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## Clinical Trial Evaluates New Minimally Invasive Rectal Cancer Surgery

Surgeons at the University of California, San Diego School of Medicine are evaluating a new, combined surgery technique to remove cancerous tumors from the rectum. The hybrid technique uses the body's natural opening to remove malignancies and diseased tissue while also performing reconstruction. UC San Diego Health System's surgical team is the first in the United States – in a clinical trial setting – to integrate two novel minimally invasive techniques to treat rectal cancer.



*Elisabeth McLemore, MD, colorectal surgeon at UC San Diego Health System and principal investigator of the study.*

“By operating through the rectum, and with one small abdominal incision, we are able to perform an effective operation to remove the cancer, and to visualize and identify pelvic structures that are vital to normal bladder and sexual function,” said Elisabeth McLemore, MD, colorectal surgeon at UC San Diego Health System and principal investigator of the study. “With this advanced approach, we reduce the number of incisions from six to one. This can result in less blood loss, less pain and a shorter hospital stay for the patient.”

This clinical trial surgery combines a technique called natural orifice transluminal endoscopic surgery (NOTES) with laparoscopic total mesorectal excision (TME), a form of rectal surgery. The NOTES technique allows the surgeons to operate through the rectum to remove tumors and TME ensures that a section of normal tissue around the tumor is also safely removed to reduce the chance of cancer recurrence.

*Horgan, MD, director of the UC San Diego Center for of Surgery*

“This study is evaluating both the safety and efficacy of the surgery, as well as pain levels, cosmetic outcomes, operative costs and logistical outcomes,” said Santiago Horgan, MD, chief of minimally invasive surgery at UC San Diego Health System and director of the UC San



Diego Center for the Future of Surgery. “Our goal is to expand the range of minimally invasive techniques that can be performed for patients with any form of digestive cancer.”

The surgical team utilizes special tools designed to allow simultaneous access through the rectum and abdomen. The rectal cancer is removed from below while the colon is mobilized from the abdomen. The remaining colon is then used to re-construct the rectum. The procedure is 5 hours in comparison to the average six to eight hours of operating room time using the traditional surgical approach.

McLemore added that the tools used by the surgical team were less expensive than the current tools she uses for laparoscopic and robotic procedures.

“Up until now, new technologies and techniques have taken longer to perform in the operating room and were associated with increased cost,” said McLemore, a national leader in transanal minimally invasive surgery. “This is the first technique using a new technology to perform minimally invasive rectal cancer surgery that may result in improved visibility, and lower costs and procedure time. If successful, the new technique could create a better experience, value and long-term results for the patient.”

UC San Diego Health System is a leader in the advancement of minimally invasive surgical techniques. Since 2007, the surgeon-scientists of UC San Diego’s Center for the Future of Surgery have pioneered both scarless and single-incision surgery. The Center’s surgeons were the first in the United States to perform an oral appendix removal. To date, the team has performed more than 300 NOTES and single incision cases to remove diseased appendix, kidneys and gallbladders and obesity surgeries such as sleeve gastrectomy.

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