

Contributors	ix
Foreword	xvii
Seymour I. Schwartz	
Preface	xix
Preface to the First Edition	xxi

PART I

Basic Considerations	1
1 Accreditation Council for Graduate Medical Education Core Competencies	3
Thu Ha Liz Lee, David H. Berger, Samir S. Awad, Mary L. Brandt, and F. Charles Brunnicardi	
2 Systemic Response to Injury and Metabolic Support	15
Badar V. Jan and Stephen F. Lowry	
3 Fluid and Electrolyte Management of the Surgical Patient	51
G. Tom Shires III	
4 Hemostasis, Surgical Bleeding, and Transfusion	67
Ernest A. Gonzalez, Kenneth M. Jastrow, John B. Holcomb, and Rosemary A. Kozar	
5 Shock	89
Brian S. Zuckerbraun, Andrew B. Peitzman, and Timothy R. Billiar	
6 Surgical Infections	113
Greg J. Beilman and David L. Dunn	
7 Trauma	135
C. Clay Cothren, Walter L. Biffi, and Ernest E. Moore	
8 Burns	197
Fred W. Endorf and Nicole S. Gibran	
9 Wound Healing	209
Adrian Barbul and David T. Efron	
10 Oncology	235
Funda Meric-Bernstam and Raphael E. Pollock	

11 Transplantation	271
Abhinav Humar and David L. Dunn	
12 Patient Safety	313
Catherine L. Chen, Mark L. Shapiro, Peter B. Angood, and Martin A. Makary	
13 Physiologic Monitoring of the Surgical Patient	343
Louis H. Alarcon	
14 Minimally Invasive Surgery, Robotics, and Natural Orifice Transluminal Endoscopic Surgery	359
John G. Hunter and Blair A. Jobe	
15 Molecular and Genomic Surgery	379
Xin-Hua Feng, Xia Lin, and F. Charles Brunnicardi	

PART II

Specific Considerations	403
16 The Skin and Subcutaneous Tissue	405
Patrick Cole, Lior Heller, Jamal Bullocks, Larry H. Hollier, and Samuel Stal	
17 The Breast	423
Kelly K. Hunt, Lisa A. Newman, Edward M. Copeland III, and Kirby I. Bland	
18 Disorders of the Head and Neck	475
Richard O. Wein, Rakesh K. Chandra, and Randal S. Weber	
19 Chest Wall, Lung, Mediastinum, and Pleura	513
Katie S. Nason, Michael A. Maddaus, and James D. Luketich	
20 Congenital Heart Disease	591
Tara B. Karamlou, Karl F. Welke, and Ross M. Ungerleider	
21 Acquired Heart Disease	627
Charles F. Schwartz, Gregory A. Crooke, Eugene A. Grossi, and Aubrey C. Galloway	

22 Thoracic Aneurysms and Aortic Dissection	665	36 Soft Tissue Sarcomas	1283
Scott A. LeMaire, Kapil Sharma, and Joseph S. Coselli		Janice N. Cormier and Raphael E. Pollock	
23 Arterial Disease	701	37 Inguinal Hernias	1305
Peter H. Lin, Panagiotis Kougas, Carlos Bechara, Catherine Cagiannos, Tam T. Huynh, and Changyi J. Chen		Vadim Sherman, James R. Macho, and F. Charles Brunicaardi	
24 Venous and Lymphatic Disease	777	38 Thyroid, Parathyroid, and Adrenal	1343
Timothy K. Liem and Gregory L. Moneta		Geeta Lal and Orlo H. Clark	
25 Esophagus and Diaphragmatic Hernia	803	39 Pediatric Surgery	1409
Blair A. Jobe, John G. Hunter, and Jeffrey H. Peters		David J. Hackam, Tracy C. Grikscheit, Kasper S. Wang, Kurt D. Newman, and Henri R. Ford	
26 Stomach	889	40 Urology	1459
Daniel T. Dempsey		Jeffrey La Rochelle, Brian Shuch, and Arie Belldegrn	
27 The Surgical Management of Obesity	949	41 Gynecology	1475
Bruce Schirmer and Philip R. Schauer		Joanna M. Cain, Wafic M. ElMasri, Tom Gregory, and Elise C. Kohn	
28 Small Intestine	979	42 Neurosurgery	1515
Ali Tavakkolizadeh, Edward E. Whang, Stanley W. Ashley, and Michael J. Zinner		Michael L. Smith, Joel A. Bauman, and M. Sean Grady	
29 Colon, Rectum, and Anus	1013	43 Orthopedic Surgery	1557
Kelli M. Bullard Dunn and David A. Rothenberger		Michael H. Heggeness, Francis H. Gannon, Jacob Weinberg, Peleg Ben-Galim, and Charles A. Reitman	
30 The Appendix	1073	44 Surgery of the Hand and Wrist	1609
Bernard M. Jaffe and David H. Berger		Scott D. Lifchez and Subhro K. Sen	
31 Liver	1093	45 Plastic and Reconstructive Surgery	1647
David A. Geller, John A. Goss, and Allan Tsung		Joseph E. Losee, Michael Gimbel, J. Peter Rubin, Christopher G. Wallace, and Fu-Chan Wei	
32 Gallbladder and the Extrahepatic Biliary System	1135	46 Surgical Considerations in the Elderly	1709
Margrét Oddsdóttir, Thai H. Pham, and John G. Hunter		Rosemarie E. Hardin and Michael E. Zenilman	
33 Pancreas	1167	47 Anesthesia of the Surgical Patient	1731
William E. Fisher, Dana K. Andersen, Richard H. Bell Jr., Ashok K. Saluja, and F. Charles Brunicaardi		Robert S. Dorian	
34 Spleen	1245	48 Ethics, Palliative Care, and Care at the End of Life	1753
Adrian E. Park and Carlos D. Godinez Jr.		Daniel E. Hall, Peter Angelos, Geoffrey P. Dunn, Daniel B. Hinshaw, and Timothy M. Pawlik	
35 Abdominal Wall, Omentum, Mesentery, and Retroperitoneum	1267	Key References	1769
Neal E. Seymour and Robert L. Bell		Index	1777