

QIBA DCE-MRI Technical Committee Update
Wednesday, June 24, 2009
11 am CDT

Call Summary

In attendance:

Gudrun Zahlmann, PhD
Michael H. Buonocore, MD, PhD
Daniel P. Barboriak, MD
Andrew Buckler, MS
Laurence Clarke, PhD
John Freymann
Brian Hughes
Edward F. Jackson, PhD
Gregory Karczmar, PhD
Colin G. Miller, PhD
Chahin Pachai, PhD

David E. Purdy, PhD
Annette Schmid, PhD
Mitchell Schnall, MD, PhD
Daniel C. Sullivan, MD
John Waterton, PhD
Thomas Yankeelov, PhD

RSNA staff

Fiona Miller
Joe Koudelik
Susan Anderson

Phantom Scanning Progress (Drs Karczmar and Jackson)

- U Chicago collecting image data; 1st scan completed, second scan week of June 29
- Dr Jackson to send Dr Karczmar draft T1 data (for both GE and Siemens) for comparison with U Chicago data
- 2nd phantom at MD Anderson; has been scanned twice
- Data is accessible at NCIA site
 - Go to log-in page
 - Collections Dialogue box
 - Choose "QIBA"
- Dr Ashton to test the NCIA FTP site for image data downloading (of Dr Jackson's data)
 - Initial data analysis looks favorable
- Drs Jackson and Purdy scanned homogenous phantom on Siemens Esprit and developed draft protocol including 18 5mm slices to obtain temporal resolution (10 seconds time resolution on Siemens and approx 8.3 seconds on GE; TR approx 5 milliseconds on Siemens and approx 4 milliseconds on GE)
 - Dr Purdy completing workaround, optimization and troubleshooting for Siemens protocol
 - Dr Purdy will complete changes related to TR/T1/ flip angle and will distribute to group
- Draft Siemens protocol to be forwarded to Dr Rosen (U Penn); Phantom 2 soon to follow
- GE protocol remains unchanged (if Dr Purdy proposes no changes); send to Dr Karczmar (U Chicago)
- Need minimum adjustments at individual scanning sites; reminder to keep protocols as generic as possible

NCI Archival Site (John Freymann)

- Discussion of file naming convention in directory
 - Existing long directory names are DICOM format
 - Users would prefer replacing DICOM names with description of study; these directory names do not work well with DICOM programs though
 - Mr Hughes will address with developers and communicate with Dr Ashton
 - Suggestion to spell-out “prime” in series naming (i.e. A-Prime)

NIBIB Proposal (Dr Zahlmann)

- Decision to keep \$25,000 in budget for synthetic data project; may be alternate sources of funding available in addition to NIBIB funds
- Continue working on test-re-test study protocol; may be alternate sources of funding available in addition to NIBIB funds - protocol could be used to ‘attract’ additional funding
 - Feasible to mention cost-sharing, e.g., 75% from contract and 25% other sources
- Discussion of funding for personnel; need funding for support of MR physicist and computer/data personnel
 - Funding fractional time for personnel is difficult
- Decision to add funding request for further analysis of phantom data although the timing gap between phantom study and clinical study is difficult – funding flexibility built into the proposal

Synthetic Data (Dr Barboriak)

- David Thomason has been working on software for several years
- NIH conference on standardizing analysis software promoted single software solution
 - Preference for ICAD package for several reasons including support (a single software solution)
- Will continue discussion of software selection (one package or several) for test-re-test study on future calls

Next Steps:

- Dr Ashton to test the NCIA FTP site for image data downloading (of Dr Jackson’s data)
- NIBIB proposal:
 - Short description of projects (approx ½ page) to be sent to Dr Zahlmann
 - Dr Barboriak: budget for synthetic data project, paragraph with bridge wording how synthetic and clinical test data fits into overall QIBA activities
 - Dr Barboriak: paragraph describing test-re-test study
 - Dr Karczmar: paragraph on additional phantom data analysis emphasizing impact on clinical data
 - Dr Jackson: paragraph on description of phantom study to justify phantom budget
 - Dr Buonocore: paragraph describing phantom analysis software development
 - Provide justification for funding for physical phantom, e.g. possible modification or overhaul of existing phantom
 - Close the gap in discussion of phantom and clinical study
- Determine future activities and call schedules

- All contributed text to Dr Zahlmann by 6/25/09 to finalize the proposal; Dr Zahlmann to review proposal for readability before forwarding to the group