

Clinical stage I epithelial ovarian cancer: predictors of surgical staging and prescription of adjuvant therapy

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Introduction

Patients with apparent stage I ovarian cancer are recommended to undergo extensive surgical staging due to the risk of microscopic disease spread. Evidence of microscopic extra-ovarian disease can influence decisions regarding the amount of chemotherapy prescribed. Per NCCN, surgical staging of apparent stage I epithelial ovarian cancer should include bilateral para-aortic and pelvic lymphadenectomy (LA). In this study, we evaluated predictors of surgical staging, prescription of adjuvant therapy, and rate of complications in a cohort of patients who underwent surgery for clinical stage I epithelial ovarian cancer.

Methods

- Retrospective cohort study of patients with clinical stage I ovarian cancer that underwent surgery for their pelvic mass at a single institution from 2013-2020
- Patients with non-epithelial or borderline tumors were excluded
- Staging was classified as:
 - No LA (some staging, but no LA)
 - Partial LA (some LA, but not bilateral pelvic and para-aortic nodes)
 - Full LA (bilateral pelvic and para-aortic nodes)

Results

- Of 96 patients with epithelial ovarian cancer on frozen section, 27% had no LA, 60% had partial LA, and 13% had full LA
 - These percentages did not change with exclusion of patients with mucinous carcinoma on frozen section
- A one-unit increase in Charlson comorbidity index was associated with a 50% reduction in odds of partial/full LA compared with no LA (p-value=0.04)
- Presence of dense tumor adhesions was associated with a 91% reduction in the odds of partial/full LA (p-value=0.005)
- Extent of LA was not significantly associated with prescription of adjuvant therapy or rate of complications

Discussion

Only 13% of patients received complete LA staging as recommend by NCCN guidelines. Increased Charlson comorbidity index and the presence of dense tumor adhesions were associated with decreased odds of full or partial LA. Extent of LA did not influence the prescription of adjuvant therapy or complications.

Though **only 13%** of patients with apparent stage I ovarian cancer receive **full lymphadenectomy** (as recommended by national guidelines), there are **no differences** in complication rates or prescription of adjuvant therapy between patients with varying levels of lymphadenectomy.



Figure 1. Percentage of patients with varying levels of lymphadenectomy

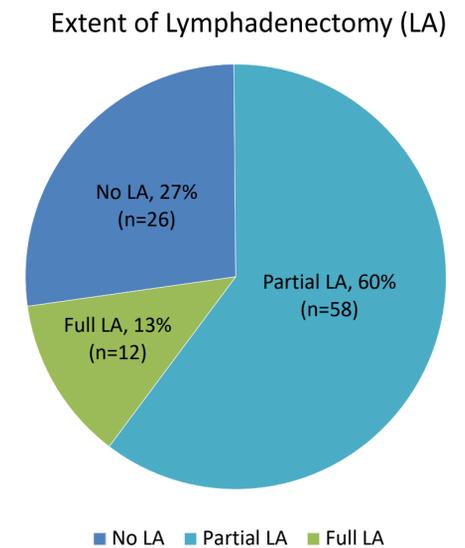


Figure 2. Surgical staging procedures completed (percentage of total patients undergoing staging)

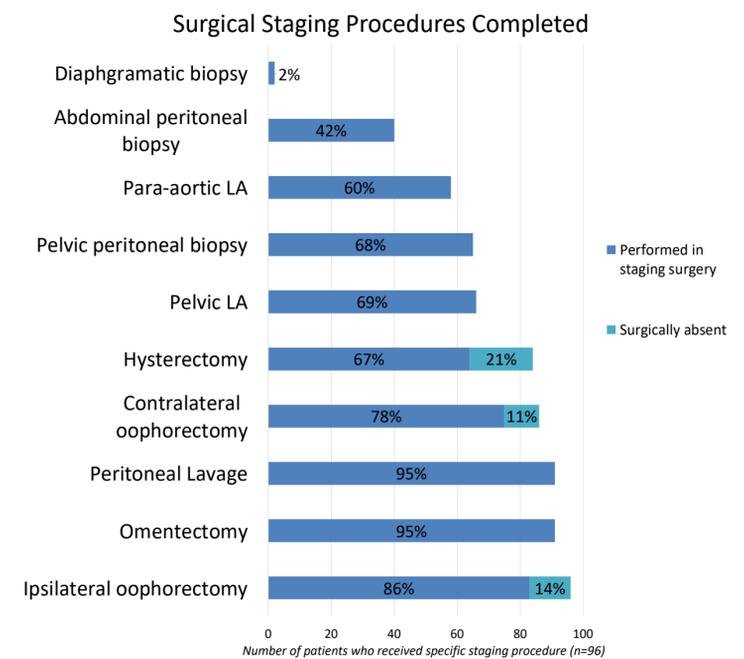


Table 1. Multivariate logistic regression with associations between patient/clinical factors and partial or full lymphadenectomy (as compared to no lymphadenectomy)

	Odds Ratio (95% Confidence Interval)	p-value
Charlson comorbidity index	0.5 (0.26, 0.98)	0.042
Dense tumor adhesions	0.09 (0.02, 0.48)	0.005
Route of Surgery (MIS vs Laparotomy)	0.23 (0.04, 1.31)	0.969
Obesity Class III vs no obesity	0.37 (0.04, 3.49)	0.3834
Intraoperative Cyst Rupture	0.52 (0.13, 2.13)	0.3613