European Commission

Shaping Europe's digital future

European Cancer Imaging Initiative

The European Cancer Imaging Initiative will unlock the power of imaging and Artificial Intelligence for the benefit of cancer patients, clinicians and researchers.

@EuropeanCommission

The **European Cancer Imaging Initiative** is one of the flagships of the Europe's Beating Cancer Plan (EBCP). One of the objectives of the Plan is to make the most of the potential of data and digital technologies such as Artificial Intelligence (AI) or High-Performance Computing (HPC) to combat cancer.

The aim of the European Cancer Imaging Initiative is to **foster innovation and deployment of digital technologies in cancer treatment and care**, to achieve **more precise and faster clinical decision-making, diagnostics, treatments and predictive medicine for cancer patients**.

The Initiative will showcase how medical images can be accessed, used and pooled, while ensuring a high level of ethics, trust, security and personal data protection in full compliance with EU values and rules. It will make large amounts of cancer images and linked clinical data easily accessible to European clinicians, researchers and innovators in line with the European data strategy and supporting the goals of the European Health Data Space.

What is the European Cancer Imaging Initiative trying to achieve?

Cancer imaging datasets exist for different cancer types, but they are scattered among many repositories and clinical centres in Europe, and they are not easily accessible to clinicians, researchers and innovators.

The European Cancer Imaging Initiative will work towards linking up resources and databases to an **open, available and user-friendly infrastructure of cancer images for all stakeholders**. This will be achieved through an integrated approach designed with major European research organisations, institutions, and companies. The infrastructure will support the development and **benchmarking**, **testing** and **piloting of tools for personalised medicine**, essentially offering a **backbone for next generation of cancer diagnostics and treatments**.

How are we going to do this?

The cornerstone of the initiative will be a **federated European infrastructure for cancer images data**, developed by the **EUCAIM project** funded under the DIGITAL programme (18 MIO EU co-funding). The project starts with 21 clinical sites from 12 countries and aims to have at least 30 distributed data providers from 15 countries by the end of the project.

The project will provide **a central hub** that will link EU-level and national initiatives, hospital networks as well as research repositories with cancer images data. Clinicians, researchers and innovators will have cross-border access to an interoperable, privacy-preserving and secure infrastructure for **federated, distributed analysis of cancer imaging data**.

Both common and rare cancers will be included with anonymized images and annotations through this pan-European Cancer Images infrastructure and more than 100,000 cases are expected to be available. At least 50 Artificial Intelligence algorithms, Artificial Intelligence tools and clinical prediction models for researchers within the infrastructure are planned to be deployed by the end of the project.

EUCAIM **builds upon the results of the work of the "AI for Health Imaging" (AI4HI) Network** which consists of 86 affiliated institutions from 20 countries involved in 5 large EU-funded projects on big data and Artificial Intelligence in cancer imaging: Chaimeleon, EuCanImage, ProCancer-I, Incisive and Primage. These projects are developing Artificial Intelligence algorithms to detect the cancer from imaging and are establishing federated repositories for cancer images.

EUCAIM plans to make cancer images data available to the AI Testing and Experimentation Facility for Health (TEF-Health) established under the DIGITAL programme. This will allow small and medium-sized enterprises who have developed Artificial Intelligence solutions for cancer care to test them in real-life environments. Other testing facilities will also be considered.

The European Digital Innovation Hubs under the DIGITAL Programme will support the roll-out of the technologies relevant for the European Cancer Imaging Initiative, for example by informing the innovators about the legal requirements and testing facilities available to them. They will provide a range of services to digital solutions users and providers, such as test-before-invest services, training and networking opportunities as well as access to finances.

Event to mark the launch of the Initiative

An event will be organised on 23 January 2023 to mark the launch of the Cancer Imaging Initiative #euCancerImaging. After the presentation of the policy background and the Cancer Imaging Initiative by EC, an overview of the Federated European Infrastructure for Cancer Images Data (EUCAIM) project will be given by the project coordinator. This will be followed by a panel discussion covering the clinical, industry, AI developer and research perspectives on the Cancer Imaging Initiative and discussion with the audience.

Milestones

- **December 2022:**

  Launch of the Initiative

- **January 2023:**

  Start of the EUCAIM project

- **September 2023:**

  Early release of the EUCAIM Data Federation Framework with preliminary proof-of-concepts on data federation and harmonisation in at least one cancer type and few selected use cases;

- **December 2023:**

  Requirements analysis and design of the EUCAIM infrastructure completed, collaboration mechanisms established;

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December 2024:

EUCAIM platform validated and fully populated with data; prototype of federated learning and benchmarking platform available

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- **2025:**

  Federation of new cancer images databases through open calls; implementation of clinical use cases

- **December 2025:**

  Final release of the EUCAIM platform, including final version of tools and services for data providers and platform users

- **2026:**

  Full operation of the federated European repository of cancer images data

- **2027:**

  Expansion

Relevant links

Europe's Beating Cancer Plan *(https://ec.europa.eu/info/strategy/priorities-2019-2024/promoting-our-european-way-life/european-health-union/cancer-plan-europe_en)*

European Health Data Space *(https://health.ec.europa.eu/ehealth-digital-health-and-care/european-health-data-space_en)*

European Data Strategy *(https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/european-data-strategy_en)*

Coordinated Plan on Artificial Intelligence *(https://digital-strategy.ec.europa.eu/en/policies/plan-ai)*

European Cancer Imaging Factsheet (pdf.) *(https://ec.europa.eu/newsroom/dae/redirection/document/92245)*

Follow the latest progress and learn more about getting involved.

Follow the latest progress and learn more about getting involved *[(https://twitter.com/ehealth_eu?lang=en)](https://twitter.com/ehealth_eu?lang=en)*

Latest News

PRESS RELEASE | 23 January 2023

Europe's Beating Cancer Plan: Launch of the European Cancer Imaging Initiative *[(/en/news/europes-beating-cancer-plan-launch-european-cancer-imaging-initiative)](/en/news/europes-beating-cancer-plan-launch-european-cancer-imaging-initiative)*

At an event earlier this week in Brussels, the Commission has launched the European Cancer Imaging Initiative to support healthcare providers, research institutes and innovators in making the best use of innovative data-driven solutions for cancer treatment and care.

REPORT / STUDY | 21 December 2022

Evaluation of the Active and Assisted Living programme (AAL2) *[(/en/library/evaluation-active-and-assisted-living-programme-aal2)](/en/library/evaluation-active-and-assisted-living-programme-aal2)*

The European Commission transmitted the evaluation report presenting the results of the final evaluation of the Active and Assisted Living research and development programme - AAL2 - to the European Parliament and the Council.

REPORT / STUDY | 12 December
2022

**Covid-19 Digital Contact
Tracing Study**
*(/en/library/covid-19-digital-
contact-tracing-study)*

The European Commission
published a study that
provides an overview of the
approach and lessons
learned on cross-border
interoperability,
coordination,
implementation and the
epidemiological impact of
COVID-19 digital contact
tracing apps.

PRESS RELEASE | 01 December
2022

**Laptops for Ukraine: new
initiative to collect tech
devices for Ukrainian
schools, hospitals and public
services** *(/en/news/laptops-
ukraine-new-initiative-collect-
tech-devices-ukrainian-
schools-hospitals-and-
public-services)*

The Commission, together
with the Ukrainian Ministry
of Digital Transformation
and DigitalEurope, a
European organisation that
represents the digital
technology industry, is
organising a new initiative:
Laptops for Ukraine.

Browse eHealth   *(/en/related-content?topic=96)*

Related Content

Big Picture

eHealth *(/en/policies/ehealth)*

The European Commission is working to provide citizens with access to safe and top quality digital services in health and care.

See Also

The European Innovation Partnership on Active and Healthy Ageing (EIP on AHA) *(/en/policies/eip-aha)*

The European Innovation Partnership in Active and Healthy Ageing is an initiative that aims to foster innovation use of digital for active and healthy ageing.

Privacy code of conduct on mobile health apps *(/en/policies/privacy-mobile-health-apps)*

The privacy code of conduct on mobile health apps aims to promote trust among users and provide a competitive advantage for those who sign up to it.

European '1+ Million Genomes' Initiative *(/en/policies/1-million-genomes)*

The 1+ Million Genomes initiative has the potential to improve disease prevention, allow for more personalised treatments and support

groundbreaking research.

Managing health data *(/en/policies/health-data)*

The European Commission adopted a Communication and a Staff Working Document on Digital transformation of health and care to boost European Union action.

Exchange of electronic health records across the EU *(/en/policies/electronic-health-records)*

The European Commission has adopted a Recommendation on a European electronic health record exchange format to unlock the flow of health data across borders.

eHealth experts *(/en/policies/ehealth-experts)*

The European Commission created two expert groups working on eHealth: the eHealth Stakeholder Group and a temporary eHealth Task Force.

Other

EU support for the digital public sector *(/en/activities/support-public-sector)*

The Commission wants to ensure the public sector is able to keep pace with new technologies and...

Last update

14 December 2022

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