The SAGES Manual
Perioperative Care in Minimally Invasive Surgery

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With 106 Figures

Illustrations by Vaune Hatch

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This manual is dedicated to the next generation of surgeons who have so enthusiastically embraced minimally invasive methods and who will further develop and refine these techniques in the years to come.
Preface

The second SAGES (Society of American Gastrointestinal Endoscopic Surgeons) manual was intended to be a companion piece for the successful first SAGES manual, edited by Carol Scott-Connor, that was published more than 4 years ago. Originally, the goal was to concentrate on tersely covered or often ignored aspects of the preoperative preparation of the patient and the operating room as well as the postoperative care of patients undergoing minimally invasive operations. It was also our intention to include a section for each procedure where several different port placement schemes would be presented and briefly discussed. Unique to this manual, the impact of the patient’s body habitus (short or long, narrow or wide) on port placement is also taken into account for many of the procedures. Also unique are chapters devoted to hypothermia, port wound closure, and the management of subcutaneous emphysema and abdominal wall hemorrhage caused by trocars.

Naturally, the surgeon tends to focus on the technical aspects of the procedure, such as the operative tasks to be carried out, the order of operation, and the position of the surgeon and assistant. However, it is critical that the surgeon be aware that the CO₂ pneumoperitoneum, far more so than laparotomy, results in multiple physiologic alterations that, if not compensated for by the anesthesiologist and surgeon, may endanger the patient or prevent the laparoscopic completion of the procedure. Although most laparoscopic texts, at best, have a chapter or two on CO₂ pneumoperitoneum, a whole section of this manual has been dedicated to discussion of the physiologic ramifications of this exposure method. A well-informed surgeon is better able to work with the anesthesiologist to limit or prevent deleterious physiologic changes. It has also become clear that open and closed abdominal surgery cause immunosuppression and may have oncologic implications for the patient. The issue of port wound tumors has loomed large on the surgical landscape for more than a decade. This manual contains chapters that review the literature in these areas and will, hopefully, prove useful to readers.

The intended audience for this manual are general surgeons in training as well as already trained surgeons who are facing the often daunting task of learning how to perform advanced laparoscopic procedures. It is hoped that this manual will prove useful as a quick “lockerroom” reference for residents with limited experience heading into advanced cases in regard to setting up the operating room, positioning the patient, and selecting the port locations. On another level, we hope that this manual will also be a resource for surgeons interested in developing a thorough and well-thought-out approach to the pre- and postoperative management of minimally invasive patients or to learn more about CO₂ pneumoperitoneum and its implications.

The generation of this manual has involved hundreds of people who generously gave of their time. Although it is impossible to thank each person, I would be remiss if I did not acknowledge a number of people who were critical to the project. First, I am indebted to my co-editors, James W. Fleshman and Dennis L. Fowler, for their Herculean efforts; without them this manual could not have been completed. Their expertise both surgical and literary is greatly appreciated.
There would be no manual if not for the efforts of the expert surgeons who took the time from their busy schedules to write the chapters. Vaune Hatch, the talented artist who did all the drawings and figures for the manual, deserves a special accolade. Without complaint she made countless modifications to the figures until all were satisfied.

Finally thanks go to the SAGES Board of Governors and the Publication Committee, who entrusted this task to me. I am proud not only to have been given this responsibility but also to be part of an organization such as SAGES, which has broken much new ground over the past two decades and has consistently provided leadership and direction during a period of tremendous change in the surgical world. The SAGES family has been patient, helpful, and supportive during the entire, longer than expected, process. It has been an honor to take part in this project and to see it through to its completion.

Richard L. Whelan, MD
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