Atlas For Delineation Of The Lymph Node Regions For

Stereotactic body radiation therapy (SBRT) has emerged as an important innovative treatment for various primary and metastatic cancers. This book provides a comprehensive and up-to-date account of the physical/technological, biological, and clinical aspects of SBRT. It will serve as a detailed resource for this rapidly developing treatment modality. The organ sites covered include lung, liver, spine, pancreas, prostate, adrenal, head and neck, and female reproductive tract. Retrospective studies and prospective clinical trials on SBRT for various organ sites from around the world are examined, and toxicities and normal tissue constraints are discussed. This book features unique insights from world-renowned experts in SBRT from North America, Asia, and Europe. It will be necessary reading for radiation oncologists, radiation oncology residents and fellows, medical physicists, medical physics residents, medical oncologists, surgical oncologists, and cancer scientists.

Lippincott Williams & Wilkins is pleased to introduce the second edition of Anderson's Atlas of Hematology, the most comprehensive atlas for the laboratory technologist. Understanding that effectiveness as a technician comes through the ability to identify what one sees under the microscope, this atlas equips students with visual examples of the concepts covered in their programs. This new ediion has been thoroughly updated and revised based on the latest basic science and clinical findings. In addition, you'll find new, higher-quality images as well as the most recent World Health Organization classification of hematologic disorders. With its four-color illustrations and clear descriptions, this atlas enables you to describe and identify all stages in the development of blood cells. Moreover, it provides an illustrated guide to a broad range of hematologic disorders. Used as a quick reference, study guide, or atlas, this is an invaluable tool for today's laboratory technician student, helping them clearly identify the very types of hematologic images they will encounter in practice.

Hospital service areas (HSAs) and hospital referral regions (HRRs) are considered more appropriate units than geopolitical units for analyzing the performance of health care markets and policy implementation. GIS Automated Delineation of Hospital Service Areas represents the state-of-the-art approach in delineating HSAs and HRRs by using GIS-automated processes. It provides the best practices for defining such areas scientifically, in a geographically accurate manner, and without a steep learning curve. This book is intended to mainly serve professionals in geography, urban and regional planning, public health, and related fields. It is also useful for scholars in the above fields who have research interests related to GIS and spatial analysis applications in health care. It can be used as a supplemental text for upper-level undergraduate and graduate students in courses related to GIS and public health. Features: Introduces innovative state-of-the-art methods for delineation of HSAs (Dartmouth method, Huff model, network community detection methods) Provides best practices and one-stop solution for related data processing tasks (e.g., distance and travel time estimation, identifying the best-fitting distance decay function) Automates the methods in ArcGIS Pro toolkits Includes free ready-to-download GIS tools and sample data available on authors' website Presents a methodology that is applicable to delineation of other service areas, catchment areas or functional regions for business analysis, planning, and public policy studies

This book provides a comprehensive introduction to current state-of-the-art auto-segmentation approaches used in radiation oncology for auto-delineation of organs-of-risk for thoracic radiation treatment planning. Containing the latest, cutting edge technologies and treatments, it explores deep-learning methods, multi-atlas-based methods, and model-based methods that are currently being developed for clinical radiation oncology applications. Each chapter focuses on a specific aspect of algorithm choices and discusses the impact of the different algorithm modules to the algorithm performance as well as the implementation issues for clinical use (including data curation challenges and auto-contour evaluations). This book is an ideal guide for radiation oncology centers looking to learn more about potential auto-segmentation tools for their clinic in addition to medical physicists commissioning auto-segmentation for clinical use. Features: Up-to-date with the latest technologies in the field Edited by leading authorities in the area, with chapter contributions from subject area specialists All approaches presented in this book are validated using a standard benchmark dataset established by the Thoracic Auto-segmentation Challenge held as an event of the 2017 Annual Meeting of American Association of Physicists in Medicine

Why Arc hydro? / David Maidment / - Arc Hydro framwork / David Maidment, Scott Morehouse / - Hydro networks / Francisco Olivera, David Maidment / - Drainage systems / Francisco Olivera, Jordan Furnans / River channels / Nawajish Noma, James Nelson / Hydrography / Kim Davis, Jordan Furnans / - Time series / Damid Maidment, Venkatesh Merwade / - Hydrologic modeling / Steve Grise, David Arctur.

This book is devoted to sharing the knowledge and experience of expert radiation therapy (RT) for extranodal lymphomas. For that purpose, the authors provide clinical-pathological information, precise RT techniques, and treatment results, i.e., disease control and survival, of all extranodal lymphomas. Over the past 10 years, specific techniques have been updated, from 3-dimensional conformal RT to intensity modulated RT / volumetric-modulated arc therapy. Precise targeting such as image-guided RT and active breathing control are now capable of treating lymphoma lesions that shift with respiration or peristalsis. This book, serving as a guide, provides the necessary knowledge for radiation oncology, practice, and planning involving the RT techniques of treating extranodal lymphomas. In addition, it equips oncologists, hematologists, and medical oncologists to refer patients with extranodal lymphomas to radiation oncologists for appropriate treatment in a timely manner. Therefore this volume will greatly benefit all oncologists, including radiation and medical oncologists, as well as hematologists.

The Stereotaxic Brain Atlas of the Egyptian Fruit Bat provides the first stereotaxic atlas of the brain of the Egyptian fruit bat (Rousettus aegyptiacus), an emerging model in neuroscience. This atlas contains coronal brain sections stained with cresyl violet (Nissl), AChE, and Parvalbumin – all stereotaxically calibrated. It will serve the needs of any neuroscientist who wishes to work with these bats – allowing to precisely target specific brain areas for electrophysiology, optogenetics, pharmacology, and lesioning. More broadly, this atlas will be useful to all neuroscientists working with bats, as it delineates many brain regions that were not delineated so far in any bat species. Finally, this atlas will provide a useful resource for researchers interested in comparative neuroanatomy of the mammalian brain. Provides detailed and accurate stereotaxic coverage of the Egyptian fruit bat forebrain Contains 87 plates of coronal sections of adult Egyptian fruit bats, each with one Nissl-stained hemisphere and the other stained either for AChE or Parvalbumin Delineates brain structures in the bat brain Serves as an essential tool for directing electrophysiology, imaging, optogenetics, pharmacology and lesioning in Egyptian fruit bats, and bats more generally Provides a rich resource for comparative neuroanatomy of the mammalian brain ncludes the Expert Consult eBook version, compatible with PC, Mac, and most mobile devices and eReaders, which allows readers to browse, search, and interact with content

This book will facilitate the understanding of cross-sectional anatomy details and assist radiation oncologists in the difficult task of a detailed delineation of lymph node targets in multiple anatomical locations.

'Handbook of Cardiac CT' is a primer for the practical performance and interpretation of cardiovascular computed tomography. This manual serves as a companion to the textbook: 'Cardiac CT Imaging: Diagnosis of Cardiovascular Disease' and provides essential concise and practical text summary of each topic, with additional tables, algorithms, protocols and key images for orientation to and familiarization with important disease processes. This manual targets a reading audience who are in the training phase of performance and interpretation of cardiovascular CT and is designed as an easily accessible pocket reference.

Developing better therapies for neurological conditions such as Parkinson's and Alzheimer's diseases remains an enduring problem for 21st century medicine. The testing of novel therapies will continue to require a robust experimental animal model. The marmoset is an ideal animal model for modern neurological research because of the species' conveni

The Atlas of the Prenatal Mouse Brain is the latest addition to Academic Press' list of atlases for neuroscientists and neuroscience students. It fills an urgent need for a comprehensive atlas of the developing mouse brain for use in studies of both normal and abnormal development. High-quality photomicrographs of brain sections are depicted in sagittal, coronal, and horizontal planes for four gestational age groups. Each photomicrograph is accompanied by a fully labeled, precision-drawn diagram for easy identification of brain structures. Researchers and students using normal, transgenic, or mutant mouse preparations in developmental neurobiology, neurotoxicology, and biotechnology will welcome this meticulously assembled and accessible guide. Presents 153 photomicrographs of serial brain sections Represents four gestational ages (GD 12 and 14 embryos; GD 16 and 18 fetuses), each depicted in sigittal, coronal, and horizontal planes Includes fully labeled diagrams identifying brain structures for each photomicrograph Provides complete alphabetical lists of brain structures and abbreviations Presents a full description of tissue preparation method Large format, 8-1/2 x 11" pages in a sturdy hardcover case

This handbook is designed to provide the radiation oncologist with clear practical guidance in the delineation of tumor volumes and/or radiation fields for a wide variety of pediatric cancers, including the most frequently encountered malignancies of childhood. This is a guide to designing treatment fields and volumes that may be utilized in the delivery of conformal therapies such as intensity-modulated radiation therapy and proton therapy, the latter being particularly relevant in children. Each chapter focuses on a specific tumor type, providing general guidelines that will assist the reader in delineating the clinical target volume for particular presentations, including patterns of spread. As the target volumes can be complex, detailed illustrations are presented of the volumes in representative cases, contoured slice by slice on the planning CT images. In addition to target volume delineation for conformal treatment, field design setup for conventional approaches is also discussed.

Defining organs at risk is a crucial task for radiation oncologists when aiming to optimize the benefit of radiation therapy, with delivery of the maximum dose to the tumor volume while sparing healthy tissues. This book will prove an invaluable guide to the delineation of organs at risk of toxicity in patients undergoing radiotherapy. The first and second sections address the anatomy of organs at risk, discuss the pathophysiology of radiation-induced damage, and present dose constraints and methods for target volume delineation. The third section is devoted to the radiological anatomy of organs at risk as seen on typical radiotherapy planning CT scans, with a view to assisting the radiation oncologist to recognize and delineate these organs for each anatomical region – head and neck, mediastinum, abdomen, and pelvis. The book is intended both for young radiation oncologists still in training and for their senior colleagues wishing to reduce intra-institutional variations in practice and thereby to standardize the definition of clinical target volumes. ?

This textbook is designed to help the busy radiation oncologist to accurately and confidently delineate tumor volumes for conformal radiation therapy (including IMRT). The book provides an atlas of clinical target volumes (CTVs) for commonly encountered cancers, with each chapter illustrating CTV delineation on a slice-by-slice basis, on planning CT images. Common anatomic variants for each tumor are represented in individual illustrations, with annotations highlighting differences in coverage. The anatomy of each site and patterns of lymphatic drainage are discussed, and their influence on the design of CTVs is explained in detail. Utilization of other imaging modalities, including MRI, to delineate volumes is highlighted. Key details of simulation and planning are briefly reviewed. Although the emphasis is on target volume delineation for conformal techniques, information is also provided on conventional radiation field setup and design when IMRT is not suitable.

Thoroughly updated to include all of the latest technology and treatment regimens, Radiotherapy for Head and Neck Cancers: Indications and Techniques, 5th Edition remains the reference of choice for radiation oncologists. Timely updates include an increased use of full-color images and significantly more digital content, bringing you fully up to date with state-of-the-art radiation therapy for head and neck cancer. The first section covers general principles, practical aspects of external beam therapy, patient care guidelines, and more, including a new chapter on general principles of target and normal tissue contouring; the second section discusses site-specific indications and techniques. Numerous illustrated case examples make this resource an excellent day-to-day reference for both residents and practitioners.

Clinical conformal radiotherapy is the holy grail of radiation treatment and is now becoming a reality through the combined efforts of physical scientists and engineers, who have improved the physical basis of radiotherapy, and the interest and concern of imaginative radiotherapists and radiographers. Intensity-Modulated Radiation Therapy describes in detail the physics germane to the development of a particular form of clinical conformal radiotherapy called intensity modulated radiation therapy (IMRT). IMRT has become a topic of tremendous importance in recent years and is now being seriously investigated for its potential to improve the outcome of radiation therapy. The book collates the state-of-the-art literature together with the author's personal

research experience and that of colleagues in the field to produce a text suitable for new research workers, Ph.D. students, and practicing radiation physicists that require a thorough introduction to IMRT. Fully illustrated, indexed, and referenced, the book has been prepared in a form suitable for supporting a teaching course.

Description This stereotaxic atlas of the ferret brain provides detailed architectonic subdivisions of the cortical and subcortical areas in the ferret brain using high-quality histological material stained for cells and myelin together with in vivo magnetic resonance (MR) images of the same animal. The skull-related position of the ferret brain was established according to in vivo MRI and additional CT measurements of the skull. Functional denotations from published physiology and connectivity studies are mapped onto the atlas sections and onto the brain surface, together with the architectonic subdivisions. High-resolution MR images are provided at levels of the corresponding histology atlas plates with labels of the respective brain structures. The book is the first atlas of the ferret brain and the most detailed brain atlas of a carnivore available to date. It provides a common reference base to collect and compare data from any kind of research in the ferret brain. Key Features Provides the first ferret brain atlas with detailed delineations of cortical and subcortical areas in frontal plane. Provides the most detailed brain atlas of a carnivore to date. Presents a stereotaxic atlas coordinate system derived from high-quality histological material and in vivo magnetic resonance (MR) images of the same animal. Covers the ferret brain from forebrain to spinal cord at intervals of 0.6 mm on 58 anterior-posterior levels with 5 plates each. Presents cell (Nissl) stained frontal sections (plate 1) and myelin stained sections (plate 2) in a stereotaxic frame. Provides detailed delineations of brain structures and their denomination on a Nissl stained background on a separate plate (3). Compiles abbreviations on plate 4, a plate that also displays the low resolution MRI of the atlas brain with the outlines of the Nissl sections in overlay. Displays high-resolution MR images at intervals of 0.15 mm from another animal with labeled brain structures as plate 5 corresponding to the anterior-posterior level of each atlas plate. Provides detailed references used for delineation of brain areas. Target audience of the book: The book addresses researchers and students in neurosciences who are interested in brain anatomy in general (e.g., for translational purposes/comparative aspects), particularly those who study the ferret as important animal model of growing interest in neurosciences.

This book is the most up-to-date publication on fluorescence diagnostic (FDAP) and photodynamic therapy (PDT) methods used in dermatology. Both techniques are presently world wide introduced as standards for the delineation and the treatment of cutaneous precancerous stages and tumors, which show steadily increasing numbers due to e.g. more frequent sun exposure. Summarizing experiences on more than 5.000 treated patients, it offers a comprehensive information on every aspect of skin tumor detection and treatment. The main part of the book focuses on the clinical aspects giving detailed descriptions on skin tumor detection as well as photodynamic treatment of selected diseases (solar keratoses, basal cell carcinomas, squamous cell carcinomas, Bowen's disease, psoriasis lesions, etc.). The clinically oriented chapters are supplemented by practical guidelines for PDT and FDAP. The included atlas is comprised of 270 high quality color figures allowing daily use as a handbook.

Target Volume Delineation for Conformal and Intensity-Modulated Radiation TherapySpringer

This book constitutes the refereed proceedings of the 7th International Conference on Functional Imaging and Modeling of the Heart, held in London, UK, in June 2013. The 58 revised full papers were carefully reviewed and selected from numerous initial submissions. The focus of the papers is on following topics: image driven modeling, biophysical modeling, image analysis, biophysical modeling, cardiac imaging, parameter estimation, modeling methods, and biomedical engineering.

This is a reproduction of a book published before 1923. This book may have occasional imperfections such as missing or blurred pages, poor pictures, errant marks, etc. that were either part of the original artifact, or were introduced by the scanning process. We believe this work is culturally important, and despite the imperfections, have elected to bring it back into print as part of our continuing commitment to the preservation of printed works worldwide. We appreciate your understanding of the imperfections in the preservation process, and hope you enjoy this valuable book.

The MRI Atlas of the Human Cerebellum constitutes the most complete, detailed work on the human cerebellum to date. This definitive work provides images in the three cardinal planes (sagittal, transverse, and coronal) at closely spaced intervals of 2 millimeters. The images are derived from MRI scans of one individual and from postmortem sections of another. It is the only such atlas set within the universally accepted framework of the Talairach stereotaxic system, derived from standard landmarks in the brain. The book includes a new nomenclature system (labeling system) which is easier to use, aids in understanding the organization of the cerebellum, and is consistent with earlier work on the anatomy of the cerebellum in animals and the development of the human cerebellum in infants. Recent studies have shown that the cerebellum is involved in much more than motor coordination alone: also in higher functions including memory, language, emotion, and attention, as well as sensory discrimination. This atlas facilitates this new era of study of the cerebellum, allowing investigators to identify cerebellar structures with precision. Everyone concerned with the anatomy, function, or dysfunction of the cerebellum should have a copy. Key Features * Provides the most comprehensive, detailed, and authoritative atlas of the human cerebellum * Contains 110 MRI images and 110 corresponding cryosection images * Includes a CD with all of the images and text from the book, supported by both PC and Macintosh computer platforms * Developed within the universally accepted framework of the Talairach stereotaxic system * Contains detailed myelin- and Nissl-stained histology of major nuclei * Presents a new, easy-to-use nomenclature system * Allows investigators to identify structures with precision and to address detailed structure-function correlations