

Leya Maliekal, BS, Shunji Nagai, M.D., Nemie Beltran, BSN, Syed-Mohammed Jafri, M.D.
Wayne State University School of Medicine &
Henry Ford Health System Department of Gastroenterology and Hepatology



INTRODUCTION

- Intestinal transplantation is a highly specialized, continuously developing procedure with a three-year survival rate of 70%
- Intestinal transplant candidates are typically individuals who have experienced intestinal failure with minimal chance of intestinal adaptation & who have experienced life-threatening complications of total parental nutrition
- On average, patients with intestinal failure who undergo intestinal transplantation experience an increased life expectancy of five years
- Moreover, trauma and gunshot violence are significant issues frequently observed in urban medical centers that oftentimes may prompt a multitude of physical calamities, including short bowel syndrome
- Factors such as pre-transplant comorbidities, age, and immunosuppression regimens may contribute to variations in patient outcome after intestinal transplant surgery
- We highlight these factors through a retrospective case discussion of two patients who underwent intestinal transplant surgeries at an urban medical center due to short bowel syndrome secondary to gunshot-related small bowel resection; trends were compared to trends noted among patients comprising the intestinal transplant registry at the same urban medical center (n=24)
- Trends discussed through this case discussion may be of interest to gastroenterologists who are considering intestinal transplant surgeries for patients suffering from short bowel syndrome

METHODS

- Retrospective chart review was conducted for all intestinal transplant recipients at a single large, urban medical center
- Patients without adequate documentation of cause of transplantation, medications, or surgical history were excluded from review
- Trends in cause of transplant, rejection, treatment, and longevity in patients who underwent intestinal transplantation secondary to SBS due to GSW (n=2) were compared to all other patients (non-GSW) comprising the intestinal transplant registry (n=24) at the same medical center

RESULTS

	GSW Patients (n=2)	Non-GSW Intestinal Transplant Recipients (n=24)
Age at intestinal transplant	29.5 years	47.8 years
Co-morbidities before transplant	H/x DVT, cholecystectomy, smoking	H/x carcinoma, cholecystectomy, smoking, CKD, HF
Rejection 6 months post-transplant	50% of patients	36% of patients
Survival 1-year post-transplant	50% of patients	92% of patients
Survival 5-years post transplant	50% of patients	71% of patients

Causes for Intestinal Transplant

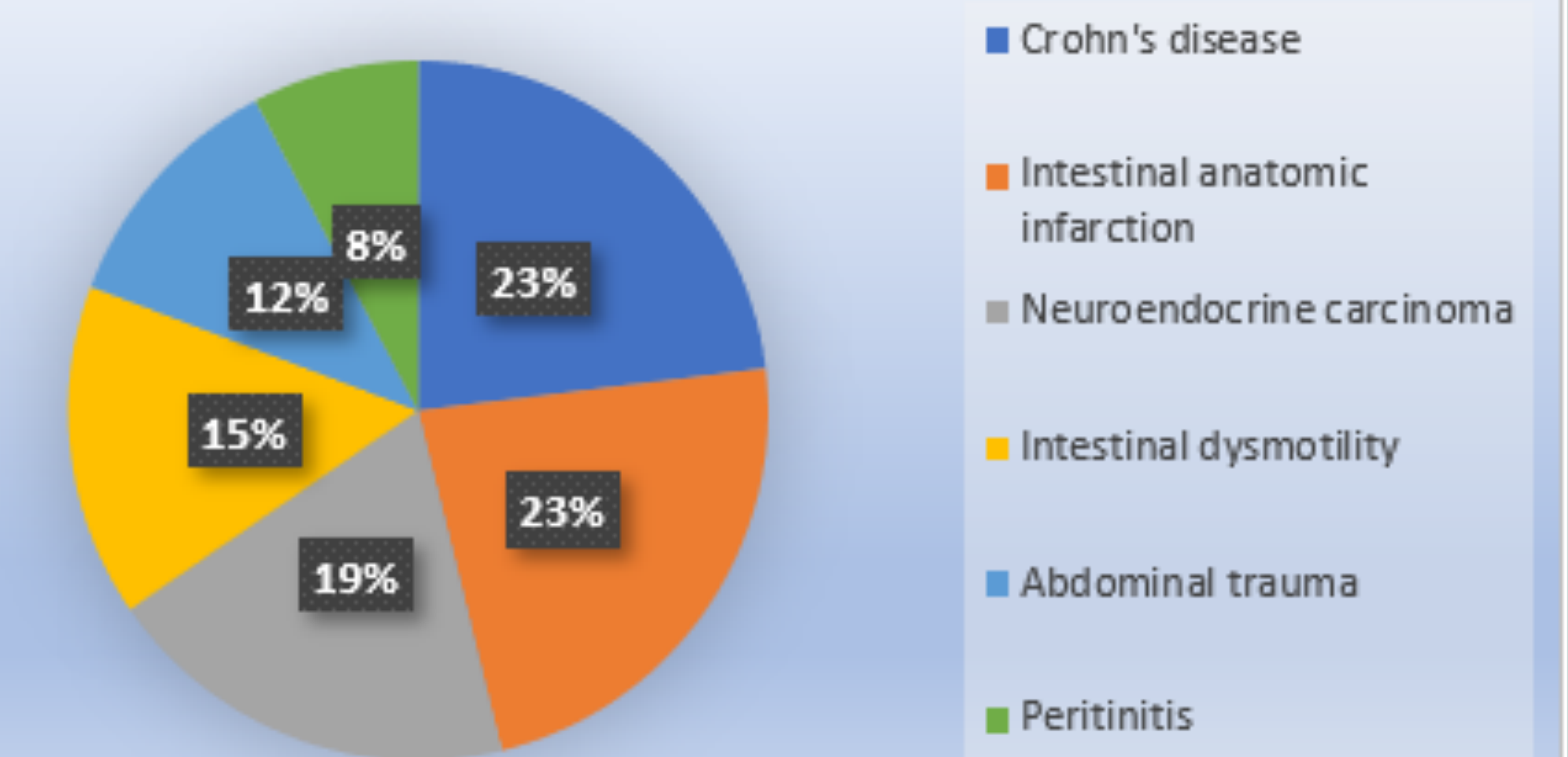


Figure 1. Causes for intestinal transplant grouped by primary diagnoses. (n=26)

Average Life Span among Intestinal Transplant Recipients

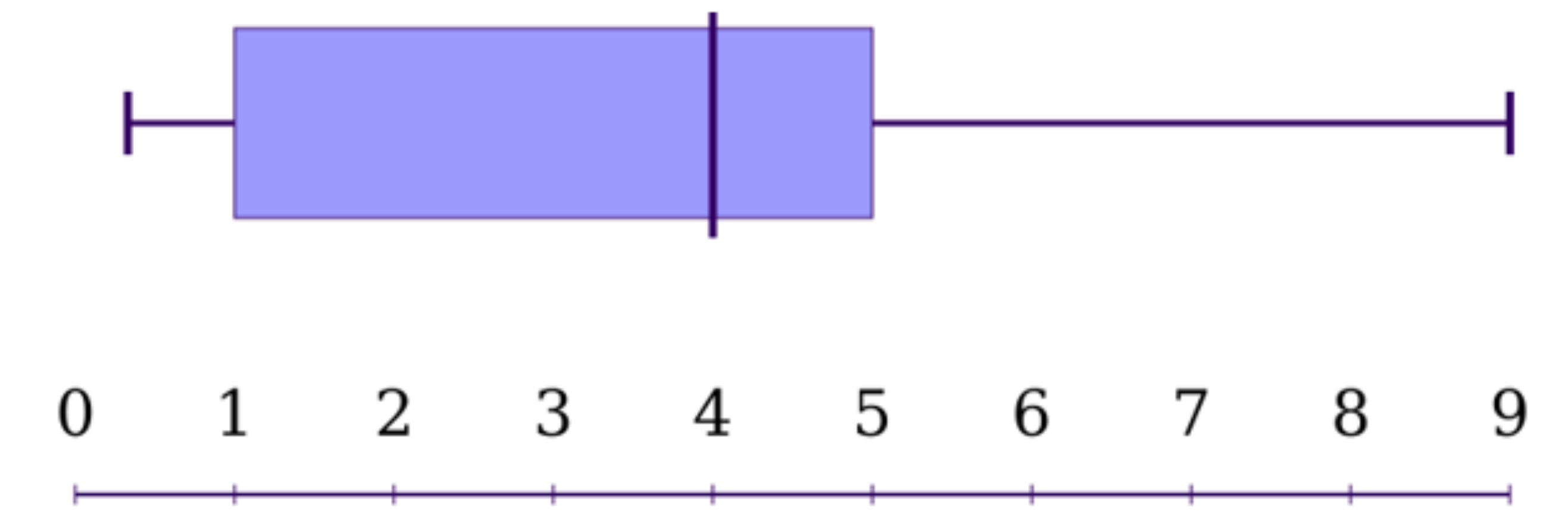


Figure 2. Average life span after organ transplant among patients who have expired. (n=10)

CONCLUSION

- Intestinal transplantation can be successful in short bowel syndrome patients due to gunshot wound
- Patients should be considered based on co-morbid conditions and risk factors rather than cause of trauma
- Further large, multi-center studies are needed to elucidate risk factors related to the success of intestinal transplantation for short bowel syndrome due to trauma

REFERENCES

Bharadwaj, S., Tandon, P., Gohel, T. D., Brown, J., Steiger, E., Kirby, D. F., ... & Abu-Elmagd, K. (2017). Current status of intestinal and multivisceral transplantation. *Gastroenterology report*, 5(1), 20-28.
Marino, I. R., & Lauro, A. (2018). Surgeon's perspective on short bowel syndrome: Where are we?. *World journal of transplantation*, 8(6), 198.