

Supplementary 1 Individual factors included in the GTV and CTV of each case

Case	Surgical cavity ^a		T2-HSI	
	GTV	GTV	GTV	CTV
Case 1	93.30%		13.30%	80.00%
Case 2	STBx only		20.00%	93.30%
Case 3	100%		6.70%	53.30%
Case 4	73.30%		20.00%	66.70%
Case 5	STBx only		6.70%	26.70%
Case 6	66.70%		86.70%	100%
Case 7	66.70%		86.70%	100%
Case 8	STBx only		60.00%	100%
Case 9	66.70%		6.70%	53.30%
Overall	81.10%		34.80%	74.80%

GTV: gross tumor volume.

CTV: clinical tumor volume.

STBx: stereotactic biopsy.

T2-HSI: T2-high signal intensity.

^aSurgical cavity is defined as surgical resection margin plus the dead space resulted by brain tissue resection.