Outcomes of Locoregional Treatment for Unifocal Progression in Widespread Metastatic Gastroenteropancreatic Neuroendocrine Tumors

**Taymeyah Al-Toubah**<sup>1,2</sup>; **Mauro Cives**<sup>1</sup>; **Daniel Anaya**<sup>1</sup>; **Heloisa Soares**<sup>1</sup>; **Jonathan Strosberg**<sup>1</sup>

<sup>1</sup>H. Lee Moffitt Cancer Center and Research Institute; <sup>2</sup>University of South Florida

**BACKGROUND:** New systemic treatments have improved the therapeutic landscape for patients with progressive, metastatic GEP-NETs. While drugs such as everolimus are appropriate for patients with widespread disease progression, local treatment approaches may be more appropriate for patients with unifocal progression. Surgical resection, radiofrequency ablation (RFA), hepatic arterial embolization (HAE), or radiation, can control discrete sites of progression, allowing patients to continue their existing therapy, and sparing them toxicities of a new systemic treatment.

**METHODS:** We reviewed records of patients treated at a large referral center to identify patients seen between 1/2014 and 5/2017 with metastatic GEP-NETs who underwent a local treatment for focal progression. Patients undergoing lobar HAE or cytoreductive hepatic surgery were not included. The primary endpoint was time to new systemic therapy. Secondary endpoints included time to any additional intervention (systemic or local), progression free survival, and side effects of treatment.

**RESULTS:** 59 patients were identified who underwent a form of local treatment for a progressive metastatic tumor in the setting of widespread metastases. 27% underwent resection, 29% RFA, 25% external beam radiation, and 19% selective HAE. With a median follow-up of 17 months, 19 patients (32.2%) eventually...
progressed to the extent that they received salvage systemic treatment. 6 patients (10.2%) progressed and received further local treatment. Median time to new systemic treatment was 42 months (95% CI, 9.7-74.3 months). Median time to any additional intervention was 21 months (95% CI, 11.4-30.6 months). 4 patients died, all of whom had progressed and received further systemic treatment.

**CONCLUSION:** We identified a large cohort of patients with metastatic GEP-NETs who underwent a local treatment for unifocal progression in the setting of widespread metastases. Control of local sites of progression enabled the majority of patients to remain on their existing systemic treatment and avoid potential toxicities associated with salvage systemic therapy.