

BY JOHN DAMILAKIS

# PiDRL: A new EC project on paediatric DRLs

## INTRODUCTION

In 1999 the European Commission (EC) issued the Radiation Protection 109 (RP 109) publication on *Guidance on diagnostic reference levels (DRLs) for medical exposure* (1). This document highlights the importance of establishing DRLs for high-dose medical examinations, in particular computed tomography and interventional radiology procedures. The utility of DRLs in radiation protection of patients is also very well acknowledged in the newly published *Euratom BSS* (2).

## THE PIDRL PROJECT

European DRLs for Paediatric Imaging (PiDRL) is a new 27-month EC project which aims to a) develop a methodology for establishing and using DRLs for paediatric medical imaging, and b) update and extend the European DRLs to cover as many procedures as possible. The PiDRL consortium is headed by the European Society of Radiology, with other participating organisations including the European Feder-

ation of Organisations for Medical Physics (EFOMP), the European Society of Paediatric Radiology (ESPR), the European Federation of Radiographer Societies (EFRS) and the Finnish Radiation and Nuclear Safety Authority (STUK), with Public Research Centre Henri Tudor (CRP-HT) as a subcontractor.

The main task of PiDRL is to develop a methodology for establishing and using DRLs for paediatric imaging and produce new European guidelines on paediatric DRLs. PiDRL also aims to update and extend the European DRLs as provided in RP 109 (1) to cover more procedures.

## PIDRL ACHIEVEMENTS

A worldwide review of literature on patient doses and DRLs for children of different age groups, or other distributions, and for different examinations has been carried out with an emphasis on European literature. Questionnaires have been distributed to confirm and update the data on paediatric DRLs in European countries as available from the

EC project Dose Datamed2 (DDM2) database (3), and to collect information to prepare sections of the guidelines. The first complete draft of the guidelines has already been submitted to the EC.

The review of DRLs has indicated that for interventional, fluoroscopy-guided cardiac procedures, no national DRLs exist but only a few local DRLs have been suggested, and for interventional non-cardiac procedures, no DRLs have been suggested at all. PiDRL efforts are in progress to establish multi-national DRLs for paediatric interventional procedures.

PiDRL will hold a workshop in Lisbon, Portugal, on October 15–17, 2015. A range of topics pertaining to the current status, difficulties and future opportunities in the field of paediatric DRLs will be discussed. The outcomes will form the basis for European Guidelines on DRLs for paediatric imaging covering plain radiography, fluoroscopically-guided interventional procedures and CT. The scientific committee of the PiDRL workshop has endeavoured

to set up an exciting programme, which includes round tables and panel discussions, as well as oral and poster presentations. The call for abstract submissions for oral and poster presentations on the topic 'Patient Doses from Paediatric Diagnostic and Interventional Procedures – Establishment and Use of Paediatric DRLs' will close in April 2015. Besides our scientific programme, participants can enjoy sightseeing, architecture, museums and Portuguese cuisine in Lisbon. More information about the PiDRL project and workshop can be found at [www.eurosafeimaging.org/pidrl](http://www.eurosafeimaging.org/pidrl)

Directives 89/618/Euratom, 90/641/Euratom, 96/29/Euratom, 97/43/Euratom and 2003/122/Euratom. Official Journal L-13 of 17.01.2014.

3. European Commission (EC), 2014. Dose Datamed 2 (DDM2) Project Report Part 2: Diagnostic Reference Levels (DRLs) in Europe.

*Prof. John Damilakis is the ESR Representative and PiDRL Scientific Coordinator. He is Professor of Medical Physics at the University of Crete, Faculty of Medicine, in Iraklion, Greece*

## REFERENCES

1. European Commission (EC), 1999. Guidance on Diagnostic Reference Levels (DRLs) for medical exposures, Radiation Protection 109.
2. Council of the European Union. (2013). Council Directive 2013/59/Euratom laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation, and repealing



BY FLORIAN DEMUTH

# ESR and NDSC launch ESR iGuide

Introducing clinical decision support for imaging referral guidelines in Europe will help doctors choose the best exam for every patient

ESR iGuide is a Clinical Decision Support (CDS) system developed by the ESR in cooperation with the National Decision Support Company (NDSC) for distribution in Europe. This product will make imaging referral guidelines available in a user-friendly way, supporting referring physicians in choosing the most appropriate exam for each of their patients. Used as a stand-alone tool or integrated with hospital ordering systems and electronic health records, ESR iGuide not only offers referrers up-to-date and scientifically valid guidance; it also provides an efficient, traceable and reliable way of selecting and ordering imaging exams in daily practice, improving the clinical workflow to the benefit of general practitioners and other specialists, radiologists, hospital managers and patients alike. According to incoming ESR President Prof. Luis Donoso, "imaging referral guidelines are essential for improving appropriateness, and CDS solutions are the best way to achieve this in practice. ESR iGuide will enable health professionals to make the best possible use of medical imaging, and it is an important part of the ESR's overall drive to improve quality and safety for patients."

In Europe, the appropriateness of the countless radiological examina-

tions conducted year in, year out can be improved significantly. Imaging referral guidelines are an essential tool to achieve this, but they are only available in 70 percent of European countries. The recommendations that are available often differ starkly from country to country, even though there is no sound evidence for such divergences. Moreover, as developing and updating guidelines is a complex, arduous process, it is often questionable how up-to-date these recommendations are. And, not least, they are usually only available as a booklet or in PDF format. These and other factors contribute to a significant lack of use of imaging referral guidelines.

At a time of budgetary constraints on health systems in many European countries, amid rising public concern over the risks of radiation exposure, and in the context of new EU legislation requiring member states to ensure guidelines are available to referrers, the ESR yesterday officially presented ESR iGuide as its solution to address these issues.

Based on the American College of Radiology's Appropriateness Criteria, the ESR has developed guidelines adapted to European standards of practice, and in cooperation with NDSC embedded them in a CDS platform. Through this approach, the

guidelines and the functionality of the system can be tailored to national requirements or institutional preferences and significantly improve the clinical workflow.

"This is a tremendous opportunity to work alongside the ESR and provide a robust content delivery mechanism, capable of delivering European wide criteria while supporting country or site specific requirements. The content delivery mechanism integrates directly into EHR or other IT platforms used by an institution and ensures that the correct guidelines and feedback are presented to referring physicians," says Michael Mardini, CEO of NDSC. "Our in depth experience in delivering this solution nationally within the US will guide us as we implement across the European market," continues Mardini. "The medical expertise of the ESR together with our technical experience will create a more efficient way of selecting, ordering and monitoring radiological services, in turn improving the quality and safety of imaging services across Europe," concludes Mardini.

ESR iGuide will give referrers medically sound guidance, provide radiologists with clear orders, and enable hospital managers to monitor performance; most importantly, ESR iGuide will give patients confidence

that the care they receive adheres to the highest standards of quality and safety. Following pilot tests in the coming months, ESR iGuide will be available from autumn 2015.

Be sure to visit our booth in the entrance hall of the ACV to find out how ESR iGuide can benefit your institution!



## EuroSafe Imaging Session 1

Thursday, March 5, 14:00–15:30, Room M

#ECR2015M

Clinical decision support: making imaging referral guidelines work for patients, doctors and hospital managers

- » Chairman's introduction  
G. Frija; Paris/FR
- » CDS impact on guidelines development  
K.J. Dreyer; Boston, MA/US
- » Adapting and updating guidelines  
M.G.M. Hunink; Rotterdam/NL
- » ACR select implementation experience  
J.A. Brink; Boston, MA/US
- » ESR iGuide  
L. Donoso; Barcelona/ES
- » Discussion