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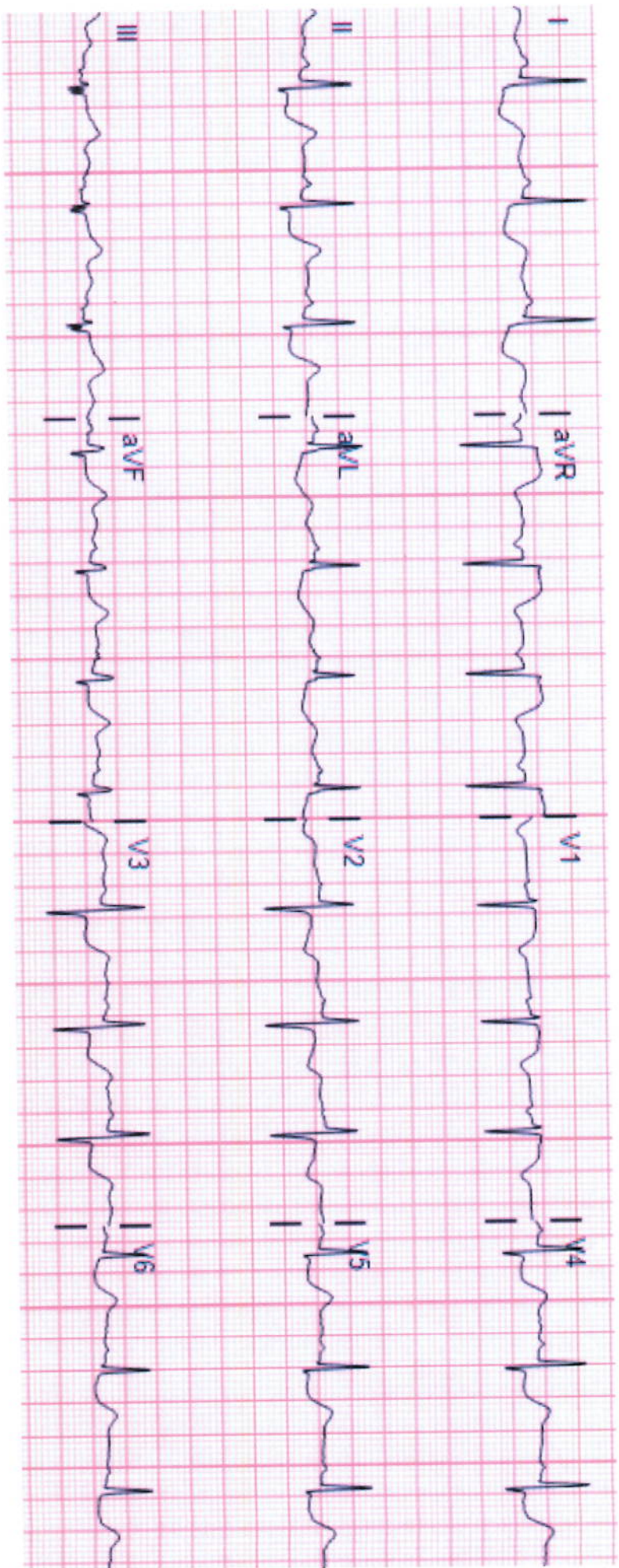
ST elevation in aVR: When time may not mean muscle

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**San Antonio Uniformed Services
Health Education Consortium**

Disclaimer

The views expressed are those of the presenter and do not reflect the official views or policy of the Department of Defense or its Components



Main points

- Recognize this EKG pattern as high risk
- Look closely for STEMI
- Consider etiology of coronary ischemia
- Consider withholding clopidogrel

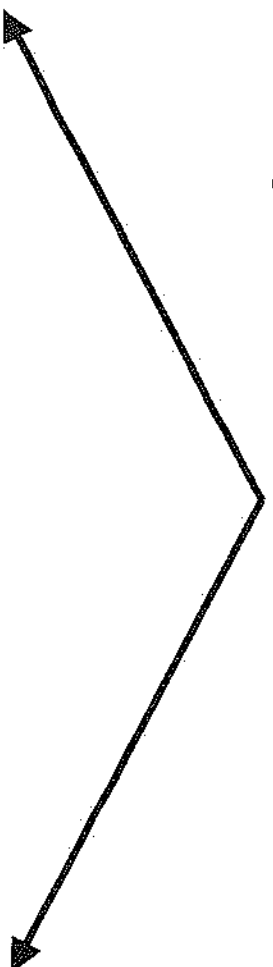
PRACTICE GUIDELINE

2013 ACCF/AHA Guideline for the Management of ST-Elevation Myocardial Infarction

A Report of the American College of Cardiology Foundation/
American Heart Association Task Force on Practice Guidelines

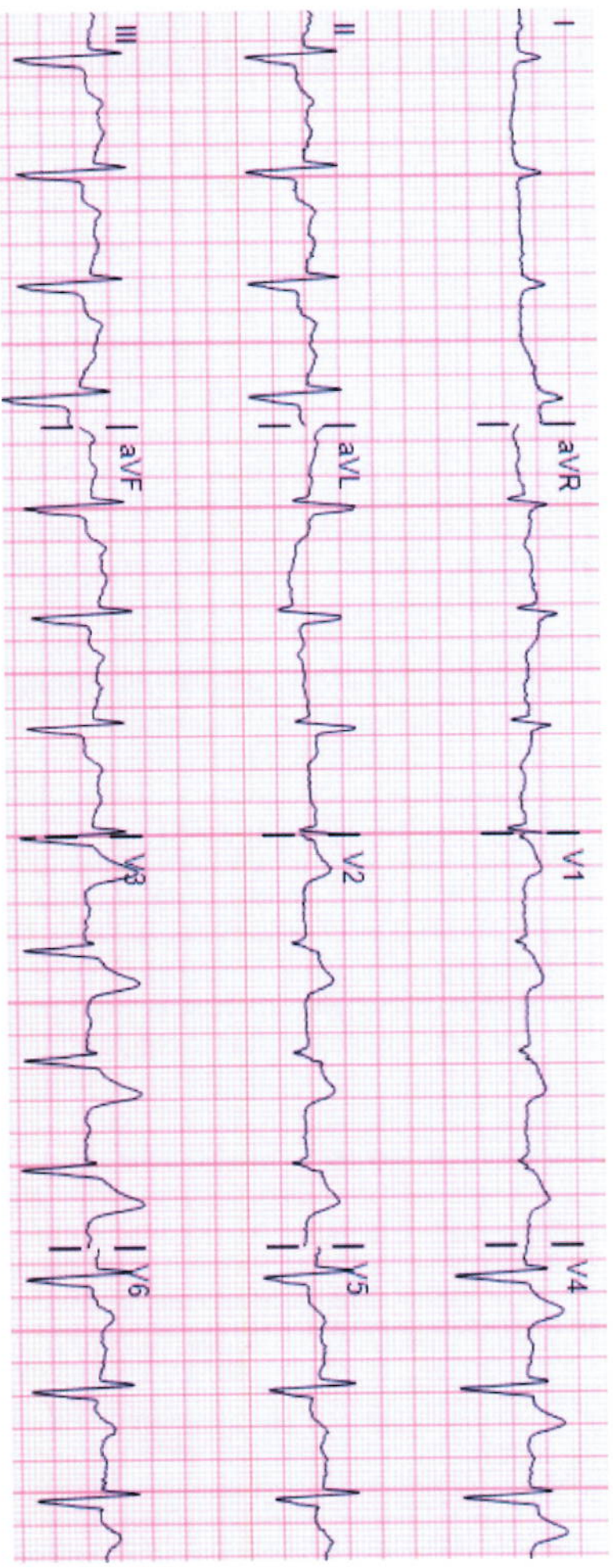
*Developed in Collaboration With the American College of Emergency Physicians and
Society for Cardiovascular Angiography and Interventions*

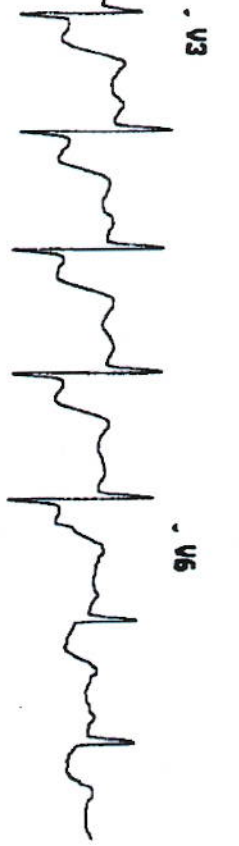
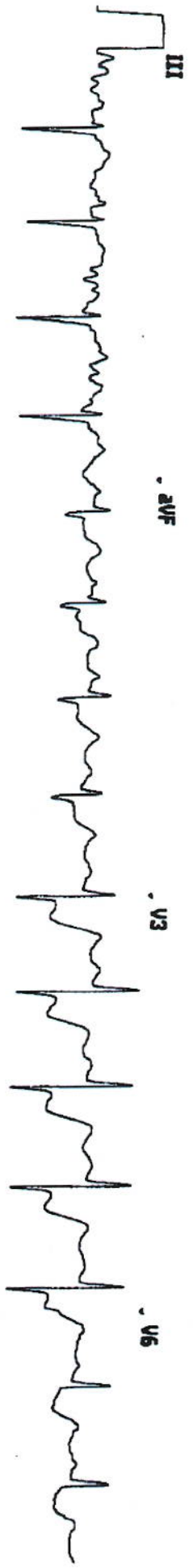
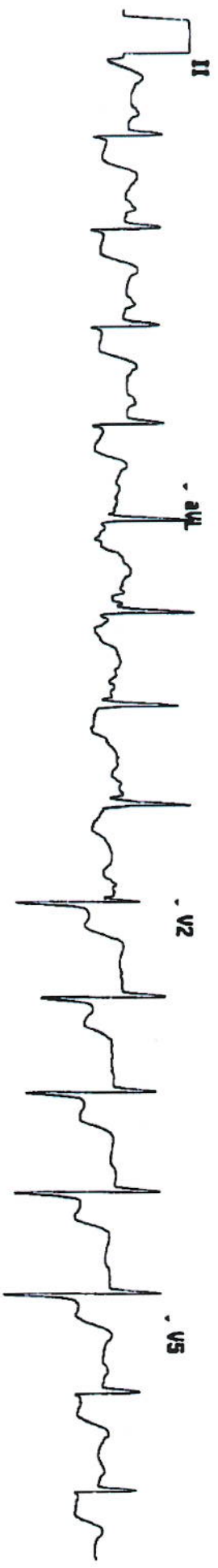
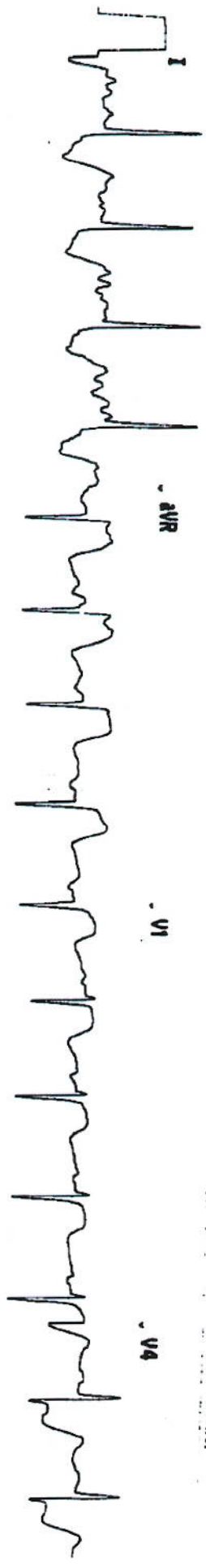
ST ↑ in lead aVR



STEMI

Non-STEMI





Emergent

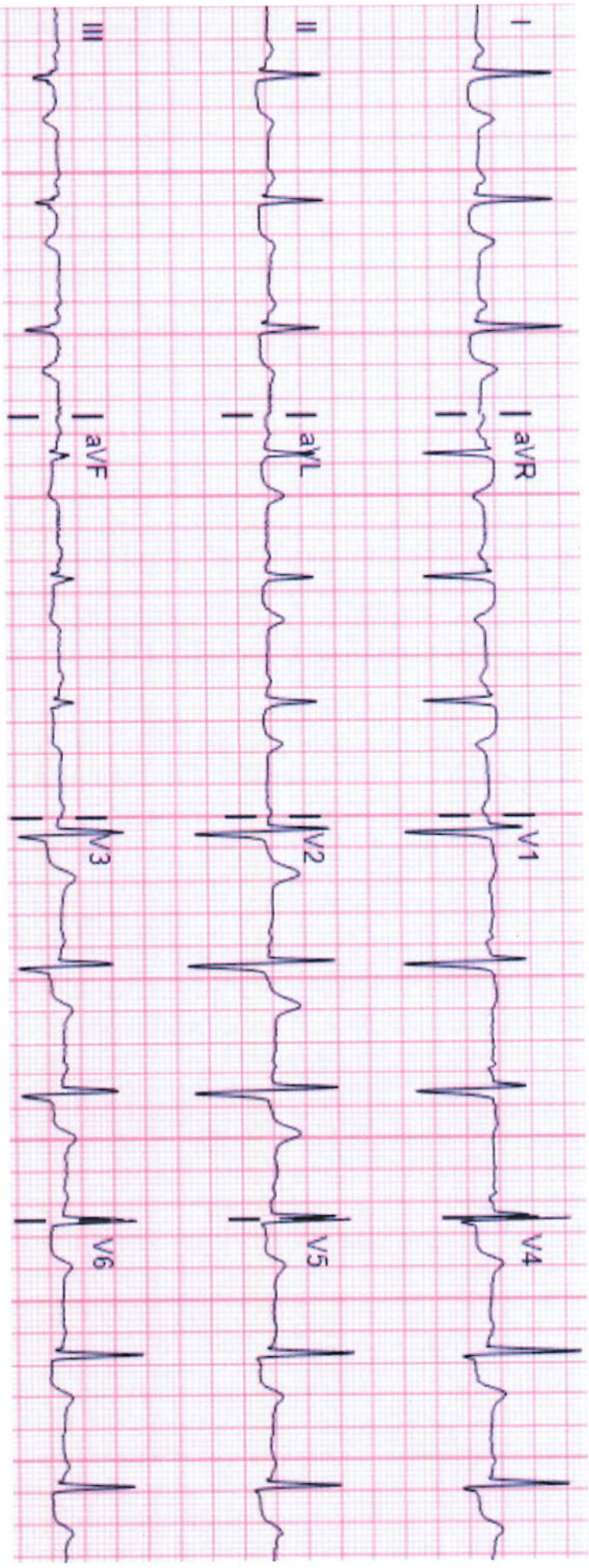
**+ STEMI = Coronary
Angiography**

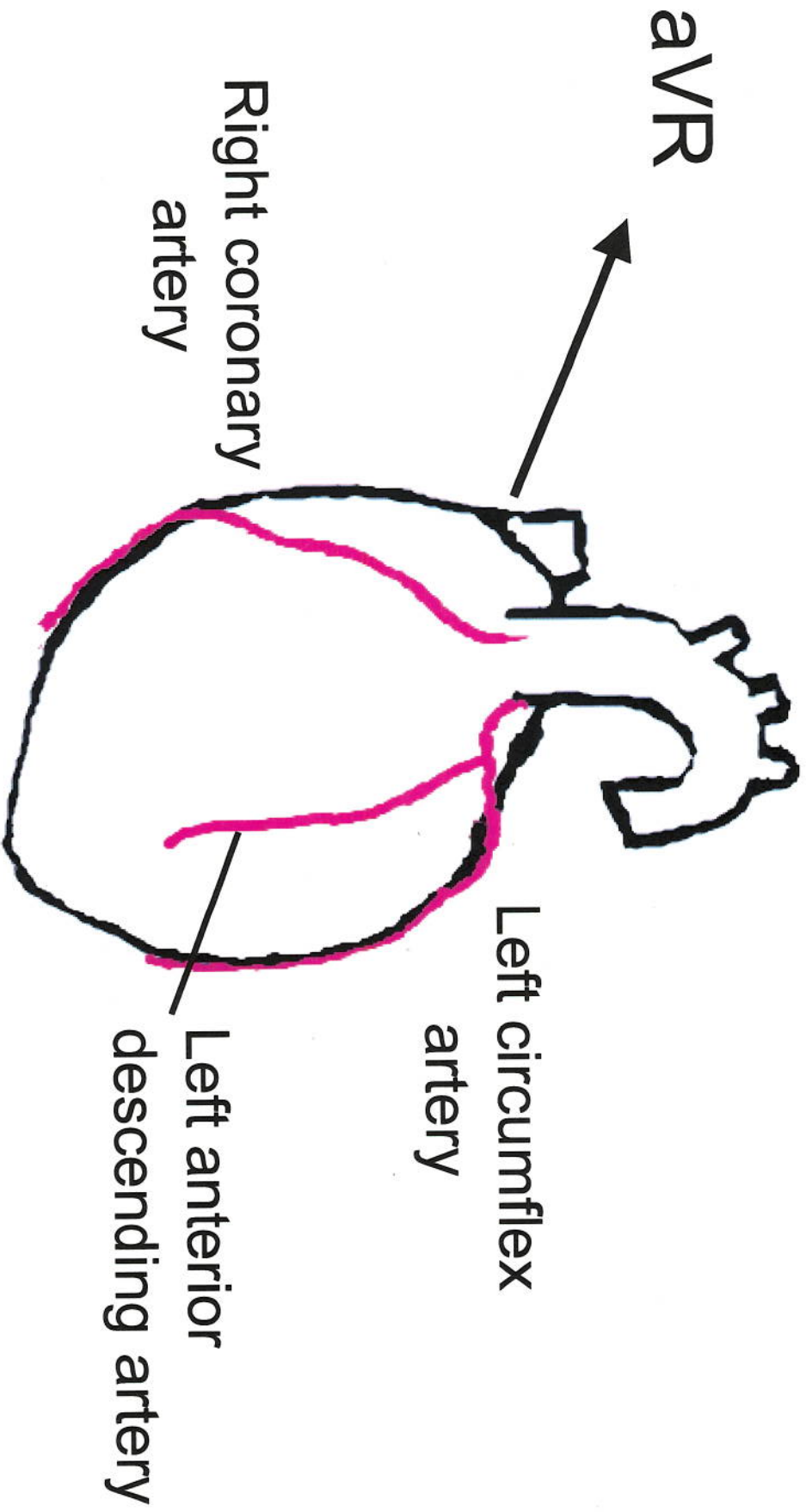
ST ↑ in lead aVR

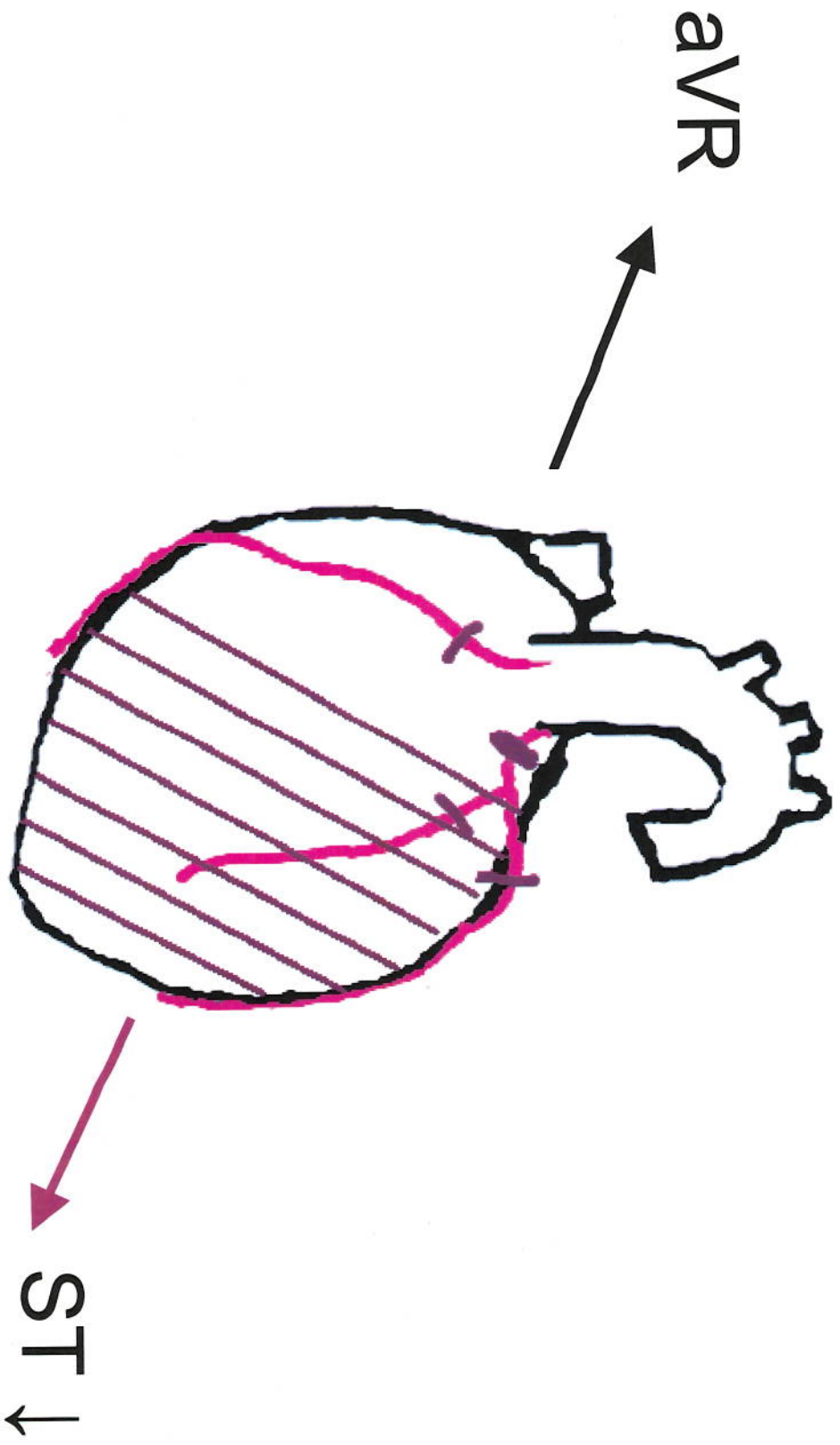
STEMI

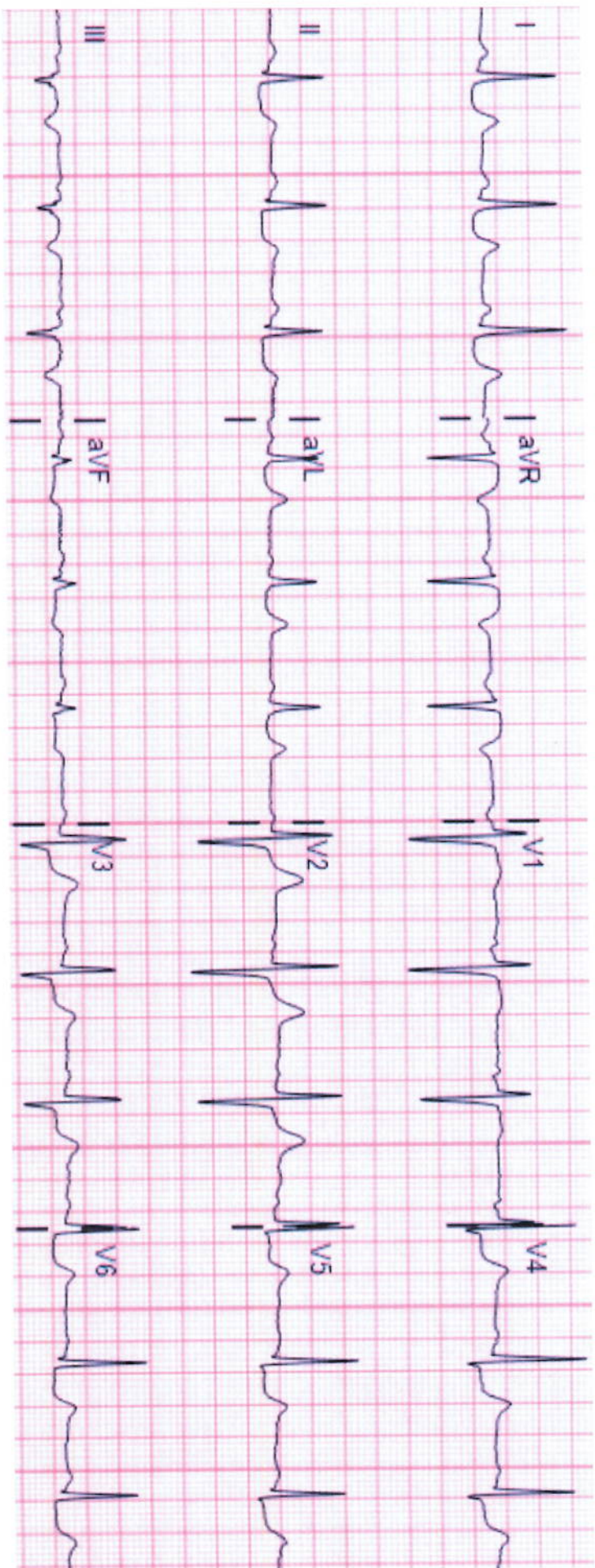
Non-STEMI











Cath lab

Sepsis

Hypokalemia



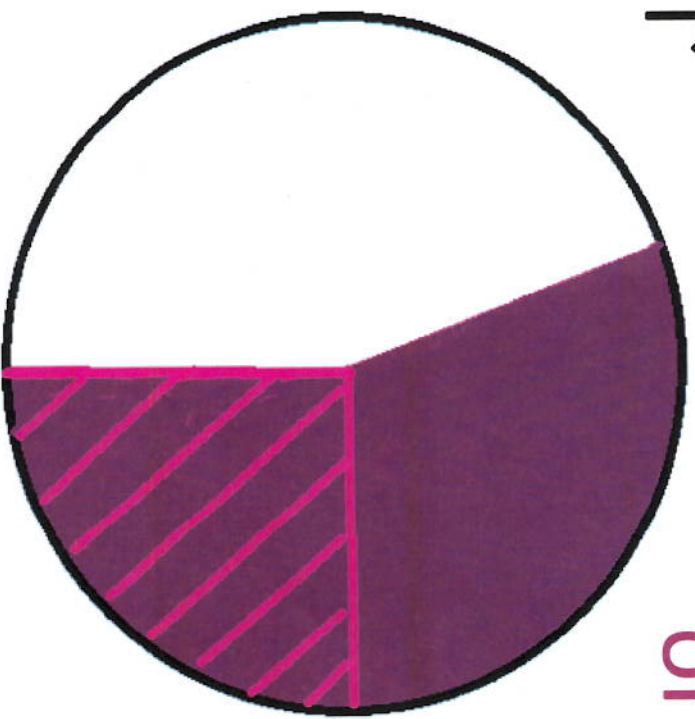
Anemia

Pulmonary
Embolism

Consider
diagnostics and
resuscitation for

Non-STEMI =
secondary
ischemia

**NSTEMI or UA with
≥1 mm of ST ↑
in aVR**



**Severe 3 vessel
or LMCA disease**

**Urgent
CABG**

~~Clopidogrel~~

Take home points

- Don't ignore ST elevation in aVR
- Look closely for STEMI
- Consider secondary ischemia in NSTEMI
- Consider withholding clopidogrel

Resources

- Davis WT, Long BJ, Barnwell RM, & Frawley TC. "A case of spontaneous coronary artery dissection with ST elevation in aVR and posterior leads." *Am J Emerg Med* 2016; 34(12): 2470-e5.
- O'Gara PT, Kushner FG, Ascheim DD, et al. 2013 ACCF/AHA guideline for the management of ST-elevation myocardial infarction: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. *Circulation* 2013;127(4):e362–425.
- Macias M, Peachey J, Mattu A, Brady WJ. The electrocardiogram in the ACS patient: high-risk electrocardiographic presentations lacking anatomically oriented STsegment elevation. *Am J Emerg Med* Mar 2016;34(3):611–7.
- Kosuge M, Ebina T, Hibi K, et al. An early and simple predictor of severe left main and/ or three-vessel disease in patients with non-ST-segment elevation acute coronary syndrome. *Am J Cardiol* 2011;107(4):495–500.
- Smith SW. Updates on the electrocardiogram in acute coronary syndromes. *Curr Emerg Hosp Med Rep* 2012;1(1):43–52.