



Cancer Image Europe

Introducing the future European Digital Infrastructure Consortium (EDIC)

June 2025 Update



Content

1. What is EUCAIM?	3
2. Why is EUCAIM needed, and how does it actually contribute to beating cancer?	3
3. A flagship initiative of Europe's Beating Cancer Plan	4
4. Expansion and consolidation of the EUCAIM infrastructure: the EUCAIM EDIC	7
5. The EUCAIM EDIC as an Authorised Participant of HealthData@EU	7
6. Why should my country join and invest in EUCAIM?	8
7. Practical examples of necessary implementations that the Central Hub Office will facilitate	9
8. EUCAIM as a mean to enhance national research and innovation capabilities and cancer care more cost-efficient	9
9. EUCAIM as a mean to facilitate AI deployment in healthcare	11
10. EUCAIM as a mean to inform and align with public health policies	12

Cancer Image Europe (EUCAIM)

Europe's main access portal for **high-quality cancer imaging data** and an all-inclusive **platform for AI experimentation**

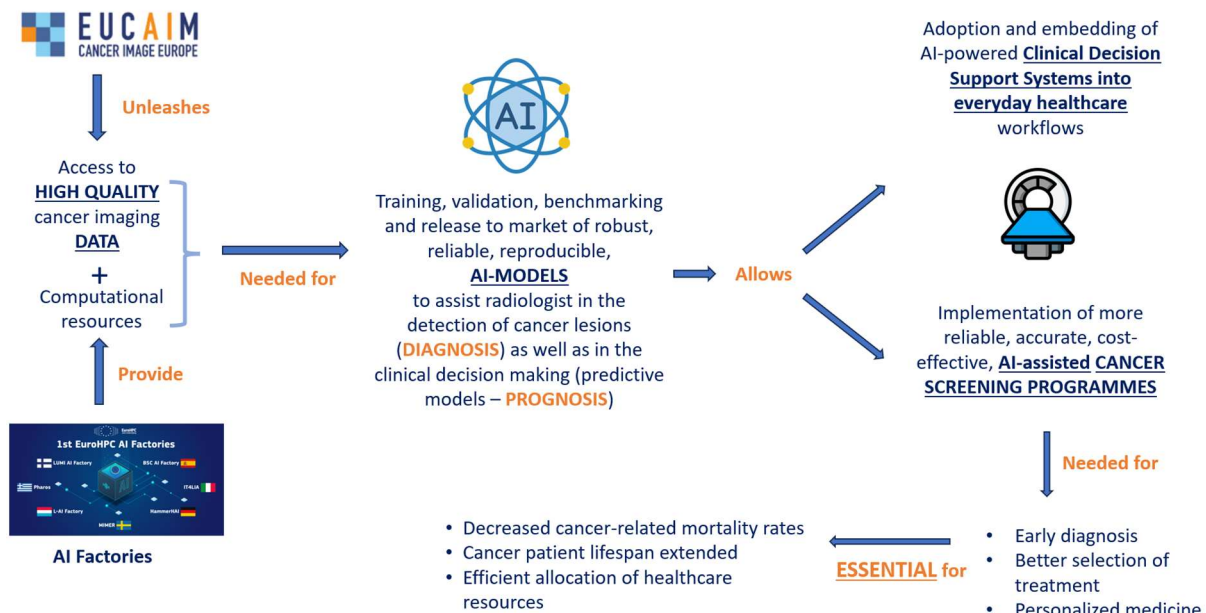
What is EUCAIM?

The [Cancer Image Europe platform \(EUCAIM\)](#) is a robust and trustworthy **DIGITAL INFRASTRUCTURE** for **researchers, clinicians** and **industrial innovators** to access diverse **cancer imaging datasets, linked to associated clinical data**, from hospital networks and research repositories across the EU, enabling the development, testing and piloting of **AI-enabled cancer management solutions**.

By making **large amounts of high-quality datasets** accessible, ready and usable for AI research and innovation, EUCAIM will accelerate the development of AI-solutions for enhanced **personalized cancer care**, contributing to more precise and faster diagnostics, clinical decision-making, accurate treatment and, overall, accelerating the **digital transformation of healthcare** in the EU.

Why is EUCAIM needed, and how does it actually contribute to beating cancer?

THE KEY TO BEATING CANCER IS EARLY DIAGNOSIS. Imaging-based AI solutions are increasingly proving to have the **capacity to detect the presence of cancer at its earliest stages or even before it manifests** via other clinical signs we currently measure in a patient. Even when cancer is detected at a late stage, AI-based solutions reading body scans can still help predict whether a given patient will positively respond to a certain treatment, or whether the cancer is likely to spread to other parts of the body. By training imaging-based AI models to detect early signs of cancer or better profile a certain type of it, **not only the patient is given their best chance of survival**, but Europe also ensures to **make the most efficient use of public healthcare resources**.



To train, validate, and benchmark these AI-based cancer imaging solutions, developers need access to large volumes of **HIGH-QUALITY DATA** and a **SECURE PROCESSING ENVIRONMENT** equipped with the necessary tools for experimentation.

These are the needs EUCAIM is addressing, as it has been designed as an all-inclusive AI experimentation environment, providing access to high-quality cancer imaging data and a complete set of tools for data privacy, quality control, and AI model training.

Conducting AI experimentation in the EUCAIM environment ensures **full legal and ethical compliance with EU regulations** by providing all the necessary means and implementing them in alignment with European regulatory frameworks. This promotes the safety and trustworthiness of the AI solutions developed within it.

All the above makes EUCAIM an **ALL-INCLUSIVE EXPERIMENTATION PLATFORM**: High quality data and all necessary processing tools, made available in a secure processing environment built in full legal and ethical compliance with EU regulations.

A flagship initiative of Europe's Beating Cancer Plan

EUCAIM was born as a Multi-country Project (MCP) devoted to the creation of an infrastructure named after it. This MCP is the cornerstone of the [European Cancer Imaging Initiative](#), one of the flagships of [Europe's Beating Cancer Plan](#) (EBCP).

The **pilot version of the infrastructure** is currently being deployed by the [EUCAIM project](#), an ongoing four-year initiative co-funded by the Digital Europe Programme that will finalize in December 2026.

EUCAIM Project profile

Name: European Federation for Cancer Images (EUCAIM)

Website: <https://cancerimage.eu/>

Programme: Digital Europe

Consortium: 96 partners from 17 different countries

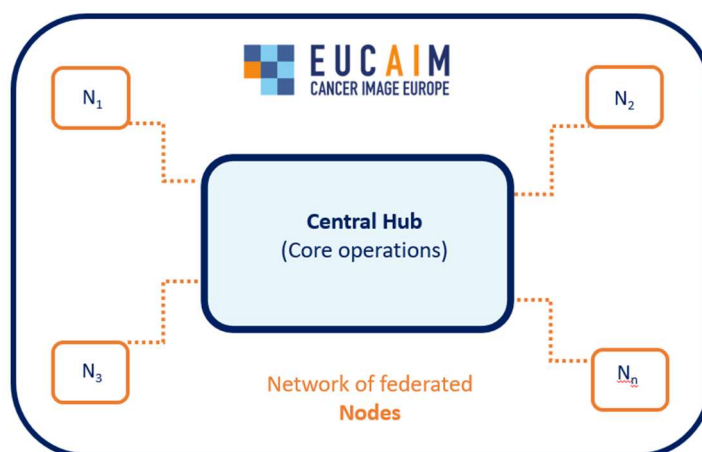
Runtime: January 2023 - December 2026

Budget: €35.5 million total (50% EU Grant)

Key metrics from 2026 and beyond:

- Data Nodes: 30 sites from 15 countries
- Platform Users: 2000 monthly visits to the metadata catalogue, from 15 different countries
- AI Tools: 40 tools integrated into the federated analysis toolbox.
- Cancer Cases: 100.000 cases (already surpassed)

The infrastructure is being implemented following a hub and node model, whereby a **network of federated nodes across the EU** (involving hospitals, research infrastructures and data repositories) are connected to a central hub in a federated manner. The model is designed to readily **incorporate new nodes** as collaboration opportunities arise, thereby rapidly expanding the data coverage of cancer patients to include new participating countries.



Key functionalities and metrics of the EUCAIM infrastructure as of June 2025 include:

- ✓ The **“Atlas of cancer images”**: a pool of fully anonymized data coming from pre-existing sources (R&D projects, data repositories, etc.).
- ✓ A distributed Secure Processing Environment (SPE), including **federated functionalities** and on-demand access to computing-intensive frameworks.
- ✓ A dashboard that integrates all the functionality in a coherent environment, enabling users to **browse and search datasets in the federation, request access** to them, and browse tools and pipelines to run them on a containerised environment at the data holder’s premises.
- ✓ A **helpdesk system** to support users and manage breaches or incidental findings, including a security incident response service, allowing for **complete traceability of user interactions**.
- ✓ 57 imaging datasets currently available covering 9 different types of cancer over 47,000 subjects. More than **100,000 cases and 60 million images** are expected to be available by 2026, involving at least **30 distributed data holders from 15 different countries**.
- ✓ **50 AI tools for data preparation and pre-processing**, respecting all applicable regulatory and privacy requirements.

Expansion and consolidation of the EUCAIM infrastructure: the EUCAIM EDIC

By the end of the EUCAIM project, a fully functional version of the EUCAIM platform will be deployed. The infrastructure will then start its **consolidation and expansion phase**, further enhancing its current tools and capabilities while **on-boarding new data holders** from countries currently not represented while adding **new cancer types**.

This consolidation is planned to be articulated by establishing EUCAIM as a **European Digital Infrastructure Consortium (EDIC)**, a legal instrument facilitating the implementation of MCPs.

For the establishment of the EDIC, **financial contributions from at least 3 different EU member states** are needed to sustain operations at the core of the infrastructure, known as the EUCAIM **Central Hub**.

The following sections describe why joining the EUCAIM EDIC as a contributing member state will be a key long-term investment for participant countries, as well as what would be the specific associated benefits that these countries will gain from financially supporting the EDIC operations.

The EUCAIM EDIC as an Authorised Participant of HealthData@EU

The data sharing process in EUCAIM has been designed to be in full compliance and following recommendations of the Data Governance Act (DGA), the European Data Act (EDA), and the recently adopted European Health Data Space regulation (EHDS). Following these guidelines, **EUCAIM's data access request process fully aligns with what will be requested of a Health Data Access Body (HDAB) of the EHDS**.

It is because of this that one of the main strategic objectives for the future EUCAIM EDIC is to become an **Authorized participant of HealthData@EU**.

To allow this, the EUCAIM EDIC will be fully connected with the HealthData@EU infrastructure and will work closely with HDABs, ensuring the necessary level of security, data protection and robust governance.

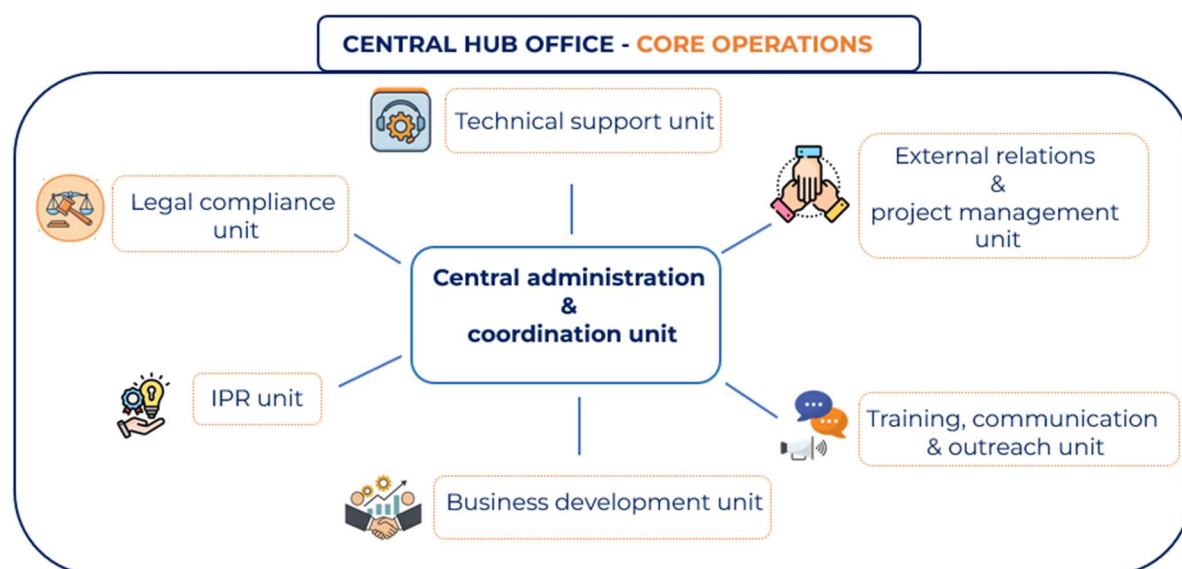
Why should my country join and invest in EUCAIM?

How it works in practice: 360-degree support enabling the use of health data for secondary use in research and innovation

The EUCAIM consortium comprises **a team of technical, clinical, ethical and legal experts** specialized in enabling the use of cancer imaging data for secondary use in research and innovation. Among many others, the team comprises experts in the creation of high-quality health data repositories, health data science and AI-powered analytics, interoperability, and federated learning, being all these developments guided by clinicians.

Since its very inception in January 2023, this team has been building **applicable standards, comprehensive guidelines and best practices for the sharing of health data**, specifically in the realm of cancer imaging. All the lessons learnt to date are now reflected and compiled in a **holistic operation providing end-to-end support for platform users**, from data preparation to making use of it for AI model development.

The core operations of the EUCAIM infrastructure where this support will be made possible will be hosted at **EUCAIM's main headquarters, known as the Central hub office**, where all support teams will be centralized.



Central Hub Office Support Units

Contributing member states will have **access to these advanced services provided by the central hub**, which will ultimately result in a series of benefits for national researchers and innovators, as described in the following sections.

Practical examples of necessary implementations that the Central Hub Office will facilitate

In return on the investment, contributing member states will be provided holistic support by the central hub office services, with everything that implies. Among many others, some concrete examples of health data sharing related-implementations the EUCAIM team can facilitate are listed below:

- ✓ Elaboration of any necessary legal documentation associated with data sharing: Ethics Committee approval, Data Sharing Agreements, Data Transfer Agreements, Collaboration agreements, etc.
- ✓ Data anonymization and preparation at the Data Holder premises.
- ✓ Data pre-processing and analysis prior to AI training.
- ✓ Set up and connection to a new federated node.
- ✓ Technical support for federated learning.
- ✓ Facilitating interoperability between EUCAIM and other digital infrastructures in health.
- ✓ Stakeholder network creation and applying for funding: connecting research communities based on a specific topic and cancer type and identifying the right call to seek funding to do research on it.

The **EUCAIM user guide** can be accessed [here](#)

EUCAIM as a mean to enhance national research and innovation capabilities and make cancer care more cost-efficient

Direct and indirect benefits for researchers, innovators and healthcare organisations at the national level can be summarised as follows:

- 1) **Generation of high-quality, AI-ready cancer imaging datasets, more efficiently and at a lower cost**

EUCAIM works as a generator of high-quality datasets as it promotes **data quality and FAIRness upgrades using a tier-based classification system**. One of EUCAIM's main goals is to encourage tier upgrades for all datasets

made accessible via the infrastructure, improving the **usability of the data for AI development purposes** as a result. This is achieved through dedicated technical resources made accessible through the infrastructure, including a vast array of tools for data standardization, anonymization, quality check and transformation to a common data model.

Leveraging EUCAIM resources while being assisted by training and technical support teams all throughout the way will significantly **reduce the effort, time, and cost associated with data preparation and quality upgrade processes.**

2) **Strategic positioning on secure and legally compliant health data sharing**

EUCAIM provides data holders with the necessary functional, operational, and legal support framework to enable secure, controlled, and legally compliant access to data, in line with the European Health Data Space (EHDS) regulation.

By actively participating as early adopters of the EHDS regulatory framework, particularly within cancer imaging, contributing Member States will gain visibility as drivers of progress within European healthcare, while strengthening their role as key contributors to the establishment of European Health Data Spaces.

3) **Increased revenue generation for Data Holders**

Hospitals and other institutions providing data can be compensated for the costs of preparing and sharing data, presenting an opportunity for them to create a new revenue source while gaining visibility by playing an active role in the healthcare data market.

4) **Accelerated AI development and validation enhancing the economic prosperity of start-ups and SMEs at the national level**

Unleashing access to a vast amount of high-quality datasets will rapidly boost the research and innovation capacity of start-ups and SMEs working on the development of AI-based cancer management solutions, as EUCAIM enables the **training, validation and benchmarking of AI tools**, paving the way for their regulatory pathways towards their **release to market.**

5) **Becoming part of a network of excellence**

As of June 2025, EUCAIM brings together a network of 120+ stakeholders in the fields of biomedical research, health data science, health data interoperability, privacy and cybersecurity, and AI development of cancer management solutions among many others. The network continues to expand on a monthly basis.

For a given member state, becoming part of the EUCAIM network implies increased opportunities to strengthen their national cancer research and innovation ecosystems. Public and private entities at the national level can join specific EUCAIM research communities, consequently enhancing their visibility and promoting inter-entity collaboration at the national, European, and public-private partnership levels.

This, in turn, will imply greater opportunities to form competitive consortia and ultimately increase the chances to access EU funding (EU4Health, Horizon Europe, Digital Europe, Cancer Mission, among others) for national hospitals, research infrastructures, and cancer screening programmes, directly enhancing their **recognition, visibility and reputation**.

6) **Enhanced operational efficiency over time**

As a member of EUCAIM's stakeholder support network, members become part of a leading collaborative ecosystem, receiving **first-hand access to vital information and key trends** that serve to inform and influence national and European policy discussions on AI and data innovation in healthcare. This deep understanding will empower **national-level developments to become increasingly efficient**.

EUCAIM as a mean to facilitate AI deployment in healthcare

Any public or private institution working on the development and deployment of innovative digital technologies in health, and more particularly of imaging-based AI solutions for cancer care, relies and depends on the availability and variability of large imaging datasets to be able to **test, train, validate and eventually achieve regulatory clearance for their digital health technologies**. It is because of this that any entity involved in the deployment of AI in healthcare will find EUCAIM to be a crucial resource for advancing their developments and associated business.

Key industries that EUCAIM is expected to significantly boost the innovation capacity of include but are not limited to:

✓ **Medical Device and Software companies:**

- AI for Diagnosis and Detection
- AI for Treatment Planning and Prognosis
- Medical Imaging Equipment Manufacturers
- Computer-Aided Diagnosis (CAD) and Computer-Aided Therapy (CAT) System Developers

✓ **Healthcare IT and Digital Health companies:**

- Electronic Health Record (EHR) System Providers
- Data Analytics and Visualization Platforms
- Cloud Computing and Data Storage Providers

✓ **Pharmaceutical and Biotechnology companies:**

- Drug Discovery and Development
- Personalized Medicine
- Clinical Trials

EUCAIM as a mean to inform and align with public health policies

The EUCAIM consortium acknowledges that the infrastructure is being developed in a constantly evolving legal landscape. To account for this, our legal team has carefully addressed heterogeneous health data regulations at the national level, while ensuring compliance with regulations at the wider European level.

The establishment of EUCAIM EDIC will contribute, either directly or indirectly, to the broader objectives of several European initiatives, health-related legislation and policies, including but not limited to:

- The **European Health Data Space Regulation (EU 2025/327)**; as EUCAIM makes accessible and promotes the secondary use of health data for research, innovation, policy-making, and regulatory activities, helping establish a cancer imaging-specific data environment that supports a single market for cancer-related digital health services and products.
- **The package of EU policy measures to support the development and deployment of trustworthy AI**, including the [AI Act](#), the [AI Innovation Package](#), the AI Continent Action Plan, and the upcoming Apply AI strategy, as these measures ultimately aim to strengthen uptake, investment, and innovation in AI across the EU. EUCAIM EDIC will support these policy priorities, as fully reliable, reproducible, trustworthy AI in the healthcare domain cannot be developed without high-quality health data and AI testbeds.
- Last but not least, EUCAIM will ultimately be an essential pillar for the implementation of **[Europe's flagship initiative on cancer screening](#)** (also part of the EBCP), as it will help provide evidence for the use of AI in breast, lung and prostate cancer screening. Together with the [EUCanScreen Joint Action](#), aimed at developing guidelines and tools for implementing AI in cancer screening; EUCAIM will **facilitate the uptake of AI in cancer screening programmes**.

A practical example of EUCAIM informing public health policies can be found in the [EUCAIM – ESR Join Statement](#)

Want to learn more?

**Contact the EUCAIM EDIC coordination team
at:**

edic@cancerimage.eu

<https://cancerimage.eu>

