

**Table 1.** Distribution of VASARI features among the groups.

VASARI Feature	IDH-mutant (n=15)	IDH-wild type (n=63)	p value
<b>Tumor location</b>			0.764
Frontal	9 (60.0%)	26 (41.3%)	
Temporal	4 (26.7%)	24 (38.1%)	
Insular	0 (0.0%)	2 (3.2%)	
Parietal	2 (13.3%)	8 (12.7%)	
Occipital	0 (0.0%)	1 (1.6%)	
Cerebellum	0 (0.0%)	2 (3.2%)	
<b>Side of tumor epicenter</b>			0.247
Right	11 (73.3%)	34 (54.0%)	
Left	4 (26.7%)	29 (46.0%)	
<b>Enhancement quality</b>			0.165
Mild/Minimal	2 (13.3%)	2 (3.2%)	
Marked/Avid	13 (86.7%)	61 (96.8%)	
<b>proportion of CET</b>			0.804
< 5%	1 (6.7%)	8 (12.7%)	
5%-33%	11 (73.3%)	41 (65.1%)	
34%-67%	3 (20.0%)	12 (19.0%)	
68%-95%	0 (0.0%)	2 (3.2%)	
<b>proportion of nCET</b>			0.028
< 5%	4 (26.7%)	21 (33.3%)	
5%-33%	3 (20.0%)	28 (44.4%)	
34%-67%	8 (53.3%)	11 (17.5%)	
68%-95%	0 (0.0%)	3 (4.8%)	
<b>Proportion of necrosis</b>			0.159
None (0%)	1 (6.7%)	1 (1.6%)	
< 5%	7 (46.7%)	15 (23.8%)	
5%-33%	5 (33.3%)	27 (42.9%)	
34%-67%	2 (13.3%)	20 (31.7%)	
<b>Cyst</b>			0.064
Yes	4 (26.7%)	5 (7.9%)	
No	11 (73.3%)	58 (92.1%)	
<b>Thickness of enhancing margin</b>			0.208
Solid	4 (26.7%)	10 (15.9%)	
Thin (<3mm)	10 (66.7%)	36 (57.1%)	
Thick/nodular	1 (6.6%)	17 (27.0%)	
<b>Definition of enhancing margin</b>			0.165
Well-defined	13 (86.7%)	61 (96.8%)	
Poorly-defined	2 (13.3%)	2 (3.2%)	
<b>Proportion of edema</b>			0.920
None (0%)	3 (20.0%)	9 (14.2%)	
< 5%	3 (20.0%)	11 (17.5%)	
5%-33%	5 (33.3%)	26 (41.3%)	
34%-67%	4 (26.7%)	17 (27.0%)	
<b>Haemorrhage</b>			0.230
Yes	11 (73.3%)	55 (87.3%)	
No	4 (26.7%)	8 (12.7%)	
<b>Diffusion</b>			0.646
Facilitated	0 (0.0%)	1 (1.6%)	
Restricted	13 (86.7%)	48 (76.2%)	
Neither/equivocal	2 (13.3%)	14 (22.2%)	

**Table 2.** Statistically significant radiomics features extracted from the tumor volume without the edema in T2W images. The previous \* indicates the normal distribution, express with mean value  $\pm$  standard deviation, and others are abnormal distribution, express with median (25th-75th percentile).

<b>Radiomics Feature</b>	<b>IDH-mutant (n=15)</b>	<b>IDH-wild type (n= 63)</b>	<b>p value</b>
<b>First order</b>			
Energy	532339 (102008-966726)	163301 (59169-327668)	0.034
Total Energy	532339 (102008-966726)	163301 (59169-327668)	0.034
*Minimum	-0.358 $\pm$ 0.289	-0.132 $\pm$ 0.426	0.020
*Range	4.747 $\pm$ 1.065	4.044 $\pm$ 1.077	0.026
10. percentile	1.338 (1.191-1.444)	1.167 (0.952-1.353)	0.046
<b>GLCM</b>			
JointAverage	1.9999 (1.9997-2.0000)	1.9992 (1.0000-1.9999)	0.003
SumAverage	3.9998 (3.9993-3.9999)	3.9983 (2.0000-3.9997)	0.003
Correlation	0.1756 (0.0509-0.3077)	0.3029 (0.1553-1.000)	0.026
Autocorrelation	3.9996 (3.9998-3.9999)	3.9968 (1.0000-3.9995)	0.003
MCC (Maximal Correlation Coefficient)	0.1557 (0.0385-0.2359)	0.3029 (0.1346-1.0000)	0.007
<b>GLDM</b>			
High Gray Level Emphasis	3.9994 (3.9989-3.9998)	3.9969 (1.0000-3.9994)	0.005
Dependence Entropy	1.1853 (1.1122-1.4103)	1.4189 (1.2246-1.5595)	0.032
Dependence Non Uniformity	50278 (19490-79380)	30671 (11149-56240)	0.038
Gray Level Non Uniformity	72193 (32025-113936)	48377 (21138-81701)	0.049
Dependence Non Uniformity Normalized	0.6855 (0.6086-0.7058)	0.6270 (0.5627-0.6748)	0.033
Large Dependence Emphasis	668 (647-672)	653 (636-665)	0.041
DependenceVariance	11.19 (10.62-14.39)	13.63 (11.81-16.07)	0.041
Large Dependence High Gray Level Emphasis	2673 (2494-2686)	2552 (647-2659)	0.005
Small Dependence Low Gray Level Emphasis	0.0004 (0.0004-0.0006)	0.0005 (0.0005-0.0018)	0.006
Low Gray Level Emphasis	0.2501 (0.2501-0.2503)	0.2508 (0.2502-1.0000)	0.005
<b>GLRLM</b>			
Short Run Low Gray Level Emphasis	0.0214 (0.0195-0.0243)	0.0299 (0.0217-0.0802)	0.004
Low Gray Level Run Emphasis	0.2523 (0.2508-0.2550)	0.2598 (0.2527- 1.0000)	0.005
*Long Run Emphasis	642 $\pm$ 340	442 $\pm$ 223	0.007
Long Run High Gray Level Emphasis	2615 (846-3049)	1284 (302-2315)	0.004
Run Percentage	0.0526 (0.0495-0.0711)	0.0654 (0.0557-0.0806)	0.038
High Gray Level Run Emphasis	3.9910 (3.9800-3.9967)	3.9606 (1.000-3.9892)	0.005
<b>GLSZM</b>			
Gray Level Variance	0.1875 (0.0900-0.2500)	0.1389 (0.0000-0.2222)	0.045
Gray Level Non Uniformity Normalized	0.6250 (0.5000-0.8200)	0.7222 (0.5556-1.000)	0.045
Size Zone Non Uniformity Normalized	0.3333 (0.1800-0.5000)	0.5000 (0.2500-1.000)	0.037
High Gray Level Zone Emphasis	1.7500 (1.3000-2.5000)	1.5000 (1.0000-2.0000)	0.045
Small Area Emphasis	0.2427 (0.0626-0.5000)	0.0390 (0.0000-0.2227)	0.004
Low Gray Level Zone Emphasis	0.8125 (0.6250-0.9250)	0.8750 (0.7500-1.0000)	0.045
Zone Variance	1193667950 (57881627-1871067150)	86261399 (0-766241009)	0.008
<b>NGTDM</b>			
Strength	0.1441 (0.0365-0.5569)	0.0202 (0.0000-0.5569)	0.007

**Table 3.** Statistically significant radiomics features extracted from ADC map images. Features were expressed as median (25th-75th percentile) as they are not conforming to normal distribution.

<i>Radiomics Feature</i>	IDH-mutant (n=15)	IDH-wild type (n= 63)	p value
<b>GLDM</b>			
Large Dependence High Gray Level Emphasis	2582 (2400-2665)	2444 (655-2620)	0.033
<b>GLRLM</b>			
Long Run High Gray Level Emphasis	1424 (822-2477)	811 (410-1639)	0.031
<b>GLSZM</b>			
ZoneVariance	371812177 (99958123-1479779124)	57449401 (0-341898590)	0.005
Size Zone Non Uniformity Normalized	0.333 (0.156-0.500)	0.500 (0.222-1.000)	0.041
Gray Level Non Uniformity	3.400 (1.667-8.200)	1.000 (1.000-4.333)	0.041
Small Area High Gray Level Emphasis	0.098 (0.014-0.336)	0.010 (0.000-0.216)	0.022
Small Area Emphasis	0.098 (0.014-0.336)	0.010 (0.000-0.216)	0.021
Small Area Low Gray Level Emphasis	0.098 (0.014-0.336)	0.010 (0.000-0.216)	0.019
Zone Entropy	1.793 (1.000-2.750)	1.000 (0.000-2.252)	0.040

**Table 4.** Statistically significant radiomics features extracted from postcontrast T1W images. The previous \* indicates the normal distribution, express with mean value  $\pm$  standard deviation, and others are abnormal distribution, express with median (25th-75th percentile).

<i>Radiomics Feature</i>	IDH-mutant (n=15)	IDH-wild type (n= 63)	p value
<b>First order</b>			
*Median	0.803 $\pm$ 0.294	1.019 $\pm$ 0.337	0.025
<b>GLDM</b>			
Small Dependence Low Gray Level Emphasis	0.0018 (0.0013-0.0021)	0.0016 (0.006-0.0018)	0.041
<b>GLRLM</b>			
Short Run Low Gray Level Emphasis	0.0856 (0.0722-0.1561)	0.0743 (0.0356-0.0925)	0.034

**Table 5.** Statistically significant radiomics feature extracted from the tumor volume without the edema in FLAIR images. Feature was expressed as mean value  $\pm$  standard deviation as it is conforming to normal distribution.

<i>Radiomics Feature</i>	IDH-mutant (n=15)	IDH-wild type (n=63)	p value
<b>First order</b>			
Kurtosis	4.690 $\pm$ 1.815	3.582 $\pm$ 1.289	0.016