Supplementary material 1: Explanations and formulas of texture parameters.

Texture parameters from Histogram-based matrix (HISTO):

Parameter	Description	Formula
HISTO-Skewness	Asymmetry of the grey-level distribution in the histogram	$HISTO\_Skewness = \frac{\frac{1}{E}\sum_i \quad (HISTO(i) - \overline{HISTO})^3}{(\sqrt{\frac{1}{E}\sum_i \quad (HISTO(i) - \overline{HISTO})^2})^3}$
HISTO-Kurtosis	Shape of the grey-level distribution relative to a normal distribution	$HISTO\_Kurtosis = \frac{\frac{1}{E}\sum_i \quad (HISTO(i) - \overline{HISTO})^4}{(\frac{1}{E}\sum_i \quad (HISTO(i) - \overline{HISTO})^2)^2}$
HISTO-Entropy	Randomness of the distribution	$HISTO\_Entropy_{log10} = -\sum_i \quad p(i) \cdot log_{10}(p(i) + \varepsilon)$
HISTO-Energy	Uniformity of the distribution	$HISTO\_Energy = \sum_i \quad p(i)^2$

E: the total number of voxels in the Volume of Interest; $HISTO(i)$: the number of voxels with intensity I; $\overline{HISTO}$: the average of grey-levels in the histogram; $p(i)$: the probability of occurrence of voxels with intensity I; $\varepsilon = 2e - 16$; V_i: the volume of voxel i of the Volume Of Interest.

Texture parameters from grey level co-occurrence matrix (GLCM):

Parameter	Description	Formula
GLCM-Homogeneity	Homogeneity of grey-level voxel pairs	$GLCM_{Homogeneity} = Average\ over\ 13\ directions(\sum_i \sum_j \frac{GLCM(i,j)}{1+\lvert i-j\rvert})$
GLCM-Energy	Uniformity of grey-level voxel pairs	$GLCM_{Energy} = Average\ over\ 13\ directions(\sum_i \sum_j GLCM(i,j)^2)$
GLCM-Contrast	Local variations in the GLCM	$GLCM_{Contrast} = Average\ over\ 13\ directions(\sum_i \sum_j (i-j)^2 \cdot GLCM(i,j))$
GLCM-Correlation	Linear dependency of grey-levels in GLCM	$GLCM_{Correlation} = Average\ over\ 13\ directions(\sum_i \sum_j \frac{(i-\mu_i)\cdot(j-\mu_j)\cdot GLCM(i,j)}{\sigma_i \cdot \sigma_j})$
GLCM-Entropy	Randomness of grey-level voxel pairs	$GLCM_{Entropy_{log10}} = Average\ over\ 13\ directions(-\sum_i \sum_j GLCM(i,j)\cdot log_{10}(GLCM(i,j)+\epsilon))$
GLCM-Dissimilarity	Variation of grey-level voxel pairs	$GLCM_{Dissimilarity} = Average\ over\ 13\ directions(\sum_i \sum_j \lvert i-j\rvert \cdot GLCM(i,j))$

$I(p,q)$ corresponds to voxel(p,q) in an image (I) of size $N*M$; $Pairs_{ROI}$ corresponds to the number of all voxel pairs belonging to the region of interest (ROI); μ_i: the average on row i; μ_j: the average on column j; σ_i: the variance on row i; σ_j: the variance on column j; $\varepsilon = 2e-16$.

$$GLCM_{\Delta x,\Delta y}(i,j) = \frac{1}{Pairs_{ROI}} \sum_{p=1}^{N-\Delta x} \sum_{q=1}^{M-\Delta y} \begin{cases} 1 \text{ if } (I(p,q)=i, I(p+\Delta x, q+\Delta y)=j) \\ \text{and } I(p,q), I(p+\Delta x, q+\Delta y) \in ROI \\ 0 \text{ otherwise} \end{cases}$$