



## Clinical Cardiac Electrophysiology

### Certification Examination Blueprint

#### **What Does the Examination Cover?**

The examination is designed to evaluate the extent of the candidate's knowledge and clinical judgment in the areas in which a consultant in clinical cardiac electrophysiology should demonstrate a high level of competence. Expertise in the broad domain of clinical cardiac electrophysiology and the diagnosis and treatment of both common and rare conditions that have important consequences for patients, will be assessed.

Examination content is consistent with a pre-established blueprint, or table of specifications. The blueprint is developed by the Test Committee on Clinical Cardiac Electrophysiology and is reviewed and revised annually to ensure that it is current. In addition, practicing clinical cardiac electrophysiology trainees, and training program directors are surveyed periodically to provide feedback on the blueprinting process. The blueprint is used as a guide in developing the examination.

Topics covered may include the following:

- Indications for and interpretation of intracardiac electrophysiologic studies, as well as techniques of performing these studies
- Indications for and interpretation of esophageal, scalar, and signal-averaged electrocardiography; ambulatory electrocardiography; continuous in-hospital cardiac monitoring; exercise testing; tilt testing; and relevant imaging studies
- Indications for and effects of pacemaker and cardioverter-defibrillator implantation and catheter and surgical ablation of/for arrhythmias
- Indications for and effects of esophageal and transcutaneous pacing, cardioversion, defibrillation, and cardiopulmonary resuscitation
- Pharmacokinetics and use of antiarrhythmic agents and other drugs that affect cardiac electrical activity
- Evaluation and management of patients — both ambulatory and hospitalized — who have clinical syndromes resulting from arrhythmias
- Formation and propagation of normal and abnormal electrical impulses, autonomic nervous control of cardiac electrical activity, and mechanisms of clinically significant arrhythmias and conduction disturbances
- General internal medicine as encountered in the practice of clinical cardiac electrophysiology (including some general pediatrics with an emphasis on adolescent medicine)

The content areas covered and their relative proportions on the examination are as follows:

Medical Content Category	Relative Percentage
Invasive Diagnosis and Treatment	42%
Basic Science and Fundamentals of Electrophysiology	18%
Device Management	18%
Noninvasive Diagnosis and Treatment	15%
Clinical Scenarios and Syndromes	7%
Total	100%

## Content Outline of the Certification Examination

This content outline describes a *typical* Clinical Cardiac Electrophysiology Certification Examination; actual content on a specific examination may vary. Each medical content category from the examination blueprint is listed in boldface below, along with target blueprint percentage and total number of questions in the category. Within each category, the approximate distribution of questions in specified areas is also listed.

Medical Content Category (Relative Percentage)	Number of Questions
<b>Invasive Diagnosis and Treatment (42%)</b>	<b>62-75 as follows:</b>
Core concepts of electrophysiology studies	2-5
Bradyarrhythmias	4-5
Supraventricular tachycardia	48-53
Ventricular tachycardia	7-13

<b>Basic Science and Fundamentals of Electrophysiology (18%)</b>	<b>31-37 as follows:</b>
Cellular electrophysiology	3-4
Cardiac physiology	8-11
Pharmacology	19-24
Genetics — non-ion channels	0-1

<b>Device Management (18%)</b>	<b>25-29 as follows:</b>
General concepts	1-2
Pacemakers	12-15
Implantable cardioverter-defibrillators	9-11
Biventricular devices	0-1
Implantable loop recorders	0-1

<b>Noninvasive Diagnosis and Treatment (15%)</b>	<b>29-31 as follows:</b>
Core concepts	1-6
Bradyarrhythmias	3-5
Supraventricular tachycardia	11-16
Ventricular tachycardia	6-10

Medical Content Category (Relative Percentage)	Number of Questions
<b>Clinical Scenarios and Syndromes (7%)</b>	<b>8-13 as follows:</b>
Common presentations	1-3
WPW and risk stratification	0-1
Repolarization syndromes	0-1
Miscellaneous syndromes	2-3
Infectious diseases	1-4
Cardiomyopathies	0-1
Congenital heart disease	1-2
Electrolyte abnormalities	0-1
Cardiac transplantation aftercare	0-1
Arrhythmias in pregnancy	0-1
Arrhythmias in athletes	0-1
Cardiopulmonary resuscitation	0-1
Ethics	0-2