

Improving Patient Management with Echocardiography, and EchoInsight Strain Imaging

Over five years ago, the team at UCSD's Sulpizio Cardiovascular Center began using EchoInsight® visualization and analysis for research projects and clinical evaluation. Their focus was to investigate the advancement of patient management with strain imaging and echocardiography for assessing both the left and right ventricles (LV and RV) for a variety of indications.

"Over this time, the American Society of Echocardiography (ASE) and the European Association of Cardiovascular Imaging (EACVI) have published recommendations focused on multimodality imaging of adult patients before and after cancer treatment. Additionally, the ASE and EACVI have also published chamber quantification guidelines recommending strain imaging as a method of analysis for assessing function." said Dr. Anya Narezkina, Assistant Professor of Medicine, Division of Cardiology at UCSD.

Dr. Narezkina added, "In regards to cardio oncology management, these recommendations indicate the importance of monitoring oncology patients with 2D echo and strain imaging pre- and post-chemotherapy to assess heart function. There is a tremendous need to identify cardiotoxicity early to help risk-stratify patients and possibly start cardio-protective medications. With strain imaging, it has been proven to indicate the negative effects of chemotherapy up to three months earlier than LV ejection fraction (EF)."

Additionally, the AMA CPT Editorial Panel assigned a new category III CPT billing code, 0399T, for use in reporting myocardial strain imaging for the detection of myocardial deformation.

In mid-2017, with guidelines, research, and clinical use all recommending strain imaging with echocardiography to more accurately assess and monitor heart function in the LV, Dr. Narezkina along with Monet Strachan, Manager & Technical Director CV Imaging and Megan Kraushaar, Supervisor Non-Invasive CV Services were tasked with launching a strain imaging clinic to bring strain imaging into routine clinical

About Sulpizio Cardiovascular Center at UC San Diego Health

The Sulpizio Cardiovascular Center is a hub for world class healthcare, along with discovery and innovation. The physicians and researchers are on the front lines of fighting heart and vascular diseases—at the patients' bedsides and in the research lab. The technology used, and techniques and treatments administered are setting standards in cardiac care.

- Performs, reads and manages a volume of approximately 20,000 studies annually
- Clinical lab uses GE Healthcare Vivid, and Philips Healthcare IE-33, EPIQ and Siemens SC2000 ultrasound scanners
- With increased guidelines, research and clinical support advocating echo with strain imaging as a tool for improved assessment and monitoring of heart function with indications, such as cardio oncology, the Sulpizio Cardiovascular Center identified a strain imaging clinic needed to be established
- Dr. Anya Narezkina, Assistant Professor of Medicine, Division of Cardiology, Monet Strachan, Manager & Technical Director CV Imaging and Megan Kraushaar, Supervisor Non-Invasive CV Services led the launch of a Strain Imaging Clinic in October 2017



echo study management. The initial patient populations to be monitored would be cardio oncology, with a focus on breast cancer, and heart transplant patients.

“We needed a strain imaging solution that could integrate easily into our Siemens Syngo Dynamics health imaging and information reading and reporting environment,” said Monet Strachan. “Over the years, EchoInsight has proven to deliver vendor agnostic accurate global longitudinal strain imaging with excellent serial comparison capabilities to monitor percent change from baseline, and all in an easy to use user interface. When we learned about EchoInsight’s ability to launch as a third party application from the Syngo reading environment, the decision was simple—we would use EchoInsight for our strain imaging clinic.”

Megan Kraushaar added, “Additionally, a unique feature of EchoInsight is the ability to analyze retrospective data, allowing for streamlined enrollment into the strain imaging clinic. This is critical, along with the serial comparison capabilities, to properly assess cardiac function in these vulnerable and important patient populations.”

Strachan added, “Since launching our strain imaging clinic nearly six months ago, we have seen great success in the program in improving management of our cardiovascular patients. We plan soon to add valve clinic and pulmonary hypertension patient populations.”

About EchoInsight

By delivering valuable echocardiographic analysis tools designed to transform patient management, EchoInsight with strain imaging is improving diagnostic confidence, standardization and efficiency. EchoInsight is designed for clinical practice, and has been shown to improve diagnostic assessment, standardize interpretation and can assist in monitoring patients over time to optimize care. Additionally, EchoInsight with its strain imaging and automated cardiac function measurements, integrates into institutional and cardiovascular program management with robust, standardized functional data analytics. At its core is Epsilon Imaging’s proprietary speckle tracking technology, TissueTrack®, providing robust strain imaging with automation of cardiac measurements. EchoInsight seamlessly integrates into healthcare IT infrastructure as a DICOM compliant system with structured reporting.

Features include:

- Clinical strain imaging for improved confidence in assessment and monitoring of wall mechanics for the entire heart
- Automated linear, volumetric and area measurements for improved efficiency and standardization based on ASE guidelines
- Easy to use features and clinical applications for fast analysis
- Rapid study comparison capabilities for comprehensive assessment and monitoring of patient studies
- Ability to analyze strain in contrast-enhanced studies
- Available as a stand-alone workstation or client-server architecture
- DICOM structured reporting for streamlined patient management
- Vendor neutral platform



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