




# radioval

An International Clinical Validation of Radiomics Artificial Intelligence for Breast Cancer Treatment Planning

## Deliverable D7.1: RadioVal Website

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Author(s)	Peter Gordebeke
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## Version log

Issue Date	Version	Involved	Comments
30/11/22	V0.1	EIBIR	Initial version
30/11/22	V1	Karim Lekadir, Oliver Díaz & Anais Emelie	Revised and corrected final version.

## Executive Summary

The RadioVal website ([www.radioval.eu](http://www.radioval.eu).) serves as the central platform for all project-related public information and thus is a key communication instrument of the project during its lifetime and beyond. It will provide all dissemination material developed during the project and links to any publication made in relation to RadioVal.

The website will be further developed and regularly updated according to project progress and achievements.



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## Acronyms

Name	Abbreviation
European Commission	EC
General Data Protection Regulation	GDPR



# 1 RadioVal Website

The RadioVal website has been developed as the main public-facing online presence.

It contains the most important information about the project and efforts were made to keep the information understandable for the general public.

The website is a constantly changing and evolving platform. The initial release provides basic functionality and information, but will change substantially over the course of the project.

All separate pages are attached at the end of this document.

## 1.1 Landing page

The landing page features an attention grabbing hero element at the top of the page. This is followed by more details about the objectives of the project. Both sections link to more in-depth information about RadioVal.

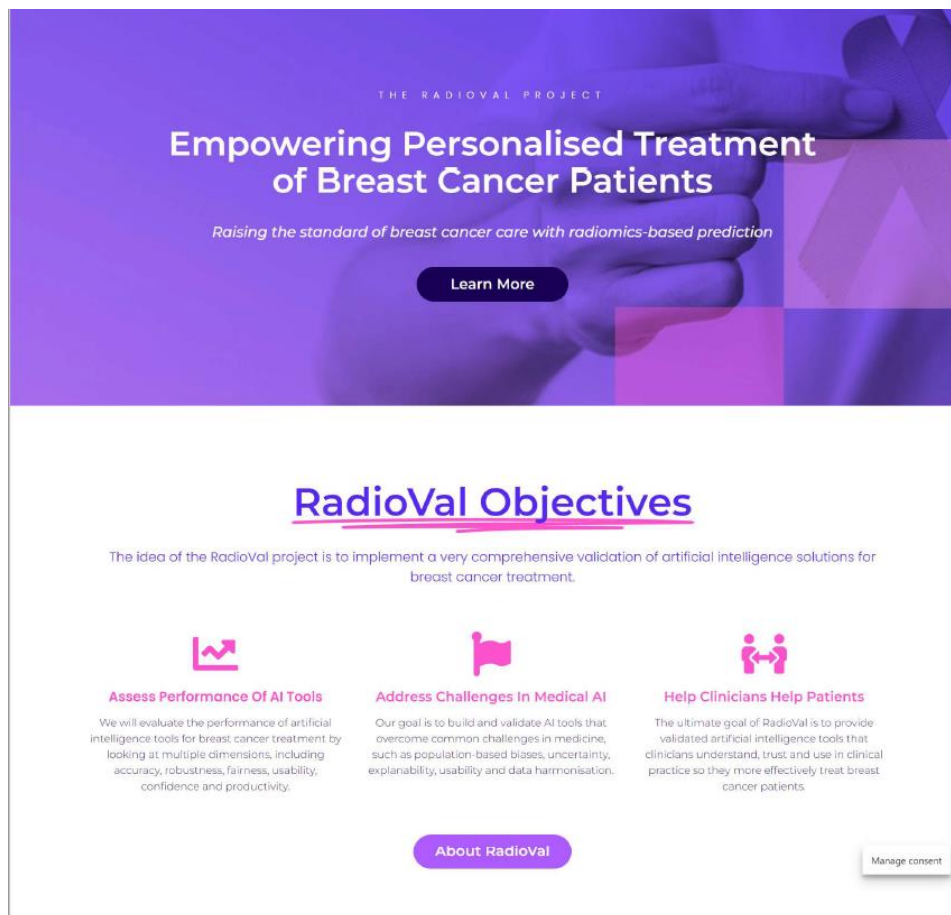


Figure 1: Screenshot RadioVal Landing page

This is followed by a section displaying the latest news items, which also links to a news archive.

As a next section, and overview of the consortium is included. All consortium partners are included with their logo.



## Our consortium

The RadioVal consortium brings together 16 partners from 13 countries.

You can find out more about the consortium partners, the individual expertise and the involved staff on the consortium overview page.

[Find Out More](#)



Figure 2: Introduction of the Consortium on RadioVal's website

A final attention-grabbing headline concludes the content of the main page, and links to the overview of work packages.

The menu at the top of the page remains at the top for easy navigation.

A footer at the bottom of the page includes information about the EC funding and the disclaimer regarding the public views of RadioVal. It also includes direct contact details and quick links to each main section.

### 1.2 About Us page

The About Us page provides more details about RadioVal, including the mission and vision, as well as some hard facts about the project such as runtime, number of partners, coordination teams etc.




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## Our Mission

The idea of the RadioVal project is to develop and implement a very comprehensive validation of artificial intelligence solutions in the breast cancer treatment.

We hope our projects promotes precision medicine with tools that will help clinicians to perform more precise medicine, individualised to the patient's need.

RadioVal will help clinicians help patients.



## About the project

RadioVal implements the first international clinical validation study of radiomics based prediction of neoadjuvant chemotherapy treatment response from breast MRI. The project will develop a comprehensive and standardised methodological framework for multi-faceted radiomics evaluation based on the FUTURE AI Guidelines, to assess Fairness, Universality, Traceability, Usability, Robustness and Explainability. Furthermore, the project will introduce new tools to enable transparent and continuous evaluation and monitoring of the radiomics tools over time. 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.

### Facts and Figures

Project name: International Clinical Validation of Radiomics Artificial Intelligence for Breast Cancer Treatment Planning

Figure 3: Extract of About us page

### 1.3 Work Packages

The specific objectives and work packages are described on this page.



### Aims and specific objectives

RadioVal develops a validated AI-based decision-making support system, increasing clinicians' and patients' trust in artificial intelligence tools by implementing the first international, clinical validation study of radiomics-based prediction of neoadjuvant chemotherapy (NAC) treatment response from breast MRI. This reduces overtreatment in patients undergoing chemotherapy and reduce costs of breast cancer care. To test applicability as well as transferability, the validation will take place in eight clinical centres 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).

- **Objective 1:** Implement the very first international, multi-faceted clinical validation study for radiomics-based prediction of response to neoadjuvant therapy in multiple developed and developing countries.
- **Objective 2:** Introduce a holistic, standardised methodological framework for multi-faceted and trustworthy evaluation of radiomics AI, taking into account multiple technical, clinical as well as ethical criteria.
- **Objective 3:** Implement a multi-stakeholder, inclusive approach to improve awareness, acceptance and promotion of radiomics AI in future breast cancer care.
- **Objective 4:** Develop the very first traceability tool for radiomics AI, which will enable transparent monitoring and continuous evaluation of radiomics tools during their lifetime.
- **Objective 5:** Evaluate wider impacts of clinical deployment of radiomics AI, including associated cost-benefits, socio-ethical implications and regulatory aspects.

### Work Package description

- **WP1: Multi-stakeholder engagement and social innovation**
  - Develop a social innovation framework to compile multi-stakeholder requirements and pathways for enhancing radiomics evaluation and implementation in breast cancer.
  - Develop a radiomics information and communication package that will be leveraged during social innovation and radiomics evaluation by RadioVal's multi-disciplinary stakeholders.
  - Leverage the social innovation framework to define multi-disciplinary requirements and pathways in the following specific areas:
    - clinical, patient and healthcare,
    - socio-ethical,
    - legal and regulatory.
- **WP2: Multi-faceted evaluation framework, resources and guidelines**

Figure 4: Screenshot of the Work Package page

## 1.4 Consortium and partner-specific pages

This page provides a geographical overview of the consortium, showing its global nature, as well as a list of partners. Every partner can be clicked on for navigation to more details about each partner. This includes a general description of the organisation, their role in the project and the staff involved.



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## Our Consortium

The RadioVal consortium is a highly experienced and ambitious consortium with a unique blend of assets and expertise uniquely suited to achieve the ambitious objective of a first multi-faceted international validation study in the field of radiomics.

The RadioVal consortium is, first of all, an alliance of 5 European projects (EuCanImage, CHAMELEON, INCISIVE, TCIA and PRIMAGE) represented by their coordinators, as well as by additional members of these projects. These partners cover a lot of the expertise needed in this project, such as breast cancer care, big data in cancer imaging and PAIP data management, radiomics AI, machine learning in breast cancer, in-silico validation, and dissemination and communication in biomedical imaging.

To complete the consortium, 6 additional clinical centres join to form a highly diverse international clinical network, covering Southern, Northern, Central-Western and Eastern Europe, South America, Eurasia and North Africa.

Furthermore, the consortium is reinforced by NIHC, a European expert on value-based care, cost-effectiveness analysis and regulatory aspects, especially for emerging digital services.

Last but not least, SHINE2Europe completes the consortium as a major European expert in social innovation and participatory democracy.

The participation of Hacettepe University, the Alexander Fleming Institute and Ain Shams University, as representatives of low-to-middle income countries from Eurasia, North Africa and Asia, will demonstrate radiomics scalability and transferability like never before. This promotes diversity and inclusion in AI for healthcare, in particular for women's health, and inspires best practices to ensure future AI solutions can benefit all the human population well beyond high-income countries.

### List of Partners

**Spain**  
University of Barcelona (project coordinator)

**Greece**  
FORTH

Figure 5: Consortium page on the RadioVal website

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## UNIVERSITAT DE BARCELONA

The University of Barcelona (UB) is one of the oldest universities in Spain and the largest university in Catalonia. It has over 60,000 students and 6,000 researchers, as well as 340 graduate and 48 doctorate programs in 16 faculties (including mathematics, informatics, medicine and biology). UB is particularly interested in fostering international relations and, for many years, has managed an average of 150 European projects per year. This project will be carried out by the research team of the Artificial Intelligence in Medicine Laboratory of the University (IACM-UB), which is an essential part of the Department of Mathematics and Computer Science. The research team has an established track record in coordination and participation in national, European and international projects on data science and AI (such as EuCanImage, euCanShare, EarlyCourse, LONGTOOLS, DataTools4Heart).

### UB In RadioVal

The University of Barcelona (UB) is the Project Coordinator of RadioVal, while also leads the preliminary evaluation and calibration of the tool in VHS and contributes to the elaboration of a multifaceted evaluation framework in WP2. UB also participates to the design and implementation of the tools for continuous evaluation, monitoring and traceability within VHS.

**Dr. Karim Lekadir**

Dr. Karim Lekadir is a Senior/Tenure Track Researcher at the University of Barcelona and coordinator of RadioVal. He holds a Master's Degree in Computer Science from the University of Montpellier II (France) and a PhD in Medical Image Computing from Imperial College London (UK). He was also previously a Visiting Scholar at Stanford University (USA). He was the recipient of a Marie-Curie research fellowship awarded by the European Commission and a Juan de la Cierva postdoctoral fellowship funded by the Spanish Ministry of Science and Innovation. He participated in several EU-funded projects in the

Figure 6: Partner page for UB

This page also includes information about the multidisciplinary nature of the consortium, and its complementary expertise.





## 1.5 Results

The results page features searchable and sortable tables for three categories of public results: scientific publications, public deliverables and press material. The respective tables will be populated with results as they become available.

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# Our results

We're making our research findings available free of charge for readers and are providing open access to published papers and reports.

### Scientific Publications

Search:

Title	Author(s)	Journal	Date	DOI
N/A	N/A	N/A	N/A	N/A

Showing 1 to 1 of 1 entries

### Public Deliverables

Search:

Title	Author(s)	Date	Download
N/A	N/A	N/A	N/A

Showing 1 to 1 of 1 entries

### Press Material

Search:

Title	Author(s)	Date	Download
N/A	N/A	N/A	N/A

Showing 1 to 1 of 1 entries

Figure 7: Result page where publications, press releases and public deliverables will be uploaded

## 1.6 Contact page

The contact page does not include any contact forms, but only provides details for direct contact means; a dedicated email address and a phone number.

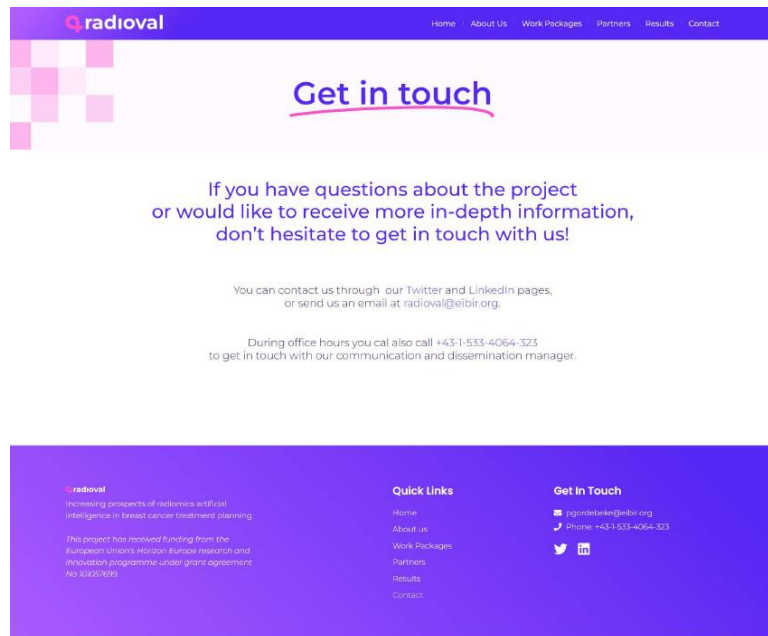


Figure 8: Contact page

The decision not to include a contact form was made for GDPR compliance reasons. See section 2 for more details.

## 2 Security and compliance

All connections to and from the website are SSL-encrypted and secure.

All data is stored in a data center in Belgium.

A GDPR-compliant cookie banner for consent and management is implemented.

The backend of the website is running on WordPress with Elementor. Elementor does **not** set HTTP cookies. Instead, Elementor works with LocalStorage and Session Storage. However, these are legally treated as (HTTP) cookies. Rather than HTTP cookies, data stored is an entry in the local storage and in the session storage of the browser. The collected data will most only be stored on the visitor's local browser for a limited period and will not be sent to Elementor, the website operator's server or any third party.

The LocalStorage and Session Storage data is classified as essential according to the current state of knowledge. In this case, local storage and session storage are responsible for ensuring that pop-ups, sitebars, etc. are not displayed again so that the visitor can use the website undisturbed. Whether these "cookies" are actually considered necessary is disputed.

Nevertheless, according to ePrivacy Directive 2002/58/EC, access to browser memory is only permitted if the visitor has consented (GDPR Article 6 (1) lit. a) or if the access is absolutely necessary in order to provide or operate the service.

In both cases, this means that European users of Elementor should provide their website visitors with detailed information on what data is stored locally in accordance with the GDPR.



Since we consider local and session storage to be essential in this case, opt-in consent from website visitors is technically not needed. However, to err on the safe side, we comply with the obligation to inform according to Article 13 of the GDPR. In addition to cookies, we refer to the data storage in our cookie notice.

In addition to the Elementor local storage, we also use Matomo Cloud for tracking visitor statistics. This data is also stored in Belgium. Matomo is a fully GDPR-compliant alternative to Google's Analytics for website.

Cookies are only stored on the visitors computer if they consent in the cookie notice. Following this, an option to manage consent is permanently available at the bottom right of each page.



*Figure 9: Cookie preference pop-up*

A contact form is not provided on this website, as the added value and ease of use of such a contact form is not high enough considering the implication in processing data in terms of GDPR compliance.

### 3 Conclusion

In conclusion, throughout this deliverable, we provided an overview of the RadioVal's website content as well as the security measures.