

**Table S1** Region of interest analysis of subacute WBRT effect on each DKI parameter: mean percentage change and P values by one-sample *t*-test

Region of interest	MD		FA		MK		AK	
	Percentage change	P value	Percentage change	P value	Percentage change	P value	Percentage change	P value
Left precentral gyrus	3.81 (11.07)	0.16	-4.06 (6.83)	0.04*	-2.55 (4.94)	0.05*	-2.50 (3.20)	0.01*
Left middle frontal gyrus	1.84 (5.1)	0.18	-0.71 (4.89)	0.54	-1.55 (2.54)	0.04*	-1.51 (2.67)	0.04*
Left opercular part of inferior frontal gyrus	1.48 (3.55)	0.12	-0.75 (6.37)	0.62	-1.36 (2.12)	0.02*	-1.58 (2.14)	0.02*
Left triangular part of inferior frontal gyrus	2.36 (4.09)	0.02*	-1.51 (3.76)	0.10	-1.67 (1.96)	0.004*	-2.16 (2.26)	0.004*
Left orbital part of inferior frontal gyrus	2.59 (5.72)	0.09	-1.38 (5.04)	0.26	-1.68 (2.63)	0.02*	-2.1 (2.87)	0.02*
Right orbital part of inferior frontal gyrus	4.66 (5.25)	0.004*	-2.47 (5.34)	0.06	-1.39 (2.78)	0.05*	-1.67 (2.5)	0.02*
Left rolandic operculum	2.33 (3.99)	0.02*	-0.55 (4.86)	0.639	-1.19 (1.81)	0.02*	-1.42 (1.7)	0.008*
Left olfactory cortex	7.27 (10.43)	0.03*	-1.42 (9.38)	0.52	-1.17 (3.55)	0.34	-1.25 (5.76)	0.48
Right medial orbital part of superior frontal gyrus	1.46 (6.01)	0.31	-1.87 (7.10)	0.37	-2.24 (3.13)	0.03*	-2.22 (3.18)	0.01*
Left insula	2.83 (5.12)	0.06	-0.3 (5.79)	0.82	-1.35 (2.19)	0.04*	-1.34 (1.97)	0.04*
Right middle cingulate & paracingulate gyri	2.93 (4.42)	0.01*	-3.1 (8.97)	0.15	-1.72 (2.42)	0.01*	-1.53 (1.96)	0.02*
Right parahippocampal gyrus	5.10 (9.65)	0.06	-1.63 (6.25)	0.28	-1.21 (1.86)	0.04*	-1.16 (2.96)	0.14
Left calcarine fissure and surrounding cortex	1.98 (4.75)	0.12	1.1 (5.25)	0.38	-1.41 (1.88)	0.01*	-1.2 (1.24)	0.004*
Right lingual gyrus	2.33 (6.05)	0.16	-0.59 (3.48)	0.48	-1.89 (1.76)	<0.001*	-1.19 (1.62)	0.01*
Left fusiform gyrus	2.38 (3.56)	0.04*	0.85 (6.6)	0.59	-1.55 (2.57)	0.04*	-1.63 (3.56)	0.08
Right fusiform gyrus	4.31 (7.04)	0.02*	0.29 (6.86)	0.86	-1.25 (1.58)	0.01*	-0.99 (3.54)	0.33
Left postcentral gyrus	2.82 (4.96)	0.02*	-1.81 (4.54)	0.108	-1.87 (2.34)	0.006*	-1.82 (1.58)	<0.001*
Left inferior parietal gyrus, excluding supramarginal and angular gyri	1.63 (4.14)	0.14	-0.76 (4.39)	0.47	-1.17 (1.6)	0.02*	-1.12 (1.88)	0.04*
Left supramarginal gyrus	1.58 (2.8)	0.02*	-1.05 (4.97)	0.381	-1.3 (1.74)	0.01*	-1.14 (1.88)	0.02*
Right angular gyrus	2.04 (6.2)	0.36	-1.49 (5.11)	0.233	-0.84 (2.73)	0.26	-0.99 (1.77)	0.04*
Left paracentral lobule	3.81 (11.07)	0.162	-4.06 (6.83)	0.04*	-2.55 (4.94)	0.05*	-2.5 (3.2)	0.01*
Right caudate nucleus	7.47 (9.21)	0.01*	-4.65 (14.94)	0.203	-3.69 (7.74)	0.06	-3.66 (5.56)	0.02*
Left superior temporal gyrus	1.62 (4.61)	0.20	-0.44 (5.8)	0.75	-1.23 (2.43)	0.08	-1.67 (2.05)	0.01*
Left temporal pole: superior temporal gyrus	0.23 (7.91)	0.902	-1.53 (9.15)	0.64	-1.09 (3.7)	0.44	-1.8 (2.63)	0.03*
Left middle temporal gyrus	2.57 (4.54)	0.04*	-1.08 (5.84)	0.58	-1.82 (1.99)	0.004*	-1.9 (2.05)	0.004*
Left temporal pole: middle temporal gyrus	3.06 (9.95)	0.26	-2.09 (11.89)	0.466	-1.92 (2.43)	0.01*	-2.55 (3.57)	0.01*
Left inferior temporal gyrus	2.41 (3.56)	0.01*	0.25 (6.09)	0.86	-1.78 (2.15)	0.006*	-2.12 (2.28)	0.004*
Right inferior temporal gyrus	2.61 (3.89)	0.04*	-0.15 (7.73)	>0.99	-1.63 (2.44)	0.04*	-1.5 (3.17)	0.12

\*, P values indicate statistical significance ( $P \leq 0.05$ ) after corrections for multiple comparisons. BM, brain metastasis; MMSE, Mini-Mental Status Examination; SD, standard deviation; MD, mean diffusivity; FA, fractional anisotropy; MK, mean kurtosis; AK, axial kurtosis.