

Prediction and visualization of non-enhancing tumor in glioblastoma via T1w/T2w-ratio map

Shota Yamamoto ^{1,2}, Takahiro Sanada ¹, Mio Sakai ³, Atsuko Arisawa ⁴, Naoki Kagawa ², Eku Shimosegawa ⁵, Katsuyuki Nakanishi ³, Yonehiro Kanemura ⁶, Manabu Kinoshita ^{1,2,7,*}, Haruhiko Kishima ²

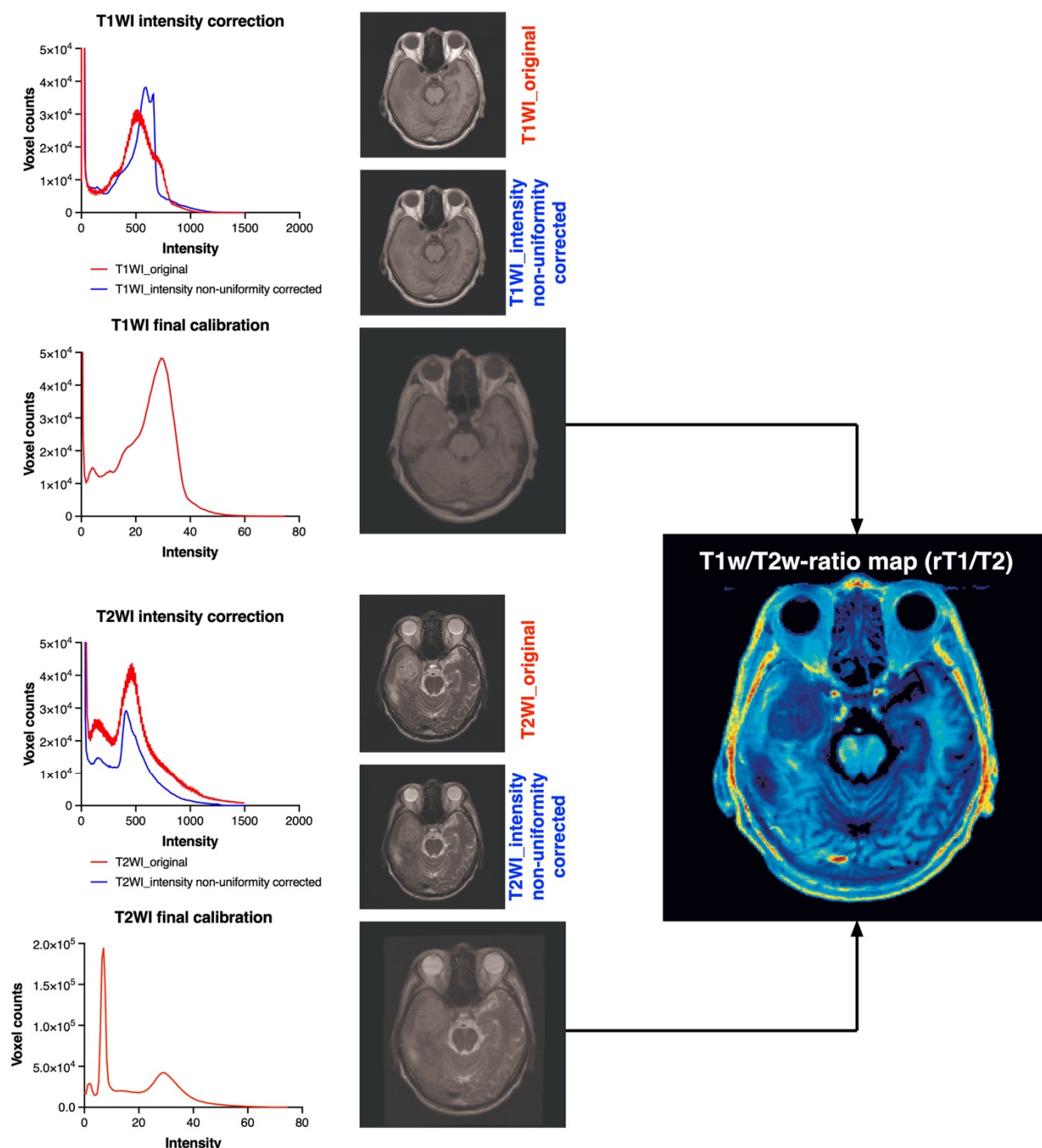


Figure S1. Image processing for T1w/T2w-ratio map (rT1/T2) reconstruction is presented. Both T1WI and T2WI were subjected to intensity non-uniformity correction and intensity normalization. T1w/T2w-ratio map (rT1/T2) was created by the finally calibrated and image intensity normalized T1- and T2WI. Further details can be found in the reference article 14 by Ganzetti et al [14].

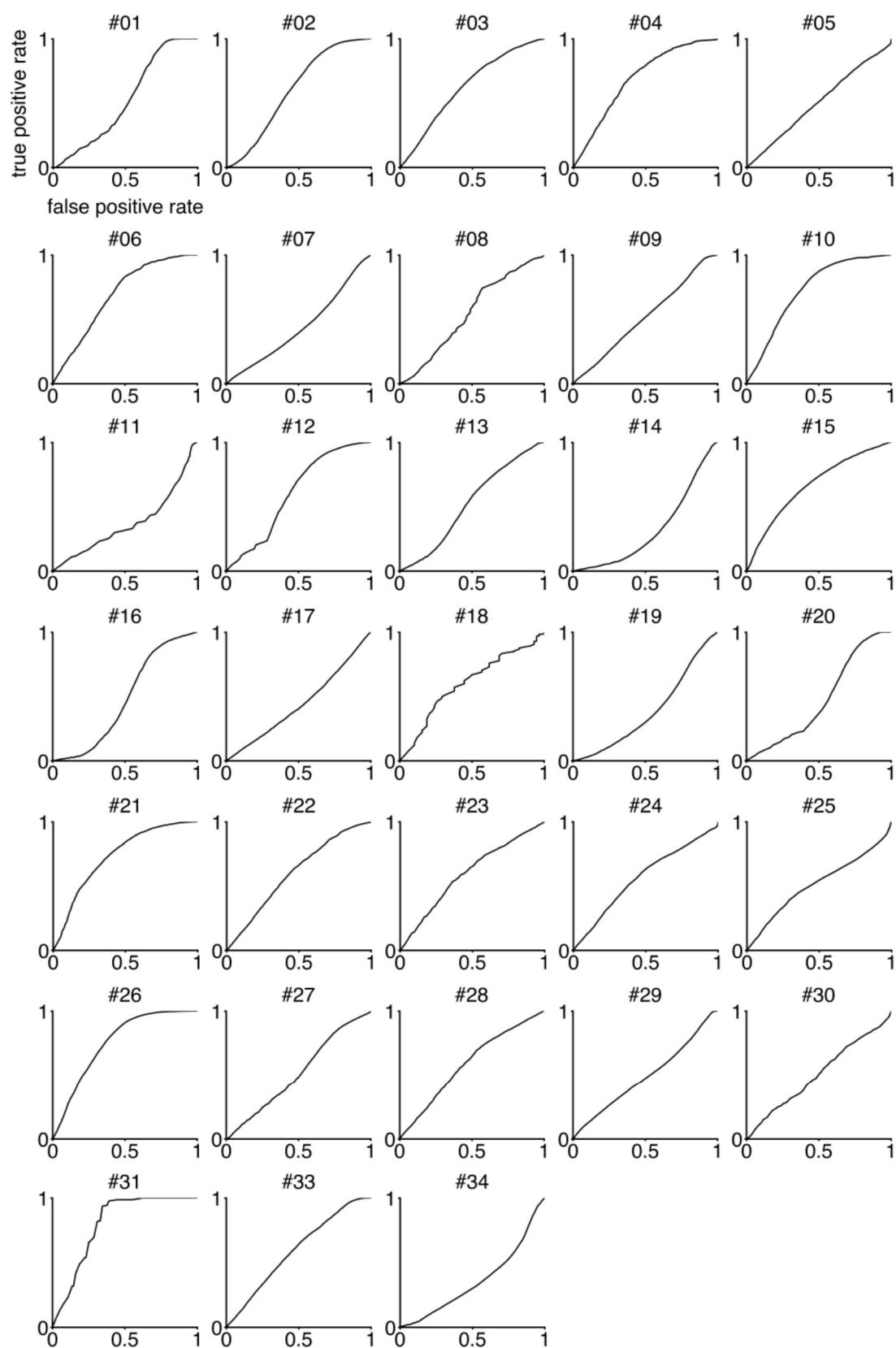


Figure S2. ROC curves of LMPH to detect Met-PET high for each case.

Table S1. Relationship between rT1/T2 and Likeliness of MET-PET high.

Numbers above black line indicate the range of rT1/T2 and below the line indicate the Likeliness of MET-PET high. Abbreviations: NaN, Not a number.

0.0- 0.01	0.01- 0.02	0.02- 0.03	0.03- 0.04	0.04- 0.05	0.05- 0.06	0.06- 0.07	0.07- 0.08	0.08- 0.09	0.09- 0.1
NaN	NaN	NaN	-1.000	-1.000	-1.000	NaN	-1.000	-1.000	-1.000
0.1- 0.11	0.11- 0.12	0.12- 0.13	0.13- 0.14	0.14- 0.15	0.15- 0.16	0.16- 0.17	0.17- 0.18	0.18- 0.19	0.19- 0.2
-1.000	-1.000	NaN	-1.000	-1.000	-1.000	-1.000	-1.000	-0.705	-1.000
0.2- 0.21	0.21- 0.22	0.22- 0.23	0.23- 0.24	0.24- 0.25	0.25- 0.26	0.26- 0.27	0.27- 0.28	0.28- 0.29	0.29- 0.3
-1.000	-0.770	-0.891	-0.908	-0.831	-0.936	-0.948	-0.872	-0.680	-0.643
0.3- 0.31	0.31- 0.32	0.32- 0.33	0.33- 0.34	0.34- 0.35	0.35- 0.36	0.36- 0.37	0.37- 0.38	0.38- 0.39	0.39- 0.4
-0.549	-0.705	-0.584	-0.662	-0.590	-0.564	-0.626	-0.632	-0.654	-0.688
0.4- 0.41	0.41- 0.42	0.42- 0.43	0.43- 0.44	0.44- 0.45	0.45- 0.46	0.46- 0.47	0.47- 0.48	0.48- 0.49	0.49- 0.5
-0.643	-0.655	-0.649	-0.689	-0.657	-0.621	-0.618	-0.584	-0.578	-0.510
0.5- 0.51	0.51- 0.52	0.52- 0.53	0.53- 0.54	0.54- 0.55	0.55- 0.56	0.56- 0.57	0.57- 0.58	0.58- 0.59	0.59- 0.6
-0.490	-0.429	-0.376	-0.354	-0.301	-0.271	-0.226	-0.216	-0.190	-0.162
0.6- 0.61	0.61- 0.62	0.62- 0.63	0.63- 0.64	0.64- 0.65	0.65- 0.66	0.66- 0.67	0.67- 0.68	0.68- 0.69	0.69- 0.7
-0.142	-0.120	-0.103	-0.105	-0.099	-0.087	-0.071	-0.068	-0.048	-0.019
0.7- 0.71	0.71- 0.72	0.72- 0.73	0.73- 0.74	0.74- 0.75	0.75- 0.76	0.76- 0.77	0.77- 0.78	0.78- 0.79	0.79- 0.8
-0.014	-0.004	0.016	0.015	0.029	0.026	0.040	0.031	0.035	0.028
0.8- 0.81	0.81- 0.82	0.82- 0.83	0.83- 0.84	0.84- 0.85	0.85- 0.86	0.86- 0.87	0.87- 0.88	0.88- 0.89	0.89- 0.9
0.041	0.041	0.049	0.067	0.086	0.094	0.112	0.129	0.145	0.163
0.9- 0.91	0.91- 0.92	0.92- 0.93	0.93- 0.94	0.94- 0.95	0.95- 0.96	0.96- 0.97	0.97- 0.98	0.98- 0.99	0.99- 1.0

0.179	0.183	0.176	0.165	0.158	0.160	0.144	0.128	0.121	0.108
1.0- 1.01	1.01- 1.02	1.02- 1.03	1.03- 1.04	1.04- 1.05	1.05- 1.06	1.06- 1.07	1.07- 1.08	1.08- 1.09	1.09- 1.1
0.102	0.103	0.124	0.143	0.123	0.160	0.161	0.174	0.140	0.113
1.1- 1.11	1.11- 1.12	1.12- 1.13	1.13- 1.14	1.14- 1.15	1.15- 1.16	1.16- 1.17	1.17- 1.18	1.18- 1.19	1.19- 1.2
0.124	0.143	0.102	0.139	0.152	0.122	0.088	0.102	0.072	0.019
1.2- 1.21	1.21- 1.22	1.22- 1.23	1.23- 1.24	1.24- 1.25	1.25- 1.26	1.26- 1.27	1.27- 1.28	1.28- 1.29	1.29- 1.3
0.014	0.044	0.095	0.183	0.109	0.119	0.166	0.206	0.221	0.119
1.3- 1.31	1.31- 1.32	1.32- 1.33	1.33- 1.34	1.34- 1.35	1.35- 1.36	1.36- 1.37	1.37- 1.38	1.38- 1.39	1.39- 1.4
0.109	0.062	0.139	0.116	0.199	0.146	0.201	0.181	0.185	0.177
1.4- 1.41	1.41- 1.42	1.42- 1.43	1.43- 1.44	1.44- 1.45	1.45- 1.46	1.46- 1.47	1.47- 1.48	1.48- 1.49	1.49- 1.5
0.249	0.237	0.397	0.004	0.218	0.256	0.249	0.243	0.382	0.218
1.5- 1.51	1.51- 1.52	1.52- 1.53	1.53- 1.54	1.54- 1.55	1.55- 1.56	1.56- 1.57	1.57- 1.58	1.58- 1.59	1.59- 1.6
0.470	0.871	0.218	0.019	-1.000	-0.486	-1.000	0.019	-0.092	-1.000
1.6- 1.61	1.61- 1.62	1.62- 1.63	1.63- 1.64	1.64- 1.65	1.65- 1.66	1.66- 1.67	1.67- 1.68	1.68- 1.69	1.69- 1.7
1.000	NaN	NaN	0.724	1.000	0.350	0.019	-1.000	NaN	1.000
1.7- 1.71	1.71- 1.72	1.72- 1.73	1.73- 1.74	1.74- 1.75	1.75- 1.76	1.76- 1.77	1.77- 1.78	1.78- 1.79	1.79- 1.8
1.000	1.000	NaN	1.000	1.000	1.000	NaN	NaN	NaN	1.000
1.8- 1.81	1.81- 1.82	1.82- 1.83	1.83- 1.84	1.84- 1.85	1.85- 1.86	1.86- 1.87			
NaN	-1.000	-1.000	NaN	NaN	NaN	1.000			