

## AB037. P008. Intratumoral regulatory T cells (Tregs) reduced by neutralization TGF- $\beta$ in murine pancreatic ductal adenocarcinoma model without promising functional change

Guochao Zhao, Ning Pu, Abulimiti Nuerxiati, Hanlin Yin, Lei Zhang, Wenhui Lou, Wenchuan Wu

Fudan University, Shanghai 200000, China

**Abstract:** Regulatory T cells (Treg) is a vital cell subset inducing immune tolerance in tumor microenvironment by secreting suppressive cytokines and inhibit innate immune cells. Transforming growth factor- $\beta$  (TGF- $\beta$ ) plays an important role in this process because both the differentiation and functioning of Treg are relied on it. Elevated Tregs and TGF- $\beta$  in pancreatic ductal adenocarcinoma (PDAC) microenvironment was previously explored with a protein expression array. In this study, we evaluated the quantity and quality change of Treg after neutralizing TGF- $\beta$  with different doses of monoclonal antibody 1D11: the tumor

volume was measured, the T cell subsets was assessed by flow cytometry in peripheral blood and spleen and was stained by immunohistochemistry in tumor, and main cytokines in tumor tissue were detected by enzyme linked immunosorbent assay in a murine PDAC model. As a result, only tumor infiltrating Tregs decreased significantly (high dose, low dose and control,  $38.6\pm 8.1$ ,  $38.6\pm 1.8$ ,  $74.6\pm 4.9/40\times$  field,  $P=0.024$ ) after 1D11 administration, the CD8+ T cells in the tumor microenvironment elevated in the low-dose group but remain almost the same level in the high-dose group (high dose, low dose and control,  $3.1\pm 11.9$ ,  $12.3\pm 2.1$ ,  $5.4\pm 0.5/40\times$  field,  $P=0.016$ ). The frequency of CD4+, CD8+ or Treg in peripheral blood and spleen showed no significant change and the typical cytokines TGF- $\beta$  and interleukin-10 secreted by Tregs and interferon- $\gamma$  produced by T cells in tumor tissue also remained at the same level as untreated. In conclusion, this research indicated neutralizing TGF- $\beta$  with monoclonal antibody can reduce Tregs in tumor niche, however, the functional alteration should still be evaluated in further studies.

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