



Atrial fibrillation complexity score for enhanced risk stratification and management

A novel scoring system that integrates multiple metrics to evaluate the severity of atrial fibrillation.

IP Status: Provisional Patent Application Filed

Applications

- Atrial fibrillation risk stratification

Technology Overview

Atrial fibrillation (AF) is a prevalent cardiac arrhythmia linked with an increased risk of stroke and other heart complications. Traditional prognostic tools for assessing AF severity are limited because they fail to capture the electrical complexity of the AF signals. Researchers at the University of Minnesota have developed a novel metric that incorporates AF burden and a new marker, electrical burden, which quantifies the instability of AF signals. This novel approach enables more accurate characterization and stratification of AF to guide management and improve patient outcomes.

Phase of Development

TRL: 3-4

Clinical validation has been demonstrated using data from 50 atrial fibrillation patients.

Desired Partnerships

This technology is now available for:

- License
- Sponsored research
- Co-development

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Researchers

- [Alena Talkachova, PhD](#) Professor, Department of Biomedical Engineering

References

1. Jieun Lee, Autumn J. Brower, Henri Roukoz & Elena G. Tolkacheva(2024) , <https://www.nature.com/articles/s41598-024-76611-7>, Scientific Reports

Technology ID

2022-201

Category

Life Sciences/Diagnostics & Imaging

Life Sciences/Health IT

Life Sciences/Human Health

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