

## **Identification of Prognostic Predictors in Japanese Men with Metastatic Castration-Resistant Prostate Cancer Who Were Treated with Docetaxel-Based Chemotherapy**

**Introduction and Objective:** Docetaxel-based chemotherapy is currently considered the standard treatment for metastatic castration-resistant prostate cancer (mCRPC) in Western countries; however, it remains largely unknown whether docetaxel-based chemotherapy for Japanese patients resulted in the efficacy similar to those in Western populations. The objective of this study was to retrospectively review the oncological outcomes of docetaxel-based chemotherapy in Japanese men with mCRPC.

**Materials and Methods:** This study included 257 consecutive Japanese men who were diagnosed as having mCRPC and subsequently received docetaxel-based chemotherapy between 2007 and 2010.

**Results:** In the 257 patients, the median age and serum value of prostate-specific antigen (PSA) prior to docetaxel-based chemotherapy were 72 years and 43.0 ng/ml, respectively. Of these patients, 64 (24.9%) and 193 (75.1%) received docetaxel as a weekly (30 mg/m<sup>2</sup>) and 3-weekly (70 – 75 mg/m<sup>2</sup>) regimen, respectively, and estramustine (EM) was administered in combination with docetaxel in 137 (53.3%). PSA decline was observed in 205 patients (79.8%), including 143 (55.6%) achieving PSA decline ≥ 50%. The median progression-free survival and overall survival (OS) were 4.3 and 25.4 months, respectively. Of several factors examined, univariate analysis identified performance status (PS), PSA value, significant clinical pain, bone metastasis, prior treatment with EM, treatment cycle and PSA response as significant predictors of OS, of which only PS, significant clinical pain, prior treatment with EM, treatment cycle and PSA response appeared to be independently related to OS on multivariate analysis. Furthermore, there were significant differences in OS according to positive numbers of these five independent risk factors; that is, overall death occurred in 19 of 71 patients (26.8%) who were negative or positive for a single risk factor, 63 of 156 patients (40.4%) who were positive for two or three risk factors, and 18 of 30 patients (60.0%) who were positive for four or five risk factors.

**Conclusions:** Oncological outcomes in Japanese mCRPC patients receiving docetaxel-based chemotherapy is generally favorable, and the risk stratification presented in this study may contribute to precisely predicting the prognosis of such patients.