

## QIBA Dynamic Contrast-Enhanced (DCE) MRI Biomarker Committee (BC) Call

Monday, April 26, 2021 at 11 a.m. (CT)

### Call Summary

#### In attendance

Caroline Chung, MD (Co-Chair)	Cristina Lavini, PhD	Mark Shiroishi, MD	RSNA staff Joe Koudelik
Hendrik Laue, PhD (Co-Chair)	Nancy Obuchowski, PhD	Rianne van der Heijden, MD, PhD	Susan Stanfa
Michael Boss, PhD	James O'Connor, MBBS, PhD	Divya Yadav, MD	

#### Update on DCE-MRI Profile

- The [Public Comment Resolutions Sheet](#) was referenced to address comments; details on resolutions reached through committee discussion and consensus are included
- DCE-MRI BC members are welcome to work on edits to the [Profile](#)

#### The following comments submitted during the public comment period were addressed:

*James O'Connor, MBBS, PhD | EIBALL/The University of Manchester (UK)*

- Guidance to be added for dealing with patient movement that occurs between t1W and t2W images and the dynamic series being acquired
  - Discussion on whether to use B-Value image (500) and a hierarchical approach
  - This information will be added to the “Open Issues” section
- Suggestion to distinguish two conceptually different scenarios in therapy evaluation where  $K^{trans}$  can be considered a pharmacodynamic biomarker (focusing on mechanism of action), and where  $K^{trans}$  is a non-specific downstream biomarker (focusing on biomarker effects)
  - Dr. O'Connor to submit explanatory text to staff for distribution to the DCE-MRI BC for additional discussion
- Dr. Laue to verify that ‘true change’ thresholds in Claims are accurate and that rationale is clearly stated
  - The [official, Public Comment \(stage 1\) Profile](#) was the version referenced in the public comment announcement when it was distributed to QIBA members; it is located on the [Profiles page](#) of the QIBA Wiki
  - The recent, [working Profile draft](#) reflects updates made in response to comments that have been addressed
- There were several concerns related to the lack of repeatability data on DCE-MRI from clinical studies of brain tumors and prostatic tumors that inform the Profile Claims
  - If additional studies are conducted and published in the next few years, the DCE-MRI Profile will be updated
  - The DCE-MRI BC plans to conduct a literature search of recent studies to see if more data have been published since its last review
  - QIBA BCs may need to incorporate new literature into Profiles and are welcome to post maintenance drafts to their respective [Committee pages](#) on the QIBA Wiki
  - Provided that Profile Claims would not be substantially impacted by updates, a round of public comment would not be necessary
  - Dr. O'Connor to send a summary of ongoing test-retest studies to staff for distribution, and intended inferences for biomarker applications
- The figure in Section 3 illustrating brain requirement for true change in  $K^{trans}$  will be corrected
- Discussion of Dr. O'Connor's comments will resume during the May 10 DCE-MRI meeting

**Next call:** Monday, May 10, 2021 at 11 a.m. (CT) [2<sup>nd</sup> & 4<sup>th</sup> Mondays of each month]

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