

## 論 文 要 旨

### **Clinical and biological impact of cyclin-dependent kinase subunit 2 in esophageal squamous cell carcinoma.**

食道扁平上皮癌におけるサイクリン依存性キナーゼ  
サブユニット2の発現意義

石 原 由 香

#### **【Abstract】**

Cyclin-dependent kinase subunit 2 (CKS2) is a cyclin-dependent kinase subunit (CKS) family member that participates in cell cycle regulation. Few studies have investigated its involvement in esophageal squamous cell carcinoma (ESCC). The aim of the present study was to assess the clinical significance of CKS2 in ESCC. We used immunohistochemistry to study the clinicopathologic significance of CKS2 protein expression in 121 patients with ESCC. Using real-time reverse transcriptase-polymerase chain reaction (RT-PCR), we examined the expression of CKS2 mRNA in tumors and the corresponding normal esophageal tissues that were obtained from 62 patients. Finally, siRNA-mediated attenuation of CKS2 expression was examined in vitro. CKS2 protein expression was significantly correlated with depth of tumor invasion, clinical stage, lymphatic invasion and distant metastasis ( $p=0.033$ ,  $0.028$ ,  $0.041$  and  $0.009$ , respectively). CKS2 mRNA expression was higher in cancer tissue than in corresponding normal tissue ( $p<0.001$ ). Patients with positive-CKS2 protein expression had a poorer five year survival frequency than patients who did not express CKS2 protein ( $p=0.025$ ). In vitro, siRNA-mediated suppression of CKS2 slowed the growth rate of ESCC cells compared to control cells ( $p<0.001$ ). The evaluation of CKS2 expression is useful for predicting the cause of malignant tumors and the prognosis of patients with ESCC.