

# Access to radiotherapy in Spain (summary report)

**Full report in Spanish can be downloaded:**

[http://observatorio.aecc.es/sites/default/files/informes/Informe\\_AECC\\_radioterapia.pdf](http://observatorio.aecc.es/sites/default/files/informes/Informe_AECC_radioterapia.pdf)

## Introduction and objectives

*This report, elaborated by the Spanish Association Against Cancer (AECC) with the collaboration of the Spanish Radiation Oncology Society (SEOR), shows the current access to the radiation therapy in Spain.*

The objective of the study is to highlight the gaps and disparities regarding the access to the radiotherapy in Spain highlighting the economic, social and psychosocial costs which must be borne by patients. It also aims at showing the variability and the lack of public subsidies available in Spain to reduce the economic impact caused by the access to this treatment.

Radiation Oncology is a branch of clinical medicine that contributes towards 40% of curative treatment for cancer. It is a non-invasive and organ-preserving treatment as well as cost-effective therapy. Around 60% of people diagnosed with cancer in Spain will need at least one radiation therapy along the course of the disease, and 20%-25% of cancer patients will need more than one.

## Sample and methodology

This study includes the following content: i) the results of a survey addressed to patients aged more than 18 years who were receiving radiation therapy at the time of the study; ii) an analysis of the public subsidies/schemes available in Spain to reimburse patients' travel expenses to access treatment.

This study was carried out between January and June 2019, 1.736 cancer patients were interviewed in 55 hospitals. All respondents were receiving this treatment in the National Health Service (NHS).

Regarding the sample, 41% of respondents were in working age. Of these, 30% were employed and the remaining 13% were unemployed. Concerning the phases of the disease, 59% of respondents were in an early stage of the illness, 17% were at an advanced stage, 10% with a recurrence and 3% were receiving palliative care. The most common type of tumors among the participants were breast, prostate, colon and brain cancers. Overall, respondents had received an average of 15 radiotherapy sessions at the time of the study.

The main costs associated with radiotherapy reported by patients were: accommodation, travel, meals, medicines to prevent or treat the side effects of the treatment, as well as those expenses due to the loss of income and/or the need to hire at-home care or a health professional.

## Results

### 1. Accommodation costs

According to the study, 6% of total respondents had to change their place of residence in order to receive radiation therapy. This percentage varies widely among the Spanish Autonomous Regions from 2% or 3% in regions like Madrid, Galicia or Navarra, to 8% or 9% in Andalucía, Asturias, Aragón or Castilla y León, and 17% and 18% in Canary and Balearic Islands respectively.

One in four patients reported that this change of residence implied several expenses without taking into account the indirect costs and the inconveniences associated to this situation. The average cost of this temporary change of residence was 1.092,2 Euros.

### 2. Travel costs

Most patients need to travel to a different city in order to access the hospitals to receive radiotherapy. In 32% of cases the distance traveled was more than 61 kilometers (intermediate distances); and in 18% of cases the distance was over 100 kilometers per day and per session (long distances).

Regarding the means of transportation, half of the patients used a private vehicle, a third of them used public transport and one tenth used ambulance services. Besides, more than a half of patients declare not having alternative means of transportation.

#### 2.1 Private vehicle

**Around half of the patients use a private vehicle to go to the radiotherapy unit.**

The daily cost of these trips is on average 5,14 Euros. This cost increases to 6,20 Euros in the case of intermediate distances and to 15,46 Euros per day in the case of long distances. In the latter case, the cost could increase up to 386,40 Euros on average for a treatment of 25 sessions.

The study shows that patients spend an average of 65,5 minutes on the road per session to access radiation therapy. This time raises to 83,2 minutes in those cases where patients have to travel intermediate distances (21% of patients), and to 200 minutes in the case of long distances (10% of patients).

#### 2.2 Public transportation

**One-third of patients use public transportation services. Public transport is mostly used for short distances.**

One of the main reasons why patients use public transportation services is because of its affordable cost in comparison with other alternatives. In those cases where patients' place of residence and the radiation therapy unit are in the same city or province, it is estimated that patients will spend around 2,25 Euros on average on public transport per session. Meanwhile, those who needs to travel to a different city or province will spend 16,26 Euros on average on public transportation services.

### 3. Other costs associated with radiotherapy

#### 3.1 Meal costs

According to the study, 27% of patients had to pay for meals when travelling to the hospital, although these expenses are more common when patients have to travel long distances. In most cases, the average expense varies between 4 and 15 Euros per person and per day.

Taking as a reference a regular treatment of 25 sessions of one patient accompanied by one person, the average expenditure in meals rises to 383,3 Euros. This amount increases to 585 Euros in those cases where patients must travel outside their place of residence.

#### 3.2 Cost of formal care and health professionals

The estimated cost of hiring health care to assist patients in their daily activities during their treatment is 500 Euros. That adds up to the expenses for hiring health specialists, such as physiotherapists, to alleviate secondary effects of the treatment.

#### 3.3 Cost due to the loss of income by the patient or caregiver

The analysis indicates that 31% of patients who receive radiation therapy experience a decrease in their income for different reasons: loss of their wages because of their inability to work (27%) or the loss of income by household members (6%).

This cost is much more pronounced in patients who are self-employed (around 59,75 Euros per day), than in patients who are employed workers (around 26,81 Euros per day). Regarding household members, it is estimated that their income losses are on average 41,9 Euros per day and per radiotherapy session.

#### 3.4 Cost of medicines and sanitary products

Radiotherapy patients declare that they use on average a minimum of two or three medicines or other prescribed products to prevent or treat secondary effects of the radiotherapy such as drugs to prevent or reduce diarrhea, antibiotic creams, gels and soaps without detergents and sunscreens. It is estimated that the cost of these products is 80 Euros per patient on average. These medicines or sanitary products are not covered by the public health system thus patients must assume 100% of their cost.

### 4. Ambulance services

**According to the results of this study, most patients who use ambulance services have no alternative means of transportation (60% of patients report not having any alternative option).** The use of ambulance services is significantly higher in those cases where patients need to travel long distances to access radiotherapy.

Around 12% of respondents who use ambulance services stated that they had encountered barriers that prevented them to arrive on time to the radiation therapy session. This is an indirect cost to be added to other burdens such as the following: 3% of people who suffer the disease have difficulties to travel accompanied in the ambulance and in most cases, they have to wait an average of one hour until other patients finish their treatment before returning back home.

Data show, that almost 30% of patients had to travel between one and two hours daily in order to access radiotherapy. In another 30% of cases, travel time exceeded two hours and it could rise by up

to 4 hours. It can be stated that in general patients spend an average of 107,4 minutes on the road. To this, an average of 56,7 minutes of waiting time per treatment session must be added.

### **5. Patients' perceptions on the impact of radiotherapy**

The study shows that 58% of respondents perceived a negative impact in their life. Of this percentage, 37% of patients reported having a physical impact, 18% an economic impact, 8% a negative influence on their daily habits and 6% a negative psychological effect. The reported impact increases proportionally to the number of sessions received. In that sense, the percentage of patients who reported a negative physical impact increases from 29% during the first 5 sessions of treatment to 45% in the case of 25 sessions. A similar trend can be observed in the case of those reporting an economic impact going from 14% to 28%.

Results show that factors such as the distance to the hospital, the travelling time, the use of ambulance services, the need to change the place of residence or the stage of the disease influence patients' perception regarding the constraints resulting from the treatment.

### **6. Analysis of the travel allowance to access radiotherapy**

This study includes a comparative analysis of the different public subsidies/aids available in relation to non-emergency medical transportation (NEMT), travel, living and accommodation expenses. Results show that there are great disparities regarding the economic subsidies provided by the different Spanish regions to cover the associated costs of radiotherapy.

Furthermore, this report also includes the economic help that the AECC offers cancer patients in order to reduce the impact of travel expenses. AECC also provides 37 apartments and care homes as well as direct economic support for the most vulnerable patients so they can cover the additional costs of the radiation treatment.

## **Recommendations to improve access to radiotherapy (summary)**

- Adapt the organization of radiotherapy sessions to reduce the negative impact of long distances in the quality of their life. The adaptation should also assess the viability of satellite units<sup>1</sup> and the coordination between the autonomous regions so the patient could receive the treatment at the nearest hospital.
- Harmonize the public subsidies in the whole territory in order to promote equal access to public aid.
- Include, in the pharmaceutical catalogue of the National Health System, those medicines or sanitary products to prevent or treat the side effects of cancer or its treatments such as drugs to prevent diarrhea or constipation, antiflatulents, oral rinses, antibiotic or corticoids creams.
- Include the assessment of the economic and social condition of patients together with the clinical situation and mobility problems in the process of approval of non-emergency medical transportation to access treatment.
- Improve the access to information concerning the public subsidies provided by the National Health System.

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<sup>1</sup>Arenas M, et al.(2014). Decentralisation of radiation therapy. Is it possible and beneficial to patients? Experience of the first 5 years of a satellite radiotherapy unit in the province of Tarragona, Spain. Rep. Pract. Oncol. Radiother 8;20(2):141-4. Available: <https://pubmed.ncbi.nlm.nih.gov/25859402/>

### **AECC, 67 years of experience in the fight against cancer**

The Spanish Association Against Cancer (AECC in Spanish) is the leading organization in the fight against cancer in Spain since 1953. Our organization is formed by patients, families, volunteers and professionals who work together to raise awareness on cancer prevention, help people affected by cancer and their families and fund research projects to accomplish the scientific advances that will lead towards achieving our shared vision: to defeat cancer. The AECC works through their 52 provincial delegations and in more than 1.400 local sites throughout the whole country. We have reached over 30.000 volunteers, 454.000 members and 1.007 professionals.

In 2019, the AECC provided care for 318.264 persons affected by the disease. Currently, it is the social and private entity that devotes the greatest resources in Spain to cancer research: 70M€ in 380 research projects.

### **SEOR**

The Spanish Radiation Oncology Society (SEOR in Spanish) is a scientific society which brings together 1.000 specialists in radiation oncology at national and international level. Its work is fundamentally based on the treatment of cancer and other non-neoplastic diseases, through the exclusive use of ionizing radiation or in conjunction with other therapeutic treatments (surgery, chemotherapy, biopharmaceuticals). SEOR's specialists develop their clinical activity in the field of epidemiology, prevention, pathogenesis, diagnosis, treatment and assessment of the prognosis of the cancers, particularly the treatment with ionizing radiation.

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