

Review of 126 High Grade Neuro-Endocrine Carcinomas of the Colon and Rectum

James D. Smith¹; Diane L. Reidy²; Martin Weiser¹; Larissa K. Temple¹; Jose G. Guillem¹;
Philip B. Paty¹; Garrett M. Nash¹

¹Department of Surgery, Memorial Sloan Kettering Cancer Center, New York, NY 10065

²Department of Medicine, Memorial Sloan Kettering Cancer Center, New York, NY 10065

Background: High grade neuroendocrine carcinoma's (NEC) of the colon and rectum are rare tumors, constituting less than 1% of colorectal cancers. The purpose of this review is to identify the natural history and oncologic outcomes of this disease, the role of surgery and to determine the clinical and pathological factors associated with outcomes.

Methods: Following IRB approval patients with high grade NEC were identified from our institutional database. Patient charts and pathology reports were analyzed retrospectively for clinical and pathological factors.

Results: 126 patients with a median follow up of 9 months were identified. The median survival was 13.2 months. 85 (67%) of patients had metastatic disease at diagnosis. The 3 year overall survival (OS) was 5% and 18% for patients with and without metastatic disease respectively. Factors associated with improved OS on multivariable analysis were absence of metastatic disease and presence of an adenocarcinoma component within the tumor. For metastatic disease alone, response to chemotherapy was the only factor associated with survival. For localized disease, presence of an adenocarcinoma component within the tumor was the only factor associated with survival. Resection of the tumor was not statistically associated with survival in localized tumors or metastatic disease.

Conclusion: High grade colorectal NEC are extremely aggressive tumors with a poor prognosis. Patients appear to have a marginally better prognosis if they present without metastatic disease, have a component of adenocarcinoma within their tumor or respond to chemotherapy. Surgery, particularly in the presence of metastatic disease, may not offer a survival benefit for the majority of patients with this disease.