

Colorectal Cancer Liver Metastasis: Incidence and Surgical Outcomes — An Experience from a Tertiary Care Cancer Center in Pakistan

[B. Farooqi, T. Ahmad, F. Tu Zahara, S. Sarshar, S. Asif, A.A. Syed, S. Khattak]¹

¹Shaukat Khanum Memorial Cancer Hospital and Research Centre, Lahore, Pakistan

INTRODUCTION

- Colorectal cancer (CRC) is a leading cause of cancer morbidity and mortality worldwide; liver being the most common site of metastasis.
- Surgical resection remains the only potentially curative option and, can improve survival in selected patients.
- Data from LMICs such as Pakistan are limited, where late presentation and resource constraints may affect outcomes.

OBJECTIVE

- Describe the incidence of synchronous and metachronous liver metastases among CRC patients
- Evaluate the surgical strategies used, with the perioperative and oncologic outcomes,
- Explore factors associated with recurrence and survival.

METHODS

- Retrospective cohort study at Shaukat Khanum Memorial Cancer Hospital and Research Center, Pakistan
- Data collected from electronic medical records over the last 10 years
- Clinical, treatment and outcome variables extracted; analysis in SPSS 22.0

RESULTS

2,153

colorectal cancer patients identified over the study period

220

developed colorectal liver metastases (CRLM)

54

selected for surgical resection; the remainder had advanced or irresectable disease

Table 1. Patient and tumour characteristics (n = 54 resected)

Mean age	49.2 years
Male	57.4%
Left-sided primary tumour	77.8%
T3 tumours	77.8%
Nodal involvement	> 75%
Solitary liver metastasis	57.4%
Synchronous disease	42.6%

Table 2. Treatment and surgical approach

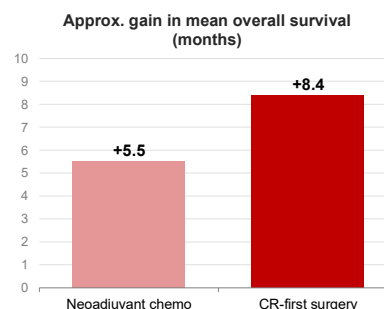
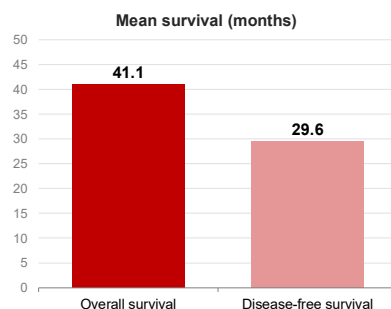
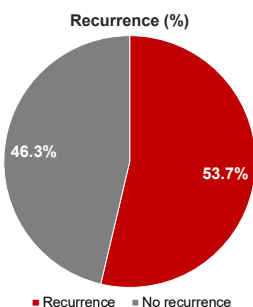
Neoadjuvant chemotherapy	38.9%
Adjuvant therapy	74.1%
Open approach	72.2%
Minor resections	59.3%

Table 3. Perioperative and oncologic outcomes

Postoperative morbidity	13.0%
Clavien-Dindo < III (of morbidity)	92.6%
Bile leak	7.4%
Liver failure	11.1%
R0 resection achieved	83.3%
Recurrence	53.7%

Key findings

- No significant association between timing of metastasis (synchronous vs metachronous) and recurrence ($p > 0.05$).
- Neoadjuvant chemotherapy showed a trend toward improved overall survival (≈ 5.5 months), compared to non- NAC patients.
- Overall survival 41.1 months, mean disease free survival 29.6 months
- CR-first surgery showed a more consistent survival advantage in subgroup analysis (≈ 8.4 months).



CONCLUSION

This study highlights real-world outcomes of CRLM surgery, showing moderate survival with acceptable morbidity. Neoadjuvant chemotherapy provided a modest survival benefit, while CR-first surgery showed greater improvement in overall survival. Findings emphasize surgical strategy as a key prognostic factor and support individualized treatment planning.

