

DIAGNOSTIC REFERENCE LEVELS IN ANGIOGRAPHY AND INTERVENTIONAL  
RADIOLOGY : A BELGIAN MULTI-CENTRE STUDY

M-T.Hoornaert<sup>1</sup>, F.Bleeser<sup>1</sup>, K.Smans<sup>2,5</sup>, H. Bosmans<sup>2</sup>, N.Buls<sup>3</sup>, D.Berus<sup>3</sup>, P.Clerinx<sup>3</sup>, L.Hambach<sup>4</sup>, F.  
Malchair<sup>4</sup>, L.Struelens<sup>5</sup>

<sup>1</sup>CH Jolimont-Lobbes, Haine Saint-Paul, Belgium,

<sup>2</sup>UZ Gasthuisberg, Leuven, Belgium ,

<sup>3</sup>AZ VUB, Brussels, Belgium ,

<sup>4</sup>Centre Hospitalier Universitaire, Liège, Belgium,

<sup>5</sup>SCK-CEN, Mol, Belgium.

To determine diagnostic reference levels (DRLs) for common angiographic and interventional procedures in Belgium.

Dose Area Product (DAP) measurements were performed on 21 systems, (13 angiography and 4 vascular surgery centres) . No correction was made for couch attenuation. Type of procedure, total DAP, patient weight and height were collected on a daily basis during one year. The 75<sup>th</sup> percentile of the distribution of DAP values was defined as DRL. DRLs were calculated for the whole population, for a weight class of patients (65-80 kg) and using the k-factor to normalize for patient size.

The mean age and weight of the patients were 63 y and 73 kg. Data cleaning of more than 7000 procedures was difficult, only 6175 (from 21 categories) had complete data. DRLs were determined for the 4 most frequent procedures. Amongst them, the DRL for angiography of the lower limbs (30% of the procedures) from the whole population was 93 Gy $\text{cm}^2$ , 90 Gy $\text{cm}^2$  for the weight banded and 76 Gy $\text{cm}^2$  for the size corrected. These DRLs are comparable to published literature. The mean DAP values of each room was compared to these DRLs.

These DRLs are the first in Belgium and enlarge the limited European data today. They will allow Belgian centres to situate their practice and modify it if necessary.

E-mail presenting author : [mt.hoornaert@skynet.be](mailto:mt.hoornaert@skynet.be)