

Supplemental Table 1 MR and PET findings compared to baseline at the time of tumor progression and malignant transformation

Patient No.	Initial WHO grade	Initial treatment	No. of PET	Progression				Malignant Transformation					
				Time to progression (months)	MRI changes	Clinical worsening	FET-uptake	Time to mal. Transformation (months)	MRI changes	Clinical worsening	FET-uptake	Evaluation by	New WHO grade
1	II	Surgical resection	4	56.0	T2 enlargement	-	Yes	-	-	-	-	-	-
2	II	Brachytherapy	4	104.6	New CE	-	Yes	-	-	-	-	-	-
3	II	Temozolomide	4	51.9	T2 enlargement	seizures	Yes	-	-	-	-	-	-
4	II	Watch-and-wait	11	48.2	T2 enlargement	-	Yes	-	-	-	-	-	-
5	II	Watch-and-wait	12	21.1	New CE	-	Yes	28.7	New CE	-	Yes	Histology (surgery)	IV
6	III	Surgical resection	4	29.1	T2 enlargement	-	Yes	41.1	New CE	seizures	Yes	MRI	n.a.
7	II	Watch-and-wait	4	29.5	New CE + T2 enlargement	-	Yes	29.5	New CE + T2 enlargement	-	Yes	MRI	n.a.
8	II	Watch-and-wait	9	24.7	New CE	seizures	Yes	24.7	New CE	seizures	Yes	Histology (surgery)	III
9	II	Radiochemotherapy	8	30.9	none	seizures	Yes	33.0	none	seizures	Yes	Histology (biopsy)	III
10	II	Brachytherapy	5	10.2	New CE	-	Yes	10.2	New CE	none	Yes	Histology (biopsy)	IV
11	II	Watch-and-wait	9	50.6	New CE + T2 enlargement	seizures	Yes	50.7	New CE + T2 enlargement	seizures	Yes	Histology (surgery)	IV
12	II	Brachytherapy	4	10.2	New CE + T2 enlargement	aphasia	Yes	10.2	New CE + T2 enlargement	aphasia	Yes	Histology (biopsy)	IV
13	II	Surgical resection	4	69.9	New CE + T2 enlargement	-	Yes	69.9	New CE + T2 enlargement	-	Yes	Histology (surgery)	III
14	II	Watch-and-wait	2	8.0	New CE + T2 enlargement	-	Yes	8.0	New CE + T2 enlargement	-	Yes	Histology (biopsy)	IV

15	II	Brachytherapy	3	53.5	New CE	motor and sensibility disorders	n.a.	53.7	New CE	motor and sensibility disorders	Yes	Histology (biopsy)	IV
16	II	Radiochemotherapy	2	22.3	T2 enlargement	oculomotor deficit	n.a.	35.0	New CE	Oculomotor deficit	Yes	Histology (surgery)	IV
17	II	Watch-and-wait	3	12.2	New CE + T2 enlargement	seizures	Yes	12.4	New CE + T2 enlargement	seizures	Yes	Histology (biopsy)	IV
18	II	Surgical resection	4	15.2	New CE + T2 enlargement	seizures, imbalance	Yes	15.3	New CE + T2 enlargement	seizures, imbalance	Yes	Histology (biopsy)	IV
19	II	Radiochemotherapy	3	44.5	T2 enlargement	Seizures, sensibility disorders	Yes	41.7	T2 enlargement	-	Yes	Histology (biopsy)	III
20	II	Surgical resection	7	41.1	T2 enlargement	-	Yes	50.7	New CE + T2 enlargement	-	yes	Histology (surgery)	IV
21	II	Temozolomide	3	-	none	-	None	-	-	-	-	-	-
22	II	Surgical resection	2	-	none	-	None	-	-	-	-	-	-
23	II	Surgical resection	3	-	none	-	None	-	-	-	-	-	-
24	III	Watch-and-wait	4	28.1	T2 enlargement	-	None	-	-	-	-	-	-
25	III	Surgery	8	-	none	-	None	-	-	-	-	-	-
26	III	Temozolomide	4	-	none	-	None	-	-	-	-	-	-
27	III	Surgery	3	-	none	-	None	-	-	-	-	-	-
28	II	Radiochemotherapy	4	-	none	-	None	-	-	-	-	-	-
29	II	Brachytherapy	3	-	none	-	None	-	-	-	-	-	-
30	II	Watch-and-wait	2	4.7	T2 enlargement	-	None	22.2	New CE + T2 enlargement	seizures	n.a.	Histology (biopsy)	IV
31	II	Watch-and-wait	3	24.8	T2 enlargement	-	None	42.7	T2 enlargement	-	None	Histology (surgery)	III

n.a. not available; CE Contrast-enhancement on MRI