

QIBA Musculoskeletal (MSK) Biomarker Committee (BC) Meeting

Tuesday, February 22, 2022, at 10 a.m. CT

Meeting Summary

In attendance

Xiaojuan Li, PhD (Co-chair)

Thomas Link, MD, PhD (Co-Chair)

Michael Boss, PhD

Angie Botto-van Bemden, PhD

Robert Boutin, MD

Majid Chalian, MD

Maggie Fung, MEng

Ali Guermazi, MD, PhD

Amer A. Hanano, MD

Youngkyoo Jung, PhD, DABR

Jason Kim, PhD

Kecheng Liu, PhD, MBA

Nancy Obuchowski, PhD

Edwin Oei, MD

Yuxi Pang, PhD

Chris Peng, PhD

Carl Winalski, MD

Cory Wyatt, PhD

Yansong Zhao, PhD

Xiaodong Zhong, PhD

RSNA

Joe Koudelik

Susan Stanfa

Topics Discussed

- Profile advancement plans - [Stage 3: Technically Confirmed \(TC\)](#)
- Update on NIH R01 grant project / multicenter study (Dr. Li)
- Teaching initiatives

Next Steps

- Dr. Li received a phantom prototype from NIST for use in the NIH R01 grant project / multicenter study and is evaluating it for use in future studies; a second batch of six more phantoms will be distributed to participating sites over the next few months
- The multicenter study will eventually include traveling volunteers, but they are not needed to proceed to stage 3
- For a sufficient vetting of Profile requirements, stage 3 requires feasibility testing at three or more sites; there is currently a total of 10 – 12 participating sites including three major scanner vendors:
 - Sites using the NIST phantom on scanners from three major vendors: Cleveland Clinics (Drs Li and Winalski), University of Kentucky (Dr. Hardy), Albert Einstein University Hospital (Dr. Peng) and UCSF (Dr. Link)
 - Sites to receive the MAPSS T1rho/T2 map sequence: University of Washington (Dr. Chalian) and Cleveland Clinic in Florida (Dr. Hanano) will be using Dr. Li's phantom (similar to Phantom Lab phantom) and Erasmus-Rotterdam (Dr. Oei) will be using the [Phantom Lab](#) phantom, to be provided by Maggie Fung, GE
 - Arthritis Foundation Osteoarthritis Clinical Trial Network sites already have the MAPSS T1rho/T2 map sequence and would use the NIST phantom: University of Iowa (Drs. Daniel Thedens/Don Anderson), University of North Carolina (Dr. Brian Pietrosimone), Duke University (Dr. Brian Soher/Dr. Virginia Kraus)
 - Additional potential site: Brigham and Women's, Harvard (Drs. Elena Losina and Stacy Smith)
 - Dr. Fung to contact Dr. Kogan and Stanford University regarding the use of [Phantom Lab](#) phantom
- Dr. Li to help sites with image analysis (cartilage segmentation and relaxation time fitting) and provide software support in terms of analyzing the data if needed; a one-page testing site instructions scope of work (SOW) is underway
- Site feedback received during stage 3 will be compiled in the [Technical Confirmation Resolutions Google Sheet](#)
- Education initiatives on T1rho and T2 images in efforts to further implement the MSK Profile include
 - Workshop (2 – 3 hours) or teaching session (1.5 – 2 hours) at the 2023 International Society for Osteoarthritis Imaging in Lausanne, Switzerland; MSK BC Co-chairs to reach out to organizers in July or August
 - Dr. Link will give a lecture on translating quantitative cartilage imaging to clinical practice at the [2022 ISMRM Meeting](#) in London; this format could be used for teaching and to provide QIBA insight
 - The 2023 ISMRM Meeting in Toronto may be another opportunity to provide education with a weekend educational session, or a weekday sunrise session; Dr. Li will reach out to the Annual Meeting Program Committee (AMPC) currently planning the education sessions
 - A session at the 2023 OARSI meeting was also considered

- An inquiry on QIBA's ability to centrally host educational materials, e.g., AV recordings of webinars generated for society meetings will be brought to QIBA Leadership for discussion by Dr. Boss

Next Meeting: Tuesday, March 22, 2022, at 10 a.m. CT [4th Tuesday of each month]

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