

Contents

Preface	v
Contributors	xi
1 Epidemiology of Renal Cell Carcinoma	1
<i>Intan P.E.D. Kümmerlin, M. Pilar Laguna, Jean J.M.C.H. de la Rosette, and Patrick M.M. Bossuyt</i>	
2 Natural History of Renal Cell Carcinoma	9
<i>Mototsugu Oya and Masaru Murai</i>	
3 Pathology of Renal Cell Carcinoma: Correlation of Morphology, Immunophenotype, and Genetic and Clinical Aspects	15
<i>Ferran Algaba, Yolanda Arce, and Isabel Trias</i>	
4 Staging of Renal Cell Carcinoma	41
<i>John T. Leppert, John S. Lam, and Arie S. Beldegrun</i>	
5 Prognostic Factors: Markers	53
<i>Benjamin I. Chung and John A. Libertino</i>	
6 Diagnostic Tests	69
6a Ultrasound in Diagnosis and Follow-Up of Renal Cell Cancer	71
<i>Margot H. Wink, Johan S. Laméris, and Jean J.M.C.H. de la Rosette</i>	
6b Computer Tomography in Renal Cell Cancer	81
<i>Saffire S.K.S. Phoa</i>	
6c Magnetic Resonance Imaging of Renal Cell Cancer	101
<i>Els L.F. Nijs and Raymond H. Oyen</i>	
6d Angiography as a Diagnostic Tool in Renal Cell Carcinoma	127
<i>Didier Jacqmin and Catherine Roy</i>	
6e Positron Emission Tomography in Renal Cancer	131
<i>Sarah K. Ceysens and Luc Mortelmans</i>	
6f Biopsies and Cytological Punctures	137
<i>Intan P.E.D. Kümmerlin and Fiebo J.W. Ten Kate</i>	

7	Hereditary Factors	149
7a	von Hippel–Lindau Disease	151
	<i>Martijn P. Lolkema and Emile E. Voest</i>	
7b	Genetic Counseling for Inherited Forms of Kidney Cancer	161
	<i>Peter Hulick, Gayun Chan-Smutko, Michael Zimmer, and Othon Iliopoulos</i>	
8	Surgery	173
8a	Open Radical Nephrectomy for Localized Renal Cell Carcinoma	175
	<i>Sreenivas N. Vemulapalli and Jean B. deKernion</i>	
8b	Radical Nephrectomy, Laparoscopic Transperitoneal	189
	<i>Yi-Hsiu Huang and Allen W. Chiu</i>	
8c	Retroperitoneoscopic Radical Nephrectomy	195
	<i>Dogu Teber, Ali S. Gözen, Tibet Erdogru, Marto Sugiono, Michael Schulze, and Jens Rassweiler</i>	
8d	Radical Nephrectomy: Lymph Node Dissection	205
	<i>Alexander Roosen, Elmar W. Gerharz, and Hubertus Riedmiller</i>	
8e	Nephron-Sparing Surgery: Partial Nephrectomy Open	213
	<i>Frank Steinbach, Fred Schuster, and Ernst P. Allhoff</i>	
8f	Nephron-Sparing Surgery: Laparoscopic Partial Nephrectomy	221
	<i>Georges-Pascal Haber, Jose R. Colombo Jr., and Inderbir S. Gill</i>	
8g	How Much Margin to Spare in Partial Nephrectomy	229
	<i>Hein P.A. van Poppel and Raf van Reusel</i>	
8h	Advanced Tumors: Tumor Thrombus	237
	<i>Ziya Kirkali and Can Öbek</i>	
8i	Complicated Tumors: Bench Surgery	253
	<i>Gerald H.J. Mickisch</i>	
8j	Advanced Disease: Nonpulmonary Metastases	257
	<i>Bryan B. Voelzke and Robert C. Flanigan</i>	
8k	Local Recurrence After Radical Nephrectomy for Renal Cell Carcinoma	279
	<i>M. Pilar Laguna</i>	
9	Minimal Invasive Therapies	289
9a	Cryosurgery	291
	<i>Gyan Pareek, Brunolf W. Lagerveld, and Stephen Y. Nakada</i>	
9b	Radiofrequency Ablation of Renal Masses	299
	<i>Michael C. Ost and Benjamin R. Lee</i>	

9c	High-Intensity Focused Ultrasound	313
	<i>Michael Marberger</i>	
9d	Current Status of Photodynamic Therapy for Renal Tumors	317
	<i>Surena F. Matin and Avigdor Scherz</i>	
10a	Complicated Cysts and Cystic Carcinomas	323
	<i>Morton A. Bosniak and Gary M. Israel</i>	
10b	Nephron-Sparing Surgery for Central Renal Tumors	341
	<i>Sascha Pahernik and Joachim W. Thüroff</i>	
10c	Bilateral Renal Masses	345
	<i>Bradley C. Leibovich and Michael L. Blute</i>	
10d	Old and Fragile Patients	353
	<i>Dmitry Y. Pushkar and Alexander V. Govorov</i>	
10e	Obesity and Coumadin in Kidney Cancer	365
10e.i	Obesity and Kidney Cancer	367
	<i>Louis S. Liou, Emil Kheterpal, and Richard K. Babayan</i>	
10e.ii	Coumadin and Kidney Cancer	373
	<i>Louis S. Liou, Emil Kheterpal, and Richard K. Babayan</i>	
10f	Embolization	381
	<i>Theo M. de Reijke and Otto M. van Delden</i>	
10g	Benign Tumors of the Kidney	389
	<i>Doddametkurke R. Basavaraj and Adrian Joyce</i>	
10h	Bone Metastases	401
10h.i	Radiotherapy	403
	<i>Padraig R. Warde and Mary K. Gospodarowicz</i>	
10h.ii	Surgery	409
	<i>Ignace R. Samson and Friedl C. Sinnaeve</i>	
11	Medical Management	425
11a	Immunotherapy	427
	<i>Edith Huland, Hans Heinzer, and Hartwig Huland</i>	
11b	Antiangiogenic Therapies in Renal Cell Carcinoma	449
	<i>Karen L. Reckamp, Robert M. Strieter, and Robert A. Figlin</i>	
11c	Signal Transduction Inhibitors in Renal Cell Cancer	457
	<i>Andrea Mancuso and Cora N. Sternberg</i>	
11d	Cytotoxic Chemotherapy for Metastatic Renal Cell Cancer	467
	<i>Walter M. Stadler</i>	

11e	Cell-Based Vaccines for Renal Cell Carcinoma	475
	<i>Dolores J. Schendel and Bernhard Frankenberger</i>	
11f	Monoclonal Antibody-Based Therapy	489
	<i>Axel Bex, Simon Horenblas, and Gijsbert C. de Gast</i>	
11g	Hematopoietic Stem Cell Transplantation: Allogeneic Immunotherapy for Cancer	495
	<i>Andreas E. Lundqvist and Richard W. Childs</i>	
11h	Bisphosphonate Treatment for Osteolytic Bone Metastases Associated with Renal Cell Carcinoma	505
	<i>Fred Saad and Allan Lipton</i>	
11i	Therapeutic Counseling for the Medical Management of Renal Cell Carcinoma	515
	<i>Brant A. Inman and Bradley C. Leibovich</i>	
11j	Trends in Medical Management of Renal Cell Cancer	535
	<i>Bernard Escudier</i>	
12	Models of Human Renal Cell Carcinoma	539
	<i>Meaghan L. Douglas and David L. Nicol</i>	
13	Follow-Up Strategies for Renal Cell Carcinoma After Nephrectomy	551
	<i>Andreas Skolarikos and Gerasimos J. Alivizatos</i>	
14	Palliative Treatment in Renal Cell Cancer	561
	<i>Dick Richel</i>	
15	Future Directions	567
	<i>Jean J.M.C.H. de la Rosette, Cora N. Sternberg, and Hein P.A. van Poppel</i>	
Index	569