

***Radiation Safety & Changing Role of the Technologist***

**One Day Seminar (8 CE’s)**

**Introduction**

* Tenets of Radiation Safety Philosophy
* ALARA: What does it truly mean from a clinical viewpoint?
* Risk vs. Benefit rationale
* Diagnostic Yield vs Diagnostic Efficacy
* Role of technologist and Diagnostic Yield
* Examples of imaging modalities and DY

**Photon Interactions with Matter**

* Concept of Electronic Data Set (EDS)
* Photoelectric and Compton effect
* Patient/operator dosage considerations
* Units of Measure and Dosage Considerations that have a Practical Application

**Protection Measures for the Patient and Operator**

* Cardinal rules of protection: Review and practical applications
* SID considerations and ESE dose, technique considerations
* Changing role of technologist as a radiation safety advocate

**Dose Management Strategies**

* Collective dose profile considerations
* Image Gently and Image Wisely
* ACE program (ASRT)
* Dose management strategies as a quality measure and future strategies
* Exposure Index and Deviation Index
* What do they mean in terms of image quality assessment and exposure

**Basic Principles of Image Interpretation**

* Basic radiographic densities and clinical examples
* How does the radiologist use these densities clinically?
* Low contrast resolution and its clinical value
* Boundary Effect and Mach Bands illusion
* Silhouette Sign Concept
* Clinical utility of Silhouette Sign
* Image impact of improper positioning and rotation
* Image quality expectations of radiologists (clinical image benchmarks)
* Chest imaging benchmarks
* Orthopedic image benchmarks
* Role of fat images
* Impact of digital technologies and detector designs

**Professional Standards of Care for the Profession**

* Technology impacting responsibilities
* The resurgence of radiography and why!

**New Joint Commission (JC) standards impacting medical imaging**

 **~ Agenda Subject to Change ~**

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