

**SPEAKER:** Robotic Assisted APR with Robotic Harvest of Rectus Abdominus Muscular Flap for Vaginal Reconstruction-- performed at the Medical University of South Carolina.

Patient was a 55-year-old female with local recurrence of anal squamous cell carcinoma who elected to undergo an APR with vaginal reconstruction.

Robotic pelvic dissection was undertaken with the robot docked between patient's legs and trocar sites, as depicted, ensuring right-sided trocars were placed lateral to the semilunar line. Pelvic dissection was then carried out in the standard fashion, halting interior dissection at the vagina.

The robot was then re-docked to the patient's right side with camera trocar placed at colostomy site and trocar sites two and three reused. The perineum and posterior rectal sheath were then completely opened at the midline, from the costal margin to the pubis, to expose the dorsal aspect of the rectus muscle flap.

Interior mobilization of the flap then separated the rectus muscle from the interior rectal sheath.

Perforating vessels were controlled with bipolar electrocautery.

Great care must be taken in the dissection and preservation of the inferior epigastric vascular pedicle.

The cephalad attachment of the muscular flap is finally divided just caudal to the costal margin.

The flap's attachment to the pubis are preserved.

The muscular flap is then inspected in fluorescence perfusion imaging used to inspect blood supply to the entirety of the flap.

The perineum was then closed using a running suture. The muscular and omental flap were then placed appropriately within the pelvis. The perineal dissection was then completed with removal of the specimen, including the posterior vaginal wall, and the muscular flap was positioned appropriately.

Final reconstruction showing nouveau vagina with muscular flap and skin graft-- the colostomy was then matured.

For this patient, the robotic assisted APR and rectus flap harvest, while technically challenging, saved a midline laparotomy incision and may have contributed to a faster recovery, less narcotic use, a lower wound infection rate, and a lower risk for incisional hernia.