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Repository Citation

Kandadai P, Flynn MK, Zweizig S, Patterson D. (2012). Cost-Utility of Routine Endometrial Evaluation Prior to Le Fort Colpocleisis. UMass Center for Clinical and Translational Science Research Retreat.

<https://doi.org/10.13028/7vbs-tr32>. Retrieved from https://escholarship.umassmed.edu/cts_retreat/2012/posters/34

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COST-UTILITY OF ROUTINE ENDOMETRIAL EVALUATION PRIOR TO LE FORT COLPOCLEISIS

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Objective: Endometrial evaluation is routinely performed in elderly women undergoing Le Fort colpocleisis. There is little evidence to support this practice. We sought to investigate the cost-utility of routine evaluation of the uterine cavity prior to performing a Le Fort colpocleisis.

Study Design: A decision analysis model was created to compare uterine evaluation, by either endometrial biopsy or transvaginal ultrasound, to no evaluation for a cohort of women > 80 years old undergoing Le Fort colpocleisis. Baseline assumptions for our model were made to reflect women who did not carry significant risk for the development of endometrial cancer, such as history of postmenopausal bleeding, abnormal uterine pathology, obesity, diabetes, and tamoxifen use. Decision paths included no screening, ultrasound evaluation, and biopsy. The horizon was five years until the endpoint of survival, death, or the development of cancer. Those pathways in which cancer was diagnosed were carried out to the endpoint of either five-year survival or death. Treatment arms for endometrial cancer were based on management methods used at our institution. Probabilities and utilities for health outcomes were estimated through literature review or, when unavailable, by expert opinion. Costs were obtained from US Medicare charges for the appropriate CPT and DRG codes and are reported in 2012 US Dollars. Cost-utility analysis was performed using US recommendations from a societal perspective. Sensitivity analysis using Monte Carlo simulation was performed to test the validity of our model.

Results: Analysis of our decision tree demonstrates that a strategy of no evaluation is superior to that of either biopsy or ultrasound. Univariate sensitivity analysis demonstrates that at a 0.55 probability of cancer, biopsy surpasses both no evaluation and ultrasound as the dominant strategy. Using Monte Carlo simulation, at willingness-to-pay thresholds of \$50,000 and \$100,000, no evaluation was superior to both biopsy and ultrasound from the patient, health-plan, and societal perspectives. Biopsy appears to be a more effective strategy than ultrasound when uterine evaluation is needed.

Conclusions: Our model shows that a practice of not evaluating the endometrial cavity prior to performing Le Fort colpocleisis is superior to either biopsy or ultrasound. These results are likely being driven by the low incidence of endometrial cancer in this population. It may not be necessary to perform uterine evaluation prior to Le Fort colpocleisis in a low-risk population. If uterine evaluation is needed, biopsy appears to be the preferred strategy over ultrasound. More studies are needed to determine utility values for health states experienced by women with pelvic organ prolapse and with endometrial cancer. This will enhance our ability to develop more accurate cost-utility models for treating these women.