

QIBA Lung Density Biomarker Committee (BC)

February 10, 2016 at 2 PM CT

Draft Call Summary

In attendance

Sean Fain, PhD (Co-Chair)

Matthew Fuld, PhD (Co-Chair)

Andrew Buckler, MS

Heather Chen-Mayer, PhD

Dominic Crotty, PhD

Bernice Hoppel, PhD

Philip Judy, PhD

Songtao Liu, MD

Nancy Obuchowski, PhD

RSNA

Joe Koudelik

Julie Lisiecki

Phantom Scanning, Round II:

- The Vendors Task Force has planned a scanning trip for the week of March 7 – 10th.
- The team will travel to U-Iowa (Monday) and then to sites in Madison (Tuesday) and Marshfield, WI (Wednesday).
- As there is no guarantee of safe, damage-free shipment of the phantoms, this must be done in person.
- They will scan several phantoms using the AEC protocol soon to be finalized by Dr. Fain:
 - Alderson 2
 - COPDGene2
 - NIST foams phantom
- Testing will include the following:
 - automatic exposure control (AEC)
 - iterative reconstruction (IR)
 - vendor-specific harmonization protocols
- The ultimate goal is to harmonize 22 parameters
 - Different dose levels will be targeted, as well as a range of parameters
 - Dose level measurements with IR and without IR will be made accordingly
- The current plan is to scan at predicted values for AEC correction and to explore IR ranges utilizing commercial settings for each system
 - Positioning of the phantom and Image reconstruction are the most time-consuming
 - Multiple scans are easily completed
- Dr. Fain welcomes contributions to the protocol: sfain@wisc.edu

Profile - related:

- Dr. Chen-Mayer has updated a document detailing procedures used to eliminate machine dependent variations
- A condensed version has been distributed for group review
 - This condensed version may be added to the Profile appendix
- Dr. Fain applauded Dr. Chen-Mayer's complex analysis and recommended that she try to publish the document
 - Publication would make it easier to reference within the group's Profile or future publications
- Work on convergence schema between vendors to continue

For next call:

- Group to discuss volume adjustment analysis for the Profile
- Next steps needed to complete the Profile

Next call: Wednesday, February 24, 2016 at 2 pm CT