Surgical Stress Response After Colorectal Resection

This resource stands as the only authoritative text to specifically focus on developments and best practices in anesthesiology for procedures affecting the gastrointestinal tract and related appendages. This book provides in-depth coverage of topics such as risk assessment, stress response, and scoring, as well as spans anesthetic trends and practi "The surgical stress response results in postoperative insulin resistance and hyperglycemia, both strongly associated with postoperative infections and overall morbidity. As such, identifying patients at higher risk of developing postoperative insulin resistance and hyperglycemia (prediction) and containing the surgical stress response and reducing postoperative insulin resistance and hyperglycemia (prevention) are both essential to reduce postoperative infections and other adverse events. The current dissertation addresses both aspects.The first part of the thesis addresses the “prediction” aspect through preoperative screening for dysglycemia by measuring HbA1c levels . Nondiabetic patients with underlying degrees of insulin resistance are more prone to develop of postoperative insulin resistance. Therefore earlier diagnosis of dysglycemia and increased glucose monitoring for nondiabetic patients might be as important as for diabetic patients. A systematic review was performed to identify the current evidence regarding the association of preoperative HbA1c with postoperative outcomes in nondiabetic patients. The available evidence was extremely limited; However, with current surgical and anesthetic techniques, including widespread use of minimally invasive surgery and Enhanced Recovery Pathways (ERPs), the surgical induced stress response is less pronounced. Therefore, we performed a prospective cohort study to assess the value of preoperative HbA1c screening to predict postoperative infections in nondiabetic patients undergoing elective colorectal surgery within an ERP. No association was found between elevated HbA1c levels and postoperative infections or other complications. Therefore, preoperative screening with HbA1c is not recommended in this population.This lack of association between preoperative HbA1c levels and postoperative outcomes in this population might be attributed to the maintained insulin sensitivity seen with laparoscopic colorectal surgery in ERPs. Therefore the question remains whether other recommended preventive interventions to attenuate the surgical stress response and reduce postoperative insulin resistance are still useful in these populations. For example, provision of drinks containing complex carbohydrate (CHO) prior to surgery is strongly recommended in guidelines from the Enhanced Recovery after Surgery Society to reduce postoperative insulin resistance. However, these drinks are not widely available and drinks containing simple CHO are often used in practice. With modern surgical and perioperative care techniques, is this adequate to prevent the insulin resistance that is a classic component of the metabolic response to surgery?The second part of the thesis addresses the “prevention” aspect by assessing the impact of a simple

carbohydrate (CHO) drink on insulin sensitivity. It is known that the insulin response to a drink containing simple CHO would be lower than that triggered by a complex CHO drink. We first assessed the insulin response triggered by simple CHO drinks in healthy volunteers and studied whether the addition of whey protein, an insulinotropic supplement, would result in a higher insulin response. Addition of whey protein was not found to be effective in enhancing the insulin response after simple CHO drinks. However, even if the insulin response to a simple CHO drink is lower than that seen after complex CHO, whether this would impact maintenance of insulin sensitivity in the perioperative setting is not known. Therefore, we compared the impact of simple CHO versus complex CHO on intra and postoperative insulin sensitivity in a randomized controlled trial in nondiabetic patients undergoing elective laparoscopic colon resection. Unlike in previous studies in open surgery, insulin sensitivity was maintained and there was no difference between the simple and complex CHO drinks. In this setting, we conclude that either drink could be used to prepare patients for surgery"--

This book provides simplified principles of surgical anatomy for colorectal cancers with sophisticated drawings, standard laparoscopic procedures with striking photographs and illustrations, and advanced procedures such as lateral pelvic node dissection and “down to top” or “reverse” total mesorectal excision. Oncological safety as well as minimum invasiveness of laparoscopic surgery for colorectal cancer has been acknowledged worldwide, based on long-term outcomes of several randomized controlled trials comparing laparoscopic surgery and open surgery. Developments in optical devices have provided us with a magnified clear vision of fine anatomical structures, facilitating our understanding of surgical anatomy and surgical procedures have been refined and improved accordingly. All these topics are presented in this book—valuable for surgical residents and experts eager to learn more about laparoscopic colorectal surgery—and readers will be enlightened by a new paradigm for “lap-enhanced surgical anatomy”. Therefore this volume will greatly benefit not only colorectal surgeons but also general surgeons as well as gastroenterologists and oncologists.

Colorectal Surgery meets the needs of surgeons in higher training and practising consultants for a contemporary and evidence-based account of this sub-specialty that is relevant to their general surgical practice. It is a practical reference source incorporating the most current information on recent developments, management issues and operative procedures. The text is thoroughly referenced and supported by evidence-based recommendations wherever possible, distinguishing between strong evidence to support a conclusion, and evidence suggesting that a recommendation can be reached on the balance of probabilities. This is a title in the Companion to Specialist Surgical Practice series whose eight volumes are an established and highly regarded source of information for the specialist general surgeon. The Companion to Specialist Surgical Practice series provides a current and concise summary of the key topics within each major surgical sub-specialty. Each volume highlights evidence-based practice both in the text and within the extensive list of

references at the end of every chapter. An expanded authorship team across the series includes additional European and World experts with an increased emphasis on global practice. The contents of the series have been extensively revised in line with recently published evidence. New techniques, such as percutaneous and transcutaneous tibial nerve stimulation for faecal incontinence as well as extralevator abdomino-perineal excision, are fully covered.

Dedicated to fecal and urinary diversions, this comprehensive reference book features information on the history of enterostomal therapy, anatomy and physiology of diseases that necessitate intestinal or urinary diversions, pouching system management principles, ostomy related complications, care of the cancer patient as well as the patient with chronic disease, and current trends and issues affecting the person with an ostomy. Current topics covered include intestinal diversions requiring temporary diversions, medical and surgical treatments for inflammatory bowel disease, colo-rectal cancers advances and ischemic intestinal disease. Fecal and Urinary Diversions: Management Principles is a valuable resource to students, nurses, physicians, surgeons, and any health professional caring for a person with an ostomy. Covers lifespan considerations to address the special needs of patients of all ages. Includes an 8-page color insert with 25 full-color photos illustrating ostomy-related complications to help nurses improve their assessment skills. Offers a unique framework for pouch selection to help nurses choose the most effective and cost-conscious options. Covers coping and quality-of-life issues to guide nurses in handling these important patient and professional considerations. Features practical, step-by-step guidelines for pouching, irrigation, and other techniques. Provides review questions and answers to help evaluate learning and prepare for certification or recertification.

The collection of chapters in this proceeding volume reflects the latest research presented at the Aegean meeting on Tumor Microenvironment and Cellular Stress held in Crete in Fall of 2012. The book provides critical insight to how the tumor microenvironment affects tumor metabolism, cell stemness, cell viability, genomic instability and more. Additional topics include identifying common pathways that are potential candidates for therapeutic intervention, which will stimulate collaboration between groups that are more focused on elucidation of biochemical aspects of stress biology and groups that study the pathophysiological aspects of stress pathways or engaged in drug discovery.

Any surgical intervention, elective or acute, may lead to postoperative complications. Moreover, the pertaining approach - laparoscopic or open - will probably not differ in the morbidity rate after surgery. Complications that occur after a surgical intervention can be classified as major or minor. Major complications to the digestive tract after surgery imply in most of cases a leakage of an anastomosis, bleeding in the abdominal cavity or in the tract, the appearance of intraperitoneal abscesses, or surgical site infections and wound dehiscence. These complications, depending on the organ affected, upper GI, HPB tract or colorectal, are associated with high morbidity and mortality. Early suspicion and diagnosis,

followed by an early and effective treatment is imperative in order to reduce the morbidity and mortality. Adequate treatment will involve a good coordination of the three disciplines involved in treatment: the surgeon, the intervention radiologist, and the gastroenterologist. Approach of these postoperative complications is changing constantly and these changes are not properly known by general and more specialized digestive surgeons daily involved in the treatment of these diseases. The proposal for this book is to offer a systematic description of the most frequent complications occurring in the three above mentioned parts of the digestive tract. In this way, the reader will have access to a practical book in which every current complication can be easily recognized, along with relevant information as guide for an adequate treatment.

This comprehensive book provides the reader a perspective of the current evidence-based management of Laparoscopic Colorectal Surgery. It covers sections on benign surgery for IBD, diverticulitis, rectal prolapse etc. along with the procedures for colon and rectal cancers, including laparoscopic TME. The accompanying videos complement the text imparting specific operative skills of exposure, retraction, countertraction, dissection, vascular control, hemostasis, laparoscopic Stapling, anastomosis, specimen extraction and stoma formation. This book aims to help surgeons to learn, standardize, practice and master the complex skills of Laparoscopic colorectal surgery. Key Features Provides step by step solution to the difficulties encountered by the beginners by covering a section on bugbears. Caters to General, GI, Oncology and Colorectal surgeons who have the adequate basic laparoscopic skills and have already been doing some advanced laparoscopic surgery in form of laparoscopic Upper GI and bowel surgery and would want to start laparoscopic colorectal surgery. Covers a section on Robotic and single incision laparoscopic surgery providing the contemporary knowledge in this emerging field, whereas a section on trans-anal surgery provides a futuristic dimension to this field.

During the last decade Fast-track or Enhanced Recovery packages have shown rapid evolution and widespread introduction to colorectal units throughout Europe and the United States of America. The 'fast-track' approach prescribes a 'multi-modal' and 'multi-disciplinary' package of care to guide the pre-operative, peri-operative and post-operative management of surgical patients. By using these care protocols fast-track surgery aims to optimise patient's post-operative recovery through reducing the physiological stress response evoked by surgery and enabling quicker physiological recovery thus allowing early return to normal function and discharge. Furthermore, it is believed that psychological and physical benefits arise through the application of fast-track packages which also act to promote patients' recovery. A detailed review examining the evidence for each individual element of the fast-track packages was undertaken. It demonstrated the range in availability and quality of evidence available to guide application of modern clinical management. Currently fast-track enthusiasts still rely on data from observational studies and controlled clinical trials to justify their use of this approach, as a few, small, single-centred and low-numbered randomised controlled trials exist in

this field.
Does the ERAS program reduce the metabolic stress in colorectal surgery? A comparative study.Metabolism,glucose, Surgery,abdominal, Recovery,postoperativeJ. Casado Neira1, P. Su00e1nchez Expu00f3sito1, V. Molnar 1, M. Barbero Mielgo1, C. Su00e1nchez-cabezudo Moreno1, J. Garcu00eda Fernu00e1ndez11HOSPITAL PUERTA DE HIERRO DE MAJADAHONDA - MAJADAHONDA (Spain)Background and Goal of Study: Surgery represents a disruption of the homeostatic processes of the body. There are now many programs focused on clinical strategies that attenuate metabolic stress. In our hospital we are following the Enhanced Recovery After Surgery (ERAS) program in colorrectal surgery. The procedures that reduce metabolic stress included in the ERAS program are: Optimization of the preoperative period, Avoidance of perioperative fasting (by feeding patients with oral carbohydrates), Optimal postoperative nutritional care with early oral feeding in order to achieve anabolism, Fluid therapy strict control, Multimodal analgesia and control of nausea and vomiting. The aim of this study is to demonstrate a reduction of the metabolic response in colorectal surgery using the ERAS program in comparison with the cases recollected before the implementation of the program; using the glycemic control and the C-Reactive Protein(RCP) as predictors of metabolic stress.Materials and Methods: We compared the RCP values and the subtraction between postoperative and basal glycemia on the first, third and fifth postoperative days after colorrectal surgery between two groups: The prospective group (n=133, medium age 67.54u00b112.34, CR-POSSUM 16u00b10.71) were subjected to colorrectal surgery in 2017 (POST-ERAS). The retrospective group (n=37, medium age 65.8u00b113.88, CR-POSSUM 9.53u00b13.37), subjected to the same surgery before ERAS program. In order to compare the studied parameters we used the mean and standard deviation.Results and Discussion:GLYCEMIA mg/dltPOST-ERAStPRE-ERAStREDUCTION1st d -basalt 13.2 u00b1 35 20.9 u00b1 44t -7.73rd d -basalt -5.2 u00b1 77t-2.8 u00b1 31t -2.45th d -basalt -10.3 u00b1 17t-3.7 u00b1 29t -6.6CRPttt1st dt 63.3 u00b1 41t87.3 u00b1 40t -243rd dt 69.7 u00b1 53t93.4 u00b1 64t -23.75th dt 45.4 u00b1 49t72.1 u00b1 104t -26.7In both situations we found a reduction on the level of the predictors we were studying.Conclussion: A reduction of the metabolic stress response, as shown by the reduction of the studied parameters, was observed. These results may highlight the significant role of ERAS program in mantaining homeostasis. Probably to achieve a significant result we should enlarge the clinical trial.
Awake thoracic surgery is a new surgical field that is set to expand in the near future. Employing sole epidural or local anaesthesia in fully awake patients renders many thoracic surgical procedures doable with less invasiveness and general anaesthesia r
A practical guide to perioperative cognitive disorders, the most common complications of anesthesia and surgery in older people.
From fundamental principles to advanced subspecialty procedures, this text is the go-to reference on the technical, scientific, and clinical challenges professionals face. Features new chapters, new authors, meticulous updates, an increased international presence, and a new full-color design.
The first edition of Robotic Surgery was written only a decade after the introduction of robotic technology. It was the first comprehensive robotic surgery reference and represented the early pioneering look ahead to the future of surgery. Building upon

its success, this successor edition serves as a complete multi-specialty sourcebook for robotic surgery. It seeks to explore an in-depth look into surgical robotics and remote technologies leading to the goal of achieving the benefits of traditional surgery with the least disruption to the normal functions of the human body. Written by experts in the field, chapters cover the fundamental principles of robotic surgery and provide clear instruction on their clinical application and long term results. Most notably, one chapter on “The Blueprint for the Establishment of a Successful Robotic Surgery Program: Lessons from Admiral Hymen R. Rickover and the Nuclear Navy” outlines the many valuable lessons from the transformative change which was brought about by the introduction of nuclear technology into the conventional navy with Safety as the singular goal of the change process. Robotics represents a monumental triumph of surgical technology. Undoubtedly, the safety of the patient will be the ultimate determinant of its success. The second edition of Robotic Surgery aims to erase the artificial boundaries of specialization based on regional anatomy and serves as a comprehensive multispecialty reference for all robot surgeons. It allows them to contemplate crossing boundaries which are historically defined by traditional open surgery.

From fundamental principles to advanced subspecialty procedures, Miller’s Anesthesia covers the full scope of contemporary anesthesia practice. This go-to medical reference book offers masterful guidance on the technical, scientific, and clinical challenges you face each day, in addition to providing the most up-to-date information available for effective board preparation. Consult this title on your favorite e-reader, conduct rapid searches, and adjust font sizes for optimal readability. Address the unique needs of pediatric patients with guidance from an entire section on pediatric anesthesia. View more than 1,500 full-color illustrations for enhanced visual clarity. Access step-by-step instructions for patient management, as well as an in-depth analysis of ancillary responsibilities and problems. Quickly reference important concepts with ‘Key Points’ boxes integrated into every chapter. Stay current on today's most recent anesthetic drugs and guidelines/protocols for anesthetic practice and patient safety, and access expanded coverage on new techniques such as TEE and other monitoring procedures. Take advantage of the unique, international perspectives of prominent anesthesiologists from all over the world, including the UK, Australia, India, Brazil, and Germany. Remain at the forefront of new developments in anesthesia with coverage of hot topics including Non-OR Anesthesia; Role of the Anesthesiologist in Disasters; Sleep Medicine in Anesthesia; Perioperative and Anesthesia-related Neurotoxicity; Anesthetic Implications of Complementary and Alternative Medicine; and Robotics. Study brand-new chapters on Perioperative Fluid Management; Extracorporeal Support Therapies; Anesthesia for Organ Donation/Procurement; and Malignant Hyperthermia and other Genetic Disorders.

In recent years, significant progress in colorectal surgery has been made which includes laparoscopic techniques, pre-operative management, emergency colorectal surgery, fast track multimodal recovery, management of complex wound problems and colorectal cancer follow-up. "Contemporary Issues in Colorectal Surgical Practice" aims to bridge the gap between the journal article and the traditional textbook in these areas.

Major colorectal surgery leads to a significant physiological stress response that is associated with postoperative morbidity and

prolonged patient recovery. Statins are a widely used class of cholesterollowering drugs with useful pleiotropic effects that are relevant to abdominal surgery. Despite considerable experimental evidence, the clinical evidence of their benefits in the setting of abdominal surgery is limited to retrospective and observational studies. The aims of this thesis was to examine the correlation of the surgical stress response to postoperative morbidity following major colorectal surgery and explore the novel concept of whether statins can attenuate this response and improve clinical outcomes after surgery. Chapter one discusses the basis of the surgical stress response, introduces the concept of statins and presents the evidence demonstrating their surgically relevant benefits. Chapter two explores the association between postoperative inflammation and morbidity after colorectal surgery by presenting a meta-analysis which shows C-reactive protein levels in the early postoperative period correlate with the development of anastomotic leakage and have a useful negative predictive value. Chapter three presents a retrospective study which demonstrates the relationship between patient-reported functional recovery and morbidity following colonic surgery using the surgical recovery score questionnaire and shows it closely correlates with postoperative complications and their severity. In chapter four, a retrospective review of patients undergoing elective colectomy is presented and shows patients on statins during the perioperative period achieved equivalent outcomes for complications and functional recovery despite significantly higher perioperative risk and had a significantly lower rate of anastomotic leak. Chapter five is a systematic review which critically appraises the available clinical studies on the use of statins in abdominal surgery and shows the various benefits demonstrated, particularly for inflammatory and infective outcomes. This leads to a placebo-controlled, randomised clinical trial presented in chapter six which shows that perioperative oral simvastatin therapy in patients undergoing major elective colorectal surgery leads to a significant reduction in inflammatory markers in the early postoperative period but no difference in complications or functional recovery. Therefore, the addition of perioperative simvastatin therapy cannot be recommended as a routine for patients undergoing major elective colorectal surgery.

Manual of Fast Track Recovery for Colorectal Surgery provides a broad overview on enhanced recovery, with expert opinions from leaders in the field regarding elements of enhanced recovery care that are generic and specific to colorectal surgery. This book covers the patient journey through such a programme, commencing with optimisation of the patient’s condition, patient education and conditioning of their expectations. Manual of Fast Track Recovery for Colorectal Surgery investigates the metabolic response to surgery, anaesthetic contributions and optimal fluid management, after surgery. It also details examples of enhanced recovery pathways and practical tips on post-operative pain control, feeding, mobilisation and criteria for discharge. Manual of Fast Track Recovery for Colorectal Surgery is a valuable reference tool for colorectal surgeons, anaesthetists, ward nurses and other members of the team involved in perioperative care: pain control specialists, physiotherapists, dietitians, specialist therapists (such as colorectal and stoma nurses), and outpatient nurses.

John Libbey Eurotext continues to publish the proceedings of the gastroenterology seminars taught by leading European specialists and organised by the European Association for Gastroenterology and Endoscopy (EAGE). The aim of the book is to

describe major clinical and therapeutic progress observed during 2003.

"Introduction: Post-surgical patients are at risk of long periods of bed rest, which has been associated with poor pain management, insulin resistance, loss of lean muscle mass and an enhanced surgical stress response. This is detrimental for their health status and subsequent recovery process. With post-operative quality of life and treatment dependent on recovery, optimizing functional capacity throughout the surgical process is essential. This project proposes an in-hospital exercise program for colorectal resection patients that is adaptable to their physical capacities in the immediate post-surgical period. After undergoing a prehabilitation program prior to surgery, patients received daily in-hospital resistance training that was initiated within the first 24 hours of surgery. The in-hospital exercise program consisted of a series of adapted resistance exercises (either in-bed, seated or standing) targeting all major muscle groups of the body. Aim of the study: The aim of this project was to evaluate the feasibility of a progressive resistance exercise program initiated within 24-hours of surgery, supporting patients in attaining the mobilization goals outlined in the Enhanced Recovery After Surgery (ERAS) guidelines. Current guidelines for post-surgical patients encourage between four and six hours of ambulation over each post-operative day in hospital. With adherence to this component of ERAS remaining low, it is critical to increase the number of patients who attain this goal. Results: Compliance to the in-hospital program was high on post-operative day one (POD1) (90%), with main symptoms deterring exercise being: fatigue, nausea and vomiting. These results suggest initiating a resistance-based exercise program within the first 24-hours of surgical intervention is feasible. Patients were closer to attaining the ERAS mobilization guidelines before discharge, while experiencing early discharge (3 days) compared to 4.16 days in a historical control group. Overall, length of time spent in bed was diminished, and sedentary time was broken up. Conclusion: Encouraging resistance exercise over the hospital stay is feasible and may enhance adherence to ERAS early mobilization guidelines." --

This volume introduces the reader to the most important standards and principles of prophylactic surgery. After discussing the comparative effectiveness of screening in the treatment of hereditary cancer syndromes and evaluating genetic predisposition, the book moves on to address ethical, legal, social and cost-effectiveness dimensions of prophylactic surgery. With the aim of preventing hereditary predisposition syndromes, it also includes a chapter on the application of preventive surgery to all specific fields of surgery. Given its scope, the book will appeal to a broad readership, from experienced surgeons to students.

This volume provides an overview of the current evidence-based medical and surgical practice in emergency conditions in colorectal cancer patients. It offers a multidisciplinary perspective, taking into account the specific characteristics of colorectal cancer patients, the necessary pre-operative assessment, the endoscopic and radiological management, and the surgical treatments. Each chapter is supplemented with tables, figures, key-point boxes, schematic representations, and decision-making trees that serve as easy-to-use tools to apply in the different scenarios requiring acute care. Recommendations for best practice and the main reference articles are included for each topic, as well as numerous illustrated clinical cases with cilnical and empirical evidence regarding the surgical management of colorectal cancer. Specific technical aspects of the different surgical interventions

and approaches (e.g., open surgery, laparoscopy, and robotics) are also detailed. This book is intended for residents and emergency surgeons, as well as all practictioners who treat colorectal cancer patients, such as gastroenterologists, oncologists, and radiologists.

This text reviews the areas of colorectal surgery that are at the cutting edge of innovation, paradigm shift and controversy with regard to diagnosis, patient selection, treatment algorithm, and therapeutic approaches. From the impact of enhanced recovery protocols on traditional colorectal practices, to that of novel strategies merging endoscopic and surgical techniques, to recent paradigm shifts in the management of common colorectal disorders, this text provides readers with an update on current controversies and evolving treatment rationale in the management of common colorectal diseases. Current Common Dilemmas in Colorectal Surgery provides a guide for the current common dilemmas that caregivers encounter in their daily practice. It is of great utility to colorectal surgeons, surgical oncologists and general surgeons practicing colorectal surgery, senior residents in general surgery training or surgical oncology or colorectal fellowships, allied healthcare professionals involved in the care of patients with colorectal disease, pharma and biomedical technology industry with an interest in current care of patients with colorectal disease.

Total Burn Care guides you in providing optimal burn care and maximizing recovery, from resuscitation through reconstruction to rehabilitation! Using an integrated, "team" approach, leading authority David N. Herndon, MD, FACS helps you meet the clinical, physical, psychological, and social needs of every patient. With Total Burn Care, you'll offer effective burn management every step of the way! Effectively manage burn patients from their initial presentation through long-term rehabilitation. Devise successful integrated treatment programs for different groups of patients, such as elderly and pediatric patients. Browse the complete contents of Total Burn Care online and download images, tables, figures, PowerPoint presentations, procedural videos, and more at www.expertconsult.com! Decrease mortality from massive burns by applying the latest advances in resuscitation, infection control, early coverage of the burn, and management of smoke inhalation and injury. Enhance burn patients' reintegration into society through expanded sections on reconstructive surgery (with an emphasis on early reconstruction), rehabilitation, occupational and physical therapy, respiratory therapy, and ventilator management.

"Enhanced recovery after surgery (ERAS) pathways are multidisciplinary clinical care pathways incorporating multiple evidence-based interventions designed to decrease the surgical stress response, enhance recovery, and improve outcomes. Multiple randomized trials have demonstrated the clinical effectiveness of ERAS over conventional care for elective colorectal surgery, but these pathways require significant resources to design, implement, and maintain. There is little economic evidence to support ERAS, as the existing data are low quality and there are large knowledge gaps regarding post-discharge outcomes and the socioeconomic impact of ERAS. Therefore the objective was to determine the cost-effectiveness of ERAS versus conventional care for patients undergoing elective colorectal surgery.In order to adequately measure recovery, the postoperative recovery construct was conceptually defined as a multidimensional construct that followed an expected trajectory of immediate postoperative deterioration and then a gradual rehabilitation back to or surpassing preoperative baseline. This definition was used to validate the SF-6D, a multi-attribute utility instrument, as a measure of postoperative recovery and for use as the main

outcome measure of the cost-effectiveness analysis. Superior validity evidence was also provided for the SF-6D over the EQ-5D, another utility instrument. A pilot study as performed to estimate the cost impact of ERAS for esophagectomy using deviation-based cost-modeling, a novel method to analyze costs and outcomes for clinical pathways. Results from this pilot study were then used for sample size calculations for the cost-effectiveness analysis comparing ERAS and conventional care for colorectal surgery.The main study was a multi-institutional prospective cohort study that recruited adult patients undergoing elective colorectal surgery over a one-year period (10/2012 to 10/2013). One centre utilized ERAS routinely and the other did not. Costs and outcomes were measured over a 60-day time horizon. A total of 190 patients (95 ERAS, 95 conventional care) participated. ERAS was associated with lower length of hospitalization, less productivity loss, less caregiver burden, and decreased outpatient resource utilization. ERAS was also associated with decreased costs from a societal perspective (mean difference -2985 CAN$, 95% CI -5753, -373), but no difference in quality-adjusted life (mean difference: +0.87 quality-adjusted days, 95% CI -1.23, 2.97) compared to conventional care. Uncertainty analysis reported that ERAS was highly probable (>98% at all willingness-to-pay thresholds) to be cost-effective. The base-case results were insensitive to multiple sensitivity scenarios and subgroup analyses. In conclusion, evidence was provided to support the cost-effectiveness of ERAS over conventional care for patients undergoing elective colorectal surgery. In particular, the analysis addressed many of the limitations of previous economic evaluations and used a validated measure for postoperative recovery as the main outcome measure. Future research should focus on the costs and benefits of ERAS on a population level. High value cost-effective healthcare can be obtained through ERAS, as it lowers costs without compromising outcomes." --

Learn to calculate drug dosages safely, accurately, and easily with Kee’s Clinical Calculations, 9th Edition! This market-leading text covers all four major drug calculation methods, including ratio & proportion, formula, fractional equation, and dimensional analysis. It also includes practice problems for both general care as well as specialty areas such as pediatrics, labor and delivery, critical care, and community nursing. With its market-leading, comprehensive coverage; strong emphasis on patient safety; and the incorporation of the latest information on antidiabetic agents, anticoagulant agents, drug administration techniques, and devices; Kee remains the winning choice for easy drug calculation mastery. Coverage of all four major drug calculation methods includes ratio & proportion, formula, fractional equation, and dimensional analysis to help you learn and apply the method that works best for you. The latest information on drug administration techniques and devices helps you master the most up-to-date techniques of drug administration, including oral, intravenous, intra-muscular, subcutaneous, and other routes. Caution boxes provide alerts to problems or issues related to various drugs and their administration. Information on infusion pumps covers enteral, single, multi-channel, PCA, and insulin; and explains their use in drug administration. Calculations for Specialty Areas section addresses the drug calculations needed to practice in pediatric, critical care, labor and delivery, and community settings. Detailed, full-color photos and illustrations show the most current equipment for IV therapy, the latest types of pumps, and the newest syringes. Comprehensive post-test lets you test your knowledge of key concepts from the text. NEW! Updated information on Antidiabetic Agents (orals and injectables) has been added throughout the text where appropriate. NEW! Updated content on Anticoagulant Agents is housed in an all-new chapter. NEW! Colorized abbreviations for the four methods of calculation (BF, RP, FE, and DA) appear in the Example Problems sections. NEW! Updated content and patient safety guidelines throughout the text reflects the latest practices and procedures. NEW! Updated practice problems across the text incorporate the latest drugs and dosages.

Goal of Study: Hospitalization and surgery affect the normal homeostasis. This process is called Systemic Inflammatory Response (SIR). One of the markers of SIR is CRP. The aim of the study is to evaluate the effectiveness of different variables (an Enhanced Recovery After

Surgery (ERAS) protocol, laparoscopic surgery, and postoperative Clavien Dindo complications) in relation to reduce the SIR to surgery using an objetive marker as CRP in the first (POD1), second (POD2) and third (POD3) postoperative day according to age (

Intended for any healthcare professional working with surgical patients, including medical students, residents, surgeons and internists, nurses, dieticians, pharmacists, and physical therapists, The Practical Handbook of Perioperative Metabolic and Nutritional Care focuses on topics from the history of surgery and metabolism, to organic response to stress. Based on clinical processes, the author explores screening, assessment, and the impact of nutritional status on outcomes, in addition to investigating nutritional requirements, including macronutrients and micronutrients. Chapters examine wound healing as well as metabolic and nutritional surgical preconditioning, including coverage of preoperative counseling, preoperative nutrition, and preoperative fasting. Physical exercise is addressed, as well as nutritional therapy in the form of oral supplements, and enteral and parenteral approaches. Additional topics explored include nutrition therapy complications and immunomodulatory nutrients, pro, pre and symbiotics, postoperative oral, enteral and parenteral nutrition, enteral access, vascular access, fluid therapy, and more. With up-to-date information, practical and cost-effective data, this resource is critical for translating theory to practice. Focuses on preoperative metabolic and nutritional preparation for surgery Explores processes for intra and postoperatively assessing metabolic and nutritional state to ensure patient progress Contains content based on clinical process

"Background: The stress response elicited by surgery, and exacerbated by fasting, evokes metabolic, hormonal, and immunological changes that can result in loss of body protein. Protein balance can be maintained, and the acute phase response supported, when hypocaloric parenteral nutrition is administered to avoid perioperative fasting. As oral feeding reduces costs and complications associated with parenteral feeding, our objective was to compare parenteral and oral protein kinetic outcomes. Methods: Patients undergoing colorectal surgery were randomly assigned to receive dextrose and amino acids either parenterally (PN) (n=8) or orally (n=8) on the first postoperative day. Both nutrition regimens supplied dextrose at 50% of each patient's measured resting energy expenditure and amino acids at 20%, as either Travasol® or pressurized whey protein. The effects of each regimen on whole body protein turnover and hepatic secretory protein synthesis rates were assessed through primed constant infusions of L-[1-13C] leucine and L-[ring2H5] phenylalanine tracers before and after surgery. Circulating concentrations of glucose, insulin, cortisol, lactate and plasma amino acids were also measured. Results: Both nutrition support regimens were similarly effective in maintaining whole body leucine balance (PN: 0.1+6 ?mol/(kg·h); Oral: 4.1+8 [symbol]mol/(kg·h)). The oral regimen supported postoperative normoglycemia (PN: 7.1+0.3 mmol/L; Oral: 5.6+0.5 mmol/L). A postoperative increase (p

Rectal cancer is one of the most prevalent cancers world-wide. It is also a paradigm for multimodal management, as the combination of surgery, chemotherapy and radiotherapy is often necessary to achieve the optimal outcome. Recently, international experts met in Heidelberg, Germany to discuss the latest developments in the management of rectal cancer, including the anatomic and pathologic basis, staging tools, surgical concepts including fast-track surgery and laparoscopic resection, functional outcome after surgery and the role of radio- and chemotherapy. This monograph summarizes this meeting and gives an extensive overview of the current concepts in management of rectal cancer.

TitleGoal-Directed Fluid Therapy on Laparoscopic Colorectal Surgery within Enhanced Recovery After Surgery Program

BackgroundEnhanced recovery after surgery (ERAS) protocols implement peri-operative care to reduce the stress response to surgical aggression. A major aspect is fluid management, as fluid overload has been associated with increased morbidity and delayed hospital discharge. Intraoperative goal-directed fluid protocols (GDFT) have proved to reduce postoperative complications particularly in high

risk patients. There is still controversy regarding whether GDFT protocols or just a zero-balance fluid therapy should be used during colorectal surgery.MethodsWe conducted an observational retrospective study, involving adults who were scheduled for laparoscopic colorectal surgery within an ERAS program from January 2014 to October 2016. Patients were divided into two groups according to the use of our hemodynamic optimization protocol for fluid administration during surgery (GDFT group) or the application of a zero-balance fluid therapy (ZB group).We investigated the intraoperative amount of fluids disposed and the rate of complications such as surgical site infection (SSI), ileus, and anastomotic dehiscence up to the time of hospital discharge. Incidence of postoperative nausea and vomiting, intraoperative urine output, variability of the estimated glomerular filtration rate and length of hospital stay were additionally investigated.ResultsA total of 128 patients were included in this study; 43 in the ZB group and 85 in the GDFT group. The patient characteristics were similar in both groups.Surgical site infection appeared in 17.3% of the ZB group and 6.3% of the GDFT group (p

Colorectal Surgery equips you to overcome the clinical challenges you face in this area of surgery. Written for the general surgeon who is called upon to manage diseases and disorders of the large bowel, rectum, and anus, this reference provides advanced, expert guidance on how to avoid complications and achieve the most successful results. Visualize relevant anatomy and techniques more easily with high-quality, full-color line drawings and clinical photos throughout. Zero in on the information you need with key points boxes in every chapter that provide a quick overview of the topic at hand. Get practical, hands-on advice on managing the diseases and disorders you’re most likely to encounter. Learn from acknowledged leaders in the field who excel in both academic and clinical areas.

Colorectal cancer is one of the commonest cancers affecting individuals across the world. An improvement in survival has been attributed to multidisciplinary management, better diagnostics, improved surgical options for the primary and metastatic disease and advances in adjuvant therapy. In this book, international experts share their experience and knowledge on these different aspects in the management of colorectal cancer. An in depth analysis of screening for colorectal cancer, detailed evaluation of diagnostic modalities in staging colorectal cancer, recent advances in adjuvant therapy and principles and trends in the surgical management of colorectal cancer is provided. This will certainly prove to be an interesting and informative read for any clinician involved in the management of patients with colorectal cancer.

This innovative, comprehensive book covers the key elements of perioperative management of older patients. The book's chapter structure coincides with the clinical path patients tread during their treatment, from preoperative evaluation to post-hospital care. Epidemiological aspects and aging processes are illustrated, providing keys to understanding the quick expansion of geriatric surgery and defining the clinical profile of older surgical patients in a cybernetic perspective. Preoperative evaluation and preparation for surgery, including medication reconciliation and pre-habilitation, are developed in the light of supporting decision-making about surgery in an evidence-based and patient-focused way. Intra- and postoperative management are discussed, aiming to tailor anesthetic, surgical and nursing approaches to specific patients' needs, in order to prevent both general and age-related complications. This volume also addresses issues relevant to geriatric surgery, from different organizational models to clinical risk management and systems engineering

applied to hospital organization.

This volume presents a comprehensive, up to date and practical approach to creating an ERAS program for GI surgery. The first sections review the evidence underlying individual elements of ERAS, including evidence from laparoscopic procedures when available or pointing to evidence gaps where more research is required. These are written by experts in the field, including surgeons, anesthesiologists, nurses, and physiotherapists. The format is in the style of a narrative review, with narrative evidence review, and concluding with a table with “take home messages” and 3-5 key references for readers interested in more depth in each topic. Each chapter also addresses management of common complications and patient selection or exceptions. Subsequent chapters address practical concerns, including creation of a pathway team, project management and engaging administration. Experts contribute real-world examples of their pathways for a variety of procedures, including colorectal surgery, bariatric surgery, upper GI and hepatobiliary surgery, enabling the user to have a starting point for creating their own programs. The SAGES Manual of Enhanced Recovery Programs for Gastrointestinal Surgery will be of great value to fully trained surgeons, anesthesiologists, nurses and administrators interested in initiating an ERAS program.

This book is the first comprehensive, authoritative reference that provides a broad and comprehensive overview of Enhanced Recovery After Surgery (ERAS). Written by experts in the field, chapters analyze elements of care that are both generic and specific to various surgeries. It covers the patient journey through such a program, commencing with optimization of the patient’s condition, patient education, and conditioning of their expectations. Organized into nine parts, this book discusses metabolic responses to surgery, anaesthetic contributions, and optimal fluid management after surgery. Chapters are supplemented with examples of ERAS pathways and practical tips on post-operative pain control, feeding, mobilization, and criteria for discharge. Enhanced Recovery After Surgery: A Complete Guide to Optimizing Outcomes is an indispensable manual that thoroughly explores common post-operative barriers and challenges.