

Background

- Angiolipomas are rare, benign, subcutaneous tumors typically located in subcutaneous tissues, especially in the extremities and trunk.
- These fatty tumors appear clinically similar to simple lipomas, but they are histologically characterized by an excessive degree of vascular proliferation.¹
- Angiolipomas are extremely rare in the colon, accounting for less than 1% of all colonic benign lesions.²
- While these tumors are typically painful, they may also present with rectal bleeding or positive fecal occult blood test in an otherwise asymptomatic patient.
- Therefore, it is important to recognize the clinical, radiological, and endoscopic findings associated with these masses.

Case Description

- A 49-year-old male with hypertension and hyperlipidemia presented for evaluation of **3 days of self-limited rectal bleeding**.
- The patient had no prior colonoscopies and denied associated symptoms of abdominal pain, diarrhea, or constipation.
- On physical examination, the abdomen was soft, non-tender, and non-distended with no palpable masses.
- Colonoscopy was remarkable for a **malignant-appearing, large, ulcerated, non-bleeding mass** in the hepatic flexure (Figure 1).
- Biopsy of the mass demonstrated features of focal active colitis and erosion without evidence of dysplasia or malignancy.
- The patient was referred to oncology for further evaluation of the mass. Positron emission tomography-computed tomography (PET-CT) results were remarkable for abnormal thickened appearance of the colon at the hepatic flexure with an **adjacent 4.4cm fatty structure** in the proximal transverse colon without fluorodeoxyglucose radiotracer uptake.
- The patient was evaluated by colorectal surgery and received a robotic-assisted **laparoscopic right colectomy** with an isoperistaltic ileotransverse colon anastomosis.
- The specimen was sent to pathology and results demonstrated a **4.4 x 4.0 x 4.0 cm protruding mass with glanular mucosa and submucosal fatty cut surfaces**, consistent with angiolipoma.
- Immunohistochemical (IHC) staining was unremarkable for angiomylipoma. The patient tolerated the procedure well without significant sequelae.

Endoscopic Findings

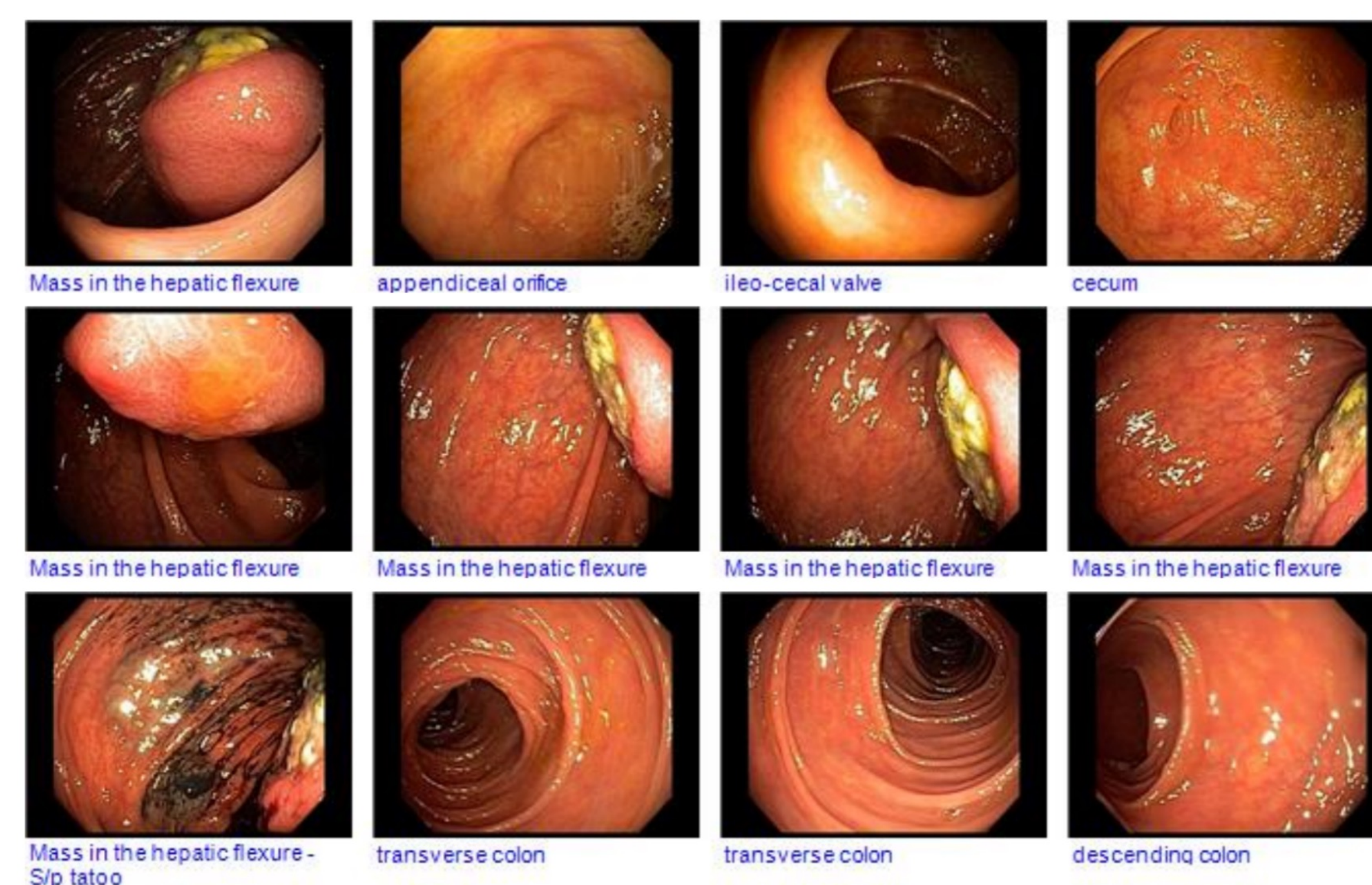


Figure 1. Endoscopic identification of malignant-appearing mass in hepatic flexure.

Radiologic Findings

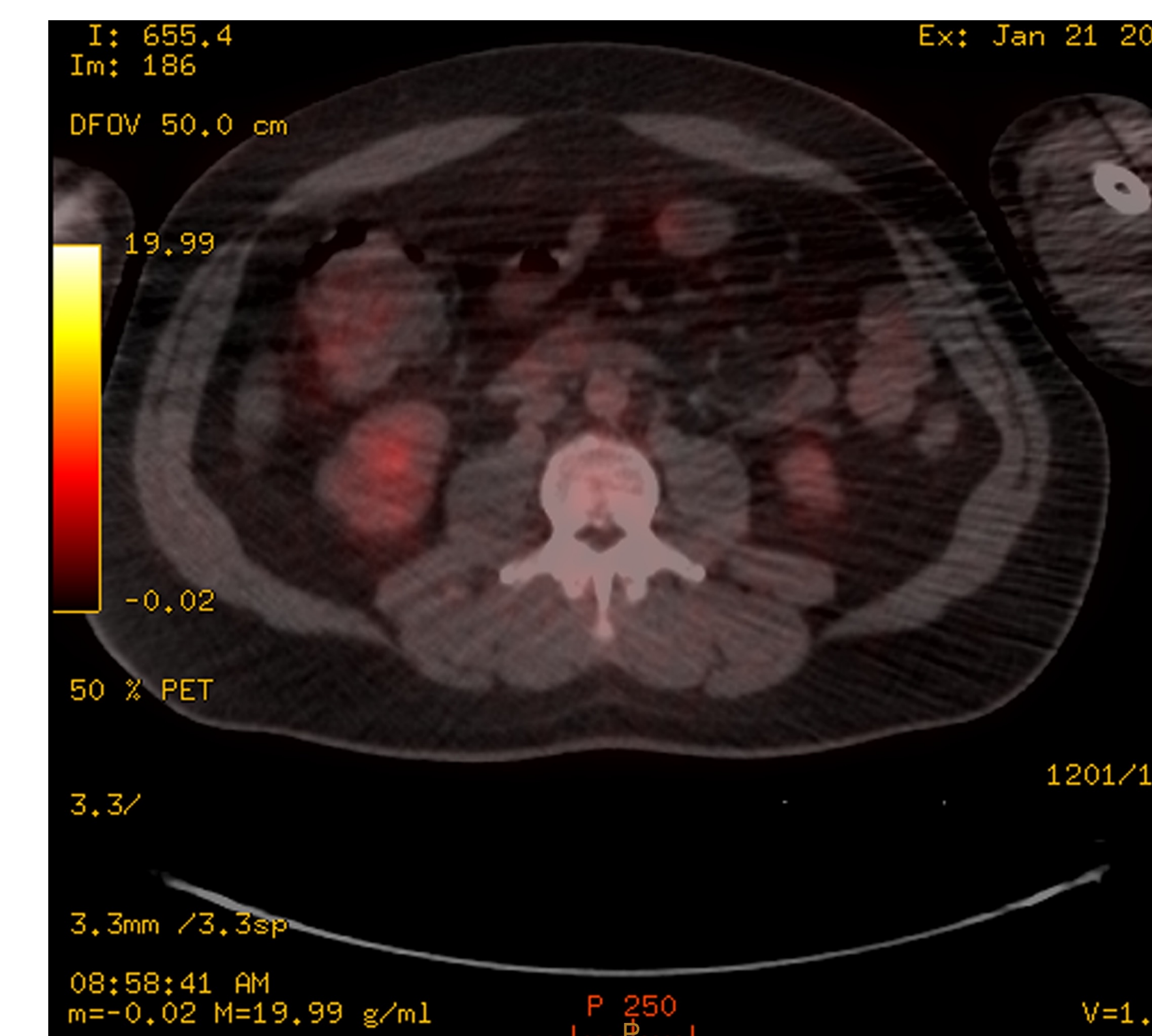


Figure 2. PET-CT image of mass in hepatic flexure without FDG uptake.

Histopathologic Findings

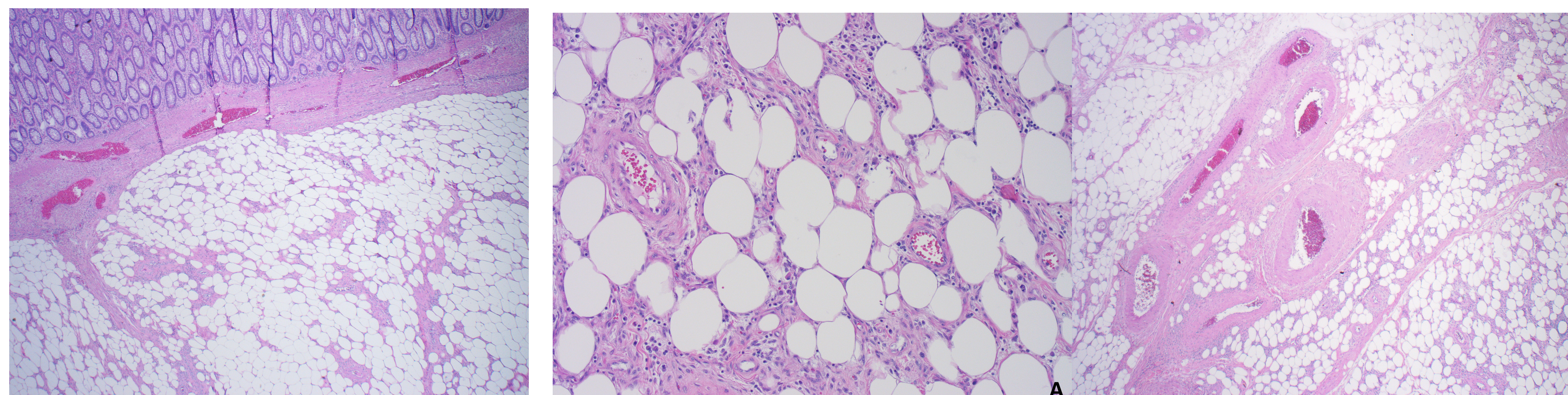


Figure 3. Submucosal mass is composed of lobulated mature adipose tissue admixed with numerous vessels. There is a thin fibrous capsule around the lesion. The surface mucosa shows no dysplasia (hematoxylin and eosin-stained section, magnification x20).

Figure 4A and 4B. The adipocytes demonstrate no nuclear atypia, mitosis, or necrosis. Branching network of thin and thick-walled vessels vary in sizes. There are no visible fibrin thrombi within blood vessels (hematoxylin and eosin-stained sections, Fig 4A magnification x40; Fig 4B magnification x100).

Discussion

- Although many of the colonic angiolipomas in the literature presented with abdominal pain or discomfort, rectal bleeding or positive fecal occult blood testing on examination were more commonly reported on presentation.^{2,4-11} This is consistent with the patient in this case, who initially presented with **asymptomatic rectal bleeding** for 3 days.
- Preoperatively, diagnosis may be aided by CT, MRI, colonoscopy, barium enema, and/or endoscopic ultrasound.
- In this patient, PET-CT was remarkable for a dense fatty structure, but findings were non-specific, hence further evaluation was necessary to elucidate the etiology of the mass.
- Colonoscopy is beneficial for enabling physicians to visualize the mass and perform biopsies. Although **biopsies** may distinguish an angiolipoma from a malignant tumor, they **are not always diagnostic**, as was in the case of our patient.
- In this case, surgical evaluation was still necessary to confirm the result via histopathologic examination. **Surgical pathology remains the gold standard for final diagnosis** of the tumor.
- Treatment of angiolipoma may vary, depending on the size and symptoms of the patient. Endoscopic resection may be indicated for polyps that are small and carry little risk for bleeding or perforation.⁸
- When the lesion has grown to a large size, surgical resection is the recommended treatment.
- Ultimately, when angiolipomas are fully excised, the **prognosis is excellent**.⁸

Conclusions

- Angiolipomas are rare, benign, subcutaneous tumors composed of adipose tissue and vascular components.
- Although these tumors are typically painful, they may present with isolated, self-limited rectal bleeding.
- Preoperative diagnosis of angiolipoma is possible when aided by CT, endoscopy, and MRI, but histopathology remains the gold standard for final diagnosis of the tumor.
- Histopathology typically demonstrates mature adipose tissue with branching capillary vessels and possible fibrin thrombi.
- Treatment may include endoscopic or surgical resection, depending on the size of the tumor.
- When angiolipomas are fully excised, the prognosis is excellent.

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