

PET Reconstruction and Quantification

The images were reconstructed using a two-dimensional ordered-subset expectation maximum (OSEM) algorithm, and no correction was applied for attenuation or scatter. For each microPET scan, regions of interest (ROIs) were drawn over the tumor using vendor software ASI Pro 5.2.4.0 on decay-corrected whole-body coronal images. The maximum radioactivity concentrations (accumulation) within a tumor were obtained from mean pixel values within the multiple ROI volume and then converted to megabecquerels per milliliter per minute using a conversion factor. These values were then divided by the administered activity to obtain (assuming a tissue density of 1 g/mL) an image-ROI-derived percent injected dose per gram (%ID/g).

Fluorescence Staining Analysis

All images were analyzed using Image J software (Imaging Processing and Analysis in Java, NIH image, MD) version 1.46. The software was used to assess the total DAPI-positive nuclei numbers and Ki67-positive nuclei numbers. The Ki-67 staining index (SI) was defined as the percentage of positive nuclei within the total number of nuclei in 10 random views, as indicated by DAPI staining. Human $\alpha\beta3$ fluorescence intensity, macrophage, and murine $\beta3$ fluorescence intensity were calculated in equivalent areas by measuring mean fluorescence intensity of image pixels stained positive with Abegrin, F4/80 or CD61. For each tumor section, ten random high power images ($\times 20$ magnifications) were analyzed.

Results

Supplemental Table 1. Tumor growth inhibition after Abraxane treatment

Time (d)	0	3	5	7	9	12	14	16	18	21
Control	226.1 (29.2)	307.5 (30.6)	376.7 (48.8)	404.6 (42.2)	411.9 (34.5)	444.3 (40.2)	522.1 (39.4)	555.4 (58.7)	602.0 (55.2)	712.9 (67.7)
Abraxane	268.5 (42.6)	268.5 (48.9)	208.3 (30.6)	180.5 (30.6)	148.8 (30.8)	137.7 (25.7)	132.9 (23.7)	141.2 (25.6)	144.1 (29.5)	157.9 (36.5)

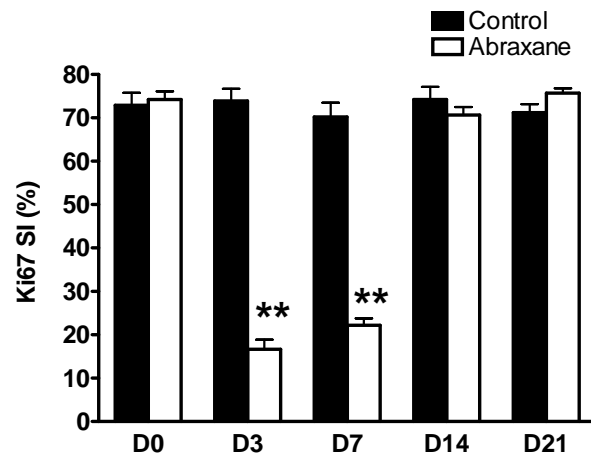
(xx.xx)=SD n = 10/group

Supplemental Table 2. Quantitative tumor uptake of ^{18}F -FPPRGD2 and ^{18}F -FDG

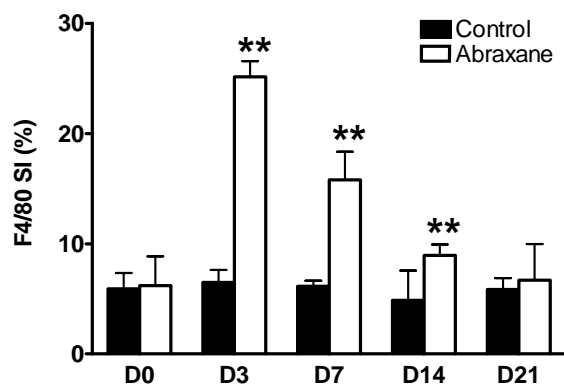
(%ID/g)

		Day 0	Day 3	Day 7	Day 14	Day 21
^{18}F -FPPRGD	Control	1.21±0.17	1.24±0.06	1.27±0.08	1.25±0.17	1.26±0.18
	Abraxane	1.22±0.08	1.08±0.10	0.63±0.06	1.42±0.14	1.23±0.19
^{18}F -FDG	Control	3.56±0.53	4.11±0.96	3.63±0.59	3.83±0.87	4.05±0.73
	Abraxane	3.42±0.66	4.64±0.73	5.14±1.09	3.85±0.57	4.05±0.52

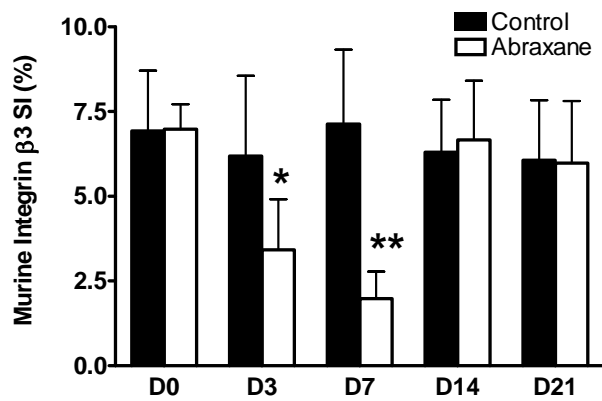
mean ± SD, n = 10/group



Supplemental Figure 1. Quantification of Ki67 staining. ** $p < 0.01$.



Supplemental Figure 2. Quantification of F4/80 staining. ** P< 0.01.



Supplemental Figure 3. Quantification of murine integrin $\beta 3$ staining. * $P < 0.05$; **

$P < 0.01$.