

From Cardiotoxicity to Quality of Life: The CARDIOCARE Vision



An Interdisciplinary Approach for the Management of the Elderly Multimorbid Patient with Breast Cancer Therapy Induced Cardiac Toxicity

CARDIOCARE is a five-year journey to empower patients to actively participate in their care — supporting not only their physical health but also their psychological resilience as they navigate the challenges of cancer.

CARDIOCARE pioneers advanced prognostic models to predict both cardiotoxicity and quality of life trajectories in elderly breast cancer patients. These models integrate multimodal data — from biomarkers, imaging, and electronic health records to wearable-derived signals and patient-reported outcomes — creating a comprehensive digital profile of each patient.

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“CARDIOCARE establishes an innovative framework for managing the complex interplay between breast cancer and cardiovascular risk in elderly women with multimorbidity. By integrating AI-based risk prediction, continuous real-time health data, and patient-reported outcomes, the project redefines clinical care into a continuous, personalized, and proactive process.”

-Mrs. Georgia Karanasiou -Technical Coordinator

Personalized heart and cancer care

The project has already been successful in enabling the development of advanced and integrated AI-driven models to assist clinicians to personalise the heart and cancer care elderly breast cancer patients receive. The models are continuously validated using real-world data from CARDIOCARE prospective and retrospective clinical studies.



The CARDIOCARE mobile app

CARDIOCARE is one of the first large-scale projects in Europe to integrate real-time wearable data, biomarkers, psychological profiling, and explainable AI into a personalized care pathway for a highly vulnerable population.

By applying explainable artificial intelligence and advanced deep learning, CARDIOCARE not only predicts risks with greater precision but also translates complex data into actionable insights for clinicians and patients. This innovative approach enables early interventions, reduces adverse events, and supports a truly personalized and sustainable model of cardio-oncology care.

