

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

Thursday, December 19, 2019 at 2 p.m. (CT)

Call Summary

Participants

Michael Boss, PhD (Co-Chair)

Thomas Chenevert, PhD (Co-Chair)

Ishtiaq H. Bercha, MSc, MSEE

Amita Shukla Dave, PhD

Carri Glide-Hurst, PhD

Dariya Malyarenko, PhD

Nancy Obuchowski, PhD

Savannah Partridge, PhD

Brian A. Taylor, PhD

Lisa Wilmes, PhD

RSNA

Angela Colmone

Joe Koudelik

Susan Stanfa

Moderator: Dr. Boss

Review of Previous Call Summary

- The notes from the September 26, 2019 DWI BC t-con were approved as presented

Stage 2: Consensus Version of the Diffusion-Weighted Magnetic Resonance Imaging (DWI) Profile – Final BC Review

- Since the last t-con, the Profile was circulated for [internal BC review](#)
 - Subject matter experts were assigned to specific sections
 - Minimal revisions were received
- Dr. Boss addressed outstanding issues and updated the Profile based on BC member feedback
- Discussion re: Appendix E
 - Assessment of slope needed; Profile Claims are based on the assumption that slope=1
 - Testing could be added here, and the ADC phantom could be used to collect data that are needed
 - Specifically, at least 5 truth values based on the mean of multiple measurements should result in a linearity relationship of bias
 - The rationale is that the mean of multiple measurements at each truth value would provide a much better assessment of bias
 - Common language to use for assessing the slope was provided by Dr. Obuchowski
 - An appropriate definition of linearity was added, along with steps to assess it
- It was noted that there may be newer uses of DWI at lower/higher field strengths
 - Dr. Boss clarified that the Claim statements and performance specification tables in this Profile are derived from the literature and focus on 1.5T or 3.0T field strengths only
 - A note was added to the Open Issues section stating that alternate field strengths were not addressed in this Profile version
- After final edits were made, the Profile was deemed ready for a BC vote to publish it as Stage 2: Consensus
 - There was a motion for the DWI-MR BC to approve (by Dr. Boss) and it was seconded (by Dr. Chenevert)
 - The vote passed successfully, with 8 yesses, 0 abstentions, and 0 noes
 - The MR CC will be asked to vote on publishing the Profile as Consensus via e-ballot

Next Steps

- Dr. Boss to fix references and create a final Profile PDF; staff will circulate it to MR CC voting members along with a link to an email ballot
 - The main purpose of CC approval is oversight to confirm that the Profile claim is on target and to bring fresh eyes to the overall document
 - Following a successful MR CC vote, the Profile will be published on the [QIBA Wiki Profiles page](#) as [Stage 2: Consensus](#)

- Discussion on [Planning](#) for [Stage 3: Technical Confirmation](#) will occur during the next DWI BC call

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Next DWI-MR BC Call: TBD

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