

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

Thursday, August 15, 2019 at 2 PM (CT)

Call Summary

## Participants

Michael Boss, PhD (Co-Chair)

Thomas Chenevert, PhD (Co-Chair)

Amita Dave, PhD

Dariya Malyarenko, PhD

Nancy Obuchowski, PhD

Savannah Partridge, PhD

Lisa Wilmes, PhD

## RSNA

Joe Koudelik

Susan Stanfa

Moderator: Dr. Boss

## Review of Previous Call Summary

- The notes from July 25, 2019 were approved as presented

## Round-2 Public Comments on DWI-MR Profile Resolution Process

- Formatted DWI-MR comment resolution document to be posted on the [Comment Resolutions page](#) of the QIBA Wiki
  - QIBA Process Cmte is working on making key pages on Wiki easier to locate
  - This Wiki page still needs to be populated with comment resolution documents from QIBA Groups other than the CT Volumetry BC
  - Dr. Boss provided an overview of the [Google Sheets public comment resolutions template](#), which is available for use. DWI BC members who participate in other BCs across QIBA were encouraged to use this template for comment resolution in those respective Profiles.
  - The [DWI Public Comment Round 2 resolutions document](#) will be posted soon
  - Public Comment Round 1 resolutions to be reformatted into the template for inclusion on wiki page
- 3.6.1: Profile Activities Discussion Section
  - Discussion re: minimum Time to Echo (TE)
    - The following text was added: "Care should be taken to utilize the same scan parameters across exams, particularly within a study. For example, close attention should be paid to the TE, which should be consistent across exams"
  - Mention of k-space undersampling was added and references to be added accordingly
    - It was decided that the Profile would allude to techniques and provide references, but would not delve further into the topic
    - DWI-MR BC consensus needed re: articles to include; Dr. Boss to send references (DWI reduced k-space, rFOV, multi-shot) to RSNA staff for circulation
  - There was unease re: the location of a "shall" statement in a discussion section; "shall" with was replaced with "can" in: "Whenever possible, true zero  $b$ -value should be acquired; when hardware or software makes this not possible,  $b < 50$  s/mm<sup>2</sup> can be acquired in lieu of true-zero  $b$ -values.
- 3.11 / 3.11.1: Image QA/Discussion Section
  - Specific instructions on method for SNR measurements deemed helpful, i.e. reference to Appendix E
    - Proposed resolution was accepted (App. E contains reference to NEMA methods)
    - In-line reference to Appendix E.2 was made, and reference to appropriate NEMA guidance was added
    - Additional references need to be added and more discussion may be needed

- In Figure 2, values for SNR for (a) and (b) would be instructive AND/OR reporting the average ADC in a common ROI
  - No action was taken, but future revisions of the profile may consider incorporating similar images for which SNR is available via methods described in Appendix E.2
  - More discussion is needed on this topic off-line
- The following comment was an email submission (not included in the comments spreadsheet): low SNR in figure 3C may be due to high liver iron, but iron was not mentioned as a QC issue in validity of liver ADC evaluation.
  - Arguably, this effects the liver and not a liver lesion
  - It was resolved that this would not be addressed in present version of the profile, but may be considered in the future
- 3.12.1: Image Distribution Discussion Section - disposing data should be a suggestion and not a requirement; if data were generated on the scanner as DICOM images, they should be archived
  - This requirement was removed from the specification table and checklist
- Appendix D: Dr. Boss to finish incorporating responses from Canon Medical Systems re: phantom protocol into the Profile working draft
- Highlighting indicating new text related to breast will be removed before the Profile is converted to a PDF and sent out for a vote-to-publish as Stage 2: Consensus

### Next Steps

- References for undersampling techniques in 3.6.1 to be addressed
- References and texts for SNR evaluations in 3.11.1 and Appendix E to be addressed (Dr. Boss to follow up with Drs. Chenevert and Malyarenko separately)
- Both rounds of public comment resolution to be compiled and posted on the [Comment Resolutions QIBA Wiki page](#)
- During the September 19 DWI-MR BC t-con, the following actions will be taken:
  - Last review at the DWI-MR Profile
  - Complexity presented by including multiple organs to be addressed re: an [approach](#) to [Stage 3: Technically Confirmed](#)
- A BC vote-to-publish the DWI-MR Profile as Stage 2: Consensus to be initiated upon completion of the BC [review process](#); the goal is to complete this by **Oct. 31**
  - To proceed with a vote-to-publish, Drs. Boss and Chenevert to simply confirm that the Profile is ready and request staff send an e-ballot to eligible BC voting members
  - Email ballot will then be sent to eligible BC voters, with a separate notification to inform non-voters

**Next DWI-MR BC Call:** Thursday, September 19, 2019 at 2 PM CT

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