***Short communication***

***Management of Metastatic Colorectal Cancer : A Case Series of 20 Patients***

**Abstract**

Metastatic colorectal cancer (mCRC) represents a major public health challenge, characterized by high morbidity and mortality. This retrospective study, conducted at Ibn Rochd University Hospital in Casablanca from 2019 to 2023, analyzes the epidemiological, clinical, and therapeutic characteristics of 20 patients diagnosed with mCRC. The mean age was 56 years, with a male predominance. The liver was the most common metastatic site. Management relied on a multidisciplinary approach combining surgery, chemotherapy, and, in selected cases, radiotherapy. The FOLFOX regimen was the most frequently administered. The resectability rate of liver metastases was 40%. Median overall survival was 12.6 months. Recent advances, such as personalized medicine and liver transplantation, offer new opportunities for improving survival and quality of life in these patients.

**Introduction**

Colorectal cancer ranks as the third most common cancer worldwide and the second leading cause of cancer-related mortality. In Morocco, it accounts for 8.7% of all cancer cases, making it the third most frequent malignancy. Between 40% and 60% of patients develop metastases, primarily in the liver, which heavily impacts prognosis. Despite therapeutic advancements, mCRC remains associated with a poor prognosis, especially in low-resource settings where diagnosis is often delayed. The aim of this study is to share the experience of a Moroccan referral center in managing mCRC and to compare it with recent international recommendations.

**Materials and Methods**

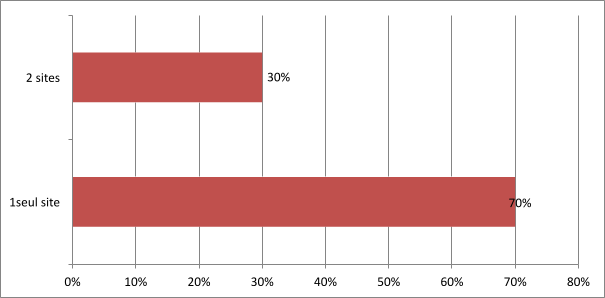
This was a retrospective descriptive study conducted from January 2019 to December 2023 at the Digestive Oncology and Liver Transplantation Surgery Department of Ibn Rochd University Hospital, Casablanca. Twenty patients with histologically confirmed mCRC—either colon or rectal cancers with synchronous or metachronous metastases—were included. Non-metastatic cases and incomplete records were excluded. Data collected included demographics (age, sex, origin), clinical findings (diagnostic delay, symptoms), paraclinical data (endoscopy, imaging, biomarkers), histopathology (histologic type, grade), treatment modalities (surgery, chemotherapy, radiotherapy), and outcomes (morbidity, mortality, survival). Categorical variables were expressed as percentages, and continuous variables as means with ranges.

Results

The study included 20 patients with a mean age of 56 years. Most of them were men, with a male-to-female sex ratio of 1.85. A majority of the patients (85%) were from urban areas. The average time from the onset of symptoms to the first medical consultation was 9 months, and 85% of patients sought consultation after more than 6 months of symptom progression. The most commonly reported symptoms were abdominal pain, rectal bleeding, and a general decline in health status.

Regarding metastatic sites, the liver was involved in all patients. In 70% of cases, liver involvement was isolated, while 30% had liver metastases associated with other sites. Among these, 15% had concurrent lung metastases, 10% had peritoneal metastases, and 5% had lymph node involvement. Synchronous metastases were found in 85% of patients, whereas 15% had metachronous disease.

Figure 1. Distribution of patients according to the number of metastatic sites



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| --- | --- | --- |
| **Metastatic site** | **Number of cases** | **Percentage (%)** |
| **Liver** | 20 | 100 |
| **Isolated involvement** | 14 | 70 |
| **Associated involvement:** | 6 | 30 |
| Liver + lung | 3 | 15 |
| Liver + peritoneum | 2 | 10 |
| Liver + lymph nodes | 1 | 5 |

Table 1. Distribution by metastatic sites (n = 20)

Histological confirmation of diagnosis was achieved through colonoscopy or rectoscopy in all patients. The most common histological type was moderately differentiated adenocarcinoma of the Lieberkühn type, accounting for 65% of cases. Tumor markers were elevated in most patients, with carcinoembryonic antigen (CEA) elevated in 60% and carbohydrate antigen 19-9 (CA 19-9) elevated in 45% of cases.

Surgical resection of the primary tumor was feasible in 95% of patients. Hepatic metastasectomy was performed in 40% of cases. All patients received systemic chemotherapy. The FOLFOX4 regimen was the most commonly administered, followed by XELOX, FOLFIRINOX, XELIRI, and FOLFIRI, with the addition of panitumumab in patients whose molecular profiles permitted targeted therapy. Five patients with rectal tumors also received perioperative radiotherapy.

Postoperative mortality was 10%, and postoperative morbidity was also 10%. The median overall survival was 12.6 months, ranging from 2 to 36 months. At the end of the follow-up period, 65% of patients had died, 20% were still undergoing chemotherapy, and 15% showed disease progression despite treatment

**Discussion**

mCRC remains a critical public health issue due to its prevalence and complex management. Our patients presented at an advanced stage, with long delays before consultation—common in low-resource countries where screening programs are limited. Our demographic findings (male predominance, mean age of 56) are consistent with global data, although increasing incidence among younger populations has been reported.

The liver is the main site of metastasis due to the portal drainage of the colon and rectum. Synchronous metastases—more frequent than metachronous in this study—are associated with worse outcomes.

Histological confirmation and tumor marker assessment are essential, but molecular profiling (RAS, BRAF, MSI/dMMR) is now critical for selecting targeted therapies or immunotherapy. Unfortunately, access to molecular testing remains limited in our context.

A multidisciplinary approach is essential. Primary tumor surgery is indicated for complications or when metastasectomy is feasible. Only 40% of our patients underwent liver metastasectomy, in line with literature findings. Innovative techniques such as ablation, portal vein embolization, and combination treatments could improve resectability but are not widely available.

Systemic chemotherapy with or without targeted agents remains central. Treatment is guided by tumor location and molecular profile. Immunotherapy has shown excellent results in MSI/dMMR tumors, though it remains inaccessible for many.

Liver transplantation is emerging as a promising treatment for unresectable hepatic metastases. The TransMet trial (2024) demonstrated 5-year survival rates of 73% with transplantation, versus 9% with chemotherapy alone—highlighting a paradigm shift. However, challenges remain regarding graft availability, patient selection, and ethical considerations.

Despite advances, the prognosis remains poor, especially in low-resource settings where median survival rarely exceeds 15 months. Negative prognostic factors include multiple metastatic sites, poor general status, unfavorable mutations, and unresectability.

**Conclusion**

Metastatic colorectal cancer continues to have a poor prognosis, particularly in low-resource environments. Improved survival depends on early detection, multidisciplinary care, access to molecular testing, and innovative strategies such as liver transplantation for unresectable cases. These developments warrant continuous updates to management guidelines to ensure optimal patient care.

**Consent:**

As per international standard or university standard, patient(s) written consent has been collected and preserved by the author(s).

Ethical Approval:

This study has been approved by the Research Ethics Committee of the Department of General Surgery at IBN ROCHD University Hospital, Casablanca, Morocco. The principles of the Helsinki Declaration were followed.

Disclaimer (Artificial Intelligence): Option 1:

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

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