



Patients as co-creators of innovative technologies in R&I projects of Horizon Europe: the case of ONCOSCREEN and ONCODIR

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Kapa 3 Conference: Implementation of Digital Tools for Oncological Quality of Care –
Barriers and Facilitators,
5 April 2024

The logo for ONCOSCREEN features the word "ONCOSCREEN" in a bold, sans-serif font. The "ONCO" part is in green, and "SCREEN" is in pink. A stylized pink and white DNA double helix is positioned over the "CO" in "ONCO".

ONCOSCREEN

• **HORIZON-MISS-2021-CANCER-02-01**

<https://oncoscreen.health/>

The logo for ONCODIR features the word "ONCODIR" in a bold, sans-serif font. The "ONCO" part is in dark blue, and "DIR" is in a lighter blue. A stylized dark blue and white DNA double helix is positioned over the "OD" in "ONCO".

ONCODIR

HORIZON-MISS-2022-CANCER-01-01

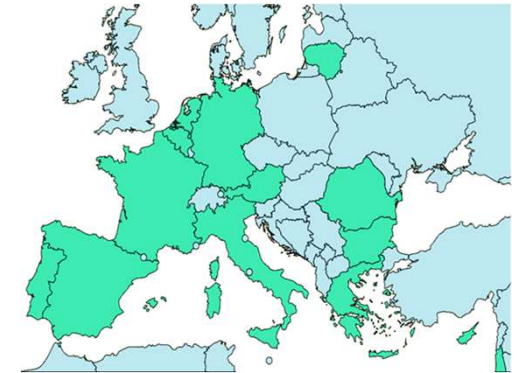
<https://www.oncodir.eu/>





“A European “shield” against colorectal cancer based on novel, more precise and affordable risk-based screening methods and viable policy pathways”

- Development of new, non-invasive, affordable and easy to use technologies and methods for colorectal cancer screening and early diagnosis
- Multi-tier risk stratification
- Diagnosis and policy making support systems



- HORIZON-MISS-2021-CANCER-02-01
- Duration: 1/2023- 12/2026 (48 μήνες)
- 38 Partners, 16 Countries
- Coordination: EXUS AI Labs, Ελλάδα
- Technical Management: i-SENSE Group/ICCS, Ελλάδα
- 11 technological solutions
- Two-phase clinical study >4000 participants from 10 countries
- Total cost: €13M

<https://oncoscreen.health/>



Diagnostic solutions

- ONCOVOC** Volatile Organic Compounds in breath samples
- ONCOCTC** Circulating Tumor Cells in blood
- ONCOCRISPR** CRISPR-Cas point-of-care testing, dipstick prototypes
- ONCONMR** NMR metabolomics in blood samples (metabolites, lipoproteins, glykoproteins)

Training web platform, automated annotation

- ONCOAICO** AI-enabled training on polypod detection and classification
- ONCOAITI** AI-enabled training on Region Of Interest detection in Whole Slide Histopathological images

Decision support systems

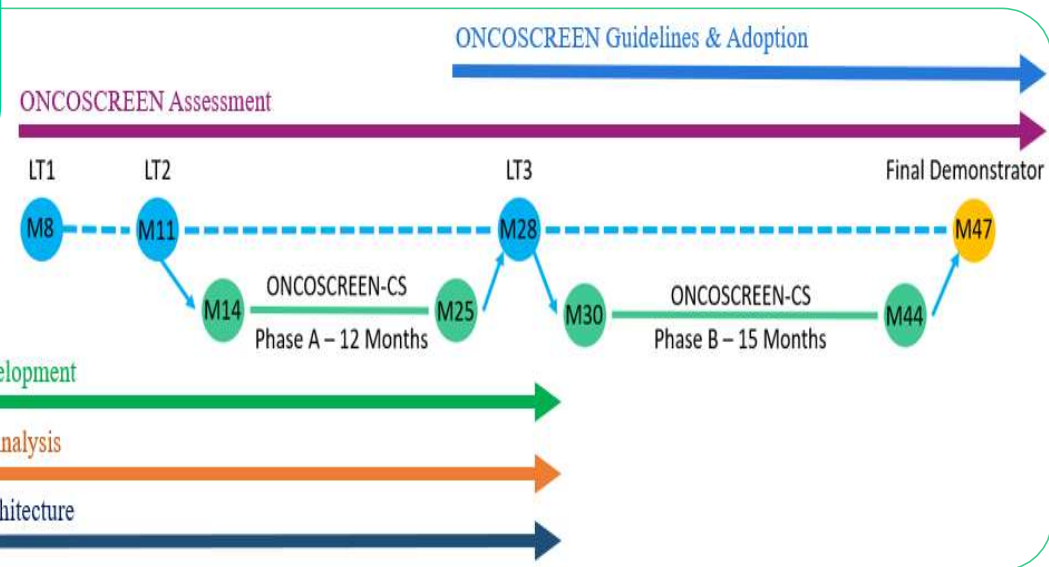
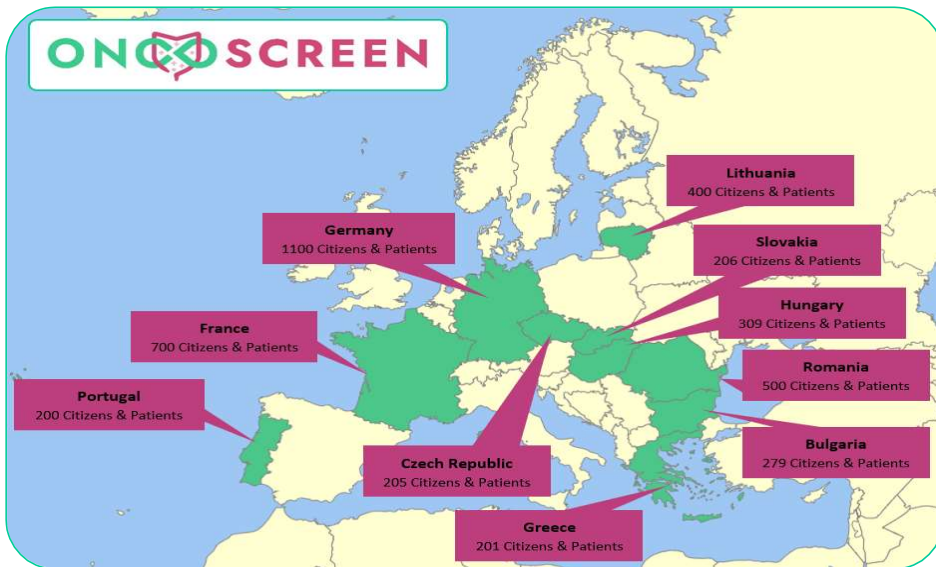
- ONCORISTE** Risk stratification engine
- ONCOCLIDE** Diagnostic decision support
- ONCOEVIDA** Public health policy making

Personalised citizen/patient mobile app

- ONCOCAWA** Self-assessment, monitoring, education

Online virtual data catalogue

- ONCOBIOBA** AI-ready, FAIR-ified, reusable data in a federated setting



The role of patients in ONCOSCREEN

Patient representatives in the Consortium

- Lithuanian Cancer Patient Coalition (POLA)
- Europacolón Portugal (ECPT)
- Youth Cancer Europe (YCE)

Main roles

- Leading the iterative process of end user requirements elicitation
- Supporting patient recruitment in clinical studies
- Contributing to the production of training material, and the project dissemination activities
- Leading colorectal cancer awareness campaign
- Evaluating the project solutions
- Contributing to the design of recommendations and strategies



Until today:

12 meeting between technical partners and end users for the 1st version of end user requirements and their prioritisation, and the alignment of expectations among all involved parties

Co-organization of 2 lab integration tests

> 40 meeting in total between technical partners and end users

Completion of the 1st awareness campaign in social media



Open Innovation Ecosystem: ONCOSCREEN Living Labs

Launch of 1st ONCOSCREEN HACATHON (March 2024)

«Improving Patient Experience»

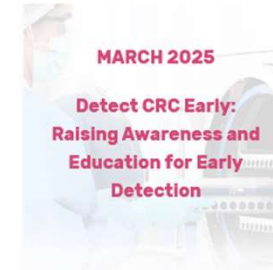
Organiser: Lithuanian University of Health Sciences, EIT Health Hub




Challenges:

- 1) Lack of communication and information flow between patients and healthcare providers
- 2) Lack of personalized patient education
- 3) Lack of awareness and early detection

Information: [ONCOSCREEN Living Labs](#)

Join our [ONCOSCREEN Mentor Network!](#)



 Dedicated Mentorship Ten hours of focused sessions to fine-tune your winning idea	 Expert Advice Direct access to knowledge and experience from leaders in the health innovation field.	 Idea Development Practical support to evolve your concept and prepare it for the next stages of realization.
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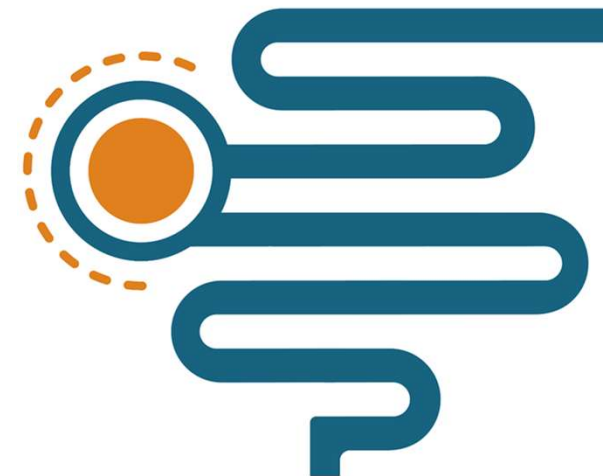


“Evidence-based Participatory Decision Making For Cancer Prevention Through Implementation Research”

- HORIZON-MISS-2022-CANCER-01-01
- Start: 6/2023
- Duration: 42 μήνες
- 27 partners, 10 countries
- Coordination: CERTH, Greece
- Technical Management: i-SENSE Group/ ICCS, Greece
- Budget: 8M €

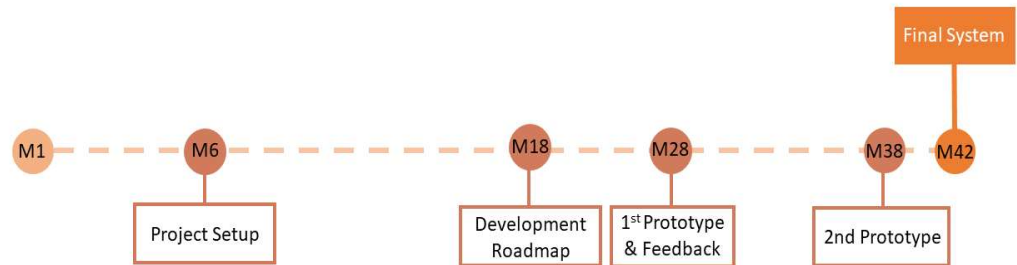
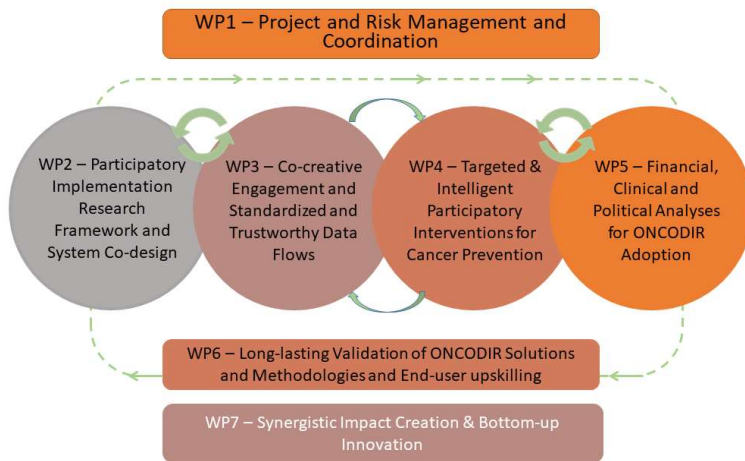


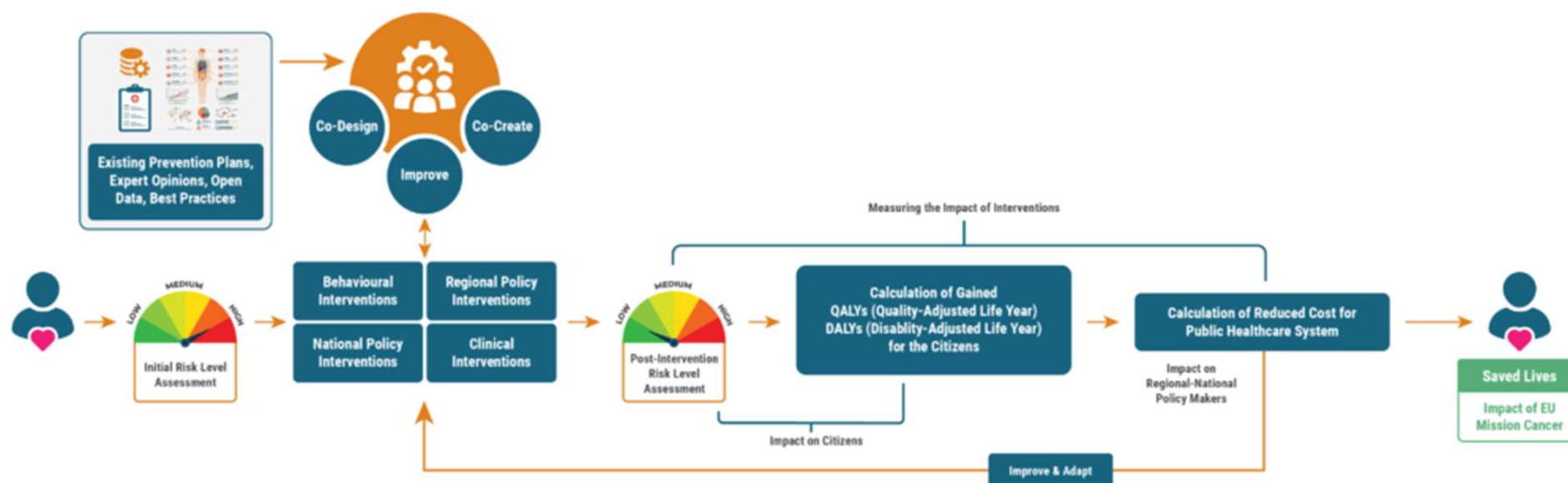
<https://www.oncodir.eu/>



“Evidence-based Participatory Decision Making For Cancer Prevention Through Implementation Research”

ONCODIR aims at the development of evidence-based programs for colorectal cancer prevention, through interdisciplinary collaboration and co-design.





- Risk stratification/scoring system
- **Investigation of barriers and facilitators for the adoption of prevention programs by stakeholders** (citizens, healthcare providers, public health policy makers).
- **Primary prevention policy mapping throughout Europe and identification of policy gaps**
- Development of intelligent **digital tools and methods for intervention co-design**
- 3 laboratory integration tests and **3 large-scale pilots** (Greece, Belgium, Spain, Romania, Lithuania)
- Promotion of prevention programs integration into regional and national strategies

The role of citizens/patients in ONCODIR

- Leading the iterative process of end user requirements elicitation and prioritisation
- Contribution to the investigation of socio-economic determinants related to prevention program design and adoption
- Active participation in solutions' design and evaluation
- Promotion of citizen participation in pilot activities
- Contribution to the creation of training material, and the project dissemination activities

Until today:

1st end user requirements workshop

1st co-design workshop





Institute of Communication & Computer Systems (ICCS)

33 years Creating Impact

Founded as the research branch of the School of Electrical and Computer Engineering of the National Technical University of Athens (NTUA).

Advancing Basic and Applied Research

AI and Smart Systems | Hardware and Software | Computer Networks | Mobile Communications | Control and Automation | Power Production, Transport and Distribution | Energy, Transport, Climate Research | Biomedical and Biomechanics | Information Systems | Management and Decision Support

Promoting **Innovation** at the intersection of disciplines

By combining our strong disciplines, our research groups develop basic science, explore new scientific areas of interdisciplinary research and enable promising innovations in the light of societal challenges.

Developing the **Technologies** of the future

*ICCS today ranks
among the top 3
Research Institutions
in Greece and among
the first 20 in EU
-in terms of research
funding.*



I NTELLIGENT

S YSTEM

E NGINEERING

N OVEL

S IMULATIONS

E NVIRONMENT

“Over the last 20 years, I-SENSE Group has succeeded in providing an environment where innovation can arise guided by the values of circular and green economy, openness and smart citizenship”.

*Dr Angelos Amditis, R&D Director
ICCS, I-SENSE Founder & Director*

With a vision
**Towards the Smart Societies
of the future**

I-SENSE is one of the most active Research Groups of the Institute of Communication and Computer Systems (ICCS) of the National University of Athens in Greece (NTUA). Founded in 2002, I-SENSE is committed to the highest standards of academic excellence and research innovation in the field of electrical, electronic and computer engineering & technologies.

184+ Research Projects

180+ Researchers

420+ Scientific Publications


10 Research Divisions

3 Spin offs








10 Research Divisions


 Cooperative Connected Automated Mobility (CCAM)

 Intelligent Network Systems (INS)

 Multimodal Logistics
& Maritime Operations (ML)


 Circular Economy & Tracing (CET)

 Industry 5.0 &
Smart Manufacturing (ISM)

 Smart Mobility Applied
Systems (SMAS)

 Extended Reality (XR)

 **Health Technologies (HT)**

 Earth Observation
& Environmental Monitoring (EOEM)

 Crisis Management & Secure Societies (CMSS)



Contact us!

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Thank you!

