Early Experience of a Robotic Foregut Surgery Program at a Cancer Center: Video of Shared Steps in Robotic Pancreatoduodenectomy and Gastrectomy

Naruhiko Ikoma, MD, MS, Michael P. Kim, MD, Hop S. Tran Cao, MD, Laura P. Prakash, MD, Jessica E. Maxwell, MD, MBA, Ching-Wei D. Tzeng, MD, Paul F. Mansfield, MD, Jeffrey E. Lee, MD, Brian D. Badgwell, MD, MS, and Matthew H. G. Katz, MD

Department of Surgical Oncology, The University of Texas MD Anderson Cancer Center, Houston, TX

ABSTRACT Over the past few decades, robotic surgery techniques required to resect gastric and pancreatic malignancies have evolved remarkably; however, the safety and generalizability of robotic pancreatoduodenectomy remain unknown. At our cancer center, gastrectomies and pancreatectomies are performed in a combined foregut minimally-invasive surgery program; this effectively increases the composite case volume and shortens the learning curve for any individual surgeon. In this video, we demonstrate the shared steps in pancreatoduodenectomy and gastrectomy and explain how the skills gained through robotic gastrectomy can be used during robotic pancreatoduodenectomy. During the initial 2-year period of our robotic foregut surgery program, we performed 120 pancreatic and gastric operations, including 22 pancreatoduodenectomies and 37 gastrectomies. Our first robotic pancreatoduodenectomy was performed following successful completion of 45 other robotic foregut operations. Of those 22 patients who underwent robotic pancreatoduodenectomy, the median hospital stay was 4 days (range 3–17 days) and the readmission rate was 14% (3/22). The rate of grade B/C pancreatic fistula was 9% (2/22) and

there was no 90-day mortality. In conclusion, the presented video showing the shared steps in robotic pancreatoduodenectomy and gastrectomy demonstrates the potential for a combined robotic surgery program to increase composite case volumes and to shorten the learning curve. At our cancer center, implementation of this approach has been helpful in accelerating the development of our new robotic pancreatectomy program, especially in honing the skills necessary to perform robotic pancreatoduodenectomy.

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N. Ikoma, MD, MS

e-mail: nikoma@mdanderson.org