



Frequency and Clinical Distribution of Gynecological Malignancies Among Women Presenting with Suspected Gynecological Cancer-Related Conditions

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Vol 15-02, 361-367

Submission: 20 March 2025 | Acceptance: 28 June 2025 | Publication: 18 July 2025

Abstract

Background: Gynaecologic cancer is any cancer that starts in a woman's reproductive organs. It results in abnormal cells that have the ability to invade or spread to other parts of the body. It is due to the abnormal growth of cells that have the ability to invade or spread to other parts of the body. Cancer screening tests are effective when they can find disease early, which can lead to more effective treatment. Cancer has very negative impact on the life of people. Quality of life of females who develop different types of gynaecological cancers is found to be very poor. But no local evidence was found in literature. So, we conducted this study by using EORTC-QLQ scoring system in females presenting with different gynaecologic cancers. Objective: To assess the frequency of different gynecological cancers among females presenting in a tertiary care hospital To measure the mean score of Quality of life by using EORTC-QLQ scoring system in females presenting with different gyn ecologic cancers. This present cross-sectional study was conducted at Unit II, Department of Obstetrics & Gynaecology, PIMS Islamabad. This was conducted after the six months of approval of synopsis. The non-Probability, Consecutive Sampling was used in this study. Informed consent was obtained to use their data for research purpose. Demographic data (name, age, parity, duration of symptoms) was obtained. Medical record was obtained to note the type of gynecological cancer i.e. endometrial, cervical, ovaries or valvular. Then females underwent face to face interview using EORTC –QLQ C30 quality of index questionnaire. Each question was asked, and score was noted. All this information was recorded in Proforma. Effect modifiers like age, duration of cancer was controlled by stratification. Post stratification chi-square was applied for qualitative variables and t-test for quantitative outcome variables. In our study the mean age of the patients was 56.90 ± 11.38 years, most of the 92(32.86%) females had five parity. In this study the mean duration of cancer 12.87 ± 5.77 months. Most of 134(47.86%) patients appeared with ovarian cancer. In our study 39(13.93%) patients had cervical cancer, 101(36.07%) patients had endometrial cancer, 134(47.86%) patients had ovarian cancer and only 6(2.14%) patients had vulvar cancer. The mean value of EORTCQLQ score of the patients was 58.86 ± 15.13 . Statistically there is highly significant difference was observed between the EORTCQLQ score and type of cancer of the patients i.e. $p\text{-value}=0.000$. According to our study the most frequent (47.86%) cancer was ovarian cancer, and the 2nd most frequent cancer was endometrial (36.07%), Statistically EORTCQLQ score is highly significant with type of cancer in our finding. Keywords: Gynecological Cancer, Cervical, Endometrial, Ovarian, Vulvar, Endometrial, EORTC-QLQ score

INTRODUCTION:

Gynecological cancers make up for approximately 18% of all female cancers worldwide.(1) In a study conducted in 2011, 43.7% of the women were diagnosed with ovarian, 34.5% of the women had endometrial, 16.0% of the women had cervical and 5.9% of the women had vulvar cancer.(1) QoL for patients is defined as “extend to which one’s usual or expected physical, emotional and social well-being is affected by a medical condition or its treatment”. The definition shows that the concept is subjective in nature, being comparison between person’s present level of functioning and what is ideal according to him or her.(2, 3) The WHO defines quality of life as ‘the individual's 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. Quality of life is a multidimensional concept which is defined as a person’s view of life, and with his/her satisfaction and pleasure with life.(4)

All the aspects coming under definition of QOL are influenced negatively in cancer patients; hence it is important to assess QOL in these patients. Information obtained from this can be used for describing effects of disease and treatment and it can broaden clinician’s point of view regarding needs of the patients.(5) A variety of health-related QOL measures have been developed. EORTC QLQ C-30 is one of the cancer specific evaluation tool for QOL. EORTC QLQ-C 30 version 3.0 questionnaire is an integrated system for assessing the health related QOL of cancer patients. It was first released in 1993. (1, 6) The mean of global health QoL score was reported to be 59.4 ± 24.2 by using EORTC QLQ-C30 scores for women with gynecological cancer. The mean global health QoL score of females with endometrial carcinoma was 61.6 ± 21.1 while 65.3 ± 24.7 of females with ovarian cancer, 47.6 ± 16.5 in females with valvular carcinoma and 43.0 ± 24.1 in females with cervical cancer. The females with cervical cancer has very low QOL.(1) Similarly, Akkuzu study, reported that EORTC-QLQ-C30 of life” of the patients were found to be 60.5 ± 25.0 .(7)

It is know that the incidence of cancer is increasing day by day all over the world. Among all type of cancers, gynecological cancers are most common. The life of females is affected badly due to cancer, however, the treatment is available. But the word cancer has very negative impact on the life of people. Rationale of this study is to determine frequency of different gynecological cancers in females presenting in our hospital and their quality of life by using EORTC-QLQ Quality of life scoring system. We observed in literature that there is only one international study which reported the quality of life of females who develop different types of gynecological cancers. Also we did not find any local study in which the QOL of females of

RESULTS:

In this present study total 280 cases were enrolled. The mean age of the patients was 56.90 ± 11.38 years with minimum and maximum

Pakistani females was observed or measured. So we aimed to conduct this study to measure the frequency of different gynecological cancers to see which gynaecological cancer is most common, moreover, the QOL of females with different gynecological cancers. This will help us to gain local evidence as well as this will help in clinicians to tackle the most devastating cancer which affect QOL more badly.

MATERIAL AND METHODS:

Study design: Cross-sectional study

Setting: Unit II, Department of Obstetrics & Gynecology, PIMS Islamabad

Duration Of Study: 06 months from the time of approval of synopsis.

Sample Size: Sample size of 280 cases is calculated with 95% confidence level, 2.8% margin of error and taking expected percentage of valvular cancer i.e. 5.9% in females presenting with gynecological cancer in a tertiary care hospital.

Sampling tehcnique : Non-Probability, Consecutive Sampling

Sample Selection Inclusion criteria: Age >20 years married females Diagnosed cases of gynecological tumors (ovarian, endometrial, cervical, valvular) of any stage assessed through medical record presenting ≥ 3 months after diagnosis.

Exclusion criteria: With recurrent disease (medical record and history of treatment before for any gynecological or other malignancy of body)

Patients with any psychiatric disease (medical record) Accompanying severe medical conditions (BP $\geq 104/90$ mmHg, BSR >186 mg/dl, cardiac problems like IHD, abnormal ECG or asthma) 280 females fulfilling selection criteria were enrolled in the study from OPD of Department of Obstetrics & Gynecology, PIMS Islamabad. Informed consent was obtained to use their data for research purpose. Demographic data (name, age, parity, duration of symptoms) was obtained. Medical record was obtained to note the type of gynecological cancer i.e. endometrial, cervical, ovaries or valvular. Then females underwent face to face interview using EORTC –QLQ C30 quality of index questionnaire. Each question was asked and score was noted. All this information was recorded in proforma (attached). The statistical analysis was performed in SPSS Version 20.0. Age and EORTC-QLQ QOL was measured in terms of means $\pm$ SD. Parity and type of gynecological cancer was presented in terms of frequency. The EORTC-QLQ QOL for all type of gynecological cancers (endometrial, cervical, ovaries or valvular) was also measured as means $\pm$ SD. Effect modifiers like age, duration of cancer was controlled by stratification. Post stratification chi-square was applied for qualitative variables and t-test for quantitative outcome variables.

ages of 35 & 75 years respectively. **Table#1.** In this study 17(6.07%) patients had parity three, 55(19.64%) patients had parity four, 92(32.86%) patients had parity five, 64(22.86%) patients had parity

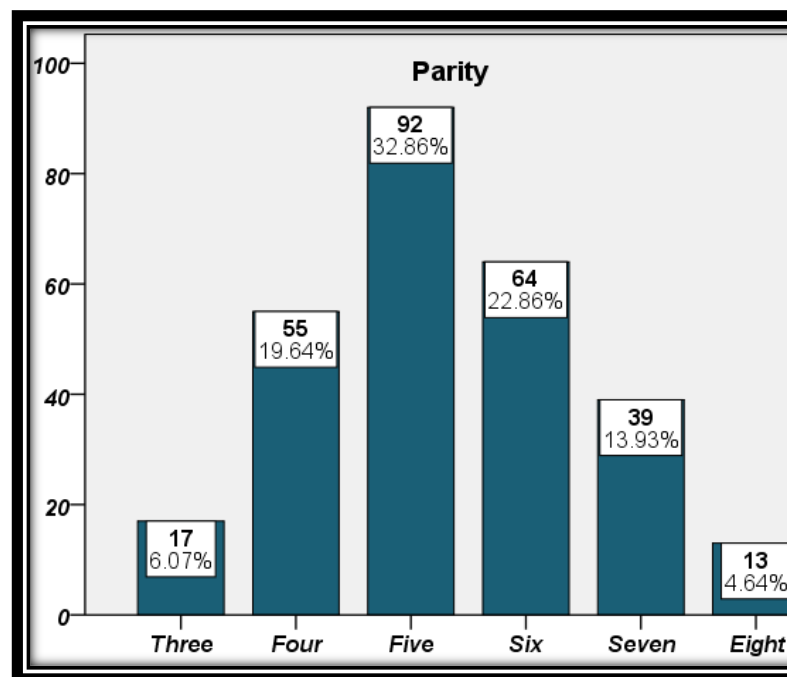
six, 39(13.93%) patients had parity seven and 13(4.64%) patients had parity eight. **Fig#1**. The study results showed that the mean duration of cancer diagnosis was 12.87 ± 5.77 months with minimum and maximum duration of 3 & 24 months respectively. **Table#2**. The study results showed that the mean value of EORTCQLQ score of the patients was 58.86 ± 15.13 with minimum and maximum values of 20 & 89 respectively. **Table#3**. In our study 39(13.93%) patients had cervical cancer, 101(36.07%) patients had endometrial cancer, 134(47.86%) patients had ovarian cancer and only 6(2.14%) patients had vulvar cancer. **Fig#2**.

In this study the mean value of EORTCQLQ score in cervical cancer patients was 44.10 ± 10.24 , its mean value in endometrial cancer patients was 56.91 ± 19.84 , the mean value of EORTCQLQ score in ovarian cancer patients was 64.41 ± 7.36 and its mean value in vulvar cancer patients was 63.83 ± 6.40 . Statistically there is highly significant difference was observed between the EORTCQLQ score and type of cancer of the patients. i.e p-value=0.000 **Table#4**. In our study in below 50 years patients the mean value of EORTCQLQ score of the patients was 58.91 and it mean value in above 50 years patients was 58.84 ± 15.66 . Statistically there is insignificant difference was found between the EORTCQLQ score and the age categories of the patients i.e. p-value=0.97. **Table#5** In this study

Table#1

Descriptive statistics of age (years)

Age (years)	n	280
	Mean	56.90
	SD	11.38
	Minimum	35.00
	Maximum	75.00



Fig#1

Frequency distribution of parity

cancer duration <12 months patients the mean EORTCQLQ score of the patients was 58.51 ± 15.11 and the mean EORTCQLQ score of the patients who had cancer duration ≥ 12 months was 59.27 ± 15.21 . Statistically there is insignificant difference was found between the EORTCQLQ score and the cancer duration of the patients i.e. p-value=0.68. **Table#6**

The study results showed that the in 89 age <50 years patients, 10 had cervical cancer, 37 had endometrial cancer, 39 had ovarian cancer and 3 had vulvar cancer. In 191 patients of age ≥ 50 years patients, 29 had cervical cancer, 64 had endometrial cancer, 95 had ovarian and 3 had vulvar cancer. Statistically there is insignificant difference was found between the cancer and age of the patients i.e. p-value=0.37 **Table#7** In 152 patients with duration of cancer <12 months, 23 had cervical cancer, 52 had endometrial cancer, 73 were with ovarian cancer and 4 had vulvar cancer. In 128 patients who had cancer duration ≥ 12 months, 16 had cervical cancer, 49 had endometrial cancer, 61 had ovarian cancer and 2 had vulvar cancer. Statistically there is insignificant difference was found between the cancer types and cancer duration of the patients i.e. p-value=0.79 **Table#8**

Table#2

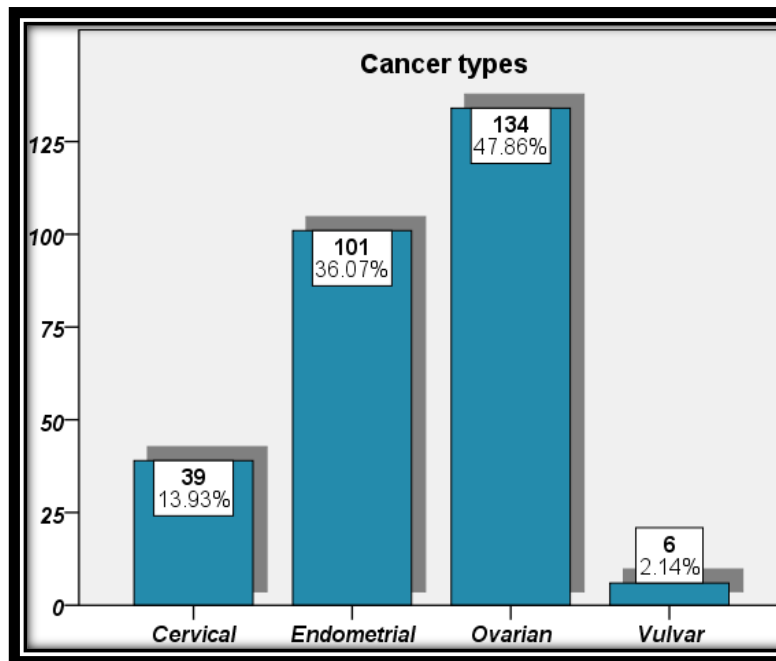
Descriptive statistics of duration of diagnosis (months)

Diagnosis duration (months)	n	280
	Mean	12.87
	SD	5.77
	Minimum	3.00
	Maximum	24.00

Table#3

Descriptive statistics of EORTCQLQ score

EORTCQLQ score	n	280
	Mean	58.86
	SD	15.13
	Minimum	20.00
	Maximum	89.00



Fig#2

Frequency distribution of type of cancer

Table#4

Comparison of EORTCQLQ score in different type of cancer

Type of cancer	n	Mean±SD
Cervical	39	44.10±10.24
Endometrial	101	56.91±19.84
Ovarian	134	64.41±7.36
Vulvar	6	63.83±6.40

p-value = 0.000 (Significant)

Table#5

Comparison of EORTCQLQ score in age groups

		Age (years)	
		<50	≥ 50
EORTCQLQ score	n	89	191
	Mean	58.91	58.84

DISCUSSION:

This present cross sectional study was conducted at Unit II, Department of Obstetrics & Gynecology, PIMS Islamabad to assess the frequency of different gynecological cancers and measure the mean score of Quality of life by using EORTC-QLQ scoring system in among females presenting in a tertiary care hospital Gynecological cancers are a frequent group of malignancies in women, accounting for approximately 18% of all female cancers worldwide. The most common are, in order, endometrial, ovarian and cervical cancer. Vaginal and vulvar cancers are rare. Cervical cancer is more common in premenopausal women, whereas the incidence of endometrial and ovarian cancers increase in the perimenopausal years.(10). In our study 13.93% patients appeared with cervical cancer, 36.07% patients appeared with endometrial cancer, 47.86% patients appeared with ovarian cancer and 2.14% patients

	SD	14.02	15.66
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p-value = 0.97 (Insignificant)

e#6

Comparison of EORTCQLQ score according to cancer duration

		Cancer duration (months)	
		<12	≥ 12
EORTCQLQ score	n	152	128
	Mean	58.51	59.27
	SD	15.11	15.21

p-value = 0.68 (Insignificant)

Table#7

Comparison of cancer types in different age groups

		Cancer types				Total
		Cervical	Endometrial	Ovarian	Vulvar	
Age (years)	<50	10	37	39	3	89
	≥ 50	29	64	95	3	191
Total		39	101	134	6	280

Chi value=3.14

p-value=0.37 (Insignificant)

Comparison of cancer types in according to cancer duration

		Cancer types				Total
		Cervical	Endometrial	Ovarian	Vulvar	
Cancer duration (months)	< 12	23	52	73	4	152
	≥ 12	16	49	61	2	128
Total		39	101	134	6	280

Chi value=1.03

p-value=0.79 (Insignificant)

appeared with vulvar cancer. According to 2007 year data of the American Cancer Society, endometrial and ovarian cancers are in the fourth and fifth rank. Cervical cancer is the eighth most frequent cancer in general now, as a result of scanning tests and early diagnosis and third among gynecological cancer cases.(11) In a study conducted in 2011, 43.7% of the women were diagnosed with ovarian, 34.5% of the women had endometrial, 16.0% of the women had cervical and 5.9% of the women had vulvar cancer.

G. Chakalova et al showed in their study that Breast and gynecological cancers (cervical, uterine and ovarian) comprised almost half of all incident cancer cases in Bulgarian women and about one third of all cancer deaths in females Breast cancer was the most common site (23% of the new cases), followed by cancer of the uterine body (8%), cervix (7%) and ovary (5%). Takeda et al demonstrated in their retrospective study that the multiple primary

neoplasms were detected in 45 (4.3%) cases, including 16 (2.1%) out of 733 cervical cancers, 14 (8.2%) out of 166 endometrial cancers, three (15%) out of 20 vaginal cancers and 12 (9.8%) out of 123 ovarian cancers. (12) Wilailak et al in their study divided gynecologic cancer patients into those with cervical cancer (n=571, 65.6%), ovarian cancer (n=149, 17.1%), endometrial cancer (n=108, 12.4%), uterine sarcoma (n=15, 1.7%), gestational trophoblastic neoplasia (n=22, 2.5%), vulvar cancer (n=3, 0.3%) and vaginal cancer (n=2, 0.2%).(2) One study showed that 43.7% of the women were diagnosed with ovarian, 34.5% of the women had endometrial, 16.0% of the women had cervical and 5.9% of the women had vulvar cancer. (1)

According to our study results mean value of EORTCQLQ score in cervical cancer patients was 44.10 ± 10.24 , in endometrial cancer patients was 56.91 ± 19.84 , in ovarian cancer patients was 64.41 ± 7.36 and its mean value in vulvar cancer patients was 63.83 ± 6.40 . Statistically there is highly significant difference was observed between the EORTCQLQ score and type of cancer of the patients. i.e p-value=0.000. The mean of global health QoL score was

CONCLUSION:

This present cross-sectional study was conducted at Unit II, Department of Obstetrics & Gynaecology, PIMS Islamabad. This was conducted after the six months of approval of synopsis. The non-Probability, Consecutive Sampling was used in this study. Informed consent was obtained to use their data for research purpose. Demographic data (name, age, parity, duration of symptoms) was obtained. Medical record was obtained to note the type of gynecological cancer i.e. endometrial, cervical, ovaries or valvular. Then females underwent face to face interview using EORTC –QLQ C30 quality of index questionnaire. Each question was asked, and score was noted. All this information was recorded in Proforma. Effect modifiers like age, duration of cancer was controlled by stratification. Post stratification chi-square was applied for qualitative variables and t-test for quantitative outcome variables. In our study the mean age of the patients was 56.90 ± 11.38 years, most of the 92(32.86%) females had five parity. In this study the mean duration of cancer 12.87 ± 5.77 months. Most of 134(47.86%) patients appeared with ovarian cancer. In our study 39(13.93%) patients had cervical cancer, 101(36.07%) patients had endometrial cancer, 134(47.86%) patients had ovarian cancer and only 6(2.14%) patients had vulvar cancer. The mean value of EORTCQLQ score of the patients was 58.86 ± 15.13 . Statistically there is highly significant difference was observed between the EORTCQLQ score and type of cancer of the patients i.e. p-value=0.000. According to our study the most frequent (47.86%) cancer was ovarian cancer, and the 2nd most frequent cancer was endometrial (36.07%), Statistically EORTCQLQ score is highly significant with type of cancer in our finding.

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reported to be 59.4 ± 24.2 by using EORTC QLQ-C30 scores for women with gynecological cancer. The mean global health QoL score of females with endometrial carcinoma was 61.6 ± 21.1 while 65.3 ± 24.7 of females with ovarian cancer, 47.6 ± 16.5 in females with valvular carcinoma and 43.0 ± 24.1 in females with cervical cancer. The females with cervical cancer has very low QOL.(1) Akkuzu study, reported that EORTC-QLQ-C30 Quality of Life Index mean points for “general well-being and quality of life” of the patients were found to be 60.5 ± 25.0 .(7) One study in Turkey, which evaluated QoL of women using EORTC QLQ-C30 scale, stated that emotional (49.55 ± 32.42) aspects of QoL were mostly affected among the functional parameters and cognitive function (66.33 ± 27.45) was found higher.(15) Matulonis et al. (2008), studied QoL of 58 early stage ovarian cancer patients and observed that patients reported good physical QoL scores.(16). In literature, ovarian cancer survivors have good QoL, with few physical symptoms. Cervical cancer survivors treated with radiotherapy reported more QoL impairments than survivors treated with other approaches.

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