



AVATAR MEDICAL

Press release | November 23rd, 2021

Institut Curie equips its surgeons and radiologists with AVATAR MEDICAL's virtual reality medical image solution

It is the first hospital worldwide to buy this state-of-the-art medical image visualization solution.

Paris, November 16th - Institut Curie, France's leading cancer center, combines an internationally-renowned research center with a cutting-edge hospital group. As part of its drive to remain at the forefront of patient care, Institut Curie Hospital group (Paris location) has decided to equip its surgeons and radiologists in its breast cancer and ENT department with AVATAR MEDICAL's virtual reality medical image solution. It is the first hospital in the world to buy this state-of-the-art medical image visualization solution.

AVATAR MEDICAL was founded in July 2020 by a team of French scientists and Franco-American entrepreneurs. The technology is based on four years of research in human-data interaction and machine learning conducted at Institut Pasteur and Institut Curie by Jean-Baptiste Masson, Mohamed El Beheiry, Fabien Reyat, and the late Maxime Dahan. Institut Pasteur has supported AVATAR MEDICAL in its seed phase, notably by accompanying it through its Pasteur Innovation Accelerator.

A member of [NVIDIA Inception](#), a free program designed to empower cutting-edge startups, AVATAR MEDICAL's solution generates in real-time 3D patient representations based on their medical images in an interactive virtual reality (VR) context and is particularly useful for visualizing and measuring tumors¹. A study from Institut Pasteur and Institut Curie recently published in JCO Clinical Cancer Informatics² proved that the solution allowed a faster and more accurate analysis of breast tumors and a better prediction of the surgical procedure.

Surgeons and radiologists at Institut Curie are going to use the solution to do research on the impact of 3D and VR visualization of medical images in surgery preparation and de-escalation of treatment. The solution will also help accelerate the training of residents and to ensure patient engagement.

¹ The AVATAR MEDICAL software is for research use only and has been tested in retrospective studies with approved clinical research protocols.

² El Beheiry, et al., JCO Clinical Cancer Informatics, 2021.

The study was performed with 18 surgeons from Institut Curie



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“At the end of the day, what’s important is to support cancer patients undergoing stressful surgeries and to help surgeons make the best decisions for them,” says Xavier Wartelle, CEO of AVATAR MEDICAL. “I am delighted to partner with Institut Curie and their outstanding team of surgeons in order to accomplish this goal.”

“The quality of a procedure highly depends on preplanning and, in particular, on the perception and the knowledge the surgeon has of the disease before performing the surgery. AVATAR MEDICAL can play a central role in helping surgeons, whether experienced or novice, to better understand medical images and thus better perform their surgeries”, says Pr. Fabien Reyal, head of breast cancer surgery department at Institut Curie.

“We are particularly proud to pursue our collaboration with AVATAR MEDICAL, one of our latest spin-offs, and thrilled to see this revolutionary technology, born in Institut Curie’s and Institut Pasteur’s research labs, and with the support of PSL, arrive at Institut Curie Hospital Surgical Department, for the benefit of patients,” says Cécile Campagne, head of Institut Curie’s Technology Transfer Office and Deputy Director of Carnot Curie Cancer.

The AVATAR MEDICAL software will be installed on computers equipped with NVIDIA RTX graphics cards based on the latest NVIDIA Ampere architecture and HP VR headsets.

In the long term, AVATAR MEDICAL aims to unlock the power of medical images and make them actionable to all stakeholders of the patient care: radiologists, surgeons, oncologists, residents, and patients. With AVATAR MEDICAL, medical images will become a collaboration tool to make the right decision, and a means of explanation for the patient.

More about the study published in JCO Clinical Cancer Informatics:

- [infographics](#)
- [publication](#)
- [news published by Institut Pasteur](#)

About AVATAR MEDICAL

AVATAR MEDICAL is an innovative spin-off from Institut Pasteur and Institut Curie. AVATAR MEDICAL was incorporated in Paris in July 2020 by an experienced team of French and American founders, and also operates in the United States. The company has been selected in prestigious competitions and programs: i-Lab, i-Nov, the MedFIT award for the most innovative European startup, PR[AI]RIE, and NVIDIA Inception program. Full



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commercial deployment of the FDA and CE-approved version of the software platform is planned for 2022.

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Press Contact:

AVATAR MEDICAL

marie@avatarmedical.ai

About Institut Curie

Institut Curie, France's leading cancer center, combines an internationally renowned research center with a cutting-edge hospital group that treats all types of cancer, including the rarest. Founded in 1909 by Marie Curie, Institut Curie employs more than 3,700 researchers, physicians, and health professionals across three sites (Paris, Saint-Cloud, and Orsay), working on its three missions: treatment, research, and teaching. A private foundation with public utility status, Institut Curie is authorized to receive donations and legacies, and thanks to the support of its donors, is able to make discoveries more quickly, improving treatments and quality of life for patients.

www.curie.fr

Since 2011, Institut Curie is certified "Institut Carnot Curie Cancer". The Carnot label is a label of excellence granted to academic research structures with proven high quality and involvement in partnership research. Curie Cancer offers industrial partners the opportunity to set up research collaborations, benefiting from the expertise of Institut Curie teams, for the development of innovative therapeutic solutions against cancers from the therapeutic target to clinical validation.

<http://www.instituts-carnot.eu/fr/institut-carnot/curie-cancer>

About Institut Pasteur

The Institut Pasteur, a non-profit foundation with recognized charitable status set up by Louis Pasteur in 1887, is today an internationally renowned center for biomedical research. In the pursuit of its mission to tackle diseases in France and throughout the world, the Institut Pasteur operates in four main areas: research, public health, training, and development of research applications. The Institut Pasteur is a globally recognized



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leader in infectious diseases, microbiology, and immunology, with research focusing on the biology of living systems. Among its areas of investigation are emerging infectious diseases, antimicrobial resistance, certain cancers, neurodegenerative diseases, and brain connectivity disorders. The Institut Pasteur's outstanding research is facilitated by the development of a technological environment of the highest standard, with core facilities for nano imaging, computational biology, and artificial intelligence. Since its inception, 10 Institut Pasteur scientists have been awarded the Nobel Prize for Medicine, including two in 2008 for the 1983 discovery of the human immunodeficiency virus (HIV) that causes AIDS.

The Institut Pasteur is part of the Pasteur Network, a worldwide network of 33 members on five continents, united by Pasteurian values, that contribute to global health.