

Online Resource 1

Individual tumor's residual MRglc at S2 (10-12 days post-therapy), residual SUVmax, and their corresponding local tumor control status at 12 months, and model prediction on 62 tumors

Tumor Number	Residual MRglc ^a (μmol/min/gm) at S2 ^b	Residual SUVmax ^c at S2	Tumor Control Status ^{d, e}	Model Prediction ^f
1	0.013	0.39	1	0.99
2	0.019	0.82	1	0.99
3	0.019	0.67	1	0.99
4	0.021	1.03	1	0.98
5	0.023	0.40	1	0.98
6	0.032	0.55	1	0.96
7	0.033	0.62	1	0.96
8	0.034	0.63	1	0.95
9	0.036	0.74	1	0.95
10	0.036	0.73	1	0.95
11	0.037	0.66	1	0.94
12	0.037	1.15	1	0.94
13	0.042	0.54	1	0.93
14	0.042	0.76	1	0.93
15	0.044	1.21	1	0.92
16	0.046	1.15	1	0.91
17	0.048	1.52	1	0.91
18	0.048	0.78	1	0.91
19	0.048	0.98	1	0.91
20	0.050	1.10	1	0.90
21	0.050	1.31	1	0.90
22	0.054	1.37	1	0.88
23	0.061	1.16	1	0.85
24	0.063	1.11	1	0.84
25	0.066	1.48	1	0.83
26	0.069	0.99	1	0.81

Tumor Number	Residual MRglc ^a ($\mu\text{mol}/\text{min}/\text{gm}$) at S2 ^b	Residual SUVmax ^c at S2	Tumor Control Status ^{d, e}	Model Prediction ^f
27	0.069	0.98	1	0.81
28	0.072	1.38	1	0.80
29	0.072	2.11	0	0.80
30	0.073	1.63	0	0.80
33	0.073	1.41	1	0.80
31	0.076	1.36	0	0.78
32	0.078	1.40	0	0.77
34	0.081	1.67	1	0.76
35	0.084	1.35	1	0.74
36	0.085	2.09	1	0.74
37	0.086	1.49	0	0.73
38	0.093	2.22	1	0.70
39	0.099	2.74	0	0.67
40	0.103	1.45	1	0.65
41	0.105	2.01	1	0.64
42	0.107	2.10	0	0.63
43	0.116	2.54	0	0.59
44	0.122	3.20	0	0.56
45	0.123	2.24	0	0.56
46	0.124	3.29	1	0.55
47	0.127	2.56	1	0.54
48	0.130	3.24	1	0.53
49	0.133	2.30	0	0.51
50	0.134	1.93	1	0.51
51	0.145	2.21	1	0.47
52	0.160	3.28	1	0.41
53	0.182	2.84	0	0.35
54	0.196	3.38	0	0.31
55	0.197	3.28	1	0.31
56	0.228	4.20	0	0.25

Tumor Number	Residual MRglc ^a (μmol/min/gm) at S2 ^b	Residual SUVmax ^c at S2	Tumor Control Status ^{d, e}	Model Prediction ^f
57	0.243	4.58	0	0.22
58	0.282	4.55	0	0.17
59	0.315	6.09	0	0.14
60	0.373	6.46	1	0.10
61	0.460	7.67	0	0.07
62	0.477	7.04	0	0.06

Abbreviations:

a: MRglc = glucose metabolic rate measured with Simplified kinetic method (SKM); b: S2 = 10-12 days after radiotherapy or chemoradiotherapy; c: SUVmax = maximum standard uptake value and it is given as reference; d: 1 = tumor controlled at 12 months; e: 0 = tumor recurred within 12 months; f: Model prediction is based on residual MRglc measured with SKM.