

QIBA Volumetric CT Colorado Group Project Update

Tuesday, August 23, 2011 at 11 am CDT

Call Summary

In attendance

Kavita Garg, MD (Chair)
Denise Aberle, MD
Hubert Beaumont, PhD
Andrew Buckler, MS
David A. Clunie, MBBS
Alden Dima, MS
Charles Fenimore, PhD

Paul R. Garrett, MD
Marios Gavrielides, PhD
Philip Judy, PhD
Hyun Grace Kim, PhD
Michael McNitt-Gray, PhD
David Miller, PhD
P. David Mozley, MD

Nicholas Petrick, PhD
Eliot Siegel, MD
Michael Silver, PhD
Daniel C. Sullivan, MD
Ying Tang, PhD
RSNA
Julie Lisiecki

Discussion

- Two main components for the study to be finalized: 1) Phantom use; 2) Clinical images
- Purpose to collaborate with VOL CT Groups: 1A, 1B, 1C, and QIBA members to advance progress

Phantom portion of the study:

- *Issue:* Whether to share a phantom and part-solid nodules or purchase these for Colorado Group's exclusive use.
 - Group determined it would be best to purchase a phantom and nodules
 - Part of original mission is to create reference objects for standards: manufacturer specifications will be used as a test

Purpose/Use of Nodules:

- Solid nodules to be used as controls for volumetric/RECIST measurements; determining endpoints
- Nodules' multiple densities represent more complex heterogeneous lesions
 - Work of this group may dovetail together with Dr. Petrick's group
 - - could use different scanners

Imaging protocol:

- *Goal:* To assess intra and inter observer variability
- Use 7 scanners with 4 radiologists readers as a pilot study Consider using 3-4 scanners with different protocols
- Colorado Group used much thinner slice thickness and reduced dose scanning than other groups
 - Some concern regarding noise as a result of low- dose scanning and its effect on image quality
 - *Goal to find the right balance:* low enough dose for patient safety with high enough dose to produce images that can help with early and accurate detection
 - Significant difference usually exists between diagnostic and screening scans
 - Consider trying to lower mAs

Next steps:

- Group to meet again next week and regularly at 11 am CDT, Tuesdays, until a research plan is established.
- Look into micro CT data, densitometry issues
- Determine specific main hypothesis

Next Call

- Next VOL CT Colorado Group Update call scheduled for Tuesday, August 30, 2011 at 11 am CDT.