Decision Support and Information Management System for Breast Cancer

**From** 2016-02-01 to 2019-07-31, ongoing project | DESIREE Website

### Project details

| **Total cost:** | **EUR 3 340 720** |
| **EU contribution:** | **EUR 3 340 720** |
| **Coordinated in:** | **Spain** |

| **Topic(s):** | **PHC-30-2015 - Digital representation of health data to improve disease diagnosis and treatment** |
| **Call for proposal:** | **H2020-PHC-2015-single-stage** See other projects for this call |
| **Funding scheme:** | **RIA - Research and Innovation action** |

### Objective

Breast cancer is the most common type of cancer affecting woman in the EU. Multidisciplinary Breast Units (BUs) were introduced in order to deal efficiently with breast cancer cases, setting guideline-based quality procedures and a high standard of care. However, daily practice in the BUs is hampered by the complexity of the disease, the vast amount of patient and disease data available in the digital era, the difficulty in coordination, the pressure exerted by the system and the difficulty in deciding on cases that guidelines do not reflect.

DESIREE aims to alleviate this situation by providing a web-based software ecosystem for the personalized, collaborative and multidisciplinary management of primary breast cancer (PBC) by specialized BUs. Decision support will be provided on the available therapy options by incorporating experience from previous cases and outcomes into an evolving knowledge model, going beyond the limitations of the few existing guideline-based decision support systems (DSS). Patient cases will be represented by a novel digital breast cancer patient (DBCP) data model, incorporating variables relevant for decision and novel sources of information and biomarkers of diagnostic and prognostic value, providing a holistic view of the patient presented to the BU through specialized visual exploratory interfaces. The influence of new variables and biomarkers in current and previous cases will be explored by a set of data mining and visual analytics tools, leveraging large amounts of retrospective data.

Intuitive web-based tools for multi-modality image analysis and fusion will be developed, providing advanced imaging biomarkers for breast and tumor characterization. Finally, a predictive tool for breast conservative therapy will be incorporated, based on a multi-scale physiological model, allowing to predict the aesthetic outcome of the intervention and the healing process, with important clinical and psychological implications for the patients.

### Related information

**Report Summaries**

Periodic Reporting for period 1 - DESIREE (Decision Support and Information Management System for Breast Cancer)
**Coordinator**

FUNDACION CENTRO DE TECNOLOGIAS DE INTERACCION VISUAL Y COMUNICACIONES  
VICOMTECH  
PASEO MIKELETEGI PARQUE TECNOLOGICO DE MIRAMON 57  
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**EU contribution:** EUR 586 623,75

Activity type: Research Organisations  
Contact the organisation

**Participants**

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**EU contribution:** EUR 350 250

Activity type: Private for-profit entities (excluding Higher or Secondary Education Establishments)  
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**EU contribution:** EUR 194 375

Activity type: Research Organisations  
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**EU contribution:** EUR 252 825

Activity type: Private for-profit entities (excluding Higher or Secondary Education Establishments)  
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**EU contribution:** EUR 168 975

Activity type: Private for-profit entities (excluding Higher or Secondary Education Establishments)  
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EU contribution: EUR 155,115

Activity type: Research Organisations

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EU contribution: EUR 402,035

Activity type: Research Organisations

Contact the organisation

EU contribution: EUR 261,466.25

Activity type: Private for-profit entities (excluding Higher or Secondary Education Establishments)

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EU contribution: EUR 99,125

Activity type: Private for-profit entities (excluding Higher or Secondary Education Establishments)

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EU contribution: EUR 0

Activity type: Higher or Secondary Education Establishments

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**Activity type:** Higher or Secondary Education Establishments

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**Activity type:** Other

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