

Importance of Continuing Therapy and Maintaining One-Month Relative Dose Intensity in Sunitinib Therapy for Metastatic Renal Cell Carcinoma

Introduction and Objective: Sunitinib is a multikinase inhibitor used as first- and second-line treatment of metastatic renal cell carcinoma. However, there are few reports on the necessary doses of sunitinib to get better clinical outcome in general practice with Japanese patients. We examined the relationship between the efficacy and the necessary doses of sunitinib therapy in a multi-institutional retrospective study.

Materials and Methods: A study population of 94 metastatic renal cell carcinoma patients was eligible for this investigation.

Results: The most frequent grade 3/4 laboratory adverse events were decreased platelet (31.9%) and white blood cell (21.3%) counts. Treatment was discontinued in 18 patients (31.0%) initially receiving a 50-mg/day dose within only one course, and median one month relative dose intensity was 74.3%. Median progression free survival time was 2.3 months in patients treated for only one course and 10.8 months in patients treated for more than one course ($P < 0.001$). Multivariate analysis showed that only one course of treatment and 60% and less of one month relative dose intensity were significantly associated with inferior progression free survival ($p < 0.001$ and $p = 0.027$, respectively). Moreover, modified Memorial Sloan Kettering Cancer Center poor risk was significantly associated with progression free survival time.

Conclusions: It is difficult for Japanese patients to continue an initial dose of sunitinib therapy without drug withdrawal. Continuing therapy for more than one course and maintaining more than 60% of one month relative dose intensity were very important in the prolongation of progression free survival time regardless of the initial treatment doses.