

QIBA DCE-MRI Technical Committee Update
Wednesday, June 17, 2009
11 am CDT

Call Summary

In attendance:

Gudrun Zahlmann, PhD
Michael H. Buonocore, MD, PhD
Edward Ashton, PhD
John Freymann
Alexander Guimaraes, MD, PhD
Luna Hilaire, PhD
Brian Hughes
Edward F. Jackson, PhD
Gregory Karczmar, PhD
Justin Kirby

Desiree E. Morgan, MD
David E. Purdy, PhD
Mark Rosen, MD, PhD
Annette Schmid, PhD
Mitchell Schnall, MD, PhD
Katherine Scott, PhD

RSNA staff

Joe Koudelik
Mary Cerceo

General Discussion:

Phantom Scanning Progress (Drs Karczmar and Jackson)

- U Chicago already collecting image data
- Coronal plane imaging confirmed
- Slight leak observed with the cuboid phantom (spot repair recommended)

NCI Archival Site Ready for Data (John Freymann, Brian Hughes and Justin Kirby)

- First Study (test cases) from MD Anderson already received and posted to the FTP site
- Data is accessible and ready for download
 - Go to log-in page
 - Collections Dialogue box
 - Choose "QIBA"
- Secure FTP (SFTP) site to be operational soon; FTP site with folders set-up in the meantime
- Brian Hughes has accounts set-up for each scanning site
 - SFTP was agreed upon as a fast, reliable system to upload images
- NCI support team emailed account info to scanning site contacts on May 7, 2009
 - Email from Ms. Kelly Hunsecker (NIH/NCI) <hunseckerk@mail.nih.gov>
- Dr Ashton to test the NCI FTP site for image data downloading (of Dr Jackson's data) within 1-2 days; report back to John Freymann with any difficulties
- Testing to be complete before Clinical Test-Retest project begins

Siemens Protocol Readiness Update/Work Assessment (Drs Jackson and Purdy)

- Working together at MD Anderson, Drs Jackson and Purdy found discrepancies between GE and Siemens systems

- e.g. Matrix size, pixel resolution and shape, number of protocol lines varied, variable flip angles, over sampling issues, T1 irregularities
- Siemens sequences need more work
- Once oversampling issues finalized, Siemens protocol to be sent to U Penn
 - Siemens *Vibe* sequence is considered the basic sequence to use for Siemens scanners
- Dr Jackson to give Dr Rosen approval to proceed (and ship the second phantom) once protocol finalized; protocol write-up to be sent soon

NCIA Image Requirements:

- Name the image data series description very clearly before sending to NCIA
 - e.g. Ratio / Mount / BC / Rotation A - A° (may need to write “prime”)
- Phantom rotational differences not easily determined
- Need straightforward wording suggestions for consistent file naming at NCIA
- Dr Jackson to send suggested wording to all sites for consistency

Cautions concerning FTP data storage (Brian Hughes-NCI)

- Relational database storage structure being used
- Files not being identified
- Descriptions may not fit allocated web-space (i.e. label size)
- Original tags not modified

NIBIB Proposal (Dr Zahlmann)

- Dr Rosen provided site efforts to Dr Zahlmann – very useful
- Project descriptions needed for incorporation for one last revision and editing cycle
- Drs Jackson and Karczmar to edit final version by June 18th, 2009
- Rough estimate of P.I. and oncologist costs - still need this type of detail per site
- Need to estimate true cost to help determine what type of cooperative work still needed
- Need a clear understanding of what’s needed to move forward
- Project budget to be ready by June 18th

Thoughts for who should oversee this future activity needed

- ACRIN open to collaboration with QIBA (per Dr Schnall)
- This could serve as an ACRIN protocol (co-sponsor)
- P.I.’s could participate
- ACRIN involved with three DCE-MRI trials currently, i.e. experienced
- Must be specified as an ACRIN Protocol or an ACRIN Service
- ACRIN’s Experimental Imaging Science Committee would fit here
- Guidance for ACRIN to develop a solid protocol would be helpful
- QIBA could use ACRIN as a reference in collaborative approaches
- This is a QIBA-type experimental project with close ACRIN collaborations, but not an ACRIN project
- How far can QIBA go needs to be determined
- A seamless workflow of normal clinical patient evaluation needed
- A standard approach to DCE-MRI is goal

- QIBA may not be a standard clinical workflow process / might prove difficult to acquire patients
- Manufacturer input also needed

Dr Zahlmann gave thanks to:

- Drs Jackson and Purdy for working on the Siemens protocol
- Dr Karczmar for beginning the next scan set (U Chicago)
- Dr Ashton for proceeding with an image download test

Next Steps:

- Dr Ashton to test the NCIA FTP site for image data downloading (of Dr Jackson's data) within 1-2 days; report back to John Freymann with any difficulties
- Dr Jackson to send suggested wording to all sites for consistent file naming at NCIA
- Dr Jackson to send Siemens protocol and phantom #2 to Dr Rosen (U Penn); Dr Rosen to send preferred shipping address to Dr Jackson
- Mr Freymann to re-email NCIA FTP site log-in instructions to Dr Karczmar (U Chicago)
- Brian Hughes to email NCIA site credentials
- Dr Karczmar to begin image upload to NCIA from U Chicago
- Dr Zahlmann will send final version NIBIB Proposal Outline to Drs Ashton and all clinical sites for final feedback, then distribute to the entire committee
 - Main team to see draft next Tuesday; need critical review for Wed call (6/24)
- Dr Schnall to send link to Dr Zahlmann – how a collaborative approach might work for QIBA (how QIBA could fit)
- Dr Schnall to send narrative to Tech Ctte – “How ACRIN interacts with other Groups”
- Dr Annette Schmid to email background CRO perspective to Dr Zahlmann within two weeks