

Selective Lateral Pelvic Lymph Node Dissection Versus Omission After Neoadjuvant Therapy for Rectal Adenocarcinoma With Clinically Suspicious Lateral Pelvic Nodes: A GRADE-Assessed Systematic Review and Meta-Analysis

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Introduction

- Standard rectal cancer surgery is TME
- Side-wall (lateral) nodes lie outside TME
- They are a common site of pelvic recurrence
- Suspicious side-wall nodes are seen on MRI
- East: remove them surgically (LPLND)
- West: chemo/radiotherapy first, then TME
- Some nodes may still hold cancer after it
- Need for LPLND after NA treatment is unclear

Aim

To find out if removing suspicious side-wall nodes (LPLND) after chemo/radiotherapy lowers recurrence, and at what surgical cost.

Methods

- Systematic review & meta-analysis (PRISMA)
- Searched PubMed, Scopus, Web of Science
- Searched up to 13 April 2026
- Patients: suspicious nodes + chemo/RT first
- Compared TME with vs without LPLND
- Quality graded: ROBINS-I and GRADE

1,021

records

605

screened

10

full texts

3

studies

- **Main outcome:** pelvic recurrence
- **Others:** nodes, tumour stage, spread, time, blood loss, stay

Discussion

- Benefit not proven, but not ruled out
- Larger nodes chosen for LPLND (selection bias)
- LPLND: longer, harder operation
- Nerve injury may affect bladder/sexual function
- Restaging MRI shows which nodes remain
- Matches ASCRS advice: selective, not routine
- Limits: 3 retrospective studies, no survival data

Results

Pelvic recurrence (main outcome)

Study	RR [95% CI]	
Kim 2017	0.09 [0.01, 1.63]	
Lee 2025	2.90 [0.19, 44.41]	
Peacock 2022	0.80 [0.17, 3.82]	
Combined	0.66 [0.12, 3.59]	

Left of 1 = fewer recurrences with LPLND

Outcome	Effect (95% CI)	Result
Pelvic recurrence	RR 0.66 (0.12–3.59)	Similar
Positive nodes	RR 1.24 (0.92–1.68)	Similar
ypT3–4 tumour	RR 0.95 (0.79–1.13)	Similar
Distant spread	RR 1.06 (0.62–1.83)	Similar
Operating time	+87 min (48–127)	Longer
Blood loss	+119 mL (–16, 254)	Similar
Hospital stay	+1.0 day (0.3–1.7)	Longer

- **Similar:** nodes, tumour stage, distant spread
- **Blood loss:** +119 mL, statistically not significant
- **Robust:** same if any one study removed
- **Evidence strength:** very low (GRADE)

Conclusion

Longer surgery and stay, no proven benefit.

- No routine LPLND; decide with MRI + MDT
- Larger prospective studies are needed

301

patients (139 vs 162)

2.9% vs 5.6%

pelvic recurrence (NS)

+87 min

longer operation

+1 day

longer hospital stay

References: 1. Kim HJ, et al. Oncotarget. 2017;8(59):100724. 2. Lee TG, et al. Ann Surg Treat Res. 2025;108(6):333–44. 3. Peacock O, et al. Ann Surg. 2022;276(4):654–64. 4. Langenfeld SJ, et al. Dis Colon Rectum. 2024;67(1):18–31.

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