Cancer Neurology in Clinical Practice, 2nd ed

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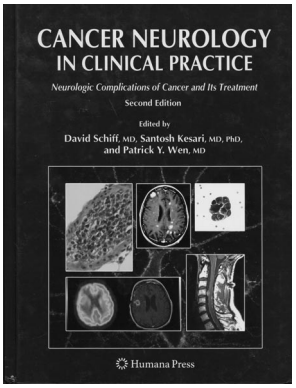
BOOK REVIEW

Cancer Neurology in Clinical Practice, 2nd ed

D. Schiff, S. Kesari, and P.Y. Wen, eds. Totowa, NJ: Humana Press; 2008, 636 pages, 152 illustrations, $169.00.

The multidisciplinary specialty of neuro-oncology encompasses the fields of neurosurgery, neuro-oncology, radiation oncology, medical oncology, neuropathology, and neuroradiology. The multidimensional physical, medical, and emotional needs of the patient in the care of neuro-oncologist also require social services, physical and occupational therapy, rehabilitation medicine, neuropsychology, pain management, palliative care, and hospice care. The continued growth of the Society for Neuro-Oncology, since its origination in 1996, to include more than 900 members from these various specialties is a reflection on the recognition of this important specialty. The neuro-oncology team exemplifies multidisciplinary care of a patient with cancer. The neuroradiologist has an increasingly important role as the technology advances to allow for evaluation of tumor type and grade, anatomic extent of the tumor, treatment response, and differentiation of recurrent tumor from infection or treatment-related injury. Metabolic imaging with positron-emission tomography, single-photon emission tomography, and MR-spectroscopy continues to play an important role in differentiating recurrent tumor from treatment related changes. Diffusion-weighted imaging (DWI) and perfusion-weighted imaging (PWI) may help differentiate metastatic tumors from high-grade gliomas and cystic tumors from abscesses. Neuroimaging may be helpful for other cancer-related diagnoses such as paraneoplastic syndromes, toxic and nutritional disorders, infections, and vascular disease. The neuroradiologist provides expertise that allows the neuro-oncology team to establish a diagnosis and treatment plan for the patient.

*Cancer Neurology in Clinical Practice i*s the second edition of a multi-authored book by Dr. David Schiff, Dr. Santosh Kesari, and Dr. Patrick Wen. The purpose of this book is to provide a comprehensive, multidisciplinary review of the management of the neurologic complications of cancer. Whereas many of the available books in neuro-oncology emphasize primary tumors of the nervous system, this recent publication is an invaluable reference for any member of the neuro-oncology team involved in the care of a patient with cancer and neurologic symptoms. The primary authors are well recognized for their expertise in neuro-oncology as reflected in their selection of topics; the organization of the book; and, most importantly, in the selection of the contributing authors.



Dr. Jerome Posner, honorably credited as one of the founding fathers of neuro-oncology, discussed the importance of identifying and treating neurologic problems in patients with cancer in the Foreword of the first edition, and Dr. van den Bent once again emphasized this concept in the Foreword of the second edition. Many specialists interested in neurologic oncology have treasured the monograph entitled *Neurologic Complications of Cancer* published in 1995 by Dr. Posner. The text covered in this review provides an in-depth updated review of many of the topics first discussed by Dr. Posner. Comparison of the 2 publications is bound to create a sense of awe at the progress achieved during the past 13 years in this developing field. The authors accomplish the detailed coverage of this multifaceted specialty in this 636-page book by dividing the contents into 7 parts: 1) Overview, 2) Diagnostic Studies, 3) Neurologic Symptoms, 4) Direct Complications of Cancer, 5) Indirect Complications of Cancer, 6) Complications of Cancer Therapy, and 7) Neurologic Complications of Specific Malignancies.

The value of this book is best appreciated by highlighting the 32 chapters The first section, "Overview," includes a single brief chapter emphasizing the prevalence and effect of neurologic symptoms in patients with cancer.

Neuroradiology is presented in the second section, "Diagnostic Studies," as a single chapter. The content of this chapter is thoughtful but not plentiful. The neuroimaging of brain metastases is discussed in pitfalls and strategies to improve detection of brain metastases and the application of MR-spectroscopy, DWI, and PWI. Meningeal cancer, epidural spinal cord compression, and a very brief discussion of paraneoplastic syndromes complete this chapter. The 11 figures containing neuroimaging are well chosen but limited. Many examples of neuroimaging are presented elsewhere in this book, but the reader may not be able to find desired information regarding the multitude of applications that neuroimaging provides in neuro-oncology by referring to this chapter.

Part 3, "Neurologic Symptoms," includes 6 thoughtful chapters discussing clinically relevant topics: seizures and the issues regarding the use of antiepileptic drugs, corticosteroids, headaches, confusion and delirium, cognitive dysfunction, mood disorders, and cancer-related pain. The information in this section is consistently insightful and balanced, and it represents evidence-based medicine. The tables are well organized and useful. The references are extensive and well chosen.

The direct metastatic effects of cancer are presented within the 5 chapters of the fourth part of this book. The chapters on skull and dural metastases (chapter 10) and leptomeningeal metastases (chapter 12) are especially well presented. The various neurologic syndromes associated with tumors at the base of the skull are reviewed, and examples of neuroimaging and illustrations of pathologic processes make this a very special chapter. Seeing a patient presenting with Collet-Sicard syndrome on the day this review was written illustrates the clinical usefulness of this book.

The section on the indirect effects of cancer naturally follows and includes 2 chapters, one discussing cerebrovascular complications of cancer and the second on paraneoplastic syndromes. The chapter on paraneoplastic syndromes (chapter 15) provides an excellent update on this topic, including important information regarding the antibodies associated with the various syndromes. There are 12 beautiful color plates that

provide photographs and illustrations of pathologic processes, clinical findings, and neuroimaging.

Part 6 consists of 4 chapters reviewing the complications of radiation therapy and chemotherapy, the neurologic complications of stem cell transplantation, and infections of the nervous system in patients with cancer. There are 250 references that reflect the completeness of the discussion on radiation therapy in chapter 16. Chapter 17 provides a comprehensive, updated review of the neurologic toxicity of the various chemotherapy agents, including the more traditional agents and the newer agents such as biologic therapies, monoclonal antibodies, hormonal therapies, and small molecular inhibitors. The reference list citing 420 references speaks to the depth of this review. Chapter 18 is one of the most useful chapters in this book and provides a superb reference of the neurologic complications of stem cell transplantation. This single chapter will be highly useful for any physician caring for this patient population.

The last section of this book includes 13 chapters addressing the neurologic complications of specific malignant tumors. Each chapter provides the reader with an excellent review of how a particular malignant tumor and its treatment may interact with the nervous system. Each chapter attempts to address the biologic behavior of the tumor as it pertains to the nervous system, direct neurologic complications of metastatic disease, indirect effects of paraneoplastic syndromes, and the neurologic toxicity of treatment. Primary brain tumors, lung cancer, breast cancer, cancers of the female reproductive tract, tumors of the genitourinary tract, gastrointestinal tract tumors, sarcomas, head and neck cancers, melanoma, leukemia and lymphoma, plasma cell dyscrasias, and pediatric cancer are featured. This perspective is particularly helpful for the medical oncologist and the neurologist seeing patients with cancer in consultation.

The book is organized by an elaborate numbering system representing each topic and subtopic. Each topic is also titled. This system allows for rapid skimming of the material. The chapters are also all very well organized. This arrangement helps compensate for an adequate but limited index.

Although this book is appropriate for all members of the neuro-oncology team, it will be most useful for the neurologist and medical oncologist caring for patients with systemic cancer. The tables are excellent. The neuroimaging is well chosen but limited, and the reader will notice the discrepancy between the richness of the content of the written text and the relative paucity of neuroimaging. This is particularly true because neuroimaging has become such an important part of neuro-oncology. Although one may conclude that the neuroradiologist may therefore find limited interest in this book, the richness of this text provides the neuroradiologist with the clinical information necessary for him or her to contribute to the care of the patient with cancer and neurologic symptoms.

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