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NOTES

DICOM WORKING GROUP TWENTY EIGHT
(Physics)

Date:	**March 09, 2015(***WG-28*)
	March 10, 2014(*joint WG-02, WG-28*)
Place:	Vienna
	Austria
Presiding Officers:	Annalisa Trianni Co-Chair
	Donald Peck Co-Chair
Secretary:	Alberto Torresin

Members Present	**Represented by**
ACR/AAPM	Ioannis Sechopoulos
AAPM/ACR	Donald Peck
EFOMP/ESR	Annalisa Trianni
EFOMP	Alberto Torresin (**Secretary**)
GE Healthcare	Francisco Sureda
Philips Healthcare	R. Karthigai Balan
Siemens Healthcare	Heinz Blendinger

Alternate Voting Representatives, Observers, or Guests Present:

PACSHealth	Steve Massey
PACSHealth	Daniel Tuffelmire
Bayer	Ting Lu
MITA	Stephen Vastagh

1. Opening

- The meeting was called to order at 09.00 on March 09.
- Members identified themselves and their employers. A quorum was present.
- Members reviewed the agenda that was approved as such.
- The minutes from the meeting of December 02, 2014 in Chicago, IL has been reviewed and approved.

2. Develop Patient Radiation Dose Structured Report (P-RDSR) and potential requirments for Patient Dose SR

- Members reviewed the current template of the P-RDSR (see the document PRDSR_template_outline_March 2015.pptx and the related TIDs document on the server).
- In particular members worked on the following templates:
  - *Procedure List Organ Dose*
    This template conveys a listing of procedures performed on the patient that are included in this P-RDSR.A different container has to be completed for eachorganin which doseestimation was made.
    Multiple Phases within a procedure that may need to be separated because they require different dose estimate methodologies/models, example PET/CT, are also incorporated into this template.
  - *Dose Estimate Methodology*
    This template includes the information specific to the organ dose calculations methodology used when estimating dose to individual organs from imaging studies that use ionizing radiation. We need to define all info that is necessary to estimate the organ dose. Any parameter that is used in the estimation must be defined in the P-RDSR if it can be changed or it is a parameter that may be changedoften. Parameters that are not changed by an operator or are basic to the algorithmmay not need to be defined to simplify the P-RDSR. A list of parameters that may need to be defined will be determined from the joint AAPM/EFOMP TG246 report. **Action Item: Ioannis and Ting will review the necessary parameters and distribute to the WG.**
  - *Radiation output*
    This template includes the information required to determine the patient dose from each phase of the procedure. This template requires an RDSR be available. If the acquisition equipment does not provide an RDSR or RDSR information is missing, a "derived" RDSR must be created by the system doing the organ dose estimate that contains the required data for the estimations in the P-RDSR
  - *Beam Modifiers*
    All the information about beam modifiers usedfor dose estimations has to be included.
  - *Patient Model and Registration to the output values*
    This template includes the information specific to the patient model used and the patient location relative to the model and the RDSR output information.

3. Review Dose SR extensions and potential requirments for RDSR/P-RDSR

- The AAPM TG246 document on methodology for determining patient dose from diagnostic studies was reviewed.
- There is the need to further discuss how to move forward with changes to the CT and XA RDSR and/or IOD based on the recommendations included inthis document.
- Patient Dose Estimation Methodology was defined in general for the different modalities and the specific TIDshave beenupdated.

It was discussed whether it may be better to create a new "Enhanced RDSR" instead of making changes to the exisiting RDSR. This may allow more robust information to be included that are needed for oran dose estimates and may also allow the development of a simpler structure to the RDSR. One option is to create a Radiation Output Structured Report that provides all x-ray beam geometry (e.g. beam size and diraction for all irradiation events) and the output as a free in air kerma value at a defined reference point. This structure may not need to be specific to any one modality so the registration to a patient model and use of the output data is simplfied.**Action Item: Donald and Annalisa will ask AAPM and EFOMP for comments on this idea.**

4. Review Work Items, Supplements and CP

Supplements and CPs were not reviewed during this meeting

5. Operator Dose SR Work Item

- There has not been any manufacturer requests and participation that would warrant the initiation of this work.

6. Reports from liaisons with other groups and organizations

- AAPM activities.
- MITA Interventional group activities.
- EFOMP activities.

7. Planned Meeting Dates in 2015

Members continued defining the calendar for 2015 meetings.

- **June 1 to 3** in ***Washington DC*** (right after SIIM)
- **Sept 21 to 23** in ***Barcelona*** – to be confirmed