

# C-28

## Liver-directed therapy for metastatic neuroendocrine carcinoma and grade 3 well-differentiated neuroendocrine tumors

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### BACKGROUND

Neuroendocrine carcinoma (NEC) and grade 3 neuroendocrine tumors (NET) are aggressive, often unresectable malignancies with poor prognosis despite systemic therapies. Liver-directed therapies (LDT) may help control disease burden and reduce symptoms. Outcomes after LDT in this subset of patients with aggressive tumor biology are not well studied.

### METHODS

Single center retrospective cohort study of all patients with grade 3 NET or NEC who underwent liver-directed therapy (LDT) from 2015 to 2024, including bland embolization (TAE), chemoembolization (TACE), and Yttrium-90 radioembolization (TARE). Clinicopathologic characteristics, radiologic response (modified Response Evaluation Criteria in Solid Tumors), adverse events, and progression free survival (PFS) were recorded. Local PFS ended with progression of the treated tumor; hepatic PFS ended with progression of any hepatic tumor; and overall PFS ended with progression of any disease.

### RESULTS

20 NET patients (mean age 58, 40% male) underwent 30 LDT procedures (9 TAE, 12 TACE, 9 TARE), and 6 NEC patients (mean age 63, 67% male) underwent 13 LDT procedures (1 TAE, 4 TACE, 8 TARE) during the study period. In the NET group, median Ki-67 index was 28.5 (range 21–65), mean largest hepatic tumor diameter was 6.6cm, 35% had primary pancreatic tumors, 93% had bilobar hepatic metastases, and 90% had extrahepatic metastases. In the NEC group, median Ki-67 index was 55 (range 32–90), mean largest hepatic tumor diameter was 6.8cm, 17% had primary pancreatic tumors, 92% had bilobar hepatic metastases, and 46% had extrahepatic metastases. Radiologic response rates at 1 month post-LDT for both cohorts are listed in the table below ( $p>0.05$ ). On Kaplan-Meier analyses, median local, hepatic, and overall PFS for NET vs NEC were 6.7 vs 2.9 months ( $p=0.25$ ), 4.8 vs 1.5 months ( $p=0.21$ ), and 3.2 vs 1.5 months ( $p=0.33$ ), respectively. Adverse events were seen in 32.6%, most commonly post-embolization syndrome (27.9%) and hepatic infarct (18.6%). Carcinoid crisis was noted in 1 patient (2.4%).

## CONCLUSIONS

Liver-directed therapies induce a durable local response in approximately 60% of grade 3 NET patients with median PFS of the treated tumor of 6.7 months. While not reaching significance in this small cohort study, outcomes in NEC patients appear worse, with approximately 31% local response rate and median PFS of 2.9 months.

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