

Prostate cancer is one of the most common malignancies in men worldwide. Various treatment procedures are available for prostate cancer, including radical prostatectomy, radiotherapy, endocrine therapy, chemotherapy, immunotherapy, etc. Therefore, prostate cancer prognosis is relatively acceptable, and the 5-year survival rate is more than 95% in the early stage. However, advanced or high-grade prostate cancer has shown the potential to progress to a fatal stage that may lead to death. The lethality of advanced prostate cancer is due to insufficient treatment options that can produce a lasting response to extreme tumor heterogeneity at the genetic and cellular biological levels. Consequently, novel diagnosis and treatment methods are required to prolong the survival of patients and improve their quality of life.

Precision medicine, along with individualized treatment, is an emerging field that plays an important role in identifying new subtypes of diseases and providing treatment guidance based on individual multi-omics data. Precision medicine is changing supportive cancer care by providing more accurate and efficient predictions of therapies for each patient. Based on clinically relevant and genome-defined disease subsets, molecular stratification of prostate cancer provides opportunities for more precise management. Multi-omics methods always include genomics, metabolomics, transcriptomics, proteomics, epigenomics, and phenotypic data to reveal the complexity of disease-related biological networks, predictive biomarkers, prognostic genes, and provide individual cancer patients with new targeted drugs. High-throughput sequencing technology can accelerate the molecular characterization of prostate cancer and provide an opportunity to develop an accurate medicine for treatment decision-making.

However, even with these new advances in precision medicine, there remain many challenges for doctors treating patients with prostate cancer, especially those with castration-resistant prostate cancer. This book covers a wide range of knowledge, including many topics collected from experts from all over the world. We believe it can inspire and stimulate readers' thinking and promote clinical innovation. Therefore, this book may be of considerable value to help urologists or oncologists have a deep and comprehensive understanding of the diagnosis and treatment of prostate cancer.

Finally, we would like to thank the Editorial Board again for their efforts, and we hope that everyone enjoys the read and benefits of this book.



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