

QIBA DCE-MRI Technical Committee Update
Wednesday, July 15, 2009
11 am CDT

Call Summary

In attendance:

Gudrun Zahlmann, PhD (Co-Chair,
Moderator)

Michael Buonocore, MD, PhD (Co-Chair)

Edward Ashton, PhD

Daniel Barboriak, MD

Geoffrey Clarke, PhD

Alexander Guimaraes, MD, PhD

Sandeep Gupta, PhD

Brian Hughes

Edward Jackson, PhD

Gregory Karczmar, PhD

Justin Kirby

Colin Miller, PhD

David Purdy, PhD

Mark Rosen, MD, PhD

Mitchell Schnall, MD, PhD

RSNA staff

Fiona Miller

Joe Koudelik

General Discussion:

Update from UChicago (Dr Karczmar)

- Initial phantom scans done at UChicago resulted in some questionable data
- Repeat scans performed and data looks good
- T1 scans appear different than those obtained at MD Anderson CC by Dr Jackson
- Data to be uploaded to NCIA FTP site
- Crack in phantom detected on the finned base attachment; does not preclude imaging
- Once done scanning, phantom to be shipped back to MD Anderson CC for re-evaluation
- Brian Hughes to forward Dr Karczmar NCIA log-in details and password for future data uploads

NCIA FTP Site Upgrades (Mr Hughes)

- System has been upgraded to allow direct uploads; Mr Hughes to work with anyone who requires this route vs. the FTP upload process
- File naming convention being looked into
- Dr Ashton to be given full access to the process
- An updated FTP software version is needed
- Should only the current FTP site be allowed/used? Allowing scanning sites to choose their own upload process may be technically challenging and not recommended
- Long-term data NCIA image data storage and management being addressed by a development team
 - Unique study ID eventually to be used
 - To ease access to stored data and development of processing schemes
 - 2-3 months away from implementation

Siemens Scanner Profile Specifics (Dr Purdy)

- UPenn to run phantom scans on both new and old Siemens' systems
- Dr Purdy has drafted specific Siemens parameters, e.g. slice thickness, number of slices/partitions to use
- Dr Purdy noted that slice spacing and thickness are determined by several parameters
- Reminder to keep "auto-sampling" turned off so that
 - RF profiles don't change
 - Can manually change the oversampling and discard any bright edge slices, i.e. not needed
- Dr Purdy's protocol sent to UPenn for implementation on Avanto
- Drs Purdy and Rosen to discuss off-line specific details if needed
- Norm Butler is contact person for phantom shipping address for UPenn
 - Include "ATTN: Dr Mark Rosen" on shipping label

MD Anderson CC Update (Dr Jackson)

- Dr Ashton's data was pulled and analysis has begun
 - All phantom positions appear consistent
 - <1% correction across all samples; data looks good
- Dr Jackson to check his datasets to determine reason for the variation of systematic bias between images obtained with Body coil versus Phase Array coil
- Varying image intensity patterns seen on phantoms scanned with identical parameters and coil; a concern Dr Jackson will look into and report back on next group call

QIBA-ACRIN Relationship (Dr Schnall)

- Much synergy and interest to work together, support for QIBA-ACRIN collaboration was agreed upon by group members
 - RFA to be posted on [Wiki?] by Dr Schnall
- ACRIN (clinical domain) to help recruit patients and gain access to imaging sites
 - ACRIN could help multiple sites participate in reproducibility studies
- QIBA (phantom domain) to contribute phantom utilization and technical expertise, e.g. a rigorous phantom calibration approach
- A general DCE-MRI scanning protocol may be difficult to develop because technology changes too fast
- DCE-MRI needs more support to be utilized in multi-center trials
 - ACRIN to highlight current issues (i.e. barriers) on Oct 2 '09 Pentagon City meeting
- ACRIN's collaboration with CRO's may be problematic, e.g. core lab commercialization may be a conflict of interest
 - Commercial partners to outline potential concerns and send to Dr Schnall
 - Colin Miller (BioClinica), Gudrun Zahlmann, (Roche)
 - Need to determine if collaboration with ACRIN might create a conflict due to their commercial position
 - Dr Schnall will draft a response to outline how these issues can be addressed
- Dr Schnall to outline how various neutral groups might work; a pre-competitive effort

- Examples of how ACRIN worked with past commercial partners are needed

ACRIN Workshops

Dr Schnall mentioned the ACRIN workshops on Oct 2, 2009 in Pentagon City

- Drs Karczmar and Zahlmann interested
- Drs Barboriak and Jackson plan to attend

Next steps:

- Next call to discuss Dr Jackson's phantom data and Dr Ashton's data analysis
- Profiles of varying intensity seen with identical scanned phantoms; an issue Dr Jackson will look into and report back on next group call
- Brian Hughes to forward Dr Karczmar NCI log-in details and password for future data uploads
- Commercial partners to outline potential concerns and send to Dr Schnall
 - Colin Miller (BioClinica), Gudrun Zahlmann (Roche)