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Original Research

THE QUALITY OF LIFE SCORE AND ITS CONTRIBUTING FACTORS OF CANCER PATIENTS UNDERGOING PALLIATIVE TREATMENT AT THAI BINH ONCOLOGY CENTER

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ABSTRACT

Purpose: *To describe the quality of life score of cancer patients undergoing palliative treatment at the Oncology Center of Thai Binh General Hospital in 2020 - 2021 and explore the factors from the supply side service provision that affects the quality of life of these patients.*

Method: *A cross - sectional study was carried out on 198 stage IV cancer patients who were treated from August 2020 to July 2021. Evaluation of the quality of life score of the above group of patients was performed according to the EORTC QLQ - C30 toolkit version 3 before and after treatment at the Palliative Department.*

Results: *The average scores for comprehensive health, physical, motor, emotional, cognitive, social, respectively, increased by 17.8; 19.3; 24.1; 18.7; 12.4 and 12.1 points. Symptoms such as fatigue, nausea and vomiting, pain and shortness of breath after treatment have significantly improved.*

Conclusion: *After treatment for the general health issue, the patient's physical function and most of the symptoms were markedly improved in terms of the mean score. Functional, emotional and social functions improved and decreased in mean scores after treatment. The patient's financial difficulties also increased after treatment.*

Keywords: *Quality of life, cancer, palliative care.*

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I. BACKGROUND

Cancer is still and a major public health problem. Up to 1/6 of all deaths worldwide are due to cancer. The global cancer burden is increasing at an alarming rate. It is estimated that in 2030 there will be 13.0 million cancer deaths. Survival rates for most cancers are low, and quality of life is low, and quality of life score is greatly reduced [1].

The National Strategy for the Prevention and Control of non-communicable diseases for the period 2015 - 2025 of the Ministry of Health of Vietnam has identified cancer as one of the diseases with top focus, thereby improving the quality of life of cancer patients is one of the issues mentioned in four activities prevention non-communicable diseases [2]. Surveying the state of cancer at Thai Binh Oncology Center, the types of cancer at the center are very diverse, the number of patients tends to increase much, especially in the context of the raging Covid-19 epidemic and many front-line hospitals. The restriction on patient admission has made the rate of cancer patients treated at Thai Binh Oncology Center increase both in number and severity of the disease. In terms of physical facilities, our center's wards are still cramped. There are cases where they have to lie down together and also lack

some necessary equipment. The question is: What is the quality of life score of cancer patients at the center? What are the influencing factors from the hospital management side? At Thai Binh Provincial General Hospital, there have been no studies on quality of life score of patients with stage IV cancer who are only indicated for palliative treatment, so we carried out this study to: describe the quality of life score of cancer patients who were receiving palliative treatment at the Oncology Center in the year 2020 - 2021 and explore some factors from the service provider that affect the quality of life of these patients.

II. METHODS

2.1. Study population

A cross - sectional study was conducted on 198 cancer patients received palliative treatment at the Palliative Care Department - Thai Binh Cancer Center from August 2020 to July 2021.

Inclusion criteria were: patients aged 18 years or older who were diagnosed with stage IV cancer. These patients were admitted to the palliative care department for the first time, with a minimum stay of seven days, and agreed to participate in the interview. They had the ability to listen, understand and communicate normally. Medical staff including: the center director, one doctor and one experienced nurse directly take care of and consult patients.

Exclusion criteriawere cancer patients who were too weak or unable to communicate, who are having acute diseases.

"Patient information form" include:

Part A: form to collect patient information from medical records: including information: type of cancer; disease stage; height weight; treatments.

Part B: Interview with patient. Includes information about personal characteristics such as: year of birth; accommodation; main job; academic level; marital status; health insurance…

Part C: EORTC QLQ - C30 (version 3) questionnaire on quality of life score [3].

Interviewing Center leaders and medical staff involved in treating and taking care of patients.

Data were analyzed using SPSS 20.0 software

The study was carried out after the approvaling of the hospital's scientific council and the patient's consent.

III. RESULT

3.1. Baseline characteristics

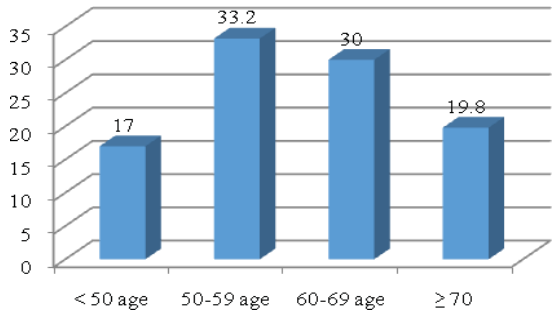

Figure 1: Percentage of patients by age group.

The average age is: 59 years old, the youngest person is 30 years old, oldest person is 94 years old. The most common age group is 50-59 years old, accounting for 33.2%.

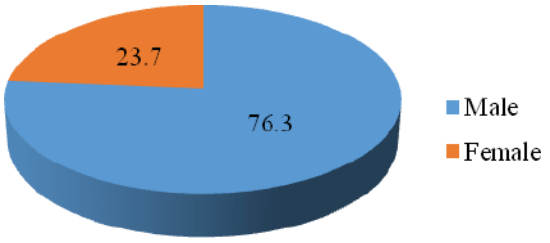

Figure 2: Gender diagram

The study recorded 151 male patients and 47 female patients. Male/female ratio = 3.2/1.

Table 1: Personal characteristics

Content	N	%
Residence		
Countryside	161	81.3
City	37	18.7
Job		
Officers/Workers/Staffs	9	4.5
Farming	111	56.1
Trader/ Freelance/ Housewife	32	16.2
Retire	46	23.2
Education		
Elementary, Middle School	78	39.4
High school	92	46.5
College, university or higher	28	14.1

Content	N	%
Marital status		
Not married	23	11.6
Have a spouse	158	79.8
Divorced/widowed	17	21.5
Health Insurance		
Health Insurance	188	94.9
Service	10	5.1

Patients living in rural and urban areas (81.3 %, 18.7 %), farming occupation accounted for the highest percentage (56.1 %), the lowest was cadres/ workers (4.5%). Education level in primary and lower secondary schools (39.4%), the proportion of patients with existing families living with spouses (79.9%), divorced/widowed is 8.5% of patients, unmarried 11.6%; there are 94.9% patients with health insurance and 10 patients without health insurance

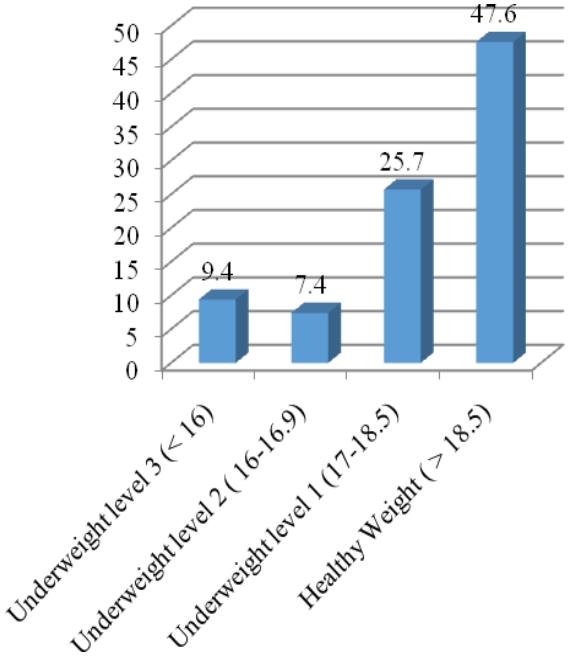

Figure 3: Percentage of study subjects by BMI

BMI at normal level is 47.6%, underweight patient 1 accounted for 25.7%, grade 2 accounted for 7.4%, grade 3 accounted for 9.4%.

3.2. Quality of life score of study subjects before treatment

Table 2: Overall health quality of life score

Content	Medium	SD	p
< 50 age	40.5	9.2	> 0.05
50 - 59 age	45.4	16.9	
60 - 69 age	41.3	15.8	
≥ 70 age	39.6	14.7	
Male	44.5	14.7	p > 0.05
Female	41.3	15.6	
Normal	44.2	15.4	> 0,05
Underweight level 1	42.5	13.6	
Underweight level 2	40.5	19.1	
Underweight level 3	38.6	13.6	
Not married	48.1	10.3	< 0,01
Have spouse	43.5	14.3	
Divorced/widowed	34.3	10.1	

The average score of quality of life score in the field of general health before treatment: of the age group 50 - 59 years old is the highest (45.4), the lowest is the age group ≥ 70 years old (39.6); Male patients are higher than female patients (46.2 and 45.3 points); the unmarried group achieved the highest (48.1). The lowest is the divorced/widowed group with 34.3 points.

Table 3: Functional life quality score

Content	Medium	SD	P
< 50 age	33.4	17.4	> 0,05
50 - 59 age	39.6	14.1	
60 - 69 age	38.2	13.2	
≥ 70 age	32.5	12.5	
Male	42.1	14.3	p > 0,05
Female	45.3	11.4	

Content	Medium	SD	P
Normal	44.2	13.5	p > 0,05
Underweight level 1	41.4	12.6	
Underweight level 2	40.1	12.3	
Underweight level 3	35.5	16.5	
Not married	49.5	13.6	p > 0,05
Have spouse	41.3	14.3	
Divorced/widowed	46.2	11.4	

The average functional score before treatment: by age group 50 - 59 years was the highest (39.6), followed by 60 - 69 years old, the lowest was 70 years old (32.5) p > 0.05 ; by gender: men are lower than women (42.1 and 45.3 points, p > 0.05); for the unmarried group, the highest score was: 49.5 points, the divorced/widowed group got 46.3 points; married couples scored 41.3 points, p > 0.05

Table 4: Mean quality of life score on symptom domains and pretreatment finances according to some individual characteristics

Content	Medium	SD	P
< 50 age	51.7	8.5	p>0,05
50 - 59 age	49.5	11.3	
60 - 69 age	47.4	12.4	
≥ 70 age	50.5	10.6	
Male	45.3	11.4	p>0,05
Female	47.1	12.5	
Normal	46.1	12.5	p>0,05
Underweight level 1	43.7	11.4	
Underweight level 2	42.9	10.9	
Underweight level 3	39.4	9.8	
Not married	41.4	13.2	p>0,05
Have spouse	45.9	11.3	
Divorced/widowed	42.5	10.4	

Average score of quality of life score of symptoms and financial before treatment: by age group: the highest is < 50 years old (51.7), the lowest is age group 60 - 69 years old (47.4), by sex: female is taller for men (47.1 and 45.3 points), by marital status: for the Divorced/widowed group, the lowest score was: 42.5 points, the highest was 45.9 points for the group with a spouse (p > 0.05).

3.3. Change in quality of life score mean score in the areas of general health, function and symptoms & financials after treatment

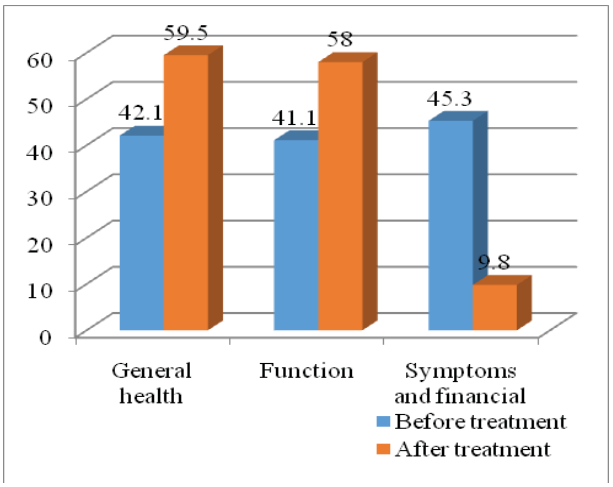

Figure 4: Change of mean score of quality of life score in functional areas, symptoms/financial and general health of study subjects after treatment.

Overall health score after treatment increased from 42.1 to 59.5 points, functional scores increased from 41.4 to 58 points, symptom and financial scores were lower, from 45.3 to 39.8, (p < 0.01).

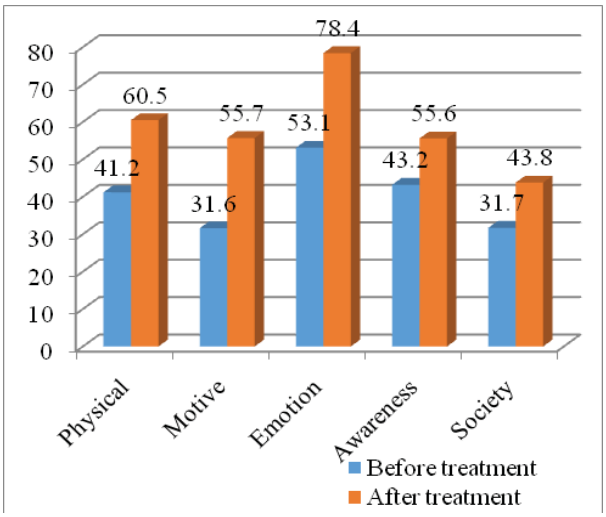

Figure 5: Comparison of quality of life scores before and after treatment by function

Regarding function after treatment: physical, motive, emotional, cognitive and social indicators have significantly improved. Average physical

score increased from 41.2 to 60.5 points; movement score increased (from 31.6 to 55.7); emotional score increased (from 53.1 to 71.8); cognitive score increased (from 43.2 to 55.6); Social score increased (from 31.7 to 43.8).

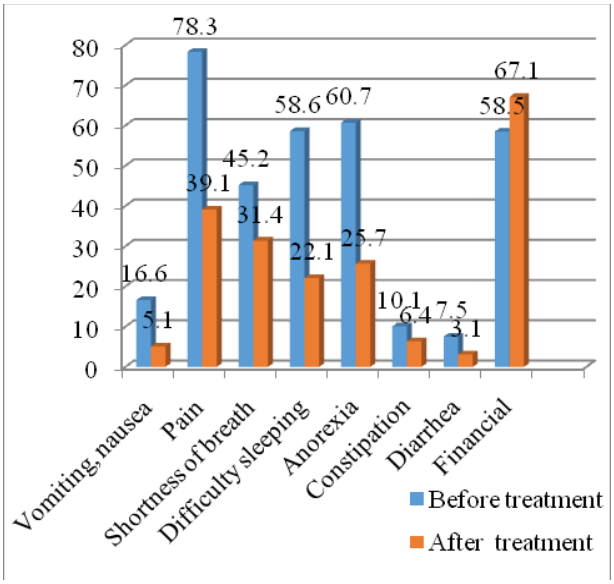

Figure 6: Change in mean score of quality of life score in symptom &financial area after treatment.

Symptoms such as fatigue, nausea and vomiting, pain, shortness of breath after treatment have improved significantly. However, the patient's financial difficulty increased after treatment, $p < 0.05$.

IV. DISCUSSTION

4.1. Evaluation of quality of life score of patients with late stage cancer before treatment

In our study, out of 198 patients treated, 151 were male and 47 were female. The average score of quality of life score in the field of general health before treatment: the age group 50 - 59 years old is the highest (45.4), followed by the age group 60 - 69 years old (41.3), the lowest was the age group ≥ 70 years old (39.6 years old)), male patients were higher than female (46.2 and 45.3); patients with normal BMI had the highest average quality of life score (44.2), followed by thin grade 1 (42.5), the lowest was grade 3 (38.6) thin group ($p > 0.05$).

Average functional score before treatment: by age group 50 - 59 years old is the highest (39.6), followed by group 60 - 69 years old, the lowest is group ≥ 70 years old (32.5); men are lower than women (42.1 and 45.3 points); according to BMI: respectively, the patient with the highest normal BMI (44.2 points), the thinnest grade 1 (41.4), the lowest was the 3rd thin group (35.5); The unmarried group got the highest score: 49.5 points, the divorced/widowed group got 46.3 points, the Married group got 41.3 points ($p > 0.05$). Average score of quality of life score in terms of symptoms & finances before treatment: group < 50 years old (51.7), followed by age group ≥ 70 years old (50.5), the lowest age group is 60 - 69 years old (47.4); female is higher than male (47.1 and 45.3 points); patients with normal BMI had the highest score (46.1), followed by grade 1 thin patients (43.7), the lowest was grade 3 thin patients (39.4).

4.2. Evaluation of quality of life score of patients with late - stage cancer after treatment

Overall health score after treatment increased from 42.1 to 59.5 points, functional scores increased from 41.4 to 58 points, symptom and financial scores were lower, from 45.3 to 39.8, ($p < 0.01$). Thus, the patient's symptoms after treatment improved significantly.

In terms of function after treatment: physical, motor, emotional, cognitive and social indicators have significantly improved. Average physical score increased from 41.2 to 60.5 points; motor score increased (from 31.6 to 55.7), emotional score increased (from 53.1 to 71.8); cognitive score increased (from 43.2 to 55.6); social score increased (from 31.7 to 43.8), $p < 0.05$. For cancer patients, helping patients improve physically, emotionally, etc. is very important. This helps patients to be confident and optimistic, trusting in the treatment and care measures of the department and center. We see a positive change in the scores in these areas. Our study gives results nearly equivalent to the study of Vu Van Vu et al in 2010 [4].

With symptoms such as fatigue, nausea and vomiting, pain, shortness of breath, trouble sleeping... there was a significant improvement after treatment. In addition to the influence of disease, cancer patients while being treated are also affected by many factors such as room conditions, eating conditions, many people coming in and out… which will affect the ability to eat, drink, sleep of patients. We realize that these scores have changed, but this change is not high, we will continue to improve the measures of the ward and hospital to help improve patients' symptoms such as upgrading beds and rooms. Treatment, improve the quality of meals in the hospital canteen. In Vu Van Tan's study, fatigue score changed 11.7 after treatment [4]. Cleeland's study found that patients with

satisfactory pain treatment always maintained daily activities, walking and enjoying life higher than those who did not receive adequate treatment [5]. Author Dwi Gayatri (2021) also showed positive signs, markedly improved symptoms after patients received treatment and comprehensive care [6]. Mirjana Marinkovic' results: In all four domains, patients treated with conserving surgeries scored higher than patients treated with radical mastectomy. This result was controlled for a set of demographic variables. The differences in QoL scores are present on all levels of controlling variables [7].

4.3. Some factors affect the quality of life score

As described above, our Palliative care and Oncology Department always strives to find the most appropriate and optimal treatment and care for each patient. However, due to many impacts from the difficulty of facilities, machinery and equipment, it also impacts on the overall health and functions of the patient. Especially in the past year, due to the influence of the Covid-19 pandemic, our Palliative Department was also affected as much as the restriction of family visits, even for nearly a month, we had to isolate at the department (in May 2021) has also greatly affected the psychology and general health of patients. Besides, in terms of human resources: in 2020 - 2021, we have 02 doctors going to study to improve qualifications and one doctor taking maternity leave out of seven treating doctors. This also partly affects he ability to cover and close to all patient problems. Also due to the impact of the Covid-19 pandemic, many benefactors and charity groups have little opportunity to have direct contact with our patients, which also causes disadvantages for these patients. From the problems obtained after researching and interviewing Center leaders and medical staff as above: we have come up with many solutions to positively change the comprehensive quality of life score for cancer patients, such as upgrading beds. For prevention, there is a patient meeting each week in the department to listen to the patient's thoughts, share, and difficulties. This year, two doctors in our department also completed their studies and returned for treatment, and we also changed measures to prevent and control the epidemic so that many benefactors could come in to support and comfort both materially and spiritually for the patient.

V. CONCLUSION

Before treatment, the average score of general health, physical function, functional function, and social function is low while the problem of cancer symptoms is high. After treatment, the patient's general health problem and most of the patient's symptoms improved markedly in terms of the average score.

The functional emotional, and social functions improved and decreased to the average score after treatment.

The Department of Palliative care continues to make efforts to improve care and treatment conditions, meeting all patients once a week to grasp, listen to and promptly improve the difficulties the patient is having, actively seek and create conditions for benefactors and volunteer groups to meet and support in many aspects for cancer patients in the department.

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