Conclusions: The introduction of MRI based BT in our clinic was feasible and the treatment results were similar to other published series. The rate of significant side effects encourages us to elaborate the plan modification techniques, apply interstitial needles and treat all pts with individual plan in the future.

PO-1019
Improving service efficiency by reducing the volume of bowel contoured when performing IGBT of the cervix?
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Purpose/Objective: Contouring the bowel is one of the most time consuming aspects of planning a HDR treatment of the cervix. This investigates the possibility of reducing the volume of bowel to be contoured for planning purposes when treating the Cervix with HDR using a Tandem and Ovoid Applicator with CT simulation. It is hoped that the service efficiency can be improved by reducing the volume of bowel contoured prior to planning.

Materials and Methods: Additional contours were constructed on previous patient plans which were clinically accepted. Using Oncentra Brachy (Version 4.3), 3D margins of 0.5cm, 1.0cm, 1.5cm and 2.0cm were grown around the HR-CTV. The overlap of the original (complete) bowel volume and the newly created volumes was extracted to produce a bowel contour which was limited to within a given distance from the HR-CTV. For example, taking the intersection of the ‘Bowel’ and the ‘HRCTV + 1.0cm’ to give a bowel contour which only extends to 1.0cm beyond the HR-CTV (referred to as ‘HR-CTV + 1.0cm & Bowel’). This produced a set of bowel outlines which were limited to within a given margin of the HR-CTV. The dosimetric parameters (D2cc, D1cc, D0.1cc) reported by Oncentra were recorded for the original bowel volume, as well as the limited bowel volumes produced to enable comparison.

Results: A total of 10 plans were contoured and assessed, with comparison of the dosimetric parameters performed for the limited bowel volumes. A summary of the results is given in the table. The mean doses for the fully contoured bowel were 3.99Gy, 4.39Gy and 5.37Gy for the D2cc, D1cc and D0.1cc respectively. When the bowel was limited to within 1.5cm or less of the HR-CTV there was at least one contour which did not give sufficient volume to produce complete dose statistics. When considering contouring within a 2.0cm margin of the HR-CTV the mean change in the D0.1cc was less than 0.1Gy (with D2cc and D1cc being less than 0.05Gy). The reduction in volume contoured however was large, with a reduction of around 65% in volume when restricting contouring to within 2.0cm of the HR-CTV.

Conclusions: Restricting the bowel contouring for planning of treatments of the Cervix using Tandem and Ovoid applicators with CT simulation to within 2.0cm of the HR-CTV has the potential to reduce the volume contoured by 65%. This results in a change in reported dose statistics of less than 0.1Gy for the D0.1cc and less than 0.05Gy for the D1cc and D2cc. These small changes would not have an effect on the clinical decision to treat using the produced plans. By producing a an expanded HR-CTV contour, the bowel contouring could be easily limited to within this region, thus reducing the time taken to contour, ultimately leading to a more efficient treatment delivery. Applying this to other organs at risk may also be possible.

PO-1020
High-dose rate vaginal brachytherapy in early stage endometrial cancer
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Purpose/Objective: Aim of this study was to evaluate vaginal recurrence rate and toxicity after postoperative vaginal brachytherapy (VBT) in patients (pts) with early stage endometrial cancer.