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World's First Successful Robot Assisted Pancreatic Tumor Surgery

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This month Fox Chase Cancer Center performed the world's first successful minimally invasive distal pancreatectomy using the ViKY® system's revolutionary robotic, compact laparoscope holder. The technology, developed in France and tested on thousands of patients in Europe, made its debut in a cancer setting in the United States at Fox Chase.

"Fox Chase is among only a handful of institutions worldwide using robotics or laparoscopy to treat patients with nearly all types of cancer," says Robert G. Uzzo, MD, FACS, chairman of the department of surgery at Fox Chase. "The use of technology, like the ViKY system, reinforces our Center's commitment to excellence in minimally invasive surgical techniques for the care of patients with

both benign and cancerous conditions."

Fox Chase surgeon Andrew A. Gumbs, MD, who specializes in minimally invasive hepato-pancreatic and biliary (HPB) surgery, explains, "This system is so versatile that surgeons like me are able to use it for many different laparoscopic procedures, including those in the gastrointestinal, urologic, thoracic and gynecologic regions."

Typically with minimally invasive procedures, like a laparoscopic distal pancreatectomy, surgeons use both hands to manipulate the surgical tools and need an assistant to manipulate the endoscope—a thin, lighted tube equipped with a camera that allows the surgeon to view the surgical field.

Gumbs performed this first ever ViKY assisted minimally invasive distal pancreatectomy on a 65-year-old man who was diagnosed with two pancreatic cysts, one of which is potentially cancerous. Pathologists are currently evaluating the cyst.

"The new ViKY robotic laparoscope holder acts as an extra hand during surgery, giving me stability and steadiness," adds Gumbs. "The view of the surgical field is critical, so ViKY's pinpoint accuracy helps me perform more complex procedures laparoscopically." Unlike typical laparoscope holders, the ViKY system's holder is lightweight, easy to set up and use, and takes no floor space.

Standard treatment for pancreatic cancer is surgery to remove the head or tail of the pancreas. When patients present with pancreatic cancer localized to the tail of the pancreas (instead of the head), they undergo a distal pancreatectomy, in which the surgeon removes the tail of the pancreas and leaves the head attached. The remaining portion can function normally by producing and releasing digestive enzymes and hormones. Patients with pancreatic cancer are typically treated with surgery followed by radiation therapy and/or chemotherapy to reduce the risk of recurrence.

The ViKY system gave Gumbs precise control of the laparoscope while he performed the distal pancreatectomy. The endoscope moves according to the surgeon's orders, either through voice recognition or footswitch control.

Before the ViKY technology was available patients might have undergone open surgery. Depending on the complexity of the case, the surgeon may have considered open abdominal surgery, requiring a large incision and a lengthy recovery. Minimally invasive surgical techniques, like the surgery Dr. Gumbs performed, benefit patients in many ways, including a shorter hospital stay, faster recovery, quicker return to daily activity, less risk of infection and less scarring and bleeding.

Gumbs was the first American surgeon to complete a minimally invasive HPB fellowship at the Institut Mutualiste Montsouris in Paris, France. This is the hospital where the first published case of a single incision laparoscopic cholecystectomy in the world was done using the ViKY system. Gumbs is responsible for bringing the ViKY system to Fox Chase and will be training fellow surgeons on this technology.

The ViKY system is manufactured by Endocontrol Medical in La Tronche, France. Endocontrol is an innovative company offering robotic solutions for endoscopic surgeries. Endocontrol was created by Clement Vidal and Patrick Henri of Joseph Fourier University, Grenoble, France, a worldwide leader in computer assisted and robotic surgery.

Image Caption: "The new ViKY robotic laparoscope holder acts as an extra hand during surgery, giving me stability and steadiness," said Dr. Gumbs.

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