PREOPERATIVE DIAGNOSIS: , Right renal mass.,POSTOPERATIVE DIAGNOSIS: , Right renal mass.,PROCEDURE PERFORMED: , Laparoscopic right partial nephrectomy.,ESTIMATED BLOOD LOSS:, 250 mL.,X-RAYS: , None.,SPECIMENS: , Included right renal mass as well as biopsies from the base of the resection.,ANESTHESIA:, General endotracheal.,COMPLICATIONS: , None.,DRAINS: , Included a JP drain in the right flank as well as a #16-French Foley catheter per urethra.,BRIEF HISTORY: , The patient is a 60-year-old gentleman with a history of an enhancing right renal mass approximately 2 cm in diameter. I had a long discussion with him concerning variety of options. We talked in particular about extirpated versus ablative surgery. Based on his young age and excellent state of health, decision was made at this point to proceed to a right partial nephrectomy laparoscopically. All questions were answered, and he wished to proceed with surgery as planned. Note that the patient does have a positive family history of renal cell carcinoma.,PROCEDURE IN DETAIL: , After acquisition of proper informed consent and administration of perioperative antibiotics, the patient was taken to the operating room and placed supine on the operating table. After institution of adequate general anesthetic via endotracheal rod, he was placed into the right anterior flank position with his right side elevated on a roll and his right arm across his chest. All pressure points were carefully padded, and he was securely taped to the table. Note that sequential compression devices

were in place on both lower extremities and were activated prior to induction of anesthesia. His abdomen was then prepped and draped in a standard surgical fashion. Note that a #16-French Foley catheter was in place per urethra as well as an orogastric tube. The abdomen was insufflated at the right lateral abdomen using the Veress needle to a pressure of 15 without incident. We then placed a Visiport 10 x 12 trocar in the right lateral abdomen. With the trocar in place, we were able to place the remaining trocars under direct laparoscopic visualization. We placed three additional trocars. An 11 mm screw type trocar at the umbilicus, a 6 screw type trocar 7 cm in the midline above the umbilicus, and a 10 x 12 trocar to serve as a retractor port approximately 8 cm inferior in the midline.,The procedure was begun by reflecting the right colon by incising the white line of Toldt. The colon was reflected medially, and the retroperitoneum was exposed on that side. This was a fairly superficial lesion, so decision was made in advance to potentially not perform vascular clamping, however, I did feel it important to get high level control prior to proceeding to the partial. With the colon reflected, the duodenum was identified, and it was reflected medially under Kocher maneuver. The ureter and gonadal vein were identified on the right side and elevated. The space between the ureter and the gonadal vein was then developed, and the gonadal vein was dropped elevating only the ureter, and carrying this plane dissection up towards the renal hilum. Once we got up to the renal hilum, we were able to skeletonize the renal hilar vessels partially, and in particular,

we did develop some of the upper pole dissection above the level of the hilum to provide for access for a Satinsky clamp or bulldogs. The remainder of the kidney was then freed off its lateral and superior attachments primarily using the Harmonic scalpel and the LigaSure device.,With the kidney free and the hilum prepared, the Gerota fascia was taken down overlying the kidney exposing the renal parenchyma, and using this approach, we were able to identify the 2-cm, right renal mass located in the lower pole laterally. A cap of fat was left overlying this mass. Based on the position of the mass, we performed intraoperative laparoscopic ultrasound, which showed the mass to be somewhat deeper than initially anticipated. Based on this finding, I decided to go ahead and clamp the renal hilum during resection. A Satinsky clamp was introduced through the lower most trocar site and used to clamp the renal hilum en bloc. Note that the patient had been receiving renal protection protocol including fenoldopam and mannitol throughout the procedure, and he also received Lasix prior to clamping the renal hilum. With the renal hilum clamped, we did resect the tumor using cold scissors. There was somewhat more bleeding than would be expected based on the hilar clamping; however, we were able to successfully resect this lesion. We also took a biopsy at the base of the resection and passed off the table as a specimen for frozen section. With the tumor resected, the base of the resection was then cauterized using the Argon beam coagulator, and several bleeding vessels were oversewn using figure-of-eight 3-0 Vicryl sutures with lap ties for tensioning. We then placed

a FloSeal into the wound and covered it with a Surgicel and held the pressure. We then released the vascular clamp. Total clamp time was 11 minutes. There was minimal bleeding and occlusion of this maneuver, and after unclamping the kidney, the kidney pinked up appropriately and appeared well perfused after removal of the clamp. We then replaced the kidney within its Gerota envelope and closed that with 3-0 Vicryl using lap ties for tensioning. A JP drain was introduced through the right flank and placed adjacent to the kidney and sutured the skin with 2-0 nylon. The specimen was placed into a 10-mm Endocatch bag and extracted from the lower most trocar site after extending it approximately 1 cm. It was evaluated on the table and passed off the table for Pathology to evaluate. They stated that the tumor was close to the margin, but there appeared to be 1-2 mm normal parenchyma around the tumor. In addition, the frozen section biopsies from the base of the resection were negative for renal cell carcinoma. Based on these findings, the lower most trocar site was closed using a running 0 Vicryl suture in the fascia. We then re-insufflated the abdomen and carefully evaluated the entire intraoperative field for hemostasis. Any bleeding points were controlled primarily using bipolar cautery or hemoclips. The area was copiously irrigated with normal saline. The colon was then replaced into its normal anatomic position. The mesentry was evaluated. There were no defects noted. We closed the 10 x 12 lateral most trocar site using a Carter-Thompson closure device with 0-Vicryl. All trocars were removed under direct visualization, and the abdomen

was desufflated prior to removal of the last trocar. The skin incisions were irrigated with normal saline and infiltrated with 0.25% Marcaine, and the skin was closed using a running 4-0 Monocryl in subcuticular fashion. Benzoin and Steri-Strips were placed. The patient was returned in supine position and awoken from general anesthetic without incident. He was then transferred to hospital gurney and taken to the postanesthesia care unit for postoperative monitoring. At the end of the case, sponge, instrument, and needle counts were correct. I was scrubbed and present throughout the entire case.