

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

Wednesday, May 16, 2012 at 11 AM CDT

Call Summary

Participants

Edward Jackson, PhD (Co-chair)
Sandeep Gupta, PhD (Co-chair)
Daniel Barboriak, MD
Orest Boyko, MD
Andrew Buckler, MS
Martin Buechert, PhD
Thomas Chenevert, PhD
Barbara Croft, MD
Daniel Gembris, PhD
Alexander Guimaraes, MD, PhD
Marko Ivancevic, PhD
Rajan Jain, MD
Gregory Karczmar, PhD

Jiachao Liang, PhD
Chen Lin, PhD
David Purdy, PhD
Edward Somer, PhD
Rohit Sood, MD, PhD
Daniel Sullivan, MD
Ying Tang, PhD
Xiangzhi Zhou, PhD

RSNA

Joe Koudelik
Madeleine McCoy

General discussion

- Two clear goals for the DWI portion of the PDF-MRI breakout session agenda discussed
 - Refining the DWI Claim
 - Refining the DWI Profile outline and defining writing tasks
- First Profile draft expected by the RSNA 2012 Annual Meeting
- Decision made not to initially limit the DWI Profile only to oncology; stroke remains a potential alternative
- Multiple Claims possible per single Profile; caution to avoid redundancy across multiple Profiles
- Test-Retest repeatability is needed for oncology Profile application; stroke would require a completely new Claim not based on repeatability
- Current Claim language is targeted to oncology; a second Claim would be needed for stroke
- All Claim language to be supported by published data/literature

VirtualScopics (VS) phantom data analysis software update

- Beta-testing of the VS software discussed
- Software bugs identified and a recommendation letter to address being drafted
- Order of “fix” priority:
 1. Goodness-of-fit measures to be included
 2. Directory reset when loading new datasets
 3. Software version numbering requested
 4. DCE analysis module corrections for VTR and VIR fitting
 5. Region-of-Interest (ROI) numbering issues encountered; numbers differ from phantom definitions-these need to match
 6. Manual ROI definition and ROI modification difficulties
- Pixel fit failures need to be addressed, i.e., how does the VS code address fit failure issues?
- The VS analysis software should also work with synthetic data
- Need to revisit this project’s scope-of-work (SOW) to determine if requests are reasonable and which software update may be considered
- Residual QIBA/NIBIB funding may be added to extend this project

- Group consensus was that the 32- vs. 64-bit issue was outside the SOW, therefore no follow up is necessary

Topics for QIBA PDF-MRI breakout sessions

- Brief updates on QIBA/NIBIB Round-1 and -2 projects
- Field test issues
- Compliance
- Completion of a proffered fMRI protocol (v1.0)
- DCE-MRI Profile (v2.0) development

PDF-MRI leadership update

Dr Jackson thanked Dr Gupta for his past efforts and contributions as DCE-MRI co-chair. Dr Gupta plans to step down from this leadership role, which will be assumed by Dr Marko Ivancevic.

Next steps:

- Dr Jackson to forward RSNA FTP site details to Dr Ivancevic for reference/testing
- Due to possible image scaling issues, Dr Jackson to try and acquire Phantom v2 data on a Philips 3T scanner at the U of Texas Medical School at Houston and compare results using the VS code
- Next call scheduled for Wednesday, May 30th, 2012 at 11 AM CDT