

# The CHAIMELEON Project

Accelerating the lab  
to market transition of AI tools  
for cancer management



  
chAIMELEON  
[www.chaimeleon.eu](http://www.chaimeleon.eu)



## Project Objectives

The CHAIMELEON project aims to develop a structured repository of health images and related clinical data on the most prevalent cancers in Europe: lung, breast, prostate and colorectal.

This EU-wide interoperable repository will greatly facilitate and contribute to the development and validation of AI tools for improved cancer management.

Access to large, structured data repository	EU-wide resource
Distributed infrastructure	Online processing pipelines
Facilitate AI development	Validate AI solutions
Secure data sharing	Ensure sustainability

# The **CHAIMELEON** Repository: A Powerful Resource for AI-based Cancer Management Solutions

- distributed infrastructure which is interoperable with existing repositories and biobanks
- imaging data in DICOM format linked to data including the patient profile, tumor, treatment and outcome
- approximately 13,000 cases from the four most predominant cancers in Europe
- secure, free resource for AI experimentation in cancer management
- data analytics models
- in line with ethical and legal requirements



## First results

- Successful deployment of repository as a robust cloud-based distributed infrastructure
- Robust data security with blockchain-backed hashing and privacy-preserving techniques
  - Innovative harmonisation approaches for imaging data implemented
  - Imaging and clinical data collected for over 8,000 patients
- Internal and external validation are complete. Clinical validation of the AI models, refined using the platform, is underway in a multicentre study across 14 hospitals
- More than 40 open-access scientific publications

# Expected Impact of Chameleon

Improve technical,  
organisational & ethical  
AI health imaging  
standards

Assist clinicians  
in daily  
decision making

AI-based solutions  
to improve diagnosis,  
treatment & follow up

Increase trust  
in AI solutions

Expand potential  
to other types of cancer

Reduce social  
& economic  
burdens  
through  
personalised  
cancer  
management

Improve management  
of the four most  
prevalent cancer types  
worldwide

Increased  
collaboration and  
sharing of resources  
across the EU for  
improved cancer  
management and  
research

## Project Facts

**Coordinator:** Prof. Luis Marti-Bonmati, HULAFE

**Duration:** 54 months

**Runtime:** September 1, 2020 – 28 February, 2025

**Total EU Funding:** €8,784,038.75

## Consortium

Fundacion para la Investigacion del Hospital Universitario la Fe de la Comunidad Valenciana (ES), Universita di Pisa (IT), Universita Degli Studi di Roma la Sapienza (IT), Centro Hospitalar Universitário de Santo António (PT), Policlinico San Donato (IT), College des Enseignants de Radiologie (FR), Universiteit Maastricht (NL), Charité Universitätsmedizin Berlin (DE), Imperial College London (UK), Ben-Gurion University of the Negev (IL), Universitat Politècnica de Valencia (ES), GE Healthcare (DE), Quibim (ES), Medexprim (FR), Bahia (ES), Matical Innovation (ES), European Institute of Biomedical Imaging Research (AT), Universitat de Valencia (ES)

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 952172