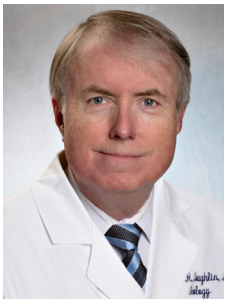
Foreword

The Continued Pursuit of Urologic Biomarkers: Beyond Prostate-Specific Antigen



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Urologists have utilized biomarkers for almost the past century. Gutman and Gutman[1,2] discovered and reported on the utility of acid phosphatase in the 1930s. Prostate-specific antigen was identified in 1970,[3] and for the next several decades, prostate cancer received most of the attention of biomarker applications in urologic practice.[4]

However, in this century, there has been an explosion in the discovery, application, and interest in urologic biomarkers. In the last issue of the *Urologic Clinics* devoted to Biomarkers, which was published in 2016, we reported that a Medline search for the term "biomarker" revealed a growth of 116 citations in 2000 to 2988 in 2014.[5] That growth has continued unabated up to the present time.

Doctor Feldman has gathered recognized experts to contribute to this latest issue of Biomarkers. What is striking is that urologic biomarkers are no longer confined to prostate disease. This issue not only touches on biomarker applications to several urologic malignancies but also expands the applications to pediatric disease as well as to benign urologic conditions.

Urologic biomarkers have been expanded to aid in the diagnosis, prognosis, selection of therapy, and surveillance in a variety of urologic conditions. Urine, serum, tissue, and radiologic imaging are all current sources for biomarker development.

In addition, the application of molecular markers, some of which are reviewed in this issue, holds particular promise to practice "personalized" biomarkers in selected patients. The next decade holds great promise for even more applications of biomarkers in clinical practice, and this issue of the *Urologic Clinics* provides a state-of-the-art review of this topic.

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