

# SCA Robotics

Solving healthcare's impossible problems

# How SCA sees the future of healthcare

Medical data has never **been more complex**, yet the way clinicians look at data **hasn't evolved to scale with clinical needs...**

So we looked outside of healthcare to **particle physics**, a field known for processing vast quantities of complex and interconnected data

Today, SCA is applying these **pioneering, multidimensional machine learning models** to ignite the next wave of innovation in medical analytics and **change the way we see our health**



# Experienced leadership team of international talent

Our mission: to build the world's most **comprehensive artificial intelligence health platform** for predicting and diagnosing complex diseases, starting in oncology, neurology and cerebrovascular disorders.



**Rob Rao**  
Founder, CEO



**Yashar Kalani MD PhD**  
CMO



**Chris Crespi**  
COO



**Azriel Goldschmidt PhD**  
CTO



**Max Wasilko**  
Biz Dev



**Josh Renner PhD**  
Technical Director










**Rami Ajjuri PhD**  
Growth & Strategic  
Partnerships



**Bradley Horowitz**  
VP Product, Advisor | Google  
Advisor

# Growing collaborations with leading providers

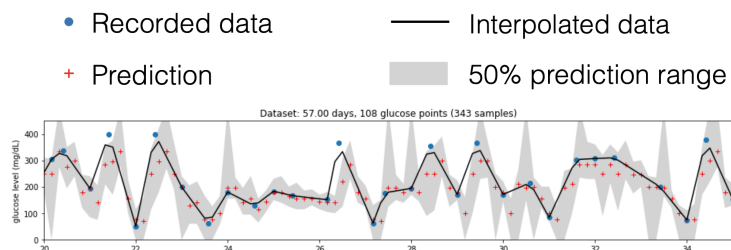
Using advanced machine learning to look at medical problems differently

Indication	Oncology (brain tumor)	Cerebrovascular (stroke)	Oncology (brain, spine, breast)	Cerebrovascular (hydrocephalus)	Neurology (epilepsy)
Partners	 City of Hope	  Allegheny Health Network	  NUANCE	 CHOC Children's.	 Allegheny Health Network
Scope	Developed 3D brain model for tumor identification and segmentation	Developing real-time decision support model for comprehensive stroke assessment and reporting	Training model on spine and breast tumors; integrating into clinical workflow via PACS system (completed)	Predictive brain development and shunt placement guidance in children with hydrocephalus	Analyzing health, imaging, genetic and SDOH data to predict treatment for optimal seizure control
Stage	Completed	Training phase	IRB submission	Project Scope	Exploration
New capability	Rapidly creating 3D organ models using 2D MRI scans	Processing dynamic time-series imaging data; precise vascular segmentation	Cloud-container integration; automated measurements and multi-tumor growth prediction	Brain growth modeling; white / gray matter segmentation; device placement and guidance	Multi-factor modeling; treatment response prediction; EEG and fMRI capability

# Completed Proof of Concept studies

Examples of how SCA has rapidly developed models across conditions and modalities

## Glucose Prediction in Diabetics

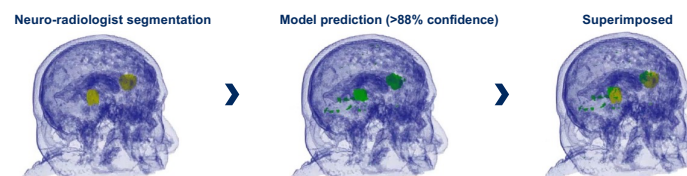


Won Proof of Concept + Award  
@ HealthTech Showcase 2018



## Brain tumor segmentation

Model trained using only 139  
segmented MRI scans

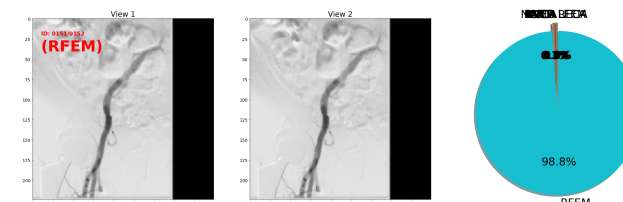


COH expanded IRB to include  
spine and breast tumors as well  
as PACS integration via Nuance



## Stroke characterization

Model currently being trained to  
identify specific vascular structures



In data labeling and training phase;  
Allegheny General has recently joined;  
preparing IRB for data access

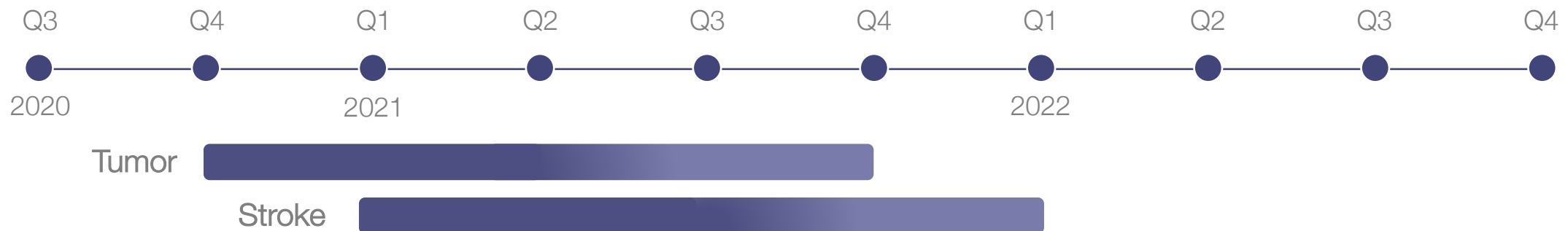


# Regulatory pathway underway for two models

Initiating FDA submissions for tumor and stroke tools by Q1 2020

- Preparing for 510(k) Software as a Medical Device (SaMD) pathway
- Probable designation: Class II device based on predicates\*
- Currently evaluating experienced FDA advisors to join SCA team
- IRBs at City of Hope, Ascension and Allegheny are designed to collect data in support of FDA filings

Expected timeline for approval of lead AI models\*



\*based on input from FDA consultants

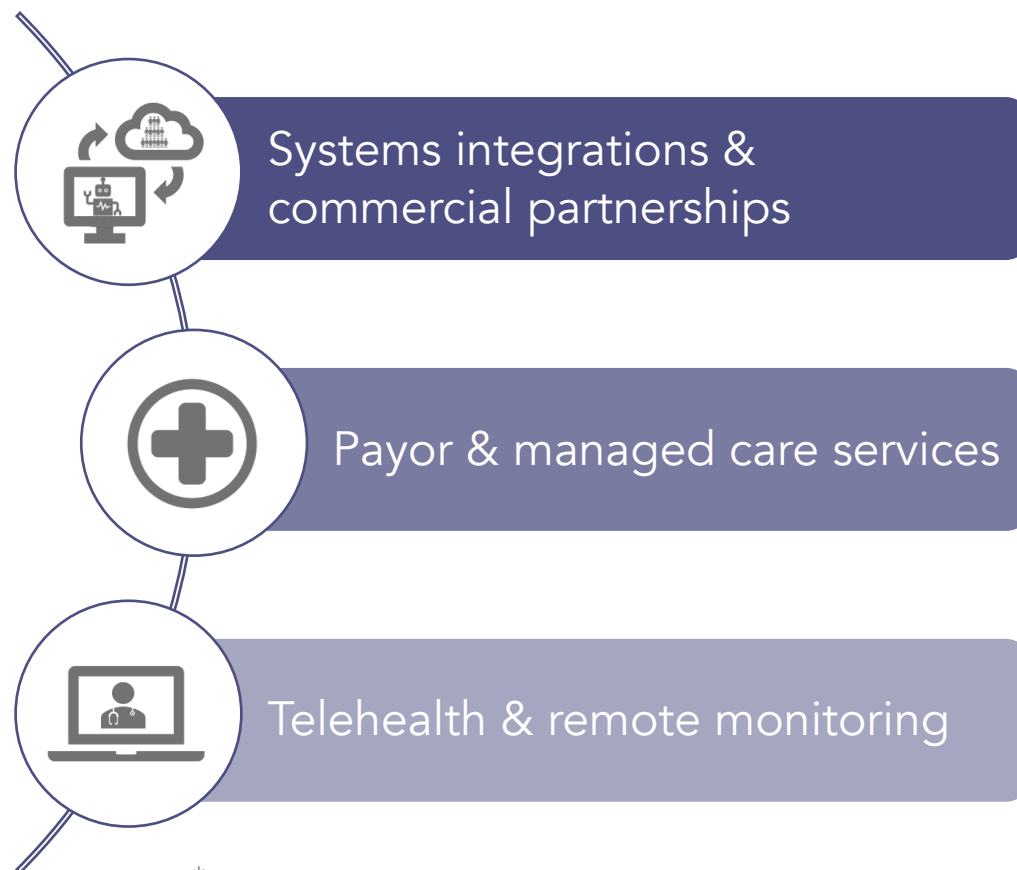
# How we create mutual opportunities across our network

Gaining market access through strategic partnerships & licensing

## Why Partnerships?

- Clinicians don't want more one-off digital tools and logins (tech fatigue among leading causes of burnout<sup>1</sup>)
- Partners have access, clinical needs and a surplus of unused data yet lack AI resources to pursue ambitious initiatives
- SCA fills this gap by co-developing integrated, configurable and highly scalable cloud-based ML models
- Both parties utilize their strengths while benefiting from *agile development* and *shared clinical and commercial success*

<sup>1</sup> West CP, Dyrbye LN, Shanafelt TD. Physician burnout: contributors, consequences and solutions (Review). *J Intern Med* 2018; 283: 516–529.



\* Integrated into clinical workflow via Nuance (75% of US radiology market)  
★ Developing commercial relationship  
‡ Representative partners



# Selected Partners and Recognitions

## Microsoft Health Cloud & AI

Member of Commercial One Program (pending)



## Nuance

Proud partner + working on joint AI chipset



## Plug and Play

Member Batch 9 Health Accelerator



## NVIDIA Inception Program

Member 2019



INCEPTION PROGRAM

## ADA Diabetes Prediction

Proof of Concept + Award @ HealthTech Showcase 2018



Connected for Life

# Areas where SCA is seeking to expand its network

Top-tier talent, clinical and commercial partners and value-adding capital



## Top data and AI talent

Our projects and partnerships are **quickly growing** and we need additional expert talent to **scale with worthwhile new challenges**.

We're recruiting **data scientists, architects, AI developers and project managers** looking to work on the cutting edge of medical analytics.



## Forward-thinking partners

We're on a mission to **democratize access** to high-quality **precision care** while **reducing the cost-of-care**.

To do this, we need **data, clinical experts and users**. Our ideal partners are **payors, medtech, healthtech and care providers** who are eager to push the boundaries of their data.



## Fuel for warp speed

We are very proud of how far we've come without outside capital, but we're **prepared to take it up a notch**.

We're opening a **\$3-5M round** to accelerate scaling our team, building our tech infrastructure and executing on our **pipeline of high impact life-saving solutions**.

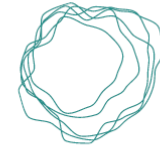
# Our vision for tomorrow

Creating the platform to power the future of AI in healthcare

Working closely with trail-blazing partners from across the care continuum, SCA will help usher in a **new dawn of medicine** that leverages breakthroughs in **machine learning, data analytics and hardware innovation**.

Our **holistic data-driven health platform** will be capable of making quantum leaps by developing **novel algorithms coupled with specialized chip sets** to transform clinical capabilities and raise the standard of patient-centered care.

Together, we can **combine our collective data and expertise** to understand our health like never before and **relabel the impossible**.



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For more information,  
please reach out to us:

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