

and the cervical collar. A dose volume histogram was generated and a dosimetric correlation of MRD with dose to 2cc (D2cc), dose to 1cc (D1cc), maximum and mean rectal dose was calculated using spss software version 19. Results: The mean MRD was 3.11cm (range 2.32-3.77cm). D1cc, D2cc, mean rectal dose and maximum rectal doses were 3.51 Gy, 3.04 Gy, 1.63 Gy and 4.95 Gy per treatment, respectively. Statistical analysis revealed an increase in D2cc ($p=0.02$) and D1cc ($p=0.05$) with increasing rectal distension. Further it is possible to predict the increase in D2cc with increasing rectal distension using the linear regression model: 'Increase in D2cc in cGy = $17.74 + 92.22 \times$ Increase in rectal distension in cm'.

Patient and Tumor Characteristics	
Number of patients	30
Number of brachytherapy-planning CT scans	90
Average age in years	56.4 (48-74)
Average time for three sessions of brachytherapy in days	19 (15-28)
Cervical cancer stage IB2-IVA	
IB2	4 (13.3%)
IIA	4 (13.3%)
IIB	12 (40%)
IIIA	2 (6.6%)
IIIB	6 (20%)
IVA	2 (6.6%)
Pathology	
Squamous cell carcinoma	26 (86.6%)
Adenocarcinoma	4 (13.3%)

Conclusions: D2cc increases significantly with increasing rectal distension in HDR brachytherapy for cervical cancer patients. Minimizing rectal distension by simple measures like overnight fasting, mild laxatives and enema are likely to minimize potential rectal toxicity. Hence efforts to decrease rectal distention during brachytherapy should be considered.

PO-0751

Early stage endometrial cancer treated with surgery and no adjuvant treatment \bar{n} to follow-up or not?

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Purpose/Objective: Endometrial cancer is the commonest gynaecological malignancy with an increasing incidence. It is unclear whether patients with early stage endometrial cancer treated with surgery and no adjuvant therapy require regular gynaecological follow-up.

Materials and Methods: Retrospective analysis of all cases of early stage endometrial cancer treated with surgery and no adjuvant therapy presenting with recurrence over a thirteen year time period in a single centre. Case notes and electronic records were reviewed to determine whether the recurrence presented symptomatically or was detected clinically on follow-up. The intent of treatment at recurrence was analysed to determine the 2-year survival for this patient group.

Results: 35 patients were included, who presented with recurrence between 2000 and 2013. 10 patients (29%) were detected clinically on routine follow-up with 25 patients (71%) presenting symptomatically. 20 patients (57%) were

treated with palliative intent (7 chemotherapy, 8 External Beam Radiotherapy (EBRT), 4 hormone treatments and 1 best supportive care) and 15 patients (43%) were treated with radical intent (9 EBRT followed by brachytherapy, 4 brachytherapy alone and 2 receiving EBRT alone). Median follow-up was 22 months. Median survival overall was 23 months, with palliative treatment was 10 months and with radical treatment was 53 months. 2-year survival following recurrence overall was 51.6%, following radical treatment was 78.5%, and following palliative treatment was 29.4%.

Conclusions: With 71% of patients presenting with recurrence having symptoms, it would appear on the surface to be reasonable to alter the model of follow-up to be more patient-centred, with symptoms triggering referral rather than routine review. However, in view of 80% of patients whose recurrence is detected at Routine Follow-Up, going on to have radical treatment, it may be more appropriate to offer patients the choice of Routine Follow-Up or a telephone review/self-referral service. In times of pressure on NHS resources this may be a suitable way of managing this cohort of patients.

PO-0752

Does ITV vaginal procedure ensure dosimetric coverage during IMRT of postoperative Gynaecologic tumors?

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Purpose/Objective: The position of the vagina could be highly variable due to differences of bladder and rectal filling. In order to ensure adequate target coverage, RTOG first introduced ITV accounting for individualized organ motion affected by bladder filling. We investigate the magnitude of vaginal displacement along the treatment in patients treated with post-operative IMRT for gynaecological cancer. We evaluate the subsequent dosimetric coverage loss and look for any correlation with bladder and rectal filling. Materials and Methods: We retrospectively analyzed 27 consecutive patients treated in our institution between July 2012 and July 2014 with IMRT for post-operative treatment of gynaecological cancer.

All patients underwent empty and full bladder CT simulation (CT planning). This procedure was repeated as a control 3 weeks after (CT-control). Both sets of CTs were registered.

The delineation of the volumes and the definition of ITV were performed following the RTOG guidelines in both CTs.

ITV displacement was measured as the coordinates difference (in three axes) between the center-of-mass of both ITV, expressed in absolute value. With these values we calculated the 3D vector.

The PTV was created by adding 0.7cm (margin) to ITV and CTV-node. Treatment planning was done on full bladder CT-planning with IMRT. Plans were optimized and normalized to deliver 100% prescribed dose to 97% of PTV.

These plans were recalculated (but not optimized) on the full bladder CT-control.