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NETS Arising in a Meckel's Diverticulum: Do They Behave Differently than Ileal NETS?

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BACKGROUND: Neuroendocrine tumors (NETs) are the most common primary malignancy of the small intestine, most frequently occurring in the ileum. Meckel's diverticula contain heterotopic tissues from which NETs may arise and may express differing clinicopathologic behavior

METHODS: Patients with NETs located in Meckel's diverticula (n = 162) and ileum (n = 9486) were reviewed in the National Cancer Database (NCDB) between 2004-2014. Patient and tumor characteristics as well as outcomes were examined.

RESULTS: Patients with Meckel's diverticula NETs were more likely to be male (72.8% vs 46.4%, $p < 0.001$) and white (95.1% vs 86.6%, $p < 0.001$). At diagnosis, patients with Meckel's NETs were less likely to have lymphovascular invasion (6.5% vs 55.3%, $p < 0.001$) and clinically diagnosed metastatic disease (2.5% vs. 15.5%, $p < 0.001$). Well-differentiated tumors occurred similarly in both groups (41.4 vs 49.7, $p = 0.12$). Patients with Meckel's and ileal NETs underwent open resection at similar rates (54.6% vs. 60.3%), however, patients with Meckel's NETs were less likely to have any lymph nodes concurrently removed at surgery (30.4% vs. 85.6%, $p < 0.001$) and when nodes were removed, were less likely to have evidence of nodal metastasis (52.1% vs. 82.7%, $p < 0.001$). Overall survival was similar between the groups (median not met at 140 months follow up, $p = 0.54$).

CONCLUSION: Compared to ileal NETs, NETs of Meckel's diverticula are more likely to have favorable histopathologic characteristics. Lymphadenectomy is less commonly performed and, while nodal disease is less frequent, it is still present in nearly half of patients. Lymphadenectomy should be performed in these patients for adequate staging.