

The genomic revolution in oncology has dramatically altered our molecular understandings and clinical management of urological malignancies over the past several years. For example, in the case of prostate cancer, there are now at least two molecular classifications of the disease that have clinical relevance for therapeutic strategies. The first example, defined by prostate cancers harboring germline or somatic mutations in homologous-recombination DNA repair genes (e.g., BRCA2, ATM) appears to be associated with sensitivity to poly (ADP-ribose) polymerase inhibitors such as olaparib. The second example, defined by tumors that are deficient in DNA mismatch-repair function giving rise to microsatellite instability, is linked with sensitivity to a different class of drugs: PD-1 inhibitors such as pembrolizumab. Similar examples of genomically-targeted therapeutics are beginning to emerge for other urological cancers including bladder cancers and renal cell cancers. Moreover, as genomic and biomarker technologies become better and cheaper, it is becoming increasingly possible to use multiple body compartments (tissue, blood, urine) to assess for multiple analytes (tumor DNA/RNA, circulating tumor cells, circulating nucleic acids, exosomal contents) in an effort to achieve the dream of precision oncology as it relates to the management of genitourinary malignancies. All of a sudden, it seems that the future that we have all been waiting for has arrived.

This book has gathered together a group of elite experts in the fields of molecular genetics, basic biology, cancer metabolism, biomarker development, drug development and clinical experts in the science and therapy of urological malignancies with a focus on prostate cancer, urothelial cancer and renal cell cancer. Over a series of chapters linked by common themes, this book represents the state-of-the art knowledge spanning basic science, translational biology and clinical management of urogenital cancers. The target audience for this book will include a broad range of individuals, from postdoctoral research students, to medical students, to translational scientists, to clinicians involved in the field of genitourinary cancers. The AME Publishing Company should be congratulated for compiling such a great collection of works representing the state-of-the-art in our current understanding of urogenital oncology. I am confident that the readership will enjoy this book very much.

Acknowledgements

None.

Footnote

Conflicts of Interest: Emmanuel S. Antonarakis is a paid consultant/advisor to Janssen, Astellas, Sanofi, Dendreon, Medivation, ESSA, AstraZeneca, Clovis, and Merck; he has received research funding to his institution from Janssen, Johnson & Johnson, Sanofi, Dendreon, Genentech, Novartis, Tokai, Bristol Myers- Squibb, AstraZeneca, Clovis, and Merck; and he is the co-inventor of a biomarker technology that has been licensed to Qiagen.



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