

SURGICAL OUTCOMES IN LOW RECTAL CANCER: A META-ANALYSIS COMPARING LOW ANTERIOR RESECTION AND ABDOMINOPERINEAL RESECTION



SAQLAIN RASHEED¹, SEERAT FATIMA¹, MUHAMMAD AREEB UL HAQ¹, MUHAMMAD HUSNAIN MUMTAZ¹, MUHAMMAD ASIF TARIQ¹, M ABDURREHMAN ANJUM¹, SHIZA SHAKEEL¹, ABDUL MUSAWIR¹, SHAHZAD REHMAN¹, ZEESHAN AHMAD¹, USMAN ASHRAF¹, MUHAMMAD SHAMIKH SHAHID².
1.Allama Iqbal Medical College, Lahore 2. King Edward Medical University, Lahore



Introduction

- Low rectal cancer is the most common and aggressive subtype of colon cancer, located within 5 cm from the anal verge.
- Two major surgical options exist: Low Anterior Resection (LAR) and Abdominoperineal Resection (APR).
- Treatment choices are debated due to varied outcomes between these approaches.

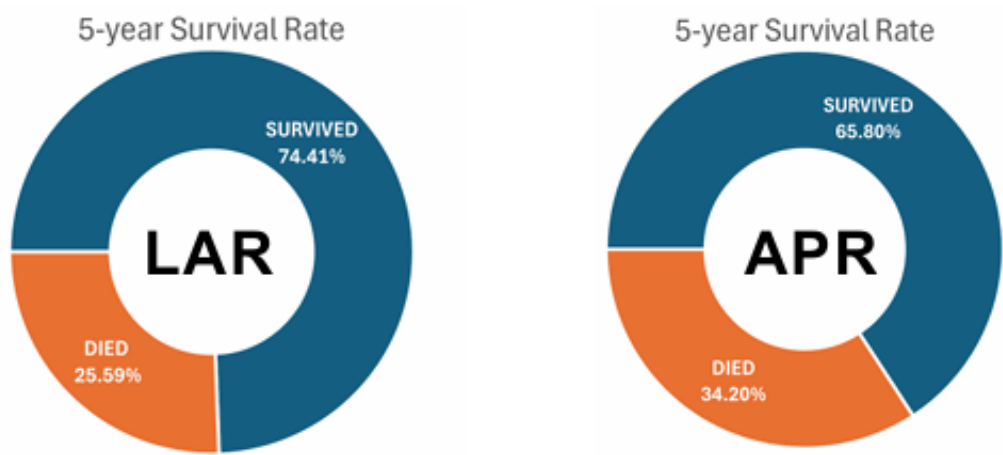


FIGURE 2: DOUGHNUT CHARTS COMPARING OUTCOMES AFTER LAR AND APR

Methodology

- We conducted a meta-analysis of 32 studies sourced from PubMed, Scopus, and Cochrane Library. Keywords such as low rectal cancer, low anterior resection, abdominoperineal resection, oncological outcomes, sphincter-saving surgery.
- Surgical outcomes, including survival and recurrence rates, were compared between LAR and APR.
- Statistical methods: Mantel-Haenszel method was used for dichotomous data and Inverse Variance for continuous data, using random-effects models

Results

- Patients who underwent LAR had a significantly higher 3- to 5-year overall survival (RR 1.11) and disease free survival (RR 1.12).
- LAR patients also had lower risks of local recurrence (RR 0.85) and systemic recurrence (RR 0.82).
- Importantly, CRM involvement - a key factor in surgical success - was lower in LAR patients (RR 0.52).
- APR patients, however, faced longer hospital stays

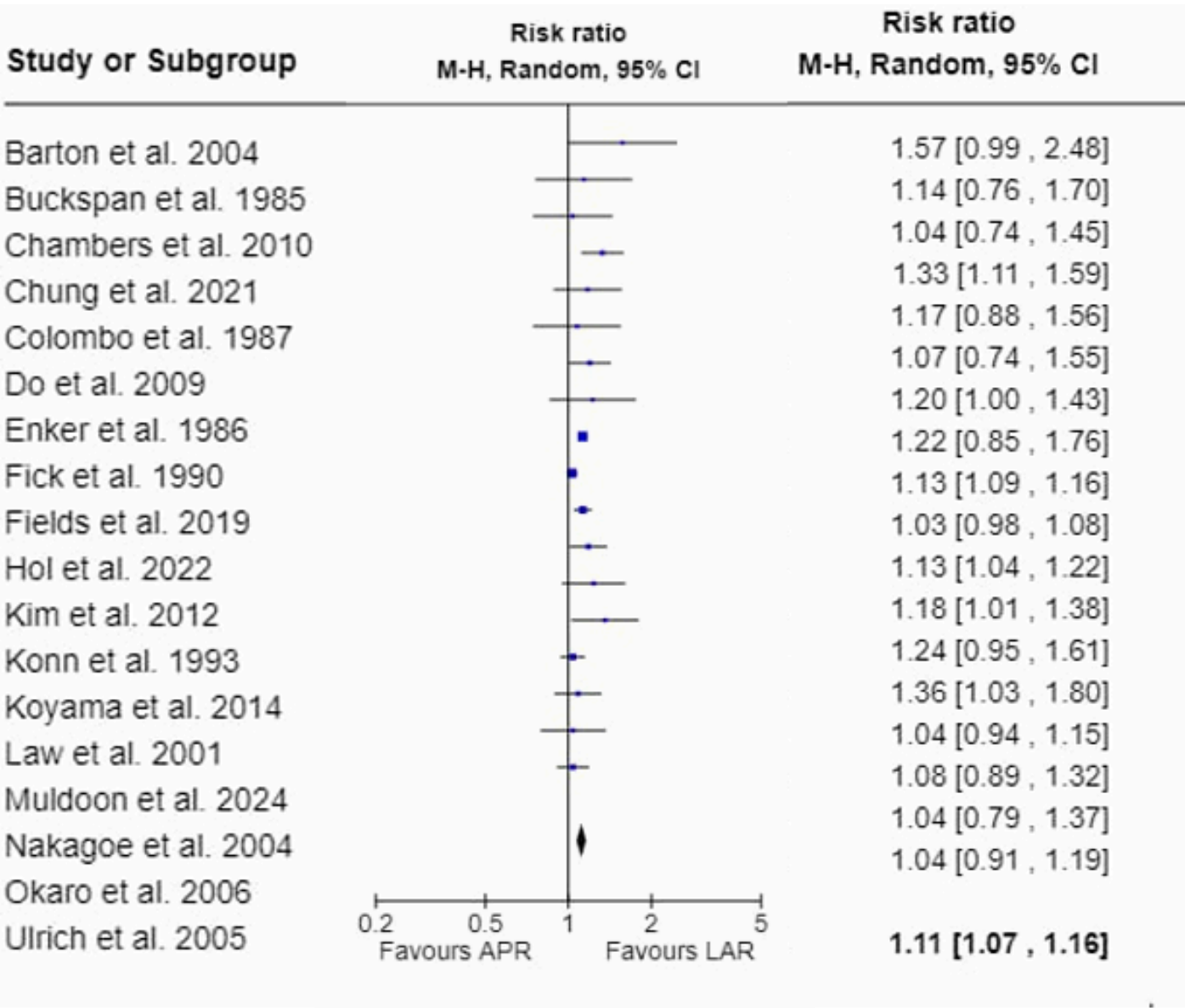


FIGURE 3: A FOREST PLOT COMPARING RISK RATIOS BETWEEN LAR AND APR

Conclusion

LAR offers better surgical outcomes, including higher survival rates, fewer recurrences, and lower CRM involvement

Oncological outcomes after Low Anterior Resection (LAR) versus Abdominoperineal Resection (APR) for Low Rectal Cancer

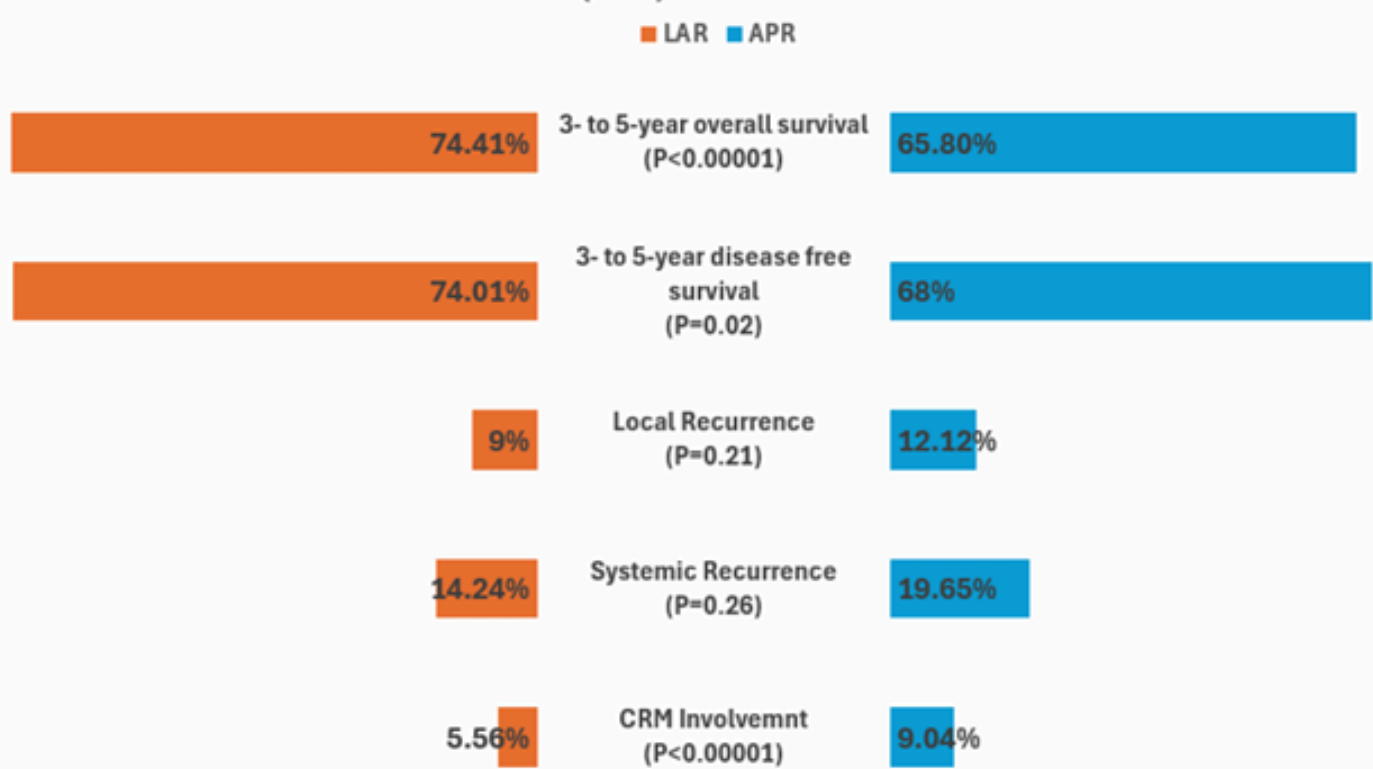


FIGURE 1: A BUTTERFLY CHART COMPARING OUTCOMES AFTER LAR AND APR