Results: A total of 105 post-hysterectomy patients with stages I-IIIC2 endometrial (n=83, 79%) or IA-IIA cervical (n=22, 21%) cancer were treated from May 2003-November 2016. Ninety-one patients (87%) had on treatment visit assessments to evaluate (51 with IMRT and 40 with non-IMRT), including 55 patients (30 with IMRT and 25 with non-IMRT) with DVH parameters available. There was no difference between the two groups regarding baseline patient characteristics. Within 5 weeks of treatment, 23.5% patients in IMRT and 40% in non-IMRT had at least one grade 2+ toxicity (p=0.12). Bowel V40 and V45 were lower in the IMRT (median [Q1-Q3] 216cc [145-373]) than non IMRT (570cc [334-668]) cohorts. Among all patients, bowel V25, V30, V40 and V45 were all significantly associated with increased incidences of any grade 2+ toxicity, while bowel V5, V10, V15, V20 and V35 were not (Table 1). The medians (Q1-Q3) of bowel V45 were 199cc (80-457cc) among those had < grade 2 GI toxicity and 527cc (147-829cc) among those had 2+ GI toxicity (p=0.03).

Conclusion: The rates of experiencing at least one grade 2 or higher toxicity were lower for patients treated with IMRT than non-IMRT. Bowel V45 was associated with Grade 2+ toxicity. IMRT was associated with a lower bowel V40 and V45 in this group of post hysterectomy patients.

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A Multi-Institutional Analysis for Sequential Adjuvantchemotherapy and Radiation Versus "Sandwich" Multi-Modality for STAGE IIIC Endometrial Carcinoma

C. Onal,[1] S. Yuce Sari,[2] B. Akkus Yildirim,[3] G. Yavas,[4] M. Gultekin,[5] O.C. Guler,[3] S. Akyurek,[6] and F. Yildiz[5]; *[1]Baskent University, School of Medicine, Department of Radiation Oncology, Adana, Turkey, [2]Hacettepe University Medical Faculty, Ankara, Turkey, [3]Baskent University Faculty of Medicine, Adana Dr Turgut Noyan Research and Treatment Center, Department of Radiation Oncology, Adana, Turkey, [4]Selcuk University, Department of Radiation Oncology, Konya, Turkey, [5]Hacettepe University, School of Medicine, Department of Radiation Oncology, Ankara, Turkey, [6]Ankara University School of Medicine Department of Radiation Oncology, Ankara, Turkey*

Purpose/Objective(s): Stage IIIC endometrium cancer is most common form of locally advanced endometrial carcinoma. However standart treatment approach is not well defined yet. The purpose of this study is to assess the necessity of adjuvant chemotherapy (ChT) and radiotherapy (RT), and also to analyse the treatment choice − sequential versus sandwich delivery of ChT and RT.

Materials/Methods: The clinical data of 241 patients from four different centers was retrospectively analyzed. All patients had undergone total abdominal histerectomy and lymph node dissection. Sixty-three patients (26%) were treated with adjuvant RT alone, while 178 patients were treated with adjuvant RT and ChT [98 patients (41%) sequential and 80 patients (33%) sandwich]. The prognostic factors effecting overall survival (OS) and progression-free survival (PFS) were analyzed. The toxicities were scored according to 'Common Terminology Criteria for Adverse Events' version 4.

Results: Median age of entire cohort 61 years (range, 36 − 88 years). 169 patients (69%) had endometrioid adenocarcinoma, while 72 patients (31%) had non-endometrioid histology. Median dissected and metastatic lymph nodes were 36 (range, 4 − 162) and 3 (range, 1 − 61), respectively. Median follow-ups for entire cohort and survivors were 42 months (range, 2 − 199 months) and 73 months (7 − 199 months). 5-year OS and PFS rates were significantly higher for patients receiving adjuvant ChT compared to patients without adjuvant ChT (67% vs. 25%; $p<0.001$ and 63% vs. 24%; $p<0.001$, respectively). However there were no significant difference in terms of sequential and sandwich ChT and RT for OS and PFS (66% vs. 70%; $p=0.2$ and 62% vs. 64%; $p=0.3$, respectively) (Figure 1). In univariate analysis, advanced age (≥60 years), non-endometrioid histology, grade III tumor and absence of adjuvant ChT were all significant negative factors for both OS and PFS. In multivariate analysis, the prognostic factors for OS were, non-endometrioid histology [HR:1.95, (95%CI, 1.27 − 2.99); $p=0.002$], grade III tumor [HR:1.81, (95CI%, 1.03 − 3.18); $p=0.04$] and adjuvant ChT [HR:4.71, (%95CI, 3.23 − 6.87); $p<0.001$]. For PFS, the detrimental factors in multivariate analysis were non-endometrioid histology [HR:1.84, (95%CI, 1.21 − 2.79); $p=0.004$] and absence of adjuvant ChT [HR:3.95, (95%CI, 2.75 − 5.67); $p<0.001$]. Grade I and II gastrointestinal system (GIS) toxicities are significantly higher in patients treated with sequential ChT and RT compared to sandwich method (32% vs. 18%; p=0.002). Similarly acute Grade I-II gentiurinary system (GUS) toxicities were significantly higher in sequential arm compared to sandwich arm (21% vs. 12%; p=0.04).

Conclusion: Postoperative RT together with adjuvant ChT improves OS and PFS in stage IIIC endometrium cancer patients. Although there were no significant difference in OS and PFS between two RT and ChT regimens, acute GIS and GUS toxicities were higher in sequential arm compared to sandwich ChT and RT.

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Patterns of Recurrence By Adjuvant Radiation Therapy Type for Stage II Endometrial Cancer: A Provincial Review

K. Paulson,[1] N. Logie,[2] G. Han,[1] D. Tilley,[3] G.V. Menon,[1] T. Phan,[4] G. Nelson,[5] B. Murray,[1] S. Ghosh,[1] R. Pearcey,[1] F. Huang,[1] and E.M. Wiebe[1]; *[1]Cross Cancer Institute, Edmonton, AB, Canada, [2]Department of Radiation Oncology, University of Miami, Sylvester Comprehensive Cancer Center, Miami, FL, [3]Holy Cross Centre, Calgary, AB, Canada, [4]Tom Baker Cancer Centre, University of Calgary, Calgary, AB, Canada, [5]Tom Baker Cancer Centre, Calgary, AB, Canada*

Purpose/Objective(s): Optimal adjuvant treatment of FIGO stage II endometrial cancer is controversial. As surgical practice evolves to include nodal resection, there may be a role for de-intensifying adjuvant therapy. In this province-wide retrospective review, patterns of recurrence were analyzed, alongside adjuvant radiotherapy (RT) practices including pelvic external beam (EB) RT, vaginal vault brachytherapy (BT), and small "minipelvis" (MP) EBRT fields, covering surgical bed, vaginal vault, and parametria, but not the classic elective nodal volumes.

Materials/Methods: We identified patients diagnosed with stage II endometrial cancer between 2000-2014 who received adjuvant RT in Alberta, Canada. We collected demographics, disease characteristics, treatment details, and clinical outcomes. Recurrence-free survival (RFS) was calculated by Kaplan-Meier analysis and factors associated with recurrence were determined by univariate and multivariate analysis.

Results: A total of 264 patients (median age 62 [35-87]) met inclusion criteria. 83% had endometrioid adenocarcinoma, 25% grade 3 disease, 56% outer half myometrial invasion, and 44% lymphovascular invasion