

Conformal RT with six or seven stationary fields is an often used treatment modality for carcinoma of the prostate. The maximum dose that can be delivered to the prostate is limited by the incidence of rectal complications. This study investigates whether a prone, rather than supine treatment position, could reduce the rectal dose.

We obtained planning CT scans for 5 patients in prone and in supine positions. On both scans, prostate, seminal vesicles, rectum and bladder were outlined, and CT based 3D treatment plans were generated with the FOCUS treatment planning system, using 7 shaped treatment portals for supine, and 6 for prone treatment position. After 54 Gy, treatment portals were reduced to come off the seminal vesicles, and a boost dose of 19.8 Gy was planned to the prostate only.

Dose volume histograms of rectal and bladder volume included in the treatment fields will be compared for both treatment positions, as well as the mean and maximum doses delivered to these organs. Reproducibility of each set-up is evaluated by comparison of repeat portal films.