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IPD01:
PREDICT PATHOLOGIC OUTCOME OF RADICAL PROSTATECTOMY FOR CLINICAL STAGE T2B AND T2C PROSTATE CANCER

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Purpose: Risk stratification of clinical stage T2c was classified as intermediate risk in NCCN criteria, but it was recognized as high risk in many other different criteria settings. Here we develop a rational nomogram to predict pathology outcome and progression free survival for clinical stage T2c and T2b.

Materials and Methods: From 1991 to 2010, 1068 men treated with radical prostatectomy in 2 medical centers: 190 at CMUH and 878 at TVGH. Patients enrolled in this cohort had complete information of preoperative serum PSA level, biopsy Gleason score (GS) and clinical stage determined by rectal digital examination. All prostatectomy specimens were inked on surface, fixed and series step sections with 3-4 mm from apex to base. A logistic regression model was used to estimate the probability of organ-confined disease (OC), extra-prostate extension (EPE)), seminal vesicle involvement (SVI) and positive node (PN). In this cohort included 235 clinical stage T2b and 190 stage T2c. Follwing prostatectomy, all patients were not received any adjuvant therapy until PSA failure.

Results: The mean age of the study population was 66.8 years (range 40 to 83 years). The final pathologic stage demonstrated that 48.7%, 48.2%, and 15.3% had OC, EPE and SVI, respectively. A nomogram on the basis of this logistic regression model appears in each tables of variables different PSA level, GS, and clinical stage contributed to prediction of pathologic stage according to logistic regression. Both stage T2c and T2b demonstrated the similar probability of pathological outcome regarding to OC, EPE, SVI and NI in each PSA level and Gleason score. The combination of preoperative variables predicted pathologic stage better than any single variable individually. There are 74 patients (39%) had PSA level >20 ng/ml in stage T2c compare to 57 patients (24%) in T2b. The incidence of Gleason score 8-10 was also higher in stage T2c than in stage T2b (22 vs 16 %). There are 82 cases (35%) in stage T2b compare to 96 (51 %) eventually stratified as high risk disease. The progression free survival of stage T2c was significant inferior to the stage T2b (33 vs 58%) in 5 years and (25 vs 53%) in 10 years.

Conclusion: We have constructed a nomogram for clinical stage T2b and T2c base on Asia population for predict pathological outcome with reasonable accuracy and potentially be applied in high risk patients. Stage T2c demonstrated as higher percentage of high risk variables (PSA >20 ng/ml and Gleason score>7) that resulted in lower progression free survival.

IPD02:
FAVORABLE OUTCOME OF INTRAOPERATIVE RADIOTHERAPY TO PRIMARY SITE IN PATIENTS WITH METASTATIC PROSTATE CANCER SUGGESTS BENEFITS OF LOCAL THERAPY: RETROSPECTIVE STUDY OF LONG-TERM OUTCOMES IN A SINGLE JAPANESE CENTER

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Purpose: Recently, local control of primary prostate cancer in patients with metastasis has been attracting attention. However, the clinical significance of such strategies has not yet been well established. The aim of this retrospective study was to determine whether local radiotherapy confers survival benefit in patients with metastatic prostate cancer.

Materials and Methods: Between February 1993 and March 2000, 102 patients with prostate cancer attending our institution received intraoperative radiotherapy (IORT). Among them, 16 patients with stage D1 prostate cancer according to the Whitmore-Jewett staging system (D1 IORT group), and 32 patients with stage D2 (M1a or M1b) prostate cancer according to the 7th UICC TNM staging system (D2 IORT group), were included in this study as IORT group. Their treatment comprised: (a) IORT for the prostate with a dose of 25 or 30 Gy given in a fraction after the dissection of pelvic lymph node; (b) external beam radiotherapy of the prostate (30Gy given in 10 fractions) commencing about 1 week postoperatively; (c) neoadjuvant and/or adjuvant endocrine treatment. Overall survival (OS) and cause-specific survival (CSS) were calculated and factors affecting survival were assessed by multivariate analysis. In addition, OS and CSS of the D2 IORT group were compared to those of the 38 patients with stage D2 (M1a or M1b) prostate cancer attending our institution between April 2000 and December 2005 who did not undergo any local therapy (D2 control group).

Results: Median follow-up period was 71 months for the IORT group (D1 + D2), and 49 months for the D2 control group. Among the IORT group, 18 patients (37.5%) died of prostate cancer. There were no statistically significant differences of clinical features between the D2 IORT group and the D2 control group. The 5-/10-year CSS, and OS of the IORT group were 75.9/52.7%, and 61.0/31.7%, respectively. The 5-/10-year CSS, and OS of the control group were 45.8/33.5%, and 42.1/30.8%, respectively. CSS of the D2 IORT group was significantly longer than that of the D2 control group ($P = 0.030$). Univariate and multivariate reduced rank regression analysis showed that grade 4 by extent of disease grading system (EOD 4) (HR: 7.51, $P = 0.012$), and non-regional lymph node metastasis (HR: 5.58, $P = 0.027$) were statistically significant prognostic factors. Patients without these unfavorable factors (EOD4/non-regional lymph node metastasis) had significantly longer OS and CSS than those with any of them ($P < 0.001$). The 5-year OS/CSS were 71.6/90.6% in the former group, and 27.3/31.2%, in the latter group.

Conclusions: Local radiotherapy of the prostate in patients with metastatic prostate cancer may contribute to better survival provided that the patients are without any of the identified unfavorable factors (EOD4/non-regional lymph node metastasis).

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