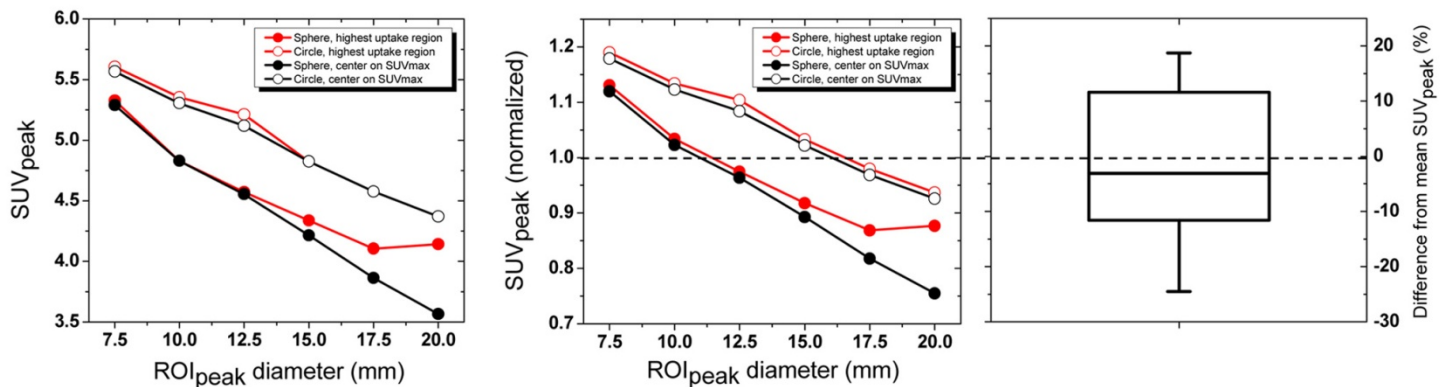
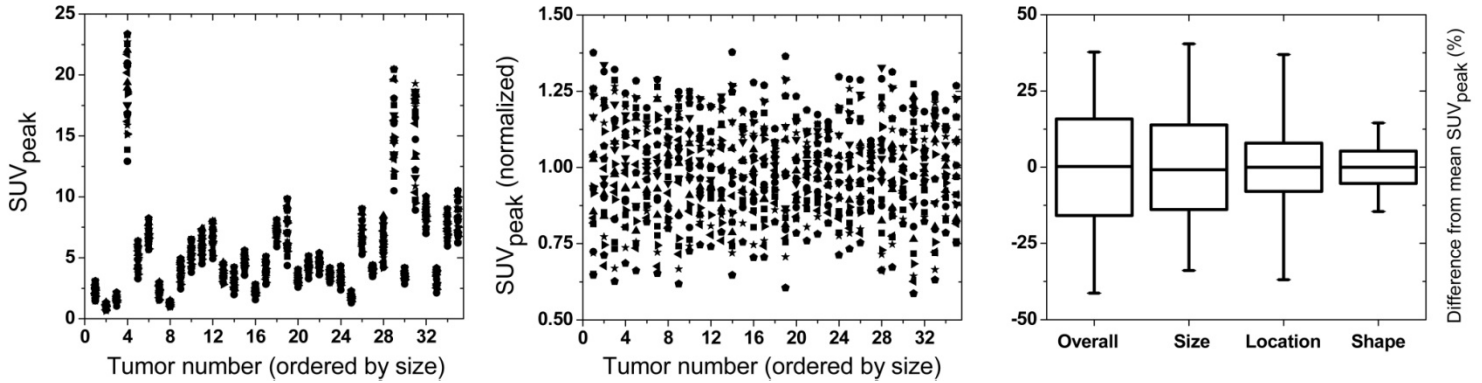


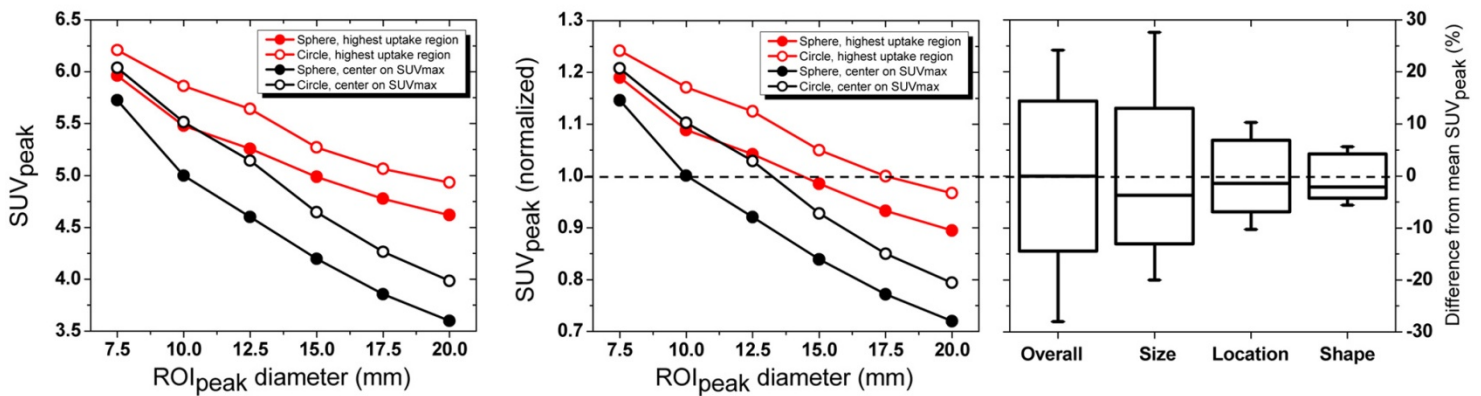
**Supplemental Figure 1: FLT PET/CT image of a lung lesion with  $ROI_{peak}$  (white circle) superimposed.** Here,  $ROI_{peak}$  was a 12.5 mm diameter circle placed in the highest uptake region of the tumor.



**Supplemental Figure 2: Variation of  $SUV_{peak}$  for a retroperitoneal lesion (lesion number 11).** 24 different  $SUV_{peak}$  (left, absolute values; middle, normalized to mean, dashed line) arising from 24 different  $ROI_{peak}$  definitions. (Right) Box represents coefficient of variation, whiskers show range, and solid line depicts median of  $SUV_{peak}$  values.



**Supplemental Figure 3: Intra-tumor variation of  $SUV_{peak}$ .**  $SUV_{peak}$  values (left, absolute values; middle, normalized to mean) at baseline in 35 tumors (ordered from smallest to largest) arising from different  $ROI_{peak}$  definitions. (Right) Overall variation of intra-tumor  $SUV_{peak}$  and variation associated with changing size, location, and shape of  $ROI_{peak}$ . Boxes represent coefficient of variation, whiskers show range, and solid line depicts median of  $SUV_{peak}$  values.



**Supplemental Figure 4: Variation of population average  $SUV_{peak}$ .**  $SUV_{peak}$  values (left, absolute values; middle, normalized to mean, dashed line) arising from different  $ROI_{peak}$  definitions averaged over all tumors (population average). (Right) Overall variation of population average  $SUV_{peak}$  and variation associated with changing size, location, and shape of  $ROI_{peak}$ . Boxes represent coefficient of variation, whiskers show range, and solid line depicts median.