

Whole pelvic IMRT treatment for post operative gynecological malignancies, Sheba experience

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BACKGROUND AND PURPOSE: To evaluate the use of IMRT treatment for post operative gynecological malignancies for better organ at risk sparing to reduce treatment toxicity that will allow dose escalation. Creating guidelines for that treatment. Recognize treatment limits and problems in ITPS and QA for very large IMRT volumes and fields.

PATIENTS AND METHODS: five patients were selected with endometrial cancer treated postoperatively. Bladder, rectal wall, small and large bowel were delineated as organs at risk. A seven field IMRT plan prescription dose 50.4 Gy and compared with conformal 4 fields plan (DVH). QA performed with film dosimetry and ion chambers.

RESULTS: significant improvements were observed for irradiated volume of rectal wall and bladder. With IMRT the average irradiated volume of small and large bowel was reduced dramatically and the impact of IMRT was large for postoperative patients, in one patient treatment volume was very large (24833cc of normal tissue) the ITPS could calculate only if the calculation grid was 10mm spaced, that lead to a disagreement in QA and patient was treated 3D conformal.

CONCLUSIONS: IMRT significantly reduced the absolute volume of rectal wall, bladder and bowel irradiated at the prescribed dose level in post operative gynecologic patients. Due to large treatment volumes we have to be aware of disagreements between calculations and dosimetry.