Carcinoma of the Kidney
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 Esophagus

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Squamous Cell Cancer of the Neck
Pancreatic Cancer
Interventional Radiological Treatment of Liver Tumours
Carcinoma of the Kidney

Edited by
Uday Patel

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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 the 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, 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 also help to achieve the ultimate goal of improving outcomes of patients with cancer.

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Preface to Carcinoma of the Kidney

The last two decades have seen ground-shifting advances in the epidemiology, genetics, diagnosis, and management of the renal cancer, particularly renal cell cancer. The most striking is that almost half are now diagnosed at an asymptomatic and earlier stage, and there have been parallel advances in the management of these early stage tumors. Nephron-sparing procedures are increasingly performed for these small tumors. Such procedures include radiologically guided ablative procedures, such as radiofrequency ablation and cryotherapy, as well as surgical options such as open or laparoscopic nephron-sparing surgery. More recently still, there have been encouraging advances in immunotherapy and the treatment of recurrent disease. There have also been sweeping advances in our understanding of the genetics of renal cancer.

However all these changes have also raised some contemporary dilemmas: for example, using imaging can we reliably resolve the nature of atypical renal masses; how to differentiate the indolent from the aggressive asymptomatic tumor; the recognition of residual or inadequately treated tumor post nephron-sparing procedures; and, finally, the follow-up of the accumulating cohort of patients treated by nephron-sparing procedures and those with familial or genetic renal cancer. These current predicaments are the focus of this issue of Contemporary Issues in Cancer Imaging. The authors are all recognized experts in their fields and I hope that this single volume should provide an up-to-date clinical and radiological summary of renal cell cancer for all those involved in the diagnosis and management of this challenging tumor.

Uday Patel