

QIBA Volumetric CT Colorado Planning Group, Project Update

Monday, February 6, 2012 at 9 am CST

Call Summary

In attendance

Kavita Garg, MD (Chair)

Andrew Buckler, MS

Paul L. Carson, PhD

David Miller, PhD

Nicholas Petrick, PhD

Ann Scherzinger, PhD

Daniel C. Sullivan, MD

RSNA

Joe Koudelik

Julie Lisiecki

Status Update

- Due to a software purchasing system error, an incorrect phantom was delivered which delayed progress
- Nodules have been ordered and are estimated to arrive within the next two weeks
- Dr. Scherzinger has provided a study design to Dr. Kim for development of a data analysis plan, including the data record sheet with parameters that will be used for the study
- This is mainly a phantom project – volumetrics of part-solid nodules+ reader variability study
- Two kinds of software being considered for use in analysis
 - VITREA – commercially available, on loan from *Vital Images, a Toshiba Medical Systems Group Company*
 - Is FDA approved will require manual contouring
 - INTIO- FDA approved, but no strong marketing yet, on loan for testing; and similar to Siemens Oncology software
- Cannot finalize analysis until software is finalized

Time Line Developed for the Colorado QIBA/NIBIB Round-1 Project (#4a)

- **February 4 - April 1, 2012**
Study Design 4 (statistical design)
Determine collaborative group members and initial meetings
Study design 1-3; Expedited IRB Approval; Phantom purchase and delivery; Nodule purchase and delivery
- **February 20 – March 15, 2012**
Scan phantom; Prepare datasets, including randomization of cases for readers; Reader training
- **March 15 – June 15, 2012**
Read studies; do volumetric analysis
- **June 15 – July 15, 2012**
Perform primary statistical analysis
- **July 15 – August 15, 2012**
Follow up analysis performed based on primary results
- **August 15 – September 15, 2012**
Report results

Imaging

- To be completed over one weekend on a Siemens 64 slice machine with a dose of 200 mAs vs. 40 mAs, 2 mm slice thickness, 1 recon kernel; both non-edited and edited datasets to be collected for comparison; must be completed by mid-March

Readers

- Dr. Garrett volunteered to be a reader; the other 3 readers will be from the Univ. of Colorado, to be trained by Dr. Garg
- Readings are expected to require one month

Next steps:

- Dr. Kim to send draft of statistical plan to Colorado Group
- Colorado Group Team to: 1) Run the scans; 2) Review the statistical analysis plan; and 3) Finalize software selection
- RSNA staff to add Drs. Kim and McNitt-Gray to invitations for planning group calls

Next Call:

- February 28, 2012 at 11 am CST; bi-weekly update calls proposed to maintain momentum

SAVE-the-DATE for future calls:

- March 13, 2012 at 11 am CST; March 20, 2012 at 11 am CST