

Deep infiltrative endometriosis mimicking rectal cancer in a post-menopausal woman: A case report

Abstract

Imaging characteristics of rectal endometriosis overlap with rectal cancer, which can lead to misdiagnosis.

We describe a 71-year-old woman, presenting with post-menopausal bleeding, found to have a rectal mass on pelvic MRI, which was presumed malignant at the time of reporting. However, biopsies were inconclusive and [¹⁸F]FDG PET/CT showed no metabolically active malignancy, and review of previous external imaging reveal stable rectal appearances.

To our knowledge, this is the oldest patient in the literature presenting with these findings, meaning that this diagnosis should be considered even in post-menopausal women when biopsy +/- [¹⁸F]FDG PET/CT findings are discordant with other cross sectional imaging findings.

Amy R Sharkey*; Ahmed Elowaidy

Department of Radiology, Guys and St Thomas' NHS Foundation Trust, London, UK.

***Corresponding author: Amy R Sharkey**

Department of Radiology, Guys and St Thomas' NHS Foundation Trust, London, UK.

Email: amyrose.sharkey1@nhs.net

Received: Jun 18, 2026; **Accepted:** Jul 03, 2026;

Published: Jul 10, 2026

Citation: Sharkey AR, Elowaidy A. Deep infiltrative endometriosis mimicking rectal cancer in a post-menopausal woman: A case report. Ann Case Rep Med Images. 2026; 3(2): 1094.

Introduction

Deep infiltrating endometriosis (DIE) most often involves the rectosigmoid and typically sits in the serosa/muscularis, so patients can present with stenosis, mass effect, bleeding, or obstructive symptoms. Cross-sectional imaging of deep infiltrative endometriosis can mimic malignancy, while colonoscopy biopsies are frequently nonspecific, and may be normal, because the colorectal mucosa is often spared. Accurate diagnosis is of key importance as the two conditions are managed entirely differently, and misdiagnosis can lead to unnecessary bowel resection.

Case description

A 71-year-old woman presented with one episode of post-menopausal bleeding and an MRI pelvis was arranged for further assessment. This showed an enhancing perirectal lesion, involving the posterior wall of the uterus and right pelvic side wall. This was interpreted as a locally advanced rectal tumour on the MRI (Figure 1), and further work up was carried out under the assumption that this was a rectal tumour, including [¹⁸F]FDG PET/CT scan (Figure 2), which found no metabolically active malignancy. On review of previous external imaging, the soft tissue perirectal mass had been stable for 17 years, which is suggestive of a longstanding benign pathology.

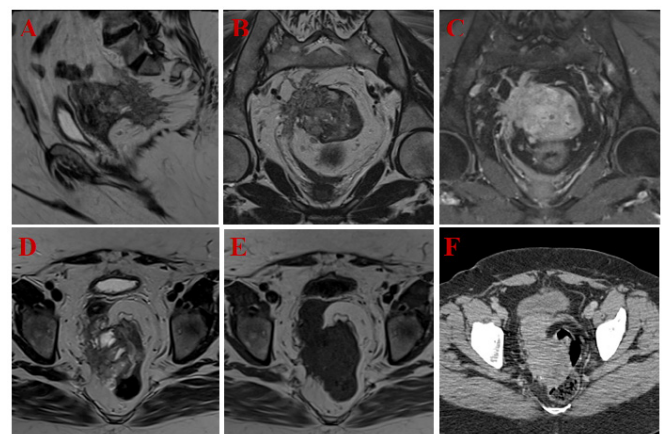


Figure 1: Pelvic MRI in 2025, reported as possible locally advanced rectal tumour. (A) (sagittal T2) shows the presumed rectal lesion, appearing to involve the posterior wall of the uterus and right pelvic side wall, with further views shown in (B) (coronal T2), (C) (contrasted enhanced coronal T1), (D) (axial T2) and (E) (axial T1). High T2 signal, best shown in (D), was interpreted as mucinous component of tumour. (F) shows the soft tissue mass demonstrated in 2008; unchanged in size compared to the 2025 MRI.

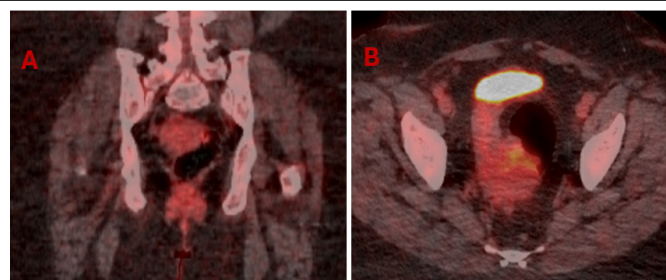


Figure 2: ^{18}F FDG PET/CT shows low ^{18}F FDG uptake at the site of the preirectal soft tissue lesion.

Discussion

This case report adds to the literature of several case reports describing endometriosis mimicking rectal cancer; however, most of these represent cases when surgery was carried out presuming malignancy. These include a case by Liang et al [1], in which an enhancing rectosigmoid mass was operated on suspecting malignancy, despite multiple colonoscopies with non-specific biopsy results, with post-operative findings confirming rectal endometriosis. A similar case by Zhao et al [2] describes a 36-year-old woman with a mass found at colonoscopy, with variable non-malignant histology, and post bowel resection surgery histological assessment proven to be rectal endometriosis. An older report describes five cases, all of whom had an anterior resection due to presumed colorectal malignancy, and all of whom were post-operatively found to have endometriosis rather than malignancy [3].

Improvements in histological analysis may help reduce the rates of misdiagnosis, with endometrial specific histology including the combination of endometrial glands, cellular Mullerian stroma, haemorrhage, and hemosiderin-laden macrophages [4]. A report focused on misdiagnosis risk [5] describes a case of circumferential infiltrative stenosis on colonoscopy, where the contrast CT described marked circumferential thickening of the sigmoid segment with luminal narrowing, but biopsy was ultimately able to demonstrate endometriosis. Advances in imaging have also helped: a recent case report describes a patient presenting with cyclical pelvic pain and rectal bleeding, where colonoscopy showed a stenosing semicircular mass suspicious for carcinoma, but biopsies were nonspecific, and pelvic MRI with an endometriosis protocol was able to diagnose DIE [6]. There are some imaging clues that could indicate endometriosis on MRI rather than rectal cancer, including lack of suspicious nodal disease and other pelvic endometriosis related findings, such as active haemorrhagic foci, endometriomas, fibrotic pelvic plaques, tethering/adhesions, and other DIE sites. In cases of diagnosis doubt, an endometriosis-protocol MRI may be helpful to look for the endometriosis associated findings (T2-dark fibrotic nodules/plaques $\pm$ T1-bright haemorrhagic foci). If this remains inconclusive, then ultimately laparoscopic biopsy or EUS FNB might provide a conclusive histological diagnosis.

^{18}F FDG PET/CT can also be of value; while ^{18}F FDG uptake can occur, it is usually low-grade, with a report of 18 women with known (n=15) or suspected (n=3) endometriosis describing the SUVmax of these lesions as between 1.8-5.3 (median 3.8) [7]. This indicates that while there is overlap of SUVmax with low-grade malignancies, if the lesion otherwise appears high-grade on imaging and if histology is non-specific, endometriosis should be considered in the differential diagnosis within the correct demographic group. Balogova et al [7] report that the oldest patient with ^{18}F FDG positive endometriosis was aged 63 years, suggesting the diagnosis of endometriosis should be considered even in post-menopausal women. We report a case of endometriosis mimicking rectal cancer in a patient of 71 years, further suggesting these findings can continue into later life and the presentation of endometriosis should still be considered in older women.

Conclusion

Deep infiltrative rectal endometriosis is a great mimicker for rectal cancer, even in post-menopausal women, and if initial colonoscopy findings and biopsies are inconclusive, further assessment with endometrial protocol MRI+/- ^{18}F FDG PET/CT might be helpful as non-invasive modalities of investigation, ultimately, laparoscopic or EUS FNB biopsy might be the only way to ascertain the histological nature.

References

1. Liang Y, Mei L, Ning Q, Zhang J, Fei J, Dong J. A case of rectal endometriosis misdiagnosed as rectal malignancy on three colonoscopies and biopsies sharing a combined literature review. *Int J Womens Health*. 2024; 16: 163–174.
2. Zhao L-J, Wang Y-H, Zhang J-D. A case report: Rectal endometriosis mimicking rectal cancer. *Int J Surg Case Rep*. 2018; 53: 137–139.
3. Kim JS, Hur H, Min BS, Kim H, Sohn S-K, Cho CH, et al. Intestinal endometriosis mimicking carcinoma of rectum and sigmoid colon: A report of five cases. *Yonsei Med J*. 2009; 50: 732–735.
4. Hu J, Hosseini M, Hasteh F, Murphy P, Pare C, Kwong WT, et al. Rectal endometriosis mimicking primary rectal adenocarcinoma. *Diagn Cytopathol*. 2021; 49: e437–e442.
5. Fejes R, Balajthy Z, Góg C, Vajda Á, Hegedűs F, Simonka Z, et al. Colonic endometriosis: From subtotal bowel obstruction to malignant transformation—a case series and literature review. *World J Surg Oncol*. 2025; 23: 230.
6. Chakor F, Handa A, Achdami F, Nacir O, Lairani F, Errami AA, et al. Deep infiltrating endometriosis mimicking colorectal cancer: A case report. *Sch J Med Case Rep*. 2025; 13: 1302–1304.
7. Balogova S, Daraï E, Noskovicova L, Lukac L, Talbot J-N, Montravers F. Interference of known or suspected endometriosis in reporting FDG PET/CT performed in another indication. *Clin Nucl Med*. 2022; 47: 305–313.