

Contents

Part I Clues to Morphological Diagnosis and Prognosis Evaluation

1 Update on Diagnostic Criteria, on Biopsy and Surgical Specimen: Preinvasive Lesions, from Epithelial Cell Hyperplasia to Carcinoma In Situ and Invasive Carcinoma – First-Line Immuno-Phenotyping of Prostate Diseases..... 3
Massimo Mascolo, Daniela Russo, and Gaetano De Rosa

Part II Molecular Pathology

2 Molecular Determinants of Cancer-Related Inflammation 45
Stefania Staibano

3 Apoptosis and Autophagy 57
Francesco Merolla

4 Androgen Receptor and Steroidogenesis Pathway Control 79
Simona Romano, Rita Bisogni,
and Maria Fiammetta Romano

5 Neuroendocrine Differentiation in Prostate Cancer 87
Renato Franco, Paolo Chieffi, Sisto Perdonà,
Gaetano Facchini, and Michele Caraglia

6 Metastatic Dissemination 111
Stefania Staibano

7 Resistance to Castration – Resistance to Drugs 127
Stefania Staibano

8 Crossroads of Signaling Pathways 143
Stefania Staibano

Part III Genetic and Epigenetic Events in Prostate Cancer

9 Gene Polymorphisms	161
Maria Siano, MariaLuisa Vecchione, and Gennaro Ilardi	
10 Expression Signature	183
Stefania Staibano and Angela Celetti	
11 Mapping Prostate Cancer Aggressiveness Loci	195
Maria Siano, Silvia Varricchio, and Gennaro Ilardi	
12 Epigenetic Mechanisms: Histone Acetylation, DNA Methylation, miRNA, Chromatin Modifiers	201
Angela Celetti	

Part IV A Modern Approach to Therapy of Prostate Cancer: Targeting the Deadly Subset

13 Molecular Markers for Patient Selection and Stratification: Personalized Prognostic Predictive Models	213
Stefania Staibano	
14 Targeting Tumor Angiogenesis	221
Stefania Staibano and Paolo Antonio Ascierto	
15 Efficacy of Signal Transduction Inhibition in Advanced Prostate Cancer	233
Stefania Staibano	
16 Therapeutic Targeting of the Bone Pre-metastatic Niche	247
Ester Simeone, Antonio Maria Grimaldi, Paolo Antonio Ascierto, Francesco Merolla, Gennaro Ilardi, Maria Siano, and Stefania Staibano	
17 Counteracting Hypoxia in Radio-Resistant Metastatic Lesions	255
Stefania Staibano	
18 “Synthetic Lethality”: Molecular Co-targeting to Restore the DNA Repair Mechanisms in Prostate Cancer Cells	271
Gennaro Ilardi and Stefania Staibano	
Concluding Remarks	289
Index	291

Prostate Cancer: Shifting from Morphology to Biology

Staibano, S. (Ed.)

2013, XVIII, 296 p. 41 illus., 38 illus. in color.,

ISBN: 978-94-007-7149-9