



AIUM/QIBA
Ultrasound Volume Blood Flow
Biomarker

MINUTES 2016-04-04

Attendance:

P. Carson, S. Chen, B. Fowlkes, T. Hall, O. Kripfgans, R. Leichner, M. Lockhart, S. Pinter, M. Robbin, J. Rubin, R. Tadross, T. Tuthill

Previous minutes are not approved yet.

I. Review of QIBA meeting at AIUM

Tim Hall asks if CEUS group could take advantage of the phantom construction as well? Brian Fowlkes replies that after initial round of testing (using off-the-shelf phantoms) we might progress to the Ken Hoyt or similar (CEUS) phantom. Oliver Kripfgans asks members to review the current list of equipment, i.e. scanners and probes at their sites.

II. Discussion of QIBA proposal

1. *QIBA Round 6 Funding* – Discussion of proposal manuscript. Target for proposed work Objective #4. Discussion of resources committed to the group, including DICOM processing software developed at the University of Michigan.
2. Phantoms and shipping was discussed. Tim Hall relates these to the shear wave biomarker work, where phantoms were donated by CIRS. Companies can benefit from QIBA work in terms of free testing of their phantoms. Differences exist, making comparison difficult, as flow phantoms are more expensive, yet manufacturers might benefit from being able to claim to be involved in the QIBA process. In other modalities phantoms may have been purchased but certainly have been created and have been shipped to laboratories.
3. Michelle Robbin points out that the objective is not to test the (difference between) phantoms, but we test the assessment of volume flow.
4. As a part of the project description, intra observer, i.e. repeatability and inter observer were discussed. Per Tim Hall, repeatability has a narrow definition in which the same person uses the same phantom and repeats after a small interruption of the workflow. Reproducibility is inter observer variability, i.e. it means that other people use the same systems or other people use other systems, etc.
5. Michelle Robbin also points out the need to always record the version of the hardware and software of the used systems and probes. For the Round Robin we should follow a best practice approach, there is no need to come up with new ways to make the measurement. For such UM will propose the best way to minimize bias and variability in the measurement, per Tim Hall. Brian Fowlkes interjects, that the protocol needs to be

robust enough to avoid being misinterpreted. Tim Hall adds that that is what 'going public' (anybody can contribute, but usually the usual-suspects) will also add.

6. Michelle Robbin asks how involved is it to make an actual measurement? Brian Fowlkes briefly describes the process steps and adds that a groundworks study is to establish confidence in a new site to properly execute a measurement. Tim Hall explains that for shear wave, generally per manufacturer, a step-by-step procedure is to be followed for their respective machines. Fowlkes and Rubin, add that setup machine follows how one normally setups the scanner in color flow. Following exact steps will be leading to the highest possible consistency.
7. The proposal is limited to two pages. Submission deadline is April 15th, 2016. Please send comments to UM. AIUM funding is a possibility.

II. Current testing sites

Draft

1. M. Robbin and M. Lockhart at University of Alabama at Birmingham (Philips Epiq, X6-1; Logiq E9, _4D16L??_)
2. M. Bruce at University of Washington (Philips Epiq, X6-1; Logiq E9, _4D16L??_)
3. M. Trew at Gammex (Logiq E9, _4D16L??_)
4. J. Gao at Cornell University (Logiq E9, _4D16L??_)
5. K. Thomenius at MIT (Logiq E9, 4D16L)

Set

6. T. Hall at University of Wisconsin (S2000 and S3000, 7CF2)
7. S. Gao at Mayo Clinic (GE Logiq E9 (9L, C1-6), GE Vivid E95 (9L, M5Sc, 4V))
8. J. Rubin at University of Michigan (Philips Epiq, X6-1; Logiq E9, 4D16L)