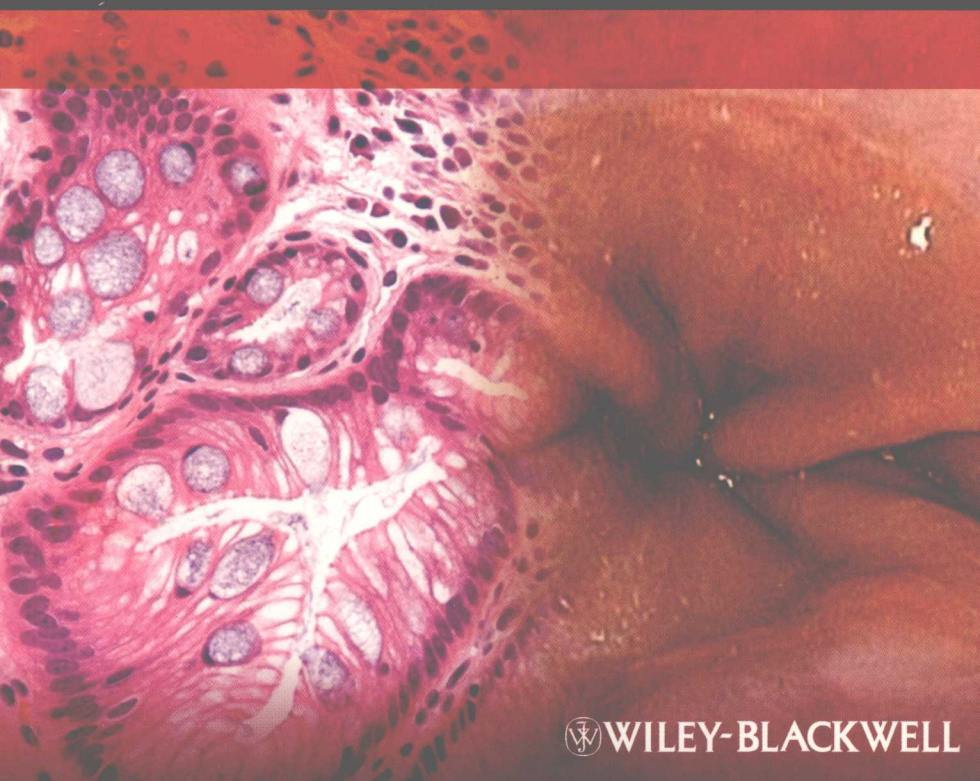


Essentials of Gastroenterology

EDITED BY

Shanthi V. Sitaraman and
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WILEY-BLACKWELL

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To the memory of Shanthi V. Sitaraman, MD, PhD

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Foreword

In an age when information on any subject is but a few clicks away – the Internet offering seemingly unlimited information to be found in response to any inquiry as well as democratization of information through social media – it is reasonable to question the need for any textbook, much less a new one. Textbooks as resources for definitive information are inherently archival in nature. The deliberate process necessary to produce a textbook, which helps ensure the accuracy that readers expect, makes them less agile as an information resource than the many electronic vehicles that are now nearly ubiquitous.

Ironically, the importance of textbooks may actually be more sharply defined by the immediate access to massive amounts of information through the Internet and other electronic vehicles. That role is to provide trusted core knowledge for a learner new to the field in need of focused, credible information. In the unregulated environment of the Internet, *caveat emptor* is implicit. Without foundational knowledge the learner approaches a search for insight or answers without the ability to distinguish the reliable from the unreliable.

The general importance of textbooks as a source of validated information in this era is especially relevant to medicine, in which the tension between the immediacy of the Internet to disseminate new information and the textbook to provide a source of vetted knowledge is particularly acute. The expansion of medical knowledge has reached a seemingly exponential rate, and the textbook is hardly the medium to reflect that almost daily evolution. However, as breakthroughs are reported and then often quickly superseded by contradictory reports or are otherwise intermixed with misinformation in the virtual world, a reference for core knowledge that has been truly validated as a foundation for the student or practitioner of medicine remains the province of the textbook.

What, then, is the need for a *new* textbook when libraries are already replete with reference works in every field? An answer to this second

important question has an implicit criterion: that the new book differs from existing textbooks in fulfilling an inadequately met need for a particular formulation of a body of knowledge.

The present new volume clearly fulfills that requirement. The field of gastroenterology has the benefit of a number of excellent, comprehensive textbooks. They provide the reader in-depth information about the field and can serve as a resource for the practitioner to find detailed knowledge around a specific question that may have arisen in the course of practice or research. These textbooks, however, do not as effectively serve the needs of the medical student, trainee, or other early career health care professional. In the early stages of education or training, the essential need is for a coherent and concise, yet substantive, formulation of the foundational knowledge of gastrointestinal medicine and the most important and common clinical problems encountered in the field.

Essentials of Gastroenterology has taken a creative approach to orient the reader to the key problems of clinical gastroenterology and provides an approach that will resonate with the student or trainee who is first encountering the challenges of this field. Edited by two outstanding experts with broad experience, this volume has been developed using the frame of reference of the students, to whom they have dedicated their careers in parallel with their commitment to patients. The result is a wonderful resource in which the reader moves quickly from an initial basic understanding of the clinical topic to an understanding of the science underpinning the clinical approach and ultimately clinical management itself.

Each chapter pivots on an initial clinical vignette, which immediately captures the interest of the reader and provides an almost palpable sense of the clinical specialty as a springboard to the rest of the chapter. This is especially effective in giving life to the chapters that focus on the more fundamental aspects of anatomy and physiology of the digestive system. The book also includes chapters covering key ancillary aspects of digestive disease and the modalities used in the practice of gastroenterology. Vivid images provide an especially vibrant view of the field to the reader.

This textbook gives a resounding answer to both questions posed in this foreword with respect to the role of textbooks. In an era in which use of “just-in-time” learning tools increasingly dominate teaching rounds and the clinical environment, this textbook provides the essential context by which more focused information of momentary relevance can be properly assimilated. Further, this textbook does indeed fulfill a distinct and important need that is not met by larger comprehensive textbooks of gastroenterology. The result is fresh: with crisp presentation, the information is accessible in a way that is well matched to the needs of its intended readers.

I note finally that this has been a labor of love for all those involved but especially the two editors, with whom I have had the pleasure of working as colleagues in years past. Dr. Friedman has brought his encyclopedic knowledge and broad experience as clinician and teacher to ensure the sharpened focus that is evident throughout this book. For Dr. Shanthi Sitaraman this book was the culminating reflection of her passion for teaching that was matched by the deep humanity that was evident in all of her efforts, including the care of patients and leadership of a research laboratory. Sadly, Shanthi did not live to see the publication of this textbook; she passed away after a long illness shortly after all of the chapters had been finalized. Her steadfast determination to see this textbook through to what is now a wonderful result is testament to her spirit. Although the field of gastroenterology has been deprived of Shanthi's continuing contributions, this textbook serves as an important and, I am sure, enduring legacy.

Daniel K. Podolsky, MD
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Preface

Essentials of Gastroenterology was conceived, developed, and co-edited by Shanthi V. Sitaraman, MD, PhD, who tragically passed away after a long illness as the book was nearing completion. The book reflects Shanthi's dream and vision to create a textbook of gastroenterology targeted specifically to medical students but useful as well to residents rotating on a gastroenterology service and fellows and practitioners preparing for certification examinations and desiring a focused overview of the state-of-the-art of the field. To achieve these goals, Shanthi enlisted contributions from her colleagues in the Division of Digestive Diseases and the Departments of Pathology and Surgery at the Emory University School of Medicine, where Shanthi was Professor of Medicine (with Tenure) and Professor of Pathology. The book is, in fact, based on the highly acclaimed lectures given by Shanthi and her colleagues to the medical students during their pathophysiology course and clinical rotations in gastroenterology. Shanthi herself was an award-winning teacher who was beloved by the students, residents, fellows, and faculty at Emory. She was a recipient of the Silver Pear Mentoring Award from the Department of Medicine, the Student Association Teaching Award and Dean's Teaching Award from the School of Medicine, and the Attending of the Year designation and the Mentor Award from the Division of Digestive Diseases at Emory, among numerous other honors. Many of her colleagues who contributed to this volume have also been recipients of awards for outstanding contributions to medical education.

The book reflects Shanthi's high standards and commitment to clear exposition, proper organization, and clarifying figures and tables. The 28 chapters are organized into five sections, each edited or co-edited by one of her colleagues. These sections are entitled Luminal Gastrointestinal Tract, Liver, Pancreas and Biliary System, Common Problems in Gastroenterology, and Picture Gallery. Each chapter covers a key clinical issue in the practice of gastroenterology, and the Picture Gallery provides the proverbial "textbook" examples of classic pathology, radiology, and dermatology findings in gastroenterology. The chapters are written in an

easy-to-read outline format that covers the basics of pathophysiology, clinical features, diagnosis, natural history, prognosis, and treatment of the common disorders seen in the practice of gastroenterology. Figures and tables illustrate and highlight key information. Shaded boxes draw attention to important practice points, and a concluding segment in each chapter in the first four sections provides a list of “pearls” useful in clinical practice. Illustrative cases begin each chapter in the first four sections, and multiple-choice questions pertaining to these clinical vignettes and to the content of the chapter provide an opportunity for the reader to test his or her knowledge of the subject matter at the end of each chapter. A few key references and web links are provided. The aim is to make the information as clear, concise, and “digestible” as possible. Medical students will find the information relevant and readily understandable, while more senior trainees will be able to obtain a quick and practical overview of the field in a short amount of time. Readers should find the book useful and focused without being overwhelming.

For me, it was a particular, though poignant, privilege to work with Shanthi, a former fellow of mine, on this book. Her love of gastroenterology and passion for teaching were evident throughout the entire project and shine in this book. She was a brilliant and dedicated physician-scientist who, as a faculty member at Emory, made numerous contributions to education, research, and clinical practice. Her work in inflammatory bowel diseases resulted in over 200 publications that advanced our understanding of basic mechanisms of inflammation and led to novel approaches to therapy. Her devotion to patients was legendary, and as recently as 2011, she received the Crohn’s and Colitis Foundation of America Premier Physician Award in Georgia. She mentored and taught countless medical students, residents, fellows, and junior faculty, and her humanitarian service to the greater Atlanta community was inspiring. *Essentials of Gastroenterology* is both a fitting tribute to and a wonderful legacy of an exceptional educator, colleague, and friend.

Lawrence S. Friedman, MD

Acknowledgments

Every chapter in this book was personally edited by Dr. Shanthi V. Sitaraman, whose labor of love is reflected in every page. She received invaluable assistance and support from her colleagues at the Emory University School of Medicine and particularly from members of the Division of Digestive Diseases. Their adherence to deadlines, attention to detail, and commitment to excellence were essential to the successful completion of this book. I am particularly grateful to Dr. Frank A. Anania, Director of Hepatology and now Acting Chief of the Division of Digestive Diseases at Emory, and Dr. Vincent W. Yang, Chief of the Division of Digestive Diseases at Emory and now Chair of the Department of Medicine, Stony Brook University School of Medicine, for their extraordinary support of this project. Each and every contributor to this book deserves acknowledgment for his or her effort. Shanthi would particularly want to acknowledge the devotion and love of her husband, Professor Suresh Sitaraman, and her son Karthik. I am grateful for the support of my own family, including my wife, Mary Jo Cappuccilli, son Matthew Friedman, and grandson Christopher Friedman. The support of our publisher Wiley-Blackwell, including Oliver Walter, Senior Editor for Health Sciences, Kate Newell, Senior Development Editor, Cathryn Gates, Senior Production Editor, and Ruth Swan, Project Manager at Toppan Best-set, was phenomenal, and I personally cannot thank them enough. We are especially grateful to Dr. Daniel Podolsky, a mentor to both Shanthi and me, who graciously prepared the Foreword for this book. We also acknowledge the remarkable efforts of our Assistants, Carla Fairclough for Shanthi and Alison Sholock for me, who served as surrogate editors for the book. For me, the opportunity to work with Shanthi Sitaraman on this book was a once-in-a-lifetime experience that I will always treasure.

Lawrence S. Friedman, MD