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Poster Sessions

Evaluation of tumor infiltrating lymphocyte and cytokine/chemokine production with anti-PD-1 antibody treatment in mouse syngeneic models

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Cancer immunotherapy opened the new way of cancer therapy and is noticed as the fourth therapy. Consequently, we need a system that can evaluate effectiveness of immune checkpoint inhibitors.

In this study, we measured tumor infiltrating lymphocytes (TILs) and cytokine/chemokine productions which were triggered by anti-PD-1 antibody treatment in CT26WT (colon), LLC (lung) or B16F10 (melanoma)-bearing mice syngeneic models. Anti-PD-1 or control antibody were administered intraperitoneally twice a week for two weeks. The anti-tumor effect was evaluated by tumor volume. Furthermore, after isolation of TILs from tumor, the TILs population was analyzed by flowcytometer. The productions of cytokine/chemokine including IFN- γ , TNF- α and CCL5 were measured by Cytometric Bead Array (CBA) or AlphaLISA analysis.

As a result, changes in the response against antibody, lymphocyte distribution and cytokine/chemokine productions were confirmed in the anti-PD-1 antibody treatment group. The differences in immune function were observed in the three mouse tumor cell lines. The method for evaluating the effectiveness of immune checkpoint inhibitors was established by analyzing TILs and inflammatory mediators.