

Good Practice presented by the Directorate General for Health Quality and Infrastructures of the Castilla y León Regional Health Department consisting of the supply of Magnetic Resonance equipment for El Bierzo Health Care Department, performance of the necessary adaptation work for its installation, removal of the existing equipment, and training of professionals.

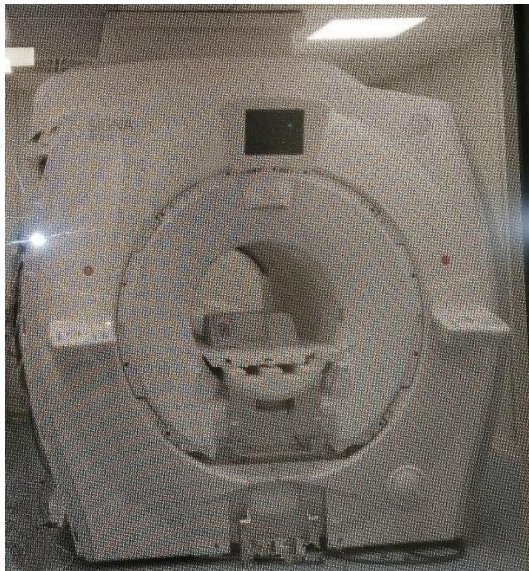
The Regional Health Department, through the Directorate General for Health Quality and Infrastructures, is developing a set of actions aimed at modernising health infrastructures and high-tech clinical equipment. This good practice is part of these actions.

At El Bierzo Hospital in Ponferrada (León), El Bierzo Health Care Department, it is necessary to have more technologically-advanced equipment to replace a 13-year-old piece of equipment. The purpose is to expand the portfolio of radiodiagnosis services, such as performing breast biopsies with Magnetic Resonance Imaging, prostate studies, whole body and neural axis Magnetic Resonance Imaging or enterographies, mainly for inflammatory bowel disease. This action contributes to improving patient care and, therefore, the quality of care, while aiding the professionals' work.

This investment leads to improved health services, equality of access to the Public Health Service for all users and strengthening the health system for future health crises. Therefore, it contributes to achieving the ERDF - REACT EU Initiative objectives, as part of the European Union's response to the COVID-19 pandemic.

The cost of this action is €1,302,316.95, **financed entirely by the ERDF.**

The population served by El Bierzo Health Care Department is 128,394 people, taking into account the number of health cards issued in that health area.



Magnetic Resonance Images



This investment guarantees an improvement in the quality of the service provided, as the new equipment offers better features and makes it possible to expand the portfolio of services. This will contribute to early detection of breast cancer, thus avoiding unnecessary mastectomies. It will bring forward the diagnosis of some cancers by months and the time it takes the machine to carry out brain studies will be reduced, improving the performance of expensive equipment in high demand. This will have a positive effect on cutting waiting lists, as it optimises the time it takes to obtain results. There are also improvements in terms of ergonomics and ease of operation.

In short, in addition to expanding and improving diagnostic services, installing the new equipment will improve waiting times for tests. This will have a positive impact on the comfort and convenience of both users and professionals.

This is considered a Good Practice because it meets the following criteria:

1. The action has been appropriately disseminated to beneficiaries, potential beneficiaries and the general public:

In addition to complying with the regulatory requirements, this operation has been publicised on the website of the Castilla y León Regional Health Department throughout the entire contracting process:

[HEALTH INFRASTRUCTURES | Citizens \(saludcastillayleon.es\)](#)

It has also been publicised on the European Funds web portal of the Directorate General of Budgets, European Funds and Statistics, in which a link to access the information on the website of the Castilla y León Regional Health Department is published:

[Links to ESF and ERDF Authorities and Managers | European Funds | Government of Castilla y León \(jcy.l.es\)](#)



And it has been publicised on the communication portal of the Government of Castilla y León:

[The Health Department budgets more than €1.3 million for new magnetic resonance equipment at El Bierzo Hospital | Communication | Government of Castilla y León \(jcy.l.es\)](#)

The corresponding informative plaque has been placed in the building in order for the ordinary building users, whether staff or the public who come to seek assistance, to be informed that the intervention carried out has been co-financed by the ERDF.



Equipment access view



The operations that the Regional Health Department carries out through the Directorate General of Health Quality and Infrastructures are periodically publicised through the digital and written press, through the corresponding news articles in various local and regional newspapers, as well as on social networks, for example:





2. The action incorporates innovative elements

This action aimed at supplying Magnetic Resonance Imaging equipment for El Bierzo Health Care Department envisages replacing a 13-year-old piece of equipment to expand the portfolio of radiodiagnosis services.

The improved performance provided by the new equipment notably includes built-in artificial intelligence systems for patient positioning. These affect image reconstruction, study programming, noise reduction during the test and respiratory synchronism. Thus, in terms of image reconstruction and image post-processing (software), it allows more images to be obtained in less time and with greater precision. It enables automatic segmentation to mark injuries, as well as navigation in vessels and cavities, or adjustment of the illumination volume to isolate tissues. This reduces the study time and also makes it possible to detect various types of cancer at an early stage, so that they can be treated earlier. It is worth highlighting the new features incorporated for early detection of breast and soft tissue cancer, evaluation of prostate cancer, and performance of brain scans, among others.

In terms of ergonomics and ease of operation, the equipment's geometry provides more space in the tunnel. It has LED lights, a ventilation system and a music system with headphones included. All this helps to reduce patient anxiety. It also has a *detachable* table that provides safety, comfort and efficiency, as it can automatically disconnect in emergency situations. It is also very useful for complex, intubated, ICU or post-surgical patients, etc.

3. Adaptation of the results obtained to the established goals

The aim of this action is to replace old or obsolete high-tech medical equipment.

The action that has been carried out enables the expansion of the portfolio of radiodiagnosis services and speeds up waiting times for diagnostic tests.

All this makes it possible to achieve the goals pursued, helping to reinforce the health system by modernising health infrastructures and high-tech clinical equipment, which is the ultimate and priority purpose of this operation.

4. Contribution to solving a problem or weakness detected in the territorial scope of implementation

One of the problems the health system has is the obsolescence of high-tech equipment. The equipment being replaced is more than twelve years old. The success of the intervention, which is presented as good practice, can be seen in the results, as set out above: expanding the portfolio of radiodiagnosis services, early detection of certain types of cancer, reducing how long it takes to perform tests and, consequently, cutting waiting lists.

The new equipment has important new features such as a breast-specific antenna biopsy system with a minimum of 8 channels. This can prevent unnecessary mastectomies and bring forward the diagnosis of some cancers by months. It makes perfusion acquisition without contrast available, which increases patient safety and saves contrast consumption by the system. Several image sequences can be obtained in a single acquisition, which optimises the equipment's occupation time.

5. High coverage of the target population

The facility benefits actual and potential users of these diagnostic tests, as well as healthcare professionals.

The improvements described above have a direct impact on the people served by the health services in the area. There are 128,394 health cards in the basic health area of El Bierzo.

6. Consideration of the cross-cutting equal opportunities and non-discrimination criteria, in addition to social responsibility and environmental sustainability

The operation presented as good practice can be said to benefit both men and women equally. In its concession, performance, application and development, the harmlessness and absence of any negative effect in relation to this cross-cutting principle of equal opportunities has been guaranteed. The obligation to observe this as an essential principle in its implementation is maintained.

To the extent the action allows it, the intervention is adapted to the specific needs of users, promoting equal usage by all of them, thus ensuring the maximum benefits that the operation offers are achieved.

With regard to environmental sustainability, the equipment acquisition agreement includes a special performance condition stipulating the contractor's obligation to adopt all the preventive measures dictated by good environmental management practices in relation to the products it concerns. These particularly include avoiding undesired liquid spills, polluting emissions and dumping of any type of waste, which must be removed and managed by an authorised manager. Certificates from the waste management company were required prior to signing the agreement to verify compliance with this special performance condition. Following receipt of the new magnetic resonance machine, the obsolete equipment was removed by an authorised company and sent to Hungary for component recycling.

In addition, the new equipment has the following advantages over the previous equipment from this point of view:

- Up to 30% less helium consumption
- Helium recharging in the hospital during installation was not necessary.
- 84% of the MR magnet is recyclable and can be converted into raw material after removal/replacement.
- The MR system's covers/lids are made of fully-recyclable plastic.
- The production operations comply with the ISO 14001 standard
- This product, RM ARTIST, complies with IEC60601-1-9:2007.

7. Synergies with other policies or public intervention instruments.

This operation reinforces compliance with the objectives set out in the Quality Plan for the National Health System (NHS), promoting equity in access to high-tech equipment and improving clinical practice by installing new equipment with better features.

The acquisition of this equipment promotes the development of the NHS's strategies designed to improve the care of patients with prevalent diseases that have a high health and social care burden, especially the development of the NHS Cancer Strategy (29 March 2006, updated in 2010 and 2021) due to the improvement it provides for the diagnosis and staging of tumours. This has greater relevance for

childhood cancer due to its speed and the absence of ionising radiation emissions. It also improves compliance with the goals of the NHS Neurodegenerative Diseases Strategy (13 April 2016) and the Plan to Tackle Alzheimer's and Other Dementias (2 December 2021), as they specifically recommend its use for the proper diagnosis of a large proportion of neurodegenerative diseases (dementia, multiple sclerosis and Alzheimer's). The NHS Stroke Strategy (2009) also includes such examination to assess and monitor stroke patients.

It also promotes compliance with the quality standards and recommendations of the National Health System (NHS) for cancer (2013), digestive system (2013) and neuroscience (2013) care units.

It supports the Regional Strategy for Oncology Patient Care in Castilla y León (ONCYL), achievement of the objectives of the Health Plans of the Community of Castilla y León, as well as development of the Community's Radiotherapeutic Oncology Improvement Plan.

It makes a particularly significant contribution to achieving the objectives set in the Priority Social Investment Plan 2021-2025 for the area of Health. The Community of Castilla y León has been working continuously to achieve an efficient and higher-quality health policy through various infrastructure plans: The Health Infrastructures Plan 2002-2010, the Priority Social Investment Plan 2016-2020 and the current Priority Social Investment Plan 2021-2025, achieving total modernisation of our health care centres, from both a structural and technological point of view.