Review of April 22nd US SWS BC call notes

- Notes were approved as written

Systems / Phantom Task Force Update (Dr. Palmeri)
- Dr. Hall has taken measurements of the Phase II phantoms for the written report
- MRE-related measurements demonstrated some temperature dependence
- Temperature-dependence analysis experiments were performed on the phantoms, utilizing a water immersion bath
- Repeated measurements were taken after immersion in the water baths
- Dr. J. Chen performed similar temperature dependence experiments at Mayo using two different ambient air temperatures: 74 °F (high) and 68 °F (cool / scanner room)
  - Phantoms were left in a warmer room overnight and measured
  - The temperature of the phantom was also recorded
  - The goal is to demonstrate reproducibility from these repeated scans
- A draft report is being prepared and will likely be circulated mid-July
- The final report will be formatted in a two-part manuscript to reflect different study designs
- Decisions must be made regarding what to do next about the temperature-dependence questions
- MRE may be a possible reference for Profile compliance once remaining questions are resolved

Simulation Data / Digital Phantom (Dr. Palmeri)
- There has been a recent uptake in digital phantom use; eleven unique downloads were recently completed
- Confounding factors have not been uploaded yet; however, it is encouraging that this resource is being used

Clinical Task Force (Drs. Samir and Dhyani)
- A few manuscripts are in preparation
  - These will be shared and reviewed with the BC members prior to submitting for publication

Profile Writing Group Update (Dr. Dhyani)
- Dr. Dhyani provided a brief overview of Open Issues for the Profile, which include:
  - Effects of inflammation on SWS and magnitude
  - Number of measurements remaining that need to be standardized (more evidence needed)
    - Criteria for inclusion or exclusion of a given measurement?
    - Repeatability vs. reliability?
      - Decreasing variance may result in increased bias
    - Must consult with Dr. Obuchowski

Moderator: Dr. Garra
Which type of phantom should be used for periodic QA and conformance (Section 3.3 of the Profile)
- Viscoelastic vs. Elastic phantom?
- Temporal stability?
  - Recommendations and supporting documentation to be determined
- Long term verification of phantoms and stability testing
  - Acoustic focus and acoustic output for phantoms, according to manufacturer’s procedures and proper storage techniques
- Pass/ fail tolerances for phantom tests
  - Testing to be performed at 21±1 °C
- Variability among patients due to intrinsic, pathologic issues
- Feedback from manufacturers regarding how outliers in images are identified and displayed
  - Work toward suggesting specific standard handling (Section 3.7)
- ROI Size – If user selected, how large of an area to select?
  - Size of homogenous region vs. variance
  - Comments disagree; Manufacturers must be queried for consensus
- Number of values averaged for each pixel in the color image
  - Image reconstruction section of the Profile
- DICOM conformance
  - Are new header fields needed?
  - Must query Mr. O’Donnell
- What is the best method to acquire measurements from patients where the intercostal approach is not possible (narrow intercostal spacing or COPD)?
- Define range of SWS values at which the claims apply
  - Dr. Palmeri to add range based on phantoms study – with a caveat that higher values may be obtained in cirrhotic patients and may also have greater variability

Feedback is welcome to Drs. Dhyani and Garra: Dhyani.Manish@mgh.harvard.edu; bgarra@gmail.com

Round-6 US Project Priority
- The CC leadership has decided that their priority will be SWS proposals that will aid with Profile completion.
- Final selections will be made soon after the July 21st QIBA Steering Committee meeting; PIs will be notified mid-August

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**JUNE and JULY US WebEx / Conference Schedule**

**June WebEx:**
- Jun 24: CEUS BC

**July WebEx:**
- July 01: Systems/ Phantom Task Force
- July 08: Clinical Task Force
- July 15: US SWS BC
- July 29: CEUS BC

**Conferences/ Meetings:**
- July 31 – Aug 4: American Association of Physicists in Medicine (AAPM), (Washington, DC)