DOSE OPTIMISATION IN MAMMOGRAPHY

29 January 2027
30 July 2027
MS Teams on-line

On-line Presentation Information

- Presentations have been scheduled for **29 January and 30 July 2027**, from **07h00 till 08h00 AM** (including Q&A). Please check our website https://radiation-consulting.co.za/dose-optimisation-in-mammography/ 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 (VAT) = R345.00
  Life Healthcare employees: No cost
- More than **125** presentations on dose optimisation already given throughout South Africa since 2016.
- The presentation will also be made available on the **Moodle** platform for Life Healthcare employees.

Radiation Dosimetry & Protection cc

HPCSA CPD accreditation
To apply for 1 Clinical 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.

Payments

By electronic transfer to:

Radiation Dosimetry and Protection cc
Bank: First National Bank
Branch Name: Willowbridge
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Reference: CPD & Name and Surname

A presentation designed specifically to give radiologists, radiographers and other relevant medical staff the mammography dose optimisation training as required by the Directorate Radiation Control (SAHPRA).

Contact details

Meeting co-ordinator: Francina Kotzé
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E-mail: radiation@radiation-consulting.co.za

Compliance with IAEA guidelines for mammography dose optimisation training

Who should attend?

Radiologists, radiographers and other relevant medical staff involved in mammography.

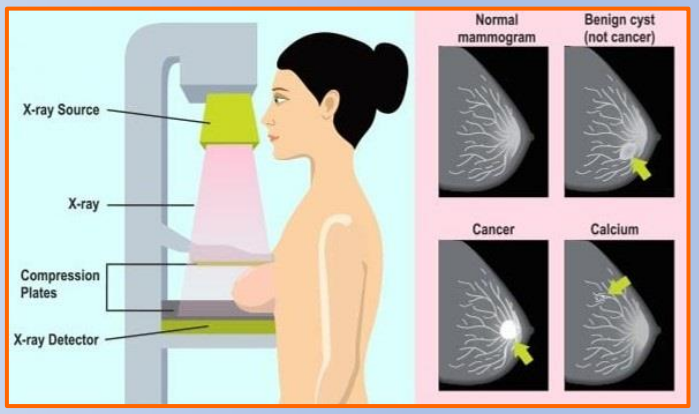
Training on Dose Optimisation in Mammography

1 History
- Limits of conventional radiography
- Radiation risks

2 Principles
- Image quality versus radiation dose
- Risk versus Benefit

3 Mammography dose metrics
- Mean Glandular Dose (MGD)
- Factors affecting MGD
- Typical MGD values

4 Optimising Breast Compression
- Why compression reduces dose
- Improved contrast
- Reduced scatter radiation
- Reduced motion blur
- Appropriate compression force
- Managing patient discomfort
- Communication techniques with patients

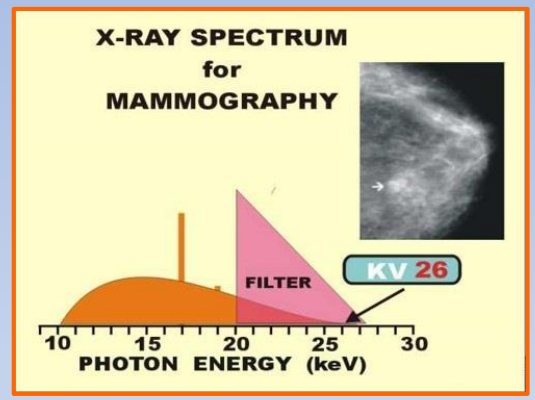


Operating principle of mammography

5 Exposure parameters and AEC
- Tube voltage (kVp)
- mAs
- Automatic Exposure Control (AEC)
- Manual exposures
- Influence of breast thickness
- Breast density
- Proper positioning of AEC sensors

6 Target/Filter combinations
- Mo/Mo, Mo/Rh, Rh/Rh
- Tungsten targets
- Beam hardening
- HVL
- Spectral optimisation
- Effect on dose and image quality

7 Image Quality Optimisation
- Spatial resolution
- Contrast
- Noise
- Signal-to-noise ratio
- Contrast-to-noise ratio
- Detector performance
- Detectability of microcalcifications
- Image quality criteria

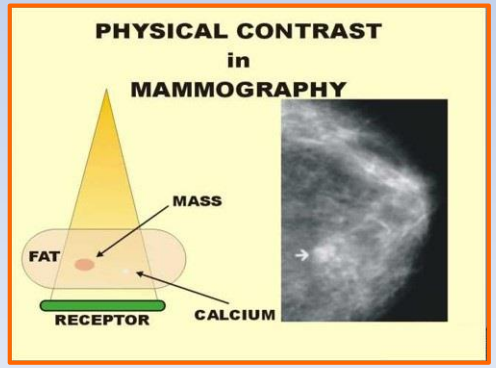


What you will gain from attending this presentation

This presentation provides training for radiologists, radiographers and other relevant medical staff in dose optimisation in mammography. It fulfils the regulatory requirement of the Directorate Radiation Control (SAHPRA).

8 Dose Optimisation
- Full-field digital mammography
- Digital breast tomosynthesis (DBT)
- Synthetic 2D images
- Comparison of doses
- Dose saving technologies

9 Quality assurance
- SAHPRA requirements
- Who may perform QA
- Acceptance QA
- Routine QA
- Diagnostic Reference Levels (DRL's)
- Typical DRLs
- Dose audits
- Staff training
- Daily QC



10 Dose monitoring
- Dose trends
- Patient doses exceeding 5 Gy
- Reject analysis
- Radiation risk communication