Atrial Fibrillation, a common cardiac arrhythmia, is treatable with cardiac ablation. However, precisely locating the electrical disturbance is important. The cardiac electrical activity test can pinpoint the disturbance.

Cardiac Test Provides Three Dimensional Model of the Heart and Locates Heart Problems

Non-Invasive Cardiac Test Provides Three Dimensional View of Interior and Exterior of the Heart

Cardiac Electrical Activity Software Locates Heart Problems

Abnormal heart rhythms or cardiac arrhythmia such as ventricular tachycardia, atrial fibrillation or atrial flutter are common electrical activity anomalies of the heart. Effective? treatment relies on the ability to precisely locate these anomalies; the more site-specific the treatment, the better the clinical outcome. The heart electrical activity algorithm in this software creates a complete 3-dimensional volumetric image of the heart during the activation and repolarization portions of the cardiac cycle. Unlike 3-dimensional surface algorithms, the 3-dimensional volume algorithm provides visualization of the interior of the heart muscle in addition to the internal and external surfaces. The procedure to measure cardiac activation and repolarization uses either the standard catheter-based approach or a non-invasive electrode jacket. In the catheter approach leads are fed through the femoral artery to the heart with a catheter. The leads sense electrical activity from the inside of the heart. The non-invasive electrode jacket is able to measure the electrical activity of the heart from outside the patient's body.

Note: The Cardiac Electrical Activity Software technology has been exclusively licensed to Acutus Medical.

Three Dimensional Model of Heart Aids in Treatment of Cardiac Arrhythmia

Current heart electrical activity imaging algorithms only produce a three dimensional image of the surface of the heart. The cardiac electric activity test constructs a three dimensional image of the cardiac tissue. This model includes imaging of the interior tissue in addition to the internal and external surfaces of the heart.

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This locates the disruption and enables effective cardiac ablation to treat cardiac arrhythmia, ventricular tachycardia, atrial fibrillation, or atrial flutter. Cardiac ablation works by scarring or destroying tissue that blocks the electrical signal that travels through your heart to make it beat. The information from this algorithm ensures that only the tissue disrupting the electrical signal is destroyed by the treatment and the heart can resume normal activity. For many electrical disturbances, cardiac ablation is a successful treatment option, with the success rate being around 85% for most heart problems. Better localization of electrical anomalies can further improve the clinical outcome.

**BENEFITS OF HEART ELECTRICAL ACTIVITY IMAGING:**

- Provides physician with 3-dimensional volumetric mapping of heart electrical activity for surgical planning
- More precise localization of the origin of cardiac arrhythmia for improved patient outcome

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