which will allow us to devise ‘guidelines for the safe use of radiation in everyday life’. This laudable intention has, however, not been achieved. The major health hazards of low dose radiation are cancer induction, genetic damage and to a lesser extent CNS damage following irradiation of the embryo and foetus. But these receive scant attention, with just two pages each on the genetic and foetal effects and only nine pages on carcinogenesis.

The perfect textbook has never been written; but a substantive criticism of this basic book on radiobiology must be that the balance of information is awry. There is too much stress on cellular effects, too little stress on DNA damage and much too little on the societally important low level radiation health effects of carcinogenesis, teratogenesis and genetic damage.

J.E. Coggle

Neoadjuvant Chemotherapy in Invasive Bladder Cancer
Edited by Ted A.W. Splinter and Howard I. Scher, New York: Willey-Liss, 1990, 241 pp. £57.50.

It is now 7 years since the demonstration by Carmichael in 1983 that methotrexate combined with cisplatin produced durable complete remission in a small proportion of patients with measurable metastatic bladder cancer. Since this time the four drug combination developed by the Memorial Hospital has become the most widely used regimen for combination, because of suggestion that there was a higher complete response rate using this regimen in patients with metastases. As a consequence of these observations, today the majority of centres involved in research in bladder cancer treatment have now taken this observation and use platinum containing combination instead of radiation as their standard adjuvant regimen for the treatment of invasive bladder tumours without metastases. This book which is the proceedings of a workshop held in San Francisco 18 months ago proves to be an invaluable resource of reference to the effect of this change in policy, though sadly it raises as many questions as it answers.

After a series of reviews papers about chemotherapy, radiation, pathology of tumours after treatment and trial design, there are five papers about randomised trials and nine about phase 2 studies from 12 different countries and six chapters about assessing response to treatment. Sadly in the critical area of the randomised trial none have advanced to the stage of having any information on response or survival. Despite the fact that it is going to be at least another 2–3 years before information will emerge from the randomised trials, the maturation of the phase 2 studies which led to the initial enthusiasm for this approach and the increase in number of other authors who have got phase 2 data, does make it easier to get a feel that the likely benefits are more likely to be closer to that seen from using chemotherapy to treat primary head and neck cancer than from that gained from using it as adjuvant for breast cancer.

The critical information is that provided in the first chapter by Howard Scher who has done an excellent work in summarising the literature and the contributions from participants. This shows clearly that the proportion of patients with previously untreated primary bladder cancer achieving complete remission while only being 11% for single agent platinum, was more than 20% for all platinum based combinations. However there was no difference between the two drug combinations methotrexate cisplatin (33%) and the four drug Memorial M-VAC regimen (32%). Though there was mention of one small trial where the two have been compared, this is obviously an important area that will need focusing on in the future, particularly as this complete remission rate is lower than that reported by many authors who have used the considerably less toxic radiation as primary treatment.

A final area of considerable controversy, which is the subject of one chapter by Reg Hall, is the issue of whether transurethral resection of tumour (TUR) should be used to reduce tumour bulk prior to chemotherapy treatment. Sadly it is rather difficult to assess his extremely important data as the text says that 70–80% of his patients remain tumour free while the data presented in the table shows that at 2 years only 50% have a bladder free of tumour following TUR and combination chemotherapy which is worse than he achieved using single agent methotrexate alone after TUR (57% at 3 years). As none of the other authors give any information about how much resection of tumour they did prior to treatment, it is clear that more assessment of this variable is required. Given the anxiety raised from studies in prostate cancer which suggest that there may be increased intravascular and lymphatic dissemination after transurethral resection, it would be important to exclude such as effect happening in bladder cancer patients who have TUR.

The final section of the book on assessing response is very useful in its own right, because it provides important prognostic information (in particular the influence of tumour size and response to treatment on survival) as well as publishing two of the first papers that have actually gone to the trouble of computing tumour volume before and after treatment, though the figure in Sager’s paper showing shrinkage of what is labelled as the uterus after chemotherapy does emphasise the limits of the technology at present.

I am sure that there can be little doubt that this book will be an important reference for the future, though its message to me is that we still have far to go if we are to improve on the figure of 30% 5-year survival for T3 bladder cancer which has been with us since the advent of megavoltage radiotherapy.

R.T.D. Oliver

Current Genitourinary Cancer Surgery
Edited by E. Crawford and S. Das, London: Lea & Febiger, 1990, 249 pp. £87.35.

Professor Crawford and Dr Das have persuaded 81 surgeons and physicians to contribute to this edition of Genitourinary Cancer Surgery. No significant tumour or tumour-type has been ignored and all are considered in a most practical way which allows both the trainee and the expert to feel at home with, and to benefit from, the views expressed. Each major section has an overview which clearly sets out the accepted basic information, draws attention to contentious issues and highlights some of the problems which both physician and surgeon must face on a daily basis. It is a book for surgeons by surgeons and very properly gives over the majority of its test to a consideration of the indications for, and alternatives in techniques of, urological cancer surgery. Despite the number of authors, the editing has produced a marvellously uniform text of great clarity with a wealth of illustrations of the very highest quality drawing attention to details of critical surgical importance.

The editors have cast their net widely and have incorporated every relevant surgical advice without endeavouring to force the acceptance of any particular option considered. The reader from Europe will notice the American usage of English and will be aware from such statements as ‘approximately 47,100 new cases of bladder carcinoma will be diagnosed this year’; and ‘. . . cystectomy remains the therapeutic choice for patients with invasive bladder cancer,’ that this book is primarily written for Americans. The case for surgi-
Immunosuppression and Human Malignancy
Edited by D. Naor, B.Y. Klein, N. Tarcic and J.S. Duke-Cohan, Clifton, New Jersey: Humana Press, 1990, 271 pp. £59.10.

Our understanding of the relationship between immune status and malignancy has a long and somewhat controversial history. At one extreme of this controversy, immunological deficits are held to be intimately connected with progression of malignant disease; others have dismissed any immunological defects that may be found as post hoc phenomena, a consequence of malignant disease rather than a necessary precursor of it. The field is also complicated by the range of (not easily reproducible) in vitro techniques that have been used to define immunological defects and to probe their mechanistic basis. To this one can add the basic dilemma posed by insufficient knowledge of the in vivo role both of the effector cell types being studied and their putative regulatory mechanisms. For example, the regulation of natural killer (NK) cell activity by monocytes begs the question of whether NK cell activity is relevant to the development of malignancy, and if it is, whether NK activity is regulated by monocytes in vivo.

The authors are fully aware of these dilemmas, and they seek to avoid them by providing a very comprehensive assessment of the widest possible range of candidate regulatory and suppressive mechanisms that could influence the growth of malignant tumours. Whilst this detailed scholarship is an admirable summation of these possible mechanisms, in the process the major disadvantage of this book quickly becomes apparent. The problem is that the majority of the book appears to have been written in 1984–5, with a few later additions in early 1987. In many fields, this delay would not vitiate the endeavour, but immunology is developing rapidly, and particularly within the last 3–4 years when several fundamental conceptual advances have occurred. The most notable is probably the Bjorkman model for the structure of MHC antigens, with consequences for the nature of T cell recognition and the mechanisms of antigen processing, transport and presentation. Another development that is now more widely recognised is that of antigen processing by B lymphocytes. The earlier explanation of cognate help which involved antigen forming a bridge between receptors of T and B cells is alluded to in the introduction to the chapter on suppressor cells and human malignancy. The current view is that the B cell receptor allows preferential uptake of native antigen which is processed, followed by presentation of associated T cell epitope(s) to CD4 T cells in the context of the B cell's class II MHC.

As well as producing rapid developments in some areas, immunologists also have a remarkable capacity to lose faith (or at least lose interest) in others. As briefly discussed at the end of the concluding chapter of the book, suppressor cells are very much in the latter category. The current lack of willingness on the part of some investigators to countenance a major in vivo role for suppressor cells, whether or not as a distinct functional population of cells, may subsequently prove to be an extreme view, but it contrasts very strongly with the zeitgeist so apparent in the earlier chapters of the book.

One is left with the feeling that whilst the detailed discussions of suppressor mechanisms developed in the book are valid within their own terms of reference, time has moved on too far and too fast for these considerations to have a major impact on current thinking in this area, and necessarily limits the value of the book even to a more general readership.

R.A. Robins

Programmed Cell Death in Tumours and Tissues
I.D. Bowen and S.M. Bowen, London: Chapman & Hall, 1990, 276 pp. £38.00.

The renaissance of interest in programmed cell death in tumours, after a relatively low key burst of excitement in the topic in the early 1970's, has been driven to a large degree by the application of molecular biological techniques to this fascinating topic. A review of the subject is therefore most welcome. The Bowens' book has been expertly timed: it precedes the publication of a Cold Spring Harbor publication on programmed cell death by a few months. When CSH publishes a monograph (after holding a meeting last Spring) it suggests that programmed cell death has come of age! How does a cell die? Bowen and Bowen give us plenty of descriptions in their book: death by cell deletion, by necrosis, apoptosis (programmed cell death), accidental cell death, induced cell death, death by differentiation and death by autolysis. Each of these definitions attempts to clarify the loss of cells by natural or unnatural means, by suicide or by...