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Original Article

QUALITY OF LIFE AMONG CANCER PATIENTS RECEIVING TREATMENT AT TAY NGUYEN REGIONAL GENERAL HOSPITAL

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ABSTRACT: According to the World Health Organization (WHO), the quality of life of cancer patients is significantly affected throughout treatment and recovery, which calls for a comprehensive approach to care. This study aimed to describe the quality of life of cancer patients undergoing treatment at Tay Nguyen Regional General Hospital and thereby provide evidence for appropriate interventions to improve the quality of patient care. A cross-sectional descriptive study was conducted among cancer patients receiving treatment at the Department of Oncology, Tay Nguyen Regional General Hospital. Quality of life was assessed through face-to-face interviews using the EORTC QLQ-C30 questionnaire. The mean global health status score was 50.1 ± 22.9. The mean functional scale score was 59.0 ± 16.5, and the mean symptom scale score was 30.2 ± 10.2. Financial difficulties were high, with a median score of 66.7 (33.3–66.7). The quality of life of patients with cancer remains limited, particularly because of symptom burden and financial difficulties. These findings indicate the need for targeted interventions to improve the quality of life of cancer patients.

Keywords: quality of life; cancer; EORTC QLQ-C30.

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1. INTRODUCTION

According to data published by the World Health Organization (WHO) in 2024, there were about 20 million new cancer cases and 9.7 million cancer deaths worldwide [1]. Cancer is a group of diseases, with about 200 different types identified in the human body. It is characterized by uncontrolled cell division in organs and tissues; these cells can invade adjacent tissues and/or metastasize to distant organs. As a result, cancer has become a major disease burden and accounts for about 22.8% of deaths from noncommunicable diseases worldwide [2].

The WHO defines quality of life (QoL) as an individual's subjective perception of their position in life in the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards, and concerns [3]. For cancer patients, QoL is a multidimensional concept that covers physical, psychological, social, and functional domains. Many studies have confirmed that cancer patients face numerous symptoms, such as pain, fatigue, anxiety, depression, and limitations in daily activities, which substantially reduce their QoL [4–8]. Specifically, Tran Trung Kien et al. (2023) reported a mean QoL score of 55.6 ± 23.9 [5]; Tran Van Hung et al. (2019), 49.2 ± 6.5 [6]; and Vo Le Uyen et al. (2022), 62.4 ± 20.5 [7]. Internationally, Agarwal et al. reported a mean QoL score of 52.34 ± 23.34 [8]. Linda Smail et al. studied female patients with breast cancer and reported a mean QoL score of 74.73 ± 18.25 [9]. These results reflect the overall health status of people with cancer and show the importance of developing comprehensive support interventions in the treatment and care of these patients.

In Vietnam, there were more than 180,400 new cancer cases and more than 120,000 cancer deaths in 2024 [1]. In the Central Highlands (Tay Nguyen), the Dak Lak Provincial Center for Disease Control recorded 1,141 new cancer cases in the province in 2024, bringing the total number of cancer cases to over 3,600, including 1,291 deaths [10]. The Department of Oncology of Tay Nguyen Regional General Hospital currently treats about 170 patients and receives up to 30 new patients per day [11]. This shows heavy pressure on the regional health system as the number of new cases and the demand for cancer care continue to rise. Studies on QoL in cancer patients in Dak Lak are still limited. This study was therefore conducted to describe the QoL of patients receiving cancer treatment at Tay Nguyen Regional General Hospital. The results provide scientific evidence that healthcare teams can use to develop more practical measures to improve nursing care and support cancer patients during treatment. The objective of this study was:

To describe the quality of life of patients receiving cancer treatment at Tay Nguyen Regional General Hospital.

2. SUBJECTS AND METHODS

This study was conducted in 2025 at the Department of Oncology, Tay Nguyen Regional General Hospital. Study design: cross-sectional descriptive study.

2.1. Study subjects

Patients diagnosed with cancer and treated at the Department of Oncology, Tay Nguyen Regional General Hospital during the study period.

Inclusion criteria:

Patients aged 18 years or older who agreed to participate in the study.

Patients who were alert and able to understand and answer the interview questions.

Exclusion criteria:

Patients readmitted during the data collection period.

Patients not well enough to complete the interview questionnaire.

2.2. Sample size and sampling method

The sample size was calculated using the formula for estimating a population mean:

Where

n: required sample size

Z: confidence coefficient; Z = 1.96 for a 95% confidence level (α = 0.05)

$\overline{X}$: mean QoL score from a previous study.

s: standard deviation (based on the results of a previous study)

ε: acceptable relative error, set at ε = 0.05

Based on the study by Huynh Ngoc Van

$$n = Z_{1-\alpha/2}{}^2 \frac{s^2}{\left(\overline{X} \times \varepsilon\right)^2}$$

Anh et al. [12], we used $\overline{X}$= 57.3 and s = 16.3, giving n = 124.3. Allowing for a 10% loss, a total of 137 patients were enrolled in the study.

We used consecutive sampling of patients who met the inclusion criteria and none of the exclusion criteria during the study period.

2.3. Data collection:

General information was collected with an interview questionnaire, and information on disease characteristics and treatment was collected from medical records. QoL was assessed with the Vietnamese version of the EORTC QLQ-C30, which has 30 items covering 4 domains: global health status, functional domain, symptom domain, and financial domain (Huynh Ngoc Van Anh et al., 2018).

2.4. Data analysis:

Data were analyzed using SPSS 27.0. Qualitative variables were described as frequencies (n) and percentages (%). Quantitative variables were described as mean ± standard deviation (SD) if normally distributed, and as median and interquartile range (Q1–Q3) if not normally distributed.

2.5. Research ethics

The study used only an interview questionnaire and involved no invasive procedures on participants. All patient information was kept confidential and used only for research purposes.

3. RESULTS

The study included 137 patients at Tay Nguyen Regional General Hospital from March 2025 to June 2025. The results were as follows:

3.1. General characteristics of the patients

Table 1. General characteristics of the 137 patients

Characteristic		n = 137
Age, years		56.5 ± 13.5
Age group	< 60 years	70 (51.1)
	≥ 60 years	67 (48.9)
Sex	Female	72 (52.6)
	Male	65 (47.4)
Economic status	Dependent on family/ social support	79 (57.7)
	Self-supporting	58 (42.3)

In our study, the mean age of participants was 56.5 ± 13.5 years. The youngest was 21 years old and the oldest 86 years old. The > 60 age group accounted for the highest proportion (48.9%). Female patients outnumbered male patients (47.4% male). Patients who were economically dependent predominated, at 57.7% (Table 1).

3.2. Clinical characteristics and treatment:

In our study, gastrointestinal cancer was the most common (42.3%), followed by breast cancer, lung cancer, and cancers at other sites. Most participants had stage III or IV disease. A disease duration of more than 3 months to 1 year was the most common (52.6%). Patients received combinations of treatment modalities; chemotherapy was the most frequently used (80.6%), followed by surgery (66.9%) (Table 2).

Table 2. Clinical characteristics and treatment

Characteristic		n=137
Disease duration	≤ 3 months	31 (22.6)
	> 3 months – 1 year	72 (52.6)
	> 1 year – 3 years	22 (16.0)

	> 3 years	12 (8.8)
Cancer site	Gastrointestinal	58 (42.3)
	Breast	28 (20.4)
	Lung	20 (14.6)
	Other (adnexal, thyroid, etc.)	31 (22.7)
Cancer stage	Stage 1	6 (4.4)
	Stage 2	15 (10.9)
	Stage 3	47 (34.3)
	Stage 4	69 (50.4)
Treatment	Chemotherapy	100 (80.6)
	Surgery	83 (66.9)
	Radiotherapy	10 (8.1)
	None	13 (9.5)

3.3. Quality of life of the patients:

In our study, the mean global health status score of the 137 patients was 50.1 ± 22.9. The overall functional domain had a mean score of 59.0 ± 16.5. Within this domain, cognitive functioning scored highest, at 83.3 (66.7–100), followed by emotional functioning at 66.7 (50.0–75.0); role and social functioning scored lowest, at 33.3 (33.3–66.7). The overall symptom domain had a mean score of 30.2 ± 10.2. The symptoms patients experienced most often were fatigue, pain, insomnia, and appetite loss. The financial difficulties domain had a QoL score of 66.7 (33.3–66.7).

Table 3. Quality of life scores by domain (n=137)

Domain	Score
Global health status	50.1 ± 22.9
Functional domain	59.0 ± 16.5
Physical functioning	53.3 (40.0–66.7)
Role functioning	33.3 (33.3–66.7)
Emotional functioning	66.7 (50.0–75.0)
Cognitive functioning	83.3 (66.7–100)
Social functioning	33.3 (33.3–50.0)
Symptom domain	30.2 ± 10.2
Fatigue	55.6 (44.4–66.7)
Pain	33.3 (33.3–66.7)
Dyspnea	0 (0–33.3)
Insomnia	33.3 (33.3–66.7)
Nausea/vomiting	16.7 (0–25.0)
Appetite loss	33.3 (33.3–66.7)
Constipation	0 (0–33.3)
Diarrhea	0 (0–0)
Financial difficulties	66.7 (33.3–66.7)

4. DISCUSSION

4.1. General characteristics of the study participants:

The mean age of our patients was 56.5 years. This is similar to the findings of Duong Viet Tuan et al. (56.8 years) [13] and Nguyen Viet Phuong et al. (2022) (56.58 years) [14]. Women outnumbered men, consistent with the study by Tran Trung Kien et al. (2023) at Shing Mark University Hospital of Medicine and Pharmacy [5]. This partly explains why breast and adnexal cancers accounted for 43.1% of cases in our study. In contrast, Nguyen Quynh Tu et al. (2022) reported a higher proportion of men, suggesting that the difference may relate to the time and place of the survey [15]. Our results also showed that 48.9% of patients were beyond working age, so the proportion economically dependent on family or society was higher than the proportion who were financially self-sufficient. In addition, the socioeconomic characteristics of the Central Highlands play a part: a large proportion of the population are ethnic minority people living in rural areas and working mainly in agriculture, and when they fall ill they lack the income to support themselves. These factors reflect considerable challenges in providing comprehensive care for cancer patients in the area.

In this study, gastrointestinal cancer was the most common (42.3%), a higher pro-

portion than the 22.7% reported by Tran Trung Kien et al. (2023), whereas breast cancer (20.4%) was less frequent than the 31.8% in that study [5]. Other studies have reported different proportions of cancer types, such as lung cancer (37.5%) in the study by Mai Thu Trang et al. (2020) [16] or oral cancer in 43.2% of patients in the study by Agarwal et al. [8]. These differences may be explained by population characteristics, geographic setting, and time of study. The proportions of patients diagnosed at stage III and IV were 50.4% and 34.3%, respectively, and disease duration was mostly 3 months to 1 year (52.6%). These results are also similar to those of Nguyen Quynh Tu et al. [15]. This situation may be related to limited access to health services, geographic distance, the limited reach of cancer screening programs, and concern about the cost of care. Late detection reduces treatment effectiveness and negatively affects patients' QoL. Our results therefore suggest the need to strengthen cancer screening and early detection programs and to develop community-based models of continuous care, so as to improve nursing care, support patients during treatment, and ultimately improve the QoL of older adults with cancer in current clinical practice.

5.2. Quality of life of the study participants

Using the EORTC QLQ-C30, we found a global QoL score of 50.1. This is similar to a previous study (50.9) [16] but lower than the score reported by Nguyen Viet Phuong et al. (61.82) [14]. In studies from other countries, Agarwal et al. (2022) reported 52.34 [8] and Quedair JT et al. (2022) reported 63.91 [17]. Smail et al. (2022) reported a mean QoL score of 74.73 [9]. These differences may be related to patient characteristics, disease stage, socioeconomic conditions, and access to supportive care services in each study setting.

Among the functional domains, cognitive functioning had the highest score and social functioning the lowest. This is consistent with the studies of other authors [6,13]. Physical functioning in our patients was 53.3. This also reflects clinical practice: during treatment, cancer patients experience many distressing symptoms such as pain, vomiting, and diarrhea, which reduce their mobility and ability to carry out daily activities and so affect their physical functioning. Social functioning is assessed by how much the patient's physical condition or treatment interferes with family and social life. This indicates that nurses should strengthen their role in the early assessment of functional decline, provide appropriate mobility support, and guide patients to maintain their daily activities within permitted limits. Moreover, during cancer treatment, patients face not only physical pain but also disrupted family and social relationships and psychological changes, which affect their relationships within the family and in society. Social functioning had a low score (33.3), lower than in other studies [5, 15]. In this context, nurses have a key role in providing psychological support, counseling patients and their families, and encouraging family involvement in care to reduce feelings of isolation and improve patients' social functioning.

In the symptom domain, a higher score reflects more severe symptoms. The most common symptoms were fatigue, appetite loss, pain, and insomnia. The least common were gastrointestinal symptoms such as nausea, diarrhea, and constipation. This is consistent with earlier studies, such as those by Tran Van Hung et al. [6] and Nguyen Quynh Tu et al. [15]. It shows the need for nursing interventions that focus on symptom control, monitoring of treatment response, and teaching patients to manage their symptoms at home after discharge to improve QoL.

In the financial domain, the mean QoL score was fairly high (66.7), indicating that economic burden is a prominent problem for the cancer patients in this study. This score is higher than that reported by Nguyen Quynh Tu et al. (2022) in cancer patients at 108 Military Central Hospital (52.83) [15]. This may be because farmers made up a large proportion of our participants and most were beyond working age, which made them economically dependent on family and society. For nursing practice, this finding points to a need for more counseling and for helping patients access health insurance, social resources, and financial support programs, which would reduce the economic burden and improve the QoL of cancer patients.

5. CONCLUSION AND RECOMMENDATIONS

The QoL scores of patients receiving cancer treatment at Tay Nguyen Regional General Hospital were as follows. The mean global health status score was 50.1 ± 22.9. The mean functional domain score was 59.0 ± 16.5. The mean symptom domain score was 30.2 ± 10.2. The financial domain score was 66.7 (33.3–66.7).

Therefore, in the care and treatment of cancer patients, healthcare facilities should strengthen multidisciplinary collaboration among physicians, nurses, nutritionists, and psychologists to fully meet patients' physical, mental, and social needs. In addition, QoL should be assessed and monitored periodically as routine practice so that emerging problems are detected promptly and appropriate interventions are provided. At the same time, more counseling, health education, and psychological support, together with connecting patients to health insurance and social support resources, will help reduce the economic burden and thereby improve the QoL of cancer patients.

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