

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

Thursday, October 15, 2020 at 2 pm (CT)

Call Summary

Participants

Michael Boss, PhD (Co-chair)

Amita Shukla Dave, PhD

Daniel Margolis, MD

RSNA

Susan Stanfa

Dariya Malyarenko, PhD (Co-chair)

Gloria Guzmán, MD, MSc, MPH

Savannah Partridge, PhD

Trevor Andrews, PhD

Moderator: Dr. Boss

Review of Previous Call Summary

- The notes from the September 17, 2020 DWI BC t-con were approved as presented

Overview of September 29-30 QIBA Annual Meeting Discussions

- Ways to expedite the advancement of Profiles through Stage 3: Technical Confirmation and Stage 4: Claim Confirmation were discussed
- Aiming for brevity and user-friendliness will facilitate the adoption of QIBA Profiles by interested parties, e.g., clinical trials, CROs, etc.
- The DWI BC was recognized for the advancement of its Profile, as well as its implementation by an imaging site
- QIBA Member Satisfaction Survey results indicated:
 - High overall member satisfaction in regard to potential clinical value of better precision, standardization approaches and collaborative activity (working with clinical experts and colleagues)
 - Need for formal recognition of effort, e.g., Letter of Appreciation to supervisors
 - Formal process for leadership change was deemed not crucial
 - Need for greater outreach
 - More interaction with other professional organizations
 - Publicizing QIBA activities and accomplishments
 - Social media and marketing
 - To move Profile efforts forward more quickly, dedicated Profile writing sessions that could be conducted offline with 4-5 person teams should be planned in addition to regular BC calls
- Publications were discussed; white papers deemed useful but required efforts and time limitations were identified as barriers
 - Charging new QIBA members with drafting publications (as first author) may provide recognition and career opportunities since multiple, prominent QIBA co-authors would be associated (name recognition)
- Discussion re: certification process; Dr. Boss explained that there is a current attempt to address this with the Self-Attestation conformance pathway
 - Another possibility is accreditation provided by a CRO or the ACR; the challenge would be to generate interest
 - A large number of sites would need to be willing to pursue some sort of accreditation and would need to be convinced of the benefits (return on investment of their efforts)
 - Ultimately, recommendations from external stakeholders would be more persuasive than from those already involved in QIBA
 - It was noted that QIBA and accreditation bodies plan to meet f2f at a future date when possible, or a virtual meeting will be planned

Profile Conformance – Technical Conformance: Next Steps (Dr. Boss)

- Invicro’s successful testing of the DWI-MRI Profile resulted in critical user feedback and QIBA’s first registered imaging site
- Lessons learned based on Invicro feedback will help advance the Profile to Stage 3: Technically Confirmed and perhaps the Stage 4: Claim Confirmed stages
- Additional feedback to be sought from Profile implementation sites, specifically, recommended changes to Profile that would facilitate future implementation; a process similar to the public comment online form could be utilized
- Next steps for the DWI Profile include pursuing Technical Confirmation, which is organ-independent and can be established with a phantom; the two conformance tests performed by Invicro and Brazil consortium are sufficient to advance the DWI Profile
 - In addition to fabricating the ADC phantom, Calibre MRI is developing their own automated analysis software (qCal) which would automatically address Profile measurements
 - ADC phantom data will be provided to analyze with this new software package; the goal will be to demonstrate accurate measurement of ADC
 - When software is ready, an expert will be needed to perform the analysis
 - Data and reporting will be useful for wider adoption of the Profile and additional future conformance testing
- Advancement of the DWI Profile through Technical Confirmation will require offline Profile writing calls in addition to the regular, monthly BC calls
- The Stage 4: Claim Confirmation process will be organ-based since the Claims were organ-specific

DWI Groundwork Proposal on H&N Repeatability (Drs. Dave, Guzmán Pérez-Carrillo, and Amaro)

- A proposal has been submitted to QIBA leadership re: conducting a test-retest study of DWI in H&N cancers, specifically H&N squamous cell carcinoma, to inform an ADC Claim for the DWI Profile
 - Phase 1: Goal is to identify the bias introduced by pulse sequence approaches
 - Phase 2: Claim confirmation efforts using the same three institutions would follow
 - Phase 3: Expanding the Profile claim beyond ADC
- A multi-institution study would be of great value to QIBA, but it cannot be done without funding as paying for scan time would be cost-prohibitive
- Two grant applications may be needed to support the study scope; organizations to approach for funding to be determined
- Additional discussion is needed re: how to set up H&N MRI scans, questions about protocol and implementation across vendors and the type of bias that would be introduced
- Suggestion to contact vendor groups and partner with sites, as this type of research could benefit them
- Three scanning sites will participate, including Washington Univ, Albert Einstein (São Paulo) and Memorial Sloan Kettering CC
 - MD Anderson CC volunteered as well; more discussion needed in coming months re: their capabilities
- It was proposed that Dr. Guzmán lead this effort with strong support from Drs. Dave and Malyarenko; Dr. Dave offered to write letters to solicit funding and she will follow up with Dr. Guzmán
- Dr. Boss to inquire about RSNA R&E seed grants as a possible funding vehicle and will request guidance re: who to consult about soliciting funding
- Two DWI BC calls (scheduled for Nov. 19 and Dec. 17) remain before the January project description submission deadline; this will be a high-priority discussion
- The information-gathering phase will begin prior to the Nov. 19 call

VERDICT Team Data/Collaboration: PCa ADC w SD Results (Drs. Malyarenko, Obuchowski and Margolis)

- Dr. Malyarenko reported that she will be meeting with the VERDICT team on Oct. 16

White Paper (Drs. Boss and Malyarenko)

- This item was tabled due to time limitations

Action Items

- The Brazil team and Invicro to be solicited for additional feedback on their experience implementing the DWI Profile; input to be used to refine the Profile for the Stage 3: Technical Confirmation version
- Dr. Boss to look into RSNA R&E Foundation Seed Grant application for H&N project and potentially São Paulo for supplemental funding
- Assistance is needed to draft the white paper; a rough outline will be forwarded to DWI BC and volunteers will be requested to draft larger sections
- An offline call will be planned to discuss Oct. 16 VERDICT meeting highlights

Next DWI-MR BC Call: Thursday, November 19, 2020 at 2 pm (CT)

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