

Diagnostic Neuroradiology A Text Atlas

Diagnostic Neuroradiology Springer Science & Business Media

This richly illustrated and superbly organized text/atlas is an excellent point-of-care resource for practitioners at all levels of experience and training. Written by global leaders in the field, *Imaging Anatomy: Brain and Spine* provides a thorough understanding of the detailed normal anatomy that underlies contemporary imaging. This must-have reference employs a templated, highly formatted design; concise, bulleted text; and state-of-the-art images throughout that identify the clinical entities in each anatomic area. Features more than 2,500 high-resolution images throughout, including 7T MR, fMRI, diffusion tensor MRI, and multidetector row CT images in many planes, combined with over 300 correlative full-color anatomic drawings that show human anatomy in the projections that radiologists use. Covers only the brain and spine, presenting multiplanar normal imaging anatomy in all pertinent modalities for an unsurpassed, comprehensive point-of-care clinical reference. Incorporates recent, stunning advances in imaging such as 7T and functional MR imaging, surface and segmented anatomy, single-photon emission computed tomography (SPECT) scans, dopamine transporter (DAT) scans, and 3D quantitative volumetric scans. Places 7T MR images alongside 3T MR images to highlight the benefits of using 7T MR imaging as it becomes more widely available in the future. Presents essential text in an easy-to-digest, bulleted format, enabling imaging specialists to find quick answers to anatomy questions encountered in daily practice. Includes the Expert Consult version of the book, allowing you to search all the text, figures, and references on a variety of devices.

This richly illustrated and superbly organized text/atlas is part of the new *Diagnostic and Surgical Imaging Anatomy* series produced by the innovative medical information systems provider Amirsys®. Written by the preeminent authorities in neuroradiology, this volume will give radiologists a thorough understanding of the detailed anatomy that underlies contemporary imaging. The book features over 2,500 high-resolution 3T MRI and multidetector row CT images in many planes, combined with over 370 correlative full-color anatomic drawings that show human anatomy in the projections radiologists use. Succinct, bulleted text accompanying the images identifies the clinical and pathologic entities in each anatomic area. With the eBook, you'll receive the print book as well as an instant-access, online e-book: continuously updated, fully searchable online version, fast-access differential diagnosis tables based on specific anatomic area, optically clear images with interactive self-assessments. Amirsys® eBook Advantage is compatible only with Internet Explorer 6.0 or later.

This atlas presents normal imaging variations of the brain, skull, and craniocervical vasculature. Magnetic resonance (MR) imaging and computed tomography (CT) have advanced dramatically in the past 10 years, particularly in regard to new techniques and 3D imaging. One of the major problems experienced by radiologists and clinicians is the interpretation of normal variants as compared with the abnormalities that the variants mimic. Through an extensive collection of images, this book offers a spectrum of appearances for each variant with accompanying 3D imaging for confirmation; explores common artifacts on MR and CT that simulate disease; discusses each variant in terms of the relevant anatomy; and presents comparison cases for the purpose of distinguishing normal findings from abnormalities. It includes both common variants as well as newly identified variants that are visualized by recently developed techniques such as diffusion-weighted imaging and multidetector/multislice CT. The book also highlights normal imaging variants in pediatric cases. *Atlas of Normal Imaging Variations of the Brain, Skull, and Craniocervical Vasculature* is a valuable resource for neuroradiologists, neurologists, neurosurgeons, and radiologists in interpreting the most common and identifiable variants and using the best methods to classify them expediently.

This book aims to provide the trainee and practicing minimally invasive neurological therapist with a comprehensive understanding of the background science and theory that forms the foundation of their work. The contents are based on the tutorial teaching techniques used at the University of Oxford and are authored by the MSc Course Director. The tutorial is a learning episode focussed on a particular topic and intended to guide the student/reader through the background literature, to highlight the research on which standard practices are based and to provide the insights of an experienced practitioner. Each chapter of the book covers a different topic to build a complete review of the subspecialty, with in-depth discussion of all currently used techniques. The literature is reviewed and presented in context to illustrate its importance to the practice of this rapidly expanding field of medical treatment.

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

In this text atlas of neuroimaging the author provides a review of the pathologies and diseases that affect the head, brain, skull base, face, spine, and cord. The case presentation format of this handbook covers the important clinical and neuropathological aspects of the disease process. The book contains 350 selected pathologies, represented in 750 high resolution MR images. It also covers the aspects of neurological disorders and the fundamental aspects of the physics of magnetic resonance, spectroscopy, as well as a review of MR techniques. Given its scope, this book is of interest to radiologists involved in MR interpretation, neuroradiologists seeking an up-to-date review, and all workers in the field of diagnostic and therapeutic neurology.

In this monograph, the authors summarize their findings in complex neuroimaging work (cranio-, spondylo-, myelo- and angiography as well as CT and MR imaging of the brain and spine) during their longstanding experience at the N. Burdenko Neurosurgical Institute in Moscow. The book begins with a review of modern neuroimaging techniques: CT and MR angiography, perfusion and diffusion imaging, tractography, spectroscopy and functional MR imaging. The problems and various other aspects of diagnosis of intra- and extra-axial brain tumors (more than 30,000 verified cases) as well as of cerebrovascular, infectious, demyelinating, degenerative and traumatic brain and spine lesions are discussed. The volume is well illustrated with angiographic, CT and MR images of complex diagnostic studies. The numerous images represent a "visual text," which can be used as an atlas by practical clinicians. This book is a comprehensive reference manual for neurologists, neurotraumatologists and radiologists. It may also be of interest to technicians, medical physicists, students and other specialists interested in neurovisualization and diagnostic imaging.

Encouraged by the success of the Italian editions, the Authors have decided to publish an English version taking into account the latest technical and methodological advances and the consequent new acquisitions in clinical practice. The contribution of Professor R. Jenkins has been essential to carry out both these tasks. The resulting work is an up-to-date technical tool that preserves its original aim of contributing to the training of those radiologists who work in emergency departments. We hope that this revised and extended English version will have the same success as the previous Italian editions, thereby confirming the validity of our initiative. The work of all the friends and colleagues who have contributed to the making of this book is gratefully acknowledged. Tommaso Scarabino Ugo Salvolini CONTENTS I.

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Subject of the book is MR imaging in all kinds of diseases that may affect the skull and brain. Primary purpose of the book is to provide the reader with a descriptive as well as pictorial overview of MRI in the various pathologic processes. An important additional purpose is to explain how to make the best use of MRI if a particular disease is suspected. Extensive information on differential diagnosis will also be included.

This book demonstrates how advanced medical imaging techniques can be successfully applied to dental and maxillofacial conditions. There is a focus on CT and MRI, but the use of all contemporary imaging techniques are illustrated including PET, PET/CT, ultrasonography, and cone beam CT. The presentation is in atlas style, with succinct, bulleted text and a wealth of high-quality images in multiple planes. All images for each patient are grouped to enable the reader very quickly to gain an imaging overview of the condition under consideration. After a comprehensive introductory chapter on normal imaging anatomy, the role of advanced imaging techniques is described in pathologic conditions of the mandible and maxilla, temporomandibular joint, regions closely related to the jaw, paranasal sinuses, oral cavity, salivary glands, and structures adjacent to the maxillofacial region. A concluding chapter examines the use of interventional procedures for diagnosis and treatment of maxillofacial conditions. Compared to the first edition, numerous additional cases have been incorporated and a completely new chapter focuses on cone beam CT. The book will be useful for oral and maxillofacial radiologists, oral and maxillofacial surgeons, dentists, radiologists, plastic surgeons, head and neck surgeons, and others who work with maxillofacial conditions.

This succinct compendium focuses on the key practical aspects of head and neck cancer imaging. It also provides essential information on handling and analyzing imaging data. Head and neck cancer is the sixth most common cancer worldwide. CT and MRI imaging are absolutely crucial to accurate diagnosis and staging, and radiologists have to be especially familiar with the anatomy of that region of the body. In addition, they must be highly proficient in interpreting radiographic images in order to judge the patterns of metastasis, response to treatment, and the signs and patterns of recurrence. This concise but detailed book describes the latest imaging modalities for all types of head and neck cancer diagnosis in light of recent technological advances. Featuring abundant high-quality images supplemented by advice from experts on the management of each cancer, it is a valuable resource for diagnostic and general radiologists, as well as all medical staff involved in the management of head and neck cancers.

This exhaustive text covers all aspects of diagnosis and endovascular treatment of neurological and neurosurgical diseases of the pediatric central nervous system starting from their in utero expression. It also includes the vascular malformations of each district and their endovascular treatment. Besides the "normal" imaging techniques the advanced techniques (spectroscopy, diffusion, perfusion, and functional imaging) are covered in detail. Several topics that are often only superficially dealt with in other books are herewith covered in outstanding detail. The volume is richly illustrated with high-quality neuroradiological images, with pathological correlation where applicable. The rich analytic index makes it an easily usable tool in the everyday clinical practice. The book serves both as a reference for specialists (neuroradiologists, radiologists, neurosurgeons, neurologists, pediatricians) and as a teaching text for residents and fellows-in-training. Psychobiological Foundations of Psychiatric Care is the first book to provide a comprehensive knowledge base of the psychobiological aspects of psychiatric disorders. Using a dynamic, full-color design and format, with more than 100

brain scans, photographs, and other illustrations, the text offers psychiatric nurses and others working with patients with mental illness the information needed to remain up-to-date in their field.

Greenfield's Neuropathology, the world's leading neuropathology reference, provides a comprehensive account of the pathological findings in neurological disease, their biological basis, and their clinical manifestations. The book's detailed advice on pathological assessment and interpretation is based on clear descriptions of molecular and cellular processes and reactions that are relevant to the development of the nervous system, as well as its normal and abnormal functioning. The information is presented in an accessible way to readers working within a range of disciplines in the clinical neurosciences, and neuropathological findings are placed within the context of a broader diagnostic process. New for the Ninth Edition: Features online and downloadable digital formats with rapid search functions, annotation and bookmarking facilities, image collections, and live reference links Contains many color illustrations and high-quality clinical photographs to help with interpretation and understanding Includes more than 1000 new photographs and drawings Incorporates new design elements, such as alternate colour coding of chapters for easier navigation Known for its thorough yet practical approach, Greenfield's continues to provide trusted information to all neuropathologists and those in related specialties, including neurologists, neurosurgeons, general pathologists, neuroradiologists, and clinical neuroscientists.

Dr. Jonathan J. Dutton, a world leader in orbital surgery, presents Radiology of the Orbit and Visual Pathways. This new and unique diagnostic guide offers expert advice on the full spectrum of uses of CT and MRI, the two core methods of radiologic imaging of the orbit. An atlas style approach provides the essential text you need to accurately diagnose over 120 of the more common disorders you'll come across in your daily routine, and over 1,100 lavish illustrations enhance your visual guidance. Covering the entire visual pathways from the eye to the occipital cortex, you'll gain thorough knowledge of normal anatomy and how it compares to pathologic findings to confidently diagnose.

- Offers expert guidance on the strengths and weaknesses of CT and MRI and discusses the correct application of each, so you can choose the most appropriate technology for the most accurate diagnosis for more than 120 disorders.
- Uses an atlas-style approach, illustrating the full spectrum of scanning available for each disorder and includes 1,100 images to help you better identify, recognize, and understand the complete variations of each disease.
- Presents clear and concise artwork that illustrates the mechanics of each imaging protocol making difficult concepts easy to grasp and explains the physics behind each technology to help you understand how and why various imaging techniques apply to specific lesions.
- Illustrates the normal anatomic structures in the orbit and brain to compare against pathologic presentations for better understanding of disease.

This atlas employs the spaces concept of analysis, which helps radiologists directly visualize complex head and neck anatomy and pathology. With hundreds of high-quality illustrations, this book makes the difficult identification and localization of complex neck masses relatively simple. This book provides CT and MR examples for more than 200 different diseases of the suprahyoid and infrahyoid neck, as well as clear and concise information on the epidemiology, clinical findings, pathology, and treatment guidelines for each disease.

Dr. Osborn's classic work, An Introduction to Cerebral Angiography, has now been completely revised, reorganized, and updated and expanded from an introductory book into a comprehensive, state-of-the-art reference on cerebral angiography. Coverage includes new information on vascular territories, film subtraction, and magnetic resonance angiography. The text is thoroughly illustrated with 1,200 radiographs and line drawings, all of them new to this volume. Boxed summaries are used throughout the text to highlight key points.

Problem Solving in Neuroradiology, by Meng Law, MD, Peter M. Som, MD and Thomas P. Naidich, MD, is your survival guide to solving diagnostic challenges that are particularly problematic in neuroimaging. With a concise, practical, and instructional approach, it helps you apply basic principles of problem solving to imaging of the head and interventional neck, brain, and spine. Inside, you'll find expert guidance on how to accurately read what you see, and how to perform critical techniques including biopsy, percutaneous drainage, and tumor ablation. User-friendly features, such as tables and boxes, tips, pitfalls, and rules of thumb, place today's best practices at your fingertips, including protocols for optimizing the most state-of-the-art imaging modalities. A full-color design, including more than 700 high-quality images, highlights critical elements to enhance your understanding. Apply expert tricks of the trade and protocols for optimizing the most state-of-the-art imaging modalities and their clinical applications used for the brain and spine—with general indications for use and special situations. Make the most efficient use of modern imaging modalities including multidetector CT, PET, advanced MR imaging/MR spectroscopy (MRS), diffusion-weighted imaging (DWI), diffusion tensor imaging (DTI), and perfusion weighted imaging (PWI). Successfully perform difficult interventional techniques such as biopsies of the spine and interventional angiography—key techniques for more accurately diagnosing cerebral vascular disease, aneurysm, and blood vessel malformations—as well as percutaneous drainage and tumor ablation. Know what to expect. A dedicated section is organized by the clinical scenarios most likely to be encountered in daily practice, such as neurodegenerative disease, vascular disease, and cancer. Avoid common problems that can lead to an incorrect diagnosis. Tables and boxes with tips, pitfalls, and other teaching points show you what to look for, while problem-solving advice helps you accurately identify what you see—especially those images that could suggest several possible diagnoses. See conditions as they appear in practice thanks to an abundance of case examples and specially designed full-color, high-quality images which complement the text and highlight important elements. Quickly find the information you need thanks to a well-organized, user-friendly format with templated headings, detailed illustrations, and at-a-glance tables.

Written by authors from one of Asia's premier ophthalmology institutes the purpose of this atlas is to provide ophthalmologists and other physicians concerned with eye diseases with a carefully selected collection of quality

illustrations that review the spectrum of diseases commonly seen in Neuro-ophthalmic practice.

Designed for easy use at the PACS station of viewbox, here is your right-hand tool and pictorial guide for locating, identifying, and accurately diagnosing lesions of the extracranial head and neck. This beautifully produced atlas employs the spaces concept of analysis, which helps radiologists directly visualize complex head and neck anatomy and pathology. With hundreds of high quality illustrations, this book makes the identification and localization of complex neck masses relatively simple. This book provides CT and MR examples for more than 200 different diseases of the suprahyoid and infrahyoid neck, as well as clear and concise information on the epidemiology, clinical findings, pathology, and treatment guidelines for each disease. Each space within the head and neck has its own separate section, with examples of the common pathology that arises in this area. A standard format consisting of Epidemiology, Clinical Presentation, Pathology, Treatment, and Imaging Findings, allows quick and efficient access to well-structured subjects. This uniform organization streamlines research for radiologists at any level of training. Although well over 200 pathologies are included within this remarkable text, Atlas of Head and Neck Imaging focuses primarily on the suprahyoid and infrahyoid neck, providing exceptionally detailed information on the most challenging aspects of this field. Radiologists and radiation oncologists will find this visual text ideal as a quick anatomic reference and diagnostic tool. Radiology residents preparing for board exams and neuroradiology fellows and staff studying for the CAQ exam will also benefit from the wealth of information.

This text was created to fill a void in the practice of pediatric neuropathology. It is a practical and well-illustrated book representing a collection of interesting, common and unusual tumors for a diagnostic exercise by the reader. The wide reception of the first edition by the pathology community is testament to its relevance and utility in the pathologic diagnosis of pediatric brain tumors. This edition covers topics ranging from neuroimaging, the use of crush and touch preps during intraoperative consultation, classic histological features of pediatric brain tumors, tumor variants, and a miscellaneous group of challenging tumors. Chapters consist of essential diagnostic information and features highlighting recognized variants and their differential diagnoses. A section on molecular pathology and electron microscopy is also included for each tumor category, along with a list of classic reviews and innovative articles on each of the tumor entities as suggested reading at the end of each chapter. Atlas of Pediatric Brain Tumors, Second Edition represents the state of the art in pediatric neuropathology with easy utility beside the microscope.

Forensic imaging with multidetector computed tomography (MDCT) and other cross-sectional imaging modalities is a rapidly evolving field. Understanding the pathological basis of disease and death is fundamental to the interpretation of radiologic images.

Forming a bridge between these distinct disciplines, Essentials of Forensic Imaging: A Text-Atlas

MRI Brain: Atlas and Text is a highly illustrated collection of magnetic resonance imaging cases, complete with guidance on terminology, anatomy and diagnosis. MRI Brain: Atlas and Text covers MR signal intensity nomenclature, common MR sequences and their use, and the use of MRI in the diagnosis of stroke, along with other specialist topics making this book ideal for radiology postgraduates as well as GPs and neuroradiologists.

This book offers practical guidelines for performing efficient and cost-effective MRI examinations. By adopting a practical protocol-based approach the work-flow in a MRI unit can be streamlined and optimized. All chapters have been thoroughly reviewed, and new techniques and figures are included. There is a new chapter on MRI of the chest. This book will help beginners to implement the protocols and will update the knowledge of more experienced users.

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You asked for a new edition. Here it is, better than ever! Not only have many of the same experts in hematology and oncology returned to update their chapters, but new specialists have joined the team, rounding out this edition's detailed coverage of cancer treatment, palliative care, blood disorders, genetic counseling, and more. New to this edition are: skeletal complications of malignancy, fatigue in the cancer patient, and targeted molecular therapy. Freshen your knowledge base, study for the boards, or read for the challenge of testing yourself. - Back cover.

This full-color new edition combines radiographic imaging of abuse with pathologic correlates side-by-side. Essential for radiologists, pediatricians and forensic pathologists.

The aim of this book is to emphasize firstly that rare and serious conditions can be hidden behind common (mis)leading neurological symptoms. Secondly, it stresses the importance of the collaboration with clinician colleagues - a neuroradiologist needs complete and accurate patient information to make a proper diagnosis or a differential diagnosis that can properly guide further diagnostic processing. The book, structured as an atlas, is divided into three sections according to the most common leading symptoms encountered in hospital emergency units or in outpatient settings. Each proposed case is accompanied by a short medical history, CT and MRI images, and a text describing its most important radiological features. 27 cases were chosen from the authors' everyday practice: rare and peculiar cases, as well as common cases with a twist. Although both authors are experienced neuroradiologists, several of the cases were surprising and it took considerable time to arrive at the correct diagnosis. A certain level of knowledge and experience, together with information from literature, the Internet or from clinicians, helped them solve most of the cases directly, or after consultation with clinicians and further medical examinations and interventions. This book is mainly intended for residents, general radiologists and neuroradiologists. However, it will also be of help to less experienced colleagues or trainees who need to solve particular cases, encouraging them to think outside the box to find the answers.

The English Edition contains a few differences from the first Italian Edition, which require an explanation. Firstly, some images, especially some 3D reconstructions, have been modified in order to make them clearer. Secondly, in agreement with the Publisher, we have disowned one of our statements in the preface to the Italian Edition. Namely, we have now added a brief introductory text for each section, by way of explanation to the anatomical and physiological notes. This should make it easier for the reader to understand and refer to this Atlas. These differences derive from our experience with the previous edition and are meant to be an improvement thereof. Hopefully, there will be more editions to follow, so that we may further improve our work and keep ourselves busy on some evenings. Finally, the improvements in this edition are a reminder to the reader that one should never purchase the first edition of a work. UAquila, January 2006 The Authors Preface to the Italian Edition I have been meaning to publish an atlas of neuroradiologic cranio-encephalic anatomy for at least the last decade. Normal anatomy has always been of great and charming interest to me. Over the years, while preparing lectures for my students, I have always enjoyed lingering on anatomical details that today are rendered with astonishing realism by routine diagnostic imaging.

As a result of the increasing number of surgical procedures on the brain, head, neck, and spine, postoperative changes are being encountered more frequently on neuroradiological examinations. However, these findings are often unfamiliar to neuroradiologists and neurosurgeons and can be difficult to interpret. This book, which contains numerous images and to-the-point case descriptions, is a

comprehensive yet concise reference guide to postsurgical neuroradiology. It will enable the reader to identify the type of surgery performed and the hardware implanted and to differentiate expected sequelae from complications. Topics reviewed include trauma, tumors, vascular disorders, and infections of the head, neck, and spine; cerebrospinal fluid abnormalities; and degenerative diseases of the spine. This book will serve as a unique and convenient resource for both neuroradiologists and neurosurgeons.

Presenting a practical text for the clinician on diagnosing various neurologic disorders and clinical presentations with an emphasis on the use of diagnostic testing. Detailed disorder-oriented chapters provide a brief summary of the clinical aspects, the differential diagnosis and comprehensive literature reviews of diagnostic testing for the disorder. Also features summaries of the contributors' experience with algorithms and/or their practical recommendations. Offers clear, practical guidance regarding indications, sensitivity and relative utility of neurologic testing in general practice. Encompasses a wide scope of neurologic conditions (both in- and out-patient). Common conditions covered include headache, back pain, dementia, stroke, carpal tunnel syndrome, and seizure disorders. Uncommon conditions such as ALS are examined. Covers special testing methods such as autonomic testing, EMG waveform analysis, and molecular diagnostic tests...for gait disorders, dysarthria, more information that is hard to find except in multiple subspecialty books. Familiarizes readers with the sensitivity and specificity of each test as well as indications for obtaining the study. Provides clinical aspects, differential diagnosis, and comprehensive literature reviews, with algorithms and practical recommendations.

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