

**Technology:** [Methods and systems for detecting and treating heart instability](#)

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**Inventor:** Sanjiv Narayan

**Location:** San Diego, CA

**Topic:** Cardiology/Respiratory

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**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.