**Is Surgical Cytoreduction for Stage IV Pancreatic Neuroendocrine Tumors Justifiable?**

**Yi-Zarn Wang, MD**<sup>1</sup>; Elizabeth McCord, BS<sup>1</sup>; Melissa Aycock; Stevens, MPH<sup>1</sup>; Anne Diebold, BS<sup>1</sup>; Robert A. Ramirez, DO<sup>2</sup>; J. Philip Boudreaux, MD<sup>1</sup>; Eugene A. Woltering, MD<sup>1</sup>

<sup>1</sup>Louisiana State University Health Sciences Center, Department of Surgery, New Orleans,
<sup>2</sup>Department of Neuroendocrine Oncology, Ochsner Health, New Orleans

**Background:** Pancreatic neuroendocrine tumors (pNETS) comprise <2% of all pancreatic tumors. They can be functioning or nonfunctioning. Long-term survival in patients with metastatic disease is generally poor, with recent SEER data citing 5- and 10-year survival of 19.5% and 7.1% respectively. We hypothesized that surgical cytoreduction of stage IV pNETS would improve survival.

**Methods:** Eighty-nine charts of consecutive well-differentiated pancreatic NET patients seen in our clinic from 5/2006 through 7/2012 were reviewed. Only patients with liver metastases were included in this study (n=64). Tumor characteristics and surgical procedures were reviewed and Kaplan-Meier survival curves were generated.

**Results:** Fifty-one (51/64, 80%) patients had nonfunctional pNETS vs. 13 (13/64, 20%) with functional pNETS. Sixteen (16/64, 25%) patients had pancreatic primary resected without concurrent liver resection, 27 (27/64, 42%) patients underwent combined pancreatic and liver resection, 5 patients (5/64, 8%) underwent resection of their liver metastases only without resection of their primary. Sixteen (16/64, 25%) patients did not undergo any NET-related surgeries.
The 5- and 10-year survival rates for the whole cohort were 62% and 48% respectively; survival in the surgical group was 66% and 49% vs. 54% and 45% in non-surgical group. Patients who underwent surgical cytoreduction had a median survival of 81 months in contrast to nonsurgical group with a survival of 61 months.

**Conclusions:** Aggressive surgical cytoreduction for patients with stage IV pNETS is warranted and should be recommended for all low risk surgical candidates.