

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

Wednesday, 16-April-2014 at 11 AM CDT

Call Summary

Participants

Marko Ivancevic, PhD (Co-Chair)

Daniel Barboriak, MD
Michael Boss, PhD
Martin Buechert, PhD
Thomas Chenevert, PhD
Caroline Chung, MD
Amita Dave, PhD
Benjamin Ellingson, PhD
James Ewing, PhD
Dena Flamini, RT

Daniel Gembris, PhD
Alexander Guimaraes, MD, PhD
Edward Jackson, PhD
Jayashree Kalpathy-Cramer, PhD
John Kirsch, PhD
Daniel Krainak, PhD
Hendrik Laue, PhD
Chen Lin, PhD
Walter Schneider, PhD
Mark Shiroishi, MD
Daniel Sullivan, MD

Ying Tang, PhD
Ona Wu, PhD
Dewen Yang, MD, PhD
Xiangzhi Zhou, PhD
Yuxiang Zhou, PhD

RSNA

Joe Koudelik
Madeleine McCoy

Proposed Agenda:

- EORTC QuIC-ConCePT Update (Dr. Boss)
- DWI Profile Status (Dr. Boss)
- DCE-MR Profile Compliance Update (Dr. Guimaraes)
- QIBA Project Updates QIBA Artificial Data Evaluation Software (Dr. Laue)
- MITA MR Section Co-Organizes Standards Workshop with NIST- July 14-15 at NIST in Boulder* (Dr. Boss)

EORTC QuIC-ConCePT Update (Dr. Boss)

- Dr. Boss has been collaborating with Dr. David Collins regarding further phantom development for clinical trial use.
 - Currently, there are 3 European Test Object Phantoms which address different concerns.
 - Ice-water cylindrical phantom
 - Silicone oil phantom
 - Water phantom with an oil jacket
 - The proposed goal is to combine the best features of these three phantoms into two phantoms, specific to body and head designs
 - The best way to produce the phantoms was discussed.
 - Local Boulder company provided Dr Boss a quote for 15 molded, fully assembled and boxed phantoms, at a cost of \$3K each; NIST (Dr Boss) would supply the PVP fill solutions
 - Dr Boss mentioned that NIST may offer to split the fabrication cost in efforts to promote phantom usage among the research community
 - If approved the QIBA PDF committee members would have initial access to these phantoms for round-robin field testing; eventually (1) uploading data to the QIDW, (2) feeding the DWI Profile, and (3) helping finalize the overall DWI phantom design
 - Further refinements to the internal design still need to be determined—discussions to continue at the BOG at the QIBA Annual Meeting

DWI Profile Status (Dr. Boss)

- Dr. Boss will compile comments and finalize references by the upcoming ISMRM Meeting
- Further discussions to continue at the BOG at the QIBA Annual Meeting

DCE-MR Profile Compliance Update (Dr. Guimaraes)

- The differences between compliance, accreditation and qualification were discussed as they relate to the DCE Profile compliance section.

- Dr. Sullivan outlined four potential compliance scenarios for consideration:
 - **Hardware**-Phantom tests applied by manufacturers and physicists
 - **Software**- requires a set of dataset cases (i.e., algorithms, synthetic DROs)
 - **Imaging Site**-Build on existing programs, centralize the above mentioned components
 - **Radiologist**-this is the most difficult to test in an organized manner
- An accreditation presentation by ACR is on the agenda for the Steering Committee F2F and General Session at the QIBA Annual Meeting
- The compliance procedures must relate to the Profile and stay consistent in the highly debated MR field
- Dr. Guimaraes will circulate the latest draft with all comments incorporated for overview on the next t-con.

MITA MR Section Co-Organizes Standards Workshop with NIST- July 14-15 at NIST in Boulder* (Dr. Boss)

- Further details will be circulated and Dr. Boss will discuss on the next t-con.

Next t-con: Wednesday, April 30th at 11AM (CDT)

Agenda Items:

- QIBA Project Updates QIBA Artificial Data Evaluation Software (Dr. Laue)
- MITA MR Section Co-Organizes Standards Workshop with NIST- July 14-15 at NIST in Boulder* (Dr. Boss)
- DCE-MR Profile Compliance Update--Please send comments to Dr. Guimaraes