



Figure S1 Bland-Altman plots for the reproducibility of different background activity measured by SUV. SUV, Standardized uptake value normalized. (A) Reproducibility of absolute variations in different background activity. The full lines of ± 0.3 represented the permitted variation from study to study by the Response Evaluation Criteria in Solid Tumors (RECIST). The dash lines represented the 95% limits of agreement of each background variation. SUV average was equal to the mean SUV of the two scans. Absolute variation was equal to the SUV in the second scan minus the SUV in the first scan. (B) Reproducibility of relative variations in different background activity. The full lines of $\pm 20\%$ represented the permitted variation from study to study by PERCIST. The dash lines represented the 95% limits of agreement of each background variation. SUV average was equal to the mean SUV of the two scans. Relative variation was defined as the percentage of absolute variation as a proportion of the SUV of the first scan.

Table S1 Repeatability of Patients background SUVs

	The first PET scan	The second PET scan	Absolute variation	Relative variation %	ICC (95% CI)	%CV
ABP-SUV	1.52±0.20	1.59±0.23	0.07±0.19	5.32±13.47	0.56 (0.26–0.76)	9%
L-SUV	2.16±0.26	2.30±0.37	0.13±0.34	6.48±15.69	0.39 (0.06–0.65)	11%
M-SUV	0.83±0.17	0.86±0.17	0.03±0.12	5.08±15.55	0.76 (0.55–0.88)	10%

Absolute variation was equal to the SUV in the second scan minus the SUV in the first scan. Relative variation was defined as the percentage of absolute variation as a proportion of the SUV of the first scan; ICC, Intra-class correlation coefficient; %CV, the percentage coefficient of variation. SUV, standard uptake value; ABP-SUV, aortic blood-pool standard uptake value; L-SUV, liver standard uptake value; M-SUV, muscle standard uptake value.

Table S2 Correlation between effect factors and background SUVs in the linear regression analysis

	Effect factors	Unstandardized coefficients		Standardized coefficients	P-value
		B	SE	Beta	
ABP-SUV	BGL	0.30	0.16	0.35	0.08
	Tracer dose	0.08	0.34	0.05	0.81
	Uptake period	0.08	0.14	0.11	0.55
L-SUV	BGL	0.61	0.16	0.60	<0.01
	Tracer dose	-0.41	0.33	-0.19	0.22
	Uptake period	0.24	0.13	0.28	0.08
M-SUV	BGL	0.45	0.15	0.45	<0.01
	Tracer dose	0.10	0.30	0.05	0.74
	Uptake period	0.50	0.12	0.58	<0.01

SUV, standard uptake value; ABP-SUV, aortic blood-pool standard uptake value; L-SUV, liver standard uptake value; M-SUV, muscle standard uptake value; BGL, blood glucose level.