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## Case Report

# Liposarcoma metastases to the small bowel presenting as fat-density intraluminal lesions

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## ABSTRACT

Metastatic disease to the small bowel is rare; however, it is important to recognize that when it does occur a variety of complications are possible including obstruction, gastrointestinal bleeding, intussusception, and bowel perforation. We present here an unusual case of small bowel metastases in a patient with known metastatic liposarcoma in which the lesions manifested as rapidly evolving fat-density masses that necessitated segmental small bowel resection. Careful scrutiny of the small bowel in oncology patients is necessary to guide appropriate treatment and avoid potential catastrophic complications from small bowel metastases.

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## Introduction

Metastatic disease to the small bowel is a rare entity that is most famously associated with melanoma [1], although a wide variety of other cancers have been reported to cause this pattern of disease including lung [2], breast [3], and soft tissue and bone sarcomas [4]. While small bowel metastases may portend a dismal prognosis in many oncology patients [5], it is most important to identify such lesions in the acute setting given the broad spectrum of complications that may be associated. Reported complications from small bowel metastatic disease include obstruction [6], intussusception [7], gastrointestinal bleeding [8], and even frank perforation [9].

Here, we describe an unusual case of liposarcoma metastatic to the small bowel in which the tumor deposits

manifested as rapidly appearing and growing fat-density intraluminal masses that were identified on contrast-enhanced computed tomography (CT).

## Case report

A 61-year-old man presented for CT evaluation of left groin and thigh pain in the context of a history of recurrent well-differentiated liposarcoma. The patient had originally come to attention approximately 5 years earlier with right upper quadrant pain that had prompted a CT that identified a large retroperitoneal fat-containing mass. This mass had been resected and found to be a well-differentiated liposarcoma. Since that time, the patient had undergone additional

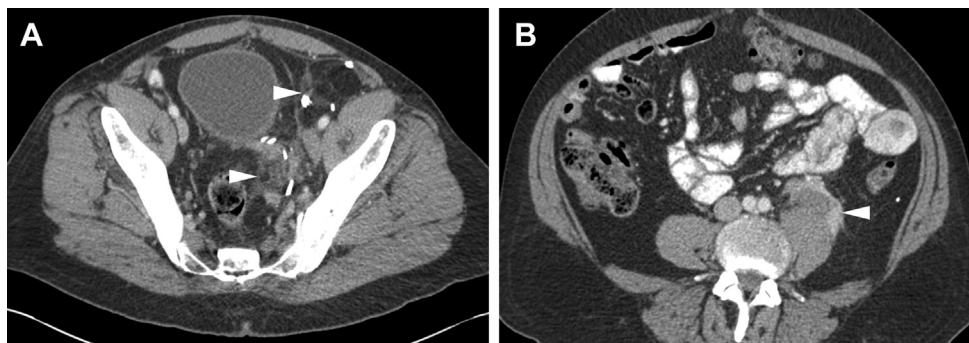
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**Fig. 1 – (A)** Axial contrast-enhanced CT image through the pelvis demonstrating fat-containing masses (white arrowheads) including a mass tracking along the left external iliac vasculature that was believed to be responsible for the patient's presenting left groin and thigh pain. Note numerous surgical clips compatible with history of multiple pelvic liposarcoma deposit resections. **(B)** Axial contrast-enhanced CT image higher in the abdomen showing evidence of additional disease anterior to the left psoas (white arrowhead).

resections of multiple retroperitoneal and pelvic liposarcoma deposits.

A single-phase (venous) contrast-enhanced CT was notable for fat-containing masses with enhancing soft-tissue components in the left hemipelvis in both the perirectal space abutting the posterior aspect of the urinary bladder and extending along the left external iliac vasculature (Fig. 1A). An additional enhancing mass lesion was also noted anterior to the left psoas musculature (Fig. 1B); this mass was less fatty than the pelvic lesions but was felt to be consistent with another site of liposarcoma recurrence. All of these masses were larger than on a previous CT dated five months earlier. The mass associated with the iliac vasculature was the presumed source of the patient's pain and surgical debulking of the pelvic and juxtaspsoas lesions was planned.

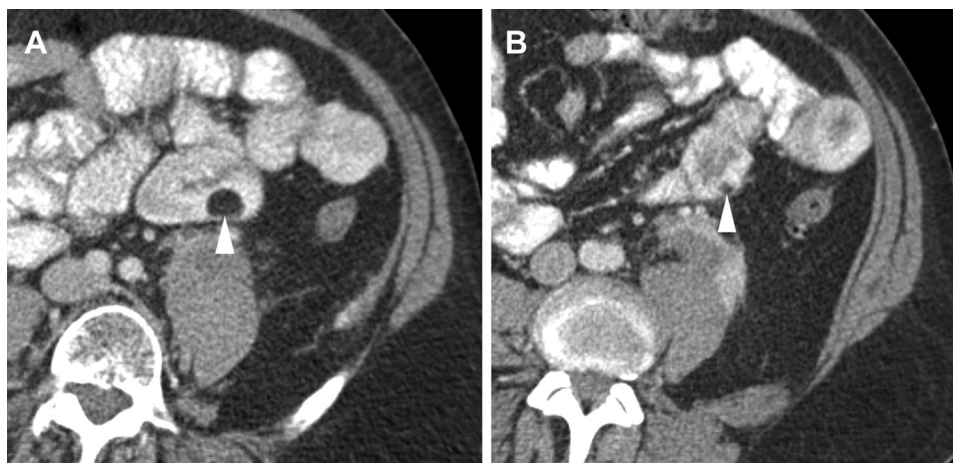
However, an unsuspected finding was also present in the jejunum in the left lower quadrant. Two fat-density intraluminal masses were identified (Fig. 2), the largest of which measured 1.5 cm in greatest dimension. In a different context, these masses might have been diagnosed as small bowel lipomas, although given the nature of the patient's primary

tumor these were instead reported as highly suspicious for small bowel metastatic disease. Retrospectively, the larger of the 2 lesions could be seen as a much smaller fatty mass (0.8-cm maximum diameter) on the previous CT (Fig. 3), while the smaller mass was not identified at the previous time point. Given the rapid appearance and/or growth of the small bowel masses, the surgical approach was altered to also resect these lesions.

The patient ultimately underwent relatively uneventful resection of all of the visualized masses including a segmental resection of the jejunum. Pathology revealed all of these lesions to be well-differentiated liposarcoma, including the 2 intraluminal small bowel masses. Two years later, the patient remains alive and has had no further metastatic involvement of the small bowel.

## Discussion

This case highlights the importance of careful examination of imaging studies in oncology patients for sites of unusual



**Fig. 2 – (A)** A 1.5-cm fat-density intraluminal mass in the jejunum that was proven on pathology to be metastatic low-grade liposarcoma as seen on axial contrast-enhanced CT (white arrowhead). **(B)** An additional axial contrast-enhanced CT image showing a subtle, small, second liposarcoma metastasis in the jejunum (white arrowhead).



**Fig. 3** – Axial contrast-enhanced CT image from an earlier time point (5 months before the imaging in [Figs. 1 and 2](#)) allowed the retrospective identification of the larger of the 2 intraluminal small bowel metastatic lesions (0.8-cm maximum diameter at the time, white arrowhead).

metastatic spread. While this patient could almost certainly not be cured of his metastatic disease with surgical intervention, surgery was nonetheless necessary to avoid a potential complication such as intestinal obstruction given the short time course over which the patient's small bowel liposarcoma metastases appeared and grew. The original surgical approach had been planned to alleviate the pain that the patient was experiencing from his pelvic disease burden; however, an aggressive approach to his small bowel metastatic disease was warranted so that the patient did not experience a severe complication such as obstruction or intussusception. Indeed, prior reports of liposarcoma small bowel metastases have generally focused on the resultant acute complications [7,10].

## Conclusions

Small bowel metastatic disease can lead to serious complications and findings compatible with such lesions should be carefully sought in oncology patients so that appropriate action can be taken by referring clinicians.

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