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KEY=OF - ANTONIO KAELYN

Minimally Invasive Spine Surgery Surgical Techniques and Disease Management

Springer Over the past decade, minimally invasive techniques have developed rapidly and are widely applied in the management of spine disorders. With the development of enabling technologies, including specifically designed spinal retractor systems, intraoperative imaging and navigation technologies, and real-time neural monitoring, minimally invasive spine surgery (MISS) techniques are safe, effective and reproducible. Indeed, studies have confirmed the clinical and economic advantages of these procedures. Minimally Invasive Spine Surgery includes detailed discussions of enabling technologies, surgical techniques (including posterior decompression and fusion), approaches to specific diseases and conditions, as well as strategies to manage the unique risks and complications of MISS. Generously illustrated, this will be an essential reference for orthopedic surgeons, neurosurgeons and all health care professionals who treat the spine.

Minimally Invasive Spine Surgery, an Issue of Neurosurgery Clinics of North America

Elsevier This issue of Neurosurgery Clinics of North America is devoted to "Minimally Invasive Spine Surgery" and is edited by Zachary A. Smith, MD and Richard G. Fessler, MD, PhD. Articles in this issue include: Complications and complication avoidance of minimally invasive spine surgery; Radiation exposure risk and avoidance; Current techniques in the management of cervical myelopathy and radiculopathy; Thoracic disc/pathology management through minimally invasive routes; Transforaminal Lumbar Interbody fusion: Long term outcomes and complications; Computer-assisted navigation technique for minimally invasive transforaminal lumbar interbody fusion and lateral interbody fusion; Safety and the Anatomy of the retroperitoneal lateral corridor; Minimally invasive extracavitary transpedicular corpectomy for the management of spinal tumors; Minimally invasive anterolateral corpectomy for spinal tumors; Minimally invasive approaches for the management of intramedullary spinal tumors; Percutaneous fixation of thoracolumbar fractures; Advances and feasibility of advanced minimally invasive techniques in deformity correction; Direct lateral approach: Outcomes and Deformity Correction; and Evidence basis and outcomes.

Minimally Invasive Spine Surgery

The field of spine surgery is in a state of flux, with minimally invasive and open surgical procedures vying for dominance. A new volume in the Minimally Invasive Orthopaedic Surgery series, Minimally Invasive Spine Surgery weighs the pros and cons of today's open versus minimally invasive techniques, allowing you to choose the approaches that will best meet your patients' needs. In each chapter, accomplished experts describe the advantages, indications, setup, technical aspects, and problem areas associated with a given minimally invasive procedure, including critiques from surgeons who favor a standard open approach - to give you a balanced, objective foundation for surgical decision making. Key Features Seven comprehensive sections explore the fundamentals of minimally invasive spine surgery; minimally invasive procedures of the cervical, thoracic, and lumbar spine; minimally invasive surgery of the lumbosacral junction and sacroiliac region; and complications of minimally invasive lumbar spine surgeries. Authoritative perspectives from leaders in the field assure you of current, accurate information. Detailed, step-by-step guidance helps you perform each procedure successfully and achieve optimal outcomes. Clinical photographs, radiographs, and detailed line drawings provide visual support to key elements of each procedure. Your book purchase includes a complimentary download of the enhanced eBook for iOS, Android, PC & Mac. Take advantage of these practical features that will improve your eBook experience: The ability to download the eBook on multiple devices at one time -- providing a seamless reading experience online or offline Powerful search tools and smart navigation cross-links that allow you to search within this book, or across your entire library of VitalSource eBooks Multiple viewing options that enable you to scale images and text to any size without losing page clarity as well as responsive design The ability to highlight text and add notes with one click

An Anatomic Approach to Minimally Invasive Spine Surgery

Thieme Learn state-of-the-art MIS techniques from master spine surgeons! Significant advances have been made in minimally invasive spine (MIS) surgery approaches, techniques, and innovative technologies. By preserving normal anatomic integrity during spine surgery, MIS approaches enable spine surgeons to achieve improved patient outcomes, including faster return to normal active lifestyles and reduced revision rates. Exposing only the small portion of the spine responsible for symptoms via small ports or channels, requires a deep understanding of spinal anatomy and spinal pathophysiology. Building on the widely acclaimed first edition, An Anatomic Approach to Minimally Invasive Spine Surgery, Second Edition, provides an expanded foundation of knowledge to master minimally invasive spine surgery. World-renowned spine neurosurgeons Mick Perez-Cruet, Richard Fessler, Michael Wang, and a cadre of highly regarded spine surgery experts provide masterful tutorials on an impressive array of cutting-edge technologies. Organized by seven sections and 51 chapters, the book presents a diverse spectrum of current safe and efficacious MIS procedures and future innovations. Nonsurgical approaches include injection-based spine procedures and stereotactic radiosurgery. Surgical technique chapters discuss MIS anterior, posterior, and lateral approaches to the cervical, thoracic, and lumbar spine, with procedures such as endoscopic microdiscectomy, vertebroplasty and kyphoplasty, percutaneous instrumentation, and robotic spine surgery. Key Features Step-by-step illustrations, including more than 400 depictions by master surgical and anatomic illustrator Anthony Pazos portray the surgeon's-eye-view of anatomy, intraoperative images, and surgical instruments, thereby aiding in the understanding of anatomy and procedures 20 online videos feature real-time operative fluoroscopy, pertinent anatomy, operative set-up, and common cervical, thoracic, and lumbar approaches Discussion of novel MIS techniques reflected in 16 new or expanded chapters, including Robotic Assisted Thoracic Spine Surgery and Stem-Cell Based Intervertebral Disc Restoration There is truly no better clinical reward for spine surgeons than giving patients suffering from debilitating spinal disorders their life back. This quintessential MIS surgery resource will help surgeons and clinicians accomplish that goal.

Lateral Access Minimally Invasive Spine Surgery

Springer This well-illustrated textbook is the first comprehensive and authoritative source of information on minimally invasive lateral access spine surgery. It covers all aspects of the subject, including patient selection, approach and monitoring techniques, soft tissue management, application in a variety of pathologies, technical nuances, and the prevention and management of complications. In addition, current controversies in the field are discussed and the biomechanics of lateral spinal reconstruction, the physiologic benefits, and cost implications are explained. As use of the lateral approach in spinal surgery has become more popular, so its diversity and complexity have increased. Nevertheless, publications devoted entirely to the technique are lacking, and Lateral Access Minimally Invasive Spine Surgery is designed to fill this vacuum. Written by the world's experts on the topic, it will be an excellent resource for both beginning and experienced surgeons.

Minimally Invasive Spine Surgery Techniques, Evidence, and Controversies

Thieme Minimally invasive spine surgery, in some form or other, has historical roots dating back more than 100 years, and recent advances in technology now make it increasingly effective in treating suitable spine patients. While minimally invasive approaches have shown to reduce muscle damage, blood loss, and post-operative pain, to perform this type of surgery correctly, even highly skilled modern-day surgeons must prepare themselves for a demanding learning curve. For this reason, AOSpine proudly presents Minimally Invasive Spine Surgery: Techniques, Evidence, and Controversies, the most comprehensive book of its kind, which includes more than 500 pages of surgical techniques, illustrations, case images, tips and tricks, and research, providing an invaluable tool for spine surgeons around the world. Each technique is fully examined: The pros and cons of each is objectively reviewed Its spectrum of indications and contraindications is summarized Historical and modern day controversies relating to each technique are discussed Uniquely, chapters in the text are further supported by an evidence-based section summarizing research studies, analysis, and conclusions into each technique, from peer-reviewed journals The text covers more than just a range of interesting medical techniques. By including brief historical introductions on each technique and the surgeons that explored and founded its methods, their early (sometimes self-made) instrumentation, right through to today's current best-practice, this book provides an interesting, informative, and topical instruction on minimally invasive surgery and its increasingly encouraging results for spine-patient care.

Instrumentation for Minimally Invasive Spine Surgery

Thieme The quintessential guide to state-of-the-art instrumentation in minimally invasive spine surgery In recent decades, technological innovations in minimally invasive surgery (MIS) have revolutionized spine surgery. The integration of devices tailored to MIS spine techniques has allowed spine surgeons to tackle more complex spinal pathologies and generate new ways to improve clinical outcomes. Instrumentation for Minimally Invasive Spine Surgery by renowned orthopaedic surgeon Kern Singh and esteemed collaborators, provides practical, evidence-based insights into important surgical decisions spine surgeons face every day. The primary goal of this book is to help spine surgeons navigate a daunting number of available devices and leverage the optimal ones to achieve improved patient outcomes. Organized in 3 parts and 16 chapters, the text starts with the past, present, and future of MIS spinal instrumentation. The first two parts detail cutting-edge posterior and lateral approaches with discussion of required devices. The final part covers percutaneous cement augmentation, biologics, and navigation systems. The text combines a thorough review of empirical literature with expert experience and manufacturer specifications to elucidate the advantages and capabilities of currently available instrumentation. Key Highlights Discussion of commonly used MIS spinal instrumentation including retractors; percutaneous pedicle, cortical, and facet screw systems; interbody cages; and fixation systems Concise, yet in-depth technical descriptions include an introduction and potential complications, followed by design features, modular aspects, applicable procedures, and compatible devices for each type High-quality detailed images provide greater understanding of techniques This unique book is an essential surgical companion for orthopaedic and neurosurgical residents and fellows, as well as spine surgeons who wish to incorporate MIS techniques into clinical practice.

Minimally Invasive Spine Surgery

JP Medical Ltd Minimally Invasive Spine Surgery combines up-to-date research on surgical techniques with high-definition surgical video and concise algorithmic evidence. Each of its sixteen chapters begins with a brief summary followed by imaging indications, instrumentation, a step-by-step surgical technique (and video guide), as well as the potential complications and adverse outcomes that may develop. Techniques discussed in the text include: Posterior Cervical Foraminotomy; Percutaneous Posterior Pedicle Screw Placement; Lumbar Discectomy; Transforaminal Lumbar Interbody Fusion (TLIF); Lateral Lumbar Interbody Fusion (LLIF). Also included is a discussion on the types of implants and instrumentation available today and the potential advantages they offer, making Minimally Invasive Spine Surgery an essential and relevant book for orthopaedic and neurosurgeons. Key Points Authored by experts from Rush University Medical Centre and Thomas Jefferson University Hospital in the United States Includes DVD to enhance clinical instruction 273 full colour illustrations

Minimally Invasive Spine Surgery

Surgical Techniques and Disease Management

Springer Nature The use of minimally invasive spine surgery (MISS) has grown rapidly over the last decade and remains the fastest growing area in spine surgery. Now in a revised and expanded second edition including 19 new chapters, this comprehensive textbook provides an updated presentation of the field of MISS, highlighting surgical techniques and clinical outcomes as well as providing a unique focus on how these techniques are applied for specific spinal conditions. Minimally Invasive Spine Surgery, Second Edition includes detailed discussions of enabling technologies, surgical techniques, approaches to specific diseases and conditions, a new section on out-patient/ambulatory spine surgery, and strategies to manage the unique risks and complications associated with MISS. Each chapter, whether revised or new, is formatted in a consistent manner, including bulleted key learning points as well as review questions, pearls and pitfalls, and generous illustrations and intra-operative photographs. Written and edited by thought leaders in the field, this user-friendly textbook will be an essential resource for orthopedic and neurosurgery trainees, as well as a valuable reference and review for spine surgeons and health care professionals who treat the spine.

Minimally Invasive Spine Surgery

A Surgical Manual

Springer Science & Business Media In the past few years spine surgery has undergone revolutionary changes leading towards minimally invasive techniques. This book is a survey of microsurgical as well as endoscopic surgical techniques for the treatment of a variety of spinal disorders. The structure of the individual chapters includes terminology, history, surgical principles, advantages/disadvantages, indications, surgical technique, complications and hazards as well as results. However all chapters are focused on a very didactic presentation of surgical steps. Thus, the reader will get familiar with a variety of new techniques some of which are already integrated into clinical routine others still being part of ongoing clinical trials and development.

Advances in Minimally Invasive Surgery and Therapy for Spine and Nerves

Springer Science & Business Media Radiologists, orthopedic and neurological surgeons present the different minimally invasive methods. Peripheral nerve problems and problems concerning differential diagnosis in special situations such as between radicular and peripheral nerve trunk lesions are discussed, pinpointing the significance of different diagnostic tools. Minimally invasive techniques, utilized nowadays to minimize bone demolition, scarring and risk of recurrence are analyzed. Microdiscectomy is compared with the results of intradiscal techniques, and new methods are discussed facing problems such as epidural fibrotisation, microinstability, osteoporotic or neoplastic or posttraumatic vertebral lesions.

Minimally Invasive Thoracic Spine Surgery

Springer Nature This book describes and illustrates a variety of minimally invasive approaches to the thoracic spine, covering procedures applicable in not only degenerative diseases but also deformities and trauma. Surgery to the thoracic spine is demanding because of the surrounding ribs, lungs, heart, and large blood vessels and the challenges posed by the vulnerable spinal cord within a relatively small spinal canal. Consequently, postsurgical morbidity is often high. In this context, minimally invasive surgery offers significant benefits, but to date, comprehensive coverage in textbooks is

lacking owing to the limited experience in the use of minimally invasive surgical techniques. This book will be ideal for all who are searching for clear guidance that is faithful to the established principles of spine surgery and evidence-based medicine. In addition to the comprehensive coverage of procedures appropriate in different pathologies, including thoracic disc herniation, ossification of the posterior longitudinal ligament, ossification of the ligamentum flavum, and stenosis, individual chapters address the transforaminal endoscopic approach, interventional treatment, intraoperative neuromonitoring, and navigation for thoracic spine surgery.

Minimally Invasive Spine Surgery

W B Saunders Company Surgery of the spine continues to be a key aspect of neurosurgery, constituting over half of all neurosurgical procedures. This issue of Neurosurgery Clinics investigates recent trends in minimally invasive methods. Article topics include minimally invasive approaches to cervical discectomy and foraminotomy, cervical decompression, thoracic discectomy and decompression, thoracoscopic spine surgery, deformity correction, lumbar discectomy and foraminotomy, lumbar decompression, fixation techniques, fusion techniques, and spinal tumors.

Minimally Invasive Spine Surgery

CRC Press Minimally invasive procedures are increasingly utilized and are replacing open surgery to reduce scarring and pain, enhance patient recovery, and minimize cost. Minimally Invasive Spine Surgery provides step-by-step guidance, expert instruction, and detailed illustration of current minimally invasive orthopedic spine procedures. With a variety of chapters covering critical developments in the field--including the utilization of biologic materials, image-guided surgery, and bone fusion--this guide delves into discussions of indications, methods for preoperative planning, complication avoidance strategies, and patient outcomes. Covering emerging technologies and biological advances that will result in smaller incisions, less trauma, and enhanced patient rehabilitation, this book: Helps surgeons identify key anatomical structures for minimally invasive access Considers preoperative planning, complications, and outcomes for all operative methods Updates surgeons on significant advances in bone graft substitutes for spine fusion Details decompression and mini-open surgical techniques--all intended to achieve less traumatic surgical treatments and improve patient outcomes Includes a section on needle-based procedures for chronic pain relief

New Technologies in Spine Surgery, An Issue of Neurosurgery Clinics of North America E-Book

Elsevier Health Sciences This issue of Neurosurgery Clinics, guest edited by Dr. Nathaniel P. Brooks and Dr. Michael Y. Wang, is devoted to New Technologies in Spine Surgery. Articles in this issue include: Endoscopic Lumbar Discectomy, Endoscopic Cervical Foraminotomy, Endoscopic Lumbar Interbody Fusion, Endoscopic Lumbar Decompression, Lateral Lumbar Interbody Fusion, Retropleural Thoracic Approach, Novel Intervertebral Technologies, Surface Technologies for Fusion, Cell derived/Stem Cell Technologies for Fusion, Disk Replacement, Enhanced Recovery in Spine Surgery/Perioperative pain management, Imaging Technologies, Robotic Instrumentation Placement, Minimally Invasive Deformity Advances, Tissue Engineering/Regenerative Treatments, Minimally Invasive Tumor Ablation, and more.

Essential Step-by-Step Techniques for Minimally Invasive Spinal Surgery

Thieme The ultimate resource for learning and mastering minimally invasive spine surgery techniques An estimated 1.5 million instrumented spinal procedures are performed every year in the US. The majority of decompressions and about 50% of fusion procedures can be performed completely or partially using minimally invasive spine surgery (MISS) techniques. The full potential of MISS techniques has yet to be realized. Essential Step-by-Step Techniques for Minimally Invasive Spinal Surgery by internationally renowned MISS neurosurgeon Roger Härtl, spine-neurosurgeon Rodrigo Navarro-Ramirez, and an impressive group of global multidisciplinary contributors is the most comprehensive and detailed textbook written to date on this topic. The foundation of the book is built on six interacting principles critical to surgical success, and MISS in particular: Target, Technology, Technique, Teaching and Training, Testing, and Talent. The text starts with an opening chapter on the definition of MISS and introduction of these principles. Fifty-six subsequent chapters provide a comprehensive discussion on how to utilize an MISS approach for a full spectrum of spinal pathologies using nuanced variations specific to the operating surgeon. To ensure readers are well versed in all aspects of MISS, these chapters include painstaking details on indications, contraindications, pathoanatomy, operating room set-up, step-by-step techniques, and postoperative management. Key Highlights Contributions from master spine surgeons across the world provide a balanced global perspective on mastering and incorporating diverse techniques into practice Invaluable clinical pearls including tips/tricks and complication avoidance High-quality images, figures, anatomic drawings, and imaging studies illustrate relevant anatomic approaches and corridors and delineate why anatomic mastery is critical to MISS Twenty-five videos enhance the ability to learn and implement MISS approaches This is a must-have resource for practicing spine surgeons interested in MISS who wish to learn the latest techniques from master surgeons and achieve optimal patient outcomes. The text and videos also provide a robust training tool for senior-level orthopaedic and neurosurgery residents and spine fellows.

Minimally Invasive Spine Surgery

A Practical Guide to Anatomy and Techniques

Springer Science & Business Media Minimally Invasive Spine Surgery is a beautifully illustrated atlas describing the 18 most widely accepted minimally invasive procedures in spine surgery. Written by leaders in both neurologic and orthopedic spine surgery, this book offers the most up-to-date material and the broadest perspective on the subject. Procedures range from simple to complex and cover the cervical, thoracic and lumbar regions of the spine.

Minimally Invasive Spine Surgery

Lippincott Williams & Wilkins The field of spine surgery is in a state of flux, with minimally invasive and open surgical procedures vying for dominance. A new volume in the Minimally Invasive Orthopaedic Surgery series, Minimally Invasive Spine Surgery weighs the pros and cons of today's open versus minimally invasive techniques, allowing you to choose the approaches that will best meet your patients' needs. In each chapter, accomplished experts describe the advantages, indications, setup, technical aspects, and problem areas associated with a given minimally invasive procedure, including critiques from surgeons who favor a standard open approach - to give you a balanced, objective foundation for surgical decision making.

State of the Art for Minimally Invasive Spine Surgery

Springer Science & Business Media The second congress of the Paci?c Asian Society of Minimally Invasive Spine Surgery (PASMIS) held in Phuket,Thailand,August 5-6,2002,was highly s- cessful. Dr.Akira Dezawa, the president, had worked hard in organizing the congress,which was well attended.All scienti?c papers presented were of the highest standard and were worthy of publication in book form.This scienti?c meeting brought to light the practice of this modern surgical technique as it is being performed by spine surgeons in the Asia-Paci?c region.Dr.Dezawa has made a great effort to collect the papers from the congress,and to have them edited and published as a text that covers all aspects of the minimally invasive spine surgical approach. Minimally invasive spinal surgery will be a highlight of operative approaches in the twenty-?rst century and already has been popularized worldwide.This procedure will provide surgical options that address several pathological conditions in the spinal column without producing the types of morbidity commonly seen in open surgical procedures. The contents of this book provide highly relevant and detailed information. I certainly believe that it will be a great bene?t to all orthopedic surgeons who are interested in performing minimally invasive spine surgery. Charoen Chotigavanich,M.D. Chairman,Spinal Section The Royal College of Orthopedic Surgeons of Thailand V Preface Recent decades have been characterized by revolutionary changes in spinal surgery. Concurrent progress in implant technology and functional en- scopes and the improvement of less invasive surgical techniques has opened a new dimension for spine surgery.

Minimally Invasive Spine Surgery

A Primer

Thieme Unique resource provides spine surgeons with the right tools and mindset to perform minimally invasive surgery *Minimally Invasive Spine Surgery: A Primer* by Luis Manuel Tumialán is the ideal introduction to minimally invasive spine approaches, especially for neurosurgery and orthopedic residents, fellows, and spine surgeons who want to incorporate minimally invasive approaches into their practice. The Primer offers a treasure trove of 3D illustrations and animations that virtually brings the aspiring minimally invasive spine surgeon into the operating room alongside their professor. The text starts with a discussion of open spine surgery versus minimally invasive procedures and the optimal mindset required to convert from one to the other. The book is divided into lumbar, cervical, and thoracic spine sections, and a fourth section dedicated to the fundamentals of fluoroscopy and radiation exposure. The text begins with an overview, history, and evolution of each procedure, followed by a discussion of the anatomical basis for using a minimally invasive approach. Each anatomical section starts with the least complicated surgeries, thereby laying the foundation for more complex procedures discussed in subsequent chapters. The third section focuses on thoracic decompression, nerve sheath tumors in the lumbar and thoracic spine, and management of metastatic disease and intradural extramedullary lesions. Key Features Single-authored text provides uniform readability and philosophy—cover to cover Lumbar approaches include microdiscectomy, laminectomy, transforaminal interbody fusions, and the transpoas approach Cervical procedures encompass posterior foraminotomy, laminectomy, and anterior discectomy Superb illustrations, high-fidelity anatomical animations based on computer modeling, and procedural videos enhance understanding of minimally invasive spine principles This unique, single-author Primer is a must-have resource for early-career spine surgeons who wish to learn minimally invasive principles, as well as veteran surgeons who have a desire to incorporate minimally invasive spine surgery into clinical practice.

Controversies in Spine Surgery, MIS versus OPEN

Best Evidence Recommendations

Thieme Master spine surgeons Alexander R. Vaccaro, Richard G. Fessler, and a cadre of esteemed co-editors have compiled the most comprehensive textbook to date detailing minimally invasive spine (MIS) versus open spine surgery techniques. Controversies in Spine Surgery, MIS versus OPEN: Best Evidence Recommendations features debates by renowned experts on one of the most provocative topics in spine surgery. Twenty-four chapters systematically organized into four sections — degenerative, trauma, tumor, and other issues, cover procedures and underlying pathologies, backed by a large, diverse body of literature. MIS and open approaches are thoroughly compared and contrasted in each chapter. Evidence is presented and analyzed in an objective manner with 'opposing sides' presenting differing opinions and techniques, resulting in a synchronous collection of pros and cons. Every chapter is masterfully summed up by the book's editors — each of whom have varying stances on the topics at hand. This unique 'duel' and 'duet' discussion enables readers to assimilate information, benefit from the balanced harmony between divergent opinions, and reach their own conclusions. Key Highlights Comparative risks, benefits, complications, and outcomes for a full spectrum of lumbar, thoracic and cervical procedures MIS versus open approaches for lumbar stenosis, synovial cysts, lumbar adjacent segment degeneration, degenerative scoliosis, flatback syndrome, thoracic disc herniation, and dural tears Tumor resection and stabilization, quality of life issues, and potential advantages and risks of MIS techniques Key differences in MIS versus open operations such as radiation exposure and costs Analysis of 3-D navigational imaging to improve outcomes and reduce radiation exposure and operating time This book is a tremendous, evidence-based tool to guide spine surgeons as they make important decisions on selecting the most optimal spine surgery techniques. It is a must-have resource for all resident and veteran orthopaedic surgeons and neurosurgeons who specialize in treating patients with spine conditions. Alexander R. Vaccaro, MD, PhD, FACS, MBA, is Richard H. Rothman Professor and Chairman, Department of Orthopaedic Surgery, and Professor of Neurosurgery, Thomas Jefferson University and Hospitals; and President, The Rothman Institute, Philadelphia, Pennsylvania, USA. Richard G. Fessler, MD, PhD, is Professor, Department of Neurosurgery, Rush University Medical Center, Chicago, Illinois, USA. Faheem A. Sandhu, MD, PhD, is Professor of Neurosurgery, Director of Spine Surgery, and Co-Director, Center for Minimally Invasive Spine Surgery, Department of Neurosurgery, MedStar Georgetown University Hospital, Washington, DC, USA. Jean-Marc Voyadzis, MD, is Co-Director, Center for Minimally Invasive Spine Surgery and Associate Professor of Neurosurgery, MedStar Georgetown University Hospital, Washington, DC, USA. Jason C. Eck, DO, MS, is an Orthopaedic Spine Surgeon, Center for Sports Medicine and Orthopedics, Chattanooga, Tennessee, USA. Christopher K. Kepler, MD, MBA, is an Associate Professor and Orthopaedic Spine Surgeon, Department of Orthopaedic Surgery, Thomas Jefferson University and Hospitals, and The Rothman Institute, Philadelphia, Pennsylvania, USA. An award-winning international medical and scientific publisher, Thieme has demonstrated its commitment to the highest standard of quality in the state-of-the-art content and presentation of all its products. Founded in 1886, the Thieme name has become synonymous with high quality and excellence in online and print publishing.

Minimally Invasive Spine Surgery

A Primer

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Modern Techniques in Spine Surgery

JP Medical Ltd Minimally invasive techniques are now the preferred method for spine surgery because the incision is much smaller, causing less damage to surrounding muscles, pain is usually greatly reduced, and recovery time is faster. This book is a practical guide to minimally invasive diagnostic and surgical techniques for spine operations. Beginning with an overview of spinal anatomy and the basics of minimally invasive surgery, the following chapters examine the management of numerous different spinal conditions. A complete chapter is dedicated to patients with spinal cord injury and rehabilitation. More than 200 clinical photographs, diagrams and tables enhance the comprehensive text, making it an invaluable resource for both trainees and practising spine surgeons. Key points Comprehensive guide to minimally invasive spine surgery Covers diagnosis and treatment of numerous spinal disorders Complete chapter dedicated to spinal injury and rehabilitation Includes more than 200 photographs and illustrations

Minimally Invasive Spinal Deformity Surgery

An Evolution of Modern Techniques

Springer Science & Business Media Contemporary spinal surgeons, whether orthopedic or neurosurgeons, are increasingly recognizing minimally invasive spine surgery (MISS) as a desirable option to manage advanced degenerative diseases. MISS techniques minimize blood loss, surgical site pain, and speed recovery. Thus, the marriage of MISS with adult spinal deformity was a natural one. Currently, the techniques, technologies, and education of surgeons have finally reached a point where MISS deformity surgeries are becoming commonplace. Nevertheless, the field is young enough that no comprehensive texts have addressed the unique challenges faced by surgeons exploring this evolving field. This book will fill the gap.

Decision Making for Minimally Invasive Spine Surgery

Thieme Decision Making for Minimally Invasive Spine Surgery provides the critical tools needed to determine exactly when, for whom, and why minimally invasive spine surgery (MISS) is a viable option. Ten tightly focused chapters each begin with a decision making algorithm that explains how to ascertain if MISS will benefit the patient more than traditional open surgery. Following each algorithm, concise yet detailed information on the preoperative evaluation, surgical techniques, and possible outcomes helps the reader to formulate a clear surgical strategy. The book closes with an incisive analysis of radiosurgery, instrumentation systems, image guidance, and promising advances in MISS that will stimulate further discussion of this emerging area. Features A realistic assessment of both the advantages and drawbacks of MISS by pioneers in the field Evaluative algorithms allow readers to form rapid, fully informed treatment decisions Intuitive organization by spinal region facilitates quick reference Spine surgeons, residents, or fellows in orthopedic surgery or neurosurgery will refer to this easily accessible manual every time they consider performing a minimally invasive spine procedure. This is an excellent book with no comparisons, useful for neurosurgeons, spine surgeons, and radiologists.--Doody's

Minimally Invasive Spinal Surgery

Principles and Evidence-Based Practice

JP Medical Ltd This book provides a timely, comprehensive and evidence-based review of minimally invasive surgery of the cervical, thoracic and lumbar spine. Minimally invasive techniques are now aided by more advanced endoscopic instruments, video, and computerised navigation systems broadening the range of surgical procedures that can be carried out with similar efficacy as traditional open spinal surgeries, without the significant burden on the patient recovery and rehabilitation. This book thoroughly reviews the preclinical and clinical data on minimally invasive spinal surgery and describes and illustrates the current effective techniques. An authoritative, international team of contributors add their clinical experience and expertise to provide a clear, authoritative and practical guide. The book is organised in four sections covering cervical, thoracic and lumbar spine regions with a final section on the latest advances in technologies and the cost-effectiveness of current treatments.

Cervical Spine

Minimally Invasive and Open Surgery

Springer This book details the current status of cervical MISS for expert surgeons, young surgeons or clinicians, and residents and fellows with little or no experience on this field of surgery. Because of the involvement of different and highly trained specialists from all over the world, the aim of this book is to satisfy the requirements for knowing the most advanced surgical techniques and their application. Also included are the indications and surgical techniques involving an open standard approach, giving a most exhaustive knowledge of the cervical spine surgery. Due to the difficulty of finding books with both minimal invasive cervical spine surgery and more conventional standard "open" surgery, the benefit of this book is to permit the surgeons and residents and medical doctors, to have a more complete and immediate knowledge of the topics. Due to the scientific multidisciplinary nature of the MISS, several professionals such as orthopedic surgeons, neurosurgeons, radiologists, anesthesiologists and pain management specialists, have been involved in order to create a book in which all the aspects of MISS have been treated.

Pocket Atlas of Spine Surgery

Thieme Medical Publishers Pocket Atlas of Spine Surgery, 2nd Edition by Kern Singh and Alexander Vaccaro is unique in its presentation, utilizing multilayered visuals to delineate the most commonly performed spine procedures. High-definition intraoperative photographs are juxtaposed with translucent anatomic drawings. This facilitates visualization of both the entire surgical field and complex anatomy never "seen" during surgery. It also provides greater insights into the subtleties of both open and technically demanding minimally invasive spine surgery techniques. Unlike many large spine surgery atlases, this is the perfect, on-the-go, pocket-size resource for busy spine surgeons who work in any clinical setting. From the cervical to lumbar spine, 21 concise chapters reflect the collective technical expertise of internationally renowned spine surgeons. Easy-to-follow guidance is provided on fundamental open and minimally invasive techniques, including pedicle screw placement, fusion, discectomy, corpectomy, foraminotomy, laminoplasty, and laminectomy. Each procedural chapter focuses on the importance of accurate visualization, adequate homeostasis, and impacted anatomical structures. Insightful tips, pearls, and potential pitfalls throughout the book expedite acquisition of knowledge Nearly 200 detailed, clearly labeled images of common spine procedures provide invaluable anatomical and clinical guidance Expanded insights on positioning in spine surgery Added discussion of surgical challenges, including warnings and descriptions of internervous planes Orthopaedic surgeons, neurosurgeons, and surgical trainees will discover an indispensable and friendly white coat reference for everyday practice. The visually rich atlas will also benefit physician assistants, surgical nurses, and all practitioners involved in the operative care of spine surgery patients.

Minimally Invasive Spine Surgery

An Algorithmic Approach

JAYPEE BROTHERS MEDICAL PUBLISHERS PVT. LTD. This book Minimally Invasive Spine Surgery: An Algorithmic Approach is organized in a logical fashion with an introduction, clinical evaluation, intraoperative positioning, surgical techniques, potential pitfalls and pearls of treatment and discussion. This book has written extremely well-known surgeons who are experts in their respective fields of minimally invasive surgery. This textbook attempts to formally describe a simple to understand decision-making process that is the essence of minimally invasive surgery. The chapters of this book are organized in a very technique-focused text that p.

Symposium: Minimally-Invasive Spine Surgery (MISS)

Minimally Invasive Spine Surgery

JP Medical Ltd This book is a complete review of the indications, techniques and outcomes of minimally invasive spine surgery (MISS) for neuro- and orthopaedic surgeons. Divided into seven sections the text begins with an overview of the fundamentals of MISS, explaining the development of techniques, anatomy, and imaging. The next chapters cover MISS for numerous disorders in both the cervical and lumbar spine followed by sections on surgery for tumours, infections and osteoporosis, and pain management. The book concludes with discussion on recent advances in the field of MISS, including robotics. The comprehensive text is highly illustrated with nearly 400 surgical images and tables. Key points Comprehensive review of minimally invasive spine surgery (MISS) In depth discussion on procedures for cervical and lumbar spine disorders Covers recent advances in MISS including robotics Highly illustrated with nearly 400 surgical images and tables

Technical Advances in Minimally Invasive Spine Surgery

Navigation, Robotics, Endoscopy, Augmented and Virtual Reality

Springer Nature This book is a comprehensive guide to the application of recently introduced and emerging technologies in minimally invasive spine surgery (MISS). These technologies, including 2D and 3D navigation, endoscopy, virtual and augmented reality, robotics, and 3D printing, are helping to overcome previous limitations of MISS, such as the steep learning curve and the need for a great deal of experience in order to achieve optimal outcomes. Compared with traditional techniques, their use is designed to reduce local operative tissue damage, alleviate systemic surgical stress, and enable earlier return to function. The book provides detailed and extensively illustrated accounts of the role of the new technologies and techniques in a wide range of indications. In essence, all spine conditions, whether degenerative, traumatic, or oncologic, will in the near future be amenable to MISS using these approaches. The book will be a source of insight and practical assistance for all surgeons who perform MISS, regardless of their level of experience.

Atlas of Minimal Access Spine Surgery, Second Edition

CRC Press In this second edition of the classic *Atlas of Endoscopic Spine Surgery*, *Atlas of Minimal Access Spine Surgery* provides the authoritative operative reference for both the novice and the experienced spine surgeon. This extensively illustrated new edition stands as a comprehensive thesis on the rapidly evolving field of minimally invasive spine surgery. Greatly expanded over the previous edition, this volume prepares surgeons to effectively meet the increased demand for minimal access spine surgery. With smaller incisions, less pain, shortened hospital stays, substantial savings in health care dollars, and lower morbidity, it is clearly the preferred method for both patient and surgeon. Written by the world's foremost endoscopic surgeons, this volume provides expert advice, tips, and caveats, plus step-by-step operative guidance to a full range of minimal access spine surgery techniques. Hundreds of photographs and precise illustrations, mostly in color, guide the surgeon through each major step of every procedure, detailing anatomic structure and instrument positioning. To complement this book, two CDs are included with operative video. The *Atlas of Minimal Access Spine Surgery* explores in detail procedures that have been developed to utilize advancements in fiber optics, versatile spinal implants, and computer image-guided assistance to improve outcomes in the management of spinal disorders. It incorporates procedures such as endoscopic scoliosis correction, micro-endoscopic discectomy, and the latest advances in artificial disc replacement. The authors examine every significant topic: anesthetic considerations, indications and contraindications, instrumentation and surgical systems, complications, outcomes, and more.

Essential Step-by-Step Techniques for Minimally Invasive Spinal Surgery

The ultimate resource for learning and mastering minimally invasive spine surgery techniques An estimated 1.5 million instrumented spinal procedures are performed every year in the US. The majority of decompressions and about 50% of fusion procedures can be performed completely or partially using minimally invasive spine surgery (MISS) techniques. The full potential of MISS techniques has yet to be realized. *Essential Step-by-Step Techniques for Minimally Invasive Spinal Surgery* by internationally renowned MISS neurosurgeon Roger Härtl, spine-neurosurgeon Rodrigo Navarro-Ramirez, and an impressive group of global multidisciplinary contributors is the most comprehensive and detailed textbook written to date on this topic. The foundation of the book is built on six interacting principles critical to surgical success, and MISS in particular: Target, Technology, Technique, Teaching and Training, Testing, and Talent. The text starts with an opening chapter on the definition of MISS and introduction of these principles. Fifty-six subsequent chapters provide a comprehensive discussion on how to utilize an MISS approach for a full spectrum of spinal pathologies using nuanced variations specific to the operating surgeon. To ensure readers are well versed in all aspects of MISS, these chapters include painstaking details on indications, contraindications, pathoanatomy, operating room set-up, step-by-step techniques, and postoperative management. Key Highlights Contributions from master spine surgeons across the world provide a balanced global perspective on mastering and incorporating diverse techniques into practice Invaluable clinical pearls including tips/tricks and complication avoidance High-quality images, figures, anatomic drawings, and imaging studies illustrate relevant anatomic approaches and corridors and delineate why anatomic mastery is critical to MISS Twenty-five videos enhance the ability to learn and implement MISS approaches This is a must-have resource for practicing spine surgeons interested in MISS who wish to learn the latest techniques from master surgeons and achieve optimal patient outcomes. The text and videos also provide a robust training tool for senior-level orthopaedic and neurosurgery residents and spine fellows. This print book includes complimentary access to a digital copy on <https://medone.thieme.com>.

Handbook of Minimally Invasive and Percutaneous Spine Surgery

Thieme Medical Publishers *Handbook of Minimally Invasive and Percutaneous Spine Surgery*, edited by Drs. Wang, Anderson, Ludwig, and Mummaneni, is destined to become a favorite with all students of spine surgery, whether residents in training or experienced practitioners. Small enough to fit in a lab coat pocket, this exceptional manual is just the resource you need. It will prove invaluable as a quick reference in daily practice or simply as a refresher when confronting a difficult clinical problem. This fully illustrated fundamental guide focuses on procedures and techniques that require minimal exposure. Presented in a concise and readable format, this text delivers the basics for those new to minimally invasive surgery as well as pointers and tips for more advanced surgeons. It is destined to become a favorite with all students of spine surgery. Composed of 11 chapters, this practical manual begins with the true foundation of minimally invasive surgery--imaging. Safe and effective surgery performed through minimal exposures demands a thorough mind's-eye understanding of anatomy without visualization. Moreover, it requires a keen ability to mentally translate two-dimensional imaging into three-dimensional anatomy. Next, the most common techniques of cannulation are covered in a logical step-by-step fashion, just as it is taught in the operating room. Minimally invasive options for pedicle screw placement are completed with a chapter describing the mini-open technique. The second half of this book focuses on fusion and pedicle screw insertion. Finally, this handbook does not ignore the endpoint of all these techniques--achieving successful fusion. Techniques to enhance the success of this outcome are discussed in Chapter 9, whereas potential complications and methods to avoid them are outlined in Chapter 8. Each chapter concludes with "Surgical Pearls and Pitfalls," which provide summaries of the salient points discussed in the chapter. Unique to this text are highlighted boxes outlining "Bailouts/Alternative Strategies" for completing the task when classic techniques fail. Furthermore, each chapter is well illustrated, with step-by-step images that clearly demonstrate the points being made. Written by world-recognized minimally invasive spine surgeons, this handbook provides essential coverage of key topics.

Minimally Invasive Spine Surgery Techniques

This book includes operative videos and teaches the reader how to perform all currently available minimally invasive spine surgery (MISS) techniques. Each chapter covers a MISS procedure and includes an introduction, indications and contraindications, surgical technique, pitfalls and pearls, discussion, conclusion, references, videos and figures. *Spine Surgery: Minimally Invasive techniques* is aimed at spine surgeons who are interested in learning or improving their MISS skills.

Minimally Invasive Spine Surgery (MISS)

Symposium

State of the Art for Minimally Invasive Spine Surgery

Springer The second congress of the Pacific Asian Society of Minimally Invasive Spine Surgery (PASMIS) held in Phuket, Thailand, August 5-6, 2002, was highly successful. Dr. Akira Dezawa, the president, had worked hard in organizing the congress, which was well attended. All scientific papers presented were of the highest standard and were worthy of publication in book form. This scientific meeting brought to light the practice of this modern surgical technique as it is being performed by spine surgeons in the Asia-Pacific region. Dr. Dezawa has made a great effort to collect the papers from the congress, and to have them edited and published as a text that covers all aspects of the minimally invasive spine surgical approach. Minimally invasive spinal surgery will be a highlight of operative approaches in the twenty-first century and already has been popularized worldwide. This procedure will provide surgical options that address several pathological conditions in the spinal column without producing the types of morbidity commonly seen in open surgical procedures. The contents of this book provide highly relevant and detailed information. I certainly believe that it will be a great benefit to all orthopedic surgeons who are interested in performing minimally invasive spine surgery. Charoen Chotigavanich, M.D. Chairman, Spinal Section The Royal College of Orthopedic Surgeons of Thailand V Preface Recent decades have been characterized by revolutionary changes in spinal surgery. Concurrent progress in implant technology and functional endoscopes and the improvement of less invasive surgical techniques has opened a new dimension for spine surgery.

Spine Surgery

Tricks of the Trade

Thieme Praise for this book: [Four stars] This book is required reading for orthopedic and neurosurgical fellows and residents...very highly recommend[ed]...outstanding.--Doody's Review This best-selling book returns in a second edition covering the major procedures in spine surgery and the latest technical innovations in the field. Retaining the comprehensive scope and accessible presentation of the previous edition, the book distills the basic elements of each procedure using concise descriptions and simple line drawings. New sections of the book cover minimally invasive exposure methods, motion-sparing techniques, and the latest fixation techniques. Highlights: Each chapter outlines the essentials of the procedure in just a few pages Consistent presentation throughout the book enhances ease of use Tips, pearls, lessons learned, special considerations, pitfalls, and bailout, rescue, and salvage procedures emphasize critical points to help ensure a safe and effective procedure Nearly 500 illustrations demonstrate key technical points Concise and up-to-date, this book serves as an invaluable quick reference prior to surgery. It is ideal for clinicians and residents in spine surgery, orthopedics, and neurosurgery.

Spine Surgery

Elsevier Health Sciences Provides guidance on how to perform a wide-variety of techniques in spine surgery. Topics covered include immobilization techniques, anterior and posterior approaches, and thoracic spine surgery.