

GOLDMAN'S CECIL MEDICINE

LEE GOLDMAN
ANDREW I. SCHAFER

VOLUME 2

24TH
EDITION

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GOLDMAN'S CECIL MEDICINE

24TH EDITION

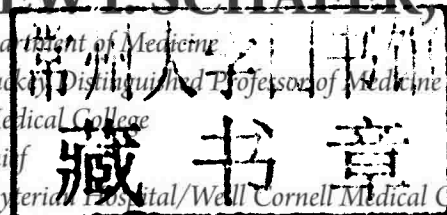
Volume 2

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CECIL MEDICINE

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PREFACE

The 24TH Edition of *Goldman's Cecil Medicine* symbolizes a time of extraordinary advances in medicine and in technological innovations for the dissemination of information. This textbook and its associated electronic products incorporate the latest medical knowledge in formats that are designed to appeal to learners who prefer to access information in a variety of ways.

The contents of *Cecil* have remained true to the tradition of a comprehensive textbook of medicine that carefully explains the *why* (the underlying normal physiology and pathophysiology of disease, now at the cellular and molecular as well as the organ level) and the *how* (now frequently based on Grade A evidence from randomized controlled trials). Descriptions of physiology and pathophysiology include the latest genetic advances in a practical format that strives to be useful to the nonexpert. Medicine has entered an era when the acuity of illness and the limited time available to evaluate a patient have diminished the ability of physicians to satisfy their intellectual curiosity. As a result, the acquisition of information, quite easily achieved in this era, is often confused with knowledge. We have attempted to counteract this tendency with a textbook that not only informs but also stimulates new questions and gives a glimpse of the future path to new knowledge. Grade A evidence is specifically highlighted in the text and referenced at the end of each chapter. In addition to the information provided in the textbook, the Cecil website supplies expanded content and functionality. In many cases, the full articles referenced in each chapter can be accessed from the Cecil website. The website is also continuously updated to incorporate subsequent Grade A information, other evidence, and new discoveries.

The sections for each organ system begin with a chapter that summarizes an approach to patients with key symptoms, signs, or laboratory abnormalities associated with dysfunction of that organ system. As summarized in Table 1-1, the text specifically provides clear, concise information regarding how a physician should approach more than 100 common symptoms, signs, and laboratory abnormalities, usually with a flow diagram, a table, or both for easy reference. In this way, *Cecil* remains a comprehensive text to guide diagnosis and therapy, not only for patients with suspected or known diseases but also for patients who may have undiagnosed abnormalities that require an initial evaluation.

Just as each edition brings new authors, it also reminds us of our gratitude to past editors and authors. Previous editors of *Cecil Medicine* include a short but remarkably distinguished group of leaders of American medicine: Russell Cecil, Paul Beeson, Walsh McDermott, James Wyngaarden, Lloyd H. Smith, Jr., Fred Plum, J. Claude Bennett, and Dennis Ausiello. As we welcome new

associate editors—Wendy Levinson, Donald W. Landry, Anil Rustgi, and W. Michael Scheld—we also express our appreciation to Nicholas LaRusso and other associate editors from the previous editions on whose foundation we have built. Our returning associate editors—William P. Arend, James O. Armitage, David Clemmons, Jeffrey M. Drazen, and Robert C. Griggs—continue to make critical contributions to the selection of authors and the review and approval of all manuscripts. The editors, however, are fully responsible for the book as well as the integration among chapters.

The tradition of *Cecil Medicine* is that all chapters are written by distinguished experts in each field. We are also most grateful for the editorial assistance in New York of Theresa Considine and Silva Sergenian. These individuals and others in our offices have shown extraordinary dedication and equanimity in working with authors and editors to manage the unending flow of manuscripts, figures, and permissions. We also thank Faten Abera, Reza Akari, Robert C. Brunham, Ivan Ciric, Seema Daulat, Gregory F. Erikson, Kevin Ghassemi, Jason H. Huang, Caron Jacobson, Lisa Kachnic, Bryan T. Kelly, Karen Krok, Heather Lehman, Keiron Leslie, Luis Marcos, Michael Overman, Eric Padron, Bianca Maria Piraccini, Don W. Powell, Katy Ralston, James M. Swain, Tania Thomas, Kirsten Tillisch, Ali Turabi, Mark Whiteford, and Y. Joseph Woo, who contributed to various chapters. At Elsevier, we are most indebted to Dolores Meloni and Linda McKinley, and also thank Cathy Carroll, Taylor Ball, Virginia Wilson, Linda Van Pelt, Suzanne Fannin, and Steve Stave, who have been critical to the planning and production process under the direction of Mary Gatsch. Many of the clinical photographs were supplied by Charles D. Forbes and William F. Jackson, authors of *Color Atlas and Text of Clinical Medicine*, Third Edition, published in 2003 by Elsevier Science Ltd. We thank them for graciously permitting us to include their pictures in our book. We have been exposed to remarkable physicians in our lifetimes and would like to acknowledge the mentorship and support of several of those who exemplify this paradigm—Robert H. Gifford, Lloyd H. Smith, Jr., Frank Gardner, and William Castle. Finally, we would like to thank the Goldman family—Jill, Jeff, Abigail, Mira, Daniel, and Robyn Goldman—and the Schafer family—Pauline, Eric, Pam, John, Evan, and Kate—for their understanding of the time and focus required to edit a book that attempts to sustain the tradition of our predecessors and to meet the needs of today's physician.

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Approach to the Patient in a Critical Care Setting

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Systemic Lupus Erythematosus

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Salmonella Infections (including Typhoid Fever)

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Principles of Occupational and Environmental Medicine

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Smallpox, Monkeypox, and Other Poxvirus Infections

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Diseases of the Mouth and Salivary Glands

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Breast Cancer and Benign Breast Disorders

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Tumors of the Central Nervous System and Intracranial Hypertension and Hypotension

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Interventional and Surgical Approaches to Lung Disease; Video

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Prevention of Human Immunodeficiency Virus Infection

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Medical Aspects of Trauma and Burn Care

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Rhabdomyolysis

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Principles of Drug Therapy

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Intestinal Nematode Infections; Tissue Nematode Infections

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Papillomavirus

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Asthma; Video

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Urticaria and Angioedema

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Vascular Disorders of the Kidney; Video

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Urticaria, Drug Hypersensitivity Rashes, Nodules and Tumors, and Atrophic Diseases

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Crystal Deposition Diseases

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Testicular Cancer

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Reference Intervals and Laboratory Values

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Tuberculosis

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Approach to Inborn Errors of Metabolism

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Arthropods and Leeches

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Bioethics in the Practice of Medicine

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Ovaries and Development; Reproductive Endocrinology and Infertility

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Interventional and Surgical Approaches to Lung Disease

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Leprosy (Hansen's Disease)

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Disorders of Neuromuscular Transmission

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Neoplasms of the Large and Small Intestine; Videos

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Diseases of the Esophagus

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Mineral and Bone Homeostasis

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Measuring Health and Health Care

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Mechanisms of Inflammation and Tissue Repair

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Prevention and Control of Health Care–Associated Infections

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Overview of Anesthesia

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Venoms and Poisons from Marine Organisms

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Rotaviruses, Noroviruses, and Other Gastrointestinal Viruses

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Approach to Women's Health

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Epidemiology of Aging: Implications of the Aging of Society

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Biologic Agents

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Plague and Other Yersinia Infections

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Endocrine Manifestations of Tumors: "Ectopic" Hormone Production

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Coccidioidomycosis

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Hemolytic Anemias: Red Cell Membrane and Metabolic Defects

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Gene and Cell Therapy

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Medical Aspects of Trauma and Burn Care

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Diseases Caused by Chlamydiae

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Peripheral Venous Disease

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Applications of Molecular Technologies to Clinical Medicine

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Disorders of Phagocyte Function

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Approach to Medicine, the Patient, and the Medical Profession: Medicine as a Learned and Humane Profession; Approach to the Patient with Possible Cardiovascular Disease

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Diseases Caused by Non-Spore-Forming Anaerobic Bacteria

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The Innate and Adaptive Immune Systems

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Cancer of Unknown Primary Origin

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Rotaviruses, Noroviruses, and Other Gastrointestinal Viruses

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The Major Histocompatibility Complex

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Approach to the Patient with Neurologic Disease

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Hereditary Nephropathies and Developmental Abnormalities of the Urinary Tract

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