QIBA Lung Density Biomarker Committee (BC) Call
March 29, 2017 at 2 PM CT
Call Summary

In attendance
Sean Fain, PhD (Co-Chair) Charles Hatt, PhD Philip Judy, PhD Joe Koudelik
David Lynch, MD (Co-Chair) Bernice Hoppel, PhD Miranda Kirby, PhD Julie Lisiecki
Andrew Buckler, MS Stephen Humphries, PhD Nancy Obuchowski, PhD
Heather Chen-Mayer, PhD

RSNA

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:
  o There should be clearly established anonymization procedures
  o 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
  o 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
  o 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