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Research Article

**ANALYSIS OF PREVALENCE OF GYNAECOLOGICAL  
CARCINOMAS IN FEMALES OF SOUTH PUNJAB, PAKISTAN:  
2012 TO 2017****Masooma Kalsoom<sup>1</sup>, Gulshan Ahmad<sup>2</sup>, Amna Kalsoom<sup>2</sup>, Ahmad Bashir<sup>2</sup>, Hina Kiswar<sup>2</sup>,  
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**Abstract:**

**Introduction:** A human body is made up of a millions of cells, cancer is a disease that starts within one of these cells and starts to slowly penetrate into the rest of the body through these cells. Majority of the time there is a fix amount of cells in a specific place. **Objectives of the study:** The basic aim of the study is to analyze the prevalence of gynaecological carcinomas in females of South Punjab, Pakistan during 2012 to 2017. **Methodology of the study:** This study was conducted at Nishtar hospital, Multan during 2012 to 2017. This was done with the permission of ethical committee of hospital and with the permission of patients. Total number of participants from 2012 to 2017 was 1323 (females) which belongs to different parts of southern Punjab. **Results:** Studies have shown that with the passage of time prevalence of gynecological carcinomas is increasing in the world. On the other hand, the death rate in Pakistani woman due to prevalence of gynecological carcinomas has been doubled in the last decade. The main reason behind this is the fact that more than 70% of cancer patients report with very advanced stage of malignancy. **Conclusion:** After going through the above data it can be easily concluded that prevalence of gynecological carcinomas is increasing in Pakistan and something needs to be done about it. Hence, over the last few years this is the cause of the high charge per unit of mortality in Pakistan.

**Key words:** Cancer, Prevalence, Malignant, Tumor**Corresponding author:**

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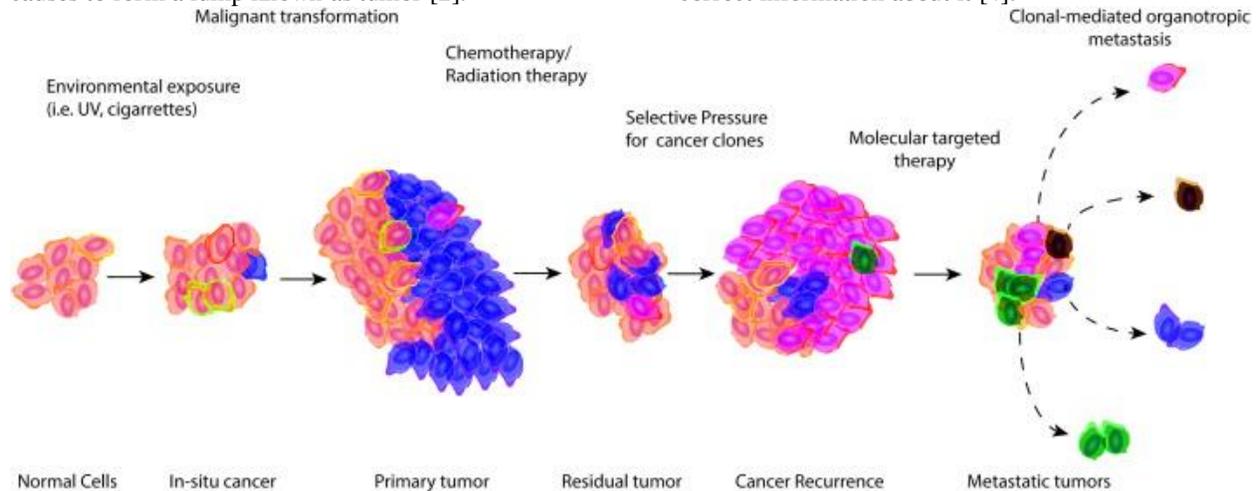
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## INTRODUCTION:

A human body is made up of a millions of cells, cancer is a disease that starts within one of these cells and starts to slowly penetrate into the rest of the body through these cells. Majority of the time there is a fix amount of cells in a specific place [1]. However, if there are a number of cells missing from a certain place, the body automatically starts to these cells. When these cells are multiplied a bit too much then it causes to form a lump known as tumor [2].



## Prognosis of cancer

Studies have shown that in Pakistan due to lack of awareness women do not understand the symptoms they are facing until its very late<sup>5</sup>. This is one of the major reasons why it has become difficult to save precious lives. Following are some of the main symptoms that can assist in early detection of the cancer [6]:

1. Abnormal vaginal bleeding or discharge (Bratman, S. V., Feng, W., Kim, D. & Diehn, M. 2015).
2. Pelvic pain or pressure.
3. Abdominal or back pain.
4. Bloating.
5. Changes in bathroom habits (increased urination, constipation, diarrhea)
6. Itching or burning of the vulva.

The cancer is caused by several types of a virus called human papillomaviruses (HPV). HPV spreads through sexual contact. Most women's bodies are able to fight this infection, however 55 percent of the time the virus leads to cancer [7]. On the other hand, when the treatment is taken under consideration, there are not many options. A patient suffering from gynecological cancer has to go through an operation, chemotherapy or a combination of chemo and radiation therapies [8].

A tumor is basically the start of the cancer. Studies have shown that with the passage of time cancer is increasing in the world. The most common type of cancer is the lung cancer and the second most common type of cancer is the gynecological cancer. It is the cancer that occurs in a woman's reproductive system [3]. The treatment, a suffering patient would need, depends on from where the cancer started. Knowing the type of cancer means you can get the correct information about it [4].

## Background of the study

The following report contains a thorough analysis on the prevalence of gynecological carcinomas in south Punjab. The main objective behind doing the research was to study the prevalence of most common cancer in women of Pakistan, so it can be eradicated at the most initial level in order to lower the increasing rate. The report also contains the symptoms and cures for the gynecological carcinomas.

## Objectives of the study

The basic aim of the study is to analyze the prevalence of gynaecological carcinomas in females of South Punjab, Pakistan during 2012 to 2017.

## Method

This study was conducted at Nishtar hospital, Multan during 2012 to 2017. This was done with the permission of ethical committee of hospital and with the permission of patients. Total number of participants from 2012 to 2017 was 1323 a (female) which belongs to different parts of southern Punjab.

## Collection of data

The basic method utilized in order to attain the data was conducting an interview with the management team of the Nishtar Hospital that is based in South Punjab. The data attained was secondary data which

was already recorded by the Hospital over the period of time. The basic reason behind using this method was to ensure the authenticity of the data.

All results were expressed as the mean ± standard deviation (SD). P value below 0.05 was considered to be statistically significant.

**Statistical Analysis**

Statistical analyses (Anova Test and Post Hoc) were performed using the SPSS software program (17.0).

**RESULTS:**

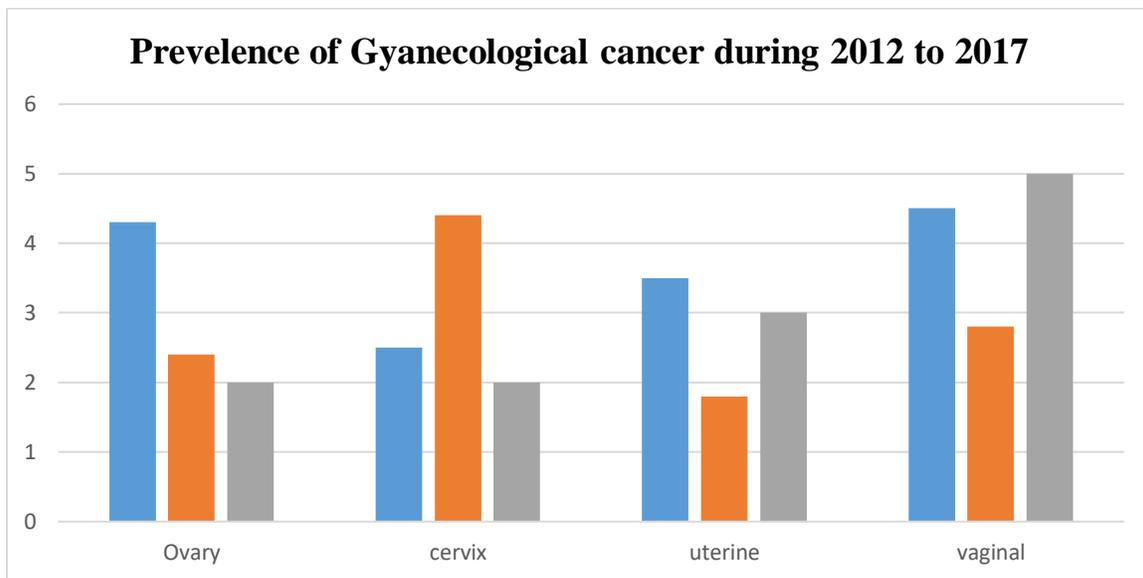
After going through the Hospital records, following is the data gathered over the 5 years of time span.

**Table 01:** Demographic characteristics of different forms of cancer

Demographic characteristics		(%)		P value
		With infection	Without infection	
Age	≤25	56.1	61.5	0.345
	>31	44.0	38.5	
Body mass index	≤30	52.2	42.3	0.13*
	>30	47.8	57.7	
Max age of carcinoma	≤40%	44.0	42.8	0.876
	>40%	56.0	57.2	
Types of carcinoma	Ovarian	25.34	28.3	0.012*
	Cervical	22.7	26.5	
	Vaginal	5.6	14.2	
	Uterine	2.7	13.6	
	Endometrial	2.3	12.34	

**Table 02:** ANOVA results for the year 2012-2017

	Mean	SD	Ovarian cancer	Cervical cancer	Vaginal cancer	Uterine cancer	Endometrial cancer
2012	81.65	324.76	0	0	2.5	23.25	3,369
2013	7.53	23.77	0.14	0.7	1.76	4.45	314.1
2014	7.20	18.23	0.04	0.4	1	3.45	146.13
2015	9.01	29.51	0.1	0.65	1.95	5.25	284.54
2016	1.39	2.02	0.28	0.71	0.92	1.45	25.54
2017	1.056	1.00	0.26	0.58	0.79	1.06	10



**Figure 01:** Graphical representation of major forms of gynaecological cancers

## Findings

Following points are the main findings after conducting the research

1. 101 out of 1304 of total diagnosed cases in Nishtar Hospital in 2016 were reported.
2. From the above given data it can be seen that 6.4% of all cases are gynecological tumors of which 50% are ovarian and 96 patients were diagnosed out of 1483.
3. 107 out of 1341 of total diagnosed cases in Nishtar Hospital in 2013 were reported.
4. 129 out of 1403 of total diagnosed cases in Nishtar Hospital in 2015 were reported.
5. 101 out of 1323 of total diagnosed cases in Nishtar Hospital in 2012 were reported.

## DISCUSSION:

The burden of gynaecological cancer is on the increase worldwide, but it is higher in developing than developed countries, with approximately five million new cancer cases diagnosed annually. The need for novel independent prognostic factors in metastatic breast cancer patients is much lower than the need for dynamic blood markers, which can indicate the treatment efficiency in a reliable and early fashion [7]. Serum tumor markers are an easy, quick, cheap, but rather imprecise and sometimes misleading tool, to monitor the treatment efficacy. However, they are particularly valuable for treatment monitoring in patients that have disease that cannot be evaluated by radiology [8].

Here, by comparing the early and late changes of five blood markers together with CTC changes for PFS prediction, we showed no clear superiority of CTC over the other serum markers. This result was, however, not the primary endpoint of our study, and the statistical power of these analyses may still be discussed, although performed in more than 200 patients [9]. For this analysis, we used the "prognosis-optimized" threshold of  $\geq 5$  CTC/7.5 ml, which was initially defined as the best dichotomizing threshold for PFS and OS prediction by CTC at baseline and under treatment [10].

Ovarian cancer has the highest mortality rate among gynecologic cancers, even in developing nations. Late stage diagnosis requires long, complex, very aggressive and costly treatment; thus, the management of ovarian cancer in developing countries poses a great challenge. Predictive biomarkers that can guide treatment decision have been sought after to identify subsets of patients who would be "exceptional responders" to specific cancer therapies, or individuals who would benefit from alternative treatment modalities [11].

Uterine/endometrial cancer is the third most common site of gynecological tract malignancies with the majority of patients presenting in the older age groups (>60 years), which is comparable to other studies. Endometrial/uterine (23%) malignancy is the third most common site of gynecological malignancies and the majority of patients present in the older age groups [12].

These malignancies constitute the third leading site of malignancy in women after breast and ovary [13]. Similarly, one study from India reported that uteri (129 cases) are the third most common malignancy in the female genital tract after cervix, and ovary [14]. In uterus, the main histological type of cancer was endometrial tumor with 66 patients, followed by sarcoma patients. Adenocarcinoma was the most common histological type of endometrial tumor [15].

## CONCLUSION:

After going through the above data it can be easily concluded that prevalence of gynecological carcinomas is increasing in Pakistan and something needs to be done about it. Hence, over the last few years this is the cause of the high charge per unit of mortality in Pakistan. According to statistics, just about 500,000 women are detected with bellicose cancer of the cervix per year throughout the world but the developing countries are said to be the most affected. Sadly the exact ratio of women in Pakistan is unknown due to several cultural and non-cultural reasons.

## Contribution of authors

All the authors contributed equally. But on behalf of all the co-authors and from myself I want to say a special thanks and pay my gratitude to my supervisor Dr Ijaz Masood (Head of Oncology department) because without his help we are unable to complete this novel research work.

## Conflict of interest

There is no conflict of interest.

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