

QIBA DCE-MRI Technical Committee Update Call

Wednesday, February 22, 2012

Call Summary

In attendance

Edward Jackson, PhD (Co-chair)
Edward Ashton, PhD
Daniel P. Barboriak, MD
Michael Boss, PhD
Orest B. Boyko, MD
Paul L. Carson, PhD
Barbara Croft, PhD

Daniel Gembris, PhD
Gregory Karczmar, PhD
Hendrik Laue, PhD
Chen Lin, PhD
Estanislao Oubel, PhD
Thorsten Persigehl, MD
David E. Purdy, PhD
Edward Somer, PhD

Ying Tang, PhD
Gerald L. Wolf, PhD, MD
Ona Wu, PhD
Xiangzhi Zhou, PhD

RSNA

Joe Koudelik
Madeleine McCoy

Phantom Analysis Software Update - software and phantom data available for testing

- Process for downloading the phantom prototype data and analysis software now in place
- Format of the data
 - Dr. Jackson provided an overview of the prototype phantom data available on the RSNA FTP site; a single 180 MB file in Zip format
- Plans for voluntary testing and feedback
 - Beta-testing of software encouraged; user feedback to be directed to Dr. Ashton at: ed_ashton@virtualscopics.com (with Cc to RSNA staff at: jkoudelik@rsna.org)
 - Image header issues affecting software function; being addressed at VirtualScopics
- RSNA Staff to distribute FTP site access instructions to any committee member interested in "beta testing" the software and willing to provide feedback.

Update on the DCE-MRI Phantoms (v2) manufactured by The Phantom Laboratory

- 4 Phantoms were received and the fill solutions are being created at MD Anderson Cancer Center
- Choice of phantom fill materials and lack of need for de-gassing process discussed
- Initial phantom testing at MD Anderson Cancer Center expected in 1-2 weeks

Updates on the NIBIB Projects:

- Phase 1: Jackson (phantom), Ashton (software), Barboriak (digital reference object)
 - Dr. Barboriak's DRO project on track; T1 Tofts (version 3) ready for testing; synthetic images with noise expected soon
- Phase 2: Rosen (Test-retest Prostate Project) Overview presented by Dr. Jackson
 - Follow-up progressing after CTEP review of protocol; minor questions raised
 - ACRIN protocol in place and project on schedule

Old Business:

- Incorporation of DWI biomarker efforts within the DCE-MR Tech Ctte
- Updated TC name recommended to better reflect broader biomarker scope
- Continued discussion of gap analysis / proposed projects for next NIBIB funding proposal
- Previously identified targets; volunteers needed to develop project proposals:
 - DWI (confirmed; Dr. Boss drafting project proposal)
 - 3.0T specific issues, including B1 mapping and corrections (Drs. Purdy, Barboriak and Rosen)
 - Impact of Parallel Imaging on QI biomarkers and corrections (Drs. Purdy, Barboriak and Rosen)
 - Open image archive / database needs for MR QI biomarker data

Next Steps

- Dr. Jackson to analyze the synthetic T1 data DRO created by Dr. Barboriak using the VirtualScopics analysis software package and provide feedback; will also provide feedback on the v3 and v2 Tofts DRO using in house as well as other packages available at MD Anderson Cancer Center
- Drs. Jackson and Rosen to follow-up off line concerning the ACRIN test-retest project and any parallel imaging framework proposed thus far by Dr. Rosen
- Dr. Ashton and the VirtualScopics software team to assess image header issues encountered
- Continued discussion of gap analysis / proposed projects for next NIBIB funding proposal
- Next call scheduled for Wednesday, March 7, 2012 at 11 am CST