



# Total Heart Intelligence... Wherever You Are

NASDAQ: BEAT

January 2025



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# Introductions



**Rob Eno**  
Chief Executive Officer



**Tim Cruickshank**  
Chief Financial Officer



**Richa Gujarati**  
SVP, Product

# HeartBeam: Total Heart Intelligence...Wherever You Are

Unique IP-enabled disruptive technology



First ever **cable-free 12L ECG** for use by patients synthesized from a novel approach that captures heart signals in three directions

Highest resolution cardiac data



Artificial Intelligence applied to rich, longitudinal data can deliver **personalized cardiac insights**

Massive Market Opportunity



Positioned to **disrupt markets worth a combined \$100B+** in areas of large healthcare spend

Roadmap with 3 Clear Focus Areas



Symptom-driven diagnosis  
↓  
Monitoring and Screening  
↓  
Replace traditional 12L ECGs

Clear Go To Market Strategy



**De-risked through recent FDA clearance** and near-term milestones

**Strong commercial plan:** Initial target markets validated

# Today's ECG Technology is Not Adequate

## AT HOME USE

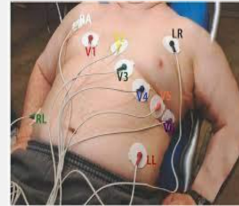
### CONSUMER-GRADE ECGs



- Generally 1 Lead
- Not accurate enough
- Produce noisy data
- Inundate physicians with data
- Limited to arrhythmia detection

## MEDICAL FACILITY

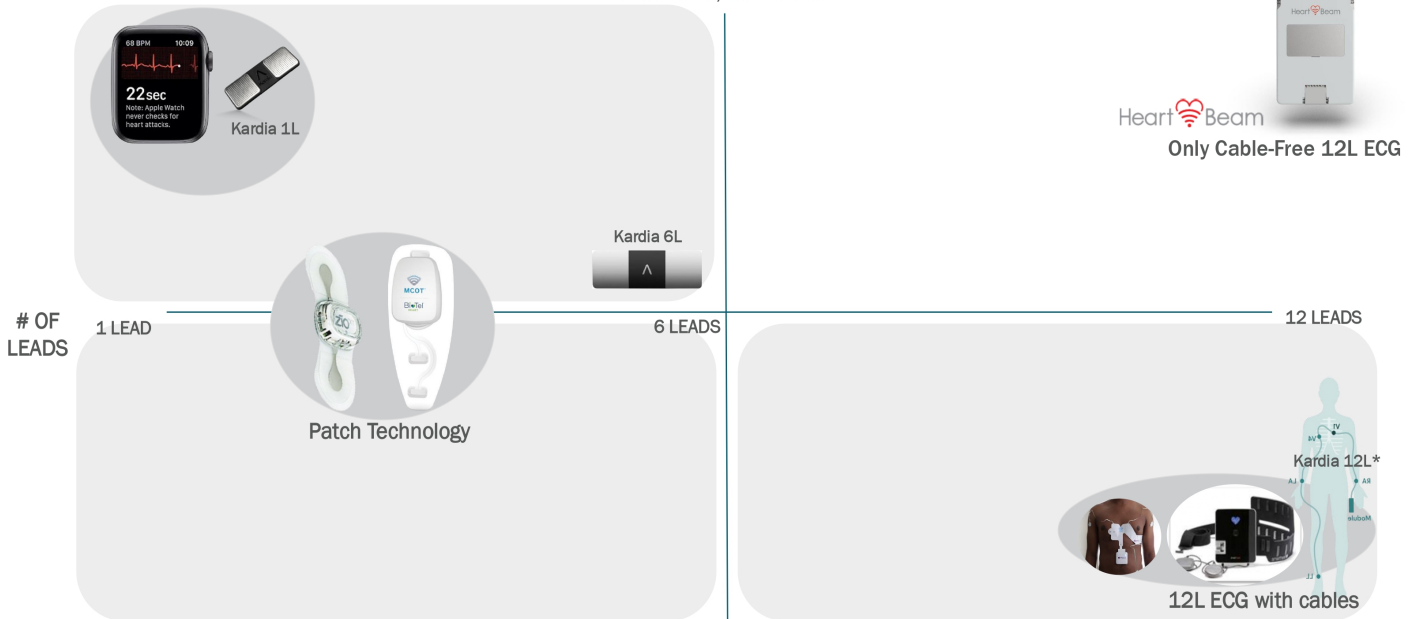
### STANDARD 12 Lead ECGs



- Current gold standard for data quality and ability to diagnose
- Limited to the hospital
- Not practical for at-home use
- Rarely capture data over time

# HeartBeam Overcomes these Limitations, Creating a New Paradigm

## DESIGN CABLE-FREE, EASY TO USE



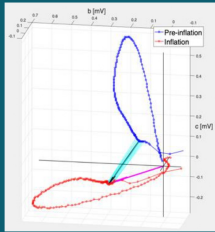
\* For Healthcare professional use only

12-lead synthesis software not cleared by the FDA and not available for sale in the United States and other geographies.

# Fundamental, IP Protected Advances Enable HeartBeam's 12L Technology

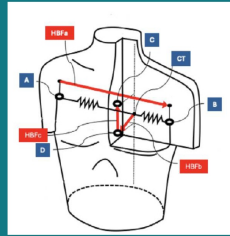
## 3 Directions

Collects **signals in 3 directions**, capturing the totality of the heart's electrical signals



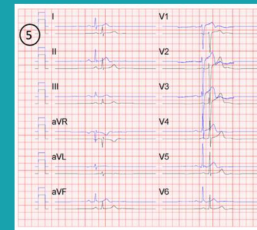
## IP Breakthrough

Credit card-sized device with a novel resistive network captures the "front to back" direction, providing **actionable heart intelligence**



## Personalized





Signals from 3 directions train HeartBeam's AI algorithms and are synthesized into 12L ECGs using a **personalized transformation matrix**



## HeartBeam Demo

# Leadership in Cable-Free 12L ECG Space

Strong intellectual property position on core technology and product pipeline

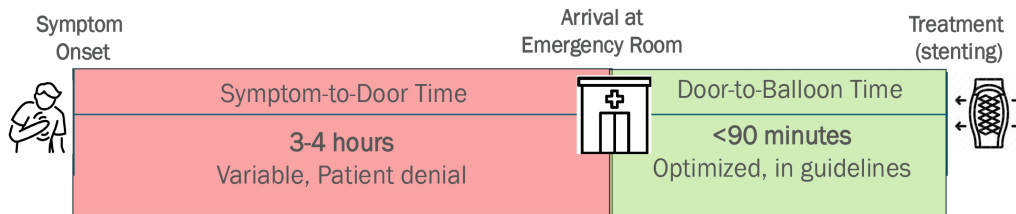
			
<b>HEARTBEAM 12L ECG SYSTEM</b>	<b>EXTENDED WEAR PATCH</b>	<b>INTEGRATED SYSTEM</b>	<b>HEARTBEAM 12L SMART WATCH</b>
Multiple granted patents, including foundational resistive network enabling “front to back” axis	Foundational patents granted: synthesis to 12-lead upon pressing electrodes with fingers	Multiple patents granted on HeartBeam and LIVMOR watch	Foundational patents granted: synthesis to 12-lead upon placing band electrodes on chest

17 issued patents worldwide

12-lead synthesis software not cleared by the FDA and not available for sale in the United States and other geographies.

## HeartBeam will allow patients with symptoms to get treatment sooner, saving lives and reducing healthcare costs

### Patients Delay Seeking Care



#### Delays Greatly Impact Patient Outcomes



Every 30 minutes increases 1 year mortality rate by 7.5%<sup>1</sup> and risk of heart failure by 8.7%<sup>1</sup>

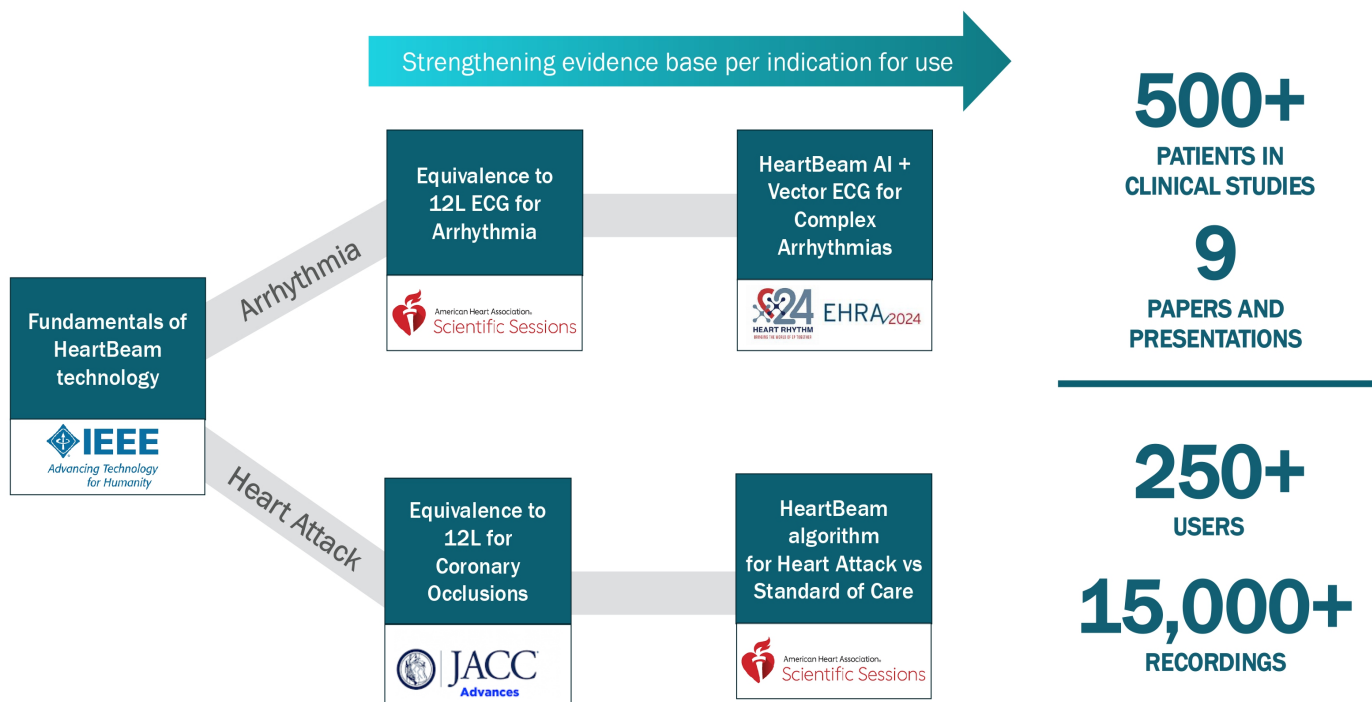
#### Heart Failure is Deadly and Extremely Expensive to the Healthcare System

Annual Cost<sup>2</sup> **\$30,000**  
 Average life expectancy<sup>3</sup> **5 years**

1. De Luca G. Circulation. 2004 Mar 16;109(10):1223-5 2. Heidenreich PA, J Card Fail. 2022 Mar;28(3):453-466. 3. Heart Failure Society of American, Heart Failure Facts & Information

Ischemia product not cleared by FDA and not available for sale in the United States or other geographies.

# Significant Body of Evidence on HeartBeam's Groundbreaking Technology



12-lead synthesis software and ischemia product not cleared by the FDA. Not available for sale in the United States and other geographies.

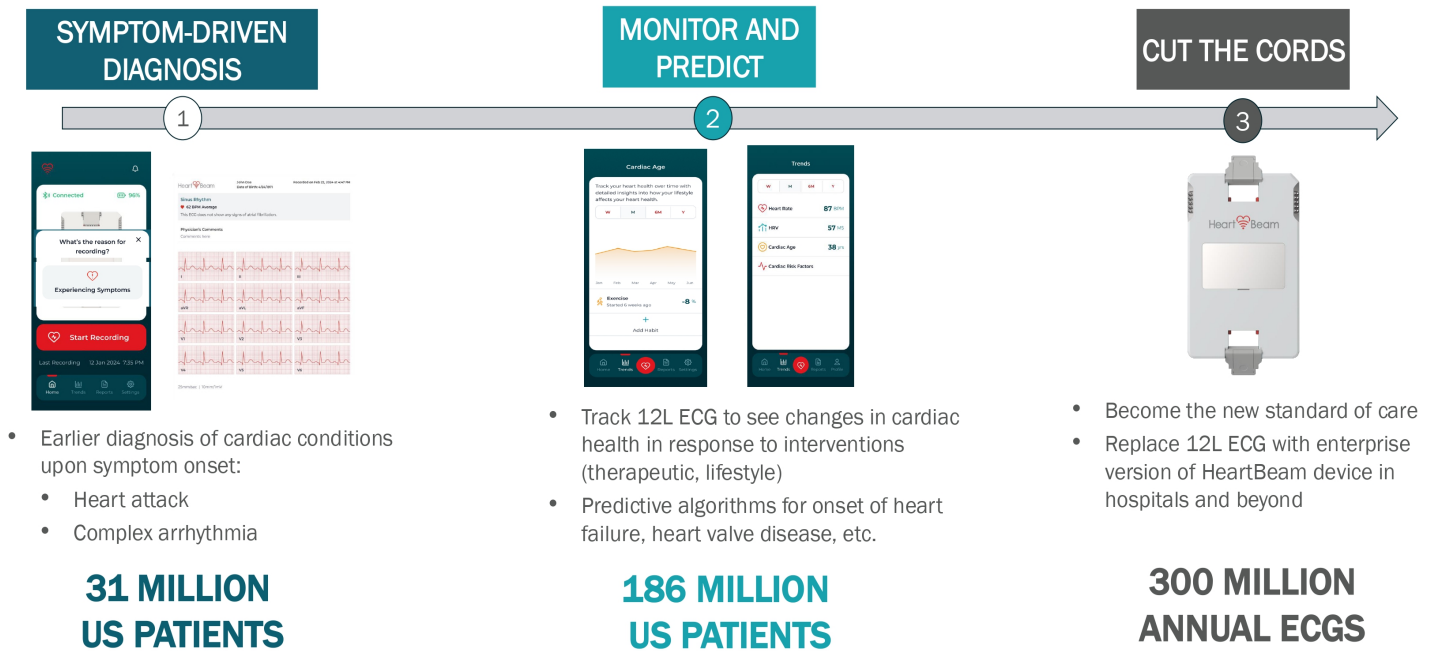
## Large and Rapidly Expanding Body of Evidence on HeartBeam's Groundbreaking Technology

	Equivalence	Algorithms
Arrhythmia	<p><b>Comparable with Standard 12L ECG for Arrhythmias<sup>1</sup></b></p> <p>Interval &amp; amplitude differences: 1/10 of margin of ECG reading error</p> <p>EP Rhythm classification: 100% Specificity, 95% Sensitivity</p> <p></p>	<p><b>Deep Learning on Vector ECG Improves Performance</b></p> <p><b>28% Improvement</b> In detecting atrial flutter vs 1L ECG<sup>2</sup></p> <p><b>Outperformed Panel of EPs</b> Reading 12L ECG in detecting atrial flutter<sup>3</sup></p> <p> </p>
Heart Attack	<p><b>Able to Detect Coronary Occlusions<sup>4</sup></b></p> <p><b>Equivalent</b> To 12L ECG performance</p> <p><b>&gt;40% better with baseline</b> (HB with baseline vs. single 12L)</p> <p></p>	<p><b>Algorithm with ECG + Symptoms + Patient History<sup>5</sup></b></p> <p><b>Equivalent</b> To MD panel with 12L ECG in classifying ACS</p> <p><b>&gt;33% better with baseline</b> More negative ACS patients classified as low risk</p> <p></p>

1, 5. AHA 2024. 2. Shvilkin, et al, Coronary Artery Occlusion Detection Using 3-Lead ECG System Suitable for Credit Card-Size Personal Device Integration. JACC Adv. 2023 Aug, 2 (6). 3. EHRA 2024. 4. HRS 2024

12-lead synthesis software and ischemia product not cleared by the FDA. Not available for sale in the United States and other geographies.

# HeartBeam Roadmap: Groundbreaking Form Factor and AI Drive Significant Expansion



12-lead synthesis software and ischemia product not cleared by the FDA. Not available for sale in the United States and other geographies.

## HeartBeam AI: Driving Earlier Insights into Cardiac Conditions

Transforming data into life-saving insights, predicting cardiac events before they happen

### AI: PREDICTIVE INSIGHTS

- Proven ability of AI algorithms applied to 12L ECG to predict/identify cardiac conditions:
  - Heart Failure
  - Coronary Artery Disease
  - Hypertension
  - Arrhythmias
  - Sudden Cardiac Death prediction
  - Aortic Stenosis
  - Amyloidosis
  - Mitral regurgitation
  - Stroke prediction
  - Hyperkalemia
  - Diastolic dysfunction
  - + many more
- HeartBeam brings these directly to the patient
- Potential to further improve accuracy through Longitudinal 12L ECG readings

### HEARTBEAM'S UNIQUE VALUE



For patients:

- Early detection of cardiac conditions before symptoms appear
- Routine use updates cardiac risk score prompting follow-up on additional testing or treatment

Compelling reasons for patients to pay for HeartBeam



For pharma/health insurance companies:

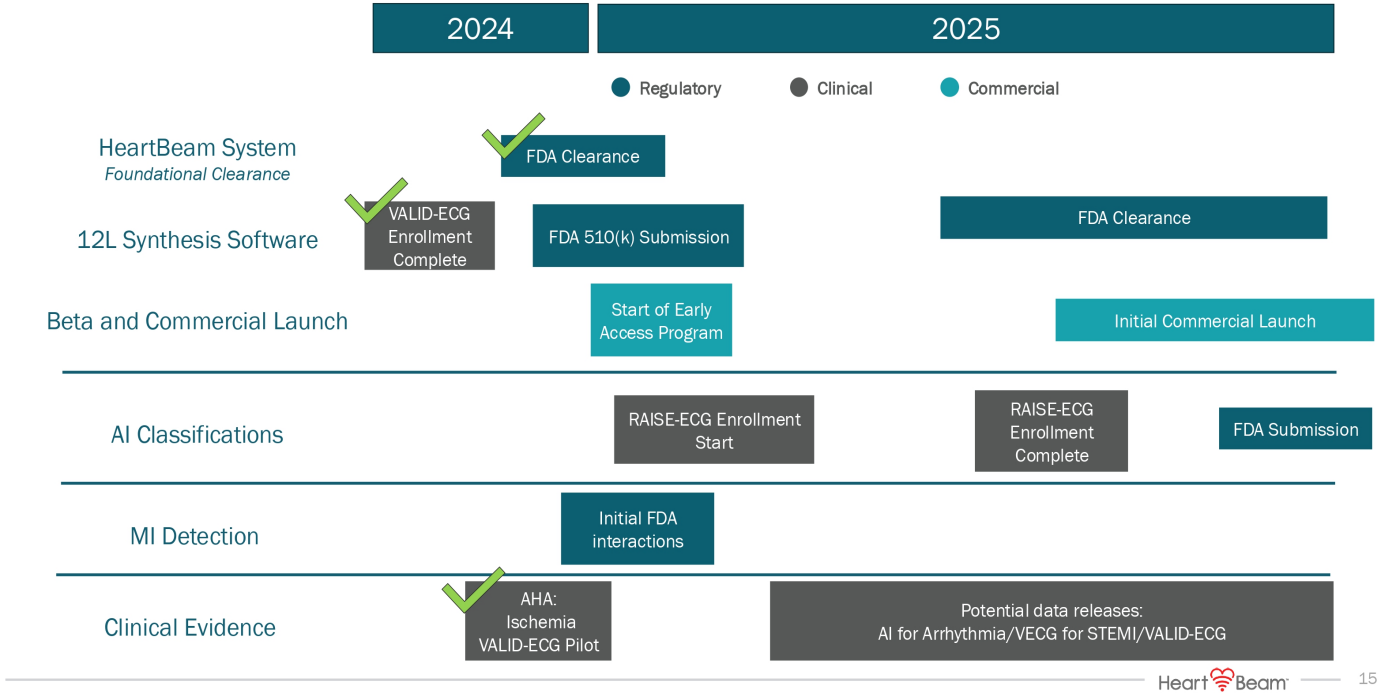
- Targeted drug development and clinical trial optimization
- Better identification of patients at high-risk driving improved outcomes

Data HeartBeam generates provide valuable insights

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# Innovation Paving Way for Commercialization Launch

Near-term milestones creating significant momentum



## Focus of Initial Commercial Launch: Direct Patient Pay

<h3>OVERALL STRATEGY</h3> <ul style="list-style-type: none"> <li>Establish HeartBeam as first personal, cable-free 12L ECG</li> <li>Create a focused direct sales and marketing operation in US</li> <li>Prove concept in select geographic markets, then expand</li> <li>Establish premium pricing and subscription model</li> <li>Focus on customer experience and retention</li> </ul>	<h3>TARGET PATIENT PROFILE</h3> <ul style="list-style-type: none"> <li>Known cardiac issue/higher risk/family history</li> <li>Proactive/concerned with cardiac health</li> <li>Willingness and ability to pay without reimbursement</li> </ul>
	<h3>INITIAL MARKETS</h3> <ul style="list-style-type: none"> <li>Preventive cardiology + concierge practices</li> <li>Individuals through targeted digital marketing</li> <li>Cardiologists recommend to patients</li> </ul>
<h3>Concierge Market</h3> <p>1.5 million concierge patients in US</p> <p>1/3 with elevated cardiac risk: 500,000 people</p> <p><b>\$250 - \$500 million annual revenue*</b></p>	<h3>Direct Patient Pay Market</h3> <p>160 million people ages 35-74</p> <p>1/3 with elevated cardiac risk, top 5% income: 2.6 million people**</p> <p><b>\$1.3 - \$2.6 billion annual revenue*</b></p>

\* Based on \$500 - \$1,000 per year per unit





























\*\* >2.5 million Oura rings and >3 million AliveCor Kardia devices have been sold

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# GTM Options in Multiple Verticals

## Positioned to disrupt multiple large markets


VERTICAL	POTENTIAL PARTNERS	COMMENTS
Concierge	   	Start direct, create playbook, prove concept
Broader Patient Pay	   	Additive to revenue; drive downstream treatments (stents, valves, pacemakers)
	  	Synergy with CAD Diagnostics companies: same customer and patient
Wearables	  	Wearable identifies heart issue and prompts patient to use 12L ECG
	  	HeartBeam 12L watchband
Patch	   	On demand 12L patch has best-in-class performance
Traditional 12L ECG	  	Transition legacy business, expand to new locations
Data	   	Early insights into patients with disease

## Corporate Overview


### Strong foundation for execution


  
**NASDAQ: BEAT**  
 Since November 2021

  
**\$60 Million**  
 Market Capitalization<sup>i</sup>

  
**High Margin Business**  
 Recurring Revenue with Reader Service

  
**\$5.8 Million**  
 Cash on Hand<sup>ii</sup>

  
**Debt: N/A**  
 No Bank Borrowings<sup>ii</sup>

  
**Financial Discipline**  
 Cash Burn Aligned with Key Milestones



i. Approximate, as of January 3, 2025

ii. As of September 30, 2024; refer to the Form 10-Q unaudited financial statements for the quarterly period ended September 30, 2024

# Financials

Focused on financial discipline to deliver on goals while minimizing cash burn

## Cash Burn



Operating cash burn of \$3.3M in prior quarter<sup>i</sup>, aligned with key milestones

## Shareholder Support



Strong support from existing shareholders, committed to groundbreaking technologies

\$ in Thousands	Quarter Ended September 30,	
	2024 <sup>ii</sup>	2023
Operating Expenses:		
General & Administrative	\$2,176	\$2,114
Research & Development	2,893	1,623
Total Operating Expenses	5,069	3,737
Loss from Operations	(5,069)	(3,737)
Interest and Other (expense)	90	267
Net loss	\$(4,979)	\$(3,470)
Less non-cash items and timing differences	1,570	1,372
<b>Net cash used in operating activities<sup>i</sup></b>	<b>\$(3,306)</b>	<b>\$(2,098)</b>
\$ in Thousands	September 30, 2024	December 31, 2023
Cash & Cash Equivalents	\$5,768	\$16,189

i. Calculated as Net loss, less non-cash items such as stock-based compensation and timing differences.

ii. Refer to the Form 10-Q unaudited financial statements for the quarterly period ended September 30, 2024

## Funding Next Wave of Milestones

Investment aligned with milestones

- Focused on maintaining and adding value-add investors
- Plan to strategically finance the company to manage dilution
- Upcoming milestones<sup>i</sup> are clear catalysts for investment
- Continue to align our cash burn to the achievement of our key milestones, in advance of commercialization
- Investing in commercial-readiness, key R&D activities, initial inventory build outs and other key initiatives



### Commercial-readiness

- Business development and partnerships
- Initial build out of commercial team
- Onboarding and customer service
- Health economic studies and market access
- Marketing for Phase 1 Go-To-Market plans



### R&D (Clin/Reg, AI, Software)

- Continued clinical data for commercialization
  - RAISE ECG Pivotal Study
- AI for Arrhythmia / Ischemia indication
- Regulatory filings and certifications



### Inventory/Manufacturing

- Build out of HeartBeam Systems
- Contracts with manufacturing partners
- Establishment of physician reader service



### G&A

- Minimize incremental G&A spend over coming period
- Invest in critical IT and ERP Systems for growth

i. Refer to Slide 15 for HeartBeam 2025 Milestones.

# HeartBeam Leadership Team

Depth of experience across healthcare and technology



**ROB ENO**  
Chief Executive Officer



**BRANISLAV VAJDIC, PHD**  
Founder & President



**TIM CRUICKSHANK**  
Chief Financial Officer



**PETER FITZGERALD, MD, PHD**  
Chief Medical Officer



**KEN PERSEN**  
Chief Technology Officer



**LANCE MYERS**  
Chief AI Scientist



**RICHA GUJARATI**  
SVP, Product



**DEBORAH CASTILLO, PHD**  
VP, Regulatory



**POOJA CHATERJEE**  
VP, Clinical



# HeartBeam Scientific Advisory Board

Worldwide experts in cardiology



**PETER FITZGERALD, MD, PHD**  
Chief Medical Officer



**C. MICHAEL GIBSON, MD**  
SAB Chair



**CHARLES L. BROWN III, MD**  
SAB Member



**TONY DAS, MD**  
SAB Member



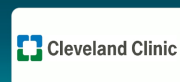
**ROBERT HARRINGTON, MD**  
SAB Member



**CAMPBELL ROGERS, MD**  
SAB Member



**NIRAJ VARMA, MD, PHD**  
SAB Member



# Closing Summary

## BREAKTHROUGH IN CARDIAC TECHNOLOGY

- IP protected design: smallest, easiest-to-use and first cable-free 12-lead ECG device
- Potential for major advances over existing ambulatory ECG technology
  - Heart attack detection with patient
  - AI algorithms for early disease detection and personalized cardiac insights

## SIGNIFICANTLY DERISKED OPPORTUNITY

- Foundational FDA clearance achieved
- Second FDA submission to be submitted imminently
- Significant clinical data on equivalence/superiority to 12L ECG
- Continued derisking through near-term milestones

## GO-TO-MARKET OPTIONS IN MULTIPLE VERTICALS

- \$1 billion+ opportunity in initial markets: Concierge and Direct Patient Pay
- Positioned to disrupt numerous large markets and clinical applications worth a combined \$100 billion+
- High margin, recurring revenue model
- Range of strategic partnership opportunities to accelerate growth


## The Offering

Enables sufficient runway to reach next value-inflection milestones

  
**Offering Amount**  
\$10 MILLION

  
**Security**  
Straight Common Stock

  
**Price Per Share**  
To Be Determined

  
**Offer Type**  
Registered Public Offering\*

### Additional Information

- Allocation preference given to existing shareholders (MDBH and BEAT)
- Account with MDB Direct or a selected dealer required to participate
- Management believes the Offering qualifies for Section 1202/QSBS exclusion\*\*

\*\* We believe that upon the close of this offering (i) we will be an "eligible corporation" as defined in Section 1202(e)(4) of the Internal Revenue Code of 1986, as amended, or Code, (ii) we will not have made any purchases of our own stock during the one-year period preceding the closing having an aggregate value exceeding 5% of the aggregate value of all our stock as of the beginning of such period and (iii) our aggregate gross assets, as defined by Code Section 1202(d)(2), at no time and through the closing will have exceeded or will exceed \$50 million, taking into account the assets of any corporations required to be aggregated with us in accordance with Code Section 1202(d)(3). As such, we believe that the common stock offered hereby may be "qualified small business stock" pursuant to Code Section 1202(c). Certain prospective purchasers may be eligible for an exemption from federal income tax on capital gains with respect to "qualified small business stock" held for more than five years. For such exemption to apply to such purchaser, we will have to meet certain active business tests during substantially all of the purchaser's holding period, which tests may be impacted by our future operations and our utilization of the proceeds of this offering. We cannot assure that we will meet all or any of such tests during substantially all of a purchaser's holding period. Purchasers must consult their own tax advisors with regard to the applicability or interpretation of Section 1202 of the Code.

\* A copy of the registration statement can be found here:  
[https://www.sec.gov/Archives/edgar/data/1779372/000121390024111343/ea0225279-424b5\\_heartbeam.htm](https://www.sec.gov/Archives/edgar/data/1779372/000121390024111343/ea0225279-424b5_heartbeam.htm)