

Χαρακτηριστικά:

- Provides **state-of-the-art coverage of CMR technologies and guidelines**, including basic principles, imaging techniques, ischemic heart disease, right ventricular and congenital heart disease, vascular and pericardium conditions, and functional cardiovascular disease
- Includes **new chapters on artificial intelligence and advanced techniques** such as dark-blood delayed enhancement, as well as new, up-to-date coverage of myocarditis, arrhythmogenic cardiomyopathies, valvular heart disease, and cardiac masses
- Contains **more than 1,100 high-quality images** representing today's CMR imaging, including **increased visual aids** such as bulleted lists, graphs, tables, and algorithms
- Discusses the **cost-effectiveness of CMR**
- **An eBook version is included with purchase.** The eBook allows you to access all of the text, figures, and references, with the ability to search, make notes and highlights, and have content read aloud. Additional digital ancillary content may publish after the publication date

Περιεχόμενα:

Section I Basic Principles and Technology

1. Physics, Instrumentation, and Basic Sequences
2. Cardiovascular Magnetic Resonance Contrast Agents
3. Gating, Motion Correction, and Image Acceleration
4. Techniques for T1, T2, and Extra-Cellular Volume (ECV) Mapping
5. Blood Flow Velocity Assessment
6. Myocardial Imaging: Advanced Techniques
7. Myocardial Perfusion Imaging—Techniques
8. Cardiac Magnetic Resonance Image Artifacts

Section II Emerging Technology with Requirements for Clinical Use

9. Artificial Intelligence: Promises, Pitfalls, and Ethical Considerations
10. Mid-Field Cardiovascular Magnetic Resonance Imaging
11. Cardiac Magnetic Resonance Spectroscopy

Section III Clinical CMR Laboratory

12. Special Considerations for Cardiovascular Magnetic Resonance: Safety, Electrocardiographic Setup, Monitoring, and Contraindications
13. The Core Clinical Cardiovascular Magnetic Resonance Examination
14. Scan Reporting and Registries
15. Cost-Effectiveness Analysis for Cardiovascular Magnetic Resonance Imaging

- 16. Normal Values in Cardiovascular Magnetic Resonance Imaging
- 17. Left Ventricular Structure and Function
- 18. Right Ventricular Cardiovascular Magnetic Resonance Imaging
- 19. Atrial Structure and Function

Section IV Ischemic Heart Disease

- 20. Stress Cardiovascular Magnetic Resonance: Myocardial Perfusion Imaging
- 21. Technical Foundation and Clinical Utility of Coronary MRI
- 22. Acute Myocardial Infarction
- 23. Myocardial Viability
- 24. Identifying the Etiology: A Systematic Approach to Differentiating Ischemic From Nonischemic Disease

Section V Myocardial and Pericardial Disease

- 25. Hypertrophic Cardiomyopathy
- 26. Role of Cardiovascular Magnetic Resonance in Dilated Cardiomyopathy
- 27. Infiltrative Cardiomyopathies
- 28. Cardiac Iron Loading and Cardiovascular Magnetic Resonance
- 29. Arrhythmogenic Cardiomyopathies
- 30. Myocarditis
- 31. Cardio-Oncology
- 32. Cardiac Thrombus
- 33. CMR of Cardiac Masses
- 34. The Pericardium: Anatomy, Function, and Disease

Section VI Valvular Disease

- 35. Assessment of Valvular Heart Disease Using Cardiac Magnetic Resonance Imaging
- 36. Cardiac Remodeling and Implications of Valvular Heart Disease
- 37. Pulmonary Vein Angiography and Left Atrial Fibrosis Imaging
- 38. Cardiovascular Magnetic Resonance Angiography: Carotids, Aorta, and Peripheral Vessels
- 39. Thoracic Aortic Disease
- 40. Pulmonary Artery Magnetic Resonance Imaging

Section VII Congenital Heart Disease

- 41. Safety Monitoring and Protocols in Infants and Children
- 42. Pediatric and Congenital Heart Disease

Appendix

A. Cardiac Magnetic Resonance Screening Form: Duke Cardiovascular Magnetic Resonance Center

B. Cardiac Magnetic Resonance Pulse Sequence Parameters and Protocols at Duke

Cardiovascular Magnetic Resonance Center

C. Cardiac Magnetic Resonance Acronyms Used by Various Vendors