Written by internationally eminent experts in cardiovascular imaging, this volume provides state-of-the-art information on the use of MRI and CT in the assessment of cardiac and vascular diseases. This Second Edition reflects recent significant advances in cardiovascular MRI technology and the emergence of multi-detector CT as an important diagnostic modality, particularly for ischemic heart disease. New chapters in this edition cover coronary CTA and plaque characterization. A brand-new interventional MR section covers catheter tracking and devices, endovascular interventions, MR-guided cardiac catheterization, and endovascular delivery of gene and stem cell therapy. More than 900 illustrations present diagnostic information in unprecedented detail.

This timely volume addresses the areas of pathophysiology and therapy of pulmonary hypertension, which have seen exciting developments over the past decade. The discoveries of endothelin overexpression as well as prostacyclin and nitric oxide deficiency in association with pulmonary hypertension have led to important therapeutic insights. The new therapies have led to significant improvements in patient function, quality of life and survival. In this book, expert authors describe these new therapies. It will be of interest not only to cardiologists, pulmonary specialists and rheumatologists, but also many nurses and pharmacotherapists.

This open access book presents a comprehensive overview of dilated cardiomyopathy, providing readers with practical guidelines for its clinical management. The first part of the book analyzes in detail the disease's pathophysiology, its diagnostic work up as well as the prognostic stratification, and illustrates the role of genetics and gene-environment interaction. The second part presents current and future treatment options, highlighting the importance of long-term and individualized treatments and follow-up. Furthermore, it discusses open issues, such as the apparent healing phenomenon, the early prognosis of arrhythmic events or the use of genetic testing in clinical practice. Offering a multidisciplinary approach for optimizing the clinical management of DCM, this book is an invaluable aid not only for the clinical cardiologists, but for all physicians involved in the care of this challenging disease. This work was published by Saint Philip Street Press pursuant to a Creative Commons license permitting commercial use. All rights not granted by the work's license are retained by the author or authors.

This issue of Heart Failure Clinics--edited by Dr. Eduardo Bossone--will cover The Right Heart Pulmonary Circulation Unit. Topics include Pathophysiology, Increased Systemic versus Increased Pulmonary Pressures, Pulmonary Arterial Hypertension, Right Heart Pulmonary Circulation Unit in Congenital Heart Diseases, Pulmonary Hypertension and Heart Failure, Right Heart Pulmonary Circulation Unit in Cardiomyopathies and Storage Diseases, Pulmonary Hypertension, Right Heart Pulmonary Circulation Unit at High Altitude, Chronic Thromboembolic Pulmonary Hypertension, Combining Invasive and Non-Invasive Evaluation for the Diagnosis of Pulmonary Hypertension, Imaging the Right Heart Pulmonary Circulation Unit: The Role of Ultrasound, Imaging the Right Heart Pulmonary Circulation Unit: The Role of CT and MRI, Biomarkers in Pulmonary Hypertension, Pulmonary Hypertension Related to Diffuse Parenchymal Lung Disease, Chronic Right Heart Failure, Exercise Training and Rehabilitation in Pulmonary Hypertension, and Right Heart Circulation Unit and Left Heart Valvular Diseases.

Interventional Cardiac Electrophysiology is the first and only comprehensive, state-of-the-art textbook written for practitioners in multiple specialties involved in the care of the arrhythmia patient. Encompassing the entire field of interventional therapy for cardiac rhythm management, from basic science to evidence-based medicine to future directions, topics include: Technology and Therapeutic Techniques – EP techniques; imaging and radiologic technology; device and ablation technology; drug therapy. Interventional Electrophysiologic Procedures – Diagnostic and physiologic EP techniques; mapping in percutaneous catheter and surgical EP procedures; catheter and surgical ablation; device implantation and management. Clinical Indications and Evidence-based Outcomes Standards – For medical and surgical EP interventions for arrhythmias. New Directions in Interventional Electrophysiology – Hybrid therapy for atrial and ventricular arrhythmias and staged therapy. This book will be essential reading for clinicians and researchers that form the health care team for arrhythmia patients: cardiologists, adult and pediatric clinical electrophysiologists, interventional electrophysiologists, cardiac surgeons practicing arrhythmia surgery, allied health care professionals, pharmacologists, radiologists and anesthesiologists evaluating arrhythmia patients, and basic scientists from the biomedical engineering and experimental physiology disciplines. Professor Sanjeev Saksena has been involved in this arena for over three decades and has brought his experience to this textbook, assembling editorial leadership from medical and surgical cardiology to provide a global perspective on fundamentals of medical practice, evidence-based therapeutic practices, and emerging research in this field. This book includes 95 videos.

Provides review of the most recent advances in drugs and devices used for the treatment of heart failure, helping clinicians select the best evidence-based therapy for patients. Written by experienced cardiologists from San Francisco and Philadelphia.

A complete, how-to-do-it guide to planning, programming, implementing, and trouble-shooting todays pacemakers and other implantable cardiac devices Edited by a team of leading clinician-educators this is a practical, go-to reference for trainees and clinical staff who are new to or less experienced with the programming and management of implantable devices. It distills device best-practices into a single, quickreference volume that focuses on essential tasks, common pitfalls, and likely complications. Each chapter follows a hands-on, how-to-do-it approach that helps readers quickly master even the most challenging device-related taskssuch as programming and how to respond confidently when complications arise. Todays pacemakers and other implantable EP devices are to earlier versions what smart phones are to rotary phones. They are not only smaller and more comfortable; they offer complex programming options that allow clinicians to adapt a device to individual patient requirements. As they continue to become smaller, smarter, and more adaptable, these devices also become more challenging for clinicians to set up, manage and monitor. This unique, quick-reference guide dramatically reduces the learning curve for mastering this essential technology by giving doctors and technicians the how-to information they need. Focuses on tasks clinicians perform, including pre-implementation, planning, programming, management, troubleshooting, and more Shows how expert clinicians achieve optimal outcomes in their own labs with real-world examples Features more than 300 images, including ECGs, X-ray and fluoroscopy, images from device interrogation, intracardiac electrograms, and color electoanatomical maps Provides eight videos on an accompanying website demonstrating key tasks and techniques Also available in an eBook version, enhanced with instructional videos, How-to Manual for Pacemaker and ICD Devices is an indispensable tool of the trade for electrophysiologists, fellows in electrophysiology, EP nurses, technical staff, and industry professionals.

This title provides an easily digestible and portable synopsis of the technique which will suit the needs of cardiologists and cardiothoracic surgeons wishing to acquaint themselves with what CMR can do, and what it cannot. Beginning with an outline of some of the basic principles of MRI, the following chapters concentrate on the cardiac side of CMR with a later section on its more established vascular uses. This extensively revised textbook reviews the use of transesophageal echocardiography (TEE) in pediatric and young adult patients with cardiac disease. It reviews how TEE has made a vital contribution to these patients' successful and continually improving clinical outcomes, enabling them to live well into adulthood. The book details the evolving technology and applications of TEE (including three-dimensional TEE), describing how this imaging approach remains at the forefront of clinical practice for pediatric patients and those with congenital heart disease (CHD). Transesophageal Echocardiography for Pediatric and Congenital

Heart Disease represents a unique contribution as the only contemporary text to focus exclusively on the clinical application of TEE in children and all patients with CHD. Written by numerous prominent specialists in the field, it presents a comprehensive, modern and integrated review of the subject. Specific chapter topics include the physics and instrumentation of TEE, structural and functional evaluation, and specialized aspects of the examination, with emphasis on the technical considerations pertinent to both pediatric and adult patients with a variety of congenital and acquired cardiovascular pathologies. Consequently, it serves as a comprehensive reference for the TEE evaluation of CHD, utilizing the segmental approach to diagnosis and discussing the TEE evaluation of the many anomalies encompassing the CHD spectrum. In addition, numerous other relevant topics are discussed, including application of TEE for perioperative and interventional settings. The book is richly illustrated, with many chapters supplemented by illustrative case studies and accompanying videos. A specific section with multiple-choice questions and answers is provided at the end of each chapter to reinforce key concepts. This textbook therefore provides an invaluable and indispensable resource for all trainees and practitioners using TEE in the management of CHD and pediatric patients. Principles of Cardiac and Vascular Computed Tomography has everything you need to successfully obtain and interpret CT and CTA images. Stuart J. Hutchison-a premier cardiac imaging specialist-explains the dos and don'ts of CCT so you get the best images and avoid artifacts. Get only the coverage-from evidence-based CTA to noncoronary lesions-you need with clinically oriented, practical information presented in a consistent format that makes finding everything quick and easy. High-quality images and access to the text and more at Expert Consult makes this the one cardiovascular computed tomography resource that has it all. Access videos of CTA procedures at Expert Consult. Get only the coverage that you need-from evidence-based CTA to determination of coronary calcium to noncoronary lesions-from focused, clinically oriented, and practical information. Obtain the best image quality and avoid artifacts through instructions on how to and how not to perform cardiovascular computed tomography. Gain a clear visual understanding through high-quality images-many in color-that reinforce the quality of information in the text. Master probe settings and measurements using numerous tables with useful values and settings. Find information easily thanks to a consistent format.

Prepare yourself for success with this unique cardiology primer which distils the core information you require and presents it in an easily digestible format. Provides cardiologists with a thorough and up-to-date review of cardiology, from pathophysiology to practical, evidence-based management Ably synthesizes pathophysiology fundamentals and evidence based approaches to prepare a physician for a subspecialty career in cardiology Clinical chapters cover coronary artery disease, heart failure, arrhythmias, valvular disorders, pericardial disorders, and peripheral arterial disease Practical chapters address ECG, coronary angiography, catheterization techniques, ecnocardiography, hemodynamics, and electrophysiological testing Includes over 650 figures, key notes boxes, references for further study, and coverage of clinical trials Review questions at the end of each chapter help clarify topics and can be used for Board preparation - over 375 questions in all!

This issue of Cardiology Clinics, edited by Sharmila Dorbala and Piotr Slomka, examines Nuclear Cardiology. Topics include Advances in SPECT Hardware and Software; Advances in PET Hardware and Software; Technical Advances and Clinical Applications of Cardiac PET/MR; Translational Coronary Atherosclerosis Imaging (NaF PET, FDG); Quantitative Nuclear Cardiology Using New Generation Equipment; Myocardial Perfusion Flow Tracers; Translational Molecular Nuclear Cardiology; Radionuclide Imaging in Congestive Heart Failure (Sarcoid, Amyloid, Viability); Clinical Applications of Imaging Myocardial Innervation; Gated Radionuclide Imaging Including Dyssynchrony Assessment; Clinical PET Myocardial Perfusion Imaging Including Flow Quantitation; and Novel Applications of Radionuclide Imaging in Peripheral Vascular Disease. Cardiac Magnetic Resonance (CMR) is a rapidly evolving imaging technology and is now increasingly utilized in patient care. Its advantages are noninvasiveness, superb image resolutions, and body tissue characterization. CMR is now an essential part of both cardiology and radiology training and has become part of the examination for Board certification. This book provides a condensed but comprehensive and reader friendly educational tool for cardiology fellows and radiology residents. It contains multiple choice questions similar to board examinations with concise comment and explanation about the correct answer. Challenges for the treatment of valvular heart disease include the growing need for effective yet less invasive interventions and therapies to treat these progressive conditions. With the development of potential new treatments, it is crucial for cardiac physicians to be well informed on the pathophysiology, assessment, treatment options and their outcomes of valvular diseases. Written by a highly experienced and internationally recognized group of cardiologists, cardiac surgeons, and researchers, Valvular Heart Disease offers insights into the widely varying hemodynamic effects and clinical course of heart valve conditions, as well as the contemporary management of these conditions. Offering a broad perspective on these diseases, Valvular Heart Disease expands on the recent guidelines developed by the major heart societies in the United State and Europe.

This pictorial instructional pocket guide, derived from Cardiovascular MRI Tutorial, is a quick reference for MRI technologists, technologist trainees, and radiology or cardiology residents or fellows. Routine cardiac imaging protocols are presented in step-by-step fashion for immediate reference during an MRI examination. Each chapter displays a specific protocol from start to finish, including positioning, anatomy, and sequence terminology, with easy-to-follow illustrative images. Coverage includes protocols for cardiac function; cardiac function/viability; cardiac function/non-ischemic viability; arch; arrhythmogenic right ventricular dysplasia/cardiomyopathy (ARVD/C); pulmonary vein electrophysiology (EP) ablation; constrictive pericarditis; atrial or ventricular septal defect (ASD or VSD); anomalous coronaries; and cardiac thalassemia.

Clinical Cardiac MRI is a comprehensive textbook intended for everyone involved in magnetic resonance imaging of the heart. It is designed both as a useful guide for newcomers to the field and as an aid for those who routinely perform such studies. The first edition, published in 2004-5, was very well received within the cardiac imaging community, and has generally been considered the reference because of its completeness, its clarity, and the number and quality of the illustrations. Moreover, the addition of a CD-ROM showing 50 real-life cases significantly enhanced the value of the book. In this second edition, the aim has been to maintain the same quality while incorporating the newest insights and developments in this rapidly evolving domain of medical imaging. The four editors, all experts in the field, have taken great care to ensure a homogeneous high standard throughout the book. Finally, the selection of 100 real-life cases, added as online material, will further enhance the value of this textbook.

Echocardiography Board Review, 2nd Edition 500 Multiple Choice Questions with Discussion Ramdas G. Pai, MD, Professor of Medicine, Loma Linda University, CA, USA Padmini Varadarajan, MD, Associate Professor of Medicine, Loma Linda University, CA, USA Echocardiography is an essential tool for the modern-day cardiologist and routinely used in the diagnosis, management and follow-up of patients with suspected or known heart diseases. This best-selling book now returns in a fully revised new edition,

once again providing cardiologists and cardiology/echocardiography trainees with a rapid reference, self-assessment question and answer guide to all aspects of echocardiography. Packed with full-color images and written by experienced echocardiographers, the book covers: applied ultrasound physics practical hydrodynamics valvular heart disease myocardial diseases congenital heart disease non-invasive hemodynamics surgical echocardiography Containing 500 case-based questions, including clear explanations and discussions for every question, Echocardiography Board Review, 2nd Edition, is the perfect preparation guide for all those about to take the National Board of Echocardiography's Board exam, including cardiology and echocardiography trainees and specialist physicians preparing for re-certification. Sonographers planning to take RDCS or RDMS certification examinations should find this book very helpful as well. Of related interest Practical Manual of Echocardiography in the Urgent Setting Fridman, ISBN 978-0-470-65997-7 Successful Accreditation in Echocardiography: A Self-Assessment Guide Banypersad, ISBN 978-0-470-65692-1 Website www.wiley.com/go/cardiology

The significantly updated second edition of this important work provides an up-to-date and comprehensive overview of cardiovascular magnetic resonance imaging (CMR), a rapidly evolving tool for diagnosis and intervention of cardiovascular disease. New and updated chapters focus on recent applications of CMR such as electrophysiological ablative treatment of arrhythmias, targeted molecular MRI, and T1 mapping methods. The book presents a state-of-the-art compilation of expert contributions to the field, each examining normal and pathologic anatomy of the cardiovascular system as assessed by magnetic resonance imaging. Functional techniques such as myocardial perfusion imaging and assessment of flow velocity are emphasized, along with the exciting areas of artherosclerosis plaque imaging and targeted MRI. This cutting-edge volume represents a multidisciplinary approach to the field, with contributions from experts in cardiology, radiology, physics, engineering, physiology and biochemistry, and offers new directions in noninvasive imaging. The Second Edition of Cardiovascular Magnetic Resonance Imaging is an essential resource for cardiologists and radiologists striving to lead the way into the future of this important field. Structural heart disease interventions are a diverse group of novel treatments that have evolved from a small number of procedures to an impressive array of new approaches to diseases that have been traditionally managed by surgery and medical therapy. This book has been prepared for use by physicians and non-physicians who have an interest in SHD interventions and desire a practical, comprehensive, and clinical summary of established and emerging percutaneous interventions. The chapters are authored by recognized experts from around the world. There are five major sections including: 1) Core Knowledge in SHD Intervention 2) Specialized Skills for the Interventionalist 3) Closure of Congenital and Acquired Defects in Adults 4) Transcatheter Therapy for Valvular Disease 5) Specialized Procedures Features Include: Extensive images to present anatomical complexities and diversity including some interactive 3-D graphics Presentation of transcatheter mitral valve repair Chapter on how to set up & credential a SHD program

This text/DVD package is ideally suited for training courses for cardiologists and radiologists seeking certification to perform and interpret cardiovascular MRI (CMR) examinations. The authors present 37 lectures that systematically explain all key aspects of CMR. Coverage begins with an overview of principles, equipment, and imaging methods and proceeds to imaging protocols and clinical applications. An Advanced Training section includes details of imaging techniques, vascular imaging techniques, specialized cardiac imaging, and artifacts. The text and the PowerPoint lectures on the DVD complement each other in a unique way. The book mirrors the content of the lectures and provides full explanations of concepts that are well illustrated in the slides. DVD for Windows (PC only; Mac is available upon request).

For many years, there has been a great deal of work done on chronic congestive heart failure while acute heart failure has been considered a difficult to handle and hopeless syndrome. However, in recent years acute heart failure has become a growing area of study and this is the first book to cover extensively the diagnosis and management of this complex condition. The book reflects the considerable amounts of new data reported and many new concepts which have been proposed in the last 3-4 years looking at the epidemiology, diagnostic and treatment of acute heart failure.

MRI from Picture to Proton presents the basics of MR practice and theory in a unique way: backwards! The subject is approached just as a new MR practitioner would encounter MRI: starting from the images, equipment and scanning protocols, rather than pages of physics theory. The reader is brought face-to-face with issues pertinent to practice immediately, filling in the theoretical background as their experience of scanning grows. Key ideas are introduced in an intuitive manner which is faithful to the underlying physics but avoids the need for difficult or distracting mathematics. Additional explanations for the more technically inquisitive are given in optional secondary text boxes. The new edition is fully up-dated to reflect the most recent advances, and includes a new chapter on parallel imaging. Informal in style and informed in content, written by recognized effective communicators of MR, this is an essential text for the student of MR.

This book is a comprehensive and authoritative text on the expanding scope of CMR, dedicated to covering basic principles in detail focusing on the needs of cardiovascular imagers. The target audience for this book includes CMR specialists, trainees in CMR and cardiovascular medicine, cardiovascular physicists or clinical cardiovascular imagers. This book includes figures and CMR examples in the form of high-resolution still images and is divided in two sections: basic MRI physics, i.e. the nuts and bolts of MR imaging; and imaging techniques (pulse sequences) used in cardiovascular MR imaging. Each imaging technique is discussed in a separate chapter that includes the physics and clinical applications (with cardiovascular examples) of a particular technique. Evolving techniques or research based techniques are discussed as well. This section covers both cardiac and vascular imaging. ?Cardiovascular magnetic resonance (CMR) imaging is now considered a clinically important imaging modality for patients with a wide variety of cardiovascular diseases. Recent developments in scanner hardware, imaging sequences, and analysis software have led to 3-dimensional, high-resolution imaging of the cardiovascular system. These developments have also influenced a wide variety of cardiovascular imaging applications and it is now routinely used in clinical practice in CMR laboratories around the world. The non-invasiveness and lack of ionizing radiation exposure make CMR uniquely important for patients whose clinical condition requires serial imaging follow-up. This is particularly true for patients with congenital heart disease (CHD) with or without surgical corrections who require lifelong clinical and imaging follow-up.

In recent years, there has been increasing interest in the clinical applications of coronary angiography techniques. Coronary MRA can be instrumental in the evaluation of congenital coronary artery anomalies, however, the complexity of advanced MR pulse sequences and strategies may be overwhelming to many. Coronary MR Angiography demystifies the art of coronary MRA by providing a text in plain language with clearly illustrated imaging steps and protocols. Designed to bridge the gap between radiology and cardiology, it is written for physicians and scientists planning to incorporate this technique into their research or

practice.

CMR is a powerful tool in the armamentarium of pediatric cardiology and health care workers caring for patients with congenital heart disease (CHD), but a successful study still presents major technical and clinical challenges. This text was created to give trainees, practitioners, allied professionals, and researchers a repository of dependable information and images to base their use of CMR on. Because CHD presents an intricate web of connections and associations that need to be deciphered, the imager performing CMR needs to understand not only anatomy, physiology, function, and surgery for CHD, but also the technical aspects of imaging. Written by experts from the world's leading institutions, many of whom pioneered the techniques and strategies described, the text is organized in a logical way to provide a complete understanding of the issues involved. It is divided into three main parts: The Basics of CMR - familiarizes the reader with the minimum tools needed to understand the basics, such as evaluating morphology, ventricular function, and utilizing contrast agents CMR of Congenital and Acquired Pediatric Heart Disease - discusses broad categories of CHD and the use of CMR in specific disease states Special Topics in Pediatric Cardiac MR - covers other important areas such as the complementary role of CT scanning, interventional CMR, the role of the technologist in performing a CMR exam, and more With the ever increasing sophistication of technology, more can be done with CMR in a high quality manner in a shorter period of time than had been imagined as recently as just a few years ago. Principles and Practice of Cardiac Magnetic Resonance in Congenital Heart Disease: Form, Function, and Flow makes a major contribution to applying these techniques to improved patient care. An ideal introduction for the novice or just the curious, this reference will be equally useful to the seasoned practitioner who wants to keep pace with developments in the field and would like a repository of information and images readily available.

This extensively illustrated volume has been specifically geared towards optimal use of MRI systems. The text provides essential theoretical background information: Imaging acquisition and potential pitfalls are also examined in detail. Most importantly, structured guidelines are provided on the interpretation of clinical data in the wide range of cardiac pathology that can be encountered.

Transcatheter Valve Repair discusses all aspects related to percutaneous and established valve repair methods. The book is divided into few major sections covering all four valves and other topics. Each section contains several chapters discussing everything related to that valve. Beginning with the pulmonary valve, since it was the first valve to be tackled in the catheterization laboratory, and then moving to the aortic, then the mitral and then finally end with the tricuspid valve. 1.5M US citizens alone have some degree of a rtic valve stenosis, with half (750K) requiring a ortic valve replacement. Aortic valve replacement, on the whole, is performed by surgeons, requiring bypass machines and technicians, as well as the usual operating team. The operation is expensive and occupies a considerable amount of operating room time. Mostly, the aortic valve is calcified and the usual option available to patients is valve replacement with a variety of choices, ranging from porcine valves to synthetic, for which there are many manufacturers. It should be noted that the aortic valve is the most problematic of valves. Percutaneous procedures are the answer. The bottom line is that given the growing elderly population, many more patients will require valve repair, thus increasing health care costs with not only surgical operations but also hospitalisation. Percutanous valve repair, whilst requiring a cath lab team, does not involve bypass machines nor extended hospitalisation. Like percutaneous transluminal coronary artery interventions (PTCA) has replaced coronary artery bypass grafts (once the golden standard), and now stenting having replaced PTCA and its balloons. We now see drug eluting stents replacing ordinary stents (though at a much higher cost. There will be a huge movement toward percutanous valve repair, which should presumably cut costs but also morbidity and mortality. Cardiovascular MRI150 Multiple-Choice Questions and AnswersSpringer Science & Business Media 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 non-cardiac pathology, pacemaker safety, economics of CMR, and guidelines as well as new coverage of myocarditis and its diagnosis and assessment of prognosis by cardiovascular magnetic resonance, and the use of PET/CMR imaging of the heart, especially in sarcoidosis. Features more than 1,100 high-quality images representing today's CMR imaging. Covers T1, T2 and ECV mapping, as well as T2* imaging in iron overload, which has been shown to save lives in patients with thalassaemia major Discusses the costeffectiveness of CMR.

With a growing population of young patients with congenital heart disease reaching adulthood, this unique new book offers an in-depth guide to managing the challenges and issues related to device therapy in this patient group. The only book resource dedicated to pacing, cardiac resynchronization therapy and ICD therapy for the pediatric and congenital heart disease patientï¿1?2 Contains practical advice for pacemaker and ICD implantation, programming, trouble-shooting, managing complications and follow upï¿1?2 Up-to-date with the latest in device technology Contains multiple graphics, device electrogram tracings, and radiographic images for clarityï¿1?2 Includes video clips and over 150 multiple choice questions with extended answers on companion website, ideal for self test An invaluable resource for both the specialist pediatric cardiologist and the general cardiologist responsible for children with heart disease and pacing devices

??This is the first major textbook to address both computed tomography (CT) and magnetic resonance (MR) cardiac imaging of adults for the diagnosis and treatment of congenital heart disease (CHD). Since the introduction of faster CT scanners, there has been tremendous advancement in the diagnosis of CHD in adults. This is mostly due to the higher spatial resolution of CT compared to MR, which enables radiologists to create more detailed visualizations of cardiac anatomic structures, leading to the discovery of anomalous pathologies often missed by conventional MR imaging. This book is unique in highlighting the advantages of both CT and MR for the diagnosis of CHD in adults, focusing on the

complementary collaboration between the two modalities that is possible. Chapters include discussions of case examples, clinical data, MR and CT image findings, and correlative cadaveric pictures. The chapters focus not only on the diagnosis of the primary problem, but also give readers information on visual clues to look for that often reveal associated pathologies. This book appeals primarily to diagnostic and interventional radiologists, as well as cardiologists and interventional cardiologists.

First multi-year cumulation covers six years: 1965-70.

Heart failure affects over 5 million patients in the United States alone, and is a chronic and debilitating disease. While a number of pharmacologic therapies have shown varying degrees of effectiveness, many recent advances in the treatment of heart failure has focused on device based therapies. In Device Therapy in Heart Failure, William H. Maisel and a panel of authorities on the use and implementation of device based therapies provide a comprehensive overview of the current and developing technologies that are used to treat heart failure. Individual chapters provide an in-depth analysis of devices such as CRT's and ICD's, while broader topics such as the pathophysiology of heart failure and its current medical therapies are also discussed. Additional topics include Pacing and Defibrillation for Atrial Arrhythmias, Atrial Fibrillation, and Percutaneous Treatment of Coronary Artery Disease.

Ventricular arrhythmias cause most cases of sudden cardiac death, which is the leading cause of death in the US. This issue reviews the causes of arrhythmias and the promising new drugs and devices to treat arrhythmias.

This book constitutes the thoroughly refereed post-workshop proceedings of the 8th International Workshop on Statistical Atlases and Computational Models of the Heart: ACDC and MMWHS Challenges 2017, held in conjunction with MICCAI 2017, in Quebec, Canada, in September 2017. The 27 revised full workshop papers were carefully reviewed and selected from 35 submissions. The papers cover a wide range of topics computational imaging and modelling of the heart, as well as statistical cardiac atlases. The topics of the workshop included: cardiac imaging and image processing, atlas construction, statistical modelling of cardiac function across different patient populations, cardiac computational physiology, model customization, atlas based functional analysis, ontological schemata for data and results, integrated functional and structural analyses, as well as the pre-clinical and clinical applicability of these methods. Besides regular contributing papers, additional efforts of STACOM workshop were also focused on two challenges: ACDC and MM-WHS. This important new book presents advancements in the treatment and prevention of Atrial Fibrillation (AF). The reader is provided with the latest information that is critically important in the daily care and for the potential cure of patients with AF. Each chapter deals with a different aspect of AF and each chapter is authored by internationally recognized experts in the evolving field of cardiac electrophysiology. This book is a single source that provides a multi-perspective look at and approach to AF. Because AF is so prevalent and affects all areas of medicine, the information in this book will be useful to all those in the medical field.

Cardiac Magnetic Resonance Imaging (CMR) is a rapidly evolving tool. This book presents a state-of-the-art compilation of expert contributions to the field, each examining normal and pathologic anatomy of the cardiovascular system as assessed by magnetic resonance imaging. Functional techniques such as myocardial perfusion imaging and assessment of flow velocity are emphasized. The book represents a multi-disciplinary approach to the field.

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