

Description of Additional Supplementary Files

File Name: Supplementary Movie 1

Description: **T cells find and attack cancer spheroids**

Montage of experiments showing T cells exploring matrigel droplets, finding spheroids, and attacking them. The spheroids display visible fragmentation in some cases, but not in others.

File Name: Supplementary Movie 2

Description: **T cells reaching spheroid**

Upon contact with the spheroid, T cells (green) change their motility mode and begin to explore the surface of the spheroid. Left movie shows bright-field images. Right movie shows edge-detection to highlight moment when cell is on spheroid vs. off spheroid.

File Name: Supplementary Movie 3

Description: **Dynamics of OVA-B16 vs. WT-B16 cases**

T cell accumulation on the spheroids is specific to the OVA-expressing B16 cells.

Accumulation is only seen in the OVA expressing spheroids (left), while T cells do not attach nor accumulate on WT cells (right).

File Name: Supplementary Movie 4

Description: **T cells can leave OVA-B16 spheroids**

T cells can also leave OVA-expressing spheroids and migrate back into Matrigel matrix.

File Name: Supplementary Movie 5

Description: **Fragmentation is associated with Caspase 3/7 signal**

Simultaneous views of CTLs (green), Caspase 3/7 (red), and bright field views. The apparition of Caspase signal is well correlated with the adhesion of CTLs and the fragmentation of the B16 cells.

File Name: Supplementary Software 1

Description: Image analysis module and data analysis scripts for the quantitative analysis of CTL accumulation on spheroids.