Prostate cancer basic and clinic science enters a golden age

In recent years, few cancer types have witnessed such a rapid expansion in the basic science and therapeutic options for patients with localized, recurrent or metastatic prostate cancer. Some of the greatest recent advances include an unprecedented understanding of the germline and somatic genomic landscapes of prostate cancer, an appreciation of the cellular processes and pathways driving this disease, novel insights on the epigenetic regulation of the androgen receptor and other key transcription factors, new imaging techniques capable of detecting recurrent prostate cancer earlier than ever before, novel genomically-informed therapies that target specific molecular or genetic tumor alterations, and our understanding of how the external environment (and the internal microbiome) influence prostate cancer initiation and progression.

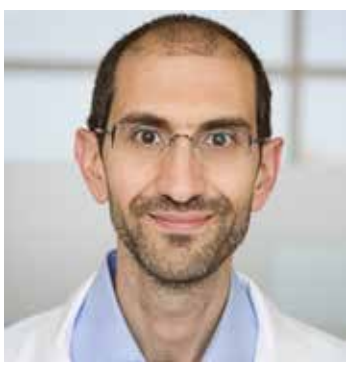
Key Leaders' Opinion on Novel Progress in Diagnosis and Treatment of Prostate Cancer (*First Edition*) is a collection of papers, recently published by experts in this fields working in renowned centers all over the world, which provides a detailed review of new knowledge as well as debated issues in the science and clinical management of prostate cancer.

The volume covers a diverse set of topics including the surgical and medical treatment of localized and advanced prostate cancer, advanced in radiotherapy and radiopharmaceutical treatments, imaging-based and molecular biomarkers for prediction and prognosis, personalized oncology and precision medicine approaches, basic and translational research advances in prostate cancer, and the effect of environmental exposures and metabolism on prostate cancer risk.

While many topics will be of interest to anyone studying prostate cancer in the laboratory or in the clinic, a few select topic areas are of particular interest to me. These include debates on the optimal management (including genomic markers) of high-risk localized or locally-advanced prostate cancer, how best to treat biochemically-recurrent prostate cancer, the value of hypofractionated radiation schedules, the use of MRI to better stage prostate cancer, the advent of circulating (cell-free DNA and CTC-based) biomarkers to inform precision oncology approaches, the potential targeting of the glucocorticoid receptor in castration-resistant prostate cancer, the use of radium-223 and radium-containing combination strategies, the role of N-Myc and micro-RNAs in prostate carcinogenesis, the impact of DNA repair processes on prostate cancer biology and therapeutics, and the role of systemic (and intestinal) inflammation in driving prostate cancer growth.

In the next few months and years, additional biological and clinical insights are likely to positively impact the prostate cancer research community and our patients. These new and emerging areas of basic and clinical research include the advent of next-generation imaging techniques including PSMA-based PET scans, an increasing number of genomically-informed therapies (such as ipatasertib for *PTEN*-deficient prostate cancer), therapeutic strategies to target PSMA and other cell-surface proteins, novel treatments aimed at extinguishing persistent androgen receptor signaling, and a whole range of immunotherapies (immune checkpoint inhibitors, bispecific T cell engagers, CAR T cells and NK cell therapeutics). These and other discoveries will keep our field busy for many years to come.

It is my honor and pleasure to provide the preface to this textbook, which is the result of the effective collaboration between many colleagues across multiple disciplines with an interest in prostate cancer, and I would like to congratulate the AME Publishing group who have helped to coordinate the editorial process. I sincerely believe that you will enjoy reading this book!



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