

Bearamedics EKG Test

SLO County EMS Protocols — Rhythm Interpretation & Treatment • 45 Questions

Name: _____ Date: _____ Score: _____ / 45

Choose the single best answer. Treatment answers follow current San Luis Obispo County EMS protocols (600–720 series).
All strips are Lead II at 25 mm/s, 10 mm/mV.

Section A — Rhythm Identification

1. Identify the rhythm.



- A. Sinus tachycardia
- B. Junctional rhythm
- C. Normal sinus rhythm
- D. Atrial fibrillation

2. Identify the rhythm.



- A. Sinus bradycardia
- B. First-degree AV block
- C. Junctional rhythm
- D. Idioventricular rhythm

3. Identify the rhythm.



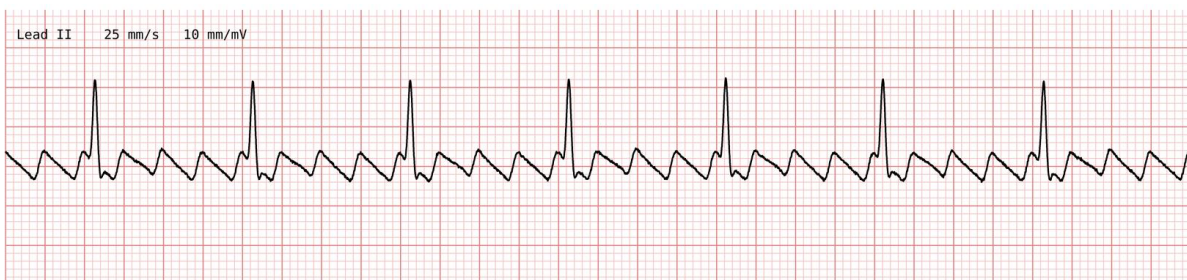
- A. Ventricular tachycardia
- B. SVT
- C. Sinus tachycardia
- D. Atrial flutter

4. Identify the rhythm.



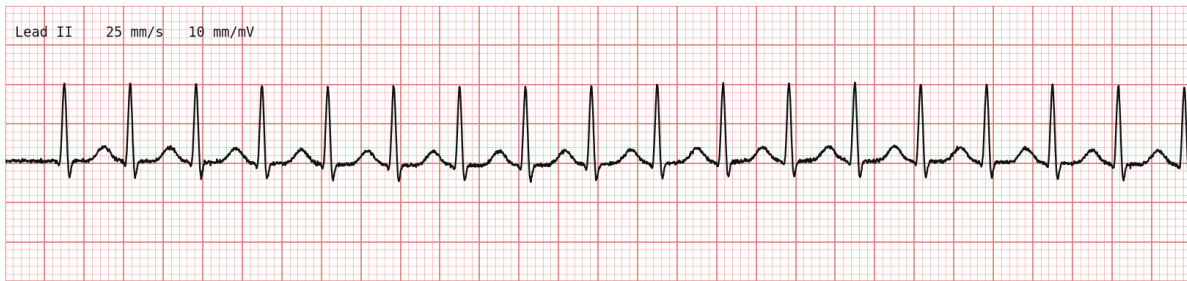
- A. Multifocal atrial tachycardia
- B. Sinus arrhythmia
- C. Atrial flutter
- D. Atrial fibrillation

5. Identify the rhythm.



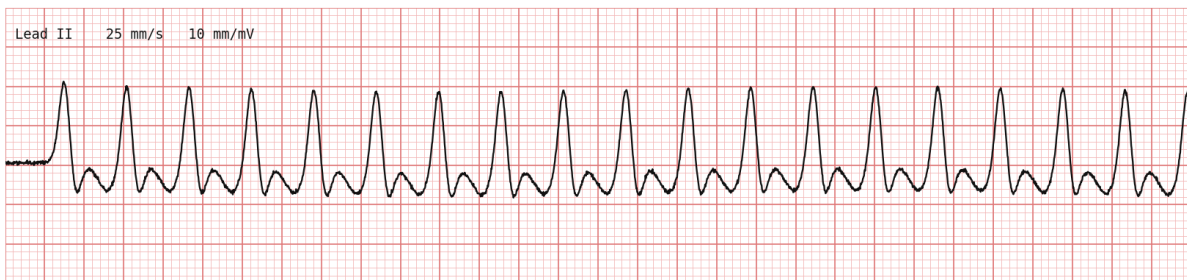
- A. Atrial flutter
- B. SVT
- C. Sinus tachycardia
- D. Atrial fibrillation

6. Identify the rhythm.



- A. Sinus tachycardia
- B. Ventricular tachycardia
- C. Atrial fibrillation
- D. SVT (narrow-complex tachycardia)

7. Identify the rhythm.



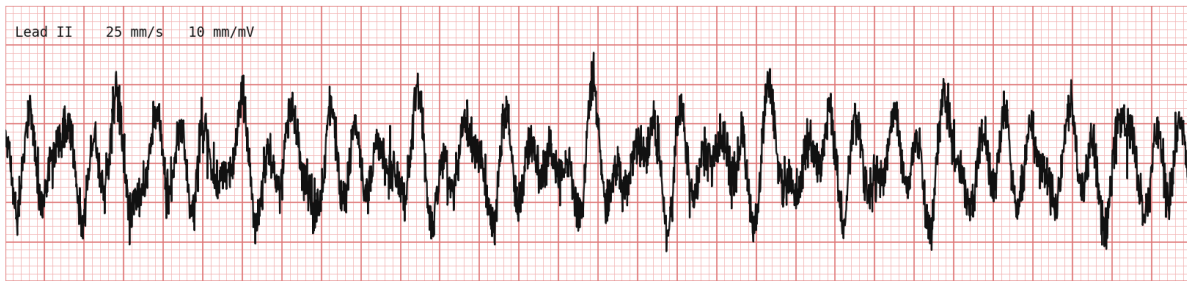
- A. Atrial flutter
- B. Accelerated idioventricular rhythm
- C. Monomorphic ventricular tachycardia
- D. SVT with aberrancy

8. Identify the rhythm.



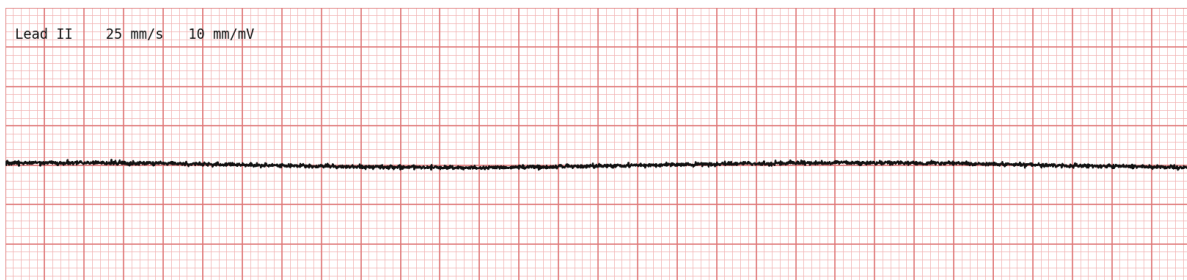
- A. Ventricular fibrillation
- B. Monomorphic VT
- C. Motion artifact
- D. Polymorphic VT (Torsades de Pointes)

9. Identify the rhythm.



- A. Coarse artifact
- B. Ventricular fibrillation
- C. Asystole
- D. Polymorphic VT

10. Identify the rhythm.



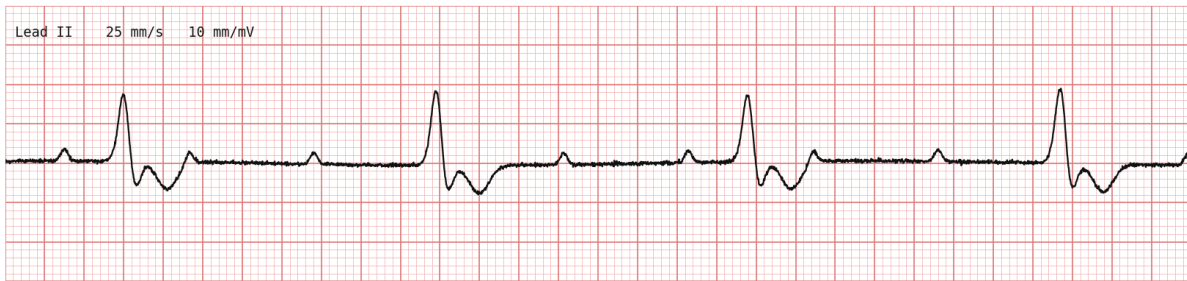
- A. Pulseless electrical activity
- B. Asystole
- C. Fine ventricular fibrillation
- D. Idioventricular rhythm

11. Identify the rhythm.



- A. Junctional rhythm
- B. Ventricular tachycardia
- C. Idioventricular (ventricular escape) rhythm
- D. Third-degree AV block

12. Identify the rhythm.



- A. Third-degree (complete) AV block
- B. Second-degree Type II
- C. Sinus brady with first-degree block
- D. Second-degree Type I

13. Identify the rhythm.



- A. Second-degree AV block, Type I (Wenckebach)
- B. Third-degree AV block
- C. Second-degree Type II
- D. First-degree AV block

14. Identify the rhythm.



- A. Second-degree AV block, Type II
- B. Third-degree AV block
- C. Atrial flutter with variable block
- D. Second-degree Type I (Wenckebach)

15. Identify the rhythm.



- A. Junctional rhythm
- B. First-degree AV block
- C. Normal sinus rhythm
- D. Second-degree Type I

16. Identify the rhythm.



- A. Atrial bigeminy
- B. Ventricular bigeminy (PVCs)
- C. Ventricular tachycardia
- D. Paced rhythm

17. Identify the rhythm.



- A. Junctional rhythm
- B. Idioventricular rhythm
- C. First-degree AV block
- D. Sinus bradycardia

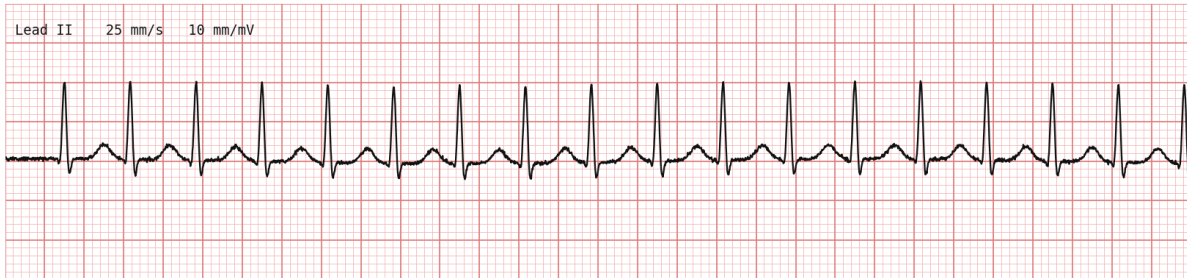
18. Identify the rhythm.



- A. SVT**
- B. Atrial flutter**
- C. Atrial fibrillation with RVR**
- D. Sinus tachycardia**

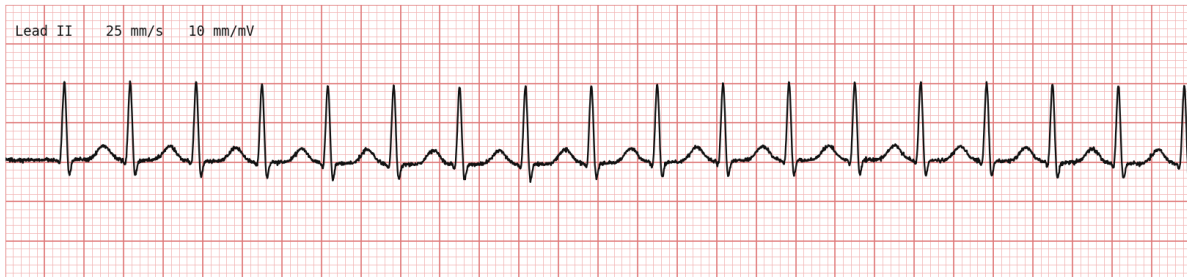
Section B — Strip Plus Clinical Context: Treatment

19. 28 y/o, palpitations, HR 190, BP 118/74, alert, no chest pain or dyspnea. Vagal maneuvers fail. Per SLO County SVT Protocol #642, the next step is:



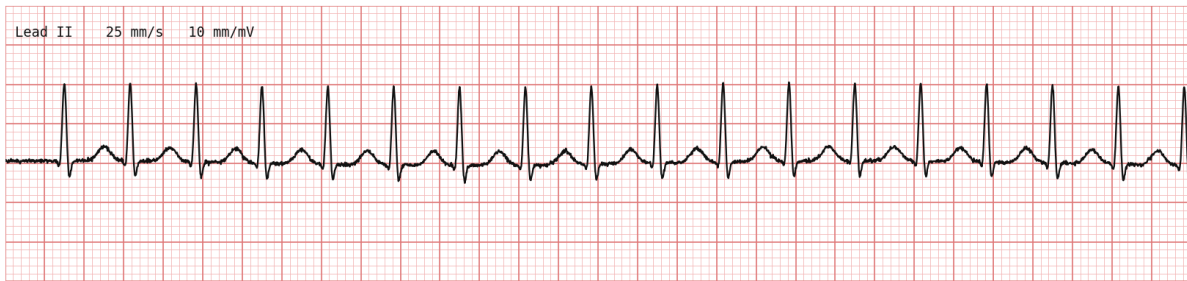
- A. Adenosine 6 mg rapid IV followed by a 20 mL NS bolus
- B. Synchronized cardioversion at 50 J
- C. Adenosine 12 mg IV with no flush
- D. Amiodarone 150 mg IV over 10 minutes

20. Same patient — the 6 mg dose with flush did not convert the rhythm. Per #642, next is:



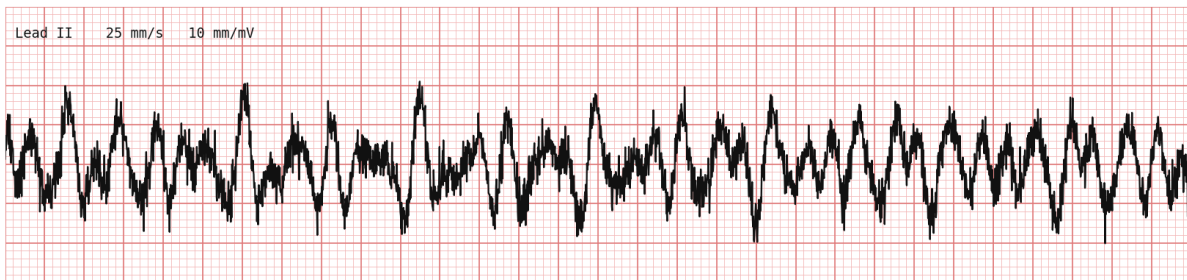
- A. Adenosine 18 mg IV
- B. Repeat Adenosine 6 mg
- C. Adenosine 12 mg IV + 20 mL NS bolus, may repeat once
- D. Proceed straight to synchronized cardioversion

21. Different patient — SVT at 200, BP 70/40, diaphoretic and altered (unstable). Per #642:



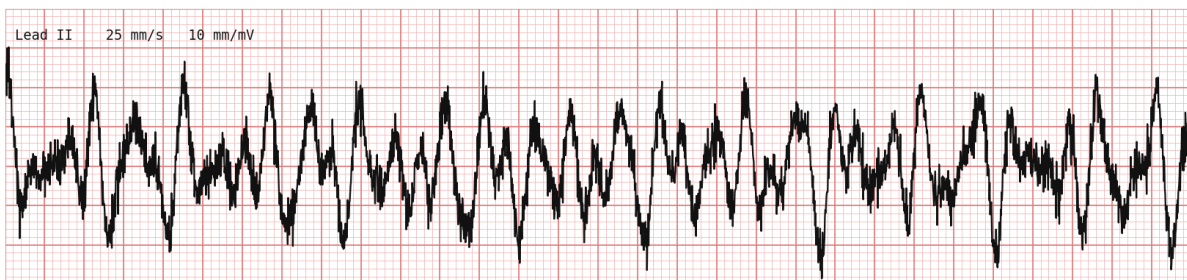
- A. Amiodarone 150 mg drip
- B. Defibrillate (unsynchronized) at 200 J
- C. Synchronized cardioversion; may give Midazolam up to 2 mg slow IV or 5 mg IN to pre-medicate
- D. Adenosine 6 mg, then 12 mg

22. Adult, unresponsive, pulseless, this rhythm on the monitor. Per Cardiac Arrest Protocol #641, the first electrical therapy is:



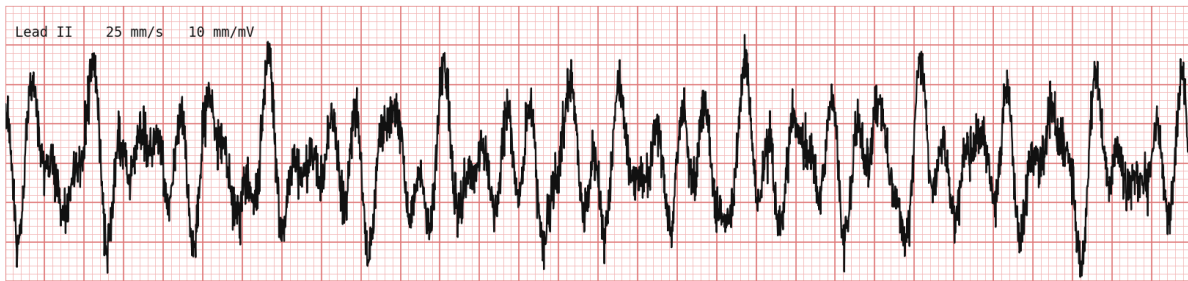
- A. Defibrillate at the maximum manufacturer setting, then resume CPR immediately
- B. Synchronized cardioversion at 200 J
- C. Synchronized cardioversion at 120 J
- D. Transcutaneous pacing at 80 bpm

23. Same arrest, refractory VF after shocks. Per #641, the first antiarrhythmic and dose is:



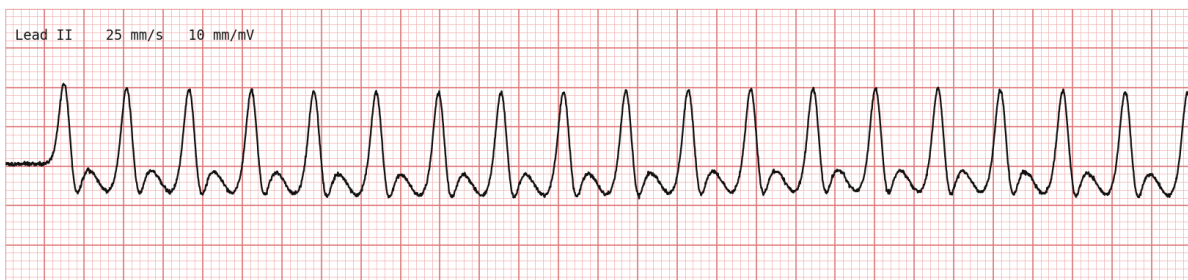
- A. Lidocaine 1 mg/kg IV/IO
- B. Epinephrine 1:1,000 1 mg IM
- C. Amiodarone 300 mg IV/IO push (refractory dose 150 mg after 5 min)
- D. Amiodarone 150 mg IV/IO push

24. Same arrest — epinephrine dosing per #641 is:



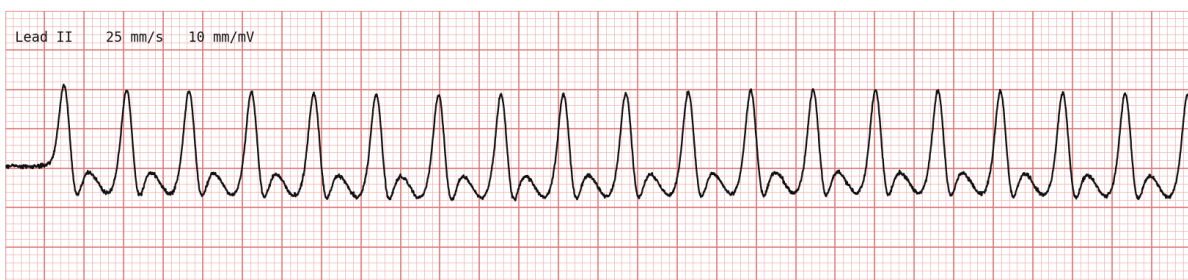
- A. Epinephrine 1:10,000 1 mg IV/IO every 3–5 min; not during the first cycle of CPR
- B. Push-dose Epinephrine 10 mcg/mL
- C. Epinephrine 1:10,000 1 mg IV/IO every cycle, including the first
- D. Epinephrine 1:1,000 1 mg IM every 5 min

25. 56 y/o, HR 190 wide and regular, BP 132/80, alert with mild palpitations only (stable). Per VT-with-Pulses Protocol #643:



- A. Adenosine 6 mg IV
- B. Amiodarone 300 mg IV push
- C. Synchronized cardioversion at 100 J
- D. Amiodarone 150 mg IV/IO drip over 10 min; refractory 150 mg (max 300 mg)

26. Same rhythm, now BP 74/40, altered, chest pain (unstable). Per #643:



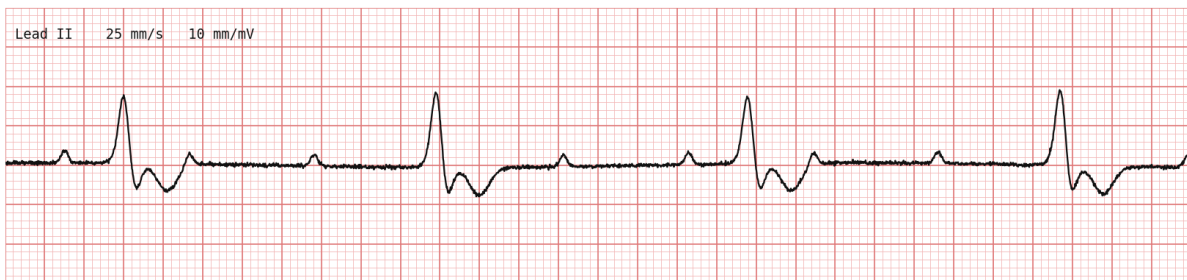
- A. Adenosine 12 mg IV
- B. Amiodarone 150 mg IV push
- C. Synchronized cardioversion; consider Midazolam to pre-medicate
- D. Defibrillate at the maximum setting

27. 68 y/o, HR 40, BP 78/50, ALOC, cool and diaphoretic. Per Symptomatic Bradycardia Protocol #644 (unstable), first-line is:



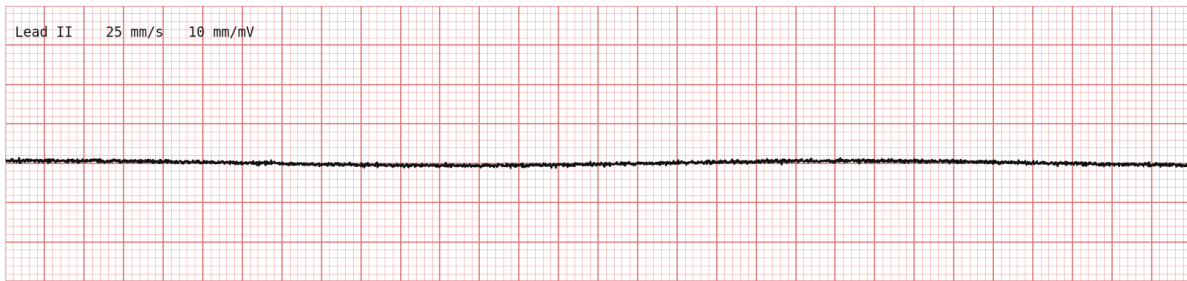
- A. Atropine 1 mg IV push
- B. Immediate TCP without a trial of atropine
- C. Epinephrine 1:10,000 1 mg IV push
- D. Atropine 0.5 mg IV, repeat q3-5 min to max 3 mg; NS 500 mL bolus concurrently

28. Syncope, HR 38, wide complexes, BP 76/44, ALOC — high-degree block with wide QRS, poor response to atropine. Per #644, the indicated intervention is:



- A. Atropine 1 mg IV push
- B. Transcutaneous pacing (Procedure #716)
- C. Adenosine 6 mg IV
- D. Amiodarone 150 mg drip

29. Unresponsive, pulseless, this rhythm confirmed in two leads. Per #641:



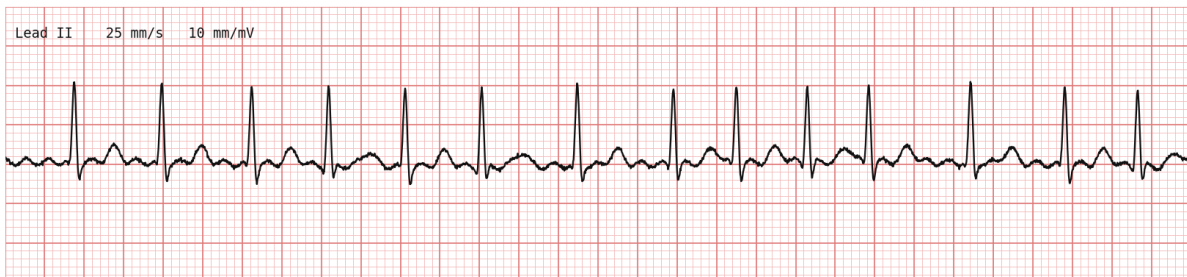
- A. HPCPR + Epinephrine 1:10,000 1 mg IV/IO q3-5 min; treat reversible causes — no shock, no antiarrhythmic**
- B. Defibrillate at the maximum setting**
- C. Atropine 1 mg IV**
- D. Synchronized cardioversion**

30. 70 y/o, irregularly irregular ~150, BP 128/78, mild palpitations, no instability (stable A-fib RVR). Per A-Fib with RVR Protocol #645:



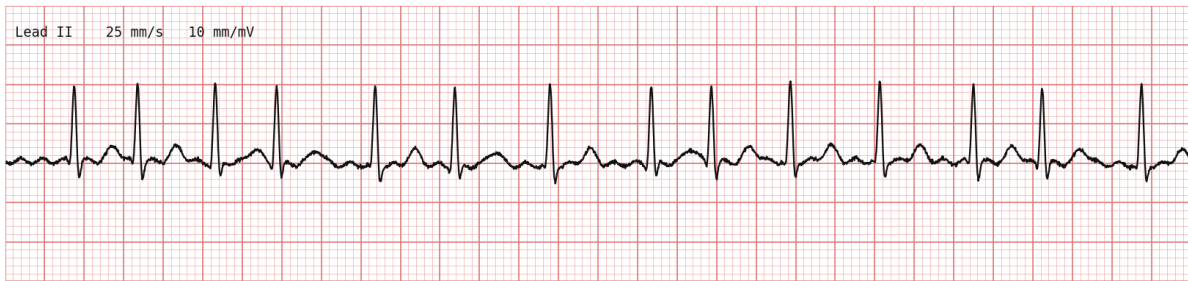
- A. Adenosine 6 mg IV**
- B. Synchronized cardioversion at 200 J**
- C. Observe and monitor the patient**
- D. Diltiazem 0.25 mg/kg IV**

31. Same rhythm but BP 74/40, altered, pulmonary edema (unstable). Per #645:



- A. Adenosine 12 mg IV**
- B. Unsynchronized cardioversion**
- C. Consult the Base Hospital**
- D. Standing-order Diltiazem**

32. Same patient deteriorates to peri-arrest / extremis. Per #645:



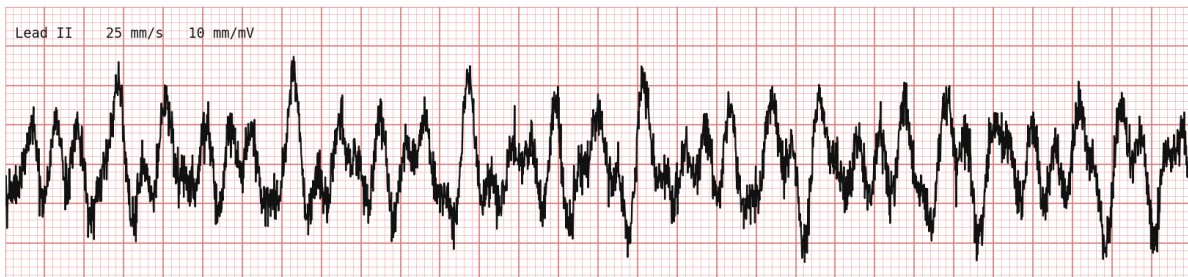
- A. Adenosine 6 mg then 12 mg
- B. Synchronized cardioversion at 200 J; consider Midazolam up to 2 mg IV / 5 mg IN to pre-medicate
- C. Amiodarone 300 mg push
- D. Defibrillate (unsynchronized) at maximum

33. Wide, twisting polymorphic VT with pulses; patient unstable. Per #643 notes, the correct cardioversion is:



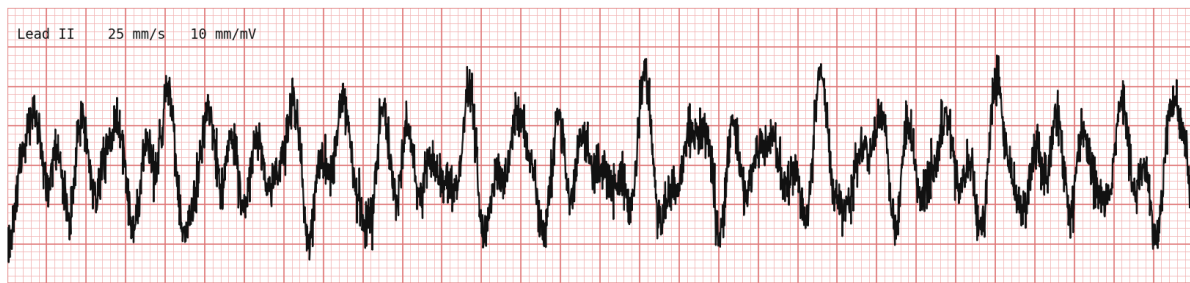
- A. Synchronized cardioversion at 100 J
- B. Unsynchronized cardioversion starting at 120 J
- C. Synchronized cardioversion at 50 J
- D. Defibrillate at max only after three failed sync attempts

34. 6-year-old, ~22 kg, pulseless, this rhythm. Per #641 (pediatric), the first defibrillation energy is:



- A. 200 J fixed
- B. 2 J/kg, then 4 J/kg on the subsequent shock
- C. 1 J/kg
- D. Maximum manufacturer setting

35. Same pediatric arrest — epinephrine per #641 is:



- A. Epinephrine 1:10,000 0.01 mg/kg (0.1 mL/kg) IV/IO, max 0.3 mg, q3-5 min
- B. Epinephrine 1:1,000 0.01 mg/kg IM
- C. Epinephrine 1 mg IV/IO q3-5 min
- D. Epinephrine 1:10,000 0.1 mg/kg IV/IO

36. Cardiac arrest with ROSC; organized rhythm restored but BP 78/44 (persistent hypotension). Per #641 ROSC with hypotension:



- A. Epinephrine 1:10,000 1 mg IV push
- B. Atropine 0.5 mg IV
- C. Amiodarone 150 mg IV
- D. Push-dose Epinephrine 10 mcg/mL, 1 mL IV/IO q1-3 min, titrated to SBP > 90

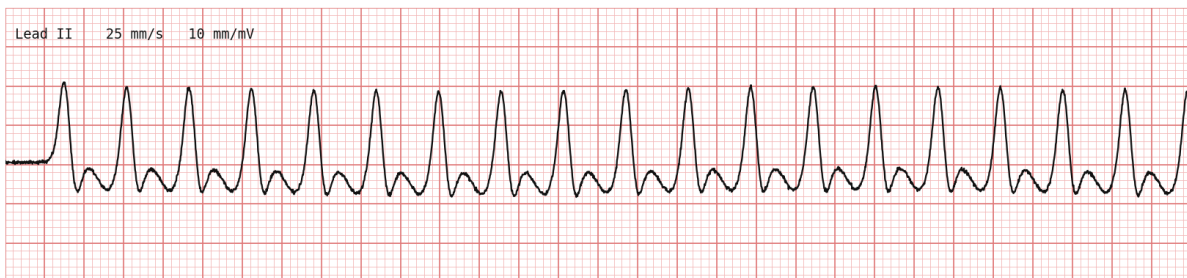
Section C — Integrated Field Scenarios

37. 58 y/o crushing chest pain, diaphoretic. 12-lead shows ST-elevation in II, III, and aVF. BP 96/60. Rhythm strip below. Which best reflects SLO County management (Protocol #640)?



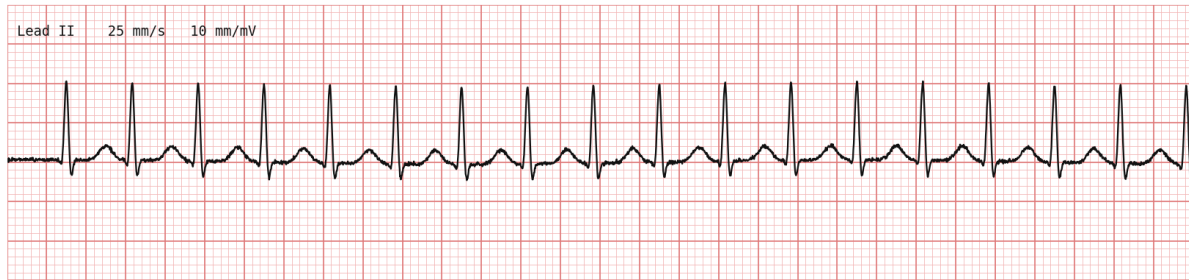
- A. Give NTG 0.4 mg SL immediately, regardless of blood pressure
- B. Give Fentanyl 100 mcg IV first, before aspirin
- C. Withhold aspirin because the systolic pressure is low
- D. ASA 162 mg chewable, obtain/transmit the 12-lead and initiate a STEMI Alert to French; evaluate V4R for RVI and hold nitroglycerin if RVI or hypotension is present

38. 62 y/o, palpitations progressing to near-syncope; wide regular tachycardia ~180, BP 70 by palpation, cool and confused. Best action?



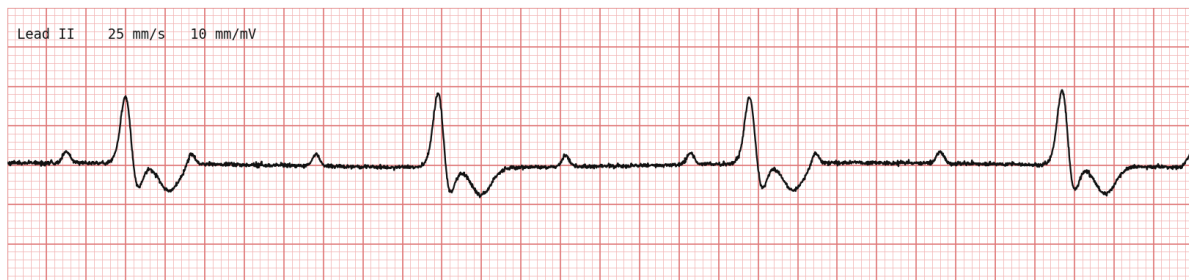
- A. Defibrillate (unsynchronized) at the maximum setting
- B. Adenosine 6 mg, then 12 mg
- C. Amiodarone 150 mg over 10 minutes
- D. Sedate with Midazolam and perform synchronized cardioversion (#643 unstable VT)

39. 24 y/o sudden palpitations, HR 190 narrow and regular, BP 120/78, no chest pain or dyspnea, mentating normally. Best initial sequence?



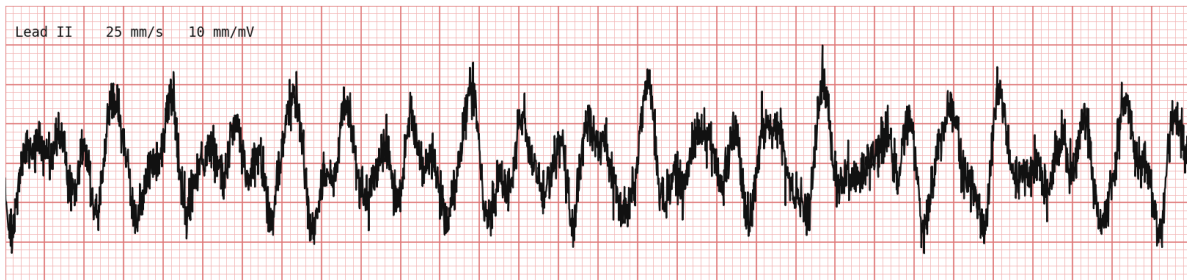
- A.** Diltiazem 0.25 mg/kg IV
- B.** Amiodarone 150 mg drip
- C.** Vagal maneuvers, then Adenosine 6 mg + 20 mL flush, then 12 mg + flush (#642 stable)
- D.** Immediate synchronized cardioversion

40. 78 y/o syncope, HR 38 with a wide escape and AV dissociation, BP 74/40, ALOC and cool. Atropine is unlikely to help. Best action?



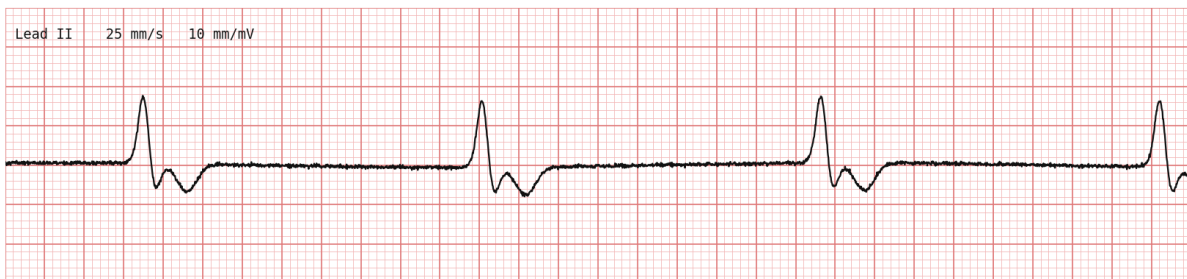
- A.** Amiodarone 150 mg drip
- B.** Begin transcutaneous pacing (#716): set rate ~80, increase output until mechanical capture; manage pain per #603
- C.** Atropine 1 mg push, then reassess
- D.** Epinephrine 1:10,000 1 mg IV push

41. Witnessed adult VF arrest. After two shocks + CPR + epinephrine, the patient remains in VF following the 3rd shock. Per #641, what should the team consider next (besides continued CPR / epi / amiodarone)?



- A. Synchronized cardioversion
- B. Transcutaneous pacing
- C. Vector-change defibrillation (switch pad position anterior-lateral ↔ anterior-posterior)
- D. Immediate transport without further shocks

42. Intentional tricyclic overdose, lethargic, wide-complex bradycardia (QRS > 0.12 s), HR 50, BP 88/54. Per #614/#644, the key pharmacologic intervention for the wide QRS is:



- A. Amiodarone 150 mg IV
- B. Sodium Bicarbonate 1 mEq/kg IV/IO, may repeat q10 min at ½ dose for persistent wide QRS
- C. Calcium Chloride 1 g IV/IO
- D. Adenosine 6 mg IV

43. 72 y/o, palpitations for 3 hrs, irregularly irregular ~150, BP 132/82, no chest pain or dyspnea, well-perfused. Best action?



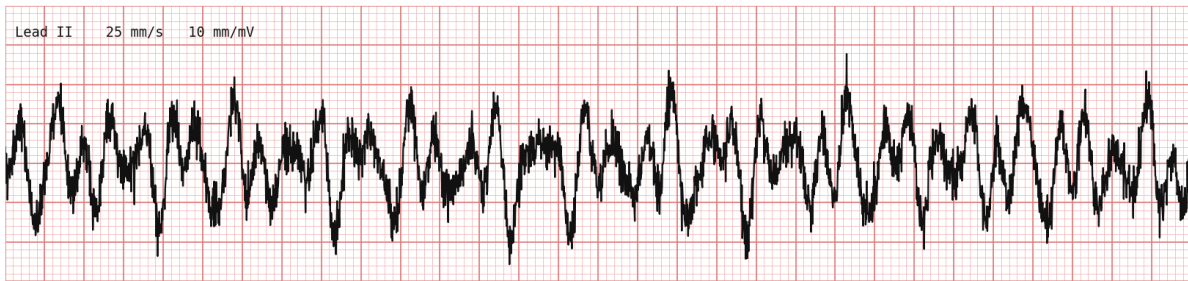
- A.** Standing-order Diltiazem
- B.** Recognize stable A-fib with RVR: observe and monitor (#645); treat only if instability develops
- C.** Synchronized cardioversion at 200 J now
- D.** Adenosine 6 mg IV

44. Post-ROSC after a VF arrest; organized narrow rhythm, no STEMI on the 12-lead, BP 84/50. Destination and pressor decision?



- A.** Transport to the closest ED only if the 12-lead shows STEMI
- B.** Hold transport until the blood pressure normalizes
- C.** Transport to the nearest STEMI Receiving Center regardless of the 12-lead reading; support BP with push-dose epi titrated to SBP > 90 (#641)
- D.** Give Amiodarone 150 mg prophylactically, then transport

45. 5-year-old, ~22 kg, witnessed VF arrest. Which is the correct county pediatric sequence?



- A. Defibrillate max setting; Epi 1:1,000 IM
- B. Defibrillate 1 J/kg; Epi 0.1 mg/kg; Amiodarone 150 mg
- C. Defibrillate 2 J/kg then 4 J/kg; Epi 1:10,000 0.01 mg/kg q3–5 min; Amiodarone 5 mg/kg IV/IO push
- D. Defibrillate 200 J; Epi 1 mg; Amiodarone 300 mg