

# High-dose 3D-CRT in the radical and postoperative setting for prostate cancer. Analysis of survival and late rectal and urinary toxicity

Francesco Tramacere<sup>1</sup>, Emilio Antonio Luca Gianicolo<sup>2</sup>, Antonietta Pignatelli<sup>1,3</sup>, and Maurizio Portaluri<sup>1,2</sup>

<sup>1</sup>Radiotherapy Dept, ASL BR, Ospedale "A Perrino", Brindisi; <sup>2</sup>National Research Council Institute of Clinical Physiology, Lecce, <sup>3</sup>University of Bari, Bari, Italy

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## ABSTRACT

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**Purpose.** The aim of the study was to retrospectively compare outcome and complications of prostate cancer patients treated with a curative and postoperative intent using a pretreatment defined NCCN classification.

**Material and methods.** A total of 103 patients was treated curatively (RAD) and 94 postoperatively (POST-OP). The mean age was higher in the RAD group (72.6 years; range, 56.4-85.1) than in the POST-OP group (65.4 years; range, 43.9-77) ( $P < 0.0001$ ). According to the NCCN prognostic classification, 13 (12%) patients were at low risk, 48 (47%) at intermediate risk and 42 (41%) at high risk in the RAD group. In the POST-OP group, 13 (14%) patients were low risk, 37 (40%) at intermediate risk and 44 (46%) at high risk. Hormone therapy was used in 98 patients (95%) in the RAD group and 45 patients (47.8%) in the POST-OP group. Patients were treated with three-dimensional conformal radiotherapy. The prescription dose was 80 Gy in 2-Gy fractions in the RAD group and 70 Gy in 2-Gy fractions in the POST-OP.

**Results.** No biochemical, clinical relapse was found in low-risk patients in the RAD group and 1 relapse was found in the POST-OP group. The largest number of relapses occurred (39%) and (33%) in intermediate-high risk in RAD and POST-OP groups, respectively. In the cause-specific survival analysis, no significant differences were found in the high-risk group between RAD and POST-OP groups ( $P = 0.9$ ). In the analysis of 5-year biochemical relapse-free survival, no significant differences were found in the high-risk group between RAD and POST-OP groups ( $P = 0.1020$ ).

**Conclusions.** Radiotherapy in the RAD low-risk group was an excellent treatment. RAD and POST-OP radiotherapy were well tolerated with very low toxicity. The cause-specific survival at 5 years was 95% and 97% for the two treatment groups, RAD and POST-OP, respectively (logrank test,  $P = 0.2908$ ).

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**Key words:** high risk, late toxicity, surgery, three-dimensional conformal radiotherapy.

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**Correspondence to:** Francesco Tramacere, Radioterapia Ospedale Perrino ASL BR, SS7, 72100 Brindisi, Italy. Tel +39-083-1537641; fax +39-083-1537640; cell +39-349-5345406; email francescotramacere@libero.it

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