GE Healthcare Statement to the National Academy of Sciences on Reporting of Radiation in Medical Diagnostics

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GE Healthcare is committed to five key principles

- ALARA (maintaining dose “As Low As Reasonably Achievable”)
- Compliance to FDA regulations applicable to medical imaging devices
- Conformance to the relevant standards and requirements
- Advancements in dose reducing technologies
- Standardization as a key enabler to deliver clinical value and patient safety

GE Healthcare's thoughts on tracking radiation from medical diagnostics

Response to suggested topics

Standardization

- Support existing standards (e.g. CTDIvol, DLP, DAP, Air Kerma, DICOM RDSR, IHE REM, SSDE)
- Implementing on all our devices and within our dose management system DoseWatch
- Encourage additional standardization, e.g. development of standardized processes for estimating organ dose

User Training

- GE Healthcare has made radiation safety training available on-line at no-charge
- Continue to add new courses for both radiologists and technologists to our catalog
- Including optimization services with the implementation of our DoseWatch dose management system

Agreement on Metrics to Report

- MITA and GE Healthcare have agreed to fully support the use of DICOM Dose Structured Reports
- We support reporting of all metrics endorsed by standards groups including the following:
  - CTDIvol, DLP & SSDE for CT
  - DAP, Air Kerma, total fluoroscopy time, angles & number of exposures for interventional labs
  - Organ dose for mammography

Dose in Radiology Reports

- Using DoseWatch to enable automated reporting of dose metrics in radiology reports
- Provide a complete API to integrate with GE and non-GE report writing systems

GE Healthcare's key investments in dose-lowering technologies

Response to suggested topics

CT Imaging

- Dose efficient detection
- X-ray field filtration
- Dose display
- Advanced image reconstruction algorithms that demonstrate significant dose reductions while maintaining image quality
- Dose Check for compatible devices
- DICOM Dose Structured Reports
- Enhanced Protocol Management

Fluoroscopic Imaging

- X-ray field shaping
- Dose efficient digital detection
- Real time digital image processing
- Pulsed fluoroscopy to optimize x-ray photon utilization in the image
- X-ray spectral filtration to optimize the photon energy for efficient imaging
- Low dose mode

Dose Management

- Dose information management system for automated tracking, reporting, monitoring, alerting
- Comprehensive solution… multi-vendor, multi-modality
- Access patient dose information from the web
- Alerting with user defined thresholds
- Patient exposure history by modality and body region (where applicable)
- Statistical analysis to help optimize protocols

Questions & Discussion