

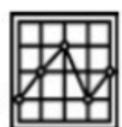
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**Better Care, Sooner**



# Predict Future Risk and Rising Cost

Significant Healthcare AI Spin-out from Stanford Start-X



**4 Years**  
R&D



**21 Million**  
Lives



**2.5x**  
Accuracy



**3**  
Products



**21**  
Advisors and Board



**28**  
Employees



**2**  
Customers Paid



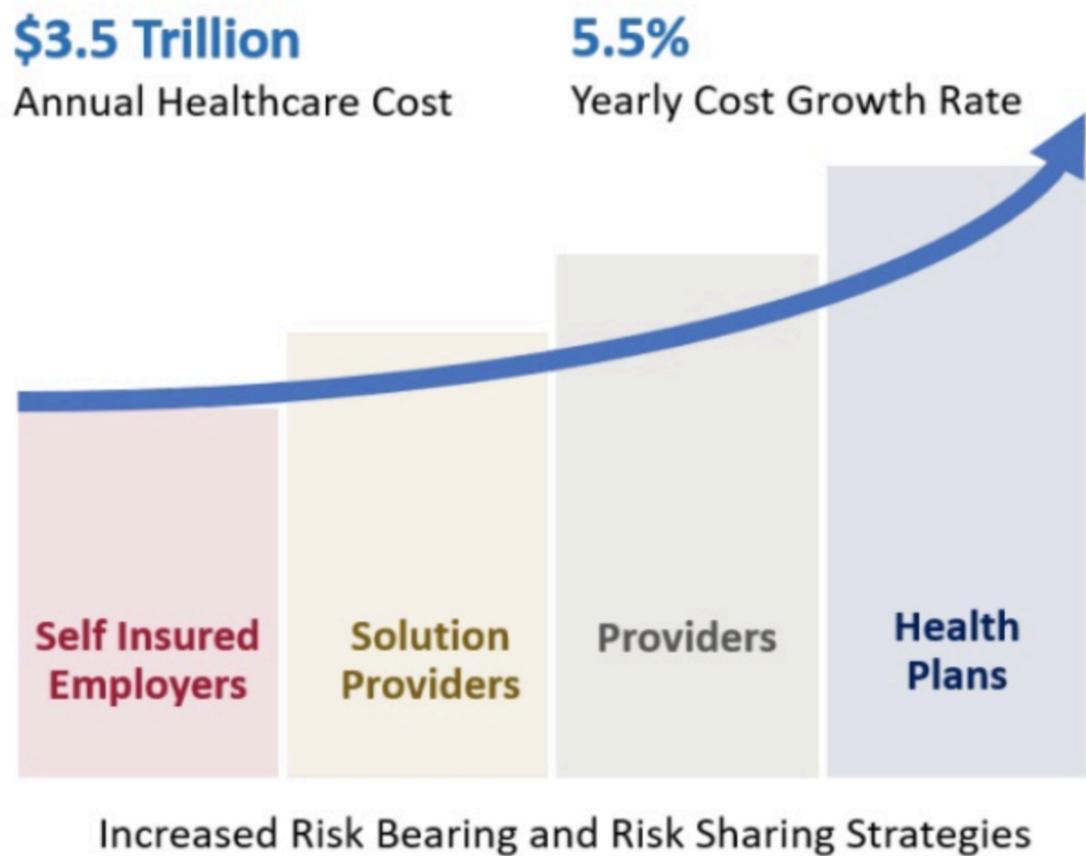
**8**  
Customers MSAs



**20**  
Pipeline Customers

# Predicting Future Risk and Rising Cost

6% of today's population will account for 1/3 of next year's new high cost



*Implement cost effective programs*

*Price for and manage new financial risks*

*Form the provider network for next year's risk*

*Manage capacity for today and tomorrow*

# Predict the What, Why and When of Tomorrow's Cost

## Mitigate Rising Risk

### Solution 1: COST BLOOM INTERVENTION

- Cost Bloom, Jump, High Cost Claimant Likelihood
- Engagement Likelihood
- Clinical Impactability Score
- Case Selection Optimizer
- Action Plan Recommendation

**Ave Annual Price Per Customer: \$850k**

## Steer High Cost Events

### Solution 2: STEERAGE PRECISION

- Clinical Event Likelihood
- Engagement Likelihood
- Event Timing Likelihood
- Case Selection Optimizer
- Case Summary

**Ave Annual Price Per Customer: \$400k**

## Predict Total Cost

### Solution 3: RISK ASSESSMENT

- Prospective Risk Score & Cost
- Concurrent Risk Score & Cost
- Cost Bloom, Jump, High Cost Claimant Likelihood

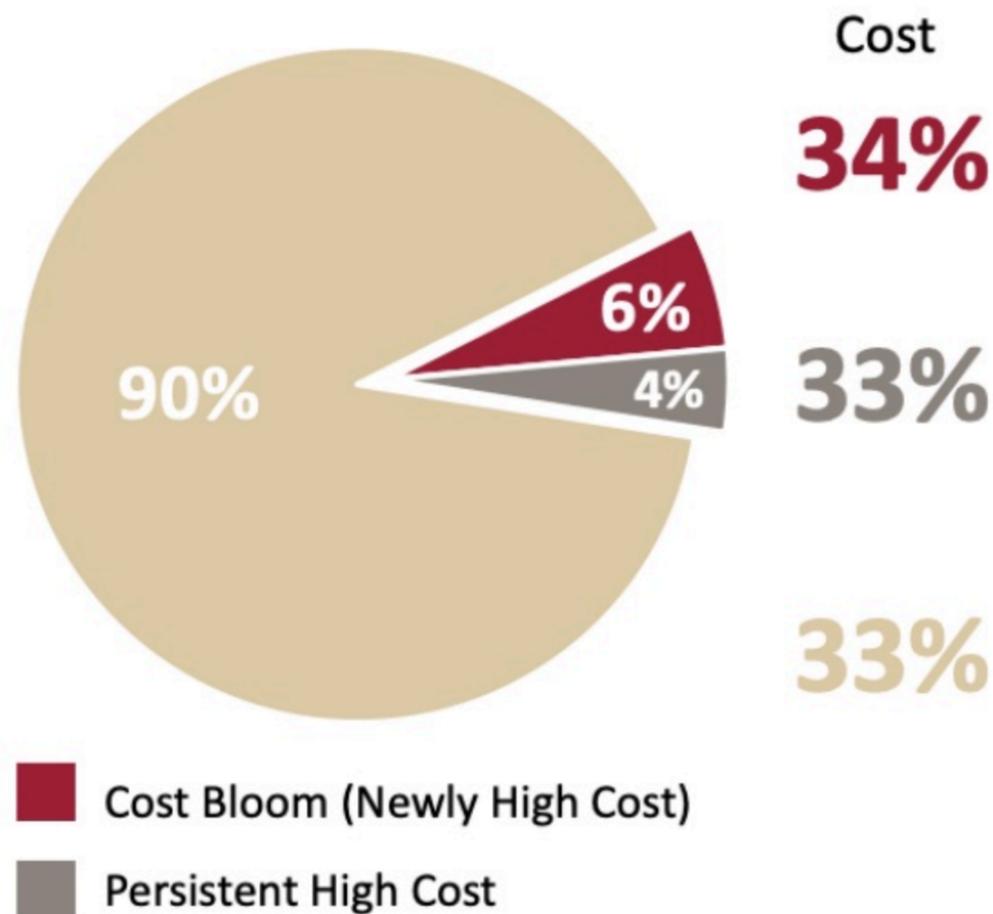
**Ave Annual Price Per Customer: \$600k**

# 8x ROI on Highest Impact Cost Blooms

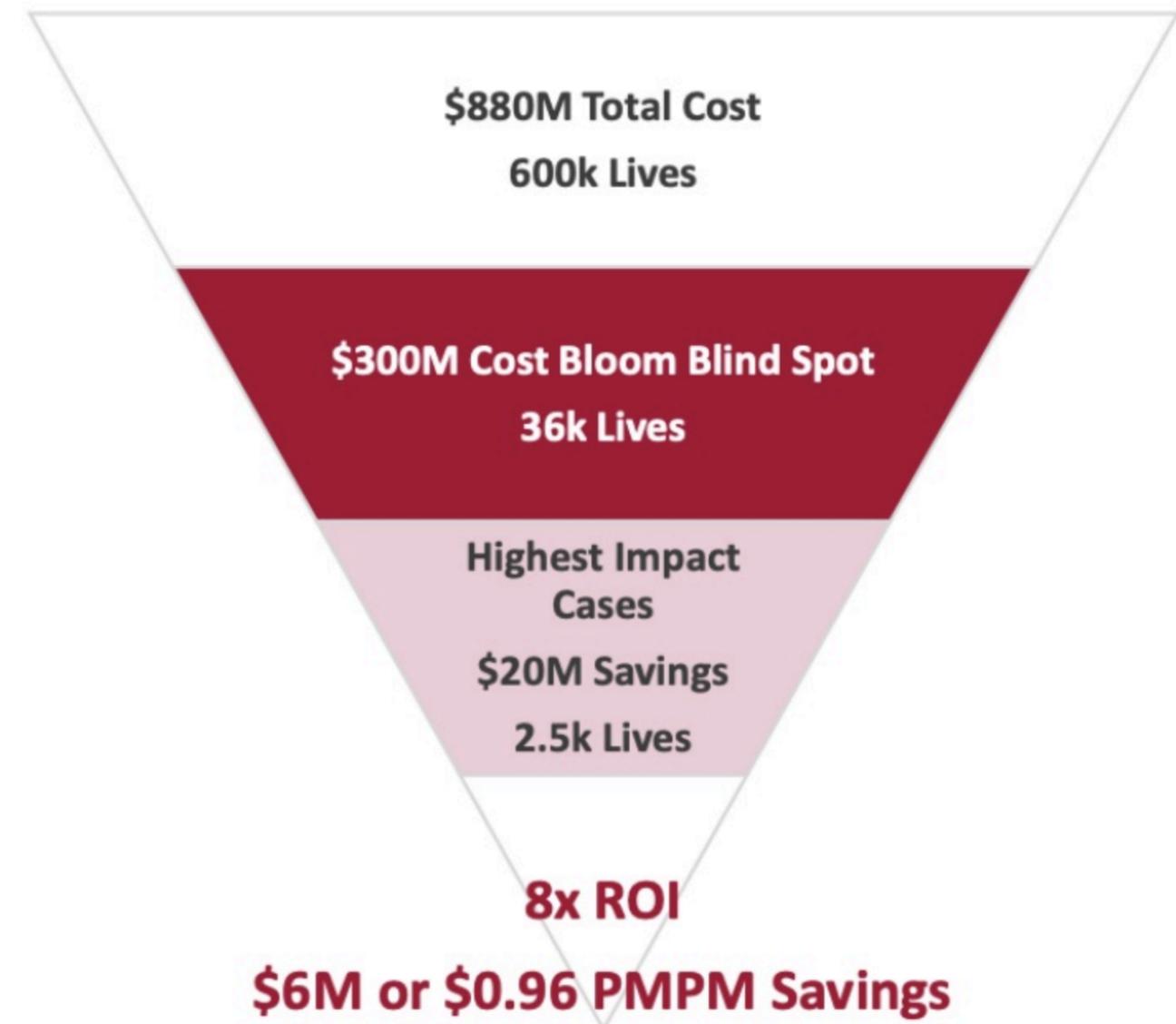
*"I felt like it was meant to be for me to reach this member, it was the perfect moment in time"*  
– Care Manager

Patient Outcome: 57 year old male with heart conditions, back pain, and opioid dependence was steered to a higher quality lower cost spinal fusion center, a savings of over \$20k.

## Health Plan A Population



## Health Plan A



# Cost Bloom Adoption at a Blues Plan



**40% engagement rate** (one call with Cost Bloom member)



**26% active engagement rate** (multiple calls with member)



**75% successful intervention rate** for actively engaged

# 6x ROI on Ortho Joint Surgery Steerage



**1/3**

Of cost blooms were ortho joint surgeries



**\$3.6M savings, 6x ROI**

Projected Ortho Joint savings at Health Plan A

## Steerage Precision Addressing a Market Gap



**Over \$5M per year in Total Savings**

Even larger market beyond Ortho Joint: Bariatric, High Risk OB, Hysterectomy, etc.

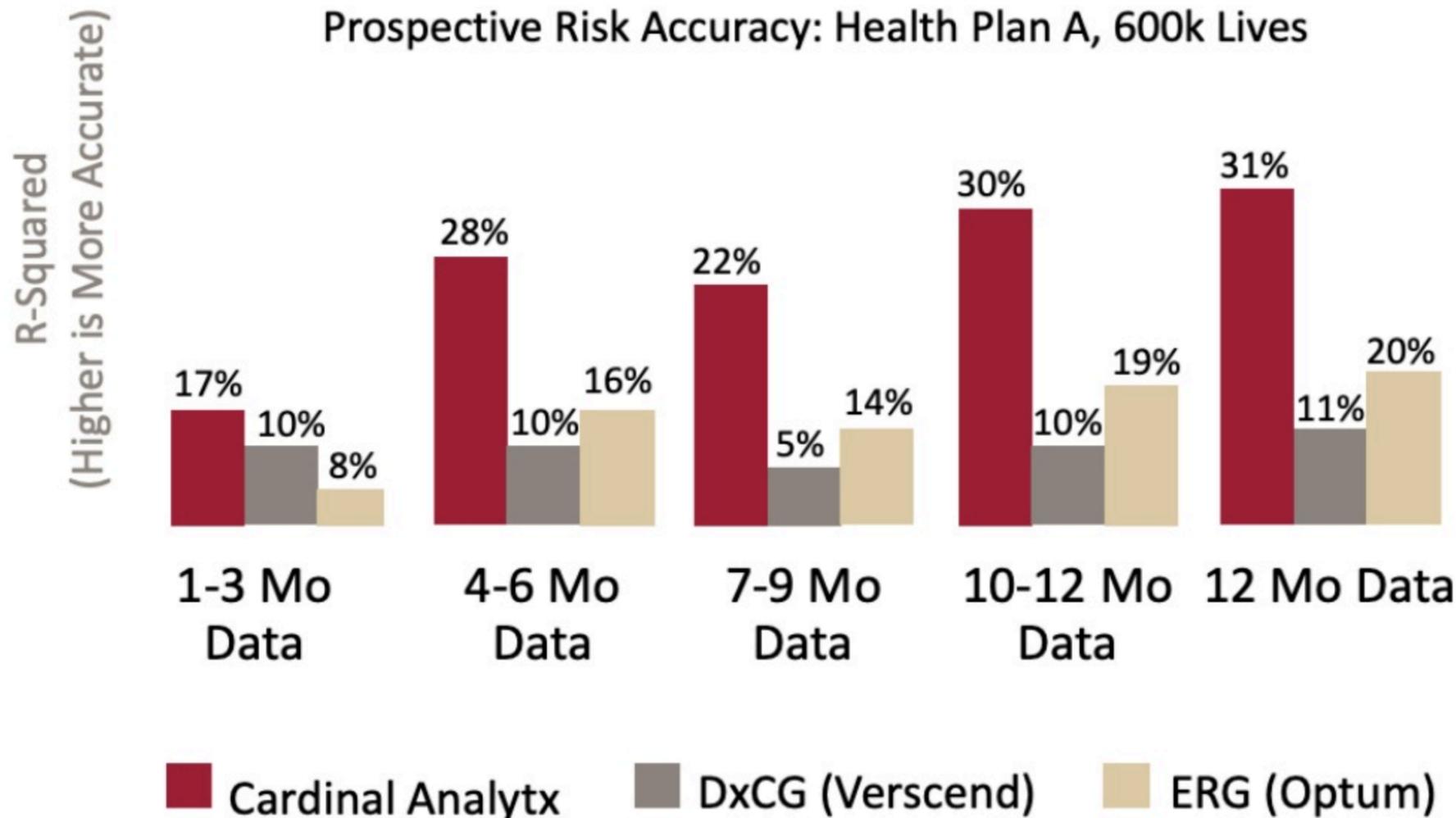


**50% of Cardinal Analytx Clients Expressed Interest in Steerage**

Cardinal Analytx is working with solution providers to partner (e.g., Vitals, Relay, MOBE, VIM)

# \$100M Through Increased Accuracy

Our proprietary Machine Learning beats the competition



## Missed Dollars by Competitors:

**\$63M missed dollars**  
Under-pricing risk

**\$37M missed dollars**  
Over-pricing / retention risk

# Strong Competitive Position

Strategic Approaches	Competitive Landscape	
<p><b>1. Machine Learning Predictions with Drivers and Actions</b></p>	 <p>KenSCI (Provider) Cyft (CM platform)</p>	
<p><b>2. Machine Learning Predictions + Model Correlations</b></p>	<p>Base Health (Med Adv. Risk Adj) Jvion (Provider) Ayasdi (Provider)</p>	
<p><b>3. Machine Learning Predictions</b></p>	<p>Lumiata (Risk) Cogitativo (Payment) HBI Solutions (Risk) IBM Watson (Truven)</p>	<p>Ark.one (Risk) NextHealth (Provider) Hindsait (Data Aggregation)</p>
<p><b>4. Traditional Predictions</b></p>	<p>Optum (Risk) Milliman (Risk) Cave Consulting (Risk) Verscend (Risk) Lexis Nexis (Risk) Deerwalk (Risk)</p>	<p>Health Catalyst (Provider) Weltok (Member Platform) Lightbeam (Provider, Risk) HCC (Risk) ACG (Risk)</p>

# Professional Team



**Linda Hand**  
CEO

- 35 years in organizational leadership, product development, solutions delivery and go-to-market strategies
- Successful exit of DecisionView to IMS Health, Clinical Tech core of IQVIA / Quintiles merger
- BA in Computer Science, UC Berkeley, Haas School of Business Executive Program



**Niall O'Cathasaigh**  
Chief Financial Officer

- 20 years of startup experience across 15 venture backed startups, 4 Healthcare companies. 7 years as founder and fund manager. 3 years at Apple.
- CIMA Qualified. DBS from University College Dublin. BA in History from University College Galway and Universite De Poitiers.



**Brian Maples**  
VP of Data Science

- 15 years in biomedical R&D and machine learning
- Invented and patented molecular diagnostic tech at Ionian, acquired by Alere to develop CLIA waived rapid flu test; Led Nuna's data science development of a Network Solutions product; at Stanford, created now leading ancestry inference methodologies
- PhD in Biomedical Informatics from Stanford University, MS in Statistics from Stanford University, BA in Science and Management from Claremont McKenna College



**Lu Lu**  
Head of Product

- 12 years healthcare experience in strategic and clinical transformation initiatives focused on transition to value with over 19 Health Systems, 45 clinical departments, and 450 design participants.
- MPH from Harvard School of Public Health, BA in Psychology from UCLA.



**Chris DeRienzo**  
Chief Medical Officer

- 11 years clinical experience, double-boarded MD
- While serving as Mission Health Chief Quality Officer gained >\$65M through continuous improvement, pay for value and population health initiatives.
- Spearheaded integration of analytics and data science while reducing harm and scaling clinical pathway development.
- MD/MPP from Duke University, BS in Biology, Biochemistry, and Psychology from Brandeis University

# Engaged Founders, Investors & Board

## Founders



**Nigam Shah**

Associate Professor of Medicine,  
Stanford

- Associate Professor of Medicine, Funded by 5 NIH institutes, FDA and 7 companies; Asst Director of Center for Biomedical Informatics Research.
- Fellow, American College of Medical Informatics and American Society for Clinical Investigation.
- MS and MD Baroda College (Baroda, India), PhD, Penn State, Postdoctoral, Medical Informatics, Stanford.



**Arnold Milstein**

Professor of Medicine,  
Stanford

- Professor of Medicine and Director, Stanford Clinical Excellence Research Center; Elected Member Institute of Medicine Section of National Academy of Sciences; Medical Director at Pacific Business Group on Health; Board Trustee Intermountain Healthcare.
- Founder national health care performance improvement firm and Leapfrog Group; former Congressional MedPac Commissioner.
- BA, Harvard; MD, Tufts; MPH, U.C. Berkeley.

## Investors



**John Doerr  
Family Fund**



## Board



**Thomas McKinley**

Chairman of Cardinal Analytx,  
Partner at Cardinal Partners



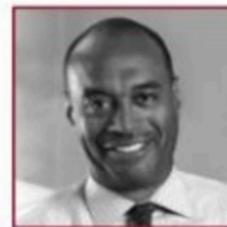
**Linda Hand**

CEO of Cardinal Analytx



**John Doerr**

Chairman, Kleiner Perkins



**Mark Smith**

California HealthCare Foundation,  
Co-leads a CMS effort to  
accelerate value-based payment



**Nigam Shah**

Associate Professor of Medicine,  
Stanford



**Elizabeth Spaulding**

Partner at Bain & Company,  
Global Head of Bain Digital



**Kent Marquardt**

Former EVP and CFO at Premera  
Blue Cross

# Industry Leading Advisors

## Science



**Susan Athey, PhD**  
Economics of Technology  
Professor, Stanford  
Graduate School of Business



**Trevor Hastie**  
The John A. Overdeck  
Professor of Mathematical  
Sciences, Stanford University



**Colt Courtright, MPA**  
Director, Corporate Data  
& Analytics

## Industry



**Virginia McFerran, MBA**  
Formerly, Partner, Optum  
Ventures, President and  
CEO, Optum Analytics



**Ray Bradford, MBA**  
Founder and CEO,  
Spruce Health

## Health Plan



**Jeffrey Bailet, MD, MSPH**  
Executive VP of Health Care  
Quality and Affordability  
Blue Shield of California



**David Fields**  
President  
Dean Health Plan



**John Espinola, MD,  
MPH, MBA**  
Executive VP of Healthcare  
Services, Premera Blue Cross



**Juan Chaluja**  
VP Commercial Markets  
Analytics and Business  
Performance, Florida Blue

## Clinical



**Kevin A. Schulman, MD, MBA**  
Professor of Medicine,  
Assoc Chair, Bus Dev & Strategy,  
Stanford School of Medicine



**Ken Paulus, MA**  
Past President and CEO,  
Allina and Atrius Health Systems



**Ronald A. Paulus, MD**  
President and CEO,  
Mission Health



**Lee Sacks, MD**  
Former CMO, Advocate  
Aurora Health



**Alan Glaseroff, MD**  
Faculty, Stanford  
University's Clinical  
Excellence Research Center