

## Case Report

# Pancreatic metastasis from rectal adenocarcinoma: A case report

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## ABSTRACT

Pancreatic metastasis from colorectal cancer is exceptionally rare, yet accurate diagnosis and management are pivotal. We describe a 66-year-old female patient with a history of low rectal adenocarcinoma treated 13 years earlier, who during routine surveillance presented with elevated carcinoembryonic antigen (CEA) levels and was found to have a solitary hypodense lesion in the tail of the pancreas on computed tomography. Biopsy revealed moderately differentiated adenocarcinoma and immunohistochemistry confirmed colorectal origin. After multidisciplinary review, the patient underwent distal pancreatectomy with splenectomy and en bloc resection of adjacent adrenal and renal tissue; histology confirmed metastatic colorectal adenocarcinoma with clear margins, no lymphatic invasion. She subsequently received six months of adjuvant XELOX chemotherapy and as of last follow-up remains free of recurrence. This case underscores the need to consider metastasis from colorectal primary when evaluating pancreatic lesions in patients with prior colorectal malignancy, and illustrates the essential role of immunohistochemical staining in differentiation from primary pancreatic cancer. Surgical resection in isolated disease, combined with adjuvant therapy, may offer favourable outcomes.

**Keywords:** Case report, Immunohistochemistry, Pancreatic metastasis, Rectal adenocarcinoma, XELOX combination (XEL= Capecitabine (Xeloda) OX= Oxaliplatin) chemotherapy

## INTRODUCTION

Pancreatic metastases are an uncommon clinical entity, representing a minor fraction of all pancreatic malignancies. This rarity underscores the diagnostic and therapeutic challenges these cases present. The differentiation between primary pancreatic neoplasms and metastatic lesions is pivotal for devising appropriate treatment strategies and prognostic outcomes.

Rectal adenocarcinoma is known for its potential to metastasize to distant organs, most commonly the liver and lungs. However, metastasis to the pancreas is rare, estimated at 1.6% <sup>[1]</sup>, and when it occurs, it raises significant diagnostic dilemmas due to the Similarity in radiographic and clinical presentations between primary pancreatic tumors and metastatic lesions. The management of pancreatic

metastases from rectal adenocarcinoma involves a nuanced understanding of both the primary cancer's behavior and the secondary pancreatic lesions' clinical implications.

The current report aims to present a delayed occurrence of pancreatic metastasis from rectal adenocarcinoma, emphasizing the diagnostic journey, the utility of immunohistochemical staining in confirming the origin of the metastatic lesion, and the therapeutic interventions undertaken, advocating for a multidisciplinary approach to optimize patient care and outcomes.

## CASE REPORT

This case report is written in accordance with the CARE guidelines. <sup>[2]</sup>

We report the case of a 66-year-old female with a history of a low

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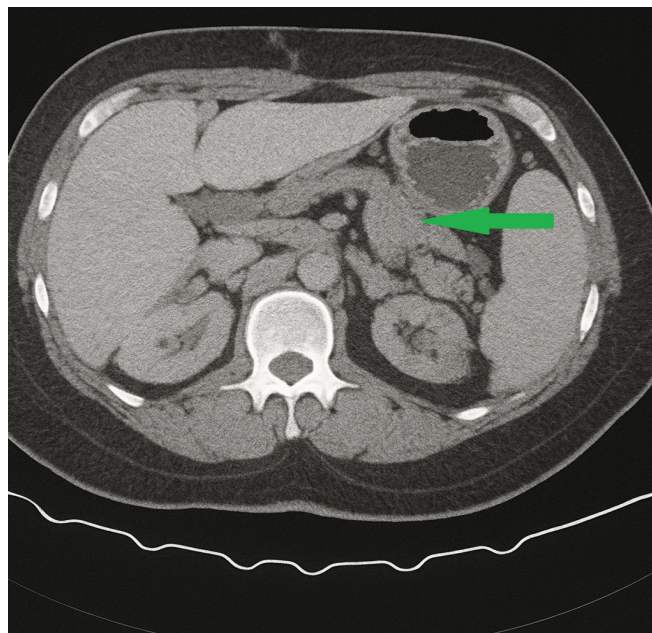
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rectal adenocarcinoma for which she underwent a total mesorectal excision and coloanal anastomosis in 2011, followed by adjuvant chemotherapy. The patient had no other significant comorbidities. At the time of the original rectal cancer diagnosis, staging was performed with contrast-enhanced computed tomography (CT) of the chest, abdomen, and pelvis, which showed no distant metastases. The tumor was classified as stage IIIB (pT3N1M0) following surgical resection and histopathological evaluation. She was under continuous surveillance, including regular imaging and monitoring of carcinoembryonic antigen (CEA) levels. In February 2024, during follow-up, she presented with an isolated elevation in CEA levels without any specific symptoms and an unremarkable physical examination. At the same time, serum CA 19.9 levels were measured and found to be within normal limits, further supporting a metastatic colorectal origin rather than a primary pancreatic neoplasm.

For the newly detected pancreatic lesion in 2024, staging included abdominopelvic CT and magnetic resonance imaging (MRI), both of which confirmed an isolated pancreatic tail mass without evidence of hepatic, splenic, adrenal, renal, or peritoneal involvement. An abdominopelvic CT scan identified a hypodense, heterogeneously enhancing lesion located in the tail of the pancreas, measuring 33.8 × 26.7 mm.

Definitive diagnosis was established through CT-guided biopsy, with histopathological and immunohistochemical findings confirming a colorectal origin. No additional evidence of metastatic disease was observed in the liver, spleen, adrenal glands, or kidneys [Figure 1]. For complete



**Figure 1:** Axial CT scan showing the pancreatic lesion in the tail (green arrow) measuring 33.8 × 26.7 mm without locoregional invasion. CT: Computed tomography

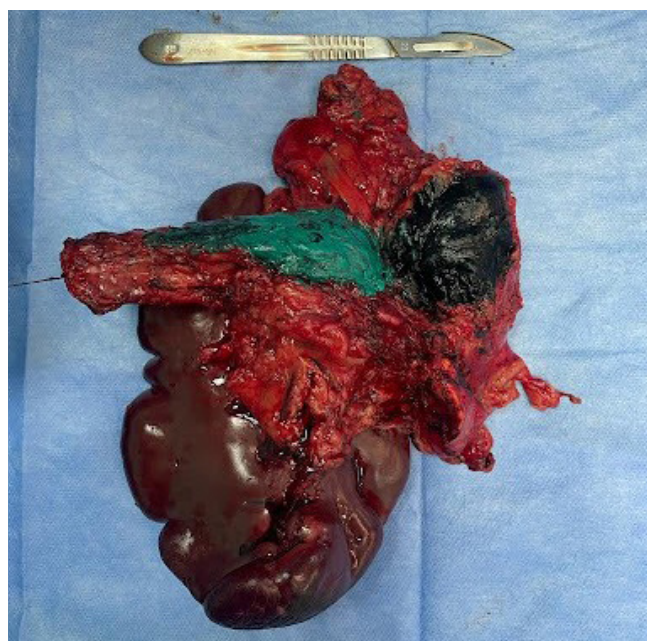
staging, a CT-TAP (Means a CT scan of the chest, abdomen, and pelvis) was performed, which showed no evidence of pulmonary or extra-abdominal metastases, confirming the pancreas as the only metastatic site.

MRI of the abdomen further characterized the pancreatic lesion, which appeared to infiltrate the splenic vein and artery as well as the surrounding pancreatic fat.

A CT-guided biopsy of the pancreatic lesion was performed. Histopathological examination revealed a moderately differentiated adenocarcinoma. Immunohistochemistry showed positivity for CK20 and CDX2 with negativity for CK7, a pattern consistent with colorectal origin. The original rectal adenocarcinoma resected in 2011 had demonstrated the same immunoprofile, thereby affirming the pancreatic Metastasis as a metastasis from the previously treated rectal adenocarcinoma.

The case was discussed in a multidisciplinary team (MDT) meeting. The decision was made not to administer neoadjuvant chemotherapy prior to surgery due to the isolated nature of the lesion and the patient's overall health status. Surgical resection was confirmed as the primary treatment approach.

The patient underwent an open distal pancreatectomy extended to the spleen due to hilar invasion and to the left adrenal gland and kidney due to per-operatively confirmed involvement of these structures. The postoperative course was uneventful. The patient was discharged on the fifth postoperative day after a negative amylase test in the drain.



**Figure 2:** Surgical specimen of splenopancreatectomy extended to left nephrectomy and adrenalectomy

Histopathological examination of the resected specimen confirmed metastatic adenocarcinoma consistent with the patient's known history of rectal cancer. Surgical margins were clear without lymphatic invasion [Figure 2].

After discussion in the MDT, adjuvant chemotherapy was indicated, and she received a XELOX regimen (capecitabine and oxaliplatin) for six months, which was well tolerated without significant toxicity.

The patient continues to be closely monitored by the surgical and oncological teams through regular follow-up appointments, which include imaging studies and tumor markers. As of the last follow-up in August 2024, the patient is alive and well without signs of local recurrence or new metastases.

## DISCUSSION

Pancreatic metastasis from colorectal cancer (CRC) is a rare but recognized phenomenon, accounting for a small fraction of all pancreatic malignancies. The incidence of pancreatic metastasis from CRC is notably low, with the liver and lungs being more common sites for metastatic spread from CRC.<sup>[3,4]</sup> This rarity underscores the importance of a nuanced approach to diagnosis and management.

The diagnostic landscape of pancreatic lesions, particularly in distinguishing between metastatic and primary pancreatic neoplasms, is fraught with challenges due to their indistinct radiographic appearances. Advanced diagnostic modalities, such as endoscopic ultrasound-guided fine-needle aspiration (EUS-FNA), are essential for obtaining tissue samples for histopathological and immunohistochemical analyses.<sup>[5,6]</sup> These analyses are critical for identifying the primary source of the pancreatic lesion, especially in cases of metastasis from CRC, thereby facilitating the formulation of a tailored treatment strategy.

The management of pancreatic metastasis from CRC requires a multidisciplinary approach. Surgical resection remains the cornerstone of treatment for isolated pancreatic metastases, as it offers the potential for prolonged survival and, in some cases, cure.<sup>[1,7]</sup> In our case, the decision to proceed directly to surgery without neoadjuvant chemotherapy was based on the absence of systemic disease and the resectability of the pancreatic lesion.

### Role of adjuvant and neoadjuvant chemotherapy:

The role of adjuvant and neoadjuvant chemotherapy in the management of pancreatic metastasis from CRC is not well established due to the rarity of such cases. However, extrapolating from the treatment of primary CRC and pancreatic cancer, chemotherapy can play a significant role in improving outcomes.

### Neoadjuvant chemotherapy:

It is considered in cases where there is a need to downsize the tumor to achieve resectability or when there are concerns about microscopic metastatic disease.<sup>[8]</sup> However, in isolated pancreatic metastasis with resectable disease, the benefit of neoadjuvant chemotherapy remains uncertain. Some studies suggest that neoadjuvant therapy may not significantly impact survival in such scenarios.<sup>[9]</sup>

### Adjuvant chemotherapy:

It is often recommended following surgical resection to address potential microscopic residual disease and to reduce the risk of recurrence. The use of adjuvant chemotherapy regimens, such as XELOX (capecitabine and oxaliplatin), has been associated with improved disease-free survival in patients with resected CRC metastases.<sup>[10]</sup> In our case, the patient received adjuvant chemotherapy postoperatively, which was well tolerated and may contribute to her favorable outcome thus far.

### Prognostic considerations

Prognostic factors influencing survival in patients with pancreatic metastasis from CRC include the disease-free interval between the primary tumor and metastasis, resectability of the metastasis, and response to chemotherapy.<sup>[11]</sup> A longer disease-free interval, as observed in our patient (13 years), may be associated with a more favorable prognosis.<sup>[12]</sup>

The absence of lymph node involvement and clear surgical margins are also positive prognostic indicators.<sup>[13]</sup> The multidisciplinary management, incorporating surgery and chemotherapy, aims to optimize these factors to improve patient outcomes.

## CONCLUSION

This case highlights the complexity of diagnosing and managing pancreatic metastasis from rectal adenocarcinoma. The rarity of such cases necessitates a high index of suspicion and a comprehensive diagnostic approach, including advanced imaging techniques and immunohistochemical staining. Surgical resection without prior neoadjuvant chemotherapy can be considered in selected patients with isolated, resectable pancreatic metastases. Adjuvant chemotherapy may play a role in improving disease-free survival. Multidisciplinary collaboration is essential in developing individualized treatment plans and improving prognosis. Ongoing research and case reports are vital in enhancing our understanding and management of this rare metastatic occurrence.

**Author contribution :** AI, BM, MH, AMM, SA, and LO: Designing the study collecting data analyzing the data

writing or revising the manuscript.

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## REFERENCES

1. Sperti C, Pasquali C, Berselli M, Frison L, Vicario G, Pedrazzoli S. *et al.* Metastasis to the pancreas from colorectal cancer: Is there a place for pancreatic resection? *Dis Colon Rectum* 2009;52:1154–1159.
2. Gagnier JJ, Kienle G, Altman DG, Moher D, Sox H, Riley D. *et al.* The CARE guidelines: Consensus-based clinical case reporting guideline development. *J Clin Epidemiol* 2014;67:46–51.
3. Karageorgou M, Myoteri D, Kotsis T, Polymeneas G, Bournakis E, Dellaportas D. Solitary colorectal cancer metastasis to the pancreas. *Case Rep Surg* 2019;2019:4891512.
4. Machado NO, Chopra PJ, Hamdani AA. Pancreatic metastasis from colon carcinoma nine years after a hemicolectomy managed by distal pancreatectomy: A review of literature. *World J Surg Oncol* 2010;8:61.
5. Sano I, Katanuma A, Yane K, Kin T, Nagai K, Yamazaki H,

*et al.* Pancreatic metastasis from rectal cancer diagnosed by endoscopic ultrasonography-guided fine needle aspiration (EUS-FNA). *Intern Med* 2017;56:301–305.

6. Ishii M, Inoue Y, Matsuo K, Miyaoka Y, Hamamoto H, Osumi W, *et al.* Successful laparoscopic treatment of pancreatic metastasis from sigmoid colon cancer: A case report. *J Investig Med High Impact Case Rep* 2022;10:23247096221074586.
7. Reddy S, Wolfgang CL. The role of surgery in the management of isolated metastases to the pancreas. *Lancet Oncol* 2009;10:287–293.
8. Jain A, Maxwell JE, Katz MH, Snyder RA. Surgical considerations for neoadjuvant therapy for pancreatic adenocarcinoma. *Cancers (Basel)* 2023;15:475.
9. Tsilimigras DI, Ntanasis-Stathopoulos I, Moris D. Surgical management of isolated pancreatic metastases: A systematic review and pooled analysis. *Ann Surg Oncol* 2020;27:722–730.
10. Chau I, Cunningham D. Adjuvant therapy in colon cancer—what, when and how? *Ann Oncol* 2006;17:1347–1359.
11. Bilici A. Prognostic factors related with survival in patients with pancreatic adenocarcinoma. *World J Gastroenterol* 2014;20:10802–10812.
12. Shao-Wei Song; Jun-Feng Cheng; Ning Liu; Ting-Han Zhao. “Diagnosis and treatment of pancreatic metastases in 22 patients: a retrospective study.” *World Journal of Surgical Oncology*. 2014; 12:299
13. Crippa S, Angelini C, Mussi C, Bonardi C, Romano F, Sartori P, *et al.* Surgical treatment of metastatic tumors to the pancreas: A single center experience and review of the literature. *World J Surg* 2006;30:1536–1542.

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