

Comparative Analysis of Extended Right Versus Left Hemicolectomy for Splenic Flexure Carcinoma: Early Postoperative and Oncological Outcomes from a Tertiary Cancer Centre

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OBJECTIVE

- Splenic flexure carcinomas: account for 2–8% of all colorectal malignancies.
- Dual vascular supply (via the middle and left colic arteries) and variable lymphatic drainage, leading to ongoing debate regarding the optimal surgical approach.
- Extended right hemicolectomy (ERH) and left hemicolectomy (LH) are the two main resections performed for these tumors, yet consensus remains lacking on which ensures better oncological clearance and postoperative recovery.
- This study was conducted to compare early postoperative and oncological outcomes between ERH and LH for splenic flexure carcinomas treated at a high-volume tertiary cancer center.

RESULTS

Demographics:

Median age was 57 years (IQR 51–62) with a slight male predominance (54%). Baseline comorbidities (HTN, DM, CAD) were comparable between groups ($p>0.05$). Mean BMI was 26.8 kg/m².

Operative & Pathologic Findings:

R0 resection: 96.8% (ERH) vs 94.2% (LH), $p=0.61$
Median LN yield: 29 (IQR 23–35) vs 27 (IQR 21–33), $p=0.42$

Median positive nodes: 0.8 vs 1.3, $p=0.38$

Operative time: 175 vs 162 minutes, $p=0.47$

Postoperative Outcomes:

Complication rate: 9.7% overall (ERH 9%, LH 11%, $p=0.57$)

Anastomotic leak: 1 (LH)

Wound infection: 2 (ERH)

Ileus: 1 (LH)

Length of stay: 6.4 vs 5.6 days, $p=0.53$

Readmission within 30 days: 4.8%

90-day mortality: 2.4% (1 patient with cardiac arrest on POD 6)

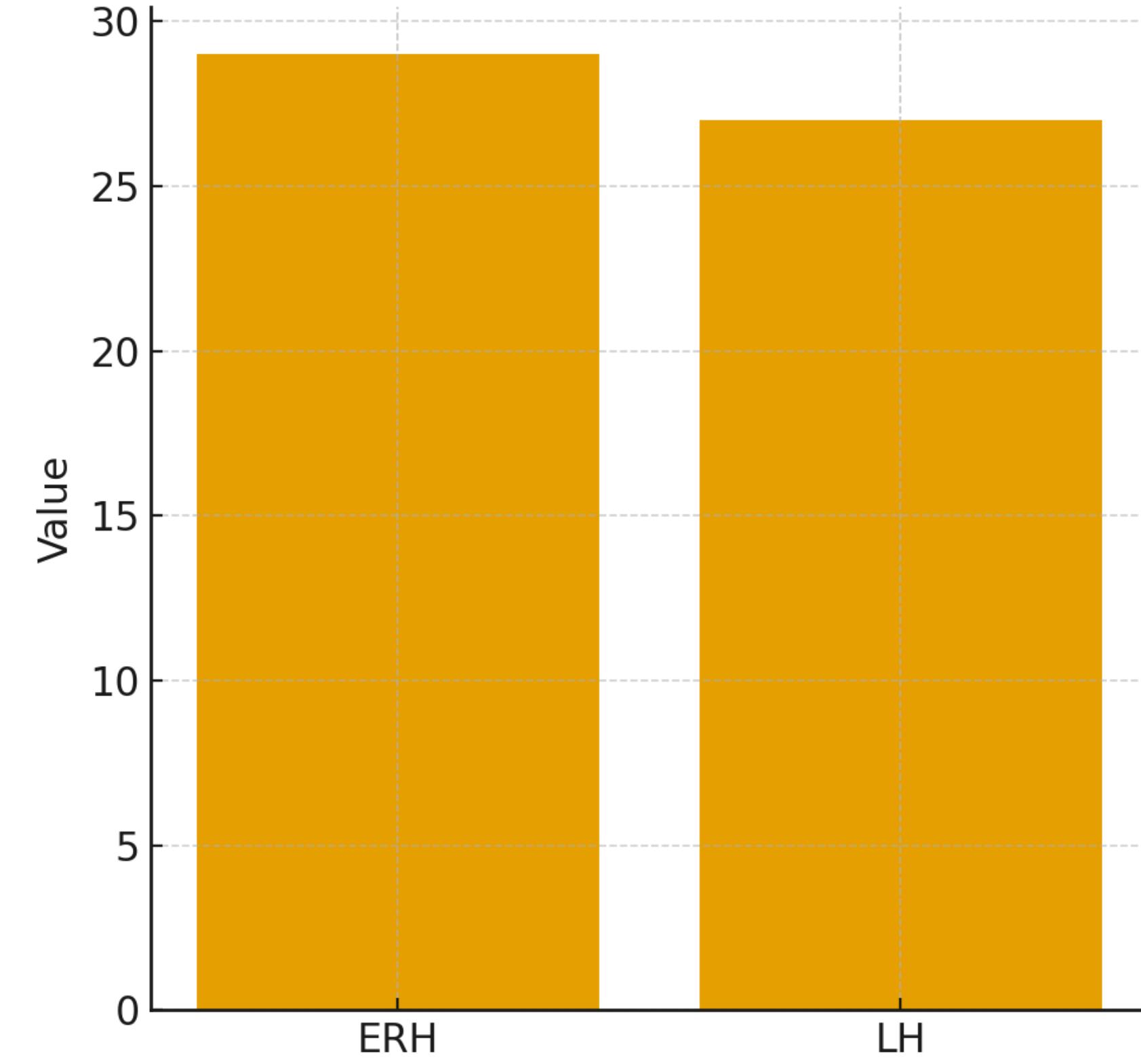
Oncological

At a median follow-up of 24 months, local recurrence occurred in 2 patients (ERH=1, LH=1). No significant difference in overall survival was observed between the two groups.

TABLE 2. VARIABLE COMPARISON

Variable	ERH	LH
R0 Resection	96.8%	94.2%
LN Yield >12	29	27
Median Positive nodes	0.8	1.3
Operative Time (min)	175	152
30-days Readmission	4.8%	0%
90- days Mortality	1	0
LOS	6.4 days	5.6 days

LN Yield >12



METHODS

- A single-institution, retrospective cohort study was conducted including 41 consecutive patients with histologically proven splenic flexure adenocarcinoma who underwent curative-intent resection between January 2018 and September 2025.
- Patients were grouped according to procedure type: ERH (n=22) and LH (n=19).
- All procedures were performed laparoscopically by experienced colorectal surgeons.
- Patients with metastatic disease, emergent surgery, or synchronous malignancies were excluded.
- Primary endpoints were margin status (R0 resection) and total lymph node (LN) yield.
- Secondary endpoints included length of stay (LOS), postoperative complications (graded by Clavien-Dindo), 30-day readmission, and 90-day mortality.
- Follow-up data were collected for recurrence and disease-free survival (DFS). Statistical analysis was performed using Mann-Whitney U and χ^2 tests; significance threshold was set at $p<0.05$.

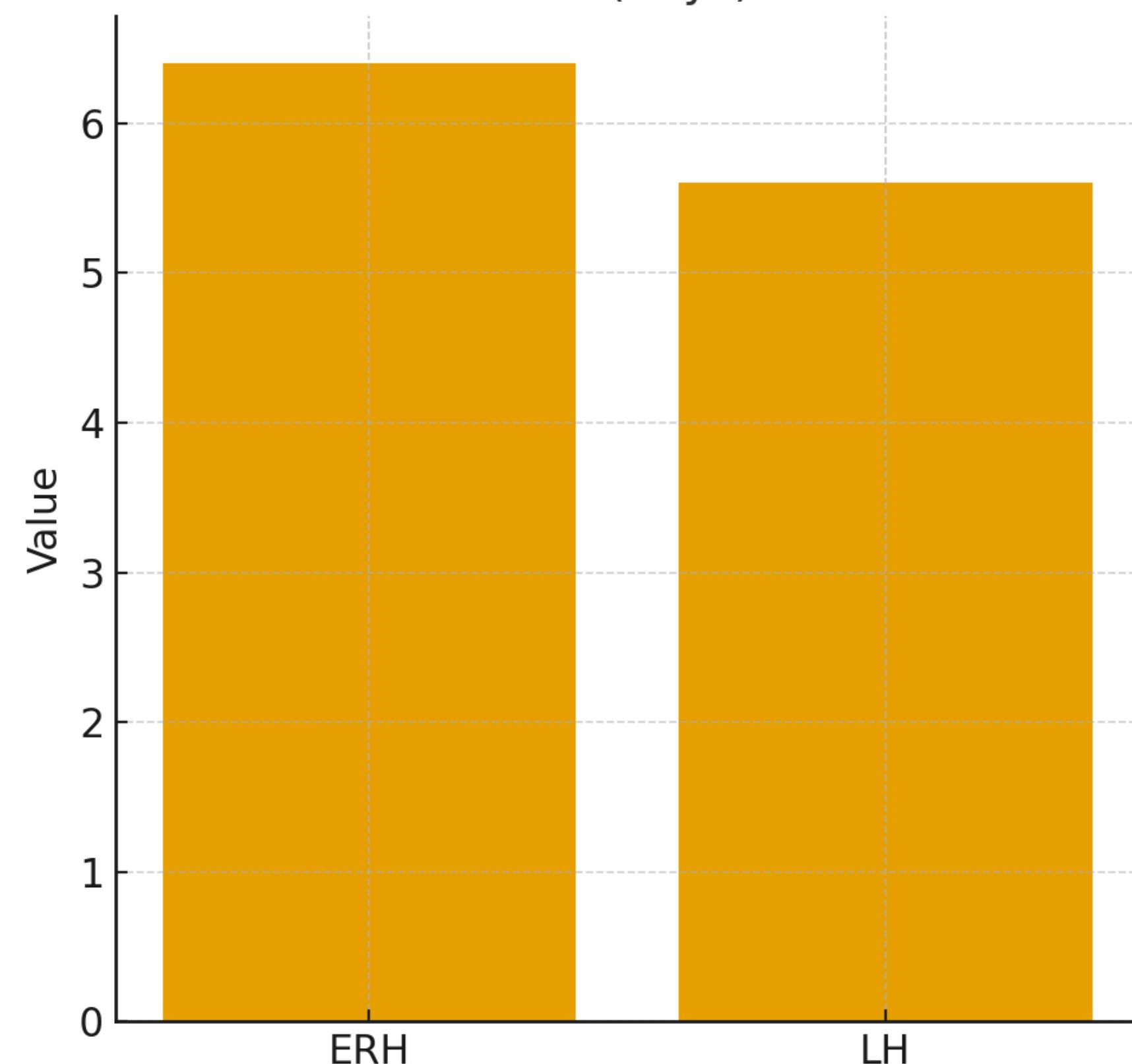
TREATMENT

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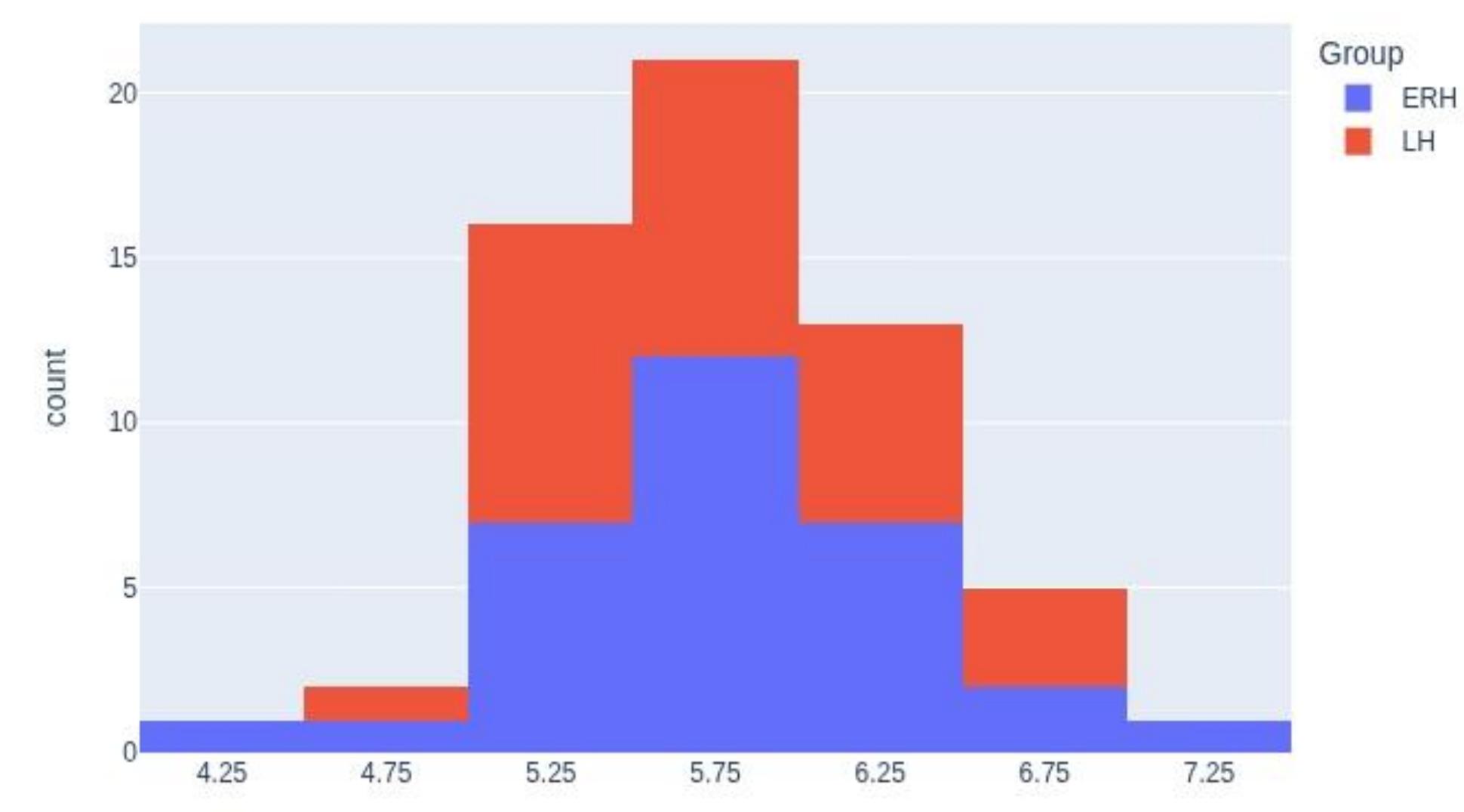
TABLE 1. PATIENTS IN BOTH SUBGROUPS

Procedure	No (n=41)	%
ERH	22	53.6
LH	19	46.3

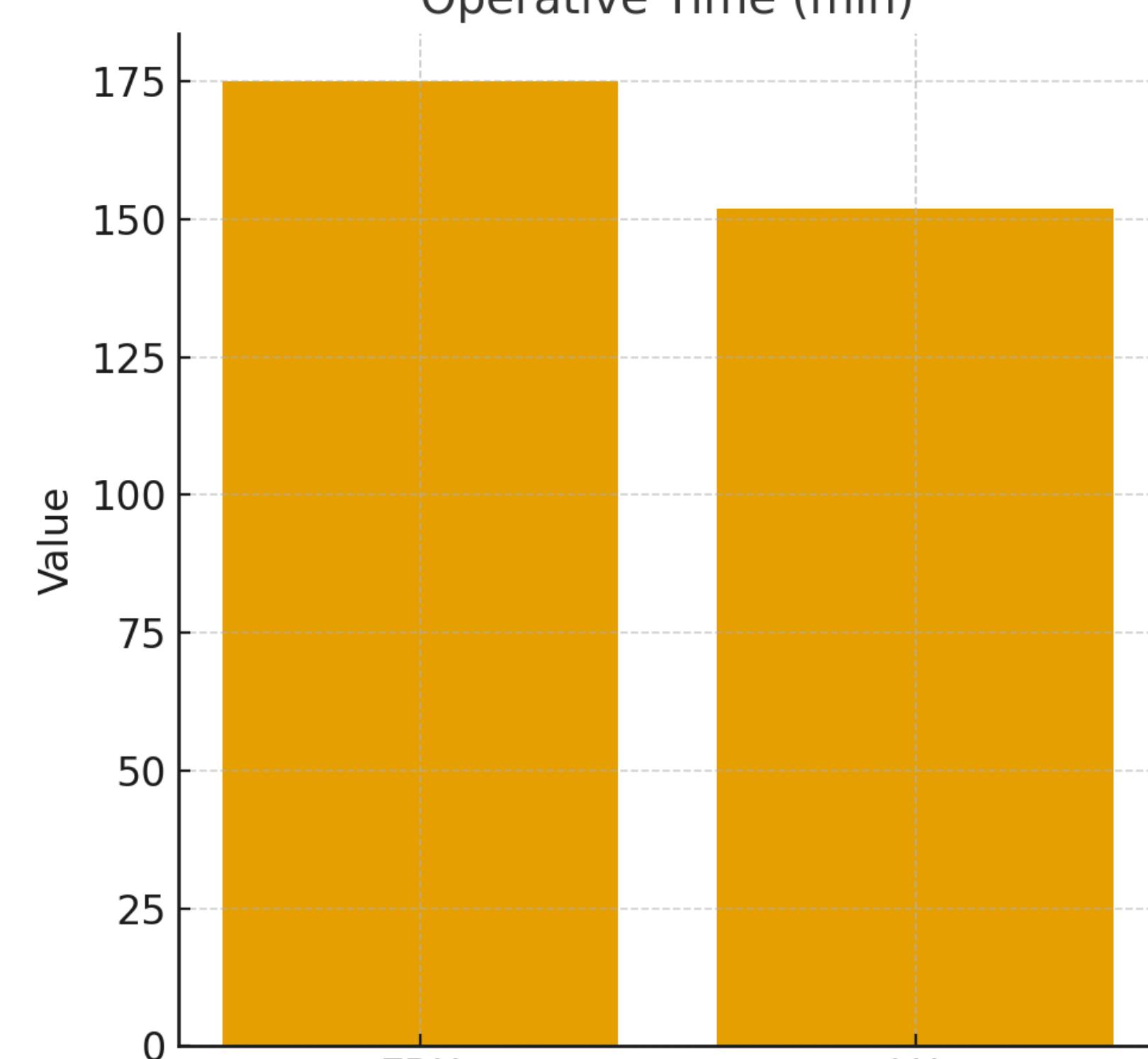
LOS (days)



Length of Stay Distribution



Operative Time (min)



CONCLUSION

Both extended right and left hemicolectomy yield comparable oncologic and early postoperative outcomes for splenic flexure carcinoma. ERH provides a modest nodal advantage, while LH favors quicker recovery. The choice of operation should be individualized based on tumor location, vascular pattern, and surgeon experience, with the overarching goal of achieving complete mesocolic excision and R0 resection.

References

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