

Opto-Acoustic Imaging: Improving Breast Diagnosis

Lunch Symposium

Sponsored by Seno Medical Instruments, Inc.

Saturday, September 24, 2016 13.00



Diagnostic specificity remains disappointingly low for breast imaging modalities that are optimized to achieve very high sensitivity. Op-to-acoustic (OA) imaging is a fusion of real time, co-registered, interleaved OA and grayscale information that shows both functional findings (relative deoxygenation of hemoglobin) and morphologic data (tumor angiogenesis) within and around breast masses using a handheld duplex OA probe. This hybrid imaging technology may provide additional information that may allow for a more specific diagnosis than CDU alone.

The Imagio® breast imaging system (Seno Medical Instruments, Inc.) has obtained a CE Mark and has completed a Post-Market Surveillance and Clinical Follow-up Study at five sites in the Netherlands. In addition, Seno is pursuing Pre-Market Approval (PMA) in the United States to obtain a FDA approval. The Imagio system, a fusion technology, shows potential for both structural and functional imaging information about potentially suspicious breast masses without the need for administering contrast agents, radionuclides, or exposing patients to x-irradiation.

Opto-Acoustic Overview: Correlation with the Gold Standard; Histopathology

T. Stavros, San Antonio/TX/USA

We will discuss the fundamentals of opto-acoustics (OA), a combination of light and sound that shows us both the vascularization (anatomy) and relative oxygen use (function) of breast masses co-registered with ultrasound in real time. The combination of anatomy and function in real time can help us to better distinguish between benign and malignant breast masses. The vascular anatomy of the breast is organized into zones. We will demonstrate some zonal correlations between OA and histologic findings in benign and malignant breast masses.

MAESTRO Interim results from the 200-subject MAESTRO Study

R. Pijnappel, Utrecht/NL

We will report the 75-subject interim analysis from the Post-Market Surveillance MAESTRO study (enrollment - 200 subjects) who had breast masses classified as BI-RADS 4a and 4b by conventional diagnostic ultrasound (CDU) to assess OA's sensitivity and specificity and its ability to downgrade benign masses and upgrade malignant masses in percentage chance of malignancy (POM) and BI-RADS category.

75 subjects with 78 masses (44 B, 34 M) from 5 Dutch sites (Amhem, Dordrecht, Hengelo, Nijmegen, and Utrecht) were evaluated with OA prior to biopsy. For each mass, the radiologist scored 5 OA features and assigned POM and BI-RADS categories. OA sensitivity, specificity, and BI-RADS downgrade and upgrade percentages were assessed with and without assist from a previously derived nomogram.

Downclassification and upclassification of suspicious breast masses using opto-acoustic imaging: Case results from the MAESTRO Study in the Netherlands

J. Veltman, Hengelo/NL

The 200-patient Post-Market Surveillance and Clinical Follow-up Study conducted at five sites in the Netherlands has interim results that may demonstrate the potential capability of the Imagio system to both downgrade and upgrade breast masses. Case examples from the MAESTRO study of downgrading benign masses and upgrading malignant masses will be presented.

Opto-acoustics as a potential new diagnostic technology in breast care: Clinical implications and future potential applications

R. Mann, Nijmegen/NL

Breast diagnostic methodologies are diverse, and each modality offers pros and cons. We will discuss the benefits of the Imagio breast imaging system and how to incorporate it into a typical clinical setting. There are future potential applications for this OA technology that will also be highlighted.

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Seno Medical
Instruments stand!!**

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**Contact Seno directly via email
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