

Figure 1. PET images from representative pairs of animals. The top row is the vehicle-treated cohort at imaging days 1 and 29, and the bottom row is the MLN4924-treated group. A reduction in the signal intensity can be observed following treatment, indicating a reduction in the uptake of FDG in the tumor. By day 13, during the second cycle of therapy, the tumor uptake of FDG appears similar to other organs.

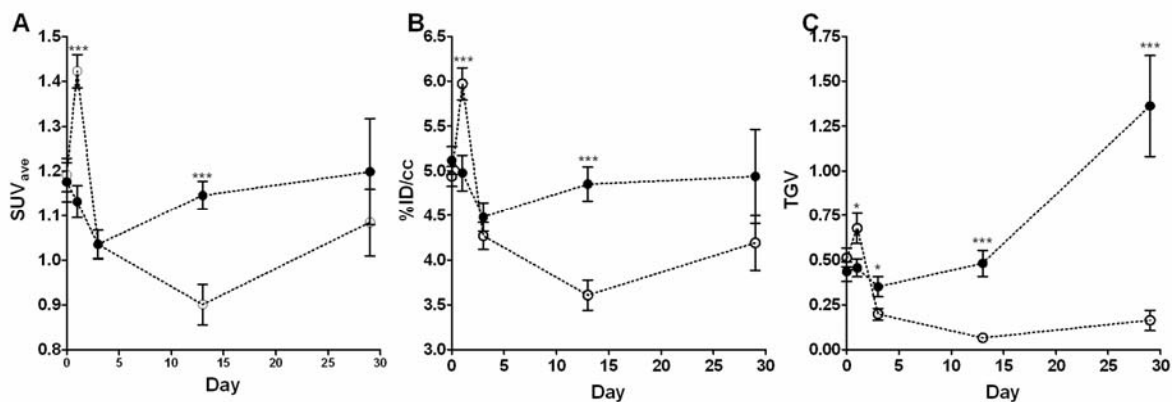


Figure 2. The PET image analysis results are shown in Figure 3. *A*: The average standardized uptake value (SUV_{ave}); *B*: decay-corrected percent injected dose per cc (%ID/cc); and *C*: total glycolytic volume (TGV). On day 13, all PET parameters are significantly reduced as compared to vehicle treatment by 21.3%, 25.6%, and 86.1% for SUV_{ave}, %ID/cc, and TGV, respectively ($p < 0.0001$).

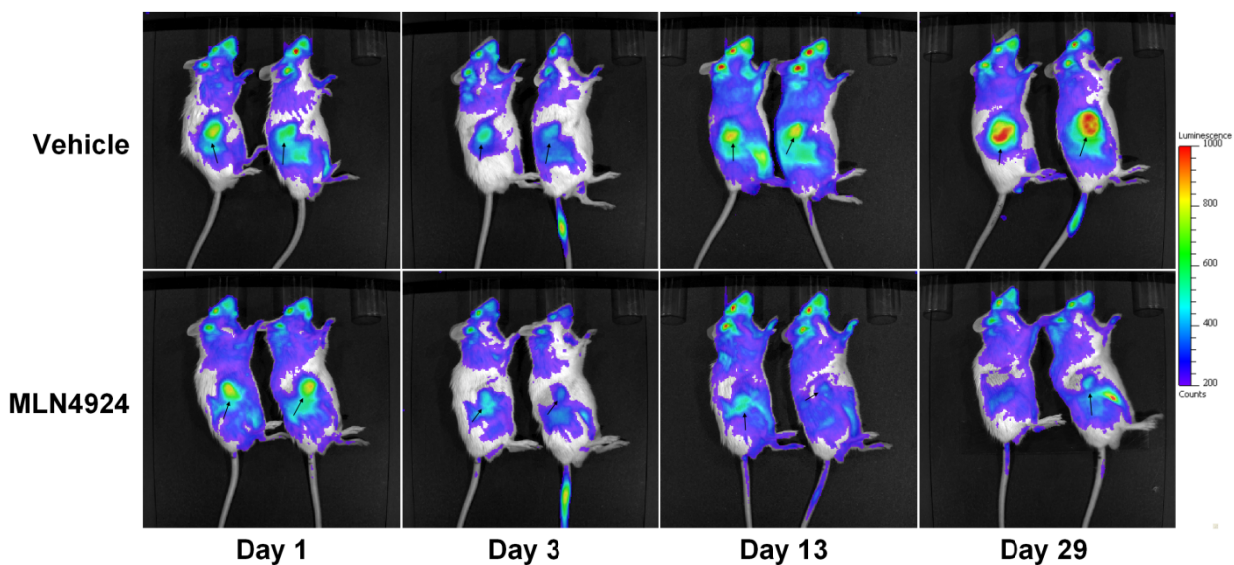


Figure 3. CLI images from representative pairs of animals. The top row is the vehicle-treated cohort at each of the imaging days, and the bottom row is the MLN4924-treated group. As observed in the PET data, there is a visual reduction in the image signal intensity in the MLN4924 treatment group that is consistent with a reduction in FDG uptake.

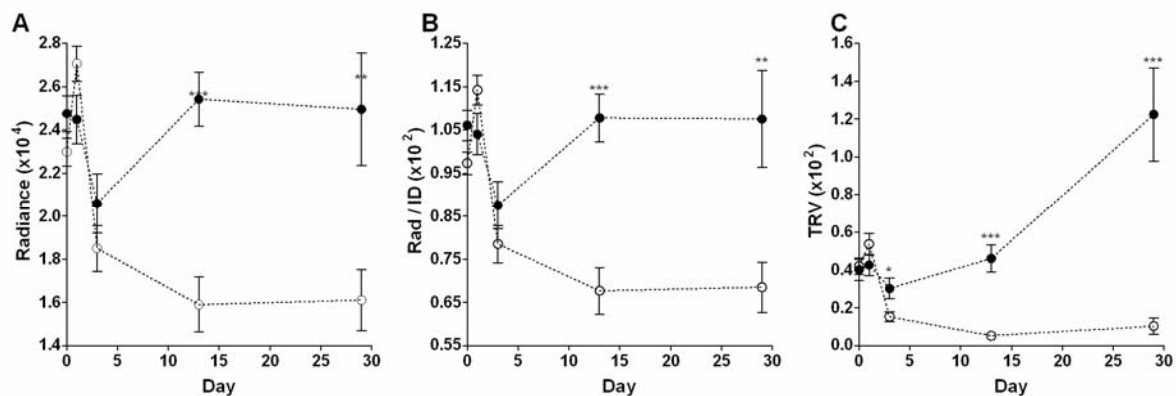


Figure 4. The CLI image analysis: *A*. The radiance (Rad); *B*. radiance per decay-corrected injected dose per cc (Rad/ID); and *C*. total radiant volume (TRV). On day 13, the CLI parameters for the MLN4924-treated group are all significantly reduced from baseline (30.9%, 30.4%, and 87.9%) and from the vehicle treated values (37.5%, 37.2%, 88.9%) (for Rad, Rad/ID, and TRV, respectively, and all $p < 0.0001$).

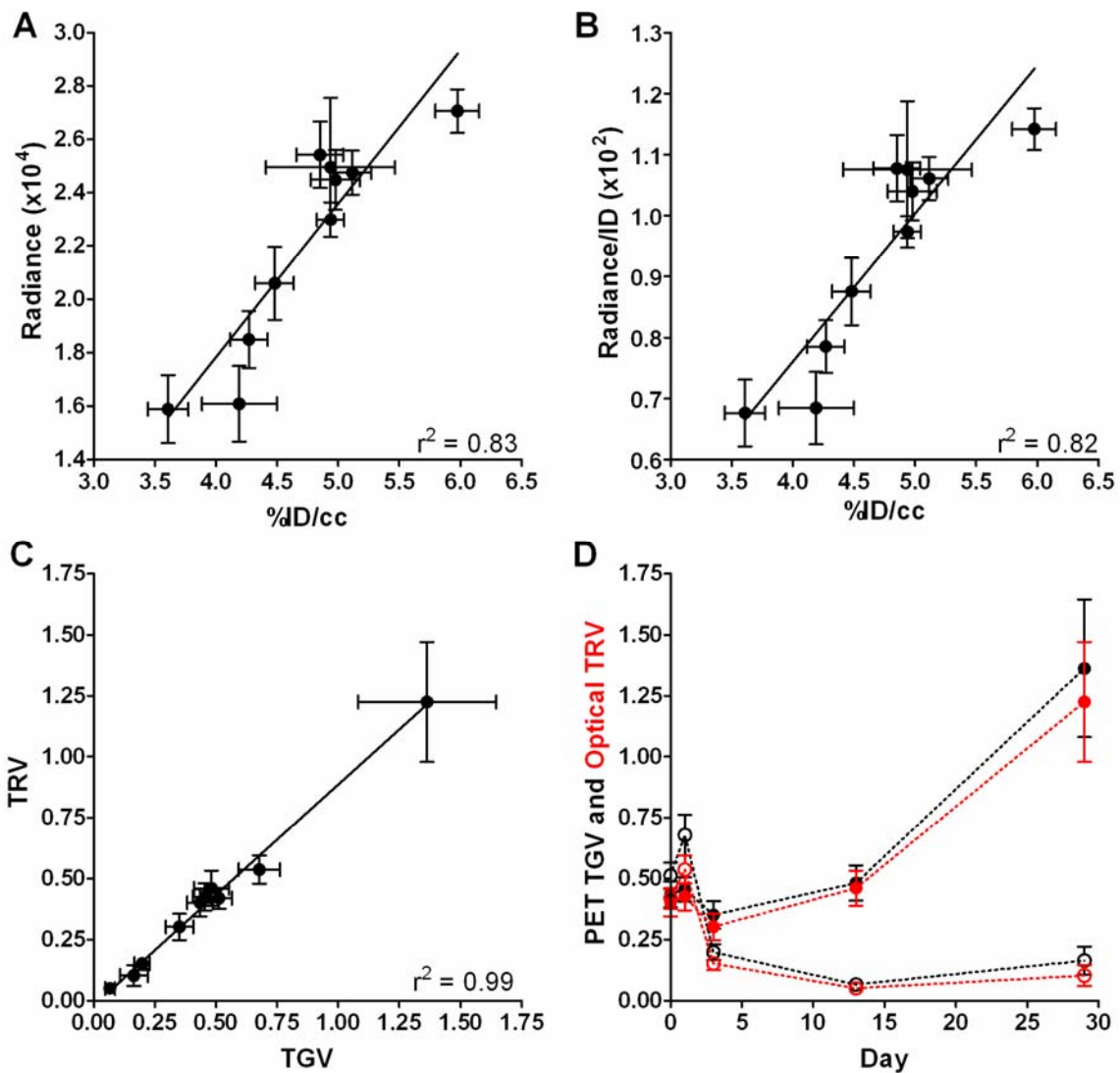


Figure 5. High correlation among the various PET and CLI analysis methods with strong correlations found between PET %ID/cc and CLI Rad ($r^2 = 0.83$) (A) and CLI Rad/ID ($r^2 = 0.82$) (B). PET TGV and CLI TRV also were highly correlated ($r^2 = 0.99$) (C). When PET TGV and Optical TRV are plotted and compared on the same graph there is no clear statistical difference between the two imaging modalities (D).

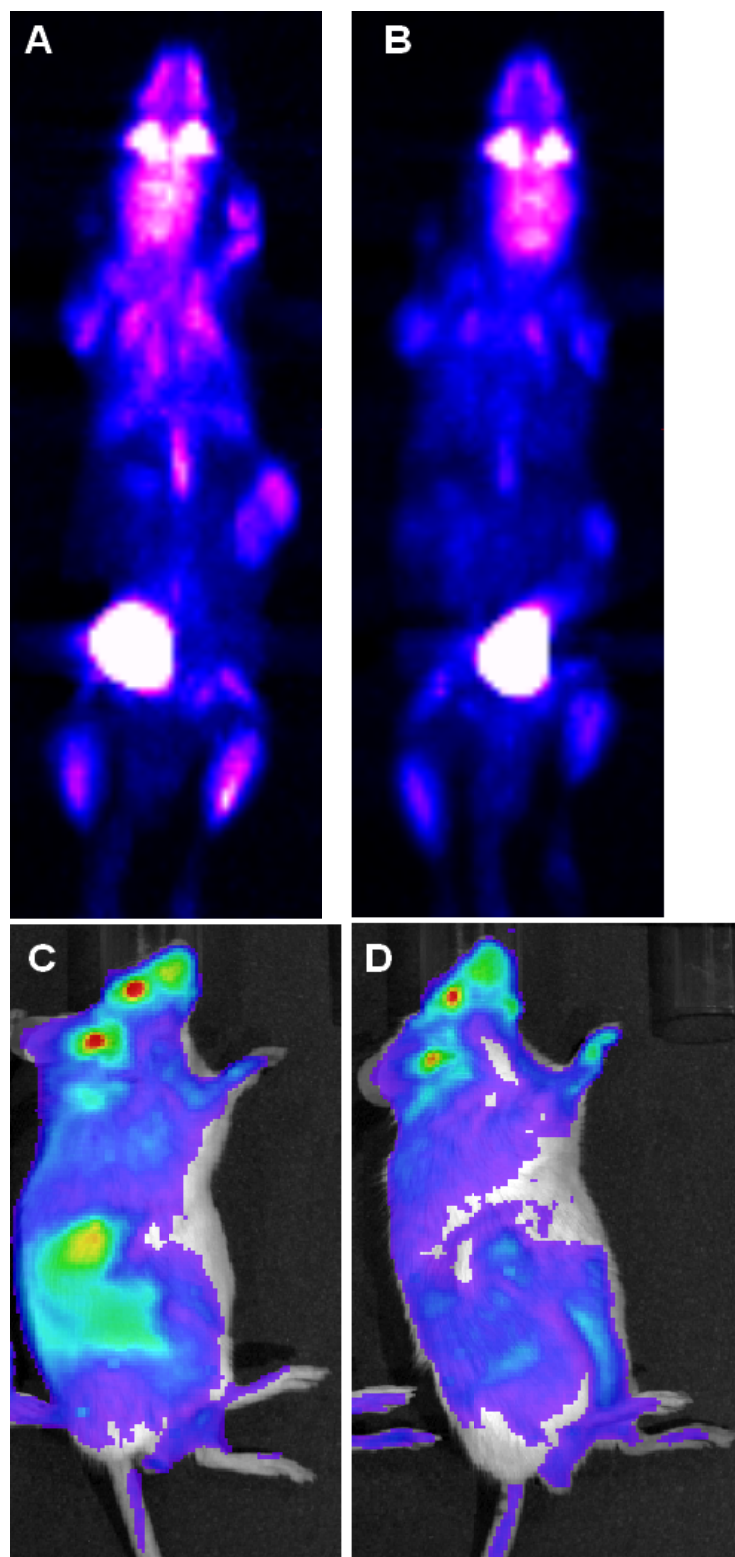


Figure 6. Visual comparison of PET and CLI modalities between a single animal is shown on Day 13 with Vehicle (A and C) and MLN4924 (B and D) treatment. Note both the marked reduction in FDG uptake following MLN4924 treatment and the qualitative agreement between PET and CLI.