

SHINE 2Europe is a partner in the 5.8 M€ Horizon Europe project RadioVal, to validate an artificial intelligence solution for breast cancer treatment planning

RadioVal is the first major multi-centre, multi-continental and multi-disciplinary project to clinically validate an artificial intelligence solution for the prediction of patient-specific response to neoadjuvant chemotherapy in breast cancer, in eight clinical centers across Europe, South America, North Africa and Eurasia.

With breast cancer becoming the most common cancer worldwide, it is paramount to improve treatment and care. New treatment protocols have shown promise in reducing mortality, such as neoadjuvant chemotherapy (NAC), but they face important challenges including variability in efficacy and important side effects for patients. RadioVal will validate an artificial intelligence (AI) solution which will support clinicians in selecting the patients that are most likely to respond to neoadjuvant chemotherapy, hence reducing unnecessary treatments and patient suffering due to side effects.

The AI solution built from radiological data, otherwise known as radiomics AI, will be validated in a variety of clinical centres across the world, including from three high-income EU countries (Sweden, Austria, Spain), two emerging EU countries (Poland, Croatia), and three countries from South America (Argentina), North Africa (Egypt) and Eurasia (Turkey). Furthermore, it will validate the AI technology for its accuracy, but also for technical robustness, clinical safety and utility, applicability in the real world, as well as ethical excellence and legal compliance.

This will be the very first international validation of a radiology AI solution in breast cancer with the aim to demonstrate that it can be trusted by clinicians, patients and other stakeholders, and hence it can be deployed and adopted by healthcare centres. The RadioVal study will be implemented through a multi-stakeholder approach, taking into account clinical and healthcare needs, as well as socio-ethical and regulatory requirements from day one to foster acceptance and adoption.

Karim Lekadir, RadioVal's Project Coordinator from the University of Barcelona, declared: "RadioVal is an unprecedented opportunity to deliver strong evidence on the clinical utility and applicability of radiology AI for breast cancer care in the real world".

The project will start on the 1st of September 2022 and the kick-off meeting will take place in Barcelona on 15-16 September 2022, with representatives of the RadioVal consortium, which consists of the following partners:

1. University of Barcelona, Spain (Coordinators)
2. Maastricht University, Netherlands
3. Quantitative Imaging Biomarkers In Medicine, Spain
4. Foundation for Research and Technology, Greece
5. Grupo Maggioli, Italy
6. SHINE 2Europe, Portugal
7. Nordic Healthcare Group, Finland
8. La Fe University Hospital Valencia, Spain
9. Karolinska Institutet, Sweden
10. Medical University of Gdansk, Poland
11. University of Zagreb School of Medicine, Croatia
12. Medical University of Vienna, Austria

13. Hacettepe University Hospital, Turkey
14. Alexander Fleming Institute, Argentina
15. Ain Shams University Hospital, Egypt
16. European Institute for Biomedical Imaging Research, Austria

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