

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

Wednesday, 26-June-2013 at 11 AM CDT (GMT-5)

Call Summary

Participants

Edward F. Jackson, PhD (Co-Chair)
Daniel P. Barboriak, MD
Michael Boss, PhD
Barbara Croft, PhD
Daniel Gembris, PhD
Hendrik Laue, PhD

Thanh B. Nguyen, MD
Savannah Partridge, PhD
Mark Rosen, MD, PhD
Girish Srinivasan, PhD
Daniel C. Sullivan, MD
Ying Tang, PhD
Ona Wu, PhD

RSNA

Joe Koudelik
Julie Lisiecki
Madeleine McCoy

NIBIB Submission Update (Drs. Jackson and Sullivan)

- Application has been submitted; next steps include:
 - Final review of the 4 submitted projects to include further recommendations, prioritization and refined budget. Final info from TC due to RSNA HQ by July 12th.
 - Funding discussions will be addressed during the July 18th QIBA Steering Committee t-con.
 - A copy of the application is available from TC co-chairs or RSNA Staff.

June 24-25, 2013 IMI Meeting Update (Dr. Boss)

- IMI Phantom Updates:
 - Discussion regarding ADC measurements using PVP:
 - Yields reliable ADC values
 - ADC values of the materials can now be measured at NIST as opposed to offsite
 - PVP phantom developments will be in progress over the next few months:
 - Automated DWI analysis routine is a goal
 - Doping of the PVP solutions to control T₁ and T₂ will be addressed
 - Conductivity of filling solution(s) for optimal coil loading and effect on measured parameters will be investigated
 - Other suggestions to address coil loading:
 - Addition of rings around the top/bottom of the existing phantom
 - Filling the phantom with a salt water solution instead of plain ice water
- 2 phantoms to be available initially; one for domestic and one for international testing.
- Technical details will be shared, and publicly posted, after phantoms have been created and initially characterized.
- Issues to be addressed:
 - Thermometer strip or other temperature assessment capability to be added
 - Etching to be included on the inner plate for orientation distinction
 - Central flange to be repositioned to the inside, if possible, to allow the phantom to fit easily in all existing RF coils, including the Siemens 32-channel head coil.

DWI Profile Update (v1.08) (Dr. Boss)

- Profile v1.08 has been uploaded to the QIBA WIKI.
http://qibawiki.rsna.org/index.php?title=Perfusion%2C_Diffusion_and_Flow-MRI_tech_ctte
- Includes more consistent formatting and a global reference list.
- Organ-specific imaging protocols submitted by Drs. Rosen and Partridge will be placed under image analysis.
- ROI organization still under development and the kidney protocol has been updated by Dr. Guimaraes.
- Dr. Boss requests feedback on all sections.

- Data Analysis section will be written and then reviewed by representatives from each of the major vendors; Philips, Siemens and GE.

Phase II test-retest clinical trial update - ACRIN 6701 (Dr. Rosen)

- University of Pennsylvania and University of Michigan are fully qualified (both DCE and DWI).
- MD Anderson is partially qualified (DCE; DWI pending).
- There is a hold-up with patient accrual and the project is behind on the milestone timeline, but still in compliance with the OWG timeline.
- If there is still interest in participating, please send an inquiry to Dr. Rosen or contact ACRIN staff for assistance.

T₁ Mapping Software Evaluation Update (Dr. Barboriak)

- Dr. Barboriak is in the process of evaluating the responses to his prior email queries.
- Send any additional feedback to Dr. Barboriak.
- Dr. Barboriak plans to be available to lead follow-up discussions on this topic on the July 10th t-con.

Other Business:

- AAPM's Technical Assessment Committee Grant Opportunity
 - Dr. Giger has volunteered to lead efforts to submit a grant application regarding QIBA Compliance procedure and the three QIBA Templates. The proposal will emphasize complementary activities of the recently created AAPM Technology Assessment Institute (TAI) and QIBA.
- Dr. Barboriak plans to attend an August 22nd meeting sponsored by the Institute of Medicine which will discuss Public/Private Relationships.
 - Dr. Barboriak made a request for greater QIBA presence.
 - Dr. Boss will contact Dr. Brady regarding greater QIBA collaboration.
 - Discussion of the template of profiles was suggested for this meeting.
- Feedback sought on Medical Imaging Technologies Multimodality Dynamic Contrast Enhanced (DCE) Perfusion Flow Phantom.
 - RSNA Staff will circulate e-mail from Mr. Gravett.
 - PDF TC members were encouraged to review the materials and, if interested, follow-up directly with Mr. Gravett.

Next t-con: Wednesday, July 10th at 11AM (CDT)

Agenda items to include:

- 1) Final review to include further recommendations and prioritization of the 4 submitted projects for potential NIBIB funding.
- 2) Dr. Barboriak to give updates on the T₁ mapping DRO project.
- 3) Any additional topics sent to Dr. Jackson or RSNA Staff.