Preface

Seven years after the initial publication of our book we now present the second edition. This new edition employs the same proven concept as before. However, its content fully reflects the rapid advances that have characterized the development of gastroenterological endoscopy in recent years. This development is not solely the result of technical progress but has also been driven by an increasing interest in endoscopy of the gastrointestinal tract. It is evident that the number of endoscopic centers has continuously increased in recent years. We note with some satisfaction that this development has embraced every continent. The major endoscopic journals report both increasing subscriptions and increasing submissions of scientific papers. The major emerging economic powers in Asia, such as China and India, have apparently decisively influenced this development. We also note that scientific papers in the field of endoscopy no longer come exclusively from university hospitals, but increasingly from municipal hospitals and private practices as well.

This newly acquired knowledge extends to all aspects of gastroenterological endoscopy that are relevant to the patient: patient preparation prior to examination, premedication, screening of premalignant and malignant lesions, endoscopic diagnosis, and therapy.

Completely new technology and methods have been introduced. Not only has the endoscopist’s field of endeavor expanded continuously as a result of this development, it has also undergone significantly change.

The magic acronym NOTES has evoked fascination. It refers to transluminal invasive procedures in which the endoscope is advanced through the wall of the organ of approach (stomach, vagina, etc.) to reach the target organ in the abdominal or retroperitoneal space in order to remove the appendix, gallbladder, kidney, etc. Surgical teams that include gastroenterologists now see a completely new field of endeavor unfolding for the intrepid gastroenterological endoscopist.

Colorectal carcinoma is by far the most impressive example of the impact of health care policies on the field of endoscopy. Where colonoscopy is the established method of screening for colon cancer, as in the United States and many European countries, endoscopists are veritably flooded with screenees. Might this not mean that other equally important tasks of the physician are being neglected as a result? Obviously new biomarkers for colon cancer with high sensitivity and specificity are needed to filter out unsuitable candidates so that only those cases where a genuine suspicion exists are sent to colonoscopy.

Naturally, colonoscopy and the removal of adenomas are indispensable established methods of colon cancer screening. However, not every intervention detects precancerous lesions or small malignancies, permitting timely endoscopic or surgical removal. Obviously improvements to endoscopic methodology or completely new methods are required to reduce the number of interval cancers to near zero.

Recent findings that flat and dimpled adenomas and certain serrated polyps in the colon entail a higher risk of malignant degeneration are important. Here there is some good news. Clear improvements in the detection of changes in the epithelial surface of the gastrointestinal tract have resulted from enlarging the endoscopic image, using dyes, autofluorescence, high-definition endoscopy, and also by manipulating the wavelength of the applied light by means of narrow-band imaging (NBI) and Fujinon intelligent color enhancement (FICE). More precise evaluation of the substrate also permits endoscopic classification of changes as premalignant or malignant lesions; the Paris–Japan and Kudo classifications are convincing examples of such a system. But this is not all. With the aid of confocal laser microscopy it is possible to obtain images of the deeper layer of the intestinal mucosa beneath the epithelial surface. This modality can visualize high-grade dysplasia in ulcerative colitis that might go undetected with white light microscopy. Have we not come very close to many older endoscopists’ dream of practicable “endoscopic histology”?

The endoscopic submucosal dissection (ESD) developed by our Japanese friends represents a great advance in both diagnosis and therapy. In contrast to endoscopic mucosal resection (EMR), ESD allows better en bloc resection of the tumor-bearing area of the wall, more precise histopathological diagnostic studies, and a deeper resection. In the first edition of our book we had described endoscopic mucosal resection as a revolutionary advance. Now this elegant method risks being supplanted by endoscopic submucosal dissection. This will hold true especially if the modification suggested by the American Apollo group, namely first marking the affected area of the wall laterally with electrocautery and lifting the wall by inflating a balloon in the submucosa, does indeed increase safety and reduce the time required for surgery.

New imaging modalities such as high-resolution–high-magnification endoscopy, autofluorescence, spectra modulation, etc., and new therapeutic technology were applied in the colon. This novel technology was also applied in other fields such as esophagus, stomach, and bilio-pancreatic area. Particularly Barrett’s esophagus was favored to apply and evaluate all novel technology but progress in diagnostic and therapeutic possibilities was also made in the bilio-pancreatic field.

A true novelty in this second edition of the atlas is the in-depth description of investigational possibilities for small intestinal diseases with capsule endoscopy and mono- and double balloon endoscopy. The last endoscopic frontier has now been tackled, allowing investigation of the entire intestinal tract, whenever clinically indicated.

In parallel with the amazing endoscopic evolution was the further development of diagnostic and particularly therapeutic endosonography. Something which was unthinkable in the past is now entering the arena of routine procedures in an optimally equipped and skilled endoscopic unit.

The key contributions of the gastroenterological endoscopist to digestive oncology are hardly at risk of being usurped by other disciplines. The situation is different in the case of classic chemotherapy or the application of biologicals by gastroenterologists in advanced gastrointestinal tumors. This is common practice in certain European countries. Indeed, the use of biologicals is hardly new to gastroenterologists used to treating patients with chronic inflammatory bowel disease.

This book addresses all endoscopists throughout the world as well as colleagues from related fields. It is especially intended for our fellows, for gastroenterologists in private practice and those
practicing in tertiary referral centers, who work closely with surgeons, pathologists, radiologists, and oncologists, as well as for all those who are involved in research and participate in clinical studies wherever possible. We are well aware of the great economic differences between the various regions and countries of the world, and we explicitly encourage our colleagues in the developing countries. Our express thanks go to those manufacturers of endoscopes and add-on devices who help to establish gastroenterological and endoscopic training centers for training physicians and assistants in the developing countries.

This edition has seen a change in the group of editors. Jacques Bergman, Alexander Meining, D Nageshwar Reddy, Michael Wallace, and Hisao Tajiri have been brought on board as associate editors in an effort to involve younger endoscopists with solid scientific and clinical reputations, who have already acquired experience and demonstrated sound critical judgment in both research and practice. These colleagues have also played a crucial role in designing the book and will be responsible for the coming editions. We felt it important that they already become familiar with the responsibilities of editors. It is essential for a textbook to keep abreast of the latest developments. New aspects and changing emphasis make it important to enlist younger authors as well. This approach has paid off. However, the majority of our authors had already contributed to the first edition. We know of few gastroenterological book projects with such a broad international group of contributing authors. The editors would like to thank all the authors for their understanding for our urgent wishes and for their outstanding cooperation.

The high quality of text and image material the editors strived for was nearly invariably achieved. We thank the enthusiastic donors (especially from Japan) for their excellent image material.

We present readers throughout the world with a book that does justice to the advances in medical science and to the development and importance of gastroenterological endoscopy. Gastroenterologists throughout the world will receive the information they require for planning an endoscopy department, for their endoscopic work in both private practice and the hospital, and for detecting and treating even rare pathology in the gastrointestinal tract and major digestive glands.

Our special thanks go to the staff of Thieme Publishers, especially Dr. Wachinger and Dr. Bergman. Ms. Rachel Swift not only did justice to her name, but won the editors’ boundless admiration for her knowledge, patience, and kindness. Dr. Hauff was a generous publisher who agreed to give the book an excellent layout.

The editors