


March 2023

## Multivisceral Transplant Prognosis and Complications In Patients With Metastatic Neuroendocrine Tumor

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### Recommended Citation

Mueller, Austin and Jafri, Syed-Mohammed, "Multivisceral Transplant Prognosis and Complications In Patients With Metastatic Neuroendocrine Tumor" (2023). *Medical Student Research Symposium*. 192. [https://digitalcommons.wayne.edu/som\\_srs/192](https://digitalcommons.wayne.edu/som_srs/192)

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## Multivisceral Transplant Prognosis and Complications in Patients with Severe Metastatic Neuroendocrine Tumor

### **Introduction**

Neuroendocrine tumors (NETs) are an uncommon group of malignancy that typically originate in the gastrointestinal tract and commonly metastasizes throughout the digestive system. Tumor can involve multiple organs including intestine, pancreas, lymph node and liver. Rare cases of substantial NET metastases have been reported in which multivisceral transplant may rarely be indicated.

### **Methods**

We evaluated patient outcomes, prognosis and complications following multivisceral transplant for NET in a single academic center. A retrospective chart review was conducted between 2010 and 2021 in a single transplant center. Patients that received multivisceral transplant due to metastatic NET were identified. Data was collected including demographic, tumor involvement, transplant course, rejection, infection, disease recurrence, graft survival and patient survival.

### **Results**

Four patients underwent multivisceral transplant due to metastatic NET. 75% were male. Mean age was 45 years (range 36-55). 50% of patients had primary pancreatic metastatic NET, 25% primary gastric and 25% an unknown primary. All patients underwent multivisceral transplant involving liver, pancreas, and small intestine. 50% of transplants included distal stomach and proximal colon. Length of initial post-transplant hospitalization was a mean of 33 days (range 18-43 days). 100% of patients showed evidence of acute cellular rejection in the small intestine: 50% within 6 months of transplant, and 50% after one year. No patient lost graft due to rejection or required re-transplant. 75% of patients were hospitalized due to infections post-transplant. 75% of patients contracted cytomegalovirus, 50% recurrent pneumonia, 50% sepsis, and 25% bacteremia. 25% of patients had infection that required hospitalization within six months, whereas 50% of patients contracted an infection that required hospitalization after 1 year. One patient was diagnosed with recurrent disease to the transplanted liver 8.5 years post-transplant. One patient developed denovo angiosarcoma 33 months post-transplant. 100% of patients survived to 1 year, and 66% of eligible patients survived to 3 years post-transplant.

**Conclusion**

This study provides community-specific data on the prognosis and complications of multi-visceral transplantation due to metastatic NET. With the incidence of metastatic NET increasing each year in the United States, further studies are vital to analyze the therapeutic benefit and long-term progression of these rare clinical cases.