Endourological Management of Urogenital Carcinoma
Endourological Management of Urogenital Carcinoma

With 58 Figures, Including 29 in Color
Cover: Planes of neurovascular bundle dissection. See Fig. 5, p. 137.
Preface

The Japanese Society of Endourology and ESWL has published a monograph in the series Recent Advances in Endourology every year since 1999, at which time laparoscopic surgery had become popular, for not only benign but also malignant urological diseases. At that time, however, attention had been focused primarily on the techniques or minimal invasiveness of the surgery, and much of the data were still short-term. During the subsequent 6 years, long-term oncological or functional outcomes have been collected in various fields, and advances in surgical techniques and improved instrumentation have led to further, widespread development of such complex surgery as laparoscopic partial nephrectomy, radical cystectomy and urinary diversion, radical prostatectomy, and retroperitoneal lymph node dissection. Recently, the trend for laparoscopic surgery for small renal cancer has been shifting away from radical surgery to more organ-sparing procedures. Furthermore, recent advances in medical engineering have now made it possible to also use robotics for laparoscopic surgery, and new methods for laparoscopic surgery are continually being developed. Robotic assistance seems to be quite useful in performing laparoscopic radical prostatectomy and radical cystectomy with urinary diversion, both of which require an extremely high level of expertise.

While we have benefited greatly from the development of minimally invasive surgery, some serious complications have also been reported. As a result, the Endoscopic Surgical Skill Qualification System in Urological Laparoscopy was established by the Japanese Urological Association and the Japanese Society of Endourology and ESWL, and began being implemented in Japan in 2004. The skills of applicants were assessed by referees reviewing unedited videotapes of laparoscopic nephrectomies or adrenalectomies. In the first year, 136 of 205 applicants passed the assessment and were certified as laparoscopic surgeons with adequate skills to perform urologic laparoscopic surgery independently. This system is expected not only to improve laparoscopic surgeons’ skills and reduce the number of serious complications but also to be a motivating factor for young urologists. Similar qualification systems may be established in other countries in the near future.

This seventh volume of Recent Advances in Endourology focuses on the treatment of urogenital malignancies with endourological procedures, including
laparoscopic surgery with robotic assistance. The standard procedures and their relatively long-term outcomes or new techniques have been clearly described with detailed references. We editors are deeply grateful to the authors for contributing their educational and informative chapters. We hope that this monograph will be helpful in providing a better understanding of the present status of endourological management for urogenital carcinoma and, consequently, will set the stage for future improvements in both oncological and functional outcomes.

Seiji Naito, M.D., Ph.D.
Chief Editor
Contents

Preface ................................................................. V
Contributors ......................................................... IX

Part 1 Kidney

Laparoscopic Radical Nephrectomy for Renal Cell Carcinoma
Y. ONO, R. Hattori, M. Gotoh, T. Kinukawa, S. Yamada,
and O. Kamihira .................................................. 3

Laparoscopic Partial Nephrectomy
J.F. Borin and R.V. Clayman .................................. 15

Part 2 Upper Urinary Tract Tumor

Percutaneous Approach to Transitional Cell Carcinoma of the
Upper Urinary Tract
B.J. Tan, M.C. Ost, R. Marovich, B.R. Lee,
and A.D. Smith ..................................................... 37

Ureteroscopic Approach to Transitional Cell Carcinoma of the
Upper Urinary Tract
I.M. Varkarakis and T.W. Jarrett ............................. 57

Laparoscopic Nephroureterectomy for Upper Urinary Tract
Transitional Cell Carcinoma: A Review of the Current Literature
J.J. Rassweiler, M. Schulze, D. Teber, S. Subotic,
and T. Frede ......................................................... 69

Hand-Assisted Retroperitoneoscopic Nephroureterectomy
A. Kawauchi, A. Fujito, K. Yoneda, J. Soh, Y. Naitoh,
O. Ukimura, Y. Mizutani, and T. Miki .......................... 91
Part 3 Urinary Bladder

Laparoscopic Radical Cystectomy and Urinary Diversion
   O. UKIMURA and I.S. GILL ........................................... 103

Robot-Assisted Radical Cystectomy and Urinary Diversion in Bladder Cancer
   A.K. HEMAL and M. MENON ........................................... 119

Part 4 Prostate

Laparoscopic Radical Prostatectomy: Techniques and Complications
   F.P. SECIN, N. KARANIKOLAS, K. TOUIJER, and B. GUILLONNEAU ...... 129

Laparoscopic Radical Prostatectomy: Oncological and Functional Results
   T. TERACHI, Y. USUI, M. SHIMA, and K. OKUMURA ...................... 147

Laparoscopic Radical Prostatectomy: Extraperitoneal Approach
   K. NAKAGAWA and M. MURAI ........................................... 161

Robotic Assisted Laparoscopic Radical Prostatectomy
   M.J. FUMO, A.K. HEMAL, and M. MENON ................................ 175

Part 5 Testis: Retroperitoneal Lymph Node

Laparoscopic Retroperitoneal Lymph Node Dissection: Transperitoneal Approach
   N. ALBQAMI and G. JANETSCHEK ..................................... 193

Laparoscopic Retroperitoneal Lymph Node Dissection: Extraperitoneal Approach
   M. SATOH, A. ITO, and Y. ARAI ....................................... 209

Subject Index .............................................................. 219
Contributors

Albqami, N. 193
Arai, Y. 209

Borin, J.F. 15
Clayman, R.V. 15

Frede, T. 69
Fujito, A. 91
Fumo, M.J. 175

Gill, I.S. 103
Gotoh, M. 3
Guillonneau, B. 129

Hattori, R. 3
Hemal, A.K. 119, 175

Ito, A. 209

Janetschek, G. 193
Jarrett, T.W. 57

Kamihira, O. 3
Karanikolas, N. 129
Kawauchi, A. 91
Kinukawa, T. 3

Lee, B.R. 37

Marcovich, R. 37
Menon, M. 119, 175
Miki, T. 91

Mizutani, Y. 91
Murai, M. 161

Naitoh, Y. 91
Nakagawa, K. 161

Okumura, K. 147
Ono, Y. 3
Ost, M.C. 37

Rassweiler, J.J. 69

Satoh, M. 209
Schulze, M. 69
Secin, F.P. 129
Shima, M. 147
Smith, A.D. 37
Soh, J. 91
Subotic, S. 69

Tan, B.J. 37
Teber, D. 69
Terachi, T. 147
Touijer, K. 129

Ukimura, O. 91, 103
Usui, Y. 147

Varkarakis, I.M. 57

Yamada, S. 3
Yoneda, K. 91