QIBA Diffusion-Weighted Imaging MR Biomarker Committee (BC) Call

Thursday, April 18, 2019 at 2 PM (CT)

Call Summary

Participants

			RSNA
Michael Boss, PhD (Co-Chair)	Dena Flamini, RT	Nancy Obuchowski, PhD	Joe Koudelik
Thomas Chenevert, PhD (Co-Chair)	Edward Jackson, PhD	Savannah Partridge, PhD	Susan Stanfa
Hung Do, PhD	Dariya Malyarenko, PhD	Brian Taylor, PhD	

Moderator: Dr. Boss

Review of Previous Call Summary

- The notes from February 21, 2019 were approved as presented

Scanner Imaging Protocol Contribution from Canon Medical Systems (Dr. Hung Do)

- Canon protocol parameters were added to Appendix D
- Phase correction requires more clarification from Dr. Do, as well as which receiver coil (size) and channels were used for 1.5T and 3T systems

Public Comment Feedback from the American Association of Physicists in Medicine (AAPM)

- A letter was received from the office of the AAPM President, Cynthia H. McCollough, PhD, FAAPM, FACR, FAIMBE of Mayo Clinic, Rochester
- The QIBA DWI BC was commended regarding its work on this Profile
- General comments regarding both format and content were supportive
- AAPM Feedback that required clarification was addressed: "The AAPM suggests that the authors consider the use of the spleen to improve quality of the liver ADC"
    - The spleen has significantly lower ADC values compared with the liver
    - Literature exists regarding the usage of the spleen as a reference organ to normalize liver ADC to improve the diagnostic performance of DWI for assessing liver fibrosis
    - Dr. Boss to follow-up with the AAPM contact listed on the letter to clarify the meaning of the statement and request literature references
    - If the DWI BC incorporates this suggestion, the information would be included in a discussion section; possibly in Section 3.10: Image Analysis
    - Dr. Taylor to provide Dr. Boss with references focusing on this topic

Public Comment Form Feedback

- The online public comment submission phase closed April 5th
- Dr. Rosen provided feedback regarding Figure 3: Visual assessment of SNR in liver DWI; comment to be added to the resolutions spreadsheet
- An issue with the line numbering in the Stage 1: Public Comment DWI Profile was cited; this discrepancy will need to be taken into consideration as comments (and the lines they reference) are addressed
- Seven reviewers provided comments through the online submission form; imaging technologists were included as they play a vital role in verifying whether the Profile is technically feasible
- The following feedback was discussed:
    - Repeatability Claims do not specify the size of lesion or ROI
        - Some QIBA groups have specified a range of lesion size; others have created a table based on lesion size and provided a coefficient of variation (CoV) for each size

- - Minimum/maximum or range of lesion size from cited literature or CoV across different ranges of lesion size will be provided
  - Related issues on this topic will be addressed in the discussion text of Section 2: Clinical Context and Claims

  - Concern regarding whether b=0 values are valid, citing that variability due to the fact that some scanners do not use this value; b=25-50 was proposed
    - Acceptable, Target, and Ideal values were derived from the literature; it was resolved that changes would not be made to the numbers, but clarification would be provided in relevant discussion section(s)

  - Suggestion to relocate all performance parameter tables to the Appendix, as they break the flow of thought when located throughout the body of the Profile
    - Appreciating that adherence to the QIBA Profile template is necessary for maintaining consistency across QIBA Profiles, Dr. Boss to consult Mr. O'Donnell regarding this suggestion

  - It was noted that the Profile is meant to consist of technical performance guidelines; not best practice guidelines, and only information needed to achieve Claim(s) should appear in the body of the Profile

- Suggestion was made to combine the public comments from both rounds 1 and 2 into a single document
  - All round 1 comments have been fully addressed and resolved as documented in DWI Public Comment/Resolution spreadsheet v1.0
  - Resolving comments was deemed the immediate priority; reformatting the resolution spreadsheet(s) to be a future consideration
  - Dr. Boss aims to determine the type of feedback received (e.g., grammar/simple additions vs. major changes) to estimate the amount of work and time needed to complete changes to the Profile
  - Suggestion to follow up with comment submitters to help address/incorporate feedback more quickly

Next Meeting
- There will not be a t-con on May 16, due to the ISMRM meeting; Dr. Boss to reach out to ISMRM staff to see if a small room would be available for a f2f DWI BC meeting in Toronto
- May finish reviewing comments during offline discussion prior to the next QIBA-hosted t-con on June 20
- Both rounds of public comment to be compiled and posted on the Comment Resolutions QIBA Wiki page
- Hope to initiate vote-to-publish the DWI Profile as Stage 2: Consensus Profile version by the June QIBA Annual Meeting

Next DWI BC Call: Thursday, June 20, 2019 at 2 PM CT