Ultrasound Guided Regional Anesthesia Conference

This textbook provides an overview of pain management useful to specialists as well as non-specialists, surgeons, and nursing staff.
This book provides a quick update on key aspects of current anesthesia practice. Book chapters are written in a concise manner to enable readers (anesthesia providers and medical students) to quickly refresh their knowledge, and understand the essential points about key topics. The chapters are written by eminent clinicians who are also outstanding teachers in their respective anesthesia training programs. Topics covered in this volume include: trauma, trauma anesthesia, regional anesthesia, upper extremity blocks, lower extremity blocks, ultrasound, the use of ultrasound for blocks and vascular access, coagulation, hemostasis, transfusion, anticoagulants and their reversal, issues in pediatric anesthesia, and pediatric trauma, as well as obstetrical anesthesia. The book serves as a handbook for advanced anesthesia professionals and a textbook for medical students.
B HTC 2020 will have 12 Technical tracks covering multiple sustainable development goals & domains of United Nations and disaster management
Edited by Sudhir Diwan, a former Director of Pain Medicine fellowship program at Ivy League Weill Cornell Medical College, and Timothy R. Deer, an internationally renowned expert in neuromodulation and minimally invasive spinal procedures, this atlas covers advanced procedures that normal residency and fellowship programs may not cover. It consolidates information pain fellows usually amass by traveling throughout the country to various specialized weekend courses. Advanced Procedures for Interventional Pain Management: A Step-by-Step Atlas is for physicians that know the fundamentals of pain medicine and want to push their knowledge further. Through easy-to-digest bullet points, extensive diagrams, hundreds of figures, and expanded legends beneath each illustration, this compendium covers techniques such as fluoroscopic guidance and radiation safety, endoscopic transforaminal discectomy, endoscopic direct-percutaneous discectomy, transforaminal myelogram, percutaneous facet fusion, percutaneous sacroplasty, vertebral augmentations, percutaneous tumor ablation, percutaneous spinal fusion, minimally invasive spinal decompression (MILD), Interspinous Spacer Placement and advanced neuroaugmentation techniques like high frequency stimulation and DRG stimulation. This book also has a dedicated section on Regenerative Medicine with chapters on platelet rich plasma, stem cell therapy, and intradiscal regenerative therapy. Each chapter has a strict chapter format that includes the indications and contraindications for each procedure, a list of equipment and drugs, a step-by-step illustration-focused how-to, a list of possible post-procedural complications, and bullet-pointed clinical pearls and pitfalls. Within each chapter the authors will also cover the variations of each procedure due to different equipment. This book is ideal for pain medicine fellows, spine surgeons, and interventional pain physicians who want access to the best minds and specialized procedures in a single package.
This comprehensive book serves as a review for the Fellow of Interventional Pain Practice (FIPP) exam and functions as a concise guide for all interventional pain doctors. Through educational initiatives, it helps to promote consensus-building among experts on the effectiveness of existing techniques and avenues for advancement of therapeutic performances. The book is divided into four sections (head and neck, thoracic, lumbar and sacral/pelvic), and each chapter is devoted to the safe, standardized approach to interventional procedures. To prepare both the examiner and the examinee for the FIPP examination, each chapter contains the relevant C-arm images and outlines the most common reasons for “unacceptable procedures performance” and “potentially unsafe procedures performance.” Distinguishing it from many of the previous guides, it also includes labeled fluoroscopic high quality images and focuses on the current FIPP-examined procedures with all accepted approaches. Written and edited by world leaders in pain, Interventional Pain guides the reader in study for FIPP Exam and offers a consensus on how interventional procedures should be performed and examined.
This practical, comprehensive anatomy book arms FRCA candidates with detailed, robust anatomical knowledge via a question-based approach.
This atlas is a practical guide for practitioners who perform interventional procedures with radiographic guidance to alleviate acute or chronic pain. The author provides an overview of each technique, with detailed full-color illustrations of the relevant anatomy, technical aspects of each treatment, and a description of potential complications. For this revised and expanded Second Edition, the author also discusses indications for each technique, as well as medical evidence on the technique's applicability. The new edition features original drawings by a noted medical artist and for the first time includes three-dimensional CT images that correlate with the radiographic images and illustrations for a fuller understanding of the relevant anatomy.
From the Foreword, by Stewart J. Tepper, MD: “Dr. Samer Narouze was the first Pain Management anesthesiologist specialist in the US to become Board-certified in Headache Medicine by the United Council of Neurologic Subspecialists (UCNS). It is therefore fitting that he decided to put together a textbook on blocks, interventions, injections, and neuromodulation possibilities in this integrated interdisciplinary area of treatment for head and facial pain... “This constellation of authors and topics should offer a comprehensive roadmap for interventions to contemplate beyond conventional medications in both primary and secondary head and face pain disorders. The chapters are precise, concise, and immensely readable, and I am honored to have been offered the chance to introduce them and encourage my colleagues to read them.” This is the first book on interventional management of intractable, medically resistant head and face pain. It is edited and written by world-class leaders in headache medicine and features practical presentations of the entire spectrum of procedures, from simple to complex. Designed to help shorten the learning curve of practitioners who are beginning to use interventional headache procedures, it provides guidance in identifying patients who are appropriate candidates for this approach and includes a unique compilation of outcomes-based algorithms for different headache and face pain syndromes. Neurologists, anesthesiologists, pain physicians, physiatrists, neurosurgeons, and interventional radiologists are the intended audience.
With a focus on anatomy and sonoantomy, this beautifully illustrated updated edition captures the latest advances in the rapidly growing field of ultrasound-guided pain medicine and MSK procedures. This atlas is divided into seven sections that provide an overview and focus on interventional approaches and advancements. Authored by international experts, each clinical chapter features a maximal number of instructive illustrations and sonograms and provides a description of sonoanatomy, instructions on performing the procedure and how to confirm appropriate needle placement. This book will help encourage and stimulate physicians to master approaches in interventional MSK and pain management.
This full-color text/atlas describes all of the nerve blocks for which ultrasound guidance has proved efficacious, including upper and lower limb blocks. The chapter organization is similar to Chelly's Peripheral Nerve Blocks book: each block is described by concise text covering the indications for use, necessary equipment, anatomic landmarks, approach, and technique. The blocks are richly illustrated by ultrasound stills and relevant anatomy. A companion Website will have video modules on 1. principles of sonography, including how to turn on the machine, set up the transducers, move the transducers, change the contrast, depth, frequency and dynamic range compression settings, how to use color Doppler flow imaging and align the needle with the beam and 2. ultrasound-guided blocks of the interscalene, supraclavicular, infraclavicular, axillary, femoral, subgluteal, popliteal, and caudal regions.

This short text addresses complications of regional anesthesia and pain medicine. Each chapter is written by an expert in the area and follows a strict format: Definition of the complication, Scope of the problem, Pathophysiology or proposed mechanism of causation, Risk factors, Diagnostic evaluation, Prevention, Treatment and rehabilitation, Summary. Emphasis in each chapter is placed around what levels of evidence the recommendations in the chapter carry. The complications covered in regional anesthesia include complications in neuraxis and peripheral nerve blocks. There is also a section on complications associated with unintended local anesthetic destinations. The complications in pain medicine include complications of acute pain management, of sympathetic blocks, of neuraxis approaches and device placement. The first edition was published by Elsevier. They have returned copyright to Rathmell and Neal, who will turn it over to us. The audience includes anesthesiologists, pain medicine specialists, and neurologists.

This book gathers contributions by researchers from several countries on all major areas of robotic research, development and innovation, as well as new applications and current trends. The topics covered include: novel designs and applications of robotic systems, intelligent cooperating and service robots, advanced robot control, human-robot interfaces, robot vision systems, mobile robots, humanoid and walking robots, bio-inspired and swarm robotic systems, aerial, underwater and spatial robots, robots for ambient assisted living, medical robots and bionic prostheses, cognitive robots, cloud robotics, ethical and social issues in robotics, etc. Given its scope, the book offers a source of information and inspiration for researchers seeking to improve their work and gather new ideas for future developments. The contents reflect the outcomes of the activities of RAAD (International Conference on Robotics in Alpe-Adria-Danube Region) in 2020.

Ultrasound technology is enabling anesthesiologists to perform regional anesthetic procedures with greater confidence in accuracy and precision. With improvements in visualizing neural anatomy and needle movement, ultrasound guidance improves patient safety and operating room efficiency. This book offers a detailed, stepwise approach to this technique, identifying pearls and pitfalls to ensure success. Topics are organized into four chapters. The first chapter provides the basic principles behind ultrasound guided regional anesthesia, setting a strong context for the rest of the book. The last three cover the nerve blocks: upper extremity, lower extremity, and chest, trunk and spine. Each nerve block is comprehensively explained, divided up by introduction, anatomy, clinical applications, technique, alternate techniques, complications, and pearls. This new edition includes discussions of 6 new blocks: the suprascapular block, axillary nerve block for shoulder surgery, fascia iliaca block, lateral femoral cutaneous block, and the adductor canal block. This edition also contains over 40 new procedural and imaging figures, an appendix on what blocks to perform for specific surgeries, and new information on choice of local anesthetic agent, types of catheters and practical ultrasound physics to help improve scanning. Ultrasound Guided Regional Anesthesia provides authoritative, in-depth coverage of ultrasound guided regional anesthesia for the anesthesiologist beginning to use ultrasound and makes a great reference for the more seasoned physician.

A practical guide to best practice in managing the perioperative care of pediatric neurosurgical patients.

A longtime standard for military healthcare personnel, the second edition of Military Advanced Regional Anesthesia and Analgesia Handbook (MARAA) has been thoroughly revised and updated. Although the MARAA handbook initially gained its reputation as a useful resource for managing pain associated with battlefield trauma, its beautifully illustrated step-by-step guidance provides pertinent and practical guidance for managing vital acute pain services in all civilian and military clinical settings. Opening chapters review equipment, local anesthesia and additives, and physics of ultrasound and nerve stimulation. Much of the book is devoted to step-by-step guidance on performing various regional anesthesia nerve blocks organized by pertinent neuroanatomy, use of nerve stimulation, and use of ultrasound. The concluding group of chapters discusses organization of the acute pain service and staff, a review of multidisciplinary care, basics of pediatric regional anesthesia, first-aid acupuncture, and more.

Apply the latest advances in regional anesthesia and acute pain medicine! Originally authored by Michael F. Mulroy, MD, this respected title has helped practitioners provide effective regional anesthesia for nearly 30 years. Now it has been retitled A Practical Approach to Regional Anesthesiology and Acute Pain Medicine to reflect the Accreditation Council for Graduate Medical Education’s recent establishment of Regional Anesthesiology and Acute Pain Medicine as an anesthesiology fellowship. This clinical reference has evolved with the many changes in this subspecialty to continue bringing you the up-to-date, clinically focused, hands-on guidance you need to offer your patients the best possible care.

The management of pain can often be achieved by medications, physical therapies, or by various procedural techniques that have evolved in recent decades. With the trend towards more outpatient surgeries and less invasive surgeries to decrease perioperative risk, perioperative time, and costs, the practice of anesthesia is evolving to utilize regional anesthesia techniques both for inpatients and outpatients. Regional anesthesia is being performed for outpatient surgeries, obstetric anesthesia, trauma, chronic pain states, and for acute post-operative pain management. Therefore, it is paramount for physicians and nurses practicing anesthesia to understand the essentials of regional anesthesia, its evolving techniques, and appropriate utilization of modern equipment and technology to provide care safely. Essentials of Regional Anesthesia, Second edition, is a concise, up-to-date, evidence-based handbook that enables every resident, physician and nurse to understand the basics of regional anesthesia and the standard of care guidelines for the practice of regional anesthesia in a comprehensive fashion. This new edition includes: · Updated and new chapters on Ambulatory, Critical Care, and Obstetrics topics · Full color, clear, detailed, anatomic drawings · Clinically relevant, practical aspects of regional anesthesia · International contributing authors who are experts in their field · Latest ultrasound techniques and images Review of 1st edition: “There are many books available on regional anesthesia, and the trend is either to focus on illustrations, forgoing any discussion, or on text descriptions, making them bulky and hard to read. This book maintains that perfect balance between text and illustrations. It is truly a master companion book on regional anesthesia.” (Tariq M. Malik, Doody’s Book Reviews, April, 2012)

A practical, comprehensive guide to the special needs of infants and neonates undergoing anesthesia.

4 STAR DOODY'S REVIEW! "The book can serve as an introduction, a refresher, or a supplement, depending on the experience and background of the reader. The authors are well regarded for their teaching, research, and clinical

abilities....The book covers basic and advanced regional anesthesia techniques. It includes mostly classic approaches, but also offers some novel techniques for both single shot and continuous nerve blockade. The illustrations are superb, especially those that reveal the underlying structures, providing an almost three-dimensional view of the relevant anatomy."--Doody's Review Service Authored by the world's leading authorities, this is an authoritative, full-color instructional manual for mastering nerve block techniques. Beautifully illustrated with 350 color illustrations, including 175 clinical photographs of actual patients.

This book offers a comprehensive but straightforward, practical handbook on ultrasound (US)-guided nerve blocks. It presents the normal US anatomy of peripheral nerves, clinical aspects of nerve entrapment and different procedures / techniques for each block. Axial or peripheral chronic radicular pain can be particularly severe and debilitating for the patient. The aim of treatment is to provide medium-/ long-term pain relief, and consequently to restore function. The therapeutic nerve block, performed with a perineural injection of anaesthetic, steroid or painkiller, is generally used once conservative treatments have proven unsuccessful and is aimed to avoid surgical options. Ultrasound guidance, offering the direct and real-time visualization of the needle and adjacent relevant anatomic structures, significantly increases the accuracy and safety of nerve blocks reducing the risk of intraneural or intravascular injection and the potential damage to the surrounding structures, but also enhances the efficacy of the block itself, reducing its onset and drug doses. This practical volume addresses the needs of physicians dealing with pain management, e.g. anaesthesiologists, radiologists, orthopaedists and physiatrists, with various levels of experience, ranging from physicians in training to those who already perform peripheral nerve blocks with traditional techniques and who want to familiarize with US guided procedures.

This is the first comprehensive text-atlas that shows how to use ultrasound technology and nerve stimulation techniques to guide regional blockade in children. Clinical chapters follow a sequential, highly illustrated format that provides step-by-step guidance and include cases, clinical pearls, and troubleshooting tips. Nearly 400 figures, consisting of ultrasound images, MRI images, and schematics, have been assembled to maximize understanding of pediatric neuroanatomy and its relationship to surrounding anatomical structures. To help the novice user, the book features side-by-side presentation of unlabeled and labeled ultrasound images. Pediatric Atlas of Ultrasound- and Nerve Stimulation-Guided Regional Anesthesia focuses on common approaches, supplemented in clinical pearls and notes by alternative approaches, and emphasizes dynamic and systematic scanning techniques. It is intended for pediatric anesthesiologists who wish to incorporate regional blockade into their repertoire and designed as a refresher and resource for all regional anesthesiologists seeking to refine their skills. Unique Selling Points: Internationally renowned experts Presents two technologies proven to improve block success when used together Superb coverage of pediatric anatomy in relation to regional anesthesia Equipment, set-up, pain assessment, local anesthetic pharmacology, and patient safety considerations f or child patients

Regional anesthesia is a fast-growing field, fuelled by the application of ultrasound technology over the last decade. This book is a technique-oriented guide, which introduces the use of ultrasound technology with practical instruction in the placement of peripheral nerve blocks and continuous perineural catheters. Each procedure is summarized for quick, easy reference, and supplemented by ultrasound images, color photos, and detailed illustrations. Helpful hints and instructions are provided to further optimize block success. Chapters are organized into four sections, focusing on introductory concepts, upper extremity peripheral nerve blocks, lower extremity peripheral nerve blocks and continuous perineural catheters. Written by instructors from a major academic medical center who work in a fast-paced ambulatory setting, this is a key text for residents, fellows and staff physicians who wish to incorporate the use of ultrasound into the scope of their anesthetic practice.

The most comprehensive resource available on pediatric ultrasound-guided regional anesthesia, covering core principles and practical guidance for all major blocks.

Fractures in the Elderly: A Guide to Practical Management provides geriatricians and other medical specialists who provide care for older adults with the vital guidance and most current data and opinions regarding the treatment of elderly patients who sustain a variety of fractures. It also provides orthopedic surgeons with the necessary information and most current data and opinions regarding assessment and management of geriatric conditions that predispose the elderly to fracture, perioperative complications and subsequent functional decline. Each chapter is both readable and appealing not only to geriatricians and orthopedic surgeons but to all clinicians that have contact with elderly patients who have sustained or are at high risk of sustaining a fracture. Emphasis is placed on the fact that although in some cases pre- and post-operative care in elderly fracture patient may proceed as it does in younger individuals, often there are considerations owing to functional status, pre-existing conditions, and age-related physiological declines that require specialized knowledge and alternative approaches. Developed by a group of renowned experts, Fractures in the Elderly: A Guide to Practical Management is a major addition to the literature and provides a wealth of specialized knowledge and approaches to care. It is an essential reference for all clinicians who care for older adults as well as fellows and residents in training.

This is a compact, single-source guide to regional anesthesia. Chapters are authored by regional anesthesia fellowship directors and fellows to insure maximum practicality and up-to-date coverage. Essentials of Regional Anesthesia covers all anatomical regions as well as the unique considerations in patients with chronic pain, obstetric patients, pediatric patients, and patients treated in the outpatient setting. A common chapter format makes it easy to find information quickly, and extensive illustrations enhance the text. Stay current with Essentials of Regional Anesthesia, and stay ahead with these helpful features: • Ultrasound incorporated into each block • Extremely practical focus • More than 400 Q & As to test knowledge • Authored by regional anesthesia fellowship directors and fellows • Clinical pearls and guidance on complications • Concise, clinically oriented review of relevant basic science • Common chapter format for ease of use • Well illustrated with 350 figures, nearly 200 in color

Trauma patients present a unique challenge to anesthesiologists, since they require resource-intensive care, often complicated by pre-existing medical conditions. This fully revised new edition focuses on a broad spectrum of traumatic injuries and the procedures anesthesiologists perform to care for trauma patients perioperatively, surgically, and post-operatively. Special emphasis is given to assessment and treatment of co-existing disease, including surgical management of trauma patients with

head, spine, orthopaedic, cardiac, and burn injuries. Topics such as training for trauma (including use of simulation) and hypothermia in trauma are also covered. Six brand new chapters address pre-hospital and ED trauma management, imaging in trauma, surgical issues in head trauma and in abdominal trauma, anesthesia for oral and maxillofacial trauma, and prevention of injuries. The text is enhanced with numerous tables and 300 illustrations showcasing techniques of airway management, shock resuscitation, echocardiography and use of ultrasound for the performance of regional anesthesia in trauma.

This book intends to bring together researchers and developers from industry, the education field, and the academic world to report on the latest scientific research, technical advances, and methodologies. The 10th International Conference in Methodologies and Intelligent Systems for Technology Enhanced Learning is hosted by the University of L'Aquila and is going to be held in L'Aquila (Italy). Initially planned on the 17th to the 19th of June 2020, it was postponed to the 7th to the 9th of October 2020, due to the COVID-19 outbreak. The 10th edition of this conference and its related workshops expand the topics of the evidence-based TEL workshops series in order to provide an open forum for discussing intelligent systems for TEL, their roots in novel learning theories, empirical methodologies for their design or evaluation, stand-alone solutions, or web-based ones. This bridge has been realized also thanks to the sponsor of this edition of MIS4TEL: the Armundia Group https://www.armundia.com, the support from national associations (AEPIA, APPIA, CINI, and EurAI), and organizers (UNIVAQ, UNIROMA1, UNIBZ, UCV, UFSC, USAL, AIR institute, UNC, and UNIBA)

The two volumes LNCS 8814 and 8815 constitute the thoroughly refereed proceedings of the 11th International Conference on Image Analysis and Recognition, ICIAR 2014, held in Vilamoura, Portugal, in October 2014. The 107 revised full papers presented were carefully reviewed and selected from 177 submissions. The papers are organized in the following topical sections: image representation and models; sparse representation; image restoration and enhancement; feature detection and image segmentation; classification and learning methods; document image analysis; image and video retrieval; remote sensing; applications; action, gestures and audio-visual recognition; biometrics; medical image processing and analysis; medical image segmentation; computer-aided diagnosis; retinal image analysis; 3D imaging; motion analysis and tracking; and robot vision.

Acute Pain Medicine is the first comprehensive, case-based text of its kind that explores the essential topics of acute pain medicine, including interventional, pharmacologic, and diagnostic considerations. Written and edited under the auspices of the American Academy of Pain Medicine by members of the Academy's Shared Interest Group for Acute Pain Medicine, the text includes an introduction to acute pain medicine and an easily referenced interventional section. Chapters focus on patients experiencing acute pain from either surgery or other medical conditions and include detailed information on the diagnosis and treatment of specific cases in acute pain medicine. The text is rounded out by the complete content of the thoroughly revised Military Advanced Regional Anesthesia and Analgesia Handbook (MARAA II). Although the MARAA handbook gained its reputation as a useful resource for managing the pain associated with battlefield trauma, its beautifully illustrated step-by-step guidance is useful for providing vital acute pain services in all settings. Acute Pain Medicine is an ideal, complete resource for physicians, fellows, and residents managing acute pain patients.

This book constitutes the refereed proceedings of the 7th International Workshop on Artificial Intelligence and Pattern Recognition, IWAIPR 2021, held in Havana, Cuba, in October 2021. The 42 full papers presented were carefully reviewed and selected from 73 submissions. The papers promote and disseminate ongoing research on mathematical methods and computing techniques for artificial intelligence and pattern recognition, in particular in bioinformatics, cognitive and humanoid vision, computer vision, image analysis and intelligent data analysis.

This book constitutes the refereed proceedings of five workshops and an industrial session held at the 20th International Conference on Image Analysis and Processing, ICIAP 2019, in Trento, Italy, in September 2019: Second International Workshop on Recent Advances in Digital Security: Biometrics and Forensics (BioFor 2019); First International Workshop on Pattern Recognition for Cultural Heritage (PatReCH 2019); First International Workshop eHealth in the Big Data and Deep Learning Era (e-BADLE 2019); International Workshop on Deep Understanding Shopper Behaviors and Interactions in Intelligent Retail Environments (DEEPRETAIL 2019); Industrial Session.

In recent years the field of regional anesthesia, in particular peripheral and neuraxial nerve blocks, has seen an unprecedented renaissance following the introduction of ultrasound-guided regional anesthesia. This comprehensive, richly illustrated book discusses traditional techniques as well as ultrasound-guided methods for nerve blocks and includes detailed yet easy-to-follow descriptions of regional anesthesia procedures. The description of each block is broken down into the following sections: definition; anatomy; indications; contraindications; technique; drug choice and dosage; side effects; potential complications and how to avoid them; and medico-legal documentation. A checklist record for each technique and a wealth of detailed anatomical drawings and illustrations offer additional value. Regional Nerve Blocks in Anesthesia and Pain Medicine provides essential guidelines for the application of regional anesthesia in clinical practice and is intended for anesthesiologists and all specialties engaged in the field of pain therapy such as pain specialists, surgeons, orthopedists, neurosurgeons, neurologists, general practitioners, and nurse anesthetists.

Pain Management - Current Issues and Opinions is written by international experts who cover a number of topics about current pain management problems, and gives the reader a glimpse into the future of pain treatment. Several chapters report original research, while others summarize clinical information with specific treatment options. The international mix of authors reflects the "casting of a broad net" to recruit authors on the cutting edge of their area of interest. Pain Management - Current Issues and Opinions is a must read for the up-to-date pain clinician.

The management of pain from acute injuries is a priority in trauma care. Regional analgesic techniques are very effective at treating acute pain and are gaining in popularity as recognition of their beneficial effects on morbidity increases. Regional Anesthesia in Trauma employs multiple narrative problem-solving case scenarios that explore the use of regional anesthesia in: • Blunt chest trauma, amputations, upper and lower extremity fractures and spinal injury • Burn injury • Patients with pre-existing nerve injury and other co-morbidities • Patients at risk for compartment syndrome • Pregnant, obese, elderly and pediatric patients • Local anesthetic systemic toxicity With a focus on ultrasound-guided techniques, the reader is guided through the technical aspects of performing regional anesthesia as well as the medical and surgical considerations that influence the choice of analgesic therapy. Regional Anesthesia in Trauma is invaluable for practitioners and trainees in anesthesiology, emergency medicine and trauma surgery.

Hundreds of challenging review questions cover a complete range of essential topics in anesthesia -- from physiological and

pharmacologic principles through anesthetic machine systems, anesthetic delivery in a variety of settings, and anesthesia administration for a full range of disease states. Chapters progress from basic to advanced topics, making it easy to assess any knowledge level. The end of each chapter has complete answers as well as specific page references to Miller: Anesthesia, 5th Edition and Stoelting & Miller: Basics of Anesthesia, 4th Edition. Cross-referenced to the leading textbooks among students, residents and practitioners in anesthesiology Ideal for board preparation or as a refresher for recertification Correct answers are provided along with references to the two main texts for more detailed explanatopms