

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

Monday, June 4, 2012; 1 PM CT
Call Summary

In attendance

Brian Garra, MD (Co-Chair)

Timothy J. Hall, PhD (Co-Chair)

S. Kaisar Alam, PhD

Cristel Baiu, MS

Paul L. Carson, PhD, (QIBA Sci. Coord)

David Cosgrove, MD

Ron Daigle, PhD

Liexiang Fan

Kenneth Hoyt, PhD

Ted Lynch, PhD

Ernest Madsen, PhD

Nicolas Rognin, MSc, PhD

Cedric Schmitt, PhD

Gale Sisney, MD

Michael Tanter, PhD

Keith Wear, PhD

Hua Xie, PhD

RSNA

Joe Koudelik

Madeleine McCoy

General discussion

- Subcommittee [charge](#) reviewed and discussed
 - The goals of this subcommittee are to determine the appropriate ultrasound elastography phantom material properties and phantom design needed to adequately assess wave speed measurement performance.
- Dynamic elasticity property measurements are to be robust and reliable; many are easily performed poorly.
- Accurate characterization of materials remains very important.
- Question arose as to whether the phantom properties to be measured are simply elastic modulus or shear wave speed. There may be overlap—create phantoms and collect data regarding measurement techniques proposed.
- Questionnaire to inventory phantom materials, measurement metrics and range of device capabilities under development proposed.
 - Drs. Wear, Hall and Madsen will work together to create a questionnaire to circulate to the Subcommittee members
 - Some of this information can be taken from the round-robin papers and individual labs which will document several different devices.
- Dr. Madsen to reach out to NIST representatives to see who may be interested in this activity.
- Dr. Wear to reach out to Lynn Gibson of NIST (polymer division)
- Dr. Rognin discussed the stages of obtaining samples and the literature values and differences in techniques.
- Dr. Xie will assemble a literature search and develop a table of reported tissue properties based on the past 5-10 years of publications. A reference bibliography to be built from this detail.
- Dr. Alam to survey the literature on measurement methods (phantom and tissue)
- Reference papers would be helpful in this stage.
- Collaboration with international labs suggested.
- Dr. Carson to reach out to Mr. James Miller (industrial engineer specializing in US tissue studies)
- Reach out for international collaboration proposed
 - Dr. Michael Tanter to reach out to French national laboratories
 - Dr. Nicolas Rognin to reach out to Japanese national laboratories

Next steps:

- Dr. Xie to write and distribute progress report one week prior to next t-con.

Next calls:

- Phantom Subcommittee – **Monday, June 25, 2012 at 1:00 PM CT** (Drs. Hall and Garra to moderate)

[QIBA wiki](#)

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