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# SYSTEM FOR EVALUATING AND ASSESSING ABNORMAL CARDIAC CONDUCTION

## DIAGNOSTICS

Rapid, low-cost, and non-invasive detection of patient risk for cardiac arrhythmia through ECG recording assessment.

### TECHNOLOGY TYPE

Medical Devices  
Class I/II

### STAGE OF DEVELOPMENT

- Prototype analysis software is complete, being fine-tuned.

- Analyses of archived normal and abnormal conduction data underway.

### IP PROTECTION

#### U.S. Utility Patent Issued

Electrocardiographic  
Assessment of  
Arrhythmia Risk  
US8437839B2

#### Nationalized PCT Pending in Europe

Electrocardiographic  
Assessment of  
Arrhythmia Risk  
EP2696751

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Reference Number: U-5006

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### TECHNOLOGY SUMMARY

Cardiac arrhythmias and abnormal heart conduction are common, with over 600,000 sudden cardiac deaths per year in the United States. Present methods for atrial assessment and atrial fibrillation ablation require expensive, high-risk, time-intensive procedures in hospital operating rooms and experimental MRI imaging techniques. Related technology for assessing ventricular conduction abnormalities is inexpensive and low-risk, but addresses only one part of ventricular abnormality.

In order to simplify and enhance the diagnosis of abnormal heart conduction, a novel approach has been created to quantify the number and character of P waves or QRS generated by the heart. This approach assesses both P and QRS signals during a 5-15 minute, continuous, high-resolution ECG recording to determine patient risk for cardiac arrhythmia.

### FEATURES AND BENEFITS

- Processes P waves and QRS signals for atrial and ventricular conduction abnormality assessment.
- Inexpensive, low risk, non-invasive assessment and screening tool.
- Uses just 5-15 minutes of continuous ECG recording for assessment.

### RECENT PUBLICATIONS

Lux, R. L. (2008). Noninvasive assessment of cardiac electrophysiology for predicting arrhythmogenic risk: Are we getting closer? *Circulation*, 118(9), 899-900. doi: [10.1161/circulationaha.108.797357](https://doi.org/10.1161/circulationaha.108.797357)

### INVENTOR PROFILE

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