Poster 21: Pathologic staging discrepancies between stage I and II ovarian and tubal high grade serous carcinoma (HGSC) and impact on survival.

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Topic: Ovarian

Objectives

Discrepancy exists between stage I and stage II ovarian and fallopian tube HGSC based on organ involvement. For example, serous tubal intraepithelial carcinoma (STIC) in the fallopian tube with extension to the ovary or coexisting with an ovarian tumor, can be assigned to either stage I or II. With an institutional database, we aimed to investigate staging and survival of stages I/II HGSC.

Methods

Pathology reports of 93 stage I (n=44) and II (n=49) HGSC patients were analyzed from a database of 758 HGSC patients treated between April 2002 and December 2022. Patient and disease characteristics were collected via EMR and recorded on a REDCap database. Of the 93 patients, 61 pathology samples were primarily analyzed by our cancer center pathologists, and an additional 13 were secondarily reviewed at the time of presentation to our institution. Staging was kept as assigned and pathology slides were not reviewed again for this analysis. Overall survival was estimated using the Kaplan-Meier method, and the difference in survival was compared using the log-rank test.

Results

9 patients with both tubal and ovarian involvement, which may have been designated as stage II, were designated as Stage I by the primary reading pathologists, and analyzed as stage I. Recurrence rates were higher in patients with HGSC stage II at 40.8% (27.3-55.7) compared to stage I at 20.5% (10.3-35.8) ($p = 0.011$). However, the 5-year survival probabilities for stage I and II were 89.1% (79.6-99.9) and 90.0% (80.1-100.0) respectively, suggesting either success of treatment at recurrence or initial discrepancy in staging. Overall Kaplan-Meier survival rates between Stage I and II were not significantly different ($p= 0.28$). A significantly higher rate of STIC lesions were identified in Stage I at 29.5% (17.2-45.4) than Stage II at 10.2% (3.8-23.0) ($p = 0.034$).

Conclusions

Staging guidelines for early stage HGSC may result in the staging of tumors involving both the ovary and the fallopian tube as either Stage I or II. However, our understanding of this disease has evolved, and the staging system could be adapted to acknowledge the scenarios of HGSC involving the fallopian tube, the ovary, or both with no further spread, as the same stage. In support of this, survival between stages I and II did not differ in our dataset, however larger studies are needed.