



RESEARCH ARTICLE

Care after colorectal cancer surgery: the case for nurse-led outpatient clinics

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ABSTRACT

Late complications following colorectal cancer surgery are prevalent, with over 50% of patients experiencing bowel and stool symptoms, up to 70% facing urinary dysfunction, and sexual dysfunction affecting 76% of men and 56% of women. Additionally, 24-39% of patients report depressive symptoms within the first year post-surgery. Traditional physician-led outpatient care models often fail to address the multifaceted needs of these patients, focusing primarily on recurrence detection. In contrast, nurse-led clinics, which are gaining popularity in various areas of cancer care, offer a holistic approach that encompasses both physiological and psychosocial support. We established a specialized nurse-led outpatient clinic for managing late complications after colorectal and anal cancer surgeries. Our model empowers specialized nurses to diagnose and treat a wide range of symptoms independently, involving physicians only when necessary. This nurse-led approach leverages the unique strengths of nursing practice, including empathy, patient education, and comprehensive symptom management, to support patients' transition to a "new normal" post-surgery. Nurses in our clinic follow treatment algorithms for common symptoms and consult with medical specialists for complex or unresponsive cases. The nurse-led clinic model enhances patient satisfaction, quality of life, and healthcare resource efficiency. However, challenges such as defining the scope of practice, ensuring adequate training, and integrating this model into existing healthcare systems must be addressed. Our experience suggests that this model can be broadly adopted across other healthcare areas. Future research should focus on evaluating long-term outcomes and strategies for broader implementation. In conclusion, integrating nurse-led consultations within a collaborative framework that includes doctors for specialized interventions represents a progressive approach to postoperative care for colorectal and anal cancer patients. This model promises to improve patient outcomes, satisfaction, and healthcare resource optimization by leveraging the holistic care approach of nurses alongside the specialized expertise of doctors.

Keywords: Colorectal cancer, complications, management, nurse-led, collaboration

Introduction

The prevalence of late complications following colorectal cancer surgery is high and more than 50% of the patients experience bowel and stool symptoms,¹⁻³ up to 70% of the patients experience urinary dysfunction,³⁻⁵ and sexual dysfunction is also common affecting 76% of men⁵⁻⁷ and 56% of women.^{3,5,7} Furthermore, depressive symptoms are prevalent in 24-39% of patients within the first year after surgery.⁸ Some of these symptoms can be handled in routine surgical outpatient clinics, but some of the symptoms will require specialized follow-up care. We have established a specialized unit for late complications after surgery for colorectal and anal cancer,⁹ and we have chosen a concept, where patient consultations are run by specialized nurses. They can diagnose and treat a variety of symptoms by themselves, and the physicians and surgeons are only involved in disease-specific consultation tasks – thus it is a nurse-led outpatient clinic.

Late complications following colorectal cancer surgery, such as bowel-, urination-, and sexual dysfunction, emotional distress, and lifestyle adaptation issues, significantly impact patients' quality of life.¹⁰ Traditional postoperative outpatient care models, heavily centered on physician-led interventions and primarily aimed at identifying recurrences, frequently overlook the multifaceted needs of patients.^{11,12} In other areas of cancer care, nurse-led clinics have gained interest because nurses fulfill their patients' biopsychosocial support needs.^{13,14} We therefore propose a new model for long-term follow-up care after curative surgery for colorectal and anal cancer since these patients experience an array of symptoms leading to impaired quality of life although cured of their cancer disease.⁹

Integrating nurses into postoperative follow-up care has shown significant benefits in other areas of healthcare, both theoretically and in practice. Nurses are uniquely positioned to provide comprehensive, patient-centered care due to their training in holistic health approaches. Studies have demonstrated that nurse-led interventions can improve patient outcomes by offering continuous, personalized care that addresses both physical and emotional needs.^{15,16} Furthermore, nurse-led clinic for colorectal cancer follow-up can achieve satisfactory results with detection rates of recurrent or metastatic disease comparable to consultant follow-up.^{17,18} By involving nurses in the postoperative care of colorectal cancer patients, we can leverage their expertise in symptom management, patient education, and emotional support, which are crucial for improving overall quality of life.¹⁹ This approach not only alleviates the burden on physicians but also fosters a collaborative environment where patients receive more thorough and empathetic care.^{20,21}

We wanted to report and discuss our experience with such a clinic where dedicated nurses run the daily workflow and refer to medical and surgical specialists when needed. This paper argues for the establishment of nurse-led clinics, emphasizing the holistic care approach inherent to nursing practice. By foregrounding the nursing perspective in postoperative care, we propose a model that addresses both the physiological

and psychosocial needs of patients, thereby enhancing overall care quality and patient as well as staff satisfaction.

Why a nurse-led clinic

Nurses are adept at recognizing and addressing the holistic needs of patients.¹³ Their training emphasizes empathy, patient education to improve patients' self-management of symptoms to improve their quality of life, and the professional management of physical and emotional symptoms in a cohesive manner. This set of skills is particularly valuable in supporting patients through the transition to a "new normal" after colorectal cancer surgery, addressing not only cancer-specific illness and risk of recurrence but also the physical symptoms as well as emotional and social implications of their condition. It is important to emphasize, that nurses in our clinic do not only address the emotional and social situation of the patient, but they take care of a variety of physical symptoms at a basic level/initial stage following principles of treatment algorithms that we have developed.²² They are therefore able to take care of most of the problems that are presented by the patients and they only consult with medical specialists when initial treatment lacks effect or if the symptoms are rare and not covered in the treatment algorithms.

The nurse-led clinic model fosters a collaborative environment where nurse practitioners act as the primary point of contact for patients, with physicians providing specialized medical oversight, and the nurses can take care of most consultations without involving physicians or surgeons. This model with a basis of specialized nurses and the involvement of doctors and other specialists on a need basis ensures that patients receive comprehensive care that encompasses both the management of complex medical issues and the holistic support necessary for effective recovery and adaptation post-surgery.

This collaborative model has in the primary care setting shown that physicians are supportive of nurse practitioner practice and trust and respect their decisions,²³ and this is also the situation in our clinic in a hospital setting. Our approach underscores the potential of nurse-led outpatient clinics to offer comprehensive care by leveraging the strengths of both nursing and medical disciplines but with the nurse as a central and first-line healthcare professional for the patient.

Discussion

The nurse-led clinic model offers numerous advantages, including improved patient satisfaction, enhanced quality of life, and more efficient use of healthcare resources. However, challenges such as defining the scope of practice, ensuring adequate training, and integrating the model into existing healthcare systems must be addressed. Future research should focus on evaluating the long-term outcomes of nurse-led care and exploring strategies for broader implementation. Thus, we have experience only from post-cancer surgery care, but it is our firm impression that this model can be widely adopted in other areas of healthcare as well.

The proposal for nurses to perform their own patient consultations stems from their holistic training and approach to care.¹³ Nurses are educated to provide patient-centered holistic care, rather than focusing solely on the disease or its symptoms. This holistic perspective is crucial in postoperative care, especially for patients dealing with the complex aftermath of colorectal cancer surgery. Nurses' ability to integrate emotional support, lifestyle advice, and symptom management into patient care addresses the multifaceted needs of patients in a late complication clinic more effectively than traditional, disease-focused models. Nurses are trained to observe, listen, and respond to patients in a way that encompasses not just the physical aspects of their condition but also the psychological, social, and emotional challenges they face.

This comprehensive approach is particularly beneficial in the late stages of postoperative care, where patients are often adjusting to postoperative changes in their daily lives and may be experiencing a wide range of symptoms and concerns, which in some cases can have deep impact on their personal perspectives and daily life and way of living including work situations and family relations.¹⁰ By conducting their own consultations, nurses can employ their holistic care skills to assess and address these varied needs, providing comprehensive and compassionate care. However, it's important to emphasize that their role extends beyond addressing the emotional aspects of patient care. Thus, in addition to managing the diagnosis and treatment of physical signs and symptoms according to our algorithms,²² they provide a holistic approach.

While nurses excel in providing holistic care, the involvement of doctors is important for addressing specific medical issues that require specialized knowledge and interventions. Literature reviews and previous studies demonstrate that enhancing collaboration among nurses, as well as between nurses, physicians, and other healthcare professionals—particularly with an emphasis on diverse skills—can significantly improve nurses' autonomy and expertise, thereby elevating the quality of patient care

outcomes.²⁴⁻²⁸ Physicians bring a depth of medical knowledge for diagnosing complex conditions, prescribing medication, and performing specialized procedures. In the nurse-led clinic model, doctors would come in as needed, providing targeted medical interventions that complement the holistic care provided by nurses.

This collaborative model ensures that patients receive the best of both worlds: the comprehensive, patient-centered care of nurses, and the specialized medical interventions of doctors. It allows for a more efficient allocation of resources, with nurses managing the ongoing, day-to-day care of patients. This division of labor not only enhances patient care but also allows healthcare professionals to work to the full scope of their training and abilities. A supportive and progressive nursing leadership plays an important role in enhancing nurses' capacity to perform and develop their competencies and skills, which in turn improves the outcomes of collaboration and the quality of patient care.^{13,24}

Conclusion

The integration of nurse-led patient consultations within a collaborative framework that includes doctors for specific medical interventions represents a forward-thinking approach to long-term follow-up care after surgery for colorectal and anal cancer. This model leverages the strengths of both nurses and doctors, ensuring that patients receive comprehensive, holistic care alongside specialized medical treatment when needed. This balanced approach hopefully will enhance patient outcomes, improve satisfaction, optimize the use of healthcare resources, and enhance patient care and satisfaction both for staff and patients. Recognizing and supporting the role of nurses in postoperative care is crucial for successfully implementing this approach.

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References

- Oggesen BT, Rosenberg J. Many patients will experience stool and bowel movement-related symptoms after treatment for colorectal and anal cancer—a descriptive study. *J Surg Res Pract*. 2024;5(1):1-8. <https://doi.org/10.46889/JSRP.2024.5104>
- Haas S, Mikkelsen AH, Kronborg CJS, et al. Management of treatment-related sequelae following colorectal cancer. *Colorectal Dis*. 2023;25(3):458-488. <https://doi.org/10.1111/codi.16299>.
- Simard J, Kamath S, Kircher S. Survivorship guidance for patients with colorectal cancer. *Curr Treat Options Oncol*. 2019;20(5):38. <https://doi.org/10.1007/s11864-019-0635-4>
- Gilmore B, Ezekian B, Sun Z, Peterson A, Mantyh C. Urinary dysfunction in the rectal cancer survivor. *Curr Bladder Dysfunct Rep*. 2016;11(2):105–12. <https://doi.org/10.1007/s11884-016-0357-4>
- Duran E, Tanriseven M, Ersoz N, et al. Urinary and sexual dysfunction rates and risk factors following rectal cancer surgery. *Int J Colorectal Dis*. 2015;30(11):1547–55. <https://doi.org/10.1007/s00384-015-2346-z>.
- Hansen SB, Oggesen BT, Fonnes S, Rosenberg J. Erectile dysfunction is common after rectal cancer surgery: a cohort study. *Curr Oncol*. 2023;30(10):9317-9326. <https://doi.org/10.3390/curroncol30100673>.
- Den Oudsten BL, Traa MJ, Thong MS, et al. Higher prevalence of sexual dysfunction in colon and rectal cancer survivors compared with the normative population: a population-based study. *Eur J Cancer*. 2012;48(17):3161–70. <https://doi.org/10.1016/j.ejca.2012.04.004>
- Ismail FQ, Öberg S, Hageman I, Rosenberg J. High frequencies of depressive symptoms after treatment for colorectal cancer: a systematic review and meta-analysis. *SN Compr Clin Med*. 2023;5:83. <https://doi.org/10.1007/s42399-023-01425-z>.
- Rosenberg J, Oggesen BT, Hamberg MLS, Danielsen AK. Establishment of a nurse-led clinic for late complications after colorectal and anal cancer surgery: a descriptive study. *Support Care Cancer*. 2022;30(7):6243-6250. <https://doi.org/10.1007/s00520-022-07061-y>.
- Oggesen BT, Hamberg MLS, Thomsen T, Rosenberg J. Exploring patients' perspectives on late complications after colorectal and anal cancer: a qualitative study. *Curr Oncol*. 2023;30(8):7532-7541. <https://doi.org/10.3390/curroncol30080546>.
- Wiltink LM, White K, King MT, Rutherford C. Systematic review of clinical practice guidelines for colorectal and anal cancer: the extent of recommendations for managing long-term symptoms and functional impairments. *Support Care Cancer*. 2020;28:2523–2532. <https://doi.org/10.1007/s00520-020-05301-7>.
- Luo X, Li J, Chen M, Gong J, Xu Y, Li Q. A literature review of post-treatment survivorship interventions for colorectal cancer survivors and/or their caregivers. *Psychooncology*. 2021;30(6):807–817. <https://doi.org/10.1002/pon.5657>.
- Been-Dahmen MJ, van der Stege H, Oldenmenger WH, et al. What factors contribute to cancer survivors' self-management skills? A cross-sectional observational study. *Eur J Oncol Nurs*. 2024;69:102539. <https://doi.org/10.1016/j.ejon.2024.102539>.
- Gyldenvang HH, Christiansen MG, Jarden M, Piil K. Experiences and perspectives of patients and clinicians in nurse-led clinics in an oncological setting: a sequential multi-methods study. *Eur J Oncol Nurs*. 2022;61:102203. <https://doi.org/10.1016/j.ejon.2022.102203>.
- Donald F, Martin-Misener R, Bryant-Lukosius D, et al. The primary healthcare nurse practitioner role in Canada. *Nurs Leadersh*. 2010; 23 Spec No 2010:88-113. <https://doi.org/10.12927/cjnl.2013.22271>.
- Fletcher CE, Copeland LA, Lowery JC, Reeves PJ. Nurse practitioners as primary care providers within the VA. *Mil Med*. 2011 Jul;176(7):791-7. <https://doi.org/10.7205/milmed-d-10-00329>.
- McFarlane K, Dixon L, Wakeman CJ, Robertson GM, Eglinton TW, Frizelle FA. The process and outcomes of a nurse-led colorectal cancer follow-up clinic. *Colorectal Dis*. 2012; 14: e245-e249. <https://doi.org/10.1111/j.1463-1318.2011.02923.x>
- Symonds EL, Simpson K, Coats M, Chaplin A, Saxty K, Sandford J, Young Am GP, Cock C, Fraser R, Bampton PA. A nurse-led model at public academic hospitals maintains high adherence to colorectal cancer surveillance guidelines. *Med J Aust*. 2018;208(11):492-496. <https://doi.org/10.5694/mja17.00823>.
- Corner J, Halliday D, Haviland J, Douglas HR, Bath P, Clark D, Normand C, Beech N, Hughes P, Marples R, Seymour J, Skilbeck J, Webb T. Exploring nursing outcomes for patients with advanced cancer following intervention by Macmillan specialist palliative care nurses. *J Adv Nurs*. 2003;41(6):561-74. <https://doi.org/10.1046/j.1365-2648.2003.02568.x>.
- Lewis R, Neal RD, Williams NH, France B, Wilkinson C, Hendry M, Russell D, Russell I, Hughes DA, Stuart NS, Weller D. Nurse-led vs. conventional physician-led follow-up for patients with cancer: systematic review. *J Adv Nurs*. 2009;65(4):706-23. <https://doi.org/10.1111/j.1365-2648.2008.04927.x>.

21. Fitzgerald-Smith AM, Srivastava P, Hershman MJ. The role of the nurse in colorectal cancer follow up. *Hosp Med*. 2003;64(6):344-7. <https://doi.org/10.12968/hosp.2003.64.6.344>.
22. Oggesen BT, Danielsen AK, Hamberg MLS, Rosenberg J. Practical management algorithms for late complications after colorectal and anal cancer – basic treatment of late complications. *Med Adv*. 2023;1(3):260-269. <https://doi.org/10.1002/med4.32>.
23. Poghosyan L, Norful AA, Martsolf GR. Primary care nurse practitioner practice characteristics: barriers and opportunities for interprofessional teamwork. *J Ambul Care Manage*. 2017;40(1):77-86. <https://doi.org/10.1097/JAC.0000000000000156>.
24. Ma C, Shang J, Bott MJ. Linking unit collaboration and nursing leadership to nurse outcomes and quality of care. *J Nurs Adm*. 2015;45(9):435-42. <https://doi.org/10.1097/NNA.0000000000000229>.
25. Currie V, Harvey G, West E, McKenna H, Keeney S. Relationship between quality of care, staffing levels, skill mix and nurse autonomy: literature review. *J Adv Nurs*. 2005;51(1):73-82. <https://doi.org/10.1111/j.1365-2648.2005.03462.x>.
26. Lei YY, Ya SRT, Zheng YR, Cui XS. Effectiveness of nurse-led multidisciplinary interventions in primary health care: a systematic review and meta-analysis. *Int J Nurs Pract*. 2023;29(6):e13133. <https://doi.org/10.1111/ijn.13133>.
27. Horrocks S, Anderson E, Salisbury C. Systematic review of whether nurse practitioners working in primary care can provide equivalent care to doctors. *BMJ*. 2002;324(7341):819-23. <https://doi.org/10.1136/bmj.324.7341.819>.
28. Laurant M, van der Biezen M, Wijers N, Watananirun K, Kontopantelis E, van Vught AJ. Nurses as substitutes for doctors in primary care. *Cochrane Database Syst Rev*. 2018;7(7):CD001271. <https://doi.org/10.1002/14651858.CD001271.pub3>
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