overall survival in multivariate analysis. As to progression-free survival, disease-free interval, PALN size, and upfront radiotherapy (chemoradiotherapy) were significant prognostic factors in multivariate analysis. Acute grade 3 gastrointestinal and hematologic toxicities developed in 3 patients.

Conclusion: For isolated PALN recurrence of cervical cancer, upfront radiotherapy (chemoradiotherapy) should be considered as a salvage treatment, especially in patients with long disease-free interval.

**EP-1323**
Clinical audit of cervical cancer records from Kidwai Memorial Institute of Oncology, South India
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**Purpose or Objective:** To present the long term outcomes and results of the clinical audit of cervical cancer cases treated at our cancer centre in the year 2010.

**Material and Methods:** A clinical audit of case records of cervical cancer treated at our centre in the year 2010 was analysed. Out of the 306 patients evaluated for Cervical Cancer, case records for demographics, treatment methodology, long term toxicity and survival data was analysed using the SPSS. The variables were compared using the Chi-square test, the survival by Log-Rank test.

**Results:** Out of a total of 306 patients with a median age group of 50 years (range:30-80) evaluated for various symptoms pertaining to cervical cancer, 204 underwent concurrent chemoradiation and 102 patients received only radiation alone. In the total cohort, FIGO stage grouping was stage II in 36% (n=111), stage III in 56% (n=172) and stage IV in the remaining. Radiation was delivered to a dose of 75Gy to point A, external beam radiotherapy (dose of 45-50Gy) being delivered predominantly on the Telecobalt and followed with low dose rate brachytherapy. Cisplatin based concurrent chemotherapy was delivered as weekly at a dose of 40 mg/sqm in 76% of the patients, while in the rest it was delivered as three-weekly regimen. In the weekly chemotherapy arm, 70% of them received atleast 4 cycles. Median overall treatment time (OTT) was 8.4 weeks (40-95 days). At a median follow up of 36 months, 5 year overall survival in the entire cohort was 30%. The OS in the concurrent chemo radiation arm was better (34% Vs. 29%, p=0.036). The OS in the two chemotherapy arms did not show a difference (log rank, p=0.46). The survival difference between the two stage groups demonstrated a superior outcome in patients with stage II (40% vs 32%, p=0.05). Multivariate analysis showed stage, type of chemotherapy and overall treatment (OTT) time were significant for OS. Acute hematologic, GI, GU and skin toxicity was higher in chemoradiation arm. Difference in long term toxicity between the two treatment arms was not statistically significant.

**Conclusion:** Our clinical audit of cervical cancer cases treated at our cancer centre, although demonstrates slight inferior survival outcome compared to available literature, might be accounted for the lower Point A dose, longer overall treatment time, and suboptimal chemotherapy dose. These factors have been taken care in our current clinical practice.

**EP-1324**
High risk early stage endometrial cancer: lymphadendetomy with brachytherapy as alternative to EBRT
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**Purpose or Objective:** Endometrial cancer (EC) is the most common gynecologic malignancy in developed countries, affecting 40,000 women/year. Recent studies have shown the therapeutic benefit of pelvic lymphnode dissection in order to determine the extent of disease and establish adjuvant therapies. Several trials have also shown that adjuvant radiotherapy(RT) in early stage EC reduces the risk of local recurrence without improving overall survival (OS). However the role of both lymphnode dissection and adjuvant RT in high risk early stage EC is not clearly defined. The aim of our retrospective study is to evaluate the validity of limbadenectomy with intravaginal brachtherapy (IVRT) as therapeutic option in high risk early stage EC, compare it with adjuvant external beam radiotherapy (EBRT) and determine which one determine the best results in terms of Recurrence Free Survival (RFS) and OS.

**Material and Methods:** Were evaluated 85 patients with EC treated between January 2007 and January 2012 with 36 months of follow-up. Of these, 47 had low risk early stage (G1 with myometrial infiltration less than 50% or G2 with myometrial infiltration less than one third ) treated with bilateral hysterosalpingoovaricatectomy without any adjuvant therapy; 38 were patients with high risk early stage (G1 with more than 50% of myometrial invasion, G2 with more than one third of myometrial infiltration and G3) treated with bilateral hysterosalpingo-oophorectomy and then submitted to pelvic lymphadenectomy (n. 22 pts) plus IVRT or EBRT (n. 16 pts) based on age, comorbidities, tumor grade, histotype, tumor size, presence of lymphovascular invasion space, depth or myometrial infiltration.

**Results:** The recurrence rate was respectively of 4% (n.2 pts) among the low risk patients with a RFS of 96% and of 19% (n.11 pts) among the high risk patients with a RFS of 81%. Considering the high risk group, the 45% of recurrence (n.5pts) occurred among patients treated with EBRT and the 55%(n.6pts) among those who received lymphadenectomy with IVRT. The mortality rate was respectively 0% (n.0 pts) among patients treated with EBRT and 0% (n.0 pts) among those who received lymphadenectomy with IVRT.

**Conclusion:** Our study shows that in high risk early stage EC there is no significant difference in terms of RFS among patients who received pelvic lymphadenectomy with IVRT and those which had been treated with EBRT. There was also no statistically significant difference for OS between the two groups.

**EP-1325**
Phase I/II study of weekly cisplatin plus paclitaxel and radiotherapy for primary cervical cancer
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**Purpose or Objective:** To determine the maximum tolerated dose (MTD) and effectiveness of weekly PTX plus DDP concurrent with whole pelvic irradiation in Chinese women with locally advanced cervical cancer.

**Material and Methods:** Between November 2008 and March 2015, a total of 36 patients with primarycervical cancer cervical cancer, FIGO stage IB1 to IIIB, confirmed by histology, negative para-aortic lymph nodes were enrolled into this phase I / II trial. Chemotherapy agents were
administered in escalating doses to cohorts of three patients at each dose level. Phase II was then assessed at the selected maximum tolerated dose (MTD). The patients were monitored for acute toxicity using the Common Toxicity Criteria, version 3.0 and late toxicity using the RTOG/EORTC. Between November 2008 and March 2015, a total of 36 patients with primary carcinoma of the cervix, FIGO stage IB1 to IIB, confirmed by histology, negative para-aortic lymph nodes were enrolled into this phase I/II trial. Chemotherapy agents were administered in escalating doses to cohorts of three patients at each dose level. Phase II was then assessed at the selected maximum tolerated dose (MTD). The patients were monitored for acute toxicity using the Common Toxicity Criteria, version 3.0 and late toxicity using the RTOG/EORTC.

**Results:** Of the 36 patients, 18 enrolled on phase I study. The MTD was confirmed to be paclitaxel 40mg/m2 and cisplatin 40mg/m2 administered weekly for six cycles with 3D conformal external beam radiotherapy. There were additional 18 evaluable patients for the phase II analysis, yielding a total of 21 patients at the MTD. 3 (9/21) hematologic, principally neutropenia, occurs late cycles. All patients finished 5-6 cycles chemotherapy and radiotherapy in 7 weeks. The median follow-up was 24 months (5-58). At 4 months, 18 CR (1 pCR), 3 PR. At 24 months local control rate was 90.4 % (19/21). 18/21 patients (85.7 %) are still survive ( 1 was loss of follow-up). 2 of 2 recurrent or metastasis patients have died. Late toxicities did not appear during follow-up.

Conclusion: Combination PTX and DDP administered concurrently with pelvic EBRT can be safely administered at the MTD of D in escalating cycles to achieve DPP 40 mg/m2 weekly for 4 cycles in Chinese women. Primary result showed a good clinical outcome. We need continue follow-up. Further development to determine if the combination will help yield a survival benefit.

**EP-1326**

The role of PET CT in the IMRT of cervical cancer: the experience of the Institute of Candigolo

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**Purpose or Objective:** This paper evaluates the impact of FDG CT-PET in the treatment of cervical cancer by volumetric radiation and chemotherapy.

**Material and Methods:** From June 2010 to October 2015, 38 patients (pts) with cervical cancer were treated by radiotherapy, 21 with curatively (4 recurrences) and 17 with postoperatively (5 with positive margins). The mean age was 58 years (range 32-88). The histology was: squamous cell carcinoma (26 pts), adenocarcinoma (9 pts), adenosquamous carcinoma (3 pts). The grading was: G3 in 14 pts, G2 in 23 pts, G1 in 1 pt. The FIGO stage was: IB1 in 7 pts, IB2 in 3 pts, IIA1 in 5 pts, IIA2 in 2 pts, IIB in 13 pts, IIB1 in 2 pts, IIIB in 5 pts, IIIB2 in 1 pt, IIIC2 in 1 pt and IVA in 2 pts. 24 pts received concurrent chemotherapy (CHT), 3 neoadjuvant CHT and 1 neoadjuvant and concomitant CHT. 3 pts were treated with IMRT by LINAC, 34 pts with image-guided IMRT-SB-IGRT using Helical Tomotherapy; 1 patient received exclusive High Dose Rate (HDR) brachytherapy. Tumor doses were ranged from 54 to 70.4 Gy in 30-32 fractions (fr); dose to the pelvis were from 50.4 to 54 Gy / 25-30 fr. In 5 pts was treated lumbar-aortic chain (51 Gy/30 fr); 14 pts received a boost on PET positive lymph nodes with dose range from 54 to 66 Gy/30 fr), 24 pts were treated with HDR boost with dose/fraction of 6-15 Gy in 1-3 frs.

**Results:** 37 pts received a PET-CT to staging and planning (Philips GEMINI TF), 33 of these had a PET-CT evaluation post RT. PET-CT changed the previous stage of disease in 6/37 cases (16%). 33 pts received also Magnetic Resonance (MRI) to staging, of these 10 showed positive lymph-nodes, conversely PET CT showed positive nodes in 20 pts (20%). 26 pts underwent a PET CT after RT: 18 pts showed a complete response (CR), 7 a partial response (PR), 1 pt a local persistence of lesion and a distance progression disease (PD). The time from end of treatment to PET evaluation was variable from 1 to 15 months (mean 4.3 months). About 6 pts with PR, 3 showed CR at the following PET-CT (8,12 and 14 months), 1 local stable disease (SD) and distance metastases and 2 showed local and distant PD.

**Conclusion:** FDG-PET changed tumor stage in 6/37 cases (16%) allowing a dose escalation on lymph-nodes detected and finally showed to be a sensitive and reliable method in the evaluation of radio-chemotherapy treatment response. The optimal timing of execution remains to be defined by further studies.

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**EP-1327**

Clinical outcomes of dose escalation using simultaneous integrated boost in cervical cancer

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**Purpose or Objective:** To evaluate the toxicity and outcome of dose escalated radiotherapy using a simultaneous integrated boost (SIB) technique in patients with locally advanced cervical cancer at primary diagnosis or at nodal recurrence.

**Material and Methods:** Sixteen patients with FIGO Stage IB2-IIIB N1 were treated with intensity modulated radiation therapy utilizing a SIB technique for gross disease in the para-aortic and/or pelvic nodal regions (8/16) or for microscopic disease after laparoscopic pelvic and para-aortic lymphadenectomy (8/16). Women were treated to 50.4 Gy in 1.8 Gy fractions to the tumor region and the pelvic and/or para-aortic lymph node areas, and a simultaneous boost with 59.36 Gy in 2.12 Gy fractions to the boost region. The boost volum was defined as 18FDG-PET/CT positive lymph nodes. Pulse-dose-rate brachytherapy was performed in eleven of sixteen and concurrent chemotherapy consisted of weekly cisplatin 40 mg/m2 in twelve patients. Acute and late toxicity, local control in the treated volumes, distant metastases and disease-free survival were assessed.

**Results:** With a median follow-up of 22 months (range 3-40), rates of acute > grade 2 gastro-intestinal (GI), genitourinary (GU), and hematologic toxicities were 19%, 0%, and 30%, respectively. There were no grade 4 acute toxicities. One patient developed a small bowel obstruction requiring surgical intervention at 16 months. The 2-year actuarial rate of grade ≥3 GI toxicity was 6%. There were no grade 3 or 4 late GU or hematologic toxicities. All patients achieved complete remission in areas treated with high doses with SIB. Two patients presented a local recurrence at 6 and 30 months of follow-up. Three cases of sixteen (19%) relapsed in this area when analyzed with 18FDG-PET/CT, that resulted positive, but not present disease in the pathologic anatomy of the salvage lymphadenectomy in two of them. On the other hand, two of sixteen patients (12.5%) presented systemic disease (lung metastases) at 27 and 35 months of follow-up, for each patient respectively. And one patient presented a second neoplasm in urinary tract ten months after the initial treatment of the cervix neoplasm. The 2-year actuarial disease-free survival was 62.5% but after that one patient presented recurrent in the area of the SIB (6.25%).