
Contents

DNA Repair	1
Kerstin Borgmann, Sabrina Köcher, Malte Kriegs, Wael Yassin Mansour, Ann Christin Parplys, Thorsten Rieckmann and Kai Rothkamm	
Cancer Stem Cells	25
Wendy A. Woodward and Richard P. Hill	
Molecular Targeting of Growth Factor Receptor Signaling in Radiation Oncology	45
Shyhmin Huang, H. Peter Rodemann and Paul M. Harari	
Molecular Targeting of Integrins and Integrin-Associated Signaling Networks in Radiation Oncology	89
Anne Vehlow, Katja Storch, Daniela Matzke and Nils Cordes	
Personalized Radiation Oncology: Epidermal Growth Factor Receptor and Other Receptor Tyrosine Kinase Inhibitors	107
Geoff S. Higgins, Mechthild Krause, W. Gillies McKenna and Michael Baumann	
Hypoxia as a Biomarker and for Personalized Radiation Oncology	123
Dirk Vordermark and Michael R. Horsman	
Human Papilloma Virus as a Biomarker for Personalized Head and Neck Cancer Radiotherapy	143
Jesper Grau Eriksen and Pernille Lassen	
FDG and Beyond	163
Dirk De Ruyscher, Karin Haustermans and Daniela Thorwarth	
On the Reliability of Automatic Volume Delineation in Low-Contrast [¹⁸F]FMISO-PET Imaging	175
Robert Haase, Michael Andreeff and Nasreddin Abolmaali	
FMISO as a Biomarker for Clinical Radiation Oncology	189
Sebastian Zschaek, Jörg Steinbach and Esther G.C. Troost	