

QIBA Lung Density Biomarker Committee (BC) Call

March 29, 2017 at 2 PM CT

Call Summary

In attendance

Sean Fain, PhD (Co-Chair)

David Lynch, MD (Co-Chair)

Andrew Buckler, MS

Heather Chen-Mayer, PhD

Charles Hatt, PhD

Bernice Hoppel, PhD

Stephen Humphries, PhD

Philip Judy, PhD

Miranda Kirby, PhD

Nancy Obuchowski, PhD

RSNA

Joe Koudelik

Julie Lisiecki

Profile Questions Discussed

- Dr. Chen-Mayer reported a 12 HU phantom reference value deviation from a “true value”
- The group will need to determine which phantoms to use, assuming there is a true-value phantom that is scanner-independent
- If there is a true-value phantom that is scanner-independent, the value can be disclosed for each phantom, and it can be required that the measured value will not deviate from the reference value by more than 12 HU
- The question remains whether to require a phantom at all, and if yes, which one?

Proposed Software Challenge

- Original goal of Challenge organizers was to confirm that the degree of variation across lesion analysis software is minimal or negligible
- The team is contemplating including a reference dataset (with ground truth) to the Challenge for long-term use in obtaining software performance appraisals, beyond software comparisons
- A reference standard is needed to determine if software is performing as it should be
- It is unclear how they would come to consensus about which software package is the top performer
- Mr. Buckler reminded the group that Profile claims are to be based on clinical utility and suggested the following regarding a proposed Challenge:
 - There should be clearly established anonymization procedures
 - The challenge should be open to the “world” rather than a curated, core list of participants
- Dr. Fain reiterated that the goal is to reach consensus regarding analysis software variance for the Profile, targeting only those commercial vendors who are most likely to use it
 - The suggestion to expand the scope and open the Challenge to additional participants would be a larger undertaking than the group is prepared to handle presently and may hinder Profile progress
 - Logistics, registration, data collection, participant agreement, instructions, analysis, and anonymization procedures would need to be determined

Action item: Ad hoc call to be set up with image analysis team offline

Next call:

- Profile updates will be reviewed
- Follow up regarding the piston phantom to look at the variability of Perc 15 will be discussed
- Updates on the QIDW and the proposed software challenge will be discussed

Next call: [Wednesday, April 12, 2017 at 2 pm CT](#)