ISEMIR

An IAEA Tool for Radiation Protection Optimization
in Interventional Cardiology and Industrial Radiography

Information System on Occupational Exposure in Medicine, Industry and Research

What is ISEMIR?

ISEMIR is an IAEA online web-based information system that aims to optimize occupational radiation protection. It is divided into two topical areas where radiation protection of workers can be a challenge:

— interventional cardiology (IC); and

— industrial radiography (IR).

How to access ISEMIR:

1. Go to https://nucleus.iaea.org/isemir.
2. Select industrial radiography (ISEMIR-IR) or interventional cardiology (ISEMIR-IC).
3. Register in order to gain an access to ISEMIR.

Who can participate?

Occupationally exposed staff, management or radiation protection officers from:

1. Non-destructive testing (NDT) companies carrying out industrial radiography.
2. Medical facilities carrying out interventional procedures.

Participation is free.

What are the key objectives of ISEMIR?

— To improve radiation protection of workers.

— To provide efficient collection and maintenance of data on occupational exposure and radiation practices.

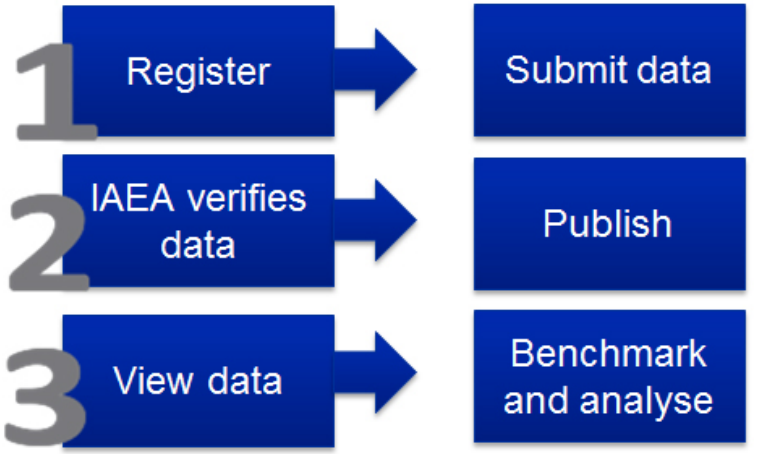
— To use the collected data for analysis of occupational doses of individuals.

— To allow NDT companies and IC facilities to benchmark their own facility or company and individual radiographers' performances against global or regional data.

— To define follow-up actions to address identified gaps and disseminate lessons learnt.

How does it work?

A selected coordinator from the facility or company submits information about the annual collective dose as well as individual effective doses. After verification, the data will be available for benchmarking. The coordinator can also provide access to ISEMIR to the employees for comparing their own exposure information to that of others.



Why focus on industrial radiography?

Industrial radiography work is often carried out under difficult working conditions. Working in such adverse environments might result in operational situations in which IR personnel are exposed to radiation.

What data does the NDT company provide?

Each participating NDT company should provide annual information such as company procedures, training related to radiation protection and annual doses. NDT companies could also submit anonymous information about the dose received by individual industrial radiographers in the company.

What are the benefits of participation in ISEMIR-IR?

ISEMIR-IR assists NDT companies in benchmarking their arrangements in radiation protection and safety, and in reviewing their trends with time. NDT companies are able to compare their collective as well effective doses against global and regional data. This way, they can better optimize occupational radiation protection.

The statistical analysis is based on the occupational dose per radiographic exposure for a given industrial radiographer.

Why focus on interventional cardiology?

In the last three decades, the use of image guided interventional procedures in cardiology has increased, bringing great benefit to millions of patients around the world. These procedures require health professionals to be present in the room alongside the patient when radiation is being used. This may result in occupational exposure.

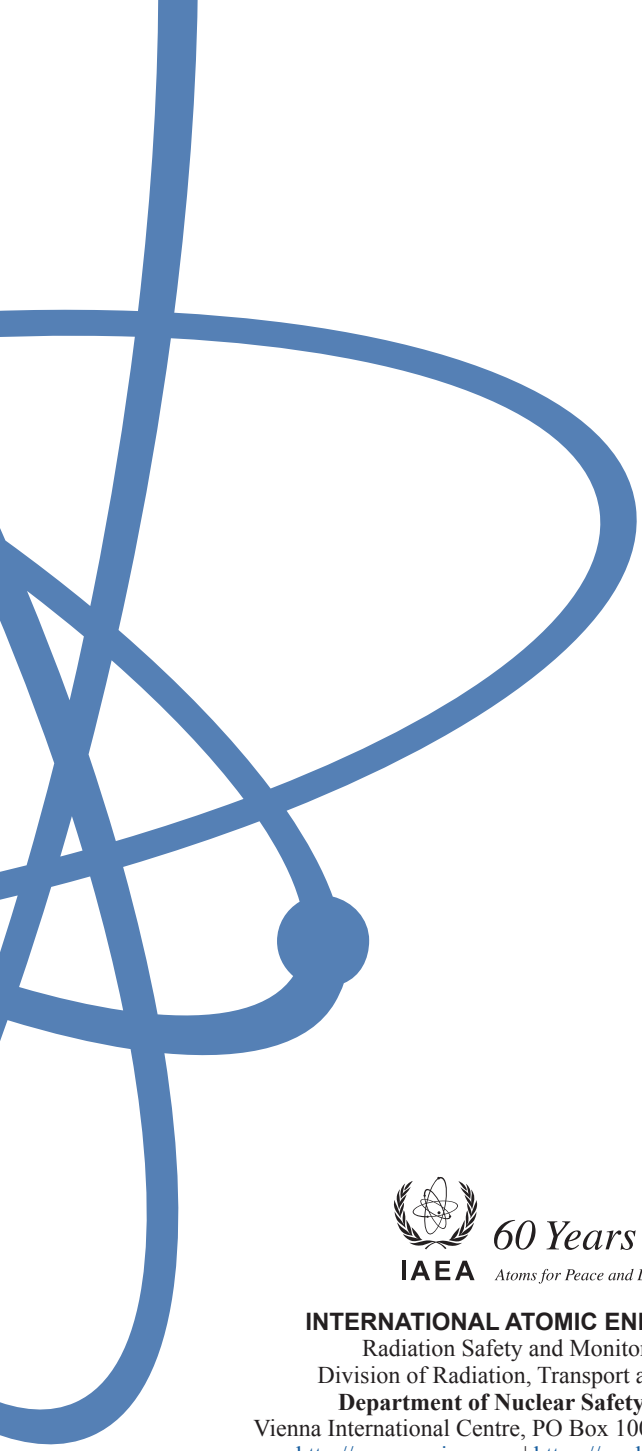
What data does the IC facility provide?

Each participating IC facility should provide annual information about the facility, including the number of procedures performed, number of catheterization laboratories, X-ray equipment used, X-ray equipment performance data and anonymous dosimetry data for individual personnel working in the facility.

What are the benefits of participation in ISEMIR-IC?

As an outcome of the data entry, IC facilities are able to benchmark their own facility and individual personnel performances against global or regional data and review their trends with time. Based on this information, IC facilities can identify areas for improvement and corrective actions.

The statistical analysis is based on the occupational dose per procedure for individual staff members or groups of staff members.



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