

## BOOK REVIEWS

*Stem Cells—Their Identification and Characterisation.* (Ed. C.S. POTTEN) UK, Churchill Livingstone, viii + 304 pp, 1983, £24, ISBN 0 443 02451 0.

Several books of handy size about Stem Cells have appeared in the last decade. They were reports of conferences. The present work seems to have been specially commissioned as a useful progression. The editor (and contributor) C.S. Potten, Cancer Research Campaign Fellow, is from the Paterson Laboratories, Manchester, an organisation which has done outstanding work on the subject, notably within the haematopoietic system of mammals.

The first contribution is by Professor L.G. Lajtha, until recently, Director of the Paterson Laboratories and major strategist. This is by way of introduction to the Stem Cell Concept. There follow (not in order) articles on stem cells in mammalian intestinal mucosa (C.S. Potten and J.H. Hendry), testicle (D.G. de Rooij), haematopoietic tissue (B.I. Lord) and epidermis (C.S. Potten)—all good and detailed reviews updating similar previous works—and a new system, oral epithelia (W.J. Hume) notable for papillae. Additional to former material is a section on tumours (C. Gordon Steel and T.C. Stephens) and their clonogenic cells but mostly those from long-established frequently-passaged tumours and thus not necessarily representative of autochthonous tumours. Also new, and of special interest for the fundamentalist, are articles on lower phyla of the animal kingdom, hydra (C.N. David), planarians (C.S. Lange) and a nematode (E. Schierenberg and R. Cassada).

Specially notable are the advances in techniques *in vitro*—the long term culture of haematopoietic stem cells (still dependent on cellular interactions not fully categorised), clonogenic assays (not necessarily of stem cells but anyway of primitive cells)—and theories and evidence for asymmetrical mitotic division.

The book, therefore, makes a fascinating whole, whether one's interests are basic or applied or both. Each article is freely referenced, some of historical interest going back to the 19th century, others up to 1982. Each review has a concluding summary. Furthermore there is an extensive subject index.

With excellent print and illustrations this book is a credit to all concerned and by modern standards not expensive.

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*Malignant Diseases of Infancy, Childhood and Adolescence.* A.J. ALTMAN & A.D. SCHWARTZ, USA, W.B. Saunders Company, 605 pp, 1983, £59.50, ISBN 0 7216 1211 3.

This is the second edition of this comprehensive textbook of Paediatric Cancer. The principal authors write in the preface that there has been a virtual explosion of knowledge in Paediatric Oncology since the first edition published in 1978. I think most paediatric oncologists would disagree with this assessment, at least in reference to improved therapy. The time has rather been one of better understanding of the role of "total management" of children with cancer and their families. The publication of the results of the large co-operative studies of various national and international groups has allowed the improved delineation of sub groups within the tumour categories and the importance of these as prognostic factors. This book has been updated in these spheres as well as those of epidemiology, immunology and diagnostic techniques. The first chapter includes an impressive account of the syndromes associated with tumour susceptibility. The second describes the diagnosis of neoplasms in childhood and includes a very sensible and balanced account of the uses of the newer radiological diagnostic techniques and tumour markers, with a list of the syndromes that may result from hormone production in childhood malignancy. Chapter 3 discusses the general principles, pharmacology, kinetics and practical approaches to the administration of drugs and the measures to be undertaken when inadvertant extravasation occurs. It goes on to describe the methods used in clinical trials to test new drugs and then the specific actions of the major categories of cytotoxic agents. Chapters 4, 5, and 6 deal respectively with radiation therapy, tumour immunology, immunotherapy and psychosocial support of the patient and family.

The first two of these are excellent but the last deals with a rapidly expanding field, without sufficient detail and the bibliography is somewhat outdated by comparison with other chapters. The next two chapters cover oncological emergencies—metabolic, neurological, cardio-respiratory, haematological and infections together with dental complications. Of the remaining eighteen chapters, sixteen are each concerned with a specific tumour group and most cover incidence presentation, pathology, diagnostic evaluation, treatment, prognosis and complications. There is some variation in the quality of these accounts but

overall they are of high standard. Although the authors mention in the preface the concerns regarding the late complications of therapy, these are discussed to a very variable extent in different tumour groups and are not mentioned at all in the discussions on soft tissue sarcomas and Ewing's tumour—two tumours where particularly serious problems have been encountered. The final chapter discusses the nutritional consequences of cancer therapy and parental nutrition—it is a good introduction to an area which is expanding rapidly due to better understanding and greater need during intensive chemotherapy programmes.

This is an excellent book, the strength of which lies in the fact that it is really a mammoth unbiased review of the current state of the art and science of paediatric oncology. The authors have produced an extensive bibliography which is commendable for its current references. They have presented a balanced and honest text which is very easy to read and allows the reader to assess different approaches without bias. I would recommend it to anyone working in the field.

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*Biopsy Pathology of the Lymphoreticular System (Biopsy Pathology Series)*. D.H. WRIGHT & P.G. ISAACSON, UK, Chapman & Hall, 337 pp, £25, 1983, ISBN 0 412 16050 1.

Diseases of the lympho-reticular system remain amongst the most taxing diagnostic problems faced by the histopathologist and this book is intended to assist him in achieving the increasingly important objective of making an accurate diagnosis.

It adopts a systematic, disease-orientated approach (in contrast to the lesion-based system of "Lymph Node Biopsy" by Robb-Smith and Taylor) and covers normal structure, infective and reactive conditions, Hodgkin's disease and the non-Hodgkin's lymphoma in 13 chapters, with a final chapter on technical methods and their diagnostic value. A brief appendix outlines the new "Working Formulation" and offers a terse and timely warning against regarding it as anything more than a clinical compromise.

Inevitably, the chapters on NHL will be consulted most frequently, since it is these diseases which cause most difficulty in sub-classification. Rightly, therefore, the authors have devoted more than half of the book to this aspect. They use a slightly modified version of the Kiel classification

as the basis for their discussion believing that it is the best currently available, a view with which I agree. Each sub-type is clearly defined and described in detail with many monochrome photomicrographs, mostly of high quality; enough background clinical and theoretical information is included in the text to dispel many of the confusions that can arise when the Kiel system is used without sufficient understanding of its conceptual basis.

Perhaps the non-neoplastic diseases might merit slightly more detailed consideration in future editions but, nevertheless, this is the best diagnostic guide through the maze of lympho-reticular disease, particularly its neoplastic aspects, that I have read and I thoroughly recommend it to all histopathologists.

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*Minimal Invasive Cancer (Microcarcinoma)*. E. BURGHARDT & E. HOLZER, Netherlands, Martinus Nijhoff, 332 pp, 1982, \$34.50.

The terms "microcarcinoma" and "minimal invasive carcinoma" were first applied to cancers of the cervix uteri where at least a measure of agreement has been reached over their definition and diagnostic criteria. The extent to which the notion of minimal invasion can be applied to other tumours at other sites is a good deal less clear, and this book sets out to assess the problem. The results are not encouraging. Patterns of invasion must depend, *inter alia*, on the configuration of the normal mucosa from which a cancer has developed. Different criteria seem to apply even for cancers arising in different kinds of squamous epithelium (for example — cervix uteri, the upper aerodigestive passages and the skin); such differences will be even greater when a comparison is made between microinvasive cancers arising in squamous and non-squamous epithelium such as the gastrointestinal tract, breast or endometrium. Measurement of microinvasion even in terms of two-dimensional thickness is difficult for tumours at any site, and wide variation can occur from simple faults such as oblique sectioning of tissue blocks. More fundamentally, it is not clear whether microinvasion at any site is a distinct pathological state or merely one transient phase in evolving tumour growth; the natural history of such lesions, particularly in the context of any putative host responses, remains obscure. These and other problems are not adequately analysed in this book,