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POSTOPERATIVE NUTRITIONAL KNOWLEDGE OF COLORECTAL CANCER PATIENTS AT VIET TIEP FRIENDSHIP HOSPITAL IN 2025

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ABSTRACT

Objective: Description of post-operative nutritional knowledge of colorectal cancer patients at Viet Tiep Friendship Hospital in 2025

Research methods: Cross-sectional descriptive study at the Oncology Center and the Department of Oncology Surgery - Palliative Care, An Dong facility, Viet Tiep Friendship Hospital in 2025.

Results: Cancer patients need a diverse diet to ensure adequate and balanced nutrition, which is essential for supporting the body's vital functions and maintaining good health during treatment. However, only 66.7% of patients agree with this viewpoint, while the remaining 33.3% believe that it is not necessary to eat a variety of foods.

Most patients demonstrate a good understanding of the need to supplement their nutrition (76.2%) and to avoid fatty foods (77.1%). Additionally, a significant majority recognizes the importance of drinking enough water (97.1%) to aid in recovery. However, knowledge about eating a variety of foods is still relatively low at 66.7%, and only 51.4% understand the need to avoid red meat.

Furthermore, understanding of vitamin and mineral supplements is limited, with only 40% knowledgeable about them. Similarly, many patients (61.9%) disagree with the benefits of whole grains, and a substantial 56.2% do not consider omega-3 essential to their diet.

Conclusion: Patients' nutritional knowledge was limited, particularly regarding the role of whole grains (38.1%), omega-3 or EPA (43.8%), and micronutrients (40%). In contrast, awareness about the importance of drinking enough water (97.1%) and the need to limit fatty foods (77.1%) was significantly higher. These gaps in knowledge underscore the necessity for comprehensive nutrition education programs to improve patient awareness.

Keywords: Nutrition, Colorectal cancer.

1. INTRODUCTION

Colorectal cancer (CRC) is one of the most common cancers globally, ranking third in frequency and second in cancer-related deaths. According to GLOBOCAN 2022, the International Agency for Research on Cancer estimates that there will be over 1.93 million new cases and nearly 935,000 deaths from colorectal cancer worldwide. In Vietnam, there were 16,835 new cases reported in 2022, making it the most prevalent gastrointestinal cancer and the fifth most common cancer overall. This disease resulted in 8,454 deaths within the year.

At Viet Tiep Friendship Hospital, most patients with CRC are diagnosed at advanced stages, complicating treatment and often necessitating surgery as the primary approach. After surgery, these patients encounter numerous nutritional challenges, including anorexia, malnutrition, digestive disorders, and reduced nutrient absorption. These issues can hinder recovery, increase the risk of complications, prolong hospital stays, and diminish the overall quality of life.

There is an urgent need to provide patients with

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accurate information and appropriate nutritional guidance to help them maintain optimal health during the postoperative period, reduce the risk of complications, and improve their quality of life. Therefore, we conducted this study with the objective of describing the nutritional knowledge of colorectal cancer patients after surgery at Viet Tiep Friendship Hospital in 2025..

2. SUBJECTS AND METHODS

2.1. Research design

Cross-sectional descriptive study.

2.2. Research time and location

- Research time: Cross-sectional investigation from March 2025 to June 2025

- Research location: The study was conducted at the Oncology Center and the Department of Oncology Surgery - Palliative Care, An Dong Facility, Viet Tiep Friendship Hospital in 2025.

2.3. Research subjects

Patients after colorectal cancer surgery examined and treated at the Oncology Center and the Department of Oncology Surgery - Palliative Care, An Dong Facility, Viet Tiep Friendship Hospital in 2025.

- *Exclusion criteria:* Patients with metastasis, patients in the active treatment phase of cancer, and patients in the palliative care phase.

2.4. Sample size

Select all patients who meet the eligibility criteria and are being examined and treated at the Oncology Center and the Department of Oncology Surgery - Palliative Care (An Dong facility) of Viet Tiep Friendship Hospital during the research period in 2025. A total of 105 eligible research subjects were selected during the data collection period..

2.5. Data collection tools

- The questionnaire was developed based on a pre-designed tool.

- To ensure suitability with the research subjects, the tool was evaluated and commented on by experts.

- Structure of the tool:

Part A: includes 10 questions from question 1 to 10 about general information and information about the medical history of the research subject.

Part B: includes 10 questions (questions 11-20) with true/false options about the patient's knowledge of post-surgery nutrition.

2.6. Data collection method

- Instruct and explain to research participants and obtain written consent from research participants;

- Conduct direct interviews with research participants to gather general information and disease-specific details, complemented by observation methods and cognitive interviews using questionnaires.

2.7. Data processing method

Data entry and processing using SPSS 22.0 software.

Descriptive analysis reveals the frequency and proportion of research variables, while univariate analysis is used to determine the nutritional knowledge status of patients.

2.8. Research ethics: The study was approved by the Board of Directors of Hai Duong Medical Technical University (No. 221/QD-DHKTYTHD dated December 25, 2024). Subjects voluntarily participated in the study, and all information was kept confidential and used solely for research purposes.

3. RESEARCH RESULTS

A total of 105 patients participated in the study, with an average age of 64.5 years (± 11.3 years), an average income of 2.1 million VND (± 3.3 million VND), and an average time since surgery of 6 months (± 7.2 months). Among the participants, men (n = 64) were older (average age of 65.7 years ± 11.1 years), had higher incomes (2.7 million VND ± 3.7 million VND), and longer times since surgery (7 months ± 8.2 months) compared to women (n = 41), who had an average age of 62.6 years (± 11.3 years), an average income of 1.3 million VND (± 2.4 million VND), and an average time since surgery of 5 months (± 5.4 months).

Table 1. Average age, income, and time since surgery of study subjects

Characteristic		
Total (n = 105)	**Male (n = 64)**	**Female (n = 41)**
Age (M ± SD)		
64,5 ± 11,3	65,7 ± 11,1	62,6 ± 11,3
Monthly income (M ± SD)		
2,1 ± 3,3 million VNĐ	2,7 ± 3,7 million VNĐ	1,3 ± 2,4 million VNĐ
Time since surgery (M ± SD)		
6 ± 7,2 months	7 ± 8,2 months	5 ± 5,4 months

The study subjects were predominantly residents of rural areas, accounting for 58% of the participants. Most participants were either retired or housewives, with 47.6% identifying as housewives and 35.2% as elderly or retired individuals. The largest group had completed secondary education, comprising 37.1% of the total. A significant majority, 78.1%, received assistance with cooking. In terms of medical treatment, many subjects were undergoing combined therapies, including chemotherapy (38.1%), radiotherapy (30.5%), and medication (17.1%). However, only 36.2% of the subjects adhered to a nutritionally advised regimen.

Table 2. Some demographic and lifestyle characteristics of the study subjects

	Frequency (n)	Percentage (%)
Gender		
Male	64	61
Female	41	39
Address		
City	44	42
Rural	61	58
Occupation		
Students	0	0
Civil servants, public employees	0	0
Workers, farmers	18	17,1
Elderly, retired	37	35,2
Others: Housewife	50	47,6
Education level		
Illegal	6	5,7
Primary school	14	13,3
Junior high school	39	37,1
High school	31	29,5
College, vocational college	8	7,6
University/graduate	7	6,7
Assist in cooking		
Yes	82	78,1
No	23	21,9
Combined treatment methods		
Radiotherapy	32	30,5
Chemotherapy	40	38,1
Taking medication	39	17,1
Others	6	5,7
Following a nutritional regimen as advised		
Yes	38	36,2
No	67	63,8

In terms of nutritional knowledge, most participants demonstrated a good understanding of the importance of supplementing nutrients (76.2%), avoiding fatty foods (77.1%), and drinking adequate amounts of water (97.1%) to support recovery. However, awareness of the need to eat a diverse range of foods was lower, at 66.7%, and knowledge about avoiding red meat was even less, with only 51.4% recognizing its importance. Additionally, familiarity with vitamin and mineral supplements was limited—only 40% had adequate knowledge. Participants also showed a lack of understanding regarding whole grains (61.9% disagreed with their importance) and omega-3 fatty acids (56.2% opposed their inclusion in the diet).

Table 3. Postoperative nutritional knowledge of research subjects

Content		Frequency (n)	Percentage (%)
Patients need to eat a variety of foods	True	70	66,7
	False	35	33,3
Patients need to supplement with more nutrients	True	80	76,2
	False	25	23,8
Patients should avoid eating red meat	True	54	51,4
	False	51	48,6
Patients should avoid eating foods high in fat	True	81	77,1
	False	24	22,9
After surgery, you should eat many small meals a day	True	60	57,1
	False	45	42,9

Content		Frequency (n)	Percentage (%)
Drinking enough water every day will help support the recovery process	True	102	97,1
	False	3	2,9
Patients need to supplement vitamins and minerals	True	42	40
	False	63	60
The best nutritional choice is milk and low-fat dairy products	True	66	62,9
	False	39	37,1
Patients should add whole grains to their diet	True	40	38,1
	False	65	61,9
Foods rich in omega-3 or EPA help reduce inflammation and support recovery	True	46	43,8
	False	59	56,2

4. DISCUSSION

The study subjects had an average age of 64.5 years, with a standard deviation of 11.3 years. There was a higher proportion of men (61%) compared to women (39%) (Table 3.1). This finding is similar to a study conducted by La Van Phu (2023) at Can Tho City General Hospital, where patients who underwent colorectal cancer surgery had an average age of over 60 years. It is also consistent with various global studies, such as the research by Hye Young Koo et al. (2013), which observed that colorectal cancer is more common in older individuals, particularly men. This increased risk is attributed to factors such as a diet high in red meat, smoking, and exposure to other carcinogens. The higher proportion of men in this study may also reflect lifestyle habits in Vietnam, particularly in Hai Phong, where men tend to consume more energy-dense foods and less fiber than women.

In terms of residence, 58% of the patients lived in rural areas (Table 3.2), which may affect their access to nutritional information and health services. Rural residents often lack nutritional knowledge due to insufficient health education programs and inadequate health infrastructure. The average monthly income of the patients ranged from 2.1 to 3.3 million VND (Table 3.1), which aligns with the findings of Tran Thi Anh Tuong et al. (2017) that suggest income is a significant barrier to accessing high-quality foods, such as fresh ingredients or omega-3-rich foods, which tend to be expensive. Notably, the average income of men was between 2.7 and 3.7 million VND, while for women, it ranged from 1.3 to 2.4 million VND. This gender gap may be due to the traditional roles of men as the primary earners in Vietnamese families, while women often engage in housework or low-paying jobs.

The majority of study subjects were retired (35.2%) or housewives (47.6%) (Table 3.2), which may have limited their physical capabilities and knowledge regarding nutritional self-management. Regarding educational levels, 56.1% of the DTNC had a secondary school education or lower (Table 3.2). This is consistent with the study by Vu Van Dau and Pham Thi Thu Hien (2020) at Nam Dinh Provincial General Hospital, which found that less educated patients often struggle to receive proper nutritional advice. In contrast, a study conducted in the Basque Country, Spain (Alegria-Lertxundi et al., 2020), found that UTTT patients had higher educational levels, with more than 50% holding a high school or university degree, possibly reflecting better education systems and economic conditions in developed countries.

Regarding nutritional support, 78.1% of the DTNC received assistance with cooking, which positively influenced their dietary adherence. In terms of combined treatments, 38.1% of the DTNC underwent both surgery and chemotherapy, while 30.5% received combined radiotherapy. These figures are similar to the study by Wang et al. (2022) in China, where chemotherapy (40%) and radiotherapy (35%) were the most common treatments. Combined treatments may affect patients' taste and ability to eat, potentially reducing their adherence to the dietary regimen..

The results presented in Table 3.3 provide insights into patients' knowledge of nutrition following colorectal cancer surgery (CRC). It is essential for cancer patients to consume a variety of foods to ensure balanced nutrition, which supports the body’s vital functions and helps maintain good health during treatment. However, awareness of this need is limited, as only 66.7% of patients agree that a diverse diet is important. The remaining 33.3% believe that it is not necessary to eat a variety of foods, possibly due to a lack of clarity in nutrition education programs.

Patients need to understand the roles of different food types, but this information may be overlooked in favor of basic dietary recommendations.

Additionally, 76.2% of patients recognize that increased nutrition is necessary after surgery to support tissue regeneration and recovery, in line with post-operative medical guidelines. However, 23.8% of patients remain unaware of this requirement, likely due to insufficient information or misunderstandings regarding postoperative dietary needs. Research by Bui Thi Hong Loan et al. (2018) emphasizes the crucial role of nutrition in reducing postoperative complications, a message that is widely disseminated.

Moreover, only 51.4% of patients believe that red meat should be avoided. In contrast, 48.6% disagree with this recommendation, likely because red meat is a common protein source that may not be emphasized in dietary guidance, or such recommendations may not align with local culinary practices. This percentage is notably higher than the 30.6% reported in a 2018 study at K Hospital. Internationally, Wang et al. (2022) found that 65% of colorectal cancer patients in China understood the need to limit red meat intake, suggesting that a stronger community nutrition education program is needed.

In terms of dietary fat, 77.1% of patients correctly recognized the importance of limiting foods high in fat, which aligns with nutritional recommendations aimed at easing the digestive burden after surgery. However, 22.9% were unaware of this need, possibly due to a lack of clear guidance on distinguishing between beneficial and harmful fats.

Patients often consume very little at meals, which does not meet their energy needs. Only 57.1% of patients believe that they should eat 4–6 meals per day, indicating a significant need for enhanced nutrition education.

Interestingly, 97.1% of patients understand the importance of staying hydrated for recovery, marking the highest percentage in the dataset. This suggests a general awareness of the role of water in maintaining bodily functions and aiding digestion post-surgery, likely due to effective public health campaigns.

On the other hand, only 40% of patients believe that vitamin and mineral supplements are necessary, while 60% think they are not needed. This low percentage indicates a lack of understanding of the importance of micronutrients in enhancing immunity and supporting recovery, particularly for those at risk of malnutrition after surgery.

A positive 62.9% of patients correctly recognize that low-fat milk and dairy products are valuable nutritional choices. However, 37.1% do not fully grasp their benefits, likely due to insufficient information about the sources of easily digestible protein and calcium. Only 38.1% of patients agree that whole grains, such as brown rice, oats, and whole wheat bread, should be included in their diets. This low awareness highlights a lack of understanding regarding the role of fiber in aiding digestion, which is crucial following colorectal surgery.

Lastly, only 43.8% of patients are aware of omega-3 fatty acids, specifically EPA (Eicosapentaenoic acid), which must be obtained through diet, as the body cannot synthesize it. This suggests that advice related to omega-3 may not be adequately emphasized or conveyed in an easily understandable way. For many patients, especially those who are older or less educated and constitute a significant portion of the average age group of 64.5 ± 11.3 years, concepts like omega-3 may be unfamiliar. Additionally, the availability and cost of omega-3-rich foods, such as salmon and mackerel, may limit their consumption due to local dietary habits..

5. CONCLUSIONS

Patients often have limited nutritional knowledge, particularly regarding the importance of whole grains (38.1%), omega-3 fatty acids (43.8%), and micronutrients (40%). In contrast, awareness of the need to drink enough water (97.1%) and to limit fatty foods (77.1%) is significantly higher. These gaps in knowledge underscore the necessity for comprehensive nutrition education programs to improve patient awareness.

REFERENCES

[1] Ferlay J., Sung H., Laversanne M., et al (2024). Global cancer statistics 2022: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries, CA Cancer J Clin, 74(3), 229–263.

[2] International Agency for Research on Cancer (IARC) | Global Cancer Observatory - Vietnam Population fact sheets, https://gco.iarc.fr/today/data/fact-sheet/populations/704-viet-nam-fact-sheets.pdf, accessed: 02/01/2025.

[3] Tran Thi Ha, Trieu Trieu Duong, and Vu Ngoc Son (2022). Nutritional status of patients before and after colorectal cancer surgery at 108 Military Central Hospital, Journal of Clinical Medicine and Pharmacy 108, 17, pp. 37–42.

[4] La Van Phu, Tran Minh Thien, Doan Anh Vu (2024). Postoperative nutrition regimen of colorectal cancer patients at Can Tho City General Hospital in 2023. Vietnam Medical

Journal, 539(1), pp. 89-93.
[5] Hye Young Koo, Kyu Joo Park, Jae Hwan Oh, et al (2013). Investigation of Clinical Manifestations in Korean Colorectal Cancer Patients. Ann Coloproctol, 29(4), 139-43.
[6] Tran Thi Anh Tuong, Nguyen Thi Kim Ngan, et al. (2017). Study on nutritional status in cancer patients and some related factors at Ho Chi Minh City Oncology Hospital in 2017. Nutrition Journal, 14(4), pp. 7-14.
[7] Vu Van Dau, Pham Thi Thu Hien (2023). Knowledge, attitudes, and practices on nutrition in cancer treatment of patients at Nam Dinh Provincial General Hospital in 2020, Vietnam Medical Journal, 527(1), pp. 315-319.
[8] Alegria-Lertxundi, I., et al. (2020). Nutritional Knowledge and Dietary Practices in Colorectal Cancer Patients in Spain. Clinical Nutrition, 39(4), 1234-1241.
[9] Wang, J., et al. (2022). Nutritional Knowledge and Dietary Practices in Colorectal Cancer Patients in China Nutrition and Cancer, 74(2), 512-520.
[10] Bui Thi Hong Loan, Shinji Nakahara, Bui An Tho, et al (2018). Nutritional status and postoperative outcomes in patients with gastrointestinal cancer in Vietnam: a retrospective cohort study. Nutrition, 48, 117-121.
[11] Nguyen Thi Hong Tien (2018). Nutritional awareness of patients and their families at K Hospital, Tan Trieu branch 2018. Nutrition conference, Hanoi Medical University, Institute of Clinical Nutrition, pp. 33-40.
[12] Key T.J., Schatzkin A., Willett W.C., et al (2004). Diet, nutrition, and the prevention of cancer. Public health nutrition, 7(1a), 187-200.