

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

Thursday, January 21, 2021 at 2 pm (CT)

Call Summary

Participants

Michael Boss, PhD (Co-chair)

Trevor Andrews, PhD

Thomas Chenevert, PhD

Carri Glide-Hurst, PhD

Daniel Margolis, MD

Nancy Obuchowski, PhD

RSNA

Susan Stanfa

Review of Previous Call Summary

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

RSNA R&E Grant Application for Groundwork on Head and Neck Squamous Cell Carcinoma (HNSCC) Repeatability

- A proposal was submitted for QIBA leadership review re: conducting a test-retest study of DWI in H&N cancers, specifically HNSCC, to inform an ADC Claim for the DWI Profile
- It was noted that many DWI BC members contributed to the development of this grant application
- Dr. Boss asked BC members to consider including a budget line item and rationale for QIBA administrative support in any future pending grant/funding proposals
- Recommendation to have boilerplate language or a template for administrative and statistical support in grant requests, as well as for subcontracts
 - Suggestion to develop a modular package that can be provided to teams interested in having a groundwork component; this would facilitate the incorporation of language into grant applications and reduce the expenditure of time and energy
 - Also suggested was to have a named contact familiar with terminology who can provide guidance, e.g., help selecting correct form at the right time
 - These ideas will be brought to Dr. Guimaraes

VERDICT Team Update

- Prospective data analysis will be used to improve the repeatability study for prostate and achieve a better Claim
- Additional discussion is needed on how to plan a prospective study and identify next steps toward the development of a cross-sectional Claim through the use of a DRO
- The VERDICT team will determine how to approach scanning on subjects (building a model) with input from the QIBA DWI BC; development of a protocol based on QIBA recommendations is underway
- Dr. Boss to reach out to Dr. Malyarenko to set up meeting with the VERDICT Team within the next week or two; Dr. Margolis volunteered to organize the next call if Dr. Malyarenko is unable
- Dr. Margolis noted that during the recent PI-RADS call, he informed participants that QIBA and the VERDICT team are working on improved quantitation for diffusion imaging and mentioned the potential for QIBA to improve uniformity
- The ACRIN 6701 test-retest study manuscript will soon be submitted to ECOG-ACRIN
- There has been ongoing discussion across QIBA groups re: ways to expedite the advancement of Profiles through Stage 3: Technical Confirmation and Stage 4: Claim Confirmation, and the topic has become increasingly important to the QIBA Executive Cmte
 - Some groups have used data from existing clinical trials and others have partnered with entities that are in the design phase of conducting feasibility and test-retest studies
 - It was noted that the DWI BC has been active in efforts toward Stage 3 through the engagement of individual DWI member relationships and collaborations
 - Dr. Boss to ask for feedback on this topic during the Feb. 24 MR CC call

Profile Structure Discussion

- As part of the QIBA 2021 Campaign, BCs have been asked to make their Profiles more practical and implementable by technologists and clinical trialists; a top goal is to get QIBA Profiles into clinical trial (iCRO) use
- A disconnect exists between Profile creators and end-users and it was recommended that the Process Cmte re-evaluate and redesign it from the end-user perspective to improve readability and usability
- Dr. Boss volunteered the DWI Profile as a test-case and QIBA groups within the other modalities will do the same
- DWI BC members shared different views re: approach during Dec. 17 meeting
 - While some BC members agreed that Profile-shortening is paramount and feasible, others were adamant that all Profile text was truly necessary for scientific rigor, and nothing should be removed
 - There were also concerns re: adjusting the structure (order) of the Profile
- It was emphasized that the DWI Profile needs to be reviewed by those who have not been involved with its development
 - Context of use deemed most important factor, as well as the Claim language, which could be rewritten from statistical language to simpler directions, e.g., standard operating procedure (SOP) document
 - Suggestion to move some background detail, introductory language, discussion, and rationale into the appendices; this can always be referred to for rationale behind specifications
 - The Profile would be restructured with the help of an objective reviewer, to focus primarily on critical requirements for Profile conformance
- The Brazil team, Drs. Amaro and Nascimento, 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 send checklists to Dr. Chenevert for his review before they are forwarded to the Brazil Team for input
- Dr. Boss to send Consensus Profile to newer DWI BC members, Drs. Andrews, Guzmán, and Margolis, who were not involved in its development; they had volunteered to review it for readability and usability
- The participation of Radiologic Technologists in the Profile-writing process is crucial; Dr. Glide-Hurst volunteered to review the DWI Profile and offer input from this perspective

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

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