

## **The EUCLID Project: Implementing DRLs on a European scale**

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In collaboration with the European Society of Radiology (ESR), the EUCLID (European Study on Clinical Diagnostic Reference Levels for X-ray Medical Imaging) project involves the implementation of Diagnostic Reference Levels (DRLs) on a European scale. Isabelle Fitton, medical physicist at the Georges Pompidou European Hospital (HEGP), is participating in this project and presents the contribution of the DACS RDM within the project's framework.

### **The EUCLID project in a few words**

The European Commission has put the ESR in charge of coordinating a project to establish DRLs by clinical indication at the European level. In order to determine these DRLs, the project is to collect the necessary data for the most used procedures – notably CT and interventional radiology – and to organize the transmission and discussion of the results so that we can identify radiation protection needs.

To achieve these objectives, EUCLID has set up an external advisory group to identify the exams that will be selected in this framework. The project has also set up a Scientific Council from the ESR to coordinate the project and contribute to the verification of the data collected in order to establish the European DRLs.

The European Institute for Biomedical Imaging Research (EIBIR) has set up a professional data collection platform (<https://www.eibir-edc.org/>), which uses the REDCap software to facilitate the collection and management of the study's data. The platform can collect almost any kind of search data, from numeric values to text to DICOM images.

The institutions participating in EUCLID have been instructed on the use of the EIBIR platform and, in June 2018, they started downloading data for the determination of the reference levels.

### **HEGP's involvement in the EUCLID project**

The HEGP Radiology Department is the only French participant in this multi-center project. A partner of Eurosafe Imaging for several years, the department has been awarded five stars by the Eurosafe Imaging Star, under the impetus of its former department head, Pr Guy Frija, and the current department head, Pr Olivier Clément. Pr Guy Frija is co-leader of the EUCLID project and a member of the study's Scientific Council.

To carry out this project, the institution's two radiology medical physicists participated in creating the collection forms for data in CT and interventional radiology.

Isabelle Fitton: "It was necessary for the medical physicists and radiologists of HEGP to work together for each clinical indication to identify and select the patients who can be included in the study. In addition, several internal meetings of the team made it possible to present the framework of the study and to define the medical referents of each clinical indication."

## **The DACS RDM solution's contribution to the project**

“RDM is a valuable tool for collecting all the technical parameters of acquisition related to patient dose,” says Isabelle Fitton. The dose management solution was also used to define tags for tracking patients in the DACS grouping by clinical indication.

Thus, the EUCLID study will allow HEGP's Radiology Department to compare itself to other European centers in terms of dose by clinical indication. “We want to focus on the DRLs' approach by clinical indication rather than by anatomical area (as is currently the case in French regulations) in CT and conventional radiology,” Isabelle Fitton explains. “The Radiology Department will continue this approach by clinical indication so that the doses delivered to the patient are more generally part of a transverse and iterative patient journey in imaging – for example, the follow-up of lung transplant patients, whose multi-modality dosimetric study has been published.”