CORRECTION Open Access



Correction to: Gamma-delta ($\gamma\delta$) T cells: friend or foe in cancer development?

Yijing Zhao, Chao Niu and Jiuwei Cui*

Correction to: J Transl Med (2018) 16:3

https://doi.org/10.1186/s12967-017-1378-2

Following publication of the original article [1], the authors reported that they omitted to state that parts of

Fig. 2 were adapted from Van Acker et al. [2] published by Taylor & Francis Ltd (www.tandfonline.com). The authors apologise for this omission. Figure 2 and its corrected caption are given below.

^{*}Correspondence: cuijw@jlu.edu.cn Cancer Center, The First Hospital of Jilin University, Changchun 130021, People's Republic of China



Zhao et al. J Transl Med (2018) 16:122

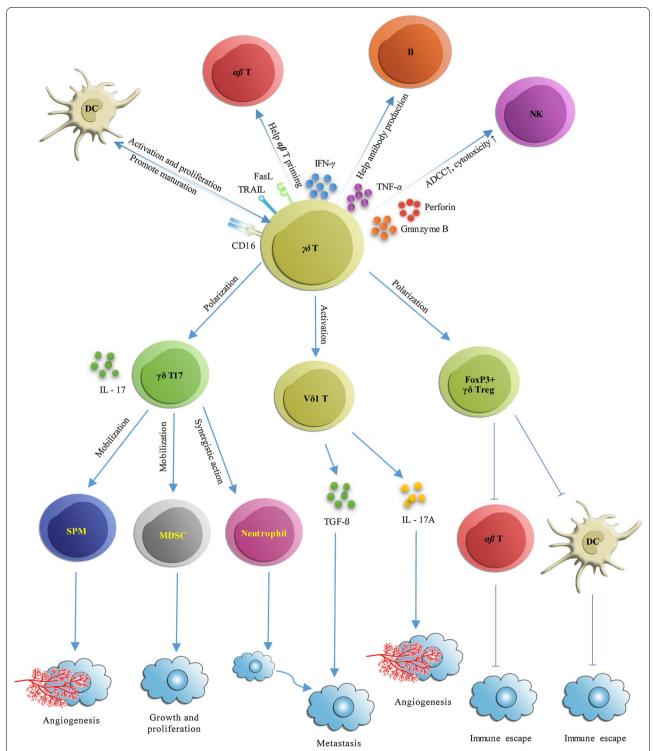


Fig. 2 Antitumor and protumor functions of $\gamma\delta$ T cells. $\gamma\delta$ T cells have both direct and indirect antitumor effects. Direct antitumor effects are mediated by lysing the tumor through the perforin-granzyme pathway, providing an early source of the inflammatory cytokines such as IFN- γ and TNF- α , eliminating Fas+ and TRAIL-R+ tumor cells, and ADCC. The indirect antitumor role of $\gamma\delta$ T cells is mediated by polarized $\gamma\delta$ Tfh cells, which promote B-cell antibody secretion. Besides, $\gamma\delta$ T cells also present antigens for $\alpha\beta$ T cell priming, trigger dendritic cell (DC) maturation, and induce robust NK cell-mediated antitumor cytotoxicity to play indirect antitumor role. With regard to their protumor effect, $\gamma\delta$ T cells can polarize into FOXP3+ $\gamma\delta$ Treg cells, and $\gamma\delta$ T17 cells. In addition, V δ 1 T cells are another subset of $\gamma\delta$ T cells that possess protumor activity. $\gamma\delta$ T cells are able to directly impair $\alpha\beta$ T cells and DC antitumor immunocyte function. $\gamma\delta$ T cells can also enhance MDSC, SPM, and neutrophil immunosuppressive functions. Together, these actions promote tumor angiogenesis, growth, proliferation, metastasis, and immune escape (Parts of this figure are adapted from Van Acker et al.)

The original article can be found online at https://doi.org/10.1186/s1296 7-017-1378-2.

Publisher's Note

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Received: 16 April 2018 Accepted: 16 April 2018 Published online: 08 May 2018

References

- Zhao Y, Niu C, Cui J. Gamma-delta (γδ) T cells: friend or foe in cancer development? J Transl Med. 2018;16:3. https://doi.org/10.1186/s1296 7-017-1378-2
- 2. Van Acker HH, Anguille S, Van Tendeloo VF, Lion E. Empowering gamma delta T cells with antitumor immunity by dendritic cell-based immunotherapy. Oncolmmunology. 2015;4(8):e1021538.