Xu Man et al., J Cancer Sci Ther, 3:7
doi: http://dx.doi.org/10.4172/1948-5956.S1.15

OMICS Group Conferences
Accelerating Scientific Discovery

International Conference & Exhibition on
Cancer Science & Therapy
15-17 August 2011 Las Vegas, USA

An investigation of PD-L1 expression and its association with tumor infiltrating T cells in human cervical carcinomas

Xu Man[1], Wang Yuqi[1], Xu Guangxu[1], Geng Weipu[1] and Tang Junying[2]

[1]Department of Pathology, Molecular Medicine and Cancer Research Center
[2]Gynecology of the first affiliate hospital, Chongqing Medical University, China

Purpose: To observe the expression of Programmed death receptor-ligand 1(PD-L1) and the association between PD-L1 expression and T cell infiltration in human cervical carcinomas.

Methods : PD-L1 and PD-1 expression was respectively determined in five cases of normal cervical tissue, 7 cases of high-level cervical intraepithelial neoplasia (CIN II-III) and 67 cases of cervical carcinomas by immunohistochemistry staining; the tumor infiltrating $CD4^+$T and $CD8^+$T cells were determined by immunofluorescent staining, and the apoptosis of tumor infiltrating lymphocytes was examined by TUNEL assay in those cases.

Results: No PD-L1 expressed in normal cervical epithelium; PD-L1 negatively or weakly expressed in epithelia of high grade CIN, the average relative optical density was 0.82 ± 0.75; and PD-L1 expressed in 70% (47/67) cervical carcinomas, the average relative optical density in superficial infiltrating (<0.5 cm) and deep infiltrating cervical squamous cell carcinomas was 2.70 ± 1.68 and 2.90 ± 1.72. PD-1 expressed in partial tumor infiltrating lymphocytes in those cases. PD-L1 expression density of cervical carcinomas was significantly higher than that of CIN (P<0.01); PD-L1 expression density of superficial invasive cervical carcinomas was slightly lower than that of deep invasive cases, but there was no significant statistic difference between them; in addition, PD-L1 expression negatively associated with the number of tumor infiltrating $CD8^+$T cells(r =-0.82, P<0.01), but not with the number of $CD4^+$T cells (r =-0.05, P> 0.05). Apoptosis occurred in partial tumor infiltrating lymphocytes of cervical carcinomas.

Conclusion: Human cervical carcinoma cells express PD-L1, and it negatively associates with the number of tumor infiltrating $CD8^+$T cells, but not with the number of $CD4^+$T cells. PD-L1 expression of tumor cells may play role on apoptosis of tumor infiltrating lymphocytes.