

QIBA Perfusion, Diffusion and Flow – MRI Technical Committee Update Call

Wednesday, 25-July-2012 at 11 AM CDT (GMT-5)

Call Summary

Participants

Edward F. Jackson, PhD (Co-chair)
Daniel P. Barboriak, MD
Michael Boss, PhD
Orest B. Boyko, MD
Andrew J. Buckler, MS
Thomas L. Chenevert, PhD
Caroline Chung, MD
Patricia E. Cole, PhD, MD

Daniel Gembris, PhD
Alexander Guimaraes, MD, PhD
Rajan Jain, MD
Gregory Karczmar, PhD
Jiachao Liang, PhD
Chen Lin, PhD
Estanislao Oubel, PhD
Thorsten Persigehl, MD
Mark Rosen, MD, PhD

Daniel Sullivan, MD
Ying Tang, PhD
Ona Wu, PhD

RSNA

Joe Koudelik
Madeleine McCoy

General Discussion

- DWI organ-specific literature review update (Dr Boss)
 - Dr Karczmar volunteered to assist with the DWI prostate literature review
- Funding application update (Dr Sullivan)
 - Dr Sullivan and RSNA Staff are drafting the “Round-3” application for NIBIB funding with a statement-of-work focus on the actual science, as opposed to high-level goals as done previously
 - Draft to be presented to all Tech Cttes in late-August 2012 for input/feedback
 - Completed draft to be ready by mid-September
- DCE-MRI phantom analysis software update (Dr Jackson)
 - Eight previously identified software bugs identified during initial beta-testing
 - 60% have been addressed by VirtualScopics
 - Dr Chenevert to send Dr Jackson data to be tested using the VirtualScopics software to determine if Philips scaling factors are being addressed
 - Outstanding issues remain which will result in additional testing and improvements, e.g., ROI numbering, fitting issues, little-/big-endian issues, etc.
- DCE-MRI Phantom V2 image acquisition update (Dr Jackson)
 - Drs Jackson and Ivancevic working on Philips data scaling factor issues with assistance from Dr Karczmar, if necessary
 - Dr Jackson reminded the Tech Ctte that there are 3 additional DCE-MRI V2 Phantom copies now available (4 total made with an additional 3-4 being fabricated). One copy is at UPenn for use in site qualification for the QIBA/ACRIN 6701 test-retest trial. One copy reserved for similar use, if needed.
- ACRIN 6701 Test-Retest study update (Dr Rosen)
 - The study protocol (including the DWI coffee break amendment) and imaging manual are nearly completed
 - The imaging manual will address flip angle, temporal resolution, and all other MRI acquisition details
 - Data have been acquired at UPenn (Siemens) using the updated version (2) of the DCE-MRI phantom. The wealth of 3.0T data submitted (w/ and w/o parallel imaging, w/ and w/o distortion correction) will provide information that will inform the development of the next release of the DCE-MRI Profile.
 - The UPenn IRB has approved the protocol.
 - Dr Rosen is now actively working to identify an additional 5 clinical sites.

- DRO project update (Dr Barboriak)
 - Data has been submitted from multiple investigators using a variety of data processing packages.
 - The preliminary results have been obtained from submitted data and there was an encouragement for additional submission of datasets. (Output format desired: Raw dumps of parametric maps, e.g., Analyze format).
 - Discussion re: anonymity of individual site results to encourage broadest participation and to not implicate any specific commercial package as being “good” or “bad”. The DRO test objects and ground truth JSim results can be used by sites and vendors to evaluate software packages.

Next steps:

- Next call scheduled for Wednesday, August 8th, 2012 at 11 AM (CT)