Leading the Next Frontier in Precision Cardiovascular Medicine

2025

CardioDiagnostics

Revolutionizing Cardiovascular Medicine With Epigenetics and AI

Forward Looking Statements

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Key Investment Highlights

- Cardio Diagnostics (NASDAQ: CDIO) is an artificial intelligence-powered precision cardiovascular medicine company that makes cardiovascular disease prevention and detection more accessible, personalized and precise

- Cardio Diagnostics is headquartered in Chicago, Illinois

- Launched multiple products leveraging proprietary AI-Driven Integrated Genetic–Epigenetic Engine™:
  - **Epi+Gen CHD™:** only epigenetics-based test in the world for coronary heart disease event (heart attack, sudden death) risk assessment (**$51 billion US TAM[(1)]**)
  - **PrecisionCHD™:** only epigenetics-based test in the world for coronary heart disease detection and management (**$134 billion US TAM[(1)]**)
  - **Actionable Clinical Intelligence™:** a one-of-a-kind platform that offers new epigenetic and genetic insights to clinicians prescribing the Epi+Gen CHD™ and PrecisionCHD™ tests
  - **CardioInnovate360:** research-use-only (RUO) solution to support the discovery, development and validation of novel biopharmaceuticals for the assessment and management of cardiovascular diseases

- Launched **HeartRisk™**, a cardiovascular risk intelligence platform customized to decision makers such as value-based care and other provider organizations, employers, brokers and benefits consultants, and government entities, who deploy the Epi+Gen CHD™ and PrecisionCHD™ tests for optimizing decisions

- Cardio Diagnostics' differentiated technology, clinical tests, and platforms are protected by a diverse IP portfolio

[(1)] Source: Cardio Diagnostics estimate for US markets based on 2020 US Census data

Key Investment Highlights

- Cardio Diagnostics' clinical tests are:
  - More sensitive compared to current lipid-based clinical tests and stress ECG
  - Non-invasive blood tests that can be administered remotely or in provider settings

- Cardio Diagnostics' clinical tests and platforms provide clear value propositions to scale across multiple key stakeholder channels including:
  - Telemedicine
  - Value-based care providers
  - Integrated delivery networks/health systems
  - Payers
  - Employers
  - Government entities
  - Life insurance
  - Pharma

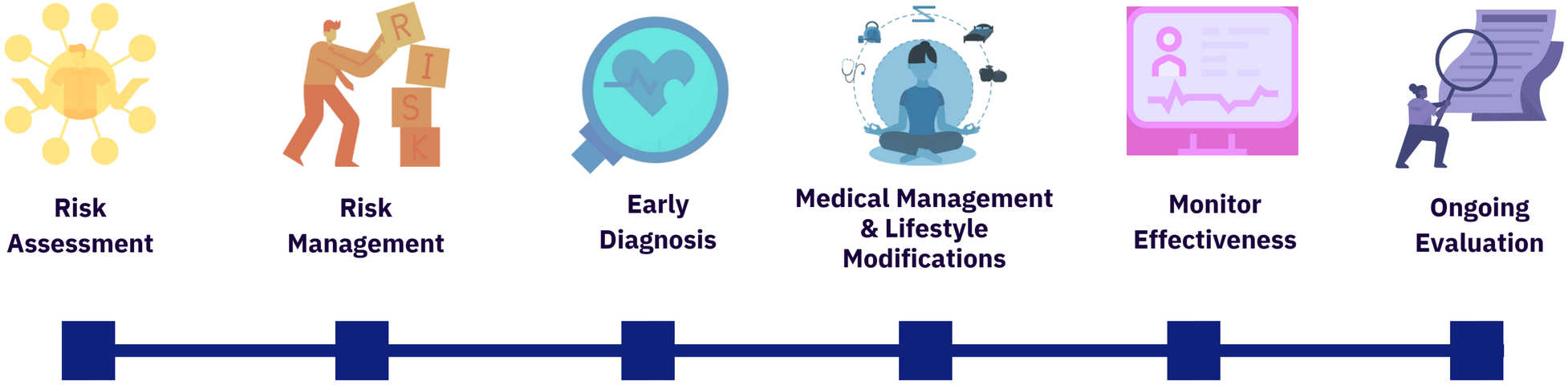
- Additional clinical tests in the pipeline for stroke, congestive heart failure and diabetes in development that together address a $340B US Total Addressable Market (TAM)[(1)]

- A highly experienced commercial and clinical team

[(1)] Source: Cardio Diagnostics estimate for US markets based on 2020 US Census data

Cardio Diagnostics' Mission is to Revolutionize Cardiovascular Medicine with Epigenetics and AI

Our Vision:
Precision Cardiovascular Medicine, driven by epigenetics and artificial intelligence, will transform the delivery of targeted interventions, enhance patient outcomes, and reduce costs, ultimately alleviating the global burden of heart disease.



Cardio Diagnostics is Pioneering a New Era in Precision Cardiovascular Medicine Driven by Innovation, Diversification, Scale and Experience

INNOVATION

TECHNOLOGY

- Only precision molecular diagnostics technology for cardiovascular disease at the intersection of epigenetics, genetics and AI.
- AI-driven Integrated Genetic-Epigenetic Engine™, a proprietary platform to rapidly design, develop, and launch clinical tests.

INTELLECTUAL PROPERTY

- Diverse and robust intellectual property portfolio.
- Consists of granted and pending patents, trade secrets and copyrights.

DIVERSIFICATION

PRODUCTS

- Multiple launched and in development synergistic clinical and non-clinical products addressing various cardiovascular diseases.
- Backed by robust clinical, analytical and economic studies that appeal to various healthcare and business stakeholders.

MARKETS

- Robust value propositions for key healthcare stakeholders, including providers, provider organizations, payers, employers, life insurance and pharma.
- Customized offering to meet the needs of different market segments.

Cardio Diagnostics is Pioneering a New Era in Precision Cardiovascular Medicine Driven by Innovation, Diversification, Scale and Experience

SCALE

OPERATIONS

- Highly scalable and efficient testing and reporting process.
- Favorable economies of scale to lower COGS and improve margin.

REVENUE

- >$300B total addressable market across launched and in-development products.
- High potential for recurring revenue.

EXPERIENCE

CLINICAL

- Has profound understanding of clinical needs, challenges and opportunities.
- Deep expertise in designing, executing ad publishing studies to expand evidence base, increase credibility and gain clinical and commercial acceptance.

BUSINESS

- Have successfully built and launched multiple healthcare products/services across private and public companies.
- Experience expanding into new markets and targeting new customers.

Cardiovascular Disease is the Leading Cause of Death Globally Despite Being Largely Preventable

#1	Cardiovascular disease (CVD) is the leading cause of death globally, accounting for nearly 19 million deaths per year, or about 32% of all global deaths [1]
$47 TRILLION LOSS	Globally, cardiovascular disease is expected to result in a cumulative output loss of $47 trillion from 2011 to 2030 due to medical costs and productivity losses, representing 75% of the global GDP in 2010 [2] [3]
72%	Following a healthy lifestyle may prevent 72% of premature deaths related to heart disease [3]

[1] World Health Organization
[2] World Economic Forum Harvard School of Public Health
[3] Harvard School of Public Health

Cardiovascular Disease is a Burden for All Major Stakeholders

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Employers

Employers may face increased healthcare costs due to heart disease, as employees with cardiovascular disease have medical costs that are twice as high as those without the condition [1]

Providers and Provider Organizations

Heart disease accounts for approximately 25% of emergency room visits related to chest pain, which can strain hospital resources, particularly in emergency departments [2]

Payers

Heart disease is responsible for a substantial portion of healthcare expenditure. In 2015, around 14% of total U.S. healthcare expenditure was attributed to cardiovascular disease [1]

Patients

In the United States, heart disease is responsible for approximately 659,000 deaths, which equates to 1 in every 4 deaths, annually [3]

Life Insurers

As the number one killer, heart disease is a leading cause of life insurance payouts

Government Entities

Heart disease is among the leading causes of death for the more than 2 million individuals incarcerated in state and federal prisons across the United States [4]

[1] American Heart Association
[2] National Center for Biotechnology Information
[3] CDC
[4] Wang EA, et al.,, Cardiovascular Disease in Incarcerated Populations. J Am Coll Cardiol.

Four Strategic Priorities to Realize Our Vision

1 Expand evidence portfolio that matters to key healthcare stakeholders

- Build upon current rigorous clinical validation and real world case studies
- Perform additional health economic studies to demonstrate substantial savings and ROI

2 Establish a robust and synergistic product pipeline

- Leverage proprietary AI-Driven Integrated Genetic-Epigenetic Engine™ to complete the development and launch of new synergistic tests
- Diverse suite of tests and platforms to address cardiovascular diseases across the care continuum for major healthcare stakeholders

3 Take a strategic approach to commercialization and growth

- Establish strong partnerships with key healthcare stakeholders to accelerate market entry and enhance overall business success
- Be present in diverse markets to expand customer base, reduce risks, and capitalize on new opportunities to foster growth and resilience in the short and long-terms

4 Execute on meaningful initiatives to broaden adoption

- Foster strong relationships with payers to secure reimbursement towards driving sustained revenue growth and market penetration
- Consider going through the FDA pathway to continue to build trust among clinicians and patients
- Engage thought leaders to advocate for the clinical benefits, enhance credibility within the medical community, and foster widespread acceptance and utilization

Clinicians' Current Approach to Assessing Risk for and Detecting Cardiovascular Disease (CVD)

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Currently, risk for CVD is assessed using two common lipid-based clinical tests:

FRAMINGHAM RISK SCORE (FRS)

- Age
- Sex
- Systolic blood pressure
- Diabetes
- Total cholesterol
- HDL cholesterol
- Smoking
- Diastolic blood pressure

ASCVD POOLED COHORT EQUATION (PCE)

- Age
- Race
- Smoking
- Diabetes
- HDL cholesterol
- Total cholesterol
- Sex
- Systolic blood pressure
- Receiving treatment for high blood pressure

Currently, CVD is detected using several tests:

Exercise ECG

Measures the electrical activity of the heart during physical activity

Cardiac Catheterization

A thin, flexible tube is inserted into an artery or vein and guided to the heart

Echocardiography

Ultrasound-based imaging technique that creates detailed pictures of the heart's structure and function

CCTA

Imaging technique that uses X-rays and contrast material to visualize the coronary arteries

Single-Photon Emission Computed Tomography (SPECT)

Nuclear imaging technique that uses radioactive tracers to generate 3D images of blood flow to the heart

Cardiac Magnetic Resonance Imaging

Uses powerful magnets and radio waves to create detailed images of the heart's structure and function

Two Types of DNA Biomarkers Power Our Approach

GENETICS (SINGLE NUCLEOTIDE POLYMORPHISMS)

- Inherited from parents
- <20% of risk for cardiovascular disease is driven by genetics[1]
- Does not change over time (i.e., not dynamic)

EPIGENETICS (DNA METHYLATION)

- Influenced by lifestyle & environment
- Larger driver of risk for cardiovascular disease as compared to genetics
- Largely confounded by genetics
- Changes over time (i.e., dynamic) (similar to HbA1c)

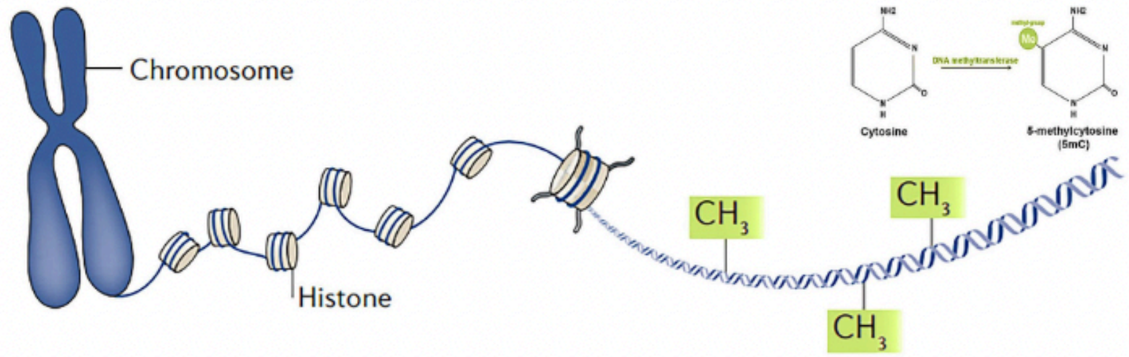
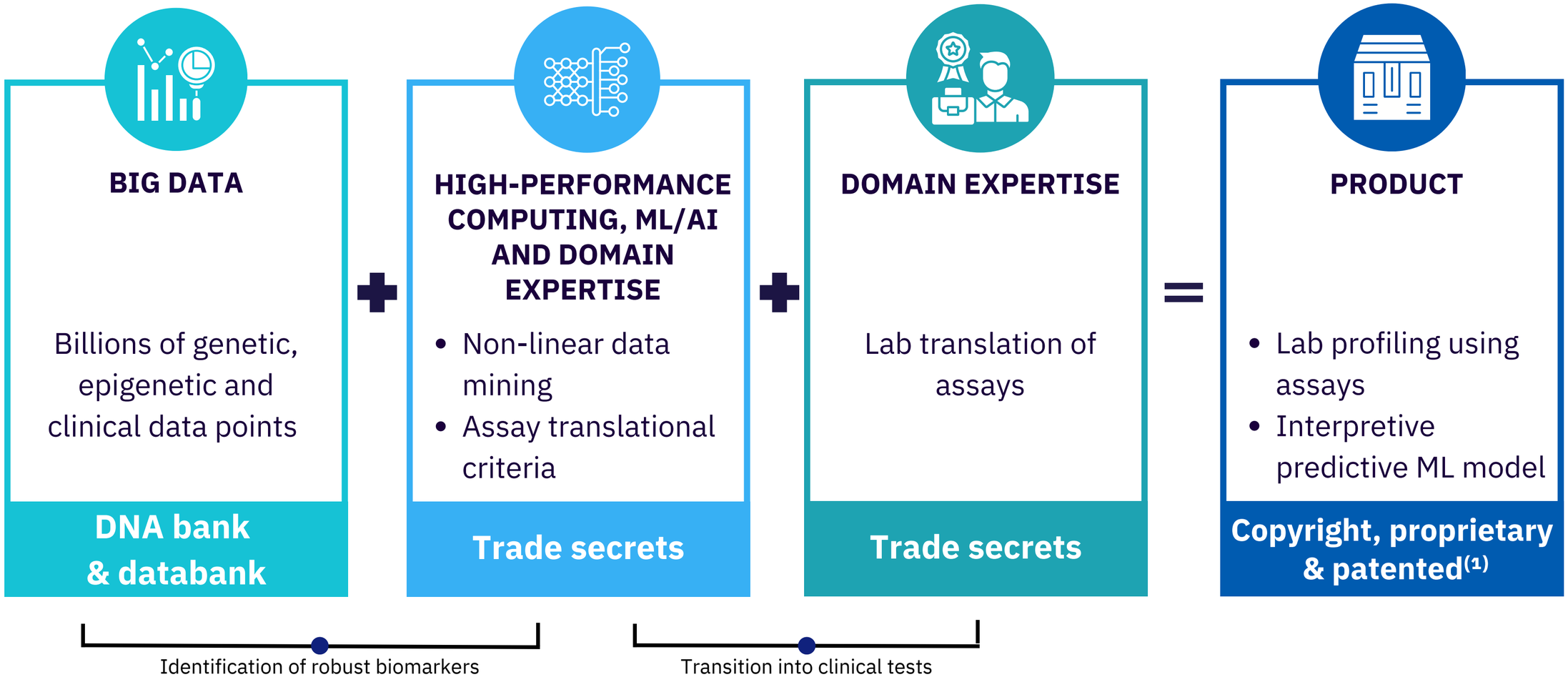


Fig 1. DNA methylation (5mC) [2]

[1] Sum heritability from Hou, K et al.,, Nature Genetics Aug 2019, /doi.org/10.1038/S41588-019-0465-0
[2] creativebiomart.net/epigenetics/services/dna-methylation-analysis-service/

Our AI-Driven Integrated Epigenetic-Genetic Engine™

Proprietary Engine designed and built over more than a decade



Our AI-Driven Integrated Epigenetic-Genetic Engine™ enables rapid design, development and launch of new diagnostic solutions

(1) Multiple granted US and international patents; Other patents pending

Cardio Diagnostics' Suite of Solutions

Clinical solutions:

Epi+Gen CHD™

Only epigenetics-based clinical blood test in the world for coronary heart disease event risk assessment

It is a more sensitive and scalable alternative to the Framingham Risk Score (FRS), and the Atherosclerotic Cardiovascular Disease (ASCVD) Risk Calculator for predicting the three-year-risk for a coronary heart disease event

PrecisionCHD™

Only epigenetics-based clinical blood test in the world for coronary heart disease detection and management

It is a sensitive, non-invasive, and scalable alternative to exercise stress tests, nuclear stress tests, stress echocardiograms, coronary angiograms, and cardiac catheterization for evaluating coronary heart disease

Actionable Clinical Intelligence™

A one-of-a-kind platform that offers new epigenetic and genetic insights to clinicians prescribing the Epi+Gen CHD™ and PrecisionCHD™ tests to help help personalize care and improve chronic care management

Non-clinical solutions:

CardioInnovate360™

Research-use-only (RUO) solution to support the discovery, development and validation of novel biopharmaceuticals for the assessment and management of cardiovascular diseases

HeartRisk™

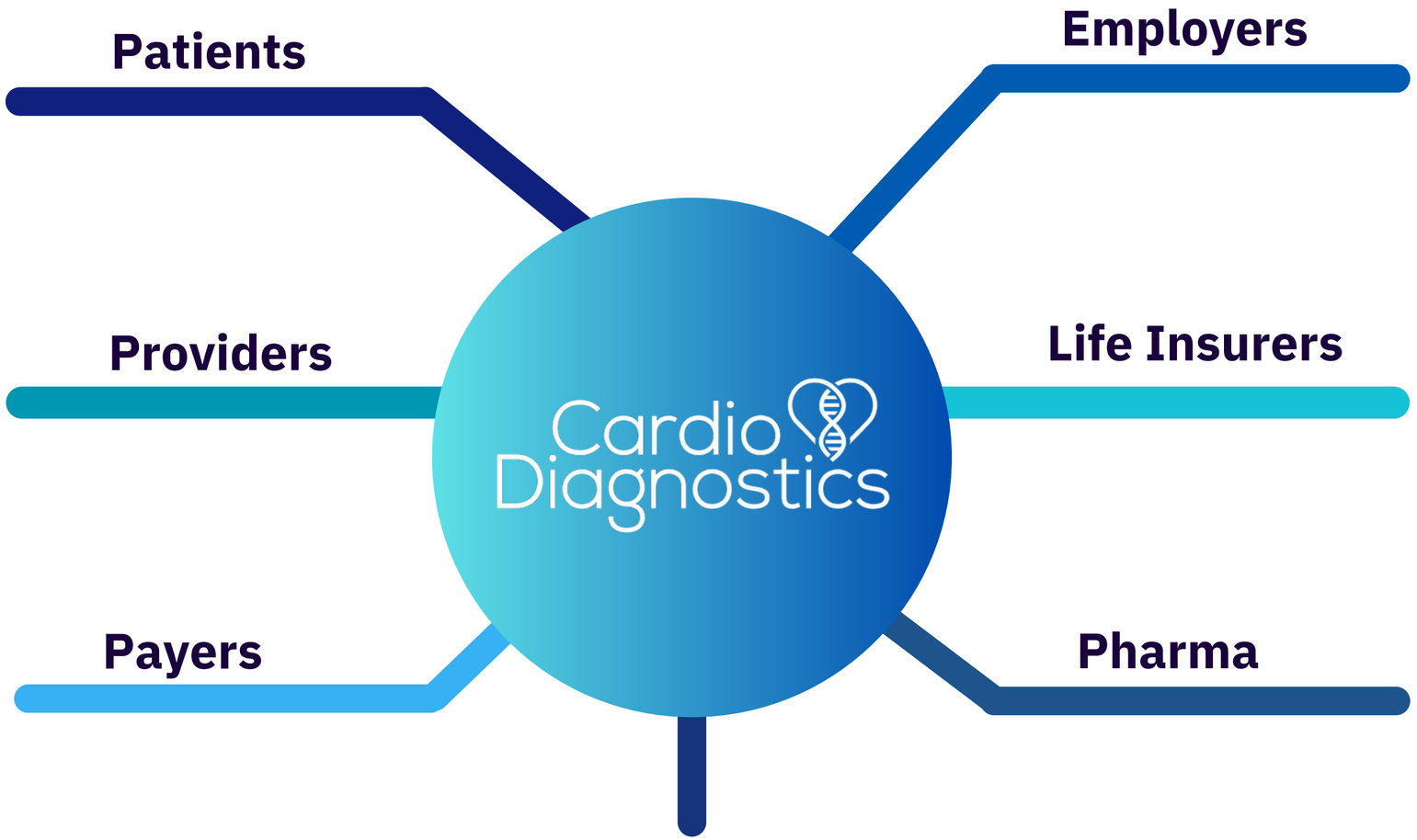
A cardiovascular risk intelligence platform customized to value-based care and other provider organizations, employers, brokers and benefits consultants, and government entities, who deploy the Epi+Gen CHD™ and PrecisionCHD™ tests for optimizing strategic decisions

Our Suite of Solutions Offer Unparalleled Innovation

	Current Clinical Solutions	Cardio Diagnostics	Evidence
Technology	Utilize traditional, proxy biomarkers (e.g., lipid) that are necessary but not sufficient	Utilize biological blueprint biomarkers that go beyond traditional biomarkers	67% of patients who had a heart attack had normal total cholesterol[1]
	Utilize self-reported/subjective biomarkers (e.g., smoking)	Utilize objective, molecular DNA biomarkers	40% of smokers fail biochemical verification of self-reported abstinence[2]
	Emphasis on obstructive disease	Accounts for both obstructive and non-obstructive disease	50% of patients undergoing invasive angiography, particularly women, do not have obstructive disease[3]
Accessibility and Scalability	Conducted only in provider-settings	Can be conducted fully remotely or in provider-settings	Average wait time for a cardiology appointment is 26.6 days[4]
	Requires specialized infrastructure	Only requires a blood sample	Rural patients are less likely to receive cardiovascular care[5]
	Fasting may be required	Fasting not required	Fasting for 10-12 hours necessary for lipid panel blood test
	Exposure to ionizing radiation	No exposure to ionizing radiation	CCTA delivers 2.88±0.85 mSv (30 chest x-rays' worth)[6]
	Potential side effects (e.g., contrast dye-induced kidney damage)	No known side effects	Acute kidney injury was 33% in those with diabetes[7]
Actionable Insights	Lack insights for personalizing interventions	Actionable insights for personalizing interventions	Actionable insights provided via our Actionable Clinical Intelligence platform
	Lack ability to monitor the effectiveness of interventions	Dynamic biomarkers to monitor effectiveness of interventions	Our dynamic epigenetics biomarkers can change in ~90 days[8]
	Lack business insights for stakeholders	Actionable business insights for stakeholders	Actionable insights provided via our HeartRisk platform

[1] Cardio Diagnostics internal data
[2] Scheuermann, T et al., Addiction. 2018
[3] Banks, K et al., Curr Cardiol Rev. 2010
[4] Merritt Hawkins and AMN Healthcare. 2022
[5] Beth Israel Lahey Health. 2022
[6] Aupongkaroon, P et al., 2022
[7] Rudnick, MR et al., 1995
[8] Philibert R et al., 2023

Our Differentiated Solutions Deliver Value to Key Healthcare Stakeholders



Patients

- Improve well-being and quality of life
- Receive timely and better care

Employers

- Reduce absenteeism and improve productivity among employees
- Reduce healthcare costs by avoiding costly disease management

Providers

- Better clinical tools and information to aid decision making
- Save time with more efficient testing

Life Insurers

- Better risk assessment and pricing of life insurance policies
- Help policyholders to stay healthy, reducing the number of claims

Payers

- Reduce healthcare costs by reducing unnecessary treatments and hospitalizations
- Transition to value-based care tied to quality of care and health outcomes

Pharma

- Help accelerate drug discovery and with clinical trial design
- Conduct post-marketing surveillance to monitor drug safety and effectiveness

Corrections

- Reduce risks associated with inmate transportation
- Convenient heart disease testing without the need for extensive physical infrastructure

Clear, Key Differentiations for Coronary Heart Disease

CardioDiagnostics

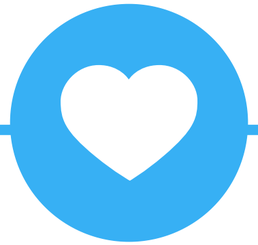
	CardioDiagnostics	Hospitals & Clinics	23andMe	prevencio (Power of AI to Prevent the Preventable)	ALIVECOR	somalogic	cleerly
SENSITIVE EPIGENETICS BASED TEST	✓						
CORONARY HEART DISEASE SPECIFIC	✓	✓		✓			✓
PHYSICIAN ORDERED AND/OR INTERPRETED	✓	✓		✓	✓		✓
AT-HOME TESTING AVAILABLE	✓		✓		✓		
MULTIPLE DNA BIOMARKERS-BASED TEST	✓						
MONITOR TREATMENT RESPONSE [1]	✓					✓	

[1] Comparison to PrecisionCHD for CHD detection
[2] Comparison to detection tests such as exercise ECG

Epi+Gen CHD™ and PrecisionCHD™: A $185B US Total Addressable Market[1]

We expect to accelerate the adoption of Epi+Gen CHD™ and PrecisionCHD™ across several channels including:

- Telemedicine
- Providers - concierge practices, innovative health systems, value-based care
- Payers
- Employers
- Life insurers

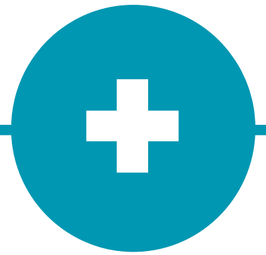


Epi+Gen CHD™ is recommended for:

- Adults ages 35-75
- Have not been diagnosed with coronary heart disease
- Approximately 146M Americans[2]

PrecisionCHD™ is recommended for:

- Adults ages 35-80
- Presenting to be evaluated for coronary heart disease
- Approximately 157M Americans[2]



We intend to accelerate the adoption of both tests by:

- Expanding strategic channel partnerships
- Leveraging industry organizations
- Offering a piloting program
- Customizing customer portal to reduce transaction friction

[1] Assumes 146M Americans x $350/test for Epi+Gen CHD and assumes 157M Americans x $850/test for PrecisionCHD

[2] US Census Bureau

The Integrated Genetic-Epigenetic Engine™ Can be Leveraged Repeatedly

Assumes one patient could be tested with multiple tests[1]

LAUNCHED	LAUNCHED	IN DEVELOPMENT	IN DEVELOPMENT	IN DEVELOPMENT	TOTAL
Epi+Gen CHD	PrecisionCHD	CHF Risk	Stroke Risk	Diabetes Risk	=
146M adults $350/test	157M adults $850/test	152M adults $350/test[2]	153M adults $350/test[2]	140M adults $350/test[2]	**$340B** U.S. ADDRESSABLE MARKET
$51B	**$134B**	**$53B**	**$53B**	**$49B**	

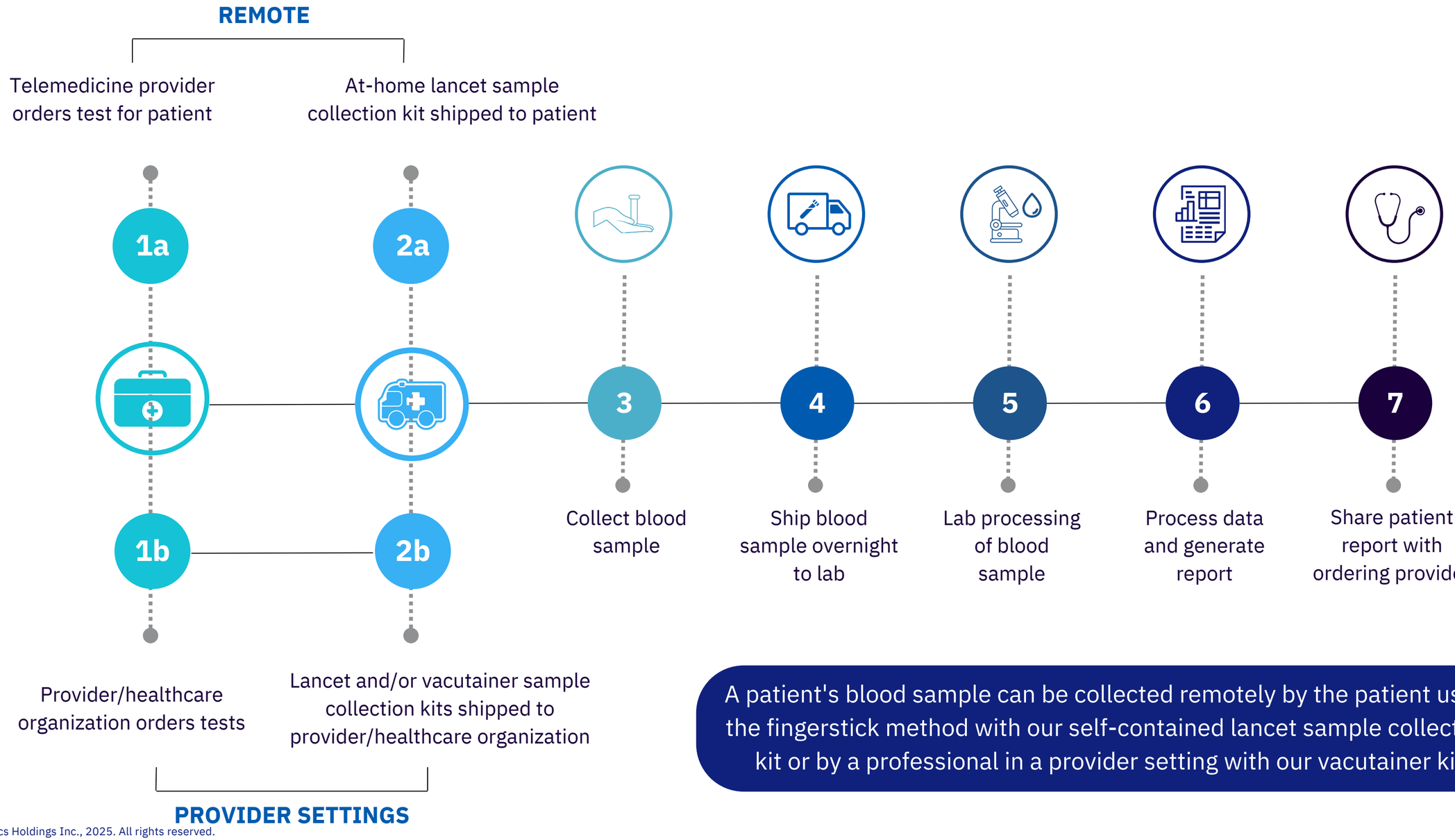
Source: Cardio Diagnostics estimate for US market based on 2020 US Census datas

[1] Assumes each test is administered to each patient a single time in a year although some patients may be eligible to be re-tested in less than a year

[2] Assumed price per test

A Scalable Testing & Reporting Process to Fulfill Increasing Demand

CardioDiagnostics



A patient's blood sample can be collected remotely by the patient using the fingerstick method with our self-contained lancet sample collection kit or by a professional in a provider setting with our vacutainer kit

Pursuing A New Standard of Care for Cardiovascular Medicine

CardioDiagnostics

EVIDENCE BUILDING

Continued expansion of analytical validity, clinical validity, clinical utility, economic utility and case studies evidence portfolio

REIMBURSEMENT CODES

Awarded CPT PLA® codes by the American Medical Association, 0439U for Epi+Gen CHD™ and 0440U for PrecisionCHD™

FDA

Completed first pre-submission with the FDA. Evaluating additional pre-submissions and regulatory strategy

COVERAGE & PAYMENT

Continued efforts to secure coverage and payment from private and government payors, with “gapfill” pricing determination awarded for both tests by CMS

ENGAGE PAYORS

Continued engagement of payors to explore synergistic opportunities

Robust Short-Term & Long-Term Strategic Initiatives

GROWTH STRATEGIES	INCREASE REVENUE	MANAGE RISKS	REDUCE VARIABLE COSTS
INTERNAL LAB	✓	✓	✓
PURSUE FDA PATHWAY	✓	✓	✓
PAYOR COVERAGE	✓	✓	
TARGET MULTIPLE REVENUE CHANNELS	✓	✓	
LAUNCH MULTIPLE SYNERGISTIC PRODUCTS	✓	✓	

Strong Leadership

Experienced leadership, complementary backgrounds & vision to succeed

Warren Hosseinion, MD

Chairman

President, Nutex Health, Inc. (NUTX)
Co-founder of Astrana Health (ASTH)
Director and former CEO of Clinigence Holdings (CLNH)
MD from Georgetown University School of Medicine

Meesha Dogan, PhD

CEO, Co-Founder, & Director

15+ years bridging engineering, AI, and medicine
Co-inventor of the Integrated Genetic-Epigenetic Engine™
PhD in Biomedical Engineering from the University of Iowa

Team Continued

Robert Philibert, MD PhD

CMO, Co-Founder & Director

17+ years in epigenetics and clinical translation
Co-inventor of the Integrated Genetic-Epigenetic Engine™
MD & PhD in Neuroscience from the University of Iowa

Tim Dogan, PhD

CTO

15+ years in AI and high performance computing systems
Co-inventor of the Integrated Genetic-Epigenetic Engine™
PhD in Mechanical Engineering from the University of Iowa

Elisa Luqman, JD MBA

CFO

Chief Legal Officer (SEC), Nutex Health, Inc. (NUTX)
Co-founder of bigVault Storage Technologies (acquired)
JD & MBA in Finance from Hofstra University
Licensed in NY/NJ and FL Corp Counsel

Key Milestones Achieved

- **Revenue and Partnerships**
  - Secured the Innovative Technology contract with Vizient, Inc., the nation’s largest provider-driven healthcare performance improvement company. Vizient's customer base encompasses over 60% of hospitals and 97% of academic medical centers in the US.
  - Expanded into the employer vertical and scaled outreach to more providers in the US.
  - Secured contract with Family Medicine Specialists and expanded to their additional locations in Walmart and Meijer.
  - Entered into an agreement with Aimil Ltd to introduce our technology in India.
- **Reimbursement and FDA**
  - Awarded two CPT PLA® codes by American Medical Association for our clinical tests, 0439U for Epi+Gen CHD™ and 0449U for PrecisionCHD™.
  - Completed first pre-submission with the FDA pertaining to our PrecisionCHD test and have received feedback from the FDA on that submission.
  - Participated in the Centers for Medicare and Medicaid Services’ (CMS) Clinical Laboratory Fee Schedule annual meeting to present pricing.
  - Completed pre-submission with MolDX and received feedback for Medicare coverage determination.
  - Obtained gapfill pricing determination from CMS for Epi+Gen CHD and PrecisionCHD.
- **Products and Evidence**
  - Launched PrecisionCHD™, the first and only integrated genetic-epigenetic blood test for coronary heart disease detection.
  - Launched Actionable Clinical Intelligence, a platform that offers new epigenetic and genetic insights to clinicians prescribing our Epi+Gen CHD™ and PrecisionCHD™ tests to help improve chronic care management.
  - Launched CardioInnovate360™, a research-use-only (RUO) solution to support the discovery, development and validation of novel biopharmaceuticals for the assessment and management of cardiovascular diseases.
  - Launched HeartRisk™, a SaaS cardiovascular risk intelligence platform customized to value-based care and other provider organizations, employers, brokers and benefits consultants and government entities, who deploy the Epi+Gen CHD™ and PrecisionCHD™ tests for optimizing decisions.
  - Clinical evidence for PrecisionCHD™ was peer-reviewed published in the prestigious Journal of American Heart Association.
  - The global scalability nature of Cardio Diagnostics’ solutions was highlighted in a peer-reviewed publication in Epigenomics.
  - A study demonstrating the use of PrecisionCHD™ to monitor the effectiveness of an intervention was peer-reviewed published in Genes.
  - A study demonstrating the cost savings associated with the use of PrecisionCHD™ was peer-reviewed published in Advances in Therapy.
- **Intellectual Property and Operations**
  - Patents granted in India, China, Australia and the United States (second patent).
  - Ongoing setup of our new operations hub that includes a high complexity CLIA lab, kitting and fulfillment, and research lab, to scale operations and reduce operating costs.

Risk Factors

Our business is subject to numerous risks and uncertainties, including those highlighted in the section titled “Risk Factors,” which represent challenges that we face in connection with the successful implementation of our strategy and growth of our business. The occurrence of one or more of the events or circumstances described in the section titled “Risk Factors,” alone or in combination with other events or circumstances, may have an adverse effect on our business, cash flows, financial condition and results of operations. Such risks include, but are not limited to:

Risks Related to Business, Industry and Business Operations

- We have a limited operating history that makes it impossible to reliably predict future growth and operating results.
- We have an unproven business model, have not generated significant revenues and can provide no assurance of generating significant revenues or operating profit.
- The market for epigenetic tests is fairly new and unproven, and it may decline or experience limited growth, which would adversely affect our ability to fully realize the potential of our business plan.
- The estimates of market opportunity and forecasts of market growth included in this Annual Report on Form 10-K may prove to be inaccurate, and even if the market in which we compete achieves the forecasted growth, our business could fail to grow at similar rates, if at all.
- If we are not able to enhance or introduce new products that achieve market acceptance and keep pace with technological developments, our business, results of operations and financial condition could be harmed.
- The success of our business depends on our ability to expand into new vertical markets and attract new customers in a cost-effective manner.
- Our growth strategy may not prove viable and expected growth and value may not be realized.
- Our future growth could be harmed if we lose the services of our key personnel.
- We may face intense competition, which could limit our ability to maintain or expand market share within our industry, and if we do not maintain or expand our market share, our business and operating results will be harmed.
- Our business depends on customers increasing their use of our existing and future products, and we may experience loss of customers or a decline in their use of our solutions.
- We rely on a limited number of suppliers, contract manufacturers, and logistics providers, and our tests are currently performed by a single contract high complexity Clinical Laboratory Improvement Amendments (CLIA) laboratory.
- We may be unable to scale our operations successfully.
- As we grow the size of our organization, we may experience difficulties in managing this growth.
- Our success depends upon our ability to adapt to a changing market and our continued development of additional tests and services.
- Our Board of Directors may change our strategies, policies, and procedures without stockholder approval.
- We may need to seek alternative business opportunities and change the nature of our business.
- We may be subject to general litigation that may materially adversely affect us and our operations.
- Our management expects to continue to devote substantial time to maintaining and improving its internal controls over financial reporting and the requirements of being a public company which may, among other things, strain our resources, divert management’s attention and affect our ability to accurately report our financial results and prevent fraud.

Risks Related to Intellectual Property

- Certain of our core technology is licensed, and that license may be terminated if we were to breach our obligations under the license.
- Our license agreement with University of Iowa Research Foundation (UIRF) includes a non-exclusive license of “technical information” that potentially could grant unaffiliated third parties access to materials and information considered derivative work made by us, which could be used by such licensees to develop competitive products.

Risk Factors

Risks Related to Government Regulation

- We conduct business in a heavily regulated industry, and if we fail to comply with these laws and government regulations, we could incur penalties or be required to make significant changes to our operations or experience adverse publicity, which could have a material adverse effect on our business, financial condition, and results of operations.
- If the U.S. Food and Drug Administration (“FDA”) were to begin actively regulating our tests, we could incur substantial costs and delays associated with trying to obtain premarket clearance or approval and incur costs associated with complying with post-market controls.
- If our products do not receive adequate coverage and reimbursement from third-party payors, our ability to expand access to our tests beyond our initial sales channels will be limited and our overall commercial success will be limited.

Risks Related to Our Common Stock

- The price of our Common Stock likely will be volatile like the stocks of other early-stage companies.
- Because a substantial number of our currently outstanding shares of Common Stock are registered for resale, we may have difficulty raising additional capital when and if needed.
- A significant number of shares of our Common Stock are subject to issuance upon exercise of outstanding warrants and options, which upon such exercise may result in dilution to our security holders.
- We have never paid dividends on our Common Stock, and we do not anticipate paying any cash dividends on our Common Stock in the foreseeable future.
- Sales of a substantial number of shares of our Common Stock in the public market by our existing stockholders could cause our stock price to decline.

*An extensive list of factors that can affect future results are discussed in the Current Report on Form 10-K for the period ended December 31, 2023 and on Form 10-Q for the period ended September 30, 2024, under the heading “Risk Factors” in Part I, Item IA thereof, and other documents filed from time to time with the Securities and Exchange Commission. Such factors could materially adversely affect the Company's financial performance and could cause the Company's actual results for future periods to differ materially from any opinions or statements expressed within this presentation.

For more information, please email:

investors@cdio.ai

Cardio Diagnostics

Revolutionizing Cardiovascular Medicine With Epigenetics & AI

APPENDIX

CardioDiagnostics

Revolutionizing Cardiovascular Medicine
With Epigenetics and AI

Cardiovascular Disease and Associated Co-Morbidities

In the US, nearly 18 million Americans have some type of cardiovascular disease (CVD), and CVD is responsible for both 1 in every 4 deaths and nearly $1 billion/day in medical costs + lost productivity.[1][2]

CORONARY HEART DISEASE (CHD)

The most common type of CVD

- **20+ million adults have CHD, the major cause of heart attacks[2]**
- **A heart attack occurs every 40 seconds[2]**
- **800,000+ heart attacks / year[2]**

STROKE

A common type of CVD

- **Nearly 800,000 strokes each year[2]**
- **A stroke-related death occurs every 3.5 minutes[2]**
- **1 in 6 CVD-related deaths are due to stroke[2]**

CONGESTIVE HEART FAILURE (CHF)

A common type of CVD

- **6+ million adults have heart failure[2]**
- **Nearly 380,000 deaths in 2018 were attributed to heart failure[2]**

DIABETES

A major risk factor for CVD

- **34+ million adults have diabetes[3]**
- **2-4x more likely to develop CVD[4]**

[1] CDC Foundation
[2] American Heart Association
[3] CDC
[4] Johns Hopkins Medicine

Epi+Gen CHD™: The ***Only*** Epigenetics-Based Test For Coronary Heart Disease Event Risk Assessment

- Epi+Gen CHD™ is Cardio Diagnostics' first product that was developed using our AI-driven Integrated Genetic-Epigenetic Engine™ and was validated in collaboration with Intermountain Healthcare.

- Epi+Gen CHD™ is a powerful test that combines epigenetics, genetics and artificial intelligence to **predict 3-year risk for a coronary heart disease (CHD) event, including heart attacks and sudden death**.

- Epi+Gen CHD™ addresses the shortcomings of current risk assessment tests because it:

  - Demonstrated strong clinical value with **76% sensitivity for men and 78% sensitivity for women,** which is **1.7 times and 2.4 times more sensitive for men and women**, respectively, compared to the average sensitivity of FRS and PCE[1] [2] [3]
  - Demonstrated strong economic value showing up to **$42,000 in cost savings per quality adjusted life year** and improved survival [4]
  - Is a simple, non-invasive blood test performed in a high complexity CLIA lab
  - **Sample can be collected at-home or in provider settings**
  - **Does not require fasting or depend on self-reported information**
  - Is coupled to Cardio Diagnostics' Actionable Clinical Intelligence™ platform to provide **new epigenetic and genetic insights** to clinicians prescribing the test

Epi+Gen CHD™

3-Year Coronary Heart Disease Event Risk Assessment

[1] This means that for every 100 men and 100 women deemed "at-risk" for a CHD event, the test correctly identifies 76 men & 78 women
[2] FRS: Framingham Risk Score, PCE: ASCVD Pooled Cohort Equation
[3] Dogan et al.,, 2021, Epigenomics
[4] Jung et al.,, 2021, Epigenomics

PrecisionCHD™: The ***Only*** Epigenetics-Based Test For Coronary Heart Disease Detection

- PrecisionCHD™ is Cardio Diagnostics' second product that was developed using our AI-driven Integrated Genetic-Epigenetic Engine™ and was validated in collaboration with Intermountain Healthcare and University of Iowa Hospitals and Clinics.

- PrecisionCHD™ is a powerful test that combines epigenetics, genetics and artificial intelligence to **assess the presence of coronary heart disease (CHD)**, the most common type of heart disease and the major cause of heart attacks.

- PrecisionCHD™ addresses the shortcomings of current detection tests because it:
  - Demonstrated strong clinical value with **80% sensitivity for men and 76% sensitivity for women**, **compared to the sensitivity of exercise ECG of 45-68%** [1] [2] [3]
  - Demonstrated strong economic value of reducing cost by $133.57 per member per year relative to existing testing procedures [4]
  - Is a simple, non-invasive blood test performed in a high complexity CLIA lab
  - **Sample can be collected at-home or in provider settings without the need to wait weeks or months to get tested**
  - **Does not** require preparation or exposure to radiation
  - Is coupled to Cardio Diagnostics' Actionable Clinical Intelligence™ platform to provide new epigenetic and genetic insights to clinicians prescribing the test

- Multiple compelling studies to expand evidence dossier are in progress

PrecisionCHD™

Coronary Heart Disease Detection and Management

[1] This means that for every 100 men and 100 women deemed "have" CHD, the test correctly identifies 80 men & 76 women
[2] Philibert R et al., 2023, Journal of American Heart Association
[3] Morrow D et al., 2018, A Textbook of Cardiovascular Medicine
[4] Frisvold D et al., 2024, Advances in Therapy

Actionable Clinical Intelligence™: Insights to Help Personalize Patient Care

ACI™

Actionable Clinical Intelligence

- A **one-of-a-kind platform** that offers new epigenetic and genetic insights to clinicians prescribing the Epi+Gen CHD™ and PrecisionCHD™ tests. These insights are:
  - Generated by integrating the test results with a patient's unique epigenetic and genetic biomarkers together with clinical information to provide **deeper and actionable insights** to clinicians about factors driving the patient's coronary heart disease
  - **Tailored to each patient** to help elucidate areas of concern and aid a clinician's independent assessment, with the goal of improving patient outcomes
  - Include the **relative contribution** of each of the patient's biomarkers to CHD, evidence on the role of these biomarkers in **coronary heart disease pathogenesis**, and changes in the measured biomarkers over time in **response to lifestyle and therapeutic interventions**

Epi+Gen CHD™ and PrecisionCHD™ are the Next Generation Tests for Cardiovascular Medicine

CardioDiagnostics

Patient

- 35-75 years old
- Have not developed signs or symptoms associated with coronary heart disease (CHD)
- Have not been diagnosed with CHD
- Have not had a bone marrow transplant

Without Epi+Gen CHD™

- Requires in-person clinic visit that may take days, weeks or months to schedule and complete
- Multiple tubes of blood needed to be collected in person for testing
- The average sensitivity of FRS & PCE was found to be 44% in men and 32% in women[1][2]
- Patient care plan lacks personalization

With Epi+Gen CHD™

- Can be completed remotely or in provider settings
- Simple blood test where lancet-based collection kit can be done at-home or vacutainer-based collection can be done in provider settings
- The average sensitivity was 76% for men and 78% sensitivity for women, which is 1.7 times and 2.4 times more sensitive for men and women, respectively
- Patient care plan highly personalizable with ACI™

[1]Dogan et al.,, 2021 Epigenomics
[2] FRS: Framingham Risk Score, PCE: ASCVD Pooled Cohort Equation

Epi+Gen CHD™ and PrecisionCHD™ are the Next Generation Tests for Cardiovascular Medicine

CardioDiagnostics

Patient

- 35-80 years old
- Presenting to be evaluated for coronary heart disease (CHD)
- Have not had a bone marrow transplant

Without PrecisionCHD™

- Requires in-person clinic visit that may take days, weeks or months to schedule and complete
- Long testing duration and more invasive tests
- Exposure to ionizing radiation
- Patient management plan lacks personalization
- The sensitivity of exercise ECG for example is only 45-68[(1)]

With PrecisionCHD™

- Can be completed remotely or in provider settings
- Simple blood test where lancet-based collection kit can be done at-home or vacutainer-based collection can be done in provider settings
- No exposure to ionizing radiation
- Patient care plan highly personalizable with ACI™
- The average sensitivity is 80% for men and 76% for women, compared to the sensitivity of exercise ECG of 45-68%[(2)]

[(1)] Philibert R et al.,, 2023, Journal of American Heart Association
[(2)] Morrow D et al, 2018, A Textbook of Cardiovascular Medicine

CardioInnovate360™: A BioPharma Research System That Harnessess the Power of Epigenetics, Genetics and Artificial Intelligence

CardioDiagnostics

CardioInnovate360™

Biopharma Research Platform

- CardioInnovate360™ is a research-use-only (RUO) solution to **support the discovery, development and validation of novel biopharmaceuticals** for the assessment and management of cardiovascular diseases
- Potential to provide a **new and non-reimbursement-dependent revenue stream** for Cardio Diagnostics
- Helps establish a footprint for the company in a **new market**
- Leverages, in part, Cardio Diagnostics' proprietary AI-Driven Integrated Genetic-Epigenetic Engine™ at scale to **help accelerate drug discovery, design clinical trials, conduct post-marketing surveillance, and develop custom applications**
- Example business model for this offering includes licensing, development services etc

HeartRisk™: A Cardiovascular Disease Risk Intelligence Platform to Help Healthcare Stakeholders Make Data-Driven Decisions

CardioDiagnostics

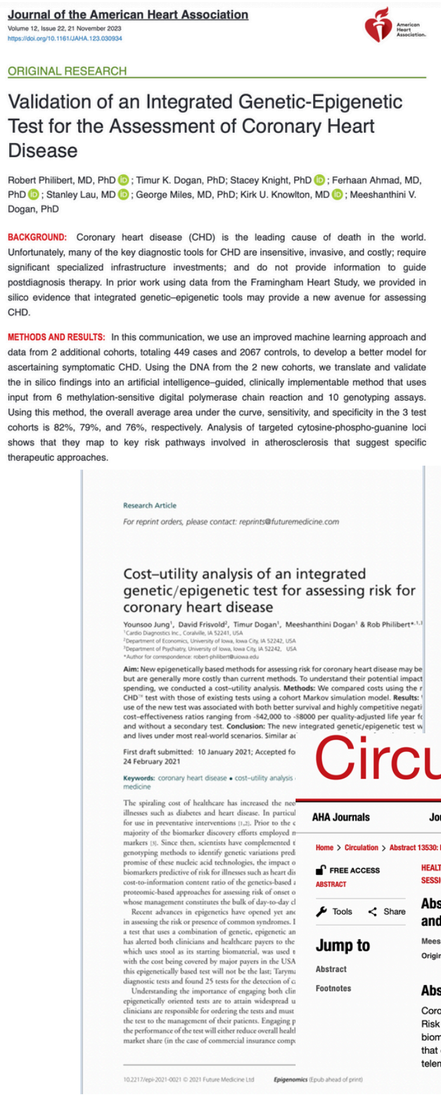
HeartRisk™

Cardiovascular Disease Risk Intelligence Platform

- HeartRisk™ is a a **SaaS** cardiovascular risk intelligence platform **customized** to value-based care and other provider organizations, employers, brokers and benefits consultants and government entities, who deploy the Epi+Gen CHD™ and PrecisionCHD™ tests for **optimizing decisions**
- Potential to provide a **new and non-reimbursement-dependent revenue stream** for Cardio Diagnostics
- Helps expand the Cardio Diagnostics' footprint in **key markets**
- Highly synergistic with Cardio Diagnostics' Epi+Gen CHD™ and PrecisionCHD™ tests, offering new opportunities for the Company to increase the adoption of and recurring testing with its tests

Cardio Diagnostics' Solutions are Backed by Comprehensive Evidence that Matters to Healthcare Stakeholders

- **Rigorous clinical and analytical validation of biomarkers and Artificial Intelligence models**
  - Dogan et al, 2021, External Validation of Integrated Genetic-Epigenetic Biomarkers for Predicting Incident Coronary Heart Disease, Epigenomics (In collaboration with Intermountain Healthcare)
  - Philibert et al, 2021, The Reversion of DNA Methylation at Coronary Heart Disease Risk Loci in Response to Prevention Therapy, Processes
  - Analytical validation performed to meet Clinical Laboratory Improvement Amendment (CLIA) requirements
  - Philibert et al 2023, Validation of an Integrated Genetic-Epigenetic Test for the Assessment of Coronary Heart Disease, Journal of American Heart Association (In collaboration with Intermountain Healthcare and University of Iowa Hospitals and Clinics)
  - Philibert et al 2023, The Reversion of the Epigenetic Signature of Coronary Heart Disease in Response to Smoking Cessation, Genes
  - Additional clinical studies are ongoing
- **Health economic studies to demonstrate substantial savings and ROI**
  - Jung et al, 2021, Cost-Utility Analysis of an Integrated Genetic-Epigenetic Test for Assessing Risk for Coronary Heart Disease, Epigenomics
  - Frisvold et al, 2024, The Use of Precision Epigenetic Methods for the Diagnosis and Care of Stable Coronary Heart Disease Reduces Healthcare Costs, Advances in Therapy


Journal of the American Heart Association
Volume 12, Issue 22, 21 November 2023
https://doi.org/10.1161/JAHA.123.030934

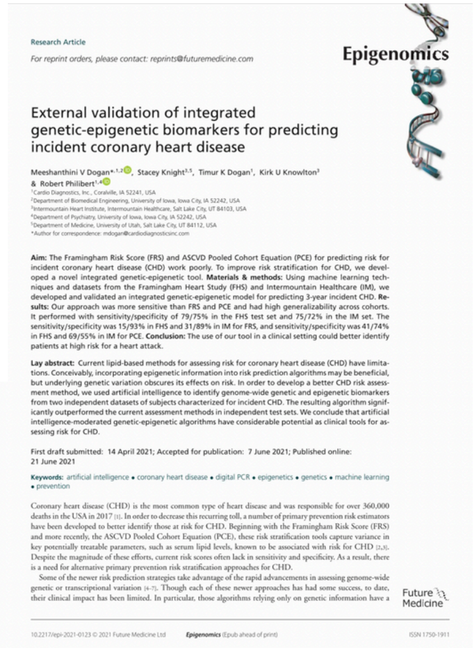
ORIGINAL RESEARCH

Validation of an Integrated Genetic-Epigenetic Test for the Assessment of Coronary Heart Disease

Robert Philibert, MD, PhD ; Timur K. Dogan, PhD; Stacey Knight, PhD ; Ferhaan Ahmad, MD, PhD ; Stanley Lau, MD ; George Miles, MD, PhD; Kirk U. Knowlton, MD ; Meeshanthini V. Dogan, PhD

BACKGROUND: Coronary heart disease (CHD) is the leading cause of death in the world. Unfortunately, many of the key diagnostic tools for CHD are insensitive, invasive, and costly; require significant specialized infrastructure investments; and do not provide information to guide postdiagnosis therapy. In prior work using data from the Framingham Heart Study, we provided in silico evidence that integrated genetic–epigenetic tools may provide a new avenue for assessing CHD.

METHODS AND RESULTS: In this communication, we use an improved machine learning approach and data from 2 additional cohorts, totaling 449 cases and 2067 controls, to develop a better model for ascertaining symptomatic CHD. Using the DNA from the 2 new cohorts, we translate and validate the in silico findings into an artificial intelligence–guided, clinically implementable method that uses input from 6 methylation-sensitive digital polymerase chain reaction and 10 genotyping assays. Using this method, the overall average area under the curve, sensitivity, and specificity in the 3 test cohorts is 82%, 79%, and 76%, respectively. Analysis of targeted cytosine-phospho-guanine loci shows that they map to key risk pathways involved in atherosclerosis that suggest specific therapeutic approaches.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Epigenomics

External validation of integrated genetic-epigenetic biomarkers for predicting incident coronary heart disease

Meeshanthini V Dogan, Stacey Knight, Timur K Dogan, Kirk U Knowlton & Robert Philibert

Aim: The Framingham Risk Score (FRS) and ASCVD Pooled Cohort Equation (PCE) for predicting risk for incident coronary heart disease (CHD) work poorly. To improve risk stratification for CHD, we developed a novel integrated genetic-epigenetic tool. Materials & methods: Using machine learning techniques and datasets from the Framingham Heart Study (FHS) and Intermountain Healthcare (IM), we developed and validated an integrated genetic-epigenetic model for predicting 3-year incident CHD. Results: Our approach was more sensitive than FRS and PCE and had high generalizability across cohorts. It performed with sensitivity/specificity of 79/75% in the FHS test set and 75/72% in the IM set. The sensitivity/specificity was 15/93% in FHS and 31/89% in IM for FRS, and sensitivity/specificity was 41/74% in FHS and 69/55% in IM for PCE. Conclusion: The use of our tool in a clinical setting could better identify patients at high risk for a heart attack.

Lay abstract: Current lipid-based methods for assessing risk for coronary heart disease (CHD) have limitations. Conceivably, incorporating epigenetic information into risk prediction algorithms may be beneficial, but underlying genetic variation obscures its effects on risk. In order to develop a better CHD risk assessment method, we used artificial intelligence to identify genome-wide genetic and epigenetic biomarkers from two independent datasets of subjects characterized for incident CHD. The resulting algorithm significantly outperformed the current assessment methods in independent test sets. We conclude that artificial intelligence-moderated genetic-epigenetic algorithms have considerable potential as clinical tools for assessing risk for CHD.

First draft submitted: 14 April 2021; Accepted for publication: 7 June 2021; Published online: 21 June 2021

Keywords: artificial intelligence • coronary heart disease • digital PCR • epigenetics • genetics • machine learning • prevention

Coronary heart disease (CHD) is the most common type of heart disease and was responsible for over 360,000 deaths in the USA in 2017 [1]. In order to decrease this recurring toll, a number of primary prevention risk estimators have been developed to better identify those at risk for CHD. Beginning with the Framingham Risk Score (FRS) and more recently, the ASCVD Pooled Cohort Equation (PCE), these risk stratification tools capture variance in key potentially treatable parameters, such as serum lipid levels, known to be associated with risk for CHD [2,3]. Despite the magnitude of these efforts, current risk scores often lack in sensitivity and specificity. As a result, there is a need for alternative primary prevention risk stratification approaches for CHD.

Some of the newer risk prediction strategies take advantage of the rapid advancements in assessing genome-wide genetic or transcriptional variation [4–7]. Though each of these newer approaches has had some success, to date, their clinical impact has been limited. In particular, those algorithms relying only on genetic information have a

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Cost–utility analysis of an integrated genetic/epigenetic test for assessing risk for coronary heart disease

Younsoo Jung, David Frisvold, Timur Dogan, Meeshanthini Dogan & Rob Philibert

Aim: New epigenetically based methods for assessing risk for coronary heart disease may be but are generally more costly than current methods. To understand their potential impact spending, we conducted a cost–utility analysis. Methods: We compared costs using the CHD test with those of existing tests using a cohort Markov simulation model. Results: use of the new test was associated with both better survival and highly competitive cost–effectiveness ratios ranging from ~$42,000 to ~$8000 per quality-adjusted life year and without a secondary test. Conclusion: The new integrated genetic/epigenetic test and lives under most real-world scenarios. Similar

First draft submitted: 10 January 2021; Accepted for 24 February 2021

Keywords: coronary heart disease • cost–utility analysis • medicine

The spiraling cost of healthcare has increased the need illnesses such as diabetes and heart disease. In particular for use in preventative interventions [1,2]. Prior to the majority of the biomarker discovery efforts employed markers [3]. Since then, scientists have complemented genotyping methods to identify genetic variations predi promise of these nucleic acid technologies, the impact biomarkers predictive of risk for illnesses such as heart dis cost-to-information content ratio of the genetics-based proteomic-based approaches for assessing risk of onset whose management constitutes the bulk of day-to-day

Recent advances in epigenetics have opened yet ano in assessing the risk or presence of common syndromes. a test that uses a combination of genetic, epigenetic has alerted both clinicians and healthcare payers to the which uses stool as its starting biomaterial, was used with the cost being covered by major payers in the USA this epigenetically based test will not be the last; Tatyana diagnostic tests and found 25 tests for the detection of

Understanding the importance of engaging both clin epigenetically oriented tests are to attain widespread clinicians are responsible for ordering the tests and must the test to the management of their patients. Engaging the performance of the test will either reduce overall healthcare market share (in the case of commercial insurance compa

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ABSTRACT

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HEALTH TECH

SESSION TITLE: HEALTH TECH POSTERS III

Abstract 13530: Epi+Gen CHD: A More Sensitive and Cost-Effective Tool to Assess Risk and Monitor Treatment Response for Coronary Heart Disease

Meesha Dogan, Willem Philibert, Younsoo Jung, Tim Dogan, David Frisvold, Allan Andersen, Eric Hoffman and Robert Philibert

Originally published 8 Nov 2021 | https://doi.org/10.1161/circ.144.suppl_1.13530 | Circulation. 2021;144:A13530

Abstract

Coronary heart disease (CHD) is preventable, but current lipid-based risk assessment tools such as The Framingham Risk Score (FRS) and ASCVD Pooled Cohort Equation (PCE) have limitations. Using DNA-based genetic and epigenetic biomarkers, we have developed a more sensitive and cost-effective incident CHD risk assessment tool, Epi+Gen CHD, that can provide actionable insights and monitor treatment response. This test can be administered remotely via telemedicine using at-home sampling, or in a clinical setting. Epi+Gen CHD was developed and validated using

Supply Chain & Laboratory Strategy

SAMPLE COLLECTION KIT CONTENTS & ASSEMBLY

- Common kit contents that can be sourced from multiple distributors
- Identified multiple distributors to diversify supply chain
- Most kit contents are shelf-stable for years and can be sourced well in advance
- Maintain inventory of fully assembled kits to meet six months of expected demand
- Assembly does not require special protocol
- Assembly & fulfillment of sample collection kits integrated internally

LABORATORY STRATEGY

- Favorable agreement in place with an experienced laboratory
- Refine plan to meet sample processing demand for at least 12 months
- Identified lead times of key suppliers to allow seamless capacity expansion as demand accelerates
- Setting up an internal laboratory to scale operations and reduce costs

Gross Margin Expansion Opportunity

1. Currently setting up internal lab
2. Process larger sample batches
3. Increase processing automation
4. Bulk shipping of sample collection kits and/or samples

Product and Company Recognitions

CardioDiagnostics

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