

## Quality of Life after diagnosis and treatment in patients with Gynecological Malignancies

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### **Abstract:**

#### **Background:**

Gynecological malignancies include the malignancy of uterine cervix, ovary and endometrium. These malignancies are associated with low Quality of life(QOL) due to its involvement of genito-urinary apparatus and the morbidity associated with the cancer therapy, like chemotherapy, radiotherapy and local surgeries. In this study we have assessed the quality of life in patients diagnosed with cancers of cervix, endometrium and ovary, and other factors that influence the quality of life in these patients using a structured pre validated questionnaire.

**Objectives:** To access the quality of life in patients with gynecological malignancies and factors influencing the quality of life.

**Methods:** In this study set in a tertiary hospital with guidance from oncology department in rural India, about 40 patients with gynaecological malignancies were chosen and were assisted to fill in a questionnaire of QOL by FACIT.org in vernacular language. The scores of the QOL questionnaire access four different aspects of QOL which are used to derive a total QOL score which was compared with various variables studied.

**Results:** The total scores of QOL was compared with the normative data given by the publisher of the QOL FACT-G questionnaire. On comparison the total QOL mean score of our study population was 57.3 versus the normative data total mean score 80.1. Our study demonstrated that younger patients with gynecological cancers had better QOL than older patients. Patients living with husbands and husband being the primary care taker enjoyed a better QOL than widowed patient living alone. Patients living in urban regions reported better QOL than those in rural regions, and education status was not influencing the QOL in contradiction to other noted studies.

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### **I. Introduction:**

Quality of life includes the measurement of patient-reported outcomes, mostly described as the physical, social, emotional and functional wellbeing of the patient<sup>1</sup>. These realms of wellbeing are reported by the patient themselves and are thought to be a subjective measurement of response to treatment and/or treatment outcomes<sup>1</sup>.

Gynaecological malignancies are diagnosed in advanced stages and is associated with poor quality of life with involvement of genitourinary system and the treatment is usually palliative.<sup>2</sup> In gynaecologic cancers, there are wide range of outcomes which can have a great impact on the quality of life of the patient.

This study focuses on the symptoms and problems particular to gynecologic cancer and the treatments of them that could affect quality of life. These include limitations of sexual activity and fertility, lower urinary tract morbidity, early menopause, chemotherapy induced toxicity, and loss of body image.<sup>4,8,9</sup> This study, also focuses on QoL in gynecological cancer in relation to medical and surgical treatment and follow-up.

Perception of disease may vary with the population, cultural belief, financial and educational status of the patient.<sup>4,5,6</sup> This study attempts to address some of the issues in the patients diagnosed and on treatment for gynecological malignancies in a rural population.

Interventions such as chemotherapy and/or radiation can thus be monitored from a patient perspective.<sup>4,5,6</sup> In addition, while clinicians and oncologists recognize the futility of advanced and/or recurrent cancer therapy in the setting of reduced QOL, patients may have difficulty with discontinuing therapy.<sup>6,10</sup> QOL research adds to the literature by introducing a patient perspective into the decision for aggressive treatment choice in the gynaecological malignancies.

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## II. Materials And Methods:

### Objective:

The objective of this study is to determine the health-related quality of life (QOL) in patients after therapy for gynecologic malignancies at follow-up in an outpatient clinic.

### Setting:

The study was carried out in the department of General medicine and Medical oncology of Sri Manakula Vinayagar Medical college and Hospital (SMVMCH), which is a tertiary care hospital with 900+ beds situated in rural Pondicherry, India. The department of General Medicine and Oncology jointly provided both curative and palliative care for oncology patients from the districts of Villupuram and Pondicherry, India.

### Method:

Patients diagnosed with malignancies of ovary, endometrium and cervix and were on treatment for the same with curative and palliative treatment were included in the study after getting informed and written consent.

Patients were assisted to fill out a questionnaire in Tamil (FACT-G questionnaire) which is validated to assess all the domains of well being, for the purpose of measuring their quality of life. Physical, emotional or mental, social and rehabilitative domains were tested with structured pre formed pre-validated questionnaire. The license to use the same questionnaire for non-profit research was obtained from the licensor (FACIT.org).<sup>10</sup> Assistance of a female colleague was taken for few questions addressing personal and sexual problems. A clinical psychologist was present through-out the interview, ready to provide post interview counseling to the patient if needed.

The questionnaires were addressing the quality of life and factors affecting the quality of life in patients in gynecological malignancy, the effect and futility of the medical and palliative interventions from patient's point of view. This study was conducted for a period of 6 months after approval by the institutional ethics committee.

About 40 patients were selected by systematic sampling method. Every 2<sup>nd</sup> patient diagnosed to have gynaecological malignancies of cervix, endometrium, and ovary, who attend Medical oncology out-patient department over the course of 6 months were included after considering exclusion criteria. Patients with other debilitating illness that can affect the quality of life were excluded from the study. All the ethical principles were adhered throughout the study.

Data were entered in epi info software version 7.12.1.0 and analyzed using software SPSS version 24.0. Descriptive analysis of final scores of QOL out of hundred measured by FACT-G questionnaire which was compared with the standard quality of life of general population. The result is expressed in means and standard deviations of different domains of QOL .

**Normative data** given by the licensor of the FACT-G questionnaire for comparison was used. Means (s.d.) for FACT-G and fatigue subscale scores were 80.1 (18.1) for total FACT-G; 22.7 (5.4) for PWB; 19.1 (6.8) for SWB; 19.9 (4.8) for EWB; 18.5 (6.8) for FWB.<sup>10</sup>

## III. Results:

In our study on Quality of life (QOL) in patients with gynecological malignancies 40 patients were enrolled who were diagnosed with gynecological. Of the total 40 patients 80% (n=32) of them were diagnosed to have uterine cervical carcinoma and 20% (n=18) (refer Table No. 1) of them had ovarian carcinoma and these patients were undergoing treatment for malignancy and they were in regular follow up with the oncology out-patient department.

Mean age of patients included in the study is 52.9 years (SD 9.34), with youngest patient being 29 year old lady with carcinoma of cervix and the oldest patient, 72 years old also had cancer of cervix.

Quality of life was accessed by patient self- reported QOL-FACT-G questionnaire, which accessed the patients quality of life on the domains of Functional well being (FWB), Physical well being (PWB), Emotional well being (EWB) and social well being (SWB). The total QOL score by FACT-G questionnaire was calculated using specified formula administered with the FACT-G questionnaire.<sup>10</sup> The total QOL score by questionnaire was interpreted as higher total score enjoying better quality of life on a linear scale from minimum QOL score to maximum QOL score.

The mean score of FWB was 15.95(SD4.84), PWB score mean was 15.75, FWB 15.01 and EWB was 12.63

The questionnaire accessed the quality of life in four domains and the total QOL was calculated as arithmetic sum of all four domains of the QOL score. The mean total QOL score by FACT-G questionnaire was 57.3.

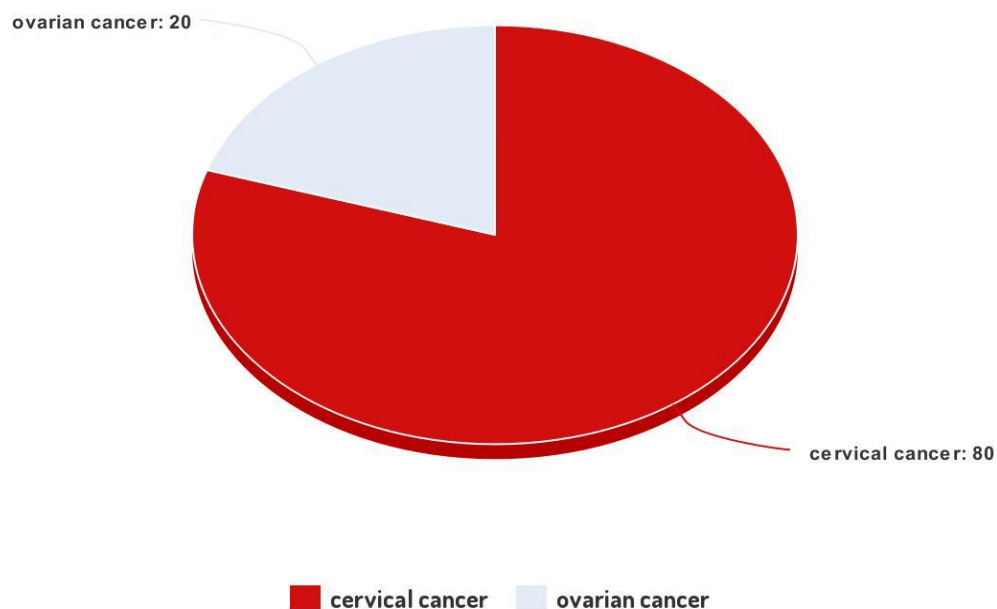
The lowest score was 31.4, in a 60 year old patient who suffered from carcinoma of cervix and was on treatment and follow up, she reported being illiterate widower and hailing from urban region and reported as having undergone chemotherapy and radiotherapy for the disease.

Highest total QOL score was seen in a 45 year old lady who also suffered from cancer of the cervix, and was educated upto 5<sup>th</sup> grade, hailed from rural region of Pondicherry, living with family and primary care taker being her husband. She reported as having undergone radiotherapy and chemotherapy for 3 months duration at the time of interview.

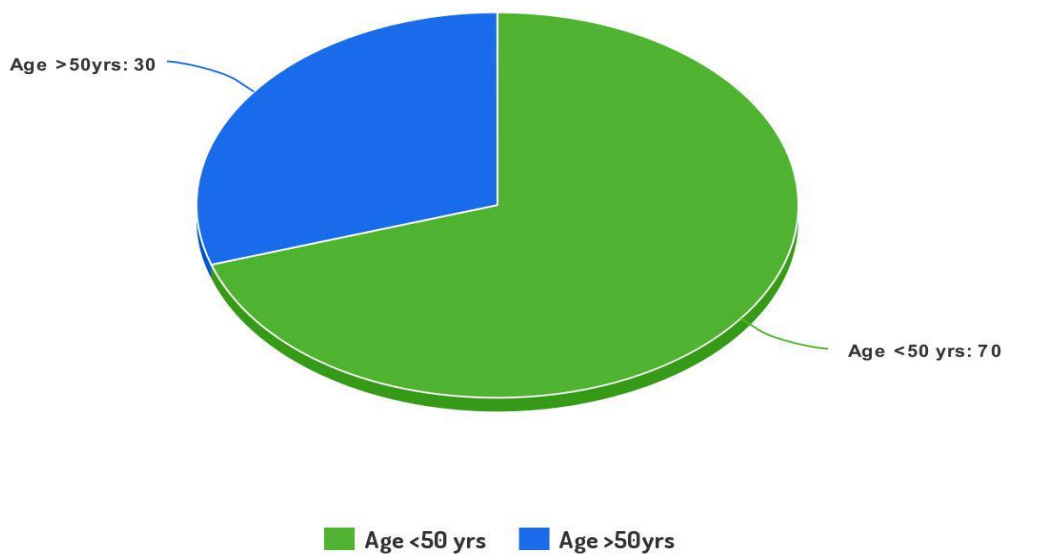
**Table no:1**

PATIENT CHARACTERISTICS				
<b>AGE</b>	Mean-52.9 yrs	Std 9.34yrs	<50yrs- 70%(28)	>50yrs- 30%(12)
<b>LOCATION</b>	Urban-45%(18)	Rural-55%(22)		
<b>LIVING WITH</b>	Alone 25%(10)	Family 75%(30)		
<b>CARE GIVER</b>	Family 40%(16)	Husband37.5%(15)	Alone 22.5%(9)	—
<b>CANCER TYPES</b>	Cervix 30%(12)	Ovary 70%(28)	Endometrium 0%	—
<b>EDUCATION</b>	Educated 37.5%(15)	Uneducated 62.5%(25)		

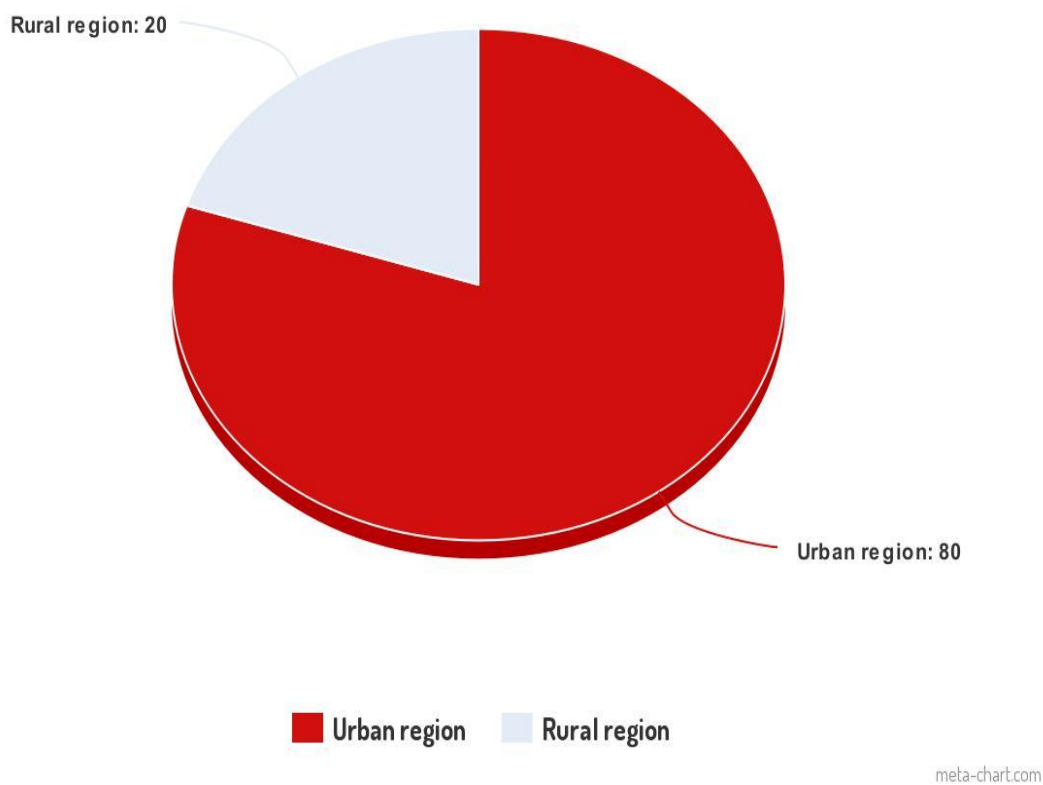
**Patient distribution: figure no. 1 Distribution of type of cancer**



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**Figure 2-** Distribution of Age



**Figure 3** Distribution of living condition

**Table No:2 Mean total Quality of life in various groups studied**

Groups	Percentage (n)	Mean total QOL score(std)	P value (significant)
<b>Age</b>			
<50yrs	70(28)	52.27(14.59)	0.004(0.352)
>50yrs	30(12)	69.02(18.32)	
<b>Cancer type</b>			
Cervix		57.17(18.17)	0.924(0.369)
Ovary	80(32)	57.84(14.93)	
	20(8)		
<b>Location</b>			
Urban region	45(18)	52.67(18.30)	0.130(0.433)
Rural region	55(22)	61.09(16.04)	
<b>Education status</b>			
Uneducated	62.5(25)	52.46(14.63)	0.21(0.105)
Educated	32.5(15)	65.37(19.08)	
<b>Living with</b>			
Family	75(30)	60.38(18.35)	0.009(0.51)
Alone	25(10)	48.05(9.94)	
<b>Care giver</b>			
<b>Husband</b>	<b>37.5(15)</b>	<b>67.75(14.65)</b>	<b>H. vs. others0.17(0.567)</b>
	<b>40(16)</b>	<b>52.43(18.65)</b>	
<b>Other family members</b>	<b>22.5(9)</b>	<b>48.53(10.42)</b>	<b>H. vs. Alone 0.02(0.149)</b>
<b>None</b>			

**Analysis:**

On analysis of the mean of total QOL scores of different groups studied, following observations were observed.

**On comparing with the normative data given by the FACIT.org, our study participants had a very low QOL score.** However it should be noted that the normative data given was based on normal population of 18 to 91 years with a mean (s.d.) of 45.9 (16.6), 50.6% were female, 75.9% were white, and 87.8% had at least a high school education. Mean (s.d.) for FACT-G was 80.1 (18.1) in the normal population and mean score for our study population was 57.3(12.5).

**In our study younger patients with cancer had better quality of life than older patients according to self reported QOL score ( Table No. 2)**

Of 40 patients included in the study, 12 patients were younger than 50 years of age with mean QOL score of 69.02(18.12) and 28 patients were older than 50 years of age and they scored a mean QOL score of 52.27(Fig. No- 2). The means of the two groups were compared and they show statistically significant (p value 0.004) change such that, the younger patient group enjoyed a higher QOL as compared to older patients with gynecological cancers

**Education status was not associated with better self reported quality of life in patients with gynecological cancers**

Majority of the patients included in the study were uneducated, about 62.5 percent(n=25) and 37.5(n=15) percent of them studied from grade one to grade twelve. The mean QOL of the educated patients was 65.37 and the mean score of uneducated patients was 52.45. But the difference was not clinically significant, to say that educated patient have higher self reported QOL with gynecological cancer

**This study did not find influence of type of cancer on total QOL**

Most of the patients included in the study were reported to have cancer of the uterine cervix 80 percent patients (n=32) and about 8 patients suffered from cancer of the ovary (Fig.No.1). The mean total QOL score in patient with cervical cancer was 57.84 and patient with ovarian cancer was 57.12. The means did not differ statistically. Hence the cancer type did not show any influence on the total QOL reported by the patients on 4 domains of quality of life

**People from urban regions had better quality of life as compared to patients from rural regions**

About 55 percent of the patients studied came from rural regions of Tamil Nadu and Pondicherry and 45 percent of the patients came from urban regions(Fig.No-3). The Mean QOL of patients from urban regions was 52.07 and mean score of patients from rural areas was 61.09. The difference in the mean was significant such that patients hailing from the urban regions had better quality of life than patients from rural regions.

**Patients living with their husbands and taken care by their husbands had better mean QOL**

Patients living with their husbands and taken care by their husbands had better mean QOL of 67.75 compared to be taken care by other family members or being alone taken care by self- 48.53

**The effect of gynecological malignancy and its therapy on uro-genital symptoms sexual functioning** has been known. But in our study about seventy (n=28) percent of the patients refused to answer the questions relating to sexual functioning.

**IV. Discussion:**

The quality of life in patients treated for gynecological malignancies depend on a number of factors like patients characteristics- age, education status, support from family and the understanding of the family members and patient about the illness. Traditionally the care of patients with malignancies focuses mostly on the medical and therapeutic aspects of management and the emotional, occupational, social impacts of the disease process on patients are given less importance which results in substantially reduced quality of life in these patients with gynecological malignancies.

The choice of therapy for the cancer has also a great impact on the QOL after the therapy in patients with gynecological cancers. It is known that patients undergoing surgical therapy would be in early stages of cancer and would enjoy a better quality of life after recovery from the surgery. Patients undergoing radiotherapy as the main stay of therapy would be on the late stages from whom surgical de-bulking surgeries would be of little benefit. Patient undergoing repeated radiotherapy may experience vaginal dryness and effects of low estrogens and may experience a loss of libido and sexual dysfunction.

In a study by Park et al, most patients with gynaecological cancers with poor quality of life had problems with social functioning, constipation, diarrhea and other financial constraints. Dyspareunia, anxiety about sexual performance and vaginal dryness were noted in patient who had undergone radiotherapy for genital malignancies.

The impact of genital cancers in female patients have a great impact in the sexual functioning as well as uro-genital problems of repeated urinary tract infections, dyspareunia. In our study most of the patients refused to comment on the questions addressing the sexual aspects of quality of life, which can be due to the fact that talking about sexuality is considered a taboo and a sensitive issue in our part of the country. In a study by S.Pignata et al concluded that gynaecological malignancies impact in the quality of life was due to aggressiveness of the surgical and medical treatment and poor quality of life was attributed to the involvement of the genital apparatus in the disease process.<sup>1</sup>

Rustoen et al concluded that patient with cancers of female genital tract were quite satisfied with their life in spite of cancer diagnosis. For these patients the support from family members were of great benefit and he emphasized on nurses helping the patient cope up with the diagnosis of cancer and treatment related morbidity. He also emphasized on sexual matters that should be given attention in order to prevent disease related difficulties causing other family problems.<sup>3</sup>

Education status of the patient and the primary care giver also affects the QOL greatly. It is attributed to the better knowledge and understanding of the disease process in educated patients. Patient with less supportive social environment like patient living alone, widower are found to have a low score of QOL.

In a study by Sarikapan Wilailak et al concluded that in patients with gynaecological malignancies quality of life improved after treatment. The factors found to be associated with higher quality of life were patient group with husband as a caregiver, no financial problem and having high school or higher education.<sup>6</sup>

Economic burden from the cancer therapy is also linked to lower quality of life. Patients living with their husbands were reported to have better quality of life due to better economic situations, emotional and social supportive environment provided by the husband

The management of these patients with gynecological malignancy should include focus on the non medical aspects of patient care in the form of adequate counseling and information briefing on the mode of therapy planned and possible effects and consequences. Partner or primary care giver should also be counseled on the effects of therapy under various issues.

Nurses should be involved in the management process efficiently as they can engage better with the patient and their care givers. Nurses should be aware of the psychological effects of cancer diagnosis and treatment and should identify and help the patient cope up with the disease process.

**Limitations:** Small sample size of 40 patients was one of the limitations of the study, due to a short study period. Use of multiple questionnaires like EORTIC questionnaire and WHOQOL(World Health Organization Quality of life ) questionnaire, would have increased the validity of the data by addressing more dimensions of the Quality of life could have resulted in a better understanding of the factors affecting the quality of life in patients treated for gynecological malignancies.<sup>11</sup>

## V. Conclusion

Our study on Quality of life involving patients with gynaecological malignancies showed better quality of life with younger patients. Also patients with family support fared well and sexual problems arising because of the intrinsic involvement of the genital apparatus by the disease was not addressed by them during the interview partly because the sexuality is still a topic of taboo in this part of the country and its given very less part in their quality of life. It is essential that for a better understanding of quality of life patients should be questioned and counseled in the pre-treatment and follow up periods and issues be addressed to provide a better quality of life.

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