QIBA DCE-MRI Technical Committee WebEx
November 10, 2008, 10:00am CST
Call Summary

In attendance:

Gudrun Zahlmann, PhD (Co-Chair)
Jeffrey Evelhoch, PhD (Co-Chair)
Edward Ashton, PhD
Cecil Charles, PhD
Laurence Clarke, PhD
Sandeep Gupta, PhD
John Freymann MD
Carle Jaffe, MD
Gregory Karczmar, PhD
David Purdy, PhD
Annette Schmid, PhD
Katherine Scott, PhD
Daniel Sullivan, MD
Linda Bresolin, PhD, MBA, CAE (RSNA)
Fiona Miller (RSNA)
Susan Anderson, MLS (RSNA)
Joe Koudelik (RSNA)

Training (e.g. photo/video) for rotation and handling of phantom

- Dr. Karczmar suggested that detailed instructions are needed for rotation and handling of the phantom.
- Further discussion needed with Dr. Jackson to consider feasibility of a video/photo training session.

Archiving and Transfer of Images:

- Dr Freymann of NCI indicated that the most straightforward method is to pack data onto a CD and send. If this method is used, a copy should also be sent to NCI for archiving.
- NCI could also provide client software for upload /download of data directly to/from NCI.
- Association of data through DICOM headers but cannot be identified by site
- Duke University expressed an unequivocal interest in electronic transfer.
- Dr. Ashton indicated that this would be acceptable if time efficient
- If there is an interruption in the transfer, it is usually possible to pick up where transfer left off.
- MDACC to test upload system when phantoms are delivered
- Dr. Freymann to send documentation to Dr. Zahlmann to incorporate into the draft protocol.
- NCI will store and archive the data
- NCI can provide software (C++). [Because the software is non-commercial, there will not be a 24/7 helpline.]
- Parametric images can be easily uploaded
- Calculations and intermediate data can be uploaded/ generated as needed.

Security issues: anonymization of data and controlled access to data

- Anonymization of phantom data is unnecessary
- Password protection available
- VirtualScopics will conduct image analysis
    - Software will be available as executable live application
    - Results will be made publicly available
- Suggested that data would be publicly released after publication.

Discussion of Section 3 of Draft protocol: Aims of the study

- Dr. Clarke suggested findings and methods from Dr. Kinahan's PET-CT study may be relevant.
- Consider whether Aim #5 needs to address relationship between signal and relaxation rates
    - Slope of Δ signal and ΔRI relationship
    - Signal intensities need to be published
- Draft language for Aim #5 will be provided by Dr. Evelhoch

Discussion of Section 4 of the draft protocol: Design and Duration of the study

- It was suggested that imaging sites be given test/retest scheduling flexibility, e.g. 3 days, 10 days, etc.
- Flexibility will allow participants to take advantage of less expensive shipping methods (e.g. 5-day versus 3-day).
- Add verbiage to indicate that repeat scan time can be determined by the site

Discussion of Sections 9 and 10 of the draft protocol: Image Analysis and Data Analysis

- Section 10 on Data Analysis needed further clarification
- Define what Data Analysis is--what needs to be done.
    - Could be statistical/comparing data
    - Possible division of responsibilities across multiple sites
    - Use approach of first looking at raw data followed by statistical analysis.
    - Need to involve a statistician-
        - RSNA/Dr. Sullivan to contact Dr. Gatsonis
        - Group also suggested Chuck Meyers whose team includes a statistician.
    - Tabulation of data by site and by time
    - For each parameter look at range, mean, median and variance
- Suggested that results need to be reviewed from Image Analysis phase before determining specific details/methods for Data Analysis phase

Discussion of the draft protocol

- Dr. Charles suggested defining the word "comparable" in terms of images
- Consider determining what percentage error from T1 readings is acceptable to consider both phantoms equivalent - needs to be addressed
- Using simple(r) phantoms for future clinical experiments suggested

Action Items

- Contact Dr. Gatsonis regarding statistical advice
- Schedule T-con with group in 10-12 days
- Dr. Zahlmann to update protocol