



EUROPEAN UNION



EU MISSIONS

CANCER

Concrete solutions for our greatest challenges



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D1 – sector Cancer Mission - *Combating Diseases*

DG Research and Innovation, European Commission

#EUmissions #HorizonEU #MissionCancer



Mission on Cancer

Challenges

- **2.7 million people** in the EU are **diagnosed** each year (↑)
- **1.3 million people die** from cancer each year (↑)
- **Total cost of cancer** in Europe in 2018: €199 billion (↑)
- **Impact of COVID-19 pandemic** and war in Ukraine

Four Mission objectives

1. Understanding cancer
2. Prevention & early detection
3. Diagnosis and treatment
4. Quality of life

19 R&I priority areas, 5 transversal priorities:

equity, innovation, childhood cancer, personalised medicine, citizen engagement

Timeline: 2021-2031

EU-funding to date: EUR 490M

GOAL

Improve the lives of more than 3 million people by 2030, through prevention, cure and for those affected by cancer including their families, to live longer and better (jointly with the Europe's Beating Cancer Plan)*

Concrete actions

- governance
- **UNCAN.eu data platform*** – blueprint published
- **European Cancer Prevention Centre** – under discussion
- **Network of Comprehensive Cancer Infrastructures*** - started
- **Cancer Patient Digital Centre*** – blueprint published
- R&I actions – 61 projects (about to be) launched
- Synergies – at EU, national, regional, and local level



Achievements Cancer Mission (1)

- **Set up governance:** mission secretariat, group of Commission DGs, Cancer Mission Board, interactions with MS and EP, started policy feedback loop, stakeholder platform;
- **Close synergies with Europe's Beating Cancer Plan (EBCP):** produce R&I results and use research policy (for example through 4 public-public and public-private research partnerships) to underpin EBCP actions, delivered scientific advice that led to adoption of new Council cancer screening recommendations;
- **Member States and Associated Countries:** brought together Research/Innovation and Health Ministries, set up *ECHoS* platform project to bring together national and regional cancer stakeholders and citizen representation through cancer mission hubs in Member States and Associated Countries;
- **Citizen engagement (CE):** ~20 focus groups in 2020-2021-2022; CE elements in each Mission WP; started a long-term dialogue with young cancer survivors – e.g. via dedicated workshops, conference, co-creation of call topics and tenders in HE and EU4H Framework Programmes;
- **Mission-driven R&I:** project portfolio (48) connected across 4 mission project clusters
 - *4.UNCAN.eu* – delivered outline for international cancer data platform connecting all major data initiatives;
 - *ECPDC study* – delivered outline for EU Cancer Patient digital platform;
 - Childhood cancer – set up R&I portfolio across four Mission objectives



Achievements Cancer Mission (2)

- **Synergies**

- **EBCP: plan's contents, various call topics**

- HE/research infrastructures: 2 call topics 2021

- HE/Health cluster: 2 call topics 2021

- HE/EIC: call topic 2023 (accelerator scheme)

- HE/EIT-Health: Mission call topic 2024

- HE/Partnerships: 3 IHI call topics 2022, 2023

- **Create incentives (attract resources) beyond Framework Programmes**

- EIB: advisory services on investments to support *network of Comprehensive Cancer Infrastructures*. Focuses on 6 MS lacking those and in need of support;

- **TRANSCAN-3 ERA-Net**: national research funders co-fund transnational calls using own resources;

- **Cancer charities**: bring them together to fund clinical trials using own resources.



TRANSCAN-3: facts & aims



Facts:

- Collaborative network of 31 partners (ministries, funding agencies, research councils, charities) from 20 countries with programmes in translational cancer research
- Funded by the EU Commission within Horizon 2020
- Duration: 5 years (March 2021 – February 2026)
- Coordinator: Ministry of Health, Italy, Dr. Gaetano Guglielmi

Aims:

- Coordinate national and regional (public and private) funding programmes for translational cancer research
- Support small- to mid-sized research consortia (3 – 7 PIs, average ca. 1 Mio € per consortium), i.e. funding is complementary to EU (large consortia & platforms)
- Develop and strengthen patient-oriented research, i.e. include the view of patients in the planning and execution of funding programmes
- Implement specific actions for young investigators (capacity building)
- Set up the future of the TRANSCAN network

Impact of TRANSCAN & contribution to Cancer Mission:
funding translational small-sized research consortia



- ✓ Total spent budget: ca. 126 Mio € (with two more calls of ca. 15 Mio € each > ca. 150 Mio €)
- ✓ Total EC contribution: ca. 13 Mio €, i.e. leverage factor is ca. 10 (for 1 Mio € EC supporting TRANSCAN, the MS and Regions provided 10 – 12 Mio €)
- ✓ Inclusion of many young investigators (first step in building transnational consortia)
- ✓ Complementary to EC funding (usually: mid-/large-scale research consortia)
- ✓ Continuous focus on TRANSLATION: linking basic science with clinical research (i.e. bridging the «valley of death»)



Example transversal priority: childhood, adolescent and young adult cancer (CAYA)

- **Rationale:** Direct engagement with young cancer patients and survivors:
 - Improve quality of life for survivors of childhood cancer (2023)
 - Best practices and tools (2024);
 - Improving the understanding and management of late-effects in adolescents and young adults (2024);
- **Outcomes (2021-2024):** 14/61 Mission projects fund cancers in adolescents and young adults
 - understanding projects (melanoma, glioma, liver etc)
 - prevention projects (obesity, digital tools for primary prevention etc)
 - clinical studies (neuroblastoma and acute lymphoblastic leukaemia (ALL) –relapse)
 - QoL, including AYA-late effects (understanding, better management)
- **Next steps:**
 - continue dialogue with young cancer survivors to define priorities for research and other policies;
 - further support investigator-driven clinical trials for better treatment.



Citizen and stakeholder engagement - linking EU, national and local communities

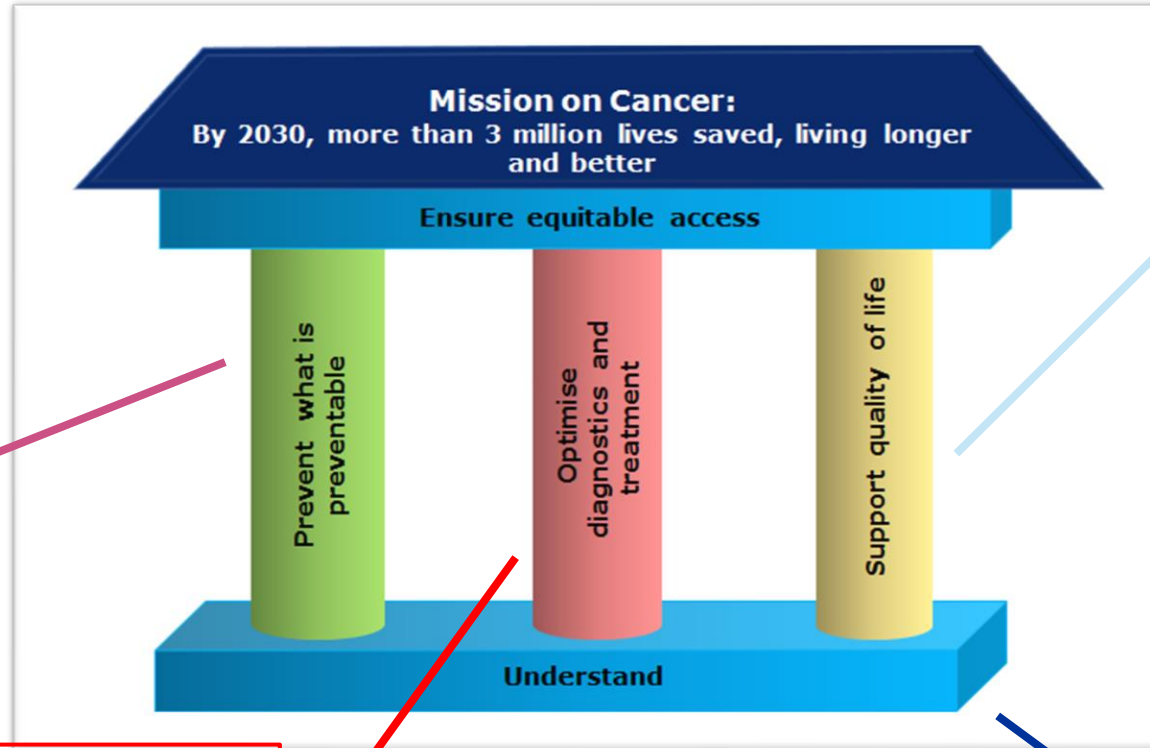
- ✓ **Dialogue with Young Cancer Survivors** launched in 2023 informs research and policy needs, e.g. shaping of dedicated Mission topic on addressing side-effects
- ✓ **Bus Roadshow** pilot phase in 2024 in 3 countries demonstrated huge potential of community-based initiatives to promote behavioural changes; meaningful way to promote prevention by engaging citizens directly
- ✓ **Broad mobilisation** of cancer research and health communities, with 66 collaborations created (e.g. 4-PCAN in RO) to amplify impact of Mission actions
- ✓ **Communication campaign in 2025** to increase outreach and engagement of stakeholders





Cancer Mission – funding opportunities WP2021-2024

- Mission-guiding principles
- Mission clusters
- Synergy Europe’s Beating Cancer Plan



- Develop new methods and technologies for screening and early detection
HORIZON-MISS-2021-CANCER-02-01
- Improving and upscaling primary prevention of cancer through implementation research
HORIZON-MISS-2022-CANCER-01-01
- Enhance cancer prevention through behaviour change
HORIZON-MISS-2023-CANCER-01-02
- Early detection heritable cancers in European regions
HORIZON-MISS-2024-CANCER-01-03

- Develop and validate a set of quality-of-life measures for cancer patients and survivors
HORIZON-MISS-2021-CANCER-02-02
- Towards the creation of a European Cancer Patient Digital Centre
HORIZON-MISS-2022-CANCER-01-04:
- Improve quality of life for survivors of childhood cancer (Best practices and tools)
HORIZON-MISS-2023-CANCER-01-04
- Improving the understanding and management of late-effects in adolescents and young adults
HORIZON-MISS-2024-CANCER-01-05
- An information portal for the European Cancer Patient Digital Centre
HORIZON-MISS-2024-CANCER-01-06

- Pragmatic clinical trials to optimise treatment for cancer patients with refractory cancers
HORIZON-MISS-2022-CANCER-01-03
- Strengthen research capacities of comprehensive cancer infrastructures
HORIZON-MISS-2022-CANCER-01-02
- Pragmatic clinical trials minimally invasive diagnostics
HORIZON-MISS-2023-CANCER-01-03
- Support a pragmatic clinical trial programme by cancer charities
HORIZON-MISS-2024-CANCER-01-04

- Preparing UNCAN.eu, a European initiative to understand cancer
HORIZON-MISS-2021-UNCAN-01-01
- Better understand healthy versus cancer cells at individual and population level
HORIZON-MISS-2021-CANCER-02-03
- Better understand tumour-host interactions in cancer patients
HORIZON-MISS-2023-CANCER-01-01
- Use cases for the UNCAN.eu research data platform
HORIZON-MISS-2024-CANCER-01-01

- Creation of national cancer mission hubs - HORIZON-MISS-2022-CANCER-01-05
- National cancer data nodes - HORIZON-MISS-2024-CANCER-01-02

Project cluster



Cancer Mission – portfolio, project clusters, citizen engagement, and end-user involvement

- Proposals will be evaluated on scientific merits - see Horizon Europe evaluation criteria, **portfolio approach**, **overall threshold 12**:
- Mission topics consistently aim at involving **other** disciplines and sectors, beyond business-as-usual.
- Applicants should budget for networking activities whenever relevant; details to be added during grant preparation => **project clusters**.
- **Citizen (including patients and caregivers) engagement**: civil society, patient and caregiver organisations and communities should be consistently addressed. Avoid focus on a limited number of patient advocacy organisations.
- Mission topics will include **end-user** engagement. Examples of end-user research models and services in various MS:
 - Living lab services Kuopio University Hospital (FI): <https://www.psshp.fi/web/en/organisation/living-lab>
 - Living Labs at INCa (FR): <https://gnius.esante.gouv.fr/en/players/player-profiles/living-lab-institut-national-du-cancer>
 - Living Lab at IrsiCaixa AIDS Research Institute (ES): <https://www.scishops.eu/case-study-living-lab-for-health-spain/>
 - European Network of Living Labs (ENoLL): <https://enoll.org/>
- **End-users**: citizens, cancer centres, national and regional health authorities and services, local communities (e.g. **schools**, cities).



Cancer Mission – portfolio, project clusters, citizen engagement, and end-user involvement (2)

- Projects are brought together in four main clusters to enhance impact and stimulate policy feedback
- Clusters
 - *Understanding*
 - *Prevention and early detection*
 - *Diagnosis and treatment*
 - *Quality of life*
- Collaboration on: Data, R&I & Capacity, Communication, Citizen Engagement, Inequalities, etc.



Personalized CANcer Primary Prevention research through Citizen Participation and digitally enabled social innovation



Objective: create real-world models for cancer primary prevention recommendations included in the EU Code Against Cancer (IARC) using living lab approach Romanian Living Lab

Townhall: key role of local authorities and informal community leaders

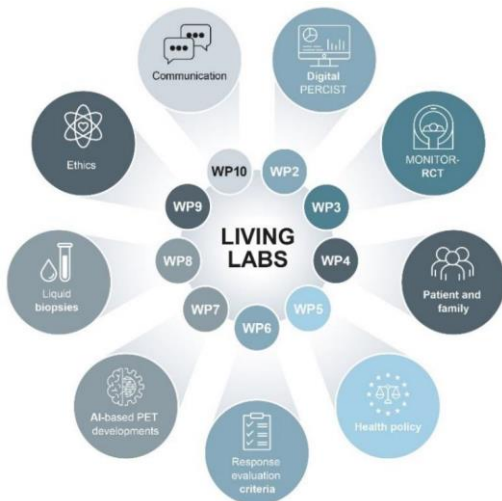
Citizen's jury: selected on voluntary basis, contribution in preparation of the citizen's engagement activities



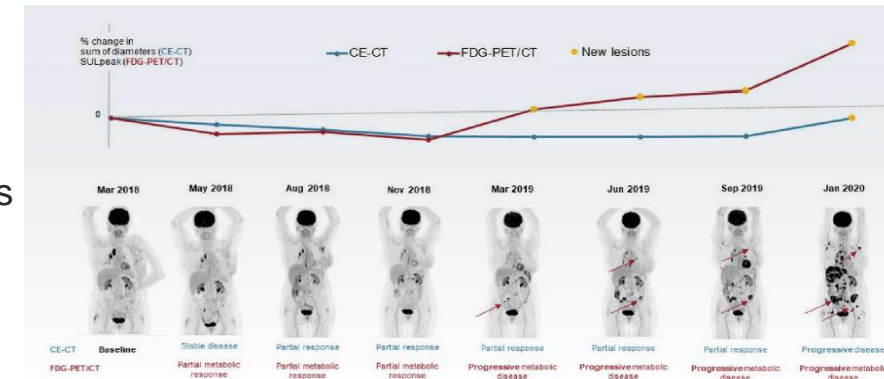


PREMIO COLLAB - Personalised response monitoring in oncology: co-creating clinical trials in advanced breast cancer (420 mBca patients)

- MONITOR-RCT: prospective randomized trial to assess FDG-PET/CT versus CT. Expected: start second-line therapies earlier, prolonged overall survival and improved quality of life
- Cost-effectiveness analysis will be performed to investigate the economic value to support HTA from the perspective of different EU countries
- Citizen engagement: diagnostic pathways that meet the needs of patients and their relatives, designed in living labs to create environments that are appropriate for patients, families and healthcare professionals.



- Primary endpoint: overall survival
- Secondary endpoints: QoL, treatment exposure, cost-effectiveness
- Research aspects: liquid biopsies, AI
- DK, IT, DE
- Sponsor: Region of Southern Denmark
- Living lab approach,
- Health-related Quality of Life



prospective observational MESTAR study: FDG-PET/CT and PERCIST detect progression ten months before conventional CT and RECIST 1.1



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Thank you!

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