



(RESEARCH ARTICLE)



## Profile of women with Gynaecological cancers at a Tertiary Hospital in Southern Nigeria

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### Abstract

**Background:** Gynaecological cancers remain a major public health concern in Low-and Middle-Income Countries. In sub-Saharan Africa, gynaecological cancers account for approximately one-third of all female cancers.

**Objectives:** To determine the socio-demographic, reproductive, and clinical characteristics of gynaecological cancer patients at the University of Port Harcourt Teaching Hospital.

**Materials and Methods:** This was a prospective cross-sectional study of 75 women with histologically confirmed gynaecological cancer managed at the University of Port Harcourt Teaching Hospital, from January 1, 2022, to December 31, 2022. A structured interviewer-administered questionnaire was used to obtain socio-demographic characteristics and clinical profile from the patients and their clinical records after informed consent was obtained. Data was entered into a MS Excel spreadsheet and analyzed with SPSS version 25.

**Results:** Most 27 (36%) of the women were between 40-49 years of age, with a mean age of  $50.4 \pm 12.3$  years. Majority 46 (61.3%) were married, 27 (36%) had tertiary education, and two-thirds earned N30,000 or less ( $\leq \$20$ ) per month. Many 23 (30.7%) were Para  $\geq 5$ , almost all 63 (84%) of the women were referred to UPTH, with one-third 21 (33.3%) of the referrals coming from other tertiary health facilities. Most 63 (84%) of the women had never had a Pap smear screening, and 48 (64%) were menopausal. The most common presenting symptom was vaginal bleeding 37 (49.3%). Cervical cancer accounted for about half 40 (53.3%) of the cases, followed by ovarian cancer 27 (36%), with the majority 28 (43%) presenting with stage III disease. Chemotherapy was administered to all the patients. However, treatment was delayed in 57 (76%) of the women due to financial constraints, with most of the funding and support coming from family members in 43 (57.3%) of the women.

**Conclusion:** There is an urgent need to increase advocacy for gynaecological cancers to increase awareness, prevent late presentation and progression of early disease. Furthermore, the government needs to subsidize the cost of cancer care to encourage early presentation and treatment.

**Keywords:** Gynaecological Cancer; Demography; Clinical profile; Nigeria

### 1. Introduction

Gynaecological cancers are malignancies of the genital tract which involves the cervix, ovary, uterus, vulva, vagina, and gestational trophoblastic neoplasia (GTN) [1]. These malignancies have different epidemiology, pathology, and management interventions [2]. Though cancers of the uterus, cervix, vagina, vulva, ovary, choriocarcinoma and fallopian tubes are managed by the gynaecologists, breast cancer is mostly managed by general surgeons in many developing countries, Nigeria inclusive [3].

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The global cancer data reveal that the burden has risen to 18 million cases and 9.6 million deaths annually, with over 50% of the new cancer incidences recorded in Asia [4]. Gynaecological cancers remain a crucial public health menace worldwide, as it is among the leading causes of morbidity in women and cancer-associated mortalities globally [2]. Aside breast cancer, gynaecological cancers are the second most common cancers, accounting for over 17% of all types of cancers in women [5].

The epidemiology of these gynaecological cancers varies across different countries, due to genetic traits, lifestyle, and socio-economic factors [6]. In developed countries, gynaecological cancers constitute about 16% of all cancers, while they account for 25% in developing nations [1]. Globally, the most common gynaecological cancer is cervical cancer with a prevalence of about 13%, while those of endometrial, ovarian and vulva cancers are 8%, 6% and 0.9% respectively [7]. Similarly, the most common types of gynaecological cancer in the African region are cervical, ovarian, and uterine cancers [8,9]. Although, no national comprehensive data exist for the prevalence of these gynaecological cancers in Nigeria, however several studies have been conducted in various parts of the country to evaluate the burden of these cancers in the general population. Cervical cancers have a high prevalence in Nigeria which could be attributed to the lack of awareness, lack of political will, poor infrastructure, and almost non-existent cervical screening programmes [10-12]. Reported prevalence of cervical cancer in Nigeria include 60% at Ebonyi [10], 66% at Enugu [13], 69% at Sokoto [14], 74% at Jos [15], while 73% and 74% were reported at Oyo and Edo respectively [13].

Ovarian cancers are the second highest cause of mortalities in patients with gynaecological cancers [8]. It is estimated that about 75% of the patients present late with advanced stages of this cancer because of its nonspecific symptoms [16]. It accounted for 19% and 28% incidence for studies conducted at Ebonyi and Abuja respectively [10,16]. Moreover, the high mortality associated with ovarian cancers is due to late presentation, as it has no premalignant stage and there are no specific screening tests [13,17].

Factors such as age and parity have been identified as some of the major risk factors for gynaecological cancers. Endometrial and ovarian cancers are more common in older women, while choriocarcinoma occur in the younger age group [2,8]. Although multiparity has been reported as a protective factor against endometrial and ovarian cancers, it is a major risk factor for cervical cancer [2]. Hence, the study sought to determine the socio-demographic, reproductive, and clinical profile of gynaecological cancer patients at the University of Port Harcourt Teaching Hospital in River state, Nigeria.

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## 2. Materials and Methods

### 2.1. Study Area

This study was conducted at the gynaecological oncology unit of the University of Port Harcourt Teaching Hospital (UPTH). The University of Port Harcourt Teaching Hospital is a 988-bed hospital in Alakahia, in Obio-Akpor Local Government Area of Rivers state. It is a tertiary hospital that serves as a referral centre for all levels of healthcare in Rivers state and other neighbouring states including Bayelsa, Imo and Abia. Every week, the gynaecological oncology runs on Friday, and each clinic session is led by a team of consultants. Patients are evaluated in the clinic before they are admitted into the gynaecological ward for surgery.

### 2.2. Methods

This was a prospective cross-sectional study of 75 women with histologically confirmed gynaecological cancer managed at the University of Port Harcourt Teaching Hospital between January 1, 2022, and December 31, 2022. Women who refused consent and very ill patients were excluded from the study. The purpose of the study was duly explained to the women and informed consent forms were signed by the participants. A structured interviewer-administered questionnaire designed for this purpose was used to obtain socio-demographic and clinical parameters. Each participant was assigned a unique identity to ensure anonymity and ease of identification. The data collection tools were checked daily for accuracy and completeness.

### 2.3. Data Analysis

The data collected was entered into an MS Excel spreadsheet. The data was cleaned and analyzed using Statistical Package for Social Sciences (SPSS) version 25. The socio-demographic characteristics and clinical information were summarized using descriptive statistics (mean, frequency percentage and standard deviation) as appropriate.

## 2.4. Ethical Considerations

Ethical approval for the study was obtained from the Ethics and Research Committee of the University of Port Harcourt Teaching Hospital. Personal identifying information was kept confidential.

## 3. Results

The table 1 showed that 27 (36.0%) of the respondents were in 40-49 years age group, 46 (61.3%) were married, 27 (36.0%) had tertiary education and 45 (60.0%) of the respondents were businesswomen. The mean age of the respondents was  $50.4 \pm 12.3$  years. About two-thirds, 55 (73.3%) of the respondents were active with 45 (60.0%) earning N30,000 or below ( $\leq$  \$20) monthly. This is shown in Table 1.

The table 2 showed that most 34 (45.3%) of the women were Para 2 or less, and 37 (49.3%) had one or two living children. Of the 75 patients, 63 (84.0%) were referred, with 21 (33.3%) of them referred from other tertiary health facilities, 19 (30.2%) were referred from general hospitals and 16 (25.4%) were referred from private facilities. Table 3 showed that 34 (45.3%) of the respondents attained menarche between 13-14 years, 37 (49.3%) had coitarche at more than 18 years, only 9 (12.0%) had Pap smear screening, 12 (16.0%) had used hormonal contraceptive, and 48 (64.0%) were menopausal.

The clinical characteristics of the patients are presented in table 4. About half 40 (53.3%) of the women had cervical cancer, while 27 (36.0%) had ovarian cancer. Most of the women presented with vaginal bleeding 37 (49.3%) and abdominal swelling 36 (48.0%), with majority presenting in stage III 32 (42.7%) and IV 24 (32%) disease. Furthermore, 38 (50.7%) were diagnosed within 1 year, and 36 (48.0%) had undergone total abdominal hysterectomy, bilateral salpingo-oophorectomy, infracolic omentectomy, and pelvic lymph node dissection. Disease recurrence was observed in 11 (14.7%) patients.

Table 5 showed that 43 (57.3%) of the respondents have support from family members, 40 (53.3%) from spouse, and 34 (45.3%) from their children. Moreover, 50 (66.7%) have financial support from their family, 35 (46.7%) from their spouse, and 16 (21.3%) were self-funded.

A quarter 20 (26.7%) of the women had chronic hypertension, while only 6 (8.0%) had diabetes mellitus. This is shown in Table 6. Of the 75 respondents, 4 (80.0%) reported a family history of breast cancer, with only 1 (20%) having a family history of ovarian cancer.

**Table 1** Socio-Demographic Characteristics

| Variable                 | Frequency n=75  | Percent (%) |
|--------------------------|-----------------|-------------|
| <b>Age group (years)</b> |                 |             |
| <20                      | 2               | 2.7         |
| 20-29                    | 3               | 4.0         |
| 30-39                    | 6               | 8.0         |
| 40-49                    | 27              | 36.0        |
| 50-59                    | 22              | 29.3        |
| 60-69                    | 15              | 20.0        |
| Mean $\pm$ SD            | 50.4 $\pm$ 12.3 |             |
| <b>Marital status</b>    |                 |             |
| Single                   | 9               | 12.0        |
| Married                  | 46              | 61.3        |
| Divorced                 | 2               | 2.7         |
| Separated                | 6               | 8.0         |
| Cohabiting               | 12              | 16.0        |

|                              |    |      |
|------------------------------|----|------|
| <b>Education</b>             |    |      |
| None                         | 5  | 6.7  |
| Primary                      | 25 | 33.3 |
| Secondary                    | 16 | 21.3 |
| Intermediate                 | 2  | 2.7  |
| Tertiary                     | 27 | 36.0 |
| <b>Occupation</b>            |    |      |
| Business                     | 45 | 60.0 |
| Farming                      | 8  | 10.7 |
| Artisan                      | 7  | 9.3  |
| Teaching                     | 7  | 9.3  |
| Unemployed                   | 5  | 6.7  |
| Others                       | 3  | 4.0  |
| <b>Occupation status</b>     |    |      |
| Active                       | 55 | 73.3 |
| Inactive                     | 16 | 21.3 |
| Retired                      | 4  | 5.3  |
| <b>Monthly income(naira)</b> |    |      |
| ≤30000                       | 45 | 60.0 |
| 30001 - 60000                | 10 | 13.3 |
| 60001 - 90000                | 4  | 5.3  |
| 90000 -120000                | 10 | 13.3 |
| >120000                      | 6  | 8.0  |

**Table 2** Obstetric History

| <b>Variable</b>              | <b>Frequency</b> | <b>Percent (%)</b> |
|------------------------------|------------------|--------------------|
| <b>Parity</b>                |                  |                    |
| ≤2                           | 34               | 45.3               |
| 3-4                          | 18               | 24.0               |
| ≥5                           | 23               | 30.7               |
| <b>No of Living Children</b> |                  |                    |
| ≤2                           | 37               | 49.3               |
| 3-4                          | 21               | 28.0               |
| ≥5                           | 17               | 22.7               |
| <b>Patient referred</b>      |                  |                    |
| Yes                          | 63               | 84.0               |
| No                           | 12               | 16.0               |

| Source of referral        |    |      |
|---------------------------|----|------|
| Tertiary Health Centre    | 21 | 33.3 |
| General Hospital          | 19 | 30.2 |
| Private Clinic/ Maternity | 16 | 25.4 |
| Primary Health Centre     | 6  | 9.5  |
| Others                    | 1  | 1.6  |

**Table 3** Gynaecological History

| Variable                                     | Frequency n=75 | Percent (%) |
|--|----------------|-------------|
| <b>Age at menarche</b>                       |                |             |
| 10-12  | 30             | 40.0        |
| 13-14  | 34             | 45.3        |
| >14  | 11             | 14.7        |
| <b>Age at coitarche</b>                      |                |             |
| 13-15  | 17             | 22.7        |
| 16-18  | 21             | 28.0        |
| >18  | 37             | 49.3        |
| <b>Pap Smear Screening</b>                   |                |             |
| Yes  | 9              | 12.0        |
| No   | 66             | 88.0        |
| <b>Hormonal contraceptive</b>                |                |             |
| Yes  | 12             | 16.0        |
| No   | 63             | 84.0        |
| <b>Type of hormonal contraceptive (n=12)</b> |                |             |
| Oral contraceptive                           | 7              | 58.3        |
| Injectables                                  | 5              | 41.7        |
| <b>Menopausal</b>                            |                |             |
| Yes  | 48             | 64.0        |
| No   | 27             | 36.0        |

**Table 4** Clinical Characteristics

| Variable              | Frequency n=75 | Percent (%) |
|-----------------------|----------------|-------------|
| <b>Type of Cancer</b> |                |             |
| Cervical              | 40             | 53.3        |
| Ovarian               | 27             | 36.0        |
| Endometrial           | 6              | 8.0         |

|                              |    |      |
|------------------------------|----|------|
| Vulvar                       | 2  | 2.7  |
| <b>Presenting symptoms*</b>  |    |      |
| Vaginal bleeding             | 37 | 49.3 |
| Abdominal swelling           | 36 | 48.0 |
| Abdominal pains              | 17 | 22.7 |
| Weight loss                  | 14 | 18.7 |
| <b>Stage of disease</b>      |    |      |
| Stage 1                      | 3  | 4.0  |
| Stage 2                      | 16 | 21.3 |
| Stage 3                      | 32 | 42.7 |
| Stage 4                      | 24 | 32.0 |
| <b>Duration of diagnosis</b> |    |      |
| < 1 year                     | 38 | 50.7 |
| 1-2 years                    | 36 | 48.0 |
| ≥ 3 years                    | 1  | 1.3  |
| <b>Type of treatment</b>     |    |      |
| Chemotherapy                 | 35 | 46.7 |
| Surgery                      | 36 | 48.0 |
| Both                         | 4  | 5.3  |
| <b>Disease Recurrence</b>    |    |      |
| Yes                          | 11 | 14.7 |
| No                           | 64 | 85.3 |

\*Multiple responses apply

**Table 5** Funding and Support

| Variable                | Frequency n=75 | Percent (%) |
|-------------------------|----------------|-------------|
| <b>Type of support*</b> |                |             |
| Family                  | 43             | 57.3        |
| Spouse                  | 40             | 53.3        |
| Children                | 34             | 45.3        |
| Friends and colleagues  | 6              | 8.0         |
| Health personal         | 3              | 4.0         |
| <b>Source of funds*</b> |                |             |
| Family                  | 50             | 66.7        |
| Spouse                  | 35             | 46.7        |
| Self                    | 16             | 21.3        |
| Friends/colleagues      | 6              | 8.0         |

\*Multiple responses apply

**Table 6** Medical History

| Variable                 | Frequency n=75 | Percent (%) |
|--------------------------|----------------|-------------|
| <b>Hypertensive</b>      |                |             |
| Yes                      | 20             | 26.7        |
| No                       | 55             | 73.3        |
| <b>Diabetes mellitus</b> |                |             |
| Yes                      | 6              | 8.0         |
| No                       | 69             | 92.0        |
| <b>Hyperlipidaemia</b>   |                |             |
| Yes                      | 2              | 2.7         |
| No                       | 73             | 97.3        |

**Table 7** Family and Social History

| Variable                        | Frequency n=75 | Percent (%) |
|---------------------------------|----------------|-------------|
| <b>Family history of cancer</b> |                |             |
| Yes                             | 5              | 6.7         |
| No                              | 70             | 93.3        |
| Type of cancer in family member |                |             |
| Breast cancer                   | 4              | 80.0        |
| Ovarian cancer                  | 1              | 20.0        |
| <b>Alcohol Use</b>              |                |             |
| Yes                             | 13             | 17.3        |
| No                              | 62             | 82.7        |
| <b>Tobacco Use</b>              |                |             |
| Yes                             | 1              | 1.3         |
| No                              | 74             | 98.7        |

#### 4. Discussion

Gynaecological cancers remain a huge burden in Nigeria, despite it being on a downward trend in developed countries. In this study, cervical cancer was the most common gynaecological cancer, followed by ovarian cancer. This high prevalence could be attributed to the lack of cervical cancer awareness and organized screening programmes with respect to cervical cancer, and non-specific symptoms in women with ovarian cancer, hence the late presentation [16]. This is consistent with previous findings of Joseph et al [10], Okeke et al [13], Ibrahim and Ijaiya [18], Umeobika et al [19], and Osinachi et al [20], who all reported cervical and ovarian cancers as the most common gynaecological cancers in the various studies across Nigeria. Similarly, Birara et al, and Afroz et al reported the same pattern of gynaecological cancers in Ethiopia and Bangladesh respectively [1,21].

Age as a demographic factor has been implicated as one of the risk factors for gynaecological cancers. In this study, gynaecological cancers were most prevalent in the 40-49 years age group. This correlated with the findings of Umeobika et al [19], among gynaecological cancer patients in Imo State, Nigeria. In addition, the mean age in our study was  $50.4 \pm 12.3$  years, which further shows that gynaecological cancers are more prevalent in women in the fourth and fifth decades of life. This finding corroborates the report of Abdullahi and Ayogu [16] who reported a mean age of 51.16

years at a study in Abuja, Nigeria. However, it was at variance with observations made by Joseph et al [10] and Nnadi et al [14] who reported a slightly higher mean age of 54 years respectively. This further emphasizes that gynaecological cancers are more common in the fifth decade of life.

Other demographic factors are marital status, level of education, employment, and income. The relationship between these factors and gynaecological cancers have not been widely reported in Nigeria. However, Sharma and Pattanshetty [22] in an Indian study reported that married women were more susceptible to cervical cancer, whereas Garg and Dasari [23] reported that lower socio-economic status was the dominant risk factor among gynaecological cancer patients in India.

Concerning the reproductive characteristics, the study showed that gynaecological cancers were more common in women with low parity, who were menopausal. Surprisingly, most of them had never had a pap smear screening. Of these, the most widely documented is the relationship between parity and gynaecological cancers. In contrast, Joseph et al [10], Abdulrahim and Ayogu [16], Ibrahim and Ijaiya [18], Osinachi et al [20], all reported in their respective studies across Nigeria that gynaecological cancers were more common in women with high parity among gynaecological cancer patients.

The most frequent presenting complaints among the women were vaginal bleeding and abdominal swelling. Furthermore, 26% were hypertensive, 8% were diabetic, 6% had a family history of cancer, 17% took alcohol, while only 1.3% tobacco usage. Although, the relationship between these factors and gynaecological cancers have not been widely studied in Nigeria, this result is lower than the findings of Wasim et al [6], who reported 48% hypertension, 42% diabetes, 8% family history of cancer and 29% tobacco usage, among gynaecological cancer patients in Pakistan. Moreover, the reason for these low results could be attributed to differences in lifestyle, social habits and effective prevention of diabetes mellitus, and hypertension among the study population.

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## 5. Conclusion

Gynaecological cancer especially cervical and ovarian cancers are still prevalent in our environment. There is an urgent need to increase advocacy for gynaecological cancers to increase awareness, prevent late presentation and progression of early disease. Furthermore, the government needs to subsidize the cost of cancer care to enable early treatment.

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## Compliance with ethical standards

### *Acknowledgments*

The authors acknowledge all the women who gave consent to participate in the study.

### *Disclosure of conflict of interest*

The authors have declared that no conflicts of interests exist.

### *Statement of ethical approval*

Ethical approval for the study was obtained from the Ethics and Research Committee of the University of Port Harcourt Teaching Hospital.

### *Statement of informed consent*

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

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