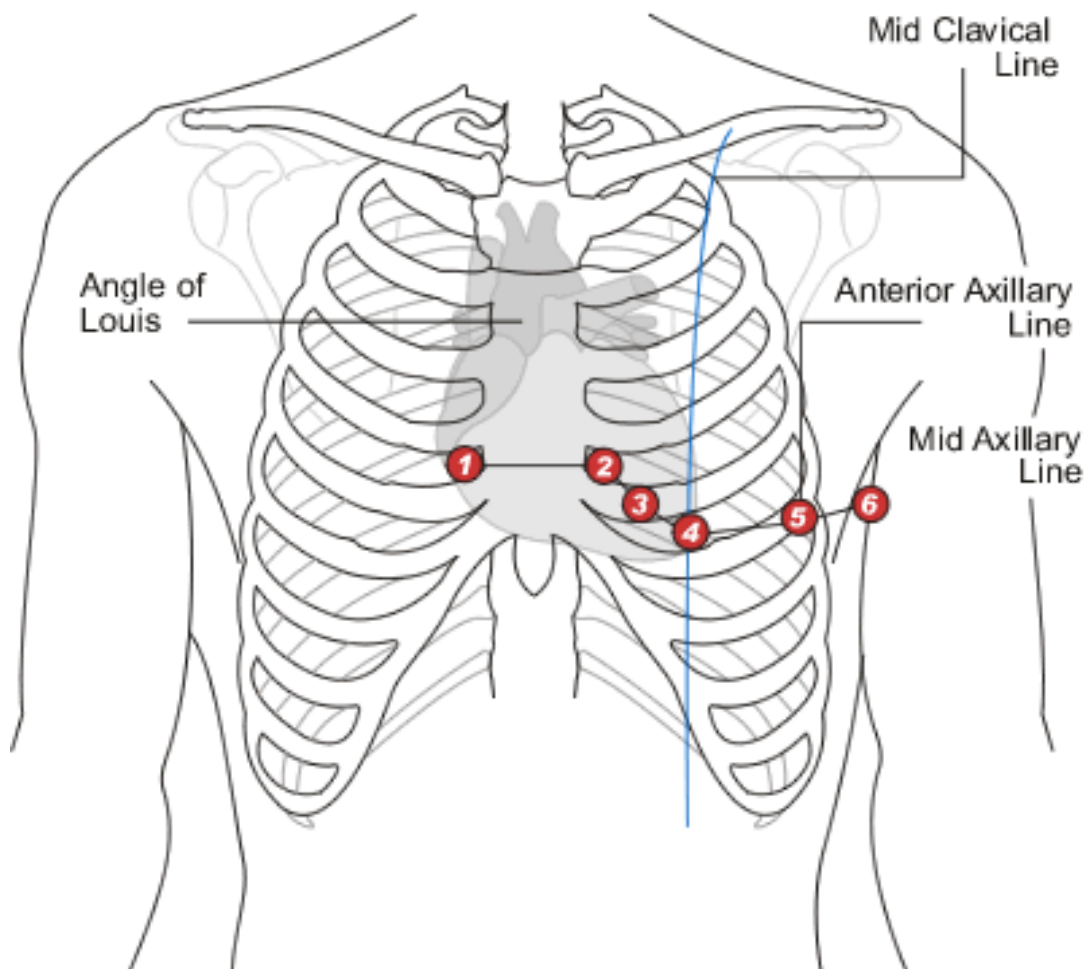


Patient Treatment Protocol Aids

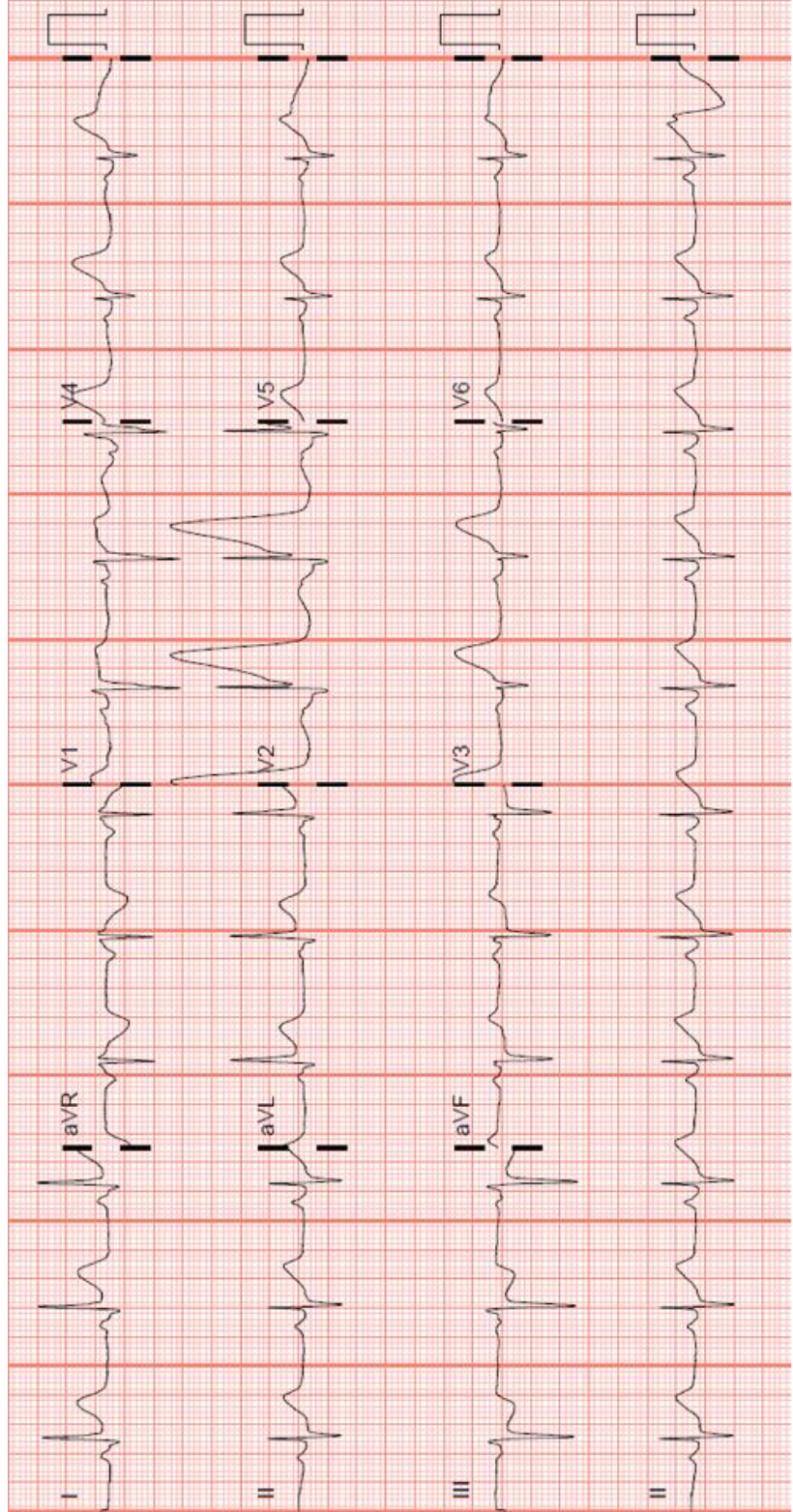


- V1: Fourth intercostal space to the right of the sternum.
- V2: Fourth intercostal space to the Left of the sternum.
- V3: Directly between leads V2 and V4.
- V4: Fifth intercostal space at midclavicular line.
- V5: Level with V4 at left anterior axillary line.
- V6: Level with V5 at left midaxillary line.

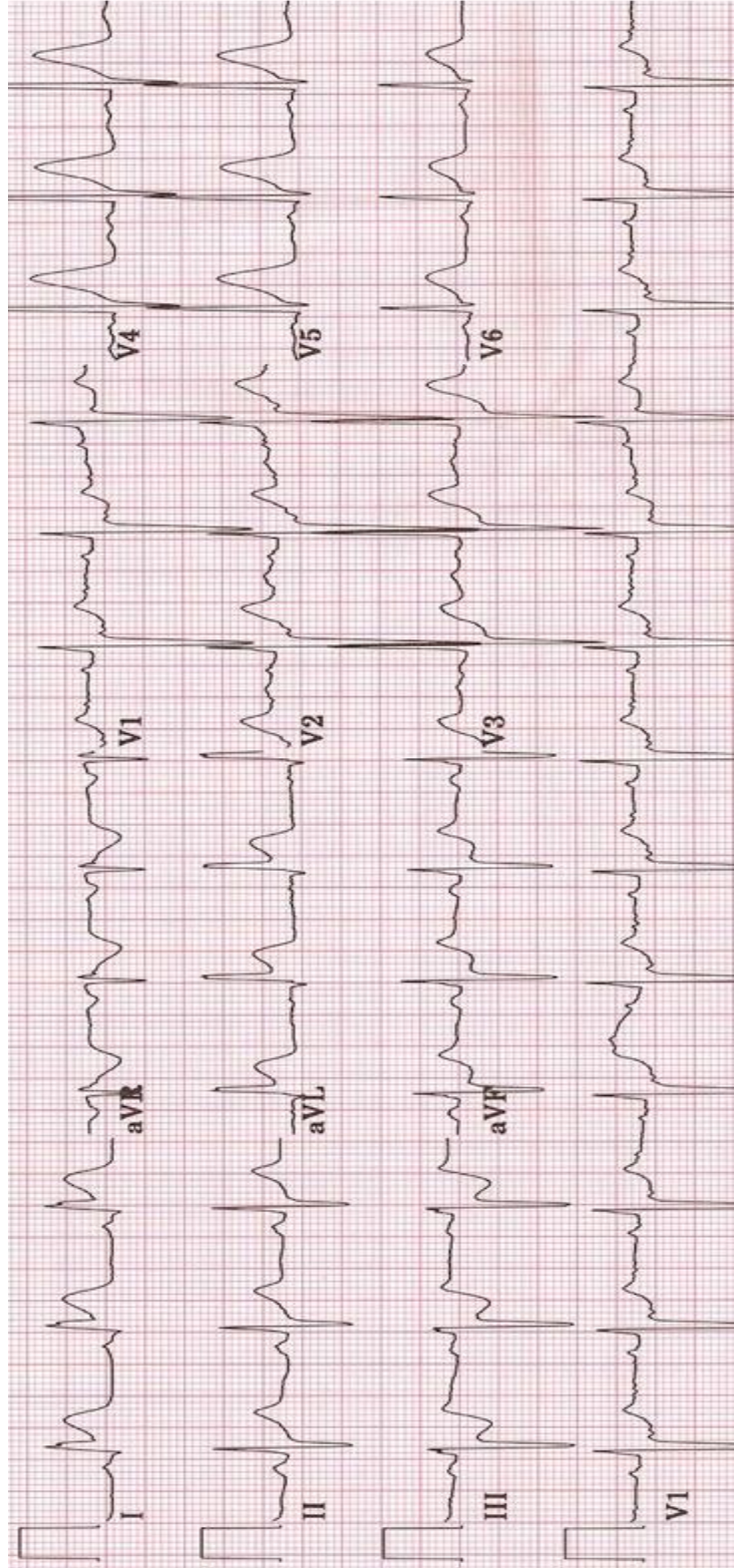
AMI Recognition – Lead Groupings

Limb Leads		Chest Leads	
I Lateral	aVR	V1 Septal	V4 Anterior
II Inferior	aVL Lateral	V2 Septal	V5 Lateral
III Inferior	aVF Inferior	V3 Anterior	V6 Lateral

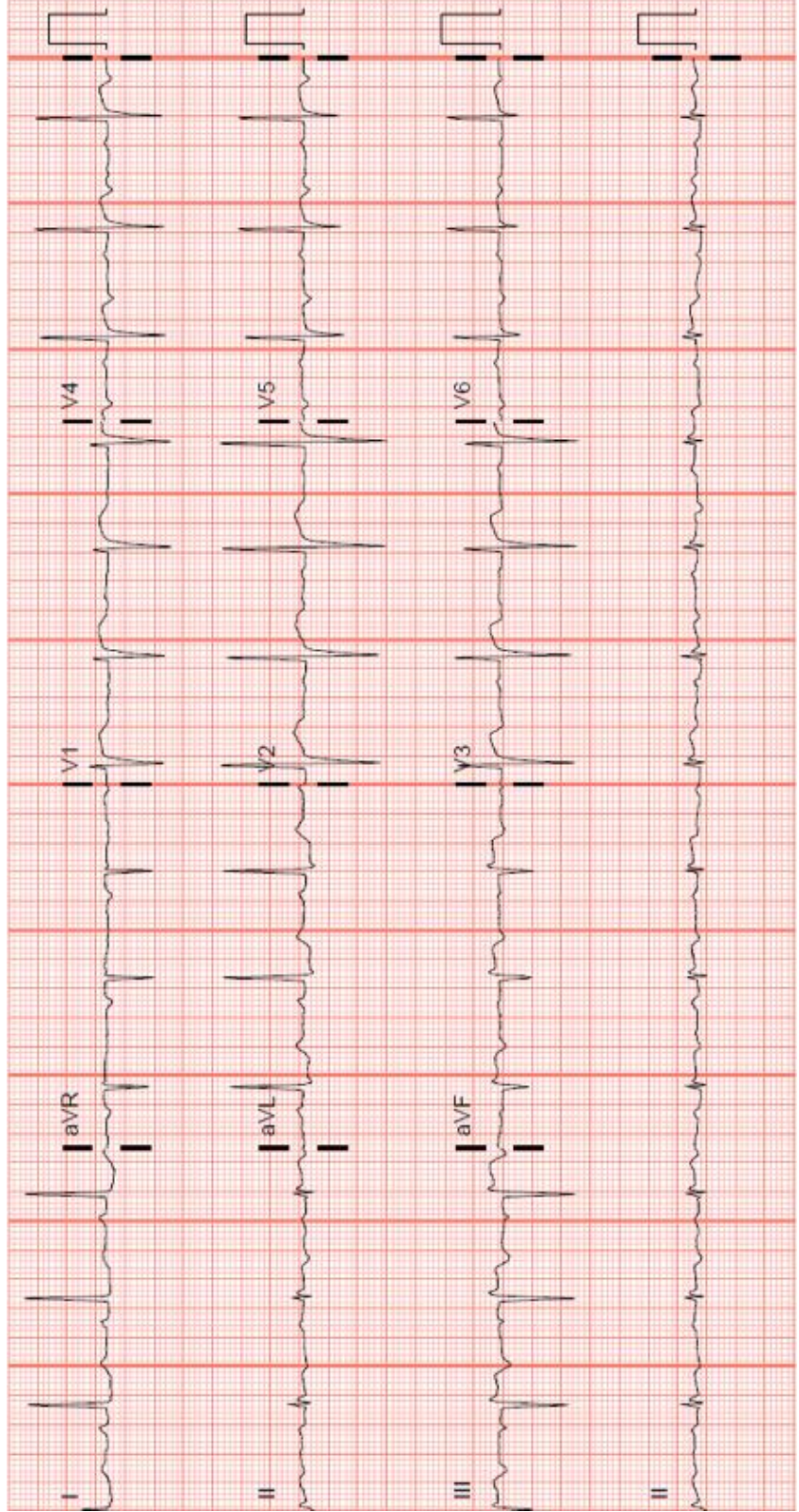
Anterior STEMIs generally result from the occlusion of the left anterior descending coronary artery and carries the worst prognosis of all STEMIs given the larger infarct size. Anterior STEMIs can be diagnosed by recognizing ST elevations in the anterior leads (V1-V4) and reciprocal changes in the inferior leads (II, III and AVF). An example of an anterior STEMI follows:



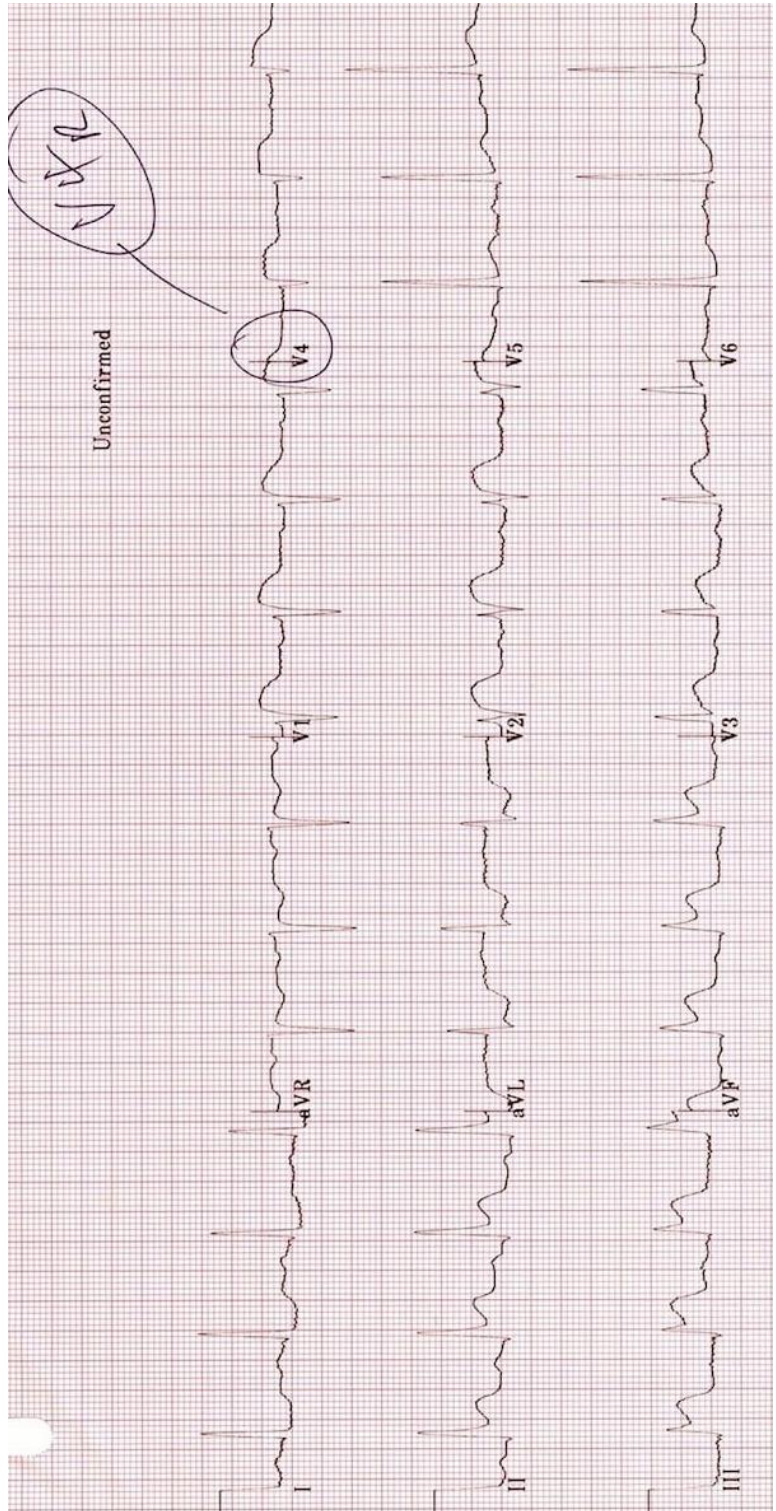
Lateral STEMIs generally result from the occlusion of the left circumflex coronary artery or the diagonal branch of the left anterior descending. On ECG, this is recognized by ST elevations in the lateral leads (V5-6) or the high lateral leads (I and AVL). It is important to remember that I and AVL are contiguous leads and ST elevations in these leads can signify a high-lateral STEMI. An example of a lateral STEMI follows.



Inferior STEMIs result from the occlusion of the Right Coronary Artery (70%) or the Left Circumflex. On ECG, this can be recognized with ST elevations in the inferior leads (II, III and AVF) with reciprocal changes in the high lateral leads (I and aVL). With these leads in particular, complete coronary occlusion can occur with less than 1mm in ST elevation in the anterior leads, so a high index of suspicion should be maintained. An example of an inferior STEMI is below.

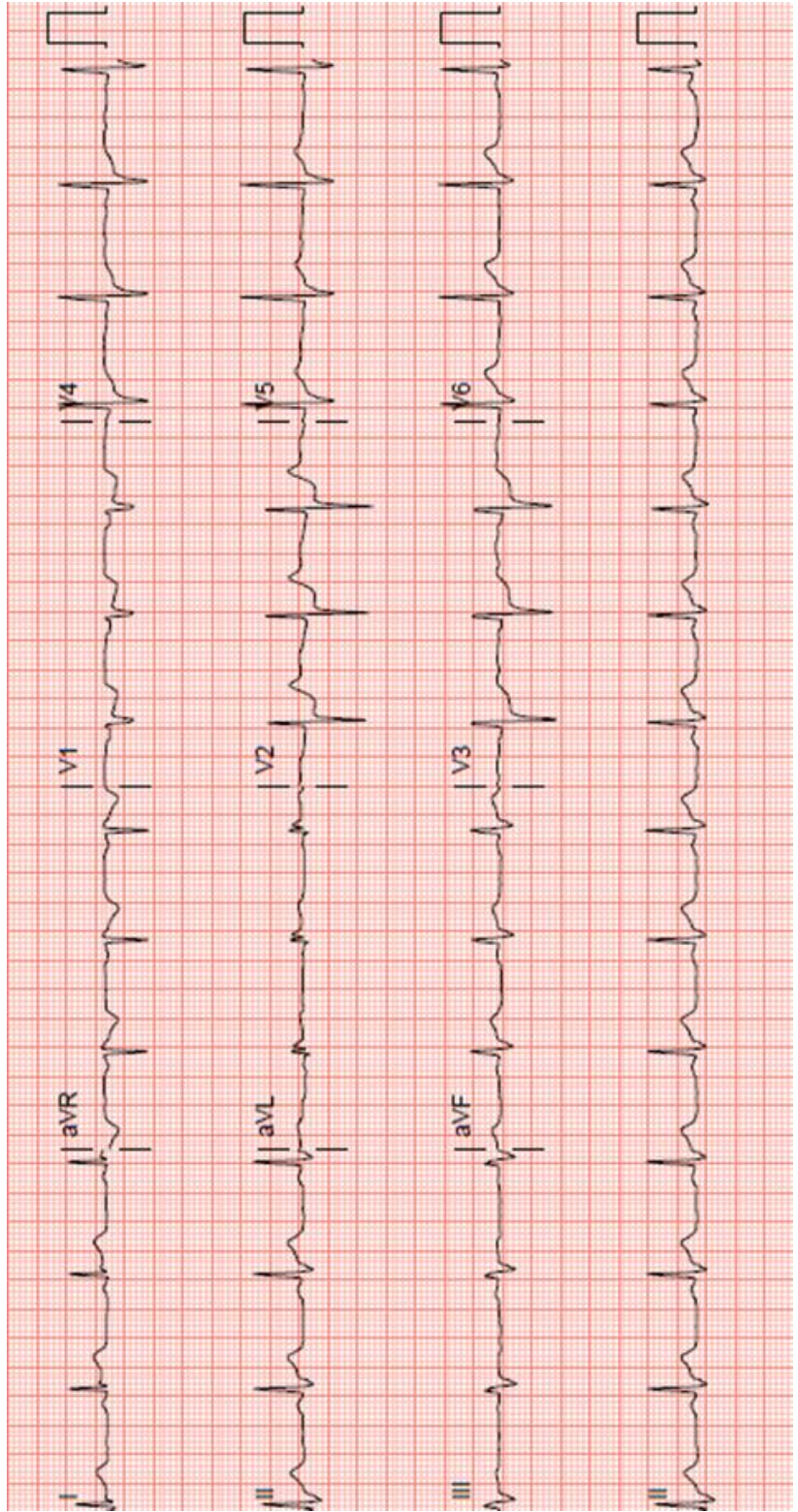


Right Ventricular Infarction: 50% of patients experiencing an Inferior MI may also have involvement of the right ventricle. Findings include ST Elevation in III > II and a right sided 12 lead ECG showing ST Elevation ≥ 1 mm in V_{4R}.

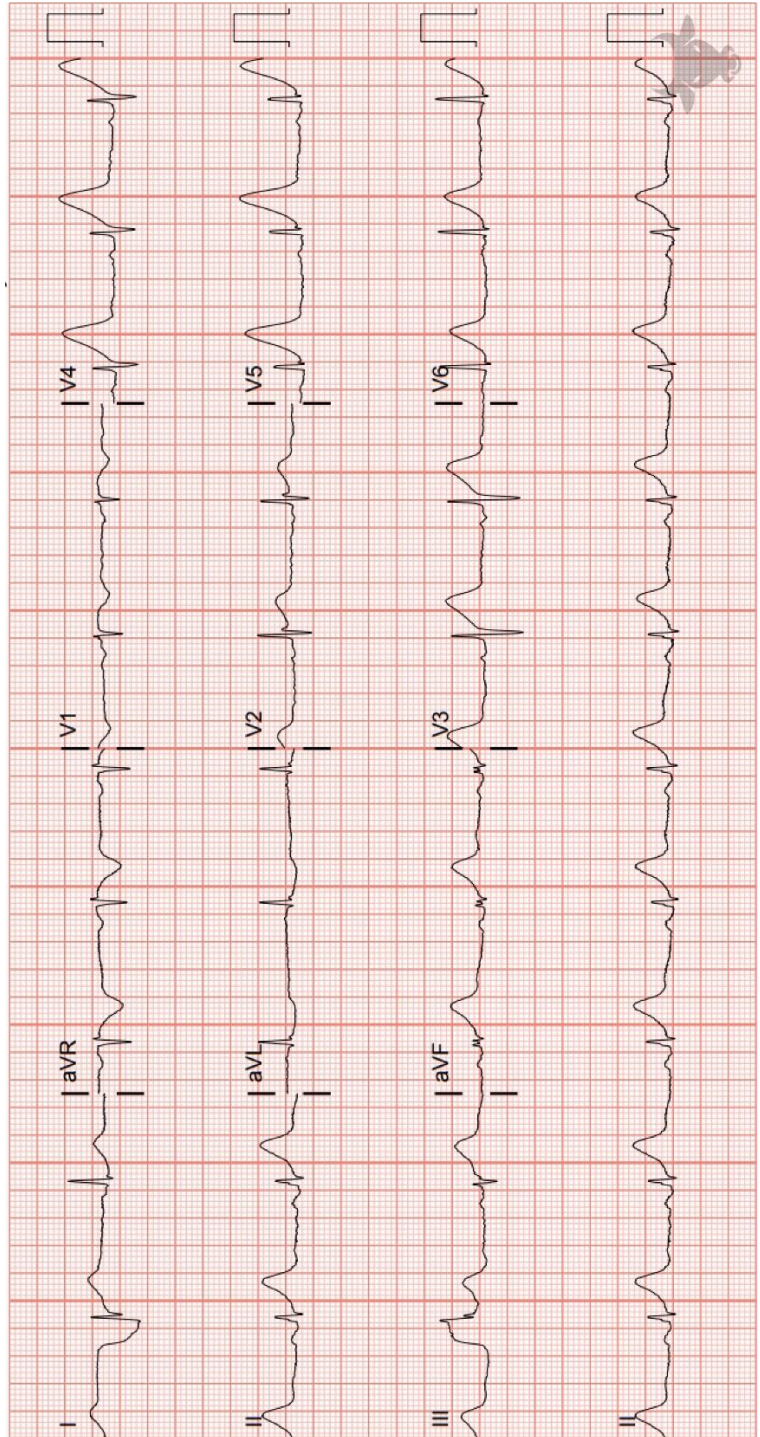


Posterior STEMIs are caused by an occlusion of posterior descending coronary artery. On a normal 12 lead ECG, it can be recognized by:

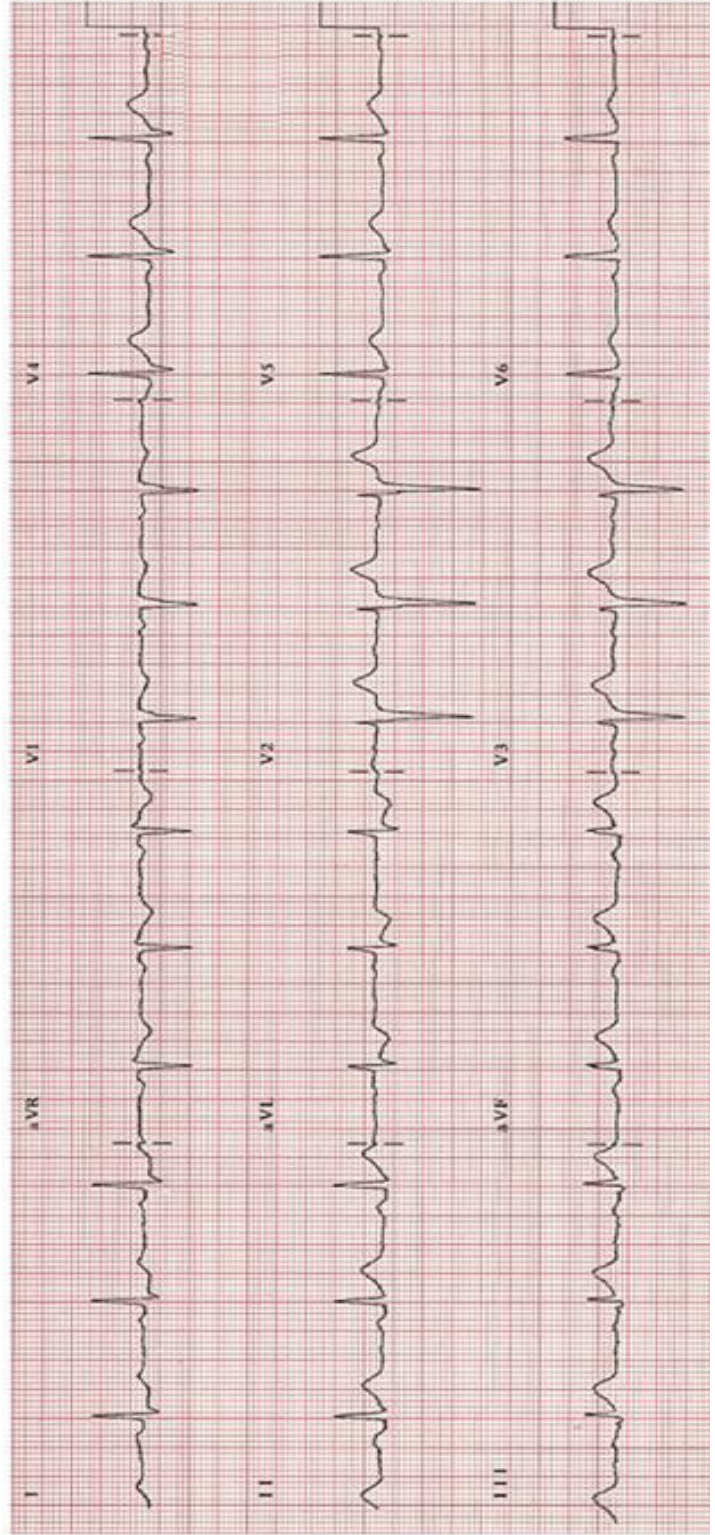
- ST depression in the anterior leads
- Prominent R waves in leads V2-3
- Upright anterior T waves



Occlusive MI Example: Hyperacute T waves: Broad and bulky, look inflated, large relative to the QRS.

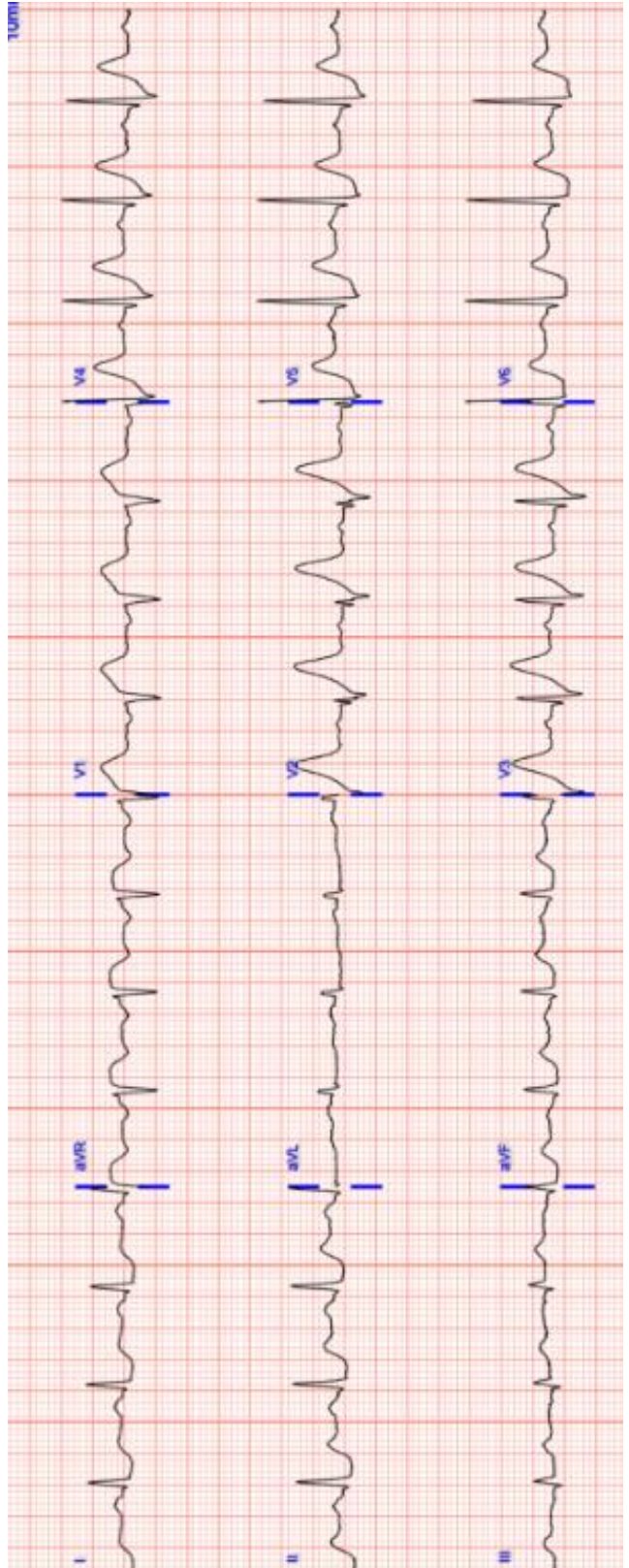


Occlusive MI Example: Mild ST elevation with reciprocal depression in aVL.



De Winter Sign

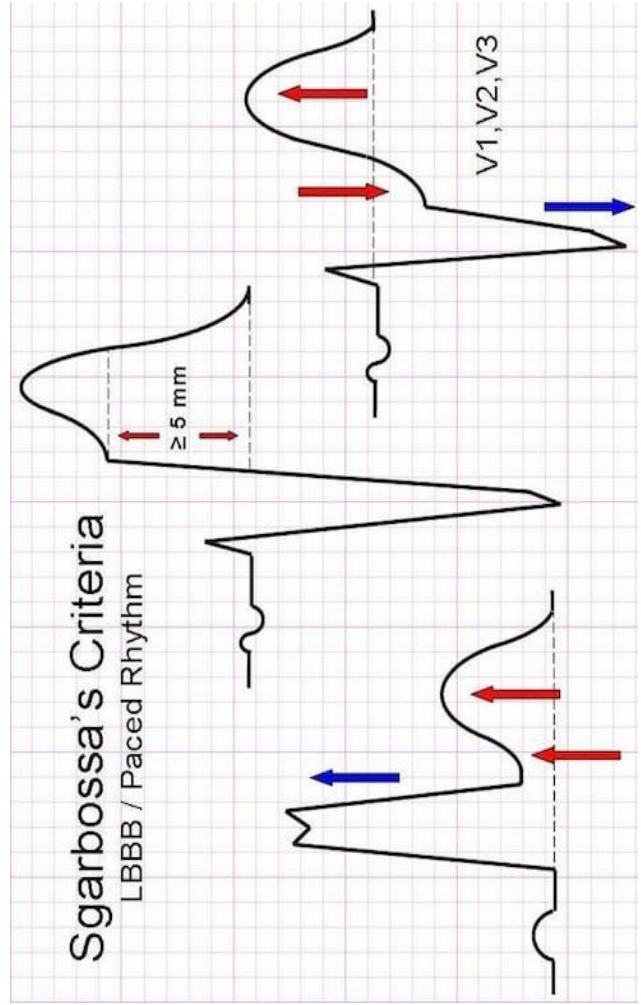
- Upsloping ST depression greater than 1mm in the precordial leads
- Prominent, tall, and symmetrical T waves in the precordial leads
- Absence of ST elevation in the precordial leads
- Reciprocal ST elevation of 0.5mm-1mm in AVR



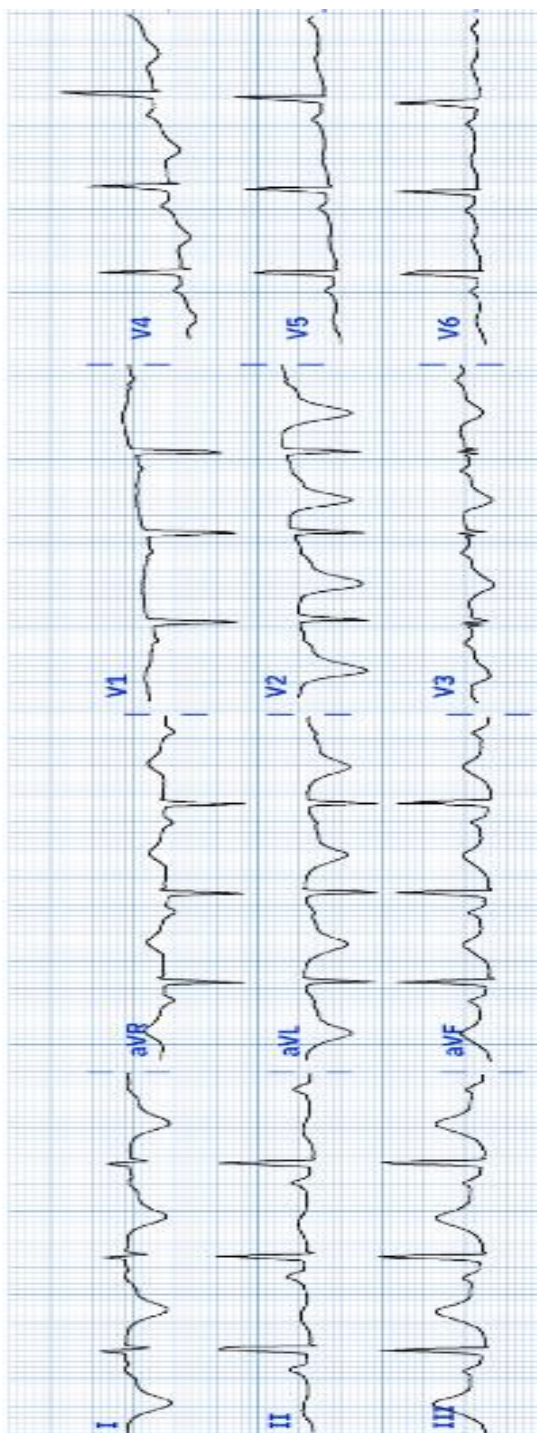
LBBB or paced rhythm with Smith-Modified **Sgarbossa Criteria**. The Sgarbossa Criteria for STEMI in the context of LBBB or a ventricular paced rhythm are:

- **Concordant ST elevation** > 1mm in leads with a positive QRS (score 5)
- **Discordant ST elevation** > 1mm in leads V1-V3 (score 3)
- **Excessively discordant ST elevations** > 5mm (score 2)

An ECG with a score greater than or equal to 3 is suggestive of a STEMI.



Wellens syndrome: Describes an abnormal electrocardiographic (ECG) pattern, deeply inverted T waves in leads V2 and V3, that are secondary to proximal LAD stenosis.



Portland Prehospital Stroke Screen and CSTAT Assessment

1	PORTLAND PREHOSPITAL STROKE SCREEN		
1. Age over 45	Yes	No	Unknown
2. No prior history of seizure disorder	Yes	No	Unknown
3. New onset of neurologic symptoms in last 24 hours	Yes	No	Unknown
4. Patient was ambulatory at baseline (prior to event)	Yes	No	Unknown
5. CBG between 60 & 400	Yes	No	
Neurological examination	Normal	Abnormal	
Facial smile/grimace (ask patient to smile/show teeth) Normal: Both sides of face move equally well Abnormal: One side of face does not move as well as the other	Yes	Right	Left
Arm drift (patient closes eyes and hold both arms out, palms up) Normal: Both arms move the same or do not move at all Abnormal: One arm does not move or drifts down compared to the other	Yes	Right	Left
Hand grip (have patient squeeze both hands simultaneously) Normal: Equal grip strength Abnormal: Unequal grip strength	Yes	Right	Left
Speech (have patient repeat a simple phrase such as "You can't teach an old dog new tricks") Normal: No difficulty repeating Abnormal: Patient has difficulty finding words, may speak in long meaningless sentences and/or cannot understand or follow simple verbal instructions	Normal/Abnormal		
If questions 1 – 5 are all answered "Yes" or "Unknown" and at least 1 of the 4 neurological examination findings are abnormal, the patient is considered to have a POSITIVE screen. Continue to C-STAT evaluation.			

Portland Prehospital Stoke Screen and CSTAT Assessment

2 C-STAT – CINCINNATI STROKE TRIAGE ASSESSMENT TOOL		
	Points	
Gaze Preference – Deviation of eyes away from side of weakness, toward side of stroke.		
Absent	0	
Present	2	
Arm Weakness - Cannot hold up arm(s) for 10 seconds		
Absent	0	
Present	1	
Level of Consciousness - Incorrectly answers at least one of two LOC questions AND does not follow at least one of two commands.		
Absent	0	
Present	1	
***** POSITIVE C-STAT SCORE IS \geq 2 *****		

