Book Reviews

Endocrine Aspects of Cancer

Edited by K. Horwitz, Bethesda: The Endocrine Society Press, 1993, 256 pp.

This monograph is the first in a series from the Endocrine Society. Each monograph will include a number of articles recently published in *Endocrine Reviews* and focus on a particular topic. These articles have all been peer reviewed and, as a clever addition, the authors have prepared addenda that update the articles which appeared originally between 1990 and 1992.

Of the ten chapters in *Endocrine Aspects of Cancer*, the first six address issues dealing with hormones and breast cancer. Santen *et al.* provide a comprehensive summary of the various modalities used in the endocrine treatment of breast cancer, Jordan and Murphy focus on anti-oestrogens and their anti-tumour properties, and Li and Li review the carcinogenic properties of oestrogens. The next two chapters address the role of progesterone in cell proliferation (Clarke and Sutherland) and the potential use of progesterone antagonists in breast cancer (Horwitz). Finally, Klijn *et al.* discuss the role of growth factors and their receptors in breast cancer growth and prognosis with particular emphasis on epidermal growth factor.

The remaining chapters discuss the role of hormones in ovarian cancer (Rao *et al.*), dopamine agonists and pituitary tumours (Bevan *et al.*), somatostatin and its analogues in the diagnosis and treatment of a variety of malignancies (Lamberts *et al.*) and the cellular sources and biological functions of cytokines (Kurzrock *et al.*).

Overall these ten chapters are high-quality critical, in-depth state-of-the-art reviews. The book is well produced and reasonably priced. My only quibble is with the content mix. The six chapters on breast cancer fit together beautifully, but the remainder are more like four isolated additions. Clinicians and probably scientists interested in dopamine agonists and pituitary tumours are unlikely to be equally interested in breast or ovarian cancer and vice versa. It might have been better to have concentrated on breast cancer and produced a smaller monograph entitled 'Endocrine Aspects of Breast Cancer'.

S.M. Shalet

Cardiac Toxicity after Treatment for Childhood Cancer

Edited by J.T. Bricker, D.M. Green & G.J. D'Angio, New York: Wiley-Liss, 1993, 133 pp.

As the treatment of children with cancer has improved, concern about possible late effects has also increased. Over half the children diagnosed with cancer will now survive more than 5 years, and one important potential cause of late excess mortality among these survivors is treatment-related cardiac damage. The book contains invited presentations given at the Second International Conference on the Long Term Complications of Treatment of Children and Adolescents with Cancer, which was held in Buffalo, New York, in 1992. These presentations mainly focus on the two most common agents to cause cardiac damage: radiation therapy and anthracycline chemotherapy. In the introductory chapter, Bricker stresses the problem of 'judiciously navigating the misty narrow channel between cardiac toxicity and inappropriate limitations of treatment'. He maintains that cardiac toxicity should be looked at as a continuous, not a categorical, variable and that our aim should be to attempt to preserve cardiac reserve rather than just prevent cardiac damage. He stresses the number of variables that are con-

cerned in the development of anthracycline cardiac toxicity. Some are well known, such as dose, age of the patient, gender, coexisting mediastinal irradiation and ventricular function before drug treatment. Others are less well recognised, such as individual variations in myocardial activity of various enzymes such as catalase, superoxide dismutase and glutathione peroxidase. Previously unrecognised problems, such as pretreatment iron status, selenium deficiency and subclinical episodes of viral myocarditis, may also add to the risk. He stresses that an optimal monitoring strategy has not yet been found, and talks about the desirability of developing load-free ventricular function testing, to overcome the problems associated with conventional tests such as M-mode echocardiography, shortening fraction, MUGA scans, ECG and stress velocity index.

Subsequent chapters in the book discuss the pathology of radiation and anthracycline-induced heart disease. Fajardo concludes that radiation should not be viewed as an independent cause of coronary artery disease, but as a co-factor with the agents already known to be associated with this disease, since there is no difference in the pathology of arterial lesions caused by radiation and those produced by spontaneous atherosclerosis. Adriamycin does aggravate radiation injury through a final common end point of diffuse myocardial fibrosis, but, whereas for radiation this fibrosis is produced by endothelial damage, for adriamycin there is direct toxic effect on myocytes which are then replaced by fibrotic tissue. The changes produced by adriamycin have been elucidated by endomyocardial biopsy, which has made it possible to detect early changes.

After papers discussing the pathology and pathophysiology of anthracycline cardiac toxicity, the epidemiology of radiation-related heart disease based on data from Stanford University is discussed by Hancock and Donaldson, who have identified 12 heart disease deaths in their group of 635 children and adolescents treated.

The second part of the book is devoted to papers on ways of monitoring anthracycline therapy in the short and long term, with regard to the factors summarised by Bricker in his introduction. Ewer and Benjamin discuss possible ways of preventing cardiac damage by modifying the way the drug is given, and Berg and colleagues discuss the use of cardiac protectant agents such as ICRF 187 in modifying the toxicity of adriamycin.

The final chapter addresses the role of genetic counselling and the ways in which progress in genetics may make it possible to identify individuals with significantly increased risks of developing late complications of cancer treatment.

The papers are clearly and coherently written and provide an excellent overview of the subject of cardiac toxicity. It is an important summary of the current situation both for clinicians caring for children receiving cardiotoxic therapy and for those concerned with developing new strategies to minimise problems in the future.

A. Barrett

Leukaemia & Lymphoma Reviews 2

Edited by A. Polliack, Chur, Switzerland: Harwood Academic Publishers, 1993, 297 pp. £48.00.

This book represents the second in a series of books, the contents of which have been derived from review articles published in the journal *Leukemia and Lymphoma*. This relatively new journal has rapidly become established as an important vehicle for publications in haematological oncology. The authors have gathered reviews from volumes 5, 6

and 7 of this journal under one cover and under three general headings of leukaemia, biology and lymphoma. Their reviews cover a broad spectrum of aspects of these diseases in considerable detail.

On the whole, the individual reviews are authoritative and clearly written and the list of contributors is impressive. A criticism of the way in which the book is structured is the fact that it has been done by disease rather than by the precise subject matter of the reviews. For example, there are several excellent review articles on various aspects of cell cycle kinetics and cytogenetics and their relationship to outcome in leukaemia and lymphoma. These various reviews could have been more sensibly grouped together. The chapter by Bokhari *et al.* on cell cycle parameters as predictors of prognosis in AML demonstrates the correlation of cell cycle kinetics with outcome, and similar subjects are covered in the chapter by Tusenius *et al.* in non-Hodgkin's lymphoma and also in the chapter on proliferating cell nuclear antigen (PCNA) by Keim and Hanash. This last chapter provides an excellent prescription of PCNA backed up by a description of its putative function as a stabiliser of DNA polymerase. The changes in the nuclear distribution of PCNA in the cell cycle are also clearly described and interesting data are presented on the relationship between PCNA expression and clinical parameters such as the incidence of relapse in patients with ANLLI.

Tusenius *et al.* review the role of various proliferation indices, including assessment of mitotic index, transferrin receptor, the Ki-67 antigen and nucleolar organiser regions. The chapter describes well the potential limitations of this kind of approach, although unfortunately appears too early to include recent data from the South-West Oncology Group prospective study indicating the independent prognostic value of Ki-67 expression in aggressive lymphoma.

The various chapters on cytogenetic abnormalities and on their molecular counterparts are also individually clear but could have been more sensibly grouped into one section of the book. The volume also includes a number of clinical papers of interest.

Ljungman *et al.* provide an overview of the role of bone marrow transplantation in acute non-lymphoblastic leukaemia.

The article is clearly written and well balanced, emphasising the need for prospective clinical studies to assess its true value and emphasising the importance of all unrelated donor transplants being registered.

Johnson and Rohatiner's chapter on the role of high-dose therapy in follicular lymphoma gives a good overview of current experience, although it fails to emphasise that comparisons between various transplant and non-transplant series in this disease are extremely difficult because of inconsistencies in histological interpretation of the subtypes of follicular lymphoma. Furthermore, the chapter fails to emphasise the need for prospective randomised studies in this disease.

Other chapters include descriptions of rare clinical entities including splenic lymphoma with villous lymphocytes, mastocytosis and coexistent non-Hodgkin's lymphoma and myeloproliferative disorders, sinus histiocytosis and post-transplant lymphoma. Again, all of these provide excellent reviews by recognised experts.

Overall, this volume provides an interesting collection of review articles on a somewhat diverse subject matter in the field of leukaemia and lymphoma. Since the articles are derived from reviews in a journal they inevitably reflect issues regarded as important at the time of writing and therefore do not easily fall into neat groupings for a book. Because of this it is difficult to determine exactly who is likely to be interested in having this kind of volume other than those people who are likely to read the journal in any case. Nevertheless, the quality of the authorship and of the articles is on the whole excellent, and for this reason alone it should be recommended.

J.W. Sweetenham

Filgrastim (r-metHuG-CSF) in Clinical Practice. Basic and Clinical Oncology Series/5

Edited by G. Morstyn & T.M. Dexter, New York: Marcel Dekker Inc., 1993, 368 pp. \$125.00.

Filgrastim in Clinical Practice is the fifth volume in the Basic and Clinical Oncology series edited by Bruce Cheson. Granulocyte colony-stimulating factor (G-CSF) was the first human haemopoietic growth factor to be introduced into clinical practice; 'Filgrastim' is its generic name. Short chapters on the biology, biochemistry and pharmacology are included. Other chapters cover the role of G-CSF in treating patients with chronic neutropenia and in ameliorating neutropenia with reduction in the incidence of infection following intensive chemotherapy. The use of G-CSF in mobilising peripheral blood progenitor cells for haemopoietic rescue following myeloablative chemotherapy is the subject of a further chapter, and the final pages cover economic, social and practical aspects of administration.

The chapters are relatively short and do not provide an extensive review of the literature, and inevitably in a book of this nature the assessment of published work is 2–3 years out of date. However, the book does provide the clinician with important basic information on the use of G-CSF in the clinic. Although one of the editors and several of the authors are Amgen Inc. staff, the book does provide a reasonably balanced view of the clinical role of G-CSF. However, any economic advantage is eroding and its exact role in clinical practice is changing with time. This book does provide the clinician with a useful introduction to the clinical uses of G-CSF, but in view of the expense of the agent the reader should be advised that specific indications for its use require continuing reassessment in the light of new research defining the role of intensive chemotherapy, growth factors and haemopoietic stem cell rescue.

D. Crowther

Diagnosis of Colorectal and Ovarian Carcinoma: Application of Immunosciintigraphic Technology

Edited by R.T. Maguire & D. Van Nostrand, New York: Marcel Dekker, 1992, 260 pp.

This book is one of a series on targeted diagnosis and therapy which focuses on individual products or strategy for targeted therapy. The generation and characterisation of the monoclonal antibody B72.3 as well as the extensive pre-clinical and clinical data are reviewed in some detail. This is one of the most widely studied anti-tumour monoclonal antibodies and binds a high molecular weight mucin-like glycoprotein frequently expressed by common epithelium-derived malignancies such as those of the colon, ovary, lung and breast. It was generated in 1981 by conventional hybridoma technology utilising the membrane fraction of cells derived from breast cancer metastases as the immunogen. Since then a vast number of preclinical and clinical data have been generated and the antibody has been modified by using the techniques of antibody engineering.

The initial chapter is an excellent historical review of radioimmunoimaging with good sections on the relative merits of different labelling agents and some discussion of the future prospects for this technology. The chapter on the initial generation, characterisation and preclinical testing is authoritative and indicates the typical development of antibodies from isolation to clinical application. The major portion of the book concentrates on the use of B72.3 in colorectal cancer imaging, and these chapters are likewise valuable, although some of the data are repetitive, with chapters describing different groups, experience of imaging with this antibody. Although a straightforward overview might have been more helpful, this is, to some extent, provided by a chapter on a multicentre trial. Overall, the book suggests that radioimmunoimaging with this antibody has sensitivity and specificity comparable to conventional