Table S1 The DTI scanning parameters of healthy volunteers

Dataset	NKI_1	XHCUMS_1	IPCAS_8
Field strength (T)	3.0	3.0	3.0
DTI repetition time (ms)	2,400	3,000	6,600
Echo time (ms)	85	91	104
Field of view (mm)	212	240	230
Slice thickness (mm)	2.0	5.0	3.0
b-value (s/mm²)	1,500	700	1,000
Diffusion directions	137	64	64

Table S2 Difference in ALPS-index between patients and healthy controls

Characteristics	Patients	Healthy controls	P value
ALPS-index in the ipsilateral to glioma	1.31±0.20	1.56±0.22	<0.01[†]
ALPS-index in the contralateral to glioma	1.35±0.21	1.58±0.22	<0.01[†]
Right hemispheres *vs*. left hemispheres in healthy controls	–	1.54±0.22 *vs*.1.57±0.23	0.25

Continuous variables are shown as mean ± SD. [†], Kruskal-Wallis *H* test was used for data that did not satisfy the association variance condition.

Table S3 Difference in parameters of metrics between various grades of glioma

Characteristics	Grade II	Grade III	Grade IV	P value
ALPS-index	1.30±0.03	1.31±0.03	1.35±0.03	0.43
FA value	0.16±0.06	0.17±0.07	0.17±0.08	0.67[†]
MD value	1.25±0.04	1.20±0.05	1.01±0.04	<0.01
AD value	1.45±0.05	1.39±0.05	1.18±0.05	<0.01
RD value	1.16±0.04	1.10±0.05	0.93±0.04	<0.01

Continuous variables are shown as mean ± SD. [†], Kruskal-Wallis *H* test was used for data that did not satisfy the association variance condition.

Table S4 Difference in parameters of metrics between IDH-mutant group and the IDH-wild type group

Characteristics	Mutant	Wild type	P value
ALPS-index	1.31±0.02	1.33±0.03	0.60
FA value	0.15±0.06	0.18±0.08	<0.01[†]
MD value	1.25±0.34	0.96±0.24	<0.01[†]
AD value	1.43±0.36	1.14±0.26	<0.01[†]
RD value	1.15±0.34	0.88±0.24	<0.01[†]

Continuous variables are shown as mean ± SD. [†], Kruskal-Wallis *H* test was used for data that did not satisfy the association variance condition.