

On-line Presentation Information

- Presentations have been scheduled for **28 January and 29 July 2026**, from **07h00 till 08h00 AM** (including Q&A). Please check our website <https://radiation-consulting.co.za/training/dose-optimization-in-interventional-radiology/> for the latest dates.
- No registration is required for these meetings, you can just join. The **MS Teams** meeting ID and Passcode are as follows (it will be the same Meeting ID and Passcode for both meetings):
 - Meeting ID: 415 675 145 857 2
 - Passcode: Wh7pz2vq
- The meeting link is as follows (you just need to click on the link):
 - [Join the meeting now](#)
- Meetings will be opened 10 minutes before 07h00 AM for participants to join.
- An **attendance register** will be automatically created by the MS Teams platform, which will indicate your total attendance time.
- Only one CPD certificate per calendar year will be issued, irrespective of how many meetings you attend during the year.
- A PDF copy of the presentation will be provided with all certificates.
- **CPD certificate fee:**
Non-Life Healthcare employees:
 $R300.00 + R45.00 \text{ (VAT)} = R345.00$
Life Healthcare employees: No cost
- More than **125** presentations already given throughout South Africa since 2016.
- The presentation is also available on the **Moodle** platform for Life Healthcare employees.



Radiation Dosimetry & Protection cc

DOSE OPTIMISATION IN INTERVENTIONAL RADIOLOGY



Payments

By electronic transfer to:

Radiation Dosimetry and Protection cc

Bank: First National Bank

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Reference: CPD & Name and Surname

Contact details

Meeting co-ordinator: Francina Kotzé

Telephone: 073 171 5960

E-mail: radiation@radiation-consulting.co.za

28 January 2026
29 July 2026
MS Teams on-line

HPCSA CPD accreditation
1 Ethics CPD point

The Presenter

Dr Tobias Kotzé is a consultant medical physicist. He was previously the deputy-Director and head of the Radionuclide section at the Directorate Radiation Control, SAHPRA and a medical physicist at Groote Schuur Hospital. He is currently a SAHPRA Technical Advisory Committee member for Radiation Protection, as well as a member of the IRPA (International Radiation Protection Association) Task Group on Radiation Protection Training.

A presentation designed specifically to give cardiologists, vascular surgeons and other interventional radiology theatre staff the radiation protection training in dose optimisation as required by the Directorate Radiation Control (SAHPRA).

HPCSA CPD accreditation by UCT
Faculty of Health Sciences

Compliance with IAEA guidelines for
interventional radiology radiation
protection training

Who should attend?

Cardiologists, vascular surgeons and other theatre staff in interventional radiology/cardiology.

Theatre Staff Training on Dose Optimisation in Interventional Radiology

1 Background

- What is radiation?
- Radiation quantities and units
- Regulatory authority
- The radiation control program in SA

2 Personal Health Risks

- Tissue necrosis
- Cancer
- Cataracts

3 Ethics

- How much radiation is dangerous?
- Malpractices in radiation medicine

4 Concepts of Protection

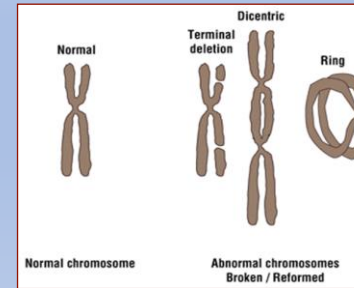
- Radiation warning signs
- ALARA
- Time, distance and shielding
- Scatter radiation

5 Radiation effects

- What is a sievert?
- What is a gray?
- Typical doses in everyday life
- Acute Radiation Syndrome
- When to expect a skin reaction

6 Biological effects of radiation

- Radiation and risk
- How radiation damage takes place
- Organ sensitivity
- Stochastic effects
- Deterministic effects
- Chromosome aberrations
- DNA damage
- Factors that determine the seriousness of the radiation hazard



7 Radiation and Pregnancy

- Malformations
- Radiation risk to the unborn baby
- Special measures during pregnancy
- Radiation effects *in utero*
- Safe workplaces during pregnancy



8 Radiation monitoring

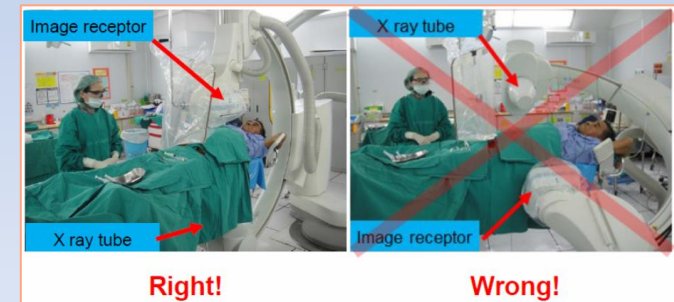
- Thermoluminescent Dosimetry (TLD)
- Optically Stimulated Luminescence (OSL)
- Electronic personal dosimeters
- Dosimeter position
- What is a radiation over-exposure?

9 Dose limits

- The dilemma
- Risk factors
- Occupational dose limits
- Public dose limits
- Emergency dose limits

10 Dose optimisation

- Fluoroscopy burns
- Diagnostic Reference Levels (DRL's)
- Typical DRL's
- High dose procedures
- Dose trends
- Comparing hospitals' doses
- Comparing cardiologists' doses
- Dose tracking of individual cardiologists
- Emergencies



What you will gain from attending this presentation

This presentation is to fill a void in the radiation protection training of cardiologists, vascular surgeons, and other interventional cardiology theatre staff. It fulfils the regulatory requirements of the Directorate Radiation Control (SAHPRA) for radiation protection training of interventional cardiology theatre staff and has been accredited for 1 HPCSA ethics CPD point.

11 Reducing staff and patient radiation doses

- Equipment factors
- Operator-dependent practices