Technology: Methods and systems for detecting and treating heart instability

VA ID Number: 10-063

Inventor: Sanjiv Narayan

Location: San Diego, CA

Topic: Cardiology/Respiratory

USPTO Issue Date: 7/19/2016

Patent Number: 9,393,425

The VA has a joint ownership interest with The Regents of the University of California, Oakland, CA

Contact Lee Sylvers, PhD

Abstract: Systems and methods define an index of risk for cardiac disease by detecting cellular derangements that may lead to cardiomyopathy, heart rhythm disorders or ischemic heart disease. The markers include fluctuations or abnormal rate-behavior of electrical, mechanical or other measurable biosignals. The invention operates in modes that can be applied to prevent atrial fibrillation or the risk for ventricular arrhythmias. Alternative embodiments are applied to tissue outside the heart such as skeletal muscle, smooth muscle, the central nervous system, the respiratory system, the urogenital system and the gastrointestinal system.

Technology: Method for analysis of complex rhythm disorders

VA ID Number: 10-063

Inventor: Sanjiv Narayan

Location: San Diego, CA

Topic: Cardiology/Respiratory

USPTO Issue Date: 9/13/2016

Patent Number: 9,439.573

The VA has a jointly owns this patent with The Regents of the University of California, Oakland.

Contact Lee Sylvers, PhD

Abstract: A method of analyzing a complex rhythm disorder in a human heart includes accessing signals from a plurality of sensors disposed spatially in relation to the heart, where the signals are associated with activations of the heart, and identifying a region of the heart having an activation trail that is rotational or radially emanating, where the activation trail is indicative of the complex rhythm disorder and is based on activation times associated with the activations of the heart.

Technology: System for analysis of complex rhythm disorders

VA ID Number: 10-063

Inventor: Sanjiv Narayan

Location: San Diego, CA

Topic: Cardiology/Respiratory

USPTO Issue Date: 6/28/2016

Patent Number: 9,375156

The VA has a joint ownership interest with The Regents of the University of California, Oakland, CA

Contact Lee Sylvers, PhD

Abstract: A system to detect a cause of a complex rhythm disorder in a human heart includes a plurality of sensors disposed spatially in relation to the heart, where the signals generated by the sensors are associated with activations of the heart. A processor collects and analyzes the signals to identify a region of the heart having an activation trail that is rotational or radially emanating, where the activation trail is indicative of the complex rhythm disorder and is based on activation times associated with the activations of the heart.