The principal objective of the *Royal College of Radiologists' Clinical Oncology symposia* is to promote multi-disciplinary collaboration for the benefit of cancer patients. Awareness and understanding of advances in a broad range of subjects are essential to ensure the timely and effective application of new techniques in the prevention and treatment of all forms of cancer. Communication of this kind may also stimulate the creation of new ideas that may prove to be of more fundamental relevance to cancer research.

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Preface

The ninth annual multidisciplinary symposium on clinical oncology organized by the Royal College of Radiologists was jointly arranged with the International Society for Radiation Oncology. It was held in London in February 1987 and discussed the biological and clinical basis of the effects of radiotherapy. Wherever possible lectures by an experimental scientist were paired with those of a clinical scientist in order to emphasize clinical relevance. It is hoped that this has resulted in a widely balanced view of the subject. The volume presents an updated version of these subjects based on those talks.

After surgery, radiotherapy is the main treatment used in the management of patients with cancer. Its empirical success when first introduced is now backed up by a wealth of laboratory, clinical and experimental experience. New techniques for administering the conventional X-ray therapy have been supplemented by methods which can be used to modify the radiation response. These include changes in dose rate or fractionation, and combined modality treatments including sensitization by drugs or heat. Other types of radiation, such as neutrons and other particles, are also now available which have enhanced physical and biological advantages.

The symposium did not attempt to pass clinical judgement on the various techniques. This would have needed a much larger volume with a critical review of randomized studies, many of which await initiation or completion. What it has attempted to do is to emphasize the importance of the symbiotic relationship that has developed between the physicist, biologist and clinician in this important area of cancer treatment.

I wish to express my thanks to all the speakers for making the symposium a success and agreeing to provide manuscripts for publication. Mr Michael Jackson of Springer-Verlag has continued to give advice and support in the production of this volume. Mrs Jane Farrell of Springer-Verlag has continued to provide her most excellent copy editing. I should also like to thank my personal assistants Ms Leslie Sargeant, Mrs Anne Anderson and Mrs Fiona Clarke for help with the organization of the meeting and the editing of the manuscripts. Finally my thanks are due to Mr A. J. Cowles, General Secretary of the Royal College of Radiologists, and to his staff, who contributed to the organization and management of the symposium.

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Norman M. Bleehen

May 1987

Contents

1 Cellular Response to Radiation: Experimental	
N. J. McNally	1
2 Radiation Response of Tumours: Experimental	
P. R. Twentyman	9
3 Normal Tissue Response to Radiation: Experimental	
J. Denekamp	17
4 Measurement of Human Normal Tissue and Tumour Responses	
G. Ross and J. R. Yarnold	31
5 Late Effects of Radiation in Man	
R. J. Berry	47
6 Principles of Fractionation in Radiotherapy	
J. F. Fowler	53
7 Fractionation in the Clinic	
M. V. Williams	59
8 Radiation Resistance and the Dose-Rate Effect: Experimental	
G. G. Steel and A. Horwich	73
9 Low Dose Rate in Clinical Radiotherapy	
A. Horwich, P. Blake and G. G. Steel	81
10 Total Body Irradiation: Normal Tissue Effects	
L. S. Constine and P. Rubin	95

11 Total Body Irradiation: Clinical Aspects	
A. Barrett.....	123
12 Particle Therapy: Physics and Biology	
D. K. Bewley	129
13 Clinical Aspects of Particle Therapy	
H. M. Warenius and R. D. Errington.....	137
14 Radiation Sensitizers and Related Compounds: New Approaches to Modification of Radiation Response	
G. Adams and I. J. Stratford.....	153
15 Radiation Sensitizers in Clinical Radiotherapy	
S. Dische	165
16 Combined Treatment with Radiation and Anti-Cancer Drugs: Experimental and Clinical Results	
H. Bartelink, A. C. Begg, L. Dewit and F. A. Stewart	177
17 Biological Aspects of Hyperthermia	
S. B. Field	201
18 Clinical Hyperthermia: Methods and Results	
N. M. Bleehen and G. C. W. Howard	209
19 Monoclonal Antibodies in the Diagnosis and Treatment of Cancer	
L. W. Brady, D. V. Woo, A. M. Markoe, H. Koprowski and C. T. Miyamoto.....	233
Subject Index.....	243

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