

A reflection of progress and hope

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Handbook of Brain Tumor Chemotherapy

Edited by Herbert B. Newton, MD

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In the preface to *The Handbook of Brain Tumor Chemotherapy*, the editor, Dr. Herbert Newton, writes that the book was inspired by the explosive growth in the field. Indeed, the field has come a long way, especially considering that using chemotherapy in many of these patients was seen, until recently, as heroic and even unjustified. What has resulted from these advances and Dr. Newton's inspiration is a multi-authored text that comprehensively reviews the pharmacology, molecular biology, and clinical trials of chemotherapeutics for patients with primary—and to a lesser degree—metastatic brain tumors.

The book is divided into four parts, starting with "Pharmacology and Clinical Applications." In this section, chapters are devoted to brain tumor epidemiology and pathologic diagnosis, brain tumor models, drug development, and drug interactions. The chapter on chemotherapy and antiepileptic drug interactions is excellent and offers not only practical advice for the clinician, but also a discussion of the impact of treatment decisions on the cost of cancer care. Also of note are clear and concise reviews of chemotherapy resistance mechanisms in brain tumors and clinical trial design. The discussion regarding novel endpoints for brain tumor trials is particularly relevant.

The section "Molecular Biology and Basic Science" takes the reader from apoptosis and angiogenesis to signaling pathways and the biology

of the blood-brain barrier. Included are discussion of molecular targeting agents that will likely become the next generation of therapeutics for brain tumors and that may very well eclipse the standard chemotherapeutics focused on in this book. As with any volume on a developing topic, some of the information is already out of date. In this book, that's especially true with regard to novel agents.

The section titled "Innovative Approaches to Chemotherapy Delivery" covers already well-described delivery systems such as intra-arterial chemotherapy, polymer-drug delivery, and intratumoral drug administration. This section would have been enhanced by more information on up-and-coming innovations such as microchip drug delivery and nanocarrier systems, discussed at the end of the chapter authored by Haque et al.

The final section has individual chapters devoted to chemotherapy for specific tumor types. The uniform format of these chapters consists of a review of published clinical trials with tables listing trial regimens, reference, number of patients enrolled, and outcome. These tables will be useful to any reader needing a historical perspective. In the case of high-grade glial tumors, the long list of trials testifies to the tenacity of investigators and patients in the face of minimal to little success.

Aside from the chapter on primary central nervous system lymphoma, which provides an algorithm for ther-

apy, other chapters on specific tumors serve as reference sources but do not provide clear direction for the clinician. This partially reflects the limited number of patients and trial outcomes that preclude making firm treatment recommendations. The chapter on mixed oligoastrocytomas is noteworthy. Although no trials have been conducted specifically for this tumor population, the authors review trials that included these patients and pull out the pertinent data. While leading to some redundancy with other chapters, this is a step toward understanding the unique behavior of these tumors. Similarly, the chapter on the rare glioneuronal tumors, although not offering any treatment recommendations, nicely summarizes the available literature.

Although this text can't be carried around for quick reference, it does provide a comprehensive overview of most of the literature pertaining to chemotherapy and brain tumors. Some of the figures are out of focus and should be improved in the next edition. The publisher placed black-and-white figures within the chapters and repeated them as color plates at the end of the book. However, the color plates are only labeled with numbers and not legends, so the reader is forced to flip back and forth.

In short, the *Handbook of Brain Tumor Chemotherapy* reflects the hope of recent advances in the treatment of brain tumors and will serve as a solid resource for readers.