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BOOK REVIEW

Progress in Neurological Surgery (Vol. 30–32)Editors: Chernov MF, Muragahi Y, Kesari S, McCutcheon I.E. (2018), ISBN: 978-3-318-06074-4 Karger

Andrew H. Kaye[1] · Andrew Morokoff[1]

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This book provides a comprehensive overview of intracranial gliomas and succeeds in being concise, informative, and up-to-date. It is a part of a larger series called *Progress in Neurological Surgery*, edited by L. Dade Lunsford, and this book has volumes 30, 31, and 32 of that series. The three volumes—Surgery, Adjuvant Therapy, and Innovative Treatment Modalities—have 11, 16, and 17 chapters in each respectively. The editors have assembled a formidable collection of expert chapter authors, many of whom are well known to be world leaders in the field.

The first volume is especially useful to the operating neurosurgeon and would provide a brilliant resource for the senior neurosurgical resident. Epidemiology is covered in the first chapter followed by a very comprehensive and well-explained chapter on radiology for brain tumors including all the MRI techniques and novel imaging modalities such as FET-PET. There is a chapter on the value of complete resection and then, chapters on gliomas in "difficult" locations such as eloquent cortex, the insula, and deep basal ganglia. I found this part invaluable and do not think I have seen an equivalent in other textbooks. The diagrams here are mostly very good, but there is one or two that were a bit hard to interpret. The insula chapter does require some prerequisite knowledge of complex white matter pathways. The chapter on virtual reality simulation is interesting but sits a bit out of place with the others. The volume then ends with excellent chapters on management of pediatric gliomas and recurrent gliomas and the role of biopsy. There is a general promotion of more aggressive surgery throughout this volume but it highlights where and how specialist centers are pushing the boundaries of what can be achieved.

The second volume on adjuvant therapy starts with a concise summary of the pathology and genetics of glioma before moving on to chapters on radiotherapy (fractionated, radiosurgery, brachytherapy) and then, a chapter on radiosensitizers, which mostly discusses temozolomide, but briefly PARP inhibitors, amongst a few others. Chemotherapy for high and low grade gliomas, children and oligodendrogliomas is covered as well as anti-angiogenic treatments, before a very informative perspectives chapter on "challenges and hopes" of discovering novel chemotherapeutic agents for glioma. The volume closes with two areas that are often overlooked: rehabilitation and palliative care for glioma patients.

The third volume starts by covering a variety of tumor-ablative techniques including photodynamic therapy, laser interstitial ablation, cryotherapy, high-intensity focused ultrasound, boron-neutron capture therapy, and proton/carbon ion therapy. Many of these techniques are interesting from a historical technology development viewpoint, but they are only in use in a few specialized centers today. Others do not have a record of use in glioma; for instance, focused ultrasound has only been trialed once in human GBM with serious adverse consequences and has been more commonly applied to neurological conditions like tremor. The chapter on novel molecular targeted therapies is an excellent and balanced summary of a huge field and even devotes a paragraph to the idea of cannabinoid therapy. This is followed by chapters on cytokine therapy, cell-based immunotherapy, vaccine therapy, gene therapy; the chapter on stem-cell based therapies is long and very comprehensive. The cell-based immunotherapy chapter is nice, with up-to-date information on the latest CAR-T cell trials. Convection-enhanced delivery (CED), a 40-year-old technique, is covered in depth and then a chapter on local therapies such as Gliadel wafers. This next chapter also includes a shorter section on CED, but there are minimal other

✉ Andrew H. Kaye
a.kaye@unimelb.edu.au

[1] Department of Surgery, The Royal Melbourne Hospital, The University of Melbourne, Parkville, Victoria 3050, Australia

examples of such overlap or repetition throughout the whole book which is to be commended. The volume ends with discussions of extracellular vesicles, so far, a speculative therapeutic idea and then, tumor-treating fields electrotherapy, which is showing clinical efficacy, and finally, nanotechnology.

Overall, the book is a pleasure to hold and read. It is easier to manage three smaller separate volumes instead of one big heavy book. The writing quality is impeccable, and it has obviously been carefully edited throughout and flows well through the wide range of topics. There is a good mix of color and black and white diagrams and photographs, which generally add to the information without being overbearing. This book is highly recommended for both resident and specialist neurosurgeons but there are also many sections of interest to neuro-oncologists and scientists working on glioma biology or therapy.