

Laparoscopic Washout as a Predictor of Hartmann’s Procedure: Insights from Cross-Hospital Readmissions in National Cohort

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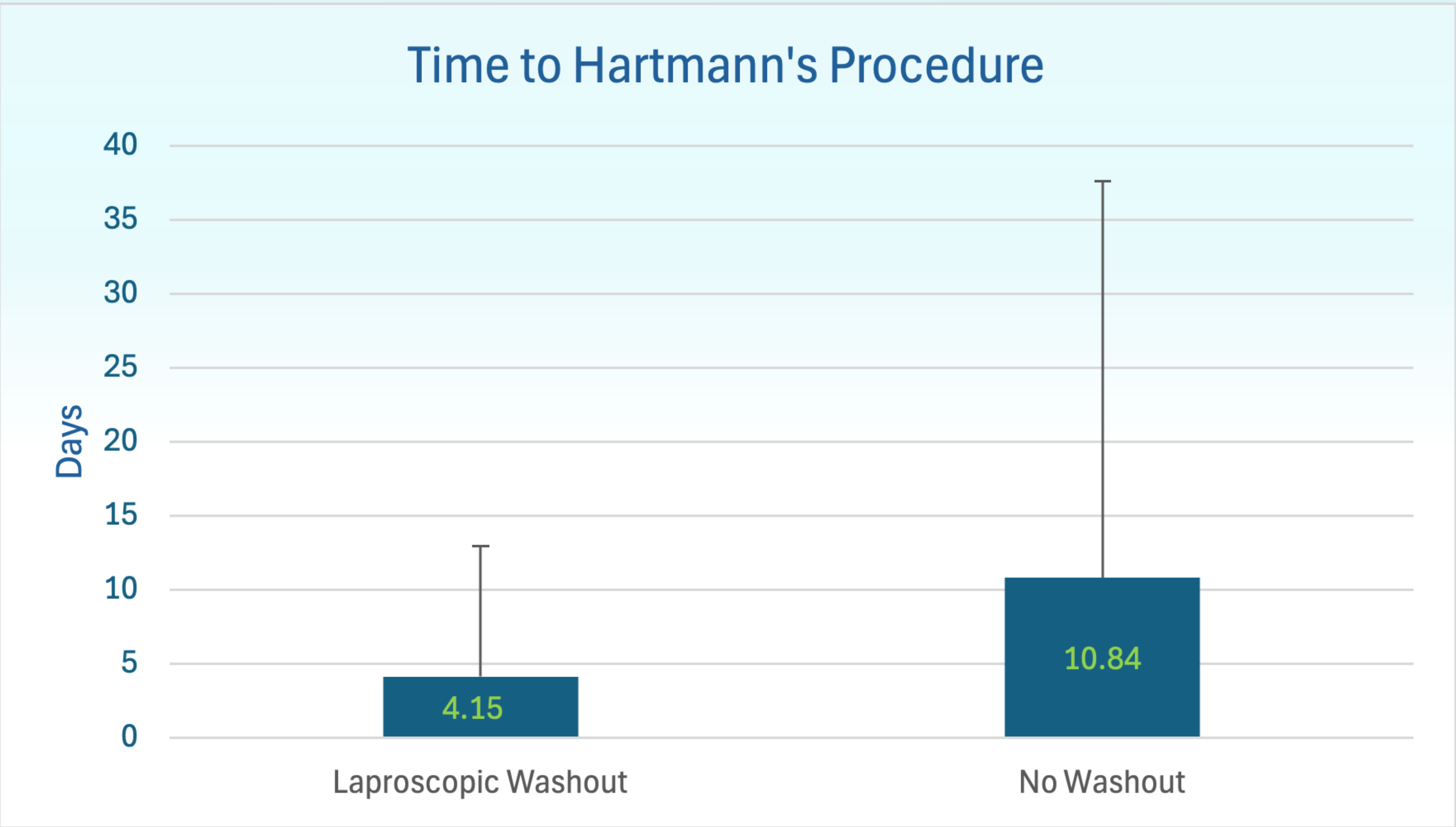
Memorial Healthcare System

Introduction

Hartmann's procedure (HP) is a critical intervention in colorectal emergencies, often following laparoscopic washout for peritoneal contamination. It may occur during index admissions, or readmissions, including to different hospitals. Using a comprehensive national readmission database across multiple hospitals with verified patient linkage numbers, this study investigates predictors of HP, its timing, and readmission contexts, focusing on the role of laparoscopic washout.

Table 1: Characteristics of patients undergoing colorectal procedures			
	Underwent HP	No HP	P-Value
N	43,481	324,442	
Over 65 years old (%)	49.6%	47.6%	
Sex			
Female	55.4%	57.1%	
Insurance N (%)			
Private	113,746 (35.1%)	14,096 (32.4%)	<0.01
Uninsured	1,602 (3.7%)	12,025 (3.7%)	0.82
Hospital Characteristics			
Large	22,454 (51.6%)	157,506 (48.4%)	<0.01
Teaching Hospital	28,450 (65.4%)	214,081 (66.0%)	0.02
Laparoscopic Washout			
Yes	1,933 (4.5%)	1,225 (0.4%)	<0.01
No	41,548 (95.5)	323,217 (99.6%)	
Comorbidities			<0.01
Deficiency anemias	525 (1.2%)	2,311 (0.7%)	
Coagulopathy	3,356 (7.7%)	16,340 (5.04%)	
Weight loss	8,331 (19.2%)	20,188 (6.2%)	
Uncomplicated DM	3,873 (8.9%)	36,361 (11.2%)	
Mild liver disease	2,550 (5.9%)	24,427 (7.5%)	

Results



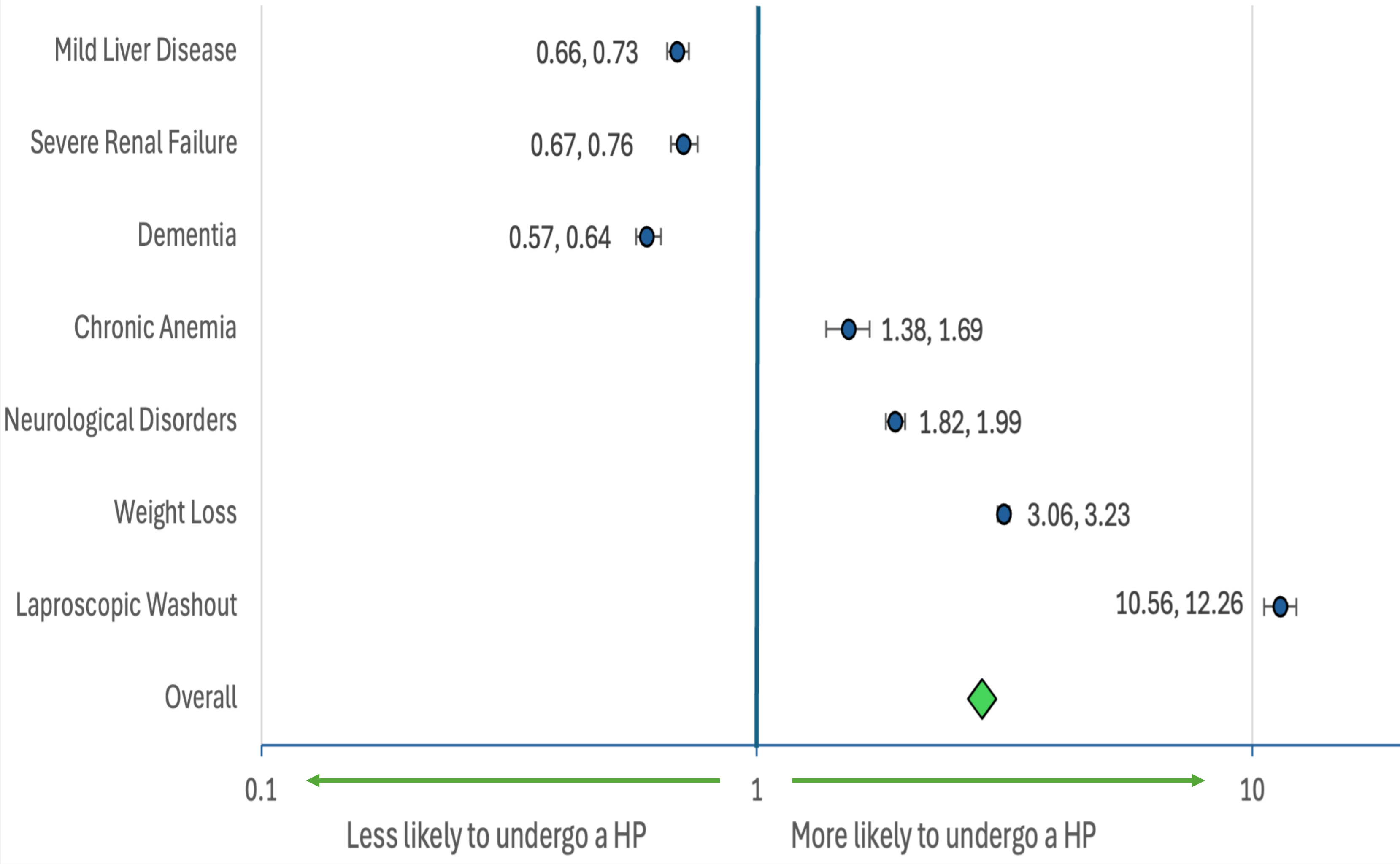
Mean days to HP was 10.54±26.29 (median 2, IQR 0-6). Laparoscopic washout was associated with earlier HP (mean 4.15±8.85 vs. 10.84±26.79 days without washout; p=0.01).

Methodology

A retrospective analysis was conducted on adults undergoing colorectal procedures in the Nationwide Readmissions Database (NRD) from 2016 to 2020.

- ❑ Patients were stratified by receipt of HP versus no HP.
- ❑ Univariate comparisons employed chi-squared tests.
- ❑ Multivariate logistic regression identified independent predictors, adjusting for multiple demographics and laparoscopic washout.

Predictors of Hartmann’s Procedures



Numbers next to plot points indicate Confidence intervals

Conclusion

Laparoscopic washout was associated with an increased likelihood of subsequent HP and earlier timing of the procedure, suggesting that severe contamination is a major driver. Future research can explore risk stratification and optimized laparoscopic washout protocols to potentially reduce Hartmann's procedure utilization.

