

Prediction of Malignancy of the Endometrium Among Premenopausal Women with Abnormal Uterine Bleeding: A Retrospective, Cross-Sectional Study in A Tertiary Hospital in Cebu City

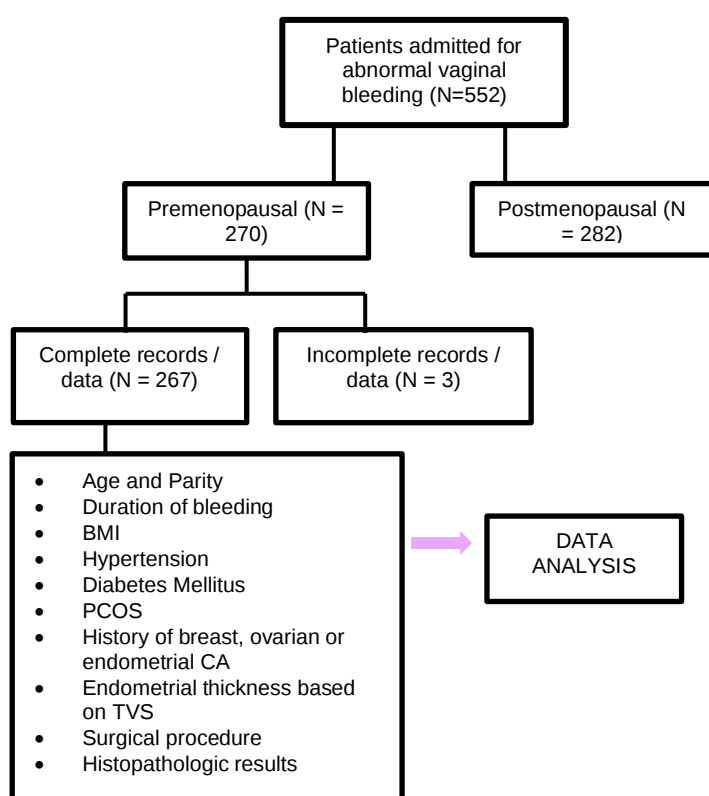
Hannah Victoria T. Yu-Sasuman, M.D.
Chong Hua Hospital, Department of Obstetrics and Gynecology, Cebu City, Philippines

BACKGROUND OF STUDY

- Endometrial cancer is one of the leading cancers among women worldwide. In the Philippines, endometrial cancer has an incidence of 4% and accounted for 1.8% of deaths.
- Measurement of endometrial thickness in postmenopausal women has been extensively studied to suggest which women are at higher risk for precancerous or cancerous changes.
- However, in premenopausal women, the endometrial thickness cut-off has been debatable.

METHODOLOGY

- Study design: Retrospective, cross-sectional study
- Patient census from September 2018 – December 2020 was reviewed.
- A total of 552 patients had abnormal uterine bleeding, 270 of which were premenopausal women, and the rest were postmenopausal.
- Only 267 patients had complete data and records and were included in the study.



RESULTS AND DISCUSSION

- The mean endometrial thickness among the subjects was 13.5 mm.
- Overall, 212 patients (79.4%) had confirmed benign pathologies, and 55 (20.60%) had malignant pathologies.
- There was a statistically significant association between BMI (p-value 0.003) and endometrial malignancy (p-value <0.001).
- A positive coefficient of 0.0804 and odds ratio of 1.0837 also indicates that malignancy is more likely if the BMI increases.
- A positive coefficient of 1.025 and an odds ratio of 2.7879 also indicates that endometrial malignancy is more likely if the endometrial thickness increases.
- Majority (80%) of the patients with malignant biopsy results had endometrial thickness equal to or more than the proposed cut-off of 13.2 mm.

Table 5. Endometrial Thickness Cut-off and Diagnostic Accuracy for Predicting Malignancy

Diagnostic Accuracy Measures	Recommended Cut-off ≥ 13.2 cm	95% CI
Sensitivity	76.36%	62.98-86.77%
Specificity	60.38%	53.45-67.01%
Positive Predictive Value (PPV)	33.33%	28.60-38.43%
Negative Predictive Value (NPV)	90.78%	85.81-94.13%
Likelihood Ratio-Positive (LR+)	1.93	1.54-2.41
Likelihood Ratio-Negative (LR-)	0.39	0.24-0.64
Over-all Accuracy	63.67%	57.59-69.45%

CONCLUSION

- Endometrial thickness and BMI are significant predictors of endometrial malignancy among the studied population.
- Malignancy becomes more likely if both endometrial thickness and BMI increase.
- No evidence was found to conclude that age, bleeding duration in months, gravidity and parity, presence of hypertension, diabetes mellitus, polycystic ovarian syndrome, and family history of cancer can be predictors of endometrial malignancy among premenopausal patients.