

On-line Table: Univariate Cox regression model of each histogram feature of DCE-MR imaging–derived pharmacokinetic parameters from baseline, posttreatment T2 high-signal-intensity lesion, and its percentage change

Histogram Feature of DCE-MR Imaging Parameters	Mean	SD	Hazard Ratio (95% CI) ^a	P Value
Baseline K^{trans}				
Mean	0.00652	0.00243	1.16 (0.987–1.36)	.072
SD	0.00740	0.00476	1.07 (0.980–1.16)	.138
Skewness	7.27	13.7	1.00 (1.00–1.00)	.256
Kurtosis	286	1113	1.00 (1.00–1.00)	.165
Fifth percentile	0.00143	0.000914	1.26 (0.855–1.84)	.245
First quartile ^b	0.00259	0.00132	1.51 (1.08–2.12)	.016
Median ^b	0.00478	0.00188	1.26 (1.01–1.57)	.038
Third quartile	0.00814	0.00321	1.12 (0.990–1.27)	.072
95th percentile	0.0174	0.00770	1.03 (0.977–1.08)	.291
Posttreatment K^{trans}				
Mean	0.00527	0.00254	1.13 (0.971–1.32)	.113
SD	0.00443	0.00306	1.06 (0.944–1.19)	.323
Skewness	2.36	1.19	1.00 (1.00–1.00)	.446
Kurtosis	11.1	13.1	1.00 (1.00–1.00)	.282
Fifth percentile	0.00151	0.00144	1.16 (0.921–1.47)	.205
First quartile	0.00245	0.00157	1.22 (0.977–1.53)	.078
Median ^b	0.00398	0.00218	1.22 (1.03–1.45)	.024
Third quartile	0.00680	0.00338	1.08 (0.966–1.22)	.170
95th percentile	0.0131	0.00681	1.03 (0.973–1.09)	.302
Percentage change K^{trans}				
Mean	–14.2	37.7	1.00 (0.991–1.01)	.705
SD	–26.3	46.9	1.00 (0.994–1.01)	.581
Skewness	–25.7	55.5	1.00 (0.996–1.01)	.310
Kurtosis	–19.0	138	1.00 (1.00–1.01)	.066
Fifth percentile	32.9	99.5	1.00 (0.995–1.00)	.600
First quartile	5.33	59.0	1.00 (0.992–1.00)	.776
Median	–12.0	41.3	1.01 (0.996–1.02)	.228
Third quartile	–10.5	40.7	1.00 (0.991–1.01)	.817
95th percentile	–17.0	41.2	1.00 (0.993–1.01)	.602
Baseline v_p				
Mean	0.297	0.160	1.03 (0.0555–19.2)	.983
SD	0.271	0.150	0.70 (0.0426–11.6)	.806
Skewness	4.84	4.21	1.03 (0.950–1.12)	.460
Kurtosis	87.0	195	1.00 (0.999–1.00)	.561
Fifth percentile	0.0635	0.0364	0.27 (0.000–119,230)	.845
First quartile	0.138	0.0700	2.16 (0.00325–1440)	.816
Median	0.227	0.124	1.60 (0.0301–84.6)	.817
Third quartile	0.365	0.210	1.46 (0.147–14.5)	.746
95th percentile	0.765	0.437	0.90 (0.337–2.42)	.839
Posttreatment v_p				
Mean	0.237	0.168	1.49 (0.124–17.9)	.753
SD	0.176	0.162	1.14 (0.0828–15.7)	.921
Skewness	2.62	1.36	1.05 (0.786–1.41)	.733
Kurtosis	17.1	19.4	1.01 (0.986–1.03)	.575
Fifth percentile	0.0588	0.0411	112 (0.00684–1,832,379)	.341
First quartile	0.126	0.0842	3.91 (0.0308–496)	.581
Median	0.194	0.130	2.71 (0.110–66.2)	.542
Third quartile	0.292	0.201	1.51 (0.187–12.1)	.700
95th percentile	0.538	0.412	1.00 (0.349–2.85)	.994
Percentage change v_p				
Mean	–4.84	93.0	1.00 (0.997–1.01)	.516
SD	–21.9	79.0	1.00 (0.995–1.01)	.865
Skewness	–20.9	60.0	1.00 (0.993–1.01)	.977
Kurtosis	13.0	183	1.00 (0.999–1.00)	.597
Fifth percentile	25.7	181	1.00 (0.999–1.00)	.243
First quartile	11.6	137	1.00 (0.998–1.00)	.466
Median	2.61	101	1.00 (0.998–1.01)	.364
Third quartile	–4.23	88.5	1.00 (0.997–1.01)	.529
95th percentile	–13.2	83.6	1.00 (0.996–1.01)	.703
Baseline v_e				
Mean	1.29	0.620	1.05 (0.571–1.92)	.882
SD	7.64	4.83	0.96 (0.885–1.05)	.383
Skewness	40.3	15.8	0.99 (0.970–1.02)	.603

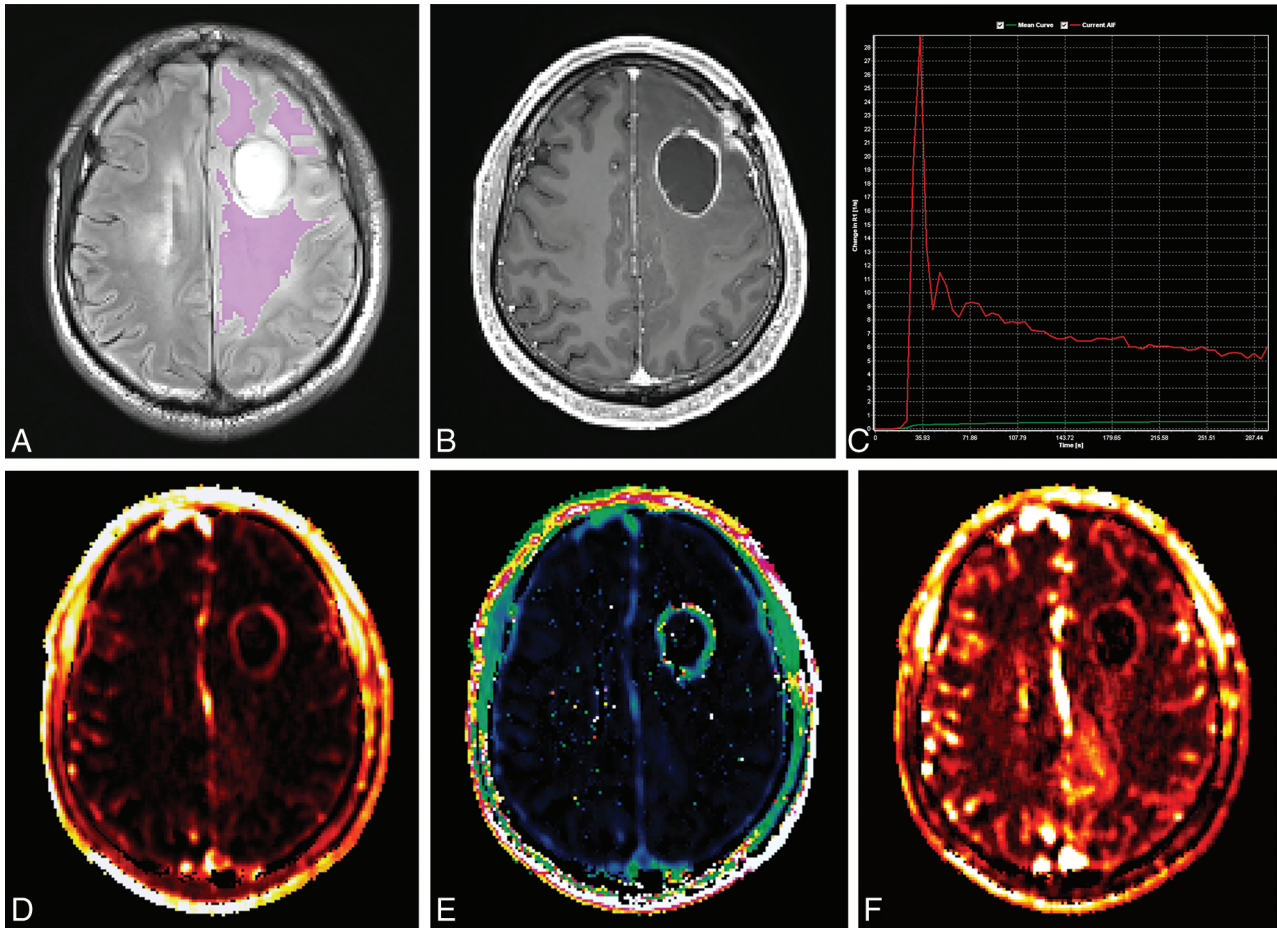
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On-line Table: Continued

Histogram Feature of DCE-MR Imaging Parameters	Mean	SD	Hazard Ratio (95% CI) ^a	P Value
Kurtosis	2153	1492	1.00 (1.00–1.00)	.634
Fifth percentile	0.200	0.0707	5.11 (0.0200–1329)	.565
First quartile	0.412	0.156	3.54 (0.418–29.9)	.246
Median	0.658	0.277	1.91 (0.552–6.59)	.308
Third quartile	1.12	0.480	1.54 (0.742–3.19)	.247
95th percentile	2.85	1.47	1.02 (0.787–1.32)	.880
Posttreatment v_e				
Mean	1.75	1.84	0.96 (0.796–1.15)	.629
SD	8.51	10.7	0.99 (0.950–1.02)	.395
Skewness	20.0	12.1	0.98 (0.946–1.01)	.203
Kurtosis	642	685	1.00 (0.999–1.00)	.342
Fifth percentile	0.167	0.0854	4.69 (0.098–224)	.433
First quartile	0.345	0.152	1.60 (0.161–15.8)	.689
Median	0.591	0.305	1.19 (0.405–3.49)	.753
Third quartile	1.15	0.991	0.99 (0.705–1.38)	.940
95th percentile	4.87	5.35	0.99 (0.926–1.05)	.695
Percentage change v_e				
Mean	56.5	193	1.00 (0.998–1.00)	.506
SD	99.9	446	1.00 (0.999–1.00)	.673
Skewness	–37.6	59.4	1.00 (0.992–1.01)	.900
Kurtosis	–41.9	112	1.00 (0.997–1.00)	.891
Fifth percentile	–8.84	49.5	1.00 (0.995–1.01)	.558
First quartile	–8.19	43.0	1.00 (0.987–1.01)	.388
Median	1.53	58.2	1.00 (0.991–1.00)	.507
Third quartile	12.6	85.2	1.00 (0.994–1.00)	.412
95 th percentile	85.9	202	1.00 (0.998–1.00)	.574

^a Hazard ratios for k^{trans} are adjusted for a unit change of 0.001 min^{-1} .

^b $P < .05$.



ON-LINE FIGURE. Dynamic contrast-enhanced image analysis process. Investigators carefully draw the VOI on every section of the FLAIR image (A), with reference to the contrast-enhanced T1-weighted image (B) to avoid minimal enhancement along the surgical margin. The investigators review the semiautomatically determined arterial input function (C). The pharmacokinetic parametric maps are calculated, including K^{trans} , v_e , and v_p (D, E, and F, respectively). Each pharmacokinetic parameter in every voxel in the VOI is extracted, and histogram features are calculated for further analysis.