

Introduction: General Principles

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A competent surgeon must be aware of all the general aspects of a surgical procedure to be able to perform specific interventions successfully and expeditiously. The old adage that “exposure, exposure, and exposure” are the three most important factors for the good outcome of a surgical procedure remains true for both open and laparoscopic approaches.

Each procedure must start with careful positioning of the patient prior to wide disinfection of the operative field, draping, and incision. Compared to the first edition of the Atlas, we added two new chapters: one on new devices for cutting and sealing tissues, and a second one to introduce robotic surgery. Significant changes were performed in about one third of the other chapters. The second chapter covers the various options for positioning of the patient on the operating table and describes the incisions that are available to enter the abdominal cavity. The third chapter focuses on different principles of exposure through the use of various types of retractors, providing examples of the most commonly used retractors. The fourth chapter addresses the use of mechanical staplers. Currently, staplers are increasingly being used for many open and laparoscopic procedures, and the industry has partnered actively with the surgical field in developing new devices enabling sophisticated maneuvers, often to reach otherwise small and relatively inaccessible areas. Proper knowledge of the general principles of the use, limitations, and function of mechanical staplers is mandatory for modern surgery, because their misuse or naiveté about their limitations may result in devastating complications such as anastomotic leakage or bleeding. While Billroth claimed more than a century ago that “drainage saves many lives”, the use of the “time-honored” surgical drain has changed dramatically, because accumulating studies have shown convincingly that drains are often useless or even harmful in many procedures. Open drains are rarely needed today. This chapter presents the principles of the various types of drains including a table of “evidence-based” utility of drains for upper abdominal surgery. A new chapter introduces devices for cutting and sealing tissues which are nowadays used in most centers and allow accurate dissection and hemostasis of tissue. The last chapter introduces robotic surgery for procedures such as robotic cholecystectomy, distal pancreatectomy, gastrectomy, and hepatectomy outlined in following sections.

These chapters covering the general aspects of surgery were prepared in a simple, yet comprehensive manner. We believe that the didactic and basic information provided in these introductory chapters of the Atlas will be of value for both trainees and specialized surgeons.