



EUROPEAN UNION

# EU MISSIONS

CANCER

**Concrete solutions for our greatest challenges**



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Christina Kyriakopoulou, PhD  
Policy officer – Research Programmes  
Health innovations & Ecosystems unit  
DG Research & Innovation  
European Commission  
Greek NCP event for Cancer Mission – 21 December 2021

#EUmissions #HorizonEU #MissionCancer



# EU Missions

A mission is a portfolio of actions across disciplines intended to achieve a **bold, inspirational and measurable goal** within a set timeframe, with **impact** for society and policy making as well as relevance for a significant part of the European population and wide range of European citizens.

**Missions will directly support other EU priorities such as the:**

- European Green Deal
- New European Bauhaus
- Europe fit for the Digital Age
- **Europe's Beating Cancer Plan**
- EU's Long-term Vision for Rural Areas



# Five Missions

Adaptation to  
Climate Change



Cancer



Climate-neutral  
and Smart Cities



Restore our  
Ocean and Waters

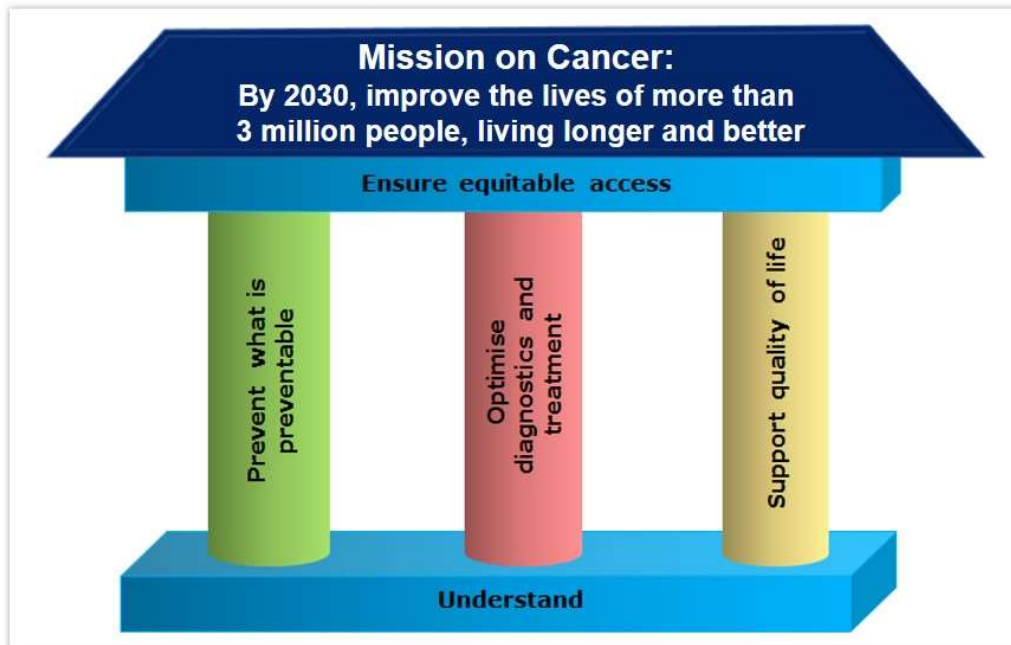


Soil Deal  
for Europe





# Mission on Cancer



***“By 2030, improve the lives of more than 3 million people, living longer and better”***

## Specific objectives:

1. understanding
2. prevention
3. diagnosis and treatment
4. quality-of-life

## Operational objectives (transversal):

1. Foster innovation through generation of knowledge and evidence
2. Promote innovation, test, validate, demonstrate and upscale solutions
3. Track progress and monitor inequities in access to knowledge, research and care
4. Engage with the cancer community, citizens/patients and society at large



## Actions : understand

- Establish the 'UNCAN.eu' platform
- Better understand healthy versus cancer cells at individual and population level
- Better understand cancer-patient molecular, cell, organ, organismal interactions
- Determine the role of genetics in cancer

## Actions: prevent

- Develop a one-stop cancer information centre on prevention
- Boost research and innovation into risk assessment
- Conduct implementation research on cancer prevention
- Establish synergies on prevention with other missions
- Optimise and improve access to existing screening programmes
- Develop new methods and technologies for screening and early detection
- Develop early predictors/tests



## Actions: diagnostic and treatment

- Support the creation of a Network of Comprehensive Cancer Infrastructures, integrating research aspects
- Develop twinning programmes for capacity-building
- Develop a clinical trial programme on diagnostics
- Develop a clinical trial programme on treatments

## Actions: quality of life

- Collect and analyse data on today's unmet needs of cancer patients and survivors
- Develop early predictors for quality of life
- Design monitoring programmes for survivors of childhood cancer
- Set up of a European Cancer Patient Digital Centre





## Reference documents

- EU Mission on Cancer
  - [Commission Communication](#) of 29 September 2021
  - [Implementation plan](#) of 29 September 2021
- [First Horizon Europe work programme for 2021-2022 for missions](#) published in June 2021, with update published **15 December 2021**
- Find topics for calls of proposals: [Funding and tender portal](#)
- [RTD-SANTE-CANCER-MISSION@ec.europa.eu](mailto:RTD-SANTE-CANCER-MISSION@ec.europa.eu)



## Joint governance

- **EU Implementation Group:** a dedicated group to ensure that actions, policies and findings are aligned across the relevant Commission departments.
- **Dialogue with Member States:** a sub-group on cancer under the Steering Group on Health Promotion and Disease Prevention (SGPP) follows jointly the implementation of the Cancer Plan and the Cancer Mission.
- **Dialogue with stakeholders:** a Stakeholder Contact Group under the EU Health Policy Platform as a basis for discussion and exchange.



## Support from Horizon Europe and other funding programmes (1)

- **Horizon Europe:** up to 10% of health cluster available to support Cancer Mission directly with a budget of minimum €378 million for 2021-2023
  - Other parts of Horizon Europe: e.g. Health Cluster, European Innovation Council; European Research Council
- **EU4Health programme 2021-2027:** will fund many initiatives outlined in the Europe's Beating Cancer Plan, including activities proposed by the Cancer Mission, with €1.25 billion support until 2027.
- **Digital Europe Programme:** support of €250 million for cancer-related activities until 2027.

# HORIZON EUROPE

# EURATOM

## SPECIFIC PROGRAMME: EUROPEAN DEFENCE FUND

*Exclusive focus on defence research & development*

Research actions

Development actions

## SPECIFIC PROGRAMME IMPLEMENTING HORIZON EUROPE & EIT\*

*Exclusive focus on civil applications*



**Pillar I**  
EXCELLENT SCIENCE

European Research Council

Marie Skłodowska-Curie

Research Infrastructures



**Pillar II - €53.5 billion**  
GLOBAL CHALLENGES & EUROPEAN INDUSTRIAL COMPETITIVENESS

Clusters

- Health – €8.25 billion
- Culture, Creativity & Inclusive Society
- Civil Security for Society
- Digital, Industry & Space
- Climate, Energy & Mobility
- Food, Bioeconomy, Natural Resources, Agriculture & Environment

Joint Research Centre



**Pillar III**  
INNOVATIVE EUROPE

European Innovation Council

European Innovation Ecosystems

European Institute of Innovation & Technology\*

### WIDENING PARTICIPATION AND STRENGTHENING THE EUROPEAN RESEARCH AREA

Widening participation & spreading excellence

Reforming & Enhancing the European R&I system

Fusion

Fission

Joint Research Center (JRC)

\* The European Institute of Innovation & Technology (EIT) is not part of the Specific Programme

# Horizon Europe – Cluster 1 ,Health‘

**Strategic Plan 2021-24 ([link](#)) → 6 Expected Impacts**

**↳ Work Programme 2021-22 ([link](#))**

## **6 “Destinations”**

1. Staying healthy in a rapidly changing society
2. Living and working in a health-promoting environment
3. Tackling diseases & reducing disease burden
4. Ensuring access to innovative, sustainable & high-quality healthcare
5. Unlocking the full potential of new tools, technologies and digital solutions for a healthy society
6. Maintaining an innovative, sustainable & globally competitive health industry



## **Topics (Calls)**

Focus on outcomes contributing to the impacts specified per Destination

Project proposals should

- make a **clear case** (*value proposition*)
- supported by a **convincing trajectory** (*pathway to impact*) for the project proposal to deliver the **output**, promote the **outcome** described in the topic, and contribute to the **impact** expected under that destination.

# Health cluster: WP 2021 topics on cancer

## Destination 3: Tackling diseases and reducing disease burden

- HORIZON-HLTH-2021-DISEASE-04-01:  
**Improved supportive, palliative, survivorship and end-of-life care of cancer patients**
- Closure: **21.09.2021**
- **Closed**
- Indicative budget: 50M€
- Project size: 6M€
- R&I actions

## Destination 4: Ensuring access to innovative, sustainable and high-quality health care

- HORIZON-HLTH-2021-CARE-05-02: **Data-driven decision-support tools for better health care delivery and policy-making with a focus on cancer**
- Closure: **21.09.2021**
- **Closed**
- Indicative budget: 50M€
- Project size: 25M€
- R&I actions

# HORIZON EUROPE

# EURATOM

## SPECIFIC PROGRAMME: EUROPEAN DEFENCE FUND

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# Research infrastructures: WP 2021 topics on cancer

## DESTINATION – ENABLING AN OPERATIONAL, OPEN AND FAIR EOSC ECOSYSTEM (INFRAEOSC)

- HORIZON-INFRA-2021-EOSC-01-06: **FAIR and open data sharing in support of cancer research**
- Closure: **23.09.2021**
- **Closed**
- Indicative call\* budget: 59M€
- Project size: 8M€
- R&I actions – 1 project

## DESTINATION – RESEARCH INFRASTRUCTURE SERVICES TO SUPPORT HEALTH RESEARCH, ACCELERATE THE GREEN AND DIGITAL TRANSFORMATION, AND ADVANCE FRONTIER KNOWLEDGE (INFRA SERV)

- HORIZON-INFRA-2021-SERV-01-01: **Research infrastructures services to support research addressing cancer**
- Closure: **23.09.2021**
- **Closed**
- Indicative call\* budget: 70M€
- Project size: 10-15M€
- R&I actions – 1 project

\*call consists of several topics besides the cancer ones



## Support from Horizon Europe and other funding programmes (1)

- **Horizon Europe:** up to 10% of health cluster available to support Cancer Mission directly with a budget of minimum €378 million for 2021-2023
  - Other parts of Horizon Europe: e.g. Health Cluster, European Innovation Council; European Research Council
- **EU4Health programme 2021-2027:** will fund many initiatives outlined in the Europe's Beating Cancer Plan, including activities proposed by the Cancer Mission, with €1.25 billion support until 2027.
- **Digital Europe Programme:** support of €250 million for cancer-related activities until 2027.

## Support from Horizon Europe and other funding programmes (2)

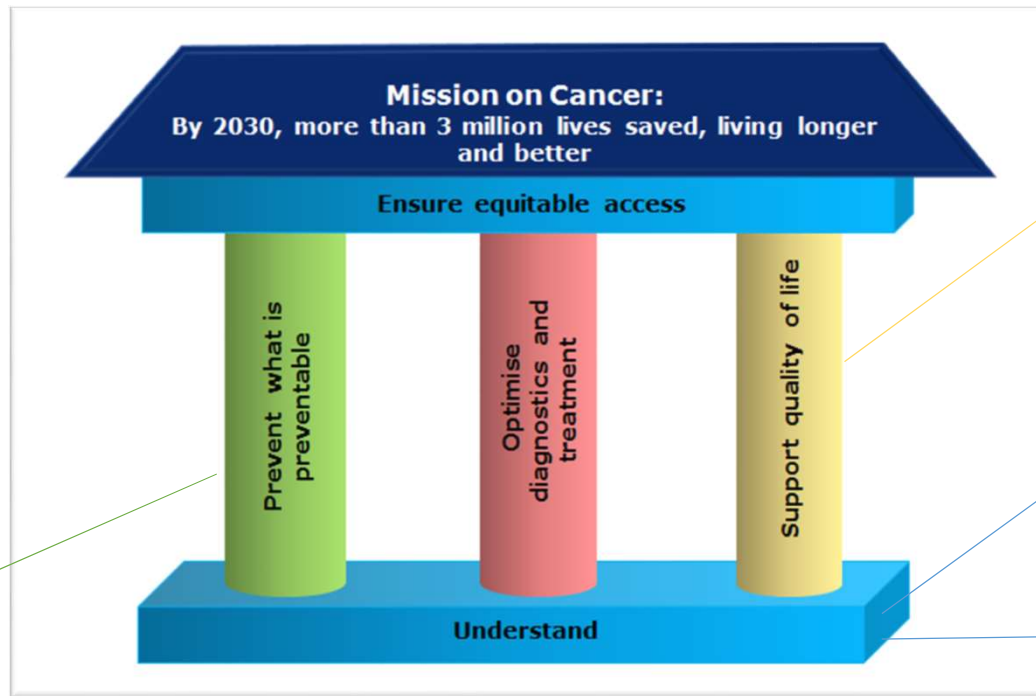
- **Erasmus+ programme, Marie Skłodowska-Curie actions and European Institute of Innovation and Technology** expected to provide up to a total of €500 million for projects in education, training, research on cancer and on the promotion of healthy lifestyles.
- **Technical Support Instrument:** technical expertise to support Member States in institutional, administrative, and growth-enhancing reforms
- **Cohesion Funds:** support of health investments
- **Recovery and Resilience Facility:** support of health investments

# Europe WP2021 topics

\*(published 15/12/21)

## Overall approach

- Apply mission guiding principles
- Underpinning and synergising with Cancer Plan actions
- Total budget 2021: ~125 M



Develop new methods and technologies for screening and early detection\*

HORIZON-MISS-2021-CANCER-02-01

Develop and validate a set of quality of life measures for cancer patients and survivors\*

HORIZON-MISS-2021-CANCER-02-02

Preparing UNCAN.eu, a European initiative to understand cancer **closed**

HORIZON-MISS-2021-UNCAN-01-01

Better understand healthy versus cancer cells at individual and population level\*

HORIZON-MISS-2021-CANCER-02-03

Procurement actions to support the Cancer Mission

HORIZON-MISS-2021-PP-02



## Mission on Cancer: Horizon Europe WP2021 topics

HORIZON-MISS-2021-UNCAN-01-01: [Preparing UNCAN.eu, a European initiative to understand cancer](#)

**Closed** Closure: 20.10.2022; Indicative call budget: 3 M€; Coordination & support actions

### Scope:

The Mission on Cancer proposes a Europe-wide platform, UNCAN.eu, utilising existing, relevant research infrastructures and investing in the development of models and technologies interrogating the interactions of poorly understood cancers and their host.

Underpin all future Mission on Cancer priorities that require a better understanding of poorly understood cancers.

This coordination and support action aims to develop the operational concept for such an initiative.

Agree on a strategic research and innovation agenda between afore-mentioned relevant stakeholders

Integrate innovative models and technologies with longitudinal patient data (e.g. medical images), samples and biomarkers to deliver concrete benefits for people at risk of cancer, living with and after cancer;

Allow for data interoperability and re-utilisation, while guaranteeing full protection for the data subjects and applying FAIR data principles.

Integration with ESFRI European Research Infrastructures, European Reference Networks, as well as other international cancer-centred research and data initiatives (e.g. 1+Million Genome, SPECTA, etc.), as well as data exchange with national cancer data ecosystems;



## Mission on Cancer: Horizon Europe WP2021\* topics

HORIZON-MISS-2021-CANCER-02-03: [Better understanding of the impact of risk factors and health determinants on the development and progression of cancer \(1\)](#)

Closure: 26.04.2022; Indicative call\* budget: 56.65M€; Project size: 4 - 15M€; R&I actions

### Scope:

Need to better understand which risk factors and determinants affect the development and progression of cancer and how.

Proposals should address **all** of the following;

- Develop a systematic understanding of cellular processes with a focus on the transition from a healthy state to cancer initiation and progression, at the individual or population
- Demonstrate access to and use of multiple comprehensive databases in and well beyond health research and health domains, such as lifestyle, omics, clinical, indoor and outdoor exposure...
- Proposals should build on longitudinal cohorts, case-control studies, biobanks, registries and many other initiatives, and use state-of-the-art digital tools for data analyses and modelling, wherever possible.
- Analyse and integrate existing knowledge and high-quality data from biomedical and clinical studies, using advanced technologies such as computer modelling, AI and machine learning with the objective to identify factors and determinants triggering the transition from the healthy state to the initiation and progression of poorly understood cancers and cancer subtypes, including in children and adolescents
- The influence of age, including in utero and early-life factors and determinants; environmental factors; genetic and epigenetic risk; socio-economic status; behavioural, including lifestyle risk factors; as well as social, cultural, sex and gender aspects including inequalities, should be taken into account across all aspects mentioned above
- Due consideration should be given to newly EU-funded initiatives such as the Knowledge Centre on Cancer, HealthyCloud, EOSC-Life, the European Health Data Space (EHDS) Joint Action, 1+ Million Genomes / Beyond One Million Genomes (B1MG), the future Innovative Health Initiative and EIT Health Knowledge Innovation Community initiatives.

\*(published 15/12/21)



## Mission on Cancer: Horizon Europe WP2021\* topics

HORIZON-MISS-2021-CANCER-02-03: **Better understanding of the impact of risk factors and health determinants on the development and progression of cancer (2)**

### Expected outcomes:

- Researchers and health professionals will understand which risk factors and determinants spur the development and progression of cancer and how. This forms the basis for the design and optimisation of prevention, screening and early detection interventions for poorly understood cancers and cancer subtypes, including in children and adolescents and early detection interventions for
- Researchers and innovators from different disciplines and sectors will support the development of the UNCAN.eu107 platform by producing, integrating and correlating comprehensive data from multiple sources (ensuring accessibility and re-usability of data, models and tools created).
- Health Policy Makers use the improved understanding of risk factors and determinants in the design of cancer-related health policies in the EU-27 and Associated countries and beyond, including for prevention, screening and early detection.

\*(published 15/12/21)



## Mission on Cancer: Horizon Europe WP2021\* topics

HORIZON-MISS-2021-CANCER-02-01: [Develop new methods and technologies for cancer screening and early detection](#) (1)

Closure: **26.04.2022**; Indicative call\* budget: 60M€; Project size: 4 - 15M€; R&I actions

### Scope:

Research is needed to develop and validate non-invasive, or minimally invasive cancer screening and detection methodologies for everyday medical practice and population-based screening programmes, including enhanced participation of the target population. These programmes should become faster, more precise and personalised, affordable and accessible.

Proposals should address all of the following;

- develop and validate non-invasive (or minimally-invasive) cancer screening and detection methodologies
- assess the potential uptake of these methods and technologies in national health systems, clearly identify the target population and consider implementation needs
- consider the use of living labs or other implementation research models that use open knowledge and (social) innovation systems and support end-user engagement.
- The influence of age and early-life factors and determinants; genetic risk; socioeconomic status; behavioural, including lifestyle risk factors; environmental factors; as well as social, cultural, sex and gender aspects, including inequalities, should be taken into account across all aspects mentioned above.

\*(published 15/12/21)



## Mission on Cancer: Horizon Europe WP2021\* topics

HORIZON-MISS-2021-CANCER-02-01: **Develop new methods and technologies for cancer screening and early detection (2)**

### Expected outcomes:

- Healthy citizens and cancer patients will benefit from faster, earlier, more precise, personalised, accessible and affordable screening and early detection of cancer.
- Health care professionals will be able to deliver earlier, faster, more precise screening and early detection of cancer.
- Health policy makers will have the evidence to review population-based screening programmes and screening and early detection methodologies in everyday medical practice, and to include new, evidence-based screening and early detection methods, technologies and solutions.

\*(published 15/12/21)





## Mission on Cancer: Horizon Europe WP2021\* topics

HORIZON-MISS-2021-CANCER-02-02: [Develop and validate a set of quality of life and patient preference measures for cancer patients and survivors \(1\)](#)

Closure: 26.04.2022; Indicative call\* budget: 11 M€; Project size: 11 M€; R&I actions

### Scope:

The long-term goal of the Mission on Cancer is to support the development of a framework of newly defined, harmonised and systematic surveys, as well as to collect new and update existing quality of life data and registries information, using appropriate digital tools. These surveys should be launched regularly across all countries and be reviewed regularly by the relevant stakeholders, so that more timely, supportive and affordable care can be provided and relevant policy measures can be taken.

Proposals should address **all** of the following;

- Conduct analyses of existing quality of life data from studies, surveys and registries together with patients and with a particular focus on patients' needs, including return to work. These analyses serve to identify problems, fill gaps and validate sets of minimal quality of life measurement tools and approaches for different types of cancer.
- Set up collaborative approaches with patients, communities and multidisciplinary research teams (for example in the form of living labs, making use of citizen science, social innovation or other participatory research methods). Within this co-design process, quality of life measurement tools and approaches should be developed to capture key elements of quality of life from the perspective of those affected by cancer, which are not captured (adequately) with established metrics.
- These metrics should cover subjective perceptions of the positive and negative aspects of cancer patients' symptoms, including physical, mental, emotional, social, cognitive functions, disease symptoms and treatment side effects as well as needs for palliative care.
- Prepare and conduct a pilot of newly defined, harmonised and systematic quality of life surveys across the EU-27 and Associated countries, reflecting both its diversity (social, cultural, geographic, demographic, health and social protection systems) and unique differences in incidence and mortality of cancer indications. The surveys should gather data using established quality of life metrics and serve to validate the newly developed metrics focusing on cancer, making use of digital tools for data gathering and analysis where relevant....



## Mission on Cancer: Horizon Europe WP2021\* topics

HORIZON-MISS-2021-CANCER-02-02: **Develop and validate a set of quality of life and patient preference measures for cancer patients and survivors (2)**

### Expected outcomes:

- Cancer patients, survivors and caregivers will benefit from enhanced quality of life, more effective and less burdensome treatments with better supportive care and counselling approaches.
- Health care professionals, supportive workers, counsellors and industry will be better aware of the (unmet) needs, expectations and preferences of cancer patients, survivors and their relatives and be compelled to address them.
- Regulators and institutions will have a set of metrics, which they can include in decision making about risks and benefits of new health interventions.
- Health Policy Makers will have a set of metrics at their disposal, which they can include in their health information and performance measurement systems.
- Labour market and social protection policy makers will benefit from additional evidence to consider in the design of labour market and social protection policies that are facilitating return to work and active participation in society



# Cancer Mission: proposed topics WP2022\*

2 Research and Innovation Actions + 3 Coordination and Support Actions (+ 2 technical support actions + 1 grant to named beneficiary)

• HORIZON-MISS-2022-CANCER-01-01:  
**Improving and upscaling primary prevention of cancer through implementation research**

- Type: **RIA**
- Indicative budget: **50M€**

• HORIZON-MISS-2022-CANCER-01-02:  
**Pragmatic clinical trials to optimise treatment for patients**

- Type: **RIA**
- Indicative budget: **60M€**

• HORIZON-MISS-2022-CANCER-01-03:  
**Strengthen Comprehensive Cancer Infrastructures**

- Type: **CSA**
- Indicative budget: **10M€**

• HORIZON-MISS-2022-CANCER-01-04:  
**Towards the creation of a European Cancer Patient Digital Centre**

- Type: **CSA**
- Indicative budget: **3M€**

• HORIZON-MISS-2022-CANCER-01-05:  
**Creation of national Mission Hubs supporting the Mission on Cancer**

- Type: **CSA**
- Indicative budget: **3M€**

+ Technical support for

1. Informing and engaging with citizens **2M€**
2. Develop monitoring framework **0.56M€**

+ Grant to European Observatory on Health Systems and Policies  
Workshops tackling cancer in MS and AC **1M€**

\*Draft - Not legally binding

## • Next steps

- Outreach activities
- Dialogue with Member States and stakeholders
- Horizon Europe work programme 2021-2022 for missions
  - Second amendment under preparation
- Selection of new Mission Boards



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EU MISSIONS   
CANCER



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# EU MISSIONS



SAVE THE DATE  
INFO DAYS 2022  
18 & 19 January

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