

**Poster 26: Intraoperative radiation therapy in the treatment of recurrent cervical and endometrial cancer: analysis of postoperative complications**

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Topic: Endometrial

**Objectives**

To describe the use of intraoperative radiation therapy (IORT) for the treatment of recurrent/persistent cervical or endometrial cancer and assess predictors of postoperative complications.

**Methods**

In this multi-site retrospective study, data was abstracted for recurrent/persistent endometrial or cervical cancer patients undergoing IORT from 6/2004 to 5/2021. Complications were graded on the 6-point Accordion scale. Variables associated with complications were analyzed with logistic regression; survival was analyzed with Kaplan-Meier method.

**Results**

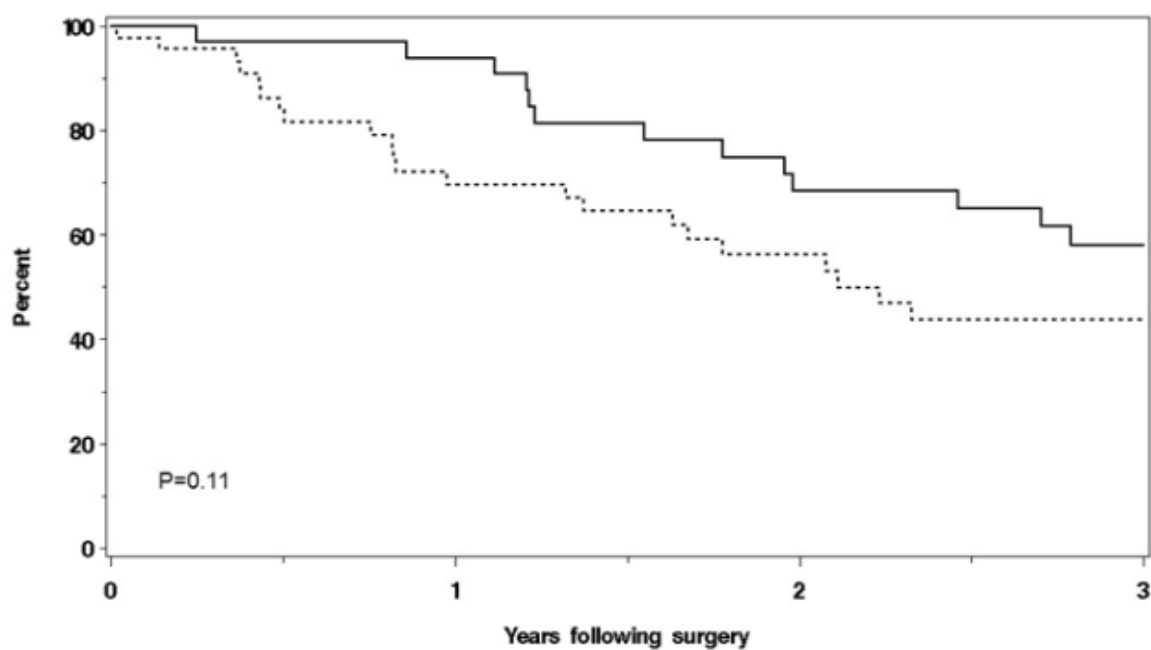
Eighty patients had IORT for recurrent/persistent endometrial (n=35) or cervical cancer (n=45). Mean age of the cohort is 56.8 years (SD=13.7), and 68.8% had an Eastern Cooperative Oncology Group performance status (ECOG PS) of 0-1. Median disease-free interval from primary disease to recurrence was 32.4 months (IQR 15.9-93.2). Most patients (77.5%) received radiation (RT) for their initial disease and (73.8%) had RT prior to surgery for recurrence. At 3 years, 35 patients died; median follow-up for the remaining 45 patients was 3.7 years (IQR 1.7-5.2) and 3-year OS was 50.0% (95% CI: 39.3-63.5%). Eighteen patients (22.5%) had a central recurrence alone and 62 patients (77.5%) had recurrence involving the pelvic sidewall, pelvic nodes, and/or paraaortic nodes. Resection margin was negative in 58 patients (72.5%) with a macroscopic positive margin in 4 (5.0%) patients. Despite pre-operative RT, most patients (n=43, 53.8%) had residual tumors >3 cm. Within 30 days postoperative, 16 patients (20.3%) had a grade 3-5 complication and 1 death (1.3%). Factors associated with grade 3+ complication include: ECOG PS 2-3 (OR 18.00, p=0.04), chemotherapy for recurrence prior to surgery (OR 5.50, p< 0.01), total exenteration requiring terminal colostomy (OR 5.37, p=0.02), and sidewall involvement (OR 8.80, p=0.04). Only 17 patients (21.3%) had a postoperative ICU stay with a median length of ICU stay of 1 day. Median overall length of hospital stay was 7 days (IQR 5-13).

**Conclusions**

Conclusions: IORT is a feasible and safe option for treatment of recurrent gynecologic malignancy with rates of complications similar to other complex oncologic surgeries. Increased surgical complexity and poor ECOG PS are associated with higher postoperative morbidity.

Abstract Table or Graph

**Figure 1. Overall survival within 3 years by primary site**



Number at risk	0 years	1 year	2 years	3 years
— Endometrial cancer	35	30	21	15
..... Cervical cancer	45	29	18	14