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Supplemental Information

Neoadjuvant Use of Oncolytic Herpes

Virus G47 Δ Enhances the Antitumor

Efficacy of Radiofrequency Ablation

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(A)



Supplementary Fig. S1

In vitro X-gal staining and virus replication assay

(A) Hep3B, SNU-398, HuH-7, HepG2, PLC/PRF/5, Hepa1-6 and Vero cell monolayers were

infected with G47 Δ at a MOI of 1 or 3, incubated for 6 hours, fixed, and stained with X-gal. (B) The cell monolayers were infected with G47 Δ (3 × 10³ pfu) and incubated at 37°C for 24 or 48 hours. Virus yields were evaluated by plaque assay on Vero cells. The data are means (n = 3); bars

represent SD. *, P < 0.05. ***, P < 0.001.



Supplementary Fig. S2

MH134-TC is too immunogenic to evaluate the antitumor efficacy of $G47\Delta$ in combination with RFA MH134-TC was inoculated subcutaneously on bilateral flanks, and when tumors reached 6–8mm in

diameter, the left tumors were treated with RFA or sham-RFA on day 4. Contralateral tumor

volume was evaluated. Regardless of whether RFA was performed, all contralateral tumors

eventually shrank. The data are means (n = 7); bars represent SEM.



Supplementary Fig. S3

Determination of tumor-infiltrating lymphocytes (TILs) subsets by a flow cytometry gating strategy



Supplementary Fig. S4

Serum cytokine analyses of the G47 Δ *and RFA combination therapy*

The left subcutaneous Neuro2a tumors (average 78 mm³) were treated as described in Fig. 2A. The serum was collected on days 13 (POD 1), 15 (POD 3) and 19 (POD 7). Levels of interleukin (IL)-12 and IL-6 were measured using the BioPlex system. For IL-12, the combination therapy did not cause any significant difference between other therapies. The combination therapy significantly decreased the IL-6 level compared with RFA monotherapy on POD 3. The data are means (n = 5); bars represent SEM. *, P < 0.05. **, P < 0.01.

Description	Fluorochromes	company
anti-mouse CD49b	FITC	BioLegend
anti-mouse Foxp3	PE	eBioscience
anti-mouse CD8a	PE/cy7	BioLegend
anti-mouse CD3	APC	BioLegend
anti-mouse CD45	APC/cy7	BioLegend
anti-mouse CD4	BV421	BioLegend
anti-mouse CD14	BV510	BioLegend
anti-mouse CD19	BV510	BioLegend
Fixable Viability Dye	BV570	BioLegend
Purified Anti-mouse CD16/32		BioLegend

Supplementary Table S1

The antibodies used in the flow cytometric analysis