# Electronic Supplementary Material 1

**Radiomic Features Generation**

First, the following 7 statistical descriptors were computed on *local* windows (LW) centred in each pixel $x_i$ of the $DWI_{b2000}$ Region of Interest (ROI), whether ROI is the PCa lesion, thus achieving 7 parametric maps (PM) of local features. In that case, the symbol of feature is followed by subscript 'L', standing for local. Second, 12 statistical descriptors, including the 7 abovementioned, were computed globally, on each of the whole 7 PM. $\boldsymbol{\Omega}$ represents the domain where the features were computed on, and it can be either a LW, or the whole PM, and N is the number of pixels in $\boldsymbol{\Omega}$. The in-house software used was written in MATLAB® (R2018b v.9.5, The MathWorks, Natick, MA, USA).

From 1. to 7., $\boldsymbol{\Omega}$: LW or whole PM, $x_i \in \Omega$, $i$=1..$N$

$$\boldsymbol{E_L, E: entropy} = -\sum_i p_{x_i} log\, p_{x_i} \tag{1}$$

where $p_{x_i}$ is the probability of each pixel value $x_i \in \boldsymbol{\Omega}$

$$\boldsymbol{S_L, S:\ skewness} = \frac{\frac{1}{N}\sum_i (x_i - \bar{x})^3}{\left(\frac{1}{N}\sum_i (x_i - \bar{x})^2\right)^{3/2}} \tag{2}$$

$$\boldsymbol{K_L, K: kurtosis} = \frac{\frac{1}{N}\sum_i (x_i - \bar{x})^4}{\left(\frac{1}{N}\sum_i (x_i - \bar{x})^2\right)^{2}} - 3 \tag{3}$$

$$\boldsymbol{m_L, m: mean} = \frac{1}{N}\sum_i x_i \tag{4}$$

$$\boldsymbol{M_L, M: median} = x_{\left\lfloor \frac{f_c}{2} \right\rfloor},\ f_c = \frac{\sum_i N p_{x_i}}{2} \tag{5}$$

$$\boldsymbol{CV_L, CV: Coefficient\ of\ Variation} = \frac{\frac{1}{N}\sum_i x_i}{\sqrt{\frac{\sum_i (x_i - \bar{x})^2}{N}}} \tag{6}$$

$$\boldsymbol{IQR_L, IQR: InterQuartile\ Range} = median_{upper\ half} - median_{lower\ half} \tag{6}$$

The following 5 statistical descriptors were computed globally on each of the 7 PM. From 8. to 12., $\boldsymbol{\Omega}$: PM.

(1) **MAX**: **Maximum value** $= \max_{x_i}(\Omega)$
(2) $\boldsymbol{\sigma}$: $\boldsymbol{standard\ deviation} = \sqrt{\frac{\sum_i (x_i - \bar{x})^2}{N}}$
(3) $\boldsymbol{MAD}$: $\boldsymbol{Median\ Absolute\ Deviation} = median(|x_i - median(\Omega)|)$
(4) $\boldsymbol{m_{90th}}$: $\boldsymbol{mean\ over\ the\ 90th\ percentile} = mean(x \in x_i \geq x_{90th})$
(5) $\boldsymbol{M_{90th}}$: $\boldsymbol{median\ over\ the\ 90th\ percentile} = median(x \in x_i \geq x_{90th})$