

QIBA FDG-PET/CT September Update
November 3, 2008
2PM CST
Draft Call Summary

In attendance:

Richard Frank, MD, PhD (Co-Chair)
Sandra Chica, MD
Paul Christian
David Clunie, MBBS
Igor Grachev, MD, PhD
John Hoffman, MD
Yuying Hwang, PhD
Lisa Karam, PhD

Dennis Nelson, PhD
Eric Perlman, MD
Barry Siegel, MD
Jeffrey Yap, PhD
Brian Zimmerman, PhD
Daniel Sullivan, MD
Fiona Miller (RSNA)
Joe Koudelik (RSNA)

FDG-PET/CT Subcommittee Updates

- Quantitative Computation Update - David Clunie, MBBS
 - Dr Clunie to modify and send his group's slide deck to Dr Frank
 - Updated Wiki and made contact with industry reps
- Covariates Rationale Update - Dr Hwang, PhD
 - Dr Hwang to add clinical trials parameters and reference material to group's slides and forward to Dr Frank

General Discussion:

- SUV Issues
 - Should manufacturers use one algorithm to calculate SUV?
 - Note: Reconstruction algorithms considered a different topic
 - Using the same procedure and formula would help the end-users
 - SUV Max is most predictive and provided by vendors along w/SUV average w/standard deviation
- Minimum Requirements to Calculate SUV Suggested for Vendors
 - Patient weight
 - Residual corrections
 - Time synchronization - clocks syncing to an absolute time
- Need to list covariates and specify how data is to be captured
- Standardization
 - Standards needed for raw data - need to be defined
 - Manufacturers need to understand the importance of standardization
 - DICOM headers could include algorithm used (private tag)
- NIST's Role in Standardization
 - Data concerning the variability and performance of PET scanners needed
 - Clinical work does involve measurement, but...

- Patient applications fall outside of the NIST scope
 - The physician is to interact at this level
- Clinical Trials
 - Set a minimum resolution for multi-center clinical trials
 - Should ACRIN or QIBA pursue this?
 - This standard has been pursued in the Netherlands
 - Performance at a threshold level
 - Natural inclination in clinical practice is to use the highest resolution possible
 - Difficult to do this in a clinical setting - lack of required consistency
 - Resolution and partial volume corrections are ongoing challenges
- Raw Data
 - Saving of raw image data needs to be made easier by manufactures
 - Raw data is very useful - can be reconstructed using chosen parameters
 - Standards needed concerning storing and reconstructing
 - New subcommittee to be established with Jeffrey Yap, PhD as Chair
- Interactions with other Organizations Suggested
 - IRAT community
 - Netherlands group - Dr Beollaard

Next Steps:

- Dr Clunie to modify and send his slide deck to Dr Frank by the Nov update t-con.
- Dr Yap volunteered to participate on the Clunie Subcommittee
- Drs Whang and Yap to discuss new subcommittee off-line
- Dr Yap to follow-up with Dr Beollaard in the Netherlands concerning data standardization
- Joe to prompt subgroup leaders to forward their slides to Dr Frank by Nov 13th (t-con rescheduled for Nov 17)