QIBA VOL-CT Part 1B - Clinical Image Reference Datasets Subcommittee WebEx
November 5, 2008, 11:30am CDT
Call Overview

In attendance:

Michael McNitt-Gray, PhD (Moderator)
Charles Fenimore, PhD
Binsheng Zhao, PhD
Fiona Miller (RSNA)
Joe Koudelik (RSNA)

General Discussion

- Questions derived from previous call:
    1. What level of accuracy needed in estimating volumetric change?
    2. What level of reproducibility in estimating volumetric change can be achieved in measuring tumors in phantoms?
    3. What is minimum detectible level of change that can be obtained in measuring tumor in patient datasets?
    4. What level of reproducibility in estimated change can be achieved in tumors in patient datasets? (RIDER datasets – 8 patients; 18 lesions/objects with thin slice data)
    5. What is the effect of slice thickness on change in tumors using patient datasets?

- Multiple time points provide more intrinsic variation between readers
    - 8 of 300 RIDER cases contain thin slice data – need to determine how many of these contain multiple time points

- Precision vs. Accuracy
    - Pharma cares about precision in volumetric change, not as much about bias or accuracy (i.e., Merck, per Dr Mozley's comment during a Monday update Vol-CT call)
    - If only precision was needed, LIDC dataset would suffice; no readers required

- Intra-reader / observer variability with multiple time points would be useful

- Guidance needed on estimating tumor size affects on (1) variance and (2) bias
    - How does volumetric change vary with slice thickness?

- All needs to tie back to clinical applications

Action Items:

- Dr McNitt-Gray's slide deck to be distributed to the group (Completed: 11.10.2008)
    - Posted on the QIBA Wiki (http://qibawiki.rsna.org/index.php?title=VolCT_-_Group_1B)
    - Group 1B comments welcome