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Comparison of Clinicopathologic Factors in 122 Patients with Resected Pancreatic and Ileal Neuroendocrine Tumors from a Single Institution

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Background: Recent population-based studies have demonstrated significant differences in outcome between patients with pancreatic and ileal neuroendocrine tumors. The objective of this study was to examine the clinicopathologic differences between ileal and pancreatic neuroendocrine tumors following resection.

Methods: A retrospective chart review was performed and data on clinicopathologic variables, biochemical markers, and follow-up of patients with resected ileal (INETs) and pancreatic (PNETs) neuroendocrine tumors were collected. The Student's t-test or analyses of variance (ANOVA) were used to compare means. Survival analysis was performed using the Kaplan-Meier method.

Results: Between 1998 and 2010, 122 patients with PNETs and INETs were explored (70 PNETs and 52 INETs). Several variables were found to be significantly different between patients in both groups. INETs were more often associated with flushing (44% vs. 14%; $p<0.001$) and diarrhea (63% vs. 16%; $p<0.001$) and were more often associated with elevation in preoperative serum levels of pancreastatin (90% vs. 50%; $p<0.001$), chromogranin A (78% vs. 53%; $p=0.036$) and serotonin (96% vs. 51%; $p<0.001$). INETs more frequently had vascular invasion on

pathology (96% vs. 60%; $p<0.001$), and presented more often with nodal and/or distant metastases (77% vs. 36%; $p<0.001$). There was no significant difference in overall survival between patients in both groups.

Conclusion: In this series, patients with INETs presented with a more advanced stage of disease as compared to PNETs, higher preoperative levels of three markers, and were more often symptomatic. Despite these factors, there was no significant difference in overall survival between patients with these two tumor types.