CCEeXAM Content Outline

01 Functional Anatomy
- **01.A Left ventricle**
  - 01.A.01 Systolic function (qualitative, quantitative)
  - 01.A.02 Diastolic function
  - 01.A.03 LV chamber quantification
  - 01.A.04 Masses/thrombi
  - 01.A.05 Cardiomyopathies
- **01.B Right ventricle**
  - 01.B.01 RV chamber quantification
  - 01.B.02 Function
  - 01.B.03 Estimated right heart pressure
- **01.C Atria**
  - 01.C.01 Chamber quantification
  - 01.C.02 Atrial septum
  - 01.C.03 Masses/thrombi
  - 01.C.04 Atrial septal defect
  - 01.C.05 Patent foramen ovale
- **01.D Valvular disease**
  - 01.D.01 Aortic
  - 01.D.02 Mitral
  - 01.D.03 Tricuspid
  - 01.D.04 Pulmonic
  - 01.D.05 Endocarditis
  - 01.D.06 Prosthetic valve disease/dysfunction
- **01.E Pericardium**
  - 01.E.01 Pericardial effusion
  - 01.E.02 Constrictive pericarditis
  - 01.E.03 Hematoma
- **01.F Great vessels**
  - 01.F.01 Aorta
  - 01.F.02 Pulmonary artery
  - 01.F.03 IVC and SVC
- **01.G Devices and foreign bodies**
  - 01.G.01 Catheters
  - 01.G.02 Pacing wires
  - 01.G.03 Mechanical circulatory support
- **01.H Intracardiac masses**
  - 01.H.01 Left ventricle
  - 01.H.02 Right Ventricle
  - 01.H.03 Atria
- **01.I Adult congenital**
  - 01.I.01 Ventricular septal defect
  - 01.I.02 Bicuspid valve
  - 01.I.03 Persistent left superior vena cava
  - 01.I.04 Complex congenital heart disease
- **01.J Normal variants**

02 Clinical Diagnosis and Management
- **02.A Shock**
  - 02.A.01 Obstructive
  - 02.A.02 Hypovolemic
  - 02.A.03 Distributive
  - 02.A.04 Cardiogenic
- **02.B Volume assessment**
  - 02.B.01 Fluid responsiveness/tolerance
  - 02.B.02 Volume overload
- **02.C Acute cardiovascular presentations**
  - 02.C.01 Myocardial infarction
  - 02.C.02 Regional wall motion abnormalities
  - 02.C.03 Pulmonary embolism
  - 02.C.04 Aortic dissection
  - 02.C.05 Valvular heart disease
  - 02.C.06 Cardiomyopathy
  - 02.C.07 Congenital heart disease
- **02.D Trauma**
  - 02.D.01 Blunt
  - 02.D.02 Penetrating
- **02.E Respiratory failure**
  - 02.E.01 Cardiac versus pulmonary
  - 02.E.02 Adverse effects of mechanical ventilation
- **02.F Cardiac arrest**
  - 02.F.01 Etiology
  - 02.F.02 Outcomes/Prognosis

03 Technical Skills & Equipment Optimization
- **03.A Physics**
  - 03.A.01 2D ultrasonography
  - 03.A.02 Doppler ultrasonography
  - 03.A.03 M mode
  - 03.A.04 Enhanced cardiac ultrasound (contrast)
- **03.B Artifacts**
  - 03.B.01 Reverberations
  - 03.B.02 Side lobe
  - 03.B.03 Mirror image/refraction
  - 03.B.04 Acoustic shadowing
  - 03.B.05 Aliasing
  - 03.B.06 Electrical interference
- **03.C Image Acquisition and Optimization**

04 Integrated ultrasound imaging
- **04.A Lung and pleural**
  - 04.A.01 Postintubation assessment
  - 04.A.02 A line versus B line
  - 04.A.03 Pleural effusion
  - 04.A.04 ARDS
  - 04.A.05 Pneumonia with sepsis
  - 04.A.06 Pneumothorax
- **04.B Vascular**
  - 04.B.01 DVT
  - 04.B.02 Arterial pathology
- **04.C Abdominal**
  - 04.C.01 Evaluation for free fluid
  - 04.C.02 Evaluation for free air
  - 04.C.03 Gastric ultrasound

Reference Statement

NBE does not endorse or recommend any third-party review course or material. Any text in cardiovascular techniques and evaluation, cardiac patient care and management may be used. Current standards and guidelines endorsed by professional societies are also appropriate.

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