QIBA Dynamic Susceptibility Contrast (DSC-MRI) Biomarker Committee (BC) Call

Wednesday, September 9, 2020 at 11 a.m. (CT)

Call Summary

Participants

Bradley Erickson, MD, PhD (Co-Chair)
Ona Wu, PhD (Co-Chair)
Michael Boss, PhD
Lisa Cimino, RT
Zhaoyang Fan, PhD
Mo Kadbi, PhD
Annelise Malkus, PhD
Nancy Obuchowski, PhD
(Christopher) Chad Quarles, PhD
Brian Taylor, PhD
Yuxiang Zhou, PhD, DABR

RSNA

Joe Koudelik
Susan Stanfa

Moderators: Drs. Erickson and Wu

DSC Profile Update

- The consensus process and the public comment resolutions document have been completed
- DSC-MRI BC members were asked to conduct a line-by-line review of the Profile and confirm that all public comments have been addressed and implemented within the Profile itself
- The accompanying comment resolutions document must contain details regarding how each comment was addressed
- Dr. Wu reviewed the following latest changes, which were approved by DSC-MRI BC members
    - Description of K2 calculation method in Section 3.4 was updated
    - Reconstruction Software was added as a separate Actor from Image Analysis Tools to reduce confusion between software that calculates AUC-TN and software that measures AUC-TN values based on co-registered T1-weighted images ROIs
    - Upper limit on enhancing tumor ROI in Section 2.4 and Appendix E was removed
    - Canon protocol details were added to Appendix F and description of round robin testing performed to determine confidence intervals

Next Steps

- Post-resolution comment review with reference to the Profile, to be conducted by Drs. Boss, Quarles and Zhou; comment assignments were noted in the public comment resolutions document
- Dr. Wu to send final Stage 2: Consensus Profile to staff for distribution to DSC-MRI BC voting members, to be attached to the vote-to-publish message
- BC review and vote to be completed by September 21, to be followed by an MR CC vote to be completed by the next DSC-MRI BC meeting on October 14
- The Stage 2: Consensus Profile will be published on the Profiles page of the QIBA Wiki
- Once post-resolution BC review assignments are completed, a PDF of the final comment resolutions sheet will be posted on the Comment Resolutions page of the QIBA Wiki

Post-Stage 2: Consensus Profile Publication Plans

- Suggested next step would be to either consider the next version of the Profile or design a multi-center test-retest study of healthy volunteers to address gaps in the data
- QIBA leadership is seeking information about unfunded groundwork and clinical studies that could help advance Profiles through the Technically Confirmed and/or Claim Confirmed stages
- Drs. Erickson, Quarles and Wu have already submitted the following project descriptions:
    - "Establishing reproducibility of dynamic susceptibility contrast MRI biomarkers"
    - "Establishing a Benchmark for Validating DSC-MRI Analysis Tools"
    - "Establishing a Physical Perfusion Phantom for Dynamic Susceptibility Contrast MRI Site Validation," which is an extension of Dr. Wu's Round-6 NIBIB-funded project on a static DSC phantom

- August 31 was set as a soft deadline for idea submission; there is still time to draft and discuss project descriptions for review by the MR Coordinating Cmte
- Discussion on groundwork projects to continue during the October 14 DSC-MRI BC meeting
- Amount of interest in the field on a specific topic may depend on the availability of funding
    - Suggestion to determine whether there are clinicians who would be interested in stroke study as part of the next version of the DSC-MRI Profile
    - Dr. Erickson volunteered to identify and reach out to stroke neuroradiologists and stroke trial PIs who might be interested in developing a stroke Profile
    - Dr. Erickson cautioned that without dedicated funding, any groundwork will be difficult
- A combined DSC-MR/CT perfusion Profile was suggested since CT perfusion is more widely used

Next DSC-MRI BC Call: Wednesday, October 14, 2020 at 11 a.m. CT
