UTILIZATION OF LYMPH NODE EVALUATION AT TIME OF HYSTERECTOMY FOR CERVICAL CARCINOMA IN-SITU

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Objectives To examine the utilization and characteristics of lymph node evaluation at time of hysterectomy for carcinoma in-situ of the cervix.

Methods This retrospective cohort study queried the National Inpatient Sample, evaluating 7,395 patients with cervical carcinoma in-situ who underwent hysterectomy from 2016–2019. A multivariable binary logistic regression model was fitted to identify independent characteristics related to lymph node evaluation at hysterectomy. A classification-tree was constructed with recursive partitioning analysis to examine utilization patterns of nodal evaluation.

Results Lymph node evaluation was done during hysterectomy in 46% of the study population. In a multivariable analysis, older age, higher household income, use of robotic-assisted hysterectomy, and surgery at large bed capacity or urban teaching centers in Northeast U.S. region were associated with increased likelihood of lymph node evaluation (all, P<0.05). Of those independent factors, robotic-assisted surgery exhibited the largest effect size (adjusted-odds ratio 3.23, 95% confidence interval 2.54–4.10), followed by urban teaching hospital (adjusted-odds ratio 2.96, 95%CI 2.13–4.10). Utilization pattern analysis identified 9 unique characteristics, of which robotic-assisted surgery was the primary indicator for cohort allocation (12.4% versus 3.2%, P<0.001). Three of nine patterns had the lymph nodal evaluation rate exceeding 10% and all were associated with robotic-assisted surgery. The rate difference between the highest and lowest groups were 33.3% (range, 0% to 33.3%).

Conclusions Overall, one in approximately 22 patients with cervical carcinoma in-situ underwent lymph node evaluation during hysterectomy in this population. Marked association between robotic-assisted surgery and lymph node evaluation at time of hysterectomy for cervical carcinoma in-situ warrants further investigation to determine the long-term risks and benefits of the procedure in this setting.