

Complex pancreatic cancer surgery ‘using chopsticks’

Region’s First Laparoscopic Whipple a Success

By Todd Neff

University of Colorado Hospital recently became the first site in the Mountain time zone to perform a complex treatment for pancreatic cancer laparoscopically. The hospital is now among only a handful of institutions in the world capable of regularly performing the Whipple procedure, otherwise known as a pancreaticoduodenectomy, through minimally invasive methods.



Barish Edil, MD, director of pancreatic surgery at UCH, performed the first laparoscopic Whipple procedure in the Rocky Mountain region in October.

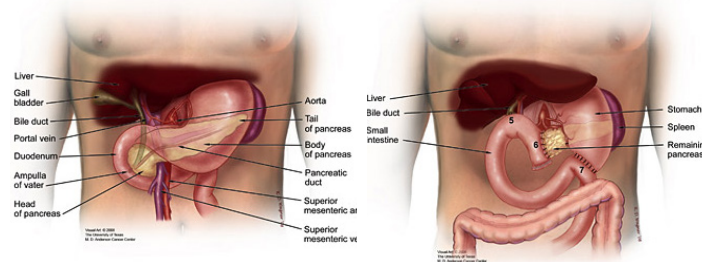
Barish Edil, MD, 38, the University of Colorado School of Medicine’s new director of pancreatic surgery, performed the procedure Oct. 22. Edil is among the few with track record of doing the Whipple procedure laparoscopically. It requires making six incisions, each just a quarter inch to a half inch long. Edil spent his fellowship and early career developing and refining the procedure at Johns Hopkins University. In 2009, he did the first-ever laparoscopic Whipple. He arrived at University of Colorado Hospital on July 1 having done more than 40 them, teaching other surgeons along the way.

“It’s like using chopsticks to do surgery,” Edil said.

The procedure was named after Allen Whipple, the Columbia University surgeon who first performed it on American soil in 1935. It aims to save the lives of pancreatic cancer patients fortunate enough to have discovered the disease before it has spread to other organs – only about 15 percent are so lucky.

The surgery amounts to a replumbing of the patient’s digestive tract. Typically, surgeons remove the tumor-burdened pancreas head, the duodenum connecting stomach and small intestine, the gallbladder, part of the common bile duct, part of the stomach and surrounding lymph nodes. Then they link together what’s left. It takes six hours, sometimes longer. It’s a huge challenge for surgeons operating via a 10-inch incision. The laparoscopic approach ups the degree of difficulty considerably.

Among the few. The “chopsticks” Edil refers to are tools with shafts ranging from 12.2 to 16.5 inches long. On their ends are various removable scissors, clamps, graspers, holders, forceps, needle holders and electrodes. He works from monitors showing him real-time video from the end of an endoscopic probe, which he cross-references with CT-scan imagery.



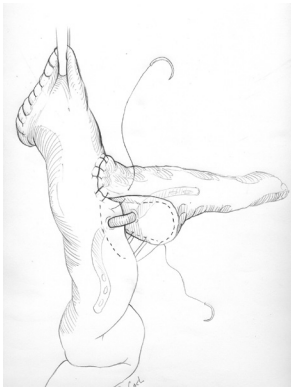
An artist’s rendering shows the magnitude of the Whipple procedure – made all the more challenging when attempted laparoscopically. Graphics: University of Texas, MD Anderson Cancer Center.

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The Whipple is the most difficult laparoscopic surgery there is, said Richard Schulick, MD, a GI surgeon and chairman of the School of Medicine's Department of Surgery, who lent his expertise in the OR during the Oct. 22 procedure.

Carolyn Henrikson, 70, a Colorado Springs nurse, was the patient. As is common with Whipple candidates, a radiologist spotted the tumor on her pancreas while reading CT-scan studies taken for other reasons. She was referred to UCH in early October.

Her case was considered by 20 specialists in a prequel to the new Multidisciplinary Pancreas and Biliary Cancer Clinic, which opened at UCH on Oct. 23 (*Insider*, Nov. 7). Schulick said they considered Henrikson's scans as well as histology and pathology results and agreed that a Whipple was the right route. Edil's presence at UCH gave her two options: a traditional open Whipple procedure, or the laparoscopic approach.



A sketch of the remaining part of the healthy pancreas being surgically attached to the small intestine in a Whipple procedure (courtesy Frank Corl).

"By doing the laparoscopic Whipple, we could cut down on the risk of infection, the time of recovery, the discomfort, the pain," Henrikson said. "It just seemed like such an easy decision."

Quick recovery. She spent two weeks recovering at UCH.

A month after surgery, Edil gave her his blessing to fly to Massachusetts to spend Thanksgiving with her son, daughter-in-law and four grandchildren.

"I was very fortunate – I didn't have a lot of the complications that could have happened, and I feel that has to do with it having been done laparoscopically," Henrikson said.

There have been a few challenges, she said. She eats smaller amounts more often, watches her fats, takes digestive enzymes, and is downing protein drinks three times a day to ensure she's getting enough in her diet, she said.

"Even this week is better than last week – it just takes time," she said.

Henrikson's case has been typical of those of his laparoscopic Whipple patients, Edil said. None have had wound infections, for example. Other benefits have included less pain, better immune-system function and, thanks to faster recovery from surgery, the ability to start patients on postoperative clinical trials, chemotherapy and radiation therapy more quickly.

Under the guidance of CU Cancer Center oncologist Tom Purcell, MD, MBA, Henrikson is doing all three, she said. She's part of a clinical trial designed to prod the immune system to attack any cancer cells that may remain. In addition, she starts chemotherapy this week, to be followed by radiotherapy.

"I'm doing everything I can to increase my odds," Henrikson said.

Edil said he has three more laparoscopic Whipples on the books already, the first scheduled for Dec. 12. He anticipates performing 20 to 30 of the procedures a year.

They're not for every patient, he added, citing factors such as the location of the tumor and the state of surrounding tissues. Rather, the Whipple is part of a portfolio of service the hospital's *Pancreas and Biliary Center* offers, as Edil put it, "to tailor therapy to the individual patient and give them a better chance to get cured."