

**QIBA FDG-PET/CT Digital Reference Object (DRO) - Subcommittee Update WebEx**  
**March 27, 2009**  
**2-3 PM CDT**  
**Call Summary**

In attendance:

Paul E. Kinahan, PhD (Chair)  
Michael E. Casey, PhD  
Dennis Nelson, PhD  
John G. Wolodzko, PhD

Brian Zimmerman, PhD  
**RSNA**  
Joe Koudelik

### **General Discussion**

Please note that call duration was 20 min. This is our target duration for future calls.

The call summary from March 13, 2009 was approved without any changes.

Reviewed four manners in which to design a DRO

1. As a *de novo* DICOM image stack
2. By the reconstruction of a stored synthetic raw data object (i.e. sinogram)
3. By the reconstruction of a stored measured object (i.e. calibration phantom)
4. Some approximation between version 1 and 3

General comments

- One DRO for each scanner vendor - if vendors agree
- Can vendors create their own DRO based on our needs/parameters?
- Design the DRO to contain objects to test maximum SUV values from ROI measurements
  - This could also support work of ROI Technical subcommittee
- Suitable test object
  - Single FOV will not be sufficient to test multiple FOV 'stitching' done by scanners
  - NEMA IQ phantom would need a minimum 2 bed FOV so may be a good choice
    - Could be modified for max SUV testing as noted above

Next Steps - Basis of next call (April 17<sup>th</sup>):

- Set of agreed upon parameters needed for quantitation for clinical trials - feedback from other FDG-PET/CT Subcommittees, (Covariates, Computation, QA/QC, Version tracking) and others needed
- Create the dataset ourselves and provide to vendors to include in DICOM format
  - Produce 'data brick' of image voxels
  - Provide list of parameters we believe should be included as discussed above
  - Vendors then figure out where this is to go on their DICOM headers
- Priority of next call will be to talk with vendor reps from scanner manufacturers
- Data brick of test object and list of DICOM fields will be provided by this Subcommittee to vendors