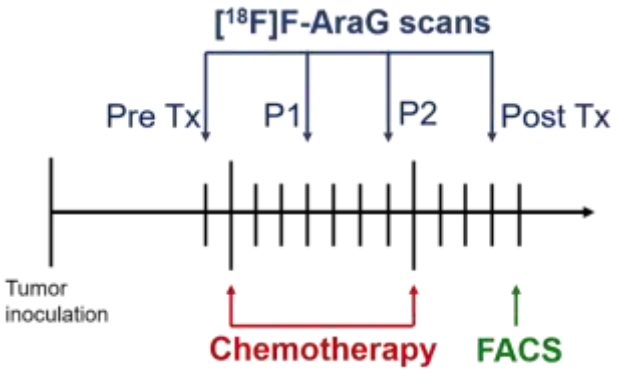
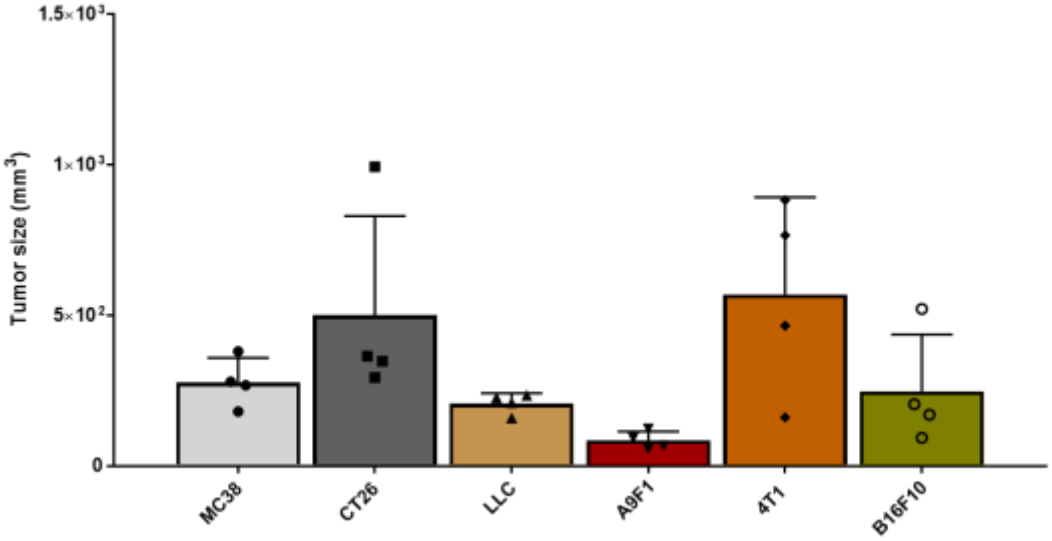


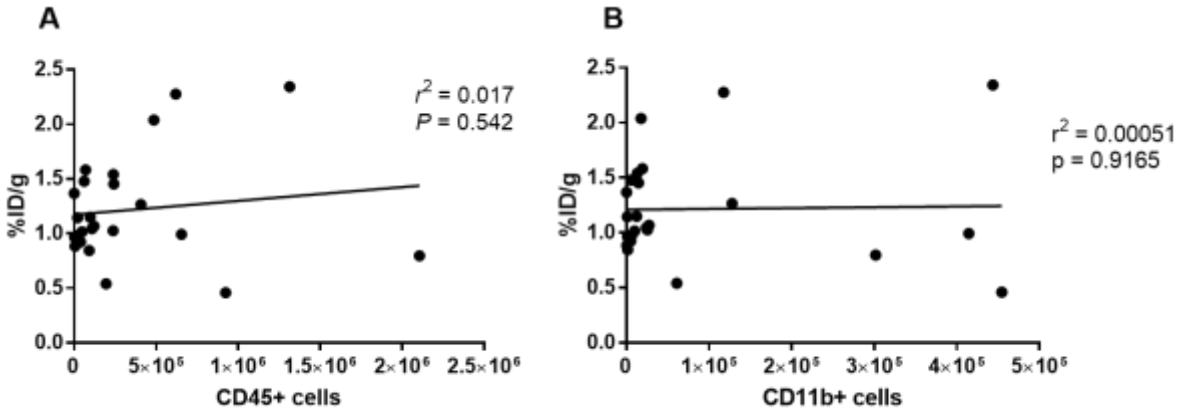
Supplemental Fig. 1. [^{18}F]F-AraG longitudinal imaging of MC38 bearing mice undergoing chemotherapy. The chemotherapy was administered once a week for two weeks. Mice were imaged one day before the start of therapy (Pre Tx) and then 3 (P1) and 6 (P2) days after the first, and 3 days after the second chemotherapy administration (Post Tx).

Marker	Flurochrome	Clone	Company
CD45	Alexa Fluor 700	30-F11	Biolegend 103128
CD4	APC Cy7	GK1.5	Biolegend 100414
CD8	PerCP	53-6.7	Biolegend 100732
PD-1	Brilliant Violet 605	29F.1A12	Biolegend 135220
FoxP3	PE	150D	Biolegend 320008

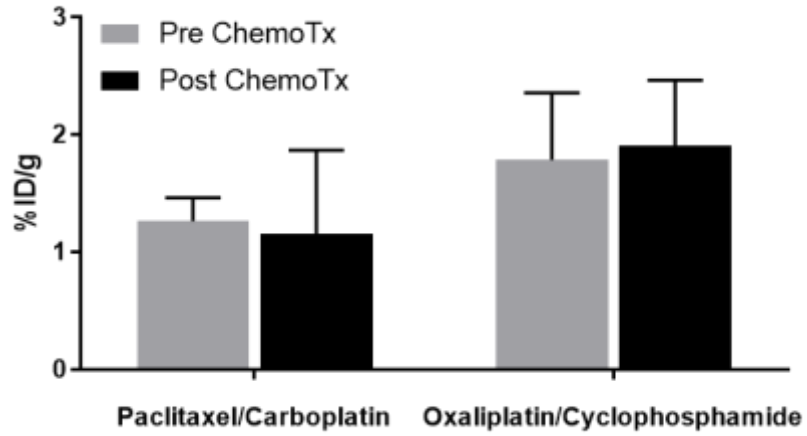
Supplemental Table 1. Antibodies used for FACS analysis of tumor infiltrating lymohocytes



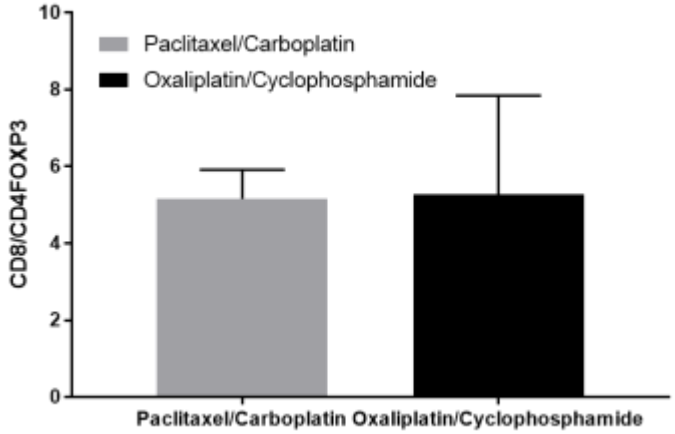
Supplemental Fig. 2. Tumor size prior to imaging differed between different tumor types and individual mice. The smallest sizes were recorded A9F1 tumors and the largest for 4T1 model.



Supplemental Fig. 3. Correlation of the [^{18}F]F-AraG signal with the number of immune cells present in the TME. **A.** The [^{18}F]F-AraG signal showed no correlation with the number of total lymphocytes found in the TME. **B.** The [^{18}F]F-AraG signal showed no correlation with the number of CD11b+ cells found in the TME. CD11b is marker expressed on a variety of cells including macrophages, granulocytes and NK cells.



Supplemental Fig.4. The effects of chemotherapy in 4T1 tumor model. Neither paclitaxel/carboplatin or oxaliplatin/cyclophosphamide treatment led to a significant increase in [^{18}F]F-AraG signal post therapy.



Supplemental Fig. 5. The effects of chemotherapy on the CD8/CD4FOXP3 ratio in A9F1 tumor model. The ratio of CD8+ to CD4FOXP3 cells was not significantly different between the groups of mice treated with paclitaxel/carboplatin and oxaliplatin/cyclophosphamide.