



Einstein is a system that integrates private and public healthcare delivery, teaching, research and innovation in Brazil

25.2K Employees

12.9K

Physicians employed, contracted and free standing

HEALTHCARE

**14.0M** medical and other appointments

61.2K surgeries & procedures

TEACHING

66.0K students enrolled

## RESEARCH & INNOVATION

## 926

articles published in journals with an impact factor above 1, with 21 of them in journals with an impact factor above 20

45

full-time researchers

\* 2023 data

articles published in indexed journals

1.4K

5.8K citations of scientific articles by Einstein researchers

55 startups invested

Founded in São Paulo in 1955, is ranked as the best hospital in Latin America and the 28th best in the world by Newsweek's World's Best Hospitals ranking.

Einstein was the first hospital outside the USA to be accredited by Joint Commission. It is the first in Latin America to achieve Magnet Designation for its excellent nursing and care.



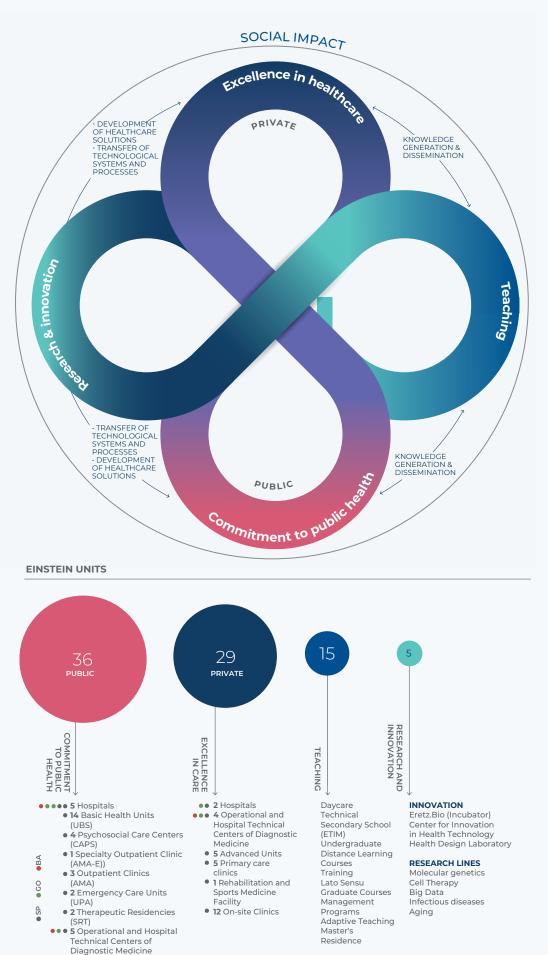






Einstein Complex in Morumbi, Sao Paulo

# A health system the size of Brazil



## Einstein brings the most advanced healthcare to Brazil



## ONCOLOGY

Einstein focuses on individualized and multidisciplinary care to improve treatment outcomes and quality of life. Every year, more than 25,000 patients use the specialist care units, which employ more than 650 professionals. Considered the 17<sup>th</sup> best oncology hospital in the world by Newsweek's ranking of the World's Best Specialized Hospitals, Einstein is continuously advancing in precision medicine, big data analytics and cell therapy, as well as in complex minimally invasive procedures.

In 2027, Einstein will open in São Paulo a new Center for Advanced Care and Therapies in Oncology and Hematology, a 38,000m<sup>2</sup> facility that will house a care complex and an academic cancer research center. The new center will be used for global collaborations in genetics, genomics, big data, translational research, technology and innovation.



#### PRECISION MEDICINE

Einstein provides highly effective genetic testing to identify the risk of developing cancer, cardiovascular disease and other illnesses, such as disorders of the metabolism, immune and neurological system. It also offers imaging tests in conjunction with the use of AI to diagnose Alzheimer's in its very early stages.

Twelve centers of excellence have been established, led by doctors from various specialties, who meet periodically to discuss opportunities for innovation, technological incorporation, development of molecular care pathways, and to analyse data related to certain diseases.



#### LARGEST ROBOTICS CENTER IN LATIN AMERICA

robotic surgery training, receiving students

from across Latin America and Asia in

and digestive system surgery and

specialties such as urology, gynecology,

thoracic surgery, head and neck surgery,

coloproctology. In 2023, it was the first

in Brazil to incorporate Medtronic's new

Einstein's pioneering Robotic Surgery program, started in 2008, supports strategic surgical specialties with a focus on high complexity procedures. Einstein has also become an important hub for

### INTERVENTIONAL MEDICINE

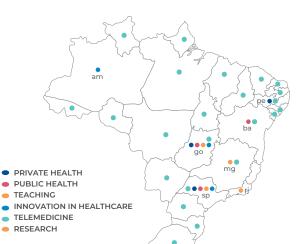
Einstein has been developing capability in interventional radiology since 2003, and has forged a strong reputation in Brazil for adopting cutting-edge technologies to treat various pathologies. Today, the hospital has a multidisciplinary team comprising doctors, nurses, biomedical scientists and technicians focused on studying and researching this field.

In 2023, Einstein's work in the area was recognized with IASIOS accreditation (International Accreditation System for Interventional Oncology Services), the most prestigious global certification of this type. It is the first center in Latin America to receive the recognition and is now one of 18 accredited worldwide. robotic-assisted surgery system, Hugo. In 2022, Einstein donated one of its robotic platforms to the Vila Santa Catarina Municipal Hospital in São Paulo, a public hospital managed by Einstein, making it the first county hospital in Brazil to perform robotic surgeries.

## Innovation and research to transform health in Brazil

IMPACTFUL PROJECTS IN BRAZIL





## TeleAmes

In a country of continental dimensions, one of the greatest challenges is to offer specialized medical care across the

entire nation. Resources are distributed unequally: in the South and Southeast of Brazil, 68% and 63.3% respectively of doctors are specialists, while in the North, it is 57.2%.

Three years ago, in partnership with Brazil's Ministry of Health, Einstein launched the TeleAmes program, offering specialized medical care through telemedicine in the North and Central-West of Brazil. Patients are seen at their nearest health center in a joint consultation with a generalist physician on site and a specialist doctor from Einstein via videocall. The program covers 12 specialties, including cardiology, adult and pediatric neurology, psychiatry, and rheumatology.

There are more than 370 virtual service delivery points in the two regions, a low-cost program with a high social impact. Since its creation, more than 260.000 consultations have been done.

## Innovation Center in the Amazon

Health indicators in the Amazon region are well below the national average and far from the standards established by the World Health Organization (WHO). The northern region of the country, for example, has a maternal mortality rate of 141.26 deaths per 100,000 live births, while the target established by the UN is 30.

When it comes to neglected tropical diseases, the numbers are also high. In 2022, more than 12,800 new cases of cutaneous leishmaniasis were recorded in Brazil—accounting for more than a third of all cases recorded on the American continent. To help transform healthcare in the region, Einstein created an

Innovation and Biotechnology Center in Manaus, the state capital of Amazonas. The center's priority is research into tropical diseases such as malaria, dengue, tuberculosis, and leishmaniasis.

#### SOME OF ITS **PROJECTS INCLUDE:**

→ SAMPa -Smart Assistant for Monitoring **Prenatal Health Care** with Large Language Models (LLMs) With funding from the Bill and Melinda Gates Foundation. nonspecialist doctors work with an AI assistant in prenatal consultations. The technology records the audio of the consultation, analyzes a database of over 2,000 medical articles, then gives the healthcare professional suggestions on questions to ask and follow-up actions. For the patient, the tool offers post-consultation support material.

### Al for diagnosing cutaneous leishmaniasis.

The aim is to develop an AI application that analyzes photographs taken on a smartphone and determines the probability of it being cutaneous leishmaniasis (CL) or another infectious, inflammatory disease or tumor. The aim is to help non-specialist healthcare professionals recognize CL. The project receives funding from the IDB.

Impact of social factors on diabetes management (AI)



population. To analyze how social factors influence management of the disease, Einstein created the DMeter Project, with funding from Amazon Web Services (AWS). DMeter is an AI tool that cross-references publicly available patient data from Brazil's public health system against patients' socioeconomic information. The results can be used to evaluate and improve public policies related to prevention and treatment, ranging from better nutritional guidelines to access to the correct drugs. They

could also help improve the management of public resources.

Type 2 diabetes mellitus affects more than 10% of the Brazilian



## Research and projects for the public system

Through PROADI-SUS (Support Program for Institutional Development of the Public Healthcare System), Einstein is currently working in partnership with the Brazilian Ministry of Health on 43 projects for Brazil's public health system (SUS), that covers 70% of the country's population. Of these, 17 are research projects, while others involve health management, training, and the assessment and incorporation of new technologies.

#### **EXAMPLES OF PROJECTS:**

### $\rightarrow$ Advanced the rapies: CAR T and natural killer cells

In 2022, the Brazilian Health Regulatory Agency (ANVISA) authorized Einstein to treat human lymphoma and leukemia with CAR T cells produced in its laboratory. In 2023, a patient experienced complete remission of her lymphoma two months after the infusion of CAR T cells. As part of the initiative, which is the first of its kind by an academic organization or hospital to be approved by ANVISA in Brazil, the technology is expected to be used on at least 30 SUS patients.

Through PROADI-SUS, Einstein also conducts other studies into advanced therapies, such as the use of natural killer (NK) cells to treat acute myeloid leukemia (AML), gene therapy for sickle cell anemia, and new virus-specific lymphocytes for cell therapy in immunosuppressed patients undergoing bone marrow transplants.

### → Optimal Diabetes and Optimal AVC

These two clinical trials are monitoring blood pressure to determine the safest level (below 140 mmHg or 120 mmHg) for reducing the risk of death from cardiovascular causes, heart attacks, strokes, and heart failure in patients with diabetes (Optimal Diabetes), or for preventing a second stroke (Optimal AVC). With approximately 9,500 participants in the Optimal Diabetes trial and 4,400 in the Optimal AVC trial, these are the largest studies of their kind in the world.

> Transplant program Through its Solid Organ Transplant Mentoring Program, Einstein is training healthcare professionals and new transplant centers in order to help decentralize treatment, improving access for patients who live in areas that do not offer these procedures. More than 6,000 professionals have been trained and more than 4,000 solid organ transplants have been carried out by the program across Brazil since 2021 (including kidney, liver, pancreas, heart, lung, intestine, and multivisceral transplants).



## Academic Research Organization

Knowing the importance of clinical research in Brazil, Einstein created the country's first Academic Research Organization in 2018, which now has a staff of more than 100. Through academic leadership of research projects, meticulous assessment of adherence to proposals in partnership with industry, and commitment to multicenter studies with a major impact on health in Brazil, the ARO's objective is to answer questions that are important not only to science, but to the whole world. It has published 21 articles in journals with an impact factor of more than 20, such as The Lancet, The New England Journal of Medicine, and The Journal of the American Medical Association (JAMA).

## Eretz.bio: Innovation hub

Eretz.bio was the first health startup incubator in Brazil. It is now a renowned innovation center that has accelerated more than 145 startups and supported over 200 others in technology validation projects, from more than 20 countries. In 2022, the Biotechnology Innovation Program was established aimed at supporting biotechnology startups and enterpreneurs with a focus in health. In 2023, an alliance was established with Sheba Medical Center in Israel to exchange technologies and expertise between the innovation centers of the two organizations.



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