

Pattern of gynaecological malignancies in Enugu State University Teaching Hospital, Enugu, Southeast Nigeria

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Abstract

Background: Gynaecological malignancies are significant cause of morbidity and mortality among women worldwide. Through this study, we seek to contribute to the growing body of evidence that can guide stakeholders, healthcare professionals, policymakers, and public health advocates in implementing context-specific strategies to improve prevention, early detection, and management of gynaecological malignancies in Nigeria and similar settings.

Aim: Evaluation of the pattern of gynaecological malignancies, and the associated sociodemographic characteristics at Enugu State University Teaching Hospital Parklane.

Materials and methods: This was a 5-year retrospective cross-sectional study of all histologically confirmed cases of gynaecological malignancies managed at Enugu State University Teaching Hospital Parklane from 1st January 2020 to 31 December 2024. The case files were retrieved from the medical record department of the hospital. Relevant information extracted from these folders included age, marital status, parity, type of cancer and tumor site. The data processing and analysis were carried out using the Statistical Package for the Social Sciences software version 23.0 (Armonk New York: IBM Corp. 2015) and presented in tabular form using frequencies, percentages, means and standard deviations.

Results: Cervical cancer is the leading cause of gynaecological malignancy (41%), with the next in frequency of occurrence being Ovarian cancer (28.2%), endometrial cancer (18%) and leiomyosarcoma the least (0.4%). There is a downward trend in the incidence of cervical cancer and upward trend in the incidence of ovarian and endometrial cancers when compared with previous studies in the same geographical area. Conclusion: The persistently higher burden of cervical cancer, despite its recent downward trend, underscores the critical need to sustain and expand preventive measures. Simultaneously, the rising incidence of ovarian and endometrial cancers call for heightened public awareness, promotion of healthy lifestyle to reduce modifiable risk factors and development of effective screening strategies where feasible.

Keywords: Gynecological malignancies; Pattern; Enugu; Cancer

1. Introduction

Gynaecological malignancies encompassing malignancies of the cervix, uterus, ovaries, vulva, and vagina, represent a significant public health concern for women globally. These cancers collectively account for a substantial portion of cancer-related morbidity and mortality among women, particularly in low- and middle-income countries (LMICs) such as Nigeria.¹ According to the Global Cancer Observatory ², cervical cancer alone remains one of the leading causes of

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cancer deaths among women in Nigeria. Gynecological malignancies are a major public health problem, due to associated morbidity and mortality in women worldwide.^{3,4} Globally the International Agency for Research on Cancer reported that gynecological malignancy contributed 19% of 5.1 million estimated new cancer cases and 2.9 million cancer deaths.⁵

In Nigeria, the trend of gynaecological malignancies is further compounded by limited awareness, poor screening uptake, lack of organized cancer control programs, and late presentation of cases⁶. Cultural beliefs, financial constraints, and inadequate healthcare infrastructure also hinder early detection and effective treatment.⁷ These barriers contribute to the disproportionately high mortality rate observed among Nigerian women diagnosed with gynaecological malignancies. Additionally, variations in histological types and presentation patterns have been noted across different regions.⁸

Cervical cancer remains one of the most significant gynaecological malignancies globally, ranking fourth in both incidence and mortality among women.⁹ It arises primarily from persistent infection with high-risk human papillomavirus (HPV) types, particularly HPV-16 and HPV-18.¹⁰ While cervical cancer incidence has declined in many high-income countries due to effective screening and HPV vaccination programs, it continues to pose a major health burden in low- and middle-income regions where access to preventive measures is limited.¹¹ Cervical cancer contributed 0.6 million new cases in 2020, resulting in 342,000 deaths worldwide.¹² About 80% of cervical cancer occurs in developing countries.¹³ Early stage cervical cancers is often asymptomatic, emphasizing the importance of screening for timely detection and treatment.¹⁴ prevention strategies, including HPV vaccination and regular screening, remain pivotal in reducing cervical cancer incidence and associated mortality within the spectrum of gynaecological malignancies.¹⁰

The Enugu State University Teaching Hospital (ESUT-TH) Parklane, located in southeastern Nigeria, serves as a major referral center for gynecological and oncological care in the region. Studying the trend of gynaecological cancers in this institution provides valuable insights into regional disease patterns, health-seeking behavior, and institutional capacity in managing these conditions. Historical data from hospital records can help identify shifts in disease prevalence, changes in patient demographics, and outcomes over time, thereby providing a foundation for targeted interventions.

Furthermore, understanding these trends is critical in the context of global efforts toward cancer control, including the World Health Organization's (WHO, 2020) global strategy to eliminate cervical cancer as a public health problem. It emphasizes the need for accurate data and local research to drive evidence-based policies and interventions. This research aims to analyze the trends of gynaecological malignancies at ESUT-TH Parklane, focusing on types of malignancies, age distribution, and annual frequency over a defined period.

Through this study, we seek to contribute to the growing body of evidence that can guide stakeholders healthcare professionals, policymakers, and public health advocates—in implementing context-specific strategies to improve prevention, early detection, and management of gynaecological malignancies in Nigeria and similar settings.

2. Materials and Methods

This was a retrospective study of patients who were managed for female genital malignancies in the Department of Obstetrics and Gynaecology, Enugu State University Teaching Hospital parklane, over a five-year period, starting from 1st January 2020 to 31st December, 2024. The case files of histologically confirmed cases of female gynaecological malignancies were retrieved from the medical records department of the hospital. Relevant information extracted from the folders included age, marital status, parity, stage, and type of cancer and tumor site. The data processing and analysis were carried out using the Statistical Package for the Social Sciences software version 23.0 (Armonk New York: IBM Corp. 2015) and presented in tabular form using frequencies, percentages, means and standard deviations

Table 1 Pattern of Gynaecological malignancies at ESUT Teaching Hospital (2020–2024)

Cancer Type	2020	2021	2022	2023	2024	Mean Age (Years)	Age Group Most Affected	Marital Status Most Affected	Parity (Most Common)	P-value
Cervical	53	60	65	72	78	52.4 ± 8.2	45–54 years	Married	Para 4–5	0.004
Ovarian	31	39	44	51	62	47.9 ± 10.1	35–44 years	Single/Nulliparous	Nullipara–Para 1	0.011
Endometrial	22	28	32	28	32	56.2 ± 6.4	55–64 years	Widowed/Postmenopausal	Para ≥3	0.017
Vulvar	5	6	9	8	10	63.5 ± 9.0	61–68 years	Widowed	Para ≥4	0.026
Vaginal	4	3	6	5	7	59.8 ± 7.5	55–64 years	Married	Para 2–3	0.033
Choriocarcinoma	5	7	6	10	13	41.4 ± 6.1	40–44 Years	married	Para 2–3	0.012
leiomyosarcoma	-	1	-	-	2	52.3 ± 4.1	49–56	married	Para 1–2	0.022
Total Cases	120	144	162	174	204	—	—	—	—	—

Table 2 Type/location of gynecological malignancies among the women

Site of Tumor	Number of Cases	Percentage (%)
Cervix	328	41
Ovary	227	28.2
Endometrium	142	18
Vulva	38	5
Vaginal	25	3.1
Choriocarcinoma	41	5.1
Leiomyosarcoma	3	0.4
Total	804	100

3. Results

The result of the pattern of gynaecological malignancies in Enugu State Teaching Hospital shows that Eight hundred and four (804) women received management within five years for gynecologic malignancies in the hospital. Cervical cancer cases were found in 41%(328) of the women. It remains the most prevalent of all the cancer cases. Ovarian cancer was the next in frequency, accounting for 28.2%(227) of the cases, followed by endometrial cancer, 18%(142), choriocarcinoma, 5.1%(41), vulva cancer 5%(38), vaginal cancer, 3.1% (25) and the least being leiomyosarcoma 0.4%(3). The mean age of occurrence of cervical cancer was 52.4 ± 8.2 years and 47.9 ± 10.1 years for ovarian cancer. The mean age for endometrial cancer was 56.2 ± 6.4 years, 63.5 ± 9.0 years for vaginal cancer, 63.5 ± 9.0 years for vulva cancer, 41.4 ± 6.1years for choriocarcinoma and 52.3 ± 4.1years for leiomyosarcoma as presented in table 1 above. Most patients managed for cervical cancer were married with parity of 4-5, while majority of patients with ovarian

malignancy were single and of low parity (nullipara to para -1). The age, marital status and parity distribution of the patients is as seen in table

4. Discussion

Cervical cancer accounted for highest case (41%) of gynaecological malignancy during the study period. Cervical cancer, while still the most commonly diagnosed gynaecological cancer in this group, shows a relatively slower increase in incidence compared to ovarian and endometrial cancers. This finding aligns with earlier reported which emphasized cervical cancer as the dominant gynaecological malignancy in Southeastern Nigeria, primarily affecting multiparous and married women aged 45–54 years.¹⁵ Previous studies noted that cervical cancer still remains the leading gynaecological malignancy and caused 66.3% of gynaecological cancers according to a hospital based study.¹⁶ A value as high as 73.1% was also reported.¹⁷ However, the index study that found 41% incidence signals a downward trend in incidence of cervical cancer. This may be due to increased sensitization, awareness on cervical screening and early identification/treatment of premalignant lesions in the study population.

The mean age of occurrence of cervical cancer was 52.4 ± 8.2 years. Most patients managed for cervical cancer were married and of high parity. These findings agree with results of previous studies.^{16,17}

Ovarian cancer was the next in frequency, accounting for 28.2%(227) of the cases, followed by endometrial cancer, 18%(142), choriocarcinoma, 5.1%(41), vulva cancer 5%(38), vaginal cancer, 3.1% (25) and the least being leiomyosarcoma 0.4%(3). The mean age of occurrence of ovarian cancer was 47.9 ± 10 years while endometrial cancer was 56.2 ± 6.4 years, 63.5 ± 9.0 years for vaginal cancer, 63.5 ± 9.0 years for vulva cancer, 41.4 ± 6.1 years for choriocarcinoma and 52.3 ± 4.1 years for leiomyosarcoma. Majority of patients with ovarian malignancy were single and of low parity (nullipara to para -1).

The upward trend in ovarian cancer, particularly among younger, nulliparous women aged 35–44 years, mirrors earlier findings, that reported increasing ovarian cancer rates in tertiary hospitals due to better diagnostic imaging and awareness.¹⁸ Likewise, endometrial cancer's rise is consistent with observations that linked this trend to increasing obesity, sedentary lifestyles, urbanization and delayed childbearing, particularly in postmenopausal women.¹⁹

Though less common, the increase in vulvar and vaginal cancers is also noteworthy. These cancers were most frequently diagnosed in older, widowed, postmenopausal women, a demographic similarly highlighted in the earlier work, which called for increased awareness and early clinical evaluation in geriatric female populations.²⁰

The statistically significant p-values (< 0.05) associated with these trends suggest non-random increases, further underscoring the need for targeted cancer prevention strategies, especially in high-risk populations. Community-based screening, HPV vaccination, public education, and investment in cancer registries are critical next steps. As corroborated by the Nigerian National Cancer Control Plan, multi-sectoral collaboration is necessary to mitigate the rising burden of gynaecological malignancies.²¹

5. Conclusion

The persistently higher burden of cervical cancer, despite its recent downward trend, underscores the critical need to sustain and expand preventive measures. Simultaneously, the rising incidence of ovarian and endometrial cancers call for heightened public awareness, promotion of healthy lifestyle to reduce modifiable risk factors and development of effective screening strategies where feasible.

Compliance with ethical standards

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Disclosure of conflict of interest

No conflict of interest to declare

Statement of ethical approval

Ethical approval of the ethical committee of Enugu State University Teaching hospital was obtained for the study.

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