

CORRECTION

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Correction to: Contributions of T cell dysfunction to the resistance against anti-PD-1 therapy in oral carcinogenesis

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Following publication of the original article [1], minor errors were discovered in Figs. 1 and 4; specifically:

- Fig. 1c: an image from the PD-1R group was incorrectly used for a representative picture the Control group; the top right image has now been corrected
- Fig. 4b: the top two flow cytometry panels were duplicated in error; the top right panel has now been corrected

The corrected figures are given here. The correction does not have any effect on the final conclusions of the paper.

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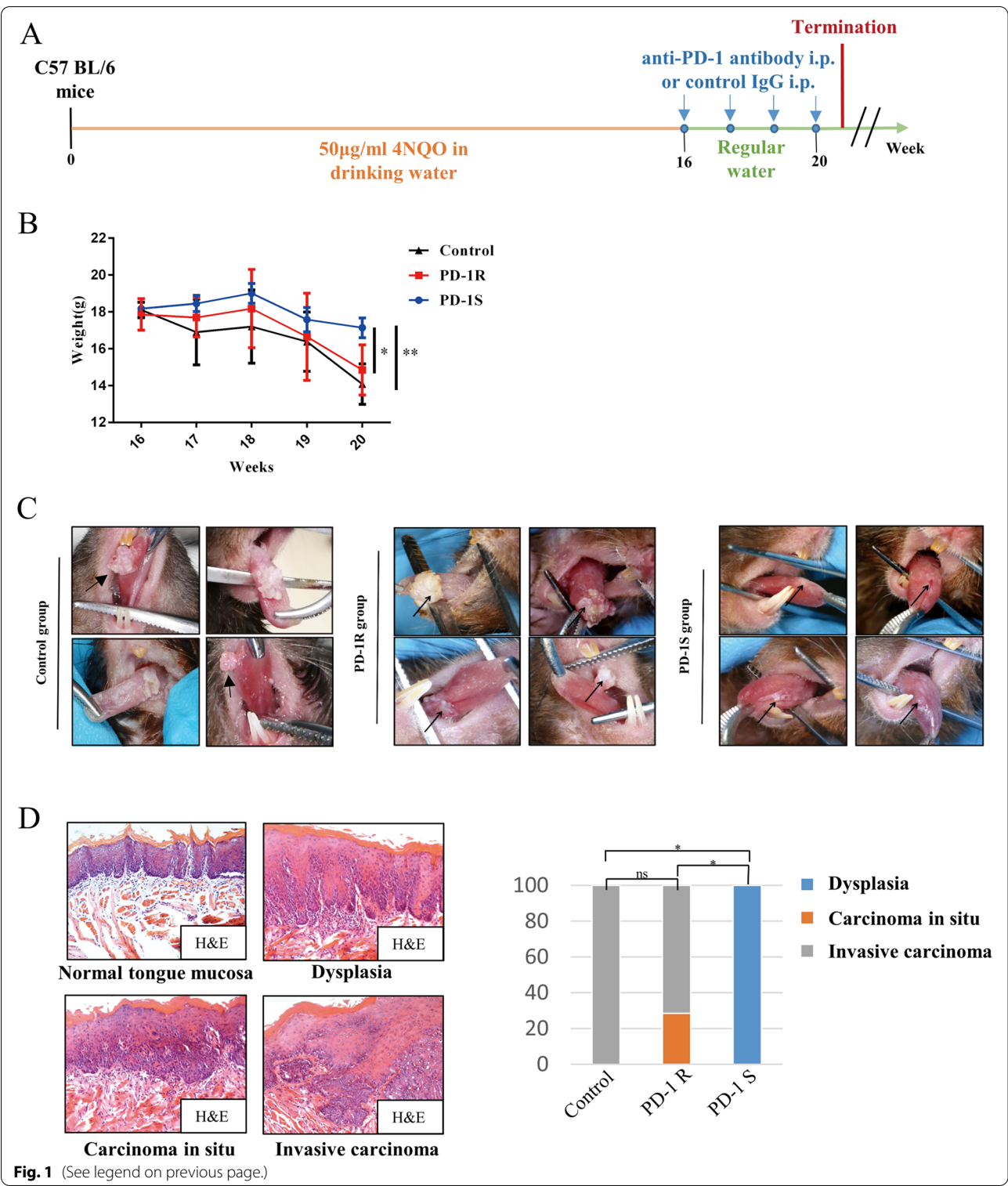
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(See figure on next page.)

Fig. 1 PD-1 blockade resistance occurred in the oral malignant transformation mouse model. **a** The schematic picture shows the 4NQO treatment and anti-PD-1 antibody ($n = 23$) and control IgG (vehicle control, $n = 5$) drug delivery strategies in C57BL/6 mice. **b** Body weight (g) was measured and documented for the control group and anti-PD-1 group (the PD-1R and PD-1S groups) once a week. Significant weight loss was observed in the PD-1R group at week 20. The data are presented as the mean \pm SEM (one-way repeated-measures ANOVA, $*P < 0.05$, $**P < 0.01$). **c** Representative macroscopic observation of the lingual mucosal lesions after treatment with control IgG (left panel) or anti-PD-1 antibody in the PD-1R group (middle panel) and PD-1S group (right panel). For PD-1R group, similarly with control group, leukoplakia-like lesions with smooth surfaces progressed into white masses with cauliflower-like (upper left), rough and granular (upper right) or exogenous verrucous surfaces (lower right and left). The lingual mucosal lesions treated with anti-PD-1 antibodies maintained a wrinkled paper-like appearance macroscopically in PD-1S group. **d** Representative hematoxylin and eosin (H&E) staining of dysplasia, carcinoma in situ (pre-invasive carcinoma) and invasive carcinoma. Statistical significance was determined by the Kruskal-Wallis test, $*P < 0.05$



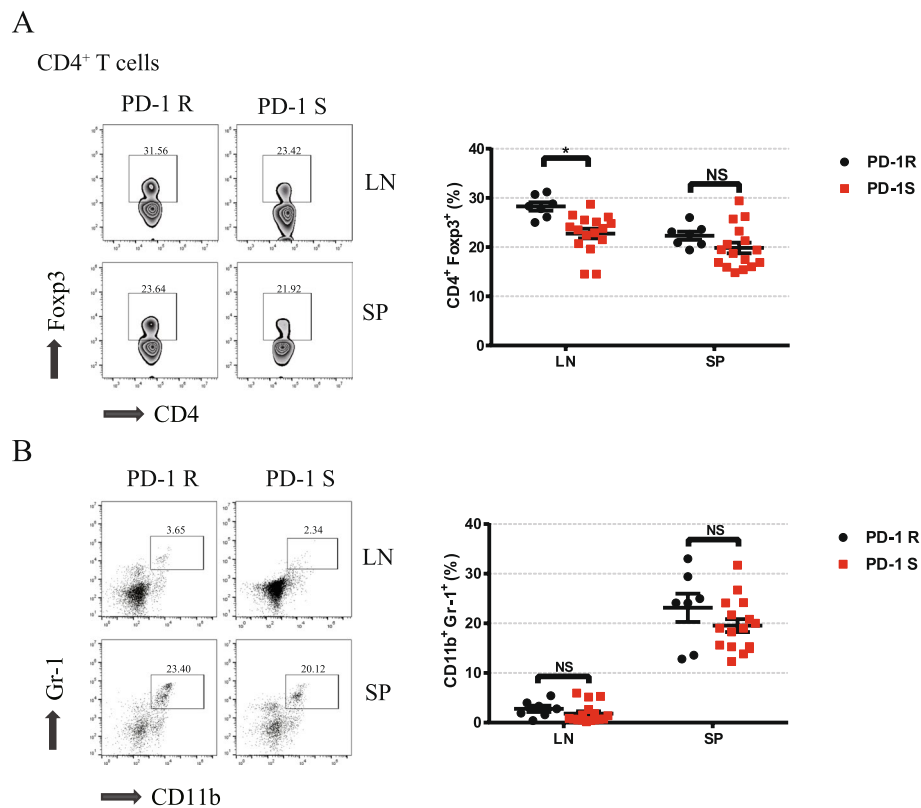


Fig. 4 Relative distributions of key immunosuppressive cells after the anti-PD-1 antibody treatment. **a, b** Flow cytometry analysis was performed to characterize and quantify Tregs (CD4⁺Foxp3⁺) and MDSCs (CD11b⁺Gr-1⁺). Compared to the PD-1S group, the PD-1R group exhibited an increase in Treg accumulation. All data represent the mean \pm SEM. Statistical significance was determined by Student's t test, **P* < 0.05. Tregs, regulatory T cells; MDSCs, myeloid-derived suppressor cells