

Χαρακτηριστικά:

- Combines cutting-edge research with current guidelines from the field
- Provides coverage of the basic science of heart failure, its epidemiology and economic aspects, outpatient and inpatient management, and advanced therapies, including mechanical circulatory support and heart transplantation
- Includes expanded chapters on the immune system and inflammation in the development and progression of heart failure
- Reviews new randomized controlled trials in pediatric heart failure

Περιεχόμενα:

Section I: Basic Science of Heart Failure

1. Molecular and Cellular Mechanisms in Heart Failure including Models of Heart Failure
2. Cardiovascular Receptors and Signaling in Heart Failure
3. Inflammatory Mediators in Heart Failure
4. Epigenetics and Transcriptomics
5. Mechanisms of Hypertrophy in Heart Failure
6. Hemodynamic Adaptive Mechanisms in Heart Failure
7. Neurohormonal Axis and Natriuretic Peptides in Heart Failure
8. Biomarkers in Heart Failure
9. Mechanisms of systolic and diastolic dysfunction
10. Echocardiographic Quantitation of Ventricular Function
11. Magnetic Resonance Imaging Assessment of Heart Failure
12. Assessment of Heart Failure by Invasive Methods
13. Lymphatic System in Heart Failure
14. Endothelial Dysfunction

Section II: Clinical Diagnosis and Management of Pediatric Heart Failure

15. Epidemiology and Economic Aspects of Pediatric Heart Failure
16. Clinical Recognition of Heart Failure in Children
17. Classification of Heart Failure
18. Right Ventricular Dysfunction
19. Pediatric Myocarditis
20. Dilated Cardiomyopathy
21. Clinical Features of Restrictive Cardiomyopathy and Constrictive Pericarditis
22. Hypertrophic Cardiomyopathy
23. Left Ventricular Noncompaction
24. Arrhythmogenic Cardiomyopathies
25. Valvular Insufficiency and Heart Failure
26. Valvular Stenosis and Heart Failure
27. Coronary Artery Disease in Children and Young Adults
28. Heart Failure in Congenital Heart Disease Including Single Ventricle Circulation

29. Heart Failure in Adults with Congenital Heart Disease
30. Dysrhythmias and Ventricular Dysfunction and Heart Failure
31. Heart Failure in the Fetus
32. Heart Failure in the Neonate
33. Heart Failure in Pediatric Pulmonary Diseases
34. Cardiorenal Syndrome
35. Heart Failure in Pediatric Oncologic Disease
36. Neuromuscular Diseases
37. Sickle Cell Disease
38. The Cardiovascular System in Systemic Inflammatory Syndromes
39. Outpatient Management
40. Cardiac Intensive Care and Inpatient Management
41. Quality of Life and Psychosocial Care
42. Palliative Care
43. Quality Improvement and Learning Collaboratives
44. Nursing Aspects of Heart Failure

Section III: Medical Treatment for Pediatric Heart Failure

45. Diuretics and Invasive Fluid Management Strategies
46. Inotropic Agents in Heart Failure
47. Phosphodiesterase Inhibitors
48. Inhibition of the Renin-Angiotensin-Aldosterone System and Other Vasodilators
49. Beta-adrenergic Receptor Blockade
50. Low Cardiac Output Syndrome in the Intensive Care Setting
51. New Therapeutic Strategies in Heart Failure
52. Electrophysiologic Devices in Heart Failure
53. Catheter Device Therapy for Heart Failure

Section IV: Cardiac Surgery and Pediatric Heart Failure

54. Post-Transplant Heart Failure
55. Surgical Strategies for the Failing Systemic Ventricle
56. Valve Intervention for Valve Failure
57. General Principles of Mechanical Cardiopulmonary Support
58. Short-Term Mechanical Cardiopulmonary Support Devices
59. Decision Making in Ventricular Assist Device Support in Pediatric Patients
60. Long-Term Ventricular Assist Devices and Destination Therapy
61. Future of Mechanical Support Devices in Children and Young Adults

Section V: Special Topics

62. Genetics and Genomics
63. Genetic Testing
64. Data Management and Analytics
65. Self-Management and Outpatient Monitoring
66. Regenerative Medicine

67. Nanomedicine

68. Digital Twin and Innovation in Research Design

69. Nutritional Assessment and Management in Pediatric Heart Failure