

Methodology

MAYA proposes the integration of advanced monitoring systems, AI-driven data analysis, and participatory research, through innovative Social Sciences and Humanities methods such as:

multistakeholder engagement

social innovation

Living Labs

co-research

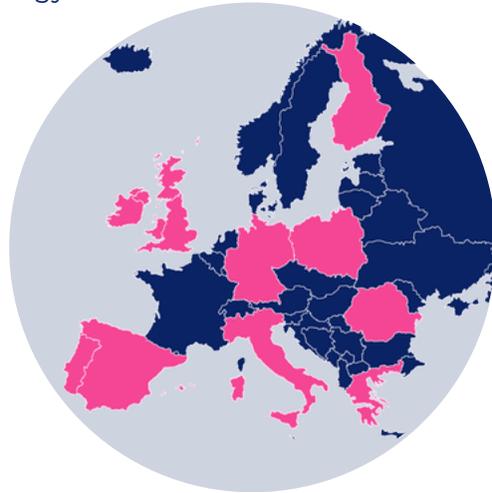


EU Cancer Mission

MAYA objectives align with the goals of the Mission on Cancer by contributing to:

- 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.
- optimise diagnostics and treatment and reduce health disparities across Europe
- enhance research and innovation across EU health systems
- ensure AYA cancer survivors voices are integral to the creation of healthcare interventions

Funded under the **Horizon Europe - Research and Innovation programme**, MAYA is a **4-year project** coordinated by the University of Ioannina, Greece, and brings together a consortium of **16 partners from 10 countries**: medical & technological universities, oncology hospitals, companies, foundations, research centers, patient associations, manufacturers of smart mirrors technology.



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smart **M**irrors supporting healthier lives of **A**dolescents and **Y**oung **A**dults after cancer



Empowering young cancer survivors to take control of their cardiovascular health through AI-driven, personalised care

maya-horizon.eu

Aim

The MAYA project aims to empower Adolescents and Young Adults (AYA) cancer survivors to manage their cardiovascular health through digital tools, particularly addressing cardiotoxic-related late effects of cancer treatment.

The project envisions using the iCARE health hub, which integrates a smart mirror and an AI-powered conversational agent, to deliver personalised care and continuous monitoring.



Prevention of late-onset cardiovascular complications

The project's main objective is to reduce the risk of major cardiac events in AYA cancer survivors by 30-40% by addressing modifiable risk factors such as hypertension, diabetes and obesity, ultimately improving both cardiovascular outcomes and quality of life.

Context

AYA can develop various cancers, often requiring treatments such as chemotherapy, hormone therapy, targeted therapy, immunotherapy, radiation, and surgery.

Common long-term effects of these treatments include:



cardiovascular toxicity (up to 22%)



secondary cancers



reduced quality of life



mental health problems



chronic fatigue



neurocognitive issues



fertility and endocrine disorders

Late-onset cardiovascular toxicities can be subclinical (no symptoms initially) or clinical (with symptoms) and are a **leading cause of non-cancer morbidity and mortality in long-term cancer survivors.**

Early intervention and lifelong surveillance are crucial in preventing disease progression

Digital Health Approach

AI-driven digital health technologies for personalised and context-aware interactions can effectively prevent, monitor, and manage cardiovascular late effects in AYA cancer survivors



MAYA improves modifiable cardiovascular risk factors by leveraging intelligent conversational agents and advanced digital tools, with:

- 1 The iCARE health hub, equipped with a smart mirror and an AI-powered conversational agent.
- 2 The iCARE health hub is designed to monitor and manage late-onset cardiovascular health issues and address gaps in care during the transition to post-treatment stages.
- 3 Additionally, they improve health literacy by providing coaching, helping survivors understand and overcome barriers to managing their health.
- 4 By installing these tools in homes, we will assess the impact and receptiveness of these technologies in different European countries.