



Transverse Colon Mucinous Adenocarcinoma Presenting as a Left Iliac Region Abscess and Fecal Fistula in Young Adult: *Case Report*

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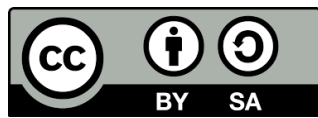
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Abstract

Colorectal cancer in young adults may present with atypical manifestations, including recurrent abdominal wall abscesses that can obscure an underlying malignancy. This case report aimed to describe the diagnostic course and surgical management of a young woman with a perforated transverse colon tumor presenting as a recurrent left iliac region abscess. A retrospective descriptive case report was prepared using medical records from two hospital admissions, including clinical examinations, laboratory findings, contrast-enhanced abdominal computed tomography (CT), intraoperative findings, and histopathological reports. A 35-year-old woman initially presented with a painful left iliac region mass, a body mass index of 14.98 kg/m², a hemoglobin level of 7.0 g/dL, and a leukocyte count of 21,250/μL. Incision and drainage were performed, while histopathological examination of the abscess wall revealed nonspecific chronic inflammation. One month later, the abscess recurred and extended into the suprapubic and right lumbar regions. Contrast-enhanced CT demonstrated extensive abscess formation, and exploratory laparotomy revealed a perforated transverse colon mass. Abscess drainage, transverse colectomy, and double-barrel stoma formation were performed. Histopathological examination of the resected specimen revealed low-grade adenocarcinoma, not otherwise specified (NOS), with tumor-free proximal and distal resection margins. This clinical course illustrated the limitations of superficial abscess-wall biopsy in detecting an underlying colon malignancy. Recurrent iliac region abscesses accompanied by systemic abnormalities warrant further evaluation for underlying intra-abdominal pathology. Integration of cross-sectional imaging, intraoperative findings, and definitive histopathological examination can facilitate accurate diagnosis and guide appropriate management.



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INTRODUCTION

Early-onset colorectal cancer (EOCRC), defined as colorectal cancer diagnosed in individuals younger than 50 years, has shown a marked and globally significant increase in incidence (Akimoto et al., 2021; Siegel et al., 2023; Sinicrope, 2022; Spaander et al., 2023). Compared with colorectal cancer occurring in older populations, EOCRC has been associated with more aggressive histopathological features, among which mucinous adenocarcinoma (MAC) is particularly notable (Aldriwesh, 2024). MAC is characterized by extracellular mucin accounting for at least 50% of the tumor volume (Luo et al., 2019), a histopathological feature that may be associated with local invasiveness, a propensity for microperforation, and diagnosis at a more advanced disease stage.

Anatomically, transverse colon carcinoma typically manifests as intestinal obstruction, anemia, or a palpable intra-abdominal mass (Dekker et al., 2019). Nevertheless, it may also

present with extraperitoneal manifestations resulting from perforation or microperforation into the retroperitoneal space, although such presentations are exceedingly rare. A contained perforation may lead to retroperitoneal abscess formation, with inflammatory fluid tracking along retroperitoneal fascial planes to distant anatomical regions, including the left inguinal region and lumbar abdominal wall (Zhou et al., 2023).

This presentation may constitute a diagnostic pitfall. When initial management consists solely of incision and drainage without additional radiological evaluation, such as contrast-enhanced abdominal computed tomography (CT), diagnosis of the underlying malignancy may be delayed (Zhou et al., 2023). Furthermore, biopsy specimens obtained from the wall or base of a superficial abscess may reveal only nonspecific chronic inflammation, reflecting a secondary inflammatory response rather than representative tissue from the primary tumor.

This case report presents a rare case of low-grade mucinous adenocarcinoma of the transverse colon in a 35-year-old woman whose initial manifestation was a left iliac region abscess that subsequently extended to the suprapubic and right lumbar regions (Torres et al., 2026; Xu et al., 2019; Zhou et al., 2023). This report aims to emphasize the importance of maintaining a high index of suspicion and the role of contrast-enhanced abdominal CT in detecting underlying intra-abdominal pathology in patients with recurrent soft-tissue abscesses, particularly young adults.

The relevance of this issue also extends to Indonesia. Colorectal cancer is among the most commonly diagnosed cancers and a leading cause of cancer death worldwide (Bray et al., 2024; Hossain et al., 2022; Morgan et al., 2023; Siegel et al., 2024; Sung et al., 2021; Xi & Xu, 2021), and it constitutes a substantial component of the national cancer burden in Indonesia (Bray et al., 2024). These estimates describe the overall burden rather than the frequency of early-onset disease or abscess-associated presentations. Nevertheless, they provide relevant epidemiological context for documenting unusual diagnostic pathways encountered in Indonesian clinical practice (Lestari et al., 2020; Nijman et al., 2023; Pasaribu et al., 2025).

An important clinical challenge arises when a perforated colonic tumor presents as an abdominal wall or deep abscess rather than with recognizable gastrointestinal symptoms. Such presentations have been described mainly in older patients, in whom an apparently localized inflammatory process may originate from an underlying colonic malignancy (Zhou et al., 2023). The patient's relatively young age in the present report therefore makes patient age and the initial clinical presentation relevant dimensions for comparison.

Additional evidence illustrates the diagnostic complexity of abscess-associated colon cancer. Zhou et al. (2023) combined institutional cases with published reports and analyzed 61 patients with colon cancer presenting with retroperitoneal abscesses; the mean patient age was 65 years. The authors reported an overall misdiagnosis rate of 43.9% among cases identified from the literature and noted that the primary tumors were not simultaneously detected on CT in 37.2% of patients for whom imaging information was available. These findings indicate that identifying an abscess does not necessarily establish its underlying etiology. They also support careful interpretation of imaging findings in conjunction with the clinical course, particularly when infection persists or recurs after initial treatment.

Research on early-onset colorectal cancer provides a complementary perspective on diagnostic recognition. Fritz et al. (2023) conducted a matched case-control study involving 5,075 incident cases of EOCRC and identified abdominal pain, rectal bleeding, diarrhea, and

iron-deficiency anemia as signs and symptoms associated with an increased risk of the disease. Among patients whose first recorded sign or symptom occurred between three months and two years before diagnosis, the median diagnostic interval was 8.7 months. Although recurrent iliac region abscesses were not among the identified manifestations, the study highlights the importance of investigating persistent or unexplained abnormalities in younger adults. Severe anemia accompanying recurrent infection therefore warrants further evaluation without assuming an unconfirmed etiology.

Taken together, these studies reveal a specific gap at the intersection of early-onset colorectal cancer and unusual infectious presentations. Population-based research has characterized changing incidence patterns, symptom-based studies have examined common warning signs, and abscess-related reports have documented uncommon manifestations, frequently among older patients. However, the cited evidence provides comparatively limited information on young adults with transverse colon carcinoma presenting as recurrent iliac region abscesses after superficial biopsy reveals nonspecific inflammation. The research gap therefore concerns the diagnostic sequence and interpretation of discordant findings rather than the complete absence of comparable cases. A carefully documented case can extend the existing literature by demonstrating how clinical reassessment can connect an initially localized inflammatory presentation with its underlying intra-abdominal source.

The clinical importance of the present report arises from the patient's documented disease course. A 35-year-old woman initially presented with a painful left iliac region mass, severe anemia, leukocytosis, and a markedly low body mass index. Incision and drainage were performed, and histopathological examination of the abscess wall revealed nonspecific chronic inflammation. One month later, the recurrent collection extended into the suprapubic and right lumbar regions, prompting contrast-enhanced CT and exploratory laparotomy, which revealed a perforated transverse colon tumor. This sequence illustrates why recurrence and progressive anatomical extension warrant further investigation, particularly when the initial tissue sample is obtained from the abscess wall rather than from the suspected primary lesion.

The distinctive contribution of this case lies in the combination of the patient's young age, transverse colon involvement, recurrent left iliac region abscess, extension into additional abdominal regions, and an initially nondiagnostic superficial biopsy. Its novelty is therefore contextual and educational without implying that this represents the first reported occurrence. This report aims to describe the progression from initial abscess management to the identification and surgical treatment of the underlying colonic malignancy. By integrating clinical findings, laboratory results, imaging findings, intraoperative findings, and histopathological examination, the report seeks to clarify the diagnostic limitations encountered and the evidence that prompted further investigation.

Accordingly, the objectives of this report are to document the chronological clinical course, examine the limitations of superficial abscess-wall sampling, and discuss the contribution of contrast-enhanced CT and intraoperative assessment to identifying the underlying lesion. The anticipated clinical benefit is increased awareness of underlying bowel pathology in young adults presenting with recurrent or unexplained abdominal wall infections, particularly when systemic abnormalities coexist. Academically, this report adds a contextual example to the literature on atypical presentations of colorectal cancer and may inform future case series examining diagnostic pathways. Its contribution remains descriptive: a single case

can provide clinically relevant insights but cannot establish diagnostic accuracy, comparative treatment effectiveness, or population-level risk.

METHOD

This study employed a descriptive, retrospective single-patient case report design and was prepared in accordance with the CARE (CAse REport) guidelines. The case involved a 35-year-old woman treated at RSUD dr. R. Soedjati, Grobogan, Central Java, Indonesia, for a recurrent left iliac region abscess subsequently associated with a perforated transverse colon tumor. Data were obtained from medical records covering two hospital admissions, including clinical assessments, laboratory findings, imaging studies, surgical records, and histopathological reports.

Data were collected retrospectively through a review of medical records, clinical photographs, contrast-enhanced abdominal computed tomography (CT) images, and gross specimen documentation. Clinical evaluation included physical examination, anthropometric assessment, complete blood count testing, abdominal CT, and histopathological examination of the initial abscess-wall biopsy and resected colon specimen. Findings were cross-checked across clinical, radiological, intraoperative, and histopathological records to ensure consistency in the case description. Written informed consent was obtained for the publication of the patient's clinical information and images, and personally identifying information was removed.

The clinical course was reconstructed chronologically from the initial presentation, incision and drainage, and abscess-wall biopsy through recurrence, contrast-enhanced CT evaluation, exploratory laparotomy, colon resection, stoma formation, and definitive histopathological examination. Data were analyzed descriptively to characterize the relationship between the presenting infection, underlying colonic lesion, and diagnostic sequence. A narrative literature review was also conducted using PubMed, Google Scholar, and ScienceDirect to identify relevant literature on mucinous adenocarcinoma, transverse colon cancer, early-onset colorectal cancer, perforated colon cancer, retroperitoneal abscesses, and abdominal wall abscesses. Relevant studies were compared with the present case to contextualize its clinical presentation, diagnostic course, and management.

RESULTS AND DISCUSSION

Case Presentation

A 35-year-old woman presented with a painful mass in the left lower quadrant of the abdomen for one week. Vital signs were within normal limits, while her body mass index was 14.98 kg/m², categorized as underweight. Local physical examination revealed a reddish, edematous, fluctuant, and tender mass in the left iliac region. Laboratory results showed severe anemia (hemoglobin 7.0 g/dL), leukocytosis (21,250/ μ L), and thrombocytosis (799,000/ μ L). The patient underwent packed red cell transfusion as well as surgical incision and drainage of the abscess; histopathological examination of the abscess wall tissue showed nonspecific chronic inflammation. The patient was subsequently discharged for outpatient follow-up.



Figure 1. Clinical photo during the first visit to the emergency room

One month later, the patient returned with a mass in the left lower abdomen (at the site of the previous mass), which had extended to the suprapubic region and right lumbar area, with erythema, partial fluctuance, and tenderness on palpation. Laboratory results showed hemoglobin 11.6 g/dL, leukocytes 35,290/ μ L, platelets 753,000/ μ L. Contrast-enhanced abdominal CT scan revealed an irregularly shaped hypodense lesion in the left iliac-left lumbar region, suprapubic region, and right lumbar-iliac region. The patient subsequently underwent exploratory laparotomy, which revealed a collection of pus in the left iliac-left lumbar region, suprapubic region, and right lumbar-iliac region, along with an intraluminal mass of the transverse colon with perforation. Pus drainage and resection of the transverse colon were performed, followed by construction of a double-barrel stoma. Histopathological examination revealed low-grade adenocarcinoma, not otherwise specified (NOS), with both proximal and distal margins free of tumor; the appendix showed nonspecific chronic appendicitis, with positive tumor budding.

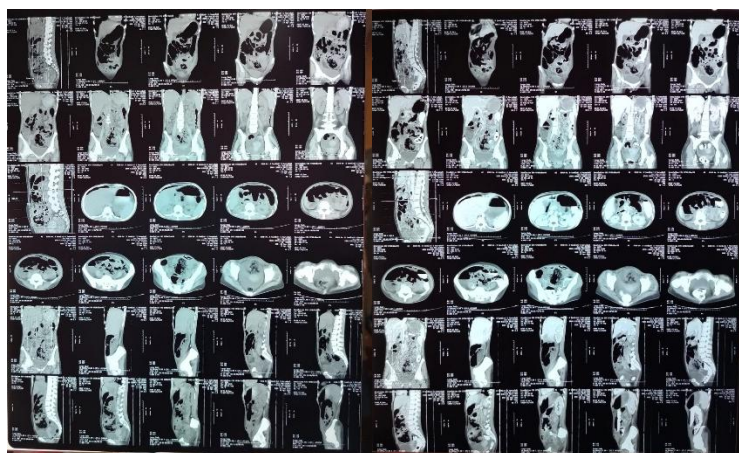


Figure 2. Results of abdominal CT scan with contrast



Figure 3. Macroscopic picture of transverse colon tumor resection

This case presents an atypical clinical manifestation of transverse colon mucinous adenocarcinoma in a 35-year-old young female patient. Early-onset colorectal cancer (EOCRC) is currently a global health concern, given the increasing incidence trend in populations under 50 years of age (Akimoto et al., 2021; Sinicrope, 2022). Unlike sporadic colorectal cancer in older populations, EOCRC is more frequently associated with aggressive histopathological profiles, such as poor differentiation, the presence of signet-ring cells, and mucinous adenocarcinoma (MAC) (Aldriwesh, 2024; Patel et al., 2022). The MAC subtype is defined by extracellular mucin accounting for at least 50% of tumor volume (Luo et al., 2019), which may confer increased intratumoral pressure, local invasion, and a risk of microperforation.

Anatomically, the transverse colon is partially located within the intraperitoneal cavity. However, the local invasiveness of the tumor in this patient triggered a contained perforation directed toward the extra peritoneum. Suppurative fluid and inflammatory cells extravasated along the extra peritoneal fascial planes, which explains why the patient presented with an abscess in the left iliac region (Zhou et al., 2023). This is consistent with the literature, which states that perforated malignancies of the transverse and descending colon can manifest as abdominal wall, inguinal, or retroperitoneal abscesses that clinically closely resemble primary soft tissue infection (Zhou et al., 2023).

This clinical presentation represents a classic and highly challenging diagnostic pitfall. The initial incision and drainage with biopsy of the superficial abscess base at the patient's first visit showed only nonspecific chronic inflammation. This misinterpretation commonly occurs because the biopsy sample was taken from the area of secondary inflammatory reaction (the abscess wall), while the primary tumor was located deep within the abdominal cavity (Zhou et al., 2023). The hyperinflammatory state accompanied by severe malnutrition (underweight BMI and anemia) in a young patient with a recalcitrant abscess should have served as a red flag for a deeper underlying pathological process.

The definitive diagnosis was only established one month later, when the infection had spread and contrast-enhanced abdominal CT scan was performed. Contrast-enhanced CT is the preferred imaging modality for evaluating intra-abdominal and retroperitoneal abscesses unresponsive to minor surgical management, as it can map the extent of abscess spread and help

identify structural bowel abnormalities as the source of infection, although the primary tumor may not be visualized simultaneously in a proportion of cases (Zhou et al., 2023).

Surgical management of massive intra-abdominal abscess due to malignant perforation requires an approach that combines source control with oncological management (Dekker et al., 2019). Exploratory laparotomy with resection of the transverse colon was absolutely necessary to remove the primary tumor and necrotic tissue. Given that the abdominal cavity had been extensively contaminated with pus (intra-abdominal sepsis), which increases the risk of anastomotic leakage, construction of a double-barrel stoma was the most rational and safe surgical decision (damage control surgery) for fecal diversion during the acute phase.

CONCLUSION

This case illustrated that perforated transverse colon carcinoma can present as a recurrent left iliac region abscess in a young adult, thereby obscuring the underlying malignancy. The initial histopathological examination of the abscess wall revealed nonspecific chronic inflammation, whereas subsequent contrast-enhanced abdominal computed tomography (CT) demonstrated extensive abscess formation, and exploratory laparotomy revealed a perforated transverse colon tumor. These findings highlighted the limitations of superficial tissue sampling and the importance of further evaluation when infection recurs in the presence of systemic abnormalities. Integration of clinical, radiological, intraoperative, and histopathological findings was essential for establishing the diagnosis and guiding surgical management.

Future research should include multicenter case series or prospective observational studies to characterize abscess-associated colorectal cancer in younger patients and identify factors associated with delayed diagnosis. Particular attention should be given to abscess location, recurrence after drainage, associated laboratory abnormalities, imaging characteristics, and tissue-sampling strategies. Standardized histopathological reporting could help clarify tumor subtypes, while longer-term follow-up could document postoperative complications, subsequent oncological treatment, recurrence, and survival outcomes. Such evidence may contribute to more effective diagnostic pathways for patients presenting with recurrent abdominal wall, retroperitoneal, or other deep abdominal abscesses.

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CONFLICT OF INTEREST

The authors declare that there are no personal, commercial, or financial conflicts of interest that could have influenced the conduct or outcomes of this study.

Afif Iman Hidayat contributed to the study design, data collection and processing, system development, analysis of the results, and preparation of the manuscript.

DECLARATION OF GENERATIVE ARTIFICIAL INTELLIGENCE USE

During the preparation of this article, the authors used generative artificial intelligence (AI) as an assistive tool for language refinement, manuscript organization, and grammatical

editing. The use of AI was limited and remained under the authors' supervision. All data, analyses, interpretations, and scientific content presented in this article were reviewed and verified by the authors. The authors assume full responsibility for the accuracy, originality, and final content of the manuscript.

REFERENCES

- Akimoto, N., Ugai, T., Zhong, R., Hamada, T., Fujiyoshi, K., Giannakis, M., Wu, K., Cao, Y., Ng, K., & Ogino, S. (2021). Rising incidence of early-onset colorectal cancer—A call to action. *Nature Reviews Clinical Oncology*, 18(4), 230–243. <https://doi.org/10.1038/s41571-020-00445-1>
- Aldriwesh, M. G. (2024). Comparative analysis of the clinical aspects of colorectal cancer in young adult and older adult patients in Saudi Arabia. *Frontiers in Oncology*, 14, Article 1460636. <https://doi.org/10.3389/fonc.2024.1460636>
- Bray, F., Laversanne, M., Sung, H., Ferlay, J., Siegel, R. L., Soerjomataram, I., & Jemal, A. (2024). Global cancer statistics 2022: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA: A Cancer Journal for Clinicians*, 74(3), 229–263. <https://doi.org/10.3322/caac.21834>
- Dekker, E., Tanis, P. J., Vleugels, J. L. A., Kasi, P. M., & Wallace, M. B. (2019). Colorectal cancer. *The Lancet*, 394(10207), 1467–1480. [https://doi.org/10.1016/S0140-6736\(19\)32319-0](https://doi.org/10.1016/S0140-6736(19)32319-0)
- Fritz, C. D. L., Otegbeye, E. E., Zong, X., Demb, J., Nickel, K. B., Olsen, M. A., Mutch, M., Davidson, N. O., Gupta, S., & Cao, Y. (2023). Red-flag signs and symptoms for earlier diagnosis of early-onset colorectal cancer. *Journal of the National Cancer Institute*, 115(8), 909–916. <https://doi.org/10.1093/jnci/djad068>
- Hossain, M. S., Karuniawati, H., Jairoun, A. A., Urbi, Z., Ooi, D. J., John, A., Lim, Y. C., Kibria, K. M. K., Mohiuddin, A. K. M., Ming, L. C., Goh, K. W., & Hadi, M. A. (2022). Colorectal cancer: A review of carcinogenesis, global epidemiology, current challenges, risk factors, preventive and treatment strategies. *Cancers*, 14(7), Article 1732. <https://doi.org/10.3390/cancers14071732>
- Lestari, B. W., McAllister, S., Hadisoemarto, P. F., Afifah, N., Jani, I. D., Murray, M., van Crevel, R., Hill, P. C., & Alisjahbana, B. (2020). Patient pathways and delays to diagnosis and treatment of tuberculosis in an urban setting in Indonesia. *The Lancet Regional Health—Western Pacific*, 5.
- Luo, C., Cen, S., Ding, G., & Wu, W. (2019). Mucinous colorectal adenocarcinoma: Clinical pathology and treatment options. *Cancer Communications*, 39, Article 13. <https://doi.org/10.1186/s40880-019-0361-0>
- Morgan, E., Arnold, M., Gini, A., Lorenzoni, V., Cabasag, C. J., Laversanne, M., Vignat, J., Ferlay, J., Murphy, N., & Bray, F. (2023). Global burden of colorectal cancer in 2020 and 2040: Incidence and mortality estimates from GLOBOCAN. *Gut*, 72(2), 338–344. <https://doi.org/10.1136/gutjnl-2022-327736>
- Nijman, G., Imran, D., Dian, S., Ganiem, A. R., Estiasari, R., Maharani, K., Yolanda, R., Supriatin, M., Alisjahbana, B., & Lestari, B. W. (2023). Tuberculous meningitis patient pathways and delays to diagnosis in Indonesia: a retrospective cohort study. *BMJ Public Health*, 1(1).
- Pasaribu, Y. M., Lubis, R. A. S., Shane, F., & Simanjuntak, L. T. (2025). Sociocultural Determinants of Clinical Autopsy Refusal and Their Medicolegal Impact on Diagnostic Accuracy in Indonesian Tertiary Hospitals: A Retrospective Cohort Study. *Sriwijaya Journal of Forensic and Medicolegal*, 3(2), 73–88.
- Patel, S. G., Karlitz, J. J., Yen, T., Lieu, C. H., & Boland, C. R. (2022). The rising tide of early-

- onset colorectal cancer: A comprehensive review of epidemiology, clinical features, biology, risk factors, prevention, and early detection. *The Lancet Gastroenterology & Hepatology*, 7(3), 262–274. [https://doi.org/10.1016/S2468-1253\(21\)00426-X](https://doi.org/10.1016/S2468-1253(21)00426-X)
- Siegel, R. L., Giaquinto, A. N., & Jemal, A. (2024). Cancer statistics, 2024. *CA: A Cancer Journal for Clinicians*, 74(1), 12–49. <https://doi.org/10.3322/caac.21820>
- Siegel, R. L., Wagle, N. S., Cercek, A., Smith, R. A., & Jemal, A. (2023). Colorectal cancer statistics, 2023. *CA: A Cancer Journal for Clinicians*, 73(3), 233–254. <https://doi.org/10.3322/caac.21772>
- Sinicrope, F. A. (2022). Increasing incidence of early-onset colorectal cancer. *New England Journal of Medicine*, 386(16), 1547–1558. <https://doi.org/10.1056/NEJMra2200869>
- Spaander, M. C. W., Zauber, A. G., Syngal, S., Blaser, M. J., Sung, J. J., You, Y. N., & Kuipers, E. J. (2023). Young-onset colorectal cancer. *Nature Reviews Disease Primers*, 9, Article 21. <https://doi.org/10.1038/s41572-023-00432-7>
- Sung, H., Ferlay, J., Siegel, R. L., Laversanne, M., Soerjomataram, I., Jemal, A., & Bray, F. (2021). Global cancer statistics 2020: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA: A Cancer Journal for Clinicians*, 71(3), 209–249. <https://doi.org/10.3322/caac.21660>
- Torres, J. A. S., Thomas, G., & Van Dellen, J. (2026). Psoas Abscess: A Possible Missed Diagnosis in the Emergency Department. *Cureus*, 18(1).
- Xi, Y., & Xu, P. (2021). Global colorectal cancer burden in 2020 and projections to 2040. *Translational Oncology*, 14(10), Article 101174. <https://doi.org/10.1016/j.tranon.2021.101174>
- Xu, B. Y., Vasanwala, F. F., & Low, S. G. (2019). A case report of an atypical presentation of pyogenic iliopsoas abscess. *BMC Infectious Diseases*, 19(1), 58.
- Zhou, J., Wan, S., Li, C., Ding, Z., Qian, Q., Yu, H., & Li, D. (2023). Retroperitoneal abscess as a presentation of colon cancer: The largest case set analysis to date, which extracted from our unit and the literature. *Frontiers in Oncology*, 13, 1198592.