

# EPicardio Simulation™

master the human heart

# Case based discussion

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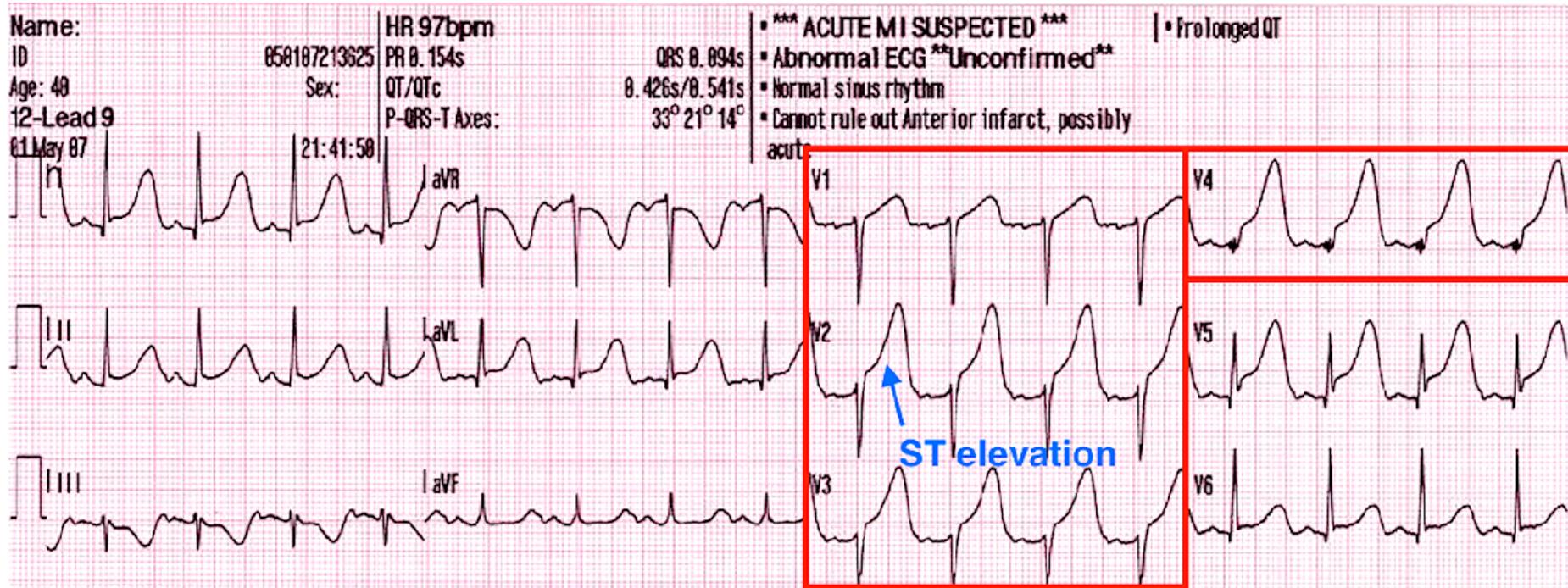
# Scenario

A 78-year old man arrives in A&E department with a medical history of hypertension, diabetes, and smoking. He presents with acute central crushing chest pain, radiating down the left arm and left side of the neck.

What are the differentials of chest pain?

# Differentials of Chest pain

- Cardiovascular causes: Acute coronary syndrome, stable angina, pericarditis, coronary spasm, aortic dissection
- Pulmonary causes: Pneumothorax, pulmonary embolism, pleurisy, pneumonia, bronchiectasis
- Gastrointestinal causes: Boerhaave's perforation, Peptic ulcer disease, Oesophagitis (secondary to GORD), Oesophageal spasms
- Other: Musculoskeletal, infections



An ECG was done for the patient and revealed ST elevation in leads V2, V3, V4, V5, V6, I and aVL

What is the diagnosis?

Which vessel is affected?

Which part of the heart is infarcted?

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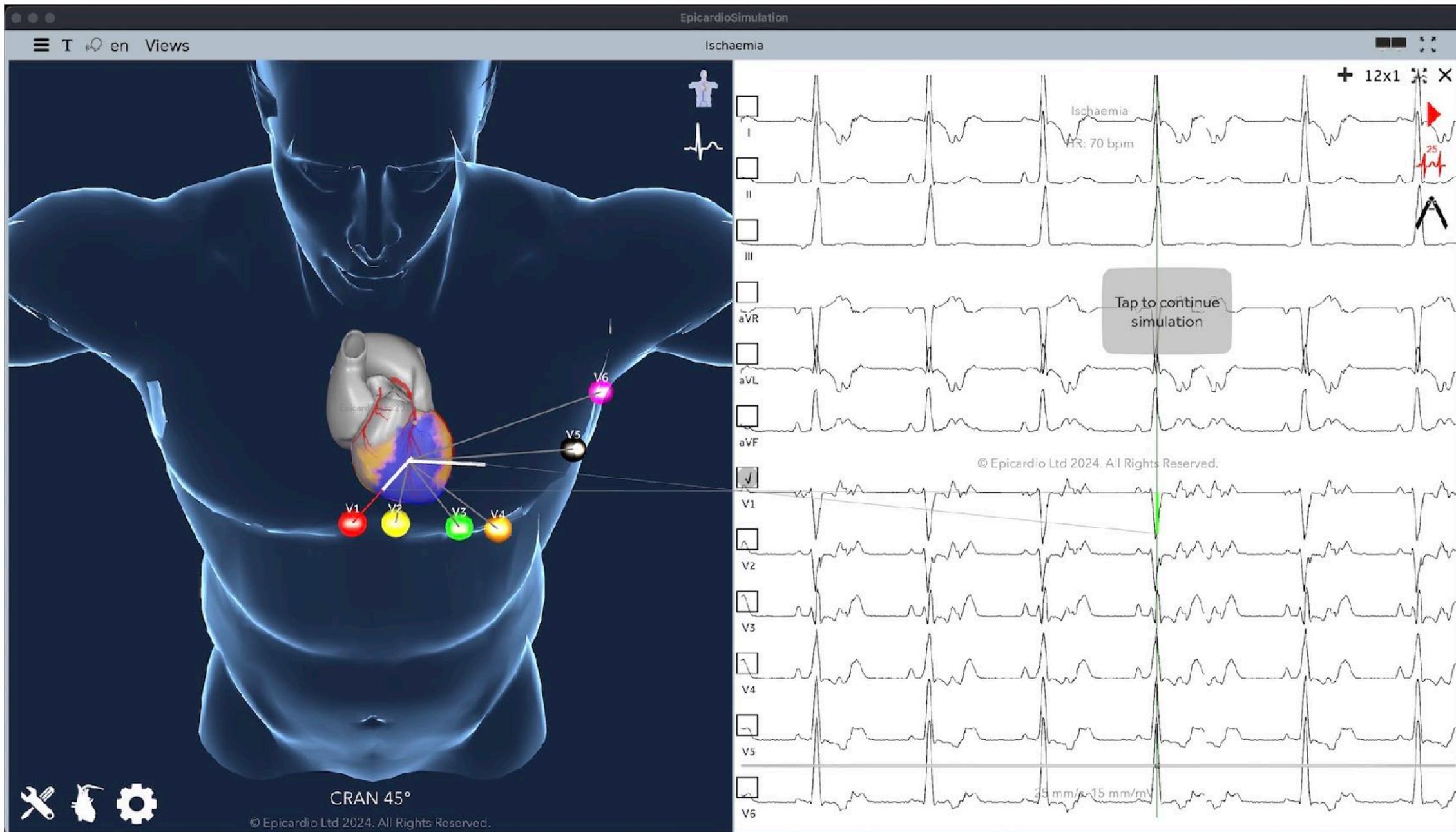
Click on

**Tutorials → Ischaemia and Infarction**

and follow the tutorial steps

Click on

**12 lead ECG and Patient ECG**



## Later on ...

Patient received immediate angiography and percutaneous coronary intervention (PCI) to open up the coronary artery.

After 48hrs, he suddenly notes palpitations, dizziness, and a sense of overwhelming malaise. One minute later, he turned grey, lost consciousness, and collapsed onto the floor.

What are the differentials of palpitations?

# Differentials of palpitations

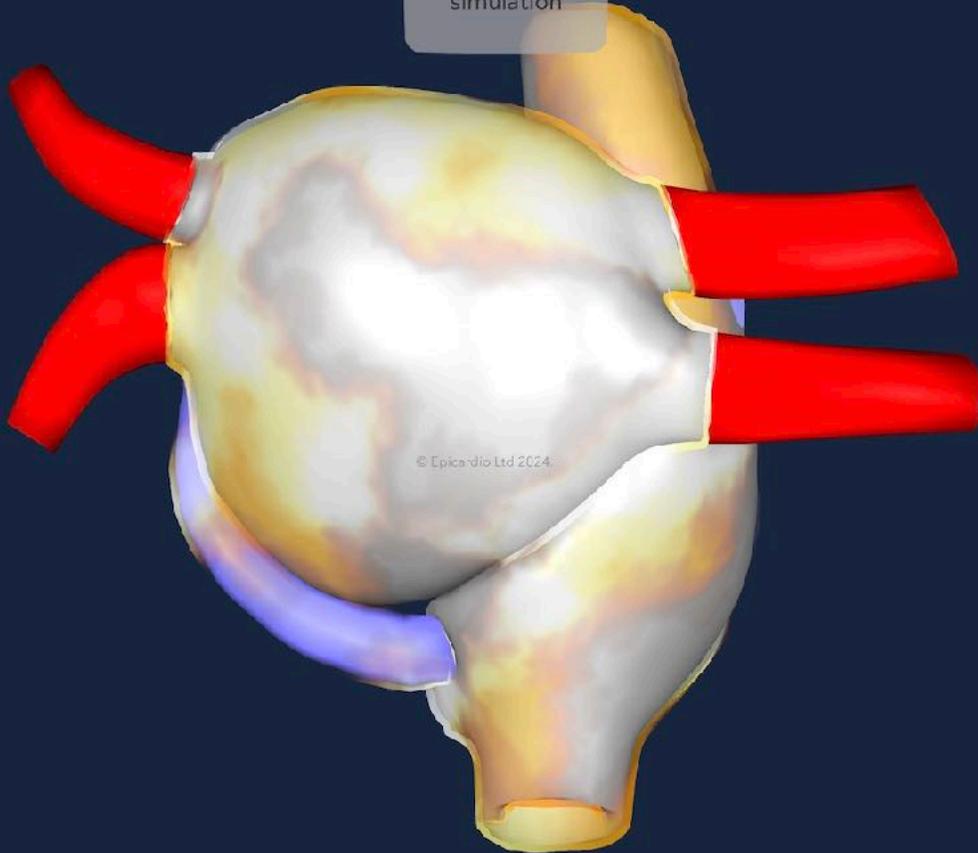
- **Arrhythmias:** Atrial Fibrillation, Atrial Flutter, Heart Blocks (1<sup>st</sup>/2<sup>nd</sup>/3<sup>rd</sup> degree), Supraventricular Tachycardia, Junctional Tachycardia, Ventricular Tachycardia, Ventricular Fibrillation
- **Psychiatric:** anxiety, panic attacks
- **Drugs and medications:** alcohol, caffeine, drugs (beta 2 agonists, digoxin)
- **Metabolic changes:** abnormalities in K<sup>+</sup>, Ca<sup>2+</sup>, Mg<sup>2+</sup>, hypoxia, hypercapnia, metabolic acidosis, thyroid disease

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Look up the following tutorials:

- Atrial fibrillation
- Atrial flutter
- Heart block
  - 1<sup>st</sup> degree, 2<sup>nd</sup> degree (Type I and II), 3<sup>rd</sup> degree
- Ventricular tachycardia
- Ventricular fibrillation

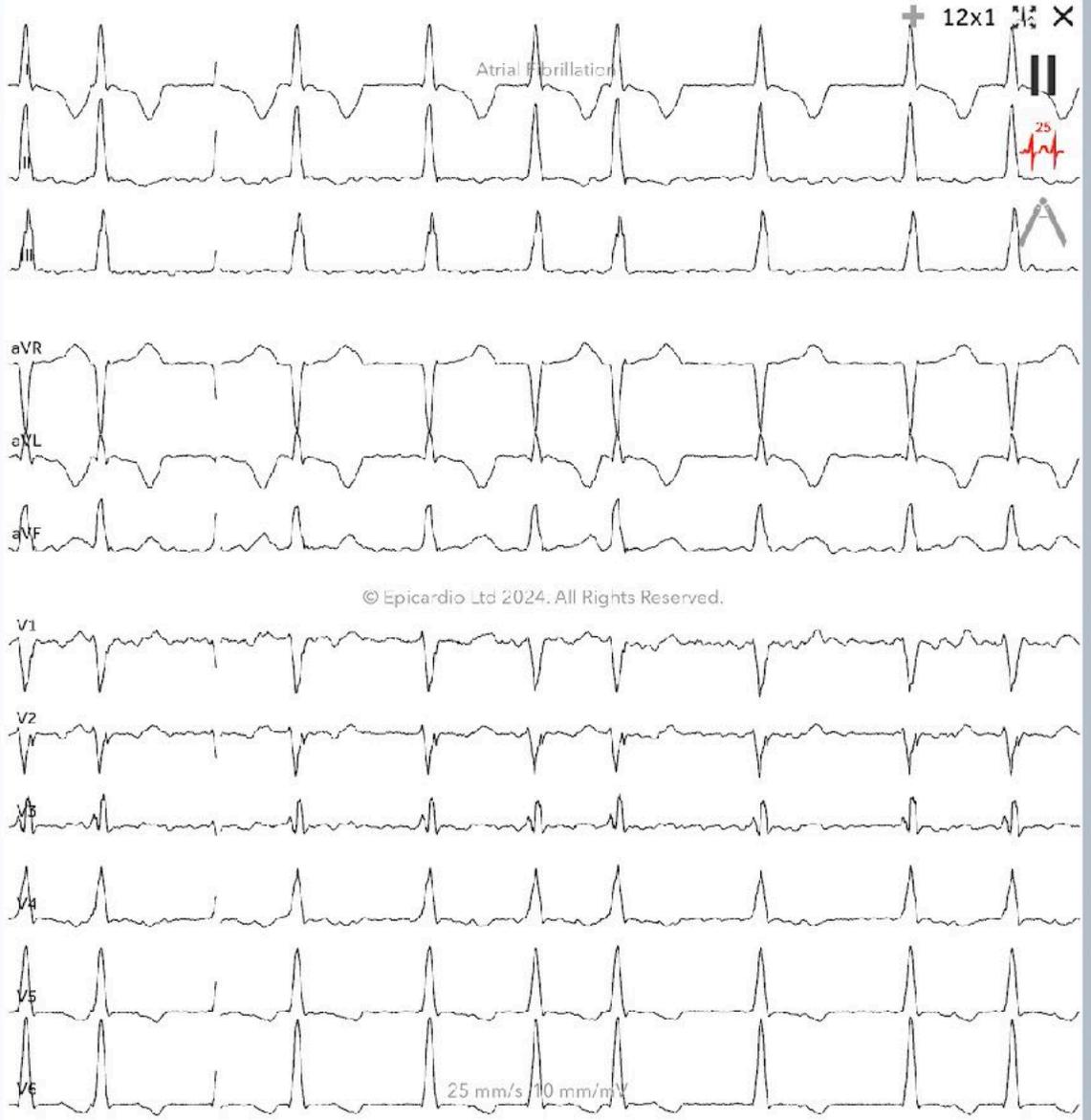
Tap to pause simulation

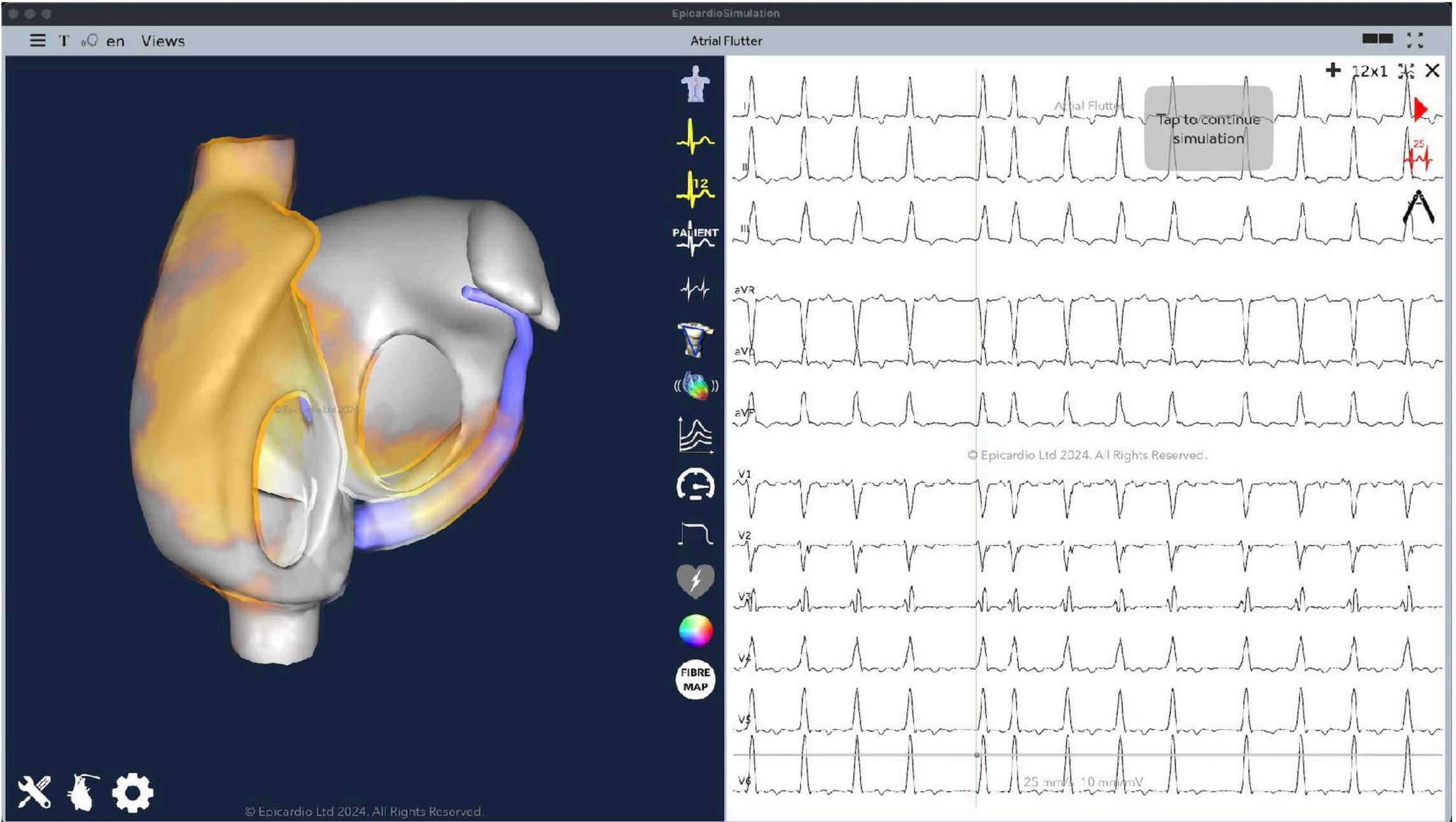


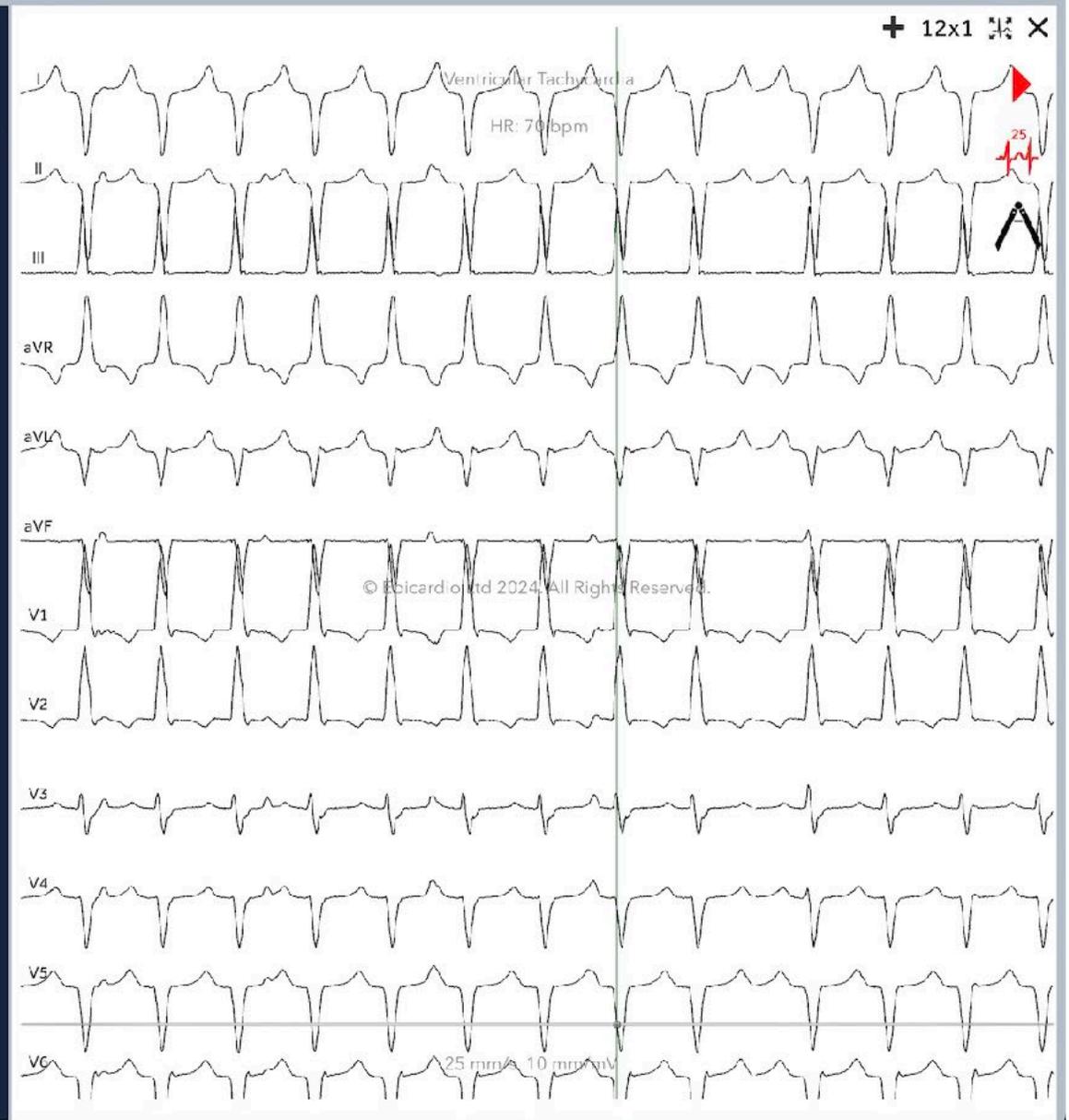
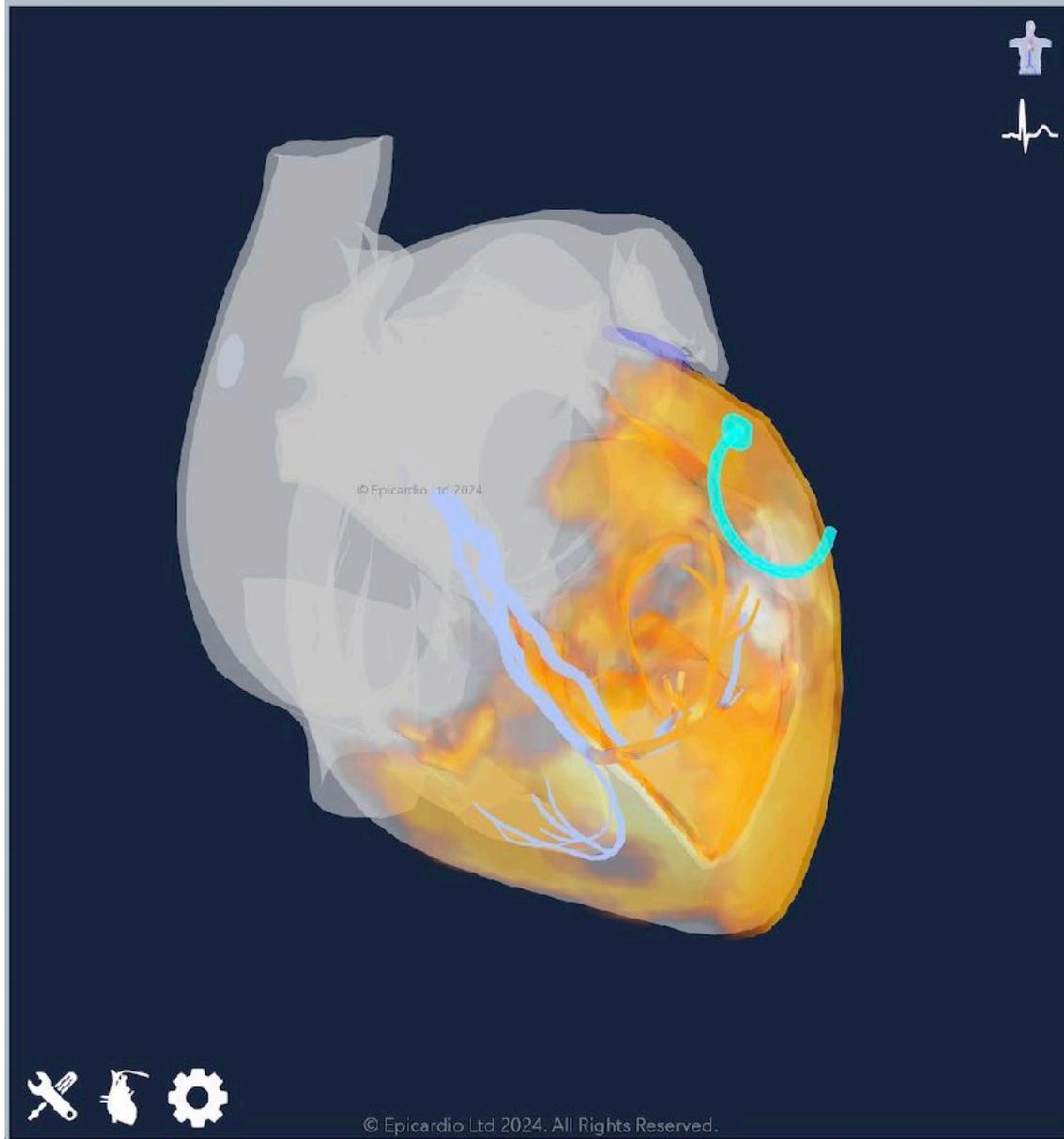
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Thank you!



# Any questions?

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