

QIBA Musculoskeletal (MSK) Biomarker Committee (BC)

Tuesday, January 16, 2018 at 10 AM CT

Call Summary

In attendance

Thomas Link, PhD (Co-Chair)

Xiaojuan Li, PhD (Co-Chair)

Robert Boutin, MD

Garry Gold, MD

Peter Hardy, PhD

Youngkyoo Jung, PhD, DABR

Leon Lenchik, MD

Elizabeth Mirowski, PhD

Vladimir Mlynarik, PhD

Nancy Obuchowski, PhD

Qi (Chris) Peng, PhD

Rob Peters, PhD

Hollis Potter, MD

Suraj Serai, PhD

Ramya Srinivasan, MD

Carl Winalski, MD

Cory Wyatt, PhD

Gudrun Zahlmann, PhD

RSNA

Joe Koudelik

Susan Weinmann

Moderator: Dr. Link

RSNA 2017 Annual Meeting / QIBA Working Meeting

- This was the MSK BC's first time participating as a group during the RSNA Annual Meeting
- MSK poster was displayed at the QIBA Kiosk and Meet-the-Experts (MTE) sessions were well-attended
- QIBA Working Meeting Summary was provided (Dr. Li)
 - Contained an overview by Dr. Jackson (QIBA Chair) and panel discussions
 - An update on QIBA in research and clinical care was presented
 - The MSK BC can learn a lot from other QIBA groups regarding the QIBA process
 - Working Meeting Breakout session discussion focused on the phantom development project

Update on the planned Imaging Interest Group of the Osteoarthritis Research Society International (OARSI)

- The Imaging Interest Group is a new forum that could be leveraged to increase the visibility of QIBA's MSK quantitative efforts
- This would be an opportunity to better engaging non-imaging clinicians, e.g. rheumatologists
- Those who are interested in the osteoarthritis imaging group should contact Dr. Link

Discussion about changes in T2 and how to interpret them

- Short-term changes in cartilage are being assessed to determine whether they are predictors of long-term changes, i.e. advanced disease

Update on Phantoms (Dr. Li)

- Dr. Mirowski at QalibreMD, Dr. Keenan from NIST, and Dr. Li are collaborating on phantom development
- Discussion on solutions/concentrations of phantom components needed to mimic the natural molecular composition of cartilage
- Repeatability and bias in Claims may differ between 1.5T and 3T scanners;
- Discussion regarding field strength, coil issue and how to deal with noise (different fitting methods)
- Dr. Mirowski to send out phantom-testing plan/summary to MSK BC members for feedback
- Dr. Mirowski plans to submit a NIH/SBIR grant application (to develop phantom) by the April 4 deadline

Update on Arthritis Foundation Study

- Standardized protocols are being finalized
- Cross-validation of cartilage T1rho/T2 values in phantoms and human subjects between sites (Cleveland Clinic, UCSF, Univ of Kentucky, Albert Einstein College of Medicine) and vendors (GE, Siemens, Philips) is being performed
- MESE T2 mapping (similar to OAI protocol) was added
- Patient handling procedures were discussed, e.g. sitting in a chair for 30 min prior to the MRI

Meta-Analysis and Editorial

- Focusing on reproducibility, a meta-analysis paper on cartilage compositional biomarkers will be published in *Osteoarthritis and Cartilage*; Drs. Li and Link submitted an editorial concerning this paper

Introduction of New Members

- Qi (Chris) Peng, PhD – Albert Einstein College of Medicine (uses Philips scanner)

Next Steps

- Dr. Valentina Pedoia to be invited to the next call to provide an overview of her impressive work in the area of automatic cartilage segmentation
- In efforts to accommodate MSK members who are unable to join t-cons on the third Tuesday at 10 AM CT, an alternate time slot on the third Wednesday at 9 AM CT will be used on a quarterly basis, effective in February 2018
- RSNA staff include upcoming call schedule with call-in details & call summary

Next Call: Wednesday, February 21, 2018 at 9 AM CT [[alternative time slot](#)]

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.