

QIBA COPD Lung Density Reference and Consistency Standards Work Group
April 27, 2011 at 2 PM CDT

Call Summary

In attendance

Philip Judy, PhD

Heather Chen-Mayer, PhD

James D. Crapo, MD

Zachary Levine, PhD

Joshua Levy

RSNA

Julie Lisiecki

Agenda

- Reference standard "profile"
- CT Number accuracy
 - Region of interest size, reconstruction kernel, truncation

Discussion included:

- Characteristics of reference phantom (spreadsheet) discussed
- Issues associated with modifying the spectra reviewed
- Mean collimation and table height deemed important
- Image analysis issue – need to define region of interest size
 - With a very large object, you need to worry about the effect of hardening
 - Consider the impact of the measurement on a patient
 - The data collection from the scanners leads to variations due to independent calibration
- Image acquisition vs. reconstruction
 - Accuracy issues within 3 HU
 - Adaptive filtering techniques
 - Truncation issues – need to aim within one HU
 - Can we reduce dose – with no loss of imaging info?
- Discussion of variation due to reconstruction techniques
- Variation in foams and batch to batch consistency
 - Hoping to measure the standard reference materials

Next steps:

- Follow up with Dr. Gierada regarding precision measurements for lesions
- Scan new COPDGene phantom

Next calls:

- COPD General Business, May 4, 2011 at 2pm (CT); Discussion of Profiling
- COPD LDRCS: May 11, 2011 at 2pm (CT)