

Chairman's introduction

This section of our educational book covers the issues of molecular mechanisms in prostate cancer, surgical management, radiotherapy and the management of advanced prostate cancer, both hormone-dependent and independent. This is a major undertaking for such a limited space but has been dealt with by all four authors in a very concise and readable fashion. All papers are properly referenced and are designed to function as a practical reference for a period of several years.

Prof. Jan Trapman reviews the rapidly developing molecular biology of prostate cancer. His approach is practical throughout and it includes clinical reference wherever possible. He covers large parts of molecular epidemiology, deals briefly with hereditary prostate cancer and concentrates on chromosomal aberrations, as well as oncogenes and tumour suppresser genes. His explanations are clear and mature and easily readable. All clinicians have trouble in following the developments in this field. Trapman finds simple and clear ways of explaining difficult molecular mechanisms. We all know that *TP53* is the 'guardian' of the genome. Trapman says: "*TP53* plays a pivotal role in the cell cycle as a G1 checkpoint regulating the transition into S-phase". Much of the chapter concentrates on the role of the antigen receptor and the various new mechanisms of its activation. These at the same time offer new working hypotheses with respect to the understanding of the progression of prostate cancer to hormone independence. The reading of this chapter has helped me a lot to understand central and clinically relevant issues related to the mechanisms of progression of prostate cancer. I feel certain that everybody who takes the trouble of reading this piece of work will find the same pleasure, satisfaction and positive reading experience that I had.

My own contribution concentrates on the natural history and surgical treatment of localised disease. The epidemiological background of prostate cancer as well as the recent decrease in prostate cancer mortality in some countries of the Western world is discussed. What is the role of screening? What are the most relevant prognostic factors? How can aggressive and non-aggressive locally confined disease be differentiated? — The natural history remains puzzling.

We know that a substantial proportion of men with prostate cancer are eligible for delayed treatment or 'watchful waiting'. How should they be identified? The development of management of locally confined prostate cancer is hampered by the lack of randomised comparative studies. While institutional theories clearly document that cure of prostate cancer is possible and is only possible with early treatment, it is still unclear whether life can be prolonged with acceptable quality and what proportion of cancer deaths can be prevented. Clearly, treatment efforts must concentrate on cases that threaten the lives of our patients. Recent evidence suggests that radical surgery is indeed effective in such cases provided the poorly differentiated cancer is diagnosed in a confined stage.

Prof. David P. Dearnaley gives an exhaustive review of the status of radiotherapy in the management of localised prostate cancer. He addresses the issue of patient selection, technological advances in external beam radiotherapy especially through computed tomography (CT) based dosimetry and programming applied as conformal radiotherapy and of all the different options of neo-adjuvant and adjuvant endocrine management, which clearly improve the effect of radiotherapy. The detailed results presented are of practical importance if one keeps in mind the fact that randomised comparative studies with watchful waiting and with radical prostatectomy are missing. In discussing the side-effects of external beam radiotherapy on the basis of recent clinical literature, the author gives a clear picture of the rapid recent developments of this treatment modality. Clearly, the options of surgery and of radiotherapy have to be offered to all eligible patients with extensive information on the chances for success, side-effects and impact on the quality of life.

Prof. Cora N. Sternberg covers a huge field. She reviews current routines in endocrine treatment based on scientific evidence, indicates clearly the clinical options in the case of hormone-independent metastatic progression and gives a comprehensive review of ongoing clinical research in the field. The included tables are especially helpful as a reference to recent development in hormone-refractory prostate cancer. The paper also discusses the possibilities of

second-line endocrine and alternative forms of management. The section on new developments gives an outlook full of hope and new possibilities on the future of the management of this disease that has

been so inaccessible to chemotherapy in the past — readers will enjoy this rapid-fire high quality review.

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