

ICD Fundamentals

1. Why did Dr. Mirowski want to develop ICDs?
 - a. He knew it would be popular
 - b. He was asked by a CRM company
 - c. His colleague and friend died from a sudden cardiac event
 - d. His dog needed one

2. Primary prevention patients are only at high risk for sudden Cardiac death.
 - a. true
 - b. false

3. What type of filters are used to clean up the sensed signal (select all that apply)?
 - a. High pass
 - b. Q wave
 - c. Triple band
 - d. Low pass

4. Which of the following are utilized as detection criteria for fast arrhythmias?
 - a. Rate
 - b. Onset
 - c. Stability
 - d. Morphology
 - e. Fibrillation detection
 - f. All the above

5. Afib with a rapid response is the leading cause of inappropriate shock
 - a. true
 - b. false

ICD Programming for Shock Reduction

1. What are the most common reasons for inappropriate shocks?(Circle all that apply)
 - a. AFib
 - b. RV morphology
 - c. Counting T waves as R waves
 - d. Noise

2. Lead noise is the most common reason for inappropriate shock.
 - a. True
 - b. False

3. Shocks in general: (Choose all that apply)
 - a. Are associated with increased mortality.
 - b. Can lead to myocardial dysfunction.
 - c. Can have a profound psychological effect on a patient.
 - d. Can have a negative effect on a patient even when appropriate.

4. Two types of T-Wave oversensing are Long-T and High-T, each requiring different programming strategies.
 - a. True
 - b. False

5. Specificity is the ability for a discrimination algorithm to appropriately withhold VT therapy in the presence of an SVT.
 - a. True
 - b. False

6. Both MADIT RIT and Prepare were important studies showing the benefit of programming zones with higher rate cut-offs and longer detection counts.
 - a. True
 - b. False

DX Clinical Data and Programming

1. An analysis of > 15,000 patients from a National Database, in patients requiring an ICD for primary prevention of sudden cardiac death, a multivariable analysis confirmed which of the following to be a significant predictor for “any complications”? (Margolis, et al. JAHA 2023;12)
 - a. Axillary vein access for lead placement
 - b. Placing an atrial lead
 - c. Using any ‘contrast’ during the procedure
 - d. Patient history of Type 2 Diabetes

2. The ability to monitor an ICD patient for high rate atrial events and burden of atrial fibrillation: (Hindricks G et al. EP Europace, 2023 Apr 11; euad061; doi: 10.1093/europace/euad061)
 - a. Eliminates the possibility of a cerebrovascular accident
 - b. Has been shown to make the patient less accepting of the implanted device
 - c. Allows earlier intervention, e.g., initiation of oral-anticoagulants, if clinically indicated
 - d. Satisfies guideline requirements to upgrade to a resynchronization device