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Bladder Cancer -- Chapter 11. Molecular Pathogenesis: Field Cancerization and Clonal Evolution in Urothelial Cancer Initiation and Progression -- Chapter 12. The Bladder Tumor Microenvironment -- Part IV. Molecular and Histological Subtypes of Bladder Cancer -- Chapter 13. Molecular Subtypes of Non-Muscle-Invasive Bladder Cancer -- Chapter 14. Molecular Subtypes of Muscle-Invasive Bladder Cancer -- Chapter 15. Molecular Features of Divergent Differentiation and Histological Subtypes in Bladder Cancer -- Part V. Experimental Models of Bladder Cancer -- Chapter 16. The Emerging Landscape of Mouse Bladder Cancer Models -- Chapter 17. In Vitro Bladder Cancer Models -- Part VI. Biomarkers for Diagnosis and Treatment of Bladder Cancer -- Chapter 18. Urine Biomarkers for Bladder Cancer Diagnosis and Screening -- Chapter 19. Blood-Based Biomarkers for Bladder Cancer Diagnosis and Prognosis -- Chapter 20. Mechanisms and Biomarkers of Response to BCG and Chemotherapy in Bladder Cancer -- Part VII. Therapeutic Application based on Molecular Insights -- Chapter 21. New Treatment Approaches in Non-Muscle-Invasive Bladder Cancer -- Chapter 22. New Treatment Approaches in Muscle-Invasive Bladder Cancer -- Chapter 23. Targeting the Immune Checkpoint in Bladder Cancer -- Part VIII. Future Directions in Bladder Cancer Research -- Chapter 24. Future Directions in Bladder Cancer Research and Clinical Implications.

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#### Sommario/riassunto

This book provides an update on the current understanding of various aspects of bladder cancer biology and introduces clinical manifestations together with current and novel treatment aspects. Key concepts covered include epidemiology and genetic predisposition to bladder cancer, insights into the mutational events and molecular pathogenesis of bladder cancer, detailed analyses of tumor subtypes, and references to common experimental models used in the study of bladder cancer. The book addresses critical issues such as the molecular features that contribute to the development of bladder cancer, the impact of the tumor microenvironment on disease progression, and the potential of novel urine- and blood-based biomarkers for diagnosis and treatment. Innovative therapeutic applications are also explored, including targeting immune checkpoints and personalized medicine approaches. Aimed at early career and experienced researchers or clinicians alike, this volume provides an interdisciplinary understanding of bladder cancer. Delving into the biology, pathology, and clinical aspects of the disease, it serves as an indispensable resource for understanding bladder cancer's complexity.

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