

**Is Hematologic Toxicity of Chemotherapy Predictable by Serum Nutritional Parameters?
A Study of Trabectedin Therapy in Advanced Soft Tissue Sarcoma**

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[Instruction] In recent years, the correlation between serum nutritional indices and inflammatory response indices and the prognosis of various cancer patients has been reported. On the other hand, the relationship between these indices and chemotherapy toxicity remains unclear. The purpose of this study was to examine posteriorly whether hematologic toxicity of trabectedin (TBD) therapy in patients with advanced soft-tissue sarcoma can be predicted by serum nutritional indices at the time of chemotherapy.

[Methods] From March 2020 to July 2022, 64 cycles of TBD therapy were administered to 8 patients with advanced soft-tissue sarcoma at our hospital. Prognostic Nutritional Index (PNI), hematologic and non-hematologic toxicities at the beginning of each treatment cycle were investigated based on CTCAE v5.0. **ABSTRACT BODY: Font is Times New Roman 8 point Font.** Abstract body includes the following: (If noting a brand name of a product you used, please do not list the city, state or country.)

[Results] The subjects were 6 males and 2 females with a mean age of 55.7 (42-73) years. Diagnoses included 3 cases of myxoid liposarcoma, 2 cases of extrasosseous myxoid chondrosarcoma, and 3 other cases. The number of prior chemotherapy regimens was 1.6 regimens (1~3), with an average of 8 (1~19) cycles of TBD therapy. The median PNI (48.8) was used to divide the patients into two groups (low and high). 95.4% of the low group (22 cycles) and 40.9% of the high group (21 cycles) used G-CSF and pegG-CSF (hereafter G-CSF products). The percentage of G-CSF products used was higher in the low- and high-G-CSF groups, respectively ($P = 0.009$, χ -square test). The same trend was observed for neutropenia, $p=0.09$. Although the difference was not significant, the low value group showed a trend toward more frequent use of G-CSF products.

[Discussion] The PNI is a serum nutritional index that may be useful in predicting the occurrence of hematologic toxicity in TRD therapy.