

# Abdominal Actinomycosis Mimicking Malignancy

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## Introduction

The abdominal subtype of actinomycosis is extremely rare; however, when present can mimic intraabdominal malignancies. We present an 88-year-old woman who presented with abdominal pain. Computed Tomography (CT) imaging showed multiple intra-abdominal soft tissue masses in the greater omentum, anterior abdominal wall, and small bowel mesentery suspicious for intraabdominal malignancy. She underwent CT guided biopsy showed filamentous gram-positive bacteria concerning for actinomycetes but no malignant process.

## Case Description

An 88-year-old woman presented with abdominal pain, fatigue, and 15 lb weight loss over the past month. On admission, she was afebrile. Physical examination revealed mild tenderness over the left lower abdominal quadrant. Initial labs revealed hemoglobin of 8.5 g/dl, WBC of 26,500/mm<sup>3</sup>. CT of the abdomen identified multiple intra-abdominal masses in the greater omentum, anterior abdominal wall, and small bowel mesentery, with contained perforation of sigmoid diverticulitis. Due to the localized nature of the perforation, the patient was initially treated with antibiotics. However, given worsening symptoms and leukocytosis, the patient underwent CT-guided percutaneous aspiration of right and left omental mass. Histopathological examination showed no evidence of malignancy but an infection/inflammatory process. Tissue gram stain revealed filamentous organisms in the area suggestive for actinomyces colonies on H and E stain. The acid-fast stain was negative. Based on these findings, a diagnosis of abdominal actinomycosis was rendered. The patient was treated with IV ampicillin/sulbactam for 4 weeks followed by oral amoxicillin for 16 more weeks. On follow up, CT imaging showed significant interval improvement of the omental and anterior abdominal wall masses.



*Figure 1 CT scan with contrast showing 4.3 cm X 2.4 cm Well defined structure of the abdomen that shows peripheral enhancement and low attenuation centrally. Finding suspicious of Fluid collection.*

## Discussion

The case reported by us of abdominal actinomycosis aims to highlight the malignancy-mimicking clinical and imaging features of this disease with the clinical symptoms of weight loss, fatigue, chronic lower abdominal pain, and the imaging findings of an intraabdominal mass(es). The diagnosis may be confounded by abdominal malignancy. A biopsy can help ascertain the diagnosis and further guide the management, as in our case. Actinomycosis can be treated with long term antibiotics and surgical debridement of the infected tissue. The prognosis is usually excellent in healthy patients, prompting the physicians to keep abdominal actinomycosis in the differential diagnoses of suspected abdominal malignancy.