QIBA VOL-CT WebEx
August 18, 2008 (11am-12pm CDT)
Call Overview

In attendance:

Nicholas Petrick, PhD (Moderator)
Rick Avila, MS
Wendy Hayes, DO
Ronald Gottlieb, MD, MPH
Michael McNitt-Gray, PhD
James Mulshine, MD

Kevin O'Donnell
Sandra Scheib, RN, MSN, CNPWH
Binsheng Zhao, PhD
Fiona Miller (RSNA)
Joe Koudelik (RSNA)

Dr. Petrick has scheduled a conference call with Drs. Fenimore, Hayes, McNitt-Gray and Avila to discuss acquisition protocol for the Phantom studies; interested parties were invited to contact Dr. Petrick.

Rick Avila –high resolution CT data
- Assembling best collection of high resolution data
- Data also available from the NCI Cancer Foundation
- Best collection of annotated data is from Dr. Gottlieb at Roswell (not thin slice; 5mm)
- Only small amount of thin slice data available; 2mm or less
- Future data collection recommendations need to specify thickness, scanner type and scanner coverage
- For Lung cancer 1.25mm slice should be available

Dr. Gottlieb volunteered to develop guidelines for parameters for clinical data, to be reviewed by the group.

Using the Groundwork & Profile document as a starting point
- Identify the imaging parameters important to CT Vol quantification
- Define and analyze with phantom data
- Clinical data in parallel with phantom as a next step
- Important to consider how to correlate to clinical outcomes
- Does size change correlate with clinical outcomes?
- Tying to clinical outcomes should be done in parallel with phantom studies
- Test software tools

Rick Avila shared the recommended CT acquisition profile:
- Scanner > 16 slice
- Thickness <1.25mm (not consistent with current clinical trials)
- Spacing: No gaps; overlap OK
- Recon. Kernel: Non edge-enhancing since current edge enhancement is only done in 2D instead of being a fully 3D enhancement.
- Dose: Airway SD <100HU
- Retrospective reconstruction can be utilized to get highest quality data but need to consider time needed, liability issues
- Thin slice can be converted/reconstructed to thick slice
- Good algorithms dependent on thinner slices (<2.5mm), better computational assessment

- Current profiles based on lung imaging; modifications may be needed for liver/abdomen

Aspects of data collection
- What is necessary for software (and/or research) tools to work
- What do we want to answer with data sets
- Inventory of data already available needed
- Volumetric estimation
- RIDER criteria
- What rectifies with clinical outcome (endpoint)
- Radiation exposure
- Reduction of noise level
- Data and clinical outcomes correlation important
- Quality of clinical data needed not known
- Comparison of thick vs. thin slice data needed

Funds needed for data collection; someone needed to develop a budget

Agenda items for 8/25 Meeting:
- Validation Plan update- Dr. Mozley
- Review of Guidelines for parameters for clinical data - Dr. Gottlieb (This may take longer than a week to put together)
    - Baseline requirements for parameters needed
    - Available data sets
- Update on initial discussion on developing a phantom study protocol (Drs. Petrick and Femimore)