Medicalgorithmics S.A.

Price target: PLN 43.80 | Initiating Coverage | Rating: BUY

After several difficult years, Medicalgorithmics S.A. (MDG), which since its foundation in 2005 has sold >20,000 ECG monitoring devices mainly in North America, has shifted its focus towards the provision of proprietary algorithms DeepRhythmAI (DRAI) and the device-agnostic AI-powered software platform DeepRhythm Platform (DRP) for the analysis of heart signals. The algorithms have been developed based on the significant amounts of medical data, which MDG has collected over the last years, and are also sold separately to third-parties that are using external software. The distribution of the company's solutions is conducted through specialised distribution partners worldwide, indluding the largest healthcare market the US, where MDG's solutions are FDA-certified. In Jan-Sep 2025, MDG already signed more contracts for the integration of its solutions than in whole 2024 (17 vs. 13) and we expect the growth momentum to continue. We initiate coverage of MDG with a 12-months DCF-based PT of PLN 43.80 and a BUY rating. Our estimates, which assume that MDG will achieve its target of 1m sold reports in 2027E vs. 2026E that it had guided for, imply a current PEG ratio for 2027E (management guides for an operational cash break-even in Q4/25 or Q1/26E) of 0.03. The main risks, which we see, are slower-than-expected integrations at MDG's partners and reductions of reimbursement rates.

Medicalgorithmics' solutions allow independent diagnostic testing facilities (IDTFs) and third-party producers of ECG devices to double the number of ECG test reports per employee and thus significant efficiency improvements. MDG generates revenues from the sale of devices and per ECG report, which its algorithms/software helps to create and which is reimbursed by insurers. Thus, its revenues are highly scalable. Additional significant revenue potential offers the VCAST technology, an AI-based non-invasive diagnostic and imaging system for the circulatory system.

While the market for ECG solutions is highly competitive, the company's competitive advantage are its algorithms, which according to a recent study in the Nature magazine showed a negative predictive value exceeding 99.9% for critical arrhythmias, far reducing the rate of missed diagnoses. In addition, the study showed a higher false-positive rate of MDG's algorithms compared to technicians (6.3% vs. 2.3%) for events like asystoles, third-degree AV block, and long runs of ventricular tachycardia.

in PLNm	2023	2024	2025E	2026E	2027E	2028E
Net sales	43.10	24.00	29.04	58.27	89.91	116.47
EBITDA	2.80	-12.90	-9.07	7.39	15.90	25.71
EBIT	0.43	-16.54	-13.07	2.99	11.06	20.38
Net income	-0.58	-16.08	-11.64	0.40	7.01	14.65
EPS	-0.06	-1.62	-1.17	0.04	0.70	1.47
DPS	0.00	0.00	0.00	0.00	0.00	0.00
Dividend yield	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
RoE	-1.25%	-18.95%	-16.31%	0.60%	10.10%	18.25%
Net gearing	-21.41%	0.97%	33.37%	38.68%	33.86%	19.28%
EV/Sales	8.26x	14.84x	12.26x	6.11x	3.96x	3.06x
EV/EBITDA	127.29x	neg	neg	48.20x	22.40x	13.85x
P/E	neg	neg	neg	866.90x	48.96x	23.44x

Company profile

Medicalgorithmics S.A. is a Polish provider of AI-based software for the analysis of the heart with clients in >20 countries in Europe, North America, Asia and Australia.

Date of publication	13 October 2025 / 8:15 am
Website	www.medicalgorithmics.com
Sector	Healthcare Software
Country	Poland
ISIN	PLMDCLG00015
Reuters	MDG.WA
Bloomberg	MDG PW

Share information

Last price	34.50
Number of shares (m)	9.95
Market cap. (PLNm)	343.37
Market cap. (EURm)	80.79
52-weeks range	PLN 42.80 / PLN 15.57
Average volume (shares)	46,643

Performance

4-weeks	-12.88%
13-weeks	18.35%
26-weeks	41.68%
52-weeks	59.72%
YTD	104.14%

Shareholder structure

Biofund Capital Management	34.92%
PZU OFE	7.25%
Free float	57.83%

Financial calendar

9M/25 report	November 29, 2025

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Content

Investment Case

- Medicalgorithmics S.A. (MDG), which was founded in 2005, is a leading European digital health company. Over the last years, it has sold >20,000 devices for remote electrocardiogram (ECG) exams especially to US clients, but also from other continents. The c. 8m of recorded days of ECG signals, which the company has collected from patients to date, allowed it to develop an own cloud-based software and algorithms for the analysis of heart signals that according to the "Artificial intelligence for direct-to-physician reporting of ambulatory electrocardiography" study in the Nature magazine from February 2025 that was based on >14,000 clinical patient recordings show a higher sensitivity (the ability to detect true positives) than ECG technicians. As MDG's strategy emphasizes a shift towards AI-based software, the contribution of device sales to the company's total revenues — which equalled 10% in 2024 — is expected to decline over time.
- MDG's proprietary algorithms and software, which are highly scalable, enable the company's target customers — distributors, independent diagnostic testing facilities (IDTFs) and third-party device manufacturers — to achieve significant efficiency gains. Specifically, clients can generate twice as many ECG reports per employee, which increases both their revenues and MDG's, as the company earns a share of the client's fee per report (with ECG reports reimbursed by insurers). MDG benefits from a strong moat in its segment, since it is both difficult and time-consuming for an IDTF to switch to another provider. The company complements its offering with the PocketECG and Kardiobeat.ai devices, which provide continuous ECG recording for periods ranging from 24 hours to 30 days.
- After a sharp drop in 2023-2024 due to competition and a change of strategy, in H1/25 Medicalgorithmics' revenues increased by 6.3% y-o-y to PLN 13.7m (prel. Q3/25 sales: +37.6% y-o-y to PLN 7.2m), with the number of sessions (= ECG reports) increasing by 60.4% y-o-y to 188,306. At PLN -6m and PLN -6.7m respectively, EBIT and net income were still negative, however management expects the operational cash break-even by the beginning of Q1/26E due to a significant increase of new contracts (especially, the revenues from the new contract with one of the largest US-based IDTFs will start ramping up in H2/25 and are supposed to reach up to PLN 46m within 2 years). For the coming years, we expect a significant growth of revenues (CAGR 2024-2033E) of 31.7% due to MDG's diagnostically superior, efficient and highly scalable software. While in full-year 2024 the company created 269,000 ECG reports worldwide, in the US alone the market potential equals 7-8m reports per year. According to WHO, cardiovascular diseases were the No 1 cause of death worldwide with c. 20m deaths (or 32% of all) in 2022 alone. Due to an ageing population this number is expected to increase to 35m by 2050E.
- We initiate coverage of Medicalgorithmics S.A. with a 12-months DCF-based PT of PLN 43.80, which implies an upside of 27% at present. In our view, MDG has a very interesting technology, a reasonable distribution strategy and a competent and international team (the CEO is Polish-American and lives in the US), which has the skills to scale it on the global market. In addition, the company's VCAST technology could significantly contribute to its growth in the long run (the US peer in this segment, Heartflow, is currently valued at USD 2.8bn). Given the nature of its business model, we expect MDG to start paying dividends in the future. The main risks, which we see, are delays with integrations at partners and declining reimbursement rates.

SWOT Analysis

Strengths

- Digital health company with 20 years of history and successful sales of ECG monitoring devices in the US and other regions in the past, which allowed it to record 8m days of ECG signals and collect 2.5bn annotated heart beats
- Since 2024, successful transformation into a provider of an AI-based digital platform for the creation of ECG analysis reports that can work with various ECG monitoring devices and offers diagnostic centers significant efficiency improvements
- MDG's proprietary algorithms made 14x less mistakes than ECG technicians in a recent study that was published by the Nature magazine
- The company's largest shareholder with a stake of 34.9% is the US-based fund Biofund Capital Management. Its CEO is an orthopaedic surgeon with professional experience in the US

Weaknesses

- MDG is just coming out of a multi-year restructuring and in H1/25 was still loss-making
- Debt (max. USD 9m) from the largest shareholder Biofund with a high interest rate (14-18.5% per annum)

Opportunities

- In the future, MDG's VCAST software could generate revenues per report of several thousand PLN, thus significantly more than an ECG report
- Only in the US, 7-8m ECG reports are performed each year. In 2024, MDG performed only 269k worldwide
- According to Stat and the American Heart Association, cardiovascular diseases are the No 1 cause of death both in the US and Europe. Worldwide, c. 20m people died due to cardiovascular diseases in 2022 and by 2050E this number of expected to grow to 35m
- Strong dividend potential in the long run due to a highly scalable software-based business model
- Takeover by a large global MedTech company in the long run

Threats

- Strong dependence on government regulations and reimbursement policies
- Risk of slower-than-expected integrations at clients
- Introduction of better and cheaper products by competitors, especially large international MedTech companies
- Risk of fines for a false diagnosis that was based on MDG's solutions
- Exchange rate risks as most of MDG's revenues are generated in USD
- Loss of key employees

Valuation

We have valued Medicalgorithmics using a DCF approach only as there are only two listed companies worldwide, which are 100% comparable and have sell-side estimates. Our approach results in a 12-months price target of PLN 43.80, which implies an upside of 27% at present and a BUY rating.

Below are the key assumptions of our WACC calculation:

(1) *Risk-free rate*: Current yield of Polish long-term government bonds with maturity in 2047E is 5.63% (Source: www.boerse-stuttgart.de)
(2) *Beta*: 4y average unlevered beta of companies from the Healthcare Information and Technology sector of 1.14x (Source: www.damodaran.com)
(3) *Target equity ratio*: 80%
(4) *Levered beta*: 1.54x
(5) *Equity risk premium (Poland)*: 5.46% (Source: www.damodaran.com)
(6) *Effective tax rate*: 19%
(7) *After-tax debt costs*: 6.5%
(8) *Equity costs*: 14%
(9) WACC: 12.5%
(10) Free cash flows are discounted to October 10, 2025.

DCF model

in PLNm	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E
Net sales	**29.04**	**58.27**	**89.91**	**116.47**	**151.03**	**180.98**	**216.94**	**249.34**	**286.61**
(y-o-y change)	21.0%	100.6%	54.3%	29.5%	29.7%	19.8%	19.9%	14.9%	14.9%
EBIT	**-13.07**	**2.99**	**11.06**	**20.38**	**33.23**	**50.67**	**75.93**	**87.02**	**99.45**
(EBIT margin)	-45.0%	5.1%	12.3%	17.5%	22.0%	28.0%	35.0%	34.9%	34.7%
NOPLAT	**-10.59**	**2.42**	**8.96**	**16.51**	**26.91**	**41.05**	**61.50**	**70.49**	**80.56**
+ Depreciation & amortisation	4.00	4.40	4.84	5.32	5.86	6.44	7.09	7.79	8.57
= Net operating cash flow	-6.59	6.82	13.80	21.83	32.77	47.49	68.59	78.28	89.13
- Total investments (Capex and WC)	-9.14	-8.82	-10.21	-9.91	-11.30	-12.18	-14.07	-13.44	-14.89
Capital expenditure	-9.60	-8.91	-9.35	-9.83	-7.28	-7.86	-8.51	-9.21	-9.99
Working capital	0.46	0.09	-0.86	-0.07	-4.02	-4.32	-5.56	-4.23	-4.90
= Free cash flow (FCF)	-15.72	-2.00	3.59	11.93	21.47	35.31	54.52	64.84	74.24
PV of FCF's	**-15.31**	**-1.73**	**2.76**	**8.15**	**13.05**	**19.07**	**26.17**	**27.67**	**28.16**

PV of FCFs in explicit period	108.00
PV of FCFs in terminal period	292.27
Enterprise value (EV)	**400.27**
+ Net cash / - net debt (30 June 2025)	-12.76
+ Investment / - minorities	-0.01
Shareholder value	**387.50**
Number of shares outstanding (m)	**9.95**
WACC	**12.5%**
Cost of equity	14.0%
Pre-tax cost of debt	8.0%
Normal tax rate	19.0%
After-tax cost of debt	6.5%
Share of equity	80.0%
Share of debt	20.0%
Fair value per share in PLN (today)	**38.93**
Fair value per share in PLN (in 12 months)	**43.80**

WACC \ Terminal EBIT margin	31.7%	32.7%	33.7%	34.7%	35.7%	36.7%	37.7%
8.5%	79.90	82.00	84.10	86.20	88.30	90.40	92.50
9.5%	66.05	67.73	69.42	71.11	72.80	74.49	76.18
10.5%	55.58	56.96	58.34	59.73	61.11	62.49	63.87
11.5%	47.42	48.57	49.72	50.87	52.02	53.17	54.31
12.5%	40.91	41.87	42.84	**43.80**	44.77	45.74	46.70
13.5%	35.60	36.42	37.24	38.06	38.88	39.70	40.52
14.5%	31.21	31.92	32.62	33.32	34.02	34.72	35.43

Source: East Value Research GmbH

Peer Group Analysis

Most of Medicalgorithmics' listed competitors are large and diversified global MedTech companies. We have identified the following peers:

(1) *iRhythm Technologies Inc.*: iRhythm, which is based in San Francisco/US, provides advanced ambulatory cardiac monitoring solutions using wearable biosensor devices, supported by data analytics and machine learning for arrhythmia diagnosis. iRhythm's primary product is the Zio service, which includes Zio XT and Zio AT wearable cardiac patches that monitor heart rhythms continuously for up to 14 days. The patches are prescribed by physicians, worn by patients, then returned for data analysis. iRhythm processes this data with proprietary algorithms and provides actionable diagnostic reports to clinicians. In 2024, iRhythm generated revenues of USD 591.8m and an EBITDA of USD -65.6m. Its market cap equals USD 5.7bn.

(2) *Biotricity Inc.*: Biotricity, which is based in Redwood City/USA, offers a combination of wearable cardiac monitoring devices and a cloud-based AI-driven analytics platform called the Cardiac AI Cloud, which processes large volumes of cardiac data to provide advanced diagnostic insights to clinicians. The company generates recurring revenue through technology service fees that are significantly larger than device sales revenues. In fiscal-year 2024/25, Biotricity, which has a market cap of USD 18.1m, generated revenues of USD 13.8m and an EBITDA of USD -2.4m.

(3) *Heartflow Inc.*: Heartflow, which is based in Mountain View/US, provides a software-as-a-service (SaaS) platform that utilizes artificial intelligence and computational fluid dynamics to create personalized 3D models of patients' coronary arteries from coronary computed tomography angiography (CTA) scans. The company offers its flagship product, the HeartFlow Analysis, which non-invasively diagnoses and helps manage coronary artery disease by providing detailed insights on blood flow, stenosis, and plaque composition. In 2024, Heartflow, whose current market cap equals USD 2.8bn, generated revenues of USD 125.8m and an EBITDA of USD -59.6m.

(4) *Koninklijke Philips NV*: Philips, which is based in Amsterdam/The Netherlands, provides large-scale medical equipment such as MRI, X-ray, patient monitoring devices, and homecare products, along with innovative digital health solutions including AI-based analytics and remote monitoring services. The company is shifting towards circular business models like product-as-a-service (PaaS), where customers lease equipment, allowing Philips to maintain control and optimize lifecycle management through refurbishment, upgrades, and take-back programs. In 2024, Philips, which has a market cap of EUR 23.1bn, generated revenues of EUR 18bn and an EBITDA margin of 8.8%. Its ROCE equalled 3.3%.

(5) *Siemens Healthineers AG:* Siemens Healthineers, which is based in Forchheim/Germany, offers advanced medical imaging systems, diagnostic solutions, and advanced therapies, combining hardware with digital services, AI-driven data analytics, and automation to enhance clinical decision-making and operational efficiency. In fiscal-year 2023/24, the company, which has a market cap of EUR 54bn, generated revenues of EUR 22.4bn and an EBITDA margin of 16.7%. Its ROCE equalled 5.7%.

(6) *GE Healthcare Inc.*: GE Healthcare, which is headquartered in Chicago/US, operates four main segments: Medical Imaging (MRI, CT, X-ray, ultrasound), Advanced Visualization Solutions (AI and software for image analysis), Patient Care Solutions (monitoring, anesthesia, respiratory care), and Pharmaceutical Diagnostics (contrast agents and radiopharmaceuticals). In 2024, the company, which has a market cap of EUR 33.9bn, generated revenues of USD 19.7bn and an EBITDA margin of 18.3%. Its ROCE equalled 10.2%.

(7) *Abbott Laboratories Inc.*: Abbott, which is headquartered in North Chicago/US, operates through four main segments: Medical Devices, Diagnostics, Nutrition, and Established Pharmaceuticals, with a strong focus on innovation-driven growth and global market expansion. Its Medical Devices segment drives growth through products like the FreeStyle Libre continuous glucose monitoring system for diabetes care and cardiovascular innovations such as leadless pacemakers and structural heart solutions. In 2024, Abbott Laboratories, which has a market cap of USD 232bn, generated revenues of USD 42bn and an EBITDA margin of 25.5%. Its ROCE equalled 8.8%.

	EV/Sales		EV/EBITDA		P/E		P/BVPS	EBITDA margin	Net gearing
Company	**2025E**	**2026E**	**2025E**	**2026E**	**2025E**	**2026E**	**Latest**	**Last FY**	**Latest**
iRhytm Technologies Inc.(USD)	8.07x	6.90x	99.57x	58.29x	n.a	n.a	54.65x	neg	182.45%
Biotricity Inc. (USD)	2.95x	n.a	n.a	n.a	n.a	n.a	neg	neg	n.a
Heartflow Inc. (USD)	21.96x	17.58x	n.a	n.a	n.a	n.a	neg	neg	n.a
Koninklijke Philips NV (EUR)	1.67x	1.62x	10.39x	9.67x	17.25x	15.59x	2.23x	8.85%	63.61%
Siemens Healthineers AG (EUR)	2.86x	2.74x	14.00x	13.04x	20.20x	19.02x	3.05x	16.71%	75.37%
GE Healthcare Inc. (USD)	2.01x	1.92x	11.32x	10.59x	16.57x	15.27x	3.49x	18.33%	71.86%
Abbott Laboratories Inc. (USD)	5.34x	4.95x	20.23x	18.43x	25.94x	23.51x	4.59x	25.54%	12.24%
Median	**2.95x**	**3.85x**	**14.00x**	**13.04x**	**18.73x**	**17.30x**	**3.49x**	**17.52%**	**71.86%**
Medicalgorithmics S.A. (PLN)	12.26x	6.11x	n.a	48.20x	n.a	866.90x	4.93x	-53.76%	18.31%
Premium/Discount	***315.6%***	***58.9%***	***n.a***	***269.5%***	***n.a***	***4910.2%***			

Source: CapitalIQ, marketscreener.com, bankier.pl, East Value Research GmbH

H1/25 results

Revenues and Profitability

In the first six months of 2025, Medicalgorithmics generated revenues of PLN 13.7m (+6.3% y-o-y), thereof PLN 13.1m from Services and PLN 629k from Products. While in Q2/25 the company's revenues increased by 18% y-o-y, in Q3/25 the preliminary figure shows an increase of 37.6%, which in our view indicates the successful implementation of the new strategy that focuses on proprietary algorithms and cloud-based software.

In January-June 2025, Medicalgorithmics has created 188,306 (+60.4% y-o-y) ECG reports (= number of sessions) and signed contracts with 17 new partners from the US, Canada, Turkey and Europe, which is the reason, why revenues from Services increased by 27.2% y-o-y. Revenues from Products declined in-line with MDG's new strategy.

In H1/25, the share of US customers in MDG's total revenues went up to 33% from 20.2% in H1/24. In total, 85.5% (H1/24: 84.2%) of the company's revenues stemmed from abroad.

in PLNm	H1/25	H1/24
Services	**13.11**	**10.30**
Share in total sales	*95.4%*	*79.7%*
Products (PocketECG, Kardiobeat.ai)	**0.63**	**2.62**
Share in total sales	*4.6%*	*20.3%*
Total net sales	**13.74**	**12.93**

Source: Company information, East Value Research GmbH

in PLNm	H1/25	H1/24	change (%)
Net sales	**13.74**	**12.93**	6.3%
EBITDA	**-4.05**	**-7.96**	-49.1%
EBITDA margin	*-29.5%*	*-61.6%*	
EBIT	**-6.03**	**-9.72**	-37.9%
EBIT margin	*-43.9%*	*-75.2%*	
Net income	**-6.69**	**-9.32**	-28.2%
Net margin	*-48.7%*	*-72.1%*	

Source: Company information, East Value Research GmbH

In H1/25, Medicalgorithmics gross margin reached 26.4% (H1/24: 15.3%), which resulted from a much higher share of the Services segment in total sales. The most important categories of direct costs were expenses related to cloud services (PLN 2.5m vs. PLN 1.6m in H1/24) and IT (PLN 2.1m vs. PLN 2.8m). As especially the share of personnel costs significantly declined y-o-y (55.2% vs. 82.9% in H1/24), the company was able to reduce its EBIT loss from PLN 9.7m last year to PLN 6m and its net loss from PLN 9.3m to PLN 6.7m. In Q2/25, it more than halved its EBIT loss vs. Q1/25 to PLN 2m.

Balance sheet and Cash flow

At the end of June 2025, Medicalgorithmics had equity of PLN 69.7m (66.4% ratio). Other large positions on the balance sheet were other intangible assets (PLN 63.1m, reflect software and licenses) and interest-bearing debt of PLN 15.5m (thereof 95.3% long-term), which mainly reflected a loan of USD 3m from MDG's largest shareholder Biofund Capital Management with a duration of 30 months starting from October 31, 2026, yearly interest of 18.5% and an additional 3% commission for Biofund on all sales generated by MDG from new clients starting from Q4/24.

Fixed assets (PLN 3.4m) reflected the company's production facility for ECG Holters in Gdansk. Goodwill (PLN 19m) was related to MDG Polska Sp. z.o.o as well as Kardiolytics Inc., which was brought into Medicalgrithmics S.A. by Biofund Capital Management in November 2022.

In H1/25, Medicalgorithmics reported an operating cash flow of PLN -3.5m compared to PLN -7.8m in the previous year. This improvement stemmed from a lower net loss and inventories as MDG now focuses on software. Cash flow from investing, which mainly reflects investments in software, equalled PLN -6.3m (H1/24: PLN -4.5m) and cash flow from financing – additions & repayment of debt - PLN 7.1m (PLN -2.7m). In total, the company's cash position declined by PLN 2.8m since January 2025.

Financial forecasts

Revenues and profitability

We have based our revenue model of Medicalgorithmics on two segments: Services – which reflect the company's algorithms and software sales – and Products – which relate to sales of the company's proprietary PocketECG device and devices of partners such as the Holter Kardiobeat.ai. As MDG has shifted its focus on software, we have assumed that the revenues from devices will decline by 13.8% each year and reach a share in total sales of 0.2% by 2033E (2024: 9.8%).

For the Services segment, we have assumed a constant average price per report of PLN 80 and a growth of the number of created ECG reports (= sessions) from 269,088 in 2024 to 3.56m by 2033E (CAGR of 33.2%). Thereby, to be conservative we have estimated the number of completed reports in 2025E and 2026E below MDG's guidance: 345,000 vs. 500,000 (2025E), 710,000 vs. 1m (2026E). We would also like to emphasize that for now we have not accounted for sales of the cloud-based VCAST platform for non-invasive, rapid, and quantitative analysis of coronary artery disease from CT scan data, whose revenue potential management describes as "significant".

Due to the focus on highly-scalable software instead of lower-margin devices like in the past we expect that Medicalgorithmics will be able to generate EBIT margins of up to 35% in the long run vs. 28% on average historically.

Below are our detailed estimates for the company's revenues and profitability:

in PLNm	2025E	2026E	2027E	2028E
Services	**27.74**	**57.10**	**88.86**	**115.52**
(% of net sales)	*95.5%*	*98.0%*	*98.8%*	*99.2%*
Number of reports	345,000	710,000	1,105,000	1,436,500
Average price per report (PLN)	80	80	80	80
Products (PocketECG, Kardiobeat.ai)	**1.30**	**1.17**	**1.05**	**0.95**
(% of net sales)	*4.5%*	*2.0%*	*1.2%*	*0.8%*
Number of devices	720	648	583	525
Average price per device (PLN)	1,805	1,805	1,805	1,805
Total net sales	**29.04**	**58.27**	**89.91**	**116.47**
(change y-o-y)	21.0%	100.6%	54.3%	29.5%

Source: East Value Research GmbH

in PLNm	2025E	2026E	2027E	2028E
Net sales	**29.04**	**58.27**	**89.91**	**116.47**
EBITDA	**-9.07**	**7.39**	**15.90**	**25.71**
EBITDA margin	*-31.2%*	*12.7%*	*17.7%*	*22.1%*
EBIT	**-13.07**	**2.99**	**11.06**	**20.38**
EBIT margin	*-45.0%*	*5.1%*	*12.3%*	*17.5%*
Net income	**-11.64**	**0.40**	**7.01**	**14.65**
Net margin	*-40.1%*	*0.7%*	*7.8%*	*12.6%*

Source: East Value Research GmbH

Balance sheet and Cash flow

After the implementation of management's strategy in 2023, Medicalgorithmics is now a software-focused company. Thus, we have assumed that its inventories will gradually decline to zero and its CAPEX will only relate to intangible assets.

For the company's working capital, we have assumed that its cash conversion cycle will decline from 191 days in 2024 to 30 days in the long run. Regarding its gross CAPEX, we expect that it will reach PLN 37.7m in 2025E-2028E and <4% of total revenues in the long run. We believe that due to the investments in software depreciation & amortisation expenses will increase at 10% on average in the coming years.

Business description

Medicalgorithmics S.A., which is based in Warsaw, is a MedTech company that offers AI-powered software and medical devices for non-invasive cardiac diagnostics. The company focuses on two cardiovascular diseases (CVDs) - arrhythmia and coronary artery disease (CAD). Its products are used by over 12,000 physicians, helping to diagnose about 200,000 patients per year. MDG has been listed on the Warsaw Stock Exchange since 2011 and employs c. 120 people, thereof 10 in the sales department. Approx. half of its team are IT specialists.

Medicalgorithmics creates value for medical institutions by increasing their efficiency and enabling them to provide better healthcare. MDG's software products allow for more diagnoses to be conducted at a much lower cost using the same resources. Moreover, the new generation of AI products provides more personalized diagnoses because the analysis reports contain much more information, enabling medical professionals to make more informed decisions faster.

Company's history

2003: Later founder of the company Marek Dziubiński, PhD began developing innovative cardiology diagnostics technology, later to be known as PocketECG.

2005: Foundation of Medicalgorithmics sp. z o.o. by Messrs Marek Dziunbiński and Marcin Szumowski.

2008: The first generation of the PocketECG system, which is designed for remote heart rhythm monitoring, has been completed. The company receives a CE certificate for the device, enabling sales in the EU.

2009: The system PocketECG has been introduced onto the Polish, Portuguese and Belgian markets. Additionally, the device receives FDA approval, granting access to the American market.

2010: The company transforms into a joint-stock company. Medicalgorithmics sales grow by over 1000% with USA becoming it primary market, and its device receiving a patent on the territory of the US.

2011: MDG becomes a public company, being listed on Warsaw Stock Exchange New Connect segment. The company expands into Asia and signs a strategic contract with AMI Monitoring Inc. (USA) under which the firm receives a minimum USD 27.7m over a period of 5 years.

2014: MDG changes strategic alliance agreement, effectively cooperating with AMI Monitoring and Medi-Lynx on the American market to diversify company's sales. The total value of the new contracts signed with these entities equals c. PLN 181.8m. The company becomes listed on the Warsaw Stock Exchange main market.

2016: MDG purchases 75% of shares in its strategic partner from the US, the diagnostics centre Medi-Lynx Cardiac Monitoring LLC (USA). The acquisition results in cooperating exclusively with Medi-Lynx on the American market.

2017: The company sells PocketECG in over a dozen of countries located on various continents. Having received public funding, at the end of 2017 the company commences the R&D project ECG TechBot that utilizes deep learning methods.

2018: The firm improves its global presence having entered a strategic partnership with m-health Solutions Inc. from Canada, as well as signs distribution agreements with entities from Norway and Sweden.

2020: The company acquires the remaining stake in Medi-Lynx and completes its transformation into the "in-network" model with a long-term contract with key private insurers. MDG releases the latest generation of its device - PocketECG IV. Its sales drop by 36% due to lower revenue from the American market. The decline results from a decrease in reimbursement rates for Medi-Lynx' services.

2021: Globally, PocketECG is available on 20 markets and diagnoses c. 150,000 patients in 2021. Despite expanding into new areas and slight improvement in sales, the company reports a loss in 2019-2021 and conducts asset impairment related to its subsidiaries in the amount of PLN 162.2m. MDG conducts a share issue worth PLN 11.7m.

2022: Due to a lack of funds, the company sells 100% of its shares in Medi-Lynx. A few months after the sale, a new strategic investor, Biofund Capital Management LLC, backed by two pioneers in the use of AI technology in the medical sector, Dr. Kris Siemionow and Prof. Paul Lewicki, acquires 49.99% of the company's shares. The transaction is paid with a cash contribution of 13.8m PLN and a non-cash contribution of 100% of Kardiolytics Inc.'s shares worth 44.9m USD.

2023: MDG approves a new strategy to become a global supplier of software and devices for diagnosing heart disease. The company's main product category is supposed to be diagnostic software based on AI algorithms, with the primary target market being diagnostic centres in the US.

2024: The company introduces technological solutions for cardiac arrhythmia diagnostics to the market based on technologies developed thanks to the ECG TechBot project, which launched in 2017: the DeepRhythm AI (DRAI) algorithms and the DeepRhythm Platform (DRP). Both products receive CE certification and FDA registration. During the year, MDG signs 13 new sales contracts.

2025: At the beginning of the year, MDG signs a contract with a large diagnostics centre from the US. The company estimates that the monthly remuneration from this contract will be over USD 0.3m in Q4/2025, which indicates that the annual remuneration in 2026E should exceed USD 3.5m. In addition, the company signs multiple distribution contracts in various countries, including Sweden and Turkey.

Shareholder structure

The current shareholder structure took shape when the U.S.-based private equity fund Biofund Capital Management LLC acquired a stake in Medicalgorithmics in 2022. For a stake of 49.99% in MDG, the fund provided PLN 13.8m in cash and a non-cash contribution in the form of Kardiolytics Inc. shares, worth at that time USD 44.9m.

At the beginning of 09/2025, several of the largest Polish investment funds and the well-known Książek Holding acquired about PLN 50m worth of the firm's shares from Biofund.

As of today, Biofund Capital Management is Medicalgorithmics' largest shareholder, holding 34.9% of the shares. The second largest shareholder is a Polish pension fund run by PZU S.A., holding 7.3%. Other shareholders have stakes of less than 5%, but it can be deduced that at least 15% of the remaining shares are held by institutional investors.

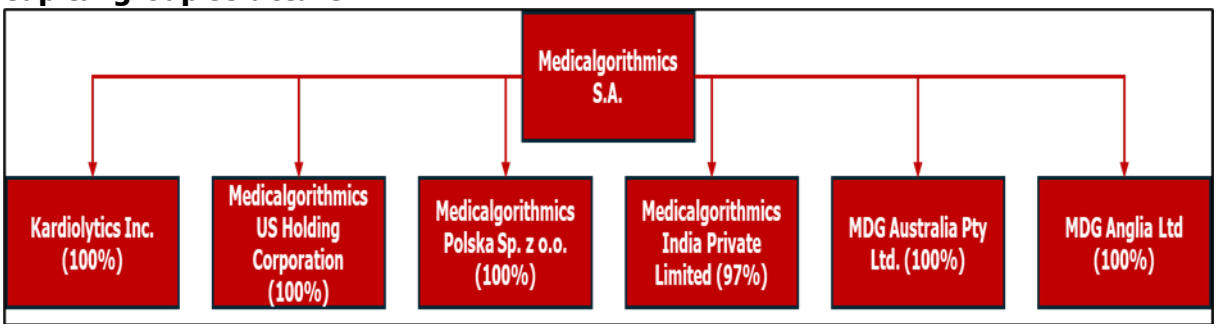
Summary of shareholder structure

Shareholder	Number of shares	% of shares
Biofund Capital Managament LLC	3,476,384	34.9%
Powszechne Towarzystwo Emerytalne PZU S.A. (pension fund)	721,689	7.3%
Other Shareholders (<5%)	5,754,696	57.8%

Source: East Value Research GmbH based on gpw.pl information

The MDG capital group consists of a parent company and six subsidiaries, as shown on the graph below. MDG has an Indian subsidiary to promote distribution in that country. In 2024, MDG established an Australian subsidiary to act as a medical products registration holder, enabling the company to operate on the market using a non-exclusive model. Likewise in 2025, the company set a subsidiary in the United Kingdom for the same purpose. Kardiolytics is responsible for developing an innovative solution for coronary artery disease.

Capital group structure



Source: East Value Research GmbH based on Medicalgorithmics S.A. information

Products Overview

Medicalgorithmics' products can be divided into two categories: ECG monitoring devices and software-based solutions that support cardiology diagnostics in the area of arrhythmia and coronary artery disease (CAD). MDG has developed an ECG monitoring device, PocketECG, in-house in the 2000s. In the last years, the company has created three marketable software products that use AI technology, such as deep learning and machine learning, to analyse ECGs and CT scans of the heart.

DeepRhythmAI (DRAI)

DRAI is a cloud-based set of AI algorithms that automatically analyse ECG signals. It is device-agnostic and can be integrated with third-party hardware and software systems, which allows wide application across diagnostic workflows. The revolutionary technology for heart rhythm analysis is highly accurate and very fast, accelerating and improving the arrhythmia diagnosis process. In 2022, the technology received FDA approval, enabling expansion into the American market and in 2024, it received CE certification.

In February 2024, MDG singed its first commercial contract for the license of DRAI with a diagnostic centre in the US, while in 2025 the company signed a partnership with an independent diagnostic testing facilities (IDTF) in Belgium – Byteflies, amongst other contracts.

The software underwent advanced testing and was described in a scientific article published in Nature magazine in 2025. Using ECG data from over 14,000 patients and 2,236 events classified as critical arrhythmias, the software recognized 98.6% of cases, far surpassing the 80.3% recognized by ECG technicians. Missed diagnoses were 14.1 times higher for technicians, while incorrect diagnoses were just 2.4 times higher for the AI. In essence, this means that the DRAI is 14 times more effective than humans. The authors concluded that DeepRhythmAI is safe for the analysis of ambulatory ECG data. Such studies are highly valuable in the medical field.

Main performance parameters of DRAIMartini testing

Metric	DeepRhythmAI	ECG Technicians
Sensitivity for critical arrhythmias	98.6%	80.3%
False negatives (missed diagnoses)	3.2 per 1,000 patients	44.3 per 1,000 patients
False positives (incorrect diagnoses)	12 events / 1,000 patient-days	5 events / 1,000 patient-days

Source: East Value Research GmbH based on Johnson, L.S., Zadrozniak, P., Jasina, G. et al. Artificial intelligence for direct-to-physician reporting of ambulatory electrocardiography. Nat Med 31, 925–931 (2025).

DeepRhythm Platform (DRP)

DRP is a holistic, cloud-based platform designed for storage, analysis, review, visualization and reporting of arrhythmia from ECG data. In essence, the DRP produces an automatic report (Urgent or End of Study) that enables cardiologists to make more informed decisions. The system is offered jointly with integrated DRAI, providing an end-to-end solution for ECG analysis. The platform has received CE and FDA certification as well as an EU certificate. In 2024, the DRP with the integrated DRAI algorithm received registration in Canada.

The largest to date contract signed in 01/2025 is for usage of the platform for two years with one of the largest IDTF in USA. MDG expects the contract to be worth in the range of PLN 30.9-46m, dependent on the number of actual ECG reports analysed.

One of the key advantages of the reporting system together with DRAI is that it can be integrated with any hardware, including the company's Kardiobeat.ai and PocketECG, as well as third-party devices. Medicalgorithmics recently began collaborating with a Korean Samsung spin-off that produces a S-Patch called Wellysis. In the future, its software could potentially be integrated with wearable devices, such as smartwatches from companies like Samsung, Apple, or Garmin.

Illustration of the platform

Source: Medicalgorithmics S.A.

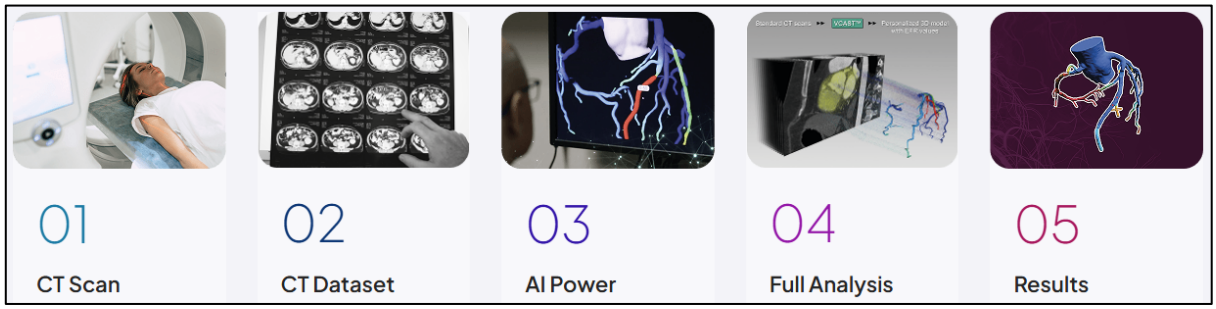
Virtual Cardiac Stress Test (VCAST)

VCAST is a technology that allows for the non-invasive assessment of coronary vessel condition for the diagnosis of coronary artery disease (CAD). In simpler terms, VCAST noninvasively assesses a patient's risk of having a heart attack. VCAST uses cloud-powered AI models to analyse cardiac imaging (CT scans), providing detailed 3D visualizations that accelerate the diagnostic process and enable quicker decision-making.

VCAST is primarily used for FFR-CT (fractional flow reserve computed from computed tomography), a non-invasive diagnostic technology for FFR measurements that are traditionally performed using invasive methods. The FFR helps determine whether a blockage in the coronary arteries is significant enough to require treatment, guiding decisions on procedures such as angioplasty or bypass surgery.

This technology uses a specific type of a CT scan. The data from a coronary CT angiography (CCTA) scan is sent to the diagnostic system, where AI algorithms analyse it. The analysis results in interactive 3D models and PDF reports containing FFR values, which medical professionals use to make diagnoses. The generation of a report takes a total of up to three hours, which is significantly less time than other commercially available products require.

Analysis Process



Source: Medicalgorithmics S.A.

VCAST has been developed since 2018 by MDG's subsidiary Kardiolytics Inc. founded in the United States by Prof. Paul Lewicki and M.D. PhD Kris Siemionow (MDG's current CEO).

The VCAST technology has already been patented in key markets. In 2024, the system received a European CE certification, and at the end of July 2025, MDG signed its first commercial contract for distribution in the Scandinavian market with Swedish NexGen MediQ. A month later, MDG signed a second distribution contract with a Turkish company. MDG is currently preparing an FDA application to bring VCAST to the American market.

In 2024, Medicalgorithmics' CFO estimated that revenues from this solution could reach PLN 130m by 2028E. A key milestone for VCAST technology is a validation study that the company should be in the process of preparing. A successful completion of this study would significantly accelerate market acceptance and open the doors to the largest clients.

PocketECG

The PocketECG is a diagnostic technology that detects cardiac arrhythmias. The PocketECG heart monitoring device was a worldwide success, helping Medicalgorithmics gain recognition, especially in the important US market. The device is able to diagnose 26 different types of arrhythmias. The portable technology enables continuous measurement for up to 30 days and detection of the onset and offset of each arrhythmia.

The device received FDA certification in 2009 and has been sold to over 20 countries. Additionally, the device has received medical approvals from Europe, Canada, Israel, Australia, and India. PocketECG is bundled with the company's diagnostics platform, PC Client, which is to be replaced by the new DeepRhythm Platform. As MDG shifts its focus to selling diagnostic software, PocketECG sales have become optional for clients.

PocketECG IV

Source: Medicalgorithmics S.A.

Kardiobeat.AI

In collaboration with the German medical device producer livetec Ingenieurbüro GmbH, MDG launched Kardiobeat.ai, a wireless ECG Holter patch for heart function monitoring. The Holter is a more budget-friendly version of the PocketECG that can monitor ECG for 24 hours up to 18 days. MDG is responsible for integrating its diagnostics AI systems, which enriches the device, as well as for distribution.

The device was registered as a medical device by the Government of Canada and received certification from the Ministry of Health in Israel, where MDG partnered with SysteMedic for distribution.

Medicalgorithmics plans to begin the CE certification process in 2025, which would enable commercialization in 2026E. Registration for the American market is expected to begin in 2026E.

Kardiobeat.ai

Source: Medicalgorithmics S.A.

Summary of MDG's products

Product name	Commercialization Year	Major Certifications	Clinical Area	Category	Product Type
PocketECG	2009	FDA , CE	Heart monitoring	Medical device	ECG monitoring device (Holter)
DRP (DeepRhythm Platform)	2024	FDA, CE	ECG abnormalities	Software platform	Cloud-based AI system
DRAI (DeepRhythmAI)	2024	FDA, CE	ECG abnormalities	Software program	Multichannel ECG analysis software
Kadriobeat.ai	2024	CE (2026E), FDA (2028E)	Heart monitoring	Medical device	ECG monitoring device (Holter)
VCAST (Virtual Cardiac Stress Test)	2026E	CE, FDA (2027E)	Coronary artery disease (using CT scans)	Software system	CT data imaging-based AI software

Source: East Value Research GmbH based on Medicalgorithmics public information

Other R&D projects

In 2025, Medicalgorithmics was awarded a public grant of 9.4m PLN to develop Kardiobeat.CT, a new diagnostic project based on the VCAST platform. This technology allows for the automatic detection and assessment of atherosclerotic plaques. The firm estimates the total project cost at 19m PLN.

Strategy

The current strategy for 2023-2026E outlines a major shift: transforming the company from being known for PocketECG to a modern MedTech software company. This important strategic change is enabling the company's software algorithms to be device- and platform-agnostic. This means that the programs can be integrated with third-party medical devices or platforms, allowing for much larger market penetration.

For the main market, the United States, the strategy for arrhythmia diagnostic products (DPR and DRAI) is to cooperate with multiple independent diagnostic testing facilities (IDTFs) to increase market reach. For heart imaging products (VCAST), the company has identified over 10,000 imaging facilities to which the product could potentially be offered.

Although the European and American markets remain crucial for future growth, the firm's long-term strategy includes international business expansion through the formation of new strategic relationships and technological partnerships. MDG's subsidiaries in England, Australia and India, as well as its partnerships with companies in Israel and Canada, highlight MDG's global aspirations. In the longer term, the company does not exclude inorganic growth via mergers and acquisitions (M&A).

The company defines its vision as: "To become a global provider of technology for non-invasive cardiac diagnostics offering proprietary software for medical data analysis, AI/ML algorithms, and software for integration with third-party devices."

Distribution channels

MDG's products are available on 25 markets across four continents, where it sells through partnerships with regional distributors. MDG's target customers are diagnostic centres that work with physicians and third-party producers of ECG devices. In 2025 alone, MDG signed partnerships with entities from the US, Canada, Turkey, and Europe. After signing a contract for a MDG solution, it takes an average of 6-10 months to implement the DRA or VCAST system into the client's infrastructure. This significant initial investment by the client reduces the likelihood that he will switch to different software, thus keeping the churn rate low. In case of DRAI, however, we believe that the integration process can take as little as two weeks.

For MDG, the American market is of particular focus, as the firm has successfully commercialized PocketECG on a large scale there. The main clients in the US are independent diagnostic testing facilities (IDTFs). Management has identified 200–300 IDTFs that could be potential clients. At the beginning of 2025, MDG signed a large contract with one such institution worth up to PLN 46m over two years.

The company offers flexible pricing models for both SaaS and MDaaS, including pay-per-report and monthly subscriptions, making them adaptable to any client. Thanks to this pricing strategy, the number of patients examined each year is growing. The CEO expects the number of total tests to reach almost 500,000 by the end of 2025, and to double in 2026E to 1m.

Management

Management board

Krzysztof (Kris) Siemionow (CEO): Mr. Siemionow was appointed to the management board in June 2025. Before starting his entrepreneurial career, he was a certified orthopedic surgeon at the Cleveland Clinic in the United States and an associate professor of orthopedics and neurosurgery at the University of Illinois. He is the author of over 100 scientific papers and holds about 50 patents/patent applications. Dr. Siemionow is also a co-founder of several medical companies, including Kardiolytics and HoloSurgical.

Michał Zapora (CFO): Mr. Zapora was appointed to the management board in June 2025. He graduated with a bachelor's degree from Østfold University College in Norway and a master's degree in managerial economics from Nicolaus Copernicus University in Poland. He is a finance professional with over 15 years of experience in controlling, auditing, and financial reporting. He joined Medicalgorithmics in 2018 as a financial analyst and eventually became the company's financial director.

Key managers

Jaroslaw Jerzakowski (COO): Mr. Jerzakowski is Chief Commercial Officer at Medicalgorithmics S.A. He has a strong background in international trade, business development, and marketing. Jaroslaw graduated from Cracow University of Economics with a major in International Trade and International Business and from the University of Mannheim with an EMBS. From 2004, he worked as manager in Sales & Marketing in the IT sector e.g. at AdRem Software and Konica Minolta Business Solutions. In February 2013, Jaroslaw joined Medicalgorithmics S.A., where he has been instrumental in establishing and developing foreign sales for their tele-cardiology services. He also served as a Board Member of MDG's US subsidiary, Medi-Lynx Cardiac Monitoring LLC, from 2018 to 2020.

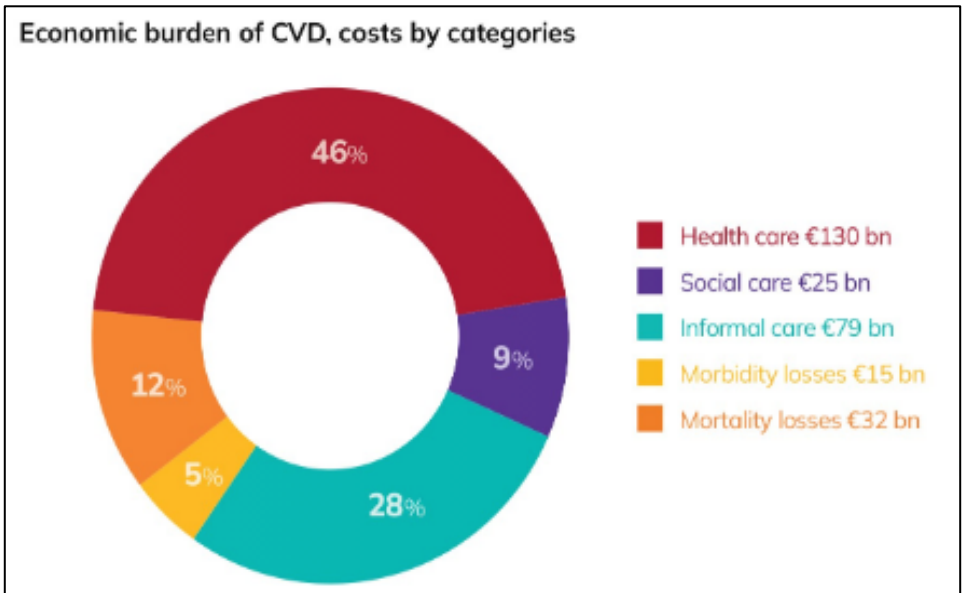
Przemysław Tadla (CTO): Mr. Tadla is the Chief Technology Officer of Medicalgorithmics. He is also the CEO of the company's subsidiary Kardiolytics Inc. Mr. Tadla has 23 years of professional experience gained in large, international corporations operating in the electronics, automotive, product certification and medical industries including Philips and Kimball Electronics. He graduated from the Poznan University of Technology with a Master's degree in Automatic Control Engineering, completed post-graduate studies in Professional Investment and Project Management at the Warsaw Business School and a course in M&A and Corporate strategies at Wharton Executive Education.

Linda S. Johnson (CSO): Mrs. Johnson is Chief Scientific Officer at Medicalgorithmics. In addition, she is Associate Professor of Cardiovascular Epidemiology at the Lund University. Linda graduated with a PhD in Medicine from the Lund University.

Market overview

According to the World Health Organization, cardiovascular diseases (CVD) are the main cause of death globally. The organization estimates that almost 20m people died from CVDs in 2022, whereby 85% of the death were caused by heart attack and stroke. Moreover, due to noncommunicable diseases at least 38% of premature deaths (below the age of 70) were caused by CVDs.[1]

In the European Union, 34% of deaths are attributable to cardiovascular diseases and it is estimated that 62m people live there with coronary artery disease (CAD). This results in a huge economic burden for the EU, which was estimated at EUR 282bn in 2021.[2]



Source: EU 27 CARDIOVASCULAR REALITIES 2025 by European Society of Cardiology

One report estimates that almost half of adult Americans have some type of CVD, whereby the majority is due to hypertension (high blood pressure).[3]

The growing base of patients directly impacts the cardiovascular market, which is estimated at c. USD 50-60bn and is forecast to grow in the coming years at a rate of 7-8% annually.

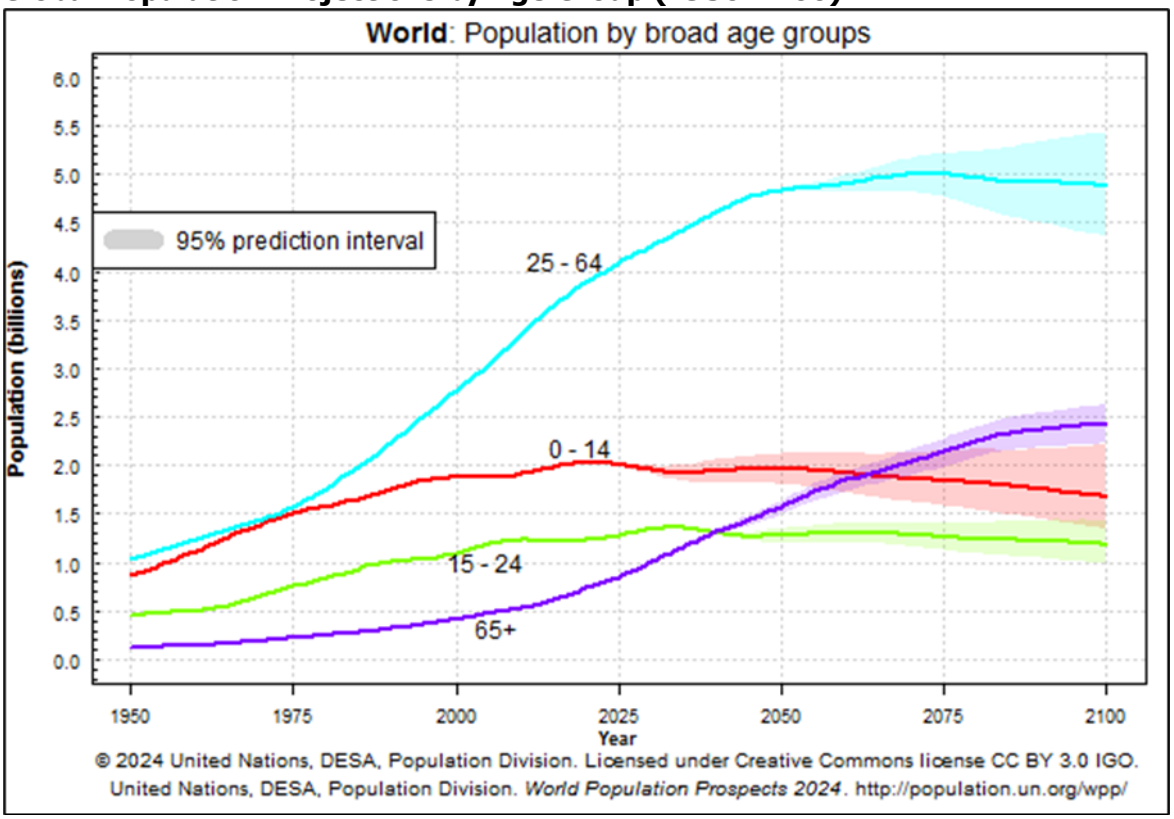
There are multiple reasons why heart-related diseases are so widespread, ranging from lack of exercise, diabetes to high blood pressure and even height. Scientific evidence generally shows that the majority of these factors is increasing globally, leading to a greater number of people with heart problems.

[1] https://www.who.int/news-room/fact-sheets/detail/cardiovascular-diseases-(cvds)
[2] EU 27 CARDIOVASCULAR REALITIES 2025 by European Society of Cardiology
[3] 2024 Heart Disease and Stroke Statistics: A Report of US and Global Data From the American Heart Association

High blood pressure (hypertension) is often cited as the most common contributing factor to heart-related issues. The problem arises from a combination of genetic and environmental / lifestyle factors, some of which are described later in this chapter. WHO reports that 1.28bn adults between 30-79 years of age have hypertensions, with 46% unaware of the condition. In the US, the US Center for Disease Control and Prevention reports that hypertension is present in almost half of the adult population of the country and was a primary or contributing cause of over 600,000 deaths in 2023.

Another major clinical risk factor of heart diseases are cholesterol levels that according to the World Heart Federation result in 3.6m deaths every year. In the US about 10% of the adult population had too high cholesterol levels.[4]

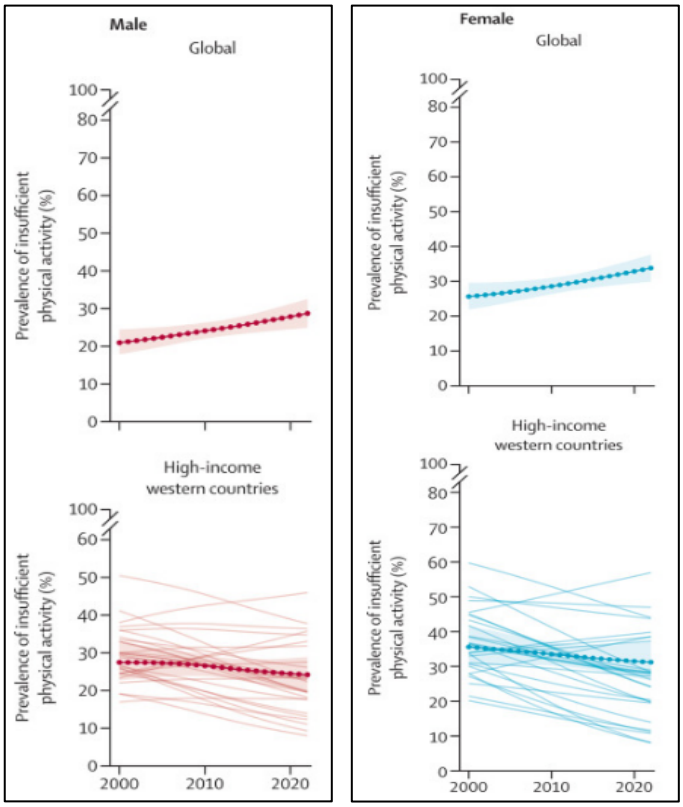
Global Population Projections by Age Group (1950-2100)



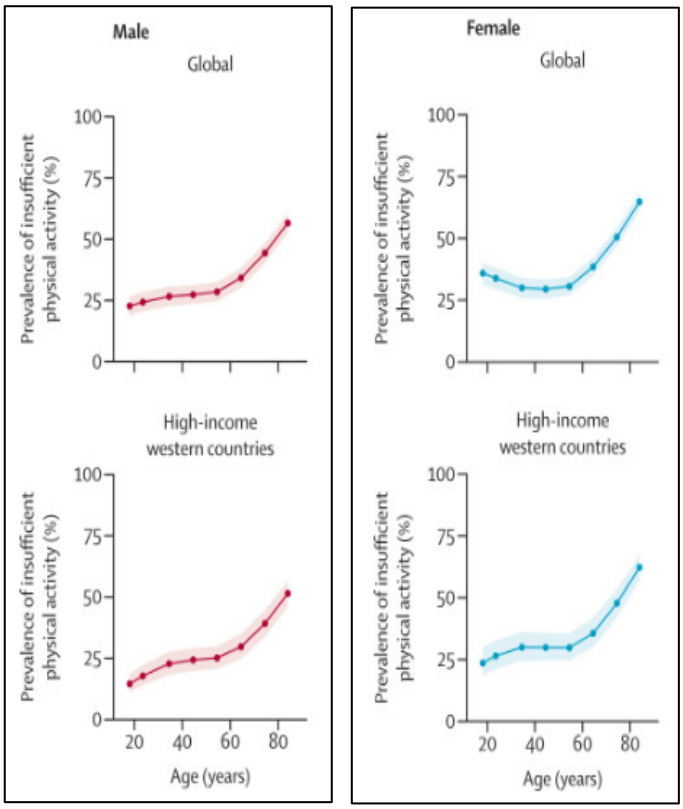
The biggest non-modifiable cause of CAVs is age. Heart problems are largely concentrated at the end of the life span, with median age of diagnosis of a heart-related disease being >65 years of age. As shown above, the population over the age of 65 is expected to exceed 2bn, which is one of the main reasons for the increase in cardiovascular disease cases.

[4] https://www.cdc.gov/cholesterol/data-research/facts-stats/index.html

Trends in the physical inactivity levels (2000-2022)



Trends in the physical inactivity levels by age (2022)



Source: Strain, TessaAbdul Raheem, Raheema et al. The Lancet GlobalHealth, Volume 12, Issue 8, e1232 - e1243

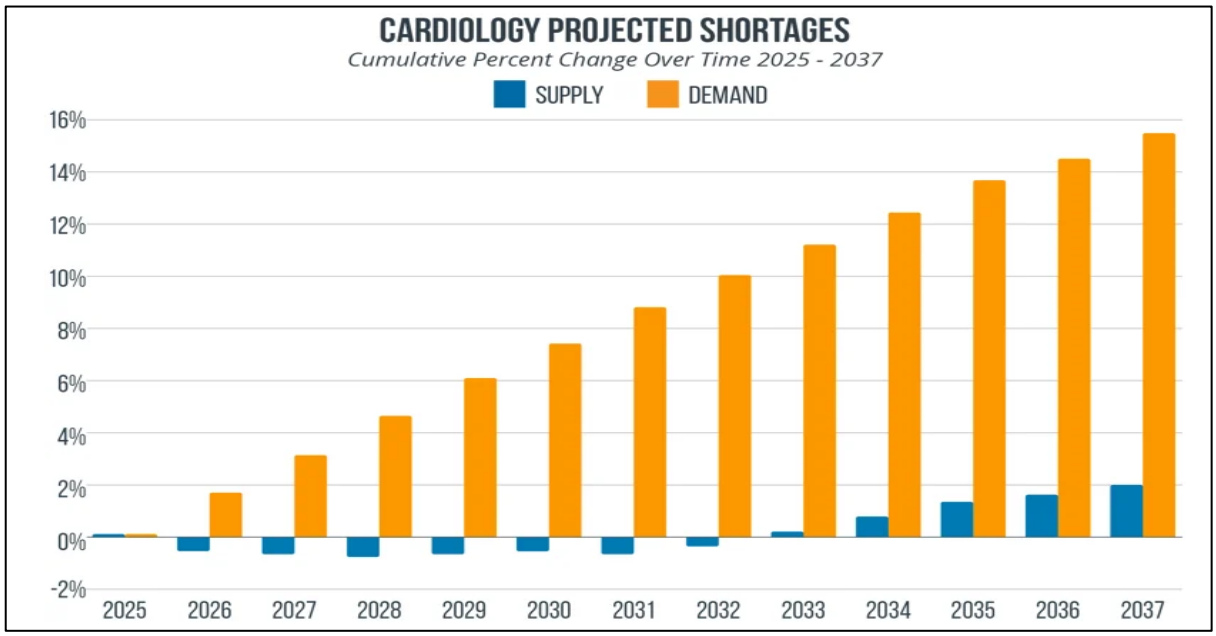
Studies have shown that physical activity reduces risk of various heart diseases.[5] However only about 25% of people in the US meet the physical activity guidelines and 71% of adult Americans are obese or overweight. A comprehensive study has shown that in 2000-2022 globally the physical inactivity levels increased from 23.4% to 31.3%.[6] With that said in some regions like high-income countries a small decrease was reported. Nonetheless, in all regions there is a clear trend that the physical activity levels decrease with age. Older adults are more prone to health issues, and the growing elderly population leads to an increase in CVD.

These findings are correlated with the global increase in obesity levels due to unhealthy diet and increased sedentary lifestyle. Obesity is directly caused by increase of supply in calories that are slowly but steadily increasing worldwide since World War II. It is estimated that global obesity rates have more than tripled in the last 30 years.

The World Obesity Atlas 2023 predicts that by 2035E about 25% of global population will be living with obesity. While obesity levels are the highest in high-income countries, the greatest increases in obesity are expected in lower-middle-income countries.

In the case of providers of supportive services for medical professionals, something that Medicalgorithmics primarily does, the demand is driven by the shortage of cardiologists. In the home market of the company, Poland, the average waiting time for a cardiologist is 183 days.[7] Considering this, alongside the data from the European Society of Cardiology, which reports that Poland has a higher number of cardiologists than the European average, the situation becomes even more concerning. In the largest cardiology market the US, the situation is not different, with Medicus reporting a shortage of 8,650 cardiologists by 2037E.

[5] https://pubmed.ncbi.nlm.nih.gov/22470299/
[6] https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(24)00150-5/fulltext
[7] https://swiatprzychodni.pl/specjalnosci/kardiolog/



Source: medicuhcs.com

The latest generation of MDG's products is based on AI for the use in cardiology. Market researchers estimate that AI in radiology will grow very fast a CAGR of >20%, at least until 2030E. As mentioned before, due to the labour shortage, the demand for solutions that improve the work of cardiologists and radiologists is very high. As presented below the market of AI in Cardiology is currently valued in the range of USD 1.2bn to 2.3bn but expected to grow very fast.

AI in cardiology

Current Market Size (USDbn)	Reference Year	Expected Market Size (USDbn)	Reference Year	CAGR	Largest region and its market share	Source
1.29	2024	4.48	2030	22.81%	North America 45%	Grand View Research
1.91	2024	36.64	2034	34.38%	North America N/D	Towards Healthcare
2.3	2024	60.4	2035	34.60%	Asia Pacific | N/D	Metatech Insights
1.22	2023	11.54	2031	32.70%	North America N/D	Insight Ace Analytic

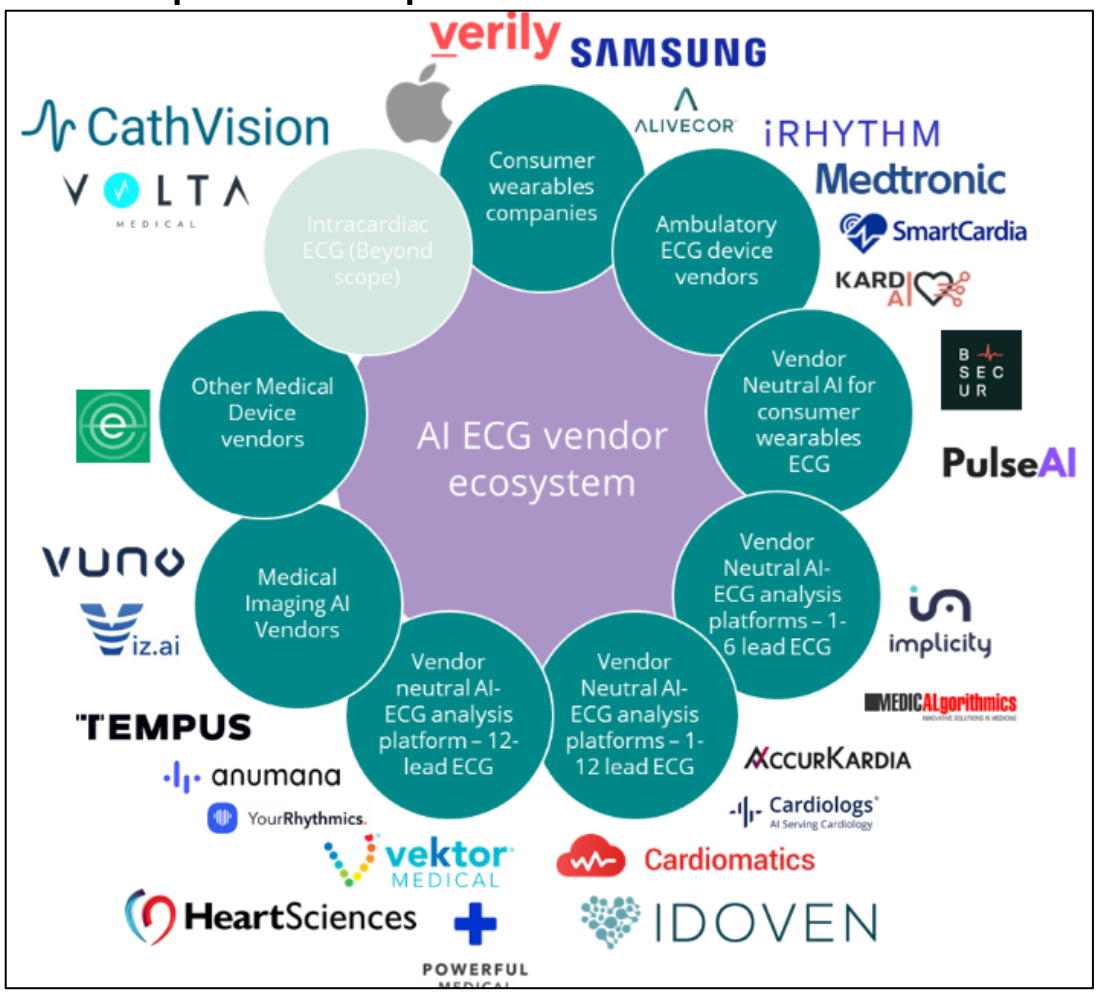
Source : East Value Research GmbH based on market researchers' data

Arrhythmia diagnostics via ECG market

After an initial examination by a doctor, the most common test for an abnormal heart rhythm (arrhythmia) is an electrocardiogram (ECG). Patients are often required to undergo ambulatory monitoring, which involves measuring the heart's activity with a portable monitoring device (e.g., a Holter monitor) to capture a longer record of the heart's activity. The ECG recording is then examined by the doctor to detect potential arrhythmias. Due to the limited number of cardiologists and the increase in ECG data, companies have been striving to create ECG analysis products that will ultimately improve the efficiency of physicians and result in a greater number of patients being diagnosed.

The AI revolution has brought numerous unprecedented opportunities to enhance and automate the analysis of ECG. Both of MDG's products DRAI and DRI are solutions that are based on heart rhythm analysis that is sourced from ECG recordings. One of the leading ECG AI companies, Slovakia-based Powerful Medical, utilizes 12-lead ECG tracking to detect 49 cardiac diagnoses. With almost 400,000 ECGs analysed as of H1/2025, the company received a EUR 40m grant from European Commission, largest amount to date for any healthcare technology company. Additionally, its AI-based solutions take the analysis one step further, offering prediction of future arrhythmias.

AI ECG competitive landscape



Source: dicardiology.com

Using AI tools for ECG diagnosis is costly. Therefore, to implement them in the diagnosis process, it is important to assess whether they can be reimbursed. In the United States, the most important healthcare market, both one- to three-lead ECG and 12-lead ECG tracking are reimbursed. Lower-frequency leads are a simplified monitoring technique usually measured by less advanced devices, such as Holter or patch monitors and, more recently, wearable devices. Furthermore, temporary reimbursement codes have been established in the US for AI-driven products that facilitate the clinical decision-making process. By 2025, reimbursement could reach USD 128.90; however, coverage varies by payer.

Generally, there are two business models that AI software companies can adopt regarding reimbursement strategies. The AI vendor can act as a diagnostic centre, providing a full service, from supplying an ECG monitoring device to delivering the final report. In this scenario, the company bills for the entire process. A prime example of a company using this model is iRhythm, which provides patients with a Zio monitoring system. The ECG record is then diagnosed by the company's own ZEUS system. The second approach is to provide an analytics platform on a SaaS or fee-per-use basis to a healthcare provider (typically an IDTF in the US), in which the medical entity independently applies for reimbursement. This model is used by companies that strive to be entirely software-based, including Medicalgorithmics.

The relevant metric for estimating market potential is the number of ECG-based reports for arrhythmia; however, such data is unavailable. According to the CEO of MDG, there are about 7-8m ECG reports in the USA alone that could serve as a base for applying MDG's algorithms.

Atrial fibrillation (AF), the most common arrhythmia, has increased threefold over the past 50 years, according to a 2020 study.[8] It is estimated that there are about 50m prevalence cases with AF globally and at least 5.5m cases in the United States.

Europe saw an increase of overall new cases of AF / atrial flutter (AFL) by 48% between 1990-2021, with almost 1,000,000 new cases in 2021. In the same year, the number of existing cases reached almost 13m.[9]

The growth in the number of ECGs is also supported by the widespread adoption of wearable devices, such as smartwatches, that have ECG monitoring capabilities. Grand View Research predicts the smart wearable ECG monitor market to grow 10.33% by 2030E.

As the number of diagnosed arrhythmias increases and reimbursement schemes for AI software expand, so will the demand for ECG analysis software and platforms as the possibilities for ECG recording grow.

[8] https://pubmed.ncbi.nlm.nih.gov/32716709/
[9] https://pubmed.ncbi.nlm.nih.gov/40606024/

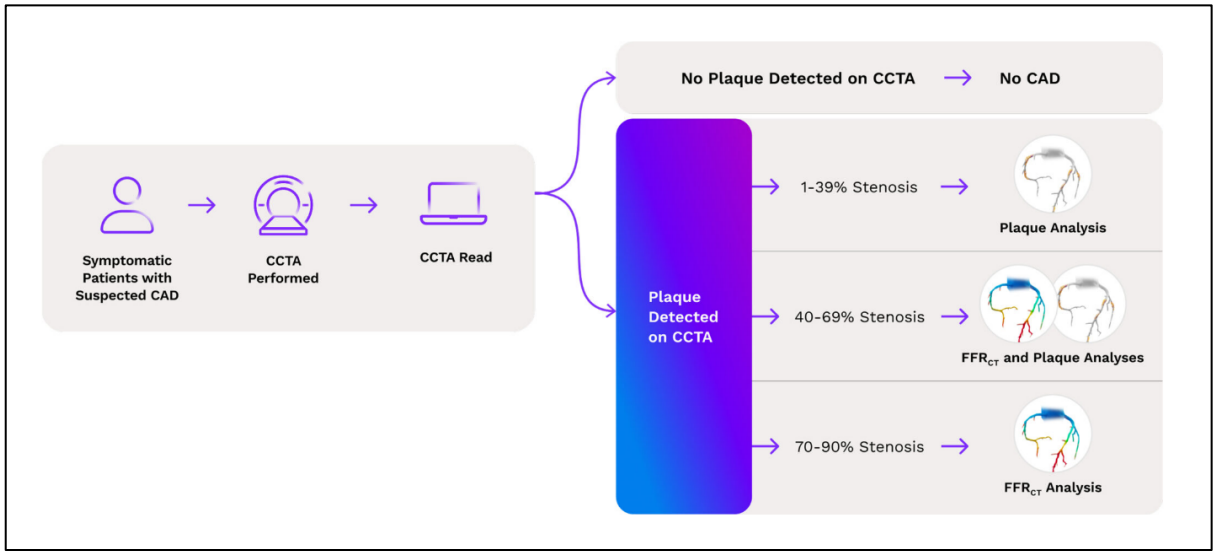
Coronary artery disease analysis via CT-FFR market

Coronary artery disease (CAD) is a major contributor to deaths globally responsible for about 9m deaths annually. According to Journal of the American College of Cardiology, there were about 315m cases of CAD globally in 2022.[10] The prevalence of this disease is reported to have doubled since 1990. The global market of the disease according to Spherical Insights was estimated at USD 21.23bn in 2023 and is expected to grow by 7.96% until 2033E.

Coronary artery disease occurs when the blood vessels supplying the heart become narrowed or blocked, typically due to atherosclerosis — the accumulation of fats, cholesterol, calcium, and other material in the arterial walls forming plaques. These plaques cause stenosis, which is measured as the percentage of narrowing. Clinically, stenosis of 70% or more (or 50% or more in the left main artery) is often considered "severe" or "obstructive" and more likely to require aggressive medical therapy.

To detect such conditions various tests using X rays to computed tomography (CT) are being conducted. Grand View Research estimates the CAD diagnostic imagining device market to be worth USD 2bn in 2024 and to grow at a CAGR of 6.6% until 2030, driven by the CT segment. The coronary CT angiography (CCTA) scan is emerging as the best non-invasive method, giving precise imaging of blood vessels enabling to access the stenosis of plaque. However, functional tests (e.g., fractional flow reserve, FFR) are often used to confirm whether these stenoses actually impair blood flow, a process known as ischemia assessment. Until recently, FFR testing was primarily performed using invasive methods. However, emerging non-invasive approaches, such as CT-FFR and AI-based plaque analysis, are increasingly being developed and adopted. Below is presented the CAD diagnosis flow by the leading provider of FFR via CT scans Heartflow, something that MDG's VCAST platform is also expected to conduct.

CAD diagnosis process using Heartflow products



Source: heartflow.com

[10] https://www.jacc.org/doi/10.1016/S0735-1097%2824%2904310-9

In today's modern era, the FFR from CCTA is assessed non-invasively with two main methods: using advanced modelling such as Computational Fluid Dynamics (CFD) to build 3D models of the blood vessels and plaque-derived ischemia assessment using AI techniques. In the first category the leading available method is FFRct by HeartFlow that was introduced in the U.S. in 2014. The second category, which refers to an emerging set of technologies, is utilizing AI-models to estimate FFR directly from CCTA images. These plaque analysis tools that use AI to predict the presence of ischemia, are developed worldwide with Cleerly, Elucid Bioimagning and Hearflow and leading the way Keya Medical with its FDA approved DeepVessel FFR solution, offering analysis within minutes.[11] Apart from new firms, large healthcare companies such as Siemens or Canon are also developing CT-FFR systems.[12]

The non-invasive CT-FFR market is relatively new and small, with very few players. The leading non-invasive CT-FFR company HeartFlow (USA) went public on the Nasdaq stock exchange in August 2025, being valued at USD 1.54bn. In 2024, the American company reached revenues of USD 125.8m. Heartflow estimates that in the United States the market opportunity is about USD 3.3bn, predicting about 3.1m patients eligible for the software analysis. Additionally, the company shares that about 9.5m tests for the CAD diseases were performed in the United States in 2023, out of which c. 0.7m were CCTA scans that both VCAST and HeartFlow use as input for the diagnostic system. CCTA test volumes increased on average by 22% between 2018 and 2023 in the United States, signalling greater market adoption.[13]

The joint procedure of diagnostic pathway for patients with suspected CAD to conduct a CCTA and CT-FFR is already the recommended pathway in the United States, European Union, and Japan.[14] Scientific papers report that this path is safe, reduces operating costs and is more effective than other methods.[15][16][17] In the US, CCTA reimbursement for outpatients increased by 104% in 2025, while CT-FFR reimbursement increased by only 2%, reaching USD 1,017. However, Heartflow reports that its average CT-FFR analysis costs USD 1,067. This means that independent medical facilities incur little to no additional cost when incorporating the CT-FFR method into CAD diagnosis. Current reimbursement of the CT-FFR analysis is when the narrowing of artery is between 40-90%. The standard for the CT-FFR market is to generate revenue on a pay-per-report basis, which occurs when a physician chooses to use the technology.

As shown above, the CT-FFR market is growing as a significant number of potential patients are still not being addressed. The procedure is reimbursed in the US and mandated by the National Health Service in the UK. Given the widespread availability of CT scans and the scientific evidence supporting this method, it is likely that other regions will include CT-FFR in their reimbursement programs in the future. It appears that CCTA + CT-FFR and similar variations are poised to become the standard for non-invasive CAD diagnosis.

[11] https://www.sciencedirect.com/science/article/abs/pii/S193459252500379X
[12] https://www.journalofcardiovascularct.com/article/S1934-5925(25)00345-4/fulltext
[13] https://www.sec.gov/Archives/edgar/data/1464521/000162828025035242/heartflowinc-sx1.htm
[14] https://www.heartflow.com/wp-content/uploads/2025/09/25_0703_hfl_marketaccess_value-dossier.pdf
[15] https://www.nature.com/articles/s41598-025-95597-4?fromPaywallRec=false
[16] https://www.nature.com/articles/s41591-025-03620-y
[17] https://www.heartflow.com/heartflow-one/ffrct-analysis/

Medicalgorithmics and related companies are developing more comprehensive CCTA analysis platforms that include modelled stenosis and plaque information. HeartFlow estimates that the market opportunity for plaque analysis in the United States is USD 1.7bn. In 2026, a new reimbursement code (Category I CPT code) for the plaque analysis will be introduced. The change from Category III (designed for emerging technologies) to Category I code signifies the increased maturity of the technology.

Profit and loss statement

in PLNm	2023	2024	2025E	2026E	2027E	2028E
Net sales	**43.10**	**24.00**	**29.04**	**58.27**	**89.91**	**116.47**
Cost of goods sold	-21.71	-20.27	-21.78	-33.79	-55.75	-71.04
Gross profit	**21.39**	**3.73**	**7.26**	**24.47**	**34.17**	**45.42**
Other operating income	0.87	4.82	1.80	1.82	1.84	1.85
Personnel costs	-18.06	-18.22	-15.97	-17.17	-18.46	-19.84
Other operating expenses	-1.41	-3.23	-2.16	-1.73	-1.64	-1.73
EBITDA	**2.80**	**-12.90**	**-9.07**	**7.39**	**15.90**	**25.71**
Depreciation & Amortization	-2.37	-3.64	-4.00	-4.40	-4.84	-5.32
EBIT	**0.43**	**-16.54**	**-13.07**	**2.99**	**11.06**	**20.38**
Net financial results	-0.67	0.76	-1.30	-2.50	-2.40	-2.30
EBT	**-0.24**	**-15.78**	**-14.37**	**0.49**	**8.66**	**18.08**
Income taxes	-0.34	-0.30	2.73	-0.09	-1.65	-3.44
Result from discontinued operations	0.00	0.00	0.00	0.00	0.00	0.00
Minority interests	0.00	0.00	0.00	0.00	0.00	0.00
Net income / loss	**-0.58**	**-16.08**	**-11.64**	**0.40**	**7.01**	**14.65**
EPS	-0.06	-1.62	-1.17	0.04	0.70	1.47
DPS	0.00	0.00	0.00	0.00	0.00	0.00
Share in total sales						
Net sales	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Cost of goods sold	-50.36 %	-84.45 %	-75.00 %	-58.00 %	-62.00 %	-61.00 %
Gross profit	49.64 %	15.55 %	25.00 %	42.00 %	38.00 %	39.00 %
Other operating income	2.02 %	20.08 %	6.20 %	3.12 %	2.04 %	1.59 %
Personnel costs	-41.89 %	-75.92 %	-55.00 %	-29.47 %	-20.53 %	-17.04 %
Other operating expenses	-3.27 %	-13.47 %	-7.43 %	-2.97 %	-1.83 %	-1.48 %
EBITDA	6.49 %	-53.76 %	-31.23 %	12.68 %	17.68 %	22.07 %
Depreciation & Amortization	-5.49 %	-15.14 %	-13.77 %	-7.55 %	-5.38 %	-4.57 %
EBIT	1.00 %	-68.90 %	-45.00 %	5.13 %	12.30 %	17.50 %
Net financial results	-1.56 %	3.17 %	-4.48 %	-4.29 %	-2.67 %	-1.97 %
EBT	-0.55 %	-65.73 %	-49.48 %	0.84 %	9.63 %	15.53 %
Income taxes	-0.79 %	-1.26 %	9.40 %	-0.16 %	-1.83 %	-2.95 %
Result from discontinued operations	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %
Minority interests	0.00 %	-0.01 %	0.00 %	0.00 %	0.00 %	0.00 %
Net income / loss	-1.34 %	-67.00 %	-40.08 %	0.68 %	7.80 %	12.58 %

Balance sheet

in PLNm	2023	2024	2025E	2026E	2027E	2028E
Cash and cash equivalents	25.50	5.50	1.73	11.90	7.50	10.11
Other financial assets	0.00	0.00	0.00	0.00	0.00	0.00
Inventories	9.32	9.39	8.60	5.01	2.92	0.00
Trade accounts and notes receivables	4.22	4.28	4.70	9.44	14.59	18.93
Prepaid expenses, deferred charges and others	4.19	3.20	3.26	3.32	3.39	3.46
Current assets	**43.23**	**22.37**	**18.29**	**29.67**	**28.41**	**32.50**
Property, plant and equipment	2.28	2.35	3.45	3.46	3.47	3.48
Other intangible assets	54.50	60.27	64.77	69.27	73.77	78.27
Goodwill	18.21	18.21	18.21	18.21	18.21	18.21
Other long-term assets	3.42	2.62	2.49	2.37	2.25	2.14
Deferred tax assets	0.00	0.00	0.00	0.00	0.00	0.00
Non-current assets	**78.40**	**83.45**	**88.91**	**93.30**	**97.69**	**102.09**
Total assets	**121.63**	**105.81**	**107.20**	**122.97**	**126.10**	**134.58**
Trade payables	3.14	2.42	2.51	3.75	5.96	7.30
Short-term financial debt	3.22	0.77	3.60	3.40	3.20	3.00
Other liabilities	3.35	3.13	3.16	3.19	3.23	3.26
Pension provision	2.59	2.65	3.70	4.07	4.48	4.92
Current liabilities	**12.29**	**8.97**	**12.97**	**14.42**	**16.86**	**18.48**
Long-term financial debt	2.47	5.48	20.00	34.00	29.00	24.00
Other long-term liabilities	5.59	5.16	0.00	0.00	0.00	0.00
Pension provision	0.15	0.09	0.09	0.09	0.09	0.10
Deferred tax liabilities	8.57	8.93	8.59	8.52	7.19	4.40
Long-term liabilities	**16.77**	**19.66**	**28.69**	**42.61**	**36.28**	**28.50**
Total liabilities	**29.07**	**28.63**	**41.66**	**57.03**	**53.14**	**46.98**
Shareholders equity	**92.56**	**77.17**	**65.53**	**65.93**	**72.94**	**87.59**
Minority interests	0.01	0.01	0.01	0.01	0.01	0.01
Total liabilities and equity	**121.63**	**105.81**	**107.20**	**122.97**	**126.10**	**134.58**

Cash Flow Statement

in PLNm	2023	2024	2025E	2026E	2027E	2028E
Net income / loss	-0.58	-16.08	-11.64	0.40	7.01	14.65
Depreciation & Amortization	2.37	3.64	4.00	4.40	4.84	5.32
Change of working capital	-5.46	-0.36	0.46	0.09	-0.86	-0.07
Others	3.86	-0.28	-0.71	-0.30	0.92	2.33
Net operating cash flow	**0.18**	**-13.08**	**-7.89**	**4.59**	**11.92**	**22.23**
Cash flow from investing	**1.96**	**-7.37**	**-9.60**	**-8.91**	**-9.35**	**-9.83**
Free cash flow	2.15	-20.44	-17.49	-4.32	2.57	12.40
Cash flow from financing	**-2.81**	**0.45**	**13.71**	**14.48**	**-6.97**	**-9.79**
Change of cash	-0.66	-20.00	-3.77	10.16	-4.39	2.61
Cash at the beginning of the period	0.00	25.50	5.50	1.73	11.90	7.50
Cash at the end of the period	25.50	5.50	1.73	11.90	7.50	10.11

Financial ratios

Fiscal year	2023	2024	2025E	2026E	2027E	2028E
Profitability and balance sheet quality						
Gross margin	49.64%	15.55%	25.00%	42.00%	38.00%	39.00%
EBITDA margin	6.49%	-53.76%	-31.23%	12.68%	17.68%	22.07%
EBIT margin	1.00%	-68.90%	-45.00%	5.13%	12.30%	17.50%
Net margin	-1.34%	-67.00%	-40.08%	0.68%	7.80%	12.58%
Return on equity (ROE)	-1.25%	-18.95%	-16.31%	0.60%	10.10%	18.25%
Return on assets (ROA)	0.15%	-14.81%	-9.71%	2.52%	7.56%	13.00%
Return on capital employed (ROCE)	0.96%	-17.40%	-11.23%	2.23%	8.20%	14.22%
Economic Value Added (in PLNm)	-12.63	-28.97	-22.38	-11.16	-4.71	1.98
Net debt (in PLNm)	-19.81	0.75	21.87	25.50	24.70	16.89
Net gearing	-21.41%	0.97%	33.37%	38.68%	33.86%	19.28%
Equity ratio	76.10%	72.93%	61.13%	53.62%	57.85%	65.08%
Current ratio	3.52	2.49	1.41	2.06	1.68	1.76
Quick ratio	2.42	1.09	0.50	1.48	1.31	1.57
Net interest cover	0.65	21.73	-10.05	1.20	4.61	8.86
Net debt/EBITDA	-7.08	-0.06	-2.41	3.45	1.55	0.66
Tangible BVPS	7.72	5.94	4.76	4.80	5.50	6.97
Capex/Sales	-179.47%	-39.48%	-33.04%	-15.29%	-10.40%	-8.44%
Working capital/Sales	24.13%	46.88%	37.16%	18.37%	12.85%	9.99%
Cash Conversion Cycle (in days)	140	191	161	73	39	22
Trading multiples						
EV/Sales	8.26	14.84	12.26	6.11	3.96	3.06
EV/EBITDA	127.29	-27.60	-39.27	48.20	22.40	13.85
EV/EBIT	822.51	-21.54	-27.25	119.15	32.20	17.47
P/Tangible BVPS	4.47	5.81	7.25	7.19	6.27	4.95
P/E	-575.00	-21.30	-29.50	866.90	48.96	23.44
P/FCF	154.94	-16.75	-19.64	-79.51	133.42	27.70

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