

AI for ECG analysis

Turning ECG signals into actionable results



About Cardiomatics

Leading technology company

in development of AI-based algorithms for long term ECG analysis since 2017.

Agile product development

regular product updates through efficient R&D development cycles

Interoperable

experienced in hardware and software integrations

Web and Cloud platform

based on AWS with data centres currently in Frankfurt and London

Trusted by KOL's

Engaged in clinical research (from e.g.: Germany, Switzerland, USA)

8 000 000+

hours of ECG signals analysed by our AI

1 000+

clinicians have used Cardiomatics

7

years on the market

10+

countries

40+

compatible Holter ECG device models



Do these challenges sound familiar?



Delays in the diagnosis and management of patients



Risk of inaccurate analysis



Growing number of complex and longer examinations



Staff shortages



Prof. Michael Kühne, MD BASEL UNIVERSITY HOSPITAL, Switzerland

examinations	



Time consuming process of analysis



Tiresome activity

Manual validation of results is very challenging and it substantially increases the risk of making a mistake

Cody Cichowitz, MD WEILL CORNELL MEDICINE, United States



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Cardiomatics offers a uniquely **streamlined experience**

Al-based ECG Interpretation workflow with Cardiomatics

UPLOAD Upload the raw ECG signal for AI interpretation

REVIEW Review the interactive graphical report

Make clinical decisions in minutes!









Unlock your cardiac clinic's growth with comprehensive long-term ECG diagnostics for more patients

- Analyse more long-term ECG signals while reducing your daily workload
- Gain more time for clinical decision-making and treatment of your patients
- Enjoy unrestricted access to your ECG reports from any device¹



What differentiates us from other solutions?

Conventional systems require extensive manual effort while Cardiomatics automates the whole process

Cardiomatics streamlined workflow





LOAD ECG SIGNAL

Upload the raw ECG signal for Al interpretation



REVIEW REPORT

Cardiomatics

Review the interactive graphical report with advanced functionalities (e.g., full-disclosure)

Seamlessly scale-up your practice with Cardiomatics'Al-based automation

Traditional FCG Load ECG signal analysis software Navigate abnormalities on HR timeline Check full-disclosure & correct annotations 4 Use morphology analysis to understand groups of abnormalities Clean-up groups of annotations based on morphologies Select events & parameters to generate ECG report Review report

Other system's workflows require many manual steps

Streamlined workflow

By using Cardiomatics, the time to perform a Ambulatory ECG (Holter) test is reduced. Medical facilities can diagnose more patients at the same time without having to invest in equipment or increase the number of staff.



Cardiomatics

ACCURATE, FAST and EASY AI-powered ECG analysis



99.8% DETECTION CORRELATION



SOURCE: Assessment of the atrial fibrillation burden in Holter electrocardiogram recordings using artificial intelligence, Cardiovascular Digital Health Journal, Universitätsspital Basel, Jan 27, 2023 FAST

WORKFLOW COMPARISON FOR A TYPICAL 24H ECG RECORDING





Compliant and **secure**, with standard regulations related to medical devices and data security.

Cardiomatics is a certified medical device CE/MDR (class IIa) - <u>1st in the world</u>¹.

Compliant with the General Data Protection Regulation (GDPR).

The company has a QMS system certified by the Notified Body <u>TÜV Rheinland</u>.

Verification is performed in accordance with the IEC EN 60601-2-47:2015.

1. 1st device approved under the recent EU Medical Device Regulation for long term ECG analysis









Examples of use case scenarios

1. Ambulatory setting



Centralisation through Cardiomatics' "Multi User Account" functionality



Clinical Evidence

To find out more, please click here

- University Hospital Basel

Country: Switzerland

The Swiss-AF-BURDEN study. The Health Consequences of the Burden

of Atrial Fibrillation.

Outcomes:

The assessment of AF burden with Cardiomatics provides very similar results compared to manual assessment (Pearson's correlation coefficient: 0.998). It may be an accurate and efficient option for the assessment of AF burden

Article:

https://doi.org/10.1016/j.cvdhj.2023.01.003



Medical University of Warsaw

Country: Poland

The CRT study An automatic ECG signal analysis system for evaluating the effectiveness of resynchronization in CRT

Outcomes:

Implementation of AI in the appropriate qualification of patients for resynchronization therapy help increase the number of people for whom CRT therapy bring the expected results.

Article:

https://doi.org/10.3390/jcdd9010017



Country: Denmark

The ACOVID study. Cardiac arrhythmias in patients hospitalized with COVID-19:

Outcomes:

- 28% of the patients developed major arrhythmias

- Reducing the time from referral to diagnosis from 70 to 22 days and avoided hospital referrals in 73% of the cases (Cardiomatics support)

Article:

https://doi.org/10.1016/j.hroo.2021.03.008

Clinical Evidence - Ongoing

Title	Cardiomatics' involvement	Partners
Al for increased efficiency in the diagnosis and treatment of atrial fibrillation.	The assessment of heart rhythm in the context of enhancing the efficiency of AFib diagnosis and treatment.	BAYER Chagdalena Citici for Cardiovascular Medicine
Development of an innovative tool for automatic analysis of cardiac arrhythmias and conduction for pediatric patients	The assessment of heart rhythm in the context of automatic analysis of cardiac arrhythmias and conduction patterns in pediatric patients	Medical University of Warsaw
AI for the investigation of cardiovascular disease risk among patients with and without HIV.	The assessment of cardiac arrhythmias in the context of guiding clinicians and shaping public health initiatives to reduce the cardiovascular disease burden in Africa	Weill Cornell Medicine
Effect of low levels of dysfunctional oxidized high-density lipoproteins on atrial fibrillation	The assessment of heart rhythm in the context of dysfunctional, oxidized high-density lipoprotein, an important risk factor for cardiovascular disease	Universitätsklinikum Brandenburg an der Havel
The Gluco-Starve Study	The assessment of HRV in the context of understanding the impact of glucocorticoids on physiological adaptations to fasting.	University Hospital Basel
The Gluco-Met Study	The assessment of HRV in the context of the dynamics of energy homeostasis during glucocorticoid excess in diabetic patients.	Contracting Hospital Basel
The Gluco-Feed Study	The assessment of HRV in the context of the impact of glucocorticoids on body weight regulation	J - University Hospital Basel

Our scientific board guides our product and clinical roadmap



1 - As per January 23

Our team



Rafał Samborski, PhD Founder & CEO Alexander Habermeier, MS, MBA Chief Product Officer (Ex-Philips) Katarzyna Barczewska, PhD Head of Machine Learning

Supported by a strong Business Advisory Board



Pavel Mucha Partner at KAYA VC



Marta-Gaia Zanchi, PhD Managing Partner at Nina Capital



Piotr Kulesza General Partner at RTA VC



Mats Dahlquist Ex VP GE Healthcare, Ex VP Philips



We are trusted by cardiologists

Cardiomatics is proven in regular day-to-day practice



- Covered all clinical needs
- Covered most important clinical needs needs
- Lacked some important features
- Inadequately covered clinical needs

Cardiologists love Cardiomatics' streamlined experience



- Cardiomatics is an **intuitive and easy-to-use** tool, that allows us to **save a lot of medical time**.
- Fadi Jamal, MD CardioParc, France



With Cardiomatics, interpretation is now fast and reliable.

Ulrich INGOLD, MG Kardiologie Interlaken, Switzerland



The web-based platform is very **simple** to use, the interface is **user-friendly**.

Prof. Michael, KÜHNE, MD Basel University Hospital, Switzerland



Cardiomatics provides **fast and reliable** ECG reports, which **perfectly suited the needs of the team**

Prof. Paweł BALSAM, MD Medical University of Warsaw, Poland



Cardiomatics reports covered all or most important clinical needs of its customers*

* Based on 333 customer reviews of Cardiomatics ECG analysis reports collected May 1 - Sept 25 2023



1000+ clinicians have used our platform across Europe

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Learn how leading cardiac clinics are growing their practice with Cardiomatics' Al-powered ECG analysis



Cardiomatics



Cardiomatics Heart of Poland Cardiomatics & American Heart of Poland Al-powered ECG analysis is twice as fast and saves time for both medical workers and patients.

American

TIME FOR ANALYSIS REDUCED BY 80%

x2 FASTER ECG ANALYSIS



Thank you!



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Try Cardiomatics for free

by clicking on our Cardiomatics cloud





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