Tomotherapy treatments. Median age of these patients was 60.6 yrs (21.6-88.5). Median follow up was 15.7 mts (0.4-58). They were 20 cervical, 10 endometrial, 4 vaginal, 1 vulvar and 5 ovarian cancer. Four pts presented stage I, 9 stage II, 8 stage III, 2 stage IV, 1 NA and 16 relapsing tumors. Fourteen patients had a previous surgery. PET/CT simulation was always performed to include pelvic or lombo-aortic N+ and tumor localizations in SIB. Fifteen patients were treated without SIB, with doses ranging from 45Gy/20 fr to 65.4 Gy/33 fr. Twenty five patients, who could not undergo BT or who had positive lymph-nodes at FDG PET/CT, were treated with 45-50.4 Gy to pelvic/lombo-aortic lymph-nodes and a SIB on PET positive lymph-nodes or central tumor. The median dose prescribed was 60 Gy (45-66.25) in a median number of 28 fr (6-33). Some of the cervical cancer patients also received concomitant chemotherpay.

Results: RTOG acute toxicity was as follows: GE (diarrhea, nausea, vomiting) : G1= 9, G2+ 14, G3= 3; GI (bleeding,tenesmus): G1= 1, G2+ 2; GU: G1= 7, G2+, 6; hematologic (neutropenia): G1=1, G2+1, G3= 1; dermatitis: G1= 3, G2+, 9, asthenia G1= 3. RT(EG)/ORTC late toxicity was: GE: G1= 3, G2+ 1; GI: G3=1, GU: G1=2, G2+, radiation dermatitis: G1=1. One patient presented vaginal sthenosis after exclusive HT treatment to 66,25Gy. Twenty CR, 9 PR, 2 SD and 2 PD were registered. Seven patients presented distant progressive disease with local CR (5) or PR (2) at the first evaluation. The 2 SD and 2 of PR presented local PD at the second follow up. Thirteen patients have chosen to continue the follow up only with the gynecologist. Six deaths were registered among the patients who continued follow up, five patients with PD, one in a patient with local CR but with brain metastases.

Conclusions: The toxicity and local control results were good in this group of patients, demonstrating that, when necessary, brachytherapy could be used in combination with PET positive lymph-nodes controlled or not with SIB technique. Disease progression with distant (lung,peritoneum) metastasis is indicative that a better systemic therapy should be developed.

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Purpose/Objective: Cervical cancer is still on the five place of cancers in women. Radiotherapy, chemotherapy, surgery or a combination with surgery and chemotherapy, is an important part of the therapeutic process in women suffering from these cancers. In the advance cases combination of radio and chemotherapy start to be the gold standard of treatment. The aim of this study was to assess the therapeutic effect according to five years survival and analysis of association between prognostic factors and results of the treatment.

Materials and Methods: The study covered 151 patients with diagnosed FIGO stage IIB and IIIB cancer of the cervix treated on 2002 to 2007 year. All patients received external beam radiatiotherapy (EBRT) and brachytherapy (BRT) in combination with chemotherapy (CHT). Cisplatin at 40mg/m² administered once a week over the radiotherapy period. The mean age of patients was 51 years old. 91.6% got planoepitheliale carcinoma histopathology. The mean tumor size was 4,96cm, bigger in the group with IIIB cancer- 5,23cm. An average to point A dose in this group of patients was 87,1 Gy; 31,9Gy by the teleradiotherapy and 52,2Gy by the brachytherapy LDR or PDR. Chemotherapy was given in 1-7 courses, with mean dose of 4,7 courses, 69,5% of patient got 5 and more courses. Meanlength of the treatment was 38 days. The radiochemotherapy results were evaluated based on medical documentation and irradiation sheets. Subject to investigation was time of survival, present of absent of disease or metastasis and both early and late toxicity observed during a five year follow-up.

Results: After five year observation we found that 88 patients (58,3%) was still alive and 63 patients (41,7%) died during this observation. Mean time to dead in group of 63 patient was 25,2 months after treatment. In 35 cases of death patients and in 13 cases with 5 years survival metastasis or recurrence was observed. Most important factors to five years survival was tumor volume (p<0,05) and associated with it stage of the disease. In the group with IIIB stage 75% survived 5 years, in IIIB 53,8%. Rest of factor was important in comparing of IIB and IIIB stages, like dose of tele and brachytherapy, number of chemotherpay courses and prolong time of treatment.

Conclusions: Patients received concomitant chemotherpay in advanced cervical cancer women. During classification to that kind of treatment we must however remember that many factors become this treatment effectiveness or not. In some cases individualization of radio and chemotherpay combination can profit with higher percent of five years survival.

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Purpose/Objective: Hypofractionated treatment with intensity modulated radiotherapy (IMRT), arc therapy, stereotactic body radiotherapy (SBRT) and Cyberknife is a valid conservative alternative in exclusive or recurrent gynaecological cancer when brachythrapy is not a viable or feasible option.

Materials and Methods: In our ‘Advanced Radiotherapy Center’ the majority of patients (pts) affected by gynaecological cancer were treated with conventional or hypofractionated radiotherapy brachytherapy boost. From June 2010 to October 2012 186 gynaecological pts (90 exclusive cervical cancer) were treated. When brachytherapy was not possible, hypofractionated schedule with external beams was a very good solution (virtual brachytherapy). The introduction of new technologies such as IMRT, Rapid-arc therapy, SBRT, Cyberknife and the application of image guidance and adaptive planning techniques makes easy to spare critical organs at risk (OAR) in order to minimize late toxicity, that is a concern because of the closeness among OAR and target. In order to compare the different fractionation schedules, 2 Gy equivalent total doses (EQD2) were calculated using the linear quadratic model with α/β ratios of 3 Gy for late normal tissue effects and 10 Gy for the tumor.

Results: All patients but five received Rapid arc radiotherapy with simultaneous integrated boost (SIB): [45-50.4 Gy (1.8 Gy/fraction (fr)) were prescribed to the T or T- bed, N0 pelvic and/or para-aortic lymph nodes and 55 Gy (2.2 Gy/fraction) to the positive lymph nodes. The dose for the hypofractionated boost schedule was 5 Gy/fr for 3 fr = 15 Gy, EQD2= 23 Gy (PTV 65%)±inocenter EQD2=83 Gy or 5 Gy/fr x 5 fr = 20 Gy EQD2 = 25 Gy. For the pts who received the hypofractionated treatment alone the doses for IMRT or SBRT was: 6 Gy/fr x 5 fr = 30 Gy (isoctode 95%)= EQD2=40 Gy, 5 Gy/fr x 5 fr = 25 Gy (isoctode 95%)= EQD2=30 Gy.

Conclusions: The possibility to hypofractionate the treatment offers a new approach for a minimally invasive treatment in the management of cancer when current surgical approach and other radiotherapy techniques are unsuitable.

EP-1102 Impact of various treatment modalities for carcinoma cervix on sexual function assessed using the LENT SOMA scales.
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Purpose/Objective: To assess the outcome and quality of life of patients of carcinoma cervix treated with multimodality therapy using the LENT SOMA scores.

Materials and Methods: The study was prospective and patients who were treated in CMC, Ludhiana between 1st January 1995 to 31st December 2007 and coming for follow up were included in this study after ethical clearance. A total of 85 patients were accrued comprising 6 stage IB, 6 stage II A, 25 stage II B, 2 stage IIIA, 45 stage III B and 1 stage IV A disease. Sixty six patients were treated with radiotherapy in which 45 patients received chemotherapy with radiotherapy and 19 had only radiotherapy prior to post-operative radiotherapy. The mean age was 47.81 years with a range of 25-68 years. Radiotherapy was given according to the Manchester school. Completion of LENT SOMA scale vagina sub-section (including sexual dysfunction) was done and Statistical analysis was done.

Results: Completion of questionnaires: From a consecutive series of 92 patients, 7 patients data were not adequate. Three patients were reported to have recurrent disease either local or metastatic. Initial data were obtained for 85 women.

Treatment data: Pre-radiotherapy LENT subjective scores for the vagina and sexual dysfunction scales were not obtained. There was a significant relationship between the maximum vagina scores at baseline and age (P =0.039), but not for stage of disease (P = 0.077). For sexual dysfunction maximum scores there was no significant association with age (P