

Section 1: ADVANCED PRINCIPLES FOR THE ECHOCARDIOGRAPHER

1. *3D Echocardiographic Image Acquisition, Display, and Analysis*
2. *Principles of Myocardial Mechanics and Strain Imaging*
3. *Contrast Echocardiography*
4. *Quantitative Analysis of Left Ventricular Anatomy and Systolic Function*
5. *Left Ventricular Diastolic Function*
6. *Right Ventricular Anatomy and Function*

Section 2: ECHOCARDIOGRAPHY BEST PRACTICES

7. *Diagnostic Echocardiography Laboratory: Structure, Standards, and Quality Improvement*
8. *The Comprehensive Diagnostic Transthoracic and Transesophageal Echocardiogram*
9. *Intraoperative Echocardiography*
10. *Interventional Echocardiography*
11. *Focused Cardiac Ultrasound at the Bedside*

Section 3: CARDIOMYOPATHIES, TUMORS, AND PERICARDIAL DISEASE

12. *Dilated Cardiomyopathy*
13. *Hypertrophic Cardiomyopathy*
14. *Restrictive Cardiomyopathy*
15. *Cardiac Transplantation*
16. *Cardiac Assist Devices*
17. *Pericardial Disease*
18. *Cardiac Tumors and Cardio-oncology*

Section 4: ISCHEMIC HEART DISEASE

19. *Stress Echocardiography for Detecting Coronary Ischemia*
20. *Non-exercise Stress Echocardiography for Diagnosis of Coronary Disease*
21. *Role of Echocardiography in Patients with an Acute Coronary Syndrome*

Section 5: VALVULAR HEART DISEASE

22. *Aortic Stenosis (Including Evaluation for TAVI)*
23. *Aortic Regurgitation*
24. *Mitral Regurgitation*

- 25. *Transesophageal Echocardiography for Surgical Repair of Mitral Regurgitation*
- 26. *Transcatheter mitral valve repair: role of echocardiography in patient selection, procedural guidance, and evaluation of outcomes*
- 27. *Mitral Stenosis*
- 28. *Right-Sided Valve Disease in Adults*
- 29. *Endocarditis*
- 30. *Fluid Dynamics of Prosthetic Valves*
- 31. *Echocardiographic Recognition and Quantitation of Prosthetic Valve Dysfunction*

Section 6: VASCULAR AND SYSTEMIC DISEASES

- 32. *Acute Aortic Syndromes*
- 33. *Inherited Connective Tissue Disorders*
- 34. *Hypertensive Heart Disease and Nutritional and Metabolic Disorders*
- 35. *The Athletic Heart on Echocardiography*
- 36. *Pulmonary Hypertension*
- 37. *Systemic Diseases Characterized by Immune-Mediated Injury*
- 38. *Echocardiographic Evaluation of Patients with a Systemic Embolic Event*
- 39. *Echocardiography in Patients with Atrial Fibrillation and Flutter*

Section 7: ADULT CONGENITAL HEART DISEASE and THE PREGNANT PATIENT

- 40. *Heart Disease in Pregnancy*
- 41. *Congenital Shunts*
- 42. *Left Heart Anomalies*
- 43. *Right Heart Anomalies*
- 44. *Complex Conotruncal Anomalies Including Tetralogy of Fallot*
- 45. *Transposition of the Great Arteries*
- 46. *Single Ventricles*