REVIEWS OF EDUCATIONAL MATERIAL

David O. Warner, M.D., Editor


For more than 60 yr, the University of Texas M. D. Anderson Cancer Center (Houston, Texas) has worked toward the goal of eliminating cancer. For physicians at institutions such as this, the unique challenges encountered while caring for cancer patients are often well understood. Increasingly, however, those who are not familiar with this population are being called on to provide care in a variety of clinical settings. As perioperative physicians, anesthesiologists, intensivists, and pain medicine specialists, we frequently find ourselves members of the multidisciplinary team caring for the oncology patient. Added to an increased frequency of encounters is the rapidly expanding complexity of oncologic therapy. As acute care physicians find themselves more and more involved, a comprehensive and up-to-date resource becomes increasingly valuable. Fortunately, Andrew Shaw, M.D. (Associate Professor, Department of Anesthesiology, Duke University Medical Center, Durham, North Carolina), and colleagues have provided this resource with their new text, Acute Care of the Cancer Patient.

The goal of this first edition is to address the many concerns that arise when managing acutely ill cancer patients. Although it is a daunting task, Dr. Shaw seems to have succeeded in grand fashion. From the anesthesiologist performing the preoperative evaluation to the internist seeking assistance with a patient’s end-of-life care, the text balances an extraordinary scope of practice with an acceptable level of detail. The contents include 58 chapters, organized in five sections beginning with the general principles of oncology and closing with pain management and palliative care. Included in between are sections on the perioperative care of patients undergoing surgical cancer resection, acute medical problems encountered by cancer patients, and a section dedicated to pediatric oncology. Although chapter placement is not always intuitive (e.g., Endocrine Evaluation and Management of the Perioperative Cancer Patient and Bone Marrow Transplantation Complications Requiring Therapy in the Intensive Care Unit in the section relating to the general principles of oncologic practice), the text is otherwise well organized, well written, and easy to follow.

While the first section provides a nice detail of general oncologic principles and therapeutic means, anesthesiologists will find the second section particularly useful. In addition to addressing the preoperative anesthetic evaluation and the care of patients undergoing surgical cancer resection, there are excellent descriptions of the stress response, immunomodulation, inflammation, coagulation, and endothelial dysfunction. These issues have become increasingly important to anesthesiologists, and because few editions of current anesthesia texts provide an adequate discussion, Dr. Shaw and colleagues have proven themselves ahead of the game. Further discussions on the perioperative management of spinal tumors, head and neck cancer, and thoracic malignancies also deserve special mention. Although all chapters are well written and informative, I found these three particularly well done and very clinically applicable.

The third section of this text is dedicated to the acute medical problems encountered by cancer patients, specifically as they pertain to critical care physicians. Although concerns regarding this population are indeed well addressed, intensivists will find the impressive compilation of current literature much more generalizable. A partial list of the recent “hot topics” discussed includes lung-protective ventilation, early goal-directed therapy, transfusion thresholds, noninvasive ventilation, tight glycemic control, and perioperative β blockade. In addition, the chapters on caring for patients with pulmonary infiltrates and respiratory failure and mechanical ventilation are impressively thorough and, again, very clinically useful. Although the relevant literature is occasionally missing (e.g., outcome data on a variety of the “advanced ventilatory techniques”), this should not detract from the overall value of this book. It would be impractical to expect such a detailed collection of literature in a single text without sacrificing the breadth of topics discussed. For those looking for more detail, an extensive list of references will certainly lead readers in the right direction.

The fourth and fifth sections of this book center their discussions on the care of pediatric oncology patients and on pain management and palliative care, respectively. Section four provides an excellent overview of the unique issues pertaining to the care of pediatric patients, and the fifth and final section successfully addresses the important issues of pain management and palliative care. With the current focus on effective pain management and quality end-of-life care, such discussions in a book pertaining to the care of acutely ill cancer patients are imperative. Once again, the authors provide the relevant clinical information in a manageable, easy-to-read format.

In closing, Dr. Shaw and colleagues have both efficiently and effectively addressed many of the unique concerns regarding the acute care of cancer patients. Although the book is not adequate (or intended) as a stand-alone text for the practice of perioperative medicine or critical care, I believe it to be a superb supplemental text for those wishing to understand the special issues with this patient population. While the intended audience includes internists, anesthesiologists, and intensivists, I suspect numerous others will find the book a useful addition to their library. I congratulate Dr. Shaw and his colleagues on a job well done.

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As the text on the back cover of this little volume asserts: “many anesthetists secretly regard pharmacokinetic and pharmacodynamics as arcane and devilishly difficult mathematical sciences.” There is some truth in the assertion, and with this slim book, Dr. Woerlee has attempted to educate these reluctant individuals. He tries to show how enlightening it can be to have clinical phenomena explained using the tools provided by pharmacokinetic and pharmacodynamic science. Despite the title, the book is not really comprehensive enough to be considered a guide, nor is it a text or even a primer. It is not a novel but perhaps a collection of short stories, in each of which a training anesthesiologist and his mentor encounter clinical problems. The mentor uses the clinical problem to enlighten the trainee through the application of pharmacokinetic and pharmacodynamic techniques.

The book is an easy read; it is 80% short story and (perhaps) 20% science. The storytelling depicts scenarios that will seem slightly unfamiliar to both North American and United Kingdom anesthesiologists but they are easily “translated” into the operating room culture of either. The stories contain detail that can, at times, become annoyingly repetitive—one can be left with the impression that coffee drinking is the highest priority in the operating room.

The book is quite effective at showing how pharmacokinetic concepts can be effective at explaining the time course of drug effects when they are nonintuitive. The explanations offered are
mainly at the level of verbal logic. The mathematics are given just
the briefest mention and are far from comprehensive. For the stated
purpose of the book, I think the balance between verbal logic and
math is about right. The concepts involved in choosing a model and
determining its parameters are not covered. The book is mainly
devoted to pharmacokinetics, and just one chapter is given to
pharmacodynamics. The pharmacodynamic chapter introduces the
concept of link compartment models, whereas concentration–re-
sponse curves are not covered. Another neglected area that Dr.
Woerlee could usefully have covered is that of the interaction
between duration of drug administration and pharmacokinetics
(e.g., in the concept of a context-sensitive half-time).

When considering the question of who should buy the book, it is
easier to say who should not buy it. The book will not appeal to those
with an interest in or expertise in pharmacokinetics, because they will
learn nothing from it. It also will not be of interest to those who wish
to study or learn pharmacokinetics, because it skims over the surface
of the science. Perhaps the book will be most useful in the library, from
where it can be borrowed by anesthetic neophytes, perhaps on the
recommendation of their mentors.

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