

Stereotactic Robotic Body Radiotherapy for Carcinoma Prostate

Tejinder Kataria nee Sethi ¹, Susovan Banerjee ², Tamil Selvan.s ³, Kushal Narang ³, Deepak Gupta ³

1. Division of Radiation Oncology, Medanta Cancer Institute, the Medicity, Gurugram, IND 2. Division of Radiation Oncology, Medanta Cancer Institute, Gurugram, IND 3. Division of Radiation Oncology, Medanta The Medicity, Gurugram, IND

✉ **Corresponding author:** Tejinder Kataria nee Sethi, teji1960@gmail.com

Categories: Urology, Radiation Oncology, Medical Physics

Keywords: prostate, robotic, hypofractionated, sbrt

How to cite this abstract

Kataria Nee Sethi T, Banerjee S, Selvan.s T, et al. (October 24, 2019) Stereotactic Robotic Body Radiotherapy for Carcinoma Prostate. Cureus 11(10): a438

Abstract

Objective(s): To analyse the biochemical and radiological control of patients with carcinoma prostate receiving hypofractionated stereotactic robotic body radiotherapy with Cyberknife VSI since October 2012.

Methods: Data from the electronic medical record was retrieved with IRB permission & patients treated with radical intent were included in the analysis. All patients were treated under institutional CyberKnife (CK) protocol and MRI was mandatory. PSMA PETCT was commissioned in May, 2017 and was done in patients thereafter. All data were tabulated and analysed using SPSS version 20.

Results: Seventy patients have been treated using Cyberknife VSI Robotic Radiotherapy from March 2013 to Jan 2019. Mean age was 69.7 years (median 70, range 54-86). All patients except 13/70(18%) had systemic co-morbidities. There were two groups; a) 32/70(45.7%) treated by only CK (5-7 fractions) and b) 38/70(54.3%) treated by CK reverse boost (3 fractions) followed by conventional radiation including prostate & pelvic nodes over 25 fractions. 2/70(<3%) were in low risk group, 17/70(20.4%) intermediate, 21/70(30%) High risk, 20/70(28.6%) very high-risk and 10/70(14.3%) had N1 disease at presentation. Patients received neoadjuvant and adjuvant hormone as per to risk stratification. The median BED (a/b=1.5) of our treatment was 210 (mean 207Gy;range 151-277). A median follow up of 32 months (mean 32.4, range 6-60mo); median biochemical relapse free survival 30 months(mean 29.5,range-5-78mo), median PSA nadir value was 0.01 ng/ml(range 0 to 1.03 ng/ml) and median local radiological relapse free survival was 32 months (mean 31.3,range 5-78mo). One patient from group two had Grade 3 diarrhoea during radiotherapy; no patient reported grade 3 urinary bladder, urethra or rectal toxicity on follow up.

Conclusion(s): A large proportion of our patients had high-risk features however, compared to published literature, favourable results were achieved. A longer follow up and prospective studies are required for long-term results and late toxicity.

Open Access

Abstract

Published 10/24/2019

Copyright

© Copyright 2019

Kataria nee Sethi et al. This is an open access article distributed under the terms of the Creative Commons Attribution License CC-BY 3.0., which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Distributed under

Creative Commons CC-BY 3.0