QIBA Dynamic Contrast-Enhanced (DCE) MRI Biomarker Committee (BC) Call
Monday, November 23, 2020 at 11 am (CST)
Call Summary

In attendance

			RSNA staff
Hendrik Laue, PhD (Co-Chair)	Cristina Lavini, PhD	Russell Rockne, PhD	Joe Koudelik
Amita Shukla Dave, PhD	Krishna Nayak, PhD	Mark Shiroishi, MD	Susan Stanfa
Hyunki (Harrison) Kim, PhD, MBA	Nancy Obuchowski, PhD		

DCE-MRI Profile and Plans for Upcoming DCE-MRI BC Calls

- The DCE-MRI BC and MR CC votes-to-release the Profile for public comment passed successfully; the Profile will be released, pending correction to discrepancies in the Claim values
- New DCE-MRI BC member, Russell C. Rockne, PhD is an Assistant Professor in the Department of Computational and Quantitative Medicine within the Beckman Research Institute at the City of Hope National Medical Center
    - Also serves as director of the Division of Mathematical Oncology, with the goal of translating mathematics, physics, and evolution-based research to clinical care
    - Specializes in conducting patient-specific mathematic modeling
    - Uses tools that range from the mathematical analysis of biopsies and imaging to the creation of computer models and simulations
    - Has been working with a team analyzing blood flow, perfusion, and cell density to determine which patients are exhibiting an immune response and which are exhibiting a cancer response
    - Colleague, Bihong (Beth) T. Chen, MD, PhD also at City of Hope, to participate during an upcoming DCE-MRI BC call as clinical schedule allows

- Discussion regarding the difficulty of acquiring DCE-MRI test-retest data; Dr. Rockne to share his research during the next DCE-MRI BC call on December 7
    - It was noted that the number of patients required for human studies is costly, especially because of the need to scan twice
    - Dr. Laue noted that while some data have been obtained from literature studies, there is room for improvement in regard to making DCE-MRI scanning more quantitative

- Dr. Laue provided an overview of the QIBA Wiki [Profiles page](#), and confirmed that BC efforts would continue for at least another year
    - After Stage 1: Public Comment, the DCE-MRI BC will proceed with the resolution process with the goal to reach BC consensus/agreement on DCE-MRI quantitation methodology
    - Challenges involved with advancing the DCE-MRI Profile to Stage 3: Technical Confirmation were noted

- Due to the dearth of literature and lack of access to vendor-specific B1-mapping sequences, B1 correction was omitted as a requirement
    - There is currently no solution available to make B1-mapping correction feasible for all Profile users
    - Explanatory text was included in the Profile, noting that B1-mapping is highly recommended and improves results, but due to missing information, it could not be required in the Claims
    - Vendors may eventually make it possible for all to perform B1 correction, and the Profile would be updated with related information
    - If test-retest data are published in the future, Profile requirements will be revisited
    - Valuable feedback on this issue may be received during public comment

- Dr. Rockne requested input re: information DCE-MRI BC members would like to be presented during the next call
    - Dr. Laue stated that Dr. Lavini would be interested in the test-retest data and would be able to provide ideas re: what to present; he will follow up with her

- The NIST Phantom-lending library is referenced in the Profile, but specifics are still needed re: phantom availability, the software analysis package offered, target start date for this program, etc.; Dr. Laue to follow up with Dr. Russek (NIST) and report back during an upcoming DCE-MRI BC call
- Dr. Kim suggested leadership map out 1-year, 5-year, and beyond goals/vision for the BC; feedback from Public Comment stage may provide insight into future needed efforts/directions

Next call: Monday, December 7, 2020 at 11 am (CT) - **Confirmed**