

## RESEARCH ARTICLE

# Functional Status in Turkish Women with Gynecological Cancer

Gulcihan Akkuzu<sup>1\*</sup>, Melek Serpil Talas<sup>2</sup>, Firat Ortac<sup>3</sup>

### Abstract

**Background:** Functional status is the ability to perform daily activities. Little is known about quality of life and health status of gynaecological cancer patients. The present study therefore aimed to evaluate the functional status of women receiving treatment for gynecological oncological disease while not hospitalised. **Materials and Methods:** This descriptive study covered 42 patients monitored by the Gynecological Oncology Unit in 2011. Data were collected using the Functional Living Index-Cancer and analysed with the chi square test, independent samples t-test, Mann-Whitney U test, one-way ANOVA test and the Kruskal-Wallis H test. **Results:** Of the 42 cases, 66.7% had been diagnosed within the previous year and 90.5% were undergoing chemotherapy. The most severe symptoms experienced were pain (35.7%), fatigue-weakness (40.5%) and nausea and vomiting (56.5%). Daily activities where the most difficulty was experienced were housework (28.6%), average pace walking (31.0%), carrying more than 5 kg (28.6%). The mean Functional Living Index score was quite high (103.5±24.1). FLIC-C scale scores did not vary with the educational status, diagnosis duration, and family history of cancer ( $p>0.05$ ). **Conclusions:** Evaluation of the functional status of gynecological cancer patients and how they cope with problems should indicate to healthcare professionals what help can be given to maintain quality of life.

**Keywords:** Quality of life - cancer patients - female genital neoplasms - activities of daily living - Turkey

*Asian Pac J Cancer Prev*, 15 (5), 2045-2049

### Introduction

Gynecologic cancer has a significant effect on patients as its diagnosis and treatment are difficult and intensive. The disease leads to a change in the patient's lifestyle. Understanding the nature of cancer and the development of new diagnostic and treatment facilities for the extension of patient survival has drawn attention to improving the quality of life (Akkuzu, 2013).

Quality of life is a multidimensional concept that describes the physical, mental and social wellbeing status. It includes daily living activities together with symptoms of disease and treatment with its physical dimension and cancer patients including gynecological cancer are prone to significant problems that negatively affect the quality of life (Ell et al., 2008; Luckett et al., 2010; Fader et al., 2011; Van Cleave et al., 2011; 2012).

Functional status is a multi-dimensional concept associated with the individual's biological status, disease and symptoms. Acute and chronic diseases, old age, disability, and drug use that disrupts functioning worsens the functional health status of the individuals and negatively affects their quality of life (Van Cleave et al., 2012). Functional status consists of the individual

performing normal daily activities, meeting his/her basic requirements, performing the daily roles and maintaining his/her health and wellbeing. It is associated with the medical, emotional and cognitive health of the individual. The presence of disease prevents the individual from fulfilling daily responsibilities and this causes emotional problems (Ell et al., 2008; Luckett et al., 2010; Fader et al., 2011; Van Cleave et al., 2011; 2012). Loss of functional status is associated with shorter survival, compromised quality of life, depression, and severe economical burden for patients and their caregivers (Van Cleave et al., 2011; Sharma et al., 2012). After a gynecological cancer diagnosis, there is a possibility of physical capacity limitations, changes in sexual function, changes in roles in the family, at work and socially, and recurrence of the disease in the patients depending on the disease and treatment options (Akkuzu, 2013). Also the gynecologic cancers was seen mostly in elderly women and first step of treatment is surgery (Van Cleave et al., 2012). Functional status of older adults serves as an important healthcare indicator and research outcome (Van Cleave et al., 2011). Studies have revealed the effects of surgery, radiation and chemotherapy on the quality of life in gynecologic cancer (Akuzu, 2012; Gogoi, 2012; Van Cleave et al., 2012).

<sup>1</sup>Department, Faculty of Health Sciences, Nursing and Health Service, Baskent University, <sup>2</sup>Nursing Department, Faculty of Health Sciences, <sup>3</sup>Department of Obstetric and Gynecology, Surgical Sciences, School of Medicine, Ankara University, Turkey \*For correspondence: [gulcihanakkuzu@yahoo.com](mailto:gulcihanakkuzu@yahoo.com)

Although there are prospective studies on the quality of life in the first two-year period after initiation of treatment in patients with gynecological cancer, very little is known about long-term ( $\geq 5$  years) quality of life and health. There are also very few studies examining the quality of life of individuals diagnosed with and treated for gynecologic cancer in developing countries (Chalas, 2013) also in Turkey.

This study was planned to evaluate the functional status of individuals receiving treatment for gynecological oncology disease during the phases not requiring hospitalization.

## Materials and Methods

### Design, research setting and sampling

This was a descriptive study. The study universe consisted of the patients followed-up at Ankara University Department of Obstetrics and Gynecology's Gynecologic Oncology Clinic in the year prior to the study date. The study aimed to reach all the study universe by not selecting a sample. We found that 92 women were treated in the clinic in 2011. Of these females, all subjects over 18 years of age with outpatient follow-up during the study and who were diagnosed at least 3 months previously were included in the study (n=42, 45.6%).

### Data collection and analysis

The data were completed at the clinic by the investigators using the FLIC Scale (Functional Living Index-Cancer) and the data collection form via face-to-face interviews with the patient.

### Functional life scale-cancer (FLIC-Cancer)

This scale was developed by Schipper et al. (1984) in order to assess the functional status and quality of life in individuals with cancer, and its validity and reliability in Turkey were studied by Bektas and Akdemir (2006). The scale consisting of 22 questions was prepared according to the 7-item Likert Scale. Options consisted of seven categories listed from positive to negative. Functional Living Scale options were scored as 7 to 1 for negative questions and 1 to 7 for positive questions. The scale results were found by adding the point value of each question. The Functional Life Index has 5 subtitles: Physical Functions, Psychological Functions, General Wellbeing (Cancer-related Challenges), Social Functions, and Gastrointestinal Symptoms (Nausea, etc.). The maximum score on the scale is 154 and the minimum score 22, with high scores indicating good functional status and quality of life (Schipper et al., 1984; Bektas and Akdemir, 2006; Bektas and Akdemir, 2008). The subscale Cronbach alpha values in this study were 0.910 (Physical Functions), 0.845 (Psychological Functions), 0.866 (General Well-Being), 0.924 (Social Functions) and 0.712 (Gastrointestinal Symptoms) (Table 5).

Basic descriptive statistics (mean, SD, frequency), percentage chi square test, Independent-Samples t-test, Mann-Whitney U-test, One-Way ANOVA test and Kruskal-Wallis H test were used for statistical analyses. A p value under 0.05 was considered statistically significant.

### Ethical dimensions

After receiving the consent of the Ankara University Faculty of Medicine Cebeci Hospital Chief of Staff and the Department of Obstetrics and Gynecology and Oncology Department for the study, permission was obtained from the Ankara University Faculty of Medicine Ethics Committee. All patients in the study group were explained the aim of the study, emphasizing that participation was voluntary and the information would be kept confidential.

**Table 1. Sociodemographic and Gynecologic Oncologic Disease Characteristics of the Patients**

	Number	%
Ia. Sociodemographic characteristics n=42		
Mean age (years)		
[Mean: 54.90±10.34 (min=30, max=80)]		
≤54	21	50.0
>54	21	50.0
Educational level		
Illiterate	13	31.0
Primary school	19	45.2
High school+University	10	23.8
Marital Status		
Married	35	83.3
Widow	7	16.7
Marriage age (years)		
[Mean 31.90±12.20 (min=9, max=59)]		
<32	17	40.5
≥32	25	54.7
Does not know	2	4.8
Financial Status		
Income more than expenses	3	7.1
Income equivalent to expenses	32	76.2
Income less than expenses	7	16.7
Ib. Gynecologic oncological disease characteristics n=42		
Diagnosis		
Ovarian cancer	36	83.5
Endometrial cancer	5	11.9
Krukenberg tumor (ovary metastasis)	1	2.4
Bladder tumor (ovary metastasis)	1	2.4
Cancer Stage		
Stage 1	1	2.4
Stage 2	3	7.1
Stage 3	23	54.8
Stage 4	9	21.4
Not staged	8	14.3
Diagnosis time (year)		
[Mean 1.74±1.41 (min=1, max=6)]		
One	28	66.7
Two+	14	33.7
Current treatment		
Chemotherapy	38	90.5
Surgical treatment	3	7.1
Radiotherapy	1	2.4
Previously administered treatment		
Chemotherapy	10	23.9
Surgical treatment	29	69.0
Not treated	4	7.1
Receiving social support during disease process		
Yes	41	97.6
No	1	2.4
The person providing social support*		
Husband	33	81.3
Mother	5	12.2
Father	7	17.1
Siblings	23	56.1
Children	31	75.6
Other relatives	11	26.8
Friend	16	39.0
Neighbors	11	26.8

\*More than one answer given

They were also ensured that their answers to the questionnaire would not affect their treatment.

“Human beings” were an element of the study, which was therefore conducted in accordance with the principles of the 2008 Helsinki Declaration.

## Results

The mean age of the women participating in the study was 54.90±10.34 years, 45.5% were primary school graduates and 31% were illiterate. 83.3% of the patients were married and the mean age of marriage was 31.90±20.12 years with 40.5% getting married before the age of 32. The income of 76.2% of women was equal to their expenses, while 16.7% had less income than their expenses (Table 1a). 83.5% of women included in this study had ovarian cancer and the cancer was Stage 3 and above in of 90.5%. 66.7% of the patients had been diagnosed with cancer within the last year. The treatment currently administered was chemotherapy in 90.5% and the previous treatment was surgical in 69%. Social support from one or more persons during cancer treatment had been received by 97.6% of the participants with 81.3% from their husbands, 75.6% from their children, and 56.1% from their siblings (Table 1b). The mean number of births was 4.67±2.65. A history of yellow-green,

whitish or pink-red vaginal discharge was present in 21.4%. The women did not report a history of sexually transmitted infections in themselves or their partners. 21.4% of the participants had received HRT previously and 40.5% had a family history of cancer. Of the patients with a family history of cancer, a cancer diagnosis was present in the father in 29.4%, the mother in 23.5% and the sister in 23.5% as reported by the patient. The types of cancer seen most commonly in the family were lung cancer (17.7%), breast cancer (7.17) and stomach cancer (11.6%) in order of frequency. A large number of patients had experienced fatigue (40.5%), pain (35.7%), and nausea and vomiting (26.2%) in the last two weeks. Of these problems, the most frequently used interventions were medical treatment for symptoms of pain (64.2%), and nausea and vomiting (59.5%), and rest for fatigue (45.2%) (Table 2). When the status of performing daily living activities was examined, the rates of being able to do the functions that required more energy was low (doing housework 28.6%, walking at moderate speed 31.0%, carrying more than 5 kg 28.6%). As seen in the Table, 11.9-14.5% of the patients reported not being able to do these functions (Table 3). The Functional Life Scale total mean score was 103.45±24.08 (min: 53.00-max: 152.00) and the subscale scores were Physical Functions 37.83±11.69, Psychological Functions 24.7±11.8, General Wellbeing; 12.40±5.05, Social Functions 8.50±3.57 and Gastrointestinal Symptoms 8.14±3.41 (Table 4).

The Functional Living Scale mean scores of the patients were evaluated according to the age group, education, years of diagnosis, and presence of cancer in the family history, and no statistically significant difference was found between the mean scores as regards these factors (Table 5, p>0.05).

## Discussion

There are only a few studies in the literature examining the quality of life in patients with gynecologic cancers compared to cancer in general globally as well as in Turkey. An important characteristic of our study is that it is the first to use the FLIC scale in gynecologic oncology patients in Turkey.

83.5% of the women included in this study had ovarian cancer and the cancer was Stage 3 and above in 90.5%. The cancer diagnosis had been made in the last year in

**Table 2. The Problems Experienced During Last two Weeks and Actions Taken for These Problems**

Problem n=42		Number	%
Fatigue	Little	7	16.7
	Moderate	18	42.9
	A lot	17	40.5
Action for fatigue	Medical treatment	7	16.7
	Resting	19	45.2
	None	16	38.1
Pain	Little	13	31.0
	Moderate	14	33.3
	A lot	15	35.7
Action for pain	Medical treatment	27	64.2
	Non-pharmacological implementation	2	4.8
	None	13	31.0
Nausea and vomiting	Little	20	47.6
	Moderate	11	26.2
	A lot	11	26.2
Action for nausea and vomiting	Medical treatment	25	59.5
	None	17	40.5

**Table 3. The distribution of the effect of the Problems Related to the disease on Daily Living Activities**

Daily Living Activities (n:42)	I can do it easily		I can do it with difficulty		I can do it with help		I cannot do it	
	Number	%	Number	%	Number	%	Number	%
Getting dressed- undressed	25	59.5	15	35.7	2	4.8	-	-
Taking a bath	27	64.3	13	31.0	2	4.8	-	-
Eating	27	64.3	13	31.0	2	4.8	-	-
Doing housework	12	28.6	21	50.0	4	9.5	5	11.9
Going upstairs	15	35.7	21	50.0	6	14.3	-	-
Going downstairs	19	45.2	17	40.5	6	14.3	-	-
Walking at moderate speed	13	31.0	19	45.2	5	11.9	5	11.9
Walking slowly	24	57.1	12	28.6	6	14.3	-	-
Standing easily	24	57.1	14	33.3	3	7.1	1	2.4
Speaking	35	71.4	10	23.8	-	-	-	-
Using the toilette	30	71.4	10	23.8	1	4.8	-	-
Lifting-carrying things heavier than 5 kg	12	28.6	21	50.0	3	7.1	6	14.3

**Table 4. The Distribution of Subscale Scores of the Functional Life Scale\***

Subscale title	Item number	Min	Max	Cronbach's alpha	Mean	SD
Physical Functions	9	17	60	0.910	37.83	11.6
Psychological Functions	6	10	38	0.845	24.07	8.11
General Wellbeing (Difficulties Related to Cancer)**	3	4	19	0.866	12.40	5.05
Social Functions	2	2	14	0.924	8.50	3.57
Gastrointestinal Symptoms (Nausea etc.)**	2	2	14	0.712	8.14	3.41

\* Min: 53.00-Max: 152.00, mean 103.45±24.08

**Table 5. Functional Life Scale Subscale Mean Scores, SD and Statistical Significance Results of the Patients According to Some Chosen Variables**

Variable		Functional Life Scale subscale mean score±SD				
		Physical Functions	Psychological Functions	General Wellbeing	Social Functions	Gastrointestinal Symptoms
Age	≤ 54	39.90±11.37	23.52±7.94	13.66±4.80	8.66±3.66	9.09±3.36
	>54	35.76±11.92	24.61±8.44	11.14±5.08	8.33±3.56	7.19±3.26
		Z=-1.032, p=0.302	Z=-0.403, p=0.687	Z=-1.528, p=0.127	Z=-0.274, p=0.784	Z=-0.825, p=0.068
Education	Illiterate	37.38±11.85	25.23±8.58	12.76±5.32	8.84±3.21	7.92±3.61
	Primary school	36.36±12.60	23.42±8.46	11.52±5.16	7.94±3.77	7.94±3.51
	High school	41.20±11.69	23.80±7.43	13.60±4.64	9.10±3.84	8.80±3.19
	+University	X <sup>2</sup> =1.063, p=0.588	X <sup>2</sup> =0.327, p=0.849	X <sup>2</sup> =1.134, p=0.540	X <sup>2</sup> =0.741, p=0.690	F=0.235, p=0.793
Years of diagnosis	One	39.14±12.23	24.75±8.20	12.89±5.10	8.85±3.59	8.21±2.93
	Two +	35.21±10.46	22.71±8.05	11.42±4.97	7.78±3.55	8.00±4.33
		Z=-1.042, p=0.298	Z=-0.575, p=0.566	Z=-0.750, p=0.453	Z=-0.997, p=0.310	Z=-0.051, p=0.957
Family history of cancer	Yes	38.47±11.69	23.17±7.66	12.82±5.24	6.94±3.61	8.47±3.44
	No	37.40±11.91	24.68±8.50	12.12±5.00	9.50±3.20	7.92±3.3
		Z=-0.218, p=0.827	Z=-0.398, p=0.691	Z=-0.502, p=0.616	Z=-2.301, p=0.021**	Z=-0.491, p=0.624

**Table 6. Functional Life Scale Subscale Mean Scores, SD and Statistical Significance Results of the Patients According to Some Chosen Variables**

Variable	n	Functional Life Scale		
		Mean	SD	Statistics
Age	≤ 54	94.19	25.12	Z= -0.805
	>54	86.71	27.76	p=0.421
Education	Illiterate	91.61	27.06	X <sup>2</sup> =0.578 p=0.749
	Primary school	87.15	29.21	
	High school +University	95.20	21.17	
Years of diagnosis	One	93.32	26.30	Z= -0.934
	Two +	64.71	26.69	p=0.350
Family history of cancer	Yes	89.52	26.30	Z= -0.179
	No	91.08	27.03	p=0.858

66.7% of the patients and the current form of treatment was chemotherapy in 90.5%. The social support of our patients seemed to be good in general: 81.3% received support from their husbands, 75.6% from their children, and 56.1% from their siblings (Table 1b). Social support is an important resource that can help cancer patients cope with their fear and doubts (Arriba et al., 2010).

Eylen's study (2002) found that the subjects received social support from one or more persons during cancer treatment. Similar to the results of that study, women receiving gynecological cancer treatment expressed receiving support mostly from their husbands and children in Akkuzu's (2012) study. Ozkan and Ogce (2008) was found in their study on Turkish women with breast cancer who mostly under chemotherapy the main conclusion that can be drawn from these data is that friend support

significantly affects both general functional state and social and community activities as it is revealed by the examination of the effect of social support on functional state. Also, general social support scores significantly improve occupational activities.

Reis (2006) found that patients with higher levels of education and with better husband and social support systems coped more easily with the side effects of treatment in a study conducted with gynecological cancer patients. Reis et al. (2010) found a fairly high level of support from family, parents and friends and emphasized that this support contributed to the development of the patients' social well-being as a feature of life in Turkish society in another study with gynecologic oncology patients. A statistically significant difference was found between the mean scores of the social function subscales according to whether the patient had a family history of cancer (p<0.05). According to this results, the individuals experiencing similar problems in our society may be considered to be more effective in understanding and supporting each other. We found that the patients had experienced a lot of fatigue, pain, and nausea and vomiting in the last two weeks, and the most common intervention used was medical treatment for the symptoms of pain and nausea, and resting for fatigue (Table 3).

Fatigue, pain and nausea were the most common symptoms under chemotherapy in women diagnosed with gynecologic cancer in Akkuzu's study (2012) as well. We found that the patients' ability to perform the functions that required more energy was low. Similarly, 81.6% of women with a diagnosis of ovarian cancer, with the majority were receiving chemotherapy, expressed having difficulty in doing housework due to fatigue (Akkuzu, 2012). According to study Ogce and Ozkan (2008) women's functional status with breast cancer according to the cancer



functional status inventory the after chemotherapy scores were lower and significantly different for household and family activities similarly in the study.

The Functional Life Scale scores of the patients in the study were Physical Functions  $37.83 \pm 11.69$ , Psychological Functions  $24.7 \pm 11.8$ , General Wellbeing  $12:40 \pm 5:05$ , Social Functions;  $8:50 \pm 3:57$  and Gastrointestinal Symptoms  $8.14 \pm 3.41$  (Table 5). The study of Akkuzu (2012) using the EORTC-QLQ-C30 Quality of Life index in women whose mean diagnosis duration was 2 years and received chemotherapy and of which 7.3% had ovarian cancer found disturbed physical, emotional, social and cognitive function. The general score in that study was higher than the general wellbeing score in this study. This may be due to the presence of more advanced stage gynecologic cancer in the sample group in our study. As seen in table 7, the functional life scale mean score of the group with a diagnosis duration of 2 years and above (64.71) was lower than the newly diagnosed group (93.3).

83.5% of the women in this study were diagnosed with ovarian cancer, and 76.2% were being treated in stage III and IV. Arriba et al. (2010) reported the quality of life of women with ovarian cancer in stage I and II to be statistically significantly higher than in stage III and IV.

The Functional Life Scale subscale scores were evaluated according to the mean age group, educational status and diagnosis duration of the patients and the difference between the mean scores were not statistically significant ( $p > 0.05$ ). Educational status was also a variable that did not affect the quality of life in Akkuzu's study (2012). The quality of life appears to be more associated with the intensity of symptoms experienced and the presence of psychosocial support. However, although the psychosocial stress was found to be moderately high in another study conducted in patients with gynecological cancer, the quality of life was found to be high with the FLIC scale (Pilkington and Mitchell, 2004).

The implementation of initiatives to improve the quality of life of individuals with gynecologic cancer during the process of diagnosis and treatment is important. This study may guide health care staff in the evaluation of patients' functional status and when helping patients to cope with the physical, psychological and social problems.

## Acknowledgements

The authors would like to thank nurse Bunyamin Erdogan for the help in data collection and all participants.

## References

- Akkuzu G, Ayhan A (2013). Sexual functions of Turkish women with gynecologic cancer during the chemotherapy process. *Asian Pac J Cancer Prev*, **14**, 3561-4.
- Akkuzu G (2012). An evaluation of the quality of life of women undergoing chemotherapy due to a diagnosis of a gynecological oncological disease. *Asian Pac J Cancer Prev*, **13**, 1277-80.
- Arriba LN, Nickles FA, Frasure H, et al (2010). A review of issues surrounding quality of life among women with ovarian cancer. *Gynecol Oncol*, **119**, 390-6.
- Bektas HA, Akdemir N (2008). Reliability and validity of the

- functional living index-cancer (FLIC) in Turkish cancer patients. *Cancer Nurs*, **31**, 1-7.
- Bektaş HA, Akdemir N (2006). The assessment of functional status in individual's who have cancer. *Turkiye Klinikleri J Med Sci*, **6**, 488-99 (in Turkish).
- Chalas E (2013). Gynecologic oncology quality measures: What really matters? *Gynecologic Oncol*, **130**, 401-2.
- Ell K, Xie B, Wells A, et al (2008). Economic stress among low-income women with cancer effects on quality of life. *Cancer*, **112**, 616-25.
- Eylen B (2002). The validity, reliability and factor structure study on the scale of social support for cancer patients. *Uludağ Üniversitesi Eğitim Fakültesi Dergisi*, **20**, 100-7 (in Turkish).
- Fader AN, Frasure HE, Gil KM, et al (2011). Quality of life in endometrial cancer survivors: what does obesity have to do with it? *Obstet Gynecol Int*, **2011**, 308609.
- Filiz Ogeç, Sevgi Ozkan (2008). Changes in functional status and physical and psychological symptoms in women receiving chemotherapy for breast cancer. *Asian Pac J Cancer Prev*, **9**, 449-52.
- Gogoi RP, Urban R, Sun H, et al (2012). Evaluation of society of gynecologic oncologists (SGO) ovarian cancer quality surgical measures. *Gynecologic Oncol*, **126**, 217-9.
- Luckett T, King M, Butow P, et al (2010). Assessing health-related quality of life in gynecologic oncology: a systematic review of questionnaires and their ability to detect clinically important differences and change. *Int J Gynecol Cancer*, **20**, 664-84.
- Ozkan S, Ogeç F (2012) Importance of social support for functional status in breast cancer patients. *Asian Pac J Cancer Prev*, **13**, 957-62
- Pilkington FB, Mitchell GJ (2004). Quality of life for women living with a gynecology cancer. *Nurs Sci Q*, **17**, 147-55.
- Reis N, Beji NK, Coskun A (2010) Quality of life and sexual functioning in gynecological cancer patients: results from quantitative and qualitative data. *Eur J Oncol Nurs*, **14**, 137-46.
- Reis N, Coskun A, Kızılkaya Beji N (2006). Jinekolojik kanserlerde yaşam kalitesi ve etkileyen faktörler [quality of life in gynecologic oncology and affecting factors]. *Ataturk Üniversitesi Hemsirelik Yüksekokulu Dergisi*, **9**, 25-35.
- Schipper H, Clinch J, McMurray A, et al (1984). measuring the quality of life of cancer patients: the functional living index-cancer: development and validation. *J Clin Oncol*, **2**, 472-83.
- Sharma C, Deutsch I, Horowitz DP, et al (2012). Patterns of care and treatment outcomes for elderly women with cervical cancer. *Cancer*, **118**, 3618-26.
- Van Cleave JH, Egleston BL, McCorkle R (2011). Factors other than age affect recovery of functional status in older adults after cancer surgery. *J Am Geriatr Soc*, **59**, 34-43.
- Van Cleave JH, Egleston BL, Bourbonniere M, et al (2012). Functional status in older women following gynecological cancer surgery: can choice of measure influence evidence for clinical practice? *Geriatric Nurs*, **33**, 34-43.