32.1 Position of Patient

The correct position for right laparoscopic adrenalectomy is supine with slight elevation (20° to 30°) of the right side by positioning of appropriate sheets or pillows. Slight overextension of the operating table may also be useful to arc the torso further and provide more working space. The monitor is positioned in the familiar position for laparoscopic cholecystectomy for the surgeon and the operating team is similarly positioned.

The only additional precautions are: (a) placement of a urinary catheter since the operation may last longer than expected and (b) the availability of a tray with all the necessary instruments (including a Satinsky curved clamp) for an immediate open approach should a major complication occurs during surgery, especially with an inferior vena cava injury.
32.2 Position of the Trocars

The initial camera trocar is placed in the umbilicus, as in laparoscopic cholecystectomy, for easier access and delivery of the adrenal tumor. We always use the open Hassan technique, which is faster and safer than the Veress needle technique. Occasionally when we deal with a very obese patient we can place the initial camera trocar closer to the subcostal area in the middle and below the remaining working trocars and avoid the umbilical site. For large adrenal tumors it is more helpful to use an additional trocar for the camera at a later stage of the procedure and still start with the umbilical incision, which can be extended at the end of the procedure to allow a larger tumor to be extracted.

There are four additional trocars that are placed in a straight line, 1–2 cm below the subcostal margin starting medially from the subxiphoid, a 10–12 mm trocar that will accommodate the liver retractor and finish as far lateral as possible with a 5-mm trocar for the first assistant’s grasper. Between these trocars, two additional 10-mm trocars are placed to accommodate the operating surgeon’s equipment and the second “helping instrument” of the first assistant, which is usually the suction-irrigation tip.

32.3 Step I

The first step is to retract the liver with the gallbladder upwards. The retroperitoneum is incised in order to further retract the liver and reach as high as possible. The retractor (preferably cloth covered to avoid liver injury) will be held upwards during the whole procedure by the second assistant.

Two landmarks are identified: the kidney laterally and the inferior vena cava (IVC) medially.