Does lymph node dissection impact adjuvant treatment or survival outcomes in high-risk endometrial cancers?

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Background

- Serous carcinomas and clear cell tumors are more likely to have lymphovascular invasion and intraperitoneal and extra-abdominal spread than their endometrioid counterparts (Slomovitz)
- Lymphadenectomy does not impact survival but does determine treatment (Zahl Eriksson)
- Sentinel Lymph Node sampling has been found to be a newer useful diagnostic tool (Ji)

Problem/Hypothesis/Aim

- Problem/Aim: As sentinel Lymph Node dissection becomes a more widely used technique for biopsy, can previous conclusions about complete lymphadenectomy and survival still apply?
- Hypothesis: There will be no difference in prognosis between sentinel lymph node dissection and complete dissection

Methods

Results/Analysis

Table 1. Patient outcomes by nodal assessment

Outcomes (months)	No Nodes Months (95%CI)	Sentinel nodes Months (95%CI)	Complete nodes Months (95%CI)	p
Recurrence free survival	61.2 (33.3-89.2)	70.3 (35.2-103.4)	86.9 (74.0-97.5)	0.630
Cancer specific overall survival	92.3 (78.4-106.2)	89.7 (59.1-102.3)	96.4 (85.9-106.9)	0.476

- No significant difference in patient characteristic besides surgical approach
- Patients with open surgery were more likely to have complete nodes than sentinel nodes when compared to a minimally invasive approach (p<0.001).
- Sentinel nodal dissection significantly impacted the utilization of, or modality choice, in adjuvant therapy (p = 0.051).

Figure 1. Kaplan Meier Curve for recurrence free survival

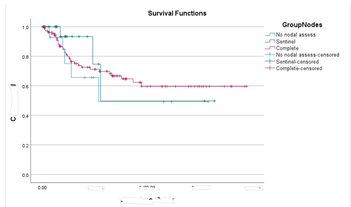
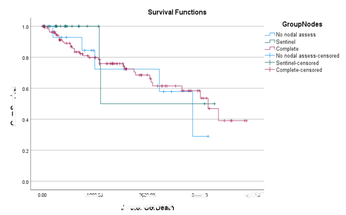


Figure 2. Kaplan Meier Curve for cancer specific overall survival



Discussion/Conclusion

- Sentinel lymph node dissection in high-risk endometrial cancers led to no significant differences in recurrence free survival or cancer-specific overall. While limited by sample size and its retrospective nature, results from this single-institution study are hypothesis-generating and prompt consideration of non-inferiority trials. Performing the least invasive surgery possible can lead to fewer complications while maintaining overall survival outcomes.

References

- Moore KN, F.A., Uterine papillary serous carcinoma. Clin Obstet Gynecolo., 2011. 54(2): p. 278–291.
- Slomovitz BM, B.T., Eifel PJ, et al. , Uterine papillary serous carcinoma (UPSC): a single institution review of 129 cases. Gynecol Oncol., 2003. 91(3): p. 463–469.
- del Carmen MG, B.M., Schorge JO., Uterine papillary serous cancer: a review of the literature. Gynecol Oncol., 2012. 127(3): p. 651–661.
- Ji, Q., et al., Sentinel lymph node mapping in high-risk endometrial cancer: a systematic review and meta-analysis. Gland Surg, 2020. 9(6): p. 2091-2105.
- Holloway, R.W., Abu-Rustum, N. R., Backes, F. J., et al., Sentinel lymph node mapping and staging in endometrial cancer: A Society of Gynecologic Oncology literature review with consensus recommendations. Gynecol Oncol., 2017. 146(2): p. 405-415.
- Zahl Eriksson, A.G., et al., Comparison of a sentinel lymph node and a selective lymphadenectomy algorithm in patients with endometrioid endometrial carcinoma and limited myometrial invasion. Gynecol Oncol, 2016. 140(3): p. 394-9.
- Todo Y, K.H., Kaneuchi M, et al. , Survival effect of para-aortic lymphadenectomy in endometrial cancer (SEPAL study): a retrospective cohort analysis. Lancet, 2010. 375(9721): p. 1165–72.
- Eggemann H, I.T., Kaiser K, et al. , Survival advantage of lymphadenectomy in endometrial cancer. J Cancer Res Clin Oncol., 2016. 142(5): p. 1051-1060.
- Frost JA, W.K., Bryant A, et al. , Lymphadenectomy for the management of endometrial cancer. Cochrane Database Syst Rev., 2017. 10(10).
- Hidaka T, K.K., Yonezawa R, et al., Omission of lymphadenectomy is possible for low-risk corpus cancer. Eur J Surg Oncol., 2007. 33(1): p. 86-90.
- Cusimano, M.C., et al., Assessment of Sentinel Lymph Node Biopsy vs Lymphadenectomy for Intermediate- and High-Grade Endometrial Cancer Staging. JAMA Surg, 2021. 156(2): p. 157-164.
- Persson, J., et al., Pelvic Sentinel lymph node detection in High-Risk Endometrial Cancer (SHREC-trial)-the final step towards a paradigm shift in surgical staging. Eur J Cancer, 2019. 116: p. 77-85.
- Rossi, E.C., et al., A comparison of sentinel lymph node biopsy to lymphadenectomy for endometrial cancer staging (FIRES trial): a multicentre, prospective, cohort study. Lancet Oncol, 2017. 18(3): p. 384-392.

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