QIBA Volumetric CT Group 1C Update WebEx
Cross-Platform / Inter-Clinical Study

March 18, 2009
11:00 AM CST

Call Summary

In attendance:

Charles Fenimore, PhD (Moderator)
John Lu, PhD
Daniel C. Sullivan, MD

RSNA staff
Susan Anderson
Joe Koudelik

General Discussion

- Measure image noise and other image quality factors and determine their impact on the measurement of volume - Goal 2
- Need to characterize noise in images and how this relates to scanner settings
- What parameters make a difference in setting-up parameter space? Group 1A already addressing this issue
- Acquisition parameter
    - NLST vs. ACRIN 6678 - both have merit
    - Running one of these parameter sets with lung data on a trial basis suggested
- Try to conduct measurements where we specify performance level of scanner
    - Suggestion to collect with specific performance goal in mind
    - Is it reasonable to require scanning sites to meet these performance levels?
        - A balance of science value and reasonableness required
    - Specify level of performance (metrics) needed by scanners, e.g. spatial resolution and noise metrics, recon kernel and mAs setting as well as specifying profile
    - Specific performance levels would eliminate unknown reconstruction kernel issues, i.e. scanner sites would need to choose their own reconstruction kernel to achieve the stated performance level.
        - Using various reconstruction kernels shouldn't pose a problem unless limited by resources

Dr Fenimore will consider constructing strawman and will talk with Dr Petrick about reading and mark-up

- Most of VolCT Group 1C data collection will be new data
- Need recruitment on this project
    - Dr Sullivan to enlist the help of Dr Ehsan Samei (Duke physicist) for the 1C projects
    - 1-2 new medical physicists newly hired at Duke (QC process) may have time to work with 1C data collection
    - Need to include medical physicists at sites to help draft the protocol (specific input needed)
    - Input from physicists and physicians well-versed in QC would be very valuable

Next Steps

- Drs Fenimore and McNitt-Gray to compile a “candidate specifications” list and ask physicians and medical physicists for input based on clinical trial use
- Protocol design details are the next step
- Dr Sullivan to enlist the help of Dr Samei (Duke physicist) for the 1C projects
- Dr Fenimore welcomes feedback