Health is regarded as one of the global challenges for mankind. Healthcare is a complex system that covers processes of diagnosis, treatment, and prevention of diseases. It constitutes a fundamental pillar of the modern society. Modern healthcare is technological healthcare. Technology is everywhere. This book focuses on twenty-one emerging technologies in the healthcare industry. An emerging technology is one that holds the promise of creating a new economic engine and is trans-industrial. Emerging technological trends are rapidly transforming businesses in general and healthcare in particular in ways that we find hard to imagine. Artificial intelligence (AI), machine learning, robots, blockchain, cloud computing, Internet of things (IoT), and augmented & virtual reality are some of the technologies at the heart of this revolution and are covered in this book. The convergence of these technologies is upon us and will have a huge impact on the patient experience.
A Practical Approach to Robotic Surgery

Deciding on a career path is difficult for many people. Deciding of the best university, of an interesting and challenging subspecialty, of where to get established, are just a few of the vast challenges you will face in preparing for a successful medical career. Whether you are a medical student, a resident, a family practitioner or a specialist, this book is an essential guide for many if not every facet of your medical career. It is a valuable resource because it covers a wide variety of topics such as choosing a medical school, a residency training program, a type of practice, establishing your practice, surrounding yourself with experts (accountants, financial advisors, banker and others), understanding the realities, challenges and up-coming changes in medical practice, preparing for retirement and retiring. Browse to the book as often as you want to refresh your memory, to look at a specific subject.

Medicine for Life: A Practical Guide for Success

Minimally invasive surgery has become the standard treatment for many diseases and conditions. In the last decade, numerous studies have demonstrated that laparoscopic approaches have improved patients’ quality of life if compared with standard open procedures. Atlas of Single-Port, Laparoscopic, and Robotic Surgery serves as a guide in single-port, standard laparoscopy, and robotic surgery and shows how novel techniques, such as single-port laparoscopy and robotics, have recently evolved. The atlas illustrates the unique challenges that the new single-port surgery modality presents, including instruments crowding and articulation, and the advanced laparoscopic skills required to perform these procedures, such as the ability to move and control a flexible camera. It also illustrates how to efficiently and safely utilize the robot to perform most gynecologic procedures. This exceptional resource provides students, residents, fellows, operating room personnel, and practicing gynecologic surgeons with invaluable information about instrumentation, surgical technique, port systems, and the current research and development in robotics.

Surgical Robotics

The advent of robotic surgery brought a rise in the proportion of minimally invasive surgery in gynecology. This book provides a practical guide to this innovative field. First it introduces the basics of robotic surgery and then focuses on specific gynecology-related surgeries. Gynecologists currently practicing robotic surgery as well as those who would like to include robotic surgery in their practice will benefit greatly from this book.
Surgical robotics is a rapidly evolving field. With roots in academic research, surgical robotic systems are now clinically used across a wide spectrum of surgical procedures. Surgical Robotics: Systems Applications and Visions provides a comprehensive view of the field both from the research and clinical perspectives. This volume takes a look at surgical robotics from four different perspectives, addressing vision, systems, engineering development and clinical applications of these technologies. The book also: -Discusses specific surgical applications of robotics that have already been deployed in operating rooms -Covers specific engineering breakthroughs that have occurred in surgical robotics -Details surgical robotic applications in specific disciplines of surgery including orthopedics, urology, cardiac surgery, neurosurgery, ophthalmology, pediatric surgery and general surgery Surgical Robotics: Systems Applications and Visions is an ideal volume for researchers and engineers working in biomedical engineering.

This is a practical nuts-and-bolts guide that is based on the authors’ experience and success in the Radiology Department at the University of California at San Francisco. Academic chairs, especially those recently appointed, struggle with leadership and management. Many have little prior experience in these areas. The material presented here is practical and specific. Each chapter is independent of the others, and the text can be used mostly as a reference tool. The text deals with the major issues facing academic Radiology leaders. The topics selected were chosen carefully and are based on the authors’ collective years of experience attempting to manage their own department but also consult for many others. The first topic is the balance among the three primary missions of an academic department, namely, clinical care, teaching, and research. These three major missions will be described in some depth, with an effort to provide reference materials that, hopefully, will stand the test of time and remain useful over the years to come. In addition, this text will provide guidance about faculty development, departmental organization, marketing and fundraising, and strategic perspectives. It will be of interest to chairs, departmental administrators, vice-chairs and other departmental leaders, section chiefs, hospital administrators and, of course, consultants.

In this second, revised edition of Robotic Urology, leading robotic surgeons from around the world pool their knowledge to provide an updated manual that covers all the oncologic and reconstructive procedures in urologic surgery that are performed with robotic assistance. Each operation is described in detail, with careful explanation of the different
surgical steps and numerous high-quality anatomic illustrations and color surgical photos. An additional feature is the inclusion of extensive references to the scientific literature. As well as offering excellent guidance on the application of robotic surgery in urology, the book will serve as an ideal reference work for all urologists and should contribute in supporting new robotic teams and further popularizing robotic surgery.

**Pediatric Robotic and Reconstructive Urology**

This essential guide provides a lifeline to authoritative, reliable information on medical management, giving you all the skills you need whether managing a junior colleague as a lead doctor, or running multidisciplinary consortia in the NHS or private sectors. Learn key skills from leadership, managing change, quality control, and project management through to doctors in difficulty, appraisals and revalidation, managing exceptional performance, and poor performance. Comprehensive coverage of NHS and private healthcare, primary care, acute and emergency care, mental health, and many other sectors. Gain insight into important topics such as healthcare innovations and technologies, implementing evidence-based medicine, medical education, patient safety, and primary care consortia. Refine your management skills with advice, wisdom, and practical help from key opinion leaders, medical professionals, and management experts. In this world of change, reforms and new government initiatives, can you afford not to build on your existing skills? Whether you are new to medical management or an experienced director wishing to stay up to date and refine your expertise, this book will be an invaluable source of advice to help you manage the delivery of high-quality care.

**Robotic Urology**

Robotic Renal Surgery: Benign and Cancer Surgery for the Kidneys and Ureters provides a comprehensive review of the role of and technical considerations regarding robotic surgery for conditions of the kidney and associated conditions of the upper urinary tract. In addition to serving as a reference regarding indications, preoperative and postoperative management, complications, and evidence-based outcomes, this text also serves as a practical guide for surgeons in how to perform the complete array of robotic kidney and upper tract surgery. Included are detailed descriptions of positioning, instrumentation, and surgical steps for the surgeon newly adopting robotic surgery or for those refining their techniques. All chapters are written by recognized and published experts in the various techniques, creating an authoritative text on the subject. Robotic Renal Surgery: Benign and Cancer Surgery for the Kidneys and Ureters will be of great value to urologists, robotic surgeons, fellows in urologic oncology or endourology as well as urology residents in training and surgical nurses and other surgery team members involved in these procedures.
TransOral Robotic Surgery for Obstructive Sleep Apnea

Robotics is one of the hottest topics in medicine today, with an international interest that is exponentially growing. The introduction of robotic technology into modern operating theatres has provoked a revolutionary change in the basic surgical approach, with many advantages over traditional open surgical treatment, including faster recovery and a significantly lower risk of surgical trauma. While the benefits of minimally invasive surgery are apparent, the expansion of laparoscopic surgery throughout the field has been relatively slow due to the steep learning curve and the level of practice and specialization required to perform such procedures. Although revolutionary upon conception, standard laparoscopy involves the surgeon working from monitors with no depth perception and also with a surgical motion that is counter-intuitive. The introduction of robotic technology however, has surpassed the traditional laparoscopic approach by providing full three dimensional vision, intuitive motion and wristed instrumentation with motion scaling. These dramatic innovations have broadened the scope of surgeons that can now perform complex laparoscopy, and while still in its infancy, robotic assisted surgery has begun to infiltrate all fields of surgery. However, while the practical adoption of the techniques and procedures has increased over the last 5 years, the educational resources have not, leaving the only available learning tools as videos, case observation and proctorships. There is therefore a severe market void for such a publication as this, with steadily growing sales around the world of robotic surgical systems. A compact book, overseen by such a respected figure and featuring contributions from the field leaders, is sure to be very successful within the next few years.

Atlas of Robotic, Conventional, and Single-Port Laparoscopy

The introduction of robotic technology into modern day operating theatres has changed the way that surgery will be preformed. The last five years have shown a paradigm shift toward the adoption of robotic surgical techniques. This comprehensive book for the practicing urologist will be an invaluable addition to every urologist’s library. The book serves as a much needed educational guide to understanding the scope of robotic procedures performed.


This book is a surgical manual, intended to present and discuss the use of robotic surgery for abdominal wall hernia repair. It comprises the most important surgical approaches in the field, presenting step by step procedures in a clear and didactic way. Abdominal wall hernias are very common conditions, easily identifiable in clinical practice and that usually require a surgical intervention as treatment. However, the choice for the right surgical procedure to treat those
conditions may vary, provided the diversity on possible techniques, clinical presentations and complexity. Robotic surgery has emerged in recent years as an important tool to increase the number of surgical approaches for the surgeon who faces abdominal wall hernias. Video-assisted and robotic surgery may represent a consistent improvement in options available for the surgeon involved in wall hernia repair. Current robotic surgical techniques present several of the benefits of common laparoscopic surgery features (such as low invasiveness and fast recovery), and adds some other specific benefits, such as more dynamic and precise movements and a much better view of the operatory field. Robotic Surgery for Abdominal Wall Hernia Repair is intended to help surgeons to manage this disease from another point of view and to choose the best procedures in each case, pushing medical practice to another level of decisions, investigation and follow up, considering the use of new technologies in robotic surgery. It intends to be a reference manual to medical practitioners who has surgical skills in their backgrounds, but that are not familiar with the use of minimally invasive procedures for abdominal wall complex defects.

**Transoral Robotic Surgery (TORS)**

Learn to treat dental patients with disabilities or who are medically compromised A Practical Approach to Special Care in Dentistry delivers a comprehensive and robust overview of special care dentistry reflecting the most common compromised clinical conditions dentists will regularly encounter. It discusses more than 50 topics based on real-world clinical cases focusing on two main areas: patients with disabilities and medically compromised patients. The book uses a problem-based learning approach and helps the reader to apply knowledge in a clinical case context. Each chapter contains a case report establishing the main risk factors relating to the provision of dental treatment. That is followed by a practical and realistic set of adaptations for the reader to follow to minimise the rate and severity of potential complications for their patient. The book also includes: A thorough introduction to patients suffering from disabilities, including physical disabilities, like cerebral palsy and epilepsy, and cognitive impairments, like Down’s Syndrome Comprehensive explorations of the treatment of medically compromised patients, like those with infectious diseases, endocrine diseases, hepatorenal disease, and cardiovascular disease Practical discussions of other special patient situations, like those with allergies, antiresorptive and antiangiogenic drugs, terminal patients, underhoused patients, and pregnant or breastfeeding patients Perfect for general dentists, undergraduate students of odontology, and graduate students of special care dentistry, A Practical Approach to Special Care in Dentistry is also a must-read resource for dental specialists in special care dentistry, hospital odontology, geriatric odontology, oral surgery, and dental hygienists.

**Urologic Robotic Surgery in Clinical Practice**
Recent advances in technology and instrumentation, mean that robot-assisted surgery has become increasingly established as an alternative to traditional open surgeries. This book is a practical guide to robotic surgery, beginning with an overview of the techniques and anaesthesia, highlighting the vital role played by anaesthetists in early patient recovery. The following sections cover all major surgical subspecialties including, general surgery, thoracic and vascular, gynaecological, urogynaecological, and paediatric and adult urology. The text is highly illustrated with clinical images and tables, and is further enhanced by an interactive DVD ROM demonstrating robotic surgical procedures including sleeve gastrectomy, rectopexy, hysterectomy, hernia repair, and much more. Key points Practical guide to robotic surgery covering all major subspecialties Provides overview of techniques and anaesthesia Highly illustrated with clinical images and tables Includes interactive DVD ROM demonstrating robotic surgical procedures

**Essentials of Robotic Surgery**

Kidney transplantation from a living donor provides the best chance for successful renal replacement therapy. However patient’s safety remains of paramount importance and complications are unacceptable. Laparoscopic donor nephrectomy (LDN) has been proven to have a lower surgical mortality and morbidity as well as a lower blood loss, a shorter hospital stay, and a better cosmetic result compared to the open procedure. This has resulted in LDN being considered the standard in many centers. Robot-Assisted Laparoscopic Donor (RALD) nephrectomy is a new trend developed in the last decade. Robotic assistance is increasingly popular worldwide, because it offers optimal operative conditions to the urological surgeon and a shorter learning curve than the standard laparoscopy.

**Pediatric Endourology Techniques**

**A Practical Approach to Special Care in Dentistry**

Head and neck surgery for benign and malignant disease is undergoing a groundbreaking transformation. Robot-assisted surgery is quickly being recognized as a significant innovation, demonstrating the potential to change treatment paradigms for head and neck disease. State-of-the-art robotics enables surgeons to access complex anatomy using a more minimally invasive approach, with the potential to improve patient outcome and reduce surgical morbidity. Learn from international clinicians who have pioneered new paths in the application of robotic-assisted surgery. Throughout the 16 chapters of this book, the authors provide comprehensive discussion of robotic surgical procedures
for diseases affecting the oropharynx, larynx, hypopharynx, parapharyngeal space, thyroid, neck, and skull base. Key Features: Fundamental training and education--from ethical considerations and room set-up--to avoiding complications and clinical pearls. Ten videos on the treatment of squamous and spindle cell carcinomas. 150 superb illustrations enhance the didactic text. Although further innovations and refinement of this technology will be forthcoming, the current state of robotic surgery encompassed in these pages lays a foundation for today and inspiration for tomorrow's advancements. The book is an invaluable resource for surgeons and residents interested in learning about and incorporating surgical robotics into otolaryngology practice, and will also benefit medical and radiation oncologists.

**Vascular and Endovascular Complications: A Practical Approach**

Pediatric Urology has rapidly developed as a separate subspecialty in the last decade. During this time, significant advances in technology and instrumentation have meant that increasingly more procedures can be performed by the minimally invasive route. However, access to and availability of adequate training facilities and resources continue to hinder surgeons in achieving experience and expertise in the minimally invasive techniques in paediatric urology. Pediatric Endourology Techniques 2nd edition is a fully illustrated text with an accompanying web application which addresses these issues. The aim of this 2nd edition is to enable surgeons to carry out commonly performed minimally invasive pediatric urological procedures. This book has been organised systematically to enable quick reference to the topic of interest. It encompasses not only the majority of commonly performed pediatric endourological procedures in a standardised format but also newer techniques and procedures that have developed since publication of the first edition. A list of specific relevant reading material is given at the end of each chapter. Pediatric Endourology Techniques 2nd Edition is a valuable tool for pediatric urologists as well as pediatric surgeons, general surgeons, adult urologists and those with an interest in minimally invasive surgery.

**The SAGES Atlas of Robotic Surgery**

**Robotic Surgery of the Bladder**

Robotic Surgery of the Bladder is a dedicated resource to understanding and mastering the concepts and practical aspects of robotic bladder surgery. The volume provides an introduction to urologists interested in initiating robotic radical cystectomy by providing them background, concepts, steps, and tools and tricks to introduce robotic radical cystectomy into their clinical practice, all in a safe, stepwise, and organized manner. For the more experienced robotic
surgeon, the text serves as a resource for more advanced applications and techniques. The volume is also accompanied by many still images and a DVD of video clips. Written by experts in the field, Robotic Surgery of the Bladder is a comprehensive resource that maintains the time-tested oncologic principles of bladder cancer surgery, while introducing the advantages that exist with robotic-assisted approaches.

A Practical Guide to Decontamination in Healthcare

Stereo EEG has revolutionized the way invasive EEG explorations are performed, facilitating the assessment of more complex cases with increased precision, a lower surgical risk, and better patient outcomes. A Practical Approach to Stereo EEG is the first dedicated reference on stereoelectroencephalography written for trainees, physicians, and technologists involved in invasive EEG evaluation and monitoring. This go-to resource provides a practical overview of the concepts, methodology, technical requirements, and implantation strategies for common and uncommon surgical epilepsies amenable to stereo EEG. Including over three hundred detailed figures, anatomical drawings, and MRI correlations, this guidebook is an indispensable tool for anyone training, practicing, and teaching in the field. With chapters written by leading experts from around the world, the book is divided into 10 sections covering noninvasive evaluation, technical aspects, electrode planning, practical approach for specific epilepsies, surgical placement in adults and children, interpretation, brain mapping, surgical procedures, and outcomes. Chapters integrate highlighted key concepts with illustrative case examples throughout to enhance clinical applicability. Four detailed case discussions of specific epilepsy syndromes covered in the book are also available online to demonstrate the process of patient evaluation, surgical planning, and decision-making in a multidisciplinary patient management conference. A Practical Approach to Stereo EEG is the essential comprehensive clinical handbook for practitioners at any level of training or experience involved in invasive EEG evaluations or working at surgical epilepsy centers. Key Features: Covers all practical aspects of stereo EEG, including the methodology, technical requirements, and strategies to successfully perform and interpret invasive monitoring Highly illustrated cases are interwoven within chapters to heighten clinical use World-class contributors with global expertise provide hands-on experience in successful use of stereo EEG in complex situations Additional online chapter-based narrated cases discuss specific epilepsy syndromes

A Practical Approach to Stereo EEG

The 11th International Conference on Medical Imaging and Computer Assisted Intervention, MICCAI 2008, was held at the Helen and Martin Kimmel Center of New York University, New York City, USA on September 6-10, 2008. MICCAI is the premier international conference in this domain, with - depth papers on the multidisciplinary ?elds of biomedical
image computing and analysis, computer assisted intervention and medical robotics. The conference brings together biological scientists, clinicians, computer scientists, engineers, mathematicians, physicists and other interested researchers and o?ers them a forum to exchange ideas in these exciting and rapidly growing ?elds. The conference is both very selective and very attractive: this year we - ceived a record number of 700 submissions from 34 countries and 6 continents, from which 258 papers were selected for publication, which correspondsto a success rate of approximately 36%. Some interesting facts about the distribution of submitted and accepted papers are shown graphically at the end of this preface. The paper selection process this year was based on the following procedure, which included the introduction of several novelties over previous years. 1. A Program Committee (PC) of 49 members was recruited by the Program Chairs, to get the necessary body of expertise and geographical coverage. All PC members agreed in advance to participate in the final paper selection process. 2. Key words grouped in 7 categories were used to describe the content of the submissions and the expertise of the reviewers.

Medical Management: A Practical Guide

PROSTATE CANCER 20/20 is a streamlined guide to understanding prostate cancer and its management options to enable the newly-diagnosed patient to make an informed choice. Advances in prostate cancer are reviewed: screening and diagnostic testing refinements; preventive measures; advanced imaging techniques; genetic/genomic testing; active surveillance; technical progress in surgical, radiation and focal therapies; new medications for advanced prostate cancer. In-depth information is provided on sexual and urinary complications of treatments and how they are managed. This book is intended for: · Newly diagnosed patients · Patients who have failed primary treatments · Patients with urinary and sexual side effects · Family members

A Practical Approach to Cardiac Anesthesia

Robotics in General Surgery provides a comprehensive review of the current applications of the robotic platform in all the general surgery subspecialties. Additionally, for each subspecialty it serves as a procedure-oriented instruction manual in terms of technical details of procedures, including fundamentals of robot positioning and trocar placement, step-by-step description of procedures, comprehensive discussions of advantages, limitations, indications, and relative contraindications of using the robotic approach. The text also discusses the challenges and steps to overcoming these challenges in transitioning from a minimally invasive to a robotic practice/surgeon. Lastly, this volume addresses emerging technology in robotics and the impact that the robotics platform will have on not only practice of surgery, but also in the education of surgeons at all levels. Written by experts in the field of robotic surgery, Robotics in General
Surgery is a valuable resource for general surgeons of all levels including residents, fellows and surgeons already in practice.

**Laparoscopic and Robotic Surgery in Urology**

Prevention is the first line of defence in the fight against infection. As antibiotics and other antimicrobials encounter increasing reports of microbial resistance, the field of decontamination science is undergoing a major revival. A Practical Guide to Decontamination in Healthcare is a comprehensive training manual, providing practical guidance on all aspects of decontamination including: microbiology and infection control; regulations and standards; containment, transportation, handling, cleaning, disinfection and sterilization of patient used devices; surgical instrumentation; endoscopes; and quality management systems. Written by highly experienced professionals, A Practical Guide to Decontamination in Healthcare comprises a systematic review of decontamination methods, with uses and advantages outlined for each. Up-to-date regulations, standards and guidelines are incorporated throughout, to better equip healthcare professionals with the information they need to meet the technical and operational challenges of medical decontamination. A Practical Guide to Decontamination in Healthcare is an important new volume on state-of-the-art decontamination processes and a key reference source for all healthcare professionals working in infectious diseases, infection control/prevention and decontamination services.

**PROSTATE CANCER 20/20: A Practical Guide to Understanding Management Options for Patients and Their Families**

Clinical Surgery: A Practical Guide is a handbook for all trainees in surgery, providing an invaluable and expert guide to all aspects of clinical surgery that the trainee will encounter during their day to day work. General chapters on clinical examination, pre-operative, peri-operative and post-operative care are accompanied by expert guidance on how to deal with specific surgical problems, such as respiratory failure, wound healing, MRSA infection, tropical surgery and acute ischaemia. Further chapters provide invaluable information on topics including nutrition, anaesthesia, sutures and surgical incisions. The special problems associated with the surgical management of elderly patients are discussed, and the reader is introduced to the principles of surgical oncology and laparoscopic surgery. With its concise and easy-to-read layout, Clinical Surgery: A Practical Guide is written by a team of expert surgeons, some of whom are also examiners for the Royal College of Surgeons. It is an invaluable on-the-job guide for Foundation level doctors on surgical rotation, as well as for those studying for the MRCS, FRCS and equivalent examinations.
Emerging Technologies in Healthcare

Robotic urological surgery is one of the most significant urological developments in recent years. It allows for greater precision than laparoscopic methods while retaining quicker recovery time and reduced morbidity over classical open surgical techniques. For children, where the room for error is already reduced because of smaller anatomy, it takes on even more importance for urologists. As a result, robotic surgery is rightly considered one of the most exciting contemporary developments in pediatric urology. Pediatric Robotic and Reconstructive Urology: A Comprehensive Guide provides specialist and trainees with an innovative text and video guide to this dynamic area, in order to aid mastery of robotic approaches and improve the care of pediatric patients. Full-color throughout and including over 130 color images, this comprehensive guide covers key areas including: Training, instrumentation and physiology of robotic urologic surgery Surgical planning and techniques involved Adult reconstructive principles applicable to pediatrics Management of complications, outcomes and future perspectives for pediatric urologic surgery Also included are 30 high-quality surgical videos illustrating robotic surgery in action, accessed via a companion website, thus providing the perfect visual tool for the user. With chapters authored by the leading names in the field, and expertly edited by Mohan Gundeti, this ground-breaking book is essential reading for all pediatric urologists, pediatric surgeons and general urologists, whether experienced or in training. Of related interest Smith's Textbook of Endourology, 3E Smith, ISBN 9781444335545 Pediatric Urology: Surgical Complications and Management Wilcox, ISBN 9781405162685


This book is intended as a definitive, state of the art guide to robotic surgery that summarizes the field for surgeons at all levels. More specifically, its goals are threefold: to review the basics of robotic surgery, including fundamental principles, technology, operating room setup, and workflow; to describe and illustrate the procedures most commonly performed in a robotic operating room; and to discuss key issues relating to cost, adoption, and training. Procedures from many surgical disciplines are included, which will aid robotic surgeons in supervising and assisting colleagues in these disciplines and simultaneously heighten their awareness of the tricks and tools used in other disciplines that can be retasked for their own purposes. In addition, the future prospects for robotic surgery, including anticipated developments in equipment, are discussed. The Textbook and Atlas of Robotic Surgery will be an excellent aid for residents and fellows entering the field, as well as a welcome update on recent progress for practicing robotic surgeons and an ideal primer for senior surgeons adapting these new technologies to their current practice.

Atlas of Robotic, Conventional, and Single-Port Laparoscopy
Minimally invasive surgery has emerged as the standard treatment for many gynecologic diseases and conditions. In the past decade, numerous studies have demonstrated the superiority of laparoscopic approaches over standard open procedures in terms of improved quality of life for patients. Innovations in minimally invasive surgical technology—such as multichannel ports, articulating instruments, and flexible high-definition endoscopes—have made it possible for laparoscopic surgeons to perform increasingly complicated gynecologic surgeries through smaller incisions. As such, since the first edition of the atlas published in 2014, technologies and techniques once considered novel have become standard. This second edition, with five new chapters and content updated throughout to reflect the latest evolutions in the field, serves as a guide in robotic, conventional, and single-port laparoscopic surgery, presenting invaluable, up-to-date information about instrumentation, surgical technique, port systems, and the current research and development in robotics. Chapters address unique challenges associated with each technique, such as lack of haptic feedback or articulation and instrument crowding, and describe the advanced laparoscopic skills required to safely and efficiently perform procedures, such as how to move and control a flexible camera or use the robot. Specific topics include conventional laparoscopic myomectomy, adnexal surgery, total and supracervical hysterectomy, and excision of endometriosis excision, as well as related techniques in gynecologic oncology, urogynecology and pelvic reconstructive surgery, tubal surgery and ectopic pregnancy, isthmocele repair, and trachelectomy for early cervical cancer. For single-port laparoscopic techniques, chapters are presented on adnexal surgery, hysterectomy, and gynecologic oncology, while the section on robotic surgery offers guidance on instrumentation, platforms, and basic principles; robotic-assisted laparoscopic myomectomy, total hysterectomy for benign disease, endometriosis management, and total hysterectomy for cancer; as well as techniques for robotic adnexal surgery, urogynecology/pelvic reconstructive surgery, tubal surgery, and complication management, concluding with a review of new and emerging technologies. For students, residents, fellows, operating room personnel, and practicing gynecologic surgeons, the editors share experience amassed while developing novel surgical instrumentation and collaborating on presentations for numerous worldwide events. Internationally renowned experts contribute as well to this practical, illustrated resource on current minimally invasive techniques in gynecologic surgery.

**Clinical Surgery: A Practical Guide**

**Robotics in General Surgery**

This book is a practical guide to the laparoscopic and robotic surgery technique in urology. It includes 34 chapters in
three sections, which are adrenal gland, kidney and ureter surgery, bladder and prostate surgery and lymphadenectomy. This book covers all parts of laparoscopic and robotic urological surgery, including methods in patient selection, peri-operative management, step-by-step descriptions of specific techniques and complication avoidance. It is accompanied with over 800 illustrations and real-time capture figures. It also includes over 40 surgery videos with online access. Through the combination of texts, pictures and videos, it presents the surgical designing, surgical procedures and surgical techniques in panorama. This book is a good reference book for urologists who interested in these techniques.

Atlas of Single-Port, Laparoscopic, and Robotic Surgery

This book describes the current state of robotics in plastic and reconstructive surgery. It examines existing clinical applications, emerging and future applications and evolving technological platforms. Concise yet comprehensive, this book is organized into four sections. It begins with an introduction to robotic microsurgical training and robotic skills assessment, including crowd-sourced evaluation in surgery. Section two explores a variety of robotic clinical application, including robotic breast reconstruction, robotic mastectomy, robotic cleft palate surgery and robotic microsurgery in a urologic private practice. Following this, section three addresses the opportunities and challenges an interested surgeon might face when considering incorporating this technology into their practice. To close, the final section discusses new microsurgical robotic platforms and the potential directions this technology may take in the future. Supplemented with high quality videos and images, Robotics in Plastic and Reconstructive Surgery is an invaluable resource for both plastic surgeons and multi-specialty micro-surgeons.

Robotic Renal Surgery

The MMVR17 proceedings collect 108 papers by conference lecture and poster presenters. These papers cover recent developments in biomedical simulation and modeling, visualization and data fusion, haptics, robotics, sensors and other related information-based technologies. Key applications include medical education and surgical training, clinical diagnosis and therapy, physical rehabilitation, psychological assessment, telemedicine and more.

Lung Cancer: A Practical Approach to Evidence-Based Clinical Evaluation and Management

National and international experts present an organized, multifaceted approach and a diverse combination of methods to help you perform effective assessments. This thoroughly revised edition is a valuable resource for developing, implementing, and sustaining effective systems for evaluating clinical competence in medical school, residency, and fellowship programs. Each chapter provides practical suggestions and assessment models that can be implemented directly into training programs, tools that can be used to measure clinical performance, overviews of key educational theories, and strengths and weaknesses of every method. Guidelines that apply across the medical education spectrum allow you to implement the book’s methods in any educational situation. New chapters on high-quality assessment of clinical reasoning and assessment of procedural competence, as well as a new chapter on practical approaches to feedback. Reorganized for ease of use, with expanded coverage of Milestones/Entrustable Professional Assessments (EPAs), cognitive assessment techniques, work-based procedural assessments, and frameworks. The expert editorial team, renowned leaders in assessment, is joined by global leader in medical education and clinical reasoning, Dr. Steven Durning.

**Robotic Head and Neck Surgery**

This comprehensive book pulls together the essential elements needed to assess sleep apnea patients for the transoral robotic surgical approach and how to optimize the surgery. Detailed information on patient selection, pre-operative work up, anesthesiological pre and post-operative management, surgery, complication prevention and management is provided along with background on sleep medicine and sleep surgery. Authored for ENT surgeons, head and neck specialists and neurologists, pneumonologists, sleep doctors as well for anesthesiologists, chapters offer solutions pulled from experts in the field of sleep surgery and information relevant to geographic areas worldwide.

**Robotic Surgery**

Part of a new series on reproductive medicine, this book is a complete guide to reproductive surgery. Beginning with an overview of the role and techniques of diagnostic laparoscopy, the following chapters cover numerous surgical procedures for the management of infertility. The book presents the latest advances in the field and each chapter includes key points and references for further reading. Clinical photographs, diagrams and tables further enhance the comprehensive text. Other titles in the series include: Practical Guide in Infertility, Practical Guide in Assisted Reproductive Technology and Practical Guide in Andrology and Embryology. Key points Comprehensive guide to reproductive surgery techniques Part of new series on reproductive medicine Covers numerous procedures for management of infertility Chapters include key points and detailed references for further reading
**Robotics in Plastic and Reconstructive Surgery**

The most widely used clinical reference in cardiac anesthesia, *A Practical Approach to Cardiac Anesthesia*, provides complete information on drugs, monitoring, cardiopulmonary bypass, circulatory support, and anesthetic management of specific cardiac disorders. This large handbook incorporates clinically relevant basic science into a practical "what-to-do" approach and is written in an easy-to-read outline format. Designed for practicing anesthesiologists, as well as anesthesia residents, fellows in cardiothoracic anesthesia, perfusionists, and all other anesthesia practitioners, this handbook delivers comprehensive and expertly presented views of the discipline - with outstanding color graphics and the practical, how-to style of a manual.

**Robotic Donor Nephrectomy**

Prevention of complications in vascular and endovascular surgery is an important consideration for all practicing surgeons. The keys to achieving clinical success are based on careful selection of both patient and procedure, along with meticulous operative and endovascular techniques. Management of complications requires careful planning and urgent intervention. This concise, practical text provides the reader with a stepwise approach to diagnosis Guidance on avoiding technical pitfalls Advice on re-interventions Case examples to aid clinical practice The early diagnosis of complications, followed by prompt action and intervention, is key to improving clinical outcomes. This well-illustrated, concise, and practical book ensures that vascular and endovascular surgeons will be able to optimize clinical results and patient care.

**Practical Guide in Reproductive Surgery**

*Essentials of Robotic Surgery* is designed to present a comprehensive and state-of-the-art approach to robotic surgery within the broad confines of general surgery. Sections address preliminary issues faced by surgeons who may be initially undertaking robotics. These areas include training, basic techniques and setup, as well as general troubleshooting. Subsequent chapters focus on specific disease processes and the robotic applications for those procedures. Written by experts in the field, each of these sections addresses patient selection, preoperative considerations, technical conduct of the most common operations, and avoiding complications. A brief review of the existing literature addressing the particular topic follows in each section. The text concludes with chapters on other robotic platforms beyond the only current FDA approved device (Intuitive Surgical) as well as future directions, including single-site, enhanced imaging, 3-D modeling, and tele-proctoring, including to and distant site surgery. Extensive illustrations and links to video make this an interactive text that will be of great value to general surgeons and associated sub-specialists, trainees including
residents and fellows, fully trained surgeons looking to start a robotic surgery practice, and experienced robotic
surgeons looking to expand the types of procedures that they currently perform robotically.

**Robotic Surgery for Abdominal Wall Hernia Repair**

Get a quick, expert overview of the many key facets of lung cancer evaluation and management with this concise,
practical resource by Drs. Lynn T. Tanoue and Frank Detterbeck. This easy-to-read reference presents a summary of
today’s best evidence-based approaches to diagnosis and management in this critical area. Covers diagnosis and
evaluation, treatment considerations, and comprehensive care options for patients with lung cancer. Provides insight on
evidence for today’s best practices, as well as future directions in the field. Consolidates today’s evidence-based
information on the clinical aspects of lung cancer into one convenient resource.