

Call Summary

In attendance:

Philip F. Judy, PhD (Co-chair)
David A. Lynch, MB (Co-chair)
Heather Chen-Mayer, PhD
Sean B. Fain, PhD
David S. Gierada, MD
Zachary H. Levine, PhD
John D. Newell, Jr, MD

Jered Sieren
Juerg Tschirren, PhD

RSNA
Fiona Miller
Joe Koudelik

NIST Scanner Acquired (Dr Chen-Mayer)

- NIST has acquired a Philips Brilliance 16 slice PET/CT scanner with a collimation on 0.6 possible
- Drs Chen-Mayer and Levine to discuss possible experiments beyond clinical understanding to the underlying physics of attenuation mechanism
- Fully characterize this scanner spectra and compare against NIST mammography beam codes maintained at NIST

QIBA Proposal: Reproducibility of CT Evaluations of COPD/Asthma Patients (Dr Judy)

- NIBIB contract proposal originally based on original three QIBA oncology projects (Technical Committees: VCT, DCE-MRI, FDG-PET)
- The original NIBIB proposal called for half of contract to be allocated for administrative support, e.g., convener function etc, the rest for QIBA sub/ctte project proposals
- Projects approved and proposed through the level of the Modality Committees
- Constraints
 - Materials, machine time, stat support, etc covered by NIBIB funding
 - No salary support included for PI's (senior people)
- Dr Judy collecting image sets over several studies to evaluate long-term reproducibility at Brigham and Women's; 700 exams utilize a common lung nodule phantom
- Additional data collection proposed for both U Iowa and BWH
- Dr Judy proposed new study, selecting U Iowa as lead site
 - Dr Eric Hoffman's Coffee Break experiment data proposed as a baseline study
 - Goal is to provide research community datasets from multiple sources to help develop computer programs
 - Datasets need to have multiple-controlled studies and multiple-exams per patient
- NLST image archive deemed an important data source containing searchable serial images
- Dr Stoel's image collection also of use
- Need to sort images based on a quality assurance process
- Methodology specifics needed next

RSNA Poster Overview (Dr Lynch)

- Left side of poster to list "what we know"
- Right side to describe phantom and variation issues
- Middle section to contain phantom images from U Iowa (Mr Jered Sieren); poster needs graphics
- "Next steps" might include COPDGene phantom modification
- Basic image acquisition methods could be included
- Mr Jered Sieren to email Dr Lynch "middle content" for poster

Status of modified COPDGene Phantom (Dr Judy)

- Dr Crapo is committed to purchasing three new phantoms and is obtaining a quote for modified COPDGene phantom containing NIST foams and smaller/thinner inner tubes
- Dr Judy continues to analyze COPDGene QA phantom; has demonstrated systematic differences between individual scanners possibly due to time and calibration issues
- Need greater feedback from manufacturers; need greater collaboration
- Mallinckrodt and U Wisconsin have COPDGene phantom study results that might be useful
- Regular phantom scanning that match the physical attributes of the lung is critical
- U Wisconsin, SPIROMICS, Mesa, U Iowa, etc all using the COPDGene phantom and have useful data

Next Steps:

- Next call scheduled for; Nov 17, 2010 at 2 pm CST