Aim: There are no potential tumor markers validated for prognosis of endometrial cancer. Sialyl-Tn (STN) is a carbohydrate antigen which was revealed to play an important role in carcinogenesis in various types of cancers. Although there were some reports investigating STN expression in endometrial cancer, the results were controversial. Moreover, there were no report investigating serum STN level in large series of cases. In this study, we investigated the diagnostic and prognostic value of serum STN level in patients with endometrial cancer.

Methods: This prospective study was approved by the Institutional Review Board of the institution. Between January 2006 and December 2012, we examined serum STN level in patients with endometrial cancer. We analyzed the serum STN level and clinicopathological features.

Results: During this period, a total of 146 patients (stage I: 98; stage II: 15; stage III: 17; stage IV: 16) were administrated. Median age was 60 years (28-83). Histology types included 132 endometrioid adenocarcinoma and 14 other types (serous: 4; carcinosarcoma: 3; mucinous: 3; adenosquamous: 2; clear: 1; small: 1). Histological grade was as followed; grade 1: 48; grade 2: 56; grade 3: 42. Twenty nine patients (19.9%) had relapse of disease at the time of the last follow up. Median follow-up time was 47 months (1-86). Elevated serum STN level was recognized in 36 patients (24.7%). Elevated serum STN level was associated with histological grade (p = 0.02) and lymph node metastasis (p = 0.006). Elevated serum STN level tended to be more frequent in patients with myometrial invasion depth >1/2 than in patients with depth <1/2 (p = 0.07). Elevated serum STN level was not related with histology type, clinical stage, distant metastasis, elderly age, menopause status, body mass index or relapse of disease. Among the 36 patients with elevated serum STN level, 33 patients (91.7%) achieved remission and serum STN level fell below within normal range in all cases. Seven patients (21.2%) had relapses among these patients and serum STN level had been elevated again in all cases.

Conclusions: While elevated serum STN level was not found so frequently in patients with endometrial cancer, serum STN level seemed to be a potential prognostic indicator for endometrial cancer in clinical practice.

Disclosure: All authors have declared no conflicts of interest.