

## Supplemental Table 1

Title: Radiomic features ( $N = 83$ )

Group	Number	Name
Local intensity features	1	Highest mean SUV of a sphere of 12-mm diameter derived from the entire VOI ( $SUV_{peak}$ )
Intensity features	23	Maximum SUV ( $SUV_{max}$ ), minimum SUV ( $SUV_{min}$ ), range of SUV ( $SUV_{range}$ ), mean SUV ( $SUV_{mean}$ ), median SUV ( $SUV_{median}$ ), standard deviation ( $SUV_{SD}$ ), interquartile range of SUV ( $SUV_{IQR}$ ), coefficient of variation (COV, in percentage), skewness, kurtosis, median absolute deviation, mean absolute deviation, mean Laplacian, total energy, variance, root-mean-square (RMS), SUV of maximum SUV and the six adjacent voxels ( $SUV_{star}$ ), entropy (64 grey level bins), entropy (fixed bin size), local entropy (64 grey level bins), local entropy (fixed bin size), uniformity (64 grey level bins), uniformity (fixed bin size)
Intensity-volume histogram features	1	Area under a cumulative SUV-volume histogram curve (AUC)
Morphological features	14	Metabolically active tumor volume (MATV), total lesion glycolysis (TLG), surface area, surface to volume ratio, surface area to surface of an equivolumetric sphere to volume ratio, radius of an equivolumetric sphere, compactness 1, compactness 2, spherical disproportion, sphericity, asphericity, maximum 3D diameter, Moran's I, Geary's C
Fractal features	3	Fractal dimension, fractal abundance, fractal lacunarity
Texture features based on grey level co-occurrence matrix	25	Joint maximum, joint average, joint variance, joint entropy, difference average, difference variance, difference entropy, sum average, sum variance, sum entropy, angular second moment, contrast, dissimilarity, inverse difference, inverse difference normalized, inverse difference moment, inverse difference moment normalized, inverse variance, correlation, autocorrelation, cluster tendency, cluster shade, cluster prominence, first measure of information correlation, second measure of information correlation
Texture features based on grey level run length	16	Short runs emphasis, long runs emphasis, low grey level run emphasis, high grey level run emphasis, short run low grey level emphasis, short run high grey level emphasis, long run low grey level emphasis, long run high grey level emphasis, grey level non-uniformity, grey level non-uniformity normalized, run length non-uniformity, run length non-uniformity normalized, run percentage, grey level variance, run length variance, run entropy

## Supplemental Table 2

Title: Radiomic features that correlated strongly ( $r > 0.9$ )

Group	N	Name
Group 1	49	Maximum SUV ( $SUV_{max}$ ), entropy (fixed bin size), angular second moment, autocorrelation, cluster prominence, cluster tendency, contrast, difference average, difference entropy, difference variance, dissimilarity, inverse difference, inverse difference moment, inverse variance, joint average, joint entropy, joint maximum, joint variance, sum average, sum entropy, sum variance, grey level non-uniformity normalized, grey level variance, high grey level run emphasis, low grey level run emphasis, long runs emphasis, long run high grey level emphasis, long run low grey level emphasis, run entropy, run length non-uniformity normalized, run length variance, run percentage, short runs emphasis, short run high grey level emphasis, short run low grey level emphasis, local entropy (fixed bin size), mean absolute deviation, median absolute deviation, root-mean-square (RMS), interquartile range of SUV ( $SUV_{IQR}$ ), SUV of maximum SUV and the six adjacent voxels ( $SUV_{star}$ ), mean SUV ( $SUV_{mean}$ ), median SUV ( $SUV_{median}$ ), minimum SUV ( $SUV_{min}$ ), highest mean SUV of a sphere of 12-mm diameter derived from the entire VOI ( $SUV_{peak}$ ), range of SUV ( $SUV_{range}$ ), standard deviation ( $SUV_{SD}$ ), uniformity (fixed bin size), variance
Group 2	1	Coefficient of variation (COV, in percentage)
Group 3	2	Skewness, kurtosis
Group 4	7	Metabolically active tumor volume (MATV), total lesion glycolysis (TLG), surface area, radius of an equivolumetric sphere, total energy, maximum 3D diameter, run length non-uniformity
Group 5	1	Mean Laplacian
Group 6	2	Surface to volume ratio, fractal abundance
Group 7	6	Surface area to surface of an equivolumetric sphere to volume ratio, compactness 1, compactness 2, spherical disproportion, sphericity, asphericity,
Group 8	1	Area under a cumulative SUV-volume histogram curve (AUC)
Group 9	1	Fractal dimension
Group 10	1	Moran's I
Group 11	1	Geary's C
Group 12	1	Fractal lacunarity
Group 13	2	Entropy (fixed bin size), uniformity (64 grey level bins)

Group 14	1	Local entropy (64 grey level bins)
Group 15	2	Inverse difference normalized, inverse difference moment normalized
Group 16	1	Correlation
Group 17	1	Cluster shade
Group 18	2	First measure of information correlation, second measure of information correlation
Group 19	1	Grey level variance

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### Supplemental Table 3

Title: Rotated component matrix illustrating correlations between PCA components and the radiomic features

Radiomic features	Component			
	1	2	3	4
Maximum 3D diameter	0.929	0.031	-0.039	0.152
Grey level variance	0.845	0.101	-0.253	-0.013
Inverse difference moment normalized	0.809	0.376	0.140	0.009
Surface to volume ratio	-0.805	-0.183	-0.177	0.476
Disproportion	0.801	-0.059	-0.113	0.469
Fractal lacunarity	-0.800	-0.323	0.180	-0.100
Uniformity (64 grey level bins)	-0.752	0.123	-0.164	0.428
Geary's C	-0.735	-0.342	-0.358	0.088
AUC	-0.218	-0.854	0.187	0.233
Moran's I	0.189	0.824	-0.044	0.080
Cluster shade	-0.089	0.775	0.312	0.095
Second measure of information correlation	0.130	0.733	0.524	-0.111
Correlation	0.615	0.684	-0.001	-0.302
SUV <sub>max</sub>	0.175	0.223	0.934	-0.049
Mean Laplacian	-0.297	-0.118	0.874	0.316
Local Entropy (64 grey level bins)	-0.090	0.066	-0.180	-0.889

Legend: AUC = area under a cumulative SUV-volume histogram curve; SUV<sub>max</sub> = maximum standardized uptake value.