Clinical Infectious Disease

This is a clinically oriented, user-friendly text on infectious disease. Written to address the needs of both general internists and infectious disease specialists, this book focuses on the diagnostic protocols and treatment strategies with which physicians must be familiar when managing infectious disease patients.

The orientation of the volume is multi-faceted: in addition to the traditional organization of organ system and pathogen-related information, this text includes specific sections on the susceptible host (with individual chapters on the diabetic, the elderly, the injection drug user, and the neonate), travel-related infections, nosocomial infections, infections related to surgery and trauma, and bioterrorism.

Informative algorithms, tables, and high-quality color photographs supplement many of the chapters. Moreover, the size of this book places it between the available encyclopedic tomes and the small pocket guides, making it a comprehensive but convenient and practical reference for the practicing clinician.

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This book is dedicated to Dr. Bennett Lorber – physician, teacher, musician, artist, raconteur, colleague, and valued friend.

“and gladly wolde he lerne and gladly teche.”
– Chaucer, Canterbury Tales
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Preface

David Schlossberg, MD, FACP

Our goal with Clinical Infectious Disease is to provide to physicians a complete and user-friendly guide to both the diagnosis and treatment of infectious diseases.

The book is divided into 10 sections. First, clinical presentation by organ system provides a traditional anatomic orientation, although within this section additional chapters are devoted to particularly challenging entities that are often difficult to research, such as infectious thyroiditis, deep neck infection, periocular infection, lymphadenopathy, mediastinitis, pacemaker infection, sexually transmitted enteric infection, bursitis, polyarthritis, psoas abscess, splenic abscess, spinal epidural abscess, cerebrospinal shunt infection, myelitis and peripheral neuropathy, and prion disease.

The second section, “The Susceptible Host,” includes individual chapters on a variety of immunocompromised states, including diabetes, transplantation, neutropenia, dialysis, pregnancy, and asplenia. Subsequent entire sections are devoted to HIV, nosocomial infection, surgery and trauma, prophylaxis, travel and recreation, and bioterrorism.

Organism-specific chapters follow, with separate chapters dedicated to individual bacteria, viruses, fungi, parasites, and other pathogens, and then a major section on antimicrobial therapy comprises chapters on principles of antibiotic therapy, antifungal therapy, antiviral therapy, and hypersensitivity to antibiotics. A final chapter lists antimicrobial agents in tabular form, providing a convenient reference for dosage, side effects, cost, pregnancy class, effect of food, and dose adjustment for renal dysfunction. All chapters include suggested readings.

We hope this text provides a practical, clinically oriented, and convenient resource for the diagnosis and treatment of infectious disease.

I am enormously grateful for the vision, talent, and dedication of the staff at Cambridge University Press, particularly publishing director Marc Strauss and editorial assistant Carlos Aguirre. I also thank Jennifer Bossert and Barbara Walthall for their valuable contributions and guidance.
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197. Toxoplasma

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Director, Infectious Diseases
VA New York Harbor Health Care System, Brooklyn, New York (Brooklyn Campus)
95. Overwhelming Postsplenectomy Infection

Rodger D. MacArthur, MD
Department of Medicine, Division of Infectious Diseases
Wayne State University School of Medicine, Detroit, Michigan
2. Sepsis and Septic Shock

Karl Madaras-Kelly, PharmD
Department of Pharmacy Practice
College of Pharmacy, Idaho State University, Boise, Idaho
150. Streptococcus Groups A, B, C, D, and G

Joanne T. Maffei, MD
Associate Professor, Department of Medicine, Section of Infectious Diseases/HIV
Louisiana State University Health Sciences Center, New Orleans, Louisiana
20. Skin Ulcer and Pyoderma

Rafael Gerardo Magaña, MD
Department of Surgery
New York-Presbyterian/Weill Cornell Medical College, New York, New York
110. Infection in the Burn-Injured Patient

James H. Maguire, MD
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University of Maryland School of Medicine, Baltimore, Maryland
195. Schistosomes and Other Trematodes

Francis S. Mah, MD
Department of Ophthalmology
University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania
12. Keratitis

Anita Mahadevan, MBBS, MD
Department of Neuropathology
National Institute of Mental Health and Neurosciences, Bangalore, India
190. Rabies

Mark A. Malangoni, MD
Department of Surgery
Case Western Reserve University School of Medicine, Cleveland, Ohio
108. Trauma-Related Infection
Stephen E. Malawista, MD
Department of Internal Medicine
Yale University School of Medicine,
New Haven, Connecticut
162. Lyme Disease

Peter Mariuz, MD
Associate Professor in Medicine
Department of Medicine
University of Rochester, School of Medicine
and Dentistry, Rochester, New York
94. Dialysis-Related Infection

Thomas J. Marrie, MD, FRCP(C)
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University of Alberta, Edmonton, Alberta,
Canada
139. Legionellosis

Paul Martin, MD
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Chief, Division of Hepatology, Schiff Liver
Institute, University of Miami Miller
School of Medicine, Miami, Florida
42. Acute Viral Hepatitis

Rebecca Edge Martin, MD
Division of Infectious Diseases,
Department of Medicine, Central
Arkansas Veterans’ Healthcare
System
University of Arkansas for Medical
Sciences, Little Rock, Arkansas
31. Community-Acquired Pneumonia

Richard A. Martinello, MD
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Medicine and Pediatrics, Infectious
Diseases
Yale University School of Medicine and
VA Connecticut Healthcare System,
New Haven, Connecticut
37. Acute Pericarditis

Omar Massoud, MD, PhD
Hepatology, Milwaukee, Wisconsin
79. Reye’s Syndrome

John E. McGowan, Jr., MD
Department of Epidemiology
Rollins School of Public Health, Emory
University, Atlanta, Georgia
101. Prevention of Nosocomial Infection
in Staff and Patients

J. Anthony Mebane, MD
Division of Infectious Diseases
VA Medical Center, Boise, Idaho
150. Streptococcus Groups A, B, C, D, and G

Jeffery L. Meier, MD
Department of Internal Medicine
University of Iowa Carver College of
Medicine
Iowa City Veterans Affairs Medical Center
Iowa City, Iowa
180. Cytomegalovirus, 183. Epstein–
Barr Virus and Other Causes of the
Mononucleosis Syndrome

Gregory Mertz, MD
Division of Infectious Diseases,
Department of Medicine
University of New Mexico School of
Medicine, Albuquerque, New Mexico
184. Hantavirus Cardiopulmonary
Syndrome in the Americas

Burt R. Meyers, MD
Clinical Professor Medicine
Division of Infectious Diseases,
Department of Medicine
Mt. Sinai School of Medicine,
New York, New York
74. Aseptic Meningitis Syndrome

Laurence F. Mirels, MD
Division of Infectious Diseases, Department
of Medicine, Santa Clara Valley Medical
Center, San Jose, California
Stanford University, School of Medicine,
Stanford, California
177. Coccidioidomycosis

Thomas A. Moore, MD, FACP
Clinical Professor and Associate
Program Director
Department of Internal Medicine
University of Kansas School of Medicine,
Wichita, Kansas
194. Tissue Nematodes

Douglas R. Morgan, MD, MPH
Division of Digestive Diseases, School of
Medicine
University of North Carolina School,
Chapel Hill, North Carolina
48. Gastroenteritis
Maurice A. Mufson, MD, MACP
Department of Medicine
Joan C. Edwards School of Medicine,
Marshall University, Huntington,
West Virginia
145. Pneumococcus

Jorge Murillo, MD
Infectious Diseases and Internal Medicine,
Miami, Florida
93. Pregnancy and the Puerperium:
Infectious Risks

Robert L. Murphy, MD
Department of Infectious Disease
Northwestern University Feinberg School
of Medicine, Chicago, Illinois
86. Corticosteroids, Cytotoxic Agents,
and Infection

Timothy F. Murphy, MD
Distinguished Professor of Medicine and
Microbiology
Chief, Infectious Diseases, University at
Buffalo, State University of New York,
Buffalo, New York
138. Haemophilus

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Department of Neurology
The Johns Hopkins School of Medicine,
Baltimore, Maryland
190. Rabies

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Division of Infectious Diseases
Jefferson Medical College of Thomas
Jefferson University, Philadelphia,
Pennsylvania
97. HIV-1 Infection: Antiretroviral
Therapy

Ronald Lee Nichols, MD, MS, FACS
William Henderson Professor of Surgery
Emeritus, Professor of Microbiology
and Immunology
Department of Surgery
Tulane University School of Medicine,
New Orleans, Louisiana
53. Diverticulitis

Lindsay E. Nicolle, MD, FRCPS
Professor, Departments of Internal
Medicine and Medical Microbiology
University of Manitoba, Winnipeg,
Manitoba, Canada
106. Infections Associated with
Urinary Catheters

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Department of Medicine, Division
of Infectious Diseases
Emory University School of Medicine,
Atlanta, Georgia
198. Malaria: Treatment and Prophylaxis

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Department of Internal Medicine,
Infectious Disease Division
Marshall University School of Medicine,
Huntington, West Virginia
90. Infections in the Alcoholic

Judith A. O’Donnell, MD
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Drexel University College of Medicine,
Philadelphia, Pennsylvania
64. Urinary Tract Infection

Anthony Ogedegbe, MD
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New York, New York
99. Differential Diagnosis and Management
of Opportunistic Infections Complicating
HIV Infection

Todd D. Otteson, MD
Division of Pediatric Otolaryngology
Children’s Hospital of Pittsburgh,
Pittsburgh, Pennsylvania
7. Sinusitis

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Gastroenterology Section IIIC
Department of Veteran Affairs Medical
Center, San Francisco, California
48. Gastroenteritis

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Infectious Diseases
University of California, San Diego School
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182. Enteroviruses
Brandon Palermo, MD, MPH
Temple University School of Medicine,
Philadelphia, Pennsylvania
60. Epididymo-Orchitis

George A. Pankey, MD, MACP
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Ochsner Clinic Foundation, New Orleans,
Louisiana
179. Miscellaneous Fungi and Algae

Monica Panwar, MD, MACP
Fellow in Infectious Diseases
Ochsner Clinic Foundation, New Orleans,
Louisiana
95. Overwhelming Postsplenectomy Infection

Georgios Pappas, MD
Institute of Continuing Medical Education of Ioannina, Ioannina, Greece
58. Urethritis and Dysuria

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Department of Medicine, Division of Infectious Diseases
University of Alabama School of Medicine, Birmingham, Alabama
176. Blastomycosis

Richard H. Parker, MD
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Providence Hospital, Washington, D.C.
68. Bursitis

Eleni Patrozou, MD
Division of Infectious Diseases
The Warren Alpert Medical School of Brown University School, Providence, Rhode Island
120. Bioterrorism

Thomas F. Patterson, MD
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University of Texas Health Science Center at San Antonio, San Antonio, Texas
204. Antifungal Therapy

Andrew T. Pavia, MD
Professor of Pediatrics and Medicine University of Utah School of Medicine, Salt Lake City, Utah
49. Food Poisoning

Zbigniew S. Pawlowski, MD, DTMH
Professor Emeritus of Parasitic and Tropical Diseases
Poznan University of Medical Sciences, Poznan, Poland
196. Tapeworms (Cestodes)

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Mayo Clinic, Rochester, Minnesota
87. Infections in Transplant Patients

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Departments of Medicine and Pathology
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University of Virginia Health System, Charlottesville, Virginia
200. Trypanosomiasis and Leishmaniasis

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Boston University Schools of Medicine and Public Health
Chief, Section of Pediatric Infectious Diseases
Boston Medical Center, Boston, Massachusetts
6. Otitis Media and Externa

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Department of Infectious Diseases
Cooper University Hospital, Camden, New Jersey
207. Antimicrobial Agent Tables

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Assistant Professor of Medicine
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University of Virginia Health System, Charlottesville, Virginia
76. Intracranial Suppuration

Robert S. Pinals, MD
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Robert Wood Johnson Medical School University of Medicine and Dentistry of New Jersey, New Brunswick, New Jersey
70. Polyarthritis and Fever

Roger J. Pomerantz, MD, FACP
Tibotec
Yardley, Pennsylvania
205. Antiviral Therapy