

QIBA Musculoskeletal (MSK) Biomarker Committee (BC) Call

Tuesday, May 26, 2020 at 10 a.m. CT

Call 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

John Carrino, MD, MPH

Majid Chalian, MD

Ruud de Boer, PhD

Maggie Fung, MEng

Ali Guermazi, MD, PhD

Peter Hardy, PhD

Kathryn Keenan, PhD

Jason Kim, PhD

Kecheng Liu, PhD, MBA

Nancy Obuchowski, PhD

Qi (Chris) Peng, PhD

Scott Swanson, PhD

Carl Winalski, MD

Can Wu, PhD

Cory Wyatt, PhD

RSNA

Joe Koudelik

Susan Stanfa

Moderators: Drs. Li and Link

MSK Profile (Dr. Link)

- Internal BC review has been completed and an e-ballot will be sent to [eligible BC voters](#) for a [vote to release for public comment](#)
- Line numbers to be added to the public comment Profile and a PDF version will be sent to staff
- Following a successful BC vote, MR CC voting members will also be asked to vote on the Profile release
- A public comment period of 2-3 months was recommended; the [MSK public comment resolution spreadsheet](#) has been created and will be used to document how feedback is addressed
- Comments to be addressed on a continual basis instead of waiting until the close of the public comment phase
- The goal is to have all public comments addressed/resolved by the end of 2020

Update on White Paper (Dr. Chalian)

- Dr. Chalian is drafting a white paper based on the MSK Profile in the style of a “Special Report,” to be submitted to *Radiology*
- This activity will proceed in parallel with the release of the Profile for public comment
- The following question to be addressed: Why are QIBA activities important for cartilage imaging?
- Publication of this paper is intended to:
 - Highlight the recommendations and Claims presented in the Profile
 - Issue recommendations for vendors to help standardize cartilage compositional imaging
 - Communicate the required procedure to Profile users
- Staff to distribute on behalf of Dr. Chalian, the structure outline to MSK BC members for feedback
- It was noted that *Radiology* limits word number (3000 words with 35 references) so the paper needs to provide a clinical setting and focus on a few specific concepts
- Discussion re: how to approach authorship
 - Suggestion to raise this issue during the Sept. 2020 QIBA Annual Meeting; Dr. Boss to contact QIBA leadership (Drs. Sullivan, Guimaraes, and Hall)
 - Recommendation to give general contributors credit as “collaborators” to attract new member interest to QIBA Profiles
 - Suggestion to include at the end of the author list, “For the RSNA QIBA MSK Biomarker Committee,” which includes all cmte members not mentioned in the author list (example given by Mamisch et al. Radiologic

criteria for the Diagnosis of spinal stenosis: Results of a Delphi Survey, Volume 264: Number 1—July 2012: 174-179)

- Discussion re: how to reference the MSK Profile
 - Suggestion to have Profile posted to the wiki with linked supplements
 - The official public comment version of the Profile will be posted on the QIBA Wiki [Profiles page](#) after successful BC and CC votes-to-release (approval process is completed); other publications can link to it
 - Dr. Boss to reach out to QIBA leadership for additional discussion on the procedure for citing Profiles
- Discussion re: Suggestion to publish articular cartilage lesion nomenclature
 - Could this be provided through RadLex® - discrepancies and communalities were discussed
 - Related issues were cited, including variable terminology, lack of precise definition and inter-reader agreement; some terms adopted from arthroscopy terminology
 - Dr. Winalski, former member of the Society of Skeletal Radiology Subchondral Bone Nomenclature Cmte, volunteered his assistance; this cmte has a glossary of terms for MSK radiology in press
 - American Journal of Radiology (AJR) has a nomenclature for subchondral nonneoplastic bone lesions
 - Benefits that come from radiologists using common language to communicate diagnostic results have been recognized
 - For this reason, RSNA produced RadLex®, a comprehensive set of radiology terms for use in radiology reporting, decision support, data mining, data registries, education, and research
 - Staff to provide point-person contact information to Dr. Chalian and he will submit his inquiries

Update on Grant and MSK Phantom (Dr. Li)

- Dr. Li received R01 funding to perform a multi-center standardization study, which will help with technical and claim confirmation
- A new MSK phantom is being developed by Drs. Mirowski (Verellium, LLC) and Keenan (NIST) to obtain reference measurements with $T_{1\rho}$ and T_2 ; a total of 6 – 9 months is required for completing a prototype phantom
 - Feedback from MSK BC members on the prototype is being incorporated
- The study aims to develop and cross-validate novel acceleration MR $T_{1\rho}$ and T_2 imaging methods on MR systems from multiple vendors, followed by feasibility evaluation in patients at risk for osteoarthritis
- Acceleration techniques to be implemented on MR systems of three major vendors (Siemens, GE, and Philips); study design is based on evaluating intersite and intervendedor variation
- Scanner coil specifications for all vendor platforms were received (a coil CAD file from Philips will be helpful due to the complex shape of the coil. Dr. De Bore and Harry Friel will facilitate this); this was critical for designing coil-specific phantom mounts

Next Steps

- Staff to send out email ballot to eligible MSK BC voters and a notification to all other MSK BC members

Next Call: Tuesday, June 23, 2020 at 10 a.m. CT [4th Tuesdays of each month]

RSNA Staff attempt to identify and capture all committee members participating on WebEx calls. However, **if multiple callers join simultaneously or call in without logging on to the WebEx, identification is not possible.** Call participants are welcome to contact RSNA staff at QIBA@RSNA.org if their attendance is not reflected on the call summaries.