



**Scientific Advice Mechanism**  
**European Commission's Group of**  
**Chief Scientific Advisors**

**Scoping paper:**  
**Cancer screening**

***22 April 2021***

## 1. ISSUE AT STAKE

In 2020, 2.7 million people in the European Union were diagnosed with cancer, and another 1.3 million people lost their lives to it<sup>1</sup>. Cancer is an individual diagnosis that has important impacts on patients, but it also severely affects the lives of their families and friends. Today, Europe accounts for a tenth of the world's population, but a quarter of the world's cancer cases, and lives lost to cancer in the EU are set to increase by more than 24% by 2035<sup>2</sup>, making it the leading cause of death in the EU. The overall economic impact of cancer in Europe is estimated to exceed €100 billion annually. Moreover, the COVID-19 pandemic has severely impacted cancer care, disrupting prevention, screening programmes and treatments, delaying diagnosis and vaccination, and affecting access to medicines. Since the pandemic began, the number of cancer diagnoses has decreased, foreshadowing a future increase in cases.

The EU has been working to tackle cancer for decades and its actions, for example on tobacco control and protection from hazardous substances, have saved and prolonged lives. However, the last European action plan against cancer was developed in the early 1990s and the world has seen major progress in cancer treatment in the years since. Personalised medicine – tailored to individual situations and needs – has radically changed patients' prognoses and will improve prevention, screening and early detection. Meanwhile, research and innovation, have dramatically advanced our understanding of cancer initiation, progression, and relapse, and diagnosis, treatment and care interventions for people living with and after cancer .

Europe needs a whole-of-government approach that is patient-centric and maximises the potential of new technologies; strengthens cooperation and opportunities for EU added value; eradicates inequalities in access to cancer knowledge, prevention, screening, diagnosis and care; and delivers improved health outcomes to patients. Europe's Beating Cancer Plan and the Horizon Europe Cancer Mission are the EU's response to these needs, while fully respecting Member States' responsibilities in health policy<sup>3</sup>. The aim is to tackle the entire disease pathway.

Europe's Beating Cancer Plan is structured around four key action areas where the EU can add the most value: (1) prevention; (2) screening and early detection; (3) diagnosis and treatment; and (4) quality of life of cancer patients and survivors. Over the coming years, it will focus on research and innovation, tap into the potential that digitalisation and new technologies offer, and mobilise financial instruments to support Member States.

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<sup>1</sup> Most recent estimates from the European Cancer Information System (ECIS) for the EU-27 countries. New diagnoses cover all types of cancer, apart from non-melanoma skin cancer.

<sup>2</sup> <https://gco.iarc.fr/tomorrow/en/>

<sup>3</sup> See Article 168 of the Treaty on the Functioning of the European Union.

The Mission on Cancer<sup>4</sup>, will be a major component of the EU's investment in cancer research and innovation. It will deepen our understanding of the complexity of cancer. Drawing on research and innovation, public health and policy development, it will inform many of the Cancer Plan's key actions and deliver solutions for patients, including those with comorbidities.

Furthermore, the new Knowledge Centre on cancer will help foster alignment and coordination of EC cancer-related activities at the scientific and technical level. It will utilize and build upon the European Cancer Information System, the European Guidelines and Quality Assurance Schemes for Prevention, Screening, Diagnosis and Care and the Health Promotion and Disease Prevention Knowledge Gateway.

## 2. BACKGROUND

Cancer screening and early detection offer the best chance of beating cancer and saving lives. As of 2020, 25 EU Member States had introduced in their National Cancer Control Plans population-based screening programmes for breast cancer, 22 for cervical cancer and 20 for colorectal cancer. However, many programmes have not been fully implemented, and unacceptable diversities and inequalities persist within and between Member States. For example, coverage of the target population ranges from 6% to 90% for breast cancer screening, and from about 25% to 80% for cervical cancer screening<sup>5</sup>. Before this summer, the Commission will deliver the European Guidelines and Quality Assurance Scheme for Breast Cancer Screening, Diagnosis and Care. These Guidelines are already being updated, as new evidence becomes available, and the Quality Assurance Scheme will facilitate implementation in all Member States. Furthermore, the Commission has started working on the Colorectal Cancer Guidelines and Quality Assurance Scheme.

To guide further EU action on cancer screening with the most recent evidence, the Commission will launch work in 2021 to prepare a 3rd report on the implementation of the Council Recommendation on cancer screening<sup>6</sup>. Alongside this, in the medium term, the upgraded European Cancer Information System will work with Member States and the International Agency for Research on Cancer to develop the routine collection of indicators to monitor and assess cancer screening programmes. As one of its flagship Europe's Beating Cancer Plan will put forward a new EU-supported Cancer Screening Scheme to help Member States ensure that 90% of the EU population who qualify for breast, cervical and colorectal<sup>7</sup> cancer screenings are offered screening by 2025. The scheme will focus on making improvements in three key areas: access, quality and diagnostics.

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<sup>4</sup> The Cancer Mission Board, an independent expert group of the Commission, has prepared an outline with 13 recommendations for consideration which will serve as basis for the implementation of the Cancer Mission, [https://ec.europa.eu/info/publications/conquering-cancer-mission-possible\\_en](https://ec.europa.eu/info/publications/conquering-cancer-mission-possible_en)

<sup>5</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>6</sup> <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32003H0878>

<sup>7</sup> The three types of cancer addressed by the Council Recommendation on cancer screening which, in 2003, were the only ones to have the prerequisite to be addressed by population based screening.

The Commission will make a proposal by 2022 to update the Council Recommendation on cancer screening to ensure it reflects the latest available scientific evidence. One of the objectives will be to consider the extension of cancer screening beyond breast, colorectal and cervical cancer to include prostate, lung and gastric cancer, and other cancers if supported by scientific evidence. This will be done according to the criteria under the point 6 of the Council Recommendation on cancer screening<sup>8</sup>, addressing the ‘Introduction of novel screening tests taking into account international research results’. This work is expected to be informed by the advice from the European Commission’s Group of Chief Scientific Advisors<sup>9</sup>, by the Joint Research Centre, and by the relevant outcomes of EU initiatives funded under the public health and research and innovation programmes, for instance, inter alia, the two projects ‘Innovative Partnership for Actions Against Cancer’ (iPAAC) and ‘Towards Improved Cancer Screening’ (EU-TOPIA) projects. In Addition, the new Partnership on Personalised Medicine, due to be set up in 2023 and funded under Horizon Europe, will identify priorities for research and education in personalised medicine, support research projects on cancer prevention, diagnosis and treatment, and make recommendations for the roll-out of personalised medicine approaches in daily medical practice. As a preparatory action to the Partnership, the Commission will establish a roadmap to personalised prevention, identifying gaps in research and innovation, and will support an approach to map all known biological anomalies leading to cancer susceptibility, including hereditary cancers.

### 3. REQUEST TO SCIENTIFIC ADVICE MECHANISM

The questions to be answered by the Scientific Advice Mechanism are:

(First question) **“How can cancer screening programmes targeting breast, cervical and colorectal cancers, be improved throughout the EU?”**

(Second question) **“What is the scientific basis extending such screening programmes to other cancers e.g. lung, prostate and gastric cancers, and ensuring their feasibility throughout the EU?”**

(Third question) **“Which are the main scientific elements to consider, and best practices to promote, for optimising risk-based cancer screening and early diagnosis throughout the EU?”**

As the proposal to update the Council Recommendation on cancer screening should be finalized no later than the first quarter 2022, the Commission would need an answer by no later than February 2022.

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<sup>8</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32003H0878&from=EN>

<sup>9</sup> [https://ec.europa.eu/info/research-and-innovation/strategy/support-policy-making/scientific-support-eu-policies/group-chief-scientific-advisors\\_en](https://ec.europa.eu/info/research-and-innovation/strategy/support-policy-making/scientific-support-eu-policies/group-chief-scientific-advisors_en)