

QIBA Lung Density Biomarker Committee (BC) Call

April 26, 2017 at 2 PM CT

Call Summary

In attendance

Sean Fain, PhD (Co-Chair)

David Lynch, MD (Co-Chair)

Heather Chen-Mayer, PhD

Gonzalo Vegas Sanchez-Ferrero, PhD, MSc

Charles Hatt, PhD

Bernice Hoppel, PhD

Stephen Humphries, PhD

Philip Judy, PhD

Nancy Obuchowski, PhD

Ann Soderman, BSc

RSNA

Joe Koudelik

Julie Lisiecki

Profile Update

- Drs. Fain, Fuld and Lynch have been working together offline to resolve a few remaining Profile questions
- Phantom choice remains undetermined; both the ISMRM and COPDGene phantoms discussed
- A number is needed for the variation between phantoms regarding lung equivalent foams
- Data must be acquired using the same scanner for a true comparison

Proposed Software Comparative Study

- The comparative study will host data on the QIDW though details must still be finalized
- A proposed reference dataset may remain posted once the study has been completed, if participants agree to upload and store their segmentations
- Proposed time frame would be 4 – 6 weeks after data upload to begin analysis for the comparative study
- The study may have two phases
 - The first phase of the study will focus on inter-software comparison regarding bias and repeatability
 - Estimates are based on existing COPDGene data; no ground truth data exist
 - Development of gold-standard datasets is not under consideration for the first round
 - Data will be tagged for the following:
 - Open-source vs. commercial
 - Fully automatic, semi-automatic, or manual
 - The second phase (if agreed upon) may focus on determining ground truth
 - This second phase would require much scrutiny and discussion

Some questions remain in getting the study organized:

- When will clinical data from COPDGene be available?
- Though approved by COPDGene, Dr. Lynch needs to select anonymized images by the end of next week
- Drs. Hatt or Kirby need to sign and submit the QIDW Contributor Agreement Form
- Specific anonymization procedures need to be determined; for both participants and uploaded segmentation data
- Phantom scan qualifications must be revised for quality assurance
- Investigating whether or not it may be possible to obtain ongoing access to analysis data at COPDGene

Next call: Updates on the QIDW and the proposed software challenge will be discussed

Next call: [Wednesday, May 10, 2017 at 2 pm CT](#)