Contemporary Issues in Cancer Imaging
A Multidisciplinary Approach

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Current titles in the series
- Cancer of the Ovary
- Lung Cancer
- Colorectal Cancer
- Carcinoma of the Kidney
- Carcinoma of the Esophagus
- Carcinoma of the Bladder

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- Squamous Cell Cancer of the Neck
- Pancreatic Cancer
- Interventional Radiological Treatment of Liver Tumors
- Gastric Cancer
- Primary Carcinomas of the Liver
- Breast Cancer
Prostate Cancer

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Series Foreword

Imaging has become pivotal in all aspects of the management of patients with cancer. At the same time it is acknowledged that optimal patient care is best achieved by a multidisciplinary team approach. The explosion of technological developments in imaging over the past years has meant that all members of the multidisciplinary team should understand the potential applications, limitations and advantages of all the evolving and exciting imaging techniques. Equally, to understand the significance of the imaging findings and to contribute actively to management decisions and to the development of new clinical applications for imaging, it is critical that the radiologist should have sufficient background knowledge of different tumors. Thus the radiologist should understand the pathology, the clinical background, the therapeutic options, and prognostic indicators of malignancy.

Contemporary Issues in Cancer Imaging – A Multidisciplinary Approach aims to meet the growing requirement for radiologists to have detailed knowledge of the individual tumors in which they are involved in making management decisions. A series of single subject issues, each of which will be dedicated to a single tumor site and edited by recognized expert guest editors, will include contributions from basic scientists, pathologists, surgeons, oncologists, radiologists, and others.

While the series is written predominantly for the radiologist, it is hoped that individual issues will contain sufficient varied information so as to be of interest to all medical disciplines and to other health professionals managing patients with cancer. As with imaging, advances have occurred in all these disciplines related to cancer management and it is our fervent hope that this series, bringing together expertise from such a range of related specialties, will not only promote the understanding and rational application of modern imaging but will also help to achieve the ultimate goal of improving outcomes of patients with cancer.

Rodney H. Reznek
Preface

Prostate cancer remains the most common internal malignancy in adult men in the western world. While there are many available treatment regimens for prostate cancer, there are few evidence-based guidelines for treatment selection, and the rationale behind common decision practices prior to localized primary or systemic therapy is continuously evolving. Providing optimal treatment selection and the most accurate outcome prediction requires the consideration and synthesis of multiple patient characteristics, which may include demographics (e.g., age, ethnicity), clinical variables (e.g., laboratory values, imaging features), pathologic findings (e.g., stage and grade), and the molecular characteristics of the tumor (e.g., receptor status, gene expression profiling). The multitude of parameters and diversity of expertise required mean that there has been a paradigm shift in the management of patients with prostate cancer, with a multidisciplinary disease management approach becoming more attractive to patients. For the radiologist, understanding the pathophysiology of prostate cancer, the critical clinical issues, and the advantages and limitations of different treatment approaches is essential for meaningful interpretation of imaging studies, be they ultrasound, computed tomography, magnetic resonance imaging or nuclear medicine studies. Similarly, for the practicing clinician, understanding the advantages and limitations of each imaging modality and appreciating the importance of optimal technique are crucial to rational incorporation of imaging studies into the care of the patient with prostate cancer. Promoting the spirit of a multidisciplinary approach, this volume includes detailed descriptions of anatomy, the natural history of prostate cancer, treatment options and imaging modalities. The series Contemporary Issues in Cancer Imaging has been designed not only to help radiologists understand the goals and requirements of oncologic imaging, but also to serve as a valuable reference for all those involved in the management of cancer.

Hedvig Hricak
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