QIBA Lung Density Biomarker Committee (BC)
June 17, 2015 at 2 PM CT
Draft Call Summary

In attendance

Philip F. Judy, PhD (Chair)  Bernice Hoppel, PhD  Joe Koudelik
Heather Chen-Mayer, PhD  David Lynch, MB  Susan Weinmann
Matthew Fuld, PhD  Nancy Obuchowski, PhD

RSNA

1. Status - Volume corrections
   • Dr. Chen-Mayer’s AAPM Presentation TU-G-204-8 (Tuesday, July 14, 2015)
     o 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
     o Dr. Lynch reported that the current COPDGene and QIBA CT dose lowering efforts were well aligned
     o Decrease CT acquisition dose using current modulation proposed to reduce overall CT exposure
     o 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
     o Dr. Lodge, Johns Hopkins, Resolution of PET images
     o Dr. Samei, Duke, ACR Rods

4. Profile Markup
   • Analysis Issues – Open Questions
   • Correction for scanner model variation – Vendor study results
     o Vendor TF requested input on next steps
     o There is no ground truth for this phantom
     o 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

   o Profile mark-up
   o Request from COPDGene