

<i>Preface</i>	<i>vi</i>
<i>Contributors</i>	<i>vii</i>
<i>Part I: Foundations</i>	
<i>1 Preoperative Care</i>	<i>1</i>
<i>Bruce E. Jarrell, Molly Buzdon, Eric D. Strauch</i>	
<i>Preoperative Care Principles</i>	<i>2</i>
<i>Case 1.1: Routine Surgery in a Healthy Patient</i>	<i>2</i>
<i>Case 1.2: Common Risk Factors Associated with Routine Surgery</i>	<i>8</i>
<i>Case 1.3: Common Problems in a Patient Waiting to Enter the Operating Room</i>	<i>10</i>
<i>Case 1.4: Surgery in a Patient with Pulmonary Symptoms</i>	<i>11</i>
<i>Case 1.5: Urgent Surgery in a Patient with Severe, Acute Pulmonary Function Problems</i>	<i>12</i>
<i>Case 1.6: Cardiac and Neurologic Risk Associated with Surgery for Peripheral Vascular Disease</i>	<i>14</i>
<i>Case 1.7: Surgery in a Patient with Liver Failure</i>	<i>19</i>
<i>Case 1.8: Surgery in a Patient with Chronic Kidney Problems</i>	<i>23</i>
<i>Case 1.9: Surgery in a Patient with Cardiac Valvular Disease</i>	<i>24</i>
<i>Case 1.10: Endocarditis Prophylaxis in a Surgical Patient with Valvular Heart Disease</i>	<i>25</i>
<i>Case 1.11: Surgery in a Patient with Cardiomyopathy</i>	<i>26</i>
<i>2 Postoperative Care</i>	<i>27</i>
<i>Bruce E. Jarrell, Molly Buzdon, Eric D. Strauch</i>	
<i>Postoperative Care Principles</i>	<i>28</i>
<i>Case 2.1: Postoperative Fluid and Electrolyte Management</i>	<i>29</i>
<i>Case 2.2: Postoperative Acute Renal Failure</i>	<i>31</i>
<i>Case 2.3: Postoperative Fever</i>	<i>33</i>
<i>Case 2.4: High Fever in the Immediate Postoperative Period</i>	<i>35</i>
<i>ContentsCase 2.5: Postoperative Cardiopulmonary Problems</i>	<i>35</i>
<i>Case 2.6: Management of a Small Bowel Fistula</i>	<i>37</i>
<i>3 Wound Healing</i>	<i>38</i>
<i>Bruce E. Jarrell, Eric D. Strauch</i>	
<i>Principles of Wound Healing</i>	<i>38</i>
<i>Case 3.1: Wound Management and Complications</i>	<i>39</i>
<i>Case 3.2: Wound Infection</i>	<i>42</i>
<i>Case 3.3: Wound Classification Based on Risk of Subsequent Infection</i>	<i>44</i>
<i>Part II: Specific Disorders</i>	
<i>4 Thoracic and Cardiothoracic Disorders</i>	<i>49</i>
<i>Bruce E. Jarrell, Eric D. Strauch</i>	
<i>Lung Disease</i>	<i>50</i>
<i>Case 4.1: Asymptomatic Abnormality Seen on Chest Radiography</i>	<i>51</i>
<i>Case 4.2: Symptomatic Abnormality Seen on Chest Radiography</i>	<i>55</i>
<i>Case 4.3: Symptomatic Abnormality Located in the Hilum on Chest</i>	

Radiography 57

Case 4.4: Lung Mass with Possible Metastases 60

Case 4.5: Symptomatic Superior Sulcus Tumor 61

Case 4.6: Hemoptysis and Atelectasis in a Young Patient 63

Case 4.7: New-Onset Pleural Effusion without Heart Failure 64

Case 4.8: Sudden Chest Pain and Shortness of Breath in a Young Patient 67

Cardiac Disease 72

Case 4.9: Pleural-Based Chest Pain, Fever, and Pleural Effusion 72

Case 4.10: Progressively Increasing Substernal Chest Pain 73

Case 4.11: Mitral Valve Disease that Requires Surgery 77

Case 4.12: Aortic Valve Disease that Requires Surgery 78

Case 4.13: Congestive Heart Failure with Normal Coronary Arteries 80

Esophageal Disease 81

Case 4.14: Recurrent Regurgitation of Undigested Food 81

Case 4.15: Dysphagia with Weight Loss 83

Case 4.16: Dysphagia with Esophageal Defect 84

Case 4.17: Severe Dysphagia with Coughing 90

Mediastinal Masses 92

Case 4.18: Muscular Weakness and a Mediastinal Mass 925 Vascular Disorders 95

Bruce E. Jarrell, Molly Buzdon, Marshall Benjamin, Eric D. Strauch

Peripheral Arterial Disease 96

Case 5.1: Brief Neurologic Event 97

Case 5.2: Other Transient Neurologic Events 102

Case 5.3: Asymptomatic Carotid Bruit 103

Case 5.4: Acute Vascular Event in the Leg 104

Case 5.5: Claudication 108

Case 5.6: Claudication and Absence of a Femoral Pulse 112

Case 5.7: Toe Ulceration in Peripheral Vascular Disease 113

Case 5.8: Aortoiliac Occlusive Disease 116

Case 5.9: Cardiac Risk in Major Vascular Reconstruction 119

Case 5.10: Pulsatile Mass in the Abdomen 121

Case 5.11: Ruptured Abdominal Aortic Aneurysm 124

Case 5.12: Complications of Abdominal Aortic Replacement 126

Case 5.13: Chronic Postprandial Abdominal Pain and Weight Loss 128

Case 5.14: Tearing Chest and Back Pain 130

Venous Disease 131

Case 5.15: Postoperative Leg Swelling 132

Case 5.16: Prevention of Deep Venous Thrombosis 133

Case 5.17: Postoperative Shortness of Breath 136

Case 5.18: Confounding Findings in Pulmonary Embolism 137

Case 5.19: Recurrent Pulmonary Embolism on Anticoagulation

Therapy 138

Case 5.20: Gastrointestinal Bleeding as a Complication of Anticoagulation

Therapy 138

Case 5.21: Severe Deep Venous Thrombosis 140

6 Upper Gastrointestinal Tract Disorders 141

Bruce E. Jarrell, John L. Flowers, Molly Buzdon, Eric D. Strauch

Case 6.1: Acute Epigastric Pain 144

Case 6.2: Acute Epigastric Pain with Regurgitation and Coughing 145

Case 6.3: Acute Epigastric Pain with Hiatal Hernia 148

Case 6.4: Acute Epigastric Pain with Pyloric Channel Ulcer 150

Case 6.5: Acute Epigastric Pain with Gastric Ulcer 153

Case 6.6: Acute Epigastric Pain with Early Gastric Cancer 156

Case 6.7: Acute Epigastric Pain with a Rigid Abdomen 158

Case 6.8: Upper Gastrointestinal Bleeding 161

Case 6.9: Upper Gastrointestinal Bleeding with Esophageal Varices 168

Case 6.10: Acute Epigastric Pain with Gastric Lymphoma 170
7 Pancreatic and Hepatic Disorders 172

Bruce E. Jarrell, Eric D. Strauch

Common Pancreaticobiliary Disorders 173

Case 7.1: Asymptomatic Gallstones 173

Case 7.2: Right Upper Quadrant Pain 174

Case 7.3: Right Upper Quadrant Pain with Gallstones and Signs of Infection 177

Case 7.4: Right Upper Quadrant Pain with Gallstones and Jaundice 178

Case 7.5: Right Upper Quadrant Pain in Pregnancy 179

Case 7.6: Right Upper Quadrant Pain with Cholelithiasis and Elevated Amylase 179

Case 7.7: Right Upper Quadrant Pain with High Fever 180

Case 7.8: Right Upper Quadrant Pain in an Extremely Ill Older Adult 183

Case 7.9: Right Upper Quadrant Pain, Fever, and Jaundice 184

Case 7.10: Complications of Laparoscopic Cholecystectomy 186

Case 7.11: Painless Jaundice 188

Case 7.12: Painless Jaundice due to Obstruction at the Common Bile Duct Bifurcation 193

Case 7.13: Other Biliary Tract Cancers 196

Case 7.14: Acute Epigastric Pain with High Serum Amylase and Lipase 197

Case 7.15: Acute Epigastric Pain in Severely Ill Patient 198

Case 7.16: Acute Epigastric Pain with Continued Pain 201

Common Hepatic Disorders 204

Case 7.17: Hepatic Mass 205

Case 7.18: Fever and Pain in the Right Upper Quadrant 210

8 Lower Gastrointestinal Disorders 213

Bruce E. Jarrell, Molly Buzdon, Eric D. Strauch

Small Intestinal Disorders 214

Case 8.1: Crampy Abdominal Pain 214
Case 8.2: Crampy Abdominal Pain with Partial Improvement 221
Case 8.3: Crampy Abdominal Pain with Signs of Small Bowel Obstruction 222
Case 8.4: Injury to the Bowel during Lysis of Adhesions 223
Case 8.5: Crampy Abdominal Pain following Pneumonia 224
Case 8.6: Abdominal Pain in an Older Adult 224
Case 8.7: Abdominal Pain with Suspected Mesenteric Ischemia 226
Inflammatory Bowel Disease 229
Case 8.8: Crampy Abdominal Pain in Patient with Crohn Disease 230
Case 8.9: Perianal Disease in a Patient with Crohn Disease 232
Case 8.10: Management of Crohn Colitis 233
Case 8.11: Complications of Long-Standing Ulcerative Colitis 233
Case 8.12: Complications of Acute Colitis 235
Disorders of the Colon 237
Case 8.13: Right Lower Quadrant Pain 237
Case 8.14: Right Lower Quadrant Pain with Dysuria and Increased WBCs 238
Case 8.15: Worsening Right Lower Quadrant Pain 243
Case 8.16: Right Lower Quadrant Pain with Mass on Appendix 244
Case 8.17: Complications of a Ruptured Appendix 245
Malignant Disorders of the Colon, Rectum, and Anus 247
Case 8.18: Screening for Colorectal Cancer 247
Case 8.19: Heme-Positive Stool 248
Case 8.20: Heme-Positive Stool in Patient with Polyp 250
Case 8.21: Heme-Positive Stool with Fatigue and Weight Loss 253
Case 8.22: Heme-Positive Stool with Suspected Colon Cancer 256
Case 8.23: Operative Findings in Colon Cancer 257
Case 8.24: Complications of Postoperative Colectomy 258
Case 8.25: Heme-Positive Stool in Patient with Rectal Adenocarcinoma 259
Case 8.26: Heme-Positive Stool in Patient with Rectal Cancer 262
Case 8.27: Metastasis in Colorectal Cancer 267
Case 8.28: Heme-Positive Stool with a Hard Lesion 268
Lower Abdominal Pain 269
Case 8.29: Left Lower Quadrant Pain and Fever 270
Case 8.30: Recurrence of Left Lower Quadrant Pain 272
Case 8.31: Left Lower Quadrant Pain in a Deteriorating Patient 273
Case 8.32: History of Left Lower Quadrant Pain with Sensation of Voided Air 274
Lower Gastrointestinal Bleeding 275
Case 8.33: Massive Lower Gastrointestinal Bleeding 275
Case 8.34: Persistent Bleeding with a Massive Lower Gastrointestinal Bleed 279
Other Benign Lower Gastrointestinal Tract Disorders 282

<i>Case 8.35: Syndromes of Acute Colonic Dilation and Obstruction</i>	282
<i>Case 8.36: Rectal Prolapse</i>	286
<i>Case 8.37: Perianal Problems</i>	287
<i>Case 8.38: Persistent Perianal Drainage</i>	288
<i>Case 8.39: Severe Anal Pain with Perianal Mass</i>	289
<i>Case 8.40: Need for Colostomy</i>	289
<i>Endocrine Disorders</i>	291
<i>Bruce E. Jarrell, W. Bradford Carter, Eric D. Strauch</i>	
<i>Endocrine Disorders</i>	291
<i>Case 9.1: Thyroid Nodule Found on Examination</i>	292
<i>Case 9.2: Symptomatic Hypercalcemia</i>	299
<i>Case 9.3: Medical Management of Acute Hypercalcemia</i>	303
<i>Case 9.4: Secondary Hyperparathyroidism</i>	305
<i>Case 9.5: Hyperparathyroidism and Severe Hypertension in the Same Patient</i>	305
<i>Case 9.6: Acute Development of a Tender Neck Mass</i>	306
<i>Case 9.7: History of Hyperparathyroidism and Intractable Duodenal Ulcers</i>	308
<i>Case 9.8: Medullary Carcinoma of the Thyroid</i>	311
<i>Case 9.9: Incidentally Discovered Adrenal Mass</i>	311
<i>10 Skin and Soft Tissue Disorders and Hernias</i>	313
<i>Bruce E. Jarrell, Eric D. Strauch</i>	
<i>Malignant Melanoma</i>	313
<i>Case 10.1: Evaluation of a Skin Lesion</i>	313
<i>Case 10.2: Diagnosis of Malignant Melanoma in a Skin Lesion</i>	315
<i>Case 10.3: Malignant Melanoma with a Palpable Lymph Node</i>	323
<i>Case 10.4: Malignant Melanoma with Distant Metastasis</i>	323
<i>Case 10.5: Malignant Melanoma on the Cheek</i>	324
<i>Case 10.6: Malignant Melanomas in Other Areas</i>	325
<i>Case 10.7: Small Bowel Obstruction and History of Malignant Melanoma</i>	326
<i>Sarcoma</i>	326
<i>Case 10.8: Sarcoma of the Lower Extremity</i>	326
<i>Case 10.9: Metastatic Sarcoma to the Lung</i>	331
<i>Hernias and Related Conditions</i>	332
<i>Case 10.10: Pain in the Groin</i>	332
<i>Case 10.11: Inguinal Hernia</i>	335
<i>Case 10.12: Additional Hernia-Related Problems</i>	342
<i>Case 10.13: Ventral Hernia</i>	343
<i>11 Breast Disorders</i>	345
<i>Julia H. Terhune, Bruce E. Jarrell, Emily Bellavance, Michelle Townsend Day, Katherine Tkaczuk, Eric D. Strauch</i>	
<i>Case 11.1: Screening for Breast Cancer</i>	346
<i>Case 11.2: Evaluation of a Mammographic Abnormality</i>	349
<i>Case 11.3:</i>	

<i>Evaluation of Mammographic Microcalcifications</i>	350
<i>Case 11.4: Biopsy Results in Lesions Visible on Mammography</i>	352
<i>Case 11.5: Palpable Breast Mass</i>	355
<i>Case 11.6: "Lumpy" Breasts</i>	356
<i>Case 11.7: Breast Mass in a Young Woman</i>	357
<i>Case 11.8: Nipple Discharge</i>	357
<i>Case 11.9: Staging and Prognosis in Infiltrating Ductal Carcinoma</i>	359
<i>Case 11.10: Select Clinical Factors that Affect Prognosis</i>	360
<i>Case 11.11: Nipple Lesion</i>	362
<i>Case 11.12: Surgical Management of Breast Cancer</i>	363
<i>Case 11.13: Treatment Options for Stage I and II Breast Cancer</i>	366
<i>Case 11.14: Breast Reconstruction</i>	368
<i>Case 11.15: Medical Management of Breast Cancer</i>	369
<i>Case 11.16: Treatment of Stage III and IV Breast Cancer</i>	370
<i>Case 11.17: Breast Mass with Cellulitis and Edema</i>	371
<i>Case 11.18: Events that Occur Later in Patients with Breast Cancer</i>	372
<i>Case 11.19: Breast Problems in Pregnancy and the Peripartum Period</i>	373
<i>Case 11.20: Breast Cancer in Patients of Advanced Age and Decreased Function</i>	374
<i>Case 11.21: Breast Mass in a Man</i>	375
<i>Case 11.22: Gynecomastia</i>	375
<i>Part III: Special Issues</i>	
<i>12 Trauma, Burns, and Sepsis</i>	377
<i>Bruce E. Jarrell, Thomas Scalea, Molly Buzdon</i>	
<i>Case 12.1: Primary and Secondary Assessment of Injuries</i>	378
<i>Case 12.2: Initial Airway Management</i>	378
<i>Case 12.3: Initial Pulmonary Management</i>	380
<i>Case 12.4: Pneumothorax in a Patient with Hypotension</i>	385
<i>Case 12.5: Hypotension and Neck Vein Distention with Normal Breath Sounds</i>	386
<i>Case 12.6: Hypotension with Normal Breath Sounds and No Neck Vein Distention</i>	387
<i>Case 12.7: Initial Cervical Spine Management</i>	390
<i>Case 12.8: Initial Assessment of Thoracic Injury</i>	393
<i>Case 12.9: Indistinct or Widened Mediastinum</i>	396
<i>Case 12.10: Initial Abdominal Assessment Based on the Mechanism of Injury</i>	397
<i>Case 12.11: Initial Assessment of Abdominal Injury</i>	401
<i>Case 12.12: Abdominal Injuries Visible on CT Scan</i>	406
<i>Case 12.13: Operative Findings with Abdominal Trauma</i>	413
<i>Case 12.14: Initial Neurologic Injury Assessment and Management</i>	415
<i>Case 12.15: Other Neurologic Problems</i>	416
<i>Case 12.16: Continuing Hemorrhage</i>	418
<i>Case 12.17: Postoperative Problems in Trauma Patients</i>	419

<i>Case 12.18: Traumatic Arteriovenous Fistula</i>	423
<i>Case 12.19: Continuing Pulmonary Problems</i>	425
<i>Case 12.20: Respiratory Distress</i>	426
<i>Case 12.21: Stab Wound to the Neck</i>	428
<i>Case 12.22: Other Injuries to the Neck</i>	430
<i>Case 12.23: B u r n</i>	431
<i>Case 12.24: Total Parenteral Nutrition</i>	437
<i>13 Pediatric Surgical Disorders</i>	<i>442</i>
<i>Clint D. Cappiello, Eric D. Strauch, Bruce E. Jarrell</i>	
<i>Case 13.1: Acute Respiratory Distress</i>	443
<i>Case 13.2: Respiratory Distress with Oral Intake</i>	445
<i>Case 13.3: Bilious Emesis</i>	448
<i>Case 13.4: Imperforate Anus</i>	456
<i>Case 13.5: Vomiting in a 2-Week-Old Infant</i>	457
<i>Case 13.6: Abdominal Wall Defects</i>	459
<i>Case 13.7: Abdominal Pain in a 7-Month-Old Child</i>	463
<i>Index</i>	465