



## AIUM/QIBA Ultrasound Volume Blood Flow Biomarker

### Summary 14-July-2021

#### Attendees:

Brian Fowlkes, Jim Zagzebski, Jing Gao, Stephen Pinter, Jim Jago, Jonathan Rubin, Megan Russ, Michelle Robbin, Nicole Lafata, Oliver Kripfgans, Paul Carson, Rimon Tadross, Shriram Sethuraman

AIUM Staff: Therese Cooper

#### Action items in red.

1. Review of Previous Call Summary – 09-June-2021. **Let Brian know if there are any changes.**
2. Action Items
  - 2.1. Discussion of 2D spectral Doppler in QIBA Phantom
    - 2.1.1. Need to examine conditions in the acquisition to determine if data is useful. Also tests being performed in conjunction with project at Baylor. Stephen reviewed the data and has not had a chance to work on this. **Stephen will update as soon as possible.** Data collection did begin for the umbilical cord study.
  - 2.2. Abstracts for Ground Work Studies. Brian suggested flow phantom modeling as a potential ground work study. **Again, if you have an idea for an abstract let Brian know.**
  - 2.3. Brian showed results from Dr. Zonneveld to the group. Not the same format as other information in the profile but does provide interobserver comparison for volume flow measurement before and after dialysis access placement. Brachial artery flows are high with unknown measurement bias. Brian would like to ask the author if he can do this in terms of the coefficient of variation. **Brian asks for the physicians to provide comments. Brian will continue to work some more on this and request alternative format from the lead author.** (Dr. Zonneveld mentioned before that he is willing to do some analysis and Brian will continue to communicate with him.)
  - 2.4. Brian asked nephrology colleague (Rick Weitzle?) about the range of volume flows seen in measurements on dialysis machines. **Brian will try and summarize this for discussion by next call.**
  - 2.5. New phantom drawings should be coming from Cristel soon reflecting suggested changes by the profile working groups.

### 3. Review of Flow Phantom Modeling

### 4. Update on VBF Profile Discussions

#### 4.1. Review of current draft and updates from Profile Task Group

##### 4.1.1. Modifications to figures on partial volume

4.1.1.1. Stephens update: Image Acquisition and Analysis subsection: Added two rows based on request from Michelle Robbin (Bmode gain, gray scale, and Lateral Transmit and Elevation focus positions). **Stephen request for comments if anyone has any changes.** Sibio added the dicom tags.

4.1.1.2. Changes to the figure 3.13.1 – updated power with consistent power level throughout. Also updated the caption based on Brian's request.

**4.1.1.3.** Changes to the figure 3.13.2 – Request to enlarge the left hand figure. This is now on the top and the caption is updated. Also added the color bar on the larger top figure. Color bar is the partial volume weighting coefficient. Zero means that you are completely in tissue and One is inside the lumen. Again, captions updated. No comments but Brian asked whether we should have the 3 to 1 aspect ratio. **Stephen mentioned that was a good point and he can do this.**

##### 4.1.2. Modifications to selected sections of text.

4.1.2.1. Discussions with Nancy O. Looked at the claims and divided into two groups. Recent discussions with Profile groups. Should list as time dependent and time independent. Reason why is because phantom studies has different results between pulsatile and constant flow. Brian reviewed the claim 1a and 1b.

4.1.2.2. Brian likes the idea of defining **pulsatility index or resistive index??**

4.2. Action items: **Set up a doodle poll to have meetings with the chair of subgroups. Discuss dividing up the checklist. In the interim: clinical group. Look at the checklist (Basecamp) to review and make sure that there are no changes.**

4.3. Review of outstanding comments. **Brian will have a clean draft.**

### 5. Matters Arising

Next Profile meeting is July 28, 2021

Next full BC meeting is August 4, 2021