

Supplementary Data for

Selection of image texture analysis and color model in the ad-vanced image processing of thermal images of the horse caused by exercise-induced fatigue

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Table S1: Blood biomarkers level (mean±SD) before (BS 0) and after (BS 1) exercise in the model of six repetitions of exercise (REs).

Blood biomarkers / exercise / <i>p</i>	RE 1	RE 2	RE 3	RE 4	RE 5	RE 6	<i>p</i>
WBC, x10⁹/L							
BS 0	7.9±1.50 ^a	7.6±1.07 ^a	7.9±1.00 ^a	8.5±1.21 ^{a*}	7.9±1.68 ^{a*}	7.8±1.29 ^{a*}	0.742
BS 1	8.0±1.28 ^a	8.5±1.92 ^{ab}	8.7±1.27 ^{ab}	9.9±1.70 ^{ab*}	9.9±1.76 ^{ab*}	10.2±1.76 ^{b*}	0.006
<i>p</i>	0.758	0.202	0.127	0.032	0.011	0.001	
RBC, x10¹²/L							
BS 0	7.6±0.56 ^{a*}	7.9±0.79 ^{a*}	7.9±0.77 ^{a*}	8.1±0.64 ^{a*}	7.7±0.71 ^{a*}	7.9±0.78 ^{a*}	0.802
BS 1	9.5±0.81 ^{a*}	9.4±0.86 ^{a*}	9.2±1.03 ^{a*}	9.8±1.41 ^{a*}	8.9±0.97 ^{a*}	9.1±0.84 ^{a*}	0.800
<i>p</i>	0.0001	0.0001	0.0005	0.0001	0.001	0.0001	
HGB, mmol/L							
BS 0	115±9.7 ^{a*}	119±9.4 ^{a*}	120±10.6 ^{a*}	123±11.2 ^{a*}	116±12.4 ^{a*}	119±13.1 ^{a*}	0.418
BS 1	145±13.4 ^{a*}	143±10.6 ^{a*}	141±17.1 ^{a*}	150±25.2 ^{a*}	136±17.0 ^{a*}	139±13.4 ^{a*}	0.400
<i>p</i>	0.0001	0.0001	0.0003	0.0002	0.0004	0.0006	
HCT, %							
BS 0	36.6±3.19 ^{a*}	37.8±3.07 ^{a*}	37.8±3.63 ^{a*}	38.9±3.50 ^{a*}	37.0±4.10 ^{a*}	37.8±3.71 ^{a*}	0.712
BS 1	46.1±3.87 ^{a*}	45.9±3.40 ^{a*}	44.9±5.22 ^{a*}	47.7±7.79 ^{a*}	43.9±5.35 ^{a*}	44.4±4.07 ^{a*}	0.690
<i>p</i>	0.0001	0.0001	0.0002	0.0002	0.0003	0.0002	
MCV, fL							
BS 0	48.1±2.44 ^a	48.3±2.34 ^a	48.2±2.21 ^a	48.5±2.38 ^a	48.3±2.61 ^a	48.2±2.36 ^a	0.118
BS 1	48.8±2.17 ^a	48.9±3.07 ^a	48.7±2.37 ^a	48.9±2.36 ^a	48.9±2.59 ^a	48.7±2.41 ^a	0.290
<i>p</i>	0.802	0.868	0.913	0.904	0.515	0.225	

MCH, g/L							
BS 0	15.1±0.62 ^a	15.1±1.00 ^a	15.2±0.49 ^a	15.2±0.71 ^a	15.1±0.75 ^a	15.2±0.79 ^a	0.058
BS 1	15.3±0.61 ^a	15.3±0.92 ^a	15.2±0.62 ^a	15.4±0.76 ^a	15.2±0.69 ^a	14.4±2.79 ^a	0.072
<i>p</i>	0.0644	0.0780	0.5521	0.1840	0.2051	0.3430	
MCHC, mmol/L							
BS 0	315±5.4 ^a	315±8.7 ^a	316±7.7 ^a	315±6.2 ^a	313±5.9 ^a	316±8.8 ^a	0.647
BS 1	314±7.1 ^a	313±7.2 ^a	313±6.1 ^a	315±5.1 ^a	311±5.2 ^a	313±5.0 ^a	0.869
<i>p</i>	0.059	0.055	0.098	0.277	0.114	0.400	
LAC, mmol/L							
BS 0	0.1±0.02 ^{a*}	0.1±0.02 ^{a*}	0.1±0.01 ^{a*}	0.1±0.02 ^{a*}	0.1±0.03 ^{a*}	0.1±0.01 ^{a*}	0.858
BS 1	4.6±0.51 ^{a*}	4.7±0.24 ^{a*}	4.8±0.63 ^{a*}	4.8±0.71 ^{a*}	4.9±0.20 ^{a*}	4.9±0.34 ^{a*}	0.478
<i>p</i>	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
TSP, g/L							
BS 0	5.90±0.38 ^a	6.29±0.63 ^a	5.96±0.43 ^a	6.02±0.33 ^a	6.37±0.88 ^a	6.15±0.47 ^a	0.858
BS 1	6.18±0.45 ^a	6.45±0.49 ^a	6.38±0.83 ^a	6.46±0.58 ^a	6.73±0.90 ^a	6.38±0.59 ^a	0.478
<i>p</i>	0.120	0.589	0.464	0.147	0.532	0.393	
CPK, U/L							
BS 0	157±58.3 ^a	148±40.2 ^{a*}	154±54.5 ^{a*}	176±30.8 ^{a*}	134±30.9 ^{a*}	148±45.3 ^{a*}	0.406
BS 1	202±85.3 ^a	209±65.5 ^{ab*}	211±50.8 ^{ab*}	239±102.0 ^{ab*}	245±65.2 ^{ab*}	294±70.9 ^{b*}	0.048
<i>p</i>	0.126	0.008	0.022	0.025	0.0001	<0.0001	
ALT, U/L							
BS 0	3.46±0.34 ^a	3.45±0.21 ^a	3.41±0.30 ^a	3.58±0.21 ^a	3.44±0.20 ^a	3.50±0.19 ^a	0.726
BS 1	3.61±0.34 ^a	3.57±0.28 ^a	3.52±0.22 ^a	3.55±0.22 ^a	3.55±0.41 ^a	3.48±0.22 ^a	0.295
<i>p</i>	0.236	0.427	0.063	0.538	0.284	0.148	
AST, U/L							
BS 0	274±59.8 ^a	274±42.3 ^a	280±54.5 ^a	274±46.8 ^a	263±19.1 ^{a*}	244±43.9 ^{a*}	0.323
BS 1	238±47.3 ^a	272±57.9 ^{ab}	280±39.9 ^{ab}	296±61.6 ^{ab}	282±33.8 ^{ab*}	309±51.8 ^{b*}	0.022
<i>p</i>	0.062	0.962	0.946	0.287	0.049	0.018	

WBC - white blood cell count; RBC - red blood cell count; HGB - hemoglobin concentration; HCT - hematocrit; MCV - mean corpuscular volume, MCH - mean corpuscular hemoglobin; MCHC - mean corpuscular hemoglobin concentration; LAC - blood lactate concentrations; TSP - total serum protein concentration; CPK - creatine phosphokinase activity; ALT - alanine aminotransferase activity; AST - aspartate aminotransferase activity. Asterisks and bolded *p*-value indicate differences between REs for *p* < 0.05. Lower case letters and bolded *p*-value indicate differences between BSs for *p* < 0.05.

Table S2: Body surface temperature (mean±SD) in four regions of interest (ROIs 1-4) before (BS 0) and after (BS 1) exercise in the model of six repetitions of exercise (REs).

Surface temperature / exercise / <i>p</i>	RE 1	RE 2	RE 3	RE 4	RE 5	RE 6	<i>p</i>
Tmax, ROI 1							
BS 0	29.1±2.27 ^{a*}	31.6±2.93 ^{a*}	31.5±2.44 ^{a*}	29.1±2.28 ^{a*}	31.2±3.60 ^{a*}	31.6±2.39 ^{a*}	0.050
BS 1	39.1±1.59 ^{a*}	38.9±2.08 ^{a*}	39.0±1.99 ^{a*}	38.6±1.99 ^{a*}	38.5±2.69 ^{a*}	38.2±2.25 ^{a*}	0.908
<i>p</i>	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Tmax, ROI 2							
BS 0	29.9±3.30 ^{a*}	33.1±3.19 ^{a*}	32.3±2.90 ^{a*}	30.8±1.66 ^{a*}	31.8±2.40 ^{a*}	31.5±2.55 ^{a*}	0.068
BS 1	38.3±1.37 ^{a*}	38.6±1.91 ^{a*}	38.9±2.20 ^{a*}	37.8±3.12 ^{a*}	38.2±3.16 ^{a*}	38.6±2.42 ^{a*}	0.904
<i>p</i>	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Tmax, ROI 3							
BS 0	29.5±3.31 ^{a*}	32.2±3.77 ^{a*}	32.2±2.98 ^{a*}	29.9±2.27 ^{a*}	31.1±3.01 ^{a*}	31.5±2.57 ^{a*}	0.050
BS 1	38.7±1.65 ^{a*}	39.2±2.07 ^{a*}	39.2±2.07 ^{a*}	38.5±2.40 ^{a*}	38.8±2.88 ^{a*}	39.1±1.95 ^{a*}	0.968
<i>p</i>	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Tmax, ROI 4							
BS 0	29.9±2.98 ^{a*}	33.0±2.90 ^{a*}	32.4±2.72 ^{a*}	30.4±2.58 ^{a*}	31.6±3.15 ^{a*}	31.6±2.64 ^{a*}	0.065
BS 1	39.0±1.76 ^{a*}	39.2±2.04 ^{a*}	37.0±2.20 ^{a*}	38.6±2.56 ^{a*}	38.5±2.88 ^{a*}	39.5±2.02 ^{a*}	0.123
<i>p</i>	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Taver, ROI 1							
BS 0	25.5±4.05 ^{a*}	28.1±3.89 ^{a*}	27.8±3.39 ^{a*}	25.2±2.09 ^{a*}	25.8±2.21 ^{a*}	27.5±1.57 ^{a*}	0.065
BS 1	35.8±2.35 ^{a*}	36.9±2.14 ^{a*}	37.0±2.17 ^{a*}	35.3±2.40 ^{a*}	35.7±2.54 ^{a*}	36.6±1.68 ^{a*}	0.502
<i>p</i>	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Taver, ROI 2							
BS 0	27.2±2.83 ^{a*}	29.9±3.67 ^{a*}	29.7±3.07 ^{a*}	28.1±1.97 ^{a*}	28.6±1.79 ^{a*}	29.9±1.41 ^{a*}	0.055
BS 1	35.3±1.76 ^{a*}	36.0±1.90 ^{a*}	36.5±2.07 ^{a*}	34.9±2.64 ^{a*}	35.1±2.93 ^{a*}	36.1±2.26 ^{a*}	0.417
<i>p</i>	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Taver, ROI 3							
BS 0	25.1±3.16 ^{a*}	27.3±3.15 ^{a*}	27.6±3.15 ^{a*}	24.6±2.12 ^{a*}	25.3±1.96 ^{a*}	26.4±2.48 ^{a*}	0.070
BS 1	35.2±2.35 ^{a*}	36.4±2.26 ^{a*}	36.9±2.38 ^{a*}	34.8±2.55 ^{a*}	35.1±2.84 ^{a*}	35.9±2.21 ^{a*}	0.240
<i>p</i>	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Taver, ROI 4							
BS 0	25.7±3.62 ^{a*}	27.3±3.83 ^{a*}	27.6±2.86 ^{a*}	25.0±2.33 ^{a*}	25.5±2.21 ^{a*}	27.0±2.02 ^{a*}	0.079
BS 1	35.3±2.55 ^{a*}	36.6±2.29 ^{a*}	37.7±1.56 ^{a*}	34.9±2.69 ^{a*}	35.1±2.77 ^{a*}	36.3±2.15 ^{a*}	0.059
<i>p</i>	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	

Tmax - maximal temperature; Taver - average temperature. Asterisks and bolded *p*-value indicate differences between REs for *p* < 0.05. Lower case letters and bolded *p*-value indicate differences between BSs for *p* < 0.05.

Table S3: Selected features of image texture analysis (mean±SD) in four regions of interest (ROIs 1-4) before (BS 0) and after (BS 1) exercise in the model of six repetitions of exercise (REs).

Structural image complexity / exercise / <i>p</i>	RE 1	RE 2	RE 3	RE 4	RE 5	RE 6	<i>p</i>
R.HS.Variance, ROI 1							
BS 0	68±26.4 ^{a*}	47±14.1 ^{a*}	51±30.7 ^{a*}	66±29.7 ^{a*}	73±33.3 ^{a*}	66±37.7 ^{a*}	0.230
BS 1	5±1.4 ^{a*}	7±2.0 ^{a*}	5±1.5 ^{a*}	31±8.9 ^{b*}	22±6.4 ^{b*}	41±12.0 ^{b*}	<0.0001
<i>p</i>	<0.0001	<0.0001	<0.0001	0.033	0.0004	0.010	
R.HS.Variance, ROI 2							
BS 0	13±16.2 ^{ab}	3±6.8 ^{a*}	4±4.3 ^{a*}	33±34.5 ^{b*}	34±30.7 ^{b*}	15±25.3 ^{ab*}	<0.0001
BS 1	2±4.2 ^a	5±1.4 ^{ac*}	3±2.9 ^{ac*}	17±4.9 ^{b*}	13±3.7 ^{bc*}	9±13.9 ^{ab*}	0.0002
<i>p</i>	0.068	0.404	0.506	0.314	0.051	0.458	
R.HS.Variance, ROI 3							
BS 0	108±40.7 ^{a*}	84±47.4 ^{a*}	75±40.0 ^{a*}	104±38.2 ^{a*}	98±31.3 ^{a*}	93±47.6 ^{a*}	0.336
BS 1	6±6.5 ^{ab*}	14±17.1 ^{ab*}	2±1.6 ^{a*}	31±29.8 ^{b*}	19±14.4 ^{b*}	26±36.1 ^{b*}	<0.0001
<i>p</i>	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
R.HS.Variance, ROI 4							
BS 0	92±28.3 ^{a*}	91±49.6 ^{a*}	71±31.0 ^{a*}	101±32.5 ^{a*}	106±33.8 ^{a*}	101±36.6 ^{a*}	0.154
BS 1	10±11.1 ^{ab*}	11±12.9 ^{ab*}	4±3.2 ^{a*}	31±28.8 ^{b*}	19±12.9 ^{b*}	22±23.3 ^{b*}	0.0001
<i>p</i>	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
R.GLCM.SumOfSqs, ROI 1							
BS 0	64±32.2 ^{ab*}	30±23.7 ^{a*}	28±25.9 ^{a*}	83±40.7 ^{b*}	80±41.6 ^{b*}	52±36.8 ^{ab*}	0.0005
BS 1	5±4.8 ^{a*}	9±6.8 ^{ac*}	5±5.0 ^{a*}	40±40.0 ^{b*}	26±22.0 ^{bc*}	31±41.4 ^{bc*}	<0.0001
<i>p</i>	<0.0001	0.010	0.010	0.010	0.001	0.028	
R.GLCM.SumOfSqs, ROI 2							
BS 0	12±16.1 ^{ab}	3±6.8 ^a	4±4.2 ^a	33±34.4 ^b	34±30.6 ^{b*}	15±25.1 ^{ab}	<0.0001
BS 1	2±4.2 ^a	4±4.9 ^{ab}	2±2.9 ^a	18±17.1 ^b	11±12.8 ^{b*}	9±13.8 ^{ab}	0.0002
<i>p</i>	0.068	0.404	0.506	0.314	0.033	0.701	
R.GLCM.SumOfSqs, ROI 3							
BS 0	125±39.7 ^{a*}	114±83.5 ^{ab*}	69±47.0 ^{b*}	104±38.2 ^{ab*}	114±30.0 ^{ab*}	92±47.5 ^{ab*}	0.031
BS 1	6±6.5 ^{ab*}	14±17.1 ^{a*}	1±1.5 ^{b*}	31±29.7 ^{a*}	19±14.3 ^{a*}	26±36.0 ^{a*}	<0.0001
<i>p</i>	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
R.GLCM.SumOfSqs, ROI 4							
BS 0	116±27.3 ^{ab*}	85±55.0 ^{ab*}	64±39.9 ^{a*}	117±30.1 ^{b*}	123±28.7 ^{b*}	101±36.6 ^{ab*}	0.005
BS 1	10±11.0 ^{ab*}	11±12.9 ^{ab*}	3±3.1 ^{a*}	31±28.7 ^{b*}	19±12.7 ^{b*}	26±36.0 ^{ab*}	0.0008
<i>p</i>	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
R.GLCM.SumVarnc, ROI 1							
BS 0	257±128.5 ^{ab*}	120±94.6 ^{a*}	111±103.6 ^{a*}	329±162.7 ^{b*}	318±166.2 ^{b*}	207±147.0 ^{ab*}	0.005
BS 1	16±19.1 ^{a*}	34±27.3 ^{ac*}	18±19.9 ^{a*}	161±123.7 ^{b*}	102±97.9 ^{bc*}	125±165.3 ^{bc*}	<0.0001
<i>p</i>	<0.0001	0.010	0.010	0.010	0.001	0.028	
R.GLCM.SumVarnc, ROI 2							
BS 0	49±61.7 ^{ab}	11±26.1 ^a	14±15.8 ^a	132±131.4 ^b	134±117.2 ^{b*}	60±96.0 ^{ab}	<0.0001
BS 1	8±16.9 ^a	14±19.7 ^{ab}	8±11.6 ^a	71±68.0 ^b	44±50.1 ^{b*}	35±55.1 ^{ab}	0.0002

p	0.051	0.703	0.360	0.189	0.033	0.463	
R.GLCM.SumVarnC, ROI 3							
BS 0	499±152.1 ^{a*}	334±181.3 ^{ab*}	276±179.7 ^{b*}	415±146.1 ^{ab*}	457±114.8 ^{ab*}	369±181.9 ^{ab*}	0.031
BS 1	25±25.9 ^{ab*}	57±68.3 ^{a*}	6±6.2 ^{b*}	124±118.6 ^{a*}	76±57.3 ^{a*}	102±143.9 ^{a*}	<0.0001
p	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
R.GLCM.SumVarnC, ROI 4							
BS 0	465±109.9 ^{ab*}	339±219.7 ^{ab*}	254±159.2 ^{a*}	467±120.3 ^{b*}	489±114.8 ^{b*}	401±146.2 ^{ab*}	0.044
BS 1	41±43.9 ^{a*}	43±51.5 ^{a*}	13±12.6 ^{a*}	123±114.7 ^{a*}	74±50.9 ^{a*}	75±97.9 ^{a*}	0.0006
p	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
r.HS.Variance, ROI 1							
BS 0	90±48.0 ^{a*}	58±47.2 ^{a*}	54±36.9 ^{a*}	99±43.7 ^{a*}	92±47.2 ^{a*}	62±49.7 ^a	0.055
BS 1	14±6.1 ^{a*}	14±5.8 ^{a*}	16±6.0 ^{a*}	49±46.9 ^{b*}	35±44.1 ^{ab*}	42±49.7 ^{ab}	0.013
p	0.0002	0.008	0.004	0.014	0.005	0.323	
r.HS.Variance, ROI 2							
BS 0	26±14.6 ^{a*}	17±3.9 ^{a*}	17±4.2 ^{a*}	31±20.2 ^{a*}	35±22.0 ^{a*}	26±31.5 ^{a*}	0.120
BS 1	21±5.2 ^{a*}	18±6.6 ^{a*}	20±5.9 ^{a*}	27±18.2 ^{a*}	21±9.9 ^{a*}	23±13.1 ^{a*}	0.867
p	0.334	0.473	0.182	0.631	0.076	0.736	
r.HS.Variance, ROI 3							
BS 0	107±27.3 ^{a*}	96±49.1 ^{a*}	85±46.7 ^{a*}	115±31.2 ^{a*}	123±19.2 ^{a*}	93±42.0 ^{a*}	0.146
BS 1	18±4.2 ^{a*}	21±15.9 ^{a*}	16±4.9 ^{a*}	45±49.0 ^{a*}	23±13.0 ^{a*}	33±27.9 ^{a*}	0.343
p	<0.0001	0.0002	0.0003	0.0005	<0.0001	0.0005	
r.HS.Variance, ROI 4							
BS 0	128±29.4 ^{a*}	93±50.5 ^{a*}	91±53.6 ^{a*}	128±15.9 ^{a*}	123±14.4 ^{a*}	111±36.4 ^{a*}	0.483
BS 1	17±6.6 ^{a*}	18±9.5 ^{a*}	13±3.9 ^{a*}	52±62.7 ^{a*}	19±10.1 ^{a*}	28±39.5 ^{a*}	0.162
p	<0.0001	0.0003	0.0004	0.002	<0.0001	<0.0001	
r.GLCM.SumOfSqs, ROI 1							
BS 0	89±48.1 ^{a*}	58±42.9 ^{a*}	54±33.4 ^{a*}	99±43.8 ^{a*}	84±46.0 ^{a*}	62±49.7 ^a	0.074
BS 1	14±6.2 ^{a*}	14±5.8 ^{a*}	16±6.0 ^{a*}	49±46.9 ^{b*}	35±44.2 ^{ab*}	42±49.7 ^b	0.014
p	0.0002	0.004	0.002	0.014	0.014	0.322	
r.GLCM.SumOfSqs, ROI 2							
BS 0	26±14.6 ^a	17±3.9 ^a	17±4.3 ^a	31±20.1 ^a	35±22.0 ^a	26±31.6 ^a	0.122
BS 1	21±5.3 ^a	18±6.6 ^a	20±6.0 ^a	27±18.9 ^a	21±9.9 ^a	23±13.0 ^a	0.866
p	0.361	0.432	0.151	0.651	0.081	0.474	
r.GLCM.SumOfSqs, ROI 3							
BS 0	107±27.5 ^{a*}	96±49.3 ^{a*}	85±46.8 ^{a*}	115±31.9 ^{a*}	123±19.2 ^{a*}	93±42.2 ^{a*}	0.141
BS 1	18±4.2 ^{a*}	21±15.9 ^{a*}	16±4.9 ^{a*}	45±49.0 ^{a*}	22±12.9 ^{a*}	33±27.9 ^{a*}	0.351
p	<0.0001	0.0002	0.0003	0.0005	<0.0001	0.0005	
r.GLCM.SumOfSqs, ROI 4							
BS 0	128±29.4 ^{a*}	93±50.7 ^{a*}	91±53.8 ^{a*}	128±15.8 ^{a*}	123±14.3 ^{a*}	111±36.5 ^{a*}	0.509
BS 1	16±6.7 ^{a*}	18±9.5 ^{a*}	13±3.9 ^{a*}	51±62.7 ^{a*}	19±9.9 ^{a*}	28±39.5 ^{a*}	0.168
p	<0.0001	0.0003	0.0004	0.001	<0.0001	<0.0001	
r.GLCM.SumVarnC, ROI 1							
BS 0	349±185.1 ^{ab*}	184±179.2 ^{a*}	164±135.4 ^{a*}	411±173.4 ^{b*}	383±186.0 ^{b*}	427±138.5 ^{b*}	0.0002
BS 1	55±24.5 ^{a*}	56±23.2 ^{a*}	63±24.0 ^{a*}	193±179.6 ^{b*}	137±170.2 ^{ab*}	160±188.3 ^{ab*}	0.015
p	0.0002	0.0308	0.026	0.006	0.003	0.0008	

r.GLCM.SumVarnrc, ROI 2							
BS 0	102±58.2 ^a	65±15.6 ^a	65±16.9 ^a	120±77.7 ^a	136±85.3 ^a	102±122.2 ^a	0.115
BS 1	85±20.8 ^a	72±26.6 ^a	78±23.8 ^a	107±72.2 ^a	85±39.6 ^a	90±51.5 ^a	0.871
<i>p</i>	0.353	0.441	0.152	0.673	0.079	0.761	
r.GLCM.SumVarnrc, ROI 3							
BS 0	417±104.8 ^{a*}	370±187.7 ^{a*}	331±181.1 ^{a*}	446±120.0 ^{a*}	474±77.4 ^{a*}	362±161.2 ^{a*}	0.144
BS 1	71±16.9 ^{a*}	83±63.4 ^{a*}	64±19.4 ^{a*}	176±189.9 ^{a*}	89±51.7 ^{a*}	129±109.0 ^{a*}	0.344
<i>p</i>	<0.0001	0.0002	0.0003	0.0006	<0.0001	0.0005	
r.GLCM.SumVarnrc, ROI 4							
BS 0	498±117.2 ^{a*}	362±195.4 ^{a*}	353±205.7 ^{a*}	494±64.1 ^{a*}	476±56.7 ^{a*}	427±138.5 ^{a*}	0.439
BS 1	66±26.7 ^{a*}	71±38.0 ^{a*}	53±15.6 ^{a*}	199±237.8 ^{a*}	76±39.8 ^{a*}	111±154.3 ^{a*}	0.165
<i>p</i>	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
r.GLCH.SumOfSqs, ROI 1							
BS 0	89±48.1 ^{a*}	63±50.7 ^{a*}	58±43.5 ^{a*}	99±43.8 ^{a*}	101±49.7 ^{a*}	62±49.8 ^{a*}	0.085
BS 1	14±6.2 ^{a*}	14±5.8 ^{a*}	16±6.1 ^{a*}	49±46.9 ^{b*}	35±44.2 ^{ab*}	42±49.7 ^{ab*}	0.013
<i>p</i>	0.0002	0.006	0.006	0.014	0.002	0.323	
r.GLCH.SumOfSqs, ROI 2							
BS 0	26±14.7 ^a	16±3.9 ^a	16±4.3 ^a	30±20.1 ^a	34±22.0 ^a	26±31.7 ^{a*}	0.051
BS 1	21±5.3 ^a	18±6.7 ^a	20±6.0 ^a	27±18.2 ^a	21±10.0 ^a	23±13.0 ^{a*}	0.876
<i>p</i>	0.366	0.407	0.149	0.674	0.083	0.764	
r.GLCH.SumOfSqs, ROI 3							
BS 0	107±27.4 ^{a*}	96±49.1 ^{a*}	85±46.6 ^{a*}	115±31.8 ^{a*}	123±19.2 ^{a*}	94±42.1 ^{a*}	0.145
BS 1	18±4.2 ^{a*}	21±15.9 ^{a*}	16±4.8 ^{a*}	45±49.0 ^{a*}	23±13.1 ^{a*}	33±28.0 ^{a*}	0.350
<i>p</i>	<0.0001	0.0002	0.0003	0.0005	<0.0001	0.0005	
r.GLCH.SumOfSqs, ROI 4							
BS 0	128±29.5 ^{a*}	96±49.1 ^{a*}	91±53.9 ^{a*}	115±31.8 ^{a*}	124±14.4 ^{a*}	111±36.7 ^{a*}	0.727
BS 1	16±6.7 ^{a*}	18±9.5 ^{a*}	13±4.0 ^{a*}	52±62.8 ^{a*}	19±9.8 ^{a*}	28±39.6 ^{a*}	0.168
<i>p</i>	<0.0001	0.0002	0.0004	0.006	<0.0001	<0.0001	
r.GLCH.SumVarnrc, ROI 1							
BS 0	307±167.1 ^{a*}	234±180.1 ^{a*}	222±147.0 ^{a*}	411±173.4 ^{a*}	341±186.2 ^{a*}	239±186.8 ^a	0.081
BS 1	55±24.5 ^{a*}	56±23.2 ^{a*}	63±24.0 ^{a*}	193±179.6 ^{b*}	137±170.0 ^{ab*}	161±188.3 ^{ab}	0.015
<i>p</i>	0.0003	0.006	0.003	0.006	0.010	0.317	
r.GLCH.SumVarnrc, ROI 2							
BS 0	102±58.2 ^{ab*}	65±15.6 ^{a*}	65±16.9 ^{a*}	121±77.7 ^{ab*}	136±85.3 ^{b*}	102±122.2 ^{ab*}	0.008
BS 1	85±20.8 ^{a*}	72±26.6 ^{a*}	78±23.8 ^{a*}	107±72.2 ^{a*}	85±39.6 ^{a*}	90±51.5 ^{a*}	0.871
<i>p</i>	0.353	0.441	0.152	0.673	0.079	0.761	
r.GLCH.SumVarnrc, ROI 3							
BS 0	417±104.8 ^{a*}	370±187.7 ^{a*}	331±181.1 ^{a*}	446±120.0 ^{a*}	474±77.4 ^{a*}	362±161.2 ^{a*}	0.144
BS 1	71±16.9 ^{a*}	83±63.4 ^{a*}	64±19.4 ^{a*}	176±189.9 ^{a*}	89±51.7 ^{a*}	129±109.0 ^{a*}	0.344
<i>p</i>	<0.0001	0.0002	0.0003	0.0006	<0.0001	0.0005	
r.GLCH.SumVarnrc, ROI 4							
BS 0	498±117.2 ^{a*}	362±195.4 ^{a*}	353±205.7 ^{a*}	494±64.1 ^{a*}	476±56.7 ^{a*}	427±138.5 ^{a*}	0.439
BS 1	66±26.7 ^{a*}	71±38.0 ^{a*}	53±15.6 ^{a*}	199±237.8 ^{a*}	76±39.8 ^{a*}	111±154.3 ^{a*}	0.165
<i>p</i>	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	

B.GLCM.SumVarnc, ROI 1							
BS 0	73±46.2 ^{ab*}	36±29.7 ^{ab}	20±20.5 ^a	146±135.4 ^{ab*}	126±108.2 ^{b*}	59±65.2 ^b	0.001
BS 1	29±8.2 ^{a*}	32±8.0 ^{ab}	34±11.2 ^{ab}	58±32.2 ^{b*}	46±22.1 ^{ab*}	62±61.6 ^{ab}	0.005
p	0.007	0.743	0.052	0.049	0.026	0.288	
B.GLCM.SumVarnc, ROI 2							
BS 0	22±7.9 ^{ab*}	24±7.6 ^{ab*}	21±6.1 ^a	50±52.9 ^{ab}	48±45.2 ^b	29±24.1 ^{ab}	0.007
BS 1	14±7.4 ^{a*}	15±7.2 ^{a*}	17±3.9 ^a	19±12.9 ^a	21±12.4 ^a	18±10.4 ^a	0.253
p	0.004	0.017	0.105	0.070	0.074	0.177	
B.GLCM.SumVarnc, ROI 3							
BS 0	325±161.6 ^{a*}	140±134.7 ^{ab*}	91±109.8 ^b	242±176.5 ^{ab*}	279±148.6 ^{a*}	171±149.2 ^{ab*}	0.002
BS 1	35±12.6 ^{a*}	40±8.7 ^{a*}	33±5.7 ^a	54±30.3 ^{a*}	41±10.7 ^{a*}	55±46.5 ^{a*}	0.082
p	<0.0001	0.026	0.743	0.017	<0.0001	<0.0001	
B.GLCM.SumVarnc, ROI 4							
BS 0	290±145.5 ^{a*}	153±137.8 ^{ab*}	78±73.8 ^{b*}	281±159.4 ^{a*}	316±146.0 ^{a*}	187±106.5 ^{ab*}	0.0004
BS 1	37±11.7 ^{ab*}	36±10.4 ^{ab*}	31±6.8 ^{a*}	50±22.4 ^{b*}	42±15.8 ^{ab*}	48±22.0 ^{b*}	0.013
p	<0.0001	0.013	0.049	0.0004	<0.0001	<0.0001	
Q.HS.Variance, ROI 1							
BS 0	724±370 ^{a*}	905±353 ^{a*}	713±410 ^{a*}	511±265 ^{a*}	537±309 ^{a*}	741±450 ^{a*}	0.113
BS 1	1411±305 ^{a*}	1590±400 ^{ab*}	1608±421 ^{ab*}	1640±339 ^{ab*}	1731±391 ^{b*}	1633±464 ^{ab*}	0.018
p	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Q.HS.Variance, ROI 2							
BS 0	1309±369 ^{a*}	1317±358 ^{a*}	1369±360 ^a	1476±306 ^{a*}	1473±521 ^{a*}	1398±490 ^{a*}	0.590
BS 1	751±213 ^{a*}	887±283 ^{ab*}	1052±199 ^{ab*}	874±303 ^{ab*}	989±351 ^{b*}	1064±287 ^{ab*}	0.045
p	<0.0001	0.006	0.045	<0.0001	0.015	0.046	
Q.HS.Variance, ROI 3							
BS 0	848±245 ^{a*}	907±273 ^{a*}	754±269 ^{a*}	674±256 ^{a*}	700±274 ^{a*}	719±317 ^{a*}	0.234
BS 1	1614±509 ^{ab*}	1940±264 ^{a*}	1407±295 ^{b*}	1823±236 ^{ab*}	1857±320 ^{ab*}	1691±475 ^{ab*}	0.009
p	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Q.HS.Variance, ROI 4							
BS 0	797±192 ^{a*}	896±375 ^{a*}	698±357 ^{a*}	718±303 ^{a*}	738±292 ^{a*}	537±264 ^{a*}	0.171
BS 1	1676±290 ^{ab*}	1670±413 ^{ab*}	1435±332 ^{b*}	1824±304 ^{a*}	1797±317 ^{ab*}	1807±367 ^{a*}	0.040
p	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
H.HS.Perc99, ROI 1							
BS 0	204±31.3 ^{a*}	176±42.6 ^{ab*}	155±29.4 ^{b*}	213±21.5 ^{b*}	209±31.3 ^{b*}	186±30.0 ^{ab}	0.0006
BS 1	131±25.5 ^{a*}	137±18.4 ^{a*}	127±10.3 ^{a*}	186±34.1 ^{b*}	168±33.8 ^{b*}	162±38.6 ^b	<0.0001
p	<0.0001	0.029	0.003	0.015	0.005	0.058	
H.HS.Perc99, ROI 2							
BS 0	140±30.3 ^{ab}	124±18.3 ^a	125±8.9 ^{ab}	173±40.3 ^b	178±36.9 ^{b*}	142±31.1 ^{ab}	<0.0001
BS 1	118±8.1 ^a	123±7.8 ^a	121±6.9 ^a	148±27.1 ^b	142±31.4 ^{b*}	135±24.2 ^b	<0.0001
p	0.080	0.467	0.325	0.183	0.010	0.540	
H.HS.Perc99, ROI 3							
BS 0	225±12.0 ^{a*}	205±27.9 ^{ab*}	189±34.9 ^{b*}	218±15.4 ^{ab*}	226±5.5 ^{a*}	205±30.6 ^{ab*}	0.0005
BS 1	131±18.3 ^{ab*}	142±27.2 ^{ab*}	120±6.5 ^{b*}	169±39.1 ^{b*}	157±34.0 ^{b*}	152±41.5 ^{b*}	<0.0001
p	<0.0001	<0.0001	<0.0001	0.001	<0.0001	0.002	
H.HS.Perc99, ROI 4							

BS 0	226±4.4 ^{a*}	197±38.6 ^{ab*}	190±35.7 ^{b*}	222±9.5 ^{a*}	224±8.3 ^{a*}	213±26.6 ^{ab*}	0.0003
BS 1	144±32.0 ^{ab*}	141±29.2 ^{ab*}	125±9.1 ^{b*}	165±32.9 ^{b*}	158±28.1 ^{b*}	156±37.7 ^{b*}	0.002
<i>p</i>	<0.0001	0.008	<0.0001	<0.0001	<0.0001	0.004	
B.HS.Perc99, ROI 1							
BS 0	160±60.0 ^{ab*}	112±69.2 ^{ab}	74±38.4 ^a	178±52.9 ^{b*}	172±52.9 ^{b*}	120±62.7 ^{ab}	0.002
BS 1	87±25.6 ^{a*}	84±11.2 ^a	87±9.1 ^a	133±50.3 ^{b*}	113±43.6 ^{ab*}	113±54.7 ^{ab}	0.018
<i>p</i>	0.002	0.175	0.294	0.043	0.018	0.787	
B.HS.Perc99, ROI 2							
BS 0	75±17.4 ^a	74±9.9 ^a	71±7.3 ^a	113±58.6 ^a	117±56.1 ^a	83±40.5 ^a	0.504
BS 1	71±12.8 ^a	69±14.4 ^a	70±10.3 ^a	74±32.3 ^a	82±35.8 ^a	70±16.1 ^a	0.755
<i>p</i>	0.590	0.310	0.751	0.062	0.082	0.292	
B.HS.Perc99, ROI 3							
BS 0	204±34.5 ^{a*}	163±59.4 ^{ab*}	133±63.8 ^{b*}	189±44.2 ^{ab*}	212±11.1 ^{a*}	160±69.4 ^{ab*}	0.003
BS 1	84±8.4 ^{a*}	93±20.3 ^{a*}	89±8.8 ^{a*}	122±53.3 ^{a*}	104±30.2 ^{a*}	112±51.8 ^{a*}	0.372
<i>p</i>	<0.0001	0.002	0.035	0.003	<0.0001	0.043	
B.HS.Perc99, ROI 4							
BS 0	214±8.4 ^{a*}	157±70.4 ^{ab*}	136±63.5 ^{b*}	200±26.4 ^{a*}	207±24.0 ^{a*}	182±62.9 ^{ab*}	0.010
BS 1	99±33.2 ^{a*}	92±23.6 ^{a*}	84±9.5 ^{a*}	110±44.7 ^{a*}	99±35.7 ^{a*}	110±38.8 ^{a*}	0.399
<i>p</i>	<0.0001	0.009	0.017	<0.0001	<0.0001	0.003	

R.HS.Variance - Variance of histogram statistics, Red component in RGB color model; R.GLCM.SumOfSqs - Sum of Squares of Grey-Level Co-occurrence Matrix, Red component in RGB color model; R.GLCM.SumVarn - Sum of Variance of Grey-Level Co-occurrence Matrix, Red component in RGB color model; r.HS.Variance - Normalized Variance of histogram statistics, Red component in RGB color model; r.GLCM.SumOfSqs - Normalized Sum of Squares of Grey-Level Co-occurrence Matrix, Red component in RGB color model; r.GLCM.SumVarn - Normalized Sum of Variance of Grey-Level Co-occurrence Matrix, Red component in RGB color model; r.GLCH.SumOfSqs - Normalized Sum of Squares of the asymmetric Gray Level Co-occurrence Matrix, Red component in RGB color model; r.GLCH.SumVarn - Normalized Sum of Variance of the asymmetric Gray Level Co-occurrence Matrix, Red component in RGB color model; B.GLCM.SumVarn - Sum of Variance of Grey-Level Co-occurrence Matrix, Blue component in RGB color model; Q.HS.Variance - Variance of histogram statistics, Q-component in YIQ color model; H.HS.Perc99 - Percentiles 99 of histogram statistics, Hue component in HSB color model; B.HS.Perc99 - Percentiles 99 of histogram statistics, Brightness component in HSB color model. Asterisks and bolded *p*-value indicate differences between REs for $p < 0.05$. Lower case letters and bolded *p*-value indicate differences between BSs for $p < 0.05$.