**Supplementary Materials:**

Supplementary Table 1: All 103 imaging feature (mean±standard deviation[range] ) between pCR vs. non-pCR groups.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Anatomical MRI – T1w Images** | | | | | | | | | | | | | | | | | |
|  | **autoc** | **cprom** | **cshad** | **contrast** | **corr** | **dissi** | **energ** | **entro** | **homo1** | **homo2** | **maxpr** | **savgh** | **svarh** | **senth** | **dvarh** | **denth** | **inf1h** | **inf2h** |
| **pCR** | 1.4±0.1  [1.23, 1.6] | 231±70 [135, 354] | 16.7±5  [9.8, 25.7] | .02±.004  [.02, .03] | .95±.01 [.94,.97] | .003±.001  [.002, .005] | .99±.004 [.98,.99] | .04±.01  [.03, .06] | .9995±.0001  [.9994, .9997] | .9995±.0001 [.9993,.9996] | .993±.002 [.990,.996] | 2.09±0.03 [2.05,2.14] | 5.43±0.45 [4.82, 6.22] | 0.04±0.01 [0.03, 0.06] | 0.03±.004 [0.02, 0.03] | .004±.001 [.003, .006] | -0.90±0.01  [-0.92, -0.88] | 0.25±0.03 [0.20,0.31] |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Non-pCR** | 1.5±0.2  [1.3, 1.88] | 298±98 [147,499] | 21.6±7 [10.6, 36.4] | .03±.007  [.02, .05] | .96±.01 [.93,.97] | .004±.001  [.003, .007] | .98±.01  [.97, .99] | .05±.01  [.03, .08] | .9995±.0001 [.9991, .9997] | .9994±.0001 [.9991, .9997] | .991±.003 [.985,.996] | 2.1±0.04 [2.06, 2.20] | 5.87±0.65 [4.89, 7.23] | 0.05±0.01 [0.03, 0.08] | 0.03±.007 [0.02, 0.05] | .005±.001 [.004, .008] | -0.90±0.01  [-0.93, -0.87] | 0.28±0.04 [0.21, 0.34] |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ***p*** | 0.03\* | 0.03\* | 0.03\* | 0.03\* | 0.20 | 0.03\* | 0.03\* | 0.03\* | 0.03\* | 0.03\* | 0.03\* | 0.03\* | 0.03\* | 0.03\* | 0.03\* | 0.03\* | 0.2 | 0.03\* |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Anatomical MRI – T2w Images** | | | | | | | | | | | | | | | | | | |
|  | **Volume** | **autoc** | **cprom** | **cshad** | **contrast** | **corr** | **dissi** | **energ** | **entro** | **homo1** | **homo2** | **maxpr** | **savgh** | **svarh** | **senth** | **dvarh** | **denth** | **inf1h** | **inf2h** |
| **pCR** | 19.6±12.1 [5.4,66.7] | 1.4±0.1  [1.2, 1.6] | 225±73 [127, 348] | 16.3±5.3 [9.2, 25.2] | 0.03±0.05 [0.02, 0.03] | .95±.01 [.94,.96] | .004±.001 [.003, .005] | .987±.003  [.98, .992] | .04±.011 [.03, .06] | .999±.0001  [.999, 1.00] | .9995±.0001 [.999, .9996] | .993±.002 [.99, .996] | 2.1±.03 [2.1, 2.2] | 5.4±0.5 [4.8, 6.2] | .04±.01 [.03, .06] | .026±.005 [.018, .034] | .004±0.001  [.003, .006] | -.90±.011  [-.92,-.88] | 0.25±0.03 [0.2,0.31] |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Non-pCR** | 23.7±13.4 [9.9,45.4] | 1.5±0.2  [1.2, 1.8] | 293±101 [139, 500] | 21.3±10.1 [10, 36.5] | 0.03±0.01 [0.02, 0.04] | .95±.01 [.93,97] | .004±.003 [.003, .006] | .982±.006  [.971, .991] | .05±.03  [.03, .08] | .9995±.0001  [.9993, 1.00] | .9994±.0001 [.999, .9996] | .991±.003 [.985, .995] | 2.1±.04 [2.0, 2.2] | 5.8±0.7 [4.8, 7.2] | .05±.01 [.03, .08] | .03±.007 [.018, .033] | .005±0.001  [.004, .007] | -0.90±0.01  [-.93,-.87] | 0.27±0.04 [0.21,0.34] |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ***p*** | 0.07 | 0.03\* | 0.03\* | 0.03\* | 0.03\* | 0.12 | 0.05 | 0.03\* | 0.03\* | 0.05 | 0.05 | 0.03\* | 0.03\* | 0.03\* | 0.03\* | 0.05 | 0.04\* | 0.04\* | 0.04\* |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **DCE-MRI** | | | | | | | | | | | | | | | | |
|  | **MSD** | **E1** | **E2** | **E3** | **E23** | **10% perc** | **20%** | **30%** | **40%** | **50%** | **60%** | **70%** | **80%** | **90%** | **Max** | **Kurtosis** | **Skewness** |
| **pCR** | 15.6±14.9 [1.1,49] | 0.60±0.28  [0.17,0.99] | 1.11±0.26  [0.79,1.6] | 0.43±0.21  [0.14,0.87] | -0.55±0.21  [-0.87,-0.31] | 0.51±0.25 [0.11,0.75] | 0.61±0.30 [0.14,0.89] | 0.73±0.34 [0.18,1.04] | 0.87±0.39 [0.24,1.23] | 1.04±0.19 [0.76,1.34] | 1.17 ±0.21  [0.85,1.49] | 1.31±0.24 [0.92,1.63] | 1.48±0.29 [1.00,1.83] | 1.79±0.46 [1.13,2.70] | 1.97±0.34  [1.43, 2.91] | 3.09±0.72  [1.98,11.7] | 0.41±0.87  [-1.02, 1.29] |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Non-pCR** | 10.4±10.8 [1.4,49.8] | 0.72±0.38  [0.13,1.76] | 1.16±0.3  [0.5,2.1] | 0.64±0.30  [0.11,0.99] | -0.48±0.34  [-0.81,-0.20] | 0.66±0.38 [0.09,1.55] | 0.77±0.43 [0.11,1.95] | 0.90±0.49 [0.14,2.38] | 1.05±0.56 [0.19,2.93] | 1.13±0.30 [0.48,1.97] | 1.26±0.33 [0.55,2.32] | 1.39±0.37 [0.63,2.69] | 1.55±0.42 [0.72,3.11]] | 1.79±0.49 [0.86,3.75] | 2.11±0.43  [1.37,4.02] | 2.29±4.20  [1.97, 3.77] | 1.49±0.84  [-0.14,2.41] |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ***p*** | 0.5 | 0.6 | 0.43 | 0.33 | 0.55 | 0.11 | 0.13 | 0.15 | 0.18 | 0.11 | 0.13 | 0.15 | 0.18 | 0.25 | 0.06 | 0.05 | 0.02\* |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **DCE-MRI** | | | | | | | | | | | | | | | | | |
|  | **autoc** | **cprom** | **cshad** | **contrast** | **corr** | **dissi** | **energ** | **entro** | **homo1** | **homo2** | **maxpr** | **savgh** | **svarh** | **senth** | **dvarh** | **denth** | **inf1h** | **inf2h** |
| **pCR** | 1.13±0.08  [1.0, 1.25] | 73±47  [4, 139] | 5.29±3.36  [.31, 10.1] | .025±.01 [0.01,0.04] | .92±.01  [.90,.93] | .004±.001 [.001, .006] | .995±.003 [.992, .999] | .018±.010  [.002, .030] | .9996±.0002  [.999, .9998] | .9995±.0002 [.999,.9998] | .998±.001  [.996, .9997] | 2.03±.02  [2.00, 2.06] | 4.4±.31  [4.0, 4.8] | .017±.008 [.003,.03] | .025±.01  [.01,.04] | .004±.002 [.002,.007] | -0.7±0.2  [-0.9,-0.3] | .14±.06 [.03,0.2] |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Non-pCR** | 1.21±0.08  [1.02, 1.41] | 109±46  [33, 231] | 7.93±3.31  [2.49, 16.8] | .03±0.013  [.016, .08] | .92±.02  [.89,.95] | .005±.002 [.002, .01] | .993±.003  [.986, .997] | .026±.008  [.006, .044] | .9994±.0002  [.999, .9997] | .9994±.0003  [.998, .9996] | .997±.001  [.993, .998] | 2.04±.02  [2.02, 2.09] | 4.7±.28  [4.2,5.4] | .024±.007 [.013,.043] | .032±.013 [.02,.08] | .005±.002 [.003, .011] | -0.8±0.1  [-0.9,-0.5] | .17±.03 [.10, 0.3] |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ***p*** | 0.008\* | 0.02\* | 0.02\* | 0.08 | 0.37 | 0.08 | 0.01\* | 0.007\* | 0.08 | 0.08 | 0.01\* | 0.02\* | 0.008\* | 0.01\* | 0.03\* | 0.03\* | 0.03\* | 0.01\* |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **DWI** | | | | | | | | | | | | | | | | | |
|  | **autoc** | **cprom** | **cshad** | **contrast** | **corr** | **dissi** | **energ** | **entro** | **homo1** | **homo2** | **maxpr** | **savgh** | **svarh** | **senth** | **dvarh** | **denth** | **inf1h** | **inf2h** |
| **pCR** | 1.42±0.14  [1.25,1.66] | 239±79 [139,372] | 17.6±5.8  [10.3, 27.5] | 0.06±0.01 [0.04,0.08] | 0.90±0.02  [0.86,0.92] | .009±.002  [.006,.012] | 0.98±0 [0.98,0.99] | 0.06±0.01 [0.03,0.08] | .9986±.0003 [.998,.9991] | .9984±.0004 [.9978,.999] | .99±.002  [.989,.995] | 2.10±0.03  [2.06,2.16] | 5.53±0.53  [4.88,6.42] | 0.05±0.01 [0.03,0.08] | 0.06±0.01 [0.04,0.08] | 0.01±0 [0.01,0.02] | -.79±.02  [-.82,-.77] | 0.26±0.03 [0.2,0.31] |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Non-pCR** | 1.49±0.18  [1.22,1.93] | 272±95  [130,499] | 20.2±7.1  [9.6,36.9] | 0.07±0.02 [0.05,0.11] | 0.90±0.02  [0.85,0.93] | .011±.003 [.007,.016] | 0.98±0.01 [0.97,0.99] | 0.06±0.02 [0.03,0.11] | .9983±.0005 [.9973,.9991] | .9981±.0005 [.997,.9989] | .991±.003  [.982,.995] | 2.11±0.04  [2.06,2.22] | 5.77±0.65  [4.82,7.33] | 0.06±0.02 [0.03,0.1] | 0.07±0.02 [0.05,0.11] | 0.02±0.01 [0.01,0.03] | -.78±.03  [-.83,-.7] | 0.27±0.04 [0.2,0.36] |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ***p*** | 0.14 | 0.16 | 0.15 | 0.07 | 0.39 | 0.05 | 0.14 | 0.102 | 0.045\* | 0.046\* | 0.10 | 0.12 | 0.14 | 0.11 | 0.07 | 0.046\* | 0.23 | 0.17 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **DWI** | | | | | | | | | | | | |
|  | **MeanADC(10-3)** | **10% (10-3)** | **20%(10-3)** | **30%(10-3)** | **40%(10-3)** | **50%(10-3)** | **60%(10-3)** | **70%(10-3)** | **80%(10-3)** | **90%(10-3)** | **Max(10-3)** | **Kurtosis** | **Skewness** |
| **pCR** | 0.90±0.11 [0.77,1.14] | 0.70±0.17  [0.50,0.81] | 0.76±0.21  [0.66,0.87] | 0.81±0.18  [0.69, 0.97] | 0.86±0.16  [0.72, 1.03] | 0.90±0.16 [0.76,1.10] | 0.98±0.17 [0.80,1.21] | 1.06±0.18 [0.84,1.25] | 1.13±0.21 [0.89,1.36] | 1.21±0.18  [0.93,1.44] | 1.34±0.21  [1.03,1.69] | 6.21±4.25  [1.03,14.0] | 0.04±1.4  [-1.02, 2.29] |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Non-pCR** | 0.97±0.09 [0.81,1.37] | 0.70±0.15  [0.57,0.87] | 0.80±0.14  [0.71,0.92] | 0.86±0.12  [0.75, 0.98] | 0.90±0.1  [0.81,1.17] | 0.92±0.09 [0.87,1.39] | 1.06±0.1 [0.94,1.46] | 1.19±0.12 [1.00,1.54] | 1.31±0.14 [1.04,1.60] | 1.37±0.21  [1.08,1.66] | 1.44±0.22  [1.18,1.70] | 5.64±4.01  [1.37, 7.4] | 1.45±1.5  [-0.14,3.41] |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ***p*** | 0.005\* | 0.54 | 0.33 | 0.2 | 0.08 | 0.002\* | 0.005\* | 0.01\* | 0.02\* | 0.07 | 0.21 | 0.06 | 0.62 |

Supplementary Table 2: All 103 imaging feature (mean±standard deviation[range] ) between GR vs. non-GR groups.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Anatomical MRI - T1w images** | | | | | | | | | | | | | | | | | |
|  | **autoc** | **cprom** | **cshad** | **contrast** | **corr** | **dissi** | **energ** | **entro** | **homo1** | **homo2** | **maxpr** | **savgh** | **svarh** | **senth** | **dvarh** | **denth** | **inf1h** | **inf2h** |
| **GR** | 1.46±0.14 [1.23,1.74] | 267±81  [135, 427] | 19.4±5.9 [9.8, 31.0] | .03±.01 [.02,.05] | .95±.01  [.94,.97] | .004±.001 [.002,.007] | .985±.005 [.98,.99] | .05±.01 [.03,.07] | .9995±.0001 [.9991,.9997] | .9994±.0001 [.999,.9996] | .993±.002 [.987,.996] | 2.1±0.03 [2.05,2.2] | 5.7±0.5 [4.8,6.7] | .05±.01 [.03,.07] | .03±.01 [.02,.05] | .005±.001 [.003,.008] | -.9±.01  [-.92, -.88] | .26±.03 [.20,.33] |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Non-GR** | 1.53±0.21 [1.25,1.88] | 309±115 [147,499] | 22.5±8.4 [10.6,36.4] | .03±.01 [.02,.04] | .96 ±.01  [.93,.97] | .0044±.001 [.003,.006] | .98±.01 [.97,.99] | .05±.02 [.03,.08] | .9994±.0001 [.9993,.9997] | .9994±.0001 [.9992,.9996] | .991±.003 [.985,.996] | 2.1±0.05 [2.06,2.2] | 6.0±0.8  [4.9,7.2] | .05±.02 [.03,.08] | .03±.01  [.02,.04] | .005±.001 [.004,.007] | -0.9±.01  [-.93, -.87] | .28±.04 [.21,.34] |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ***p*** | 0.08 | 0.08 | 0.08 | 0.12 | 0.20 | 0.05 | 0.08 | 0.09 | 0.12 | 0.12 | 0.06 | 0.08 | 0.08 | 0.09 | 0.12 | 0.111 | 0.42 | 0.11 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Anatomical MRI - T2w images** | | | | | | | | | | | | | | | | | | |
|  | **Volume** | **autoc** | **cprom** | **cshad** | **contrast** | **corr** | **dissi** | **energ** | **entro** | **homo1** | **homo2** | **maxpr** | **savgh** | **svarh** | **senth** | **dvarh** | **denth** | **inf1h** | **inf2h** |
| **GR** | 21.4±18.6  [5.4,66.7] | 1.44±0.15 [1.21,1.77] | 259±83  [127,444] | 18.8±6.0  [9.2,32.3] | .03±.01 [.02,.04] | .95±.01  [.94,.97] | .004±.001 [.003,.006] | .99±.005 [.97,.99] | .05±.01 [.03,.07] | .9995±.0001 [.9993,.9997] | .9995±.0001 [.9991,.9996] | .993± .002  [.987,.996] | 2.1±0.03 [2.1,2.2] | 5.6±0.5 [4.8,6.8] | .05±.01 [.03,.07] | .03±.01 [.02,.04] | .005±.001 [.003,.007] | -.90±.01  [-.92,-.88] | .26±.03 [.20,.34] |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Non-GR** | 27.1±14.7  [10.1,41.7] | 1.53±0.21 [1.23,1.88] | 309±117  [139,500] | 22.4±8.6  [10.1,36.5] | .03±.01 [.02,.04] | .96±.01 [.93,.97] | .005±.001 [.003,.006] | .98±.01 [.97,.99] | .06±.02 [.03,.08] | .9994±.0001 [.9993,.9997] | .9994±.0001 [.9992,.9996] | .991± .003  [.985,.996] | 2.1±0.05 [2.1,2.2] | 6.0±0.8 [4.8,7.2] | .05±.02 [.03,.08] | .03±.01 [.02,.04] | .005±.001 [.003,.007] | -.91±.02  [-.93,-.87] | .28±.05 [.21,.34] |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ***p*** | 0.02\* | 0.05 | 0.05 | 0.05 | 0.08 | 0.2 | 0.047 | 0.05 | 0.06 | 0.08 | 0.08 | 0.05 | 0.05 | 0.05 | 0.06 | 0.08 | 0.08 | 0.26 | 0.07 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **DCE-MRI** | | | | | | | | | | | | | | | | |
|  | **MSD** | **E1** | **E2** | **E3** | **E23** | **10% perc** | **20%** | **30%** | **40%** | **50%** | **60%** | **70%** | **80%** | **90%** | **Max** | **Kurtosis** | **Skewness** |
| **GR** | 10.8±10.3  [1.1,49.0] | 0.67±0.36  [0.13,1.28] | 1.13±0.22  [0.79,1.61] | 0.43±0.21  [0.14,0.87] | -0.55±0.21  [-0.87,-0.31] | 0.22±0.08  [0.05,0.67] | 0.45±0.16  [0.33, 0.74] | 0.74±0.18  [0.51,1.01] | 0.89±0.21  [0.64,1.20] | 1.04±0.19  [0.76,1.34] | 1.17±0.21  [0.85,1.49] | 1.31±0.24  [0.92,1.63] | 1.48±0.29  [1.0,1.83] | 1.79±0.05  [1.13,2.70] | 2.07±0.24  [1.45, 3.77] | 3.14±0.08  [2.73,11.7] | 0.28±0.04  [-1.02,1.29] |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Non-GR** | 12.7±14.3  [2.5,49.8] | 0.72±0.38  [0.30,1.76] | 1.19±0.38  [0.5,2.1] | 0.64±0.30  [0.11,0.99] | -0.48±0.34  [-0.81,-0.20] | 0.24±0.09  [0.07,0.81] | 0.64±0.27  [0.24,1.20] | 0.81±0.34  [0.33,1.51] | 0.94±0.28  [0.40,1.66] | 1.13±0.30  [0.48,1.97] | 1.26±0.33  [0.55,2.32] | 1.39±0.37  [0.63,2.69] | 1.55±0.42 [0.72,3.11] | 1.79±0.49  [0.86,3.75] | 2.12±0.37  [1.33,4.14] | 2.21±0.14  [1.97, 5.39] | 1.17±0.08  [-0.41,2.41] |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ***p*** | 0.56 | 0.66 | 0.34 | 0.20 | 0.21 | 0.20 | 0.17 | 0.14 | 0.20 | 0.18 | 0.21 | 0.22 | 0.32 | 0.48 | 0.50 | 0.03\* | 0.06 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **DCE-MRI** | | | | | | | | | | | | | | | | | |
|  | **autoc** | **cprom** | **cshad** | **contrast** | **corr** | **dissi** | **energ** | **entro** | **homo1** | **homo2** | **maxpr** | **savgh** | **svarh** | **senth** | **dvarh** | **denth** | **inf1h** | **inf2h** |
| **GR** | 1.14±0.06 [1.01,1.25] | 83±37 [4,148] | 6.1±2.7 [0.3,10.7] | 0.03±0.01 [0.01,0.08] | 0.80±0.15  [0.43,0.94] | .004±.002 [.001,.011] | .995±.002 [.991,.9994] | .02±.006 [.003,.03] | .9995±.0003 [.998,.9998] | .9994±.0003 [.998,.9998] | .997±.001 [.996,.9997] | 2.0±0.01 [2,2.1] | 4.5±0.2 [4.0,4.9] | .02±.006 [.003,.03] | 0.03±0.01 [0.01,0.08] | .005±.002 [.002,.01] | -0.73±0.15  [-0.88,-0.33] | 0.15±0.04 [0.03,0.2] |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Non-GR** | 1.22±0.09 [1.12,1.39] | 130±50 [70,231] | 9.4±3.6 [5.1,16.8] | 0.03±0.01 [0.02,0.05] | 0.89±0.04  [0.78,0.94] | .004±.001 [.002,.007] | .99±.002 [.986,.996] | .03±.009 [0.02,0.04] | .9994±.0002 [.9992,.9997] | .9994±.0002 [.999,.9997] | .996±.002  [.993,.998] | 2.1±0.02 [2.0,2.1] | 4.8±0.3 [4.4,5.4] | .03±.01 [.02,.04] | 0.03±0.01 [0.02,0.05] | .006±.002 [.003,.008] | -0.82±0.03  [-0.87,-0.74] | 0.19±0.03 [0.15,0.25] |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ***p*** | 0.001\* | 0.001\* | 0.001\* | 0.39 | 0.03\* | 0.39 | 0.001\* | 0.001\* | 0.39 | 0.39 | 0.001\* | 0.001\* | 0.001\* | 0.001\* | 0.39 | 0.36 | 0.01\* | 0.001\* |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **DWI** | | | | | | | | | | | | | | | | | |
|  | **autoc** | **cprom** | **cshad** | **contrast** | **corr** | **dissi** | **energ** | **entro** | **homo1** | **homo2** | **maxpr** | **savgh** | **svarh** | **senth** | **dvarh** | **denth** | **inf1h** | **inf2h** |
| **GR** | 1.43±0.13  [1.25,1.72] | 242±71  [139,400] | 17.9±5.2  [10.3,29.6] | 0.06±0.02 [0.04,0.11] | 0.90±0.02  [0.85,0.93] | 0.01±0.00 [0.01,0.02] | .98±.006 [.97,.99] | .06±.017 [.034,.10] | .998±.000 [.998,.999] | .998±.001 [.997,.999] | .99±.002 [.987,.995] | 2.10±0.03  [2.06,2.17] | 5.56±0.47  [4.88,6.60] | 0.06±0.02 [0.03,0.1] | 0.06±0.02 [0.04,0.11] | 0.02±0 [0.01,0.03] | -0.79±0.03 [-0.82,-0.72] | 0.26±0.04 [0.20,0.36] |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Non-GR** | 1.50±0.22  [1.00,1.78] | 275±119  [145,412] | 21.9±7.1  [10.9,36.9] | 0.069±0.014 [0.05,0.10] | 0.90±0.03  [0.86,0.93] | 0.01±0.00 [0.01,0.02] | .98±.01 [.97,.99] | .067±.02 [.036,.11] | .998±.001 [.997,.999] | .998±.001 [.997,.999] | .99±.003 [.985,.994] | 2.13±0.04  [2.07,2.19] | 5.93±0.65  [4.95,6.78] | 0.07±0.02 [0.03,0.1] | 0.07±0.01 [0.05,0.1] | 0.02±0.01 [0.01,0.03] | -0.78±0.03 [-0.83,-0.7] | 0.28±0.05 [0.21,0.36] |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ***p*** | 0.26 | 0.66 | 0.07 | 0.16 | 0.66 | 0.10 | 0.14 | 0.01\* | 0.06 | 0.06 | 0.05 | 0.05 | 0.06 | 0.10 | 0.16 | 0.06 | 0.36 | 0.13 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **DWI** | | | | | | | | | | | | | |
|  | **MeanADC (10-3)** | | **10%(10-3)** | **20%(10-3)** | **30%(10-3)** | **40%(10-3)** | **50%(10-3)** | **60%(10-3)** | **70%(10-3)** | **80%(10-3)** | **90%(10-3)** | **Max(10-3)** | **Kurtosis** | **Skewness** |
| **GR** | 0.91±0.11 [0.77,1.14] | | 0.71±0.21  [0.50,0.86] | 0.78±0.21  [0.66,0.91] | 0.82±0.17  [0.69, 0.98] | 0.86±0.16  [0.72, 1.07] | 0.90±0.16 [0.76,1.16] | 0.98±0.17 [0.80,1.21] | 1.06±0.18 [0.84,1.32] | 1.14±0.21 [0.89,1.36] | 1.22±0.18  [0.93,1.52] | 1.32±0.22  [1.03,1.69] | 6.98±4.20  [1.03,14.0] | 0.45±0.54  [-1.02,2.47] |
|  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **Non-GR** | 0.97±0.09 [0.81,1.37] | | 0.70±0.13  [0.52,0.87] | 0.80±0.14  [0.68,0.92] | 0.86±0.12  [0.75, 0.98] | 0.90±0.1  [0.81,1.17] | 0.93±0.09 [0.84,1.39] | 1.03±0.1 [0.94,1.46] | 1.19±0.12 [0.97,1.54] | 1.31±0.14 [1.00,1.60] | 1.37±0.21  [1.04,1.66] | 1.44±0.22  [1.18,1.70] | 4.21±3.0  [1.14, 7.7] | 1.24±0.75  [-0.47,3.41] |
|  |  |  | |  |  |  |  |  |  |  |  |  |  |  |
| ***p*** | 0.03\* | 0.4 | | 0.36 | 0.2 | 0.08 | 0.002\* | 0.005\* | 0.01\* | 0.02\* | 0.07 | 0.21 | 0.03\* | 0.65 |

Gray Level Co-occurrence Matrix (GLCM) features

autoc: Auto Correlation;

cprom: Cluster Prominence;

cshad: Cluster Shade;

contr: Contrast;

corrp: Correlation;

dissi: Dissimilarity;

energ: Energy;

entro: Entropy;

homo1: Homogeneity 1;

homo2: Homogeneity 2;

maxpr: Max Probability;

savgh: Sum Average;

svarh: Sum Variance;

senth: Sum Entropy;

dvarh: Difference Variance;

denth: Difference Entropy;

inf1h: Information Measure of Correlation 1;

inf2h: Information Measure of Correlation 2;

Histogram features:

10%...90% perc: 10%...90% percentile;

Shape descriptors of TIC (Time-Intensity-Curve):

MSD: the maximum signal difference;

E1: the TIC slope of E1 (15s post-contrast);

E2: the TIC slope of E2 (60s post-contrast);

E3: the TIC slope of E3 (120s post-contrast);

E23: the wash-out slope between E2 and E3