

QIBA Lung Density Biomarker Committee (BC)

June 3, 2015 at 2 PM CT

Call Summary

In attendance

Philip F. Judy, PhD (Chair)

Heather Chen-Mayer, PhD

Dominic Crotty, PhD

Bernice Hoppel, PhD

Daniel Sullivan, MD

RSNA

Joe Koudelik

Julie Lisiecki

Discussion topics:

1. Review of QIBA Annual Meeting Breakout Sessions Notes provided by Drs. Chen-Mayer and Fain
2. Proposed Round-5 project - Volume corrections
 - Consideration to build a compressible lung phantom based on the Stoel model, to be used as a standard for benchmarking results
 - Dr. Lynch has also requested investigator help to work with COPDGene data:
 - to examine low dose scans using iterative reconstruction (IR) and automatic exposure control (AEC)
 - to review longitudinal data for testing volume correction
 - to consider how metrics are biased by the noise
3. Vendor COPDGene Phantom 2 Scanning
 - CT number calibrations – Second round robin includes NIST lung density reference object
 - Dr. Hoppel to follow up with Dr. Crotty regarding phantom delivery
 - Vendors hope to have results to share on the 6/17 call
4. Tasks for Profile Markup
 - Analysis Issues – Open Questions
 - Correction for scanner model variation – Vendor study results
 - Edge response function matching
 - Volume Correction - list possible methods
 - Specification noise – constrained by resolution
 - Conformance, formerly known as compliance
 - Long term precision of phantom CT numbers
 - Citations

Action items:

- Dr. Hoppel to follow up offline with Mr. Sieren and Dr. Guo regarding U-Iowa software questions
- Dr. Hoppel to follow up with Dr. Crotty regarding phantom delivery
- Dr. Fain to present updates on his research at the 6/17 vendor and BC calls
- Dr. Chen-Mayer to follow up with Dr. Lynch regarding COPDGene novel data sets

Other:

- Dr. Chen-Mayer's AAPM Presentation
 - TU-G-204-8 (Tuesday, July 14, 2015), 4:30 – 6 PM Room: 204

Next call: Wednesday, June 17, 2015 at 2 pm CT - Topics: Calibration and Update on Round-1 Vendor Scans