

CASE REPORT

SYNCHRONOUS PRIMARY CERVICAL AND COLORECTAL CANCERS IN A 25-YEAR-OLD WOMAN

Charles Okwonna¹, Nafisa B. Iliyasu², Abba A. Tijjani³, Sunday A. Adewuyi², Adamu Abdullahi², Shehu S. Umar²

1. St Luke's Cancer Centre, Royal Surrey County Hospital, Guildford, Surrey
2. Department of Radiation and Clinical Oncology, Ahmadu Bello University Teaching Hospital, Zaria, Kaduna State, Nigeria
3. Department of Clinical Oncology, University of Maiduguri Teaching Hospital, Maiduguri, Borno State, Nigeria

Corresponding Author:

Dr. Charles Okwonna, St Luke's Cancer Centre, Royal Surrey County Hospital, Guildford, Surrey, charles.okwonna@npmcn.edu.ng

Citation: Okwonna C, Iliyasu NB, Tijjani AA, Adewuyi SA, Abdullahi A, Umar SS. Synchronous Primary Cervical and Colorectal Cancers in a 25-year-old woman. *Niger J Oncol* 2025;1(2): 337-343

ABSTRACT

Introduction: Synchronous cancer refers to two or more malignancies co-existing in a patient at the time of diagnosis or within 6 months of diagnosing the first. Cervical cancer is the commonest gynecological malignancy in Nigeria, while colorectal cancer the 4th commonest malignancy in Nigeria.

Case Presentation: We present a 25-year-old grand multi-para who presented the hospital with a 20-month history of recurrent bleeding per rectum and a 4-month history of persistent foul smelling watery vaginal discharge. Physical examination at presentation revealed a mildly pale young woman with multiple discrete inguinal lymphadenopathies, with a Karnofsky performance status (KPS) of 90. Abdominopelvic ultrasound scan showed a rectal mass measuring 12 x 11.4 cm that was clearly delineated from the uterus, cervix and urinary bladder. There was also a hypo echoic mass in the region of the cervix uteri. These findings were further confirmed with a pelvic MRI scan. She had a colonoscopy done with the findings of a near obstructing irregular luminal rectal mass about 3-4 cm in vertical extent and extending up to about 5 cm above the anal verge, while the other aspects of the colon were normal. Separate biopsies were taken for the rectal and cervical masses. The reports of histology were well differentiated mucinous adenocarcinoma and Squamous Cell Carcinoma Large Cell Non-keratinizing for the rectal and cervical masses respectively. **Conclusion:** Synchronous primary cervical and colorectal cancers are extremely rare. The risk factors for each of the malignancies may overlap with that of the other, thereby increasing the chances of synchronicity in an individual. More routine screening for cancer predisposing conditions like Li-Fraumeni syndrome is advocated in resource-constrained countries

Keywords: Synchronous malignancies, cervical cancer, colorectal cancer, young adult cancer

INTRODUCTION

Synchronous cancer refers to two or more malignancies co-existing in a patient at the time of diagnosis or within 6 months of diagnosing the first.¹ Cervical cancer is the second commonest gynecological malignancy in western world after endometrial cancer, but the commonest gynaecological malignancy in developing countries.² Over eighty percent of the new cases of cervical cancer are diagnosed in developing nations, where it is the second most common cancer in females (after breast cancer) and the commonest gynecological cancer.^{2,3} Studies in various parts of Nigeria showed cervical cancer to be the commonest gynecological malignancy.⁴⁻⁶ Cervical cancer rarely occurs in patients below 30 years of age, except in HIV seropositive patients.^{7,8}

Worldwide, colorectal cancer is the third most common cancer and the second most common cause of cancer death, causing about 903,859 deaths worldwide.^{9,10} Although the global incidence has not changed significantly over the past 30 years, the mortality rate especially in females has reduced.¹¹ Colorectal cancer is the third commonest cause of cancer related death in the United States, where an estimated 49,190 mortalities occurred in 2018 alone.^{12,13}

The incidence of colorectal cancer is however lower in Nigeria and parts of Africa.¹⁴ Over 90% of colorectal cancer cases are said to occur in people aged 50 years and above, however the incidence rate is about the same in both sexes.¹⁵

A case of synchronous primary cervical and colorectal cancers in a young female is reported.

CASE REPORT

SU, a 25-year-old Para 10⁺ housewife was initially seen at the surgical out-patient clinic of Ahmadu Bello University Zaria, where she presented with a 20-month history of recurrent bleeding per rectum and a 4-month history of persistent foul smelling watery vaginal discharge. There was associated change in bowel habit (increased frequency, with passage of small volume faeces) and significant weight loss. She had no vomiting, abdominal distention, dysuria, passage of faeces per vaginum, cough, jaundice or any other symptom. She consumed red meat routinely in her diet but never smoked nor consumed alcoholic beverages. No known contact with carcinogenic chemicals or family history of cancer. She made her coital debut at 12 years, with age at first childbirth being 13 years. She is the second of 2 wives and is in her first order of marriage. Neither a known diabetic nor hypertensive and her retroviral status is negative. No history of anoreceptive sexual intercourse.

Physical examination at presentation revealed a mildly pale young woman with multiple discrete inguinal lymphadenopathies, with a Karnofsky performance status (KPS) of 90. There were no masses palpable per abdomen, but a digital rectal examination showed a circumferential mass on the posterior rectal wall that was located about 4cm from the anal verge which bled on contact. On vaginal examination, there was a nodular exophytic mass that measured 2.5 x 2.5cm located on the anterior lip of the cervix and involving the upper ²/₃ of the vagina, with free parametria bilaterally.

MANAGEMENT AND OUTCOME

Abdominopelvic ultrasound scan showed a rectal mass measuring 12 x 11.4 cm that was

clearly delineated from the uterus, cervix and urinary bladder. There was also a hypo echoic mass in the region of the cervix uteri. These findings were further confirmed with a pelvic MRI scan. The chest radiograph and other staging investigations revealed normal studies. Hematological profile, renal and liver function tests were optimal, and intravenous urography did not reveal any derangement.

She had a colonoscopy done with the findings of a near obstructing irregular luminal rectal mass about 3-4 cm in vertical extent and extending up to about 5 cm above the anal verge, while the other aspects of the colon were normal. Multiple biopsies were taken from the mass, as well as random biopsies from other normal colonic mucosae. The histology showed well differentiated mucinous adenocarcinoma, at least Dukes B.

An examination under anaesthesia by the gynaecologists confirmed an exophytic irregular cervical mass (measuring 2 x 2.5cm) with involvement of the upper two-thirds of the vagina but free parametria and lateral pelvic walls. The mass was staged clinically as FIGO stage IIA and biopsy was taken for histology, which later reported Squamous Cell Carcinoma Large Cell Non-keratinizing.

A diagnosis of synchronous cervical squamous cell carcinoma and rectal adenocarcinoma was made. She had diverting colostomy and was subsequently commenced on neoadjuvant chemotherapy using Tabs Capecitabine 2g Bd for 14 days, IV Oxaliplatin 85mg/m² (130mg) and IV Paclitaxel 135mg/m² (220mg) 3-weekly. She is to commence concurrent chemoradiation therapy after the 4th cycle.

DISCUSSION

Cervical cancer has been reported in young patients, including teenagers, although this is a very rare occurrence.¹³ Colorectal cancers, though commoner in patients aged 50 years and above, there is a significant subgroup of patients under 30 years of age.¹³ It is even rarer to see both malignancies co-existing in a patient less than 30 years of age.¹³

The risk factors, clinicopathological features, as well as treatment approaches for both malignancies are totally different. However genetic mutations, as found in conditions like Li-Fraumeni syndrome, may predispose one to developing both malignancies synchronously and even metachronously.¹⁶

Predisposing factors for developing colorectal cancer include diets rich in animal fats, hereditary syndromes like Lynch syndrome (hereditary non polyposis coli), inflammatory bowel diseases and excessive tobacco consumption.¹³ On the other hand, the risk factors for cervical cancer include multiparity, early sexual exposure, early age at first childbirth, multiple sexual partners and spouse with multiple sexual partners, amongst other risk factors for human papilloma virus (HPV) infection.^{17,18} The patient in this case consumed animal fat routinely, made her sexual debut at 12 years and age at first childbirth was 13 years. She is Para 10⁺ and is married to a spouse with other sexual partners.

The pathogenesis of cervical cancer is such that over 90% are caused by HPV infections, particularly serotypes 16, 18.^{17,19} The disease often progresses from preinvasive stage to frankly malignant phase, usually over a period of 15-20 years from infection.²⁰ Colorectal cancers have a pathognomonic adenoma-

carcinoma sequence such that about 90% of sporadic colorectal cancers are said to arise from these adenomas.^{21,22}

Treatment is usually surgical excision for early diseases: trachelectomy, simple hysterectomy or total abdominal hysterectomy for cervical cancer or polypectomy and proctectomy/hemicolectomy for early rectal/colonic cancers.^{23–25} For locally advanced and inoperable cases, the preferred treatment is chemoradiation, either concurrently or sequentially.^{26,27} The total radiation dose is usually between 45Gy – 55Gy.^{28,29}

The chemotherapy option is usually tailored towards the histology. Generally, a chemotherapy regimen containing a third-generation platinum (Oxaliplatin), 5-Fluorouracil either as oral form (Capecitabine) or parenteral, is preferred for adenocarcinoma, in addition to a taxane for SCC.^{30,31}

Our patient is currently doing well on CapeOx plus Paclitaxel neoadjuvant chemotherapy, with a plan for radiation therapy to the pelvis after adequate tumour down staging.

CONCLUSION

Synchronous primary cervical and colorectal cancers are extremely rare. The risk factors for each of the malignancies may overlap with that of the other, thereby increasing the chances of synchronicity in an individual. More routine screening for cancer predisposing conditions like Li-Fraumeni syndrome is advocated in resource-constrained countries.

REFERENCES

1. Asaad A, Barron M, Rasheed N, Idaewor P, Saad Abdalla Al-Zawi A. The Rare Diagnosis of Synchronous Breast and Colonic Cancers: A Case Report and Review of Literature. *Cureus* [Internet]. 2021 Feb 13 [cited 2025 May 25];13. Available from: <https://doi.org/10.7759/cureus.13314>
2. Singh D, Vignat J, Lorenzoni V, Eslahi M, Ginsburg O, Lauby-Secretan B, et al. Global estimates of incidence and mortality of cervical cancer in 2020: a baseline analysis of the WHO Global Cervical Cancer Elimination Initiative. *Lancet Glob Health* [Internet]. 2023 Feb 1 [cited 2025 May 25];11(2):197–206. Available from: [https://doi.org/10.1016/S2214-109X\(22\)00501-0](https://doi.org/10.1016/S2214-109X(22)00501-0)
3. Allagoa DO, Obagah L, Oriji PC, Tekenah ES, Njoku C, Afolabi AS, et al. Cervical Cancer in a Tertiary Hospital in South-South, Nigeria: A 5-Year Review. *Journal of Cancer and Tumor International* [Internet]. 2021 May 4 [cited 2025 May 25];11(2):28–36. Available from: <https://scispace.com/papers/cervical-cancer-in-a-tertiary-hospital-in-south-south-4enesjfla2>
4. Raheem N, Dahiru AMC, Jangle NL, Sule AA. Histopathological pattern of cervical cancers in Yola, North-Eastern Nigeria. *Journal of diagnostic and academic pathology* [Internet]. 2024 Jul 1 [cited 2025 May 25];1(2):55–60. Available from: <https://scispace.com/papers/histopathological-pattern-of-cervical-cancers-in-yola-north-6j5fvzay3ykn>
5. Pattern of Gynaecological Malignancies at a University Teaching Hospital in Southwest Nigeria: A 5-Year Review. *Nigerian Medical Journal* [Internet]. 2022 Sep 11 [cited 2025 May 25];63:127–32. Available from: <https://scispace.com/papers/pattern-of->

- gynaecological-malignancies-at-a-university-4k4rex5fbu
6. Olaleye AA, Nwafor JI, Adiele AN, Obi CN, Asogwa SU, Ibo CC, et al. Profile of Gynaecological Malignancies in Alex Ekwueme Federal University Teaching Hospital, Abakaliki, Southeastern Nigeria. *Int J Phys Med Rehabil* [Internet]. 2019 Sep 12 [cited 2025 May 25];10(9):428–38. Available from: <https://scispace.com/papers/profile-of-gynaecological-malignancies-in-alex-ekwueme-29ouk0br08>
 7. Budiana ING, Mahendra INB, Winata IGS, Saspiyana KY, Duarsa KA, Suwanpramana PM, et al. Risk factors and characteristics of cervical cancer patients under 40 years old at Prof Dr I.G.N.G. Ngoerah Hospital Denpasar, Bali from January until December 2022. *Indonesian Journal of Perinatology* [Internet]. 2023 Aug 3 [cited 2025 May 26];4(2):22–6. Available from: <https://www.perinasiajournal.id/index.php/InaJPerinatol/article/view/33>
 8. Gravdal BH, Lönnberg S, Skare GB, Sulo G, Bjørge T. Cervical cancer in women under 30 years of age in Norway: a population-based cohort study. *BMC Womens Health* [Internet]. 2021 Dec 1 [cited 2025 May 26];21(1):1–8. Available from: <https://bmcwomenshealth.biomedcentral.com/articles/10.1186/s12905-021-01242-3>
 9. Colorectal cancer [Internet]. [cited 2025 May 26]. Available from: <https://www.who.int/news-room/fact-sheets/detail/colorectal-cancer>
 10. Bray F, Laversanne M, Sung H, Ferlay J, Siegel RL, Soerjomataram I, et al. Global cancer statistics 2022: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA Cancer J Clin* [Internet]. 2024 May 1 [cited 2025 May 26];74(3):229–63. Available from: [/doi/pdf/10.3322/caac.21834](https://doi/pdf/10.3322/caac.21834)
 11. Miller KD, Nogueira L, Devasia T, Mariotto AB, Yabroff KR, Jemal A, et al. Cancer treatment and survivorship statistics, 2022. *CA Cancer J Clin* [Internet]. 2022 Sep [cited 2025 May 26];72(5):409–36. Available from: <https://www.cancer.org/cancer/types/colon-rectal-cancer/about/key-statistics.html>
 12. Boyle P, Langman JS. Epidemiology. *BMJ* [Internet]. 2000 Sep 30 [cited 2025 May 26];321(7264):805. Available from: <https://pubmed.ncbi.nlm.nih.gov/11009523/>
 13. Haggard FA, Boushey RP. Colorectal cancer epidemiology: Incidence, mortality, survival, and risk factors. *Clin Colon Rectal Surg* [Internet]. 2009 [cited 2025 May 26];22(4):191–7. Available from: <https://pubmed.ncbi.nlm.nih.gov/21037809/>
 14. Irabor DO. Colorectal Carcinoma: Why Is There a Lower Incidence in Nigerians When Compared to Caucasians? *J Cancer Epidemiol* [Internet]. 2011 [cited 2025 May 26]; 2011:675154. Available from: <https://pmc.ncbi.nlm.nih.gov/articles/PMC3255166/>
 15. Ezenkwa US, Lawan AI, Garbati MA, Suleiman DE, Katagum DA, Kabir A, et al. Emerging cancer disease burden in a rural sub-Saharan African population: northeast Nigeria in focus. *Front Oncol* [Internet]. 2024 Jul 17 [cited 2025 May 26];14. Available from: <https://scispace.com/papers/emerging->

- cancer-disease-burden-in-a-rural-sub-saharan-3lp91bop3o
16. Ishikawa M, Nakayama K, Nakamura K, Ono R, Yamashita H, Ishibashi T, et al. High frequency of POLE mutations in synchronous endometrial and ovarian carcinoma. *Hum Pathol* [Internet]. 2019 Mar 1 [cited 2025 May 26]; 85:92–100. Available from: <https://doi.org/10.1016/j.humpath.2018.11.001>
 17. Kashyap N, Krishnan N, Kaur S, Ghai S. Risk Factors of Cervical Cancer: A Case-Control Study. *Asia Pac J Oncol Nurs* [Internet]. 2019 Jul 1 [cited 2025 May 26];6(3):308. Available from: <https://pmc.ncbi.nlm.nih.gov/articles/PMC6518992/>
 18. Cervical Cancer Causes, Risk Factors, and Prevention - NCI [Internet]. [cited 2025 May 26]. Available from: <https://www.cancer.gov/types/cervical/causes-risk-prevention>
 19. HPV and Cancer - NCI [Internet]. [cited 2025 May 26]. Available from: <https://www.cancer.gov/about-cancer/causes-prevention/risk/infectious-agents/hpv-and-cancer>
 20. Fowler JR, Maani E V., Dunton CJ, Gasalberti DP, Jack BW. Cervical Cancer. *Encyclopedia of Behavioral Medicine* [Internet]. 2023 Nov 12 [cited 2025 May 26];350–1. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK431093/>
 21. Goosenberg E, Kaur A, Babiker HM. A Review of Hereditary Colorectal Cancers. *StatPearls* [Internet]. 2025 Apr 4 [cited 2025 May 26]; Available from: <https://www.ncbi.nlm.nih.gov/books/NBK538195/>
 22. Nguyen LH, Goel A, Chung DC. Pathways of Colorectal Carcinogenesis. *Gastroenterology* [Internet]. 2019 Jan 1 [cited 2025 May 26];158(2):291. Available from: <https://pmc.ncbi.nlm.nih.gov/articles/PMC6981255/>
 23. Zhou Y, Rassy E, Coutte A, Achkar S, Espenel S, Genestie C, et al. Current Standards in the Management of Early and Locally Advanced Cervical Cancer: Update on the Benefit of Neoadjuvant/Adjuvant Strategies. *Cancers (Basel)* [Internet]. 2022 May 1 [cited 2025 May 26];14(10). Available from: <https://doi.org/10.3390/cancers14102449>
 24. Binda C, Secco M, Tuccillo L, Coluccio C, Liverani E, Jung CFM, et al. Early Rectal Cancer and Local Excision: A Narrative Review. *J Clin Med* [Internet]. 2024 Apr 1 [cited 2025 May 26];13(8). Available from: <https://doi.org/10.3390/jcm13082292>
 25. van Oostendorp SE, Smits LJH, Vroom Y, Detering R, Heymans MW, Moons LMG, et al. Local recurrence after local excision of early rectal cancer: a meta-analysis of completion TME, adjuvant (chemo)radiation, or no additional treatment. *Br J Surg* [Internet]. 2020 Dec 1 [cited 2025 May 26];107(13):1719–30. Available from: <https://doi.org/10.1002/bjs.12040>
 26. Altomare NJ, Mulcahy MF. Evolution of therapy for locally advanced rectal cancer. *J Surg Oncol* [Internet]. 2024 Jan 1 [cited 2025 May 26];129(1):78–84. Available from: <https://doi.org/10.1002/jso.27531>
 27. Massobrio R, Bianco L, Campigotto B, Attianese D, Maisto E, Pascotto M, et al.

- New Frontiers in Locally Advanced Cervical Cancer Treatment. *J Clin Med* [Internet]. 2024 Aug 1 [cited 2025 May 26];13(15). Available from: <https://doi.org/10.3390/jcm13154458>
28. Todo Y, Watari H. Concurrent chemoradiotherapy for cervical cancer: Background including evidence-based data, pitfalls of the data, limitation of treatment in certain groups. *Chinese Journal of Cancer Research* [Internet]. 2016 Apr 1 [cited 2025 May 26];28(2):221–7. Available from: <https://pubmed.ncbi.nlm.nih.gov/27199520/>
29. Seymour MT. Colorectal cancer: Treatment of advanced disease. *Cancer Treat Rev* [Internet]. 1998 [cited 2025 May 26];24(2):119–31. Available from: <https://pubmed.ncbi.nlm.nih.gov/9728422/>
30. Alvarez G, Eurolo J, Canales CP. Subjects, methods, and results. *Br Med J* [Internet]. 1980 [cited 2025 May 26];587. Available from: <https://www.bmj.com/>
31. Chemotherapy for colorectal cancer | Canadian Cancer Society [Internet]. [cited 2025 May 26]. Available from: <https://cancer.ca/en/cancer-information/cancer-types/colorectal/treatment/chemotherapy>