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EUS-guided fine needle biopsy of an anal gland adenocarcinoma with submucosal rectal invasion after normal colonoscopy. An uncommon histology

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Dear Editor,

We present the case of a 63-year-old male with long-term anal pain. A colonoscopy, including retroflexed view of the rectum, was normal. Due to no improvement, a pelvic magnetic resonance imaging test (MRI) was performed (Fig. 1A), showing a 3.2 x 3 x 3.5 cm tumor arising from the intersphincteric space, affecting the internal and external sphincter and extending into the submucosal layer of the posterior rectal wall. Furthermore, two small fistulae were observed inside the tumor directing posteriorly. The image was compatible with a cT4N0 ano-rectal carcinoma without any distant metastasis on the computed tomography (CT) scan.

The patient underwent rectoscopy, showing a slightly depressed area in the lower rectum (Fig. 1B). The proctoscope was exchanged for a radial echoendoscope (Olympus GF-UE 190), showing, above the hemorrhoidal plexus at the rectal posterior
wall, circumferential thickening invading the perirectal tissue and losing the cleavage limit with the external sphincter (Fig. 1C). EUS-guided tissue sampling was performed using a 22 G histologic core biopsy needle (Acquire™ Boston Sc.) (Fig. 1D). The samples were processed as a cellular block. Histopathology showed neoplastic proliferation cells arranged in nodules and nidus, invading the muscular layer and constituted by angulated glands (Fig. 1E; hematoxylin and eosin, magnification 20x, arrow) with mucin production. These findings were consistent with anal gland adenocarcinoma with positive immunohistostaining for CK7 and MUC5+. The patient underwent aggressive cytoreduction chemoradiation followed by abdominoperineal resection (Fig. 1F).

Discussion
Carcinoma arising from the anal canal accounts for 1 % of all gastrointestinal cancers, with the vast majority being squamous cell carcinoma and adenocarcinoma representing only 5 to 10 % (1). A recent classification suggests two types: from colorectal mucosa above the dental line or extramucosal from anorectal fistulae or anal gland (2). Anal gland carcinoma is extremely rare, and 50 % are associated with fistulae. These tumors show a positive immunohistostaining for CK7 and are negative for CK20 (3).

Patients may present anal pain (58 %), rectal bleeding (40 %) or the presence of perianal mass (37 %) (4). In contrast to anal squamous cell carcinoma and rectal adenocarcinoma, anal adenocarcinoma has a worse prognosis with a higher proportion of advanced-stage diagnoses. Therefore, a trimodality therapy, including neoadjuvant chemoradiation followed by abdominoperineal resection is recommended (5). This case illustrates the crucial role of endoscopic ultrasound (EUS) for the detection and accurate histological diagnosis in the evaluation and characterization of these challenging perirectal tumors.

References
Fig. 1. A. The pelvic magnetic resonance imaging (MRI) test shows a perirectal mass (arrow) extending into the posterior rectal wall and external sphincter. B. Retroflexed endoscopic view of the lower rectum showing a slightly depressed area above hemorrhoidal plexus. C. Endoscopic ultrasound view of a circumferential transmural thickening extending into the perirectal tissue and with invasion of the external rectal sphincter. D. Endoscopic ultrasound-guided fine needle aspiration using a 22 G-needle. E. Neoplastic proliferation cells which are arranged in nodules and nidus, invading the muscular layer (hematoxylin and eosin, magnification 20x) or constituted by angulated glands (arrow) with mucin production. F. Postsurgical specimen of the rectum after abdominoperineal resection. Notice the depressed and fibrotic area in the lower rectum near the anal canal, corresponding with the previously radiated anal adenocarcinoma.