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**Europe's Beating Cancer Plan**

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*“Europe will take the lead in the fight against cancer, [...] we will launch an ambitious cancer plan to reduce the suffering caused by this disease.”*

President-elect von der Leyen, European Parliament, 27 November 2019

## **1. A CANCER PLAN FOR EUROPE: INTRODUCTION**

Cancer concerns us all in one way or another. Every year, 2.6 million people are diagnosed with the disease and it kills another 1.2 million people in the European Union. Cancer is an individual diagnosis that wreaks havoc on patients, but it also severely affects the lives of their families and friends. It causes extensive physical and emotional pain and distress, and it places a heavy burden on our health systems, our economy, and on society at large<sup>1</sup>. For many, cancer is personal, and it evokes personal stories of loss, fear and resilience.

Today, Europe has a quarter of the world’s cancer cases, with less than 10% of its population. Without decisive action, cancer cases will increase by 25% by 2035, making cancer the leading cause of death in the EU. Moreover, the COVID-19 pandemic has severely impacted the cancer care sector. It has disrupted treatment, delayed diagnosis and vaccination programmes, and affected access to medicines. Since the beginning of the crisis, the number of cancer diagnoses has decreased, revealing the early signs of a future surge in cases, many of which will present at a more advanced stage than usual.

**Europe’s Beating Cancer Plan** is the EU’s response to this growing challenge. The EU has been working to tackle cancer for decades. Important actions, notably on tobacco control and protection from hazardous substances, have saved and extended lives. However, the last European action plan against cancer was developed in the late 1980s. Since then, the world has seen major progress in cancer treatment. Personalised therapies have radically changed the prognosis of patients. Digital technology and research and innovation have advanced dramatically. So too has our understanding of cancer genesis, prevention, treatment and care. We urgently need a new approach to cancer prevention, treatment and care in Europe, one that maximises the potential of new technologies and new learnings, strengthens coordination across the EU, eradicates inequalities in cancer care, and delivers concrete benefits to patients.

The Cancer Plan marks the beginning of a new era in cancer prevention and care while fully respecting the Member States’ competence in the area of health<sup>2</sup>. Mobilising the collective power of the European Union to drive change, the Cancer Plan contains concrete and ambitious actions that will support, coordinate and supplement Member States’ efforts to reduce the suffering caused by cancer and improve the lives of cancer patients and their families. **This is the EU’s political commitment to leave no stone unturned in the fight against cancer.**

**Europe’s Beating Cancer Plan is a comprehensive one, which tackles the entire disease pathway.** The Cancer Plan is structured around a number of key action areas where the EU can add most value: (1) prevention; (2) early detection; (3) diagnosis and treatment; and (4) quality of life of cancer patients and survivors. Over the coming years, the Cancer Plan will focus

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<sup>1</sup> The overall economic impact of cancer in Europe is estimated to exceed €100 billion annually.

<sup>2</sup> In respect of Article 168 of the TFEU

research and innovation, tap into the potential of digitalisation and new technologies, and mobilise financial instruments to support Member States' efforts under each of the four pillars. With its **seven flagship initiatives** and **multiple supporting actions**, Europe's Beating Cancer Plan will help Member States to turn the tide against cancer.

Together with the Pharmaceutical Strategy for Europe, which aims to ensure the availability of safe and affordable medicines to patients across the EU, Europe's Beating Cancer Plan is a key pillar in a **strong European Health Union** and a more secure, better-prepared and more resilient EU. The Cancer Plan outlines substantive actions to mitigate the impact of the COVID-19 pandemic on cancer care and support structural improvements that ensure a more sustainable cancer pathway. In addition, the new ambitious **EU4Health programme** will help provide financial and technical support to Member States, helping efforts to strengthen health systems. It will dedicate [XX] % of its budget to fund actions prioritised under the Cancer Plan. Other financial instruments will also be mobilised to support Member States.

The COVID-19 pandemic has taught us many lessons. Chief among them is the fundamental importance of coordination and effective partnerships. By collaborating and combining efforts at Member States' and EU levels, we can overcome individual weaknesses, reduce fragmentation, and deliver a more effective, more equal and more wide-reaching response to cancer. The Cancer Plan is based on a '**Health in All Policies**' and multi-stakeholder approach and is the result of an extensive consultation process. It incorporates the perspectives of stakeholders' groups and patients, as well as the views of the European Parliament and Member States. Each of these perspectives and insights are vital to build a more coherent EU approach to cancer, strengthening partnerships between all relevant actors and establishing links between related fields.

Europe's Beating Cancer Plan will be supported by actions linked to other Commission policies, including in the areas of digitalisation, employment, energy, education, agriculture, climate, transport, social policy, taxation and backed up by important investments from the EU budget. The Cancer Plan will tackle cancer in our schools and in the workplace, in research labs, in our towns and cities and through innovation and digital tools, healthy lifestyle choices and improvements to our environment. Crucially, **Europe's Beating Cancer Plan** places the interests and wellbeing of patients and the population at its centre, every step of the way.

## **2. PUTTING RESEARCH, INNOVATION AND NEW TECHNOLOGIES AT THE SERVICE OF CANCER CARE**

The more we understand of the biological processes involved in cancer onset, growth, and spread, the more effectively we can prevent, detect, diagnose and treat this disease. Cancer research, innovation and new technologies save lives, but to do so effectively, new knowledge and learning must be shared as widely as possible and translated into concrete actions by health authorities and other stakeholders.

The last 20 years have seen tremendous scientific progress. Our understanding of genetics has increased enormously, as has the digitalisation of data and the immense power of computer based analytical tools. The potential to deliver concrete, lasting benefits to patients, health workers and health care systems is immense. Building on what has already been achieved by the EU, Member States, healthcare professionals or patient organisations, Europe's Beating Cancer

Plan will use the remarkable potential of new technologies and recent scientific advances to better address cancer. The EU is in a unique position to maximise this potential by pooling expertise, knowledge, data and computing power to develop new innovative solutions that will benefit the entire cancer pathway.

## 2.1. Driving change through knowledge and research

Reinforced and more focused research and innovation will enable us to better understand cancer risk factors, improve diagnosis, and discover and implement promising therapies and treatments. There are several key initiatives at EU level that will contribute to this goal.

The **Mission on Cancer**<sup>3</sup>, to be set up under Horizon Europe, will be a major component of the EU's **cancer research investment**. The Mission will help to deepen our understanding of the complexity and causes of cancer, ultimately informing many of the Cancer Plan's key actions. Up to 10% of Horizon Europe's budget for the Global Challenges & European Industrial Competitiveness pillar will be allocated to Missions, including the Cancer Mission.

In addition, Horizon Europe will provide **funding for research infrastructures, cloud computing** and actions through the European Innovation Council<sup>4</sup>. This includes offering researchers access to relevant enabling infrastructures and tools to advance their projects. Research and innovation is particularly important when it comes to improving prognostics and the development of personalised medicine. This is key to improving patient outcomes.

From 2021, existing and new networks of biomedical research infrastructures will provide **tailored support to researchers working on personalised cancer treatments** through. This will include free use of advanced methodology, technologies, tools and equipment to work on new cancer therapies ranging from initial discovery to novel advanced therapy medicinal products and radiotherapy.

New platforms, hosted on the **European Open Science Cloud**<sup>5</sup>, will support interdisciplinary cancer research and will enable the delivery of advanced personalised treatments. This collaboration will allow researchers to access, analyse and process research data across disciplines and national borders while fully respecting data protection considerations, including through the European Reference Networks and the EU Network of Comprehensive Cancer Centres.

The Plan will include the launch of a **Knowledge Centre on Cancer** in early 2021, which will coordinate scientific and technical cancer-related initiatives at EU level. The Centre will seek to ensure a common approach, and to guarantee that efforts are effective, sustainable, and coherent across the Union. It will act as a knowledge broker, connecting ongoing work on best practice implementation and guidelines for screening and treatment with new actions under the Plan. It will, for example, coordinate efforts under the European Cancer Imaging Initiative and other

<sup>3</sup> [https://ec.europa.eu/info/publications/conquering-cancer-mission-possible\\_en](https://ec.europa.eu/info/publications/conquering-cancer-mission-possible_en)

<sup>4</sup> <https://ec.europa.eu/research/eic/index.cfm>

<sup>5</sup> [https://ec.europa.eu/info/research-and-innovation/strategy/goals-research-and-innovation-policy/open-science/eosc\\_en](https://ec.europa.eu/info/research-and-innovation/strategy/goals-research-and-innovation-policy/open-science/eosc_en)

initiatives with relevance for cancer control, including the European Health Data Space and the research under the Cancer Mission.

## 2.2. Data and digitalisation in cancer prevention and care

The digital transformation aims to create, manage, share and analyse data so that the right information is accessible to the right person at the right time. This is particularly relevant to the health sector. As much as 30% of the world's stored data are currently produced by health systems. Yet, the health sector is a long way behind other sectors when it comes to exploiting the potential of digitalisation. It is a sector which is 'data rich but information poor'<sup>6</sup>. Cancer care is considered to be one of the major disease areas that will benefit from better exploitation of real-world data<sup>7</sup> using powerful tools such as Artificial Intelligence (AI) and High-Performance Computing. Despite this, widely recognised potential barriers persist when it comes to interoperability, legal and ethical standards, governance, cybersecurity, and technical requirements.<sup>8</sup>

**Electronic health data** are set to become crucial tools in cancer prevention and care. They<sup>9</sup> will ensure that clinical information is shared efficiently between oncologists, radiologists and surgeons, enhancing the patients' treatment and chance of survival. Health records can also better capture the experiences and outcomes of the majority of oncology patients, painting a clearer picture than the 5% that participate in clinical trials. Combining health records with other data sets, such as genomics, can provide even better insights on the efficacy of treatments and their optimisation<sup>10</sup>. When pooled and coordinated properly, health records and data sets are important ingredients in more effective and efficient health care systems.

Europe's Beating Cancer Plan seeks to make the most of this potential. The **European Health Data Space (EHDS)**, which will be set up by 2025, will **enable cancer patients to securely access and share electronic health records** between healthcare providers and across borders in the EU through the digital communication channel MyHealth@EU. The EHDS will give general practitioners and specialists access to a patients' clinical data, enabling the holistic approach needed to ensure that health and care delivery happens along the entire patient pathway. It will also connect with the Knowledge Centre to ensure the insight and learning is shared efficiently. The Commission will also continue to work with Member States to define a common exchange format for electronic health records and to tackle data security, privacy and interoperability.

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<sup>6</sup> OECD (2019), Health in the 21st Century: Putting Data to Work for Stronger Health Systems, OECD Health Policy Studies, OECD Publishing, Paris, <https://doi.org/10.1787/e3b23f8e-en>.

<sup>7</sup> Real-world data is health-related data derived from a diverse human population in real life settings. It can be medical health records, registries, biobanks, administrative data, health surveys, observational studies, health insurance data, data generated from mobile applications etc.

<sup>8</sup> Couespel, N., et al., Strengthening Europe in the fight against cancer, study for the Committee on Environment, Public Health and Food Safety, Policy Department for Economic, Scientific and Quality of Life Policies, European Parliament, Luxembourg, 2020.

<sup>9</sup> An electronic health record is a collection of longitudinal medical records or similar documentation of an individual, in digital form. (Commission Recommendation (EU) 2019/243 of 6 February 2019 on a European Electronic Health Record exchange format)

<sup>10</sup> Agarwala, V. et al. (2018), "Real-World Evidence In Support Of Precision Medicine: Clinico-Genomic Cancer Data As A Case Study", Health Affairs, Vol. 37/5, pp. 765-772, <http://dx.doi.org/10.1377/hlthaff.2017.1579>.

The **European Cancer Imaging Initiative will be set up in 2021** to develop an EU ‘atlas’ of **cancer-related imaging**, making anonymised images accessible to a wide range of stakeholders across the ecosystem of hospitals, researchers and innovators. It will provide a common EU data space, complemented by a new **reference facility for Testing and Experimentation** that will be launched to link the data to digital technologies such as High Performance Computing and AI. Supported by dedicated Digital Innovation Hubs, which will also provide assistance on regulatory aspects of AI, the Imaging Initiative will improve personalised medicine and innovative solutions by delivering greater accuracy and reliability in diagnostic imaging and follow-up of treatments.

Furthermore, the **European Cancer Information System<sup>11</sup>**, which monitors the burden of cancer in Europe, **will be expanded** with new cancer data indicators, including on cancer staging, patient outcomes, and childhood cancers. New features will also include co-positioning of cancer incidence across regions, linking it with exposure to environmental pollutants and socio-economic data. This information is crucial to understanding and tackling cancer. It will provide important information to policy-makers, and help to monitor progress in addressing cancer at EU and Member State level.

Besides digitalisation of health data, the combined use of new technologies such as Artificial Intelligence (AI) and High Performance Computing<sup>12</sup> can help to rapidly process large amounts of health data and support the development of better targeted screening mechanisms, and speed up and increase the quality of diagnosis by automating and standardising tasks. In addition, High Performance Computing can help us to perform complex simulations of molecular and cellular interactions, for example to virtually test the effectiveness of new or existing medicines. In concrete terms, this could facilitate the development of more personalised and precise treatments based on an individuals’ genetic makeup.

To further explore this potential, starting in 2021, the Commission will **support new collaborative projects for cancer diagnostics and treatment**. These projects will bring together relevant stakeholders and expertise to make use of new approaches to data analytics, using high performance computing and artificial intelligence. They will support efforts to advance precision medicine, focusing in particular on cancers with poor prognosis such as pancreatic cancer, or head and neck tumours. Also beginning in 2021, **additional projects will be launched through Horizon Europe and the Innovative Medicines Initiative** utilising AI to provide computer-aided decision support to health professionals, carers and patients to improve prevention, diagnosis and treatment of cancer.

### 2.3. Improve cancer genetics knowledge

Cancer is strongly influenced by **genetic modifications**. ‘Public Health Genomics’ aims to understand how external factors, such as exposure to potential mutagens and toxic factors, diet, physical fitness and diseases and genetic modifications can influence cancer development and

<sup>11</sup> <https://ecis.jrc.ec.europa.eu/>

<sup>12</sup> High performance computing (HPC), also known as supercomputing, refers to computing systems with extremely high computational power that are able to solve hugely complex and demanding problems. <https://ec.europa.eu/digital-single-market/en/policies/high-performance-computing>

spread<sup>13</sup>. Genetic research has the potential to transform cancer, including by improving preventive measures, early detection, diagnosis and treatment through innovative approaches and instruments. It can also be crucial in identifying the best tailor made diagnostics and treatment in personalised medicine.

By 2021, Europe's Beating Cancer Plan will launch the '**Genomic for Public Health**' project. This will support Member States in establishing a system and infrastructure to oversee the rapid evolution of genomics and the utility of the genomics technology along the entire disease spectrum. Actions under the project, funded by the EU4Health Programme, will include developing guidelines and recommendations to better determine who and what to test, helping Member States to organise health services to implement genetic testing, and providing specific education and training for health workers<sup>14</sup> with the aim to substantially advance our understanding of cancer control.

This project will be complemented by the **European Initiative to Understand Cancer (UNCAN.eu)**, which aims to increase our understanding of how cancers initiate, develop and spread. UNCAN will also help to identify individuals at high risk for common cancers using the 'Polygenic Risk Scores' technique<sup>15</sup>. This will facilitate improved personalised approaches to cancer prevention and care, allowing actions to be taken to decrease risk or to detect a potential cancer as early as possible. Furthermore, large amounts of genomic data for research, prevention and personalised medicine purposes are expected to be provided through the 1+ Million Genomes initiative, where cancer is one of the main use cases.

#### **Flagship initiatives on research, innovation and digitalisation**

- Create a Knowledge Centre on Cancer to coordinate the scientific and technical cancer-related initiatives at EU level.
- Launch a European Cancer Imaging Initiative and a reference facility for Testing and Experimentation to support the development of new computer-aided tools to improve personalised medicine and innovative solutions.

#### **Other actions**

- Support for researchers working on personalised cancer treatments through tailored support and the creation of digital platforms to facilitate cross-border and interdisciplinary collaboration.
- Enable cancer patients to securely access and share electronic health records for prevention and treatment across borders through the European Health Data Space.
- Expand the European Cancer Information System to include new cancer indicators and geo-position cancer data linking with cancer determinants data.
- Support new collaborative projects for cancer diagnostics and treatment, bringing

<sup>13</sup> ADD definition

<sup>14</sup> Policy Paper on Public Health Genomics in Cancer at [https://cancercontrol.eu/archived/uploads/PolicyPapers27032017/Policy\\_Paper\\_1\\_Genomics.pdf](https://cancercontrol.eu/archived/uploads/PolicyPapers27032017/Policy_Paper_1_Genomics.pdf)

<sup>15</sup> Cancer is a disease that can be affected by changes in either one or many of their genes, frequently coupled with environmental factors. A 'polygenic risk score' can inform people about their risk of developing a disease, based on the total number of genetic changes related to specific disease(s), including some types of cancers.

together relevant stakeholders and expertise to make use of new approaches to data analytics, using high performance computing and artificial intelligence.

- Launch the ‘Genomic for Public Health’ project to support Member States in establishing a system and infrastructure to oversee the rapid evolution of genomics and the utility of the genomics technology along the entire disease spectrum.
- Launch the Understand Cancer Initiative (UNCAN.eu) to improve our understanding of how cancers initiate, develop and spread, helping to identify individuals at high risk for common cancers.

### 3. SAVING LIVES THROUGH SUSTAINABLE CANCER PREVENTION

Prevention is more effective than any cure. With 40% of cancer cases attributed to preventable causes, there is immense opportunity to reduce the suffering caused by cancer in the EU. It is also the most cost-effective long-term cancer control strategy. Being part of a holistic, whole-of-government approach the plan will raise awareness of and **address main risk factors** such as cancers caused by unhealthy lifestyles, exposure to pollution, carcinogenic substances and radiation, as well as cancers triggered by infectious agents.

Support to Member State actions will be complemented by EU initiatives focusing on genomics<sup>16</sup>, as it has been demonstrated that smoking habits, alcohol and obesity cause damage to DNA. Several lines of research are now ongoing to identify the **genetic predisposition** of individuals to develop cancers, opening new perspectives to **personalised risk-assessment and targeted cancer prevention**<sup>17</sup>.

#### 3.1. Improving health literacy on cancer risks

Understanding a complex issue like cancer can be challenging or daunting, but this knowledge can prevent illness, save lives, and reduce suffering. Therefore, improving people’s access to and understanding of health information and services is vital to improve health outcomes and Europe’s Beating Cancer Plan will give individuals the information and tools they need to make these healthier choices. Promoting cooperation between health and social services and the community will be an important part of the Cancer Plan. It will involve different actors such as social workers, teachers and nurses to educate the public and patients on cancer prevention as well as on how to live well after cancer treatment.

The Cancer Plan will update the **European Code against Cancer** to take into account the latest scientific developments and will add new evidence-based recommendations to improve health literacy. The Cancer Plan will aim to make at least 80% of the population aware of the messages of the Code by 2025. Funded under the EU4Health Programme, an **‘EU digital passport for cancer prevention’** will provide individuals with information about how to reduce cancer risks,

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<sup>16</sup> As further outlined in chapter 2.3

<sup>17</sup> This means that, through advances in genetic techniques, it will become possible to identify those people who are more likely to develop cancers and therefore also to personalise their lifestyle according to their genetic features.

extending the Code's coverage and empowering people to manage their own health, including information on how to benefit from new developments in personalised cancer risk-assessment. A new project on '**Health Literacy for Cancer Prevention and Care**' will also be launched to develop and share best practice to strengthen health literacy in cancer prevention and care programmes, with a focus on vulnerable groups. These measures will be implemented in the period 2021-2025.

### 3.2. Achieving a tobacco-free Europe

Tobacco consumption continues to be the **leading preventable cause of cancer**, with 27% of all cancers attributed to tobacco use<sup>18</sup>. By eliminating tobacco use, 90% of lung cancers may be avoided.

Through rigorous enforcement of the EU tobacco control framework and its adaptation to new developments and market trends, including stricter rules on novel products<sup>19</sup>, starting in 2021, Europe's Beating Cancer Plan will help to create a '**Tobacco Free Generation**' where less than 5% of the population uses tobacco by 2040. As an interim step, the goal is to reach the United Nations Sustainable Development Goals and WHO target of a 30% relative reduction of tobacco use rates by 2025 as compared to 2010. This would correspond to a prevalence of smoking of about 20% in the EU<sup>20</sup>.

The Commission will continue to prioritise protecting young people from the harmful effects of tobacco and related products<sup>21</sup>. Tobacco taxation is one of the most effective instruments to fight tobacco consumption, particularly in deterring young people from taking up smoking. Decisive action will be taken to reduce the attractiveness of tobacco and related products by reviewing the **Tobacco Products Directive**, the **Tobacco Taxation Directive**<sup>22</sup> and the **legal framework on cross border purchases of tobacco by private individuals**<sup>23</sup>. This includes working towards plain packaging and a full ban on flavours, using existing EU agencies to improve the assessment of ingredients, extending taxation to novel tobacco products, and tackling tobacco advertising, promotion and sponsorship, namely on the internet and social media.

By 2023, the Commission will **update the Council Recommendation on Smoke-Free Environments** and recommend to extend its coverage to emerging products, such as e-cigarettes and heated tobacco products and to strengthen smoke-free environments, for instance concerning outdoor public places. The Cancer Plan will also support Member States to improve enforcement of the existing legislation within their overall tobacco control strategies, including sales to minors and smoking cessation campaigns, enabling better implementation of **the Framework**

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<sup>18</sup> World Health Organisation, Regional Office for Europe, 18.02.2020 at <https://www.euro.who.int/en/health-topics/disease-prevention/tobacco/news/news/2020/2/tobacco-use-causes-almost-one-third-of-cancer-deaths-in-the-who-european-region>

<sup>19</sup> For instance novel tobacco products, e-cigarettes, herbal products for smoking.

<sup>20</sup> [https://www.euro.who.int/\\_data/assets/pdf\\_file/0020/340193/TOBACCO-CONTROL-AND-THE-SUSTAINABLE-DEVELOPMENT-GOALS\\_Edited.pdf](https://www.euro.who.int/_data/assets/pdf_file/0020/340193/TOBACCO-CONTROL-AND-THE-SUSTAINABLE-DEVELOPMENT-GOALS_Edited.pdf)

<sup>21</sup> According to Eurobarometer data, the trend has reversed for youth smoking rates (age 15-24) which went down to 20% in 2020, from 25% in 2014, following a peak of 29% in 2017

<sup>22</sup> Council Directive 2011/64/EU

<sup>23</sup> Article 32 of Directive 2008/118/EC

**Convention on Tobacco Control.** In addition, the EU track and trace system will be extended to all tobacco products by 2024.

### 3.3. Reducing harmful alcohol consumption

Alcohol-related harm is a major public health concern in the EU and accounts for over 15% of cancer attributable deaths in men and 30% in women<sup>24</sup>.

The Cancer Plan, will provide intensified support to Member States and stakeholders for the implementation of best practice interventions and capacity building activities to reduce harmful alcohol consumption in line with the targets of the UN Sustainable Development Goals. In addition, the Commission will **review EU legislation relating to the taxation of alcohol** and on cross border purchases of alcohol by private individuals.

To reduce the exposure of young people to marketing of alcoholic beverages, the Commission will closely work with Member States to **reduce online marketing and advertising** of these products. The Commission will also propose to stop stimulating consumption of alcohol via the EU promotion programme for agricultural products. Furthermore, **mandatory labelling** of the list of ingredients and calorie content and inclusion of health warnings on the label of alcoholic beverages will be proposed before the end of 2023 and support will be provided to Member States in the implementation of evidence-based brief interventions<sup>25</sup> on alcohol in primary health care, workplace and social services.

### 3.4. Improving access to healthy diets and promoting physical activity

Cancer risk is heightened by the joint effects of unhealthy diets, obesity, and physical inactivity<sup>26</sup>.

On nutrition, the Commission will take action in several areas starting with further **reducing the presence of carcinogenic contaminants** in food by setting maximum levels for more of these. In a comprehensive approach, the Cancer Plan will further focus on measures to improve the availability of healthy foods, while exploring with Member States tax incentives to increase their consumption, improve consumer information and health literacy and address marketing and advertising of products linked to cancer risks.

Addressing obesity starts at childhood. To improve early preventive actions, the Commission will **evaluate the 2014-2020 EU Action Plan on Childhood Obesity** and propose follow up actions. This will be complemented by a proposal for an **improved fruit, vegetable and milk school scheme in 2024** to enhance the availability of healthy products to children. Measures in schools will also address health literacy to improve knowledge on the benefits of healthy nutrition. Going beyond the school setting in improving information available to consumers, the

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<sup>24</sup> [https://ec.europa.eu/health/sites/health/files/alcohol/docs/report\\_assessment\\_eu\\_alcohol\\_strategy\\_2012\\_en.pdf](https://ec.europa.eu/health/sites/health/files/alcohol/docs/report_assessment_eu_alcohol_strategy_2012_en.pdf)

<sup>25</sup> “Brief interventions” (BI) for alcohol have been shown to be effective in the management of alcohol consumption for non-treatment-seeking harmful alcohol drinkers. BI is a discussion aimed at raising an individual's awareness of their risky behaviour in order to motivate them to change it.

<sup>26</sup> Changing behaviours – physical activity and weight control. In World cancer report 2014. IARC, 2014,

Commission will also propose harmonised, **mandatory front-of-pack** nutrition labelling, as announced in the **Farm to Fork Strategy**.

Marketing and advertising is designed to influence the choices consumers make. The Commission will prepare a report in 2022 on the **implementation of the provisions of the Audiovisual Media Service Directive** concerning commercial communications on unhealthy food and drinks and work with Member States, media regulators and stakeholders to encourage self and co-regulatory initiatives. The EU promotion policy for agricultural products will also be reviewed in view of phasing out promotion of foods linked with cancer risks, such as red and processed meat.

Tax incentives can also contribute to facilitate healthy lifestyles. The Commission's proposal on VAT rates allows Member States to make more targeted use of rates, for instance to support the availability and affordability of healthy and nutritious food for the population. In addition, in 2022, the Commission will publish a **study mapping fiscal measures and pricing policies** on sugars, soft drinks and alcoholic beverages. Following this, the Commission will consider the feasibility of proposing new tax measures on sugars and soft drinks.

To reduce sedentary lifestyles and to promote a healthy and active life for all age groups, the Cancer Plan will launch the '**HealthyLifestyle4All**' political commitment in 2021, involving key sectors that play a crucial role in promoting sport, physical activity and healthy diets. The new Pledge will invite EU Member States, regional and local governments and civil society representatives to actively contribute to ensure that healthy choices become the easy and affordable choices. The initiative will focus on reducing existing inequalities by strongly involving low socioeconomic groups and vulnerable groups (elderly, children). The Commission will develop a number of initiatives, such as to eliminate conflicting health messages around sport events (i.e. advertisement of alcohol and foods high in fat, salt and sugar), promote investment in soft mobility infrastructures, promote healthy canteens (schools and sport clubs) and will develop outreach measures (such as 'athletes against cancer', 'schools against cancer' and a series of charity events). These efforts will be channelled through major EU initiatives such as the European Week of Sport, EU School Scheme, the Erasmus Plus partnerships, and the European Mobility Week, bringing together various stakeholders with a view to work together on new interdisciplinary projects related to healthy and active lifestyles.

This action will be complemented by other EU actions and initiatives, including the **Sustainable Urban Mobility Planning guide** on linking transport and health, published in the Sustainable Urban Mobility Plans<sup>27</sup>. In addition, the Commission will propose a **revised urban mobility initiative** in 2021<sup>28</sup>.

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<sup>27</sup> [https://www.eltis.org/sites/default/files/linking\\_transport\\_and\\_health\\_in\\_sumps.pdf](https://www.eltis.org/sites/default/files/linking_transport_and_health_in_sumps.pdf)

<sup>28</sup> This will be done following the evaluation of the 2013 Urban mobility package, that will be available in the first quarter 2021.

### 3.5. Reducing environmental pollution

Europeans expect to live in healthy, sustainable environments, and rightfully so. Yet, air pollution<sup>29</sup> is the main driver of mortality due to environmental factors, contributing to 400,000 premature deaths per year, including from lung cancer, heart disease, and stroke<sup>30</sup>.

Europe's Beating Cancer Plan will interact closely with the Green Deal and the Zero Pollution Strategy to reinforce actions on contaminants in drinking and groundwater, soil pollution, and air. The **EU's air quality standards** will be revised by 2022 in line with the World Health Organization guidelines<sup>31</sup>. Environmental assessments and the collection of environmental data will improve our understanding of links between pollution and cancer. Improved monitoring, modelling and air quality plans will help local authorities to achieve **cleaner air**. Similarly, action will be taken, through data sharing, further analysis of indicators, and human biomonitoring, to better understand and tackle persistent and bio-accumulative substances and endocrine disruptors that may cause cancer.

In parallel, the Commission will present measures on 'clean' transport and mobility that will reduce environmental pollution. The mobility packages and the future **Sustainable and Smart Transport Strategy** will stimulate clean transport and contribute to a reduction in air pollution.

### 3.6. Reducing exposure to hazardous substances and radiations

Reducing exposure to hazardous substances and radiations will contribute significantly to cancer prevention, especially in specific settings like the work place. 52% of annual occupational deaths in the EU can be attributed to work-related cancers, compared to 24% linked with circulatory diseases, 22% with other diseases and 2% for injuries.

**The Carcinogens and Mutagens Directive** protects workers from risks arising from exposure to carcinogens and mutagens at work. As a precursor to the Cancer Plan, the Directive has been updated, setting new or revised limits for three important substances: acrylonitrile, nickel compounds, and benzene<sup>32</sup>. Starting in 2021 the Commission will also revise the existing occupational exposure limits for asbestos to better protect workers from cancer risks. Through the **revision of the Occupational Health and Safety Strategic Framework**, additional priorities and strong commitments on chemicals will be set, including through **an occupational cancer register**. This will also inform the debate on whether the legal framework needs to be adapted to the changing world of work.

The Commission will also propose to **revise the regulatory framework on ultraviolet radiation** including from sunbeds which increases the risk of melanoma, the most serious form of skin cancer. It will support Member States with the implementation of the requirements on

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<sup>29</sup> <https://www.eea.europa.eu/publications/healthy-environment-healthy-lives>

<sup>30</sup> At least one in eight European deaths is caused by poor air quality environments.

<sup>31</sup> [https://www.who.int/news-room/fact-sheets/detail/ambient-\(outdoor\)-air-quality-and-health](https://www.who.int/news-room/fact-sheets/detail/ambient-(outdoor)-air-quality-and-health)

<sup>32</sup> Directive 2004/37/EC

protection from ionising radiation, in particular on radon<sup>33</sup>, which causes a substantial number of lung cancers in the general population.

### 3.7. Preventing cancers caused by infections

Many cancers are caused by common infections that can be prevented by vaccination. With dedicated funds under the EU4Health programme and the Recovery and Resilience Facility, Europe's Beating Cancer Plan will support Member States' efforts **to extend** by 2030 the systematic vaccination against human papillomaviruses of girls and boys with the target to reach the elimination of **cervical cancer and other cancers caused by human papillomaviruses**. To reach this target the objective is to vaccinate at least 90% of the EU target population of girls and boys.<sup>34</sup> Addressing also cancer risks associated with Hepatitis B infections, a **Council Recommendation on vaccine preventable cancers** will contribute to this effort while implementation by Member States will be critical to its success.

Furthermore, the Commission will help to ensure access to vaccination and treatments to prevent liver and gastric cancers associated with hepatitis C virus and *Helicobacter pylori* infections. In parallel, the EU **Pharmaceutical Strategy** will examine the system of incentives and obligations to boost innovation and ensure better access to first line medicines and vaccines.

#### **Flagship initiatives on prevention**

- Eliminate cervical and other cancers caused by human papillomaviruses through EU support to Member States on vaccination.

#### **Other actions**

- Improve health literacy on cancer risk through updating the European Code on Cancer and targeted dissemination action.
- Create a 'Tobacco Free Generation' through a holistic approach addressing tobacco including review of the Tobacco Products Directive, the Tobacco Taxation Directive and the legal framework on cross border purchases of tobacco by private individuals, update of the Council Recommendation on Smoke-Free Environments, and support to Member States in implementing the Framework Convention on Tobacco Control.
- Reduce harmful alcohol consumption by supporting Member States on capacity building, the implementation of best practice, reduction of online marketing and advertising of alcohol products, as well as in the implementation of evidence-based brief interventions. Review EU legislation on alcohol taxation and cross border

<sup>33</sup> Council Directive 2013/59/Euratom

<sup>34</sup> Based on the three key pillars of the global strategy, WHO recommends a set of targets or milestones that each country should meet by 2030 to get on the path to eliminate cervical cancer within the century:

- 90% of girls fully vaccinated with the HPV vaccine by the age of 15;
- 70% of women screened using a high-performance test by the age of 35, and again by the age of 45; and
- 90% of women identified with cervical disease receive treatment (90% of women with pre-cancer treated and 90% of women with invasive cancer managed).

<https://www.who.int/news/item/19-08-2020-world-health-assembly-adopts-global-strategy-to-accelerate-cervical-cancer-elimination>

purchases of alcohol products, and propose mandatory labelling of ingredients and calorie content and inclusion of health warnings on alcoholic beverages.

- Address joint effects of unhealthy diets, obesity, and physical inactivity by reducing carcinogenic contaminants in food, addressing childhood obesity and improving intake of fruit, vegetable and milk in schools, proposing harmonised, mandatory front-of-pack nutrition labelling, and promoting healthy life for all age groups through launching the 'HealthyLifestyle4All' political commitment.
- Reduce environmental pollution by aligning the EU's air quality standards with the World Health Organization's guidelines.
- Reduce exposure to carcinogenic substances and radiation through continuous updates of the Carcinogens and Mutagens Directive, and revision of the Occupational Health and Safety Strategic Framework and the framework on ultraviolet radiation.

#### 4. IMPROVE EARLY DETECTION OF CANCER

Early detection through screening offers the best chance of beating cancer and saving lives. As of 2020, 25 EU countries have introduced in their National Cancer Control Plans population-based screening programmes for breast cancer, 22 for cervical cancer and 20 for colorectal cancer. However, a significant number of these programmes have not been fully rolled out or implemented, and unacceptable inequalities persist within and between Member States. For example, the coverage of the target population ranges from 6% to 90% for breast cancer screening, and from about 25% to 80% for cervical cancer<sup>35</sup>.

Europe's Beating Cancer Plan will develop a **new EU Cancer Screening Scheme** to ensure that 90% of the EU population who qualify for breast, cervical and colorectal<sup>36</sup> cancer screenings will have access to screening by 2025. The Scheme will focus on three dimensions: improved access, enhanced quality and better diagnostics.

Addressing the access dimension, the Commission will make a proposal by 2022 to update the **Council Recommendation on cancer screening**<sup>37</sup> to ensure it reflects the newest available scientific evidence. In addition, the possible extension of targeted cancer screening beyond breast, colorectal and cervical cancer will be considered to include additional cancers, such as prostate, lung and gastric cancer. The work of the Knowledge Centre on Cancer will address the quality dimension by developing new **Guidelines and Quality Assurance Schemes** on cancer screening, diagnosis and treatment for colorectal and cervical cancer. These will include voluntary-based accreditation and certification programmes of Cancer Centres, while continuously updating the existing guidelines on breast cancer. The new **European Cancer Imaging Initiative** will complement the Scheme, addressing all three elements by facilitating the

<sup>35</sup> [https://ec.europa.eu/health/sites/health/files/state/docs/2018\\_healthatglance\\_rep\\_en.pdf](https://ec.europa.eu/health/sites/health/files/state/docs/2018_healthatglance_rep_en.pdf)

<sup>36</sup> The three types of cancer addressed by the Council Recommendation on Cancer Screening

<sup>37</sup> <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32003H0878>

development of new, enhanced diagnostic methods to improve the quality and speed of screening programmes using Artificial Intelligence.

The development of the new EU Cancer Screening Scheme will be supported by the **Mission on Cancer**, which will generate evidence on the optimisation of existing population-based cancer screening programmes, develop novel approaches for screening and early detection, and provide options to extend screening to new cancers. It will be rolled-out in Member States with funding from the EU4Health Programme and support from the Technical Support Instrument. The European Regional Development Fund, which is under shared management, can also provide support for investments in early detection. Cervical, breast and colorectal cancer survival is one of the key indicators of the effectiveness of health care systems in cancer care, reflecting both efficiency in early detection and the effectiveness of treatment<sup>38</sup>.

#### **Flagship initiatives on early detection**

- Develop a new EU Cancer Screening Scheme to ensure effective and equal access of target groups to high-quality population based screening programmes for breast, cervical and colorectal cancer.

#### **Other actions**

- Review, update and explore expansion of the Council Recommendation on cancer screening.
- Developing new Guidelines and Quality Assurance Schemes on cancer screening, diagnosis and treatment for colorectal and cervical cancer, including accreditation and certification programmes, while continuously updating the existing guidelines on breast cancer.

## **5. ENSURING ACCESS TO HIGH STANDARDS IN CANCER CARE**

When it comes to accessing high quality cancer care, and particularly in the case of diagnosis and treatment, patients are still faced with unacceptable inequalities across the EU. For instance, survival rates following treatment for breast cancer vary by 20% between countries. Among women diagnosed with cervical cancer, five-year survival rates range from 70% to 54%<sup>39</sup>.

Europe's Beating Cancer Plan seeks to ensure that the EU population has the same right to high quality care, diagnosis and treatment, the same access to medicines, and the same hope of survival, regardless of where they live.

Cancer management is a complex undertaking that comprises multiple moving parts. Diagnosis and treatment involve laboratory testings, radiology, surgery, systemic therapy and radiotherapy, as well as rehabilitation and psychological support. It must be delivered along the full patient pathway by multidisciplinary teams, which are the cornerstone of integrated patient-centred care.

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<sup>38</sup> The action is expected to contribute to increase the age-standardised five-year net survival of patients with cervical, breast and colorectal cancer by 2025, and will reduce the currently existing inequalities in survival rates among countries.

<sup>39</sup> [https://ec.europa.eu/health/sites/health/files/state/docs/2018\\_healthatglance\\_rep\\_en.pdf](https://ec.europa.eu/health/sites/health/files/state/docs/2018_healthatglance_rep_en.pdf)

Europe's Beating Cancer Plan will establish, by 2025, an **EU Network** linking recognised National **Comprehensive Cancer Centres** in every Member State. The EU Network will enable the uptake of quality-assured diagnosis and treatment processes, including training, research and clinical trials. This cross-border collaboration of Centres will improve patients' access to high quality diagnostics and care including the latest innovative treatments. A new 'EU Cancer Treatment Capacity and Capability Mapping' project will help to map and subsequently share the different capabilities and expertise available across the EU using digitalised tools.

The action will also contribute to reduce inequalities across the Union, while enabling patients to benefit from diagnosis and treatment close to home. The Plan aims to ensure that **90% of eligible patients** have access to such **Centres by 2030**.

The EU Network will be underpinned by the integration of the existing four rare-cancer focused European Reference Networks (ERNs)<sup>1</sup> and a group of **newly-created Reference Networks**. These new Networks will address specific cancer conditions, which will benefit from cross border cooperation and EU expertise. This includes metastatic diseases, co-morbidities in cancer care, complex cancers with poor prognosis, paediatric cancers, and specific conditions related to genomics in cancer care, palliative care and survivorship. They will connect experts, share expertise across the EU, and provide answers, certainty and hope to patients where before there was none.

### 5.1. Ensuring a high quality health workforce

High quality cancer care depends on a high quality workforce. Patients deserve the best care possible, and EU Member States and health professionals need support to ensure they get it. Europe's Beating Cancer Plan will strengthen the **multidisciplinary cancer workforce** through training and continuous education, including on digital skills, Artificial Intelligence, genomics, and personalised medicine. This training will also include a holistic focus on patients' quality of life and well-being including mental, psychosocial, and nutritional support, as well as patient empowerment. This will help Member States to address skills gaps and equip their health workforce with personnel trained in cancer prevention, early detection, diagnosis, treatment, rehabilitation and survivorship.

The Commission will launch the '**Inter-specialty training programme**' in 2021. The programme will focus on oncology, surgery, and radiology and aims to improve the mobility of the cancer workforce through cross-border training and information-sharing programmes based on expressly developed inter-specialty curricula. This approach, comparable to previous successful EU experiences such as Erasmus<sup>40</sup> and EPIET<sup>41</sup>, will help to optimise collaboration among cancer specialists and ultimately benefit diagnosis, treatment, and follow up for cancer patients. In line with the Skills Agenda, the Commission will also launch a Pact for Skills as a large-scale partnership in the health sector.

<sup>40</sup> [https://ec.europa.eu/programmes/erasmus-plus/node\\_fr](https://ec.europa.eu/programmes/erasmus-plus/node_fr)

<sup>41</sup> <https://www.ecdc.europa.eu/en/epiet-euphem>

## 5.2. Ensuring access to essential medicines and innovation

Recent developments in cancer diagnosis and treatment have dramatically improved survival rates and quality of life for cancer patients. However, the financial costs are high, and they vary significantly across the EU. Moreover, shortages of cancer medicines have increased considerably, with serious consequences for patients. Overcoming these challenges is an important goal of Europe's Beating Cancer Plan and the Commission more broadly.

The recently adopted **Pharmaceutical Strategy** for Europe, which will include a targeted revision of the basic pharmaceutical legislation, will propose tools to improve access to medicinal products, including to generic and biosimilar medicines. It aims to do so by removing barriers that delay their market entry and uptake. The Strategy will include actions aiming to secure supply chains and respond to shortages of medicines. Furthermore, it will also seek to boost innovation to address the unmet needs of patients, while at the same time ensuring the affordability of these treatments.

The development of new medicines takes on average almost 15 years before they become available to patients. Repurposing of existing medicinal products beyond their original indication is therefore a viable strategy to reduce timeframes, decrease development costs and improve success rates. In 2021, the Commission will launch an action to create the **EU platform to improve access to cancer medicines** to support the repurposing of existing medicines. The Platform will devise and test models to enhance the collaboration among relevant EU stakeholders and leverage, pool and share existing data using new digital tools. To complement the platform and building on experiences gained through the repurposing of medicines to treat COVID-19<sup>42</sup>, an additional **project** will be launched that leverages high performance computing to **rapidly test existing molecules and new drug combinations. This will focus on rare cancers and cancers with poor prognosis.**

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<sup>42</sup> <https://ec.europa.eu/digital-single-market/en/news/using-european-supercomputing-treat-coronavirus>

Launched by end of 2021 the new ‘**Cancer Diagnostic and Treatment for All**’ initiative will help to improve access to innovative cancer diagnosis and treatments. The initiative will build on ‘tumor markers analysis’, which can detect cancer cells in the blood of cancer patients (‘liquid biopsies’)<sup>43</sup>, and utilises the ‘Next Generation Sequencing’ technology that generates quick and efficient genetic profiles of tumor cells. Cancer patients will benefit from the creation of this new **cross-EU platform**, through which Cancer Centres will be able to share cancer profiles with a view to applying the same or similar diagnostic and therapeutic approaches to patients with comparable cancer profiles. The initiative will ultimately contribute to optimising cancer diagnosis and treatment and reduce unequal access to personalised medicine in cancer care.

The initiative will be complemented by the launch of a **wide public debate** on the ethical, legal and societal implications of the use of genomic information, taking stock of the outcomes of the EU-funded Innovative Partnership on Action Against Cancer (iPAAC) Joint Action<sup>44</sup>. The debate will include cancer patients, survivors, professionals, scientists, industry, and citizens.

The new **legal framework for clinical trials** will be applicable by the end of 2021. This will introduce a highly coordinated, robust and agile system for the assessment and oversight of clinical trials in the EU. In addition, improving patient access to **electronic health records** and linking these to the Network of European Cancer Registries will give cancer patients access to personalised medicines, clinical trials and research outcomes.

The timely adoption of the proposal for a Regulation on **Health Technology Assessment (HTA)** by the Council and the European Parliament would help to ensure speedy access to innovative cancer diagnosis and treatments. Once adopted, a permanent framework for EU cooperation on HTA could provide Member States with high quality and timely Health Technology Assessment reports, and would enable them to share resources, expertise and capacity. This is particularly relevant to highly specialised cancer diagnostic procedures and treatments and would support a more patient-oriented, transparent approach.

To support the security of the supply of radioisotopes for cancer diagnosis and care, and to enhance the quality and safety of radiation technology in medicine, the Commission will present a new Action Plan of the **Strategic Agenda for Medical Ionising Radiation Applications of nuclear and radiation technology (SAMIRA)**. SAMIRA will provide guidance on EU research and innovation, and complement the ‘Inter-specialty training programme’ by supporting education of medical professionals in radiology, radiotherapy and nuclear medicine.

In the area of research and innovation, two new Horizon Europe-based partnerships will synergise investments and deliver tangible benefits for patients. The **European Partnership for Innovative Health** between the EU and companies in the biopharmaceutical, biotechnology and medical technology sectors will create an EU-wide health research and innovation ecosystem, facilitating the translation of scientific knowledge into people-centred and cost-effective innovations. The **Partnership on Health and Care Systems Transformation**, between the EU

<sup>43</sup> The ‘liquid biopsy’ is a test that enables the diagnosis or analysis of tumours using only a blood or fluid sample rather than a solid tissue biopsy.

<sup>44</sup> <https://www.ipaac.eu/en/work-packages/wp6/>

and Member states, will enable the uptake of organisational, service and technological innovations. In addition, the **Partnership on Personalised Medicine**, due to be set up in 2023, will gather Member States and international partners in identifying priorities for research and education in personalised medicine, and support research projects relevant to cancer.

Europe's Beating Cancer Plan will support the application of new techniques, such as '**Horizon Scanning**', to collect and consolidate the most recent information related to more effective, precise and less invasive cancer treatments and help to translate them into practice<sup>45</sup>. These treatments will include targeted therapy, immunotherapy and gene therapy, as these are the most popular methodologies under investigation. Other, quickly growing new approaches, which will have the potential to replace and improve conventional therapies, will also be included. These could include radiomics and pathomics approaches that help to improve cancer prognosis and outcomes.

#### **Flagship initiatives on cancer care**

- Launch an EU Network linking recognised National Comprehensive Cancer Centres in every Member State to improve access to high quality diagnosis and care.
- Launch a 'Cancer Diagnostic and Treatment for All' initiative to improve access to innovative cancer diagnosis and treatment based on new advances in genomics and personalized care.

#### **Other actions**

- Launch an 'Inter-specialty training programme', focusing on oncology, surgery, and radiology to optimise diagnosis and treatment of cancer patients.
- Establish a group of new Reference Networks on specific cancer conditions and integrate these networks, as well as the existing four rare-cancer focused ERNs, in the EU Network of Comprehensive Cancer Centres.
- Create an EU platform to support the repurposing of existing molecules with a harmonised and sustainable EU dimension.
- Launch a new project leveraging high performance computing to rapidly test existing molecules and new drug combinations addressing in particular rare cancers and cancers with poor prognosis.

## **6. IMPROVING THE QUALITY OF LIFE FOR CANCER PATIENTS, SURVIVORS, AND CARERS**

Thanks to advances in early detection, effective therapies and supportive care, survival rates have increased dramatically. The number of cancer survivors grows every year, and is now estimated at over 12 million in Europe. This figure includes around 300,000 childhood cancer survivors, a number which is also expected to rise substantially in the years to come.

While this is a reason for optimism, survivors can experience late and long-term effects of treatment, and issues related to rehabilitation, emotional distress, tumour recurrence, and

<sup>45</sup> iPAAC, Clinical practice guidelines and reference frameworks related to the use of immunotherapies  
<https://www.ipaac.eu/res/file/20191009-gb-barcelona/07-wp9.pdf>

metastatic disease. These create significant challenges for survivors and their families, first and foremost. But they also pose problems for health care and social care systems, which have to ensure that all patients receive appropriate follow-up, care, and quality of life. In this context, the question must change from ‘how long’ people live after diagnosis to ‘how well and how long’ people live.

Across Europe, the growing number of cancer survivors experience diverse survivorship approaches. However, evidence shows that the most common factors affecting cancer follow-up care are poor coordination and lack of communication among health care providers, and unmet psychosocial needs, including unfairness on health grounds<sup>46</sup>. Social integration and re-integration in the workplace should therefore be integral parts of the patient pathway including early assessment and adaptation of working conditions for cancer patients. Member States are encouraged to promote re- and up skilling programmes to promote a smooth reintegration in the labour market of cancer survivors, with possible support through the European Social Fund+. Europe’s Beating Cancer Plan aims not only to ensure that cancer patients survive their illness, but that they live long, fulfilling lives.

Funded by the EU4Health Programme, the Commission will launch the ‘**Better Life for Cancer Patients Initiative**’, which will provide, by 2022, a ‘**Cancer Survivor Smart-Card**’ to monitor their experience. The personalised voluntary ‘Smart-Card’, in the form of an interoperable portable device, will connect the patient with health professionals and ensure improved communication and coordination of the follow-up. It will be complemented by the creation of a virtual ‘**European Cancer Patient Digital Centre**’ under the proposed Horizon Europe Mission on Cancer, which will support the exchange of patients’ data and monitoring of survivors’ health conditions in a standardised manner, by 2023.

The Commission will support Member States and stakeholders in implementing the **Council Recommendation on access to social protection** by organising mutual learning activities, strengthening the evidence base, and further developing a monitoring framework with the **Social Protection Committee**. In this context, it will pay special attention to the need of cancer patients and survivors. In the upcoming Occupational Health and Safety Strategic Framework, the Commission will also look into psycho-social risks and vulnerable groups, including cancer survivors. In addition, the Action Plan to implement the principles of the European Pillar of Social Rights will contribute to developing and expanding care infrastructure in the EU and improving the working conditions of the health and care workforce.

The Commission will also ensure that Member States fully implement the **Directive on work-life balance for parents and carers**, which introduces a carers' leave for workers with caring responsibilities. The European Social Fund, the European Regional Development Fund, and InvestEU can support care services and care infrastructure for all people in need, including those with long-term illnesses like cancer. The forthcoming European Disability Strategy will further consider the facilitation of modified work patterns for those cancer patients and survivors that are considered as persons with disabilities (e.g. to convert to part-time work).

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<sup>46</sup> [https://cancercontrol.eu/archived/uploads/images/Guide/042017/CanCon\\_Guide\\_7\\_Survivorship\\_LR.pdf](https://cancercontrol.eu/archived/uploads/images/Guide/042017/CanCon_Guide_7_Survivorship_LR.pdf)

Through Europe's Beating Cancer Plan, the Commission will closely examine practices **in the area of financial and insurance services** from the point of view of fairness towards cancer survivors in long term remission, in particular how progress in cancer treatments and resulting improved health recovery are taken into account. To that end, the Commission will launch a reflection to find appropriate solutions facilitating access to financial services, protecting former cancer patients from unjustified long-term financial implications in terms of accessing financial services.

In the short term, the Commission will work with the relevant stakeholders in view of addressing the issue of access of cancer survivors to financial products. The Commission will engage in dialogue with business actors to develop a Code of Conduct to ensure that developments on cancer treatments and their improved effectiveness are reflected in the business practices of financial service providers.

In the context of the upcoming review of product-specific legislation in retail finance, the Commission will consider changes in the way the providers of financial services deal with consumer information. It will ensure that only necessary and proportionate information is used when assessing the eligibility of applicants for financial products, notably credits and loans.

#### ***Initiatives on quality of life for cancer patients and carers***

- Launch the 'Better Life for Cancer Patients Initiative', to provide a voluntary 'Cancer Survivor Smart-Card' that improves communication with health professionals and coordination of the follow-up care. Create a virtual 'European Cancer Patient Digital Centre' to complement the card and support the exchange of patients' data and monitoring of survivors' health conditions.
- Support to Member States and stakeholders in implementing the Council Recommendation on access to social protection and development of a monitoring framework, and ensuring full implementation of the Directive on work-life balance for parents and carers.
- Address equal access of cancer survivors to financial and insurance services, by working with stakeholders to develop a Code of Conduct, and launching a reflection process on finding appropriate long term solutions including considerations during the upcoming review of product-specific legislation in retail finance on specifying necessity and appropriateness of information to be used for assessing eligibility of applicants for financial products.

## **7. REDUCING CANCER INEQUALITIES ACROSS THE EU**

A number of indicators show major differences in cancer prevention and care between and within Member States. These inequalities can be seen in access to prevention programmes, in rates of early cancer detection, diagnosis, treatment, and in measures to improve quality of life of cancer patients and survivors. For instance, a recent Eurostat study revealed that unequal coverage in cancer screening between Member States ranged from 82% to 0.2% of women aged 50-69 receiving a mammography as part of a breast cancer screening programme. Inequalities are also illustrated in the fact that survival rates are often much lower in Southern and Eastern European countries compared to the European average.

Important geographic differences can be explained by a combination of lower exposure to risk factors, better access to screening programmes and health services, and better capacity to absorb the social and financial consequences of cancer. Furthermore, such discrepancies are also persistent characteristics for vulnerable and marginalised groups, like elderly people and people living in poverty.

These inequalities are unacceptable in a European Union that seeks to protect all of its population. There should be no first and second class cancer patients in the EU. Europe's Beating Cancer Plan aims to address these inequalities across the entire disease pathway.

The Plan will establish, by 2021, a **Cancer Inequalities Registry**. Reporting on an annual basis, it will map trends in key cancer data which identify inequalities between Member States and regions. The Registry, complemented by regular qualitative assessments of the country-specific situation based on an EU wide framework, will identify challenges and specific areas of action to guide EU investment and interventions under Europe's Beating Cancer Plan.

Several actions outlined in this plan will address inequalities between and within EU Member States. This includes the updated Council Recommendations on Cancer Screening, which will advise Member States on state of the art approaches to cancer screening, coupled with quality assurance schemes and accreditation for screening and treatment of breast, colorectal and cervical cancer. The EU Network of Comprehensive Cancer Centres will support this process for instance by ensuring the uptake of regularly updated evidence-based guidelines, channelling investments to accredited, quality-assured structures and the pooling of knowledge and resources.

Member States can benefit from EU Cohesion Policy Funds to reduce inequalities in access to healthcare services, for instance through the use of mobile health care units for cancer screening, or laboratory diagnostics. This is particularly important for those living in the most deprived and isolated communities with restricted access to large urban centres. These projects aim to provide healthcare and cancer services, with an emphasis on disease prevention and early diagnosis. The mobile units, staffed with a multidisciplinary team, visit the population on a regular basis, and connecting with established health facilities via mobile digital systems. The EU will also facilitate the use of advanced mobile technologies by healthcare providers through the EU4Health and Digital Europe Programme. This supports the deployment of fast connectivity in line with the Gigabit Society targets 2025<sup>47</sup>, and the EU will offer priority funding to projects involving health facilities with a public service mission.

The COVID-19 pandemic has exposed the most vulnerable groups in our society, in particular the elderly, those with fragile mental or physical health, and those whose life circumstances create barriers to accessible healthcare, including cancer patients, survivors and their families. Isolation and protective measures due to the COVID-19 pandemic have affected the follow-up care and quality of life of cancer patients. The EU is working to ensure stronger preparedness to

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<sup>47</sup> COM(2016) 587 final. "Connectivity for a Competitive Digital Single Market - Towards a European Gigabit Society"

address these needs in case of future COVID-19 waves or to respond to similar threats, Europe's Beating Cancer Plan is a key part of these efforts.

Actions in this area include **reinforcing and integrating telemedicine and remote monitoring** in health and care systems throughout the EU through supporting research, innovation and deployment actions with EU funding instruments. This will help to protect immunosuppressed cancer patients from exposure to infectious diseases such as COVID-19. Furthermore, the virtual consultation model of the European Reference Networks will be promoted to support sharing of knowledge among healthcare professionals. Through the European Health Data Space, the Commission will work to remove barriers to cross-border provision of digital health services. Measures will also include **training** and continuous education of the cancer workforce.

In 2021, the Commission continues to focus on improving the overall resilience, accessibility and effectiveness of European health systems, which will help to ensure that the provision of cancer care is safeguarded in future health crises. Cooperation at EU level offers the surest path to stronger health systems. Knowledge brokering, best practice exchange, hands-on technical support and financing from EU programmes for health reforms will all contribute to this goal.

#### **Flagship initiatives on inequalities**

- Launch a Cancer Inequalities Registry to map trends in key cancer data identifying inequalities between Member States and regions.

#### **Other actions**

- Reinforce and integrate telemedicine and remote monitoring in health and care systems throughout the EU to protect cancer patients from exposure to infectious diseases and promoting the virtual consultation model of the ERNs. Measures will also include training and continuous education of the cancer workforce.
- Measures to improving the overall resilience, accessibility and effectiveness of European health systems to safeguard the provision of cancer care in future health crises.
- Mainstreaming inequality action in other areas addressed by Europe's Beating Cancer Plan such as on screening, and high quality cancer care.

## **8. PUTTING CHILDHOOD CANCER AT THE TOP OF THE AGENDA**

More than 20,000 children are newly diagnosed with cancer each year in Europe, with 6,000 young patients dying from the disease. In fact, cancer is the first cause of death by disease beyond the age of one. However, important differences exist between childhood and adult cancers in terms of the type of cancer, how far it spreads, and how it is treated. For example, by the time they are diagnosed, 80% of paediatric cancers have already spread to other parts of the body, compared to about 20% of adult cancers.

In 2021, Europe's Beating Cancer Plan will launch the '**Helping Children with Cancer Initiative**' with the aim of ensuring that children have access to rapid and optimal detection, diagnosis, treatment and care. The initiative will be funded under the EU4Health Programme and

will facilitate access to early diagnosis and quality treatment through the new Network of Comprehensive Cancer Centres. It will support training and enable the sharing of best practice and standards of care for children with cancer, complementing the actions implemented by the new European Reference Networks.

Up to 30% of children affected by cancer suffer severe long-term consequences. As the number of childhood cancer survivors continues to grow, comprehensive care, treatment and follow-up are essential to help young patients make a good recovery and ensure an optimal quality of life<sup>48</sup>. The new '**Cancer Survivor Smart-Card**' will address the specificities of childhood cancer survivors, including long-term monitoring of outcomes and potential toxicity of treatments, rehabilitation, psychological support, educational matters, connectivity with healthcare staff, and information about past clinical history. The smart-card will also help to tailor the patient's follow-up, in accordance with the input of carers and the agreement of the family. The revision of the **Orphan and of the Paediatric Regulations** will enhance the study and authorisation of new cancer medicines for use in children.

A new '**EU Network of Youth Cancer Survivors**' will complement the actions under the 'Helping Children with Cancer Initiative', set up between 2021-22, and will connect young cancer survivors and their families as well as informal and formal carers. The Network will help to strengthen the long-term follow up in cancer care plans at national or regional level. Children, adolescents and young adult survivors will be nominated as Representatives of the Network in Member States.

The Plan will also support young cancer patients through projects under the proposed **Horizon Europe Cancer Mission**. For example, the '**Childhood cancers and cancers in adolescents and young adults: cure more and cure better**' project will increase understanding of cancer initiation and progression and boost the transformation of paediatric cancer care with evidence to advance diagnostics, treatment and survivorship support.

#### **Initiatives on paediatric cancer**

- Launch the 'Helping Children with Cancer Initiative' to ensure that children have access to rapid and optimal detection, diagnosis, treatment and care.
- Establish an 'EU Network of Youth Cancer Survivors' to complement the 'Helping Children with Cancer Initiative' and to connect young cancer survivors and their families as well as informal and formal carers.
- Develop a new 'Cancer Survivor Smart-Card' to address the specificities of childhood cancer survivors.

## **9. FUNDING**

Europe's Beating Cancer Plan will be implemented, enabled and supported using the whole range of Commission funding instruments. A substantial share of the **new EU4Health**

<sup>48</sup> [https://siope.eu/media/wp-content/uploads/2013/09/European\\_Standards\\_final\\_2011.pdf](https://siope.eu/media/wp-content/uploads/2013/09/European_Standards_final_2011.pdf)

**Programme**, [XX] %, will be used to support actions and initiatives outlined in the Plan. For instance, major initiatives to receive support include the ‘EU Digital Passport for Cancer Prevention’, the ‘EU Network of Comprehensive Cancer Centres’, ‘Helping Children with Cancer’, ‘Better Life for Cancer Patients’, the ‘Knowledge Centre on Cancer’, and the ‘EU Inter-specialty Training’.

In addition, financial support will be provided through other instruments. For example, the **Horizon Europe** Framework Programme for Research and Innovation<sup>49</sup> will support the Mission on Cancer, the **Digital Europe Programme** will focus on digital investments, electronic data and digital skills, and **Erasmus+** will support training and education.

The **Cohesion Policy Funds** (European Regional Development Fund, Cohesion Fund and European Social Fund Plus) will provide support to Member States and their regions to improve their health systems’ resilience, accessibility and effectiveness. In this context, funding could support the whole cancer control continuum, ranging from promoting healthy lifestyles, improving access to prevention, early detection and screening, and treatment, as well as research and development projects relating to oncology. For example, the funds can invest in equipment and infrastructure in oncology wards and prevention centres, as well as the development and implementation of telemedicine, eHealth applications and tools, and health workforce skills for cancer care. As Cohesion Policy Funds are under shared management, it is the responsibility of Member States and their national and regional authorities to prioritise, on the basis of the existing needs, and carry out these investments. They are encouraged to make full use of the available possibilities to implement the measures included in this Plan. To facilitate the use of Cohesion Instruments for cancer investment, the European Commission will **set up a knowledge sharing mechanism to inform Member States** of the different EU funding mechanisms and how they can be utilised.

As part of the Commission proposal for a reinforced EU budget, the ‘Next Generation EU’, a new **Recovery and Resilience Facility**, with a budget of €672.5 billion in grants and loans, has been put forward to finance reforms and investments to overcome the economic and social impact of the Covid-19 pandemic, addressing challenges identified in the European Semester. Support for health reforms and resilient health systems is eligible, and can be included in the Recovery and Resilience Plans (RRPs), which will be prepared by each Member State and approved by the Commission. These may include investments in health infrastructure, equipment, digital transformation of healthcare, manufacturing capacity for medicines and medical devices. Investments in cancer care are possible, along these lines, and the Commission calls on Member States to strongly consider these investment opportunities to support national cancer strategies.

Investments addressing cancer by Member States and public and private entities could also be mobilised through EU budget guarantees, for instance through the InvestEU programme. It will offer loans and equity financing for investments in hospitals, primary care and community care facilities; eHealth; healthcare workforce; as well as in innovative health products, services and

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<sup>49</sup> Beside the Cancer Mission, Horizon Europe finances research and pilot projects under the thematic areas in the “Health” cluster with a EUR 7.7 billion budget.

care models. Under InvestEU, national and regional authorities need to work with the European Investment Bank, national promotional banks and other investors to configure projects that can attract co-investments from the private sector.

## **10. IMPLEMENTATION AND GOVERNANCE: DELIVERING TOGETHER**

The EU **Cancer Plan Implementation Group**, led by the Commission, will guarantee a participatory Governance of Europe's Beating Cancer Plan. It will look to ensure coherence between the Commission, the European Parliament, the Member States, the Cancer Mission Board functioning as a scientific advisory group, and a stakeholder contact group established under the Commission's Health Policy Platform.

The implementation of the plan will be monitored on the basis of a roadmap and process indicators, which will be based on the actions included in the plan and regularly reviewed by the Implementation Group. Building on the augmented European Cancer Information System, the Commission will also regularly collect and publish data through the Cancer Inequalities Registry to monitor trends. This will also facilitate a comprehensive impact assessment of all actions of the Plan, including on competitiveness, the environment, and health beyond cancer. Europe's Beating Cancer Plan will be reviewed by the end of 2023 to assess whether the action taken is sufficient to achieve the objectives or whether additional measures are necessary.

## **11. CONCLUSION**

EU residents expect and deserve to live in a society that protects them from avoidable cancers, that ensures early detection, and that provides equitable, affordable, high-quality and sustainable cancer care to those who need it. Europe's Beating Cancer Plan is an ambitious strategy that responds concretely to these aspirations. It aims, first and foremost, to prevent cancer, and then to ensure a high quality of life to cancer patients, survivors, their families and carers.

With seven flagship initiatives and multiple supporting actions that address the entire disease pathway, this is a plan for Europe. It ensures that everyone has a seat at the table and, above all, that the patient is at the very centre, at every stage of their journey.

The COVID-19 pandemic has challenged the EU, its Member States and the population in unprecedented ways. However, of all the lessons learned in 2020, the clearest is that there is strength in collaboration, solidarity and unity of purpose. This lesson also applies strongly to cancer prevention, treatment and care. The success of Europe's Beating Cancer Plan requires a whole-of-society effort that follows the 'Health in All Policies' approach. Cancer care is no longer only the responsibility of the health sector, but requires engagement and buy-in from a wide range of sectors and stakeholders.

The Commission invites all Member States, residents and stakeholders to help to reverse the rising trend of cancer across the EU and to ensure a healthier, fairer and more sustainable future for all, in line with the United Nations' Sustainable Development Goals. Europe's Beating Cancer Plan aims to build effective partnerships to achieve this goal. Together, Europe can strip away the fear and uncertainty that comes with a cancer diagnosis – and replace it with knowledge, determination, dignity and hope.

Cancer Flagship Initiative		Funding instruments <sup>50</sup>	Target
[Diagram still to be added]	<b>Research</b> Knowledge Centre on Cancer	Horizon European EU4Health	Coordinate scientific and technical cancer-related initiatives at EU level
[Diagram still to be added]	<b>Digitalisation</b> European Cancer Imaging Initiative	Digital Europe Programme	Improve personalised medicine and innovative solutions by delivering greater accuracy and reliability in diagnostic imaging and follow-up of treatments
	<b>Prevention</b> EU support to Member States to improve access to vaccines and vaccination infrastructure across the EU	EU4Health  ESF+, Horizon Europe	Eliminate cervical and other cancers caused by human papillomaviruses by vaccinating 90% of the target population by 2030
	<b>Detection</b> EU Cancer Screening Scheme	Horizon Europe  EU4Health  SRSP,  Recovery and Resilience Facility  InvestEU	Access for 90% of target groups to population based screening programmes for breast, cervical and colorectal cancer, with the contribute of the European Cancer Imaging initiative

<sup>50</sup> ERDF: European Regional Development Fund  
ESF+: European Social Fund +  
SRSP: Structural Reform Support Programme

	<p><b>Diagnosis and treatment</b></p> <p>EU Network of National Comprehensive Cancer Centres</p>	<p>EU4Health</p> <p>SRSP, Horizon Europe</p> <p>Recovery and Resilience Facility</p> <p>InvestEU</p>	<p>All Member States equipped with at least one National Comprehensive Cancer Centre by 2025<sup>51</sup>, with access for 90% of eligible patients to such Centres by 2030</p>
	<p><b>Diagnosis and treatment</b></p> <p>‘Cancer Diagnostic and Treatment for All’ initiative</p>	<p>EU4Health</p> <p>Horizon Europe</p>	<p>Access for all Member States to dedicated platforms to share cancer profiles allowing innovative and personalised diagnosis and therapies</p>
<p>[Diagram still to be added]</p>	<p><b>Equity</b></p> <p>‘Cancer Inequalities Registry’</p>	<p>EU4Health</p>	<p>Regular reporting and qualitative assessments of country-specific situations to guide EU investment and interventions</p>

<sup>51</sup> For larger Member States, one Centre per 5 Million inhabitants is recommended.