



ASX: EIQ RELEASE

30 October 2023

**ECHO IQ PRESENTATION:
ORD MINNETT HEALTHCARE FORUM**

Sydney: AI and Medical Technology company Echo IQ Limited (“the Company”) (ASX:EIQ) is pleased to advise that it will be participating in the Ord Minnett Healthcare Forum on 31 October, 2023. The presentation released today will be shared with participants of the forum.

- ENDS -

Authorised for release by the Board of Directors of Echo IQ Limited.

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Andrew Grover, Executive Chair
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ABOUT ECHO IQ

Echo IQ uses AI-driven technology and proprietary software to improve decision making in Cardiology. The company is based in Sydney, Australia.



AI with heart
ASX:EIQ

Echo IQ

AI-backed cardiology support

ORD MINNETT

Ord Minnett Healthcare Forum
31 October 2023

A stylized, translucent blue heart is centered in the background. Overlaid on the heart is a network of thin, light blue lines connecting various points, resembling a molecular or data network. A faint, light blue ECG line is visible at the bottom of the frame.

Echo IQ uses the power of
artificial intelligence and data science
to **improve detection**
of structural **heart disease**.

Corporate Snapshot

494,404,376

Shares on issue



A\$0.19

Share Price (27.10.2023)



A\$93.9M

Market Capitalisation



A\$3,081,004

Cash (30.09.2023)



NIL

Long Term Debt



Jul '22

Oct'23

FIRST CONTRACT
ANNOUNCED MAY 2023

R+D rebate c. \$1M
expected by or around
year end calendar 2023

SHAREHOLDER BREAKDOWN

47%

Board of Directors
& Top 20

53%

Other
Shareholders

BOARD OF DIRECTORS



Andrew Grover
Executive Chair



Steven Formica
Non-Exec Director



Steven Picton
Non-Exec Director



Simon Tolhurst
Non-Exec Director



Jessamyn Lyons
Company Secretary

The Problem



30%¹

of all deaths worldwide
attributed to
cardiovascular disease



1 in 2²

people with heart valve
disease don't know
they've got it



2 yrs³

mortality rate for certain
forms of untreated
structural heart disease

- structural heart disease is common
- it is becoming more prevalent
- left untreated, it has high rates of mortality
- lack of treatment has a large impact on the healthcare system

EDITORIAL COMMENT

The Alarm Blares for Undertreatment of Aortic Stenosis

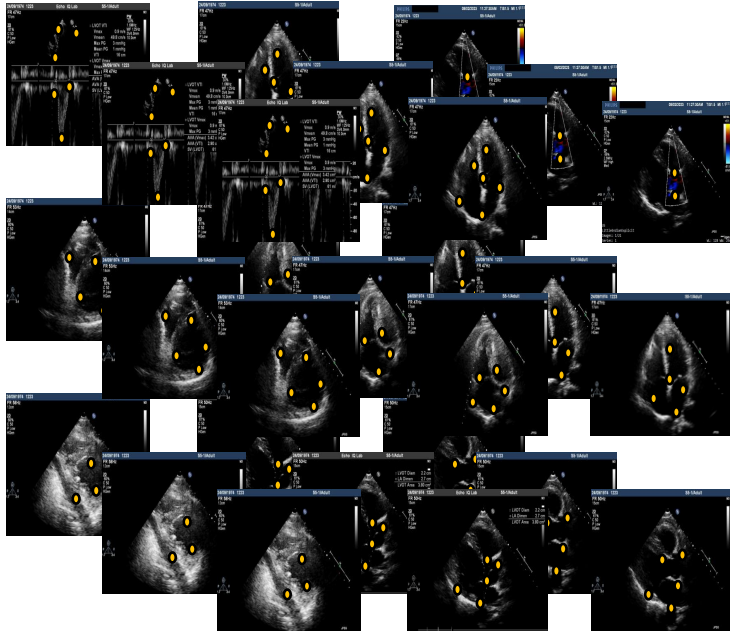


How Will We Respond?*

Brian R. Lindman, MD, MSc, Angela Lowenstern, MD, MHS

In one of America's leading health care systems, there was evidence of an overwhelming reduction in the risk of death with AVR in all AS subgroups examined, but <50% of patients with AS with an indication or potential indication for AVR were treated with an AVR.¹ Let that set in; hear and internalize the alarm. The status quo is unacceptable. What will *you* do? What will *we* do?

Traditional Diagnosis for Aortic Stenosis (AS)



- Highly manual + labour intensive
- User dependent, prone to errors
- Unconscious bias
- ~ 50% patients routinely missed

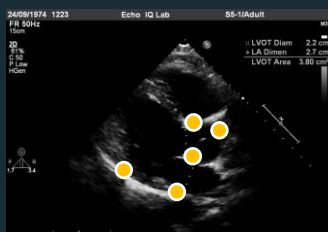
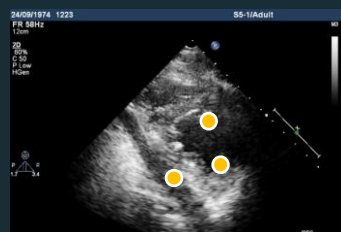
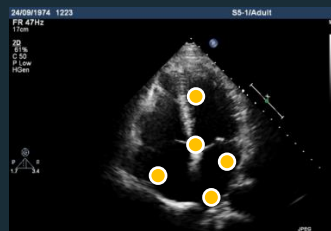
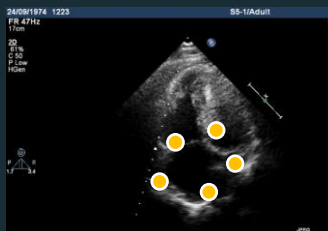
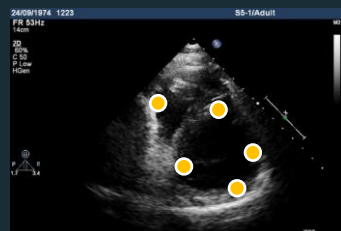
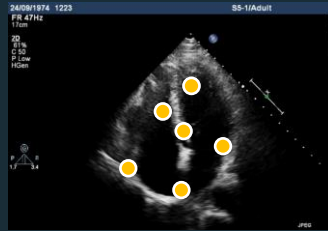
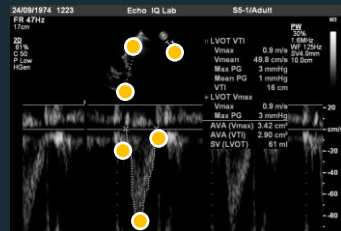
EchoSolv™



- Automated assessment in under 3 seconds
- Zero variability with removal of bias
- Recognises multi-dimensional heart profile
- 100% of patients in guidelines identified *

(* Refer ASX Announcement 1 December 2022)

EchoSolv™ AI processing



EchoSolv AI processing



Article
TextArticle
infoCitation
ToolsValvular heart disease
Original researchEnhanced detection of severe aortic stenosis via artificial intelligence:
a clinical cohort study  Geoff Strange^{1, 2},  Simon Stewart^{3, 4},  Andrew Watts⁵ and  David Playford⁶Correspondence to Dr Geoff Strange; gstrange@neda.net.au

PDF

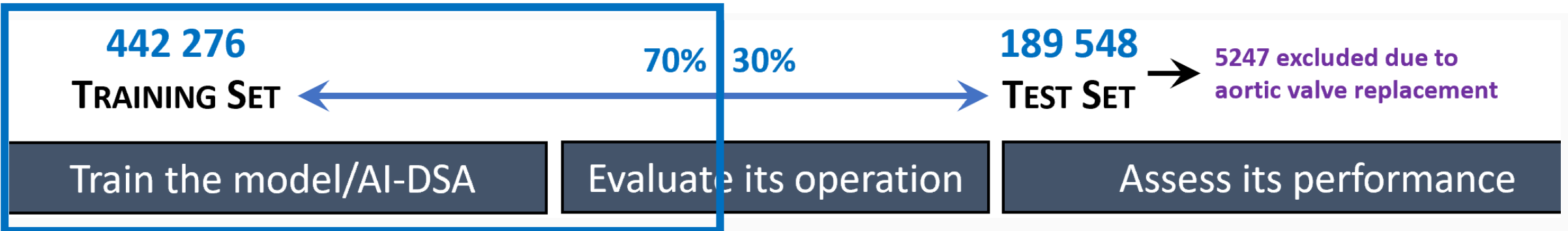
PDF +
Supplementary
Material

Inclusion

1,077,145 investigations from 631,824 individuals

299,517 women (61.1 ± 18.3 years) & 332,307 men (60.1 ± 16.9 years)

23 centres Australia-wide with 7.2 ± 4.4 years maximal follow-up
(29/05/1985 to 26/6/2019)

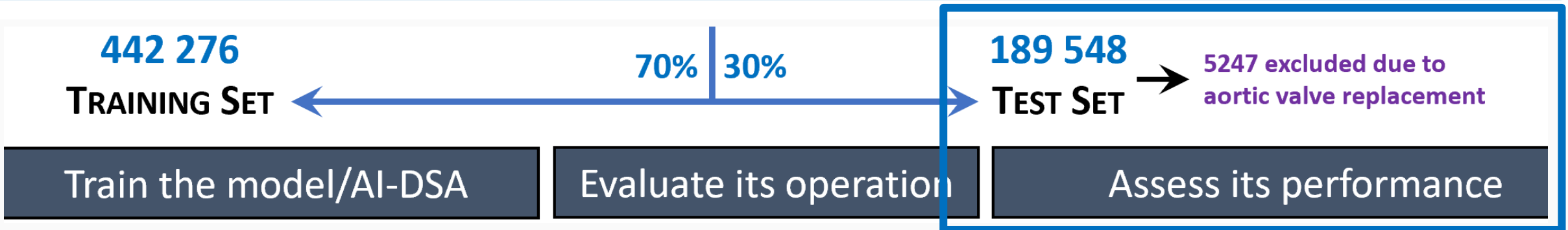


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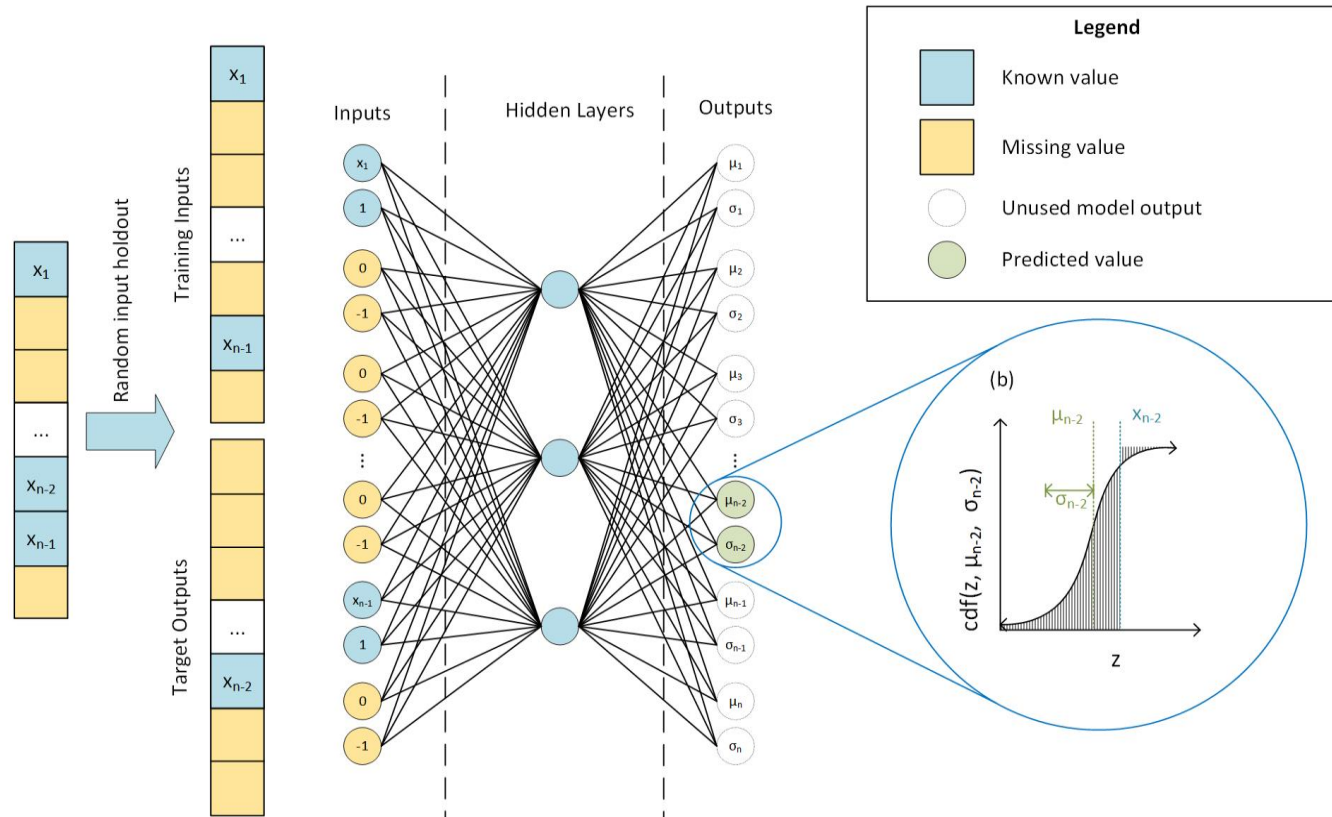
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Background



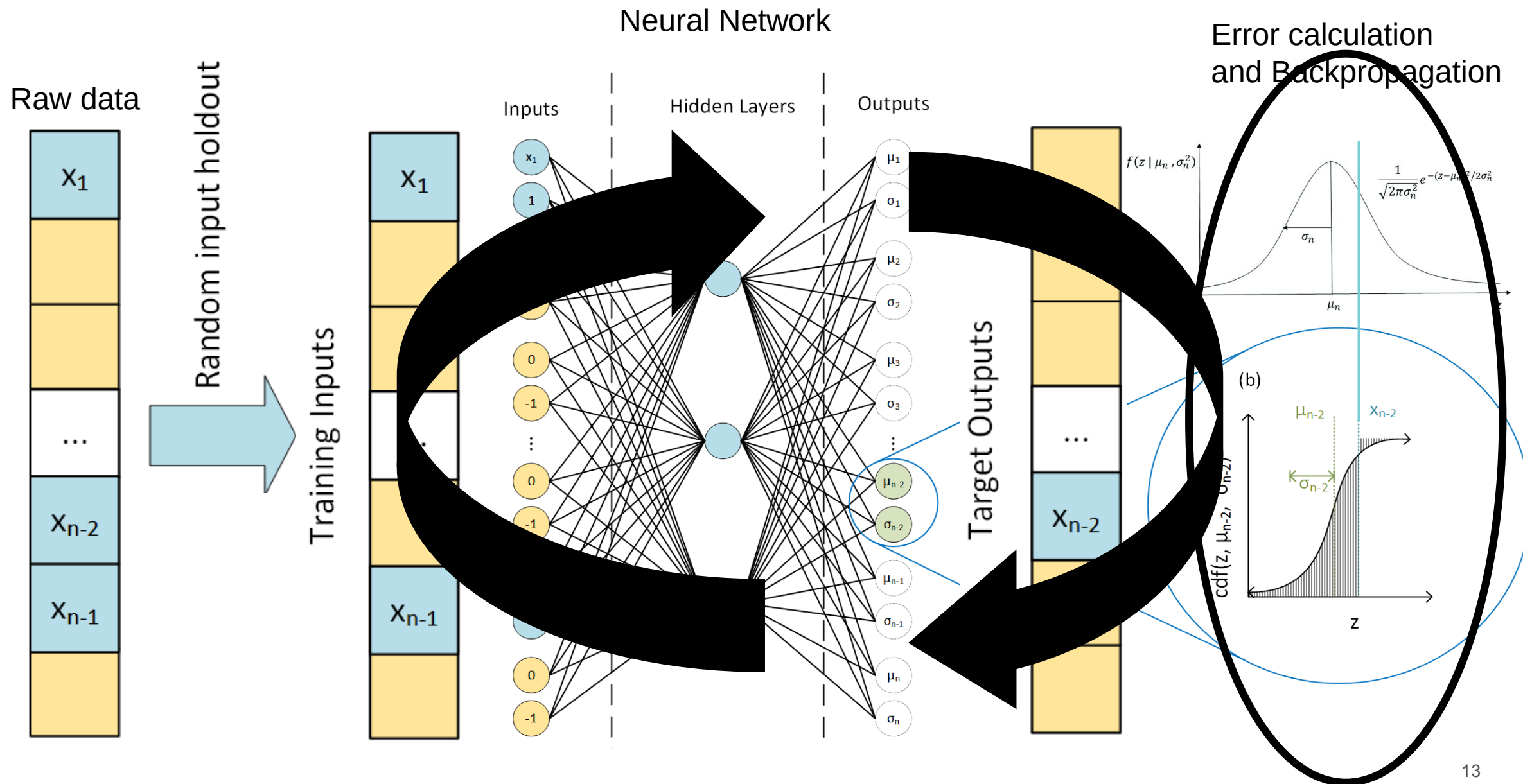
Modified Mixture Density Network

Use of AI/ML to automate severe AS phenotyping....

using only echocardiographic measurement data!!

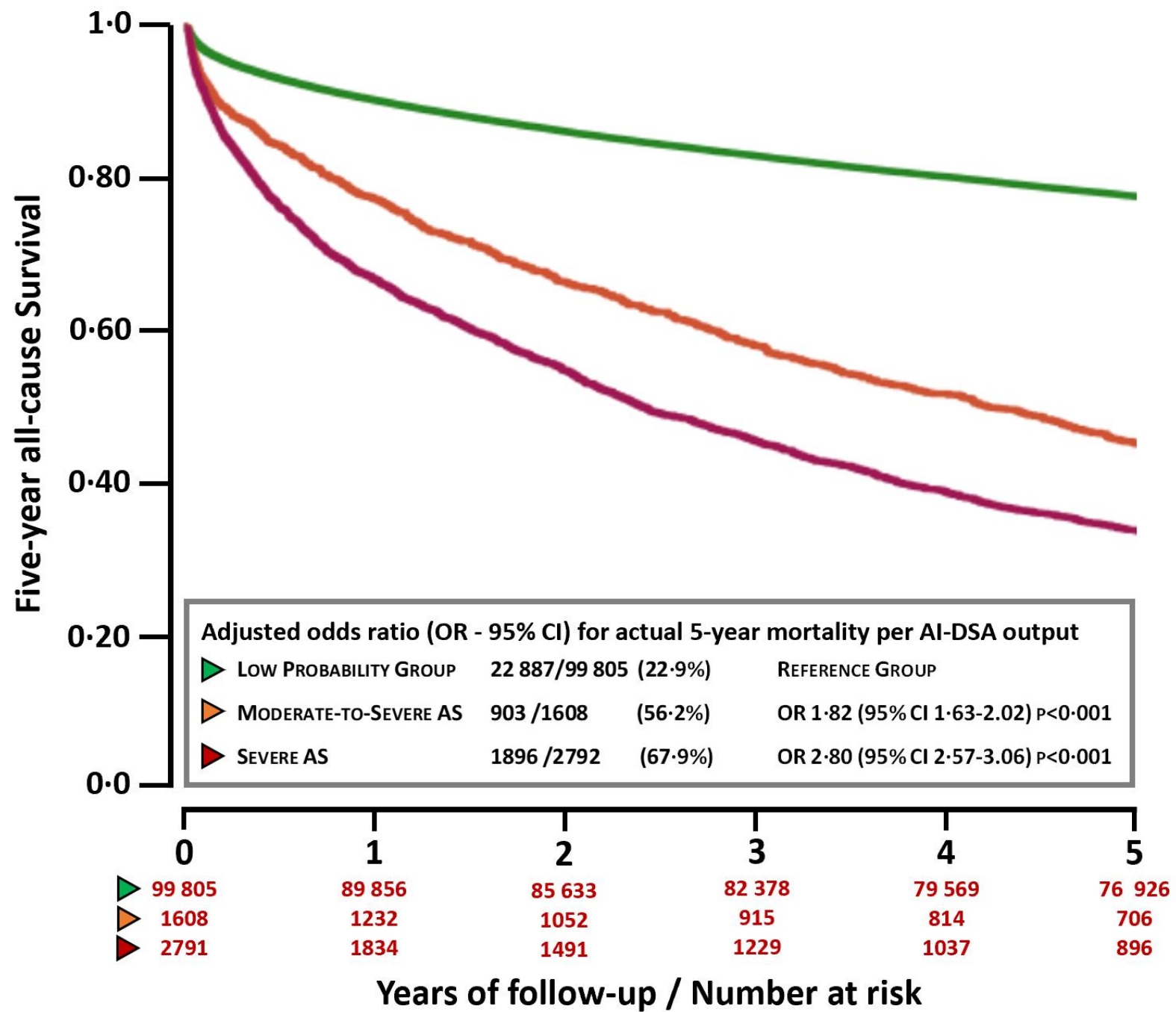
- Deep learning neural network using multidimensional clusters
- Missing data imputed using multiple imputation model - tested across the entire data set with minimal imputation errors

Training: step-by-step

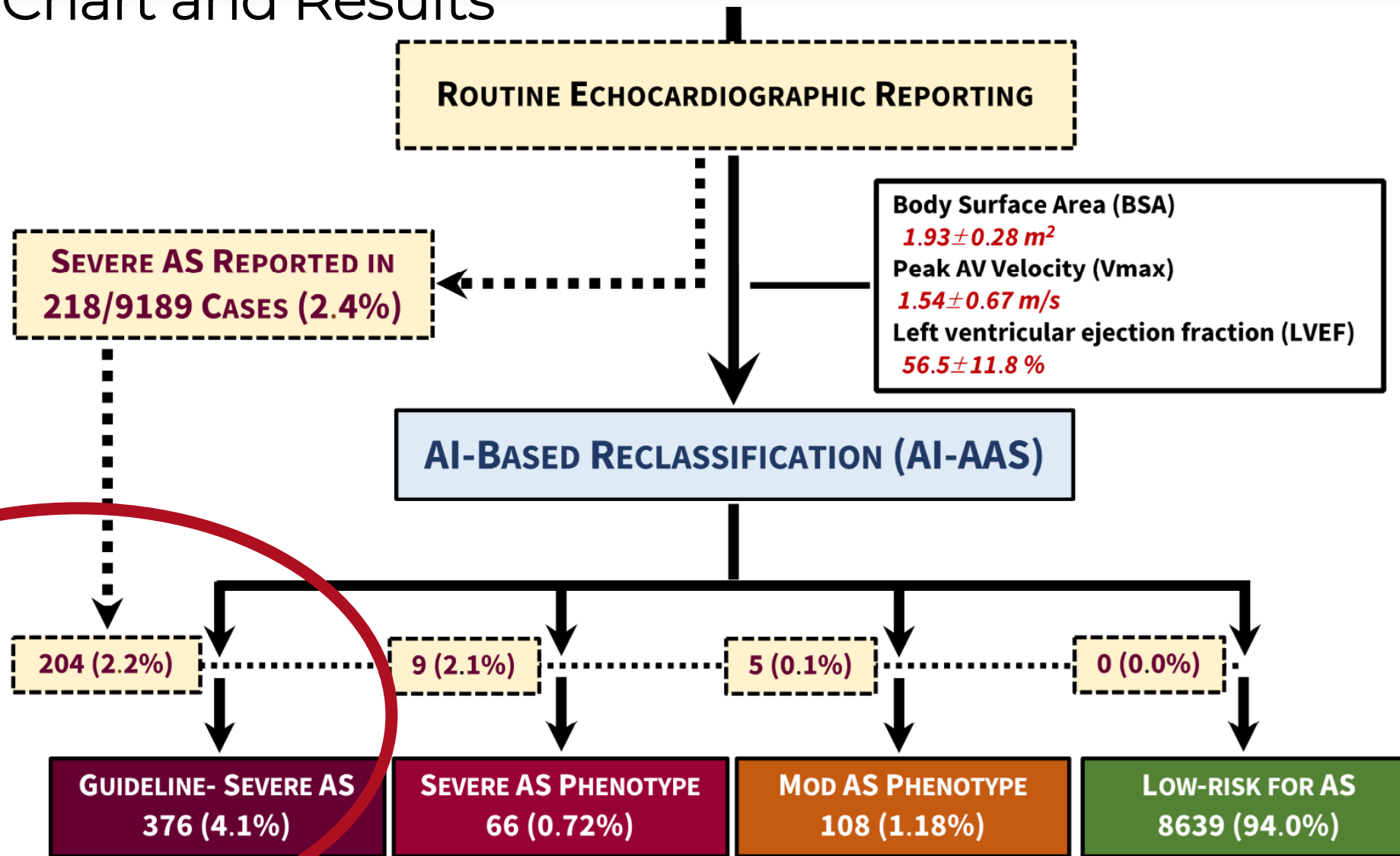


5-Year Survival Curves

Actual five-year all-cause survival according to three main outputs from the AI-DSA



Flow Chart and Results



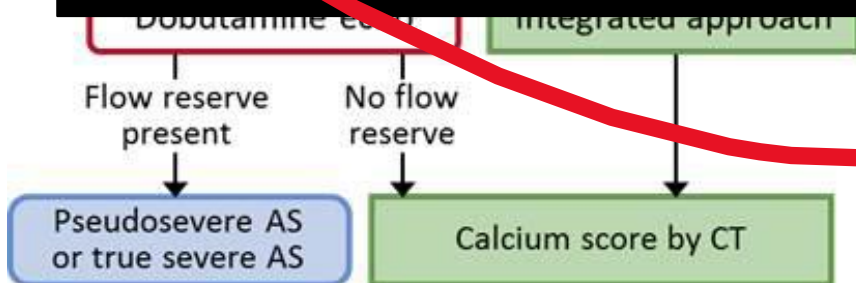
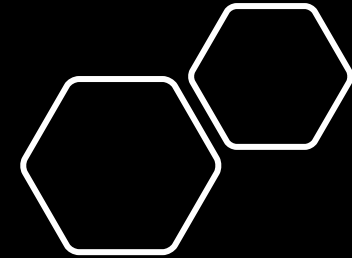
Valve morphology by echocardiography suspicious of AS

Valve

Left Ventricle

Left Atrium

Pulmonary Circulation





SCIENTIFICALLY-PROVEN AI

For enhancing diagnosis of structural heart disease

EchoSolv™ removes the labour intensiveness, user-dependency and unconscious bias in diagnosis which can lead to greater accuracy compared to traditional methods.



Patient triage on-the-go

Assessments available
wherever you are, on
any device



Real-time alerts

Tailored alerts to
reduce missed
patients



Rapid results

In under 3
seconds
per patient



AI Phenotyper

Unique AS risk
assessment using AI and
proprietary research



View 360

Wide view of heart
health for better
decision-making



Guideline detection

Aligned to local
regulatory standards
and frameworks

EchoSolv™ Product Pipeline

Echo IQ has a clear near-term roadmap for whole-of-structural-heart solutions.

● Available now

● Available Nov 23 - Jan 24

Diastolic Dysfunction

Guidelines Tool (Nov'23)

Affects 20-30% of adult population⁷

Pulmonary Hypertension

Guidelines Tool (Nov'23)

Affects 10% of adults over 65, drug therapy treatment⁸

Mitral Stenosis

Guidelines Tool (Jan'24)

Rare but manageable with drug therapies

Left Ventricular Mass
(Dec '23)

Aortic Stenosis

Severe AS Guidelines ✓

Severe AS AI Phenotype ✓

Left Atrial Volume

Indicator for multiple conditions

Mitral Regurgitation

Chronic MR Guidelines ✓

Heart Failure

Guidelines Tool (Nov'23)

Causes > 10% of **all** deaths⁹

Proven clinical effectiveness

Beth Israel Deaconess
Medical Center



EchoSolv™ identified 100% of the patients with guideline-defined severe aortic stenosis, equal to ~5% of the study population.

EchoSolv™ identified an additional cohort, similar in size, at high risk of mortality.

3 in 4 of the EchoSolv™ identified cases with AS had NOT received treatment.

"EchoSolv™ worked extremely well to identify individuals with severe aortic stenosis, despite needing minimal data inputs. Using EchoSolv™ in clinical practice could make a huge difference in our ability to identify those individuals who need timely evaluation."

*Prof. Jordan Strom. Harvard Medical School
Principal Investigator*



EchoSolv™ identified 100% of the patients with guideline-defined severe aortic stenosis, equal to ~4% of the study population. This was a 72% increase on human-only identification.

Women were 66% less likely to have been accurately diagnosed than men. EchoSolv™ addresses this bias in diagnosis.

"The EchoSolv™ platform is the first in the world to show improvement in severe AS identification compared with current clinical practice."

*Prof. David Playford
Chief Medical Advisor, Echo IQ*

Commercialisation Strategy

CLINICAL VALIDATION & REGULATORY



✓ Clinical studies at St. Vincent's Hospitals (AU) and Beth Israel Deaconess Medical Center (US)

✓ FDA 510(K) pathway defined. Reader study underway for final application Q4 2023

✓ Multiple ESC late-breaking presentations and Open Heart publication of clinical findings

COMMERCIAL PILOTS



✓ Pilot with Advara HeartCare, Australia's leading provider of cardiology services

✓ Pilot with Gold Coast Private Hospital converted to commercial SaaS agreement

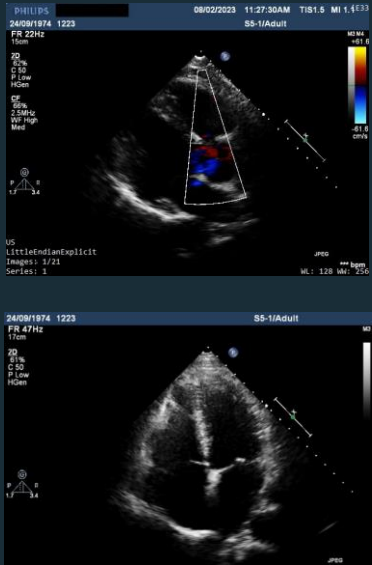
SAAS AGREEMENTS



✓ Agreements in place in Australian cardiology and hospital sectors

✓ Strong and growing pipeline of US customers in multiple sectors

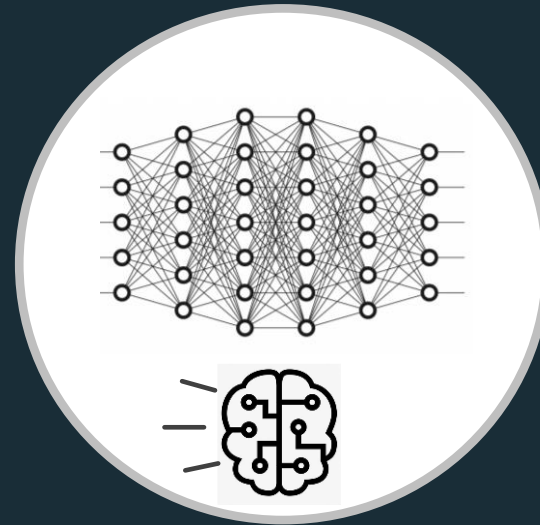
EchoSolv™ Unique AI to address the problem of under-diagnosis of structural heart disease.



AI Outputs from Images

Measurements
(Manual/ Automated)

Physician Interpreted
Measurements



EchoSolv™

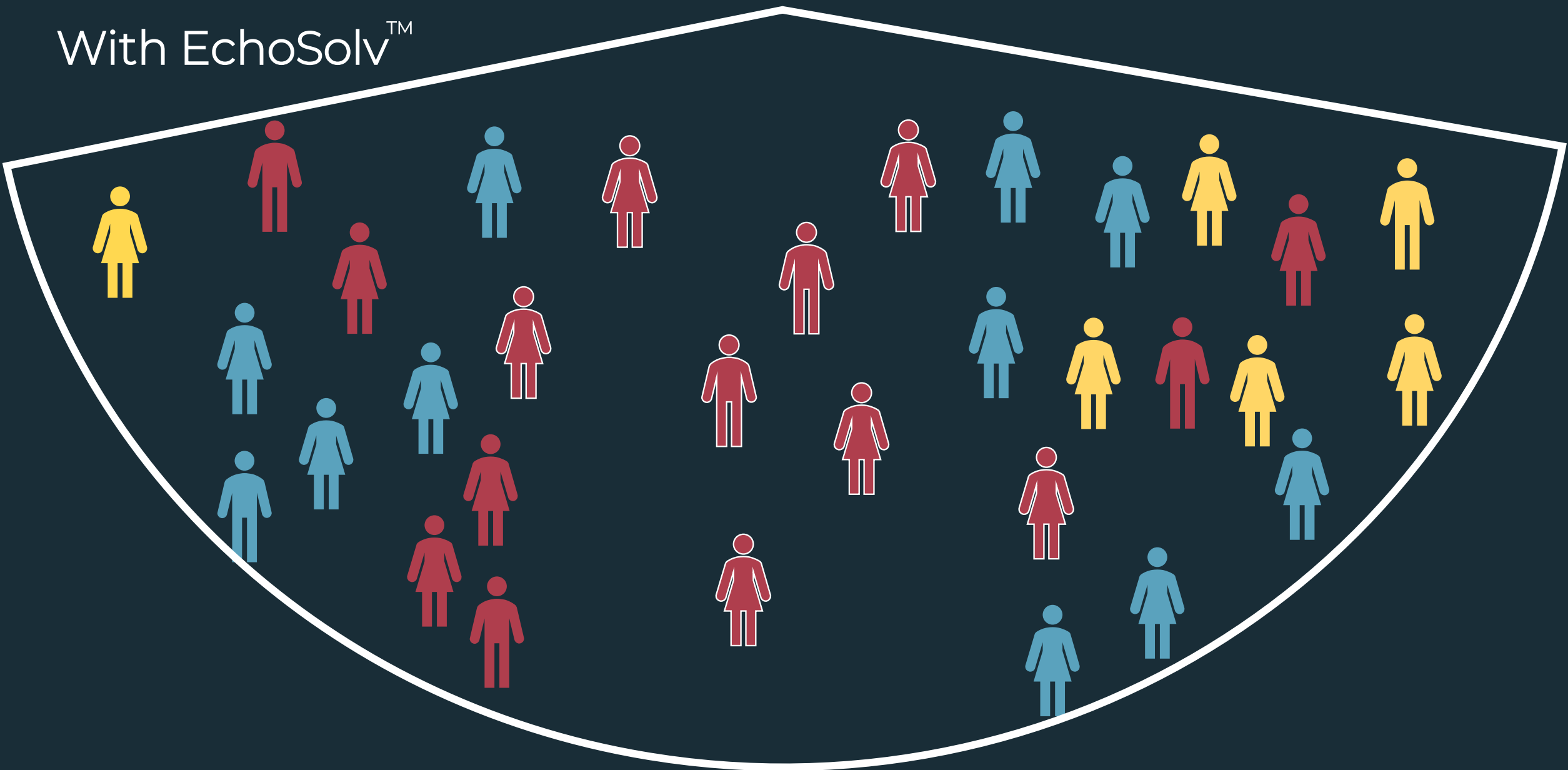
AI and Machine Learning
trained on over 1M echo's

Disease Detection

Training: step-by-step



With EchoSolv™



EchoSolv™: Easy to interpret results

EIQ

EchoSolv

Search for a patient

Stealth Mode Off

EIQPAT_5

Name: Mary Brown

Sex: Female

DOB: 1963-11-20

2022-11-01

Overall

Severe Aortic Stenosis

HIGH

Severe AS Phenotype

MET

Guideline Severe AS

Outcome

Artificial Intelligence is suggestive of a high probability of a severe aortic stenosis phenotype. The Echocardiographic measurements are consistent with current severe aortic stenosis guidelines.

Relevant Measurements

The measurements displayed here are selected from the source echocardiogram data. These measurements are not outputs of the AI product.

Aortic Valve Mean Gradient 38mmHg

Aortic Valve Peak Velocity 450cm/s

Aortic Valve Area 1.1cm²

Stroke Volume Index N/A

Left Atrial Volume Index N/A

Right Ventricular Systolic Pressure N/A

Left Ventricular Ejection Fraction Teichholz Method 8%

Study Details

Measurements

Aortic Valve Area

1.1 cm²

Aortic Valve Mean Gradient

38 mmHg

Aortic Valve Peak Velocity

450 cm/s

Body height

165 cm

Body Mass Index Calculated

31.55 kg/m²

Body Surface Area

1.98 m²

Body Weight

85.9 kg

Left Ventricular Ejection Fraction Teichholz Method

8 %

Unique assessment reference: c24674c4-d6e5-47e2-a3b2-d1fe673099e6

- Clear calls to action
- Key measurements for Severe Aortic Stenosis displayed alongside probability results
- Easy to navigate to patients' historical studies
- Export to PDF or CSV to share

HIGH RISK

MET

AS Phenotype
Guideline Severe AS

Analysis Outcome

The Echocardiographic measurements are consistent with current severe aortic stenosis guidelines*. Artificial intelligence is suggestive of a severe aortic stenosis phenotype**.

Key Measurements

	Raw Input Measurements	Standardised Measurements
Aorta at sinotubular junction diameter	3 cm	3 cm
Aorta at sinuses diameter	3 cm	3 cm
Aortic arch diameter	1 cm	1 cm
Aortic regurgitation pressure half time	650 ms	650 ms
Aortic root diameter	1 cm	1 cm
Aortic root diameter m mode	1 cm	1 cm
Aortic valve mean gradient	42 mmHg	42 mmHg
Aortic valve mean velocity	100 cm/s	100 cm/s
Aortic valve peak gradient	42 mmHg	42 mmHg
Aortic valve peak velocity	450 cm/s	450 cm/s
Aortic valve velocity ejection time	250 ms	250 ms
Aortic valve velocity time integral	50 cm	50 cm
Ascending aorta diameter	5.5 cm	5.5 cm
Body height	168 cm	168 cm
Body mass index calculated	27.99036281179138322 kg/m²	31.55 kg/m²
Body surface area	1.920069443188622453 m²	1.98 m²
Body weight	79 kg	79 kg
Heart rate	182 bpm	182 bpm
Isovolumic relaxation time	122 ms	122 ms
lv diameter expiration	4.04 cm	4.04 cm
lv diastolic thickness	2.42 cm	2.42 cm
lv diastolic thickness m mode	2.42 cm	2.42 cm
lv systolic thickness m mode	2.42 cm	2.42 cm
lv to pr ratio	8.020000000000001	8.020000000000001
Lateral mitral annular tissue doppler e to e prime ratio	40.02	40.02
Left atrial ao ratio	8.040000000000001	8.040000000000001
Left atrial ao ratio m mode	8.040000000000001	8.040000000000001
Left atrial area 2 chamber view	66 cm²	66 cm²
Left atrial area 4 chamber view	80.2 cm²	80.2 cm²
Left atrial length 4 chamber view	8.2 cm	8.2 cm
Left atrial systolic diameter m mode	8.2 cm	8.2 cm
Left atrial systolic diameter parasternal long axis	8.2 cm	8.2 cm
Left atrial volume	320.20000000000005 cm³	320.20000000000005 cm³
Left atrial volume index	320.20000000000005 ml/m²	320.20000000000005 ml/m²
Left ventricular diastolic area method of discs 4 chamber method	121 cm²	121 cm²
Left ventricular diastolic area psax for lv mass assessment	121 cm²	121 cm²
Left ventricular diastolic diameter m mode	7.5 cm	7.5 cm
Left ventricular diastolic diameter parasternal long axis	7.5 cm	7.5 cm
Left ventricular diastolic length 2 chamber	10.600000000000001 cm	10.600000000000001 cm
Left ventricular diastolic length 4 chamber	10.600000000000001 cm	10.600000000000001 cm
Left ventricular diastolic volume 4 chamber area length method	404 cm³	404 cm³
Left ventricular diastolic volume method of discs 2 chamber method	404 ml	404 ml
Left ventricular diastolic volume method of discs 4 chamber method	404 ml	404 ml

SaaS Revenue Model

○ Pay-as-you-go

EchoSolv

Per Study

Ideal for Echo labs and clinics with lower volumes

- ✓ Severe Aortic Stenosis Guidelines Detection
- ✓ Severe Aortic Stenosis AI Phenotype
- ✓ Mitral Regurgitation Guidelines Detection
- ✓ Real-time PACS Integration
- ✓ SMS and Email Alerts
- ✓ Data Export
- ✓ Unlimited Re-assessments for Each Study

○ Enterprise

EchoSolv

Fixed Monthly Fee

Unlimited assessments with predictable pricing

- ✓ Severe Aortic Stenosis Guidelines Detection
- ✓ Severe Aortic Stenosis AI Phenotype
- ✓ Mitral Regurgitation Guidelines Detection
- ✓ Real-time PACS Integration
- ✓ SMS and Email Alerts
- ✓ Data Export
- ✓ Unlimited Re-assessments for Each Study
- ⊕ Unlimited Study Assessments
- ⊕ 12-month Retrospective Quality Audit

Rapid Market Development

		MARKET		USAGE MODE		REVENUE MODEL		
		AUSTRALIA	UNITED STATES	REAL-TIME	QUALITY-AUDIT	MONTHLY SAAS	FEE PER SCAN	PROJECT FEE
PARTNER TYPE	Hospital	Contracted + Announced		Contracted + Announced	Contracted + Announced	Contracted + Announced		
	Cardiology Practice	Contracted + Announced			Contracted + Announced	Contracted + Announced		
	PACS/Reporting	Contracted + Announced	Contracted + Announced	Contracted + Announced	Contracted + Announced	Contracted + Announced	Contracted + Announced	
	Distributor	Contracted + Announced	Contracted + Announced	Contracted + Announced	Contracted + Announced	Contracted + Announced	Contracted + Announced	Contracted + Announced
	Valve Manufacturer	Significant engagement	Significant engagement		Significant engagement			Significant engagement
	Hardware Scanning	Significant engagement	Significant engagement	Significant engagement	Significant engagement	Significant engagement	Significant engagement	Significant engagement
		Contracts in place in Australia including paid pilot with country's largest cardiology provider. Advanced engagement and pipeline in US.		EchoSolv(TM) seeing traction for real-time analysis and quality audit.		Multiple revenue models in place to support users with different scale, need and objectives.		

Case Study:

Potential Impact in Hospital Setting



EchoSolv

Impact

Review Mode

Human-Only

AI +
Automation

*Number of
EchoCardiograms Assessed*

9189

9189

*Number of Severe Aortic
Stenosis cases detected*

218

376

+ 72%

*Hospital income from respective
valve replacements **

US\$6.98M

US\$9.84M

+ 41%

*Extrapolated figures derived using detection rates from St. Vincent's Study (as reported in ASX announcement dated April 19), combined with assumed industry replacement valve costings of \$32,000 and a 43% surgical non-suitability rate

510k FDA clearance pathway

Securing FDA clearance in US market becomes a material revenue accelerator

Allows cardiologists to pursue undiagnosed patients and tap revenue from insurance and public health rebate channels (similar to Medicare).

Q4 2022

Pre-submission meeting

- + Acceptance of predicate
- + Reader Study recommended

Q1 2023

Reader Study Set-Up

- + Study design accepted by FDA
- + Sites identified

Q2/3 2023

Reader Study runs

- + Study commenced and majority completed
- + Final stage before submission

Q4 2023

510k submission

- + Anticipated Q4
- + 66% reader completion

Q1 2024

510k clearance

- + Anticipated Q1 2024

Reimbursement opportunities available post-FDA clearance

Scientific Advisory Board

- > Comprises a team of globally recognised experts in cardiovascular medicine, echocardiography, sonography, applied artificial intelligence and public health
- > More than 1,200 peer-reviewed publications
- > Former Presidents and Chairs, Am. College of Cardiology and Am. Society of Echocardiography
- > Includes a TedMed Speaker and NASA's lead scientist in ultrasound
- > Includes a member of the team that performed the world's first transcatheter aortic valve replacement using the transapical approach



Prof. Huon H. Gray

CBE MD
Former National Clinical Director
CVD, NHS England, Am. College
Cardiology Chair (International
Council)



Partho Sengupta

MD MBBS FACC FASE
Henry Rutgers Professor of
Cardiology. Chief of Division, Robert
Wood Johnson Medical School



James Thomas

MD FACC FASE FESC
Former President Am. Society of
Echocardiography, Director, Center
Heart Valve Disease



David Ouyang

MD FACC FASE
Cedars Sinai Medical Center,
Los Angeles



Hashim Khan

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San Diego Cardiac Center



Jordan Strom

MD Msc FACC FASE
Beth Israel Deaconess, Boston,
Harvard University



Madeleine Jankowski

BS ACS RDCS FASE
Advanced cardiac
sonographer, Northwestern
University



Michael Mack

MD MACC
Editor JACC, Director Baylor
Scott & White, Cardiovascular
Governance



Greg Scalia

MBBS MSc FRACP FCSANZ
FACC FASE
Wesley Hospital, QLD

Investment Highlights

- 1 Echo IQ is now revenue generating with paying customers in professional healthcare segments
- 2 Strong sales pipeline in the US and Australia with new contracts imminent
- 3 EchoSolv[™] advances from single disease solution to complete structural heart decision support tool for cardiology
- 4 Competitive moat underpinned by exclusive access to world's leading echocardiographic measurement database linked to mortality
- 5 Clearly defined and highly progressed FDA 510(k) pathway for maiden AI-backed phenotype indicator, with clearance anticipated in Q1 2024



Echo IQ

THANK YOU

echoiq.ai

AI with heart