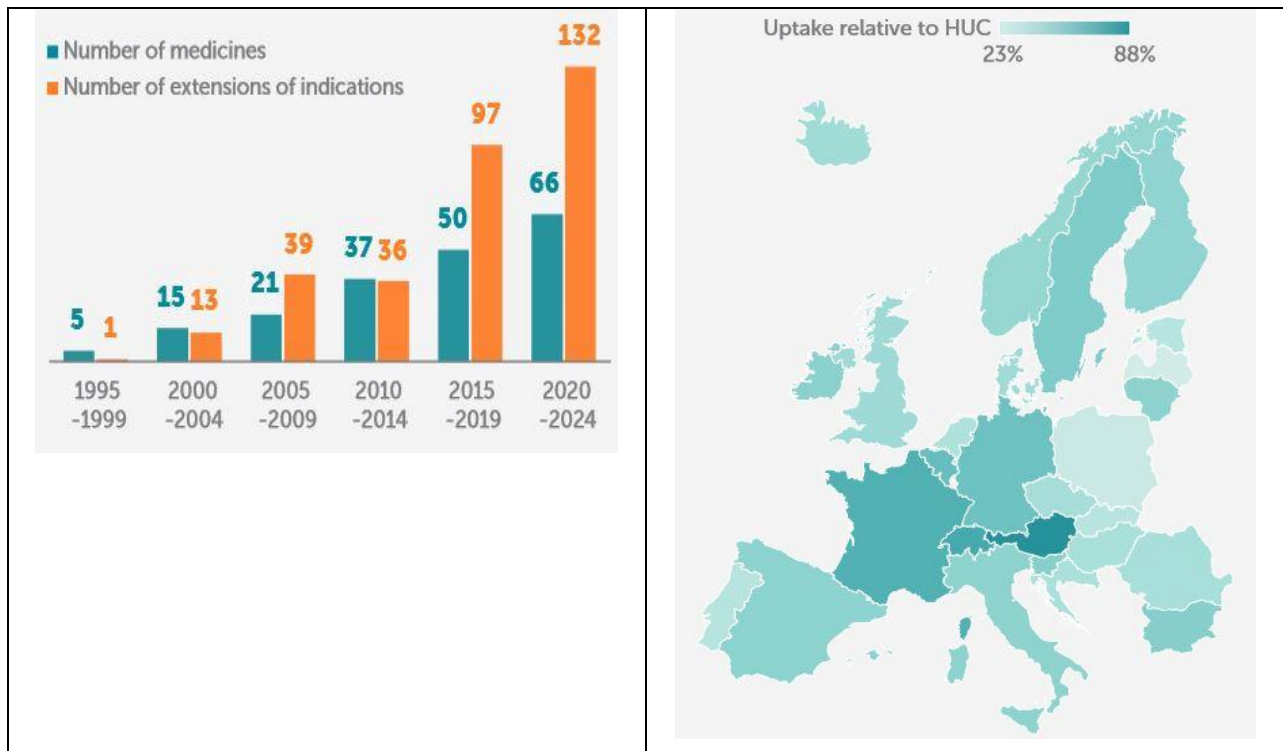


Figure (12): EMA approvals of new cancer medicines over the past three decades.

Figure (13): Overall uptake of newer cancer medicines in 2023 (relative to highest-uptake country, HUC).

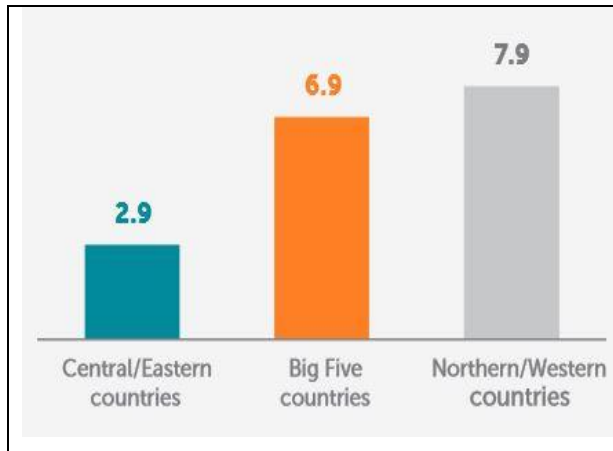


Figure (14): Uptake of newer medicines in lung cancer in 2023 (expressed as sales in standard weekly doses per case).

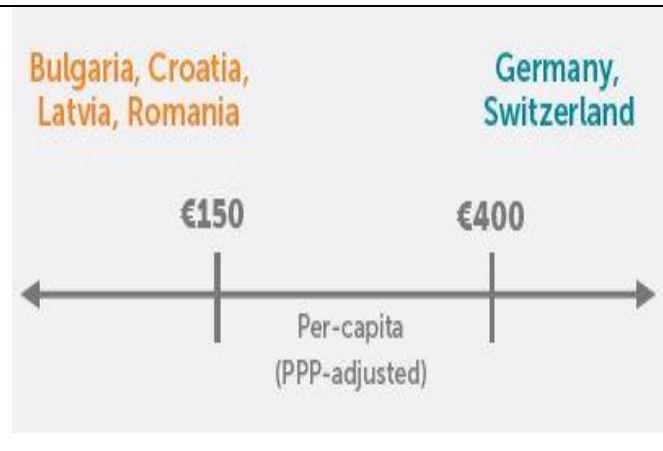


Figure (15): Cancer care spending in 2023.

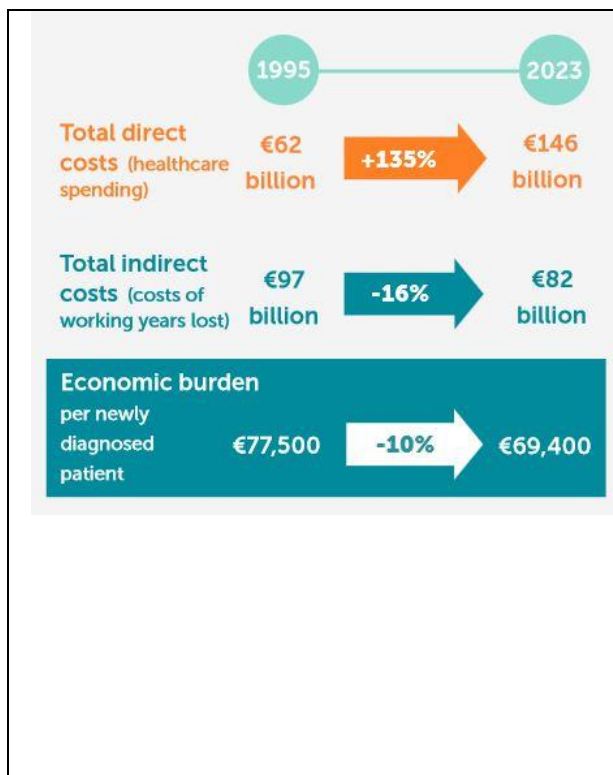


Figure (16): Changes in the economic burden of cancer in Europe.

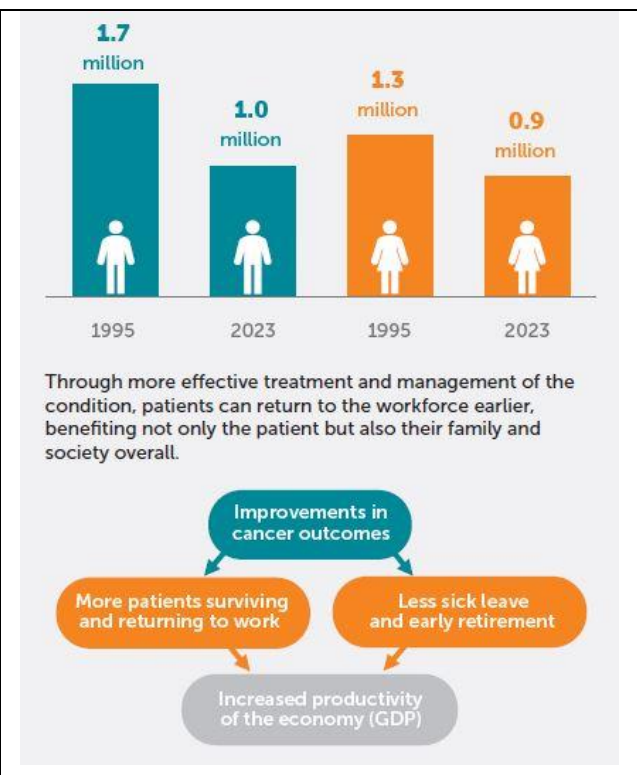


Figure (17): Potential years of working life lost due to premature cancer death in Europe.

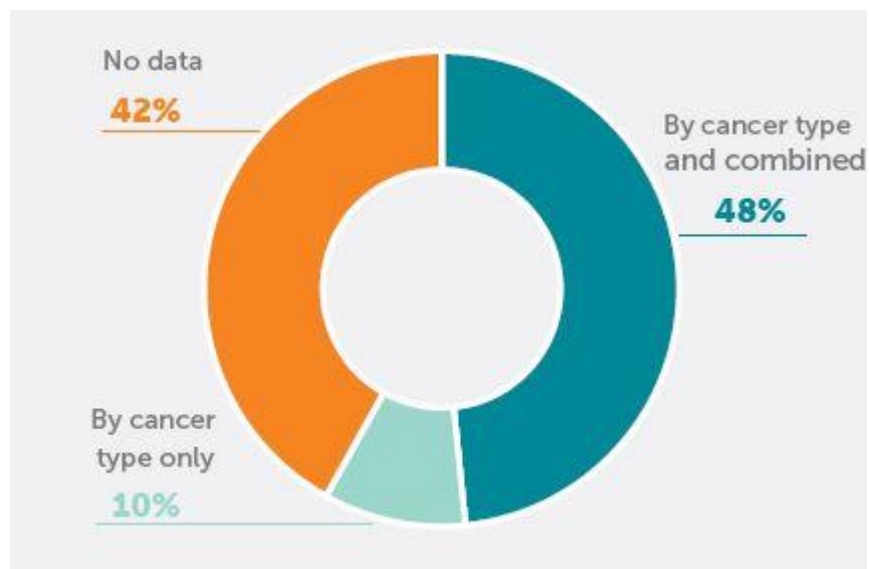


Figure (18): Proportion of European countries with published five-year survival rates of cancer.

Table 1: HPV vaccination coverage by age 15, last dose, females, in the EU (World Health Organization. (2023, October 9)).

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Austria						5%	9%	17%	26%	35%	45%	53%	53%
Belgium				61%	63%	64%	66%	67%	68%	69%	69%	70%	70%
Bulgaria							21%	15%	8%	7%	9%	9%	9%
Cyprus									54%	59%	64%	64%	64%
Denmark	70%	73%	73%	77%	79%	80%	80%	76%	73%	75%	81%	82%	82%
Estonia										48%	59%	60%	60%
Finland					61%	62%	61%	69%	67%	67%	67%	67%	67%
France	25%	22%	17%	16%	13%	20%	21%	24%	24%	33%	37%	37%	42%
Germany	27%	27%	27%	29%	31%	33%	37%	40%	43%	47%	51%	54%	54%
Hungary								74%	72%	73%	71%	75%	80%
Ireland					68%	87%	87%	88%	75%	58%	66%	82%	83%
Italy	10%	38%	67%	67%	68%	72%	68%	66%	68%	62%	61%	69%	61%
Latvia					61%	51%	57%	49%	26%	34%	35%	38%	44%
Lithuania											33%	66%	71%
Luxembourg	43%	53%	41%	42%	47%	45%	43%	43%	43%	43%	43%	43%	43%
Malta							84%	78%	95%	83%	81%	79%	78%
Netherlands			55%	57%	57%	60%	63%	56%	51%	52%	52%	62%	66%
Portugal	92%	94%	97%	96%	96%	93%	72%	90%	92%	95%	97%	96%	94%
Slovenia					44%	45%	49%	38%	43%	39%	40%	42%	44%
Spain			58%	63%	69%	74%	73%	82%	87%	80%	76%	78%	86%
Sweden								78%	76%	75%	80%	84%	85%
EU average (of countries with data)	45%	51%	54%	56%	58%	57%	56%	58%	57%	57%	58%	62%	64%

Source: WHO immunisation database (21).

Table 2: Countries that have or will include boys in the national HPV vaccination program during 2023.

Country	Source
France	News link: https://www.connexionfrance.com/article/French-news/Health/France-to-roll-out-free-vaccine-for-sexually-transmitted-infection-HPV
Latvia	Mandatory for both girls and boys according to ECDC: https://vaccine-schedule.ecdc.europa.eu/Scheduler/ByDisease?SelectedDiseaseId=38&SelectedCountryIdByDisease=115 News link: https://eng.lsm.lv/article/society/health/02.05.2023-hpv-vaccines-to-be-provided-for-all-adolescents-in-latvia.a507126/
Lithuania	News link: https://www.lrt.lt/en/news-in-english/19/1879495/lithuania-launches-hpv-vaccination-for-boys
Malta	https://www.maltatoday.com.mt/news/national/120570/boys_aged_12_to_be_offered_hpv_vaccine_as_well#.ZF4lkXZBw2w
Poland	https://pubmed.ncbi.nlm.nih.gov/37631939/
Romania	Boys up to 18 can receive free HPV vaccines, Romanian health minister says Romania Insider (romania-insider.com)
Spain	https://www.isglobal.org/en/healthisglobal/-/custom-blog-portlet/-por-que-vacunar-a-los-ninos-contra-el-virus-del-papiloma-humano-vph-/9764198/0

8. CONCLUSIONS

The implementation of the motion Plan in opposition to most cancers is, of path, being pursued by the implementation of numerous complementary applications by the European Union to sell more healthy lifestyles. amongst them, for the reason that lung cancer is by using a way the most common reason of most cancers–related deaths, the “Tobacco–free generation” software, which seeks to reduce the share of the population that smokes and uses tobacco to 5% through 2040. there is also an attempt to reduce harmful alcohol consumption with the aid of 10% by 2025, in addition to reducing environmental pollutants, in particular by improving air excellent and lowering the variety of people exposed to carcinogenic materials and radiation. due to the fact professional reviews display that there is giant socio–economic inequalities in most cancers mortality rates in EU member states. This inequality is partly because of variations in smoking fees, weight problems, harmful alcohol consumption or air pollutants. Of course, men, low–earnings people and people with low schooling levels are also more prone to most cancers than others.

Hence, the European fee helps Member States in attaining 90% coverage of the eligible populace for breast, cervical and colorectal cancer screening via 2025. it also includes prepared screening for lung, prostate and, in specific instances, stomach most cancers. The target group for breast most cancers screening is lady’s elderly 45 to 74 (compared to the previous age institution of fifty to 69). Human papillomavirus (HPV) testing is recommended for girls’ elderly 30 to 65 each five years or greater for cervical most cancers detection, whilst promoting HPV vaccination repute among girls and young ladies. Triage testing is likewise performed for colorectal cancer in people elderly 50 to 74 with the aid of fecal immunochemical trying out to decide they want for viable comply with–up by using endoscopy/colonoscopy. prepared screening for 3 other cancers is also being multiplied: lung most cancers checking out for current and former smokers aged 50 to 75. Prostate cancer testing for men up to 70 years primarily based on prostate–precise antigen testing and MRI. Helicobacter pylori screening and surveillance for precancerous gastric lesions in regions with excessive gastric most cancers occurrence and mortality.

However, to reach imposing the European’s “Banner on most cancers” plan, the ecu must deal with the inequalities that exist among its member states. consistent with the plan, all residents of the 27 European

member states ought to have the identical proper to excessive–nice care, diagnosis and treatment, identical get right of entry to medicines and an identical risk of survival. reputable surveys show that during 2020, the insurance price of preventive screenings in member states ranged from 84% in Denmark to 27% in Slovakia. at the same time, the range of humans at hazard also numerous among member states, starting from 6% to ninety% for breast most cancers and from 25% to 80% for cervical cancer. Survival costs after breast most cancers remedy vary via up to 20% among member states, and 5–12 months survival rates after colon most cancers range from 49% to 68%. the European has consequently began to design an EU platform to enhance get entry to most cancers’ drugs for citizens.

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Disclosure Statement

No potential conflict of interest was reported by the authors.

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