Objectives. The LIFE project, with a global, multidisciplinary and integral perspective aims to help optimize the entire process involved in breast cancer from early diagnosis to treatment. The strategy seeks to tailor treatment to each patient’s tumor molecular characteristics developing a personalized medicine. We present the program to follow during the 4 years of the project and the partial advances that have been made.

Material and methods. ERESA will develop the Radiotherapy part of the project. The lines of work in this area are:

• Implementation of technology to reduce the volume to be irradiated: – Marking tumor bed – Image guided radiotherapy – Development of techniques for Partial Breast Irradiation including electron intensity modulation.

• Implementation of accelerated hypofractionation.

• Development of methods for determining toxicities. These activities will be integrated into the framework of the Breast Functional Unit of the hospital which has been provisioned with a system of communication and data exchange.

Results. We will use the presentation of the progress made in this period to show the lines of work followed by radiotherapy and the remaining areas: Research of microRNA profiling, development of molecular imaging equipment, characterizing markers in magnetic resonance spectroscopy, implementation of new drugs, IGRT for Radiotherapy, tracking of optimization techniques in radiotherapy, etc.

Conclusions. The presentation of this work allows to show the challenge to be faced in the implementation of the LIFE project, especially in radiotherapy in order to discuss hypotheses and partial results.

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Breast cancer workload in a devolved radiation oncology unit in the community setting: A benchmarking study
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Introduction. The Radiation Oncology Unit in Alcazar de San Juan is entailed to La Mancha Centro & Tomelloso General Hospitals and other rural populations, attends a health area of 202.522 inhabitants with a population density of 43.8 hab/km² and a median travel time of 30 min. Benchmarking studies allow comparison of patterns of care and outcomes between different settings. Design: Retrospective data analysis from a prospective treatment registry. Study period from January to December 2010.

Objective. Estimate the unit workload due to breast cancer. Compare results with those of the GEORM survey (1).

Patients and methods. 93 patients with breast cancer diagnosis were submitted from the Multidisciplinary Tumor Board of La Mancha Centro for radiotherapy and were identified from a total of 324 pts (28.%) sent for treatment evaluation. 13% of pts were treated with palliative intention and were excluded from further analysis. CT based planning was use in all patients and treated in supine position with customized alpha-crade immovilization system and 4 MV photons ± electron field 3DCRT. Inverse planning IMRT was used in 1% pts. Characteristics for 81 pts included: Median age (61 y (R:34-87). BCT in 84% and Mastectomy in 16% (31% with immediate breast reconstruction). ALND: 35%, SLND only 20%, SLND + ALND: 38%. Pathology: Invasive ductal 79%, Lobulillar 8%, DCIS 4%. Hyostological Grade 1–2: 47%. Nodal positive: 38%. pStage I: 36&. pStage II: 35%. Treatment: Hypofractionation (START-B): 39%. Boost: 64% (electron field in 48%). Nodal volume included in 23% (IMC in 2%).

Conclusion. Patient demographics and tumor characteristics are very similar between our results and the GEORM survey, as are the distribution of radiation techniques used, with an increased use of hypofractionation in our Centre. Our results are aligned with national patterns of care in breast cancer radiotherapy. 1.- Algara M. on the behalf of the Breast Cancer Radiation Oncology Spanish Group (GEORM): Radiation techniques used in patients with breast cancer: Results of a survey in Spain. Rep Pract Oncol Radiother 17:122, 2012.

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Breast irradiation with a new IGRT system
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Introduction. The new techniques in breast irradiation, make necessary the implementation of systems that help us to ensure the proper application of the treatment.

Objective. To show the improvements in quality, time and accuracy in breast cancer radiotherapy (RT) treatments, thanks to the image guided system AlignRT.