Risk of endometrial cancer meriting surgical lymph node assessment in women with a pre-operative diagnosis of an endometrial pre-cancerous lesion

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ABSTRACT:

Objectives: The objective of this study was to determine the proportion of patients treated with hysterectomy for a pre-invasive endometrial lesion who meet an established intra-operative criteria (Mayo) on final pathology for lymph node assessment.

Methods: In this IRB-approved retrospective cohort study, all women who underwent hysterectomy for complex atypical hyperplasia (CAH) or endometrial intra-epithelial neoplasia (EIN) between 2009-2019 at two affiliated institutions were included. Parametric and non-parametric testing were utilized to test the associations between patient, operative, and pathologic characteristics.

Results: Of the 141 patients who met inclusion criteria, 51 (36%) had a final diagnosis of cancer, the majority (96%) of which were grade 1, stage IA. The median age was 54, and the median BMI was $32.5 kg/m^2$. Seven patients (5.0% total, 13.7% cancer) met established criteria for lymph node dissection on final pathology. Six of these patients underwent frozen section, with two (33%) being identified as meeting Mayo criteria on intra-operative frozen section. Of the patients that underwent lymph node dissection, none had positive lymph nodes. A history of diabetes (p=0.016), Lynch syndrome (p=0.039), surgeon use of frozen section (p=0.047) and use of tamoxifen or hormone replacement therapy (p=0.023) were associated with a cancer diagnosis. Age >55 was predictive of meeting Mayo criteria (p=0.007). BMI, race, parity, menopausal status, time interval between diagnosis and surgery, mechanism of diagnosis, and endometrial thickness on pre-operative ultrasound were not significant predictors of a cancer diagnosis or meeting Mayo criteria. No recurrences in the cancer cohort were documented across a mean/median follow up of 41.4/24.3 months.

Conclusions: Patients with pre-operative CAH/EIN have a low risk of meeting Mayo criteria for lymph node dissection upon final pathology. These data suggest that universal surgical assessment of lymph nodes in this presumed pre-invasive population is of limited clinical utility.