

QIBA Volumetric CT Group 3A Update
Thursday, January 13, 2011; 11 AM CST
Call Summary

In attendance

Maria Athelougou, PhD, (Chair)

Andrew Buckler, MS

Dirk Colditz, PhD

Charles Fenimore, PhD

David Gustafson, PhD

Hyun Grace Kim, PhD

Guillaume Orioux

Ying Tang, PhD

Matthias Thorn, PhD

RSNA

Joe Koudelik

Julie Lisiecki

I. 3A effort evolution

- Groundwork activities are developing to inform the Profile
- Targeted level of accuracy claim (clinical use); specifications to reach targeted level
- Looking for what performance is achievable with different types of algorithms
- Considering meta-analysis of phantom data to study multiple sources of variability
 - Different than inter-algorithm study but related
 - Precursor to the inter-algorithm study
 - Meta-analysis in 2 parts:
 - Inter-algorithm (based on clinical data)
 - Analysis of the data from the phantom studies
 - Dr. Fenimore suggested that 1C is in its final stages and is almost ready to collect imagery
 - Could also collect data for an inter-algorithm study
 - Envisions releasing data for general use and to support 3A efforts

Brief history of the inter-related working groups:

- **1A** – 1st effort – varied scan parameters associated with one scan device and one algorithm
- **1B** – uses clinical data
 - Measurement of minimal detectable change
 - Coffee break studies to look at short-term reproducibility. Only one algorithm – similar to 1A and 1C
- **1C** – utilize same phantom as 1A; vary scanners and sites
 - Concluding acquisition protocol: FDA's lung phantom – multiple platforms and sites
 - Extends to inter-site and inter-scanner study
- **3A** – set up as an inter-algorithm study
 - Uses dataset donated from Merck
 - Created group statistic to better inform Profile development
 - Build dataset of groundwork to establish performance levels based on different algorithms
- Establishes basis for data reference point for claims
 - useful for comparison
 - to build a set of data
 - to inform people

III. Goal of the 3A group

- Study to tie meta-analysis of multiple algorithm types together (inter-algorithm study)
- Focus: identification of technical characteristics
- Projected completion date: August 2011
- Will be connected to the Analysis section of the Profile

Next steps:

- Group 3A to consider specifics needed for designing a study and carrying out meaningful activities

Next call: Wednesday, **February 3, 2011**, 11:00 am CST. Bi-weekly after Feb 3rd.