

### Supplementary S1: The formula of the radiomics signature

$$Radimocs\ score = -1 \times b + \sum_{i=1}^N (sv_i \cdot x)$$

where

$b$  being the intercept,

$N$  being the number of support vectors,

$sv_i$  being the  $i^{\text{th}}$  support vector,

$x$  being the new data, and  $X$  indicates the filtered radiomics features

$\cdot$  being the dot product.