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BOOK REVIEW

Erwin G. Van Meir (ed): CNS cancer: Models, markers, prognostic factors, targets, and therapeutic approaches

Humana Press, 2009, 1284 pages, US$ 169.00, ISBN 978-1-60327-552-1

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Few areas in translational medicine have developed as dynamically as research into the biology and treatment of tumours of the nervous system. However, the outcome of these efforts in terms of increased survival rates and reduced mortality is still very moderate. Chemotherapy with the simple alkylating agent, temozolomide, combined with concurrent radiotherapy is still the most promising approach in the treatment of glioblastomas while the introduction of targeted therapy has had very limited success. This is no reason to resign. In contrast, our efforts should be increased, and for anybody working in this field or planning to enter this research area, *CNS Cancer* is a very good choice.

When reviewing a book, I usually ask three questions: Is it comprehensive, timely and useful? CNS Cancer is not comprehensive insofar as it basically deals with malignant gliomas. Other CNS neoplasms, in particular those manifesting in children, are either not (ependymomas) or insufficiently (medulloblastoma) dealt with.

The book starts with a section on animal models of central nervous system tumours. There is detailed information on the generation of brain tumours in genetically modified mice, but also on animal models suitable for preclinical therapeutic studies. While there are several excellent mouse models of medulloblastoma, unfortunately none is presented in detail. There is an informative article on the genetic basis of brain tumour induction by N-nitroso compounds in rodents, but a contribution specifically dealing with neural progenitor cells would have been welcome. Altogether, this section of the book contains very useful information on a variety of models, but each of them deals with a specific system, and an overview that would assist the non-initiated reader would have been quite useful.

The second part of the book deals with prognostic factors and biomarkers, sub-divided in 15 contributions that cover all important aspects, with an emphasis on those with a significant clinical impact. Most contributions focus on imbalances in signalling pathways caused by genetic and epigenetic alterations. However, there are also contributions on proteomics, the role of hypoxia and necrosis, microRNAs and brain tumour stem cell markers. Erwin. G. Van Meir, editor of the book, contributes a very informative review of the role of TP53 alterations in gliomas, including recent efforts to re-establish the transcriptional activity of mutated TP53 by small molecules. Altogether, this is an excellent section. It should also be mentioned that despite the time required for editing and publication, most of the contributions are very timely, with references reaching into 2008.

The last part of the book concentrates on therapeutic targets, including angiogenesis and apoptosis, RAS and STAT3 signalling, as well as antibody-mediated immunotherapy. Particularly interesting are the contributions on brain cancer stem cells as therapeutic targets and the approach of driving tumour stem cells into differentiation. Gene therapy using herpes simplex virus 1 and adenoviruses is described in sufficient detail, which is commendable, since this line of research is no longer funded as much as it deserves. Conspicuously absent are contributions on novel imaging techniques that may predict response to therapy.

Altogether, this book is an excellent source for those engaged in translational brain tumour research. I am not aware of any other publication that could match *CNS*

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Cancer for this specific purpose. The editor has been able to assemble a group of excellent authors with international standing, and this is reflected by the quality of work throughout the book. *Brain Cancer* contains a wealth of information, is timely and very useful.