

# Three Ways ACOs Can Magnify Results with AI

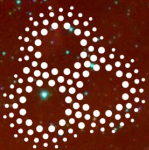
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Roji Health Intelligence LLC

December 14, 2023

VBCExhibitHall  
.com



*Educational Webinar Series*

Background Image: NASA, Orion



42% of CEOs say AI could destroy humanity  
in five to ten years (CNN Business).

# Would you hire her to navigate your patients' care?



AI-Generated Image by Sara Guerra on Freepik

- A. Yes, AI will provide essential staffing for communicating with patients.
- B. No, using AI will erode the connection with clinicians.
- C. Not sure.

# Topics for today: AI in Value-Based Care

Where is health care AI, and where is it going?

Where might AI be deployed in Value-Based Care?

What 3 key areas hold the most promise for ACOs to driven results?

What's needed to make AI feasible, and how do ACOs prepare?

# The Crux of Issues with Artificial Intelligence

- Replacement of human jobs, professions, dominance
- Unintended consequences of AI
- Privacy and security of individual data, lives
- Money and data, the currency behind AI
- Is any technology “neutral”?

# Artificial Intelligence or Human?

## Machine

- Machine learning
- Deep learning
- Neural networks
- Robots
- Algorithms created by computers
- Natural Language Processing
- Generative tools

AI has a big range – from limited or narrow functionality (e.g. Siri, self-driving cars), up to very broad (thinking computers & robots)

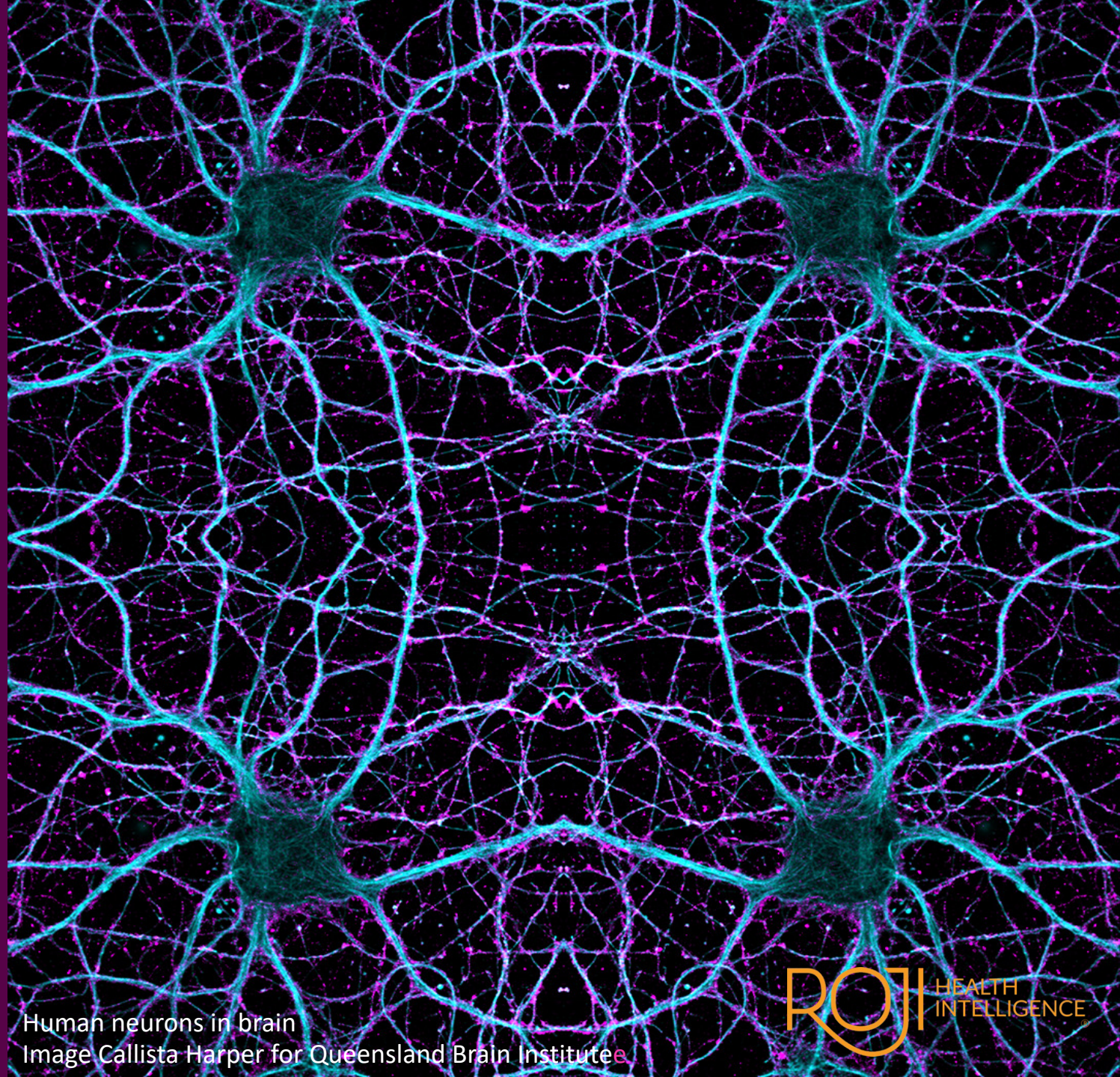
## Human

- Human programming / analytics
- Human algorithms underlying programs
- Big data analytics with human algorithms
- EHRs, in general
- Claims systems
- Population Health systems
- Clinicians

Up until recently, there was a distinction between human roles and AI roles.

# Extraordinary AI Medical Advancements

- Diagnostics
  - Skin lesions/cancer
  - Breast masses / tumors, risk
  - Diabetic retinopathy
  - Lung cancer
- Discovery of drugs
  - Parkinson's
  - Alzheimer's
  - ALS
- Robotic surgery



AI has historically targeted narrow tasks (e.g. diagnostics).

Future medical AI will bring capabilities together



Nightcafe AI generation:  
“Healthy world of energetic people”.



# Generative Medical AI of the future

“A patient is lying on the operating table as the surgical team reaches an impasse. They can’t find the intestinal rupture. A surgeon asks aloud: “Check whether we missed a view of any intestinal section in the visual feed of the last 15 minutes.” An {AI} medical assistant gets to work .... It alerts the team when they’ve skipped a step in the procedure and reads out relevant medical literature ....”

Stanford University

# Health Care AI is expanding broadly into non-clinical areas

- Capture of progress notes into usable data (NLP)
- Scheduling and reminders for patients
- Coding / Revenue cycle
- Analytics
- Marketing
- Patient communications

# EHRs Adopting AI Quickly

**FIERCE** Healthcare Providers Health Tech Payers Regulatory Finance Special Reports

HEALTH TECH

## HIMSS23: Epic taps Microsoft to integrate generative AI into EHRs with Stanford, UC San Diego as early adopters

By Heather Landi · Apr 17, 2023 11:00am

**FIERCE** Healthcare Providers Health Tech Payers Regulatory Finance Special Reports

HEALTH TECH

## Epic, Nuance bring ambient listening, GPT-4 tools to the exam room to help save doctors time

By Heather Landi · Jun 27, 2023 04:35pm

**FIERCE** Healthcare Providers Health Tech Payers Regulatory Finance Special Reports

AI AND MACHINE LEARNING

## Oracle Health integrates generative AI, voice tech into EHR system to automate medical note-taking

By Heather Landi · Sep 20, 2023 08:00am

What are the opportunities for AI in Value-Based Care

and

How can ACOs deploy them?

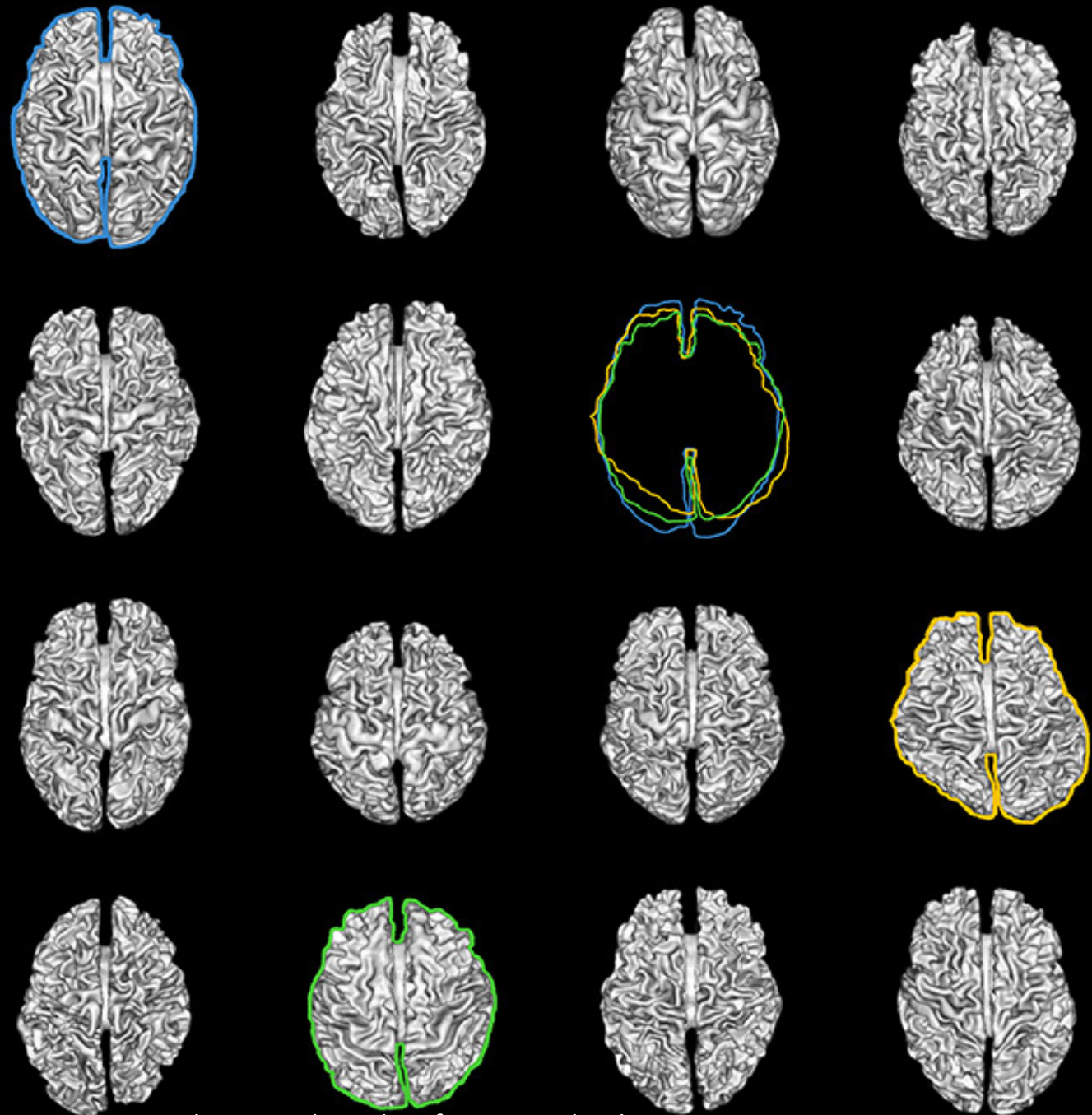


Image by Veronika Halasz for Queensland Brain Institute

# Three Artificial Intelligence applications with highest value for ACOs

- Patient risk assessment
- Cost control by improving clinical outcomes and addressing cost variation/drivers
- Population health



# Patient Risk Assessment

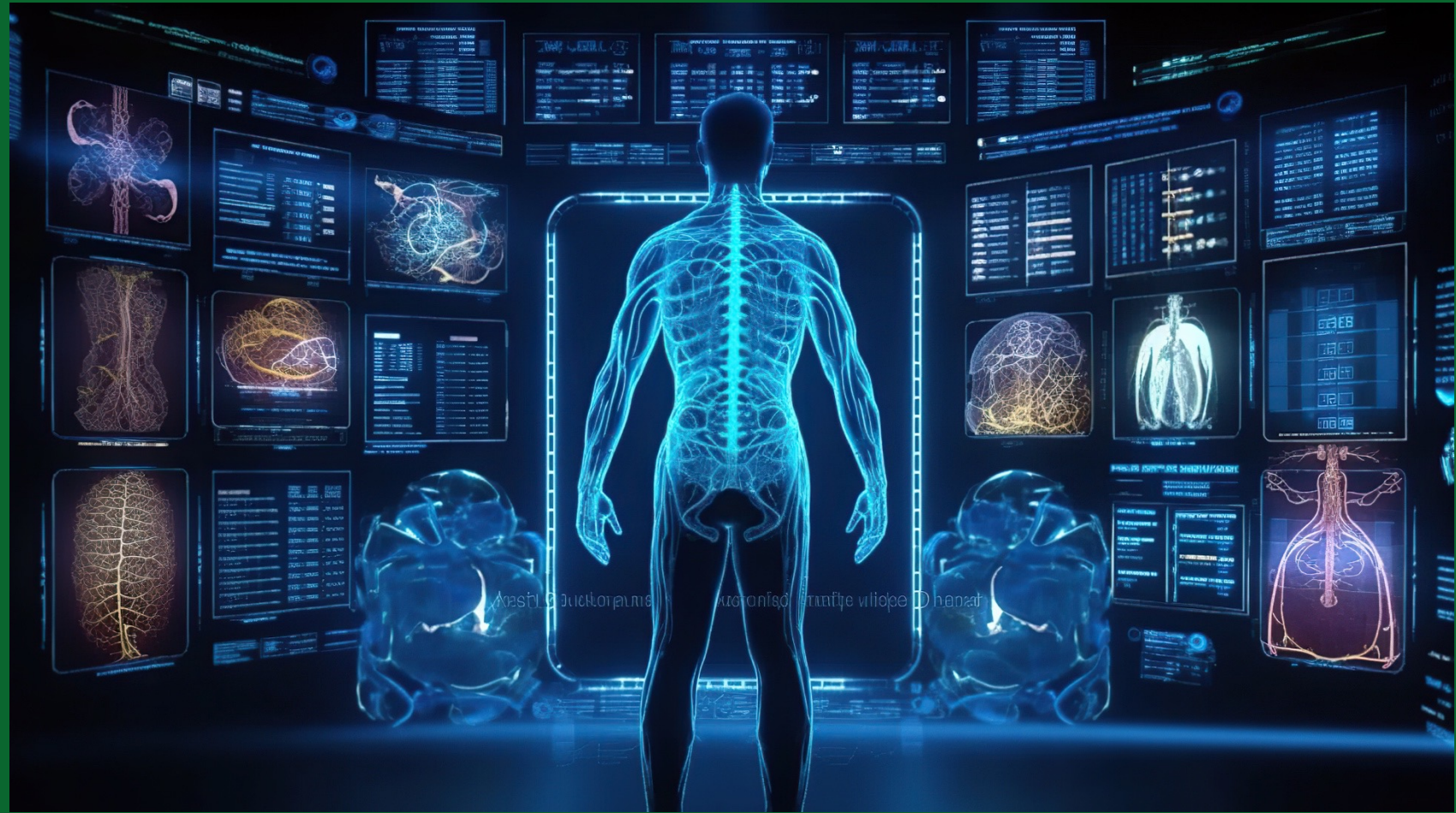
Image of the layout of visual cortex, by J Hunt  
for  
Queensland Brain Institute

# Patient and Population Data Is AI-Conducive

- Human algorithms for assessing risk have biases and mostly use retrospective data
- HCCs are also simplistic and retrospective
- AI calculates risk by evaluating patterns in data – clinical events, patient outcomes, contributing factors to future (including those not considered by humans)
- AI can also highlight connections to treatment, utilization & visit profiles
- AI is currently being trained to predict life expectancy of cancer patients

# AI Risk Assessment Opens Opportunities for Faster, More Effective Care Navigation

- Target priorities in population health
- Identify Social Determinants of Health
- Find patients needing interventions now
- Look at population of patients holistically, not condition at-a-time



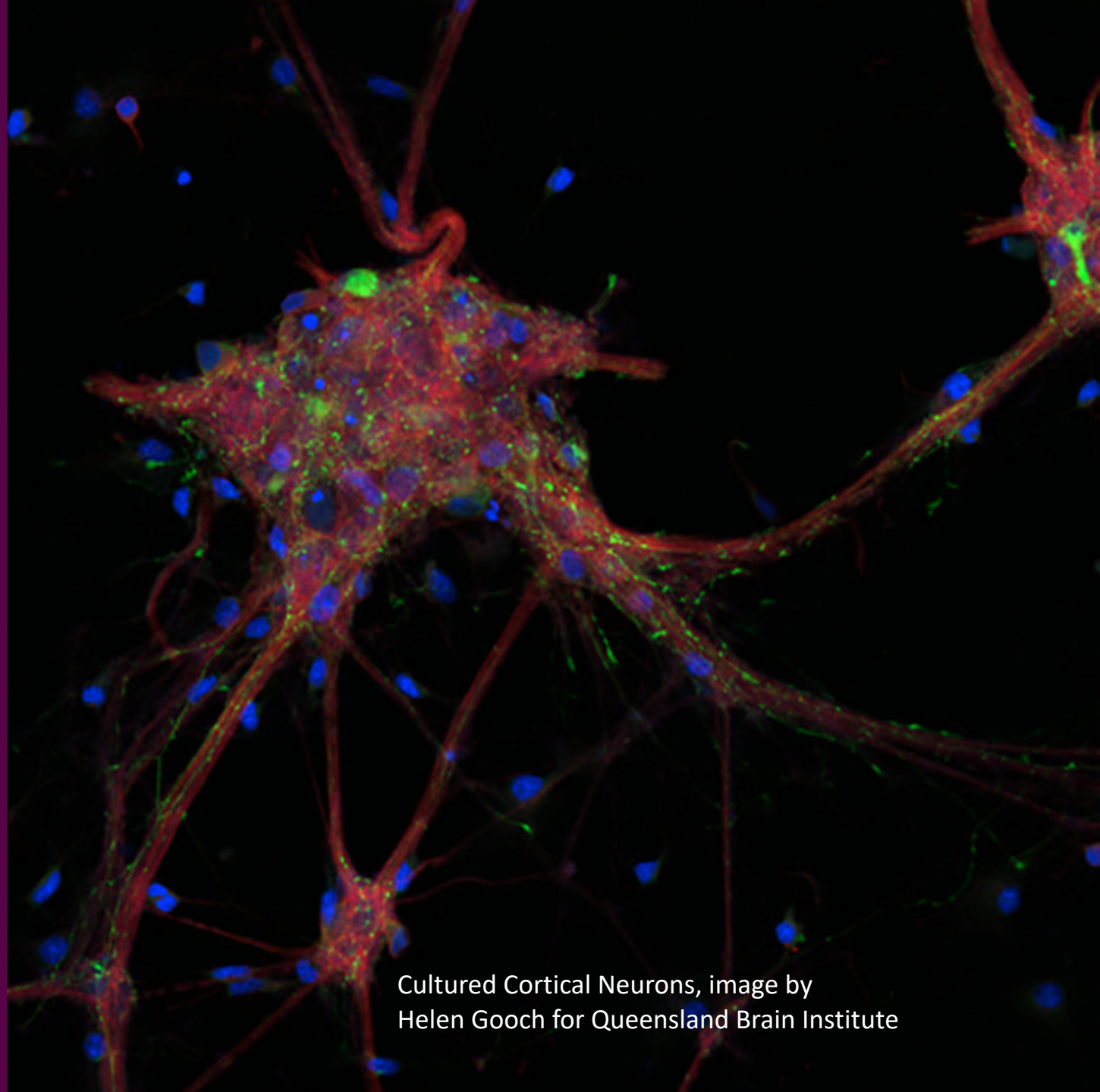
AI-Generated Image by WangXiNa on Freepik



# Issues to Address

- Rich clinical data to support AI-assisted assessments
- Availability of another critical source of data for risk: genetic data
- Resources for patient care navigation /population health after the assessments
- Physician engagement in assessments and results
- Assessments sound like a first step but the value depends on downstream programs in place

# Cost Control and Patient Health Improvement



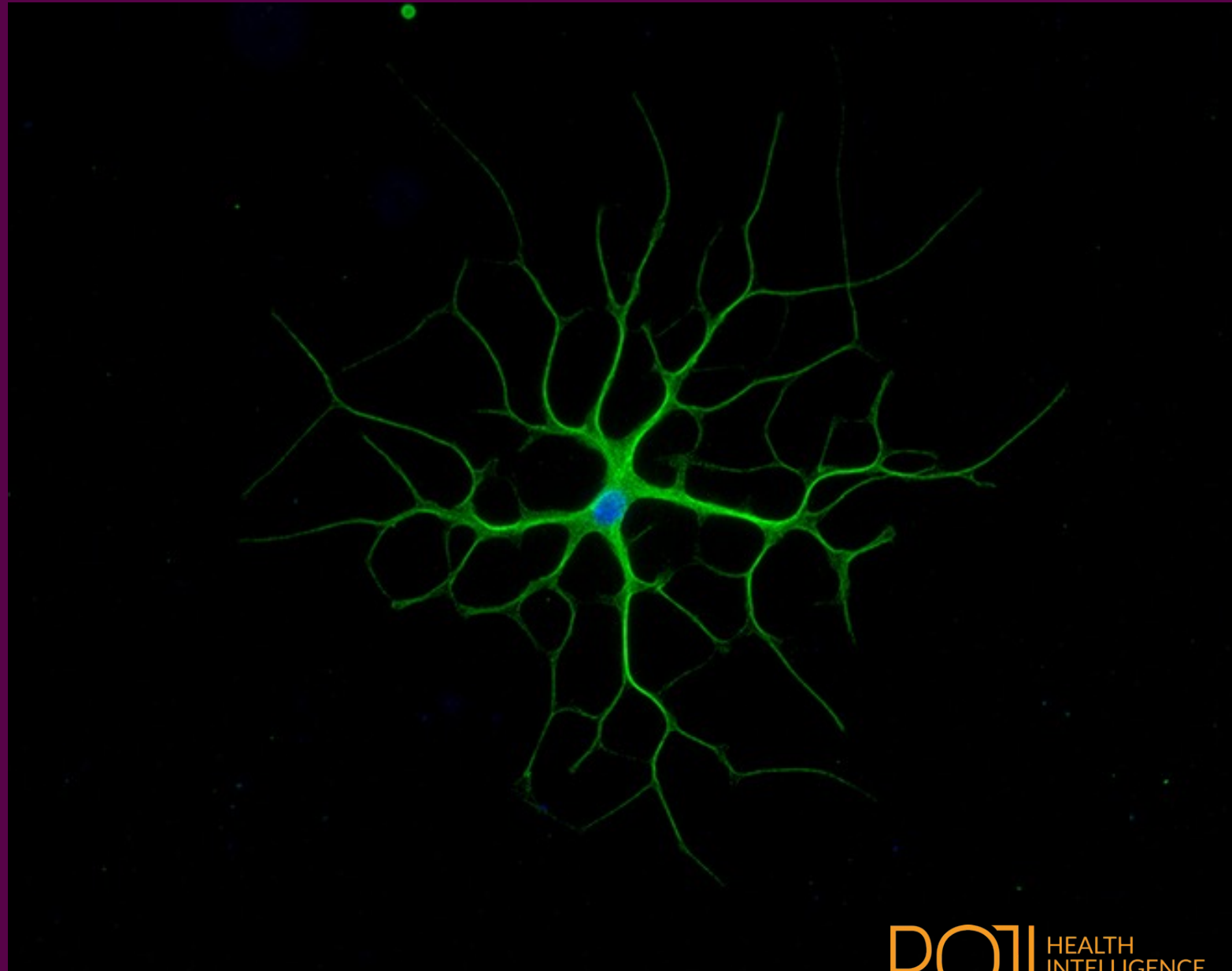
# Episodes of Care

FFS fragments data into billable services

Episodes of Care are ideal vehicle to package clinical outcomes and costs for comparisons

Roji Episodes target interventions, clinical outliers and practices

Episodes create clarity on patient outcomes and cost variation



# Opportunities for AI-Empowered Episodes

- Create Episodes faster with more comprehensive data
- Sift through the data beyond EHR and Claims
- Find hidden clinical areas for addressing costs & outcomes
- Personalize patient interventions
- Target areas with greatest priority

# AI-Powered Episodes Examine Variations

Patient Control in Chronic Conditions

Patient Improvement Trend

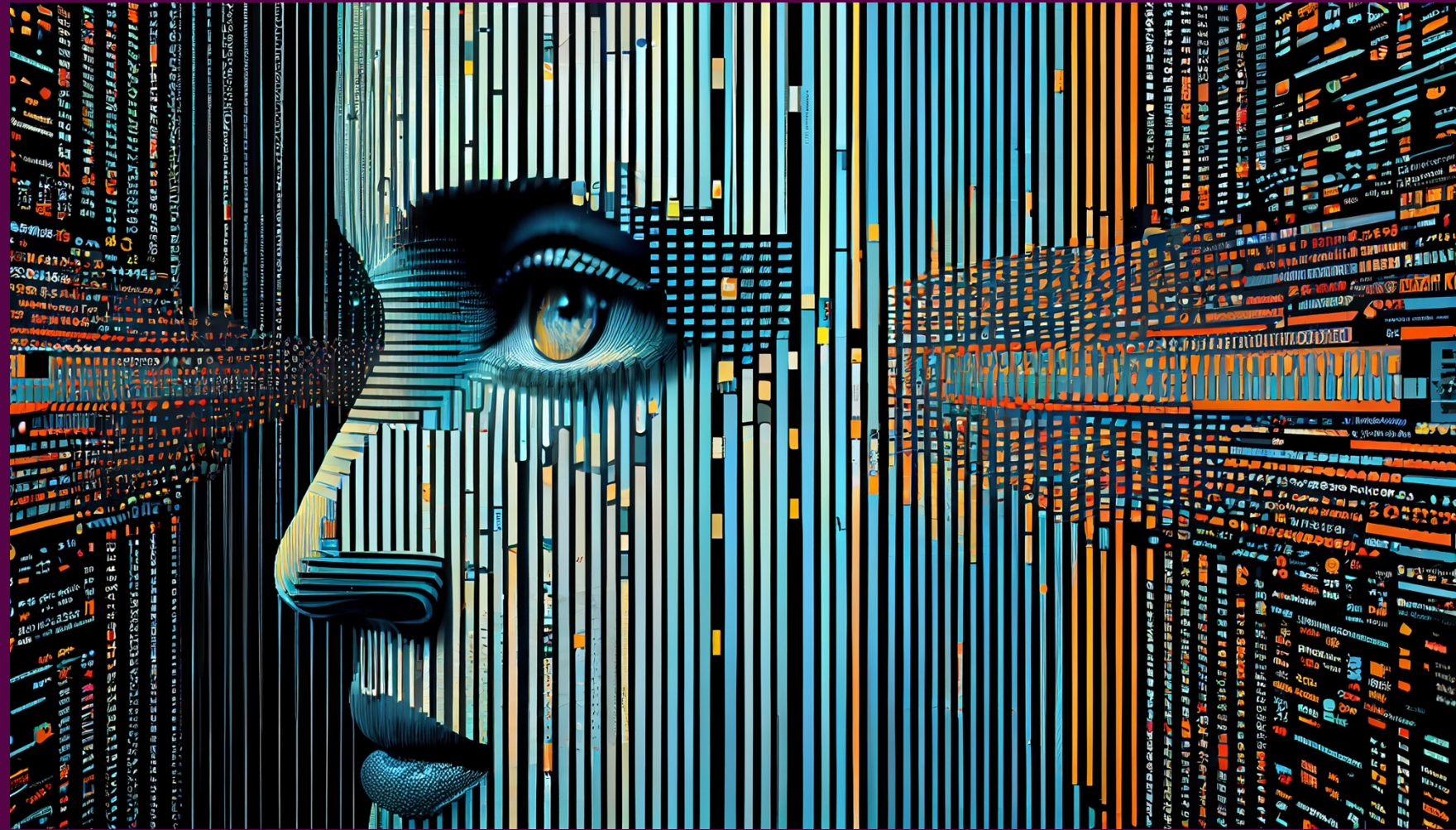
Clinical Services

Medications

Procedure Costs

Surgical Approach

Procedure Outcomes



AI-Generated Image by vecstock on Freepik

# AI-Powered Episodes Change Treatment Possibilities

With new sources of data including genomics and clinical research data, AI can open opportunities for real personalized medicine based on both patient and knowledge.

How can ACOs facilitate this goal?



AI-Generated Image on Freepik

# Who is Filling the Information Void for Physicians?



- Physician leadership required to transform to value
- New role for physicians / patient care teams
- Data and AI work together to enable time and information flow to improve patient status

Image Created with Nightcafe AI Generator:  
Physician facing maze of choices

# Issues to Address

- Methods to share data and collaborate effectively with clinicians
- Accuracy of patient episode, insights
- Clinical integrity of episode – entry of other factors with multiple procedures, different surgical approaches
- Pre-episode risk of patient
- Is there an underlying clinical pathway for every procedure?



# Population Health and Care Navigation



# Biggest Value of AI in Population Health

- Create populations and cohorts
- Use data to prioritize connections to patients
- Targeting interventions from episodes
- Scheduling screenings



# Digital Assistants Are Here



AI-Generated Image on Freepik

- Amelia.ai – Integrated with Epic, Cerner.

“Amelia helps one provider reclaim 14k hours of productivity, time that can be refocused on personalized patient and customer care”

- MyndYou.ai – Eleanor makes check-in calls to patients, triages patients for service.

“84% of participants felt more connected to their health plan after participating in calls with Eleanor.”

# Opportunities for AI-enabled Population Health

- Integrate wearable devices with AI monitoring / care navigation
- Use AI to find patients with SDoH, for screening in Population Health
- Target patient interventions based on AI-enabled episodes of care
- Create virtual reception center for appointments and patient triage
- Create self-management programs with digital assistant “coach”

# Robotic Assistants in Nursing Homes



Can robotic pets or assistants help elderly avoid placement in nursing homes and remain at home?

Some nursing homes are using pets to combat loneliness.

PARO, a therapeutic robot

# AI / Robot Assistants for Home-Based Patients

“Mabu” – interactive robot helping patients with chronic conditions



Image from Catalia Health website

“MAiRA” – multi-sensing intelligent robotic assistant



Image from Neuro Robotics Brochure

# Opportunities for AI-Assisted population health / enhanced care in historically undervalued, understaffed areas

- Deploy AI assistant for fragile at-home patients
- Screen for behavioral health and loneliness using AI tools
- AI for end-of-life care



Image Created with Nightcafe AI Generator

# Issues to Address

- Attitudes of patients toward dealing with non-human
- Division of staff between human and AI tasks
- Quality of data on which AI is acting
- Eroding trust of patients in the system, and physicians





## Patient Communications

Image Created with Freepik AI Generator

# Why this is not the 1<sup>st</sup> choice for ACO AI adoption

- It doesn't magnify results!
- Consumer concerns (Pew Research Center, Survey December 2022)
  - 57% say AI role in diagnosing disease and recommending treatments would worsen patient-provider relationship, and only 13% say it would be better  
but
- Consumers also believe it could reduce racial and gender bias
  - 51% say AI would improve the problem of bias and unfair treatment, and 15% say it would get worse with AI
- Consumer opinions are rapidly changing

# CHAT GPT Created a Buzz

- 78.6% of evaluators preferred ChatBot to physicians
- But the story is not so simple
  - Context is everything!
  - No relationship between MD and patient
  - No personal situation for physician to respond
  - Evaluators not patients
- Many in industry rushed to promote direct patient communications from AI chatbots

# Issues to Address

- Balancing roles to maintain connection with physician
- Accuracy of patient information!
- Speed of adoption



# Obstacles to AI Adoption and the Path Forward

# AI is Part of the Data Universe

- Requires a source of data storage to feed AI
- A database is almost always used as AI substrate
- Most providers lack aggregated database to feed AI

# Data Sources for Health Care AI

- Claims data –patient, provider, diagnoses, place of service, cost, SDOH
- Clinical data from provider EHRs – lab values, prescribed meds, all diagnoses, problem lists, condition staging, additional evaluation scores
- Outside data – geographic, financial, genomic
- Longitudinal data is of significant value

# Current Obstacles:

1. ACOs and health systems resist aggregation of physician EHR data.
2. Lack of longitudinal data.
3. Belief in data magic vs data quality
4. Most ACOs / health systems: no integrated patient-centric DB.
5. Few organizations have Value-Based Care Technology



# How do we proceed in uncertain territory?



Image Created with Freepik AI Generator

# ACOs and Health Systems Must Prepare for AI

*AI tools are to help you gain ground faster, but you need the basics first:*

- Build the data substrate
- Have analytics, episodes of care, and basic tools in place
- Ensure you have the technology for Value-Based initiatives
- Prioritize AI efforts based on your goals
- Ensure that patients are brought along with direct patient AI

# Be Guided by 2 Questions in Choosing AI Solution

1. Does it improve patient health status or quality of care?
2. Does it enable clinicians to work more at the top of their license?

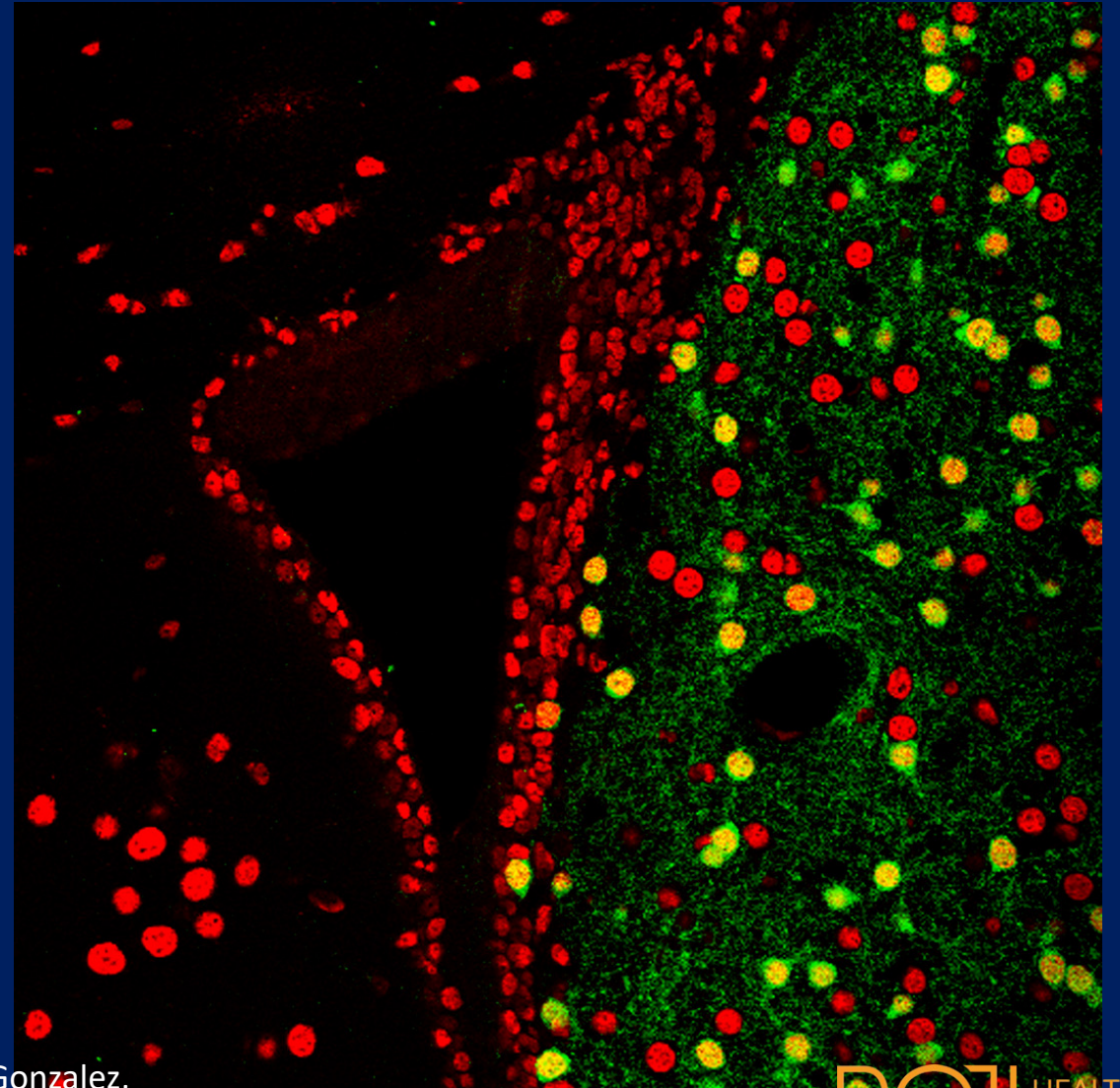


Image of nuclei in brain by J Gonzalez,  
For Queensland Brain Institute

# Be Careful Out There.



This is an AI-generated image created on Nightcafe using this statement:

“Portrait of doctor on a precipice reaching for people who are helping him to safety.”



**Questions?**

AI-Generated Image by WangXiNa  
on Freepik

Lorem ipsum

# Stop by our ACO Exhibit Hall Virtual Booth



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Thank You



Contact us to make your ACO a successful venture!

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