SYMBIOSIS BETWEEN
DOCTORS AND AI

By Reineke Maschhaupt Image Ivar Pel

The recently formed qurAI research group is a unique merger of the Informatics Institute of the University of Amsterdam and the Amsterdam Medical Center. 'To change the system, you have to be part of it', advocates co-chair of the group Clarisa Sánchez.

'During my former research, I noticed a disconnection between the fundamental research in artificial intelligence (AI) and its implementation in clinical practice. There was a lot of miscommunication about what is clinically useful. That was the reason to connect these fields in the qurAI group. We do not want to develop just solutions; we really want to incorporate those into the healthcare system too. I want patients to receive the best treatments possible. Right now, we are mainly focusing on the medical fields of ophthalmology, cardiology, oncology, radiology and intensive care.

Doctors are increasingly open to the use of AI, but there is still a lack of knowledge. For example, there is always a fear of the system making an error. Then who is responsible? And what is the effect on the patient? The next step for doctors is to understand more about the technology. And to feel that they participate in the creation of AI models. The biggest misconception that AI experts have is that only data is important for creating a solution, whereas in reality, so many things must be taken into account to create clinically meaningful models.

BUILDING BRIDGES

The biggest challenge right now is connecting the many players involved in our research. These are not just AI experts and doctors but also software engineers, legal and ethical experts, regulatory bodies and insurance companies. The process of designing, developing, validating, testing and integrating novel technology has to become both easier and faster. One example of how we try to do that is the co-development of a Grand Challenge platform with Radboud university medical center, where all the different parties can meet, access the data and work together on the perfect solution. It is also a place where doctors can evaluate AI algorithms that mimic what is happening in clinical practice.

In the future, I would like to see AI becoming integrated into clinical practice in perfect symbiosis with the doctor. Patients shouldn't even notice the presence of AI. It would be good if mergers like we have achieved in our research group, would happen more on a national level. Working in separate units is not the way to go.'

Clarisa Sánchez has been Professor of AI & Health at the University of Amsterdam since October 2020. Previously, she worked as an associate professor at the Department of Radiology and Nuclear Medicine at Radboud university medical center. Since 2019, she has also been the scientific director of Thira Lab. Sánchez received her PhD in telecommunications engineering from the University of Valladolid in Spain.