

Contents

Editorial Preface	vii
Physical and Biological Basis of Proton and of Carbon Ion Radiation Therapy and Clinical Outcome Data <i>Herman Suit, Thomas F. Delaney and Alexei Trofimov</i>	1
The Production of Radionuclides for Radiotracers in Nuclear Medicine <i>Thomas J. Ruth</i>	17
Proton Radiation Therapy in the Hospital Environment: Conception, Development, and Operation of the Initial Hospital-Based Facility <i>James M. Slater, Jerry D. Slater and Andrew J. Wroe</i>	35
Microwave Electron Linacs for Oncology <i>David H. Whittum</i>	63
Heavy-Particle Radiotherapy: System Design and Application <i>H. Tsujii, S. Minohara and K. Noda</i>	93
High Frequency Linacs for Hadrontherapy <i>Ugo Amaldi, Saverio Braccini and Paolo Puggioni</i>	111
Medical Cyclotrons <i>D. L. Friesel and T. A. Antaya</i>	133
Synchrotrons for Hadrontherapy <i>Marco G. Pullia</i>	157
Beam Delivery Systems for Particle Radiation Therapy: Current Status and Recent Developments <i>J. M. Schippers</i>	179
Laser Acceleration of Ions for Radiation Therapy <i>Toshiki Tajima, Dietrich Habs and Xueqing Yan</i>	201
FFAGs as Accelerators and Beam Delivery Devices for Ion Cancer Therapy <i>Dejan Trbojevic</i>	229
The Dielectric Wall Accelerator <i>George J. Caporaso, Yu-Jiuan Chen and Stephen E. Sampayan</i>	253
The Supercollider: The Texas Days — A Personal Recollection of Its Short Life and Demise <i>Stanley Wojcicki</i>	265
A Man for All Seasons: Robert R. Wilson <i>Edwin L. Goldwasser</i>	303