

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

Thursday, February 18, 2021 at 2 pm (CT)

Call Summary

Participants

			RSNA
Michael Boss, PhD (Co-chair)	Amita Shukla Dave, PhD	Savannah Partridge, PhD	Joe Koudelik
Dariya Malyarenko, PhD (Co-chair)	Gloria Guzmán, MD, MSc, MPH	Jacob (Bram) Stolk, PhD, MBA	Susan Stanfa
Trevor Andrews, PhD	Daniel Margolis, MD	Gudrun Zahlmann, PhD	
Thomas Chenevert, PhD	Nancy Obuchowski, PhD		

Review of Previous Call Summary

- The notes from the January 21, 2021 DWI BC t-con were approved as presented

Achieving Stage 3: Technical Confirmation (TC) for DWI Profile

- Three or more sites are required for Stage 3: TC (aka, Feasibility Testing)
- TC resolution process documents (instructional cover sheet and checklists to be sent to sites, and the TF Resolutions Sheet to be managed internally) are currently in QIBA Process Cmte development
- The [Technical Confirmation Process](#) QIBA Wiki page was reviewed
 - A form for collecting user feedback (Word doc) is linked to this page and will be distributed to DWI BC members for suggested updates
- Dr. O'Callaghan/Invicro team has already submitted feedback via the conformance testing report; comments will be transitioned into the TC Resolutions Sheet
- Since the São Paulo team (Drs. Amaro and Nascimento) did not submit a conformance testing report (only a general project report to the RSNA R&E Foundation), Dr. Boss will provide them with a comment template and request feedback
- Discussion re: phantom scan data to be added to the DWI Profile
 - VERDICT study will result in prostate test-retest data, and Dr. Margolis will obtain phantom scans and recognition that Profile protocol is being implemented
 - Dr. Boss to refer back to the research seed grant study final report that was submitted to the RSNA R&E foundation and presentation slides from a past DWI BC meeting
 - The Brazil study involved scanning an ice water phantom at multiple sites on several different platforms
- It needs to be determined whether the participating institutions in the Brazil team could be included as separate sites required for Stage 3: TC
 - PIs for the Brazil project are at a single institution with access to a 12+ scanners; to qualify as separate sites, there would need to be multiple scanners, with multiple operators in different buildings
 - Technologist feedback would be needed directly from each site, i.e., not received through the PIs of the multicenter study
 - Since they have such a pivotal role in implementing a Profile, improvement in technologist engagement is needed across all QIBA groups
 - To qualify for inclusion as a TC site and demonstrate conformance to the DWI Profile, it will need to be confirmed that the site has completed all required checklist items
- Dr. Dave to lend the ice-water phantom to Dr. Margolis for additional scanning and data acquisition
- Stage 3: TC requires that sites perform Profile checklist requirements, implementing scan protocol and all other Actor parameters; this is the last QIBA Profile stage involving the solicitation of feedback and revising a Profile in response to it
 - Dr. Zahlmann reiterated the need to follow the entire checklist, not only the scanner/phantom-related checklist to help advance the Profile to TC (Stage 3)

- Stage 4: Claim Confirmation (CC) to consist of a small-scale trial including clinical, test-retest patient scanning
 - This would be a formal experiment, testing a hypothesis, comparing scan data with the Profile Claim; if necessary, the Claim would be adjusted in response to study results
 - Development of a peer-reviewed paper would be one of the required outcomes of the study; additional discussion is needed re: other properties of Stage 4: CC
- A standardized TC Resolution template will be used to compile feedback from TC sites, address the input received, summarize cmte discussion, record resolutions, and finally, document changes made to the Profile
- Before a Profile can be brought to BC voting members (and then MR CC) for TC (Stage 3) approval, a final technical confirmation feedback resolutions documentation will need to be submitted and posted on the [Comment Resolutions page](#) of the QIBA Wiki

Profile Structure Discussion: Condensing/Reordering

- As part of the QIBA 2021 Campaign, BCs have been asked to make their Profiles more practical and implementable by technologists, medical physicists and clinical trialists; the goal is to get QIBA Profiles into clinical trials, possibly through Imaging CROs iCRO
- Dr. Boss has received some DWI BC feedback re: improvements to the main body of the DWI Profile
 - Drs. Andrews and Dr. Guzmán to conduct a closer review of the Profile; for now, preliminary information was provided
 - Non-QIBA members (and non-radiologists) may find some terminology to be unfamiliar or confusing
 - Supported moving the checklist to the front of the document, e.g., a technologist would want to be able to easily locate the scanner/operator checklist
 - The Executive Summary should be all-encompassing, relatable to both clinicians and non-clinicians
 - Suggestion to offer a separate, abridged, high-level “quick start” document, focused primarily on critical requirements for Profile conformance for end users such as clinical trialists
 - Discussion on this idea to continue during the March 18 DWI BC Call
 - Dr. Partridge to review the Profile and submit feedback to Dr. Boss

Next DWI-MR BC Call: Thursday, March 18, 2021 at 2 pm (CT)

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