organ motion when implementing advanced RT techniques for these recommendations, regular imaging is vital to monitor laxatives to ensure smaller rectal sizes through RT. Even with shorter waiting time on chemotherapy days and adequate diameter correlates with rectal volume and displays no Stereotactic body radiotherapy for mediastinal and sub-PO-0726 CTV being outside of PTV, predominantly affecting the especially the uterus. Rectal size changes increase the risk of chemotherapy increase the risk of CTV being outside of PTV, predominantly affecting cervix. Increasing rectal size correlates with decreasing planning bladder volumes (>300cc) were not deviated from planning volume, predominantly affecting the cervix. Increasing rectal size correlates with decreasing deviation from planning volume, predominantly affecting cervix. Increasing rectal size correlates with decreasing deviation from planning volume, predominantly affecting cervix. Increasing rectal size correlates with decreasing deviation from planning volume, predominantly affecting cervix. Increasing rectal size correlates with decreasing deviation from planning volume, predominantly affecting cervix. Increasing rectal size correlates with decreasing deviation from planning volume, predominantly affecting cervix. Increasing rectal size correlates with decreasing deviation from planning volume, predominantly affecting cervix. Increasing rectal size correlates with decreasing deviation from planning volume, predominantly affecting cervix. Increasing rectal size correlates with decreasing deviation from planning volume, predominantly affecting cervix. Increasing rectal size correlates with decreasing deviation from planning volume, predominantly affecting cervix. Increasing rectal size correlates with decreasing deviation from planning volume, preferably Bristol stool chart type 5. Bladder, rectum and primary CTV were outlined on each CBCT by 2 independent clinicians. Effects of time through RT, chemotherapy administration, and drinking time on bladder and rectal volume were analysed. Volume variation impact on RT coverage was also investigated using fixed effect logistic regression modelling.

Results: 10 planning scans and 109 CBCTs were reviewed. Bladder volume was 45-578cc during radiotherapy and 73-664cc at planning. Bladder volume increased (approx. 4cc/minute) with waiting time, decreased (average 4cc/day) through RT; all bladder volumes that deviated >100cc from planning led to CTV being out of PTV. The odds of CTV remaining within PTV reduced by 1.9% for every cc deviation from planning volume, predominantly affecting cervix. Large planning bladder volumes (>300cc) were not reproducible during RT. Rectal anterior-posterior (AP) diameter correlates with rectal volume and displays no pattern through treatment. AP diameter ranged from 2.9-5.3cc at planning and 1.6-8.7cc during RT. The odds of CTV remaining in PTV reduced by 5.8% with every mm deviation from planning rectal AP diameter, predominantly affecting cervix. Conclusion: Bladder volume changes during RT and with chemotherapy increase the risk of CTV being outside of PTV, especially the uterus. Rectal size changes increase the risk of CTV being outside of PTV, predominantly affecting the cervix. Increasing rectal size correlates with decreasing bladder volume, possibly due to dehydration. We therefore recommend an ideal bladder planning volume of 150-300cc, a shorter waiting time on chemotherapy days and adequate hydration throughout RT. We also recommend regular laxatives to ensure smaller rectal sizes through RT. Even with these recommendations, regular imaging is vital to monitor organ motion when implementing advanced RT techniques for gynaecological cancers.

PO-0727 Stereotactic body radiotherapy for mediastinal and sub-diaphragmatic nodal relapse of ovarian cancer L. Draghini1, F. Trippa1, F. Arcidiacono1, P. Anselmo1, M. Casale1, M. Italiani1, M. Muti1, M.L. Basagni1, L. Chirico1, R. Rossi1, E. Maranzano1 1Radiation Oncology Centre, Oncology Department “S.Maria” Hospital Terni, Terni, Italy Purpose or Objective: To retrospectively evaluate the effectiveness and toxicity of stereotactic body radiotherapy (SBRT) for localized nodal relapse (NR) of ovarian cancer.

Material and Methods: Between August 2008 and March 2015, eleven patients were treated with SBRT on 16 NR of previous ovarian cancer. All patients at the time of ovarian cancer diagnosis were submitted to surgery and at least 1 line of chemotherapy (range, 1-3). Median age was 64 years (range, 49-74), and primitive histology was siero-papillar and diaphragmatic, 5/16 (31%) mediastinal NR. Fractionation schemes were: 5 x 8Gy in 10 (62%), 5 x 7Gy in 1 (6%), 5 x 6Gy in 1 (6%) and 5 x 5Gy in 5 (28%) patients, respectively. Median interval time between first diagnosis and NR was 83 months (range, 22-148). NR was documented with PET-CT as the only site of disease. Response was evaluated with PERCIST criteria.

Results: Median follow-up was 11 months (range, 2-47), median GTV 5.4 cc (range, 1.8-18.3), median PTV -obtained adding an isotropic margin of 5 mm to the GTV- 16.5 cc (range, 4.2-85.7). There were 11/16 (69%) sub-diaphragmatic, 5/16 (31%) mediastinal NR. Fractionation schemes were: 5 x 8Gy in 10 (62%), 5 x 7Gy in 1 (6%), 5 x 6Gy in 1 (6%) and 5 x 5Gy in 5 (26%) NR. Outcome, evaluated with PET-CT 3 months after SBRT, showed a complete response in all treated NR, with a median duration of response of 17 months (range, 2-47). Six (54%) patients had a subsequent “out-field” progression, 1 nodal and 4 peritoneal progression in sub-diaphragmatic region, 1 nodal progression in mediastinial region. The two cases with nodal progression received another SBRT, while the others chemotherapy. No acute or late toxicity was registered after SBRT. At the time of last follow-up, 9 patients were alive 6 of whom without evidence of disease.

Conclusion: All ovarian cancer patients submitted to SBRT for NR had a durable complete response without toxicity. However, outcome seems less satisfying in patients with sub-diaphragmatic disease because of peritoneal progression in absence of in-field relapse.

PO-0728 Prognostic impact of 18F-FDG PET-CT in patients with locally advanced cervical carcinoma S. Cima1, A. Galuppi2, P. De iaco3, M. Perrone3, S. Fanti4, G. Compagnone5, M.C. Valli6, A. Richetti6, G. Macchia6, M. Nuzzo6, F. Deodato6, G. Ferrandina6, F. Bertini6, A. Farioli6, S. Cammelli2, G. Frezza7, A.G. Morganti2 1Oncology Institute of Southern Switzerland, Radiation Oncology Unit, Bellinzona, Switzerland 2Radiation Oncology Centre - S. Orsola-Malpighi Hospital - University of Bologna, Department of Experimental-Diagnostic and Specialty Medicine - DIMES, Bologna, Italy 3S.Orsola-Malpighi University Hospital, Gynecologic Oncology Unit, Bologna, Italy 4Nuclear Medicine Unit- S.Orsola-Malpighi Hospital- University of Bologna, Department of Experimental-Diagnostic and Specialty Medicine, Bologna, Italy 5Fondazione di Ricerca e Curia "Giovanni Paolo II" - Catholic University of Sacred Heart, Radiotherapy Unit, Campobasso, Italy 6Policlinico Universitario "A. Gemelli"- Catholic University of Sacred Heart, Department of Gynecologic Oncology, Roma, Italy 7S.Orsola-Malpighi Hospital - University of Bologna, Department of Medical and Surgical Sciences- DIMEC, Bologna, Italy 8Ospedale Bellaria, Radiotherapy Department, Bologna, Italy Purpose or Objective: The primary objective of this study was to evaluate the prognostic value of pretreatment 18-F-FDG PET-CT in patients with locally advanced cervical cancer.

Material and Methods: At pre-treatment staging, 92 patients with histological diagnosis of cervical cancer, underwent 18-F-FDG PET-TC in addition to routine protocol including International Federation of Obstetrics and Gynecology (FIGO) staging and MRI. Patients were treated with concurrent chemoradiation followed by brachytherapy boost.

Results: 18-F-FDG PET-CT identified the presence of para-aortic lymph node metastases in 17 patients (18%). These patients were treated with extended field irradiation (including para-aortic nodes). The results of multivariate analysis showed that 18-F-FDG PET-CT positive para-aortic lymph nodes and advanced FIGO stage were predictive of worse disease-free survival (p<0.01; p<0.001, respectively), and high T SUV max had a negative impact on local control, disease-free survival and overall survival (p<0.02; p<0.01; p<0.01, respectively).

Figure 1. Actuarial local control, Disease free survival and Overall survival for T SUVMAX Conclusion: High T SUV (max) showed a strong prognostic impact in these patients. Furthermore, staging 18-F-FDG PET-