

QIBA Volumetric CT Tech Committee Update

Monday, July 25, 2011 at 11 am CDT

Call Summary

In attendance

P. David Mozley, MD (Co-chair)
Lawrence Schwartz, MD (Co-chair)
Maria Athelougou, PhD
Hubert Beaumont, PhD
Andrew Buckler, MS
Baiyu Chen, PhD
Charles Fenimore, PhD
Kavita Garg, MD
Luna Hilaire, PhD
Philip Judy, PhD
Michael McNitt-Gray, PhD
Alec J. Megibow, MD, MPH

Kevin O'Donnell
Guillaume Orieux
Nicholas Petrick, PhD
Yuanxin Rong, MD, MPH
Michael Silver, PhD
Daniel C. Sullivan, MD
Ying Tang, PhD
David J. Vining, MD
Binsheng Zhao, DSc

RSNA

Joe Koudelik
Madeleine McCoy

Discussion

- Round-1 project updates
 - Dr. Charles Fenimore (Group 1C): Inter-Scanner Comparison of Reader Nodule Sizing in CT
 - Charge: To agree on protocol, specifics of measurement and data collection.
 - Goals: Reader study to characterize uncertainty in volume and other reader-based sizing of nodules in CT imagery collected on scanners from several vendors.
 - Imaging protocol composed of 2 arms: a standard arm based on ACRIN 6678 and an image quality-based, device-independent arm.
 - Imaging and curation completed for 12 nodules using 6 different scanners at 6 participating acquisition sites: FDA, Duke, University of Maryland, UCLA, Toshiba and NIST.
 - 7 readers from CoreLab Partners to perform mark-ups using identical tools
 - Next steps for Group 1C:
 - Reading will begin on 7/25/11 and should be complete by the end of August.
 - Notation is made for slight modifications in randomizing.
 - Dr. Binsheng Zhao (Group 3B)
 - Project overview: The validation of volumetric CT as biomarker for predicting patient survival (using multi-center colorectal clinical trial data).
 - Study aims: (1) To explore variability in measuring tumor volumes (uni- and bi-dimensional as well) and (2) To correlate responses assessed by these three measurement techniques with patient survival.
 - 2-3 experienced radiologists will be conducting reads on 30 patients at baseline, at a 6 week and a 12 week follow-up.
 - Total tumor burden as well as independent lesion variability will be addressed.
 - Next steps for Group 3B:
 - Dr. Zhao agreed to give regular updates to the Vol-CT TC.
 - All measurements are to be completed by the end of September.

- Complete statistical analysis is proposed to be completed by November.
- Profile/Protocol Update
 - Profile draft near ready to release
 - The claim language needs to be clarified.
 - Dr. Mozley suggested expanding the pool of intellectual talent before finalizing the profile draft.
 - The next step will be the approval process (ie, voting) for the 8 weeks of public comment phase to begin.
- Dr. David Vining commended Dr. Lawrence Schwartz on a recently published *Journal of Clinical Oncology* (JCO) paper, entitled, "Variability of Lung Tumor Measurements on Repeat Computed Tomography Scans Taken within 15 Minutes"
Abstract: <http://jco.ascopubs.org/content/early/2011/06/29/JCO.2010.33.7071.abstract>

Next Steps

- Dr. Schwartz to update and forward copy of Profile to Mr. Buckler
- Project updates will continue on next call scheduled for 8/01/11
 - Dr. Athellogou on Group 3A
 - Dr. Garg on Colorado Project