

Introduction

- Surgical resection with negative margin is the primary treatment for gastrointestinal stromal tumors (GIST) arising from the stomach.
- Trans-gastric resection (TGR) – tumor excision via gastrotomy – has been proposed as a tissue sparing alternative to wedge resection (WR).
- No series has directly compared minimally invasive TGR and WR for the management of gastric GIST.

Methods

- Single-center retrospective cohort study (2018-2024) of adults undergoing minimally invasive gastric GIST resection
- **Primary outcome:** R0 resection.
- Secondary outcomes: Recurrence, overall complication rates, readmission, operative time, and estimated blood loss (EBL)

Results

	WR (n=62)	TGR (n=30)	p value
High risk location by EGD/EUS	8 (32%)	22 (73.3%)	<0.01
Procedural approach			0.02
Laparoscopic	31 (50%)	7 (23.3%)	
Robotic	31 (50%)	23 (76.6%)	
Conversion to open	2 (3.2%)	0 (0%)	0.99
EBL	44.5 (73.5)	36.2 (57.0)	0.65
OR time	97.9 (66.8)	125.2 (57.0)	0.05
Drain placed	1 (1.6%)	2 (6.3%)	0.27
LOS	1.9 (1.2)	2.5 (1.1)	0.03
Any complication	1 (1.6%)	2 (6.3%)	0.27
Readmission	2 (3.3%)	1 (3.1%)	0.99
Need for post-operative TPN	0 (0%)	0 (0%)	0.99
Need for post-operative feeding access	0 (0%)	0 (0%)	0.99
R0 resection	55 (88.7%)	29 (96.7%)	0.26
Tumor size	4.3 (3.0)	4.0 (2.2)	0.67
Mitosis (per 5 HPF)	2.5 (3.5)	3.4 (3.6)	0.23

Conclusions

- TGR of gastric GISTs represents a safe alternative to WR with equivalent ability to achieve R0 margin
- WR and TGR offers comparable operative outcomes including conversion rates and blood loss.
- TGR may be preferred for tumors in difficult to resect locations (peri-pyloric or proximate to the GEJ)