

## Book Reviews

### Prognostic and Predictive Value of p53

Edited by J.G.M. Klijn. Publication: September 1997. Available from Elsevier Science BV, P.O. Box 211, 1000 AE Amsterdam, The Netherlands, or from Elsevier Science Inc., P.O. Box 945, Madison Square Station, New York, NY 10160-0757, USA. Price: US\$95.00. ISBN 0-444-82832-X

This is the first of a new series of books published under the auspices of the European School of Oncology. As the title indicates, the book deals with the most important gene involved in carcinogenesis, namely, p53. The book consists of 10 articles written by different experts in the field. The first paper, by Thierry Soussi of Institut Curie, Paris, France, entitled "The p53 tumor suppressor gene: From molecular biology to clinical investigation," tries to bring together the current knowledge regarding molecular pathology of p53 and its role in the pathogenesis and management of various human cancers.

The next four chapters primarily deal with the role of p53 in breast cancer and discuss such subjects as the role of p53 in the management of breast cancer, the significance of p53 protein accumulation in human breast cancer, the impact of p53 status on breast tumor biology and response to therapy, and the relation of p53 expression to tumor differentiation and endocrine response in breast cancer. An interesting article by G. Gasparini and A.L. Harris discusses the relationship between p53 and angiogenesis in neoplasia. Although at present, the relationship between the two is limited and controversial, this appears to be an exciting area for future research. The final paper, by Ingo B. Runnebaum, discusses the role of p53 genotypes and haplotypes in risk assessment in cancer patients and the prospects of retroviral p53 transduction for gene therapy of breast cancer. This is extremely interesting and stimulating work which deals with transduction of wild type p53 in MDAMB231 breast cancer cells.

Since 1979, when the p53 gene was first described, thousands of papers have been written underlying the importance of this gene. In 1993, it was declared to be the gene of the year. Since then, a lot has been learned about the clinical implications of p53 as it relates to clinical management and therapy of patients with a variety of cancers, especially breast cancer.

The book would definitely appeal to pathologists and oncologists interested in the diagnosis, prognosis and management of cancer, as well as researchers involved in the study of the genesis and progression of cancer. If the first book is any indication, subsequent books published by

the European School of Oncology are bound to be equally exciting.

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### Arrhythmogenic Right Ventricular Cardiomyopathy/ Dysplasia

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This book addresses the entity of arrhythmogenic right ventricular cardiomyopathy/dysplasia (ARVC/D), in which patients may present with ventricular tachycardia, congestive cardiac failure or sudden death. Eighty-one experts from Italy, Germany, USA, the UK, France, Japan, and other countries contributed to this book. The book consists of five chapters, covering the clinical aspects, the pathology, etiopathogenesis, diagnostic evaluation, therapy and special aspects of the disease.

The chapter on the clinical aspects of the disease reviews the natural history and the different clinical presentations, which include ventricular tachycardia, congestive cardiac failure and sudden death. The authors also discuss the involvement of the left ventricle, which was not initially recognized when right arrhythmogenic ventricular cardiomyopathy was described. This chapter also deals with the clinical presentations in children and adults. In the chapter on pathology, a review of morbid anatomy and histopathology is featured, with the contribution of experts from USA and Japan. The similarity with Chagas' disease is also discussed. The chapter on etiopathogenesis deals in detail with the different theories of the subject, which include dysontogenetic theory, inflammatory theory, dystrophic theory and apoptosis theory.

The chapter on diagnostic evaluation reviews the echocardiographic features, ECG abnormalities, imaging, radionuclide angiography and endomyocardial biopsy. The chapter on therapy deals with the medical therapy of arrhythmias and congestive cardiac failure. The use of implantable cardioverter defibrillator (ICD), catheter ablation therapy and surgery is also discussed in detail.

The last chapter deals with sudden cardiac death and Naxos disease (ARVC/D, palmoplantar keratoderma and

characteristic wiry hair). The issue discussed in this chapter is ARVC/D in competitive athletes. The book covers most aspects of ARVC/D by the experts, and would be of interest to pediatric cardiologists, adult cardiologists, cardiac electrophysiologists, cardiac pathologists and cardiac surgeons.

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### **Advances in Neutron Capture Therapy**

**Volume I: Medicine and Physics**

**Volume II: Chemistry and Biology**

Proceedings of the Seventh International Symposium on Neutron Capture Therapy for Cancer, Zürich, Switzerland. 4-7 September 1996.

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The 1284 pages of these two volumes summarize the information presented at the Seventh International Symposium on Neutron Capture Therapy for Cancer, held in Zürich in September 1996. As such, the two volumes are required reading for all investigators working in this field, and all clinicians considering initiating trials of neutron capture therapy (NCT). To date, clinical treatment facilities have been centered in Japan and in the United States at the Brookhaven National Laboratory and the Massachusetts Institute of Technology. Outcome data, even after seven biennial NCT congresses, remain sparse, with only 200 malignant brain tumors and cutaneous malignant melanomas reported from Japan, and 46 from Brookhaven. These data are mainly anecdotal and include no formal trials comparing outcome with alternative classical treatments, although such trials are in a late planning stage

at the high-flux reactor in Petten, The Netherlands. The chapter which summarizes clinical experiences with NCT occupies only 46 of the 1284 pages (4%), which indicates eloquently that the pre-clinical and basic science studies remain dominant in this field.

For boron neutron capture therapy (BNCT), the uncertainties include the relative merit of p-boronophenylalanine (BPA) and sodium borocaptate (BSH) as boron carriers, single versus multiple fractionation schemes, and the actual radiation dose delivered. As with all radiation treatments with targeted, systematically delivered radioisotopes, uniform cellular uptake is desirable for accurate dosimetry, and yet this objective can never be achieved. In Japan, the external beam irradiation is with thermal neutrons. Problems arise with collimation, inadequate tissue penetration, contamination with gamma rays, and dose calculation. These problems receive much attention in the contributions to this symposium. At present, there is no standardization of BNCT dosimetry. Internal standards are required.

It is possible that the neutron irradiation provided by <sup>252</sup>Californium could be usefully enhanced by boron, and that local control rates in cancer of the cervix treated, at least in part by brachytherapy, could be increased, although boron compounds with selective uptake in cervical tissue have not yet been described.

On the evidence of this symposium, and assuming favorable outcome of clinical trials, NCT is on course for rapid expansion by the millenium. Demand will oustrip the capacity of research reactors and will stimulate widespread provision of hospital-based accelerator-driven NCT facilities. If this prediction proves correct, many radiation oncologists will need to become familiar with the challenges and problems posed in setting up a hospital-based NCT operation. These volumes provide the data describing current and planned facilities, and indicate the many difficulties that the clinical investigator may face.

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