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 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.

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) hematoologic, 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 alive (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 = 40 mg/m2 and PTX 40 mg/m2 weekly for six 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 Candiolo
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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, IIB in 2 pts, IIIB2 in 1 pt, IIIC1 in 2 pt and IV 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 distance 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 radioChemotherapy 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 (B16) or for microscopic disease after laparoscopic pelvic and para-aortic lymphadenectomy (B16). 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 volume 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 you 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. 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 it was 87.5% in patients that one patient presented recurrence in the area of the SIB (6.25%).
Conclusions: Dose escalated radiotherapy for node positive locally advanced cervical cancer at primary diagnosis or at nodal recurrence using a SIB results in acceptable rates of acute and late toxicity. And although our small size population, the present results contribute that the SIB technique is a good treatment for the patients with nodal regional disease.

EP-1328
Phase I study of weekly PTX/DDP, and postoperative radiotherapy for early cervical cancer in Chinese
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Purpose or Objective: To determine the maximum tolerated dose (MTD) and dose-limiting toxicity (DLT) of weekly PTX and DDP concurrent postoperative radiotherapy in Chinese women with high- and intermediate-risk early cervical cancer.

Material and Methods: Women with high risks postoperative cervical carcinoma, negative para-aortic nodes, KPS≥60 were eligible. Pelvis RT (6/10MV-X, 3D-CRT, DT40Gy/20f, parametrial boost 10-20Gy/5-10f) was followed by 2-4f brachytherapy applications (192Ir 5Gy/f). Concurrent weekly chemotheraphy was started at DDP 20mg/m2/W and PTX 10mg/m2/W, and escalated in three-patient cohorts according to 3+3 methods. Serious Adverse Event (SAE) was defined as grade 4 hematologic toxicity (excluding anemia) within 30 days of treatment, or grade 3/4 non-hematologic toxicity (excluding alopecia, nausea/anorexia, vomiting).

Table 1. Chemotherapy Dose Level Schema

<table>
<thead>
<tr>
<th>DDP</th>
<th>PTX</th>
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<tbody>
<tr>
<td>mg/m2/W</td>
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</tr>
<tr>
<td>10</td>
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<tr>
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<td>35</td>
<td>DL6</td>
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<tr>
<td>40</td>
<td>DL7</td>
</tr>
</tbody>
</table>

Results: 25 patients were enrolled and treated over seven dose levels until dose-limiting toxicity (DLT) was reached. Median age was 48 years (range, 34-66). All of patients finished RT in 6 weeks. Grade 3/4 non-hematologic toxicities were diarrhea and observed in two patients (4 cycles, DLT) at within 30 days of treatment, or grade 3/4 non-hematologic toxicities did not appear during follow-up.

Conclusion: Combination PTX and DDP administered concurrently with pelvic EBRT can be safely administered at dose level VI but not seen in three additional patients. No one was delayed treatment time by concurrent chemotheraphy. The 1st patient finished 3 cycles due to 2° diarrhea at level I; 1 patient for 5 cycles at level II; 4 patients finished 6 cycles at level VII. Median follow-up is 56 months. 2 recurrent or metastasis patients have died. 1 patient has died of acute pneumonia (30.5 months). Late toxicities did not appear during follow-up.

EP-1329
Vaginal and pelvic recurrences of endometrial carcinoma with BT HDR alone or in combination with EBRT
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Purpose or Objective: Vaginal is the most rare gynecological malignancy. Consequently, few dose effect data are available. The main objective of our retrospective study was to analyze the outcome of all patients treated at our department with definitive (chemo-)radiotherapy for primary vaginal cancer, with a focus on local failure.