Blueprint for the Full-Day, Multiple-Choice Questions Component of the Exam:

Purpose of the exam

The exam is designed to evaluate the knowledge, diagnostic reasoning, and clinical judgment skills expected of the certified cardiovascular disease specialist in the broad domain of the discipline. The ability to make appropriate diagnostic and management decisions that have important consequences for patients will be assessed. The exam may require recognition of common as well as rare clinical problems for which patients may consult a certified cardiovascular disease specialist.

Exam content

Exam content is determined by a pre-established blueprint, or table of specifications. The blueprint is developed by ABIM and is reviewed annually and updated as needed for currency. Trainees, training program directors, and certified practitioners in the discipline are surveyed periodically to provide feedback and inform the blueprinting process.

The primary medical content categories of the blueprint are shown below, with the percentage assigned to each for a typical exam:

<table>
<thead>
<tr>
<th>Medical Content Category</th>
<th>% of Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arrhythmias</td>
<td>15%</td>
</tr>
<tr>
<td>Coronary Artery Disease</td>
<td>21.5%</td>
</tr>
<tr>
<td>Heart Failure and Cardiomyopathy</td>
<td>17%</td>
</tr>
<tr>
<td>Valvular Disease</td>
<td>15%</td>
</tr>
<tr>
<td>Pericardial Disease</td>
<td>4%</td>
</tr>
<tr>
<td>Congenital Heart Disease</td>
<td>5%</td>
</tr>
<tr>
<td>Vascular Diseases</td>
<td>6%</td>
</tr>
<tr>
<td>Systemic Hypertension and Hypotension</td>
<td>7.5%</td>
</tr>
<tr>
<td>Pulmonary Circulation Disorders</td>
<td>3%</td>
</tr>
<tr>
<td>Systemic Disorders Affecting the Circulatory System</td>
<td>4%</td>
</tr>
<tr>
<td>Normal Cardiovascular Anatomy and Physiology</td>
<td>2%</td>
</tr>
</tbody>
</table>

100%
Exam questions in the content areas above may also address clinical topics in:

- Preventive and rehabilitative cardiology
- Cardiovascular disease in women
- Geriatric cardiovascular disease
- Preoperative assessment for noncardiac surgery
- Postoperative cardiac care
- Critical care medicine, cardiovascular surgery, and general internal medicine as encountered in the practice of cardiology (including some general pediatrics with an emphasis on adolescent medicine)

**ABIM is committed to working toward health equity and believes that board-certified physicians should have an understanding of health care disparities. Therefore, health equity content that is clinically important to each discipline will be included in assessments, and the use of gender, race, and ethnicity identifiers will be re-evaluated.**

**Exam format**

The exam is composed of up to 240 single-best-answer multiple-choice questions, of which approximately 40 are new questions that do not count in the examinee’s score. Most questions describe patient scenarios and ask about the work done (that is, tasks performed) by physicians in the course of practice:

- Making a diagnosis
- Ordering and interpreting results of tests
- Recommending treatment or other patient care
- Assessing risk, determining prognosis, and applying principles from epidemiologic studies
- Understanding the underlying pathophysiology of disease and basic science knowledge applicable to patient care

Some questions require interpretation of pictorial material including electrocardiograms, intracardiac electrograms, hemodynamic recordings, chest radiographs, photomicrographs, and imaging studies such as coronary angiograms, echocardiograms, ventriculograms, myocardial perfusion studies, computed tomograms, magnetic resonance images, and intravascular ultrasound images. Some questions may also require recognition and interpretation of recorded heart sounds. [Learn more information on how exams are developed.](http://www.abim.org/certification/exam-information/cardiovascular-disease/exam-tutorial)
The blueprint can be expanded for additional detail as shown below. Each of the medical content categories is listed there, and below each major category are the content subsections and specific topics that may appear in the exam. Please note: actual exam content may vary.

### Arrhythmias  15% of Exam

<table>
<thead>
<tr>
<th>Arrhythmias</th>
<th>% of Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Atrioventricular conduction disease</strong></td>
<td>&lt;2%</td>
</tr>
<tr>
<td>Atrioventricular block, 1st degree</td>
<td></td>
</tr>
<tr>
<td>Atrioventricular block, 2nd degree</td>
<td></td>
</tr>
<tr>
<td>Atrioventricular block, complete</td>
<td></td>
</tr>
<tr>
<td>Left bundle branch block</td>
<td></td>
</tr>
<tr>
<td>Right bundle branch block</td>
<td></td>
</tr>
<tr>
<td>Left anterior fascicular block</td>
<td></td>
</tr>
<tr>
<td>Left posterior fascicular block</td>
<td></td>
</tr>
</tbody>
</table>

| **Sinus node dysfunction**            | <2%       |
| Sinus bradycardia                    |           |
| Sinus pauses                         |           |
| Bradycardia-tachycardia syndrome     |           |

| **Supraventricular arrhythmias**      | 2%        |
| Atrioventricular nodal reentrant tachycardia |       |
| Pre-excitation syndromes (including Wolff-Parkinson-White) |       |
| Atrioventricular reciprocating tachycardia |       |

| **Ventricular arrhythmias**           | 2%        |
| Ventricular tachycardia, monomorphic |           |
| Ventricular tachycardia, polymorphic |           |
| With prolonged Q-T interval           |           |
| Without prolonged Q-T interval        |           |
| Ventricular fibrillation (including idiopathic and non-idiopathic varieties) |       |
| Premature ventricular complexes       |           |

| **Atrial arrhythmias**                | 3.5%      |
| Atrial fibrillation                   |           |
| Atrial flutter                        |           |
| Atrial tachycardia                    |           |
| Ectopic atrial rhythms                |           |
| Premature atrial contractions         |           |

| **Channelopathies**                   | <2%       |
| Long Q-T, congenital or acquired      |           |
| Brugada syndrome                      |           |
| Early repolarization                  |           |
Sudden cardiac death <2%
Syncope <2%
Pacemaker and ICD function <2%
Antiarrhythmic drug effects <2%

Coronary Artery Disease 21.5% of Exam

Angina pectoris 5%
Unstable angina
Vasospastic angina
Angina equivalent
Exertional angina
Angina with microvascular disease

Chronic ischemic heart disease 5%
Coronary atherosclerosis
Remote myocardial infarction
Aneurysm of the heart
Coronary artery aneurysm
Silent myocardial ischemia

Acute myocardial infarction 9.5%
STEMI of the anterior wall
STEMI of the inferior wall
  Right ventricular involvement
STEMI of the lateral wall
STEMI of the posterior wall (including inferoposterior wall)
Type I Non-STEMI
Type II myocardial infarction
Spontaneous coronary artery dissection
STEMI, other

Early complications following acute myocardial infarction <2%
Ventricular septal rupture
Rupture of the cardiac wall
Rupture of papillary muscle
Postinfarction angina
Postinfarction arrhythmias
Left ventricular pseudoaneurysm
Dynamic left ventricular outflow tract obstruction
Postinfarction systolic heart failure

Atypical angina or noncardiac chest pain <2%
### Heart Failure and Cardiomyopathy  
17% of Exam

**Heart failure**  
- Acute decompensated ventricular failure  
- Systolic heart failure (heart failure with reduced ejection fraction)  
- Diastolic heart failure (heart failure with preserved ejection fraction)  
- Heart failure with improved ejection fraction  
- Cardiogenic shock

**Cardiomyopathies**  
- Dilated cardiomyopathies  
- Hypertrophic cardiomyopathies  
- Restrictive and infiltrative cardiomyopathies  
- Chemotherapy-related cardiomyopathy  
- Stress-induced cardiomyopathy (Takotsubo syndrome)  
- Myocarditis  
- Noncompaction cardiomyopathy  
- Arrhythmogenic right ventricular dysplasia

**Transplanted heart**  
- <2%

**Mechanical circulatory support**  
- <2%

### Valvular Disease  
15% of Exam

**Mitral valve disorders**  
- Mitral valve regurgitation, native  
- Mitral valve stenosis, native  
- Mitral valve prolapse, native  
- Prosthetic mitral valve  
- Systolic anterior motion

**Aortic valve disorders**  
- Aortic valve regurgitation, native  
- Aortic valve stenosis, native  
- Prosthetic aortic valve

**Tricuspid valve disorders**  
- Tricuspid valve regurgitation, native  
- Tricuspid valve stenosis, native  
- Prosthetic tricuspid valve
### Pulmonary Valve Disorders

- Pulmonary valve regurgitation, native
- Pulmonary valve stenosis, native
- Prosthetic pulmonary valve

### Endocarditis

- 2%

### Cardiac Murmurs and Other Cardiac Sounds

- <2%

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### Pericardial Disease 4% of Exam

#### Acute pericarditis

- <2%

#### Chronic pericarditis (including relapsing)

- <2%

#### Pericardial constriction and effusion

- <2%
  - Pericardial effusion
  - Cardiac tamponade
  - Constrictive pericarditis
  - Effusive-constrictive pericarditis

#### Abnormalities of the pericardium

- <2%

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### Congenital Heart Disease 5% of Exam

#### Congenital malformations of cardiac chambers and connections

- <2%
  - Complete transposition of the great vessels
  - Corrected transposition of the great vessels
  - Tricuspid atresia
  - Anomalous origin or course of coronary artery
  - Tetralogy of Fallot

#### Congenital malformations of cardiac septa

- <2%
  - Ventricular septal defect
  - Atrial septal defect
  - Patent foramen ovale
  - Atrioventricular septal defect

#### Congenital malformations of pulmonary and tricuspid valves

- <2%
  - Congenital pulmonary valve stenosis
  - Ebstein anomaly

#### Congenital malformations of aortic and mitral valves

- <2%

#### Other congenital malformations of the heart

- <2%
  - Dextrocardia
  - Congenital heart block
Congenital malformations of the great arteries <2%
- Patent ductus arteriosus
- Coarctation of the aorta
- Aneurysm of the sinus of Valsalva
- Congenital malformation of the aortic arch
- Pulmonary artery malformation

Congenital malformations of the great veins <2%
- Persistent left superior vena cava
- Anomalous pulmonary venous connections

Congenital disorders with cardiovascular implications <2%
- Eisenmenger syndrome

Vascular Diseases 6% of Exam

Cerebrovascular diseases <2%
- Cerebral infarction, including cardiovascular manifestations
- Extracranial cervical (carotid and vertebral)
- Subclavian steal syndrome with vertebral artery steal
- Carotid artery dissection

Diseases of the arteries, arterioles, and capillaries 3%
- Peripheral atherosclerosis
- Aortic aneurysm and dissection
- Raynaud's phenomenon
- Thromboangiitis obliterans (Buerger's disease)
- Claudication
- Acute limb ischemia
- Critical limb ischemia
- Atheroembolism
- Septic arterial embolism
- Polyarteritis nodosa
- Mucocutaneous lymph node syndrome (Kawasaki disease)
- Takayasu arteritis
- Giant cell arteritis with polymyalgia rheumatica
- Mesenteric arterial insufficiency
- Subclavian steal syndrome with internal mammary artery steal
- Fibromuscular dysplasia

Diseases of the veins, lymphatic vessels, and lymph nodes <2%
- Deep vein thrombosis
- Portal vein thrombosis
Iliac vein compression syndrome (May-Thurner syndrome)
Varicose veins of the lower extremities
Chronic venous insufficiency
Chronic idiopathic venous hypertension
Lymphedema

### Systemic Hypertension and Hypotension 7.5% of Exam

**Hypertensive diseases**
- Essential (primary) hypertension
- Hypertensive heart disease
- Hypertensive chronic kidney disease
- Severe or resistant hypertension
- Urgent/emergent hypertension
- Secondary hypertension
- Hypertension in pregnancy

**Hypotensive diseases**
- Hypotensive syndrome
- Drug-induced hypotension

### Pulmonary Circulation Disorders 3% of Exam

**Pulmonary embolism**
- Pulmonary embolism with acute cor pulmonale
- Pulmonary embolism without acute cor pulmonale
- Chronic pulmonary embolism

**Pulmonary hypertension**
- Pulmonary arterial hypertension (WHO Group 1)
- Pulmonary hypertension associated with other diseases (WHO Groups 2–5)

### Systemic Disorders Affecting the Circulatory System 4% of Exam

**Musculoskeletal and connective tissue**
- Systemic lupus erythematosus
- Systemic sclerosis

**Endocrine, nutritional, metabolic, and hematologic disorders**
- Dyslipidemias
Diabetes
Obesity
Electrolyte and endocrine abnormalities
Hematologic disorders

**Renal disorders**<2%

**Injury and poisoning**<2%
Toxic effects of alcohol
Toxic effects of tobacco and nicotine
Toxic effects of drugs other than alcohol and tobacco
Anaphylactic shock
Angioedema

**Cardio-Oncology**<2%
Cardiovascular effects of pharmacological cancer therapy
Cardiovascular effects of radiation therapy

**Neoplasms**
Malignant neoplasm of the heart and pericardium
Benign neoplasms (including myxoma, fibroma, and fibroelastoma)

| Normal Cardiovascular Anatomy and Physiology | 2% of Exam |

July 2023
Blueprint for the Half-Day, Electrocardiograms and Imaging Studies Component of the Exam:

**Purpose of the exam**

The exam is designed to evaluate the abilities expected of the certified cardiovascular disease specialist to interpret electrocardiograms and imaging studies. The ability to make appropriate diagnostic decisions that have important consequences for patients will be assessed. The exam may require recognition of common as well as rare clinical problems for which patients may consult a certified cardiovascular disease specialist.

**Exam content**

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<tbody>
<tr>
<td>Electrocardiograms</td>
<td>48%</td>
</tr>
<tr>
<td>Echocardiograms</td>
<td>37%</td>
</tr>
<tr>
<td>Coronary Angiograms</td>
<td>15%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

The exam is composed of up to 75 questions, of which approximately 10 are new questions that do not count in the examinee’s score. Special question formats are used in this exam, requiring diagnostic interpretation of electrocardiograms, echocardiograms, and coronary angiograms. The format comprises a brief patient description and one (or multiple) images. To see examples of the answer options lists, view the Sample Cases - Electrocardiograms and Imaging Studies.

The interactive exam tutorial and ECG and Imaging Studies tutorial allows you to practice navigating the answer option lists.
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<thead>
<tr>
<th>Electrocardiograms</th>
<th>48% of Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General features</strong></td>
<td>2.5 %</td>
</tr>
<tr>
<td><strong>P wave abnormalities</strong></td>
<td>&lt;2%</td>
</tr>
<tr>
<td><strong>Rhythms</strong></td>
<td>10.5%</td>
</tr>
<tr>
<td>- Atrial rhythms</td>
<td></td>
</tr>
<tr>
<td>- Atrioventricular junctional rhythms</td>
<td></td>
</tr>
<tr>
<td>- Ventricular rhythms</td>
<td></td>
</tr>
<tr>
<td><strong>Atrioventricular conduction</strong></td>
<td>6%</td>
</tr>
<tr>
<td><strong>Abnormal QRS voltage or axis</strong></td>
<td>3%</td>
</tr>
<tr>
<td><strong>Ventricular hypertrophy</strong></td>
<td>&lt;2%</td>
</tr>
<tr>
<td><strong>Intraventricular conduction</strong></td>
<td>4.5%</td>
</tr>
<tr>
<td><strong>Myocardial infarction</strong></td>
<td>7.5%</td>
</tr>
<tr>
<td><strong>S-T, T, and U wave abnormalities</strong></td>
<td>4.5%</td>
</tr>
<tr>
<td><strong>Clinical disorders</strong></td>
<td>5%</td>
</tr>
<tr>
<td><strong>Pacemaker function</strong></td>
<td>3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Echocardiograms</th>
<th>37% of Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Left ventricular size, function, and structure</strong></td>
<td>11%</td>
</tr>
<tr>
<td><strong>Right ventricular size, function, and structure</strong></td>
<td>&lt;2%</td>
</tr>
<tr>
<td><strong>Diseases of the atria</strong></td>
<td>&lt;2%</td>
</tr>
<tr>
<td><strong>Valvular heart disease</strong></td>
<td>11%</td>
</tr>
<tr>
<td><strong>Cardiomyopathy</strong></td>
<td>4%</td>
</tr>
<tr>
<td><strong>Systemic disease</strong></td>
<td>&lt;2%</td>
</tr>
<tr>
<td><strong>Pulmonary disease</strong></td>
<td>&lt;2%</td>
</tr>
<tr>
<td><strong>Diseases of the aorta</strong></td>
<td>2%</td>
</tr>
<tr>
<td><strong>Pericardial and pleural diseases</strong></td>
<td>3%</td>
</tr>
<tr>
<td><strong>Congenital heart disease</strong></td>
<td>&lt;2%</td>
</tr>
<tr>
<td>Category</td>
<td>Percentage</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>Normal</td>
<td>&lt;2%</td>
</tr>
<tr>
<td>Stenoses</td>
<td>3%</td>
</tr>
<tr>
<td>Insignificant stenosis</td>
<td></td>
</tr>
<tr>
<td>Moderate stenosis</td>
<td></td>
</tr>
<tr>
<td>Severe stenosis</td>
<td></td>
</tr>
<tr>
<td>Total occlusion</td>
<td></td>
</tr>
<tr>
<td>Filled by collateral vessels</td>
<td>&lt;2%</td>
</tr>
<tr>
<td>Spasm</td>
<td>&lt;2%</td>
</tr>
<tr>
<td>Thrombus</td>
<td>&lt;2%</td>
</tr>
<tr>
<td>Myocardial bridge</td>
<td>&lt;2%</td>
</tr>
<tr>
<td>Anomalous origin</td>
<td>&lt;2%</td>
</tr>
<tr>
<td>Fistula</td>
<td>&lt;2%</td>
</tr>
<tr>
<td>Aneurysm</td>
<td>&lt;2%</td>
</tr>
<tr>
<td>Bypass graft</td>
<td>&lt;2%</td>
</tr>
<tr>
<td>Dissection</td>
<td>&lt;2%</td>
</tr>
<tr>
<td>Stents</td>
<td>&lt;2%</td>
</tr>
<tr>
<td>Patent stent</td>
<td></td>
</tr>
<tr>
<td>Occluded stent</td>
<td></td>
</tr>
</tbody>
</table>

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