

Data Reconstruction

The default whole body reconstruction protocol on the Philips Ingenuity PET/CT (ING) is based on an iterative reconstruction using the ordered subset expectation maximization method. 3 iterations and 33 subsets are used and no post-reconstruction filtering is applied. The reconstructed images have a matrix size of 144×144 resulting in voxels of 4×4×4 mm.

The EARL compliant reconstruction is based on the same method and settings, but with a 4 mm full width at half maximum (FWHM) Gaussian post-smoothing to achieve EARL compliance.

The PSF 1 and 2 reconstructions are also based on the ING reconstruction protocol, but now an iterative deconvolution method using the system's point spread function is applied with 1 or 2 iterations, respectively, to enhance the spatial resolution of the reconstructed images. All reconstruction methods and settings are provided by the vendor using predefined reconstruction protocols.

Supplemental formulas for local heterogeneity features

Homogeneity, entropy, and dissimilarity are derived from a gray level co-occurrence matrix (https://en.wikipedia.org/wiki/Co-occurrence_matrix).

$$\text{homogeneity} = \sum_{i=1}^{N_g} \sum_{j=1}^{N_g} \frac{p(i,j)}{1 + |i - j|} \quad \text{Eq. (1)}$$

$$\text{entropy} = - \sum_{i=1}^{N_g} \sum_{j=1}^{N_g} p(i,j) \log_2 (p(i,j) + \epsilon) \quad \text{Eq. (2)}$$

$$\text{dissimilarity} = \sum_{i=1}^{N_g} \sum_{j=1}^{N_g} |i - j| p(i,j) \quad \text{Eq. (3)}$$

where N_g is the number of gray level intensities, and $p(i,j)$ is the (i,j) element in the normalized co-occurrence matrix, representing the number of times for the combination in which levels i and j occur in two pixels in the image, separated by a distance of δ pixels in direction α . In our study, N_g is set at 64 gray levels, and δ is 1 overall 13 spatial directions (26-connectivity in 3D).

High-intensity emphasis and zone percentage are calculated with a gray level size zone matrix (https://en.wikipedia.org/wiki/Gray_level_size_zone_matrix).

$$HIE = \frac{\sum_{i=1}^{N_g} \sum_{j=1}^{N_s} P(i,j) i^2}{\sum_{i=1}^{N_g} \sum_{j=1}^{N_s} P(i,j)}$$
Eq. (4)

$$ZP = \sum_{i=1}^{N_g} \sum_{j=1}^{N_s} \frac{P(i,j)}{N_p}$$
Eq. (5)

where N_g is the number of gray level intensities, N_s is the number of discrete zone sizes, N_p is the number of voxels, and $P(i,j)$ represents the number of times for a gray level zone (connected voxels) that shares gray level i and size j in the image.

Supplemental Table 1. Summary of implementations for the segmentation methods.

Segmentation Method	Implementation
MASAC	Incorporate both histogram fuzzy C-means clustering and textural gradient information into an active contour model
AP	Select the optimal thresholding value by clustering the intensities with a novel similarity metric
CAC	Replace original images by smoothed and contourlet-transformed images to a deformable active contour model
ST	Contrast-oriented thresholding method derived from phantom measurements and validated in clinical data
41MAX	41% of maximum value within the tumor
A50P	50% of peak tumor value threshold, adapted for local background
SUV25	Absolute SUV = 2.5
SUV40	Absolute SUV = 4.0

Supplemental Table 2. Effect of uptake interval. Estimated marginal means between 60 min and 90 min (90 min – 60 min) for each segmentation method and metric. This table is related to the factor “Uptake interval” in Table 3. Data presented as mean ± standard error, with $p<0.05$ in bold.

Metrics	MASAC	AP	CAC	ST	41MAX	A50P	SUV25	SUV40
MATV	-0.029±0.024	-0.063±0.020	0.031±0.036	-0.073±0.025	-0.051±0.022	0.026±0.021	0.066±0.020	0.177±0.063
SUV _{max}	0.152±0.016	0.153±0.016	0.153±0.016	0.150±0.016	0.150±0.016	0.150±0.016	0.150±0.016	0.150±0.016
SUV _{mean}	0.141±0.010	0.157±0.014	0.092±0.015	0.160±0.014	0.155±0.014	0.136±0.010	0.091±0.005	0.087±0.008
TLG	0.112±0.028	0.094±0.016	0.123±0.033	0.087±0.019	0.104±0.017	0.162±0.022	0.157±0.021	0.264±0.060
CIH _{AUC}	-0.447±0.570	0.169±0.297	-1.621±0.491	0.578±0.313	0.290±0.198	-0.913±0.579	-2.413±0.574	-3.403±0.774
Homogeneity	-0.024±0.003	-0.023±0.003	-0.007±0.005	-0.020±0.004	-0.021±0.003	-0.022±0.006	-0.020±0.005	-0.027±0.007
Entropy	0.366±0.041	0.324±0.044	0.291±0.038	0.272±0.051	0.291±0.038	0.368±0.046	0.426±0.032	0.529±0.049
Dissimilarity	0.166±0.154	0.356±0.237	-0.080±0.127	0.135±0.225	0.108±0.232	-0.111±0.256	-0.221±0.260	-0.355±0.256
HIE	-0.046±0.027	-0.041±0.032	-0.060±0.023	-0.018±0.024	-0.030±0.026	-0.034±0.039	-0.101±0.027	-0.042±0.024
ZP	0.047±0.005	0.047±0.006	0.022±0.005	0.042±0.009	0.045±0.008	0.038±0.008	0.034±0.005	0.035±0.006

Supplemental Table 3. Effect of reconstruction protocol. Estimated marginal mean in different metrics for each segmentation method, reconstruction, and metric. This table is related to the factor “Reconstruction” in Table 3. Data presented as mean \pm standard error, with $p < 0.05$ in bold (continued on the next page).

		MASAC			AP			CAC			ST		
		EARL	ING	PSF1									
MATV	ING	0.017 \pm 0.009			0.069\pm0.007			0.017\pm0.003			0.083\pm0.010		
	PSF1	0.069\pm0.016	0.052\pm0.014		0.322\pm0.029	0.254\pm0.024		0.104\pm0.021	0.088\pm0.021		0.368\pm0.030	0.285\pm0.022	
	PSF2	0.078\pm0.017	0.061\pm0.014	0.009 \pm 0.007	0.467\pm0.039	0.398\pm0.035	0.145\pm0.011	0.135\pm0.029	0.119\pm0.028	0.031 \pm 0.012	0.568\pm0.060	0.485\pm0.055	0.200\pm0.037
SUV _{max}	ING	-0.051\pm0.004			-0.051\pm0.004			-0.051\pm0.004			-0.051\pm0.004		
	PSF1	-0.234\pm0.017	-0.184\pm0.014		-0.236\pm0.017	-0.186\pm0.013		-0.236\pm0.017	-0.186\pm0.013		-0.236\pm0.017	-0.186\pm0.013	
	PSF2	-0.330\pm0.025	-0.279\pm0.021	-0.095\pm0.008	-0.333\pm0.024	-0.282\pm0.021	-0.097\pm0.008	-0.333\pm0.024	-0.282\pm0.021	-0.097\pm0.008	-0.318\pm0.025	-0.267\pm0.022	-0.082\pm0.014
SUV _{mean}	ING	-0.023\pm0.003			-0.046\pm0.004			-0.005 \pm 0.003			-0.049\pm0.005		
	PSF1	-0.127\pm0.009	-0.104\pm0.007		-0.225\pm0.017	-0.179\pm0.014		-0.038\pm0.012	-0.033\pm0.010		-0.239\pm0.019	-0.189\pm0.015	
	PSF2	-0.165\pm0.012	-0.142\pm0.010	-0.038\pm0.005	-0.317\pm0.025	-0.271\pm0.021	-0.092\pm0.008	-0.041 \pm 0.016	-0.036 \pm 0.014	-0.003 \pm 0.005	-0.334\pm0.027	-0.284\pm0.023	-0.095\pm0.008
TLG	ING	-0.006 \pm 0.007			0.022\pm0.005			0.012\pm0.004			0.033\pm0.007		
	PSF1	-0.058\pm0.016	-0.052\pm0.014		0.097\pm0.019	0.075\pm0.016		0.067 \pm 0.026	0.055 \pm 0.024		0.129\pm0.017	0.096\pm0.013	
	PSF2	-0.087\pm0.020	-0.081\pm0.017	-0.029\pm0.006	0.150\pm0.025	0.128\pm0.021	0.053\pm0.006	0.094 \pm 0.037	0.083 \pm 0.035	0.028 \pm 0.015	0.234\pm0.046	0.201\pm0.044	0.105\pm0.035
CIH _{AUC}	ING	1.620\pm0.184			0.230 \pm 0.149			1.506\pm0.100			0.057 \pm 0.185		
	PSF1	5.811\pm0.565	4.191\pm0.462		0.529 \pm 0.609	0.299 \pm 0.474		5.679\pm0.302	4.173\pm0.232		-0.318 \pm 0.700	-0.375 \pm 0.545	
	PSF2	8.707\pm0.745	7.087\pm0.654	2.896\pm0.254	0.719 \pm 0.815	0.489 \pm 0.682	0.190 \pm 0.235	8.064\pm0.470	6.558\pm0.392	2.385\pm0.189	-1.306 \pm 1.319	-1.363 \pm 1.222	-0.988 \pm 0.959
Homogeneity	ING	0.013\pm0.002			0.010\pm0.002			0.005 \pm 0.002			0.012\pm0.003		
	PSF1	0.041\pm0.005	0.027\pm0.003		0.041\pm0.005	0.030\pm0.004		0.009 \pm 0.006	0.003 \pm 0.005		0.036\pm0.008	0.024\pm0.006	
	PSF2	0.054\pm0.006	0.040\pm0.004	0.013\pm0.002	0.051\pm0.008	0.041\pm0.006	0.011\pm0.003	0.007 \pm 0.008	0.001 \pm 0.006	-0.002 \pm 0.002	0.041\pm0.011	0.030\pm0.010	0.005 \pm 0.004
Entropy	ING	-0.171\pm0.013			-0.077\pm0.013			-0.102\pm0.015			-0.069\pm0.018		
	PSF1	-0.604\pm0.050	-0.433\pm0.043		-0.313\pm0.066	-0.236\pm0.059		-0.305\pm0.047	-0.203\pm0.035		-0.169 \pm 0.099	-0.099 \pm 0.087	
	PSF2	-0.825\pm0.070	-0.654\pm0.063	-0.221\pm0.023	-0.359\pm0.103	-0.281\pm0.096	-0.046 \pm 0.039	-0.389\pm0.061	-0.287\pm0.048	-0.084\pm0.016	-0.088 \pm 0.161	-0.019 \pm 0.150	0.080 \pm 0.074
Dissimilarity	ING	0.095 \pm 0.150			-0.117 \pm 0.121			0.049 \pm 0.068			0.055 \pm 0.197		
	PSF1	-0.152 \pm 0.148	-0.247 \pm 0.142		-1.024\pm0.245	-0.907\pm0.231		0.118 \pm 0.128	0.069 \pm 0.130		-0.674\pm0.243	-0.728\pm0.205	
	PSF2	-0.146 \pm 0.166	-0.241 \pm 0.153	0.006 \pm 0.093	-1.214\pm0.290	-1.098\pm0.290	-0.191 \pm 0.134	0.334 \pm 0.145	0.285 \pm 0.136	0.216\pm0.064	-1.151\pm0.422	-1.206\pm0.434	-0.477 \pm 0.388
HIE	ING	-0.010 \pm 0.016			-0.038 \pm 0.025			0.022 \pm 0.015			0.002 \pm 0.033		
	PSF1	0.037 \pm 0.027	0.047 \pm 0.021		0.023 \pm 0.047	0.061 \pm 0.039		0.124\pm0.023	0.101\pm0.018		0.027 \pm 0.054	0.026 \pm 0.039	
	PSF2	0.065 \pm 0.034	0.075 \pm 0.029	0.027 \pm 0.017	0.034 \pm 0.049	0.073 \pm 0.039	0.012 \pm 0.021	0.171\pm0.032	0.148\pm0.026	0.047\pm0.016	0.026 \pm 0.050	0.024 \pm 0.041	-0.001 \pm 0.031
ZP	ING	-0.021\pm0.003			-0.017\pm0.003			-0.010\pm0.003			-0.027\pm0.007		
	PSF1	-0.087\pm0.008	-0.067\pm0.006		-0.094\pm0.011	-0.077\pm0.009		-0.040\pm0.007	-0.030\pm0.005		-0.101\pm0.015	-0.075\pm0.010	
	PSF2	-0.128\pm0.011	-0.107\pm0.009	-0.041\pm0.004	-0.146\pm0.018	-0.128\pm0.016	-0.052\pm0.008	-0.055\pm0.009	-0				

Supplemental Table 3. Effect of reconstruction protocol. Estimated marginal mean for each segmentation method, reconstruction, and metric. This table is related to the factor “Reconstruction” in Table 3. Data presented as mean \pm standard error, with $p < 0.05$ in bold (continued on the next page).

41MAX			A50P			SUV25			SUV40				
	EARL	ING	PSF1	EARL	ING	PSF1	EARL	ING	PSF1	EARL	ING	PSF1	
MATV	ING	0.072\pm0.007			0.003 \pm 0.014		0.010 \pm 0.004			-0.028 \pm 0.013			
	PSF1	0.330\pm0.021	0.258\pm0.017		0.078\pm0.015	0.075\pm0.017		0.034 \pm 0.015	0.024 \pm 0.011	-0.076 \pm 0.047	-0.048 \pm 0.037		
	PSF2	0.479\pm0.030	0.407\pm0.025	0.149\pm0.009	0.116\pm0.019	0.112\pm0.024	0.038\pm0.012	0.059\pm0.019	0.049\pm0.015	0.025\pm0.005	-0.013 \pm 0.051	0.014 \pm 0.046	0.063 \pm 0.037
SUV _{max}	ING	-0.053\pm0.003			-0.053\pm0.003		-0.053\pm0.003			-0.052\pm0.003			
	PSF1	-0.246\pm0.012	-0.194\pm0.010		-0.246\pm0.012	-0.194\pm0.010		-0.246\pm0.012	-0.194\pm0.010	-0.242\pm0.014	-0.190\pm0.011		
	PSF2	-0.349\pm0.018	-0.296\pm0.016	-0.102\pm0.006	-0.349\pm0.018	-0.296\pm0.016	-0.102\pm0.006	-0.349\pm0.018	-0.296\pm0.016	-0.102\pm0.006	-0.327\pm0.022	-0.275\pm0.020	-0.085\pm0.013
SUV _{mean}	ING	-0.047\pm0.004			-0.030\pm0.004		-0.024\pm0.002			-0.023\pm0.002			
	PSF1	-0.230\pm0.016	-0.182\pm0.013		-0.168\pm0.012	-0.138\pm0.009		-0.112\pm0.007	-0.088\pm0.005	-0.106\pm0.008	-0.083\pm0.006		
	PSF2	-0.322\pm0.024	-0.275\pm0.020	-0.092\pm0.008	-0.231\pm0.017	-0.200\pm0.014	-0.063\pm0.006	-0.153\pm0.011	-0.128\pm0.009	-0.041\pm0.004	-0.139\pm0.012	-0.116\pm0.011	-0.033\pm0.007
TLG	ING	0.024\pm0.005			-0.027 \pm 0.013		-0.014\pm0.004			-0.051\pm0.013			
	PSF1	0.100\pm0.015	0.076\pm0.011		-0.090\pm0.018	-0.063\pm0.016		-0.078\pm0.015	-0.064\pm0.012	-0.182\pm0.046	-0.132\pm0.036		
	PSF2	0.157\pm0.020	0.133\pm0.016	0.057\pm0.006	-0.115\pm0.023	-0.088\pm0.023	-0.025\pm0.009	-0.094\pm0.020	-0.079\pm0.016	-0.016\pm0.004	-0.153\pm0.056	-0.102 \pm 0.051	0.030 \pm 0.043
CIH _{AUC}	ING	0.304\pm0.106			1.475\pm0.190		1.340\pm0.128			1.707\pm0.167			
	PSF1	0.983\pm0.314	0.679\pm0.240		5.124\pm0.262	3.649\pm0.241		5.887\pm0.398	4.547\pm0.307	7.326\pm0.566	5.620\pm0.447		
	PSF2	1.567\pm0.456	1.263\pm0.382	0.585\pm0.159	7.583\pm0.354	6.108\pm0.348	2.459\pm0.185	8.302\pm0.516	6.961\pm0.422	2.415\pm0.139	9.739\pm0.751	8.032\pm0.660	2.412\pm0.399
Homogeneity	ING	0.010\pm0.003			0.017\pm0.005		0.015\pm0.003			0.011 \pm 0.004			
	PSF1	0.040\pm0.006	0.030\pm0.005		0.052\pm0.008	0.035\pm0.005		0.045\pm0.007	0.030\pm0.004	0.040\pm0.005	0.029\pm0.004		
	PSF2	0.051\pm0.008	0.041\pm0.006	0.011\pm0.003	0.065\pm0.009	0.048\pm0.006	0.012\pm0.002	0.057\pm0.008	0.042\pm0.006	0.011\pm0.002	0.042\pm0.006	0.031\pm0.006	0.002 \pm 0.004
Entropy	ING	-0.075\pm0.016			-0.159\pm0.023		-0.165\pm0.013			-0.166\pm0.012			
	PSF1	-0.291\pm0.057	-0.216\pm0.052		-0.564\pm0.053	-0.405\pm0.039		-0.643\pm0.027	-0.478\pm0.020	-0.683\pm0.043	-0.518\pm0.038		
	PSF2	-0.330\pm0.089	-0.256\pm0.085	-0.039 \pm 0.038	-0.743\pm0.074	-0.584\pm0.058	-0.179\pm0.025	-0.854\pm0.041	-0.689\pm0.033	-0.211\pm0.015	-0.818\pm0.073	-0.652\pm0.069	-0.135 \pm 0.054
Dissimilarity	ING	0.090 \pm 0.165			0.353 \pm 0.423		-0.004 \pm 0.201			0.509 \pm 0.298			
	PSF1	-0.523 \pm 0.211	-0.614\pm0.194		-0.064 \pm 0.530	-0.417 \pm 0.272	-0.030 \pm 0.292	-0.026 \pm 0.197		0.745 \pm 0.336	0.237 \pm 0.327		
	PSF2	-0.633 \pm 0.245	-0.723\pm0.235	-0.109 \pm 0.156	0.362 \pm 0.476	0.009 \pm 0.233	0.426 \pm 0.222	0.093 \pm 0.271	0.096 \pm 0.163	0.122 \pm 0.119	0.951 \pm 0.471	0.443 \pm 0.473	0.206 \pm 0.201
HIE	ING	0.027 \pm 0.032			0.029 \pm 0.024		-0.018 \pm 0.070			0.016 \pm 0.019			
	PSF1	0.004 \pm 0.040	-0.024 \pm 0.031		0.061 \pm 0.032	0.031 \pm 0.026	0.151 \pm 0.083	0.169\pm0.025		0.068 \pm 0.036	0.053 \pm 0.029		
	PSF2	0.022 \pm 0.048	-0.005 \pm 0.049	0.019 \pm 0.031	0.123\pm0.030	0.094\pm0.028	0.062\pm0.018	0.253\pm0.085	0.271\pm0.031	0.102\pm0.011	0.072 \pm 0.040	0.056 \pm 0.035	0.004 \pm 0.019
ZP	ING	-0.026\pm0.006			-0.023\pm0.004		-0.016\pm0.003			-0.019\pm0.005			
	PSF1	-0.105\pm0.014	-0.080\pm0.010		-0.090\pm0.009	-0.067\pm0.007		-0.068\pm0.008	-0.052\pm0.005		-0.080\pm0.010	-0.061\pm0.006	
	PSF2	-0.158\pm0.018	-0.132\pm0.014	-0.052\pm0.007	-0.146\pm0.013	-0.123\pm0.011	-0.056\pm0.006	-0.102\pm0.010	-0.086\pm0.008	-0.034\pm0.004 </			

Supplemental Table 4. Effect of the interaction between uptake interval and reconstruction. Estimated marginal mean difference between 60 min and 90 min (90 min – 60 min) per reconstruction method and metric. This table is related to the factor “Uptake interval × Reconstruction” in Table 3. Data presented as mean ± standard error, with $p < 0.05$ in bold.

Metrics	Reconstruction	MASAC	AP	CAC	ST	41MAX	A50P	SUV25	SUV40
MATV	EARL	-0.038±0.034	-0.103±0.029	0.035±0.048	-0.096±0.028	-0.092±0.026	0.037±0.030	0.102±0.025	0.200±0.067
	ING	-0.017±0.025	-0.078±0.022	0.030±0.048	-0.072±0.027	-0.065±0.023	0.052±0.027	0.086±0.022	0.167±0.064
	PSF1	-0.032±0.027	-0.047±0.033	0.042±0.042	-0.072±0.028	-0.031±0.023	0.008±0.020	0.045±0.021	0.117±0.061
	PSF2	-0.030±0.026	-0.024±0.039	0.019±0.034	-0.052±0.034	-0.014±0.034	0.006±0.022	0.032±0.025	0.224±0.093
SUV _{max}	EARL	0.153±0.015	0.153±0.015	0.153±0.015	0.154±0.015	0.147±0.015	0.147±0.015	0.147±0.015	0.134±0.016
	ING	0.154±0.015	0.154±0.015	0.154±0.015	0.155±0.015	0.149±0.015	0.149±0.015	0.149±0.015	0.137±0.017
	PSF1	0.152±0.017	0.153±0.017	0.153±0.017	0.154±0.017	0.152±0.017	0.152±0.017	0.152±0.017	0.148±0.019
	PSF2	0.149±0.019	0.152±0.019	0.152±0.019	0.138±0.024	0.150±0.020	0.150±0.020	0.150±0.020	0.180±0.026
SUV _{mean}	EARL	0.141±0.011	0.159±0.013	0.088±0.016	0.161±0.014	0.159±0.014	0.132±0.011	0.086±0.005	0.076±0.008
	ING	0.139±0.011	0.156±0.013	0.093±0.015	0.157±0.013	0.155±0.013	0.132±0.010	0.089±0.005	0.077±0.008
	PSF1	0.144±0.011	0.158±0.016	0.092±0.015	0.165±0.015	0.154±0.015	0.140±0.010	0.094±0.006	0.089±0.009
	PSF2	0.140±0.013	0.153±0.019	0.094±0.018	0.157±0.019	0.150±0.019	0.138±0.013	0.094±0.006	0.106±0.014
TLG	EARL	0.102±0.036	0.056±0.025	0.123±0.047	0.065±0.023	0.067±0.022	0.169±0.028	0.188±0.026	0.276±0.066
	ING	0.122±0.029	0.079±0.019	0.124±0.047	0.085±0.022	0.090±0.019	0.185±0.027	0.175±0.023	0.243±0.063
	PSF1	0.113±0.030	0.110±0.025	0.133±0.040	0.093±0.021	0.122±0.018	0.148±0.022	0.139±0.022	0.206±0.060
	PSF2	0.110±0.027	0.129±0.029	0.113±0.034	0.105±0.024	0.136±0.024	0.145±0.023	0.126±0.025	0.330±0.094
CIH _{AUC}	EARL	-0.526±0.616	0.266±0.412	-2.170±0.724	0.337±0.437	0.679±0.289	-1.226±0.588	-3.162±0.618	-3.670±0.809
	ING	-0.741±0.517	0.070±0.376	-1.804±0.608	0.069±0.329	0.332±0.236	-1.228±0.570	-2.851±0.613	-3.544±0.818
	PSF1	-0.247±0.666	0.256±0.287	-1.371±0.412	0.682±0.313	0.113±0.259	-0.640±0.648	-2.020±0.593	-2.859±0.868
	PSF2	-0.273±0.702	0.085±0.440	-1.137±0.397	1.222±0.767	0.036±0.300	-0.559±0.679	-1.618±0.654	-3.538±0.995
Homogeneity	EARL	-0.032±0.004	-0.038±0.006	-0.022±0.006	-0.035±0.007	-0.035±0.006	-0.049±0.011	-0.039±0.008	-0.038±0.009
	ING	-0.029±0.004	-0.036±0.005	-0.017±0.005	-0.032±0.005	-0.029±0.005	-0.033±0.006	-0.030±0.006	-0.034±0.006
	PSF1	-0.020±0.004	-0.014±0.003	0.004±0.006	-0.009±0.006	-0.011±0.006	-0.008±0.009	-0.009±0.006	-0.014±0.007
	PSF2	-0.014±0.004	-0.001±0.008	0.007±0.007	-0.003±0.010	-0.009±0.009	0.002±0.012	-0.000±0.008	-0.022±0.014
Entropy	EARL	0.393±0.045	0.397±0.041	0.364±0.040	0.378±0.056	0.349±0.042	0.455±0.051	0.507±0.040	0.552±0.066
	ING	0.402±0.041	0.406±0.041	0.346±0.036	0.360±0.047	0.317±0.039	0.406±0.045	0.474±0.031	0.528±0.057
	PSF1	0.348±0.047	0.282±0.047	0.246±0.047	0.219±0.060	0.272±0.046	0.347±0.060	0.395±0.035	0.462±0.062
	PSF2	0.322±0.049	0.212±0.082	0.208±0.053	0.133±0.096	0.226±0.075	0.264±0.069	0.328±0.044	0.574±0.094
Dissimilarity	EARL	-0.034±0.176	0.759±0.352	-0.026±0.156	0.121±0.267	0.187±0.262	0.389±0.609	-0.079±0.408	-0.360±0.373
	ING	0.117±0.239	0.374±0.301	0.073±0.141	0.276±0.354	0.190±0.371	-0.015±0.395	-0.200±0.311	-0.427±0.557
	PSF1	0.267±0.207	0.168±0.255	-0.216±0.190	-0.121±0.282	-0.035±0.345	-0.599±0.480	-0.399±0.371	-0.258±0.284
	PSF2	0.314±0.224	0.122±0.350	-0.150±0.140	0.264±0.387	0.090±0.382	-0.218±0.397	-0.205±0.303	-0.377±0.355
HIE	EARL	-0.051±0.031	0.042±0.058	-0.031±0.032	-0.102±0.039	-0.122±0.062	-0.022±0.058	0.022±0.121	-0.016±0.032
	ING	-0.056±0.033	-0.065±0.039	-0.038±0.029	-0.070±0.052	-0.027±0.057	-0.030±0.058	-0.146±0.037	-0.082±0.048
	PSF1	-0.031±0.031	-0.080±0.053	-0.082±0.029	-0.016±0.036	0.029±0.068	-0.072±0.034	-0.151±0.054	-0.019±0.027
	PSF2	-0.045±0.033	-0.059±0.046	-0.087±0.029	0.114±0.072	-0.002±0.046	-0.010±0.039	-0.129±0.054	-0.050±0.039
ZP	EARL	0.036±0.006	0.028±0.008	0.011±0.004	0.034±0.008	0.037±0.008	0.023±0.009	0.020±0.005	0.020±0.008
	ING	0.041±0.007	0.044±0.008	0.019±0.005	0.038±0.009	0.037±0.008	0.028±0.009	0.029±0.007	0.037±0.009

PSF1	0.054±0.007	0.059±0.008	0.027±0.006	0.055±0.009	0.053±0.009	0.053±0.007	0.045±0.007	0.045±0.009
PSF2	0.058±0.010	0.056±0.014	0.031±0.007	0.040±0.018	0.053±0.014	0.047±0.017	0.044±0.007	0.038±0.009

Supplemental Table 5. Effect of the interaction between uptake interval and reconstruction. At 60 min uptake interval, estimated marginal mean difference between reconstruction protocols for each segmentation and metric. This table is related to the factor “Uptake interval × Reconstruction” in Table 3. Data presented as mean ± standard error, with $p < 0.05$ in bold (continued on the next page).

Metrics	MASAC			AP			CAC			ST			
	EARL	ING	PSF1	EARL	ING	PSF1	EARL	ING	PSF1	EARL	ING	PSF1	
MATV	ING	0.028±0.018		0.081±0.012			0.014±0.006			0.095±0.014			
	PSF1	0.072±0.030	0.045±0.023	0.350±0.043	0.269±0.033		0.108±0.034	0.093±0.034		0.380±0.034	0.285±0.022		
	PSF2	0.082±0.032	0.054±0.025	0.010±0.014	0.507±0.055	0.425±0.044	0.157±0.014	0.127±0.035	0.113±0.034	0.019±0.006	0.590±0.060	0.495±0.052	0.210±0.035
SUV _{max}	ING	-0.050±0.003			-0.050±0.003			-0.050±0.003			-0.050±0.003		
	PSF1	-0.235±0.014	-0.185±0.011		-0.236±0.014	-0.186±0.011		-0.236±0.014	-0.186±0.011		-0.236±0.014	-0.186±0.011	
	PSF2	-0.332±0.021	-0.282±0.018	-0.096±0.007	-0.334±0.021	-0.283±0.018	-0.097±0.007	-0.334±0.021	-0.283±0.018	-0.097±0.007	-0.326±0.020	-0.276±0.017	-0.090±0.009
SUV _{mean}	ING	-0.024±0.004			-0.048±0.004			-0.002±0.004			-0.051±0.005		
	PSF1	-0.125±0.009	-0.101±0.008		-0.226±0.016	-0.178±0.012		-0.036±0.013	-0.034±0.011		-0.237±0.017	-0.185±0.012	
	PSF2	-0.165±0.013	-0.141±0.011	-0.040±0.006	-0.320±0.023	-0.272±0.019	-0.094±0.008	-0.038±0.017	-0.036±0.015	-0.002±0.004	-0.336±0.025	-0.284±0.020	-0.099±0.008
TLG	ING	0.004±0.015			0.033±0.009			0.012±0.005			0.044±0.010		
	PSF1	-0.052±0.026	-0.057±0.020		0.124±0.034	0.091±0.026		0.072±0.038	0.060±0.035		0.143±0.024	0.100±0.016	
	PSF2	-0.083±0.030	-0.087±0.024	-0.031±0.010	0.186±0.042	0.153±0.034	0.062±0.010	0.089±0.041	0.077±0.038	0.017±0.007	0.254±0.046	0.211±0.042	0.111±0.031
CIH _{AUC}	ING	1.513±0.216			0.131±0.151			1.689±0.154			-0.077±0.192		
	PSF1	5.951±0.534	4.438±0.453		0.523±0.556	0.392±0.432		6.078±0.328	4.389±0.280		-0.146±0.618	-0.069±0.467	
	PSF2	8.834±0.639	7.321±0.579	2.883±0.251	0.628±0.786	0.497±0.665	0.105±0.270	8.581±0.425	6.892±0.354	2.502±0.143	-0.864±1.042	-0.786±0.923	-0.718±0.639
Homogeneity	ING	0.015±0.002			0.011±0.003			0.008±0.002			0.013±0.004		
	PSF1	0.047±0.006	0.032±0.005		0.053±0.008	0.041±0.006		0.022±0.008	0.014±0.006		0.049±0.011	0.036±0.009	
	PSF2	0.063±0.007	0.048±0.005	0.016±0.002	0.070±0.012	0.058±0.010	0.017±0.005	0.021±0.010	0.013±0.008	-0.001±0.002	0.058±0.015	0.044±0.012	0.009±0.005
Entropy	ING	-0.167±0.016			-0.073±0.021			-0.111±0.017			-0.078±0.022		
	PSF1	-0.627±0.044	-0.460±0.038		-0.371±0.056	-0.298±0.047		-0.364±0.050	-0.254±0.037		-0.248±0.092	-0.170±0.077	
	PSF2	-0.861±0.062	-0.694±0.055	-0.234±0.024	-0.451±0.091	-0.379±0.082	-0.080±0.039	-0.467±0.067	-0.356±0.053	-0.103±0.019	-0.211±0.153	-0.133±0.139	0.037±0.069
Dissimilarity	ING	0.171±0.253			0.310±0.171			0.099±0.106			0.132±0.321		
	PSF1	-0.001±0.179	-0.172±0.221		-1.319±0.268	-1.010±0.230		0.023±0.155	-0.076±0.192		-0.795±0.306	-0.927±0.334	
	PSF2	0.028±0.212	-0.143±0.242	0.030±0.161	-1.533±0.336	-1.224±0.339	-0.214±0.204	0.272±0.155	0.173±0.181	0.249±0.076	-1.079±0.376	-1.211±0.414	-0.285±0.280
HIE	ING	-0.012±0.024			-0.092±0.043			0.019±0.022			0.017±0.044		
	PSF1	0.048±0.033	0.060±0.029		-0.038±0.056	0.054±0.044		0.098±0.026	0.079±0.025		0.070±0.064	0.052±0.059	
	PSF2	0.068±0.036	0.080±0.031	0.020±0.020	-0.016±0.064	0.076±0.051	0.022±0.032	0.142±0.036	0.123±0.029	0.044±0.018	0.134±0.078	0.116±0.080	0.064±0.046
ZP	ING	-0.018±0.004			-0.009±0.004			-0.006±0.002			-0.025±0.008		
	PSF1	-0.078±0.010	-0.060±0.008		-0.078±0.010	-0.069±0.009		-0.032±0.006	-0.026±0.005		-0.091±0.014	-0.066±0.011	
	PSF2	-0.117±0.013	-0.099±0.011	-0.039±0.005	-0.131±0.019	-0.122±0.018	-0.053±0.011	-0.044±0.008	-0.039±0.007	-0.013±0.003	-0.145±0.020	-0.121±0.017	-0.054±0.008

Supplemental Table 5. Effect of the interaction between uptake interval and reconstruction. At 60 min uptake interval, estimated marginal mean difference between reconstruction protocols for each segmentation and metric. This table is related to the factor “Uptake interval × Reconstruction” in Table 3. Data presented as mean ± standard error, with $p < 0.05$ in bold (continued).

Metrics	41MAX			A50P			SUV25			SUV40		
	EARL	ING	PSF1	EARL	ING	PSF1	EARL	ING	PSF1	EARL	ING	PSF1
MATV	ING	0.085±0.011			0.011±0.023		0.002±0.007			-0.044±0.020		
	PSF1	0.360±0.030	0.275±0.021		0.063±0.020	0.053±0.023	0.005±0.024	0.003±0.017		-0.117±0.065	-0.073±0.051	
	PSF2	0.518±0.039	0.433±0.030	0.158±0.010	0.100±0.025	0.089±0.033	0.037±0.014	0.024±0.031	0.022±0.024	0.019±0.008	-0.001±0.075	0.043±0.074
SUV _{max}	ING	-0.052±0.003			-0.052±0.003		-0.052±0.003			-0.051±0.003		
	PSF1	-0.244±0.011	-0.193±0.008		-0.244±0.011	-0.193±0.008	-0.244±0.011	-0.193±0.008		-0.235±0.015	-0.184±0.014	
	PSF2	-0.348±0.016	-0.296±0.013	-0.103±0.005	-0.348±0.016	-0.296±0.013	-0.103±0.005	-0.348±0.016	-0.296±0.013	-0.103±0.005	-0.304±0.029	-0.254±0.028
SUV _{mean}	ING	-0.049±0.004			-0.030±0.004		-0.023±0.002			-0.023±0.002		
	PSF1	-0.232±0.015	-0.183±0.012		-0.164±0.010	-0.134±0.008	-0.108±0.006	-0.085±0.005		-0.100±0.008	-0.078±0.007	
	PSF2	-0.326±0.022	-0.277±0.018	-0.094±0.007	-0.227±0.015	-0.197±0.013	-0.064±0.006	-0.149±0.010	-0.126±0.008	-0.041±0.004	-0.124±0.016	-0.102±0.015
TLG	ING	0.036±0.008			-0.019±0.020		-0.021±0.007			-0.067±0.019		
	PSF1	0.128±0.023	0.092±0.016		-0.100±0.020	-0.081±0.021	-0.103±0.023	-0.082±0.017		-0.217±0.066	-0.150±0.052	
	PSF2	0.192±0.029	0.156±0.022	0.064±0.008	-0.127±0.026	-0.108±0.029	-0.027±0.011	-0.125±0.029	-0.104±0.023	-0.022±0.007	-0.125±0.087	-0.059±0.087
CIH _{AUC}	ING	0.131±0.143			1.474±0.267		1.495±0.194			1.770±0.193		
	PSF1	0.700±0.402	0.569±0.291		5.417±0.375	3.943±0.288	6.458±0.474	4.962±0.333		7.732±0.696	5.962±0.589	
	PSF2	1.246±0.549	1.115±0.441	0.546±0.165	7.917±0.486	6.443±0.414	2.500±0.198	9.073±0.630	7.578±0.484	2.616±0.174	9.804±0.991	8.035±0.944
Homogeneity	ING	0.013±0.003			0.025±0.010		0.020±0.005			0.013±0.007		
	PSF1	0.052±0.011	0.039±0.009		0.073±0.016	0.048±0.008	0.060±0.011	0.041±0.007		0.052±0.010	0.039±0.008	
	PSF2	0.064±0.013	0.051±0.010	0.012±0.004	0.090±0.017	0.065±0.009	0.018±0.003	0.076±0.014	0.057±0.009	0.016±0.003	0.050±0.012	0.036±0.011
Entropy	ING	-0.091±0.020			-0.184±0.035		-0.182±0.023			-0.177±0.019		
	PSF1	-0.330±0.063	-0.239±0.052		-0.618±0.051	-0.434±0.031	-0.699±0.038	-0.517±0.020		-0.728±0.067	-0.551±0.060	
	PSF2	-0.392±0.093	-0.301±0.082	-0.062±0.037	-0.839±0.068	-0.655±0.046	-0.221±0.024	-0.944±0.052	-0.762±0.033	-0.245±0.017	-0.807±0.118	-0.629±0.113
Dissimilarity	ING	0.092±0.311			0.151±0.725		-0.065±0.360			0.475±0.524		
	PSF1	-0.634±0.340	-0.726±0.350		-0.559±0.972	-0.709±0.462	-0.190±0.538	-0.125±0.368		0.796±0.342	0.321±0.605	
	PSF2	-0.681±0.304	-0.773±0.311	-0.047±0.196	0.058±0.786	-0.092±0.302	0.617±0.430	0.030±0.460	0.094±0.255	0.220±0.222	0.943±0.469	0.467±0.806
HIE	ING	0.075±0.039			0.025±0.035		-0.102±0.140			-0.018±0.025		
	PSF1	0.079±0.067	0.004±0.060		0.035±0.043	0.010±0.037	0.064±0.160	0.166±0.032		0.067±0.041	0.084±0.051	
	PSF2	0.082±0.051	0.007±0.055	0.003±0.062	0.129±0.044	0.103±0.033	0.093±0.020	0.177±0.163	0.279±0.041	0.113±0.020	0.055±0.051	0.072±0.057
ZP	ING	-0.026±0.006			-0.020±0.004		-0.012±0.003			-0.011±0.007		
	PSF1	-0.097±0.014	-0.071±0.010		-0.075±0.011	-0.055±0.009	-0.056±0.008	-0.044±0.006		-0.067±0.012	-0.057±0.009	
	PSF2	-0.150±0.018	-0.124±0.014	-0.053±0.007	-0.134±0.015	-0.114±0.013	-0.059±0.007	-0.091±0.012	-0.079±0.010	-0.035±0.004	-0.110±0.011	-0.099±0.009

Supplemental Table 6. Effect of the interaction between uptake interval and reconstruction. At 90 min uptake interval, estimated marginal mean difference between reconstruction protocols for each segmentation and metric. This table is related to the factor “Uptake interval × Reconstruction” in Table 3. Data presented as mean ± standard error, with $p < 0.05$ in bold (continued on the next page).

Metrics	MASAC			AP			CAC			ST			
	EARL	ING	PSF1	EARL	ING	PSF1	EARL	ING	PSF1	EARL	ING	PSF1	
MATV	ING	0.006±0.005		0.056±0.006			0.019±0.004			0.071±0.011			
	PSF1	0.066±0.011	0.060±0.011		0.294±0.031	0.238±0.029		0.101±0.026	0.082±0.025		0.356±0.033	0.285±0.026	
	PSF2	0.074±0.009	0.068±0.009	0.008±0.005	0.427±0.041	0.371±0.039	0.133±0.012	0.144±0.041	0.125±0.041	0.042±0.020	0.546±0.066	0.475±0.061	0.190±0.040
SUV _{max}	ING	-0.051±0.005			-0.051±0.005			-0.051±0.005			-0.051±0.005		
	PSF1	-0.233±0.020	-0.182±0.016		-0.236±0.020	-0.185±0.016		-0.236±0.020	-0.185±0.016		-0.236±0.020	-0.185±0.016	
	PSF2	-0.328±0.030	-0.277±0.026	-0.094±0.010	-0.332±0.029	-0.281±0.025	-0.096±0.010	-0.332±0.029	-0.281±0.025	-0.096±0.010	-0.310±0.031	-0.259±0.028	-0.074±0.021
SUV _{mean}	ING	-0.022±0.003			-0.045±0.004			-0.008±0.003			-0.048±0.005		
	PSF1	-0.129±0.010	-0.107±0.007		-0.224±0.020	-0.179±0.016		-0.040±0.014	-0.032±0.011		-0.241±0.022	-0.193±0.018	
	PSF2	-0.164±0.014	-0.142±0.011	-0.036±0.005	-0.314±0.030	-0.269±0.026	-0.090±0.010	-0.044±0.019	-0.036±0.017	-0.004±0.006	-0.332±0.031	-0.284±0.027	-0.091±0.010
TLG	ING	-0.016±0.004			0.011±0.004			0.011±0.004			0.023±0.008		
	PSF1	-0.063±0.014	-0.047±0.012		0.070±0.016	0.059±0.017		0.061±0.031	0.050±0.030		0.115±0.016	0.092±0.013	
	PSF2	-0.090±0.016	-0.075±0.015	-0.028±0.005	0.113±0.019	0.102±0.020	0.043±0.006	0.099±0.051	0.088±0.050	0.038±0.024	0.214±0.051	0.191±0.050	0.099±0.039
CIH _{AUC}	ING	1.728±0.214			0.328±0.168			1.323±0.151			0.191±0.224		
	PSF1	5.672±0.665	3.944±0.551		0.534±0.728	0.206±0.580		5.280±0.428	3.956±0.297		-0.490±0.817	-0.681±0.652	
	PSF2	8.581±0.929	6.853±0.824	2.909±0.336	0.809±0.921	0.481±0.780	0.275±0.269	7.547±0.665	6.224±0.543	2.268±0.275	-1.749±1.669	-1.939±1.584	-1.258±1.308
Homogeneity	ING	0.012±0.002			0.009±0.002			0.003±0.003			0.010±0.004		
	PSF1	0.034±0.005	0.023±0.003		0.028±0.004	0.019±0.003		-0.004±0.008	-0.007±0.006		0.023±0.007	0.013±0.005	
	PSF2	0.045±0.006	0.033±0.005	0.010±0.002	0.033±0.006	0.023±0.006	0.004±0.003	-0.008±0.009	-0.011±0.007	-0.003±0.002	0.025±0.011	0.015±0.010	0.002±0.006
Entropy	ING	-0.175±0.016			-0.082±0.017			-0.093±0.018			-0.060±0.019		
	PSF1	-0.582±0.061	-0.407±0.052		-0.255±0.079	-0.173±0.076		-0.246±0.054	-0.153±0.042		-0.089±0.115	-0.029±0.105	
	PSF2	-0.789±0.084	-0.614±0.075	-0.207±0.024	-0.266±0.124	-0.184±0.123	-0.011±0.050	-0.311±0.065	-0.218±0.053	-0.065±0.016	0.035±0.184	0.095±0.175	0.123±0.088
Dissimilarity	ING	0.019±0.100			0.076±0.183			-4.167±0.054			-0.023±0.169		
	PSF1	-0.303±0.167	-0.322±0.148		-0.728±0.290	-0.804±0.302		0.214±0.156	0.214±0.130		-0.553±0.286	-0.530±0.205	
	PSF2	-0.320±0.200	-0.340±0.179	-0.018±0.117	-0.896±0.388	-0.972±0.392	-0.168±0.217	0.397±0.169	0.397±0.134	0.183±0.098	-1.223±0.554	-1.200±0.538	-0.670±0.558
HIE	ING	-0.008±0.020			0.015±0.035			0.026±0.018			-0.014±0.048		
	PSF1	0.027±0.027	0.035±0.022		0.084±0.069	0.068±0.051		0.149±0.033	0.123±0.023		-0.016±0.051	-0.001±0.041	
	PSF2	0.062±0.038	0.070±0.036	0.035±0.020	0.085±0.059	0.070±0.042	0.001±0.026	0.199±0.037	0.173±0.031	0.049±0.018	-0.082±0.046	-0.068±0.056	-0.066±0.046
ZP	ING	-0.023±0.005			-0.025±0.006			-0.014±0.004			-0.028±0.009		
	PSF1	-0.096±0.008	-0.073±0.006		-0.110±0.015	-0.084±0.011		-0.048±0.009	-0.034±0.005		-0.111±0.018	-0.083±0.011	
	PSF2	-0.139±0.012	-0.116±0.012	-0.043±0.008	-0.160±0.020	-0.134±0.017	-0.050±0.010	-0.065±0.011	-0.051±0.008	-0.017±0.005	-0.151±0.024	-0.122±0.018	-0.039±0.011

Supplemental Table 6. Effect of the interaction between uptake interval and reconstruction. At 90 min uptake interval, estimated marginal mean difference between reconstruction protocols for each segmentation and metric. This table is related to the factor “Uptake interval × Reconstruction” in Table 3. Data presented as mean ± standard error, with $p < 0.05$ in bold (continued).

Metrics	41MAX			A50P			SUV25			SUV40		
	EARL	ING	PSF1	EARL	ING	PSF1	EARL	ING	PSF1	EARL	ING	PSF1
MATV	ING	0.058±0.006			-0.004±0.014		0.018±0.003			-0.011±0.009		
	PSF1	0.300±0.019	0.242±0.017		0.093±0.018	0.097±0.015	0.063±0.011	0.045±0.009		-0.034±0.037	-0.023±0.029	
	PSF2	0.440±0.030	0.382±0.028	0.141±0.013	0.131±0.020	0.135±0.022	0.038±0.013	0.094±0.013	0.076±0.011	0.031±0.004	-0.025±0.045	-0.014±0.037
SUV _{max}	ING	-0.053±0.004			-0.053±0.004		-0.053±0.004			-0.053±0.004		
	PSF1	-0.249±0.015	-0.195±0.012		-0.249±0.015	-0.195±0.012	-0.249±0.015	-0.195±0.012		-0.249±0.015	-0.195±0.012	
	PSF2	-0.350±0.022	-0.297±0.019	-0.102±0.008	-0.350±0.022	-0.297±0.019	-0.102±0.008	-0.350±0.022	-0.297±0.019	-0.102±0.008	-0.350±0.022	-0.297±0.019
SUV _{mean}	ING	-0.045±0.004			-0.031±0.005		-0.026±0.003			-0.023±0.002		
	PSF1	-0.227±0.019	-0.182±0.015		-0.172±0.014	-0.142±0.010	-0.116±0.008	-0.090±0.006		-0.113±0.009	-0.089±0.007	
	PSF2	-0.318±0.028	-0.272±0.024	-0.091±0.010	-0.234±0.020	-0.203±0.016	-0.062±0.007	-0.157±0.013	-0.131±0.010	-0.041±0.005	-0.154±0.013	-0.131±0.011
TLG	ING	0.013±0.005			-0.035±0.011		-0.008±0.003			-0.034±0.009		
	PSF1	0.073±0.012	0.060±0.009		-0.080±0.020	-0.045±0.018	-0.053±0.013	-0.046±0.010		-0.147±0.035	-0.113±0.027	
	PSF2	0.123±0.019	0.110±0.015	0.050±0.007	-0.103±0.025	-0.068±0.025	-0.023±0.011	-0.063±0.017	-0.055±0.014	-0.010±0.004	-0.180±0.044	-0.145±0.036
CIH _{AUC}	ING	0.477±0.112			1.476±0.212		1.185±0.123			1.644±0.170		
	PSF1	1.265±0.298	0.788±0.251		4.831±0.304	3.354±0.288	5.316±0.425	4.131±0.342		6.921±0.571	5.277±0.431	
	PSF2	1.889±0.457	1.412±0.406	0.624±0.211	7.250±0.364	5.774±0.402	2.419±0.228	7.530±0.553	6.345±0.471	2.214±0.166	9.673±0.722	8.029±0.586
Homogeneity	ING	0.007±0.004			0.009±0.003		0.011±0.002			0.009±0.002		
	PSF1	0.028±0.004	0.021±0.004		0.032±0.004	0.023±0.005	0.031±0.004	0.020±0.003		0.028±0.003	0.019±0.002	
	PSF2	0.038±0.008	0.031±0.007	0.010±0.004	0.039±0.006	0.030±0.007	0.007±0.003	0.037±0.005	0.027±0.004	0.007±0.002	0.034±0.004	0.025±0.003
Entropy	ING	-0.059±0.019			-0.134±0.022		-0.148±0.009			-0.154±0.011		
	PSF1	-0.253±0.062	-0.194±0.064		-0.510±0.070	-0.376±0.056	-0.587±0.028	-0.438±0.026		-0.638±0.033	-0.484±0.031	
	PSF2	-0.269±0.102	-0.210±0.105	-0.016±0.049	-0.648±0.095	-0.513±0.082	-0.137±0.031	-0.764±0.044	-0.616±0.043	-0.178±0.019	-0.829±0.053	-0.675±0.051
Dissimilarity	ING	0.089±0.190			0.555±0.302		0.057±0.122			0.542±0.354		
	PSF1	-0.412±0.265	-0.502±0.217		0.430±0.292	-0.124±0.204	0.130±0.157	0.074±0.106		0.694±0.407	0.152±0.109	
	PSF2	-0.584±0.359	-0.673±0.314	-0.172±0.255	0.665±0.376	0.111±0.262	0.235±0.167	0.156±0.203	0.099±0.143	0.025±0.087	0.960±0.526	0.418±0.205
HIE	ING	-0.020±0.038			0.033±0.027		0.066±0.016			0.049±0.036		
	PSF1	-0.072±0.074	-0.052±0.071		0.086±0.041	0.053±0.033	0.237±0.030	0.171±0.028		0.070±0.037	0.021±0.026	
	PSF2	-0.038±0.067	-0.018±0.067	0.034±0.021	0.117±0.041	0.084±0.040	0.031±0.028	0.328±0.034	0.262±0.032	0.091±0.012	0.089±0.041	0.040±0.032
ZP	ING	-0.026±0.008			-0.025±0.005		-0.020±0.005			-0.028±0.007		
	PSF1	-0.114±0.017	-0.088±0.011		-0.105±0.010	-0.080±0.007	-0.080±0.009	-0.060±0.006		-0.092±0.010	-0.065±0.007	
	PSF2	-0.165±0.021	-0.139±0.016	-0.052±0.010	-0.157±0.015	-0.132±0.014	-0.053±0.012	-0.114±0.011	-0.093±0.009	-0.033±0.006	-0.128±0.010	-0.100±0.009

Supplemental Table 7. Test of GEE model significance results (*p*-values) on MATV with any other extracted metric as main effect.

Variable	Metrics	MASAC	AP	CAC	ST	41MAX	A50P	SUV25	SUV40
Metric	SUV _{max}	0.002	0.001	0.072	0.001	<0.001	<0.001	<0.001	<0.001
	SUV _{mean}	0.004	0.003	0.011	0.020	0.001	<0.001	<0.001	<0.001
	TLG	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	CIH _{AUC}	0.131	0.571	<0.001	0.414	<0.001	<0.001	<0.001	<0.001
	Homogeneity	0.001	0.029	<0.001	0.012	0.031	0.415	0.782	0.126
	Entropy	<0.001	<0.001	0.492	<0.001	<0.001	<0.001	<0.001	<0.001
	Dissimilarity	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	HIE	0.471	0.050	0.374	0.011	0.003	<0.001	0.004	<0.001
	ZP	0.701	0.009	<0.001	<0.001	0.014	0.013	0.003	<0.001
Metric * Uptake time	SUV _{max}	0.013	0.061	0.589	0.115	0.063	0.367	0.800	0.079
	SUV _{mean}	0.005	0.045	0.785	0.171	0.070	0.242	0.764	0.017
	TLG	0.083	0.070	0.131	0.114	0.102	0.162	0.243	0.609
	CIH _{AUC}	0.274	0.926	0.395	0.479	0.020	0.609	0.395	0.924
	Homogeneity	0.229	0.215	0.757	0.177	0.149	0.222	0.206	0.018
	Entropy	0.048	0.037	0.609	0.048	0.042	0.354	0.041	0.711
	Dissimilarity	0.288	0.584	0.047	0.189	0.072	0.059	0.017	0.041
	HIE	0.170	0.486	0.390	0.081	0.149	0.277	0.324	0.822
	ZP	0.004	0.113	0.142	0.742	0.075	0.219	0.255	0.355
Metric * Reconstruction	SUV _{max}	0.216	<0.001	0.356	<0.001	<0.001	0.003	<0.001	0.189
	SUV _{mean}	0.426	0.001	<0.001	<0.001	<0.001	0.002	<0.001	0.036
	TLG	<0.001	<0.001	0.017	<0.001	<0.001	<0.001	<0.001	0.731
	CIH _{AUC}	0.543	0.358	<0.001	0.459	0.389	<0.001	<0.001	0.369
	Homogeneity	0.155	0.268	0.188	0.016	0.074	0.361	0.341	0.001
	Entropy	0.294	0.011	0.025	0.020	0.253	0.133	0.198	0.319
	Dissimilarity	0.063	0.140	<0.001	0.021	0.478	0.001	0.002	0.031
	HIE	0.069	0.938	<0.001	0.057	0.087	0.630	<0.001	0.112
	ZP	0.941	0.023	0.112	0.139	0.107	0.245	0.263	0.002
Metric * Uptake time * Reconstruction	SUV _{max}	0.754	0.407	0.925	0.075	<0.001	0.295	0.581	0.511
	SUV _{mean}	0.868	0.164	0.002	0.044	0.006	0.237	0.165	0.319
	TLG	0.240	0.432	0.229	0.020	<0.001	0.001	0.049	0.037
	CIH _{AUC}	0.169	0.771	<0.001	0.743	0.115	0.898	0.254	0.630
	Homogeneity	0.457	0.197	0.153	0.348	0.587	0.043	0.533	0.025
	Entropy	0.326	0.062	0.672	0.052	0.101	0.124	0.533	0.316
	Dissimilarity	0.799	0.189	0.837	0.344	0.159	0.271	0.323	0.117
	HIE	0.064	0.383	0.199	0.630	0.205	0.242	0.001	0.006
	ZP	0.588	0.001	0.794	0.034	0.181	<0.001	0.095	0.022

Supplemental Table 8. Test of GEE model significance results (*p*-values) on the TRT_{MATV} with any other TRT as main effect.

Variable	Metrics	MASAC	AP	CAC	ST	41MAX	A50P	SUV25	SUV40
TRT	SUV _{max}	0.239	0.009	0.476	0.037	<0.001	0.911	0.079	0.058
	SUV _{mean}	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.174	<0.001
	TLG	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	CIH _{AUC}	<0.001	0.287	0.002	0.021	0.584	0.001	0.031	0.001
	Homogeneity	0.005	0.142	<0.001	0.131	0.166	0.080	0.454	0.802
	Entropy	0.305	0.011	0.933	0.002	<0.001	0.065	0.526	<0.001
	Dissimilarity	0.027	0.462	0.018	0.410	0.031	0.008	0.403	0.764
	HIE	0.056	0.016	0.924	0.123	0.001	0.024	0.078	0.495
	ZP	0.001	0.061	0.013	0.275	0.001	0.001	0.001	<0.001
TRT * Uptake time	SUV _{max}	0.923	0.764	0.316	0.607	0.708	0.759	0.780	0.033
	SUV _{mean}	0.704	0.857	0.589	0.891	0.961	0.180	0.386	0.934
	TLG	0.649	0.072	0.675	0.132	0.190	0.013	0.119	0.865
	CIH _{AUC}	0.034	0.451	0.036	0.291	0.609	0.213	0.894	0.092
	Homogeneity	0.637	0.520	0.539	0.173	0.905	0.334	<0.001	0.963
	Entropy	0.208	0.015	0.856	0.007	0.206	0.575	0.239	0.044
	Dissimilarity	0.633	0.116	0.048	0.963	0.852	0.277	0.067	<0.001
	HIE	0.076	0.300	0.262	0.068	0.380	0.184	0.503	0.036
	ZP	0.426	0.873	0.990	0.095	0.566	0.275	0.184	0.169
TRT * Reconstruction	SUV _{max}	0.016	0.321	0.221	0.274	0.617	0.609	0.016	0.610
	SUV _{mean}	0.106	0.390	<0.001	0.921	0.790	0.573	0.012	0.166
	TLG	0.428	0.104	0.335	0.160	0.488	0.066	0.259	0.302
	CIH _{AUC}	0.349	0.022	0.475	0.430	0.104	0.003	0.010	0.626
	Homogeneity	0.406	0.009	0.112	0.036	0.334	0.083	0.029	<0.001
	Entropy	0.234	0.900	0.155	0.445	0.488	0.359	0.157	0.118
	Dissimilarity	0.421	0.129	0.171	0.319	0.091	0.146	0.060	0.158
	HIE	0.371	0.554	0.874	0.026	0.041	0.331	0.002	0.102
	ZP	0.762	0.574	0.439	0.414	0.032	0.280	0.473	0.073
TRT * Uptake time * Reconstruction	SUV _{max}	0.336	0.051	0.062	0.394	0.050	0.455	0.109	0.631
	SUV _{mean}	0.272	0.045	0.061	0.344	0.115	0.540	0.144	0.978
	TLG	0.860	0.695	0.192	0.673	0.516	0.106	0.369	0.274
	CIH _{AUC}	0.129	0.853	0.539	0.009	0.054	0.062	0.094	0.308
	Homogeneity	0.268	0.131	0.097	0.638	0.552	0.054	0.001	<0.001
	Entropy	0.418	0.576	0.001	0.018	0.270	0.450	0.122	0.259
	Dissimilarity	0.546	0.424	0.916	0.254	0.052	0.754	0.483	0.264
	HIE	0.842	<0.001	0.044	<0.001	0.114	0.035	0.280	0.004
	ZP	0.481	0.002	0.196	0.001	0.937	<0.001	0.388	0.176