

QIBA MRE Biomarker Committee Call

Tuesday, August 11, 2015 at 3 PM CT

Call Summary

Participants

Patricia Cole, PhD, MD (Co-Chair)

Richard Ehman, MD (Co-Chair)

Thomas Chenevert, PhD

Edward Jackson, PhD

Frank Miller, MD

Nancy Obuchowski, PhD

Mark Palmeri, MD, PhD

Suraj Serai, PhD

Claude Sirlin, MD

RSNA

Susan Weinmann

Discussion

- Literature Search - Reproducibility Evaluation
 - Readers determined how COV was calculated from the Methods section in each article, and calculated and recorded the repeatability coefficient in the reproducibility evaluation spreadsheet
 - Dr. Obuchowski volunteered to review all of the recorded data, calculate the repeatability coefficient based upon her formula, and record her results and methodology, for comparison
 - Further discussion will be deferred until the September 8 meeting

- Literature Review Process
 - A summary re: the literature search process (e.g., search criteria) was provided by Dr. Samei
 - Search performed at two institution libraries
 - Mayo Clinic, Rochester
 - Cincinnati Children's Hospital

 - Databases used to search for articles:
 - PubMed (MEDLINE)
 - EMBASE
 - SCORPUS
 - The Cochrane Library
 - Web of Science
 - SCOPUS
 - CINAHL
 - Google Scholar

 - Publish period of articles was approximately May 2005 – May 2015
 - Search terms used:
 - hepatic fibrosis
 - MR elastography
 - magnetic resonance elastography
 - liver
 - liver parenchyma
 - liver/anatomy and histology
 - liver/physiology
 - hepatic
 - liver stiffness
 - liver elasticity
 - elastic modulus
 - elasticity imaging techniques/methods
 - sensitivity and specificity
 - reproducibility
 - repeatability
 - reliability

 - Limited to studies done on humans, published in English
 - To identify additional studies, the following were done:

- used a sensitive and precise search strategy in the PubMed database and in regular Google search to locate any existing systematic reviews on magnetic resonance elastography - none was identified
- manual searching of reference lists from primary studies
- experts in the field were consulted

- Identified studies were screened independently and then verified reciprocally by Drs. Serai and Venkatesh
- Dr. Serai agreed to provide numbers of search results yielded per database
- Dr. Cole suggested a follow-up search for papers that may have been published since May

Next steps / Action Items:

- Discuss which papers should be eliminated from literature review
- Revisit and add to Profile
- Decide final set of parameters in Profile
- Compare readers' and Dr. Obuchowski's repeatability coefficients as provided in the reproducibility evaluation spreadsheet

- Next MRE BC Call: Tuesday, September 8 at 3 PM CT