

QIBA Lung Density Biomarker Committee (BC)

November 4, 2015 at 2 PM CT

Call Summary

In attendance

Matthew Fuld, PhD (Co-Chair)

David Lynch, MD (Co-Chair)

Andrew Buckler, MS

Heather Chen-Mayer, PhD

Dominic Crotty, PhD

Bernice Hoppel, PhD

Philip Judy, PhD

Songtao Liu, MD

Nancy Obuchowski, PhD

Eric Perlman, MD

Jered Sieren, BSRT (R) MR, CT

RSNA

Joe Koudelik

Julie Lisiecki

Lung Density BC Poster for RSNA 2015

- A completed poster has been submitted and will be printed by RSNA Staff
- Meet-the-Expert volunteers are still needed for the Lung Density BC poster; participants can sign up [here](#)

Phantom Scanning, Round II:

- The scanning which was to have occurred at the Marshfield Clinic (WI) was tabled due to unforeseen circumstances including:
 - Resistance from vendor management regarding perceived intellectual property risk due to collaboration amongst vendor competitors, which caused a delay
- Possible solutions include:
 - Preferred option: All 4 vendors reps would gather with academicians at a host institution and complete scanning on an Alderson 2 phantom working together on their respective systems
 - Each vendor knows the intricacies of their own technology and working together would be ideal to more skillfully harmonize imaging protocols for the Profile
 - Commitment from all vendors is essential for success or
 - Each vendor to work with an academic partner individually (would require many months to complete and optimal performance may not be achieved)

Breakout Session Discussion Topics for QIBA Working Meeting at RSNA 2015

- Vendor engagement and next steps re phantom scanning
- Overall direction of the Lung Density Biomarker Committee
- Review of the existing Profile document and goal setting toward Profile release for Public Comment in 4- 6 weeks
- Work toward finalizing harmonization steps:
 - Quantitative image acquisition procedures
 - Image post-processing and any effects to explore
 - Image analysis and any additional information needed
 - Compliance criteria and procedures (specific procedures to be used for scanning)
 - RA -950 and PERC 15 as metrics
 - Software to consider for analysis – Other vendor representatives are needed
 - Volume corrections
 - Mass conservation issues
 - Effects of iterative reconstruction (IR)
 - AEC
 - Correct acquisition protocol
 - Corrections for biological issues
 - Dose modulation
 - “Open Questions” section
 - Next steps for Public Comment version

Goal to Release Current Profile for Public Comment

- The Lung Density BC wants to lock down and release a first version of its Profile as soon as possible, using the quantitative density measurements and corrected acquisition protocol
- Subsequent versions to follow, which will address some of the hot topics, such as AEC, IR, dose modulation as related to noise, etc.
- Work on convergence schema between vendors to continue during the Public Comment phase
 - How to make cross-vendor comparisons re individual conformance approaches not yet known.
 - This will be essential to compare vendor scans.
 - Noise and dose modulation issues need to be addressed
 - These measurements may be clarified once data from Dr. Fain's study is available
 - Hounsfield Unit (HU) tolerance numbers are also needed

Next call: Wednesday, November 18, 2015 at 2 pm CT

REMINDERS:



A [QIBA Working Meeting](#) will be held at the RSNA Annual Meeting:

- Wednesday, December 2nd from 2:30 – 5 pm.
- Breakout sessions begin at 3 pm and rooms will be available until 6 pm.
- If you have not yet done so, please RSVP for the [QIBA Working Meeting](#) and consider volunteering for the [Meet-the-Expert poster sessions](#) at the QIBA Kiosk.

We look forward to seeing you all soon.