

QIBA VOL-CT WebEx - July 21, 2008 (11am-12pm CDT) Call Overview

In attendance:

Lawrence Schwartz, MD (Moderator)
Rick Avila, MS
Martin Barth
Charles Fenimore, PhD
Robert Ford, MD
Ronald Gottlieb, MD, MPH
Bruce Hillman, MD
Michael McNitt-Gray, PhD
P. David Mozley, MD

James Mulshine, MD
Daniel Nicolson
Nicholas Petrick, PhD
Sandra Scheib, RN, MSN, CNPWH
Uri Shreter, PhD
Linda Bresolin, PhD, MBA, CAE (RSNA)
Tracy Schmidt, MS (RSNA)
Fiona Miller (RSNA)
Joe Koudelik (RSNA)

Discussion Overview

- Expert Knowledge in Image Analysis
 - Need to assess contribution of “expert” knowledge
 - Are software tools available to do the same job?
 - Challenges concerning automated software
 - Variance and bias in volume with various software packages (Fundamental estimation approach - to reduce bias)
 - Evaluation of future tools needed – need consensus on assessment rules
 - Acceptability testing and metrics required

- Specific Aims Required to Move Vol-CT Forward
 - Develop metrics and rule sets to assess software now and in the future
 - Acquisition platform requirements – parameters are key
 - Analysis plan needed
 - Apply image analysis process to UC Davis data set once received, then use the same methodology with FDA data once available

- Data Acquisition
 - Part IA: UC Davis phantom data currently available
 - Obtain images from this data set to look-over (L. Schwartz to ask J. Boone for data)
 - Have UC Davis data set (images) forwarded to RIDER
 - Part IB: FDA won't release their data until late November 2008 (N. Petrick to get an example)
 - Currently, 9 RIDER scan configurations available/downloadable from NIST
 - Expand phantom data collection across vendors (GE, Philips, Siemens)-no commercial software used
 - Acquire range of parameters – try to match across all vendors
 - Need to do change analysis on nodules (5 mm-6 cm)
 - Part IC: NIST Bioexchange 2008 (FTP) site with 6 of 9 FDA cases available
 - Volumetric change analysis (algorithms)
 - NIST goal is benchmarking with broad goal of developing performance metrics

- Thin-slice clinical data lacking
- Power concerns - Current data set too small to begin developing an alternative to RIDER
 - Hundreds of cases required to challenge RIDER
 - Should be part of Phase 2 – predicting response, identifying earlier markers
- Pharmaceutical Industry “Staged Investment” Strategy
 - Quick-kill decisions used to halt projects
 - Based on phantom data
 - Small PET sets
 - Develop roadmap with concrete milestones and decision points for non-imaging management
 - Pharmaceutical industry may provide funding

Action Items from July 21st call:

- Joe Koudelik (RSNA) to send latest matrix to the group to review for any updated or new goals (Completed 7/23/2008)
- Charles Fenimore to email slides to Joe for distribution to group (Completed 7/21/2008)
- Nicholas Petrick to email NIST FTP link to Joe for distribution among Vol-CT group (Completed 7/24/2008)
- Lawrence Schwartz to follow-up with John Boone concerning UC Davis data (to share with NCI)