

## Mdct Physics The Basics Technology Image Quality And Radiation Dose Author Mahadevappa Mahesh Published On June 2009

This book is a comprehensive and richly-illustrated guide to cardiac CT, its current state, applications, and future directions. While the first edition of this text focused on what was then a novel instrument looking for application, this edition comes at a time where a wealth of guideline-driven, robust, and beneficial clinical applications have evolved that are enabled by an enormous and ever growing field of technology. Accordingly, the focus of the text has shifted from a technology-centric to a more patient-centric appraisal. While the specifications and capabilities of the CT system itself remain front and center as the basis for diagnostic success, much of the benefit derived from cardiac CT today comes from avant-garde technologies enabling enhanced visualization, quantitative imaging, and functional assessment, along with exciting deep learning, and artificial intelligence applications. Cardiac CT is no longer a mere tool for non-invasive coronary artery stenosis detection in the chest pain diagnostic algorithms; cardiac CT has proven its value for uses as diverse as personalized cardiovascular risk stratification, prediction, and management, diagnosing lesion-specific ischemia, guiding minimally invasive structural heart disease therapy, and planning cardiovascular surgery, among many others. This second edition is an authoritative guide and reference for both novices and experts in the medical imaging sciences who have an interest in cardiac CT.

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Building on the traditional concept of nuclear medicine, this textbook presents cutting-edge concepts of hybrid imaging and discusses the close interactions between nuclear medicine and other clinical specialties, in order to achieve the best possible outcomes for patients. Today the diagnostic applications of nuclear medicine are no longer stand-alone procedures, separate from other diagnostic imaging modalities. This is especially true for hybrid imaging guided interventional radiology or surgical procedures. Accordingly, today's nuclear medicine specialists are actually specialists in multimodality imaging (in addition to their expertise in the diagnostic and therapeutic uses of radionuclides). This new role requires a new core curriculum for training nuclear medicine specialists. This textbook is designed to meet these new educational needs, and to prepare nuclear physicians and technologists for careers in this exciting specialty.

Pediatric Imaging: Case Review is a quick review of common or rare but classic pediatric cases that tests your knowledge of pediatric imaging. Featuring updated pediatric body and pediatric neuro-imaging cases from fetus to young adolescents, this case review book includes over 300 images and 600 all-new multiple-choice questions, providing residents and radiologists with a current review of key pediatric imaging information. Images and descriptions address most common/classic, as well as several rare but critical entities of pediatric radiology in a single source. Distinguish between common and rare diagnoses with case studies organized into "Opening Round," "Fair Game," and "Challenge" sections that present varying levels of difficulty and occurrences. Features completely updated cases throughout -- including new cases on congenital heart disease -- and over 300 new images. Expanded cases include advanced and state-of-the art imaging modalities (i.e.fetal MRI and CTA/MRA of the heart). Provides expanded coverage of radiation dose reduction, in addition to new patient management, physics, quality and safety, and non-interpretive skills content. 600 all-new multiple-choice questions are designed to mimic the format of core board and certification exams. Incorporates up-to-date disease classification systems (e.g. ISSVA 2014 of vascular anomalies).

This textbook covers the fundamental principles of cardiovascular imaging modalities and their applications for the diagnosis of cardiovascular diseases. The main focus is on the comprehensive diagnosis of clinical conditions/disease entities through the most effective cardiovascular imaging test or combination. The authors discuss the clinical utility and relative value of each test to address specific clinical questions, based on evidence and expert opinion. Each chapter presents information in the following format: overview, discussion of pathophysiology; differential diagnosis/diagnostic evaluation; prognosis; therapeutic guidance with illustration of treatment pathway. A companion Website will offer the full text, ten multiple-choice questions for each chapter, still and cine images, and imaging clips.

Multidetector computed tomography (MDCT), also known as multislice, multidetector-row or multisection CT, is the latest breakthrough in CT technology. It has revolutionised diagnostic imaging creating a truly three-dimensional imaging modality and crucially it enables faster and more detailed scans to be performed. This unique publication presents the viewpoints of experts working around the world on the wide and fascinating range of MDCT applications.

Written specifically for dentists, White and Pharoah's Oral Radiology: Principles and Interpretation 8th Edition incorporates over 1,500 high-quality radiographic images and illustrations to demonstrate core concepts and essential principles and techniques of oral and maxillofacial radiology. The new edition of this bestselling book delivers with state-of-the-art information on oral radiology principles and techniques, and image interpretation. Dental student will gain a solid foundation in radiation physics, radiation biology, and radiation safety and protection before introducing including specialized techniques such as MRI and CT. As well, students will learn how to recognize the key radiographic features of pathologic conditions and interpret radiographs accurately. The 8th edition also includes new chapters on Radiologic Anatomy, Beyond 3D Imaging, and Diseases Affecting the Structure of Bone. A practical guide to using today's technology, this unique text helps your students provide state-of-the-art care! Over 1,500 high quality dental radiographs, full color photos, and illustrations clearly demonstrate core concepts and reinforce the essential principles and techniques of oral and maxillofacial radiology. Updated Extensive coverage of all aspects of oral and maxillofacial radiology includes the entire predoctoral curriculum. A wide array of radiographic images including advanced imaging such as MRI and CT. An easy-to-follow format simplifies the key radiographic features of each pathologic condition, including location, periphery, shape, internal structure, and effects on surrounding structures — placed in context with clinical features, differential diagnosis, and management. Expert contributors include many authors with worldwide reputations. Case studies apply imaging concepts to real-world scenarios. NEW! New editors Sanjay Mallya and Ernest Lam along with new contributors bring a fresh perspective on oral radiology. NEW! Chapter! Beyond 3D Imaging introduces applications of 3D imaging such as stereolithic models. NEW! Chapter Radiological Anatomy includes all radiological anatomy content allowing you to better visualize and understand normal appearances of structures on conventional and contemporary imaging, side-by-side. NEW! Coverage of Diseases Affecting the Structure of Bone consolidated into one chapter to simplify foundational basic science information and its applications to radiologic interpretation.

Written by the chief physicist at Johns Hopkins University Hospital, this easy-to-read short textbook explains the physics behind multi-detector CT technology, particularly newer, more complex technology. The focus is on principles of physics, effects of scan parameters on image quality, and optimum radiation dosage. The book includes numerous key points summaries and questions to assist in exam preparation.

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Conventional computed tomography (CT) techniques employ a narrow array of x-ray detectors and a fan-shaped x-ray beam to rotate around the patient to produce images of thin sections of the patient. Large sections of the body are covered by moving the



ADMIRE. Aidentifierade bildmaterialför varje patient visades parvis i slumpmässig ordning för ett antal granskare och bildkvaliteten bedömdes med hjälp av europeiska bildkriterier. I den retrospektiva studien, delarbete III, hämtades bildmaterialet från utförda DT-urografiundersökningar från bildarkivet. För varje undersökning visades bilder från varje fas i DT-urografiundersökningen separat i slumpmässig ordning. För samtliga delarbeten, hämtades bildkriterierna från "European Guidelines of Quality Criteria for CT" och modifierades för att passa till varje studie. Granskarnas bedömning analyserades med ordinal logistisk regression så kallad visual grading regression (VGR). Resultat från delarbetet I visade att det fanns en signifikant inverkan av dos (p

**A PRACTICE, CLINICALLY RELEVANT COMPUTED TOMOGRAPHY PRIMER** Body CT: The Essentials delivers an up-to-date, detailed, and practical review of CT imaging of the chest, abdomen, and pelvis. It will prove especially valuable to trainees in diagnostic radiology and practicing radiologists with an interest in body imaging. Primarily organized by organ system, Body CT: The Essentials also includes important technical chapters that review intravenous contrast administration, scan parameters, and radiation physics that enable you to perform quality studies with minimum patient radiation exposure. Each organ-specific chapter incorporates the latest advances in CT imaging and recommendations or guidelines for imaging, as well as follow-up findings. Tables found within the chapters include differential diagnosis, and each chapter concludes with suggested readings for a more detailed discussion of the topic. Here's why this is the perfect CT primer: Enhanced by more than 450 images Emphasizes the appropriateness and role of CT relative to other imaging modalities and protocols Includes coverage of the latest technologies such as cardiac CT, CT colonography, and CT enterography Focuses on the most practical concepts related to generating a concise, accurate differential diagnosis and relevant report

Inside the Fourth Edition of the Manual of Cardiovascular Medicine, you'll find practical and effective approaches to common clinical syndromes--including clear guidance on administration of commonly prescribed medications and descriptions of proven therapeutic procedures. This best selling manual's concise outline format and colorful design make essential facts easy to find. An ideal reference for the resident, fellow, practicing cardiologist, or nurse-practitioner treating patients with cardiovascular disease. Skill-building features include... \* Authoritative perspectives let you benefit from the experienced staff and fellows at the Cleveland Clinic \* Concise overview of cardiology helps build a firm grasp of fundamental cardiovascular anatomy, physiology, and pathology \* Comprehensive section on cardiovascular procedures includes expert tips for improving performance and outcomes \* Evidence-based approach to diagnosis and management explains the 'how' and 'why' behind critical decisions \* Suggested reading at the end of each chapter provides guideposts for further investigation NEW to the 4th Edition... \* Examples added of key electrocardiographic tracings for quick reference \* New chapters cover diabetes and cardiovascular disease, pulmonary hypertension, systemic disease and the heart, management of TAVR patients, and troubleshooting LVADs \* Updated content reflects the latest advances in cardiovascular medicine--including percutaneous aortic valve replacement and left ventricular assist device management \* Quick-reference list of common formulae helps you find vital information in seconds

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Over 1,500 high quality dental radiographs, full color photos, and illustrations clearly demonstrate core concepts and reinforce the essential principles and techniques of oral and maxillofacial radiology. updated Extensive coverage of all aspects of oral radiology for the entire predoctoral curriculum. NEW! Chapter Radiological Anatomy includes all radiological anatomy content allowing students to better visualize and understand normal appearances of structures on conventional and contemporary imaging, side-by-side. NEW! Chapter! Beyond 3D Imaging: introduces applications of 3D imaging such as stereolithic models. UPDATED Comprehensive coverage of diseases affecting the teeth and jaws, relating their pathogenesis to their key imaging features and image interpretation. NEW! New editors Drs. Sanjay Mallya and Ernest Lam along with new contributors bring a fresh perspective on oral radiology. A wide array of radiographs including advanced imaging such as MRI and CT. An easy-to-follow format simplifies the key radiographic features of each pathologic condition, including location, periphery, shape, internal structure, and effects on surrounding structures are placed in context with clinical features, differential interpretation, and management. Expert contributors include many authors with worldwide reputations. Case studies apply imaging concepts to real-world scenarios.

Section I:Principles and challenges of MDCT / Introduction-I.1.MDCT:Technical principles and future trends-I.2.Contrast medium administration and scan timing for MDCT Section II:Abdominal imaging / Introduction-II.1.MDCT:Secondary malignancies and benign liver lesions-II.2.Primary liver malignancies-II.3.MDCT of the pancreas-II.4.Abdominal imaging:Use of high concentration contrast media Section III:Cardiac and vascular imaging / Introduction-III.1.Use of high concentration contrast media in CT angiography:Principles and rationale-III.2.Cardiac and vascular imaging:Cardiology indications-III.3.Aorta, peripheral and renal vessels-III.4.MDCT for diagnosis of pulmonary embolism: Have we reached our goal? Section IV:Future prospects in MDCT imaging / Introduction-IV.1.Interventional MDCT-IV.2.Functional CT imaging in stroke and oncology-IV.3.From acquisition to report: managing the information overload-IV.4.Recent update on contrast media safety

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This book presents up-to-date information on promising indications for ultrasound in contemporary periodontics and implant therapy with the aim of assisting researchers and dental practitioners to use this novel imaging modality to advance research and patient care. Readers will find clear guidance on the application of ultrasound for evaluation of periodontal and peri-implant tissues. The mechanism of ultrasound imaging is explained in detail and compared to other imaging modalities. Furthermore, the role of ultrasound in the planning and execution of implant surgery and the assessment of implant stability is discussed. The book closes by considering the potential dental applications of functional ultrasound and volumetric ultrasound. This book will potentially be of high values for dental surgeons, periodontists, general dentists, orthodontists, dental hygienists, dental assistants, dental researchers and other practitioners, etc.

MDCT Physics: The BasicsTechnology, Image Quality and Radiation DoseLippincott Williams & Wilkins

The Oxford Textbook of Vascular Surgery draws on the expertise of over 130 specialist contributors to encompass the field of vascular surgery. Through the use of figures, findings of contemporary trials, and additional online content, this textbook is an excellent study material for surgical trainees entering their final two years of training, in addition to serving as an effective reference source for practicing surgeons. This volume discusses the epidemiology, vascular biology, clinical features and management of diseases that affect the vasculature and contains dedicated chapters which address topics such as paediatric surgery, damage control surgery, and amputations. The text follows a logical framework which complements the published Intercollegiate Surgery Curriculum making it particularly useful in preparation for the Intercollegiate Examination. The online version of The Oxford Textbook of Vascular Surgery is free for twelve months to individual purchasers of this book and contains the full text of the print edition, links to external sources and informative videos demonstrating current surgical techniques, making this a valuable resource for practicing surgeons. The field of vascular surgery has advanced rapidly in recent years and has expanded to include the techniques of interventional radiology and cardiology which are also extensively covered in this volume, making it an authoritative modern text. By combining contemporary evidence-based knowledge with informative figures, online resources and links to the current training curriculum, The Oxford Textbook of Vascular Surgery is a highly valuable source of information and will become the standard reference text for all who study vascular disease and its treatment.

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