QIBA Ultrasound Shear Wave Speed (SWS) Phantom-System Measurement Testing

Monday, June 25, 2012; 1 PM CT Call Summary

In attendance RSNA

Timothy J. Hall, PhD (Co-Chair)Steven Fick, PhDNicolas Rognin, MSc, PhDJoe KoudelikCristel Baiu, MSAnis Hadj Henni, PhDGale Sisney, MDMadeleine McCoy

John Benson Kenneth Hoyt, PhD Daniel Sullivan, MD
Jeremy Bercoff, PhD Ted Lynch, PhD Keith Wear, PhD
Paul L. Carson, PhD, (QIBA Sci. Coord) Ernest Madsen, PhD Hua Xie, PhD

Shigao Chen, PhD Andrew Milksowki, MS

General discussion

- Drs. Wear, Hall and Madsen working together to create a questionnaire to circulate to the Subcommittee members for feedback based on their access to, and experience with, various dynamic mechanical property measurement devices
 - Goal is to document the various material property measurement devices and techniques being used and establish the range of capabilities of these devices and their complex (storage and loss) modulus measurement accuracy and precision.
 - Need to establish the frequency range for which valid measurements are obtained so that we can reliably quantify phantom material properties.
 - Corruption of dynamic mechanical test data by system resonance was addressed
- Need to identify appropriate materials that mimic tissues to test clinical US systems; reference standards materials to be pursued
 - Two categories exist: naturally existing materials and manufactured materials to meet performance specifications

Next steps:

- Dr. Hadj Henni to forward literature reference to RSNA staff for sub-ctte circulation
- Dr. Sheng Lin-Gibson to be added to the subcommittee
- Plans for the next web meeting:
 - o Dr. Fick to provide NIST-based "soft" material dynamic mechanical test reference standards
 - o Drs. Madsen and Rognin to present agar/gelatin performance specs on the next call

Next calls:

Phantom Subcommittee – Monday, July 16, 2012 at 1:00 PM CT (Drs. Hall and Garra to moderate)

QIBA wiki

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