

Contents

Preface	v
Acknowledgments	vii
Operative Videos	xiii
Contributors	xv
1 Multiorgan Procurement from the Deceased Donor	1
Standard Multiorgan Procurement	1
<i>Mark L. Sturdevant and Abhinav Humar</i>	
Introduction	1
Surgical Technique	2
Non-Heart-Beating Donor Organ Procurement	23
<i>David J. Reich</i>	
Background	23
a) Definitions	23
b) History	24
c) Impact of Non-Heart-Beating Donors	24
Results Following Transplantation of Non-Heart-Beating Donor Organs	25
a) Kidneys	25
b) Livers	25
c) Author's Experience	26
Preoperative Maneuvers and Operative Strategy for Non-Heart-Beating Donor Organ Procurement	26
a) Uncontrolled Non-Heart-Beating Donors	26
b) Controlled Non-Heart-Beating Donors	27
c) Surgical Technique	27
d) Premortem Cannulation Technique	30
Ethical Issues and Professionalism	31
2 Dialysis Access Procedures	35
<i>Khalid O. Khwaja</i>	
Hemodialysis	35
Introduction	35
Surgical Procedures	36
a) Radiocephalic Fistula	36
b) Brachiocephalic Fistula	38
c) Basilic Vein Transposition	44
d) Forearm Loop Arteriovenous Graft	46
e) Upper Arm Arteriovenous Graft	49
f) Lower Extremity Access Procedure	51

Peritoneal Dialysis	54
Peritoneal Dialysis Catheter Placement	54
a) Open Technique	54
b) Laparoscopic Technique	56
3 Nephrectomy from a Living Donor	59
<i>Raja Kandaswamy and Abhinav Humar</i>	
Introduction	59
Open Nephrectomy	61
Laparoscopic Donor Nephrectomy	65
a) Introduction	65
b) Preoperative Preparation	66
c) Hand-Assisted Laparoscopic Nephrectomy	67
d) Pure Laparoscopic Technique	79
e) Robotic-Assisted Technique	80
4 Kidney Transplantation	91
<i>Abhinav Humar and Arthur J. Matas</i>	
Introduction	91
Benching the Kidney from a Deceased Donor	93
a) Procedure	94
Adult Kidney Transplant	99
a) Operative Procedure	100
Surgical Variations	116
a) Pediatric Recipient Kidney Transplant	116
b) Pediatric Donor En-Bloc Kidneys	119
c) Multiple Renal Arteries	120
Surgical Complications and Their Management	122
a) Hemorrhage	123
b) Renal Artery Thrombosis	123
c) Renal Artery Stenosis	123
d) Recipient Arterial Complications	125
e) Renal Vein Thrombosis	126
f) Venous Thromboembolism	126
g) Aneurysms and Fistulas	126
h) Urologic Complications	127
i) Lymphoceles	128
j) Wound Complications	129
5 Pancreas Transplantation	133
<i>Abhinav Humar, Khalid O. Khwaja, and David E.R. Sutherland</i>	
Standard Procedure	133
a) Pretransplant Evaluation	134
b) Surgical Technique	134
c) Postoperative Care	134
d) Results	135
e) Islet Cell Transplantation	135
Benching the Pancreas from a Deceased Donor	135
a) Surgical Procedure	136
Simultaneous Pancreas Kidney (SPK): Systemic/Enteric Drainage	145
a) Surgical Procedure	146
Simultaneous Pancreas Kidney: Portal/Enteric Drainage	154
<i>A. Osama Gaber and Hosein Shokouh-Amiri</i>	
a) Surgical Procedure	156

Isolated Pancreas Transplant: Bladder Drainage	166
a) Surgical Procedure	168
Pancreas Transplant from a Living Donor	178
<i>Miguel Tan, Raja Kandaswamy, and Rainer W.G. Gruessner</i>	
a) Donor Evaluation	179
b) Surgical Procedure	179
Surgical Complications After Pancreas Transplant	192
a) Thrombosis	192
b) Hemorrhage	193
c) Pancreatitis	193
d) Urologic Complications	193
e) Infections	193
f) Leaks	194
g) Minimizing Surgical Complications	194
6 Liver Transplantation	197
<i>Abhinav Humar and William D. Payne</i>	
Standard Procedure	197
a) Preoperative Evaluation	198
b) Surgical Procedure	199
c) Postoperative Care	200
d) Results	201
Benching the Liver from a Deceased Donor	201
a) Surgical Procedure	202
Adult Cadaver Liver Transplant	207
a) Surgical Procedure	207
Deceased Donor Split-Liver Transplant: Adult/Pediatric Recipients	235
<i>Hasan Yersiz and John F. Renz</i>	
a) Surgical Procedure	236
Deceased Donor Split-Liver Transplant: Adult/Adult Recipients	242
a) Selection Criteria	243
b) Technical Aspects	243
c) Ethics of Splitting	243
d) Split Potential	244
e) Surgical Procedure	244
Living-Donor Liver Transplant: Pediatric Recipient	251
a) Donor Procedure	253
b) Recipient Procedure	261
Living-Donor Liver Transplant: Adult Recipient	264
a) Donor Procedure	267
b) Recipient Procedure	283
Surgical Complications After Liver Transplant	290
a) Hemorrhage	290
b) Hepatic Artery Complications	290
c) Portal Vein Complications	290
d) Biliary Complications	290
e) Wound Complications	291
f) Primary Nonfunction	291
7 Intestinal and Multivisceral Transplantation	293
<i>Thomas M. Fishbein and Cal S. Matsumoto</i>	
Isolated Intestine Transplant	294
a) Donor Procedure	294
b) Back-Table Procedure	297
c) Recipient Procedure	300

Combined Liver–Intestine Transplant	310
a) Donor Procedure	310
b) Back-Table Procedure	312
c) Recipient Procedure	314
Multivisceral Transplant	318
a) Donor Procedure	318
b) Recipient Procedure	319
Living-Donor Small-Bowel Transplant	324
a) Surgical Procedure	325
Perioperative Management	330
Index	333