

# RADIATION PROTECTION WORKSHOP



**ISRRT**  
INTERNATIONAL  
SOCIETY OF  
RADIOGRAPHERS  
& RADIOLOGICAL  
TECHNOLOGISTS



POLSKIE  
TOWARZYSTWO  
ELEKTORADIOLOGII

**EFRS** EUROPEAN FEDERATION OF  
RADIOGRAPHER SOCIETIES



*This workshop will be suitable for practitioners working in radiography who wish to develop their skills and knowledge in the effective application of radiation protection measures. Participants will learn about dose optimisation in CT and general radiography, in the context of current European legislation.*

## PROGRAMME

**Lecturers:** Dean PEKAROVIC (Slovenia), Dimitris KATSIFARAKIS (Greece), Philippe GERSON (France)

### Day 1: Friday 23<sup>rd</sup>

#### 9.00 Registration

9.30 Welcome and introduction  
Outline of programme and objectives

#### 9.45 Characteristics of X-rays in context of radiation protection

- *understand the physical characteristics of the X ray beam: Penetrability, intensity, attenuation in human tissue and the factors affecting this.*
- *be aware of radio-sensitivity of human tissues and the factors affecting it.*
- *understand the principle of stochastic and deterministic effects of radiation.*

#### 10.45 Break

#### 11.15 EU legislation and guidelines relating to radiography

- *be aware of the aims and objectives of specific legislation*
- *be aware of European commission Guidelines on clinical audit*
- *understand the nature and process of inter-professional bodies cooperation across Europe*

## 12.00 Principles of dose optimisation

- *understand advanced principles of radiation protection in CT and interventional radiology.*
- *be familiar with the basic principles of dosimetry.*
- *be familiar with dose optimisation principles.*
- *understand the application of dose reference levels*

## 1.00 Lunch

## 2.00 Physical principles and image acquisition in computed tomography

- *be familiar with basic CT components and their function.*
- *understand different reconstruction principles related to raw data and the image.*
- *have knowledge of basic principles of image formation and reconstruction and how to control them.*

## 3.00 Dose optimisation theory in computed tomography

- *be aware of the factors that influence dose in CT procedures*
- *understand the effect that factor manipulation has on patient dose*
- *understand the importance of protocol adjustment in optimisation*

## 3.45 Break

## 4.15 Dose optimisation theory in interventional radiology with specific regard to cardiac procedures

- *be aware of the factors that influence dose in interventional procedures*
- *understand the effect that exposure factor manipulation has on patient dose*
- *be aware of the influence of equipment configuration and positioning*

## 5.00 Discussion and feedback on local issues

## 5.30 Close



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## Day 2: Saturday 24<sup>th</sup>

### Practical workshops

(Procedures to be agreed)

- 9.00 Group A: Dose optimisation practice in computed tomography. Scenario1  
Group B: Dose optimisation practice in interventional radiology. Scenario1

### 10.30 Break

- 11.00 Group B: Dose optimisation practice in computed tomography. Scenario1  
Group A: Dose optimisation practice in interventional radiology. Scenario1

### 12.30 Lunch

- 1.30 Group A: Dose optimisation practice in computed tomography. Scenario2  
Group B: Dose optimisation practice in interventional radiology. Scenario2

### 3.00 Break

- 3.30 Group B: Dose optimisation practice in computed tomography. Scenario2  
Group A: Dose optimisation practice in interventional radiology. Scenario2

5.00 Discussion and summary

### 5.30 Close

\*The programme may be changed



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