

Stereotactic Body Radiation Therapy (SBRT) in patients with recurrent Oligometastatic Ovarian Cancer

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Abstract

Objectives: The current standard of care for patients with epithelial ovarian cancer (EOC) includes maximum cytoreductive therapy with adjuvant chemotherapy. Despite this multimodality approach, patients often recur and treatment options are limited. Our objective was to evaluate local control in patients treated with SBRT for oligometastatic recurrent ovarian cancer. We hypothesized that SBRT to areas of gross disease would result in good local control with acceptable toxicity.

Methods: Between May 2010 and February 2015 a total of 6 patients who had confirmed stage III/IV ovarian cancer of any histology previously treated with cytoreductive surgery and adjuvant systemic therapy were treated with SBRT for recurrent oligo-metastatic ovarian carcinoma. All patients underwent a CT simulation with special immobilization for SBRT. Each patient was treated with a total of 25 Gy over 5 twice-weekly fractions. Toxicity was scored according to RTOG toxicity criteria. Tumor response to SBRT was assessed radiographically by FDG-PET/CT or CT abdomen and pelvis every 3 months. Kaplan-Meier Survival analysis was used to examine the actuarial probability of local control (LC). RECIST criteria was used to assess response rates (RR) such as Complete Response (CR), Partial Response (PR), Stable Disease (SD), and local progression of disease (PD).

Results: The mean age of treated patients was 65 years (Range 41-84). 3 of 6 patients had distant metastatic disease at the time of recurrence. Sites of oligometastatic disease treated include para-aortic lymph node (LN) (n=3), vaginal cuff (n=1), and common iliac LN (n=2). Mean time to recurrence from date of surgery was 25 months. Mean follow up was 25 months. The 4 year actuarial LC was 67%. 2 patients had SD (33.3%), 2 patients had PR (33.3%), 1 patient had PD (16.7%), and 1 patient had CR (16.7%). There were no late grade 3 events that were recorded.

Conclusions: In the setting of oligo-metastatic recurrent ovarian cancer, SBRT appears safe at the dose level described above. There were no acute or late Grade 2 or greater GI or GU toxicities, suggesting that SBRT is well tolerated. Local tumor control rates were variable, though effective in controlling the small volume of disease.

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