

Insight into occupational radiation protection in interventional cardiology around the world



The ISEMIR (Information System on Occupational Exposure in Medicine, Industry and Research) Working Group on Interventional Cardiology (IC) recently held its 2nd Meeting, 5 – 6 October 2009, at the IAEA HQ, Vienna. The ISEMIR project, initiated in early 2009, is specifically aimed at improving occupational radiation protection in those areas of radiation use where non-trivial occupational exposures occur. Interventional cardiology was the first area identified.

To gain further insight into occupational radiation protection in IC around the world, three questionnaires were sent out: two of these to interventional cardiologists and a third to the national or state radiation protection regulatory body. The results of the survey were discussed at the meeting, giving a “convenience” sample, and anecdotal evidence of current practice. Responses were received from nearly 200 cardiologists from 32 countries, and from 45 IC facilities from 24 countries. As well, 81 regulatory bodies from 55 countries responded. Some notable results were reported:

- An interventional cardiologist usually performs between 300 and 700 (average 400) procedures per year, usually in more than one laboratory; 90% of cardiologists perform less than 800 procedures per year.
- 72% of cardiologists claimed that they always used their personal dosimeter and 36% stated that they always used two dosimeters. 26% of cardiologists said they knew their personal doses. However, reported radiation protection habits by cardiologists were overly optimistic compared with facility-based observations.
- Concerning requirements for wearing dosimeters, 57% of regulatory bodies define the number and position of dosimeters for the monitoring of staff in IC.
- Radiation protection training and certification in radiation protection has a positive effect on:
 - the wearing of two dosimeters;
 - the use of protective equipment and tools;
 - the knowledge of personal and patient doses.