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学位論文の題名	A comparative study of PD-L1 immunohistochemical assays with four reliable antibodies in thymic carcinoma (胸腺癌における PD-L1 蛋白の発現とハーモナイゼーション) Oncotarget, Vol. 9(6):6993-7009, 2018
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Background

Currently, four immunohistochemical assays are registered with the US Food and Drug Administration to detect the expression of PD-L1. We investigated the PD-L1 expression in thymic carcinomas using these four diagnostic assays.

Methods

The cases of 53 patients were reviewed and their specimens were subjected to four PD-L1 assays with different antibodies (SP142, SP263, 22C3, and 28-8). The PD-L1 expression in tumor cells (TCs) and immune cells (ICs) was evaluated.

Results

In TCs, the four assays showed similar scores in each case. Histopathologically, high TC scores were observed in squamous cell carcinomas (SqCCs). Meanwhile, there were no significant relationships among the IC scores in the four assays. In SqCCs, the high expression of PD-L1 (defined as $\geq 50\%$ TC score) in TCs tended to be associated with early stage cancer. The patients with high expression levels of PD-L1 tended to show longer overall survival in the 22C3 assays ($p=0.0200$).

Discussion

In thymic carcinomas, the staining pattern showed high concordance among the four assays when TCs – rather than ICs – were stained. High PD-L1 positivity in TCs, especially in SqCCs, indicated that PD-1/PD-L1 targeted therapy may be a promising therapeutic approach.