



Rapid EKG Review



Subtle Signs

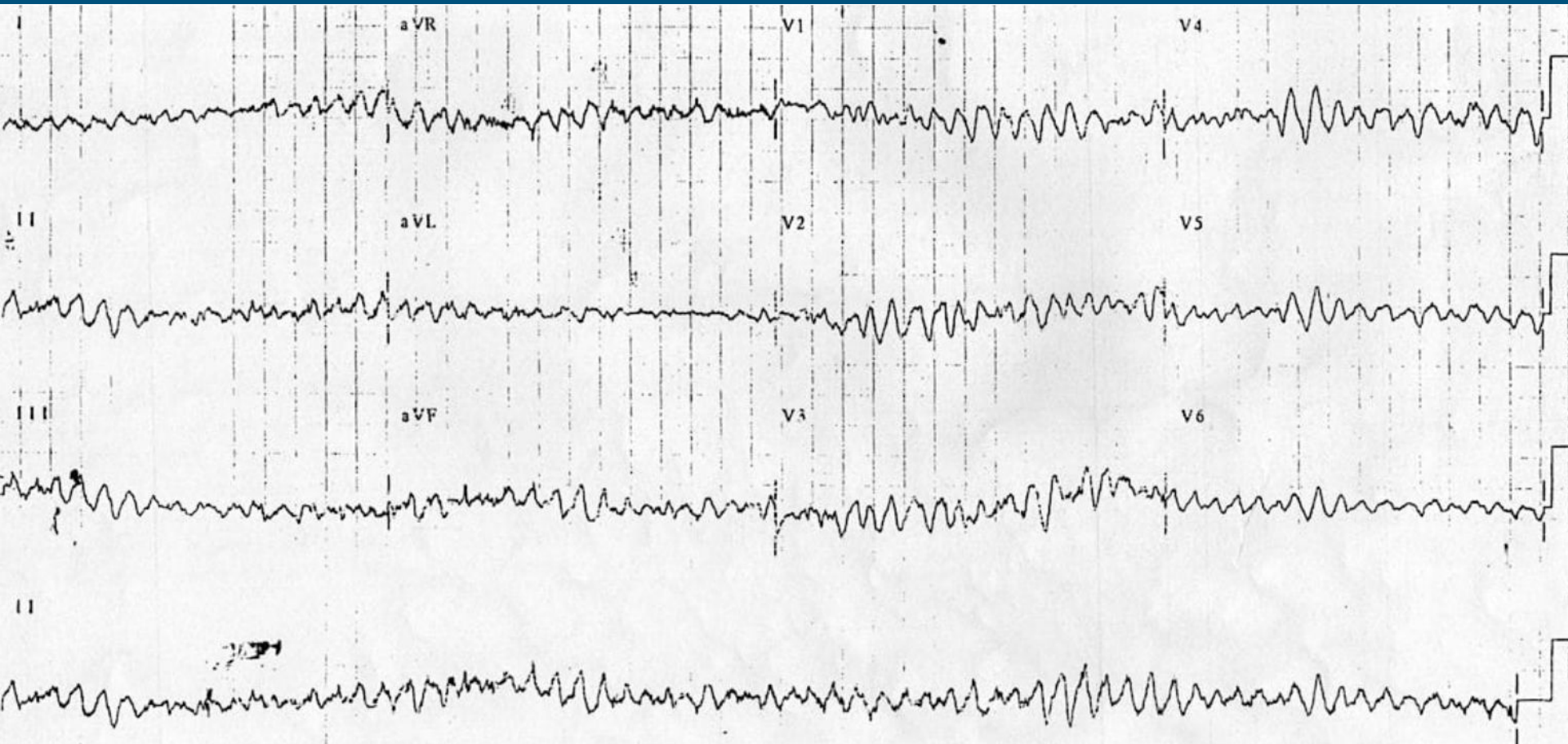


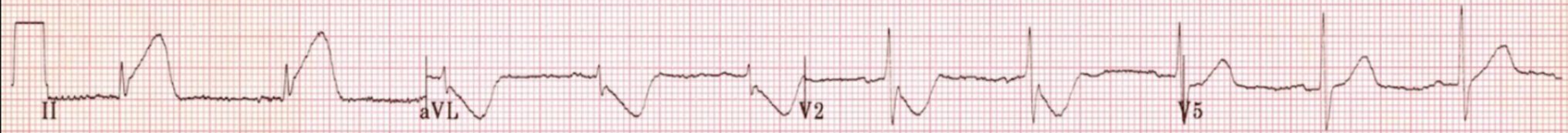
Mateo Garcia MD

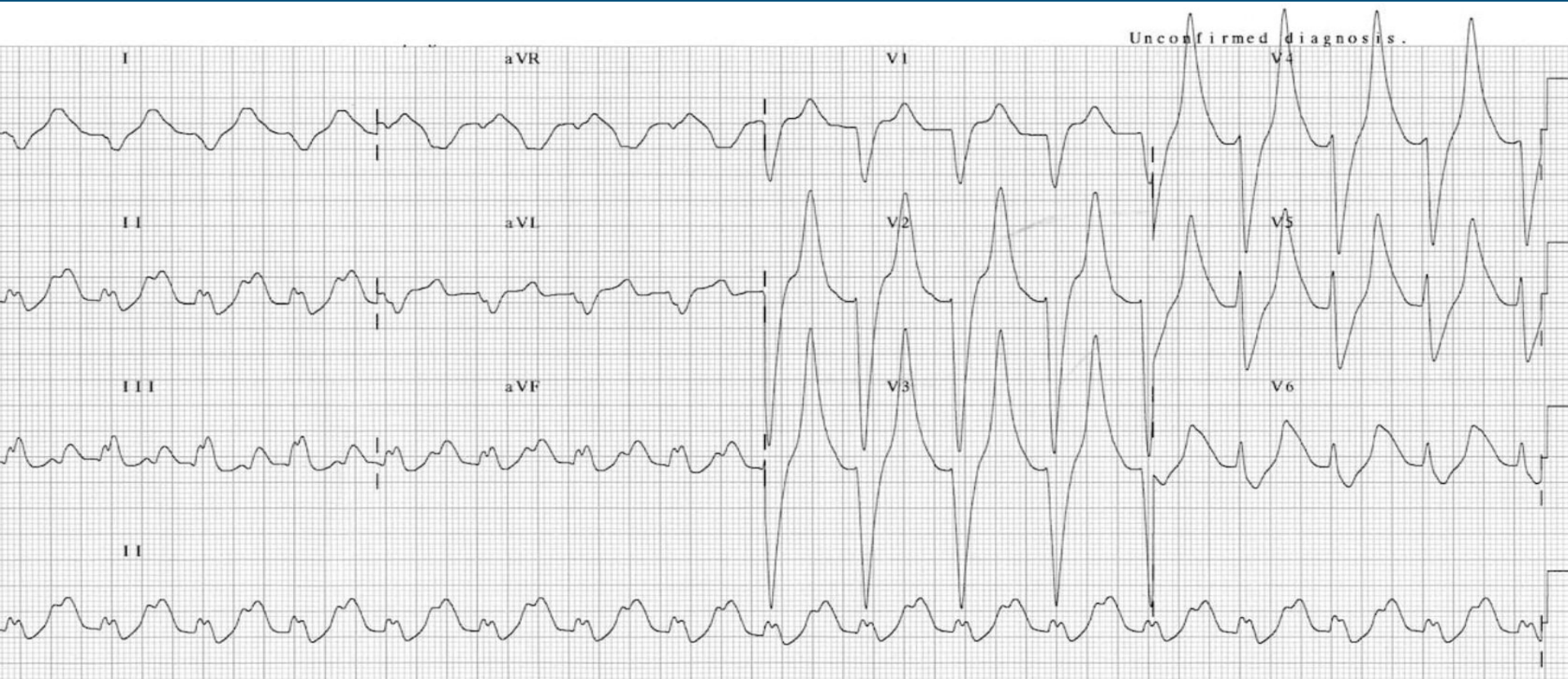


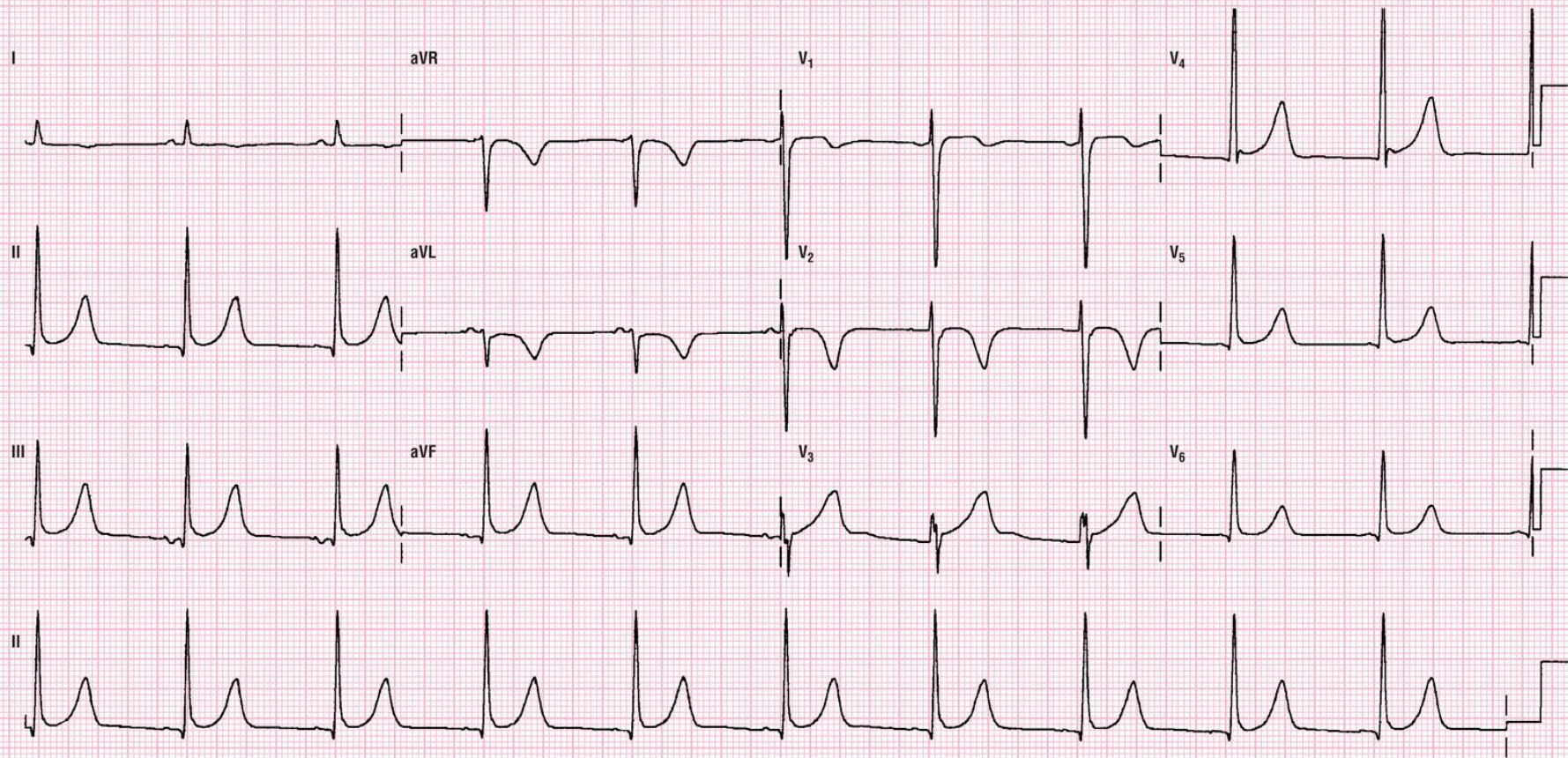
Objectives

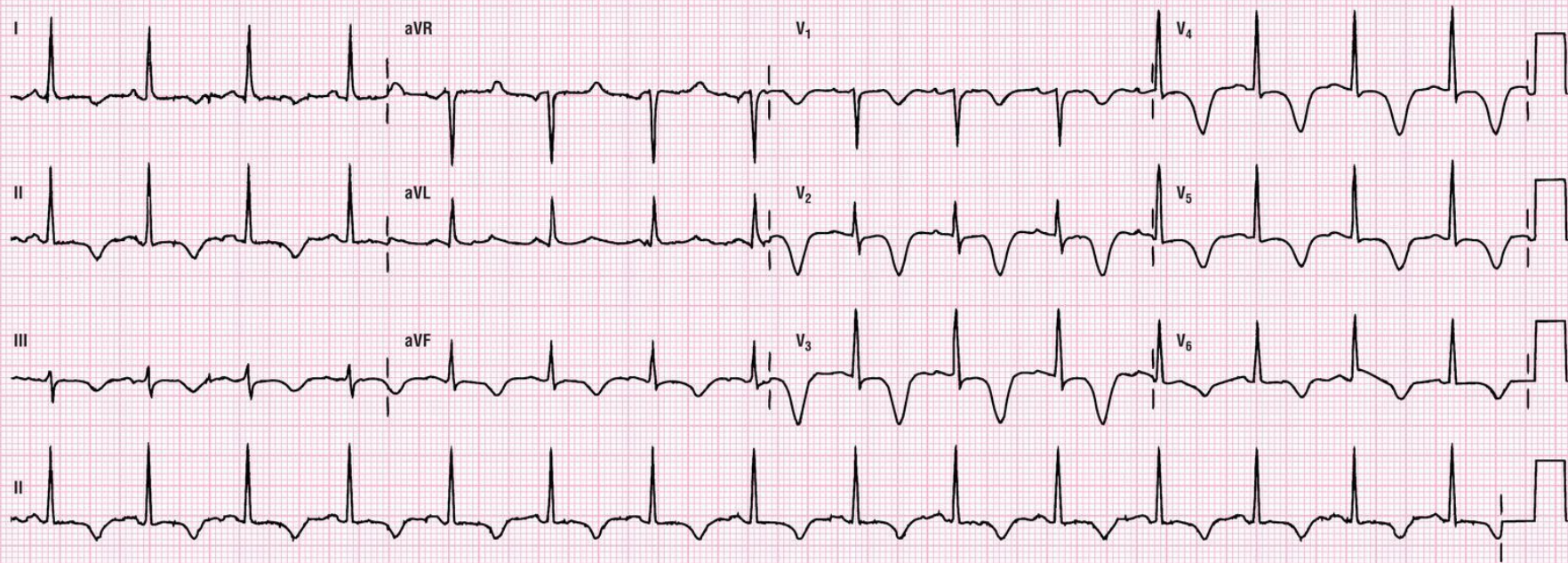
- Discuss and identify common critical EKG/rhythm strips.
- Discuss methodological approach to EKG evaluation.
- Identify The territories of the heart based on a 12-lead EKG.
- Review EKG with subtle findings that are imperative to consider.

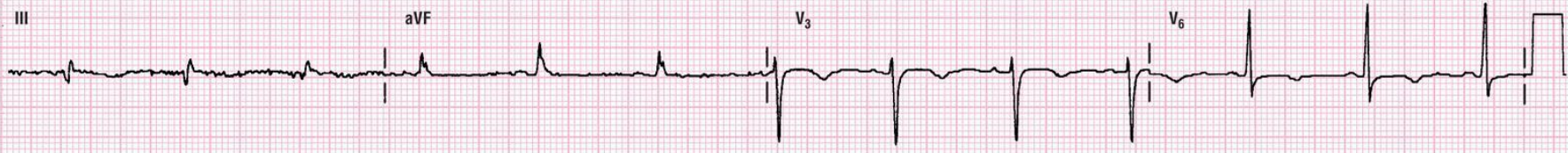




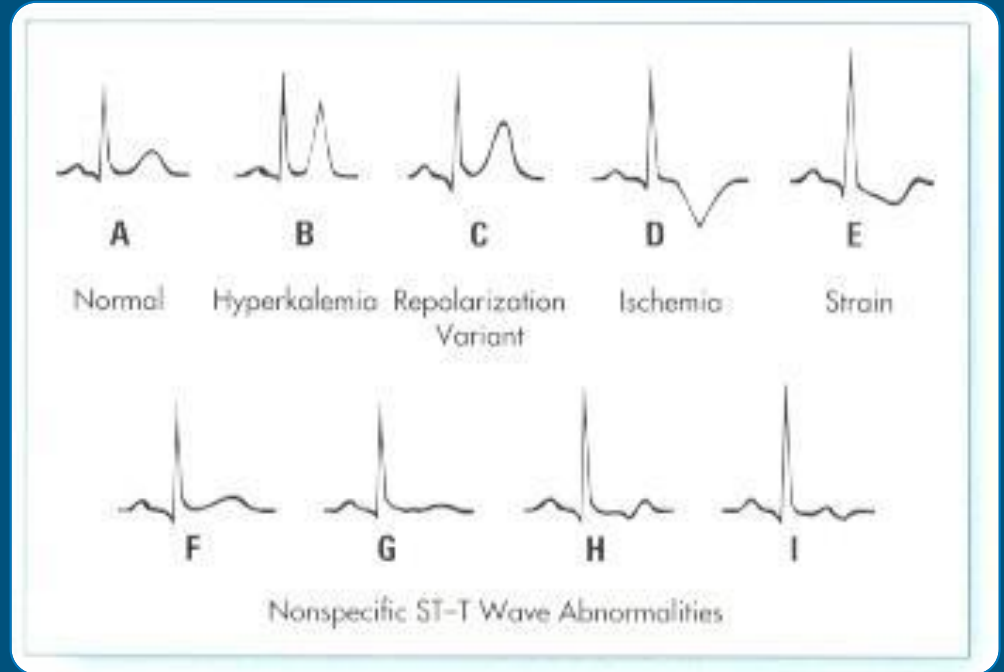








Alterations in T Wave Morphology

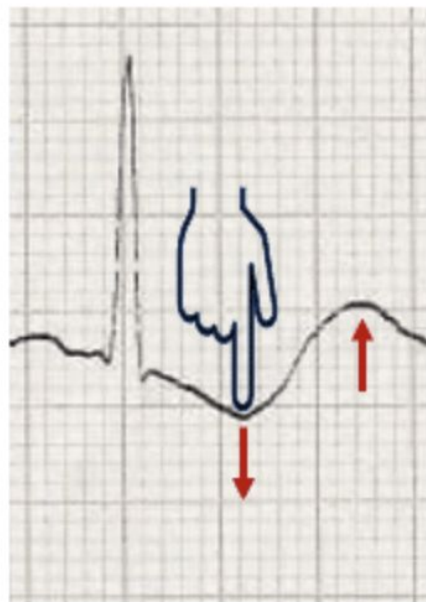


Isolated T Wave Inversion

TABLE 10-6: Leads That May *Normally* Display T Wave Inversion

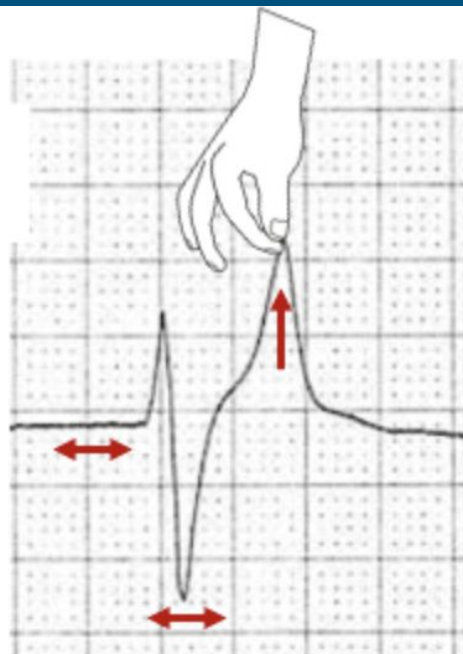
- Lead III
- Lead aVF
- Lead aVL
- Lead V₁ (and sometimes also lead V₂)
- Lead aVR

Note #1: In general we ignore lead aVR, since it rarely contributes useful information to our interpretation.



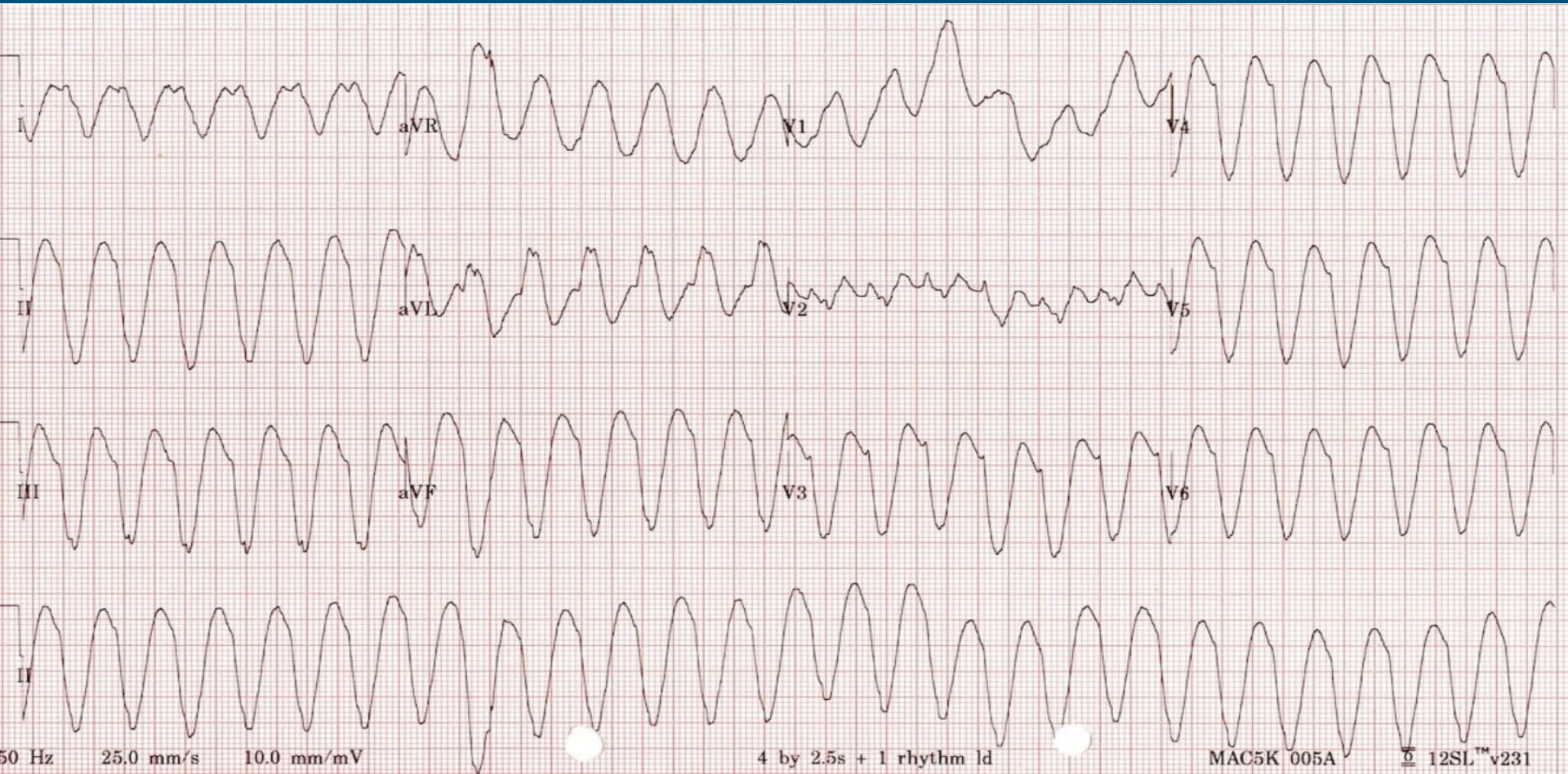
Hypokalaemia

T wave inversion
ST depression
Prominent U wave

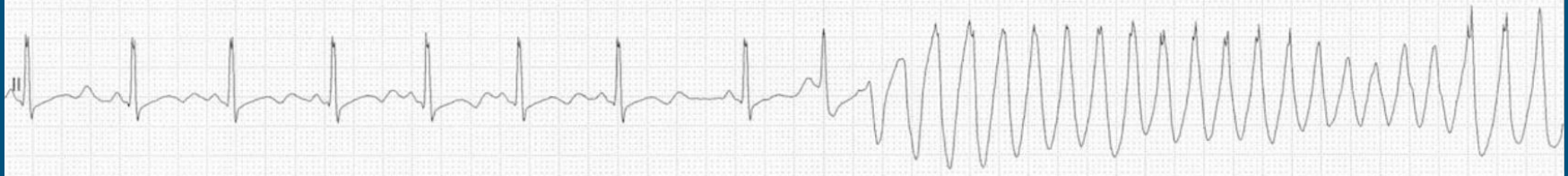
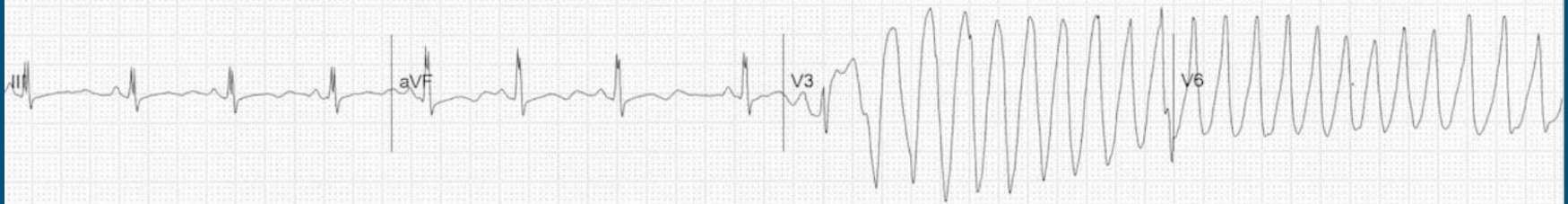


Hyperkalaemia

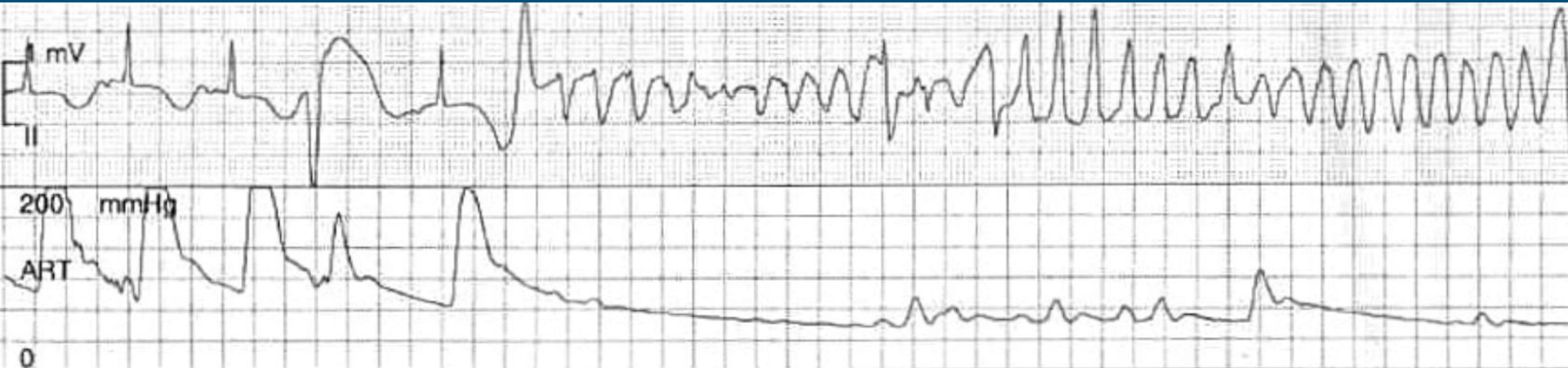
Peaked T waves
P wave flattening
PR prolongation
Wide QRS complex

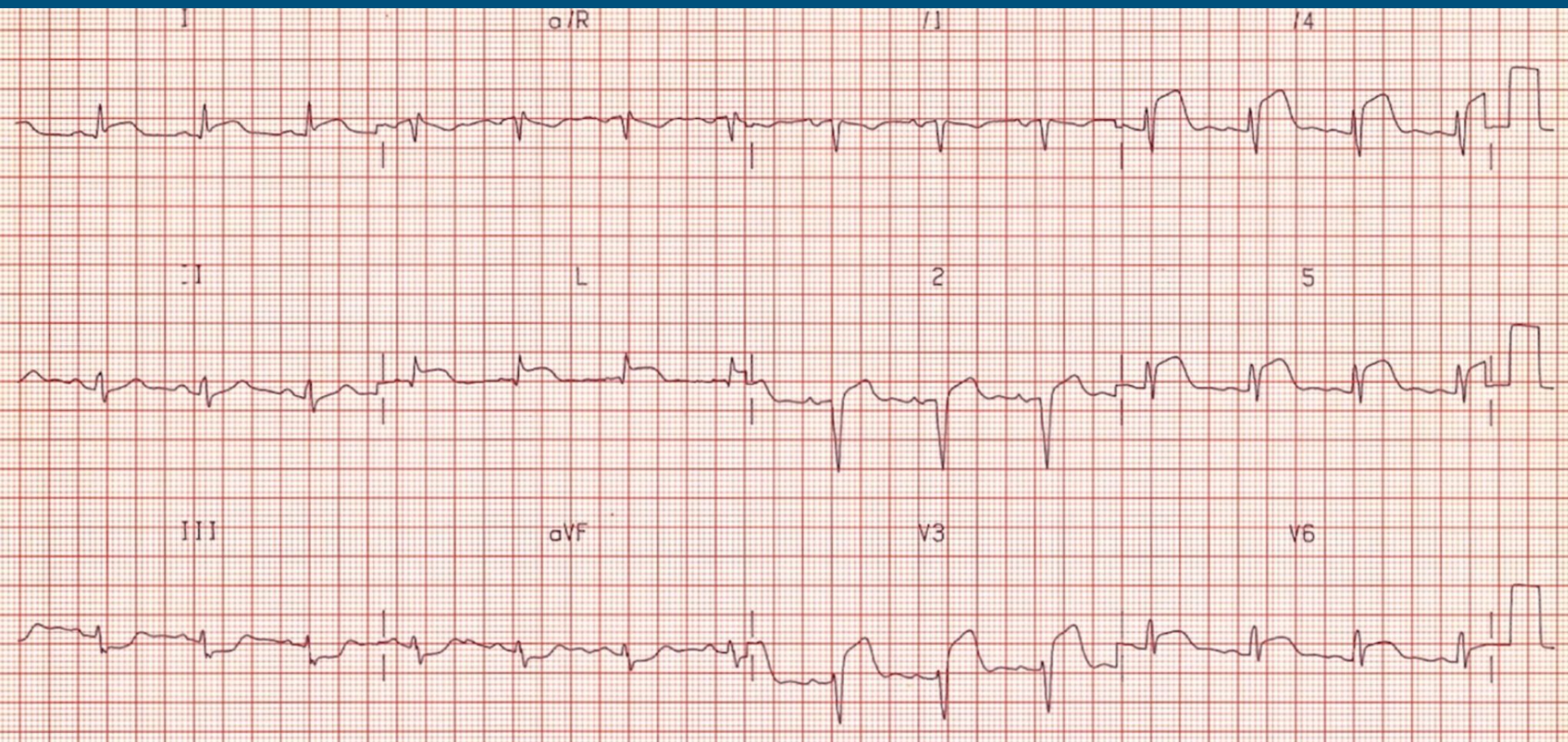


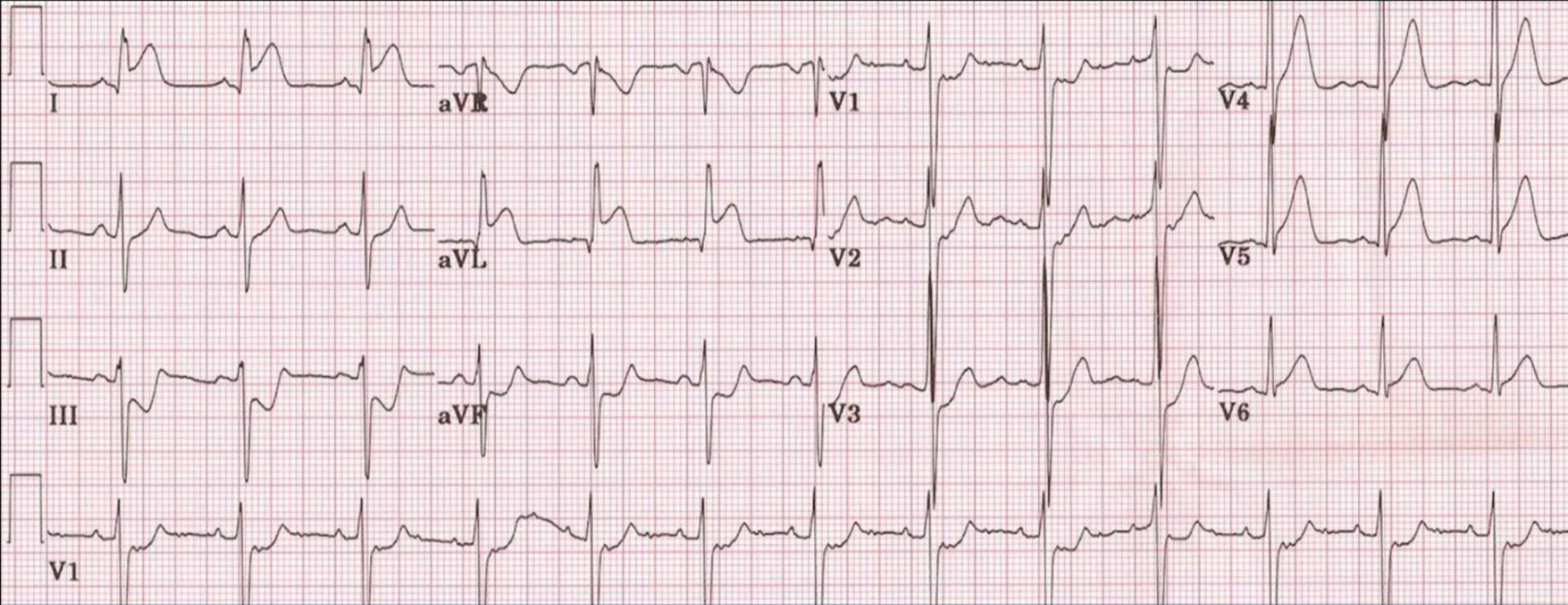
HR 90 PVC 9 RESP 22 T1 38.3



Torsades w/ art line tracing







STEMI

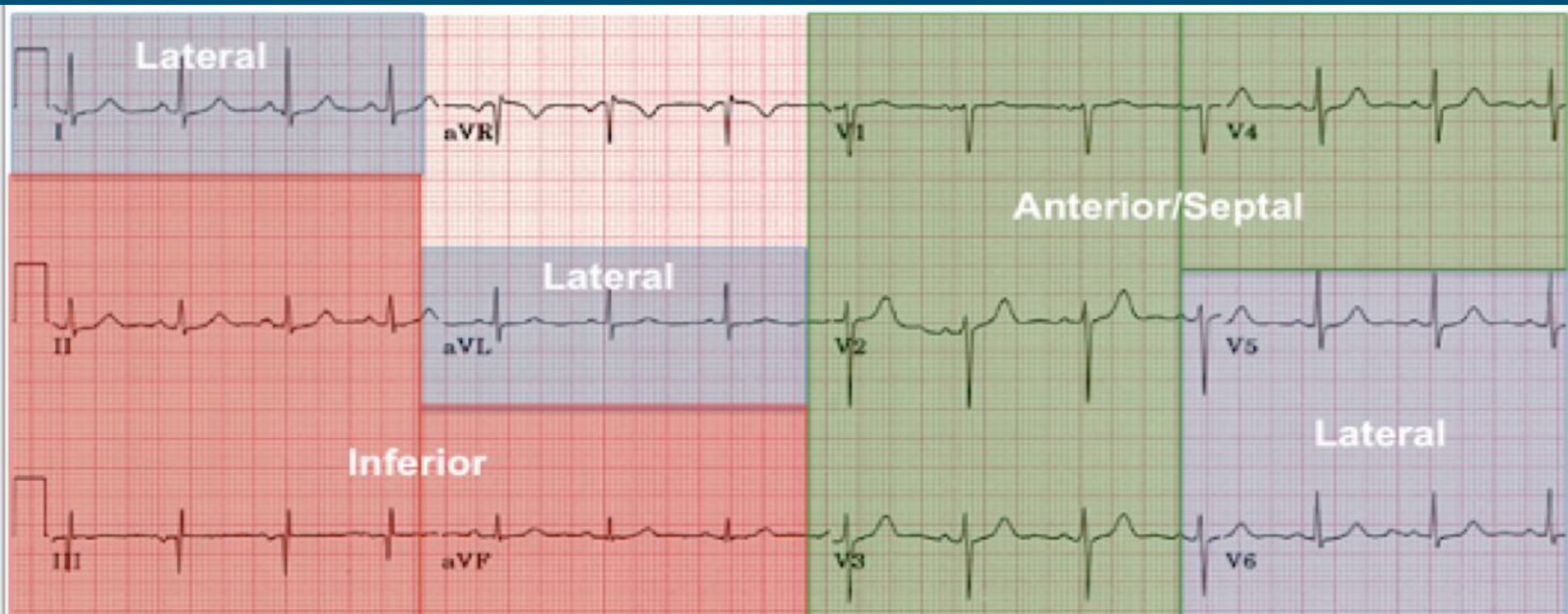
ST-elevation in 2 contiguous leads that is:

- Men < 40: 2.5 mm ST-elevation in V2 or V3, 1 mm in any other lead
- Men > 40: 2.0 mm ST-elevation in V2 or V3, 1 mm in any other lead
- Women: >1.5 mm ST-elevation in V2 or V3, 1 mm in any other lead

	<40 yo	>40 yo	All Ages
V2 -or- V3	>2.5 mm	>2 mm	>1.5 mm
ALL other Leads	>1 mm	>1 mm	>1 mm

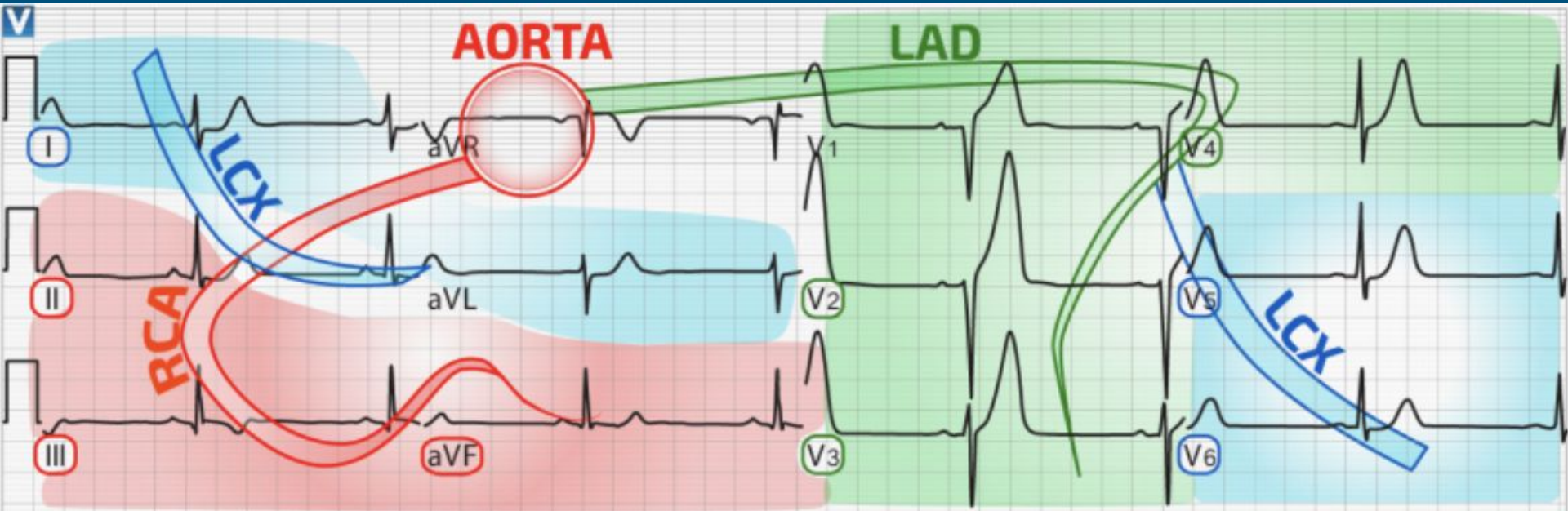
STEMI's have a 90-minute door-to-balloon time mandate from the Center for Medicare Services (CMS).

- False positives: left ventricular hypertrophy, left ventricular aneurysm, benign early repolarization, brugada, pericarditis, LBBB, ventricular paced rhythm
- False negatives: subtle ST-elevation, ST-depression with ongoing symptoms, difficult ECGs, STEMI equivalents.

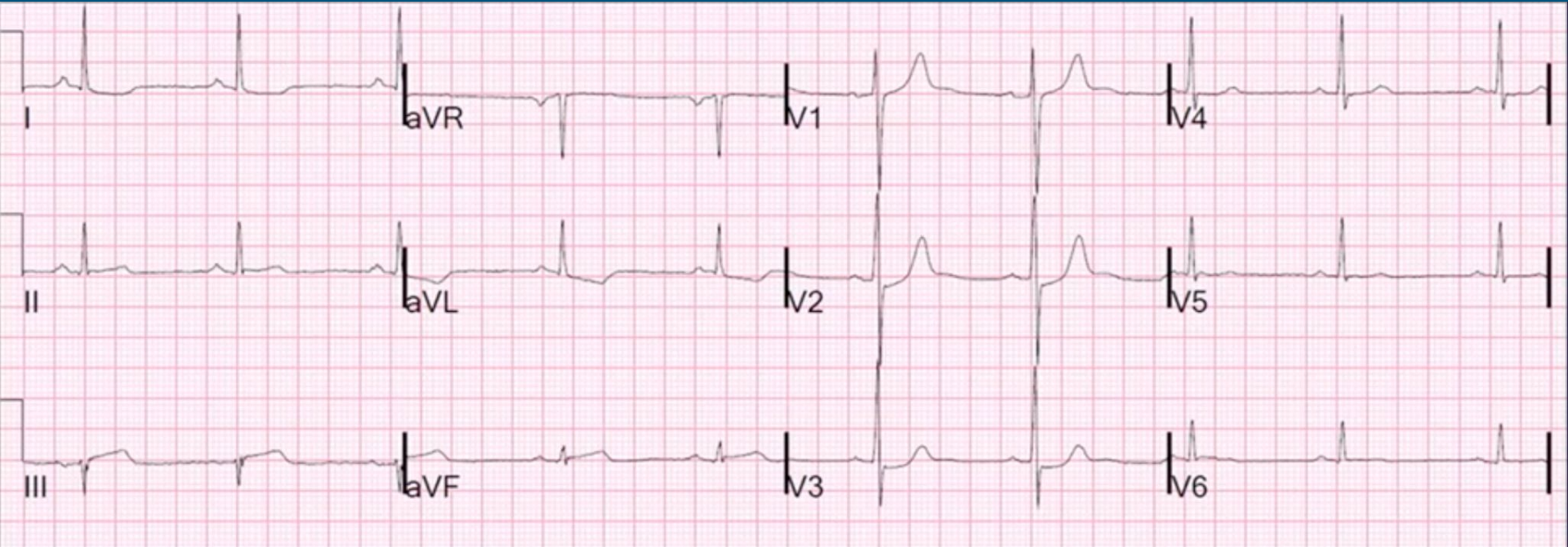


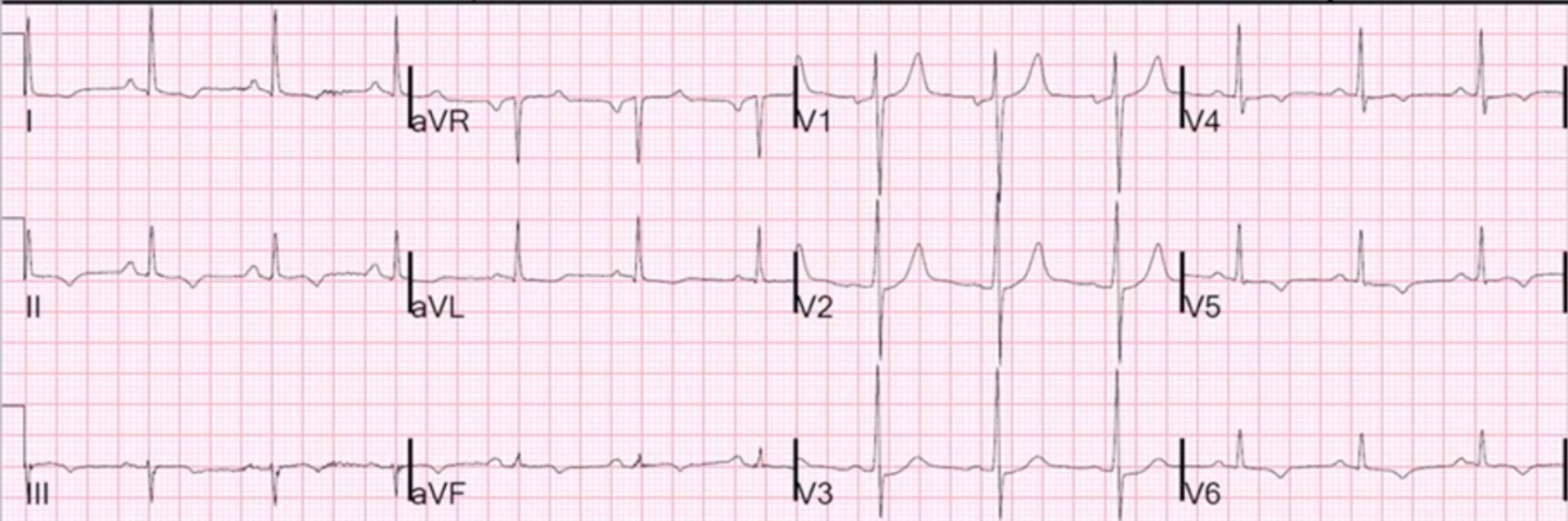
Coronary Anatomy & ECG Leads <http://rebelem.com/rebel-reviews/>

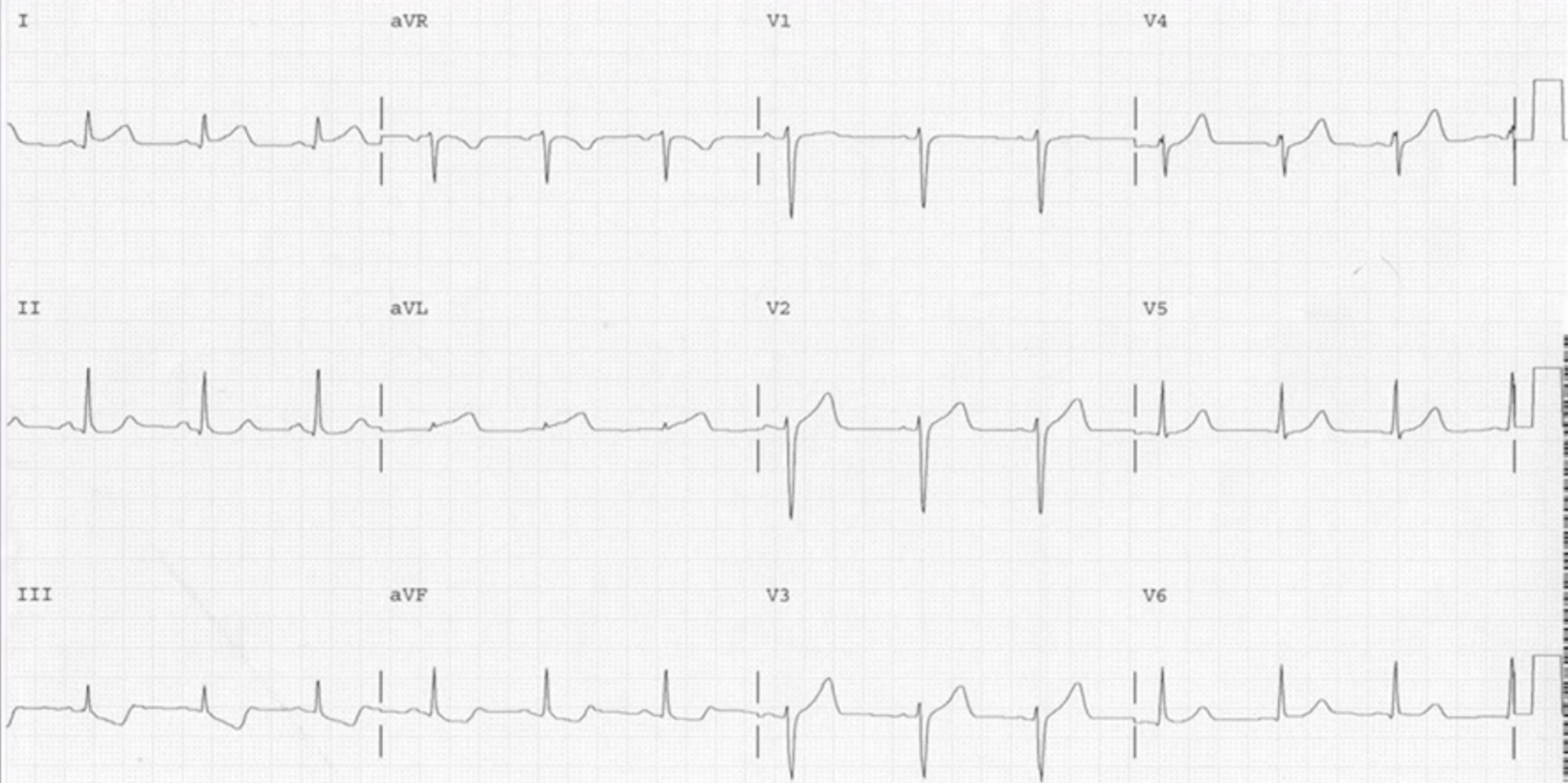
Lateral Leads	I, aVL, V5 – V6	LCx or Diagonal of LAD
Inferior Leads	II, III, aVF	RCA and/or LCx
Anterior/Septal Leads	V1 – V4	LAD



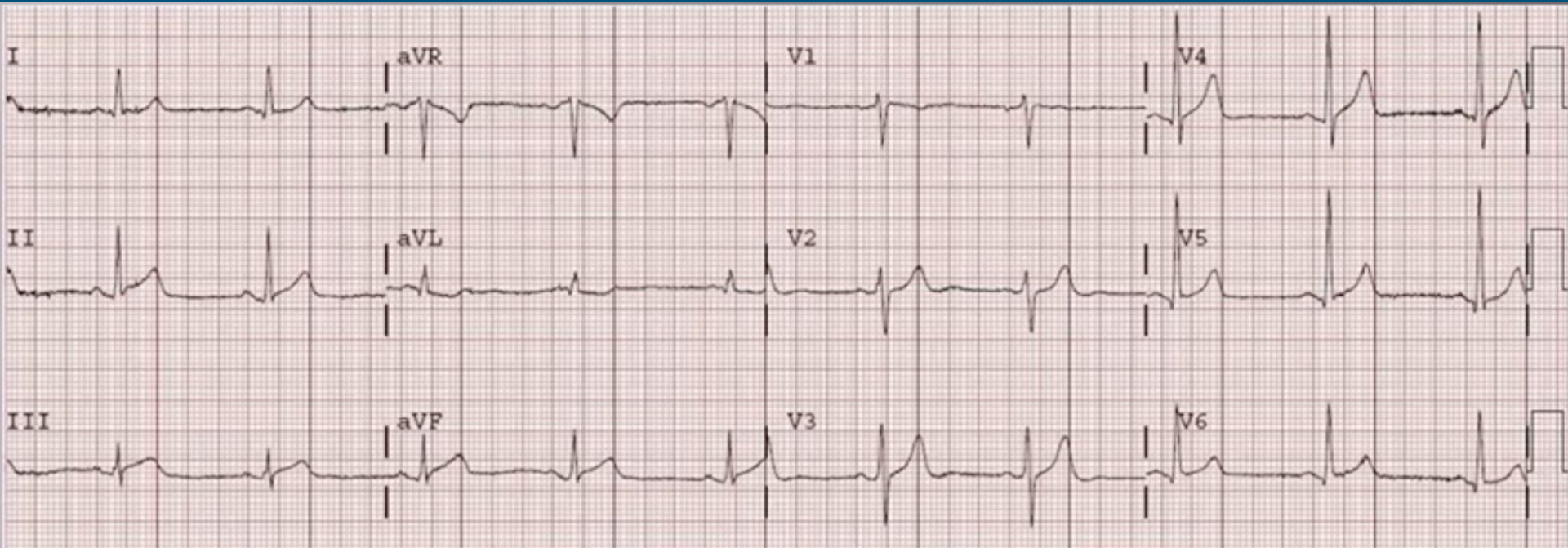
Benign early repolarization?

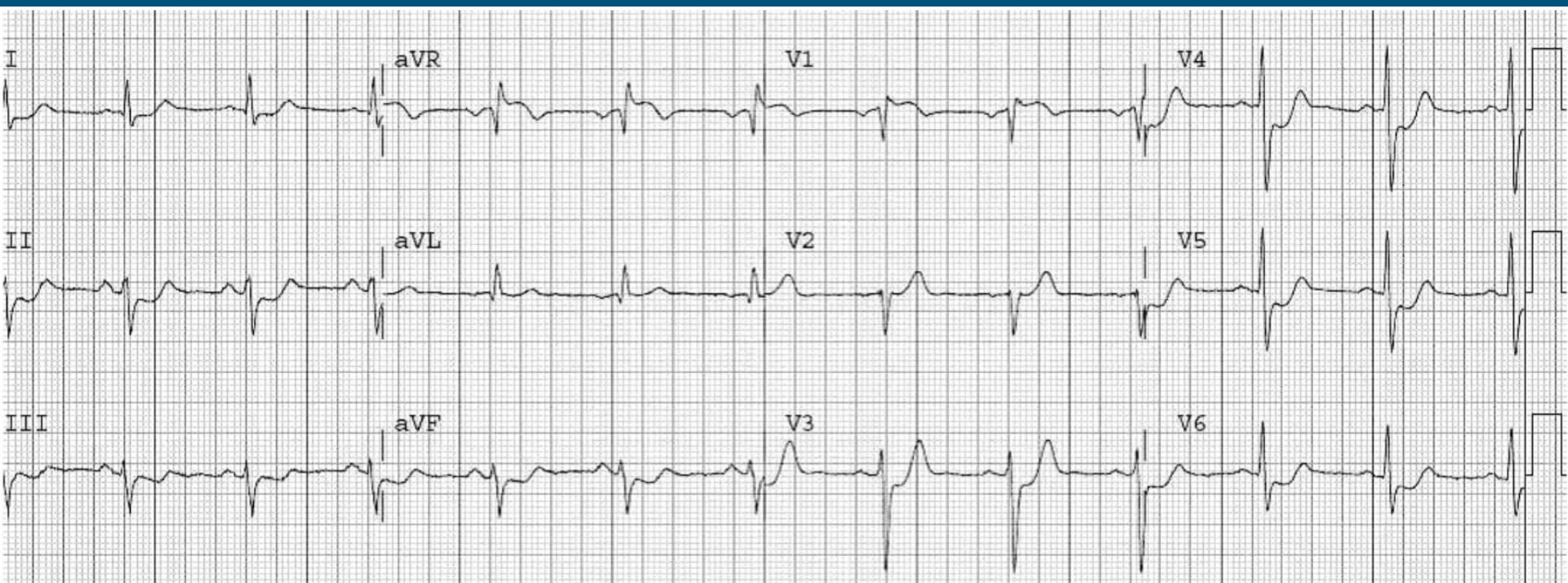


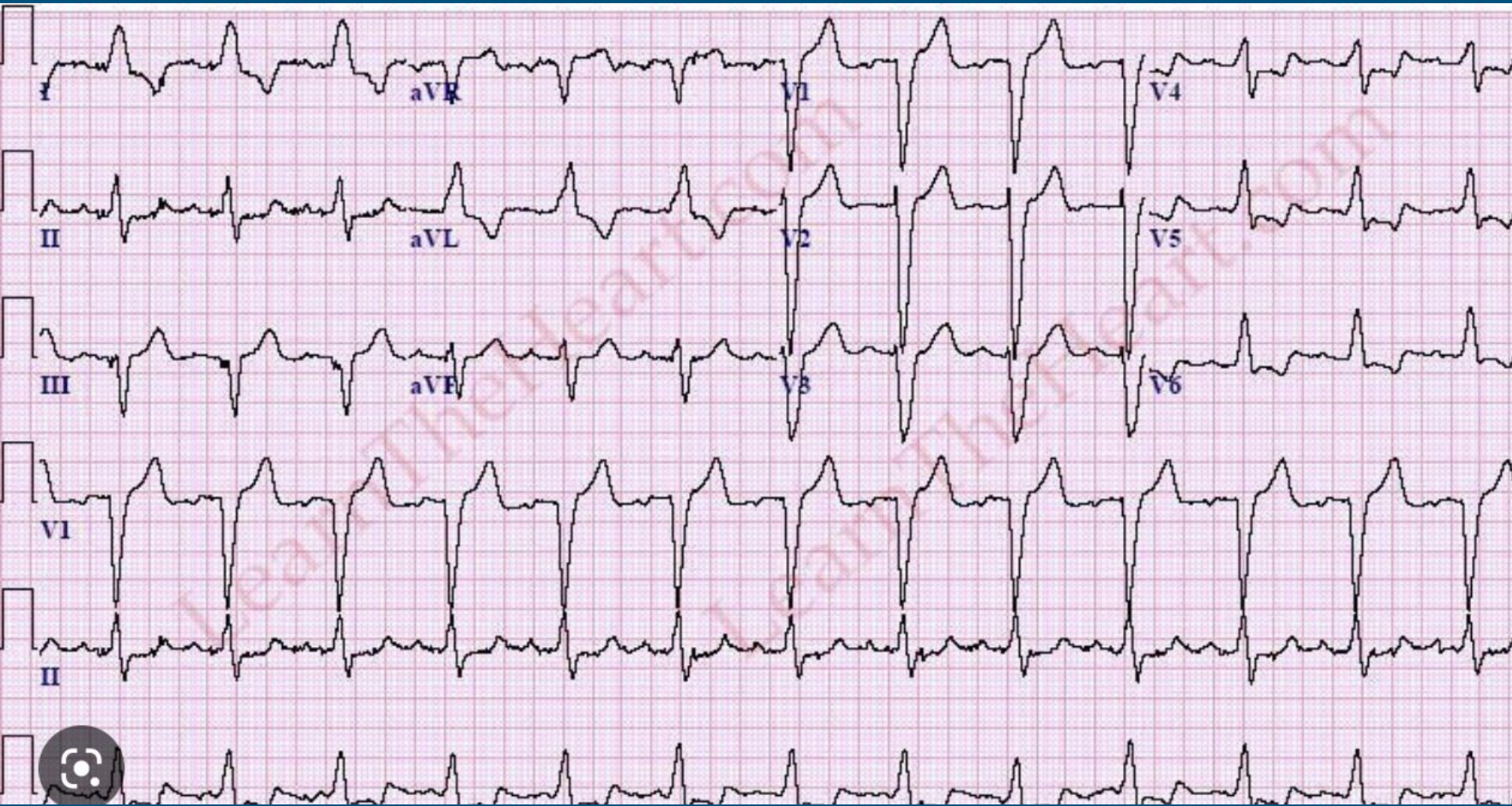




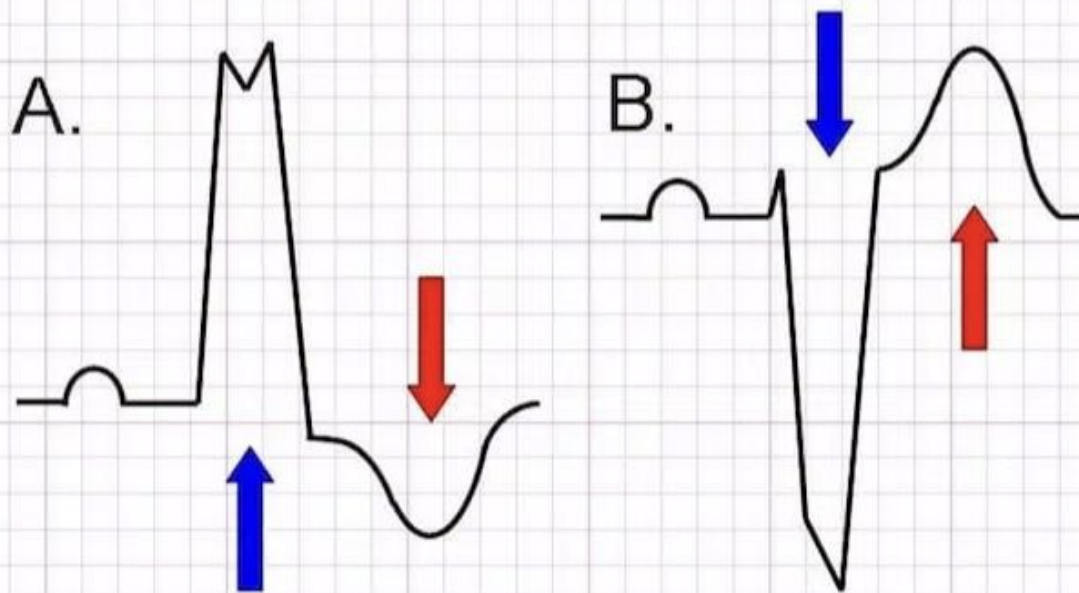
Always look for reciprocal changes.





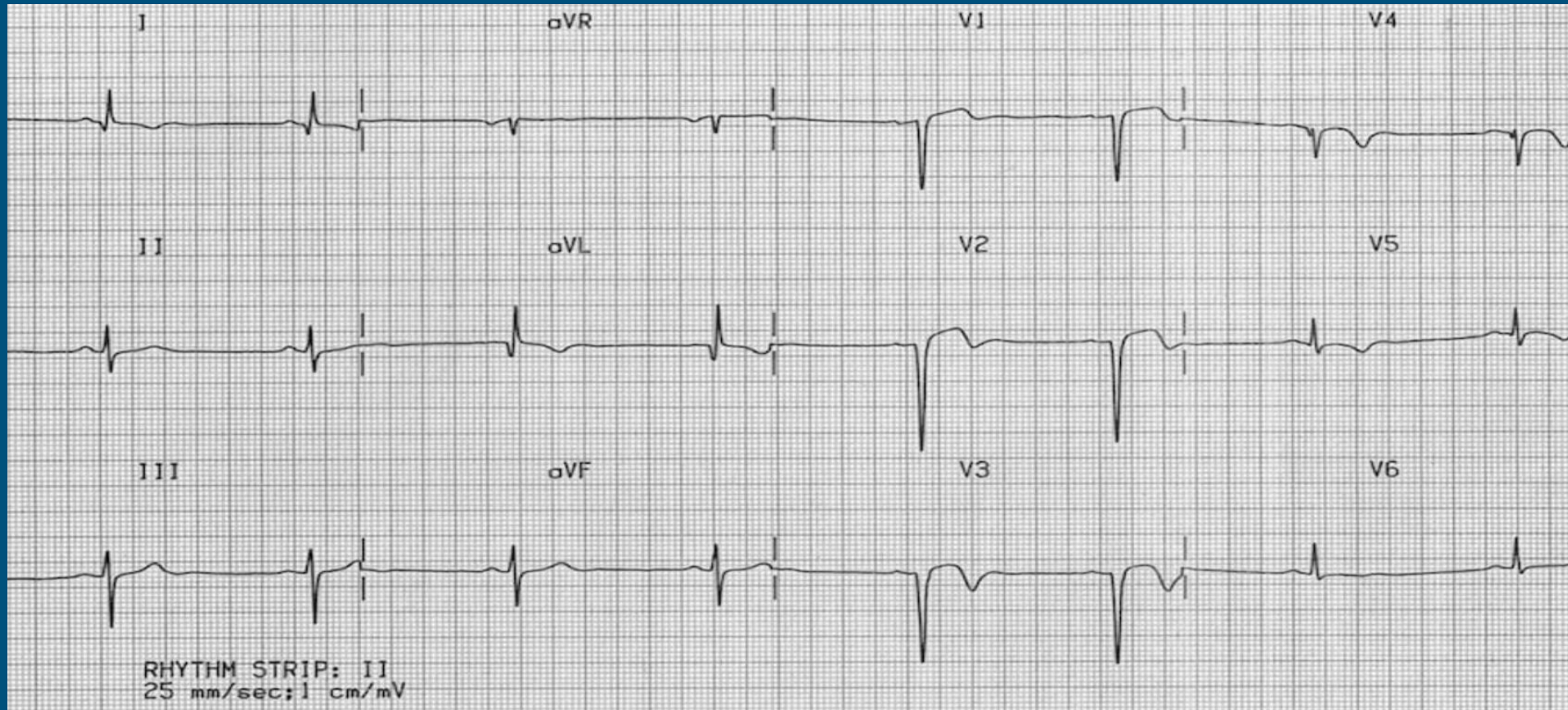


Discordant ST-Segments and T-Waves

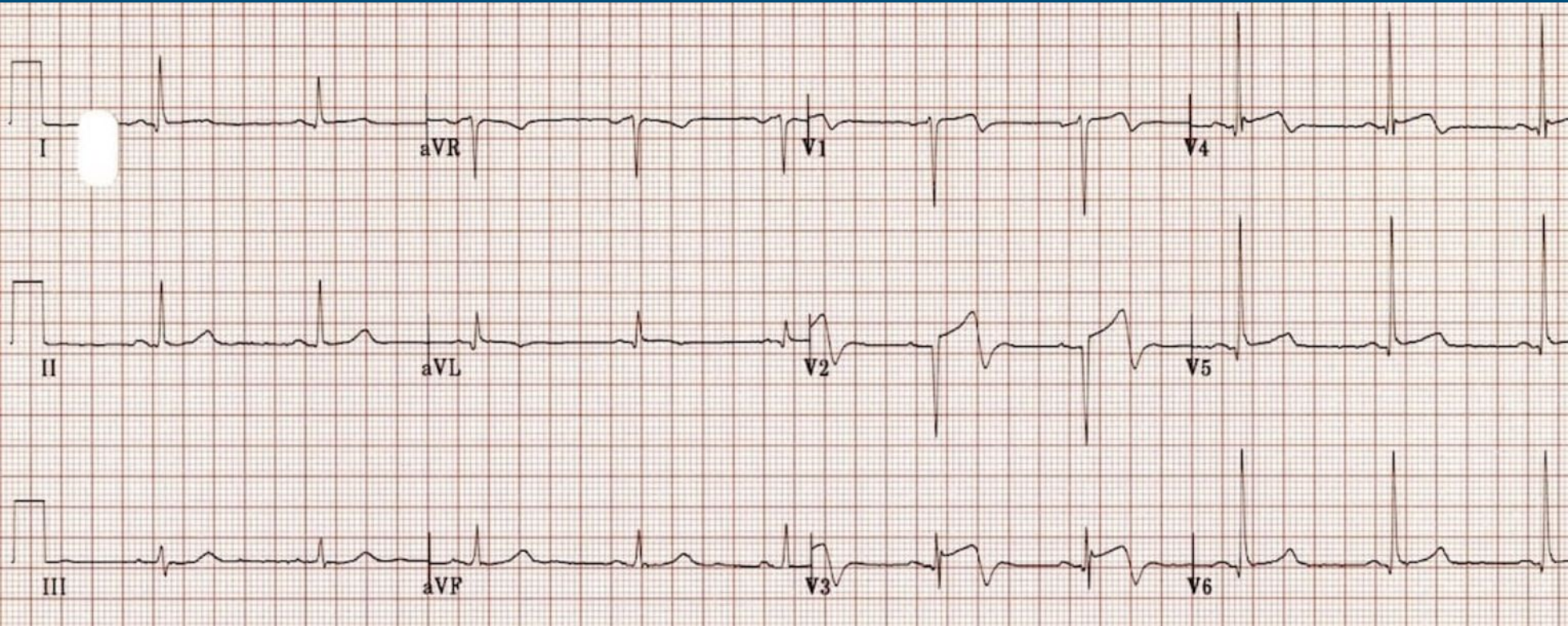


Normal for LBBB and paced rhythm

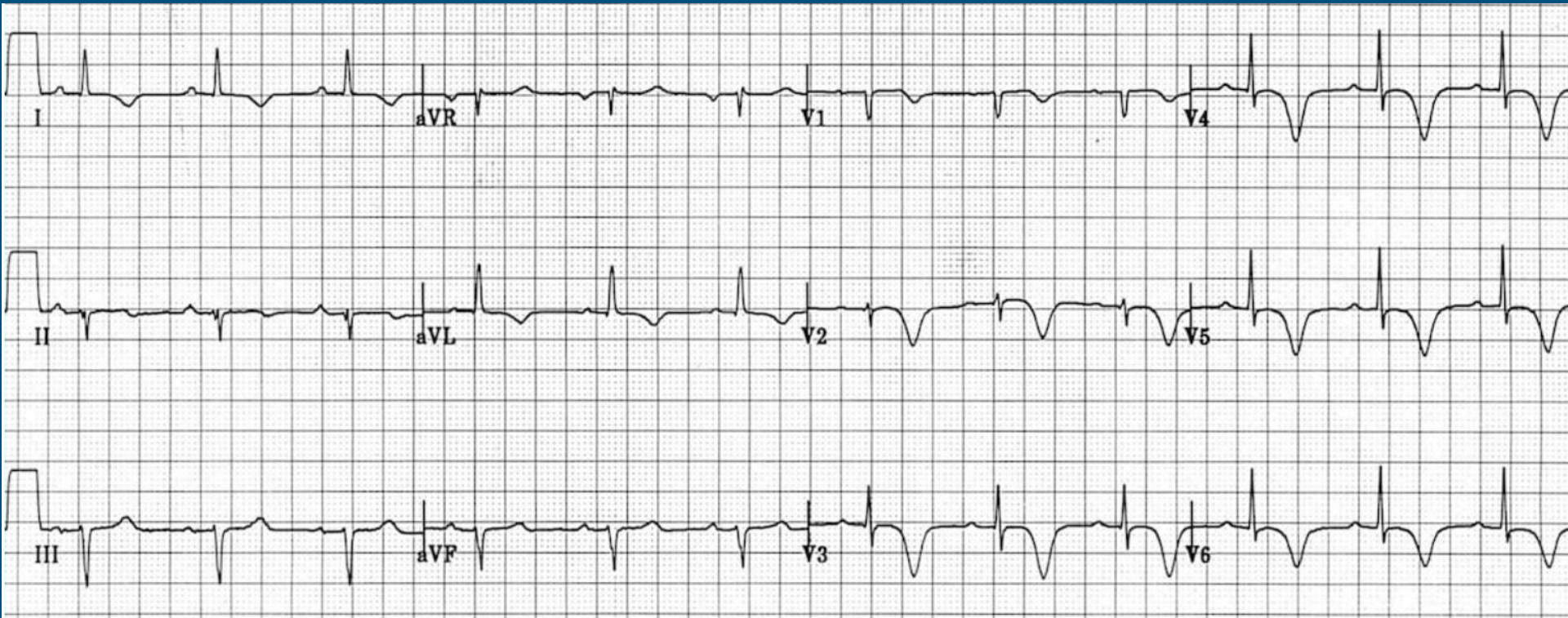
Two weeks ago had his first heart attack?



Wellens Warning



Wellens Warning



What questions do you have?

