Book Reviews

The Transformed Cell. Eds. I. L. Cameron and T. B. Pool. (1981) New York: Academic Press. 435 pp. $49.00 net.

The literature abounds with papers comparing the behaviour of transformed cells with their normal counterparts, in an attempt to understand the factors which contribute to the origin and metastatic dissemination of cancer. Drs Cameron and Pool have made a commendable effort in bringing together a number of comprehensive reviews dealing with this important, though complex, area of investigation. Individual chapters cover a wide spectrum of topics, ranging from discussions of quite general interest to more specialized topics, such as the use of NMR and ESR spectroscopy in the study of the transformed phenotype. In my opinion, the particular merit of this book is that it brings together reviews covering quite diverse areas of study under a single unifying theme. Such a collection of chapters will be useful to students and researchers interested both in reviews of their own particular field of interest, and in contributions from other less familiar fields. The contribution by Skehan and Friedman on the in vitro and in vivo correlates of transportation is well written and will be of particular interest. 

S. Schor

Bladder Cancer: Principles of Combination Therapy. Eds. R. T. D. Oliver, W. F. Hendry and H. J. G. Bloom. (1981) London: Butterworths. 326 pp.

Bladder cancer forms an important part of the urologists work, with nearly 8000 new cases a year in England and Wales and 4000 deaths. It covers a wide spectrum from the small papillary tumour easily controlled by endoscopic diathermy to the highly malignant invasive tumour which resists attempts to eradicate it by radiotherapy, radical surgical exenteration and chemotherapy. Despite much effort, however, there has been little change in the survival rates since the establishment of modern surgical and radiotherapeutic techniques in the 1960s. Combined modality treatment has made a major contribution to the management of some other tumours such as lymphoma, testicular teratoma and paediatric malignancies. This examines the possibility of extending this treatment to the whole range of bladder tumours.

The book is derived from papers by 51 contributors presented at the Institute of Urology in a Workshop held in July 1979. It has been edited by a surgeon, a radiotherapist and a medical oncologist, is well set out and eminently readable. Despite the title, a wide canvas is covered, from diagnosis and experimental pathology to the treatment of superficial and invasive tumours and immunotherapy.

There is a good opening chapter on the histological grading and staging of tumours, stressing the importance of accurate assessment of the infiltration of the submucosa and the need to review the grading of the tumours in successive biopsies. There is a useful chapter on urinary cytology, which is rather neglected in the United Kingdom. It is a pity that the only chapter on radiology is short and confined to computer-assisted tomography, the value of which has still to be established in bladder cancer; no mention is made of other possible means of assessment, such as ultrasound. By contrast twice as much space is devoted to the chemotherapy of murine tumours!

Patients with multiple superficial bladder tumours present a problem of management. In many cases the tumours will undoubtedly progress and become invasive. The only curative treatment, total cystectomy, is however too drastic to be advised for every patient at the outset. Considerable space is therefore rightly given to assessment of the value of various chemotherapeutic agents including intravesical Ethoglucid, Adriamycin and Thiotepa.

Invasive tumours are still a major problem as 70% of such patients will die of their disease within 5 years of presentation. The present position of the established treatments with radiotherapy and radical surgery, alone and in combination, is considered. The chapter on radical radiotherapy and salvage cystectomy is clearly written and helpful, whereas that on radical radiotherapy alone is
poor and confusing. Data from the author's centre is interspersed with that from the literature; the latter receiving sparse consideration, omitting important details of the varying techniques. There is no discussion of the merits of the widely differing treatment volumes which are used in the treatment of bladder cancer. The final discussion in this chapter relates only to super-fraction X-ray therapy for which little evidence is advanced that it is indeed superior. This section is concluded with a chapter on the neglected aspect of the practical difficulties for a patient with an ileal conduit. Consideration is then given to the efficacy of chemotherapy in advanced cancer. Numerous agents and combinations are described, and a liberal amount of data is presented. However, the end results are as yet disappointing, and more effective agents or combinations are sorely needed. Future trials of the combination of chemotherapy with either radiotherapy or surgery are outlined. The results are awaited with interest.

There is a section on immunotherapy, perhaps inappropriately long considering it's lack of current use in bladder cancer.

Finally there is a concise overview and a comprehensive index.

Overall it is a well presented and useful volume on the dilemmas of one aspect of current oncological practice.

G. Read

The Interaction of Cancer and Host: Its Therapeutic Significance. M. F. A. Woodruff. (1981) London: Academic Press. 467 pp. £26.20 net.

The role of the host in the growth and dissemination of malignant tumours involves more than supplying the neoplastic cells with oxygen and nutrition. The statement that tumours are autonomous new growths of tissue, independent of any of the factors that control the growth and equilibrium of normal tissues, does not apply to many experimental situations, and is clearly untenable for most human tumours, where phenomena such as sudden re-appearance after long latency provide tantalizing clues to the existence of control processes. In the field of host–tumour interaction the clinicians have the leads for tumour biologists to follow. Professor Woodruff is one of the rare individuals who has a deep understanding and appreciation of the clinical as well as the experimental field, to both of which he has made signal contributions. He is, therefore, the ideal individual to write a book on the interaction of cancer and host, which he aptly describes as antagonistic symbiosis. The monograph he has produced is authoritative, sober but yet stimulating; it is a scholarly work with a mammoth bibliography that makes it an invaluable work of reference.

The host functions necessary for tumour growth are various; the most essential (in the case of solid tumours) is, of course, to provide blood vessels, there are many instances where a supply of hormones is needed, and the concept of cross-feeding by stromal cells is gaining support. Restraint over tumour development can be exerted by the haemostatic processes of the host, especially in metastatic spread. However, the area which has attracted most attention involves control by immune mechanisms which can be divided into two broad categories: those which have to be induced by a specific antigen and require T cells, and those which Woodruff refers to as “para-immunological”, which are innate and selective, but not specific. Though this monograph addresses itself to all aspects of interaction between cancer and the host, in both experimental animals and man, the immunological aspects are the centre-piece. In part, no doubt, the emphasis on immunity derives from the author’s own involvement in this field, but mostly it is because this is the area of host–tumour interaction in which research has been most active in the last 20 years.

The short opening chapter, entitled “Methods”, addresses itself to the complexities of studies in man and to the difficulties of the choice of worthwhile experimental models. This is followed by a thoughtful and critical review on carcinogenesis, in which the section on interference with the carcinogenic process by homeostatic and immunopotentiating mechanisms should be studied by those who emphasize the potentialities of chemo-prevention—the “in” topic of the 80s! The next two chapters deal with relevant aspects of the biology of neoplasia, stressing that metastasis is the core problem of cancer. He draws attention to evidence for the multi-focal origin of some cancers and the concept of a “field effect” extending over