QIBA DCR-MRI Formal Protocol - Image Analysis Overview
December 19, 2008, 10:00am CDT
Draft Call Overview

In attendance:

Jeffrey L. Evelhoch, PhD (Co-Chair)   Michael V. Knopp, MD, PhD
Edward Ashton, PhD   David E. Purdy, PhD
Robert Gillies, PhD   Annette Schmid, PhD
Igor D. Grachev, MD, PhD   Glenn S. Slavin, PhD
Alexander Guimaraes, MD, PhD   Fional Miller (RSNA)
Edward F. Jackson, PhD   Susan Anderson (RSNA)
Gregory Karczmar, PhD   Joe Koudelik (RSNA)

General Discussion

Discussion was focused on the Image Analysis detail for the QIBA DCE-MRI formal study protocol to assist Dr Ashton with the image analysis requirements and expectations. (**#9 Image Analysis** on page 10 of formal protocol, items 1-6 discussed)

- Preliminary data needed to determine whether noise filtering is required
- Image Analysis requires only signal and contrast evaluation with and without ratio correction (per Dr Evelhoch)
- Reproducibility removed from Image Analysis Phase
- Contrast falls back on the Data Analysis Phase
- Use of single pixel temporal evaluations to create manageable data amounts (i.e., temporal averaging will create huge amounts of data)
- Agreed Volume of Interest (VOI) to be the first run
- Parallel imaging turned off
- No research or service modes for scanners
- Drift needs to be addressed in the protocol
- Signal to noise ratio (SNR) discussed
    - Drop temporal method of evaluation suggested by Dr. Purdy
- Goal is to keep process as simple as possible to allow for broad implementation
- Labeling/Naming of scans discussed
    - Image headers need to be clearly defined from all scanners
    - Dr Ashton to draft a "Data Transmittal Form" that all scanning locations are to follow
- Need to further develop the Data Analysis phase; do not want to mix Image and Data Analysis. May want to parse out Data Analysis to different sites

Action Items:

- Dr Ashton to draft "Data Transmittal Form" for scanning sites and distribute for comment
- Dr Jackson to perform the first test scan once phantoms are delivered
- Need statistician involvement