cancers

Supplementary Materials: Dormant Tumor Cell Vaccination: A Mathematical Model of Immunological Dormancy in Triple-Negative Breast Cancer

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Table S1. Measurement of tumor cell number. After injection of 5×10^4 proliferative or quiescent tumor cells mice were sacrificed at day 9, 15 or 30. The number of tumor cells and the percentage of $CD45^+$ leukocytes were measured at each time point. For each time point, three mice were sacrificed.

Days from Injection	Mean Cell Number (4T1) ± SEM (Millions)	% $CD45^+$ Cells	Mean Cell Number (MR20) ± SEM (Millions)	% $CD45^+$ Cells
9	11.2 ± 3.17	95	6.7± 0.25	95
15	17.7 ± 1.17	78	9± 1.6	95
30	33.5± 13.79	60	11.3± 0.88	95

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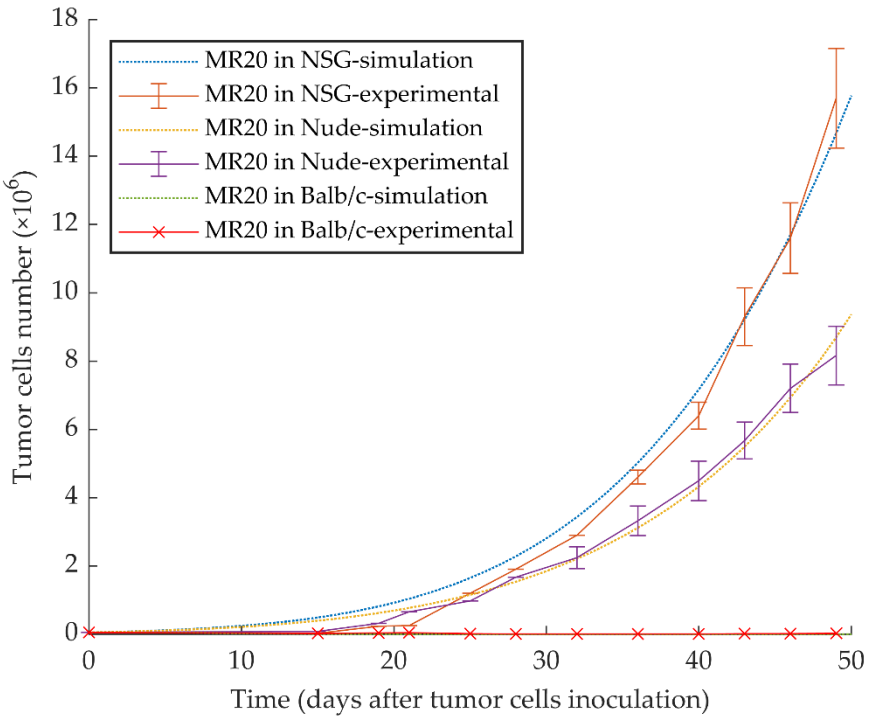

Figure S1. Experimental and simulated growth curves of MR20 tumors. MR20 tumor cells were injected into three different types of mice: wild type BALB/c mice, nu/nu mice and NSG (NOD SCID common gamma 2 KO) mice. In each group, at least five mice were included. Experimental data are represented as mean ± SEM. Experimental data are from Ref. [51].

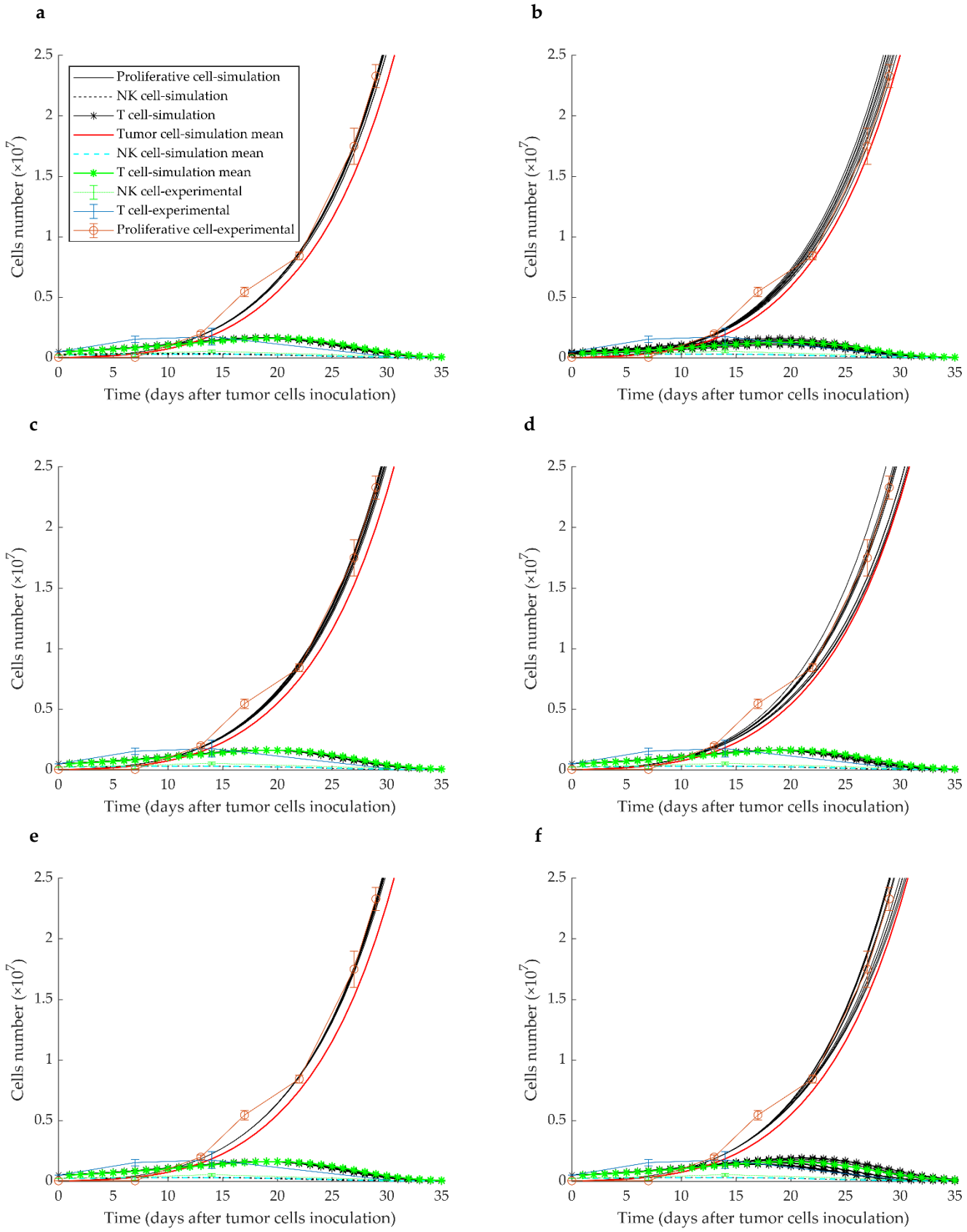

Figure S2. Sensitivity analysis of proliferative tumor parameters. The effector immune system's initial conditions and the equation parameters were randomized by a normal random variable with a standard of deviation (SD) of 25% of the mean value. Each simulation was performed 10 times. The average curve was calculated for each series of curve simulations of

tumor cells, NK cells and T cells. (**a**) initial NK cell number, (**b**) initial CD8+ T cell number, and parameters (**c**) b_1, (**d**) η, (**e**) p, (**f**) u_1 were randomized.

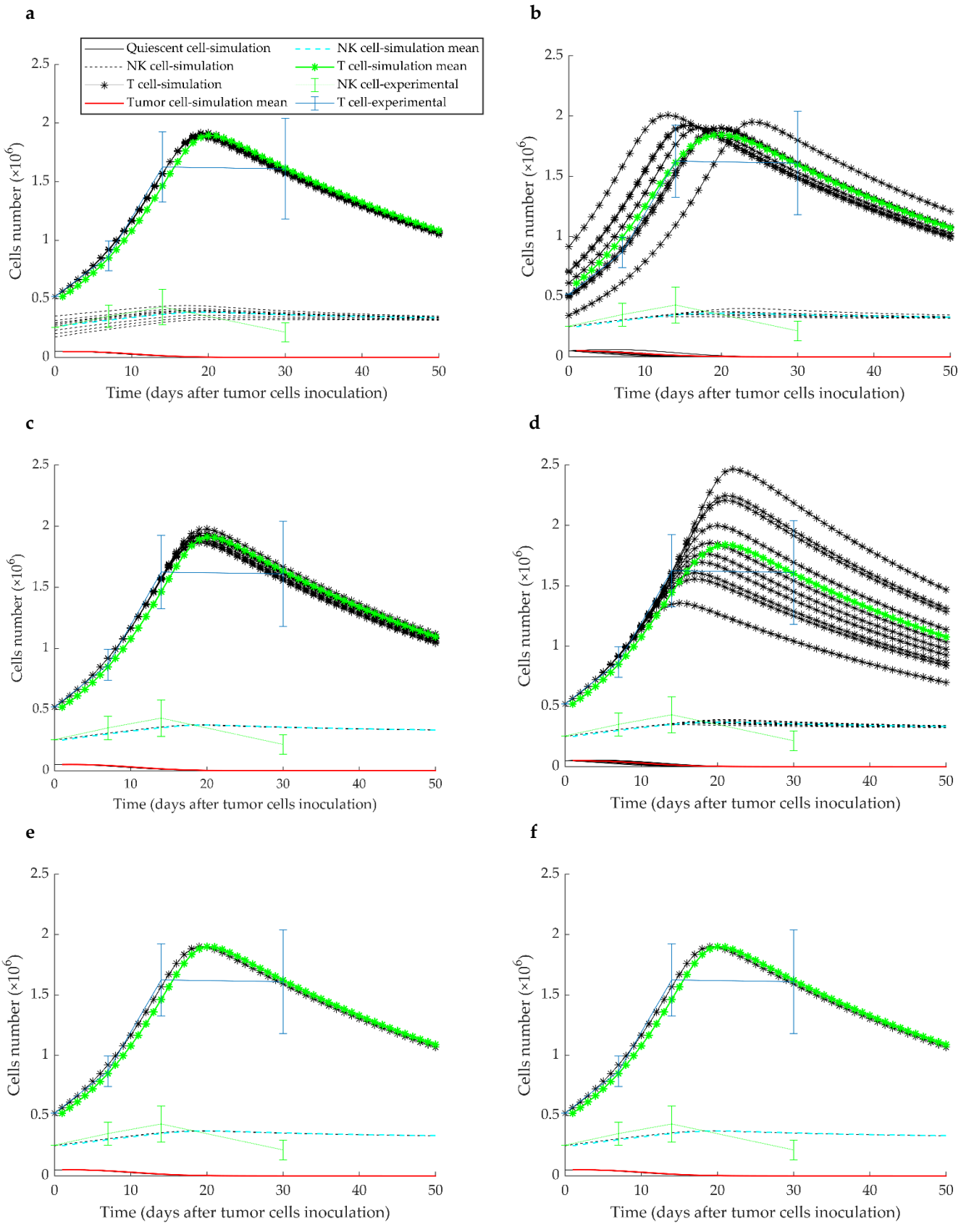

Figure S3. Sensitivity analysis of quiescent tumor parameters. The effector immune system's initial conditions and the equation parameters were randomized by a normal random variable with a standard deviation (SD) of 25% of the mean value. Each simulation was performed 10 times. The average curve was calculated for each series of curve simulations of tumor cells, NK cells and T cells. (**a**) initial NK cell number, (**b**) initial CD8+ T cell number, and parameters. (**c**) b, (**d**) η, (**e**) p, (**f**) u_2 were randomized.