QIBA Musculoskeletal (MSK) Biomarker Committee (BC) Call

Tuesday, June 25, 2019 at 10 AM CT

Call Summary

In attendance   RSNA

Xiaojuan Li, PhD (Co-Chair)   Majid Chalian, MD   Qi (Chris) Peng, PhD   Joe Koudelik

Thomas Link, MD, PhD (Co-Chair)   Edward Jackson, PhD   Suraj Serai, PhD   Susan Stanfa

Angie Botto-van Bemden, PhD   Yuxi Pang, PhD   Cory Wyatt, PhD

Moderator: Dr. Link

Follow-up QIBA 2019 Annual Meeting (Oak Brook, IL)

- Dr. Link provided an overview of the meeting agenda and briefly highlighted discussions
- It was emphasized that the MSK Profile-writing process should be prioritized since the Profiles are major QIBA deliverables
- During the meeting challenges working with single and multiparametric biomarkers were discussed, as well as importance to AI and Big Data

MSK Profile (Dr. Link)

- Dr. Link reviewed work he completed on Section 3 and noted the addition of checklists
- Writing assignments to be distributed among MSK BC members and completed by the September 24 MSK BC call
- The goal is to have a completed Profile draft by the end of the 2019
- The status of the Claims was reviewed
  - In the absence of ground truth, separate longitudinal Claims to be rewritten based on OAI study results (intra- and inter-site reproducibility to be differentiated)
  - It was noted the Claim 1B applies to 3T scanners from the same vendor

- There was discussion on the following items:
  - Section 3.2: Installation – suggestion to generalize text related to coils
  - Section 3.3: Periodic QA – it was agreed that the following should be left as is:
    - Periodic QA procedures performed once monthly using the calibration phantom developed for quantitative cartilage assessment (phantom developed for Arthritis Foundation study) and the ACR phantom
    - Monthly and annual QA analyses shall be performed using automated image analysis software for the ACR calibration phantom

  - Section 3.4: Subject Selection – two additional indications for T1rho and T2 measurements were added
    - #5: T1rho and T2 measurements may be used to monitor cartilage repair maturation
    - #6: Monitor cartilage changes after surgery (such as ACL reconstruction, meniscal repair)

  - Section 3.5: Subject Handling – specifications drafted in the past were reviewed and considered too restrictive
    - It was suggested that the requirements be broadened/relaxed (e.g., "time of day")
    - Protocol to be reviewed with technologists

- During the June QIBA Annual Meeting, it was recommended that the checklist/protocol be reviewed for real-world feasibility by technologists
- A note was added to the Profile that the sequence is currently a research sequence and not generally available; contact details for obtaining sequence/patch for each vendor to be added [e.g., Philips (Dr. Peng), GE (Dr. Li)]
  - Concern that if no clear vendor contact can be identified, Profile progress may be hampered
  - Suggestion to request that manufacturers make the sequence generally available; discussion on this issue to be continued off line

- Next steps:
  - Dr. Link to circulate the latest Profile version and request comments from MSK BC members for review during the next call in late September
  - Complete Profile draft for internal [MSK BC review and approval](#)
  - The manuscript draft is actively underway and will be submitted for publication when completed
  - MSK BC to take a summer break (focusing in the meantime on off-line Profile-writing) and reconvene on September 24

Reminder:
- Please [RSVP for the Dec. 4 QIBA Working Meeting](#) during the 2019 RSNA Annual Meeting
- Please [sign up for the RSNA 2019 MTE Sessions](#) at the QIBA Kiosk:
  - Type in your name next to the presentation time slot that works for you (we encourage that each 30-minute time slot is filled by at least one committee member)
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Next Call: Tuesday, September 24, 2019 at 10 AM CT [4th Tuesdays of each month]

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