



## AIUM/QIBA Ultrasound Volume Blood Flow Biomarker

### Summary 19-September-2022

Attendees: Brian Fowlkes, Paul Carson, Stephen Pinter, Jonathan Rubin, Jim Jago, Cristel Baiu, Rimon Tadross, Jing Gao, Megan Russ, Jim Zagzebski, Nicole Lafata

AIUM Staff: Haylea Weiss, Therese Cooper

1. Review of Previous Call Summary – 01-August-2022
2. Previous Action Items
  - 2.1. Abstracts for Groundwork Studies. Future plans for direct comparison between 3D volume flow and 2D volume flow in the contexts of the AVF for dialysis access. Potential for phantom studies comparing 2D and 3D directly. Megan R. is interested in contributing to groundwork studies but mentioned not having any 3D transducers. This will be a potential limitation for site participation. There is a potential of doing some Round Robin measurements at professional meetings, i.e., RSNA and AIUM. Would need to examine the logistics, recognizing that systems may not be using released software. Brian mentioned building an app in MATLAB and hopes to have that up and running in the near future.
    - 2.1.1. Consider contacting company about their ability and interest in participating in a possible round robin in the future when systems are ready.
    - 2.1.2. Also need to determine what specifically will be gained. This needs to be an effort that would be expected to result in a publishable outcome.
  - 2.2. Brian F.'s new analysis of the results from the Zonnebeld et al. reference. These results are now incorporated into the Profile text. We will need to determine if there is any additional information (appendix) that would need to be provide related to this analysis. Consider whether there might be interest by the authors in an additional related publication.
  - 2.3. Brian to set up groups to divide tasks related to reviewing section 4 in context of the rest of the profile.
  - 2.4. Kourosh will examine extracting the peak velocities throughout the tube and its value along the length of the tube.
3. Update on Phantom Modeling and Construction

### 3.1. Review recent modeling

3.1.1. Running the flow in the opposite direction had only minor impact on locations on parabolic flow.

3.1.2. Range of depths over which the flow is nominally parabolic currently has a gap of 5-9 cm even at the slower flows. This may be ok particularly if the flow velocity in the center of the flow is known.

### 3.2. Examine considerations for phantom construction

3.2.1. The specifications for the fluid in the flow phantom were set to those of the commercially available fluid. – Further discussion of standardization of blood mimicking fluid (BMF)

## 4. Update on VBF Profile Discussions

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

4.1.1. Profile

4.1.2. Checklist

## 5. Action Items:

1. Stephen will reach out to Ted to find out what recipe will be used and relay that back at the next Profile Task group.

Next full BC meeting is scheduled for Monday October 3, 2022 at 12:30pm ET.

Next Profile meeting is Wednesday September 28, 2022 at 10:00 am ET.