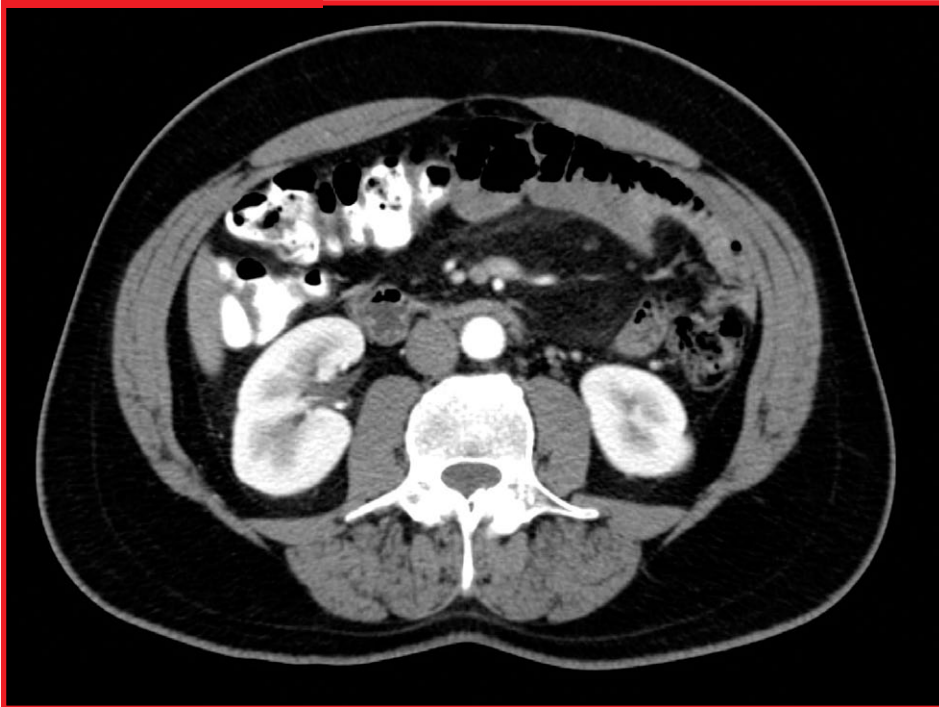


Elizabeth Mausner, Laura Sheiman, MD, and Keith D. Hentel, MD

FIGURE 1



A 40-year-old man presents to the ED with progressive lower abdominal pain of several months' duration. He denies any recent history of fever, nausea, vomiting, or change in bowel habits. Physical exam and laboratory tests reveal no significant abnormality. Lab values are within normal limits. CT of the abdomen and pelvis is performed (Figure 1).

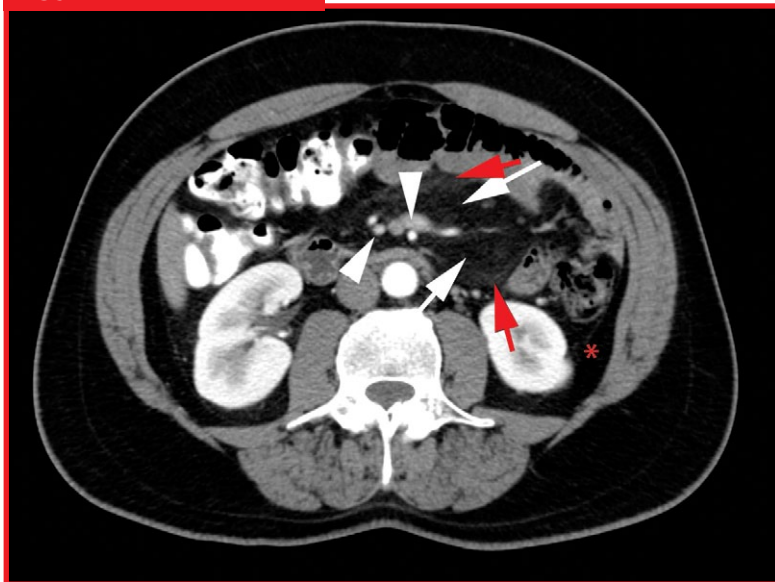
**What is the finding and what are the possible etiologies?**

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CONTINUED

## ANSWER

FIGURE 2



The axial CT image through the level of the mid abdomen (Figure 2) demonstrates diffusely increased density of the mesenteric fat (white arrows) without displacement of the mesenteric vessels (white arrowheads); this sign is termed “misty mesentery.” Normal fat should have uniform low attenuation, as is seen in the retroperitoneal fat (red asterisk). There is a small amount of fluid surrounding the mesentery itself, resulting in a “pseudocapsule” (red arrows).

A “misty mesentery” indicates infiltration of the mesenteric fat and has numerous etiologies, including both benign and malignant causes. Benign causes include inflammatory disease in adjacent organs (eg, pancreatitis, inflammatory bowel disease) or edema related to volume overload, as in congestive heart failure or cirrhosis. The most common malignancies that present as mesenteric infiltration are lymphoma and carcinomatosis (eg, originating from ovarian or colorectal cancer). Desmoid and carcinoid tumors may also have similar appearance on cross-sectional imaging.<sup>1</sup> There are many possible etiologies for mesenteric infiltration, and in many cases, an exact cause cannot be determined; such cases are classified as mesenteric panniculitis.

Mesenteric panniculitis is a rare idiopathic inflammatory disorder that affects the adipose tissue of the bowel

mesentery. This most commonly occurs in the jejunal mesentery and involves varying degrees of fat necrosis (lipodystrophy) and inflammation (panniculitis). If the process becomes chronic, fibrosis (retractile mesenteritis) may occur.<sup>2</sup> Mesenteric panniculitis usually affects patients older than 50 years. Although some authors have reported a slight male predominance, at least one series had an almost 2:1 female to male ratio.<sup>1</sup> Ninety percent of these patients are asymptomatic, and mesenteric infiltration is often an incidental finding on abdominal CT.<sup>1</sup> Symptomatic patients may present with pain or an associated complication, such as bowel obstruction. There is an increased incidence

of mesenteric panniculitis in patients with preexisting inflammatory disorders such as sclerosing cholangitis, orbital pseudotumor, thyroiditis, and retroperitoneal fibrosis.<sup>3</sup>

Mesenteric panniculitis is typically a self-limiting process and therefore is treated conservatively, although in symptomatic cases treatment with steroids may reduce inflammation.<sup>4</sup> When the imaging findings do not resolve, mesenteric biopsy may be indicated to exclude neoplasm and provide a definitive diagnosis. Therefore, referral for clinical and imaging follow-up is warranted even in asymptomatic patients who have this finding on imaging in the ED.

The patient in this case was discharged from the ED and will be followed as an outpatient. **EM**

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