Lifechamps aims to address the inherent complexity caused by cancer treatments and to act in the monitoring of health status and improvement of Quality of Life (QoL) in a significant manner by using emerging technologies in the fields of Big Data, Data Analytics, and Artificial Intelligence (AI).

**Consortium Partners**

15 Partners From 9 Countries

![Partner Logos]

**Project Coordinator**
Professor Panagiotis Bamidis — AUTH, Greece

**Technical Manager**
Pedro Louro — Altran Portugal SA

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**Project Overview**

LifeChamps: A Collective Intelligent Platform to Support Cancer Champions

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**Get in Touch**

**Website**
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The Need — Vision

The steady increase in life expectancy, mean age and cancer survivorship across the developed countries together with evidence from cancer and geriatrics care research bring forward the urgent need to deal with the “age issue” as a key component of global cancer care strategies. Increasing age and comorbidities are also often associated with a discriminant lower use of aggressive cancer therapies, as well as a higher neglect for their preferences in health-related quality of life care support. We believe in a society where ageist stereotypes and discrimination against older adults will be eliminated from the clinical practice.

The vision of LifeChamps is to address the inherent complexity caused by cancer treatments and to act in the monitoring of health status and improvement of quality of life in a significant manner by using emerging developments in the fields of Big Data, Data Analytics and Artificial Intelligence (AI). Its components will be built upon three pillars:

Approach

**PREDICTION** A prediction engine capable of providing comprehensive insights at the point of care in order to predict and prevent disorders or cancer relapse associated with cancer treatment at an early stage.

**CARE** A smart care model to timely address, in a continuous monitoring approach, symptoms responsible for affecting QOL, in particular, frailty.

**ADVICE** A collaborative structure to all targeted users counseling their activities with recommendations, supporting their clinical work and providing quality of service estimation.

LifeChamps Technologies

- **IoT**
- **Data Analytics**
- **Intelligent Algorithms**
- **Big Data**
- **HPC**
- **Clinical Records**
- **Machine Learning**
- **Wearables**
- **mHealth**
- **PROMs**
- **Artificial Intelligence**

LifeChamps Objectives

- To develop a multi-dimensional index for the quantification of QOL in different patient cases scenarios.
- To develop novel digital biomarkers for the prognosis of QOL deterioration caused by cancer treatment.
- To develop innovative systems medicine tools able to mine, filter, analyse and visualise relevant health data.
- To create a Big Data and HPC-enabled infrastructure for managing multisource and heterogeneous patient-related data.
- To deliver a novel, context-aware, large-scale analytics framework capable of delivering multi-dimensional QOL support to cancer life champions during and after their treatments.

Use Cases

The LifeChamps platform will be validated in four multi-national pilot use case scenarios aimed at demonstrating its applicability and validity for the most prevalent middle-aged and older cancer survivors cases (breast, prostate & skin cancer).