by endometrial curetting in 51 patients (52.5%). 94 patients underwent surgery (a total abdominal hysterectomy plus bilateral salpingo-oopherectomy in 75.5%, simple hysterectomy in 21.6%) with lymphadenectomy in only 25 cases. They were classified according to FIGO stage on: 61 stage I (12: IA, 7: IB, 42: IC), 13:IIB, 21: III (08 IIIA, 3 IIIB, 10 IIIC) and 2 IVa. Myometrial invasion was > 50% in 78 % of cases. Type I endometrial carcinoma represent the most common type (93 patients), with histological grade (G); 64% G1, 18.5% G2; 13.5 G3. All patients received radiation therapy; (external beam radiotherapy and brachytherapy). After median follow up of 49.9 months (2- 120 months) loco-regional recurrence occurred in 8 patients (8.3%) and metastasis in 12 patients (12.3%), the 5-year overall survival rate was 83 %. There was statistically significant overall survival between stage I-II and III-IV p=0.001), however there was no significant overall survival between surgery with or without lymphadenectomy (88%, 87%, p = 0.89), others prognostic factors affecting the overall survival were analyzed: comorbidities (without vs. with: 85% vs. 83%), hormonal status (pre vs.postmenopausal: 86% vs. 83%), histological type (1 vs. 2: 86% vs. 73%), grade (1,2,3) respectively (81%,71%, 40%), and the depth of myometrial invasion (<50 vs. > 50%: 94% vs 81%).
Conclusions: Radiotherapy is a highly effective adjuvant treatment providing an excellent loco-regional control rate; pelvic lymphadenectomy does not offer clear therapeutic benefit in the treatment of endometrial cancer, considering morbidity for lymphadenectomy, the technique of sentinel lymph nodes biopsy can potentially establish an alternative for staging. Combined therapeutic modalities (surgery, radiotherapy, chemotherapy, and targeted therapy) can improve survival and prognosis for high-risk endometrial cancer.

EP-1097
3D image-based brachytherapy in advanced cervical cancer treatment: the first clinical results
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Purpose/Objective: The use of brachytherapy (BT) combined with external beam radiotherapy (EBRT), is an essential part of cervical cancer radiotherapy treatment and also has an important role in developing radiotherapy complications afterwards. During the last decade, concepts for three-dimensional image-based treatment planning in BT have been developed and that brought closer BT and EBRT in terms of technical development. This preliminary study is aimed at showing our first clinical results and a dosimetric comparison for organs at risk (OAR) using X-ray and CT/MR based BT planning.
Materials and Methods: Implementation of image-based brachytherapy in our Institute was started in November 2008 and till June 2009 six patients with advanced cervical cancer were treated with this BT planning approach, using PLATO planning system on CT or CT/MR fused images. In the beginning of 2012 we started using Oncentra as our main planning system and after a transition period, results for 2 patients (4 applications) were included. The overall treatment approach consisted of pelvic EBRT, concomitant with BT and concurrent weekly administration of Cisplatin chemotherapy. All patients underwent X-ray 2D based planning, at 3 patients CT, at 3 patients CT/MR PLATO planning was done at first BT application, and for 2 patients (4 applications) MR Oncentra based planning was done at first and third BT application, with tandem and two ovoids and TD of 7Gy/A. Delineation of rectum, bladder, sigmoid colon and high-risk CTV was done according to guidelines by Viswanathan et al and GEC-ESTRO. The maximum dose to rectum and bladder (Rmax and Bmax), based on ICRU recommendation, calculated by X-ray imaging and dose to 0,1cm^3, 1cm3 and 2cm^3, for the bladder, rectum and sigma calculated from DVHs were compared. The volume of HR-CTV and values of D100, D90 and V100 were also calculated.
Results: The median dose of EBRT at the time of first BT was 19Gy (14-28Gy). HR-CTV mean volume value was 47.54 ± 23.04 cm^3 and dose parameters D90 6.31± 1.72Gy; D100 3.99 ± 1.43Gy; V100 80.38 ± 14.48%. Mean dose values for rectum were: Rmax 5,3 ± 2,1Gy, D0,1cm^3 7,6 ± 2,7Gy, D1cm^3 6.0 ± 1,8Gy and D2cm^3 5,4 ± 1,5Gy. There was statistically significant difference in dose at Rmax and D0,1cm^3 with higher dose obtained at D0,1cm^3 and no statistically significant difference at the doses of D1cm^3 and D2 cm^3. Mean dose values for bladder were: Bmax 4,4 ± 1,7Gy, D0,1cm^3 7.2 ±1.7Gy, D1cm^3 5.7 ± 1.1Gy and D2cm^3 55.2 ±1.0Gy and statistically significant higher dose was obtained at D0,1cm^3 and D1cm^3 compared to Bmax. Doses to sigmoid colon at D0,1cm^3 6.6± 1.9Gy, D1cm^3 5.4 ± 1,5Gy and D2cm^3 4.9 ± 1,3Gy were found.
Conclusions: Larger tumor sizes led to inadequate HR-CTV coverage with desired BT dose. As expected, mean values of estimated rectum and bladder D0.1cm3 volume-dose parameters obtained by 3D BT planning, showed higher values compared to those obtained with 2D X-ray planning approach. Also, additional information about dose values to sigmoid colon was revealed with 3D planning. Further investigation in needed in order to fully implement 3D BT in our institution and perhaps change our present concomitant EBRT/BT treatment approach.

EP-1098
Acute toxicity of 3D Conformal chemoradiation in cancer cervix with reduced PTV Dmax- an observational study.
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Purpose/Objective: To investigate the acute toxicity of 3D conformal EBRT with concurrent chemotherapy keeping D_{max} around 105% in carcinoma cervix patients.
Materials and Methods: Carcinoma cervix patients stage IIAto IIIB (n = 22) treated during November 2011 to November 2012 at the institution with 3D conformal chemo-radiation were included. They received weekly cisplatin 40mg/m^2. They received 46 Gy /23 fractions 5 fractions per week while ensuring that the PTV maximum dose (Dmax) is around 105%. EBRT was followed by two fractions of intracavitary brachytherapy 9 Gy each. Normally the prescribed dose is normalized to the isodose curve that covers at least 99% of PTV which usually results in a higher PTV $D_{max.}$ (around 110%).In this study the coverage of 99% of PTV by the prescribed dose is ensured while maintaining the PTV Dmax around 105% and thus better dose homogeneity. This is achieved by optimization methods like using subfields, adjusting weightages,using mixed beam energies etc. The purpose of the study is to analyze how this reflects on the acute RTOG toxicity profile of the patient during EBRT. This is a type of dose optimization where an IMRT like plan can be generated using conventional 3D CRT despite the process being time consuming as the results are expected to be better than a conventional 3D CRT plan.
Results:
All the 22 patients completed EBRT. The analysis is given below:
· Age: between 30-55 years (median 45)
· Stageof disease - IIB (72.72%) and IIIB (27.27%)
· Numberof cycles of chemotherapy received – 5 cycles (63.63%), 4 cycles (27.27%) and 3cycles (9.09%).
· Tumorsize: <4cm (18.18%) and >4cm (81.81%)
· Performance status: ECOG 1 (77.27%) and ECOG 2 (22.72%)
· TOXICITY ASSESSMENT: (RTOG gradewise in percentages)

Toxicity in %	Grade 0	Grade 1	Grade 2	Grade 3	Grade 4
Skin	50	40.9	9.09	0	0
Vaginal Mucosa	81.81	18.18	0	0	0
Rectum	50	36.36	13.63	0	0
Diarrhoea	45.45	81.2	13.63	9.09	0
Vomitting	63.63	13.63	13.63	9.09	0
Small bowel	35.29	35.29	11.76	17.6	0
Large Bowel	47.05	41.17	11.76	0	0
Neutropenia	72.72	22.72	0	4.5	0
Anemia	9545	0	0	454	0
Thrompcytopenia	90.9	4.5	4.54	0	0

Conclusions: The predominant toxicity was small bowel toxicity followed by hematological toxicity. 3D conformal concurrent chemo radiation with D_{max} around 105% reduces acute RTOG toxicity particularly grade 3 and 4, results in better dose homogeneity and improves patient compliance for radiotherapy.

EP-1099
PET/CT guided tomotherapy in gynecologic cancers
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Purpose/Objective: To report the experience with FDG PET/CT guided-Tomotherapy and simultaneous integrated boost dose escalation (SIB) as a substitute for brachytherapy or to increase the dose to the FDG PET positive lymph nodes.
Materials and Methods: From 08/2006 -05/2012 40 gynecologic cancer pts received pelvic/pelvic-lombo-aortic FDG PET/CT Guided