

QIBA Lung Density Biomarker Committee (BC)

June 17, 2015 at 2 PM CT

Draft Call Summary

In attendance

Philip F. Judy, PhD (Chair)

Heather Chen-Mayer, PhD

Matthew Fuld, PhD

Bernice Hoppel, PhD

David Lynch, MB

Nancy Obuchowski, PhD

RSNA

Joe Koudelik

Susan Weinmann

1. Status - Volume corrections

- Dr. Chen-Mayer's AAPM Presentation TU-G-204-8 (Tuesday, July 14, 2015)
 - 4:30 PM - 6:00 PM Room: 204 - .
- 32 Duplicate COPDGene cases

2. Request from COPDGene to recommend a lower exposure protocol

- Dr. Judy evaluations using COPDGene 50 mAs expiration exams
 - Dr. Lynch reported that the current COPDGene and QIBA CT dose lowering efforts were well aligned
 - Decrease CT acquisition dose using current modulation proposed to reduce overall CT exposure
 - Looking for current recommendations; design study in parallel with the QIBA suggested

Automatic Exposure Control (AEC) to be addressed as well regarding benefit to larger subjects

3. Vendor COPDGene Phantom 2 Scanning

- CT number calibrations – Second round robin include NIST lung density reference object
- Other QIBA edge response function activities
 - Dr. Lodge, Johns Hopkins, Resolution of PET images
 - Dr. Samei, Duke, ACR Rods

4. Profile Markup

- Analysis Issues – Open Questions
- Correction for scanner model variation – Vendor study results
 - Vendor TF requested input on next steps
 - There is no ground truth for this phantom
 - It is preferable that variability among vendor results be reduced
- Edge response function matching
- Specification noise – constrained by resolution
- Compliance
- Long term precision of phantom CT numbers
- Citations

Next call: Wednesday, July 1, 2015 at 2 pm CT

- Profile mark-up
- Request from COPDGene