

7th Annual UMEM Residency ECG Competition

June 12, 2019



Name: _____

What program are you in? (circle one)

EM

EM/Peds

EM/IM

EM/IM/CC

What is your PG year? (1-5) _____

Time limit: 30 minutes

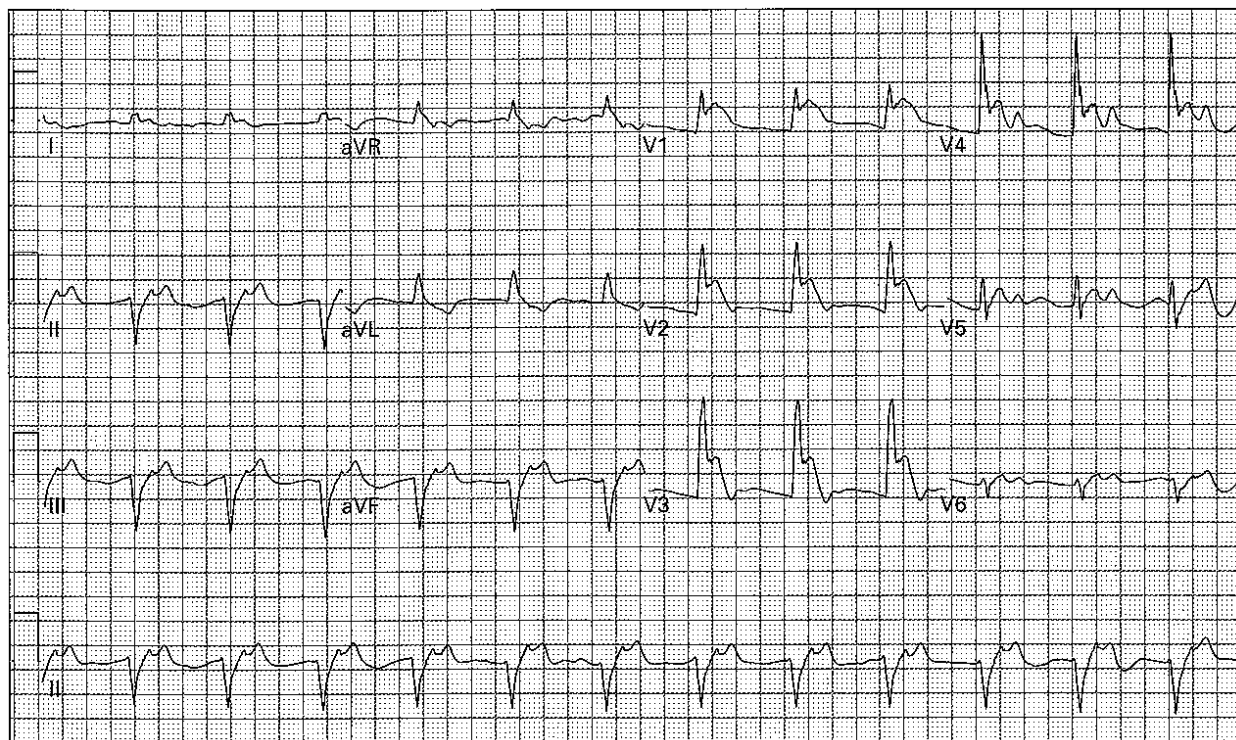
You may use calipers but no notes

1. A 55 yo patient with multiple cardiac risk factors presents with chest pressure, vomiting and sweats (i.e. a good story for ACS). List the ECG criteria/findings in this patient that would warrant immediate activation of the cath lab, based on international criteria. In other words, what are the ECG criteria that define a STEMI/STEMI equivalent? Be sure to clarify any differences in the criteria (if there are any) based on age and gender.
(6 points)

2. Draw figures demonstrating the 3 Sgarbossa criteria as well as the revised 3rd criteria (total 4 figures). Draw these as if you were teaching a student about these on the whiteboard.
(4 points)

In some of the following questions, I'll ask you for a FULL ECG interpretation/diagnosis. Here's what I am asking for:

SAMPLE QUESTION: A 58 yo M presents with chest pain and the ECG noted below.
What is the FULL ECG diagnosis? (5 points)



Answer:

Accelerated AV junctional rhythm, acute inferior-anteroseptal STEMI, IRBBB, LAFB.

In this example, I would give you 1 point for identifying the rhythm, one point for identifying inferior STEMI, one point for identifying the anteroseptal (or just anterior) STEMI, one point for identifying the IRBBB, and one point for identifying the LAFB....total 5 points. In other words... **be complete in your interpretation!**

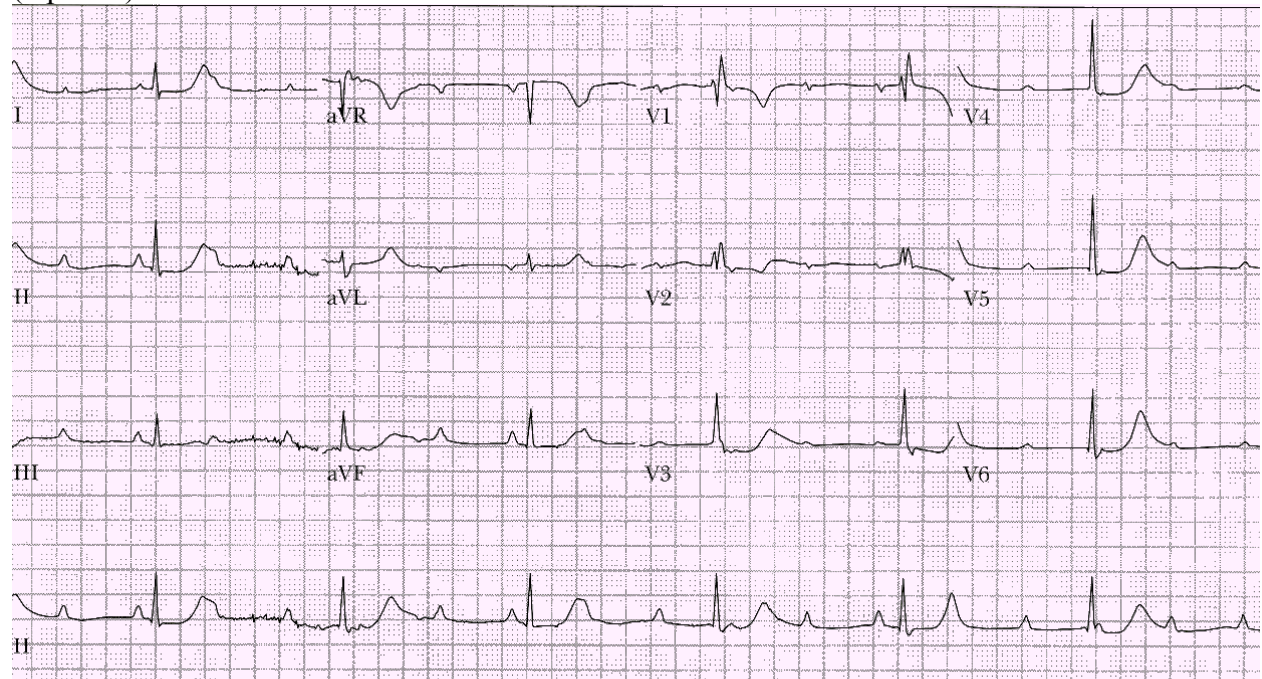
Be sure that you don't just *describe* what you see....*interpret* the ECG! For example, I don't want you to say "STE in the anterior leads." I want you to say "anterior STEMI."

In your interpretation, if you think there's an underlying issue, say it.

For example, if you think the underlying dx is hyperK, or TCA OD, or Brugada, etc., say it.

3. A 65 yo man presents with CP + lightheadedness. His BP is 85/40. He is awake and alert.
What is the FULL ECG diagnosis?

(4 points)



4. A 55 yo W presents complaining of intermittent palpitations. During one episode of palpitations, you notice the following rhythm on the cardiac monitor.

What is the rhythm? (1 point)

What is the best immediate treatment to administer while this patient is undergoing a workup?

(1 point)



5. A 19 yo W presents with atypical chest pain. The ECG below is obtained. After your Hx and physical exam, you firmly believe that she has a benign condition...so what then is your diagnosis for this ECG? (1 point)

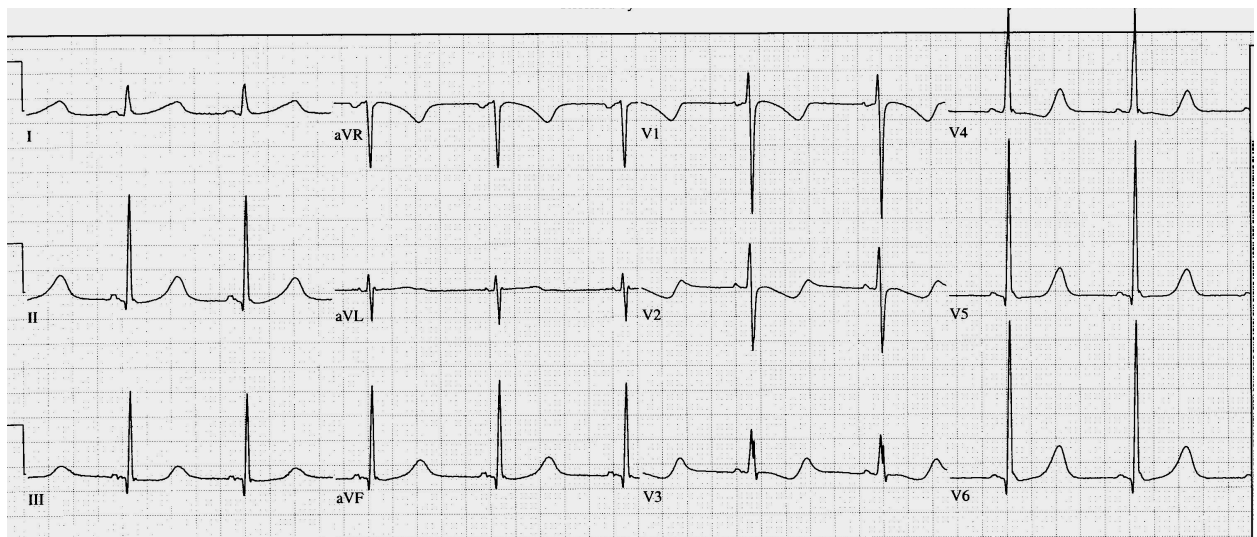
Name 2 deadly causes of T-wave inversions in the anteroseptal leads that tend to present with syncope but without chest pain or dyspnea. (2 points)



6. A 68 yo W presents with malaise, vomiting and sweats.

What is the suspected diagnosis? (1 point)

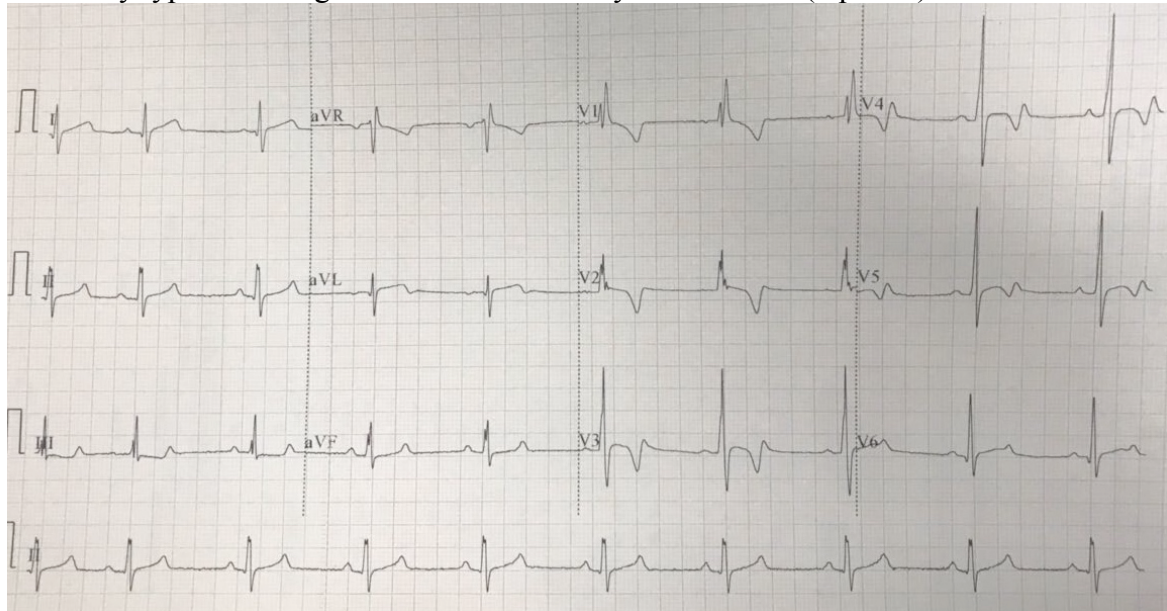
Name 6 ECG findings that are associated with this condition. (3 points)



7. A 15 yo M presents to the emergency department after a syncopal episode. He is noted to have a systolic murmur. The following ECG was obtained.

What is the suspected diagnosis? (1 point)

List 3 key typical findings on the ECG that led you to this dx. (3 points)

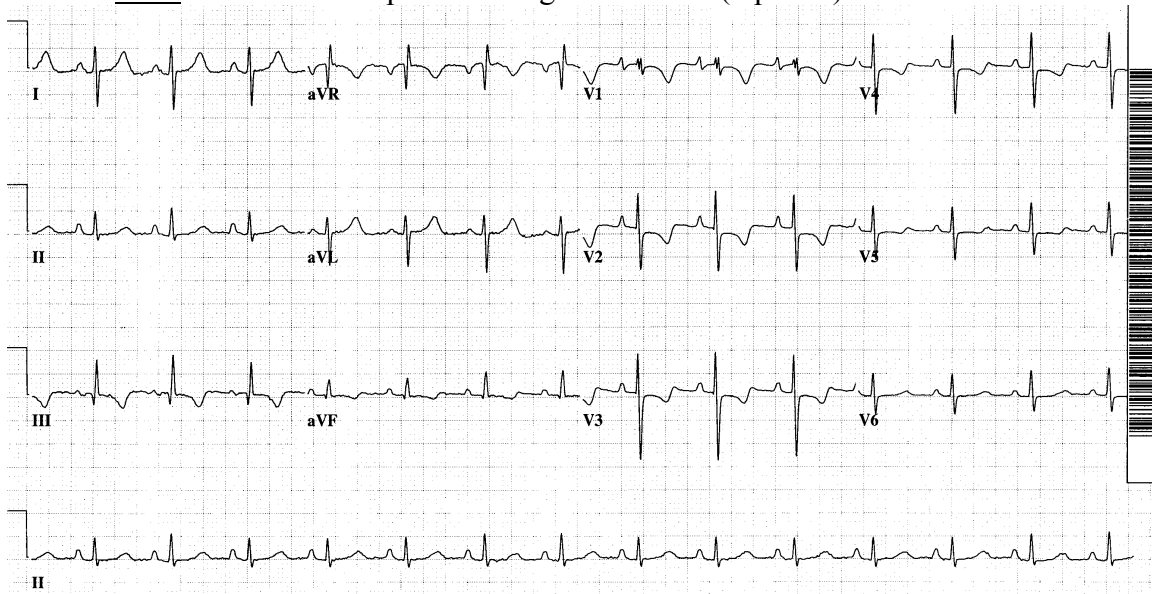


(ECG Courtesy of Dr. Denis Castillo)

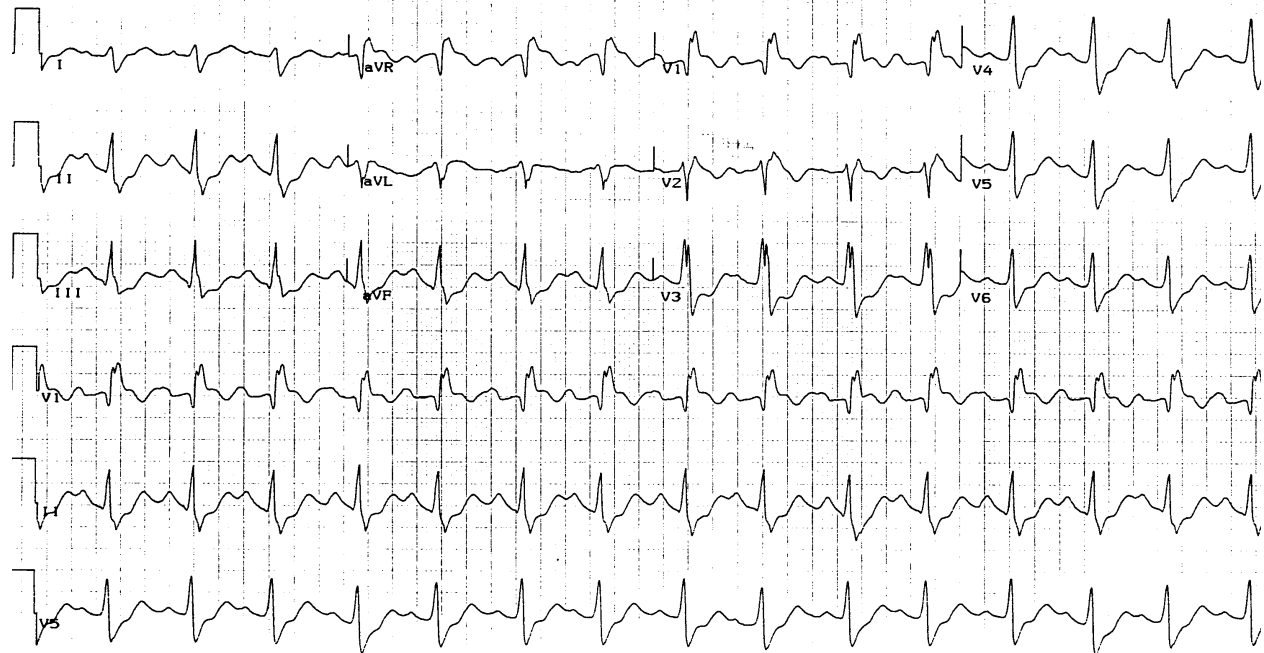
8. A 54 yo M presents with chest pain and the ECG noted below.

What is the diagnosis? (1 point)

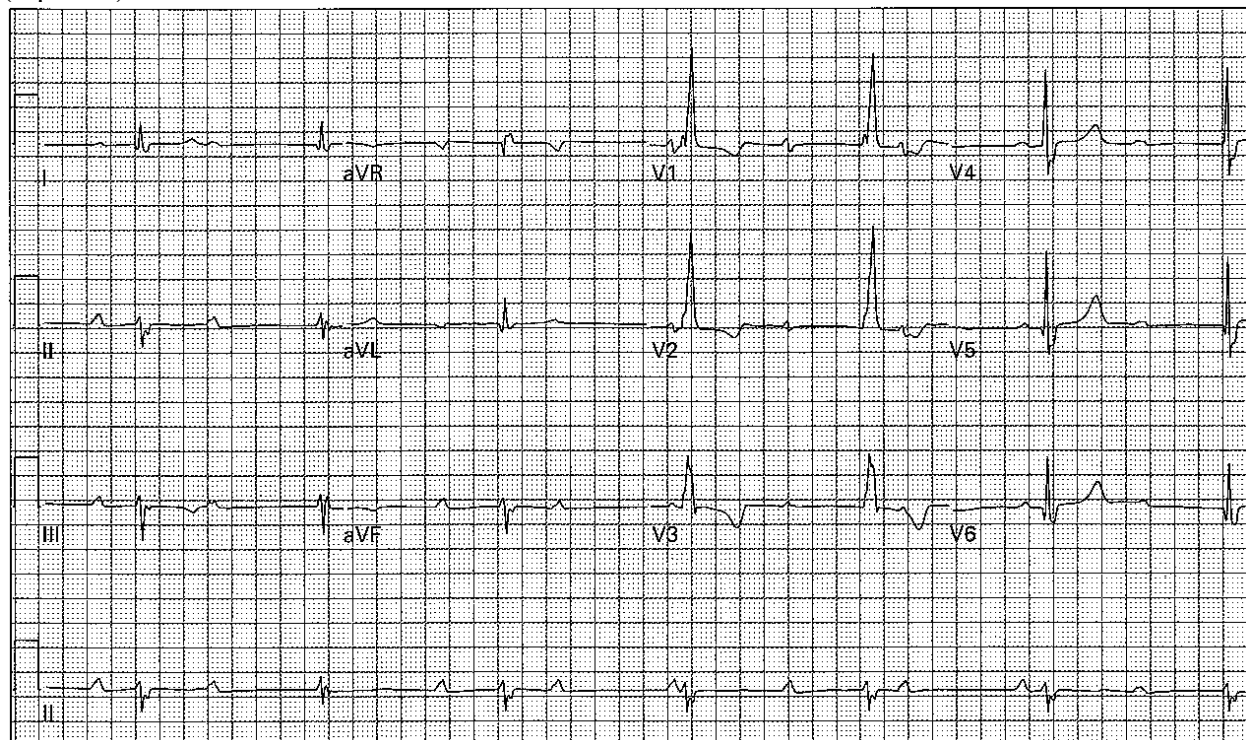
Name 6 other conditions that produce a rightward axis. (3 points)



9. A 39 yo M presents after being found down. He is lethargic and cannot provide any history. His BP is 90/60. What is the diagnosis and the treatment of choice? (2 points)



10. A 51 yo M presents after a syncopal episode. What is the FULL ECG diagnosis? (4 points)



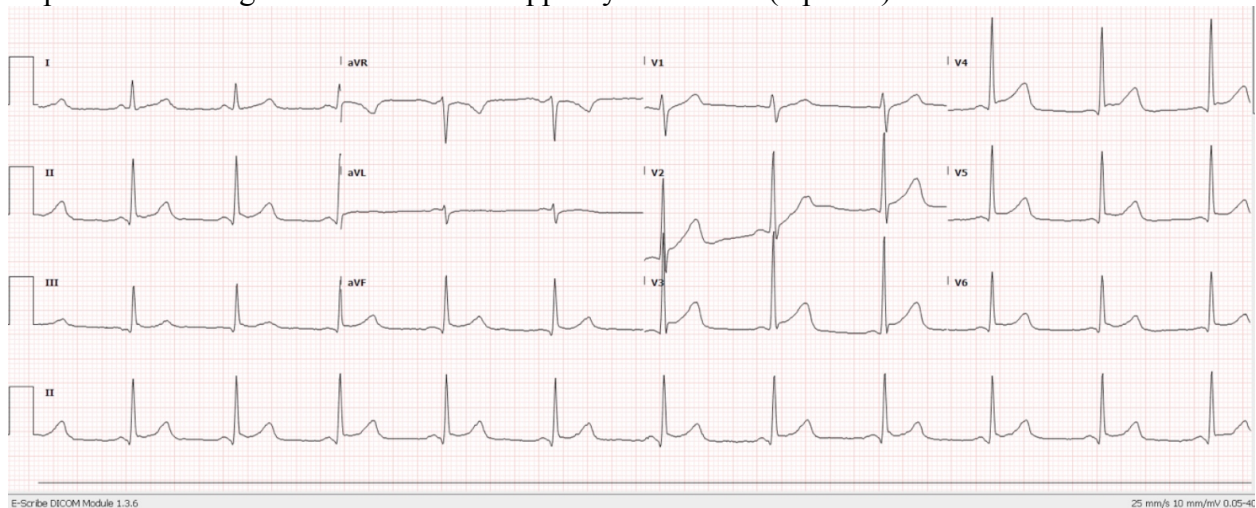
11. A 60 yo W presents with active chest pain and nausea. The following ECG is obtained. What is the FULL ECG diagnosis? (3 points)



12. A 41 yo M presents with chest pain. His ECG is below. You are trying to decide whether this is early repolarization vs. an acute MI.

Choose your diagnosis (1 point).

Explain the findings on this ECG that support your choice. (2 points)



(ECG Courtesy of Dr. Yasir Abubaker)

13. Bonus!

What is the purpose of using Lewis leads? (1 point)

Indicate on the diagram of the rib cage below the altered lead placement when Lewis leads are used. (3 points)

