

# Contents

<b>Pulmonary Medicine</b> .....	1
Asthma Exacerbation .....	1
COPD Exacerbation .....	3
Pneumonia .....	6
Pulmonary Embolism .....	8
Pleural Effusion .....	10
Chronic Cough .....	12
Hemoptysis .....	12
Solitary Pulmonary Nodule .....	13
Pulmonary Hypertension .....	14
Interstitial Lung Disease .....	15
Obstructive Sleep Apnea .....	17
Respiratory Acidosis: Hypoventilation .....	18
Respiratory Alkalosis: Hyperventilation .....	18
Hypoxemia .....	19
Ventilation Issues .....	19
Approach to Chest Imaging .....	19
Approach to Pulmonary Function Tests .....	21
<b>Cardiology</b> .....	25
Aortic Dissection .....	25
Acute Coronary Syndrome .....	26
Pericardial Diseases: Pericarditis and Tamponade .....	32
Heart Failure .....	33
Digoxin Intoxication .....	38
Atrial Fibrillation .....	39
Syncope .....	43
Cardiac Examination .....	43
Aortic Stenosis .....	47
Aortic Regurgitation .....	49
Mitral Stenosis .....	50
Mitral Regurgitation .....	51
Endocarditis .....	52
Peripheral Vascular Disease .....	54
Hypertension .....	57
Hyperlipidemia .....	61
Smoking Issues .....	62
Approach to ECG .....	62

<b>Nephrology</b> .....	67
Acute Renal Failure: Pre renal .....	67
Acute Renal Failure: Renal .....	68
Acute Renal Failure: Post renal .....	70
Glomerulopathies .....	70
Chronic Kidney Disease .....	73
Proteinuria .....	74
Hematuria .....	75
Cystic Kidney Diseases .....	76
Metabolic Acidosis .....	77
Metabolic Alkalosis .....	78
Hyponatremia .....	79
Hypernatremia .....	81
Hypokalemia .....	81
Hyperkalemia .....	82
Hypomagnesemia .....	83
Hypophosphatemia .....	83
Ureteral Calculi .....	84
Hypertension .....	84
Approach to Dialysis .....	85
<b>Critical Care</b> .....	89
Intensive Care Issues .....	89
Hypoxemia .....	92
Acute Respiratory Distress Syndrome .....	93
Ventilation Issues .....	94
Shock .....	97
Sepsis and Septic Shock .....	99
Lactic Acidosis .....	101
Rhabdomyolysis .....	101
Toxicology .....	102
Alcohol Withdrawal and Complications of Alcoholism .....	105
Hypothermia .....	107
Smoke Inhalation .....	108
Anaphylaxis .....	109
<b>Gastroenterology</b> .....	111
Nausea and Vomiting .....	111
Dysphagia .....	112
Dyspepsia .....	113
Acute Abdominal Pain .....	115
Upper GI Bleed .....	118
Lower GI Bleed .....	120
Inflammatory Bowel Disease Exacerbation .....	120
Acute Diarrhea .....	122
Chronic Diarrhea .....	124
Malabsorption Syndromes .....	125
Constipation .....	126
Acute Liver Failure .....	128
Hepatitis B .....	130
Hepatitis C .....	131
Chronic Liver Disease: Cirrhosis .....	132

Hepatic Encephalopathy . . . . .	135
Ascites . . . . .	136
Jaundice . . . . .	138
Acute Pancreatitis . . . . .	139
<b>Hematology . . . . .</b>	<b>143</b>
Polycythemia . . . . .	143
Microcytic Anemia . . . . .	144
Normocytic Anemia . . . . .	145
Macrocytic Anemia . . . . .	146
Sickle Cell Disease . . . . .	147
Neutropenia . . . . .	148
Eosinophilia . . . . .	148
Thrombocytosis . . . . .	150
Thrombocytopenia . . . . .	151
Pancytopenia . . . . .	153
Bleeding Diathesis . . . . .	153
Hypercoagulable States . . . . .	156
Deep Vein Thrombosis . . . . .	158
Approach to Anticoagulation Therapies . . . . .	160
Transfusion Reactions . . . . .	162
Approach to the Peripheral Blood Smear . . . . .	163
Splenomegaly . . . . .	164
Myeloproliferative Disorders . . . . .	165
Acute Myelogenous Leukemia . . . . .	166
Acute Lymphoblastic Leukemia . . . . .	169
Chronic Lymphocytic Leukemia . . . . .	170
Hodgkin's Lymphoma . . . . .	171
Non Hodgkin's Lymphoma . . . . .	173
Multiple Myeloma . . . . .	178
Febrile Neutropenia . . . . .	180
Hematopoietic Stem Cell Transplant . . . . .	180
<b>Oncology . . . . .</b>	<b>185</b>
Lung Cancer . . . . .	185
Mesothelioma . . . . .	188
Thymoma and Thymic Carcinoma . . . . .	189
Breast Cancer . . . . .	189
Esophageal Cancer . . . . .	195
Gastric Cancer . . . . .	197
Colorectal Cancer . . . . .	198
Carcinoid Tumors . . . . .	201
Gastrointestinal Stromal Tumor . . . . .	202
Anal Cancer . . . . .	203
Cancer of the Exocrine Pancreas . . . . .	204
Hepatocellular Carcinoma . . . . .	205
Renal Cancer . . . . .	207
Bladder Cancer . . . . .	208
Prostate Cancer . . . . .	210
Testicular Cancer . . . . .	212
Brain Tumors . . . . .	215
Ovarian Cancer . . . . .	215

Endometrial Cancer . . . . .	216
Cervical Cancer . . . . .	218
Cancer of Unknown Origin . . . . .	219
Tumor Markers . . . . .	220
Cancer Screening . . . . .	222
Hereditary Cancer Syndromes . . . . .	224
Antineoplastic Agents . . . . .	226
Oncologic Emergencies . . . . .	228
Febrile Neutropenia . . . . .	229
Chemotherapy Induced Nausea and Vomiting . . . . .	229
Oral Mucositis . . . . .	230
Chemotherapy Induced Diarrhea . . . . .	231
<b>Infectious Diseases . . . . .</b>	<b>233</b>
Fever of Unknown Origin . . . . .	233
Fever and Rash . . . . .	234
Fever and Joint Pain . . . . .	236
Sepsis . . . . .	236
Febrile Neutropenia . . . . .	236
Fever with Travel History . . . . .	238
Pneumonia . . . . .	241
Endocarditis . . . . .	241
Meningitis . . . . .	241
Urinary Tract Infections and Sexually Transmitted Infections . . . . .	244
Soft Tissue Infections . . . . .	247
Osteomyelitis . . . . .	248
Septic Arthritis . . . . .	250
Tuberculosis: Pulmonary . . . . .	250
Approach to Gram Stain, Culture, and Sensitivity . . . . .	252
Antibiotics . . . . .	254
Approach to Empiric Antibiotics . . . . .	257
Hepatitis B . . . . .	258
Hepatitis C . . . . .	258
Herpes Simplex Virus Infection . . . . .	258
Human Immunodeficiency Virus . . . . .	259
Influenza . . . . .	262
Antiviral Agents . . . . .	265
Fungal Infections . . . . .	265
Antifungal Agents . . . . .	268
Infection Control . . . . .	269
Immunization for Adults . . . . .	270
<b>Rheumatology . . . . .</b>	<b>273</b>
Septic Arthritis . . . . .	273
Gout . . . . .	275
Polyarticular Joint Pain and Fever . . . . .	276
Rheumatoid Arthritis . . . . .	277
Systemic Lupus Erythematosus . . . . .	279
Seronegative Spondyloarthropathies . . . . .	282
Back Pain . . . . .	284
Osteoarthritis . . . . .	286
Fibromyalgia . . . . .	287

Contents	xvii
Vasculitis	288
Approach to Serologies	292
Joint Examination	294
<b>Neurology</b>	297
Brain Tumors	297
Acute Stroke Syndromes	299
Cranial Nerve Examination	304
Diplopia	306
Bell's Palsy	307
Multiple Sclerosis	308
Dementia	309
Delirium	309
Seizures	309
Syncope	312
Migraine Headaches	313
Meningitis	315
Dizziness and Vertigo	315
Hearing Impairment	317
Myasthenia Gravis	318
Ataxia	319
Subacute Combined Degeneration	320
Parkinson's Disease	320
Radiculopathy	323
Peripheral Neuropathy	327
Muscle Weakness	332
Approach to Neuroimaging	333
<b>Endocrinology</b>	337
Diabetes Mellitus	337
Principles of Insulin Use	341
Hypoglycemia	342
Hypothyroidism	343
Hyperthyroidism	344
Solitary Thyroid Nodule	345
Pituitary Tumors	346
Polyuria	347
Adrenal Incidentaloma	348
Adrenal Insufficiency	349
Cushing's Syndrome	350
Hypocalcemia	352
Hypercalcemia	353
Osteoporosis	354
Hypertension	356
Hyperlipidemia	356
Amenorrhea	356
Hirsutism	357
<b>Dermatology</b>	361
Eczema	361
Psoriasis Vulgaris	362
Acne Vulgaris	363

Exanthematous Lesions . . . . .	364
Stevens Johnson Syndrome/Toxic Epidermal Necrolysis . . . . .	365
Ulcers . . . . .	367
Melanoma and Skin Tumors . . . . .	368
Cutaneous Lupus Erythematosus . . . . .	371
Drug Eruptions . . . . .	372
Erythema Nodosum . . . . .	373
Clubbing . . . . .	374
Dupuytren's Contracture . . . . .	375
<b>Geriatrics</b> . . . . .	377
Geriatric Specific Issues . . . . .	377
Dementia and Cognitive Impairment . . . . .	378
Delirium . . . . .	380
Falls . . . . .	382
Osteoporosis . . . . .	383
Urinary Incontinence . . . . .	383
Hearing Impairment . . . . .	385
Pharmacological Issues in the Elderly . . . . .	385
<b>Palliative Care</b> . . . . .	389
Palliative Care Specific Issues . . . . .	389
Principles of Pain Control . . . . .	391
Delirium . . . . .	394
Cancer Related Fatigue . . . . .	394
Dyspnea in the Palliative Setting . . . . .	394
Nausea and Vomiting in the Palliative Setting . . . . .	395
Constipation in the Palliative Setting . . . . .	396
Anorexia Cachexia . . . . .	397
Communication Issues . . . . .	399
Prognostication in Far Advanced Cancer Patients . . . . .	400
<b>Nutrition</b> . . . . .	403
Obesity . . . . .	403
Malabsorption Syndromes . . . . .	404
Anorexia Cachexia . . . . .	404
Vitamin B12 Deficiency . . . . .	405
Diet and Supplemental Nutrition . . . . .	406
<b>Obstetric Medicine</b> . . . . .	409
Preeclampsia/Eclampsia/HELLP Syndrome . . . . .	409
Pulmonary Diseases in Pregnancy . . . . .	410
Cardiac Diseases in Pregnancy . . . . .	411
Hepatic Diseases in Pregnancy . . . . .	411
Infectious Diseases in Pregnancy . . . . .	412
Endocrine Disorders in Pregnancy . . . . .	413
Other Disorders in Pregnancy . . . . .	414
<b>General Internal Medicine</b> . . . . .	417
Approach to Diagnostic Tests and Clinical Trials . . . . .	417
Smoking Cessation . . . . .	418
Multisystem Disorders . . . . .	420
Perioperative Assessment for Non cardiopulmonary Surgery and Postoperative Complications . . . . .	422

Contents	xix
Medical Fitness to Drive .....	426
Obtaining Consent for Medical Procedures .....	427
Biomedical Ethics Issues .....	427
Hospital Admission and Discharge Issues .....	429
<b>Appendix I. Advanced Cardiac Life Support</b> .....	431
<b>Appendix II. List of Common Abbreviations</b> .....	433
<b>Appendix III. Common Laboratory Values And Unit Conversion</b> .....	437
<b>Appendix IV. History Template</b> .....	441
<b>Index</b> .....	443
<b>Selected Internal Medicine Topics</b> .....	459