

# EMST 1491: ECG Recognition and Management

## Exam 2 - Ischemic Syndromes & Algorithm Exam Blueprint and Study Guide

Ischemic Syndromes (Multiple Choice)	25 - 30
General Case Management	5 – 10
Case Scenarios (Short Answer)	20 - 30
<b>Total</b>	<b>50 - 70</b>

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### **Study Guide:**

- Ischemic Syndromes:** Questions are based upon assigned readings and Lectures provided on Acute Coronary Syndromes, Pulmonary Edema, Heart Failure, and Cardiogenic Shock. Your study should focus on the pathophysiology of each disease process as well as therapeutic goals (what we are trying to accomplish with our therapies).
- General Case Management:** These questions focus on the concepts of the Universal Algorithm. They will also address specific skills or actions such as defibrillation and synchronized cardioversion.
- Scenarios:** Given a specific patient presentation and an accompanying ECG strip, list ALL appropriate interventions for the patient. BLS and ALS interventions must be listed. Answers must be based upon the patient's presentation, ECG strip and the AHA algorithms reviewed in class. Interventions must include ECG rhythm identification, drugs to be administered, routes of administration as well as specific administration methods (fast, slow, push, infusion, etc.), dosing specifics including repeat dosing information.

## **Scenario Instructions**

*Read each of the following patient scenarios. Assess the ECG rhythm. Then, for each patient scenario and associated ECG, list ALL appropriate BLS and ALS interventions for this patient. Your interventions must include the ECG rhythm identification, airway management, electrical therapy, drugs to be administered (to include routes of administration and specific dosing), when to transport, and any other appropriate therapies. You may abbreviate your listing with recognized medical abbreviations. Therapies should be in chronological order as much as is possible. Include in your listing the therapies that are noted in the exam question's scenario as already completed as well as those therapies that should have already been done but are not mentioned in the therapy. In other words, be complete in your description of the entire assessment and treatment plan. List all possible therapies as if each therapy is not successful in changing the patient's condition.*

## **Sample Scenario Question**

You are dispatched to a private residence to assist a patient experiencing chest pain. Upon your arrival, you are met at the door by the patient's wife. She tells you that your patient is 56 years old and is not breathing. As she guides you past the 52.4 billion cats and other assorted small rodent-like mammals (all completely disease free, of course), she told you he woke up this morning feeling 'very ill' and tired. He was fixing breakfast when he clutched his chest, clearly in agonizing pain, and collapsed. Fortunately, she was very quick on her feet and was able to catch him and ease him to the floor, thus preventing him from hitting his head. She says he has a history of two heart attacks and takes nitroglycerin PRN and aspirin. He has no other history and takes no other medications. She estimates it has been about 4 minutes since he collapsed. If, in the course of your assessment and management of this patient, you find yourself in some form or fashion assessing the patient's ECG you will find that he is in ventricular fibrillation.

## **Sample Answer**

Scene Size up  
Assess breathing and circulation  
Quick look ECG -> vfib  
defibrillate at 200J, then 300J, then 360J  
reassess pulse and respirations  
Begin CPR, apply monitoring electrodes  
Intubate and bag with 100% oxygen  
Establish 2 large bore IV with N/S at TKO in a proximal vein.  
vasopressin, 40 U IV push  
defibrillate 360J  
amiodarone 300 mg IV push  
defibrillate 360J  
lidocaine 1.5 mg/kg IV, repeat once in 3-5 minutes to max dose of 3.0 mg/kg  
defibrillate 360J  
bretyllium 5 mg/kg IV, repeat X 3 every 3-5 minutes at 10 mg/kg to max dose of 35 mg/kg  
defibrillate 360J  
procainamide 100 mg IV, repeat every 5 minutes to max dose of 17 mg/kg  
defibrillate 360J  
if possibly hypomagnesemic, give magnesium 10% 1-2 g IV  
defibrillate 360J  
sodium bicarbonate 1 mEq/kg  
Assuming no other obvious causes, consider termination or transportation if still in VF