

# *11<sup>th</sup> Annual UMEM Residency ECG Competition*

**May 10, 2023**



**Name:** \_\_\_\_\_

**What program are you in? (circle one)**

EM

EM/Peds

EM/IM

EM/IM/CC

**What is your PG year? (1-5)** \_\_\_\_\_

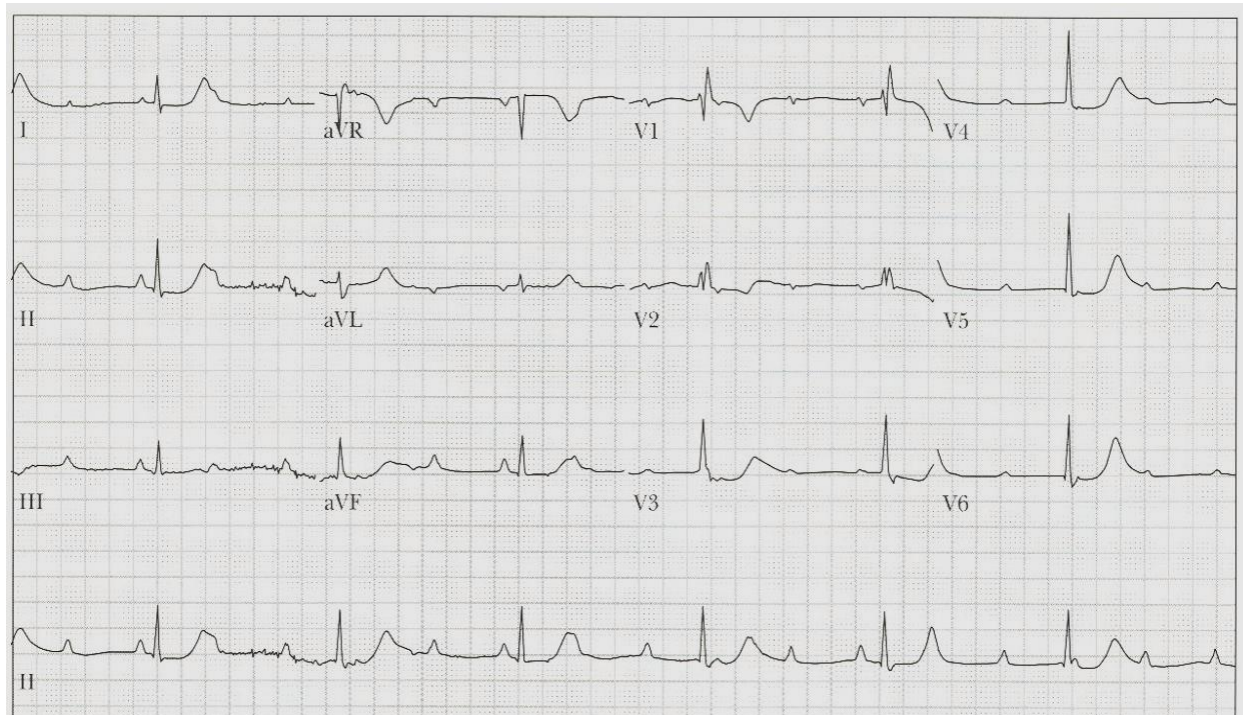
1. A 55 yo patient with multiple cardiac risk factors presents with chest pressure, vomiting and sweats (i.e. a good story for ACS). STE is noted on the ECG. List the criteria that define how true STEMI is diagnosed on the standard 12-lead ECG. [how many mm of STE, in which leads, etc.]

(4 points)

2. Aside from the STE criteria listed above, there are a handful of other criteria for which immediate cath lab activation is indicated [i.e., even though STE in contiguous leads may be absent]. Please list those criteria.

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:**

Sinus tachycardia, complete heart block, junctional escape rhythm, RBBB, diffuse ischemia

In this example, I would give you 1 point for identifying the atrial rhythm (ST), one point for identifying CHB, 1 point for identifying that there is a junctional escape, 1 point for identifying the RBBB, and one point for noting the ischemia (ST depression in multiple leads). In other words...

**be complete in your interpretation!**

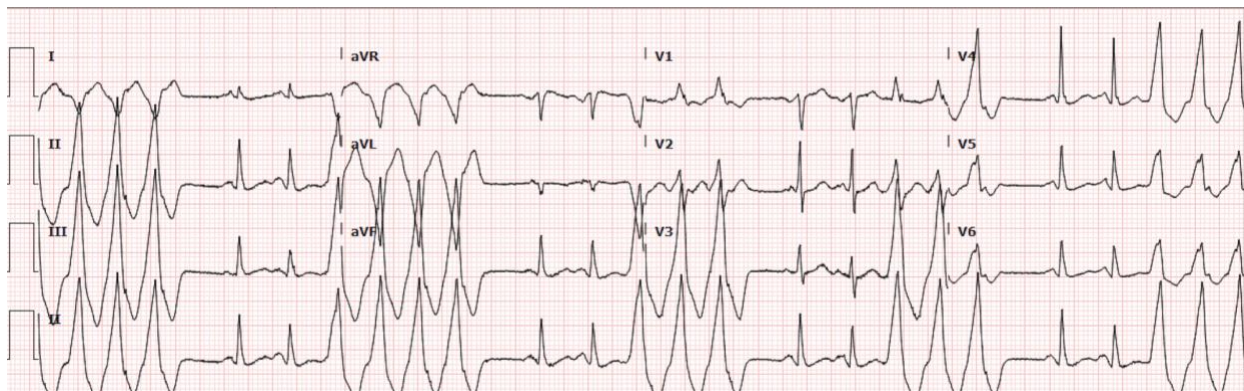
Be sure that you don't just *describe* what you see....*interpret* the ECG! For example, I don't want you to say "ST depression in \_\_\_ leads." I want you to say "diffuse ischemia."

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

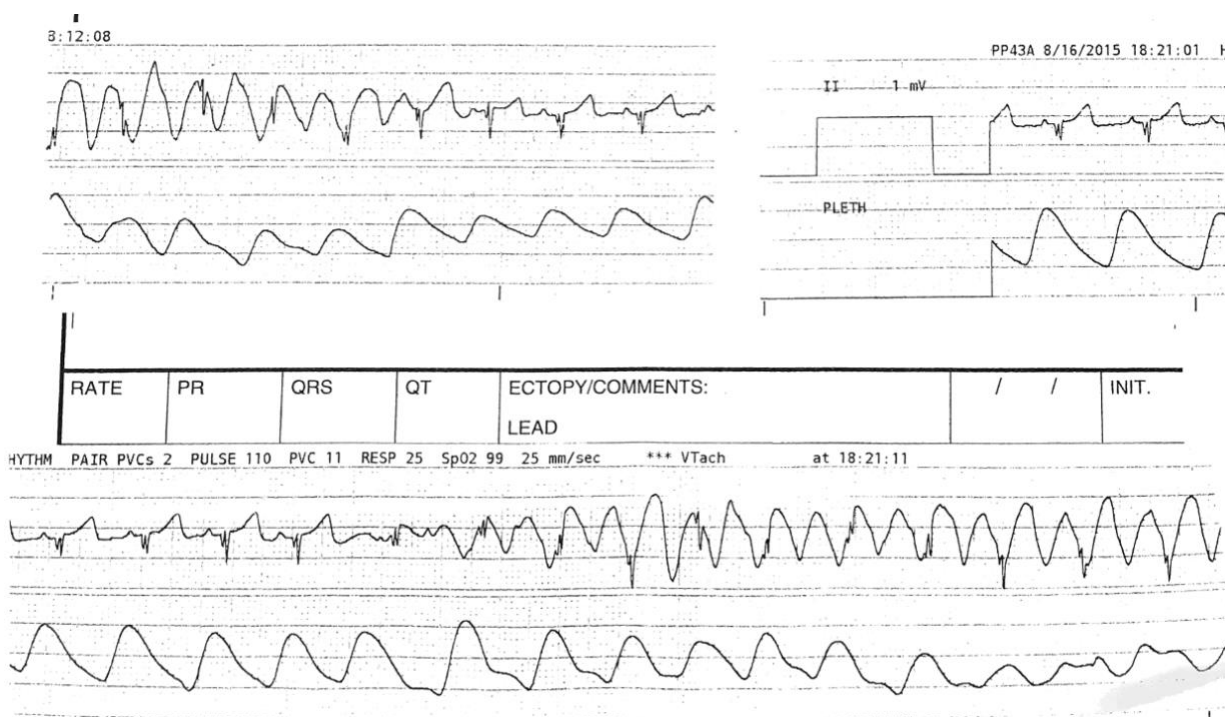
For example, if you think the underlying dx is hyperK, or TCA OD, or Brugada, etc., say it.

Don't assume that points correlate with the number of things I am looking for. For example, if something is worth 3 points, that does NOT mean there are 3 things you need to list! Points are allotted based on how important I think something is.

3. A 65 yo man presents with palpitations. His BP is 135/70. He is awake and alert.  
 What is the FULL ECG diagnosis?  
 What is the optimal management?  
 (3 points)

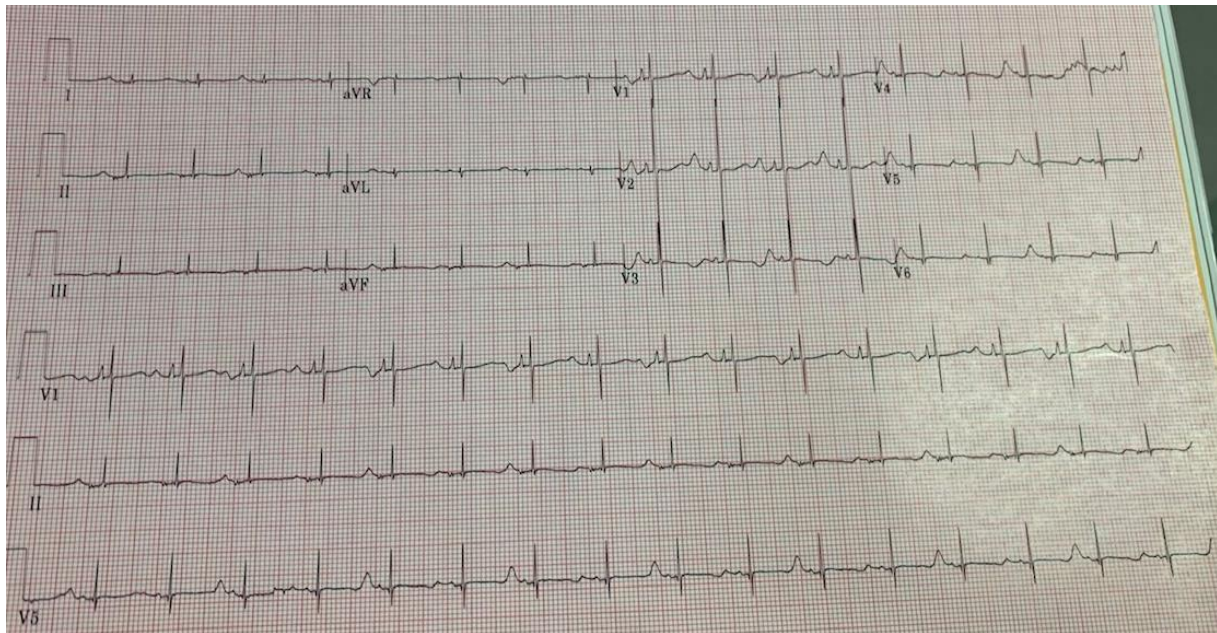


4. A 45 yo W was being evaluated at an urgent care center for a viral syndrome and while being monitored, developed the rhythm below. She was transferred to University because of the findings on the strips.  
 What is the diagnosis and management? (2 points)

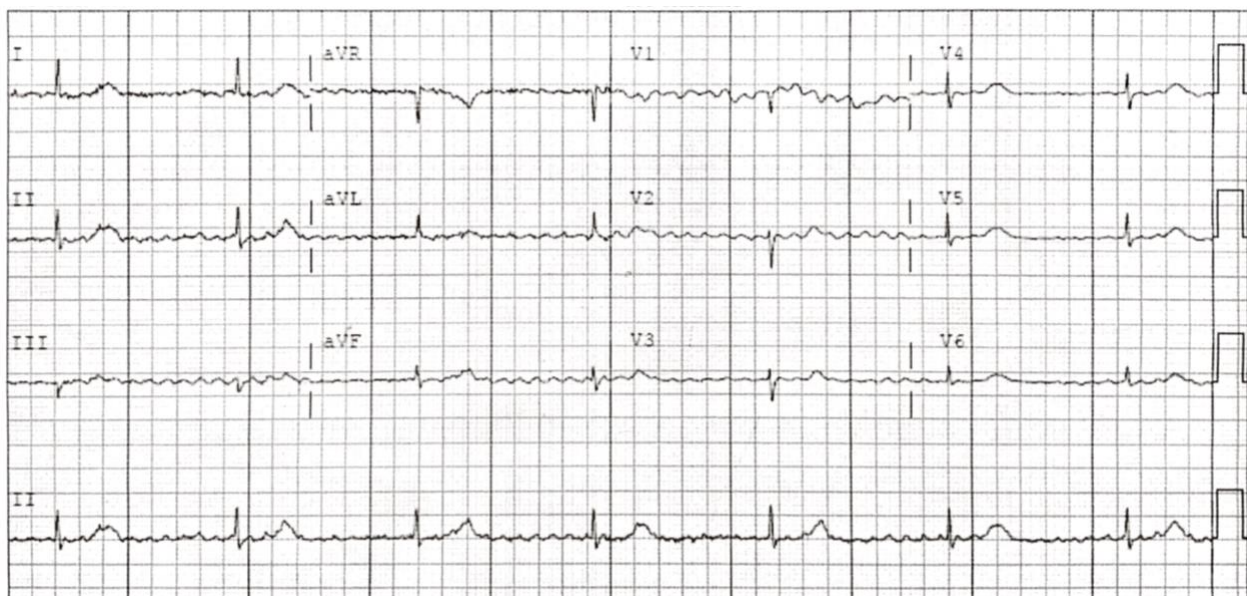




5. A 4 month old male is brought to the ED because of persistent vomiting despite multiple doses of antiemetics, and at one point the parents thought he was briefly unresponsive. The ECG is below. What is the diagnosis and the likely cause of the unresponsiveness? (3 points)



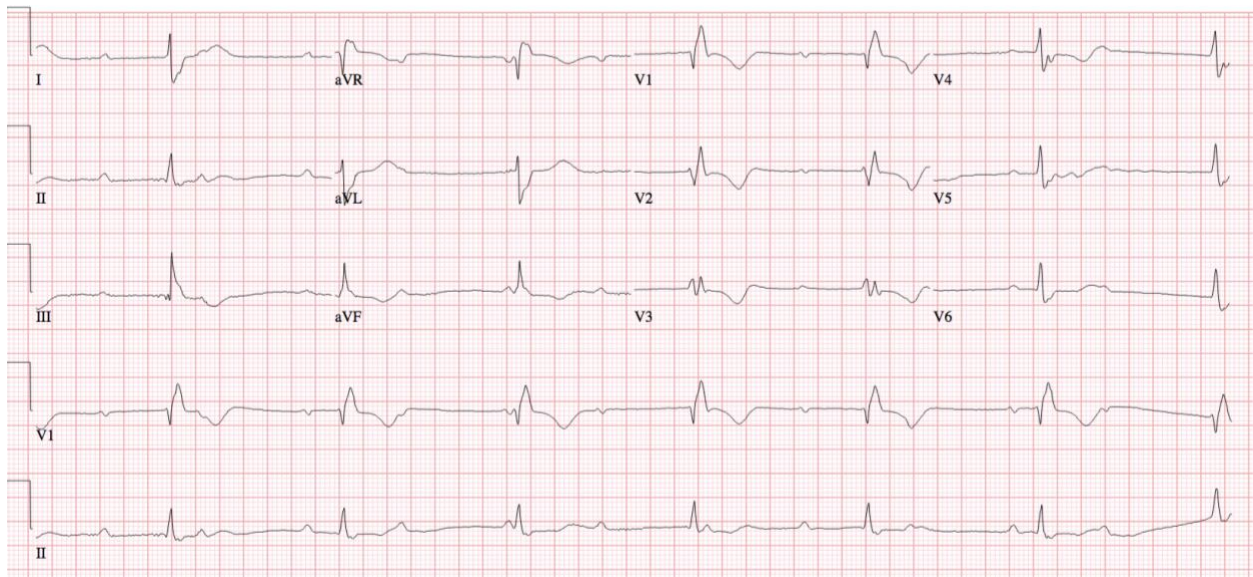
6. A 68 yo W with a history of CHF presents with lightheadedness and vomiting. What is the FULL ECG diagnosis? (3 points)  
How would you treat this patient? (1 point)





7. A 45 yo M presents to the emergency department after a syncopal episode. The following ECG was obtained.

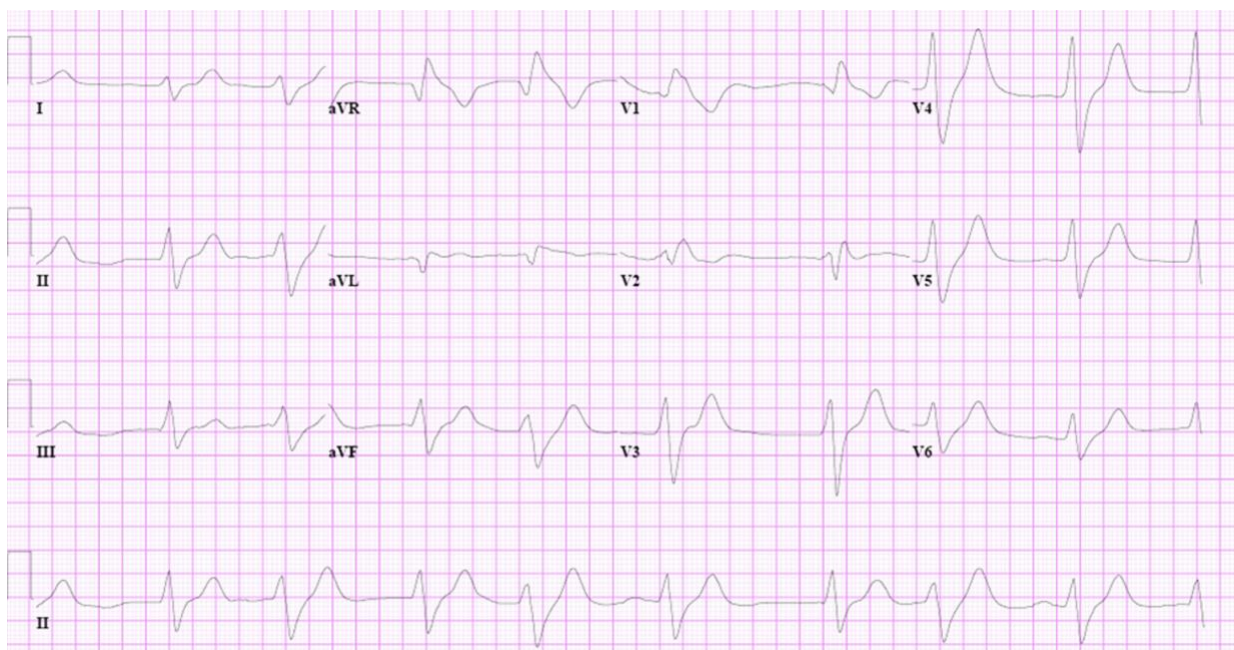
What is the FULL ECG diagnosis? (3 points)



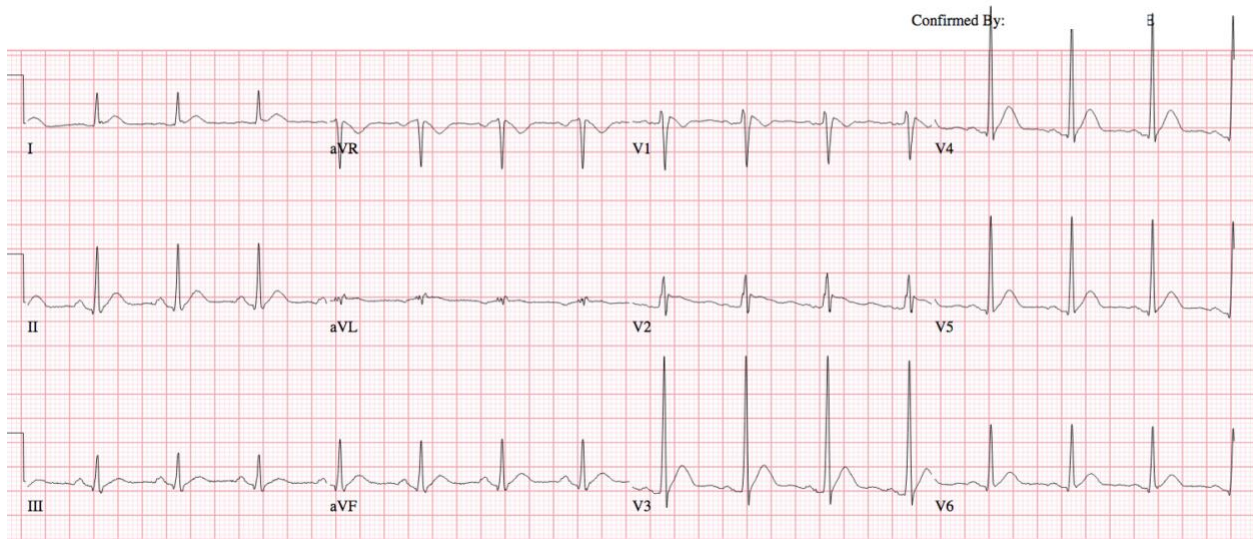
8. A 39 yo W presents lethargic. She cannot provide any history.

What is the likely diagnosis and treatment? (2 point)

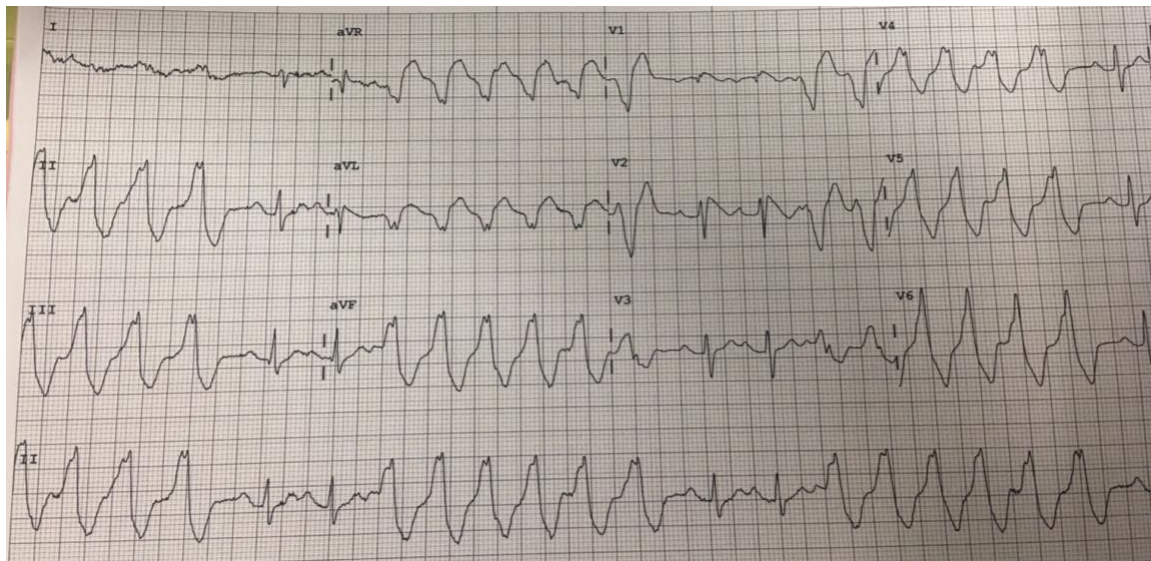
Name 6 other conditions that produce a rightward axis. (3 points)



9. A 60 yo M presents with an altered mental status. He cannot provide any history. His BP is 90/60. What is the diagnosis and the immediate treatment of choice? (2 points)

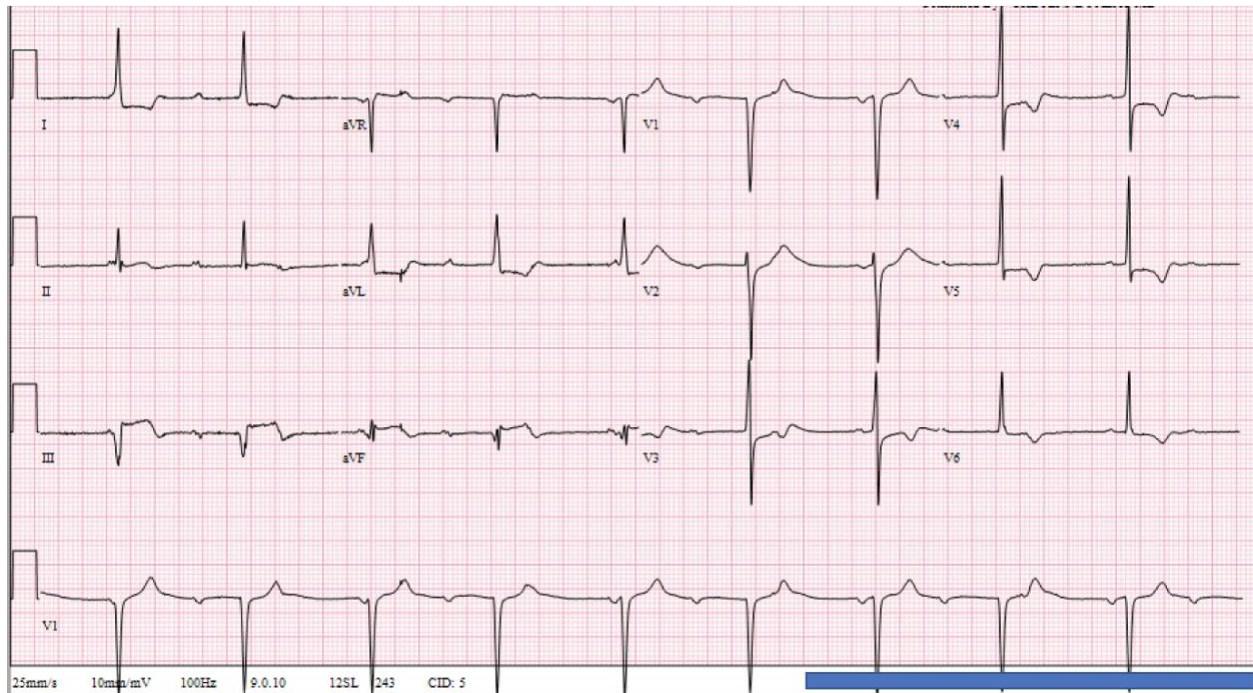


10. A 30 yo M presents with palpitations. He has had recent URI symptoms with fevers, and currently has a low-grade temperature. He presents non-toxic in appearance and has a rapid irregular HR. What is the FULL ECG diagnosis, and what is the management? (4 points)

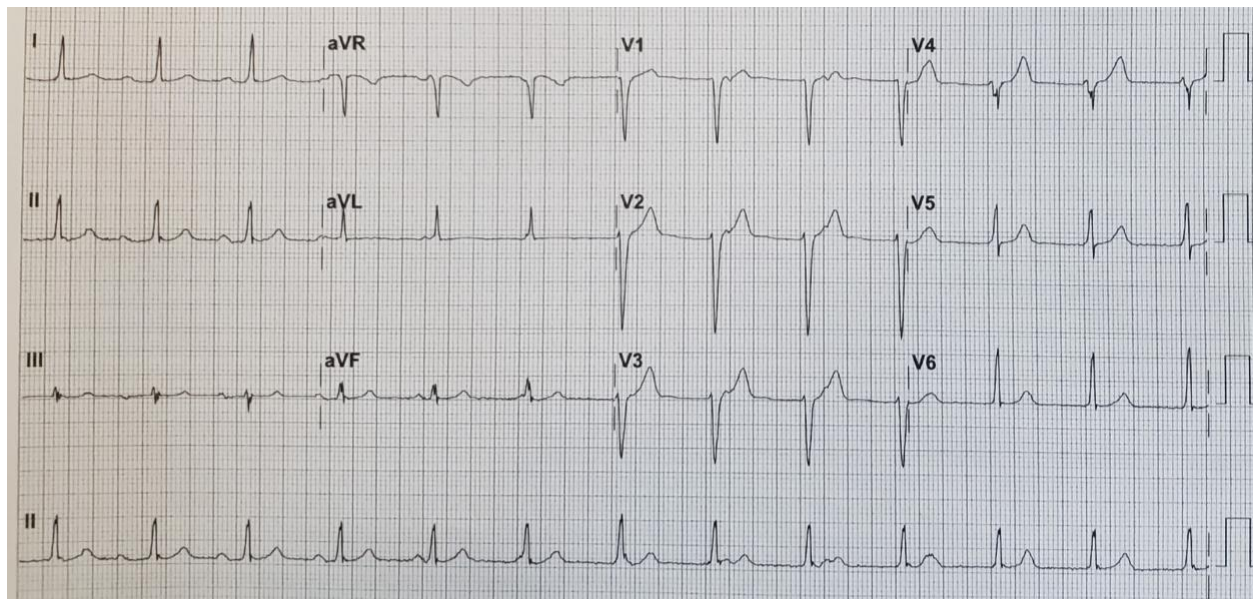




11. A 52 yo W presents with active chest pain and nausea. The following ECG is obtained. What is the FULL ECG diagnosis? (4 points)



12. A 43 yo M presents with a gastroenteritis. His ECG is below. What is the FULL ECG diagnosis? (3 points)





13. Describe or draw the diagnostic criteria for left anterior fascicular block and left posterior fascicular block.  
(4 points)