

## QIBA MRE Biomarker Committee Call

Monday, November 7, 2016 at 3 PM CT

Call Summary

### Participants

*Patricia Cole, PhD, MD (Co-Chair)*

Ninad Mantri, MS

Kay Pepin, PhD

### RSNA

Joe Koudelik

*Richard Ehman, MD (Co-Chair)*

Nancy Obuchowski, PhD

Suraj Serai, PhD

Susan Weinmann

Thomas Chenevert, PhD

**Moderator:** Dr. Ehman

### Profile Review

- Profile revisions made as a result on Oct. 31 MRE Profile-Writing TF call
- Open issues:
  - The longitudinal claim presented in this Profile requires that the MRE stiffness measurements (magnitude of the complex shear modulus) have a linear relationship with true stiffness – discussion on whether this can be confirmed with phantom testing
    - The working group noted that existing technology does not provide a way to fabricate elastography phantoms with stiffness values that are precisely defined in advance by the composition and process
    - Existing dynamic mechanical testing devices used in laboratories have significant limitations for estimating the complex shear modulus of semi-solid material
    - Therefore, no currently-accepted test procedure can be recommended to confirm the assumption of linearity
    - However, based on the physical principles of the MRE measurement process and published comparisons with benchtop mechanical testing (refs), the working group concludes that linearity is a reasonable assumption at this time
    - This issue may need to be revisited in the future
    - Linear relationship appears in the literature
    - Dr. Pepin to draft text for the Profile
  - Discussion on whether the Profile should attempt to identify commercial suppliers of MRE phantoms in this first edition
    - At this time, commercial products are limited, have not been widely tested, and may only be available from some of the MRE OEM's
    - The draft Profile describes the use of an MRE phantom to aid training and as an optional tool for generally confirming proper system operation (not to test accuracy)
    - Accordingly, it may be appropriate to defer attempting to identify commercial MRE phantoms to the second edition of the Profile, when there may be more experience to confirm availability and usability.
    - Phantom status to be revisited in the future and Profile to be updated accordingly

- References to be added
- The Executive Summary was updated
- Minor revisions were made in Sections 2 & 3
- Section 4.: “Assessment Procedures”
  - Drs. Ehman & Pepin to draft test-retest protocol
  - Information to be added to Section 4 to help the users meet Claim/Profile conformance
  
- Claim to be adjusted
  
- Revised Profile to be distributed to all MRE BC members
- MRE to hold a joint call with Dr. Garra and US-SWS BC members in early 2017

**The next MRE BC Call is scheduled for: TBD**