



# Resection of Liver Metastases before Primary, After Complete Response to M-Folfirinox in Pancreatic Carcinoma: A Case Report

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## Abstract

Approximately 50% of new pancreatic adenocarcinoma presented liver metastases at diagnosis, with a median survival of less than 1 year. The only curative treatment of pancreatic adenocarcinoma is surgery, but once distant metastases are detected, the guidelines do not recommend any resection.

We describe a case of pancreatic ductal adenocarcinoma with synchronous liver metastases that presented a complete radiologic response to neoadjuvant chemotherapy that underwent resection for liver metastases before the pancreatic resection. The patient has now 2 years from the first resection without recurrence. This case suggests that a patient with good response to neoadjuvant chemotherapy and with an expected R0 resection could be an ideal candidate for surgery, even for a liver first approach.

**Keywords:** Pancreatic cancer; Liver metastases; Liver resection; Chemotherapy

## Core Tip

The only curative treatment of pancreatic adenocarcinoma is surgery, but once distant metastases are detected, the guidelines do not recommend any resection.

This case represents the possibility of a new approach when we have a good response to neoadjuvant chemotherapy, a setting that we were unable to come across before this new era of chemotherapeutics agents.

## Introduction

Pancreatic cancer represents 3.2% of all diagnosed cancer and the fourth leading cause of cancer-related deaths in the United States, with a 5-year overall survival of approximately 8%. SEER database reveals around half of these patients have metastatic disease at the time of diagnosis, whose stage-specific 5-year OS is estimated less than 3%.

According to NCCN guidelines, metastatic disease from pancreatic carcinoma precludes curative resection and systemic therapy is therefore recommended for patients with good performance status.

However, recently published reviews pushed surgery over the edge considering simultaneous resection of pancreatic and hepatic lesions, after a course of neoadjuvant chemotherapy, as an option for oligometastatic patients, describing a potential benefit in overall survival for highly selected patients [1,2]. Here, we report the case of a patient previously treated with chemotherapy for palliative intent, which had a complete response to modified FOLFIRINOX, and then submitted to a reverse approach of liver metastasis and primary pancreatic head carcinoma.

## Case Presentation

A previously healthy and asymptomatic 65 years-old man discovered incidentally a liver mass on routine exams. A MRI showed a 2 cm nodule in the head of pancreas, a 13 cm mass in the right hepatic lobe, and another 5 cm lesion in Courmand's segment II. PET-CT detected increased FDG uptake in liver lesions (max SUV of 9.3 in right lobe and SUV 6.0 in segment II lesion) and light increase in pancreatic head nodule (SUV 2.0). Tumor marker Ca19.9 was slightly elevated and CT guided biopsy of the larger liver lesion revealed a poorly differentiated carcinoma. Oncology assistant started modified-FOLFIRINOX regimen for palliation treatment. After 6 months of ongoing chemotherapy, a repeat PET-CT showed significant reduction of dimensions and metabolism of liver lesions. By the time of 13<sup>th</sup> month, he received 15 cycles without adverse events. PET-CT

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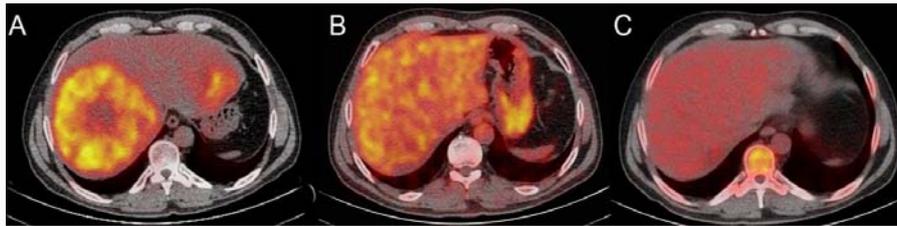
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**Figure 1:** (A) First PET-CT, before initiation of chemotherapy, (B) PET-CT after 6 months of chemotherapy, and (C) PET-CT after completion of 15 cycles of mFOLFIRINOX.

evidenced none metabolic uptake in liver and pancreatic head, and the patient was then referred for surgical resection.

Patient had an optimal ECOG performance status and remained asymptomatic at surgical evaluation, laboratory tests were normal, including no elevation of tumor markers. First, hepatic lesions was planned to be resected, as a mean of evaluating tumor biology between surgical stages, then pancreato - duodenectomy would be completed.

Right posterior and left lateral section ectomies of the liver were performed, patient overcame post operation without complications and hospital discharge was reached on the fifth Postoperative Day (POD). Pathology described viable residual neoplasm of 1.3 cm in the resected right lobe and 0.7 cm in the left lobe; and the immuno histo chemical study corroborated the diagnosis of metastatic carcinoma of the liver. After 80 days since the first operation, we performed pancreato-duodenectomy, with postoperative evolution without complications and hospital discharge in the sixth POD. Pathology examination identified foreign body granulomas, with an extense area of central necrosis and no residual neoplasia. During follow-up, the patient remained asymptomatic, presenting no evidence of relapse after 10 months of first surgery and reaching 27 months of survival since diagnosis (Figure 1).

## Discussion

We present a case of a patient with metastatic pancreatic cancer, who had complete radiological response to modified FOLFIRINOX and undergone a reversal approach of the liver lesions and pancreatic head nodule, who achieved prolonged survival.

Initial studies accessing the role of resection of pancreatic primary and liver metastasis failed to find benefit over palliative approaches [3]. However, in the past decades, refinements in anesthesia, resection techniques and postoperative management improved perioperative outcomes and enable surgeons to perform simultaneous pancreatic and liver resections with lower mortality rates. Although current guidelines do not recommend surgical approach for metastatic pancreatic cancer, some series accessed the role of simultaneous resection, suggesting that surgery may be associated with improved survival in selected cases [4], and indication of surgery has to be made on individual basis [5].

Better understanding of chemotherapy agents and the development of systemic therapy approaches increased disease control and raised median overall survival up to 11 months. FOLFIRINOX and Gemcitabin - based schemes has been recently recognized as options for down staging locally advanced and borderline resectable pancreatic cancer for later resection [6]. In patients with metastatic

disease treated with palliative chemotherapy, significant tumor response occasionally can be observed, and the role of surgery in these cases remains unclear. In a retrospective study, Frigerio et al. [2] evaluated resected patients with down staged metastatic PDAC after “neoadjuvant” chemotherapy, suggesting that those who had fully responsive disease may be cautiously considered for surgery, with potential benefit in survival compared with chemotherapy alone [2].

## Conclusion

In the setting of a high-volume center, a patient with controlled disease by chemotherapy, good performance status, and need of major liver resection, a 2-stage strategy for metastatic pancreatic disease may be reasonable, as for colorectal cancer. This case highlights the fact that a reverse approach may be feasible and safe. By the time of this manuscript, we have not found any report of a planned liver-first strategy for metastatic pancreas cancer. The main question still on debate is how to select patients who might benefit most from surgical approach. Unfortunately, small sample sizes and heterogeneity of studies preclude generalization of findings. Prospective studies are needed to define the potential role of surgery for metastatic pancreatic cancer.

## References

1. Antoniou E, Margonis GA, Sasaki K, Andreatos N, Polychronidis G, Pawlik TM, et al. Is resection of pancreatic adenocarcinoma with synchronous hepatic metastasis justified? A review of current literature. *ANZ J Surg.* 2016;86(12):973-7.
2. Frigerio I, Regi P, Giardino A, Scopelliti F, Girelli R, Bassi C, et al. Downstaging in Stage IV Pancreatic Cancer: A New Population Eligible for Surgery? *Ann Surg Oncol.* 2017;24(8):2397-403.
3. Gleisner AL, Assumpcao L, Cameron JL, Wolfgang CL, Choti MA, Herman JM, et al. Is resection of periampullary or pancreatic adenocarcinoma with synchronous hepatic metastasis justified? *Cancer.* 2007;110(11):2484-92.
4. Tachezy M, Gebauer F, Janot M, Uhl W, Zerbi A, Montorsi M, et al. Synchronous resections of hepatic oligometastatic pancreatic cancer: Disputing a principle in a time of safe pancreatic operations in a retrospective multicenter analysis. *Surgery.* 2016;160(1):136-44.
5. Seelig SK, Burkert B, Chromik AM, Tannapfel A, Uhl W, Seelig MH. Pancreatic resections for advanced M1-pancreatic carcinoma: the value of synchronous metastasectomy. *HPB surgery: A World J Hepatic, Pancreatic Biliary Surg.* 2010;2010:579672.
6. Blazer M, Wu C, Goldberg RM, Phillips G, Schmidt C, Muscarella P, et al. Neoadjuvant modified (m) FOLFIRINOX for locally advanced unresectable (LAPC) and borderline resectable (BRPC) adenocarcinoma of the pancreas. *Ann Surg Oncol.* 2015;22(4):1153-9.