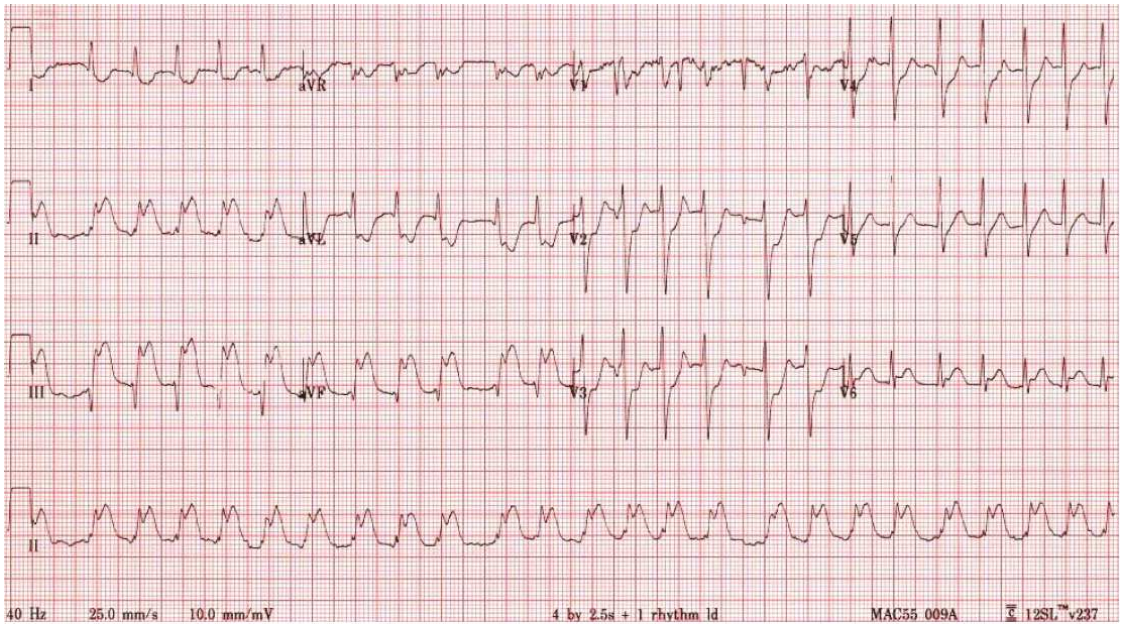
VAQ 2010.1.1 (ECG)

A 54 year old man with no prior medical history presents to your emergency department with one hour of chest pain. He is anxious and diaphoretic.
His observations are:

BP	100/60	mmHg supine	
RR	28	/min	
O_2 saturation	99	%	on 10L/min O_2 via Hudson mask



Describe and interpret his ECG (100%)

This ECG shows rapid AF, significant inferior ST elevation in keeping with inferior myocardial infarction, and significant ST depression in leads V1-4 suggestive of posterior wall infarction.
This ECG meets criteria for thrombolysis.
Of note he is hypotensive which could represent extensive infarct with cardiogenic shock, right ventricular involvement, or be a rate related phenomenon compounding his cardiac ischaemia.
He will require analgesia, antiplatelet agents, likely fluid resuscitation, and revascularisation.

Rate - 110-150
Rhythm - atrial fibrillation
Axis - normal

Waves

P – n/a
Q – in III, aVF
R – prominent R in V1-3 could represent 'inverted Q' of posterior infarction
S – no diagnostic features
T – inverted I, aVR, aVL
U – not seen

Intervals

PR – n/a
QRS – narrow complex
ST – 5-8mm elevation II, III, aVF consistent with inferior MI
1-2mm elevation in V6, consider high lateral infarction
depression in I, aVL, V1-5 in keeping with reciprocal changes, possible posterior MI
QTc – approx 350

Consistent with: AF, inferior MI, possible posterior wall MI, possible high lateral wall MI
Thrombolysable STEMI both on ECG criteria and symptoms/time since onset or PTCA.
Hypotension also suggests RV involvement in context of inferior MI