Weekly, Low-Dose Docetaxel Treatment to Japanese Castration-Resistant Prostate Cancer: Its Efficacy and Safety Profile Compared to Tri-Weekly Treatment

Introduction and Objective: To retrospectively investigate the efficacy and safety profile of weekly, low-dose docetaxel to Japanese castration-resistant prostate cancer (CRPC) patients in comparison to tri-weekly docetaxel treatment.
Materials and Methods: Between April 2002 and January 2011, 87 CRPC patients were treated with tri-weekly docetaxel (60-75mg/m2 every 3 week; standard group), and 77 CRPC patients were treated with weekly, low-dose docetaxel (20-30mg/m2 twice every 3 week; low-dose group). In low-dose group, estramustine was administered in combination with low-dose docetaxel for consecutive 3 days.
Results: There was no difference in patients' characteristics (age, number of visceral metastases, presence of pain etc.) between standard group and low-dose group. Median PSA value of standard group and low-dose group was 25.0ng/ml and 35.5ng/ml respectively. There were 53.2% of patients in standard group and 67.6% of patients in low-dose group who achieved PSA decline ≥50%. There was no difference in median time to biochemical progression between standard group (9.0 months) and low-dose group (7.2 months). There was also no difference in overall survival between standard group (24.1 months) and low-dose group (30.7 months). Grade 3-4 neutropenia was significantly high in standard group (57.5%) compared to low-dose group (7.8%, $p<0.0001$). Febrile neutropenia and thrombocytopenia was high in standard group compared to low-dose group (17.2% v.s. 3.9%, $p=0.01$, 6.9% vs. 0, $p=0.03$ respectively).
Conclusion: Weekly, low–dose docetaxel treatment has similar efficacy to Japanese CRPC patients compared to standard dose docetaxel with less adverse events.