

QIBA Volumetric CT Group 3A Update

Thursday, July 7, 2011; 11 AM CDT

Draft Call Summary

In attendance

Maria Athelougou, PhD (Chair)

Hubert Beaumont, PhD

Andrew Buckler, MS

Dirk Colditz, PhD

Charles Fenimore, PhD

David Gustafson, PhD

Grace Kim, PhD

Nicholas Petrick, PhD

Anthony Reeves, PhD

Daniel Sullivan, MD

Ying Tang, PhD

RSNA

Julie Lisiecki

I. Statistical Analysis Design discussed

- Dr Kim needs to add equations to the statistical analysis design, sections 3.4.1 and 3.4.2
- Factors affecting the characterization of performance discussed
 - Consider bias, precision, repeatability, reproducibility, and variance for inclusion or exclusion
 - Creating reproducibility across laboratories may call for slightly different procedures
 - FDA definitions or interpretations of assay performance measures generally written in terms of in vitro products - difficult to translate directly to imaging biomarkers; may be best to stick with generic definitions
 - Prime interest – how well the algorithm adheres to the standard
- Group considering multi-dimensional group average - one seed point with application of algorithm 3 times
- Group must come to consensus on the method for the study
 - 3.4.1: Removed “repeatability” and “precision”
 - Use one seed point and one measurement in the pilot study
 - Determine “effect size” for each factor

Next steps:

- Dr Kim to update section 3.4.2 of study design, including equations related to bias and variance for next call; also to distribute a draft version to the group for reference

Next regularly scheduled call: **Thursday, July 28, 2011 at 11 am CDT**

Please note: There will be no calls on 7/14 or 7/21.

Note: all documents are posted to the QIBA wiki at: <http://qibawiki.rsna.org>.