Acute Respiratory Distress Syndrome | 7309e7ea4989ce32f59b080043999bd2

Acute Respiratory Distress Syndrome

Kendig, Chernick’s Disorders of the Respiratory Tract in Children is the definitive medical reference book to help you confront critical challenges using the latest knowledge and techniques. You’ll get the state-of-the-art answers you need to offer the best care to young patients. Tackle the toughest challenges and improve patient outcomes with coverage of all the common and rare respiratory problems found in newborns and children worldwide. Get a solid foundation of knowledge to better understand and treat your patients through coverage of the latest basic science and its relevance to clinical problems. Get comprehensive, authoritative coverage on today’s hot topics, such as interstitial lung disease, respiratory disorders in the newborn, congenital lung disease, swine flu, genetic testing for disease and the human genome, inflammatory cytokines in the lung, new radiologic techniques, diagnostic imaging of the respiratory tract, and pulmonary function tests. Learn from the experts with contributions from 100 world authorities in the fields of pediatrics, pulmonology, neurology, microbiology, cardiology, physiology, diagnostic imaging, anesthesiology, otolaryngology, allergy, and surgery.

Pulmonary Circulation provides physicians with a better understanding of the structure, function and pathophysiology of the pulmonary circulation. It provides comprehensive coverage from diagnosis and clinical evaluation of patients with pulmonary hypertension to imaging techniques, disorders and treatment. This new edition incorporates the latest clinical, pathophysiological and pathological research on pulmonary circulatory disorders. In particular, it provides greater emphasis on the role of the right ventricle in pulmonary vascular disease, updated knowledge on pathobiology and genetics, and includes new material related to imaging and other diagnostic modalities. This edition also reflects new classifications and all the recommendations from the 2013 World Conference on Pulmonary Circulation as well as current guidelines from the European Society of Cardiology and the European Respiratory Society. Thoroughly updated to keep up with the brisk pace of discovery and emerging therapies, the book remains an essential resource by providing a balance between scientific review and clinically relevant guidelines for the busy practicing physician.

Proceedings of a NATO ASI held in Corfu, Greece, June 15-25, 1997

This issue of Critical Care Clinics will focus on Severe Acute Respiratory Distress Syndrome and dealing with it in the ICU. Topics will include: Challenges and Successes in ARDS Research; Mechanical ventilation with Lung Protective Strategies: What works?; Gene therapy for ALI/ARDS; High Frequency Oscillatory Ventilation in ALI/ARDS; Prone positioning therapy in ARDS; Recovery and Long-term outcome in ARDS; and Experimental models and emerging hypotheses for ALI and ARDS.

This book offers an essential guide to managing the most-debated hot topics of practical interest in anesthesia and intensive care. It reviews the state of the art in issues concerning both intensive care medicine and anesthesia, such as perioperative coagulation management, neuroaxial blockade and complications, postoperative pain management, pediatric airway management, septic shock and hemodynamic management, diagnosis and management of acute respiratory distress syndrome, and antifungal treatments for critically ill patients. Written by leading experts and including updated references, it provides a comprehensive, easy-to-follow update on anesthesia and intensive care. The book clearly explains complex topics, offering practicing clinicians valuable insights into the latest recommendations and evidence in the field while, at the same time, making it a vital resource for students new to the fields of anesthesia and intensive care.

Presents a fact sheet on adult (acute) respiratory distress syndrome (ARDS), provided by the American Lung Association. Discusses symptoms, incidence, causes, and treatment.
This major reference work is the most comprehensive resource on oncologic critical care. The text reviews all significant aspects of oncologic ICU practices, with a particular focus on challenges encountered in the diagnosis and management of the critically ill cancer patient population. Comprised of over 140 chapters, the text explores such topics as the organization and management of an oncologic ICU, diseases and complications encountered in the oncologic ICU, multidisciplinary care, surgical care, transfusion medicine, special patient populations, critical care procedures, ethics, pain management, and palliative care. Written by worldwide experts in the field, Oncologic Critical Care is a valuable resource for intensivists, advance practice providers, nurses, and other healthcare providers, that will help close significant knowledge and educational gaps within the realm of medical care for critically ill cancer patients.

Lung Epithelial Biology in the Pathogenesis of Pulmonary Disease provides a one-stop resource capturing developments in lung epithelial biology related to basic physiology, pathophysiology, and links to human disease. The book provides access to knowledge of molecular and cellular aspects of lung homeostasis and repair, including the molecular basis of lung epithelial intercellular communication and lung epithelial channels and transporters. Also included is coverage of lung epithelial biology as it relates to fluid balance, basic ion/flux molecular processes, and human disease. Useful to physician and clinical scientists, the contents of this book compile the important and most current findings about the role of epithelial cells in lung disease. Medical and graduate students, postdoctoral and clinical fellows, as well as clinicians interested in the mechanistic basis for lung disease will benefit from the book's examination of principles of lung epithelium functions in physiological condition. Provides a single source of information on lung epithelial junctions and transporters Discusses the role of the epithelium in lung homeostasis and disease Includes capsule summaries of main conclusions as well as highlights of future directions in the field Covers the mechanistic basis for lung disease for a range of audiences

In this book current knowledge of the pathophysiology of shock, sepsis and multi organ failure is presented. The rapid progress which has been made and the results achieved in intensive care medicine are based on sound basic research, which is duly reflected in these chapters. Multiorgan failure is the foremost cause of postoperative and posttraumatic death and many complex mechanisms are involved. Only with a good foundation of basic research can abnormalities in the physiological, biochemical, and morphological course of shock be recognized and the necessary conclusions for treatment drawn. Therapy must proceed from profound knowledge of the multi variant physiological events in order to influence shock, sepsis and organ failure. Although numerous possibilities for therapy have arisen from pharmaceutical research in recent years, they are beyond the scope of this book and are not discussed here. To gain a better understanding of the pathophysiological events it was necessary to examine and to describe different models that simulate and reproduce these events. Here we describe the causative agents (shock) and the consequences (sepsis, organ failure) in two main sections, divided on the basis of their pathophysiology.

This book provides a concise yet comprehensive overview of pediatric acute respiratory distress syndrome (PARDS). The text reviews the emerging science behind the new PARDS definition; explores epidemiology, pathobiology, etiologies, and risk factors; reviews state-of-the-art treatment modalities and strategies; and discusses clinical outcomes. Written by experts in the field, Pediatric Acute Respiratory Distress Syndrome: A Clinical Guide is a valuable resource for clinicians and practitioners who specialize in pediatric critical care.

Nunn’s Applied Respiratory Physiology.

Severe Community Acquired Pneumonia is a book in which chapters are authored and the same topics discussed by North American and European experts. This approach provides a unique opportunity to view the different perspectives and points of view on this subject. Severe CAP is a common clinical problem encountered in the ICU setting. This book reviews topics concerning the pathogenesis, diagnosis and management of SCAP. The discussions on the role of alcohol in severe CAP and adjunctive therapies are important topics that further our understanding of this severe respiratory infection.

A comprehensive one-stop reference for critical care medicine – bolstered by more than 500 Q&A McGraw-Hill Education Specialty Board Review: Critical Care Medicine is an evidence-based multidisciplinary perspective to critical care medicine. The format of each chapter consists of text followed by questions and answers. Authors from major academic centers discuss the basic principles of their field, along with the most recent studies. This unique review reflects the author’s belief that competency in critical care medicine is derived from multiple factors: an understanding of the basics of medicine, access to the most current evidence, clinical experience, and openness to palliative care. Features: • 500+ questions and answers, with detailed answer explanations • Covers all key topics on the ABIM Critical Care exam blueprint • Numerous high-quality images, including: x-rays, CT scans, and electrocardiograms • Essential for critical care fellows or intensivists studying for the critical care boards, as well as medical students, residents, and any other healthcare provider interested in critical care • Each of the 36 textbook-style chapters are followed by Q&A • Current guidelines from various specialties are incorporated, including their levels and/or grades of recommendation

This is the first book developed specifically for the Final FFICM structured oral examination. It is written by two senior
trainees who have recently passed the exam and is edited by a consultant intensivist with a special interest in education. The book is designed in the style of the SOE, and provides model answers which include summaries of the relevant evidence to guide trainees in their preparation for the exam. The 91 topics and questions therein are drawn from previous exam sittings, and are expanded further to ensure each topic is covered in detail. This text is a valuable revision aid to those studying for the Final FFICM, and will also prove useful to trainees revising for the Final FRCA, as it covers popular ICM topics that often come up in the anaesthetic fellowship exams.

Great progress has been made since the first description of the acute respiratory distress syndrome by the Denver group in 1967 (Lancet). Although we introduced the term adult respiratory distress syndrome in our second and more detailed description of the syndrome (chest, 1971), this was probably a mistake for the simple reason that children also suffer the same syndrome following acute lung insults. Today, the syndrome of acute respiratory distress in adults (ARDS) is recognized as a worldwide problem, but the prevalence of disease varies in different parts of the world. A huge amount of research has focused on the mechanisms of acute lung injury and yet the exact sequence of events and mediators in inflammatory cascade, which result in acute respiratory failure from ARDS, is not known but many possibilities exist. The definition of ARDS has been gradually modified in recent years and investigators around the world are now collaborating in order to establish more uniform concepts in identification, risk factors and mechanisms of lung injury, which someday will result in improved approaches to management. Already, at least some centers are showing improved outcomes in ARDS, achieving an approximate 60% survival rate. In the past, most large series documented only about a 40% survivability taking all causes of ARDS. This apparent progress is likely attributable to more meticulous and disciplined care than any specific pharmacologic attack on the basic mechanism resulting in ARDS.

The ESC Textbook of Intensive and Acute Cardiovascular Care is the official textbook of the Acute Cardiovascular Care Association (ACVC) of the ESC. Cardiovascular diseases (CVDs) are a major cause of premature death worldwide and a cause of loss of disability-adjusted life years. For most types of CVD early diagnosis and intervention are independent drivers of patient outcome. Clinicians must be properly trained and centres appropriately equipped in order to deal with these critically ill cardiac patients. This new updated edition of the textbook continues to comprehensively approach all the different issues relating to intensive and acute cardiovascular care and addresses all those involved in intensive and acute cardiac care, not only cardiologists but also critical care specialists, emergency physicians and healthcare professionals. The chapters cover the various acute cardiovascular diseases that need high quality intensive treatment as well as organisational issues, cooperation among professionals, and interaction with other specialities in medicine. SECTION 1 focusses on the definition, structure, organisation and function of ICU's, ethical issues and quality of care. SECTION 2 addresses the pre-hospital and immediate in-hospital (ED) emergency cardiac care. SECTIONS 3-5 discuss patient monitoring, diagnosis and specific procedures. Acute coronary syndromes (ACS), acute decompensated heart failure (ADHF), and serious arrhythmias form SECTIONS 6-8. The main other cardiovascular acute conditions are grouped in SECTION 9. Finally SECTION 10 is dedicated to the many concomitant acute non-cardiovascular conditions that contribute to the patients' case mix in ICU. This edition includes new chapters such as low cardiac output states and cardiogenic shock, and pacemaker and ICDs: troubleshooting and chapters have been extensively revised. Purchasers of the print edition will also receive an access code to access the online version of the textbook which includes additional figures, tables, and videos to better illustrate diagnostic and therapeutic techniques and procedures in IACC. The third edition of the ESC Textbook of Intensive and Acute Cardiovascular Care will establish a common basis of knowledge and a uniform and improved quality of care across the field.

'provides an excellent introduction to the management of acute illness for all clinical staff, and a solid foundation for those who choose to make ICM a fulfilling life-long career.' From the Foreword by Julian Bion, Professor of Intensive Care Medicine, University of Birmingham Ideal for any medic or health professional embarking upon an intensive care rotation or specialism, this simple bedside handbook provides handy, pragmatic guidance to the day-to-day fundamentals of working in an intensive care unit, often a daunting prospect for the junior doctor, nurse and allied health professional encountering this challenging environment for the first time. Thoroughly updated, the second edition addresses recent and future developments in a variety of areas and is now organised into easy-to-read sections with clearly outlined learning goals. New topics added include sepsis, ARDS, refractory hypoxia, the role of allied health professionals, post ICU syndrome and follow up, and consent and capacity including new DOLS guidance. The book is authored by world-renowned contributors and edited by established consultants in the field of intensive care medicine.

Now in paperback, the second edition of the Oxford Textbook of Critical Care addresses all aspects of adult intensive care management. Taking a unique problem-orientated approach, this is a key resource for clinical issues in the intensive care unit.

Part of the Mount Sinai Expert Guide series, this outstanding book provides rapid-access, clinical information on all aspects of Critical Care with a focus on clinical diagnosis and effective patient management. With strong focus on the very best in multidisciplinary patient care, it is the ideal point of care consultation tool for the busy physician.
Respiratory diseases affect a large proportion of the population and can cause complications when associated with pregnancy. Pregnancy induces profound anatomical and functional physiological changes in the mother, and subjects the mother to pregnancy-specific respiratory conditions. Reviewing respiratory conditions both specific and non-specific to pregnancy, the book also addresses related issues such as smoking and mechanical ventilation. Basic concepts for the obstetrician are covered, including patient history, physiology and initial examinations. Topics such as physiological changes during pregnancy and placental gas exchange are discussed for the non-obstetrician. Guidance is practical, covering antenatal and post-partum care, as well as management in the delivery suite. An essential guide to respiratory diseases in pregnancy, this book is indispensable to both obstetricians and non-obstetric physicians managing pregnant patients.

This two-volume book offers a comprehensive guide to anesthetic management and critical care management in neurosurgical and neurological patients. This second volume focuses on neurocritical care. The book begins with basic information on the principles of neurocritical care. Management of various neurological problems such as myasthenia gravis, Guillain-Barré syndrome, epilepsy, stroke and many more are discussed in detail. Subsequent sections address nursing care, physiotherapy and psychological care, issues related to brain death and organ donation, and common complications observed in neurological patients during their ICS stays. Each complication is discussed in detail, guiding readers in their clinical practice. In turn, the book’s closing chapters cover e.g. the role of hypothermia and evidence-based practice. The book offers a valuable resource for all residents, fellows and trainees in the fields of neurointensive care and critical care; it will also benefit intensivists and neurocritical care experts.

This reference surveys current best practices in the prevention and management of ventilator-induced lung injury (VILI) and spans the many pathways and mechanisms of VILI including cell injury and repair, the modulation of alveolar-capillary barrier properties, and lung and systemic inflammatory consequences of injurious mechanical ventilation. Considering many emerging therapeutic options, this guide also reviews the wide array of clinical studies on lung protection strategies and approaches to ARDS patients at risk for VILI.

This text provides a comprehensive, state-of-the-art review of this field, and will serve as a valuable resource for clinicians, surgeons and researchers with an interest in surgical critical care. The book reviews up to date data regarding the management of common problems that arise in the Surgical Intensive Care Unit. The protocols, care bundles, guidelines and checklists that have been shown to improve process measures, and in certain circumstances, are discussed in detail. The text also discusses several well designed randomized prospective trials conducted recently that have altered the way we care for surgical patients with traumatic brain injury, hemorrhagic shock, acute respiratory distress syndrome, and sepsis. This book provides the practicing physician with a clinically oriented practical approach to handle basic and complex issues in the Surgical Intensive Care Unit. This text will serve as a very useful resource for physicians dealing with critically ill surgical patients. It provides a concise yet comprehensive summary of the current status of the field that will help guide patient management and stimulate investigative efforts. All chapters are written by experts in their fields and include the most up to date scientific and clinical information. This text will become an invaluable resource for all graduating fellows and practicing physicians who are taking the surgical critical care board examinations.

ARDS: A Comprehensive Clinical Approach focuses on the clinical assessment and management of patients with ARDS.

This issue of Critical Care Clinics, guest edited by Drs. Michael Matthay and Kathleen Dori Lui, focuses on Acute Respiratory Distress Syndrome. This is one of four issues each year selected by the series consulting editor, Dr. John Kellum. Articles in this issue include, but are not limited to: Epidemiology, Environmental Factors, Clinical Diagnosis, Physiology of ARDS, including COVID-19, Pathogenesis Based on Clinical Studies, Genetics of ARDS, Ventilator Management and Rescue Therapy with ECMO, Acute Kidney Injury and ARDS, Pharmacologic Therapies and ARDS and Long Term Outcomes from ARDS. Provides in-depth, clinical reviews on ARDS, providing actionable insights for clinical practice. Presents the latest information on this timely, focused topic under the leadership of experienced editors in the field; Authors synthesize and distill the latest research and practice guidelines to create these timely topic-based reviews.

Concise yet comprehensive, this textbook of clinical pulmonology provides pulmonologists and respiratory disease physicians with all the key information that they need to know to manage the patient through the diagnosis and treatment journeys. From the most common condition to the rarest, each disease is consistently presented and comprehensively covered giving the reader just the key facts. Building upon the basic sciences and integrating these with clinical practice, each chapter has a consistent approach, is highly designed and visually appealing. Numerous illustrations, colour photographs, scans, bullet points, tables and algorithms ensure that the key information is available at a glance. The keynote sections serve as a useful revision aid as do the multiple choice questions. A truly international and highly experienced editorship with expert contributors from around the world ensure that the book remains a trusted source of information. * Concise yet thorough coverage ensures that the book is comprehensive in its approach * Each chapter is very consistent, synoptic and gives the key
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- Prone Positioning in ARDS

Extracorporeal membrane oxygenation (ECMO) has evolved into an exciting and valuable tool to assist in the management of patients experiencing cardiogenic shock, severe acute respiratory failure, or often a combination of both. While outcomes remain less than ideal, they continue to improve with team experience, better patient selection, and a growing understanding of the nuances of managing patients who require mechanical circulatory support. Patients requiring ECMO are often extremely sick and have complex problems - initiating therapy before the development of end-organ damage is critical.

Without doubt, teamwork, guidelines, and protocols are cornerstone concepts for clinical and program success - all topics that are emphasized in this text. The goals of this text are to further outline topics that help address some of the key challenges providers face when considering and applying extracorporeal support therapies to the evolving spectrum of acutely ill patients.

The novel coronavirus 2019 (COVID-19) has caused a serious global pandemic in just eight months. Nearly every country and territory in the world has been affected by the virus. The virulence and infection rate of the virus are profound, and has required extreme social distancing measures across the globe in order to prevent overwhelming the healthcare services and hospitals. COVID-19 appears to have the greatest effects on elderly individuals and those who have co-morbid diseases, such as heart disease, asthma, and diabetes. As the peak begins to slow in many countries, the death rates remain high amidst justified fears of a second wave. A rapid worldwide mobilization has begun to identify effective treatments and develop vaccines. This new volume will increase readers understanding of the ongoing COVID-19 pandemic through a series of chapters that address these concerns. Leading experts will discuss the effects of the virus in cases of co-morbidities, new treatment approaches, mental health aspects of the pandemic, and convey the results of survey studies. The book will be an excellent resource for researchers studying virology, metabolic diseases, respiratory disorders, and clinical scientists, physicians, drug companies, and healthcare services and workers.

The acute respiratory distress syndrome (ARDS) is a complex disorder associated with rapidly progressive lung inflammation, non-cardiogenic pulmonary edema, hypoxemic respiratory failure and one or more well-defined risk factors including sepsis and severe trauma. Since its original description in 1967, experimental and clinical evidence has provided considerable insight into the key roles deregulated systemic inflammation and coagulation play in this devastating clinical syndrome. Despite substantial advances in our understanding of the pathogenesis of ARDS, until recently, little progress had been made in uncovering clinical strategies to improve the outcome of patients with ARDS. However, over the past 10 years protective ventilation and other supportive management strategies have been identified that markedly improve the outcome in ARDS. More recently, research has identified patients at risk for the development of the syndrome. Currently, clinical trials are underway.

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list of terms, abbreviations, and acronyms. Unfortunately, this has made it extremely difficult for clinicians at all levels of training to truly understand mechanical ventilation and to optimally manage patients with respiratory failure. Mechanical Ventilation was written to address these problems. This handbook provides students, residents, fellows, and practicing physicians with a clear explanation of essential physiology, terms and acronyms, and ventilator modes and breath types. It describes how mechanical ventilators work and explains clearly and concisely how to write ventilator orders, how to manage patients with many different causes of respiratory failure, how to “wean” patients from the ventilator, and much more. Mechanical Ventilation is meant to be carried and used at the bedside and to allow everyone who cares for critically-ill patients to master this essential therapy.

This book covers all clinical aspects of acute respiratory distress syndrome (ARDS), from definition to treatment, focusing on the more recent recommendations and evidence-based medicine. The addressed topics are the various ventilation strategies, the impact of prone positioning, the use of partial and total extracorporeal support, the value of vasodilators, the weaning from mechanical ventilation, the pharmacological interventions, noninvasive ventilation, and the strategies using anti-inflammatory agents and stem cells. Furthermore, different related topics are also discussed, such as lung imaging, sedation, metabolic support, and hemodynamic instability. A concluding chapter specifically addresses ARDS in children. This up-to-date volume, written by experts in the field, will be of value for all health care practitioners seeking state of the art on the management of patients with this complex syndrome.

Written by a pioneer in critical care ultrasound, this book discusses the basic technique and “signatures” of lung ultrasound and explains its main clinical applications. The tools and clinical uses of the BLUE protocol, which allows diagnosis of most cases of acute respiratory failure, are first described in detail. Careful attention is then devoted to protocols derived from the BLUE protocol – the FALLS protocol for diagnosis and management of acute circulatory failure, the Pink protocol for use in ARDS, and the SESAME protocol for use in cardiac arrest – and to the LUCI-FLR program, a means of answering clinical questions while reducing radiation exposure. Finally, the book discusses all the possible settings in which lung ultrasound can be used, discipline by discipline and condition by condition. Lung Ultrasound in the Critically Ill comprehensively explains how ultrasound can become the stethoscope of modern medicine. It is a superb complement to the author’s previous book, Whole Body Ultrasonography in the Critically Ill.

This book presents a concise, evidence-based review of extracorporeal life support (ECLS) for adult diseases. It describes the use of ECLS with patients who are experiencing severe hypoxemic respiratory failure (ARDS and pneumonia), ventilatory failure (status asthmaticus and COPD), cardiogenic shock and circulatory or gas exchange failure following complications in cardiothoracic surgery, as well as its use as a bridge to lung transplant. Historically, clinicians have used ECLS as a last resort; however, this text details the technological improvements, evidence of improved outcomes and adverse consequences of alternative treatments that are causing this modality to be more commonly adopted. Topics include a description of the complex physiology and technology underlying ECLS; the evidence base for its use in specific clinical conditions; vascular access techniques; daily management of the circuit and patient; guidance regarding the weaning and decannulation process and recommendations for crisis management and rehabilitation related to ECLS. Extracorporeal Life Support for Adults is ideal reading for practicing physicians, nurses, perfusion specialists, therapists and critical care trainees who are considering whether to refer their patients for ECLS or are already providing ECLS and are seeking a practical reference to best practices and updated information.

Acute resuscitation and care of unstable and critically ill patients can be a daunting experience for all trainees in the emergency department or the intensive care unit. The practical, easy-to-read and evidence-based information in Practical Emergency Resuscitation and Critical Care will help all physicians understand and begin management of these patients. This book offers the collaborative expertise of dozens of critical care physicians from different specialties, including but not limited to: emergency medicine, surgery, medicine and anaesthesia. Divided into sections by medical entities, it covers essential topics that are likely to be encountered in the emergency department where critical care often begins. The portable format and bullet point style content allows all practitioners instant access to the principle information that is necessary for the diagnosis and management of critical care patients.

THE DEFINITIVE GUIDE TO INPATIENT MEDICINE, UPDATED AND EXPANDED FOR A NEW GENERATION OF STUDENTS AND PRACTITIONERS A long-awaited update to the acclaimed Saint-Frances Guides, the Saint-Chopra Guide to Inpatient Medicine is the definitive practical manual for learning and practicing inpatient medicine. Its end-to-end coverage of the specialty focuses on both commonly encountered problems and best practices for navigating them, all in a portable and user-friendly format. Composed of lists, flowcharts, and "hot key" clinical insights based on the authors’ decades of experience, the Saint-Chopra Guide ushers clinicians through common clinical scenarios from admission to differential diagnosis and clinical plan. It will be an invaluable addition -- and safety net -- to the repertoire of trainees, clinicians, and practicing hospitalists at any stage of their career.

Most patients with critical cardiac or thoracic conditions will at some stage pass through the cardiothoracic critical care
Critical care presents more complex clinical data than any other area of medicine. The new edition of Core Topics in Cardiothoracic Critical Care focuses on the latest practise in the management of patients in cardiothoracic intensive care. The practice of cardiothoracic critical care medicine is constantly evolving, and this new edition reflects the modernized learning styles for trainees. Each chapter includes key learning points as well as sample multiple choice questions and answers to assist in exam preparation. This edition also features updated chapters on ECMO, perioperative management of patients undergoing emergency cardiothoracic surgery, and advanced modes of organ support for patients. This text provides key knowledge in a concise and accessible manner for trainees, clinicians and consultants from specialities and disciplines such as cardiology and anaesthesia, and nursing and physiotherapy.

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