

NAME Cardiolyse

WEBSITE www.cardiolyse.com

COUNTRY HQ: Helsinki, Finlanc

BUSINESS AREA
Predictive Analytics
Post-Discharge CVD Follow-up
Remote Cardiac Monitoring,
Remote Clinical Trials,
Primary Prevention

PATIENT GROUPS CVD patients (HF, Afib), NCDs, Diabetes

BUSINESS MODEL B2B, B2B2C platform-as-a-service (RPM) software-as-a-service (analytics)

founded 2016 Cardiolyse is a CE-certified (Class 2a) CVD patient remote monitoring platform (RMP) addressing early detection of heart failure.

Patient target groups: Post-discharge patients, Chronic patients, Early screening

## **CURRENT CHALLENGES:**

- Cardiovascular disease (CVD) is still the #1 killer worldwide.
- Around 14% of HF post-discharge patients have readmission.
- Chronic patients have limited access to healthcare services during isolation and doctors are overwhelmed with unstructured data.

#### **OUR SOLUTION**

Cardiolyse RMP is combining automated ECG analytics (rest ECG, Holter ECG) and HRV analytics, that allows us to support lifestyle changes and treatment strategy of post-discharge patients.

On top of that we have developed scoring systems for better result interpretation:

- Standard ECG analysis (Unique combination of time-amplitude ECG analysis algorithms);
- Myocardium score (Determines the dynamics of myocardial changes);
- Universal ECG Score System (Patented. Evaluating effectiveness of therapeutic measures and has a proven predictive value).

#### **OUR RPM FEATURES**

- Risk stratification of the patients;
- Automatic rest ECG & Holter ECG data analysis (arrhythmias);
- Following latest rehabilitation guidelines (adjusting pathway);
- Calculating personal trends of behavioral changes;
- Device agnostic & easy to integrate in existing ecosystem.

### INNOVATION / COMPETITIVE EDGE

- 2 patents on proprietary algorithms, standing behind the Universal ECG Score calculation and the Personal Baseline development, which determine the position of every vital parameter on the scale of personal baseline to pathology to deliver midterm prognosis on dangerous heart events.
- Cardiolyse is the only market player as of today who is being altogether device and leads number agnostic cloud platform for doctors and patients, delivering rest and Holter ECG data analytics and prognostic warnings.

# **CASES / VALIDATION**

In 2020 Cardiolyse was CE-certified for the automatic ECG interpretation of most cardiac abnormalities, inclusive of 20+ types of arrhythmias and myocardial infarction detection for the 12-leads ECG recording. Within the certification the algorithms were validated with 5 databases: AHA, MIT-BIH, ESC, NST, CU.

Starting from 2016 Cardiolyse is engaged into an ongoing research on ECG recording analysis with the University of Oxford Nuffield Department of Population Health and China Kadoorie BioBank. First publication on this topic was published end of 2020.

Cardiolyse is currently in process of piloting the RPM with 2 major Hospitals in Italy and UK. We are also currently providing commercial SaaS services to Big Pharma and Healthcare providers.



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