

COMPANY UPDATE

MARCH 2024



CardioDiagnostics

Revolutionizing Cardiovascular Medicine
With Epigenetics and AI



Forward Looking Statements

Certain statements and information included in this presentation constitute "forward-looking statements" within the meaning of the Private Securities Litigation Act of 1995. When used in this presentation, the words or phrases "will", "will likely result," "expected to," "will continue," "anticipated," "estimate," "projected," "intend," "goal," or similar expressions are intended to identify "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements are subject to certain risks, known and unknown, and uncertainties, many of which are beyond the control of the Company. Such uncertainties and risks include, but are not limited to, our ability to successfully execute our growth strategy, changes in laws or regulations, economic conditions, dependence on management, dilution to stockholders, lack of capital, the effects of rapid growth upon the Company and the ability of management to effectively respond to the growth and demand for products and services of the Company, newly developing technologies, the Company's ability to compete, regulatory matters, protection of technology, the effects of competition and the ability of the Company to obtain future financing. 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 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.

The Company is not making any projections, nor providing any guidance, with regard to its future consolidated results of operations or financial condition. Any prior projections, however communicated, that may have been made in the past bear no relationship to the Company's current consolidated results and financial condition, nor the underlying facts and circumstances related thereto, and should not be relied upon for any purpose.

Key Investment Highlights

- NASDAQ listed: CDIO - market cap \$31 million as of 3/21/2024
- Cardio Diagnostics is an artificial intelligence-powered precision cardiovascular medicine company that makes cardiovascular disease prevention and detection more accessible, personalized and precise
- 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 risk assessment (**\$51 billion US TAM⁽¹⁾**)
 - **PrecisionCHD™**: only epigenetics-based test in the world for coronary heart disease detection (**\$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 SaaS 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:
 - Are more sensitive compared to current lipid-based clinical tests and stress ECG
 - Are 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 & diabetes in development that together address a \$340B US Total Addressable Market (TAM)⁽¹⁾
- A highly experienced commercial and clinical team

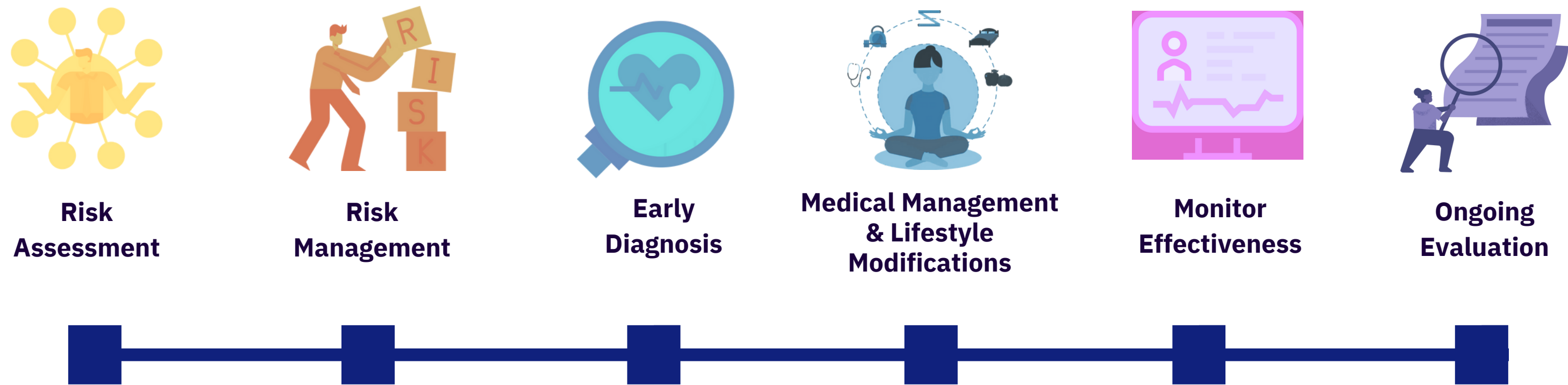
⁽¹⁾ Source: Cardio Diagnostics estimate for US markets based on 2020 US Census data

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 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 and 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⁾

Cardiovascular Disease is a Burden for All Major Stakeholders



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⁾

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

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

FRAMINGHAM RISK SCORE (FRS)

- Age
- Gender
- 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
- Gender
- 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

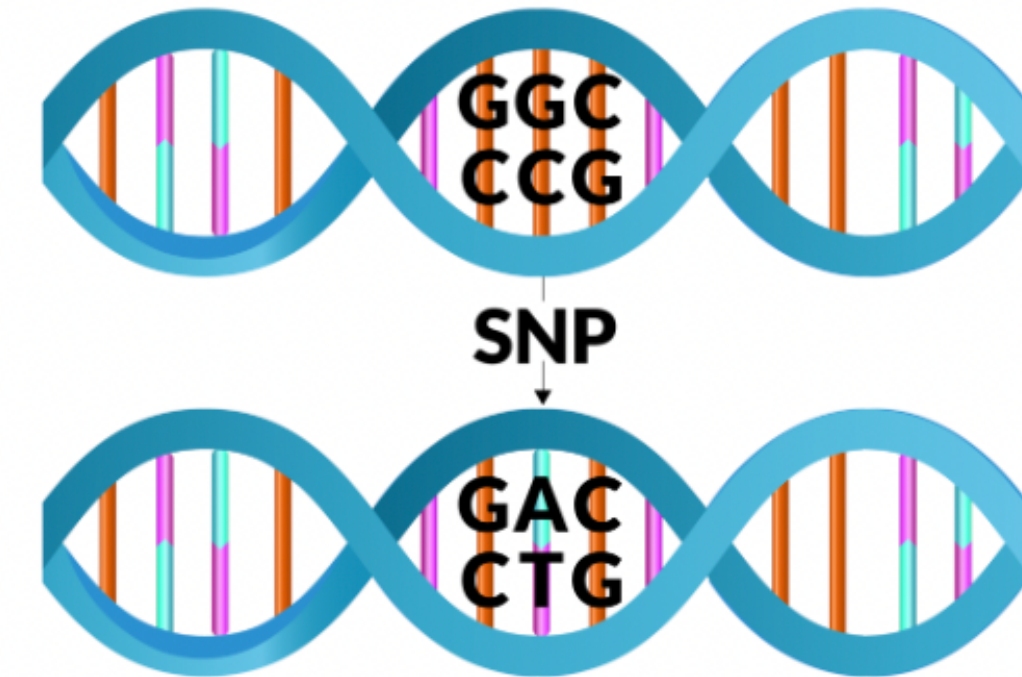
Cardiac Magnetic Resonance Imaging

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)

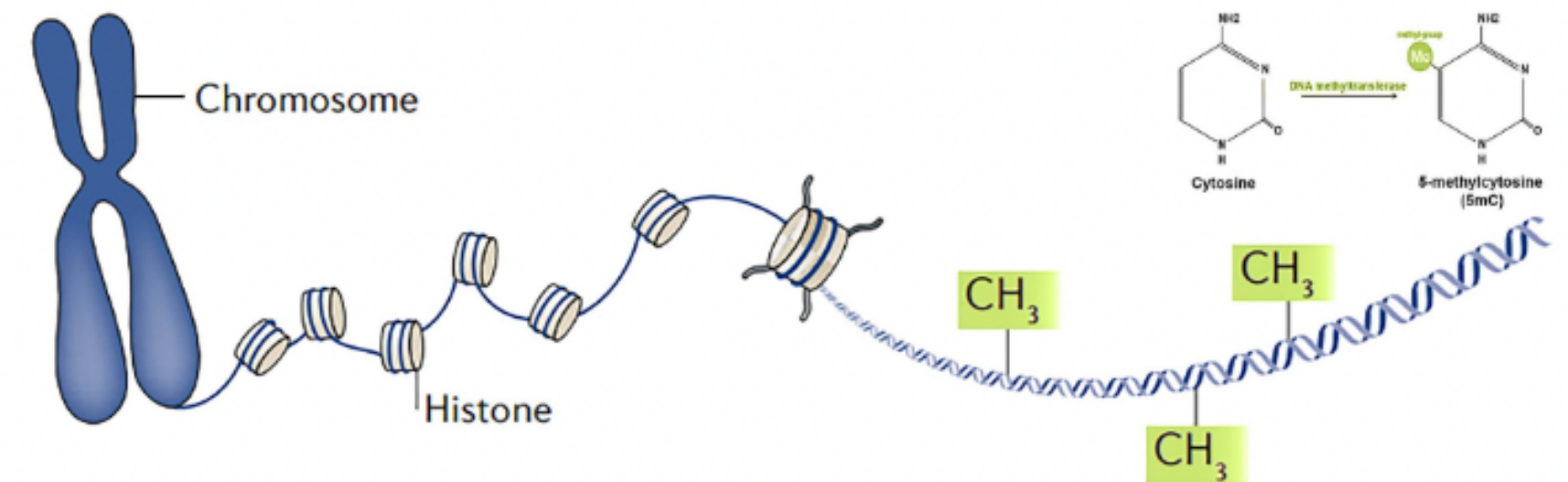
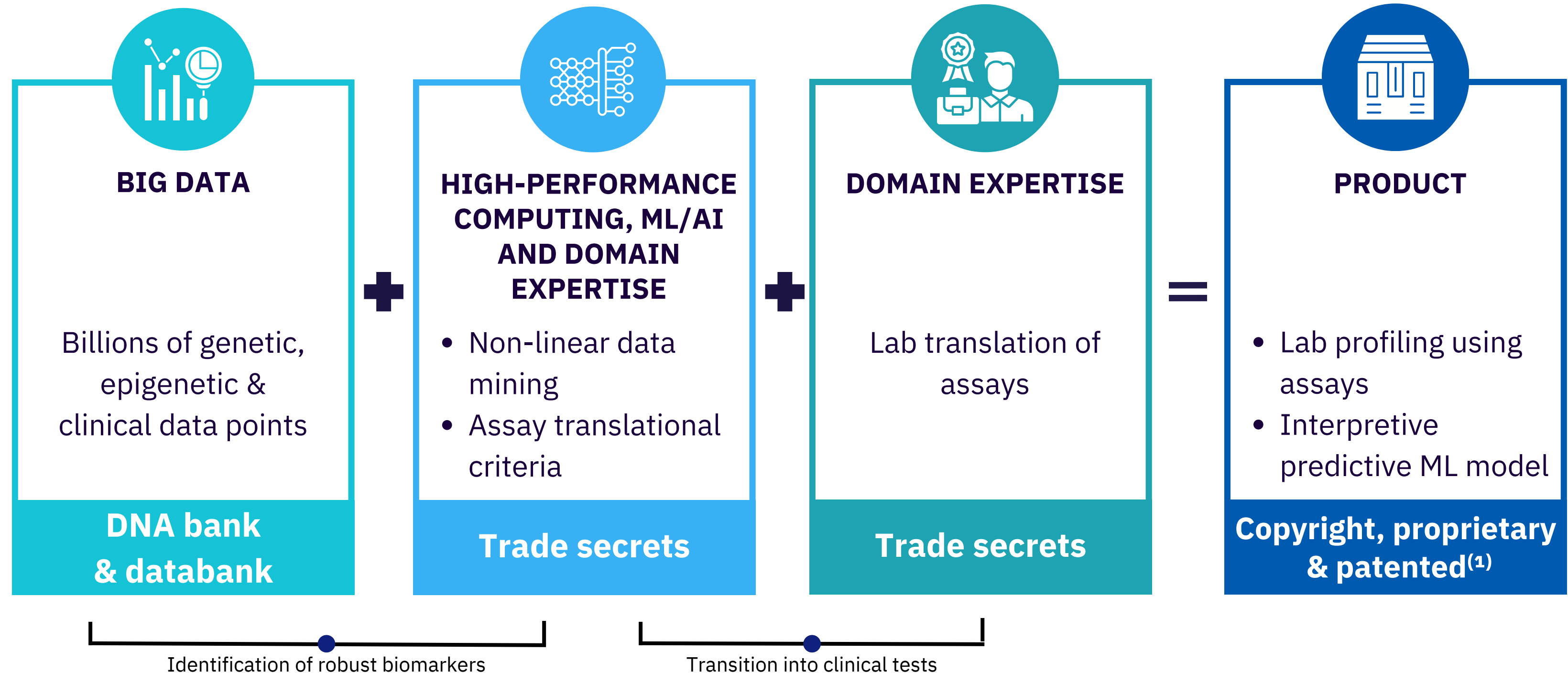


Fig 1. DNA methylation (5mC) ⁽²⁾

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

Cardio Diagnostics' Suite of Solutions

Clinical solutions:



Epi+Gen CHD™

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

It is a more sensitive and non-invasive 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

It is a sensitive and non-invasive 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 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 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


Our Suite of Solutions Offer Unparalleled Innovation



Technology

Accessibility
and
Scalability

Actionable
Insights

Current Clinical Solutions		Evidence
Utilize traditional 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⁾
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⁾
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

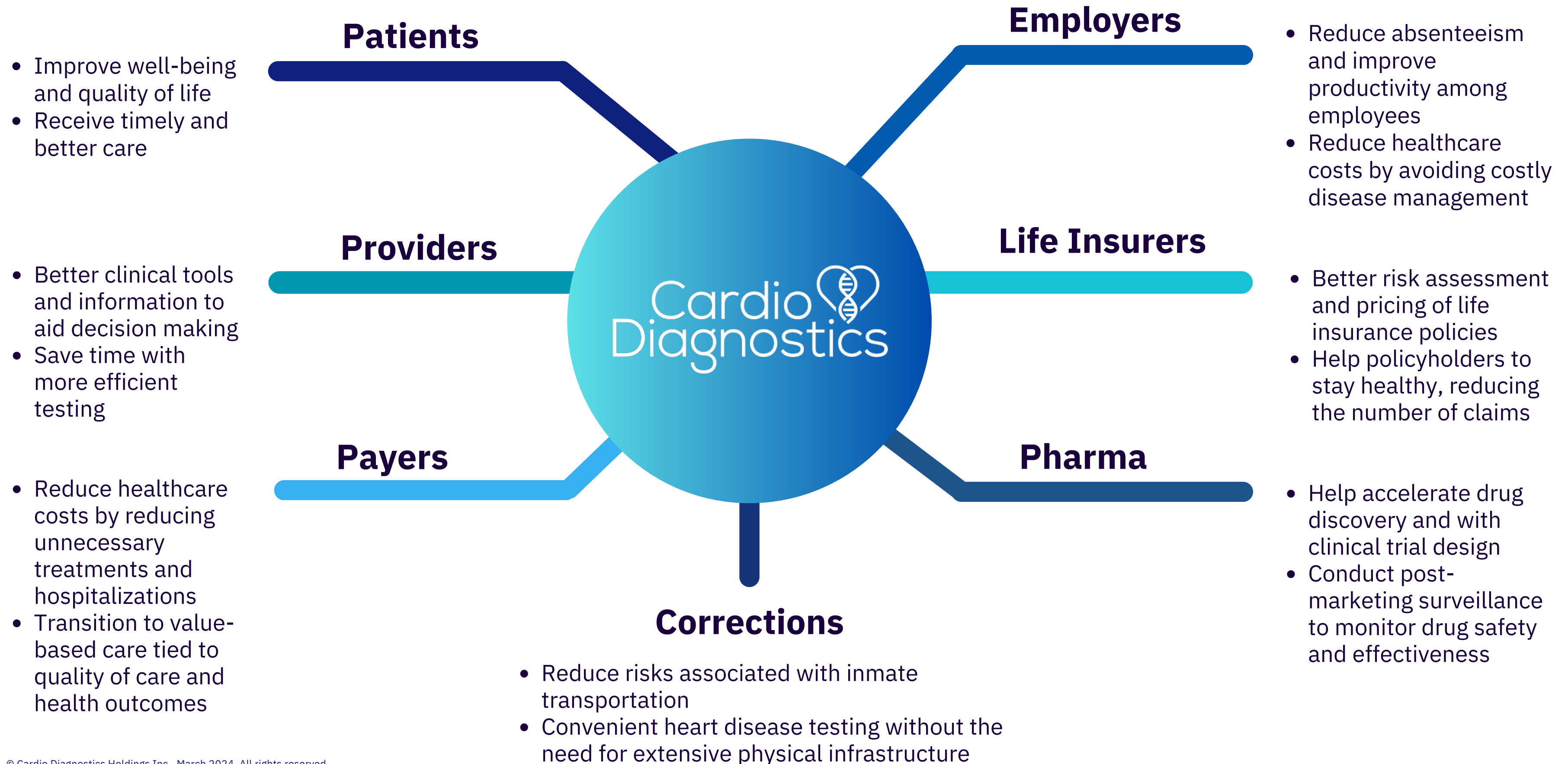
⁽¹⁾ Cardio Diagnostics internal data
⁽²⁾ Scheuermann, T et al., Addiction. 2018

⁽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



Clear, Key Differentiations for Coronary Heart Disease

		Hospitals & Clinics		 <small>Power of AI to Prevent the Preventable</small>			
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⁾	✓					✓	

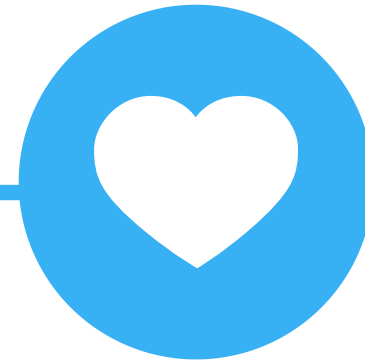
⁽¹⁾ Comparison to PrecisionCHD for CHD detection
⁽²⁾ Comparison to detection tests such as exercise ECG

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

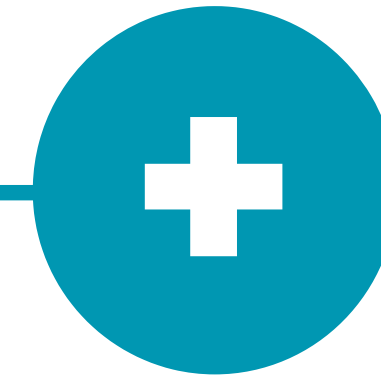


Epi+Gen CHD™ is recommended for:

- 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

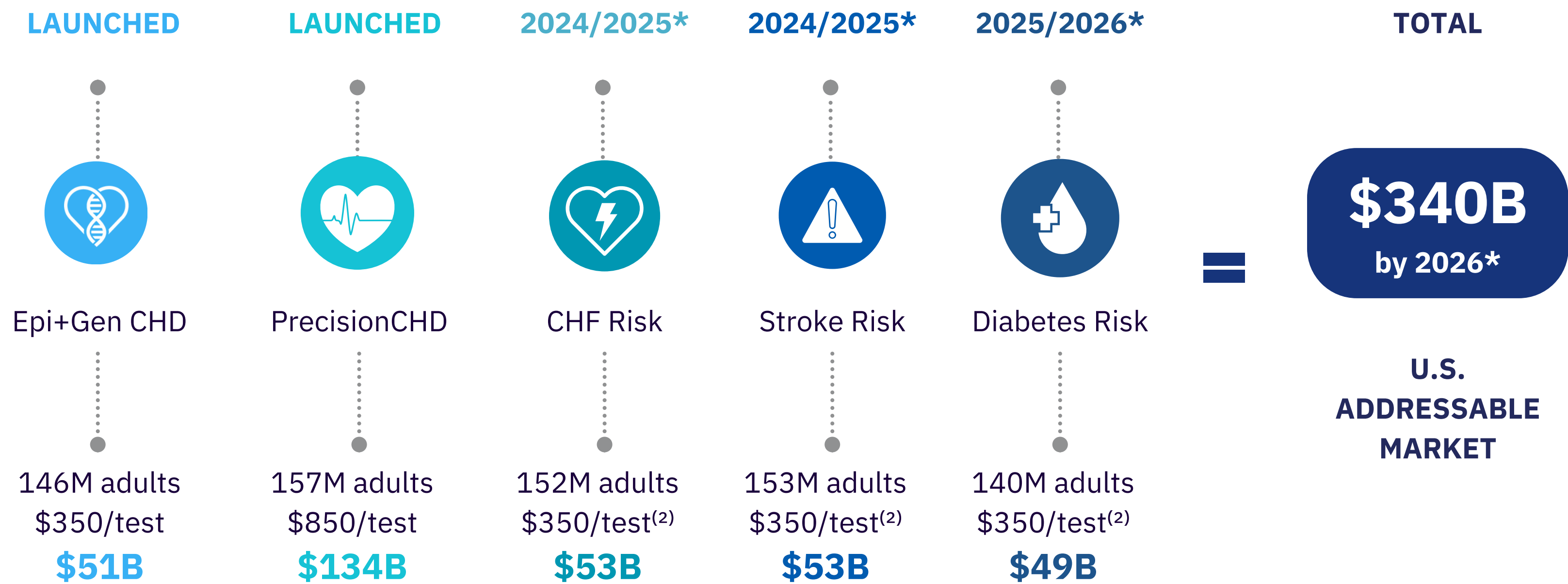
⁽¹⁾ Assumes 146M Americans x \$350/test for Epi+Gen CHD and assumes 157M Americans x \$850/test for PrecisionCHD

⁽²⁾ US Census Bureau

The Integrated Genetic-Epigenetic Engine™ Can be Leveraged Repeatedly

Assumes one patient could be tested with multiple tests⁽¹⁾

*Represents expected launch date

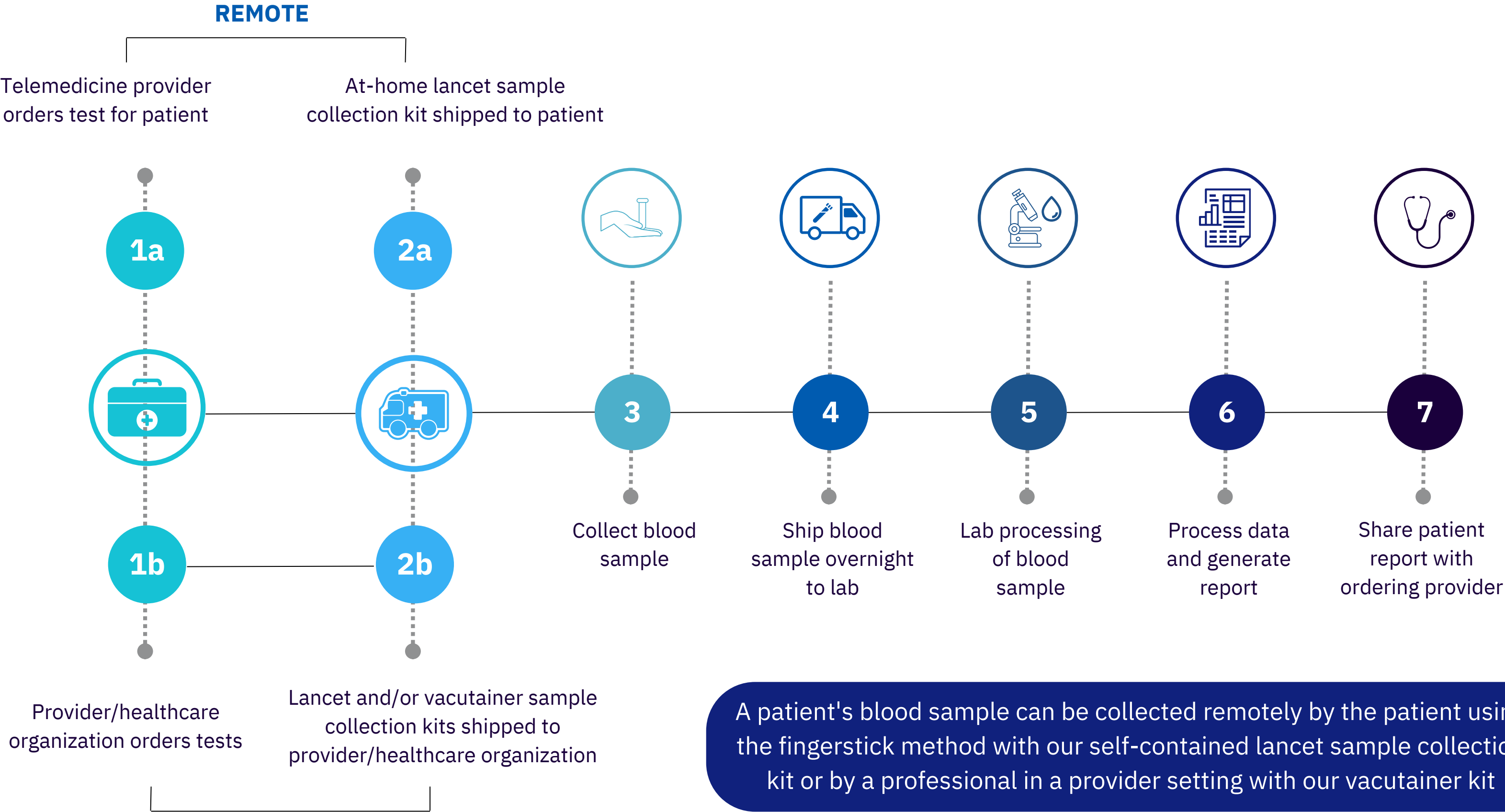


Source: Cardio Diagnostics estimate for US market based on 2020 US Census datas

⁽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



Pursuing A New Standard of Care for Cardiovascular Medicine

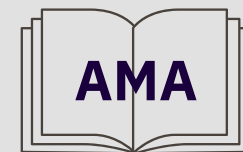


EVIDENCE BUILDING



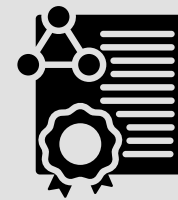
Continued expansion of analytical validity, clinical validity, clinical utility, economic utility and case studies evidence portfolio

REIMBURSEMENT CODES



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

FDA



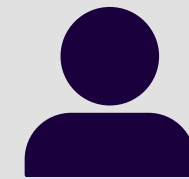
Completed first pre-submission with the FDA. Evaluating additional pre-submissions and regulatory strategy

COVERAGE & PAYMENT



Continued efforts to secure coverage and payment from private and government payors

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) - \$78M market cap⁽¹⁾
Co-founder of Astrana Health (ASTH) - \$1.92B market cap⁽¹⁾
Director and former CEO of Clinigence Holdings (CLNH)
MD from Georgetown University School of Medicine



Meesha Dogan, PhD

CEO, Co-Founder, & Director

13+ 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

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

Team Continued



Tim Dogan, PhD

CTO

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



Khullani Abdullahi, JD

VP of Revenue & Strategy

13+ years in commercializing complex technologies and solutions
Growth architect at GreenLight Medical/Symplr, Lumere/GHX
JD from the University of Minnesota

Key Milestones Were Achieved in 2023 and Q1 2024



- **Revenue and Partnerships**

- Secured the Innovative Technology contract with Vizient, Inc., the nation's largest provider-driven healthcare performance improvement company. As a result, Cardio Diagnostics is on contract with about 60% of hospitals and 97% of academic medical centers in the US.
- Expanded into the employer vertical and hosted an on-site heart disease fair with FRSTeam of East Kansas and West Missouri.
- Secured a contract with Family Medicine Specialists, a risk bearing provider, to test at least 1,200 of their patients on BlueCross BlueShield and other health plans.
- Announced the expansion with Family Medicine Specialists to their Walmart location in Q2 2024.
- 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.

- **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 journal.
- 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.

- **Intellectual Property and Operations**

- Patents granted in India, China, Australia and the United States (second patent).
- Announced the launch 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.
- Added Dr. Damon Broyles, VP of Clinical Innovation at Mercy Technologies, and Dr. Vimal Ramjee, a cardiologist and National Co-Chair of Cardiology and Innovation at CommonSpirit Health Enterprise and a member of the American Heart Association Board of Directors as strategic advisors.

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 under the heading “Risk Factors” in Part I, Item 1A 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@cardiodiagnosticsinc.com

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

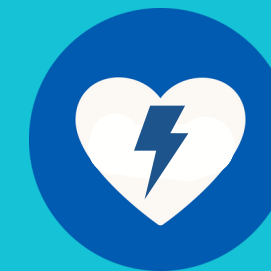
A common type of CVD



- 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)

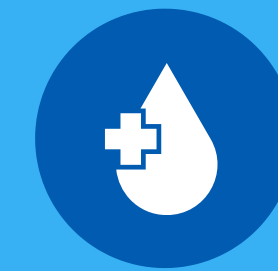
A common type of CVD



- 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⁾

Epi+Gen CHD™: The *Only* Epigenetics-Based Test For Coronary Heart Disease 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 coronary heart disease** (CHD), the most common type of heart disease and the major cause of heart attacks.
- 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



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)}
 - 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 clinical and economic studies to expand evidence dossier are in progress



⁽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

Actionable Clinical Intelligence™: Assisting Clinicians in Personalizing Clinical Decision Making

A rectangular graphic with a blue-to-purple gradient background. It features a faint, repeating pattern of binary code (0s and 1s) in the background. The text "Actionable Clinical Intelligence™" is centered in a large, white, sans-serif font.

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
 - Are **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

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 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™

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

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 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™

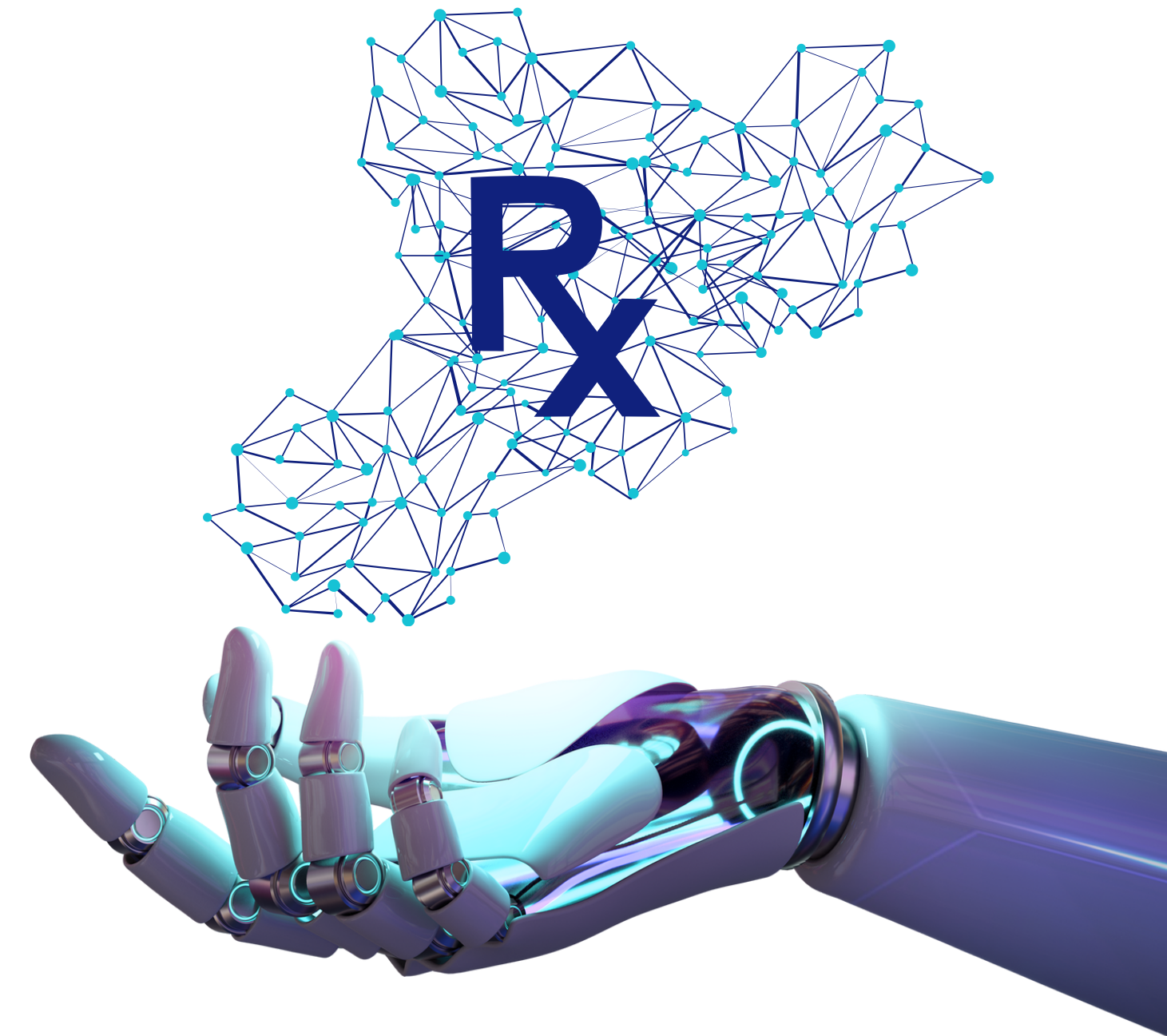
- Can be completed remotely or in provider settings
- Simple blood test where lancet-based collection kit can be done at-home or vacutainer-based collection can be done in provider settings
- No exposure to ionizing radiation
- Patient care plan highly personalizable with ACI™
- The average sensitivity 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 Harnesses the Power of Epigenetics, Genetics and Artificial Intelligence

- 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 Risk Intelligence Platform to Help Healthcare Stakeholders Make Data-Driven Decisions



HeartRisk™

Cardiovascular Risk Intelligence Platform

- HeartRisk™ is 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
 - Additional health economic studies are ongoing






Journal of the American Heart Association

Volume 12, Issue 22, 21 November 2023
https://doi.org/10.1161/JAHA.123.050934



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.

Research Article

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

Younsoo Jung¹, David Frisvold¹, Timur Dogan¹, Meeshanthini Dogan¹ & Rob Philibert^{1,2,3,4}
¹Cardio Diagnostics Inc., Coralville, IA 52241, USA
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³Department of Psychiatry, University of Iowa, Iowa City, IA 52242, USA
⁴Author for correspondence: robert.philbert@uiowa.edu

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, we conducted a cost–utility analysis. **Methods:** We compared costs using the rCHD™ 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 negative cost-effectiveness ratios ranging from <\$42,000 to <\$8000 per quality-adjusted life year (qaly) and without a secondary test. **Conclusion:** The new integrated genetic/epigenetic test w

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

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

The spiraling cost of healthcare has increased the need for innovative approaches to disease prevention and treatment. In particular for use in preventative interventions (1,2). Prior to the current era, the majority of the biomarker discovery efforts employed n-omics (3). Since then, scientists have complemented n-omics with genotyping methods to identify genetic variations that predict disease risk. Recent advances in epigenetics have opened new avenues for understanding the risk or presence of common syndromes. In a test that uses a combination of genetic, epigenetic and proteomic-based approaches for assessing risk of onset of disease, we have developed a test that uses stool as its starting biomaterial, was used in a study that was covered by major payers in the USA, and this epigenetically based test will not be the last; Taryn diagnostic tests and found 25 tests for the detection of celiac disease. Understanding the importance of engaging both clinical and genetic oriented tests are to attain widespread use, clinicians are responsible for ordering the tests and must ensure the test is the management of their patients. Engaging patients in the performance of the test will either reduce overall health care costs (in the case of commercial insurance companies) or reduce the burden of disease (in the case of government payers).

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ISSN 1750-1911

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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/JAHA.124.13530> | 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

ISSN 1750-1911

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 18 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



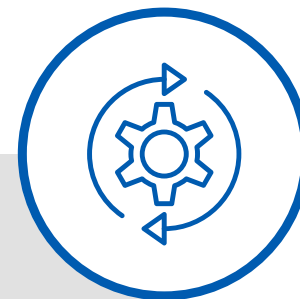
2

Process larger sample
batches



3

Increase processing
automation



4

Bulk shipping of
sample collection kits
and/or samples



Product and Company Recognitions

