

**Reappraisal of Lymphatic Mapping for Midgut Neuroendocrine Patients  
Undergoing Cytoreductive Surgery**

**Yi-Zarn Wang DDS, MD<sup>1</sup>**; Jean P Carrasquillo, MD<sup>1</sup>; Elizabeth McCord, BS<sup>1</sup>; Rhea Vidrine, BS<sup>1</sup>;  
Monica L. Lobo, BS<sup>1</sup>; S. Ali Zamin, BS<sup>1</sup>; Philip Boudreaux, MD<sup>1</sup>; Eugene Woltering MD<sup>1</sup>

<sup>1</sup>Division of Surgical Oncology, Department of Surgery, LSUHSC-New Orleans, 70123

**Background:** We previously reported that midgut NETs often develop alternative lymphatic drainage due to lymphatic obstructions from extensive mesenteric lymphadenopathy thus making intraoperative lymphatic mapping mandatory. We hypothesize that this innovative approach needs a longer term validation.

**Methods:** We updated our results by reviewing 303 patients who underwent cytoreduction from November 2006 to October 2011. Of these patients, 112 had lymphatic mappings and 98 were for midgut NET primaries. Among them, seventy-seven (77) mappings were for the initial cytoreduction and 35 were for re-exploration and further cytoreduction. The operative findings, pathology reports and long-term surgical outcomes were reviewed.

**Results:** Lymphatic mapping changed traditional resection margins in 92% of patients. Of the 35 patients who underwent re-exploration without initial mapping, 19 (54%) showed a recurrence at or near the anastomotic sites. In contrast, none of the 112 mapped patients had shown signs of recurrence in a 1-5 year follow-up. Additionally, 20/45 (44.4%) ileocecal valves were spared in patients whose tumors were at the terminal ileum which, traditionally, would call for a right hemicolectomy.

**Conclusions:** With a longer follow up, lymphatic mapping have proven to be a safe and effective way to prevent local recurrences and preserve the ileocecal valve for selected patients.