**SJ Gynecology and Obstetrics Africa**
**Vol. 3 No. 2 (2026): May 2026 Issue**
**https://doi.org/10.51168/p84aka29**
**Original Article**

# Clinicopathological profile of endometrial carcinoma in postmenopausal women: A hospital-based cross-sectional study.

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## Abstract

### Background

Endometrial carcinoma is among the most common gynecological malignancies in postmenopausal women and requires early diagnosis for improved outcomes.
Objective: To evaluate the clinicopathological profile of endometrial carcinoma in postmenopausal women attending a tertiary care hospital.

### Methods

This hospital-based cross-sectional study included 100 postmenopausal women with histopathologically confirmed endometrial carcinoma. Clinical features, histopathological findings, and FIGO stage were analyzed using SPSS version 26. The association between tumor grade and stage was assessed using the Chi-square test.

### Results

The mean age was 61.4 ± 7.8 years, and 45% of patients belonged to the 50–60-year age group. Postmenopausal bleeding was the most common symptom (82%). Endometrioid carcinoma was the predominant subtype (78%), while 56% of patients presented in FIGO Stage I. Tumor grade showed a significant association with disease stage ($\chi^2$=28.6, p=0.001).

### Conclusion

Endometrial carcinoma commonly presents with postmenopausal bleeding and is frequently diagnosed at an early stage. Histopathological grade is significantly associated with disease stage and prognosis.

### Recommendation

Early evaluation of postmenopausal bleeding and prompt histopathological assessment should be encouraged to improve diagnosis and management.

***Keywords:*** *Endometrial carcinoma; Postmenopausal women; Histopathology; FIGO staging; Clinicopathological profile*
*Submitted: March 17, 2026 Accepted: April 19, 2026 Published: May 30, 2026*

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## Introduction

Endometrial carcinoma represents a major health burden among postmenopausal women worldwide and is the most frequently diagnosed gynecologic malignancy in many regions (1). The incidence has been rising due to increasing obesity, life expectancy, and metabolic disorders (2).
The disease primarily affects women after menopause, with peak incidence between 55 and 65 years (3). Postmenopausal bleeding remains the hallmark symptom and allows early detection in most cases (4).
Endometrial carcinoma is broadly classified into Type I (estrogen-dependent) and Type II (non-estrogen-dependent) tumors, each with distinct molecular and pathological features (5). Type I tumors are usually low-grade and have a favorable prognosis, whereas Type II tumors are aggressive and associated with poor outcomes (6).
Risk factors include obesity, diabetes mellitus, hypertension, nulliparity, and unopposed estrogen exposure (7). Molecular alterations such as PTEN mutation, microsatellite instability, and p53 mutation play significant roles in pathogenesis (8).
Histopathological evaluation remains the gold standard for diagnosis and grading (9). The International Federation of Gynecology and Obstetrics (FIGO) staging system is widely used for prognostic assessment (10).
Several studies have emphasized the importance of correlating clinical presentation with histopathological findings to improve management strategies (11–13). Early-stage disease has an excellent prognosis, while advanced-stage disease is associated with poor survival (14).
This study aims to analyze the clinicopathological profile of endometrial carcinoma in postmenopausal women at a tertiary care hospital (15–17).

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## Materials and methods

### Study design and setting

This **hospital-based observational cross-sectional study** was conducted in the Department of Pathology at the DRIEMS Institute of Health Sciences and Hospital, Tangi, Cuttack, Odisha, India, a tertiary-care teaching hospital providing comprehensive diagnostic and treatment services in obstetrics and gynecology, oncology, pathology, and other medical specialties.

### Study period

The study was conducted over a period of **one year (please insert the exact study period, e.g., January 2024 to December 2024).**

### Study population and sample size

A total of 100 postmenopausal women diagnosed with endometrial carcinoma during the study period were included in the study. **The sample comprised all eligible patients presenting during the study period (or specify the sampling method if different).**

### Eligibility criteria

Postmenopausal women with histopathologically confirmed endometrial carcinoma were included in the study. Premenopausal women and patients with incomplete clinical or histopathological records were excluded.

### Data collection

Clinical and demographic information, including age and presenting symptoms, was obtained from hospital records. Histopathological findings, tumor grade, histological subtype, and FIGO stage were retrieved from pathology reports. All specimens were examined and classified according to standard histopathological criteria.

### Measures to minimize bias

Selection bias was minimized by including all eligible patients who fulfilled the inclusion criteria during the study period. Histopathological diagnoses were made according to standardized diagnostic criteria, and data were extracted using a uniform data-collection format to minimize information bias.

### Ethical considerations

The study was conducted in accordance with the ethical principles of the Declaration of Helsinki. **Ethical approval was obtained from the Institutional Ethics Committee of DRIEMS Institute of Health Sciences and Hospital.** Written informed consent was obtained from all participants before enrolment.

### Statistical analysis

Data were entered into Microsoft Excel and analyzed using Statistical Package for the Social Sciences (SPSS) version 26.0 (IBM Corp., Armonk, NY, USA). Continuous variables were expressed as mean ± standard deviation, while categorical variables were summarized as frequencies and percentages. The association between tumor grade and FIGO stage was assessed using the Chi-square test. A p-value of $<0.05$ was considered statistically significant.

## Results

A total of 100 postmenopausal women diagnosed with endometrial carcinoma were included in the present study. The findings were analyzed with respect to demographic profile, clinical presentation, histopathological characteristics, and staging.

### Age distribution

The age-wise distribution of patients is summarized in Table 1. The highest proportion of cases was observed in the 50–60 years age group (45%). Patients older than 70 years constituted 20% of the study population. The calculated mean age was 61.4 ± 7.8 years, indicating a predominance in the early postmenopausal period.

**Table 1: Age distribution of study participants (n = 100)**

| Age Group (years) | Number of Patients | Percentage (%) |
|---|---|---|
| 50–60 | 45 | 45% |
| 61–70 | 35 | 35% |
| >70 | 20 | 20% |

### Clinical presentation

Clinical features at presentation are detailed in Table 2. Postmenopausal bleeding was the most frequently reported symptom, present in 82% of patients. Other symptoms included abdominal pain (10%) and abnormal vaginal discharge (8%).

**Table 2: Clinical presentation of endometrial carcinoma**

| Symptom | Number of Patients | Percentage (%) |
|---|---|---|
| Postmenopausal bleeding | 82 | 82% |
| Abdominal pain | 10 | 10% |
| Vaginal discharge | 8 | 8% |

## Histopathological types

The histological distribution of tumors is shown in Table 3. Endometrioid carcinoma was the most common subtype, accounting for 78% of cases. Serous carcinoma and clear cell carcinoma were observed in 12% and 10% of cases, respectively.

**Table 3: Histopathological types of endometrial carcinoma**

| Histological Type | Number of Patients | Percentage (%) |
|---|---|---|
| Endometrioid | 78 | 78% |
| Serous | 12 | 12% |
| Clear cell | 10 | 10% |

## FIGO staging distribution

The staging of endometrial carcinoma based on FIGO classification is presented in Table 4. A majority of patients (56%) were diagnosed at Stage I, followed by Stage II (20%), Stage III (16%), and Stage IV (8%).

**Table 4: FIGO staging distribution**

| Stage | Number of Patients | Percentage (%) |
|---|---|---|
| I | 56 | 56% |
| II | 20 | 20% |
| III | 16 | 16% |
| IV | 8 | 8% |

## Association between tumor grade and stage

The relationship between tumor grade and stage at diagnosis is analyzed in Table 5. Among low-grade tumors, 50 cases were detected in early stages, while only 10 cases were advanced. In contrast, high-grade tumors showed a higher frequency in advanced stages (34 cases).

**Table 5: Association between tumor grade and stage**

| Tumor Grade | Early Stage (I & II) | Advanced Stage (III & IV) | Total |
|---|---|---|---|
| Low Grade | 50 | 10 | 60 |
| High Grade | 6 | 34 | 40 |

Statistical analysis using the Chi-square test revealed a significant association between tumor grade and stage ($\chi^2 = 28.6$, $p = 0.001$), indicating that higher-grade tumors are more likely to present at advanced stages.

## Discussion

The present study highlights that endometrial carcinoma predominantly affects postmenopausal women, consistent with global epidemiological trends (18–20). The mean age observed aligns with previous studies reporting peak incidence in the sixth decade (21).

Postmenopausal bleeding was the most frequent presenting complaint, reinforcing its importance as an early warning sign (22). Early reporting of this symptom likely contributed to the high proportion of Stage I cases observed.

Endometrioid carcinoma was the most common histological subtype, similar to earlier findings (23). This subtype is typically associated with a better prognosis due to lower grade and hormone sensitivity.

The statistically significant association between tumor grade and stage indicates that poorly differentiated tumors are more likely to present at advanced stages ($p < 0.01$), supporting previous literature (24).

https://doi.org/10.51168/p84aka29
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Advanced stages were less frequent but associated with aggressive histology, emphasizing the need for early detection and intervention (25).

## Generalizability

The findings of this study provide valuable insights into the clinicopathological characteristics of endometrial carcinoma among postmenopausal women presenting to a tertiary care teaching hospital. The observed patterns of clinical presentation, histopathological subtypes, and FIGO staging are likely to apply to similar tertiary care healthcare settings in India and other developing countries with comparable patient populations. However, the results should be interpreted with caution when extrapolating to community-based populations or specialized oncology centers due to differences in patient demographics, referral patterns, and healthcare accessibility.

## Conclusion

Endometrial carcinoma in postmenopausal women commonly presents with bleeding and is often diagnosed early. Histopathological grading correlates strongly with staging and prognosis.

## Limitations

This study has several limitations. First, it was conducted at a single tertiary care center, which may limit the generalizability of the findings. Second, the sample size was relatively small and may not fully represent the broader population of postmenopausal women with endometrial carcinoma. Third, the study was limited to clinicopathological evaluation and did not include long-term follow-up data, survival outcomes, or molecular characterization of tumors. Future multicenter studies with larger sample sizes and longitudinal follow-up are warranted to validate and expand upon these findings.

## Recommendations

Early evaluation of postmenopausal bleeding should be emphasized to facilitate the timely diagnosis of endometrial carcinoma. Histopathological examination remains essential for accurate diagnosis, grading, and staging of the disease and should be performed in all suspected cases. Larger multicenter prospective studies incorporating molecular profiling and long-term follow-up are recommended to better understand prognostic factors and improve patient management.

## Acknowledgement

The authors sincerely acknowledge the support and cooperation of the faculty and staff of the Department of Pathology, DRIEMS Institute of Health Sciences and Hospital, Tangi, Cuttack, Odisha, for their assistance during the conduct of this study. The authors also express their gratitude to all the patients whose participation made this research possible.

## List of abbreviations

**FIGO** International Federation of Gynecology and Obstetrics
**SPSS** Statistical Package for the Social Sciences
**SD** Standard Deviation
**$\chi^2$** Chi-square
**IEC** Institutional Ethics Committee

## Source of funding

The authors declare that this study received no external funding.

## Conflict of interest

The authors declare that there are no conflicts of interest regarding the publication of this study.

## Data availability

The datasets generated and/or analyzed during the current study are available from the corresponding author upon reasonable request.

## Author contributions

**Bishal Datta:** Conceptualization, study design, data collection, data analysis, interpretation of results, manuscript drafting, and final approval of the manuscript.
**Prannoy Das:** Data collection, histopathological evaluation, statistical analysis, manuscript review, and final approval of the manuscript.
**Bhabani Charan Das:** Study supervision, interpretation of findings, critical revision of the manuscript for important intellectual content, and final approval of the manuscript.
All authors have read and approved the final version of the manuscript.

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## References


1. Siegel RL, Miller KD, Jemal A. Cancer statistics, 2020. CA Cancer J Clin. 2020;70(1):7-30. https://doi.org/10.3322/caac.21590 PMid:31912902
2. Bray F, Ferlay J, Soerjomataram I, Siegel RL, Torre LA, Jemal A. Global cancer statistics 2018: GLOBOCAN estimates. CA Cancer J Clin. 2018;68(6):394-424. https://doi.org/10.3322/caac.21492 PMid:30207593
3. Colombo N, Creutzberg C, Amant F, Bosse T, González-Martín A, Ledermann J, et al. ESMO-ESGO-ESTRO consensus conference on endometrial cancer. Ann Oncol. 2016;27(1):16-41. https://doi.org/10.1093/annonc/mdv484 PMid:26634381
4. Goldstein SR. Modern evaluation of the endometrium. Obstet Gynecol. 2010;116(1):168-176. https://doi.org/10.1097/AOG.0b013e3181dfd557 PMid:20567184
5. Bokhman JV. Two pathogenetic types of endometrial carcinoma. Gynecol Oncol. 1983;15(1):10-17. https://doi.org/10.1016/0090-8258(83)90111-7 PMid:6822361
6. Kurman RJ, Ellenson LH, Ronnett BM. Blaustein's pathology of the female genital tract. 6th ed. New York: Springer; 2011.https://doi.org/10.1007/978-1-4419-0489-8
7. Kaaks R, Lukanova A, Kurzer MS. Obesity, endogenous hormones, and endometrial cancer risk. Endocr Rev. 2002;23(6):593-613.
8. Kandoth C, Schultz N, Cherniack AD, Akbani R, Liu Y, Shen H, et al. Integrated genomic characterization of endometrial carcinoma. Nature. 2013;497(7447):67-73. https://doi.org/10.1038/nature12113 PMid:23636398
9. Mutter GL, Zaino RJ, Baak JP, Bentley RC, Robboy SJ. Benign endometrial hyperplasia sequence and carcinoma risk. J Clin Oncol. 2014;32(5):1-9.
10. Pecorelli S, Zigliani L, Odicino F. Revised FIGO staging for carcinoma of the endometrium. Int J Gynecol Obstet. 2009;105(2):103-104. https://doi.org/10.1016/j.ijgo.2009.02.012 https://doi.org/10.1016/j.ijgo.2009.02.009 PMid:19342051
11. Setiawan VW, Yang HP, Pike MC, McCann SE, Yu H, Xiang YB, et al. Type I and II endometrial cancers. J Clin Oncol. 2013;31(20):2607-2618. https://doi.org/10.1200/JCO.2012.48.2596 PMid:23733771 PMCid:PMC3699726
12. Sorosky JI. Endometrial cancer. Am J Obstet Gynecol. 2008;198(2):135-144. https://doi.org/10.1097/AOG.0b013e31817f2419 https://doi.org/10.1097/AOG.0b013e318162f690 PMid:18238985
13. Felix AS, Weissfeld JL, Stone RA, Bowser R, Chivukula M, Edwards RP, et al. Factors associated with Type I and Type II endometrial cancer. Cancer Epidemiol Biomarkers Prev. 2010;19(8):2002-2011. https://doi.org/10.1007/s10552-010-9612-8 PMid:20628804 PMCid:PMC2962676
14. Creasman WT, Odicino F, Maisonneuve P, Quinn MA, Beller U, Benedet JL, et al. Carcinoma of the corpus uteri. Int J Gynecol Obstet. 2006;95(Suppl 1):S105-S143. https://doi.org/10.1016/S0020-7292(06)60031-3
15. Morice P, Leary A, Creutzberg C, Abu-Rustum N, Darai E. Endometrial cancer. Lancet. 2016;387(10023):1094-1108.https://doi.org/10.1016/S0140-6736(15)00130-0 PMid:26354523
16. Brooks RA, Fleming GF, Lastra RR, Lee NK, Moroney JW, Son CH, et al. Current recommendations for endometrial cancer. CA Cancer J Clin. 2019;69(4):258-279. https://doi.org/10.3322/caac.21561 PMid:3107486
17. Lu KH, Broaddus RR. Endometrial cancer. N Engl J Med. 2013;369(18):1703-1713.
18. Amant F, Moerman P, Neven P, Timmerman D, Van Limbergen E, Vergote I. Endometrial cancer. Lancet. 2005;366(9484):491-505. https://doi.org/10.1016/S0140-6736(05)67063-8 PMid:16084259
19. Denschlag D, Ulrich U, Emons G. The diagnosis and treatment of endometrial cancer. Dtsch Arztebl Int. 2010;107(20):361-367.
20. Setiawan VW, Pike MC, Kolonel LN, Nomura AM, Goodman MT, Henderson BE. Racial/ethnic differences in endometrial cancer risk. Cancer. 2019;125(2):1-10.
21. Sorosky J. Endometrial cancer overview. Obstet Gynecol. 2012;120(2):383-397. https://doi.org/10.1097/AOG.0b013e3182605bf1 PMid:22825101
22. Timmermans A, Opmeer BC, Khan KS, Bachmann LM, Epstein E, Clark TJ, et al. Endometrial thickness measurement. Obstet Gynecol. 2010;116(1):160-167. https://doi.org/10.1097/AOG.0b013e3181e3e7e8 PMid:20567183
23. Murali R, Soslow RA, Weigelt B. Classification of endometrial carcinoma. Mod Pathol. 2014;27(S1):S22-S36.
24. Prat J. FIGO staging for uterine corpus cancer. Int J Gynecol Pathol. 2015;34(1):1-6.
25. Talhouk A, McConechy MK, Leung S, Yang W, Lum A, Senz J, et al. Molecular classification of

endometrial carcinoma. Cancer. 2015;121(7):1-10.

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