

**INCIDENCE, SCREENING AND PATTERN OF CERVICAL CANCER AMONG  
WOMEN ATTENDING UNIVERSITY OF NIGERIAN TEACHING HOSPITAL,  
ITUKU- OZALLA  
(2000-2005)**

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**Abstract**

*The main purpose of the study was to find out the socio-demographic pattern of the incidence, screening and pattern of cervical cancer among women in University of Nigeria Teaching Hospital, Ituku-Ozalla from 2000-2005. The study adopted the descriptive research design utilizing the ex post facto design. The Population for study consisted of all the records of cervical cancer cases in UNTH, from 2000-2005 which were 82 cases. The instrument for data collection was researcher designed Cervical Cancer Inventory Proforma (CCIP). Frequencies and percentages were used to answer the research questions while the chi-square statistic was used to test all the hypotheses. The findings revealed that the highest incidence of cervical cancer was recorded in 2004 (30.5%) and this occurred among women aged 61 years and above (35.4%), cervical cancer was also found to be more among married women (75.6%) and rural dwellers (56.1%). Majority of the women (75.6%) had never gone for cervical screening. Based on these findings, it was recommended that government should provide cancer screening equipment in most of the health facilities to increase access and health education on cancer should be intensified.*

**Keywords:** Incidence, Pattern, Screening, Cervical Cancer, Women.

**Introduction**

Cancer is a disease characterized by the abnormal growth of cells of the tissue of the organs affected. These abnormal growths affect such organs like, the breasts, cervix and uterus. The abnormal growth that affects the cervix is called cervical cancer. Ferlay (2002) stated that cervical cancer threatens the lives of women, creates long term problems for families and challenges health care system. Globally, about 490,000 new cases of cervical cancer occur each year among women and 274,000 women die of the disease annually (Ferlay, 2002). In Nigerian, the national incidence of cervical cancer is 250/100,000 ( Adesokan, 2009).

Adesokan, (2009), defined cervical cancer as the malignant growth or immortalization of the cervix. According to the author it is the commonest form of female genital cancer in developing countries and the second commonest type of cancer in women. Within the context of this study, cervical cancer means a disease in which cells of the cervix become abnormal and start to grow uncontrollably, forming tumours. Park (2009) stated that cervical cancer is a disease characterized by an abnormal growth of cells, ability to invade adjacent tissues and even distant organs and the eventual death of the affected patient if the tumour has progressed beyond that stage when it can be successfully removed.

Infection with the common Human Papillomavirus (HPV) is a cause of approximately 90 percent of all cervical cancers. There are more than 80 types of HPV, about 30 of these can be transmitted sexually, including those that can cause genital warts. About half of the "high risk" HPVs are associated with cervical cancer; they produce a protein that can cause cervical epithelial cells to grow uncontrollably. The virus makes a second protein that interferes with tumour suppressor that is produced by the human immune system. The HPV-16 strain is thought to be a cause of about 50 per cent of cervical cancers (American Cancer Society, 2011). Risk factors to cervical cancer are as follows: Lack of regular pap test: most women do not and have never gone for pap test which helps to identify cancer cell at an early stage. Other factors include; Smoking, multiple sexual partners, prolonged use of birth control pills and use of Diethylstilbestrol to stop lactation.

According to Adesokan (2009) progression in the disease is usually accompanied with symptoms like, anaemia, single swollen leg, frequent and persistent vaginal discharge, abnormal bleeding, and painful sexual intercourse. When these symptoms are noticed, the women is expected to access a health facility for help for early diagnosis and treatment.

Dawtota and Olaseinde (2004) opined that diagnosis of cervical cancer can be achieved through different methods, these methods include; colposcopy, X-rays, computerized tomography (CT) scans and magnetic resonance imaging (MRI). When diagnosis has been made, staging is done to determine the extent of spread of the disease to nearby organs and tissues.

The International Federation of Gynecologists' and Obstetrician (FIGO) system is usually used to determine the stage of cervical cancer. The stage is based on where cancer is found, and it is carefully done to actually determine the level of spread of the disease to other organs. The staging ranges from stage 0 -IV, each stage determines the type of treatment to be implemented. The treatment options include; surgery which may be inform of radical trachelectomy, total hysterectomy and radical hysterectomy. Radiation and chemotherapy are also other options of treatment (Mamadani Garver, Harpham and Campbell, 2003).

Park (2009) defined incidence as the number of new cases of a particular disease condition occurring in a defined population during a specified period of time. He further stated that incidence measures the rate at which new cases are occurring in a population and that it is not influenced by the duration of the disease. Similarly, Onwasigwe (2010) stated that incidence measures the probability that healthy people will develop disease or health –related event during a specified period of time. It indicates the rate at which new cases of the disease occur in a defined, previously disease free population.

Screening according to McHenry (2009) is to examine (someone or something) to discover if there is anything wrong with them. This is usually done to identify existing problems in a situation or in somebody. The author further defined health screening as a programme designed to evaluate the health status and potential of an individual. The screening test for cervical cancer is called the papanicolaou (pap) test. Cervical cancer may vary in pattern of occurrence. These patterns may demographic, spatial and temporal.

Pattern according to Schwartz (1993) is a design or guide which appears among people, it is a regular way in something happens or is done. Pridemore, Andrew and Spivak (2003) classified pattern into three forms: demographic, temporal and spatial pattern. Morris (1981) and Stillion (1983) refer to demographic pattern as one that is concerned with the variables like age, gender level of education, marital status. Temporal pattern has to do with seasons in which a thing or event occurs, which spatial pattern deals with geographical location, which may be urban or rural in relation to the occurrence of cervical cancer. Age is a facto that can affect the incidence of Cervical cancer. Early age at firs sexual intercourse exposes young girls to sexually transmitted infections of which Human Papilloma Virus are included. In addition, incidence of Cervical cancer increases with age, starting to rise in women between the age of 30 to 35year and reaching peak at about 50 to 60years (Adap & Hedley, 1997).

Cervical cancer is a global health problem, especially in the developing countries including Nigeria. Women who adopt healthy sexual behaviours by avoiding multiple sexual partners thereby not contracting sexually transmitted infections are not likely to suffer cervical cancer. Regrettably, some women indulge in such behaviour that will expose them to STIs and this increases the incidence of Cervical Cancer. University of Nigeria Teaching Hospital, is one of the Teaching Hospitals in Nigeria where cancer cases including cervical cancer are managed, incidentally, no report of such study on incidence, screening and pattern of cervical cancer is known by the researcher. It is on this premise that the researcher tends to find out the incidence, screening and pattern of cervical cancer among home attending UNTH from 2000-2005.

The purpose of the study is to find out the incidence, screening and pattern of cervical cancer among women attending UNTH, specifically, the following research questions were formulated:

1. What is the incidence of cervical cancer among women attending UNTH from 2002-2005?
2. What is the demographic pattern (age) of cervical cancer among women attending UNTH from 2002-2005?
3. What is the spatial pattern by cervical cancer among women attending UNTH from 2002-2005?
4. What is the level of uptake of cervical cancer screening among women attending UNTH from 2002-2005?

### Hypothesis

There is no statistically significant difference in the incidence of cervical cancer according to demographic variable of age. ( $p > .05$ ).

### Methods

The study adopted the descriptive research method utilizing the expost- facto design. The population for the study consisted of all records of cervical cancer cases in university of Nigeria Teaching Hospital, Enugu from 2000-2005. The total number of cervical cancer cases for this period of study is 82 cases. The researcher- designed instrument called Cervical Cancer Inventory Proforma (CCIP) was used for data collection. In order to gain access to the folder of cervical cancer cases, an introductory letter from the Head, Department of Health and Physical Education UNN introducing the researcher and explaining the purpose of the study was presented to the Medical Director in charge of the health faculty. Sampling was not done because the population for the study were few (82). Three research assistances (medical record keepers) helped in the transfer of data from the patients' folders to the proforma. The Statistical Package for Social Science (SPSS) was used for analysis. To determine the annual incidence, demographic, spatial patterns and screening uptake, frequencies and percentages were used. Chi-square statistic was used to test the hypothesis at .05 level of significance

### Results

**Table 1:** Cervical Cancer Incidence at University of Nigeria Teaching Hospital from 2000-2005 (N=82)

Years	Cervical cancer cases	
	f	%
2000	9	11.0
2001	7	8.5
2002	7	8.5
2003	17	20.7
2004	25	30.5
2005	17	20.7
<b>TOTAL</b>	<b>82</b>	<b>100%</b>

Data in table 1 show that the highest number of cervical cancer of 25 cases (30.5%) occurred in 2004, followed by 17 cases, (20.7%) which occurred in 2003 and 2005 respectively. The table further shows that nine cases (11.0%) occurred in 2000 and seven cases each (8.5%) were recorded in 2001 and 2002 respectively.

**Table 2:** Demographic Pattern of cervical cancer According to Age in UNTH (n= 82)

Age	2000		2001		2002		2003		2004		2005		Total	
	F	%	F	%	F	%	F	%	F	%	F	%	F	%
21-30	0	0	0	0	0	0	0	0	1	1.2	0	0	1	1.2
31-50	5	6.1	2	2.4	3	3.7	3	3.7	6	7.3	8	9.8	27	32.9
51-60	3	3.7	3	3.7	0	0	3	3.7	11	13.4	5	6.1	25	30.5
61- and above	1	1.2	2	2.4	4	4.9	11	13.4	7	8.5	4	4.9	29	35.4
<b>Total</b>	<b>9</b>	<b>11.0</b>	<b>7</b>	<b>8.5</b>	<b>7</b>	<b>8.5</b>	<b>17</b>	<b>20.7</b>	<b>25</b>	<b>30.5</b>	<b>17</b>	<b>20.7</b>	<b>82</b>	<b>100</b>

Table 2 Shows that , age group 61- and above recorded overall the highest percentage of (35.4%) cervical cancer cases for the period under study, followed by age group 31-50 (32.9%), age group 51-60 recorded (30.5%) and age group 21-30 years (1.2%) recorded the lowest. Age group 21-30 recorded zero percentage age from 2000-2003 while 2004 recorded highest (30.5%)

**Table 3:** Spatial Pattern of Cervical Cancer at University of Nigerian Hospital from 2000-2005 (n=82)

Year	Location					
	Urban		Rural		Total	
	F	%	F	%	F	%
2000	3	3.7	6	7.3	9	11.0
2001	4	4.9	3	3.7	7	8.5
2002	4	4.9	3	3.7	7	8.5
2003	10	12.1	7	8.5	17	20.7
2004	10	12.1	15	18.2	25	30.5
2005	5	6.1	12	14.6	17	20.7
Total	36	43.9	46	56.1	82	100

Table 3: shows that women in the rural area had highest incidence of cervical cancer in 2003(12.1%) and 2004 (12, 1%) respectively, while those in the urban area recorded 18.3% in 2004 and 14.6% in 2005.

**Table 4:** Uptake of Cervical Cancer Screening at University of Nigeria Teaching Hospital from 2000-2005(n=82).

Uptake of cervical cancer screening	2000		2001		2002		2003		2004		2005		Total	
	F	%	F	%	F	%	F	%	F	%	F	%	F	%
Yes	3	3.7	1	1.2	0	0	5	6.1	6	7.3	5	6.1	20	24.4
No	6	7.3	6	7.3	7	8.5	12	14.6	19	23.2	12	14.6	62	75.6
Total	9		7		7		19		25		17		82	

Table 4: The table shows that (75.6%) of the women had never gone for cervical cancer screening. Only few (24.4%) of women under study had gone for cervical cancer screening. The table further shows that 2004 recorded the highest( 6=7.3%) cases of uptake followed by 5 (6.1%) cases in 2003 and 2005 respectively . Only one case (1.2%) was recorded in 2001 and no case (0%) in 2002..

**Hypothesis One:** There is no statistically significant difference in the incidence of cervical cancer according to demographic variable of age.

**Table 5:** Summary of Chi-square  $\chi^2$  Analysis Testing the Null Hypothesis of No significant Difference in the Incidence of Cervical Cancer According Age

Age Year	21-30	31-50	51-60	61yrs & Above	Total
	Years	Years	Years		
2000	0	5	3	1	9
2001	0	2	3	3	7
2002	0	3	0	4	7
2003	0	3	3	11	17
2004	1	6	11	7	25
2005	0	8	5	4	17
TOTAL	1	27	25	29	82

Ca  $\chi^2 = 19.426$ , p. value = .193, df = 15,  $p < .05$ .

Table 5: Shows the  $\chi^2$  calculated value of 19.43 with a corresponding P. value of .193 which is greater at .05 level of significance at 15 15df. The null hypothesis of no significant difference in the incidence of cervical cancer according to age is therefore accepted. This means that the occurrence of cervical cancer does not differ according to age.

## Discussion

Result in table 1 revealed that the highest number of cases were recorded in 2004, 25 (30.5%) while the lowest number of cases 7 (8.5%) occurred in 2001 and 2002 respectively. This result is not unexpected in view of the available literature. Ferlay (2002), and Obinna and Ogundipe (2010) reported that cervical cancer is the second most common cancer among women and accounts for most of their death. The reduction in the number of cases in 2001 and 2002 might be attributed to poor knowledge of these fear and anxiety over a positive result (Nnodu) 2010 and Ezem, 2007). This implies that women are not well educated on the issues concerning cervical cancer; secondly, health facilities that provide the services on cervical cancer screening are usually cited in the cities which are not accessible to most women.

Result in Table 2 revealed that age group 61 years and above (35.4%) was mostly affected by cervical cancer, followed by age group 31-50 years (32.9%) and age group 51-60 years (30.5%). The result does not agree with the findings of Kahn (2007) who reported that cervical cancer was more in women aged 22-25 years and that participants aged 22-25 had approximately twice odds of infection with the HPV compared with women of other ages. Although the infection was more common among younger women, cervical cancer is primarily a disease of the older women. These differences may reflect the time interval between infection and development of cervical cancer, as well as many other variables that influence the development of cervical cancer, such as pap screening practice (Kahn 2007).

Table 3 indicates that rural women had higher cases of cervical cancer (56.1%) than urban women (43.9%). This result is not unexpected as it agrees with the findings of Mamadani et al; (2003) who found that women, due to poverty, poor access to screening facilities, health system inadequacies and lack of effective health education about sexually transmitted infections prevention.

Result in table 4: Revealed that (75.6%) of the women had never had cervical screening while (24.4%) have had opportunity of cervical screening. This is in line with Aniebue and Aniebue (2010) who reported that out of 400 females selected as sample for their study, only (5.26%) reported having had a pap smear test. Additionally in support of the above findings, Ezem (2007) reported that there was a low level of cervical screening uptake among women in Owerri municipality. This might be due to poor sensitization of women in the area thereby making them ignorant of the importance of cervical cancer screening.

## Conclusions

Based on the findings, the following conclusions were made.

The highest cases of cervical cancer were recorded in 2004 and lowest in 2001 and 2002 at University of Nigeria Teaching Hospital, Enugu. Cervical cancer cases occurred more among age group 61 years and above while the lowest occurred among age group 21-30 years. Rural women recorded more cervical cancer cases than urban women. A small proportion of (24.4%) of the women had cervical cancer screening.

## Recommendations

The following recommendations were made following the findings.

1. The Government should provide cervical cancer screening facilities and vaccine in most health facilities for women to access.
2. There should be regular monitoring of cervical cancer cases through effective registration exercise
3. Cervical cancer screening services should be integrated into existing medical services to avail women the opportunity of being tested.
4. Government should provide drugs to health facilities for proper treatment of sexually transmitted infections.
5. Sensitization and education of the women about cervical cancer and utilization of the available health services.

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