

**Supplemental Table 1:** Descriptive data of lesion- and- patient-based uptake metrics on test and retest scans for PSF-reconstruction images.

	Test		Retest	
	Median	Range	Median	Range
<b>Lesion-level</b>				
<i>Volume</i>	3.4	2.0 – 7.8	3.6	1.9 – 7.5
<i>SUV<sub>mean</sub></i>	25.0	15.0 – 40.3	24.2	14.9 – 47.2
<i>SUV<sub>peak</sub></i>	27.2	15.3 – 38.8	29.5	16.3 – 48.8
<i>SUV<sub>max</sub></i>	52.9	29.2 – 93.9	47.1	29.5 – 98.6
<i>TBR<sub>mean</sub></i>	19.7	11.6 – 33.7	19.4	13.1 – 34.1
<i>TBR<sub>peak</sub></i>	23.8	10.4 – 37.7	23.0	13.2 – 36.0
<i>TBR<sub>max</sub></i>	49.3	22.0 – 83.3	36.8	26.9 – 76.1
<i>TLU<sub>SUV</sub></i>	100.3	38.5 – 223.0	99.9	35.6 – 240.9
<i>TLU<sub>TBR</sub></i>	84.0	29.2 – 213.1	82.2	27.1 – 255.7
<b>Patient-level</b>				
<i>TTV</i>	17.2	7.5 – 46.0	17.9	7.8 – 47.0
<i>TTB<sub>SUV</sub></i>	375.3	74.6 – 1909.1	340.9	77.4 – 2094.6
<i>TTB<sub>TBR</sub></i>	276.9	66.3 – 1933.5	263.5	74.8 – 2215.6

*IQR = interquartile range; SUV = Standardized Uptake Value; TBR = Tumor-to-Blood Ratio; TLU = Total Lesion Uptake; TTV = Total Tumor Volume; TTB = Total Tumor Burden*

**Supplemental Table 2:** Repeatability of lesion and patient-based uptake metrics for PSF-reconstruction images. *P*-value indicates a significant differences in repeatability between original (non-PSF) and PSF-reconstructions.

Parameter	Mean test-retest difference %	RC%	ICC (95% CI)	<i>p</i> -value <i>non-PSF vs. PSF</i>
<b>Lesion-level</b>				
<i>Volume</i>	0.1	32.0	1.00 (1.00-1.00)	0.427
<i>SUV<sub>mean</sub></i>	0.6	32.3	0.97 (0.95-0.99)	<b>0.005</b>
<i>SUV<sub>peak</sub></i>	2.2	27.8	0.98 (0.97-0.99)	0.147
<i>SUV<sub>max</sub></i>	-0.9	52.1	0.87 (0.77-0.93)	<b>&lt;0.001</b>
<i>TBR<sub>mean</sub></i>	2.2	41.7	0.96 (0.92-0.98)	<b>&lt;0.001</b>
<i>TBR<sub>peak</sub></i>	3.7	38.1	0.97 (0.94-0.98)	<b>&lt;0.001</b>
<i>TBR<sub>max</sub></i>	0.7	58.9	0.88 (0.78-0.94)	<b>&lt;0.001</b>
<i>TLU<sub>SUV</sub></i>	0.7	30.3	0.99 (0.98-0.99)	0.616
<i>TLU<sub>TBR</sub></i>	2.2	41.3	0.97 (0.95-0.99)	0.699
<b>Patient-level</b>				
<i>TTV</i>	1.7	13.9	1.00 (1.00-1.00)	0.152
<i>TTB<sub>SUV</sub></i>	1.9	23.4	0.99 (0.98-1.00)	0.952
<i>TTB<sub>TBR</sub></i>	3.9	37.6	0.98 (0.92-1.00)	0.588