



ON-LINE FIG. A 66-year-old woman with anaplastic oligodendroglioma in the anterior cingulate gyrus (Case 2). PET images of ^{62}Cu -ATSM (A), FDG (B), and MET (C). ^{62}Cu -ATSM-PET/MR fusion image showing no hypoxic region (D), FDG-PET/MR fusion image showing a very small active volume (E), and MET-PET/MR fusion image (F) showing the extensive uptake region.

On-Line Table 1: Clinical characteristics

Patient No.	Age (y), Sex	Histologic Diagnosis and Grading ^a	Tumor Diagnosis	Intervals from MRI (days)		
				⁶² Cu-ATSM	FDG	MET
1	23, F	OA, grade II	New	14	11	4
2	66, F	AOD, grade III	New	6	2	3
3	30, F	AOA, grade III	Rec	5	2	8
4	42, F	OA, grade II	Rec	3	3	9
5	60, M	AOD, grade III	Rec	2	3	6
6	53, M	DA, grade II	Rec	6	8	9
7	66, F	AOD, grade III	New	8	5	9
8	75, F	GBM, grade IV	New	6	2	—
9	61, F	GBM, grade IV	New	12	3	—
10	28, F	GBM, grade IV	New	1	2	7
11	19, M	OA, grade II	New	8	12	1
12	73, F	DA, grade II	New	9	4	2
13	47, M	OD, grade II	New	11	7	3
14	60, F	GBM, grade IV	New	1	1	0
15	43, F	OD, grade II	New	9	7	2
16	77, M	GBM, grade IV	New	3	8	6
17	38, M	DA, grade II	New	2	1	4
18	62, F	AOD, grade III	New	2	3	9
19	63, M	GBM, grade IV	New	0	1	—
20	59, M	GBM, grade IV	New	2	1	4
21	59, F	GBM, grade IV	New	11	7	13
22	81, M	GBM, grade IV	New	1	2	4
23	61, M	GBM, grade IV	New	3	4	—

Note:—AOA indicates anaplastic oligoastrocytoma; AOD, anaplastic oligodendroglioma; DA, diffuse astrocytoma; F, female; M, male; New, newly diagnosed; OA, oligoastrocytoma; OD, oligodendroglioma; Rec, recurrent.

^aHistologic diagnosis and grading according to the 2007 World Health Organization classification.

On-Line Table 2: Summary of semiquantitative values for ⁶²Cu-ATSM-PET, FDG-PET, and MET-PET

Patient No.	Tumor Classification	⁶² Cu-ATSM		FDG		MET	
		SUV _{max}	T/B Ratio	SUV _{max}	T/B Ratio	SUV _{max}	T/B Ratio
1	Non-GBM	0.4	1.0	9.1	3.0	4.8	2.6
2	Non-GBM	1.0	1.6	6.8	3.6	4.5	2.8
3	Non-GBM	0.5	0.7	8.2	2.0	1.7	1.9
4	Non-GBM	0.7	1.3	4.2	1.1	4.1	3.9
5	Non-GBM	1.0	1.5	6.8	2.5	4.9	3.7
6	Non-GBM	0.6	0.7	4.6	2.1	1.0	1.1
7	Non-GBM	0.7	2.3	4.1	1.9	5.1	2.8
8	GBM	1.2	3.0	7.1	3.2	—	—
9	GBM	4.3	9.7	14.3	6.5	—	—
10	GBM	1.2	2.0	8.5	3.7	4.8	3.5
11	Non-GBM	1.4	1.4	1.8	0.7	1.3	0.9
12	Non-GBM	1.0	1.5	4.0	2.0	3.0	2.0
13	Non-GBM	0.8	1.6	5.2	2.3	1.4	1.3
14	GBM	1.2	1.5	4.3	1.5	5.3	3.0
15	Non-GBM	0.8	0.9	3.8	1.2	1.8	1.4
16	GBM	1.5	1.9	7.1	3.2	5.0	4.6
17	Non-GBM	1.6	2.3	6.7	3.9	3.1	2.0
18	Non-GBM	2.3	2.3	9.1	5.4	5.6	3.1
19	GBM	1.6	2.7	4.2	2.2	—	—
20	GBM	1.2	2.4	6.5	1.7	4.6	2.6
21	GBM	1.7	2.0	11.0	2.0	7.4	3.9
22	GBM	1.4	2.8	5.1	1.2	4.3	3.6
23	GBM	1.5	3.0	5.0	1.9	—	—

On-Line Table 3: Summary of volumetric values for MRI, ⁶²Cu-ATSM-PET, FDG-PET, and MET-PET in GBM

Patient No.	MRI (cm ³)		Metabolic Active Volume (cm ³)		
	TV ^a	CEV ^b	⁶² Cu-ATSM ^c	FDG ^d	MET ^e
8	23.5	13.3	1.6	1.7	—
9	94.0	52.4	46.8	33.9	—
10	19.5	11.5	0.9	10.1	24.9
14	20.6	8.0	0	0.9	28.1
16	25.8	14.8	4.0	16.4	27.8
19	29.9	5.8	2.6	1.6	—
20	61.3	31.6	5.3	29.8	27.0
21	79.6	30.9	11.8	4.6	73.1
22	57.9	19.4	4.5	7.9	47.1
23	42.2	28.4	4.1	2.9	—

Note:—CEV indicates contrast-enhanced volume; TV, tumor volume.

^a TV is tumor volume as a completely covered contrast-enhanced region with necrotic and cystic components.

^b CEV is contrast-enhanced volume as a contrast-enhanced region without necrotic and cystic components.

^c ⁶² Cu-ATSM—active volume (cm³) was extracted on the basis of a T/B cutoff threshold ≥ 1.8 .

^d The FDG-active volume (cm³) was extracted on the basis of a T/B cutoff threshold ≥ 1.5 .

^e The MET-active volume (cm³) was extracted on the basis of a T/B cutoff threshold ≥ 1.3 .