Preface

Hossein Jadvar, MD, PhD, MPH, MBA
Guest Editor

Prostate cancer continues to be a major public health problem. The incidence of prostate cancer is expected to rise as longevity increases. Imaging of prostate cancer is particularly challenging because of the biological and clinical heterogeneity of the disease. Although PET with [F-18]-fluorodeoxyglucose (FDG) has found important diagnostic and, to some extent, prognostic utility in many cancers, the situation for prostate cancer remains uncertain and controversial. The recent National Oncologic PET Registry data suggest that there may be a role for FDG-PET in prostate cancer. PET is usually and unjustly synonymous with FDG-PET. In fact, there are almost an unlimited number of radiotracers that may be designed for PET imaging interrogation of various disease processes, including cancer.

In this issue of *PET Clinics*, we have focused on prostate cancer. An overview of the role of imaging in prostate cancer is presented in the first article. In the second article, Drs. Gupta and Torigian from the University of Pennsylvania, describe the role of MRI in prostate cancer, which is commonly used for the evaluation of the prostate gland for primary cancer or other conditions because PET has a limited role in the initial diagnosis and staging of primary prostate cancer. In the third article, the potential role of FDG, the most common PET radiotracer, is summarized. The next two articles discuss the potential and emerging roles of radiolabeled acetate and choline in the imaging evaluation of prostate cancer, respectively. The acetate article is presented by Dr. Czernin and his group at UCLA, and the choline article is presented by an experienced group from St. Vincent's Hospital in Linz, Austria. The sixth article from the group at the University of Texas MD Anderson Cancer Center in Houston deals with the potential and emerging utility of other PET radiotracers including amino acid derivatives, androgen receptor avid agents, hypoxia avid compounds, and other agents. In the final article, the role of PET with FDG and other tracers in radiation treatment planning and delivery in prostate cancer is discussed.

We hope that this issue of *PET Clinics* with an international list of expert contributors provides useful up-to-date information to all interested physicians, patients, and patient advocates. I take this opportunity to thank Dr. Abass Alavi for all he has contributed to the field of nuclear radiology and specifically for his invitation for me to be a Guest Editor for this issue of *PET Clinics*. I also thank Barton Dudlick for his watchful eye over the publication process from the initial concept stage to the final product. I dedicate this work to my wife, Mojgan, and my two daughters, Donya and Delara.

Hossein Jadvar, MD, PhD, MPH, MBA
University of Southern California
Keck School of Medicine
2250 Alcazar Street, CSC 102
Los Angeles, CA 90033

E-mail address:
jadvar@usc.edu (H. Jadvar)

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