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Neoadjuvant chemotherapy and primary debulking surgery utilization for advanced-stage ovarian cancer at a comprehensive cancer center

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HIGHLIGHTS

- NACT utilization has increased as an alternative to PDS in select patients.
- Optimal (<1 cm) PDS affords advanced ovarian cancer patients the greatest survival advantage.
- If not eligible for PDS, patients benefit most from complete gross resection at IDS.

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ABSTRACT

Objective. The aim of this study was to evaluate the use of neoadjuvant chemotherapy (NACT) and primary debulking surgery (PDS) before and after results from a randomized trial were published and showed non-inferiority between NACT and PDS in the management of advanced-stage ovarian carcinoma.

Methods. We evaluated consecutive patients with advanced-stage ovarian cancer treated at our institution from 1/1/08–5/1/13, which encompassed 32 months before and 32 months after the randomized trial results were published. We included all newly diagnosed patients with high-grade histology and stage III/IV disease. Associations between the use of NACT and clinical variables over time were evaluated.

Results. Our study included 586 patients. Median age was 62 years (range, 30–90); 406 patients (69%) had stage III disease, and 570 (97%) had disease of serous histology. Twenty-six percent (154/586) were treated with NACT and 74% (432/586) with PDS. NACT use increased significantly from 22% (56/256) before 2010 (at which point the results of the randomized trial were published) to 30% (98/330) after 2010 ($p = 0.037$). Although patients who underwent PDS were more likely to experience grade 3/4 surgical complications than those who underwent NACT, those selected for PDS had a median OS of 71.7 months (CI, 59.8-not reached) compared with 42.9 months (CI 37.1-56.3) for those selected for NACT.

Conclusions. In this single-institution analysis, the best survival outcomes were observed in patients who were deemed eligible for PDS followed by platinum-based chemotherapy. Selection criteria for NACT require further definition and should take institutional surgical strategy into account.

1. Introduction

In 2015, an estimated 21,290 women will be diagnosed with epithelial ovarian, fallopian tube, or primary peritoneal cancer in the United States; and approximately 14,180 women will die from this disease. The vast majority of patients with epithelial ovarian, fallopian tube, or primary peritoneal cancer will present with advanced malignancy, with stage III or IV disease [1]. Currently, there are no adequate screening methods to detect or prevent ovarian cancer in the general population; the use of CA-125 and pelvic ultrasonography in asymptomatic women have not resulted in a decrease in mortality in the general population [2]. Standard treatment in advanced-stage disease includes primary debulking surgery (PDS) followed by a platinum- and taxane-containing chemotherapy regimen, with consideration of neoadjuvant

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