

Supplementary Tables

- **Supplementary Table S1.** Summary for radiomic features.

| | Variable | Mean | Median | SD | Min | Max |
|----|------------------------|------|--------|--------|-----|-----|
| 1 | AngularSecMomT2WI | 0.4 | 0.3 | 0.14 | 0.2 | 0.6 |
| 2 | ContrastT2WI | 69.1 | 53 | 52.644 | 20 | 188 |
| 3 | CorrelationT2WI | 0.6 | 0.6 | 0.118 | 0.3 | 0.8 |
| 4 | SumSquareVarianceT2WI | 96.3 | 95 | 23.427 | 50 | 146 |
| 5 | InverseDifferenceT2WI | 0.3 | 0.2 | 0.206 | 0.1 | 0.8 |
| 6 | SumAverageT2WI | 59.6 | 64 | 9.156 | 30 | 65 |
| 7 | SumVarianceT2WI | 41.4 | 36 | 13.767 | 20 | 68 |
| 8 | SumEntropyT2WI | 3.9 | 3.6 | 0.689 | 3.1 | 5.1 |
| 9 | EntropyT2WI | 2.8 | 2.6 | 1.256 | 1.1 | 5 |
| 10 | DifferenceVarianceT2WI | 40.6 | 41 | 7.189 | 20 | 52 |
| 11 | DifferenceEntropyT2WI | 3.2 | 3.1 | 1.441 | 1.2 | 6.3 |
| 12 | AngSecMomADC | 0.5 | 0.4 | 0.449 | 0.3 | 2.1 |
| 13 | ContrastADC | 44.5 | 48 | 13.999 | 18 | 66 |
| 14 | CorrelationADC | 0.5 | 0.5 | 0.264 | 0.1 | 0.9 |
| 15 | SumSquareVarianceADC | 70.3 | 52 | 23.578 | 50 | 102 |
| 16 | inverseDifferenceADC | 0.5 | 0.5 | 0.206 | 0.1 | 0.9 |
| 17 | SumAverageADC | 44.5 | 36 | 27.689 | 9 | 93 |
| 18 | SumVarianceADC | 36.7 | 36 | 5.64 | 27 | 47 |
| 19 | SumEntropyADC | 3.2 | 2.8 | 0.916 | 1.8 | 4.5 |
| 20 | EntropyADC | 1.4 | 1.3 | 0.342 | 1 | 2.1 |
| 21 | DifferenceVarianceADC | 27.5 | 27 | 9.149 | 11 | 43 |
| 22 | DifferentEntropyADC | 1.5 | 1.2 | 0.897 | 1 | 4.6 |
| 23 | MeanT2WI | 33.4 | 34 | 8.399 | 16 | 43 |
| 24 | MeanADC | 42.7 | 47 | 11.412 | 19 | 58 |
| 25 | SkewnessT2WI | 0.4 | 0.4 | 0.389 | 0.1 | 1.4 |
| 26 | SkewnessADC | 0.6 | 0.5 | 0.511 | 0.1 | 1.8 |
| 27 | KurtosisT2WI | 1.1 | 0.4 | 1.379 | 0.1 | 3.7 |
| 28 | KurtosisADC | 0.8 | 0.6 | 0.829 | 0.1 | 2.7 |

Supplementary Table S2: Description of Histogram and Grey-level co-occurrence Matrix (GLCM) features computed within the region of interest (ROI) of prostate tumour.

| Texture Features | Description |
|---|--|
| Histogram (first order features) | They are derived from first order statistics and provides information related to grey level distribution of ROI. |
| Mean | Average grey level intensity |
| Skewness | Measures the spread distribution of values about the average value. |
| Kurtosis | Measures the peakedness of distribution of values in image. |
| Grey-level co-occurrence matrix (GLCM) | (2nd order statistic Characterizing spatial relationship between intensity values within ROIs). |
| Angular Second moment | Measures the textural uniformity that is pixel pair recurrences. It detects disorder in textures |
| Contrast | Measures local intensity variations |
| Correlation | Explains the linear dependency of Grey level values to their respective voxels in the GLCM |
| Sum Square Variance | Measures the distribution of neighbouring intensity level pairs about the average of intensity level in the GLCM |
| Inverse Difference | Measures of the local homogeneity of an image |
| Sum Average | Measures the relationship between occurrences of pairs with lower intensity values and occurrences of pairs with higher intensity values |
| Sum Variance | Explains the weights elements that differ from the average value of the GLCM. |
| Entropy | Explains the randomness in the GLCM |
| Sum Entropy | Explains the sum of neighbourhood intensity value differences. |
| Difference Variance | Measure of heterogeneity that places higher weights on differing intensity level pairs that deviate more from the mean. |
| Difference Entropy | Measure of the randomness/variability in neighbourhood intensity value differences. |

Supplementary Table S3: Gleason grading system.

| Gleason (n) | Gleason score | Risk Group |
|--|------------------------------|---------------------------|
| Grade Group 1 (5) | ≤ 6 | Low |
| Grade Group 2 (5) Grade Group 3 (0) | 3+4=7 4+3=7 | Medium or Intermediate |
| Grade Group 4 (3) Grade Group 5 (2) | 4+4=8; 3+5=8 ; 5+3=8 or 9 | High |