Hypofractionation in breast cancer. Cost analysis
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Introduction. Increasingly, medical services must be more aware of the cost of our procedures to ensure adequate resource optimization.

Objective. Based on the estimation of the relative value units, we intended to calculate the savings resulting from the implementation of hypofractionation in breast cancer.

Materials and methods. As reported in literature, a relative unit value (RUV) corresponds to the equivalent value in time and cost of human and technical resources, corresponding to a single session of 180–200 cGy. A medical visit is equivalent to 1.5 RUVs. As there is no uniform system in Spain for calculating the levels of complexity in procedures, we have relied on the published by the Andalusian Health Service, just to illustrate the comparison between hypofractionated and conventional treatment. In 2011 we treated in our department 153 breast cancers (107 patients – 69.9% – received 40.05 Gy in 15 fractions and 46 patients – 30.1% – were treated in a conventional way). It represented the 19% of the clinical activity. We calculated the RUVs corresponding to each treatment modality and compared the results. After that, we extrapolated the results to our department mixing both treatments, and calculating the actual percentage savings.

Results. We have found that the total RUVs per patient in a hypofractionated treatment are 36.5 RVUs, while the corresponding value in a conventional treatment is 49.5 RUVs (including simulation, clinical evaluations during treatment and evaluation of the dosimetry). We treated 107 patients in a hypofractionated way (3905.5 RUVs) and performed 46 conventional treatments (2277 RUVs). Total RUVs: 6182.5. If all the patients of our department were treated conventionally, we would come to 7573.5 RUVs. Therefore, we have achieved a saving of 18.37%.

Conclusion. Hypofractionation in patients in clinical indication represented a significant saving in our department.

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Implementation of the network MOSAIQ in workflow and management of a Department of Radiation Oncology
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Objectives. In March 2012 the Hospital Rey Juan Carlos activity began. At that time, we met the challenge of developing the entire radiotherapy process in a paperless environment. The objective of this study is to present how we have implemented the workflow and management in our Department of Radiation Oncology over the MOSAIQ network.

Materials and methods. In MOSAIQ network version 2.30 there is a personal space for each user where information of pending tasks as well as the patient’s medical history with all administrative data, clinical monitoring during treatment, assessments of side effects and all documents related to the simulation, planning, treatment verification, record and report dosimetric treatment are available. All these documents are legally validated by electronic signatures. We defined user profiles, with three security levels that allow you to view, modify or approve the different activities. All this information is collected in a database from which we can obtain any kind of reports or statistics, essential for the management of the Service.

Results and discussion. Lists of Quality Assurance (QA) have been used to develop the workflow of our department. QA lists consist of a series of successive activities, each one of them assigned to a responsible, which must be performed in a period of time. Each user knows daily what work has to be done and in what timeframe. All legal requirements for planning approval, weekly reviews of the processed data, dosimetric reports and daily treatment sheet have been agreed with the legal department of our hospital giving legal validity to the usernames and passwords. In addition, it has been developed a roadmap in Radiation Oncology for the patients, which is given to them on the starting day of the treatment and which reflects the appointment calendar on the accelerator, the regular consultation with doctors and nurses and the scheduled analytical controls. We have also developed templates to register the evaluation of the pathologies including weekly vital signs, laboratory data and side effects (CTC-AE version 4) during treatment.

Conclusions. MOSAIQ network contains a number of very powerful and versatile tools for configuring the workflow and management tailored to the needs and working methods of each Radiation Oncology Department.

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