

# AI and Simulation in Clinical Practice: a Look at the Future

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- What is AI (artificial intelligence)
- What are we trying to achieve with it?
- How has it been used already?
- How could it be potentially used?

# What is AI



# What is AI

- The ability for the machine to digest, process and an execute a decision based on the information it is fed.
- The machine has to learn by experience, analyze thousands of examples to build an algorithm and tweak this based on achieving its objectives. Overtime, the machine will become smarter.

# What are we trying to achieve?

- To have machines take over routine processes from humans.
- In medical terms, already being used in ophthalmology and radiology
- Predicting vs Detecting



# Retinal Images

- The IDx-DR is designed to analyze retinal photos captured by the Topcon NW400 camera and detect “more than mild” diabetic retinopathy in adults who have diabetes.





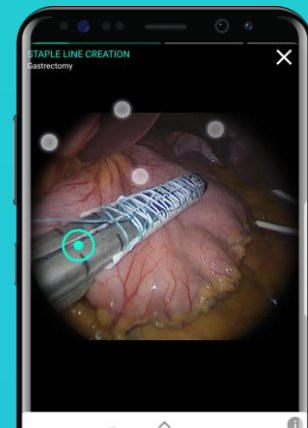
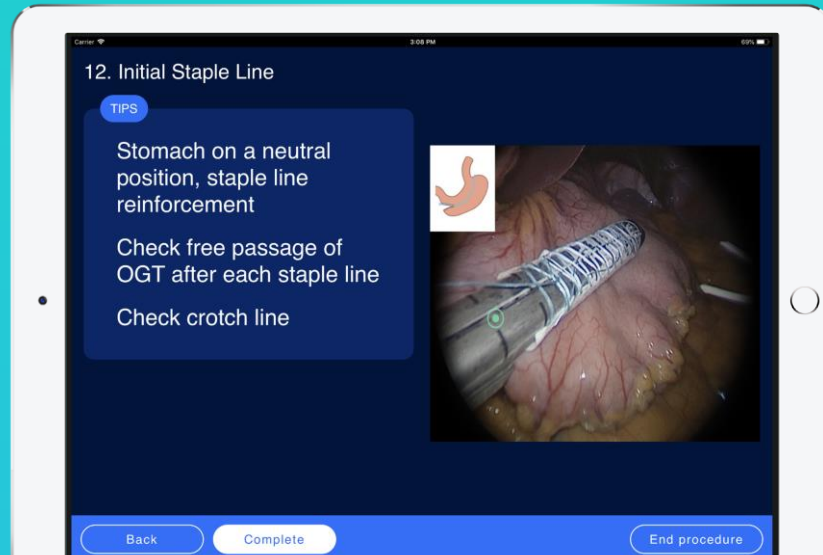
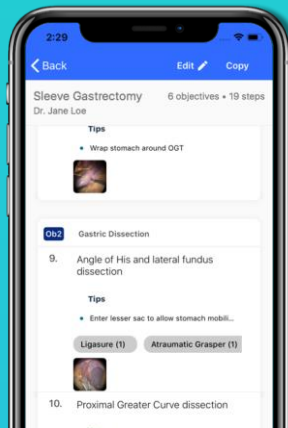
# Large Vessel Occlusion detection

- Using artificial intelligence to automatically identify and triage suspected LVO strokes using Viz.ai technology
- Clinician notified when suspected LVO stroke has been detected in order to mobilize the stroke team

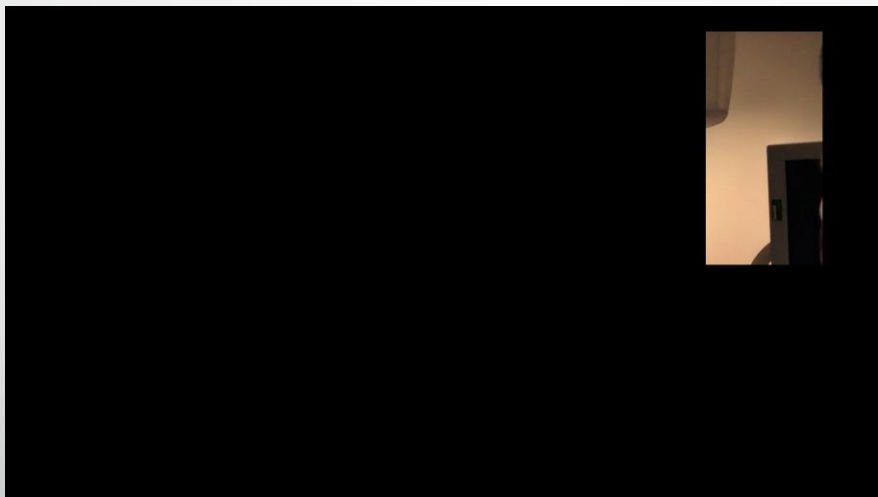


# Digital Surgery™

Artificial Intelligence for Surgery








# aiPatient

## Patient consultation

aiPatient



Log in


[Forgot password?](#)

**SIGN IN**

Health RANDOM CARDIOLOGY PAEDIATRICS

Which patient would you like to see next, Dr




**Sarah**  
38 year old female complaining of chest pains

**SPEAK TO PATIENT**

Home Profile Analytics

Finish

Consultation 8:25



Hi Sarah, how can I help you today?

Well it was very hot outside and I don't think I drank any water that day

I see. Does anyone in your family suffer from heart disease?

Type message here

Finish

Consultation 8:25

Hi Sarah, how can I help you today?

Well it was very hot outside and I don't think I drank any water that day

I see. Does anyone in your family suffer from heart disease?

Hello


"Helli" Hello Hellos

Q W E R T Y U O I P  
A S D F G H J K L  
Z X C V B N M  
123 space return

# aiPatient

✕ Finish ⚙️ ⚠️

**Assessment** 8:25



▶️ 3:12

It sounds to me like atrial fibrillation, the heart beats irregularly and faster than normal

Type message here

## Feedback

🗨️ **Feedback** ⚠️

# 9.6

Average 6.8 +0.5    Speciality 7.2 -0.1

**Patient Consultation 96%**

Introduction	2/3	⌵
History of presenting complaint	1/4	⌵
Key Symptoms	3/3	⌵
Cardiovascular Risk Factors	4/4	⌵
Past Medical History	2/3	⌵
Family History	1/3	⌵
Social History	3/3	⌵
Systemic History	1/2	⌵
Closing the Consultation	1/1	⌵
Key Communication Skills	2/3	⌵
Summarising	0/1	⌵

### Examination 96%

Question 1 2/2 ⌵

This is the question text, will be a long one this time?

Your answer: Lorem ipsum.

Question 7 1/3 ⌵

This is the question text, short one?

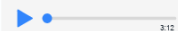
Your answer: Lorem ipsum.

Correct answer: Electrocardiogram.

Feedback: It shouldn't always be lorem ipsum but Lorem Ipsum

Question 7 1/3 ⌵

Question related to media?



Your answer: Lorem ipsum.

Feedback: It shouldn't always be lorem ipsum but Lorem Ipsum

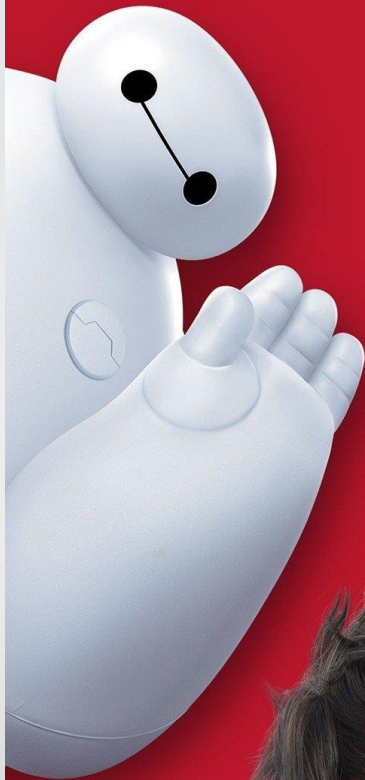
### 🏆 New Achievement



Completing your first patient consultation

CHATLOG





Disney

# BIG HERO 6

