

First Experience with Intensity Modulated Radiation Therapy (IMRT) for Localized Prostate Cancer

Introduction and Objective: Intensity modulated radiotherapy (IMRT) is an important step forward in prostate cancer treatment. To report the first experience in our hospital with IMRT for localized prostate cancer.

Materials and Methods: From February 2010 through March 2012, fifty-four consecutive patients with adenocarcinoma of the prostate were treated with radiotherapy with IMRT to a prescribed dose of 76 Gy. Mean PSA was 10.74 ng/ml and clinical stage was T1c to T3. Patients were staged according to TNM classification of Malignant Tumors 7th edition. Their biochemical relapse risk was classified according to the D'Amico risk group classification. Eight (15%) patients were classified as low-risk; Twenty-two (41%) as intermediate-risk; and Twenty-four (44%) as high-risk. Fifty-three (98%) patients received androgen deprivation therapy (ADT) starting 6 months prior to IMRT. Patients were routinely checked during and after therapy to evaluate side effects and relapse. Biochemical failure was defined as PSA < post-treatment nadir+2. Urinary and gastrointestinal toxicity were defined by CTCAE ver4.

Results: Median follow-up was 19 months. No patients were biochemical failure. Therapy was well tolerated and all patients were treated completely. Acute and late urinary toxicities were not severe (only three patients had grade 1 or 2 pollakisuria). More than grade 3 gastrointestinal acute toxicity was none. Late gastrointestinal toxicity developed in less than 3% of patients (rectal bleeding).

Conclusions: Patients treated with IMRT for localized prostate cancer have excellent rates of biochemical control and low rates of severe toxicity of treatment.