## Flagship initiatives 2021-2025

<table>
<thead>
<tr>
<th>Knowledge Centre on Cancer</th>
<th>Cancer Diagnostic and Treatment for All</th>
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<tbody>
<tr>
<td>European Cancer Imaging Initiative</td>
<td>European Initiative to Understand Cancer</td>
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<tr>
<td>Eliminate cancers caused by Human papillomavirus</td>
<td>Better life for cancer patients initiative</td>
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<tr>
<td>EU Cancer Screening Scheme</td>
<td>Cancer Inequalities Registry</td>
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<tr>
<td>EU network of National Comprehensive Cancer Centres</td>
<td>Helping Children with Cancer Initiative</td>
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European Initiative to Understand Cancer
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- HORIZON-MISS-2021-UNCAN-01-01
- Coordination and Support Action
- 1 year
- 3 million budget

**Creation of 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.
A fully-fledged UNCAN.eu initiative will:

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

• Agree on a strategic research and innovation agenda between 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.
UNCAN Expected Outcomes

- Integration with ESFRIs, ERNs, as well as other international cancer-centred research and data initiatives (e.g. 1+Million Genomes, SPECTA, etc.);

- Sustainable and interoperable data platforms, which will be developed in the framework of a future Health Research and Innovation Cloud;

- Integration with other platforms proposed under the Mission on Cancer and the Europe’s Beating Cancer Plan, such as a network of comprehensive cancer infrastructures and a virtual European cancer patient digital centre;
European Initiative to Understand Cancer
UNCAN.eu

UNCAN.eu platform

- Implement prevention, screening, treatment, and quality of life programmes in EU
- CSA: Establish then connect research and clinical db, ESFRI infrastructures, repositories, and biobanks
- Study interaction of environment, work, lifestyle, diet, nutrition in poorly understood childhood and adult cancer
- Study tumor-patient interactions in poorly understood childhood and adult cancer
- Determine the role of genetic alterations and establish individual cancer risk

Innovative interrogating models and technologies

Molecular data

Clinical data

Life-style data

Environmental data

ESFRI RIs

R&I initiatives (e.g. ICGC, 1+M)

Clinical data e.g. SPECTA, ECPDC

Registries

ESFRI RIs

Innovative interrogating models and technologies
CSA Expected Outcome:
a Blueprint for the establishment of UNCAN.eu

✓ To define cancer research needs / ambitious objectives at the supranational level in the coming years

✓ To identify the relevant infrastructures

✓ To get stakeholder support (national agencies, charities, patients, private etc...)

✓ To organize a European Citizen community in the field

✓ To suggest a mode of governance and dissemination
CSA Expected Outcome:
a Blueprint for the establishment of UNCAN.eu
Objective of UNCAN.eu

To generate a strategic agenda / a research roadmap made of large research programmes addressing key challenges in cancer research

High level, stringent
Potentially high risk
Requiring a supra-national approach (EU added value)

UNCAN.eu « platform »
may be regarded as a virtual institute running large research programmes
Core consortium
- WP/Task leaders

Associated partners
- involved in tasks and workshops
- will join final strategic roadmap

Consultation partners & stakeholders
- expertise and advices
- Invited to workshops
- Could join final strategic roadmap

Networks
- Cancer Core Europe
- EORTC
- ERNs
- EUHA

Infrastructures
- ERICs
- EMBL

Charities
- National plans
- Charities
Ambition of UNCAN.eu

Despite tremendous progress in deciphering biological bases of cancer in the last decades, and the political support of national initiatives to better understand and treat this disease, cancer remains the second leading cause of death in Europe.

In about half of the patients, cancer resists to current therapeutic options.

The 1.3 million people who die from cancer in Europe each year (men, 54%) include 6,000 children, while, with increasing life expectancies, the number of disease victims above 60 increases.

UNCAN.eu research ambition will be to create the next breakthrough that could improve cancer therapeutic control and provide a basis for saving millions of European citizens’ lives.
Cancer research outcome over the last 170 years

Starting around 1850, each breakthrough in cancer research and treatment was driven by a new technology.

- **1850**: Microscopy
  - Cellular theory of cancer (Virchow)
  - Surgery

- **1900**: Radiations
  - (Roentgen, Curie)
  - Radiation therapy

- **1950**: Synthetic chemistry
  - (Mustard gas)
  - Chemotherapy

- **2000**: Molecular genetics
  - (Watson & Crick)
  - Targeted therapy

- **2010**: Immunotherapy

Starting with Hippocrates, cancer = humor retention for 2,500 years.
Are big data and AI/machine learning the technological advance that will drive a new breakthrough?

**General objective of UNCAN.eu**

One of the EU added values might be data sharing and the use of these data to address large-scale research challenges.

UNCAN.eu will create a Federated Cancer Data Hub.
Collection of information for the federated cancer research data hub

Research Infrastructures

Comprehensive cancer centre networks

Patient Images

Patient biological data

Patient-derived models

Patient Clinical data

Cancer model data

Patient Lifestyle data

Translational research structures

Registries Exposome

Basic research Institutes

4.UNCAN.eu Collection of information for the federated cancer research data hub
Collection of information for the federated cancer research data hub

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<thead>
<tr>
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<th>Short term impact</th>
<th>Middle-term impact</th>
<th>Long-term impact</th>
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<tbody>
<tr>
<td><strong>Scientific</strong></td>
<td>• Blueprint for UNCAN.eu initiative</td>
<td>• Breakthroughs in our understanding of cancer</td>
<td>• Improved prevention, diagnosis and treatment of cancer across Europe</td>
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<tr>
<td><strong>Societal</strong></td>
<td></td>
<td>• Federated Cancer research Data Hub as a model for other disease data hubs</td>
<td>• Save lives and improve quality of life of European citizens • Reduce inequalities in cancer research across Europe</td>
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<tr>
<td><strong>Economic</strong></td>
<td></td>
<td>• Patient / Citizen role in cancer research programs</td>
<td>• Decrease burden of cancer and its treatment</td>
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<tr>
<td>WP1 leader</td>
<td>WP2 leader</td>
<td>WP3 leader</td>
<td>WP4 leader</td>
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<tr>
<td>INSERM France</td>
<td>CIBERONC Spain</td>
<td>DKFZ Germany</td>
<td>ECPC/CCI-E</td>
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<tr>
<td>Eric Solary</td>
<td>Josep Tabernero</td>
<td>Michael Boutros</td>
<td>Charis Girvalaki</td>
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**UNCAN CSA Proposal**

- **WP1**: Management and Coordination
- **WP2**: Identification of cancer research challenges to address future EU priorities and research policies
- **WP3**: Mapping of European Research Infrastructures and initiatives - Roadmap for a European Federated Cancer Research Data Hub
- **WP4**: Patients and European Citizens in cancer research
- **WP5**: Governance, organization, logistics, finances, and sustainability
- **WP6**: Inequalities in cancer research—improved science with improved outreach
<table>
<thead>
<tr>
<th>Workshop 1</th>
<th>Workshop 2</th>
<th>Workshop 3</th>
<th>Workshop 4</th>
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<tbody>
<tr>
<td>December 2022?</td>
<td>March 2023??</td>
<td>June 2023?</td>
<td>November 2023?</td>
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<tr>
<td>Prevention</td>
<td>Resistance</td>
<td>Cancer data hub</td>
<td>Infrastructures + Closing meeting</td>
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<tr>
<td>Early diagnosis</td>
<td>Age-driven cancer biology</td>
<td>Survivorship</td>
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Horizon-miss-2021-uncan-01-01
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M0  M1  M2  M3  M4  M5  M6  M7  M8  M9  M10  M11  M12  M13  M14  M15

M1  Kick-off Meeting

Workshop 1  Prevention Early Dc

Workshop 2  Age/gender Resistance

M8  Middle-term meeting

Workshop 3  Kc Research Data hub

Workshop 4  Infrastructures

M15  Final Event

UNCAN.eu Blueprint
MISSION CANCER: JOINING EUROPEAN FORCES TO UNDERSTAND CANCER
Meeting on June 23, 2022 (9:00 /13:30)
Ministère de l’Enseignement supérieur, de la Recherche et de l’Innovation
25, rue de la Montagne-Ste-Geneviève 75005 Paris

Free and mandatory registration