Treatment of Small Bowel Neuroendocrine Tumors (NETS) in a Multidisciplinary Specialty Center Increases Survival

Eugene A. Woltering, MD,1,2 Anne E. Diebold, BS,1,2 Yi-Zarn Wang, DDS, MD,1,2 Lowell B. Anthony, MD,2,3 John Philip Boudreaux, MD,1,2 Ann Porter Uhlhorn, RN,2 Pamela Ryan BSN, RN,2 Leigh Anne Kamerman-Burns, RD, LDN,2,3 Daniel J. Frey, MD,1,2 Daniel Raines, MD,3 Ryan N. Majoria, MD,2 Richard J. Campeau, MD,2,4

1Department of Surgery, Louisiana State University Health Sciences Center, New Orleans, LA; 2New Orleans Louisiana Neuroendocrine Tumor Specialists (NOLANETS), Ochsner Clinic Foundation, Ochsner Medical Center - Kenner, Kenner, LA; 3Department of Medicine, Louisiana State University Health Sciences Center, New Orleans, LA 4Department of Radiology, Louisiana State University Health Sciences Center, New Orleans, LA

Background: Neuroendocrine tumors (NETS) of the gastrointestinal tract are rare, slow-growing neoplasms. While surgery and somatostatin analogs are the mainstays of treatment, we hypothesize that aggressive, long-term multidisciplinary management will improve treatment outcomes and maximize survival.

Methods: The charts of 401 patients with well-differentiated, small bowel NETS, treated by our multidisciplinary NET specialty team, were reviewed. Information relating to the extent of disease and all tumor-related surgeries was collected from the patient records. Kaplan-Meier survival curves were generated, and 5-year, 10-year, and median survival rates from histologic diagnosis were calculated.

Results: Our multidisciplinary NET clinic saw 14 patients with local disease, 68 patients with regional disease and 319 patients with distant disease. Patients with regional disease had significantly higher median survival rates when compared to the national Surveillance Epidemiology and
End Results (SEER) database data (not yet reached vs. 107 months, \( p = .004 \)). Ten year survival rates for patients with regional disease were 81% vs. 46%, comparing our clinic patients vs. SEER, respectively. Our clinic patients with distant disease also had significantly higher median survival rates when compared to SEER data (141 months vs. 65 months, \( p < .001 \)). Ten year survival rates for patients with distant disease were 63% vs. 30%, for our clinic patients vs. SEER, respectively.

**Conclusion:** Survival rates seen in this study are objectively higher than compared to those seen in SEER. We believe that our data supports a multidisciplinary specialty approach to NET care. Future research should be done to investigate this concept.