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## RESEARCH ARTICLE

## EXPLORATION THE QUALITY OF LIFE AND THE RELATED FACTORS IN WOMEN WITH RECENT DIAGNOSIS OF GYNECOLOGICAL CANCER, BEFORE THE SURGICAL TREATMENT, IN GREECE

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## Abstract

**Introduction:** In Greece, it is estimated that annually 600 new cases of cervical cancer are diagnosed, being the third most common form of cancer in women after breast cancer (22.9%) and colon cancer (9.4%). In addition to being life-threatening, such a diagnosis can also represent the psychological impact of gynecological cancers; there are negative emotional consequences of such a diagnosis for both patients and their families affecting the quality of life (QOL) of patients with gynecological cancer.

**Aim:** To examine the quality of life (QOL) of women with recent diagnosis of gynecologic cancer (RDGC) in Greece during their illness and to identify the psychosocial problems and the symptoms faced by women in the early stages of the disease.

**Material and Method:** A prospective study of 63 patients with RDGC before undergoing hysterectomy, who completed the EORTC QLQ-C30 questionnaire.

**Results:** The patients were between 45 and 50 years old (19.6%). Impaired physical functioning of women with RDGC was associated with strenuous activity or a long walk. Emotionally, patients showed a lack of concentration, tension, anxiety, irritation and depression. Age was negatively correlated with depression ( $p$ -value =  $0.05 < 0.1$ ). More than half of women had pain and few of them suffered a lot. Pain, shortness of breath (dyspnea) and fatigue caused discomfort and interference with daily living activities. More than half had sleeping disorders. Constipation and lack of appetite were common symptoms of the digestive system. Most women had no social or financial problems and rated their quality of life "very good".

**Conclusions:** Women with a RDGC, besides the common physical symptoms such as fatigue, pain, anorexia, sleep disorders and loss of appetite, had also emotional disorders. The feeling of depression was present in most patients. It was found that the younger the patient, the more depressed they feel.

**Key words:** Quality of life, gynecological cancer, pretreatment, recent diagnosis.

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## INTRODUCTION

«Gynecological cancer» refers to the breast cancer and any cancer that developed in a woman's reproductive tract, such as the ovary, endometrium, cervix, and vulva, and accounts for about 18% of all female cancers worldwide.<sup>1,2</sup> In Greece, it is estimated that annually 600 new cases of cervical cancer are diagnosed, being the third most common form of cancer in women after breast cancer (22.9%) and colon cancer (9.4%).<sup>3</sup> In addition to being life-threatening, such a diagnosis can also represent the psychological impact of gynecological cancers; there are negative emotional consequences of such a diagnosis for both patients and their families. After diagnosis of gynecological cancer, women have to face the diagnosis itself, the personal interpretation of cancer, the clinical symptoms of the disease, the side effects of the therapeutic approach and the reaction of their family and friends.<sup>2,4,5</sup> A lot of women with gynecological cancer experience fear for the future, sadness, difficulties in their daily routine, financial problems and social isolation because of the symptoms.<sup>6,7</sup> These problems affect the quality of life (QOL) of patients with gynecological cancer. QOL is a complex and a multidimensional measure that encompasses the diagnostic impact, the impact of disease treatment and its progression on daily routine activities and recovery of patients with gynecological cancer. Currently in oncology, QOL is considered as being an indicator for assessing the quality of care and its management. QOL subjectively assesses psychological, physical and social well-being and provides insight into daily living during the treatment of gynecological cancer.<sup>8</sup> There is a need to examine women's QOL during the early stages of diagnosis of gynecological cancer and before the surgical treatment; as in the literature most of the research focuses on investigating the QOL during or after the chemotherapy or radiation treatment. Efforts to promote the QOL in gynecological cancer patients is considered as one of the most important topics in women's health care. This study gives attention to identify various aspects of life and find effective ways to promote and improve the QOL in these patients, in early stages of diagnosis.

## AIM

The aim of the study was to examine the quality of life (QOL) of women with recent diagnosis of gynecologic cancer in Greece during their illness and focusing on the psychosocial problems and the symptoms faced by women in the early stages of the disease.

## METHODOLOGY

### *Study population*

A prospective study was conducted, including patients with a recent diagnosis of gynecological cancer (n=63 patients). All patients have undergone hysterectomy at a General Anti-cancer Oncological Hospital of Athens, between June 2018 and June 2019. According to inclusion criteria, patients who qualified to be included were: patients of 30-79 years old with a recent diagnosis of gynecological cancer, who were registered in the clinic for surgery and could communicate in Greek fluently. Participants completed a self-administered questionnaire, the day just before the surgery, using the EORTC QLQ-C30, in their hospital room. EORTC QLQ-C30 questionnaire developed to assess the quality of life of cancer patients. It has been translated into Greek and validated (9)

A written informed consent was signed by the patients who were included in the study.

### *Statistical analysis*

Statistical analysis was performed using the SPSS statistical package for Windows. Age of women were classified into 5 year classes. Using the Spearman's Correlation Coefficient, the relation between age and all questions were examined.

### *Ethical issues*

All the ethical issues were taken into account during the evaluation plan of the study. The ethical considerations that included in the evaluation were informed consent, voluntary participation, confidentiality and patient's anonymity. The evaluation process did not in any way (unintended or otherwise) harm the participants.

## RESULTS

Sixty-three patients answered the questionnaire, 6 of whom (9.5%) were between 30 and 39 years old, 15 (23.8%) between 40 and 49, 11 (17.5%) between 50 and 59, 13 (20.6%) between

60 and 69, and 6 (9.5%) between 70-79 years old. The average age of the patients was between 45 and 50 years old (19.6%) (table 1). The results, using Spearman's correlation coefficient, showed that age was related negatively with the question: "I feel depression" ( $p\text{-value} = 0.05 < 0.1$ ). The other correlations weren't statistically significant.

From the data analysis (table 2a) related to physical functioning, 46.0% of the women had "little" impairment during strenuous activities, like carrying a heavy shopping bag or a suitcase; when 31.7% of them had "none at all" and 4.8% had "a lot" of trouble. When questioned about any trouble during a long walk, most of them 44.4% said that they had not faced any problems, 38.1% had "a few" problems, 11.1% had "quite a few" problems and 6.3% had "a lot" of difficulties. However, 84.1% of the patients said that they did not have any trouble during a short walk outside their house, 12.7% had "a little" problem and only 3.2% faced "quite a bit" of problems.

Some participants, 39.7%, expressed the need to stay "a little" longer in bed or sit more on a chair during the day and 19.0% of them need to stay "quite a lot" opposed to 41.3% that did not express that need. None of the participants expressed any need in help with eating, getting dressed, washing themselves or using the toilet. 19.0% of the patients did not have any changes in their resting conditions, while 46.0% needed "a little" more time to rest, 22.2% needed "quite a bit" more and 12.7% needed "much" more resting time.

In the question of QLQ about fatigue, specifically if they limited their work or their daily activities, 54.0% of the patients answered that they had no difficulty, 33.3% had "a little" difficulty, 7.9% and 4.8% respectively, had "quite a bit" and "very much" difficulty. When they were asked if they were limited pursuing their hobbies or other leisure time activities, 73% said "not at all", 15.9% said "a little", 6.3% "quite a bit" and 3.2% "very much". Most of the women (39.7%) felt "a little" tired, 27.0% felt "quite a bit" and 4.8% "very much", whereas 27.0% were not tired at all.

Regarding the shortness of breath (dyspnea) during the past week, 30.2% of the participants had "a little" 12.7% had "quite a bit" and almost 1.6% had "very much", and 55.6% did not have any shortness of breath.

Although a lot of the patients (44.4%) did not feel any pain, 34.9% felt "a little pain", 12.7% had "quite a bit" and 6.3% had "very much" pain. Most of the women (46%) expressed "a little" need to rest, while 22.2% "quite a bit" and 12.7% "very much", meanwhile, 19% did not express this need. Furthermore, the participants said that, during the last week of the research, 57.1% the pain did not interfere with their daily activities, but 31.7% "a little", 7.9% "quite a bit" and 1.6% "very much".

In addition, 33.3% of the participants declared having no sleeping troubles (insomnia), while 47.6% had "a little", 14.3% had quite a bit and 4.8% had very much trouble with sleeping. 46.0% of the patients answered negatively to the question if they felt weak, but 31.7% answered that they felt "a little" weakness, 20.6% felt "quite a bit" more, at the same time 1.6% felt "very weak".

Regarding the gastrointestinal system, the patients said that they did not have any lack of appetite (68.3%), did not feel nausea (88.9%) and did not vomit (96.8%). Although there were 15.9% who had a little lack of appetite, 9.5% who had quite a bit and 6.3% who had very much. The participants who declared that they had no constipation were 52.4%, when 34.9% had «a little» and 11.1% had "quite a bit". Otherwise, 11.1% had a "few times" diarrhea and 4.8% had "quite a bit", despite 82.5% who had "no diarrhea at all".

According to the question if they had difficulty in concentrating on things (focusing), like reading a newspaper or watching TV, 71.4% of the respondents replied "not at all", 20.6% answered "a little", 4.8% "quite a bit" and 1.6% "very much". These women also replied that they felt tense 39.7% "a little", 14.3% "quite a bit" and 7.9% "very much". On the other side, there were 36.5% who did not feel any tense at all. Half of the patients (50.8%) said that they worried "a little", 5.8% "quite a bit" more, and 14.3% "a lot", although 23.8% said they were not worried at all. According to the results, 31.7% of the patients also felt "a little" irritable, 11.1% "quite a bit" and 6.3% "very much", except for 46.0% who answered negatively.

The feeling of depression was not present in the 41.3% of the responders, but the other 55.5% answered positively. Especially, 41.3% of them felt "a little", 7.9% felt "quite a bit" and 6.3% felt "very much". The results revealed that depression was as-

sociated with the age of the patient ( $p$ -value=0.05, Correlation Coefficient= -0.28) and it had a negative impact depending on the age. The younger the patient, the more depressed they felt. Regarding the inability to remember, 63.5% had no difficulty in remembering things, but 28.6% had "a little", 4.8% had "quite a bit" and only 1.6% had "very much".

The majority of the patients (84.1%) answered that neither their physical condition nor the medical treatment affected their family life. But at the same time, 11.1% of them had "a little", 1.6% had each "quite a bit" and "very much" interference respectively. On the other hand, 77.8% of the participants said that they had no abstention from their social activities because of their physical or medical condition, when 12.7% had "a little" difficulty, 6.3% had "quite a bit" more and 1.6% had "very much".

Regarding their financial difficulties, caused by their physical condition or medical treatment, 14.3% had "a little" difficulty, 7.9% had "quite a bit" and 4.8% had "very much", opposite to 71.4% who had no difficulties at all.

Finally, participants rated their overall health, during the past week, on a scale from 1 to 7, where 1 is very poor and 7 is excellent. 25.4% rated with 6, the rest of them rated their health with average values 3-5. They also rated their overall quality of life, for the same period, 31.7% with 6 while 42.8% between 4 & 5 (table 2b).

## DISCUSSION

It can be concluded that the age group with the highest incidence of gynecological cancer was women between 45 and 50 years old. This is consistent with information given by ESMO – European Society for Medical Oncology (2012) and highlights the need for early screening among women who are sexually active or are over 18 years old, with Pap-test and pelvic examination annually.<sup>10-12</sup> In addition, for high-risk women there are also non-invasive gynecological sampling methods and technologies (genomic, epigenetic, and proteomic approaches) which have been evaluated for the early detection of gynecological cancer.<sup>13</sup>

The physical function of women with newly diagnosed gynecological cancer was a bit impaired, as they declared, on doing

any strenuous activity (like carrying a heavy bag), or taking a long walk. Some women restricted their daily work and hobbies as they had an increased need to stay in bed and rest during the day. These findings are in agreement with earlier studies that report that recently diagnosed women with gynecological cancer noticed a decrease in functional, physical health and overall well-being in the first interview.<sup>14</sup>

Emotionally, the participants showed a lack of concentration, tension, worries, irritation and depression. Depression was associated to patient's age and has a negative impact depending on the age. This is revealed also by the Multicenter Cross-Sectional Study of Wada<sup>15</sup> who reported that diagnosing cancer can have a significant impact on mental health and well-being. Depression and stress can hinder the treatment and recovery of cancer, as well as the quality of life and survival.<sup>7,16</sup> In addition, the research of Park and Rosentstein<sup>17</sup> reports that the younger cancer patients have consistently higher rates of psychological distress and psychiatric syndromes than the adults with cancer. Mystakidou<sup>18</sup> revealed that depression was associated with older age. But, this is the only study that suggests the intensity of depression is age-related among people with cancer pain.<sup>19</sup>

The findings also showed that some patients had short of breath (dyspnea) and fatigue. Fatigue is a common symptom for the gynecological cancer patients and the survivors of it and it is caused by the cancer.<sup>20</sup> Although awareness and study of fatigue have grown in recent years, its consistent assessment is not a priority in the everyday medical practice.<sup>21</sup>

Another common symptom among cancer patients is pain, which causes discomfort and interfere with daily living activities. In the present study, more than half of women had pain, and few of them suffered a lot. In the literature, researchers report that pain still remains a common persistent symptom among cancer patients from 14% to 100%, despite the advances in pain management, and also remains inadequate in 42% of them.<sup>22,23</sup> Moreover, patients who suffered from pain tend to have more advanced disease and therefore more symptoms.<sup>23</sup>

More than half of the participants had sleeping disorders. Insomnia is very common in cancer patients and there is a correlation between poor sleep and immune decline. Sleeping dis-

orders are associated with alterations of the immune system and have negative health effects that can trigger the cancerous cells.<sup>24,25</sup>

Regarding the gastro-digestive system, the participants had lack of appetite, nausea, constipation and diarrhea. These findings are corroborated by numerous studies in the literature, on general cancer symptoms.<sup>26,27</sup>

In conclusion, most of the women did not face social or financial problems, and there are numerous whose physical condition interfered with their social activities and financial difficulties. This finding was similar with Liang's<sup>28</sup> research, which reports that financial distress affects over half of gynecologic cancer patients (starting a new line of treatment) and is associated with material adversity. The younger patients and the ones with lower incomes can be used to identify patients at increased risk.<sup>19,17,28</sup> Insurance coverage does not protect patients from financial difficulties. Helping patients to maintain their salaries and pay their bills are important areas to aim for.<sup>29,30</sup>

The social consequences of cancer can also be revealed in the areas of social relationships (partner, family, friends). The disease may cause women sexual desire disorder, or disrupt their partner-relationship.<sup>31</sup> The decline in relationship satisfaction may be accompanied by lower quality of life as well as higher levels of anxiety and depression in cancer patients.<sup>16,32</sup> Manne's<sup>33</sup> suggest that resilient women may report a higher quality of life during the diagnosis of gynecological cancer because they are more likely to express positive emotions, redefine the experience positively, and cultivate a sense of peace and meaning in their lives.

## CONCLUSIONS

Undoubtedly women with a recent diagnosis of gynecological cancer, besides the common physical symptoms such as fatigue, pain, anorexia, sleep disorders and loss of appetite, experienced also emotional disorders. The feeling of depression was present in most patients and was negatively associated to young age.

## Relevance to clinical practice

It is important for health professionals to recognize the early signs of depression in their patients and to be able to refer them to a specialist (psychologists or psychiatrists) to cope with and develop defense mechanisms during the difficult period of cancer-treatment and later in recovery.

## Limitations of the study

The small sample size is the main limitation of the study. Although, no correlation was found between the patient's QOL and their demographics characteristics, more follow-up studies that will involve a group of patients in presurgical and postsurgical treatment, can effectively evaluate patients QOL. In the future, research efforts may shed more light on this sensitive population and the burden of their physical emotions.

These are preliminary results of an ongoing study.

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## Conflict of interest

We declare that we have no conflict of interest.

## Ethical approval

This study was approved by the scientific committee of the General Anticancer Oncological Hospital of Athens "Saint Savvas" and the University of West Attica, Nursing Department

## Informed consent

Informed consent was obtained from all individual participants included in the study.

## Research involving human participants

All procedures performed in the studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the



1964 Helsinki declaration and its later amendments or comparable ethical standards.

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## ANNEX

**Table 1.** Frequency and quantity analysis by age group

Variables	n (%)
<b>N=63</b>	
<b>Age</b>	
30-40	6 (11.8)
40-50	15 (29.4)
50-60	11 (21.6)
60-70	13 (25.5)
70-80	6 (11.8)

**Table 2.** Frequency and quantity analysis of variables

a	Not at all		A little		Quite a bit		Very much	
	n	%	n	%	n	%	n	%
<b>Do you have any trouble doing strenuous activities, like carrying a heavy shopping bag or a suitcase?</b>	20	31.7	29	46	11	17.5	3	4.8
<b>Do you have any trouble taking a long walk?</b>	28	44.4	24	38.1	7	11.1	4	6.3
<b>Do you have any trouble taking a short walk outside of the house?</b>	53	84.1	8	12.7	2	3.2	0	0
<b>Do you need to stay in bed or a chair during the day?</b>	26	41.3	25	39.7	12	19	0	0
<b>Do you need help with eating, dressing, washing yourself or using the toilet?</b>	63	100	0	0	0	0	0	
<b>Were you limited in doing either your work or other daily activities?</b>	34	54	21	33.3	5	7.9	3	4.8
<b>Were you limited in pursuing your hobbies or other leisure time activities?</b>	46	73	10	15.9	4	6.3	2	3.2
<b>Were you short of breath?</b>	35	55.6	19	30.2	8	12.7	1	1.6
<b>Have you had pain?</b>	28	44.4	22	34.9	8	12.7	4	6.3
<b>Did you need to rest?</b>	12	19	29	46	14	22.2	8	12.7
<b>Have you had trouble sleeping?</b>	21	33.3	30	47.6	9	14.3	3	4.8
<b>Have you felt weak?</b>	29	46	20	31.7	13	20.6	1	1.6
<b>Have you lacked appetite?</b>	43	68.3	10	15.9	6	9.5	4	6.3
<b>Have you felt nauseated?</b>	56	88.9	5	7.9	1	1.6	1	1.6
<b>Have you vomited?</b>	61	96.8	1	1.6	1	1.6	0	0
<b>Have you been constipated?</b>	33	52.4	22	34.9	7	11.1	0	0
<b>Have you had diarrhea?</b>	52	82.5	7	11.1	3	4.8	0	0
<b>Were you tired?</b>	17	27	25	39.7	17	27	3	4.8
<b>Did pain interfere with your daily activities?</b>	36	57.1	20	31.7	5	7.9	1	1.6

<b>Have you had difficulty in concentrating on things, like reading a newspaper or watching television?</b>	45	71.4	13	20.6	3	4.8	1	1.6
<b>Did you feel tense?</b>	23	36.5	25	39.7	9	14.3	5	7.9
<b>Did you worry?</b>	15	23.8	32	50.8	6	9.5	9	14.3
<b>Did you feel irritable</b>	29	46	20	31.7	7	11.1	4	6.3
<b>Did you feel depressed?</b>	26	41.3	26	41.3	5	7.9	4	6.3
<b>Have you had difficulty remembering things?</b>	40	63.5	18	28.6	3	4.8	1	1.6
<b>Has your physical condition or medical treatment interfered with your family life?</b>	53	84.1	7	11.1	1	1.6	1	1.6
<b>Has your physical condition or medical treatment interfered with your social activities?</b>	49	71.4	8	14.3	4	7.9	1	4.8
<b>Has your physical condition or medical treatment caused you financial difficulties?</b>	45	77.8	9	12.7	5	6.3	3	1.6

<b>b</b>	<b>1</b>		<b>2</b>		<b>3</b>		<b>4</b>		<b>5</b>		<b>6</b>		<b>7</b>	
	<b>Freq</b>	<b>%</b>	<b>Freq</b>	<b>%</b>	<b>Freq</b>	<b>%</b>	<b>Freq</b>	<b>%</b>	<b>Freq</b>	<b>%</b>	<b>Freq</b>	<b>%</b>	<b>Freq</b>	<b>%</b>
<b>How would you rate your overall health during the past week?</b>	1	1.6	0	0	12	19	12	19	12	19	16	25	8	12.7
<b>How would you rate your overall quality of life during the past week?</b>	0	0	1	1.6	5	7.9	13	20.6	14	22.2	20	31.7	8	12.7

1: Very Poor

7: Excellent