

# Supplementary Material: Melanoma Brain Metastases in the Era of Targeted Therapy and Checkpoint Inhibitor Therapy

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**Table S1.** Univariate and multivariable analysis for OS.

Variable	Comparison	Overall Survival			
		Hazard Ratio	95% CI		P-value
Sex	Male vs Female	1.09	0.80	1.49	0.57
Brain met on diagnosis?	Yes vs No	1.04	0.73	1.49	0.81
Number of brain mets	3+ vs 1-2	2.11	1.57	2.82	<0.01
ECOG	1 vs 0	1.61	1.13	2.29	<0.01
	2-4 vs 0	4.15	2.79	6.18	-
Therapy prior to brain met?	Yes vs No	0.84	0.63	1.13	0.25
Initial Size of Largest Met (cm)	2+ vs <2	1.05	0.79	1.40	0.73
Metastatic Disease at BM diagnosis	Yes vs No	2.53	1.58	4.05	<0.01
Osseous Metastasis	Yes vs No	1.58	1.14	2.19	<0.01
Visceral Metastasis	Yes vs No	1.91	1.35	2.71	<0.01
SRS	Yes vs No	0.52	0.38	0.71	<0.01
Whole Brain	Yes vs No	2.87	2.13	3.87	<0.01
Surgery	Yes vs No	0.55	0.40	0.75	<0.01
BRAF/MEK	Yes vs No	1.30	0.90	1.88	0.16
PD-1	Yes vs No	0.72	0.51	1.01	0.06
CTLA4	Yes vs No	0.59	0.37	0.94	0.03
Other (Chemo + Epigenetic + Other)	Yes vs No	1.71	1.25	2.34	<0.01
Year of Brain Met	Units = 1	0.96	0.93	1.00	0.07
Age at Brain Met	Units = 10	1.10	1.00	1.21	0.05

**Table S2.** Univariate analysis for PFS of systemic interventions.

Variable	Comparison	Progression-Free Survival			
		Hazard Ratio	95% CI		P-value
Sex	Male vs Female	1.16	0.79	1.7	0.45
Brain met on diagnosis?	Yes vs No	1.48	0.94	2.32	0.09
Number of brain mets	3+ vs 1-2	1.64	1.14	2.37	<0.01
ECOG	1 vs 0	1.38	0.94	2.03	0.04
	2-4 vs 0	2.05	1.16	3.64	-
Therapy prior to brain met?	Yes vs No	0.71	0.50	1.02	0.07
Initial Size of Largest Met (cm)	2+ vs <2	0.84	0.59	1.21	0.36
Metastatic Disease at BM diagnosis	Yes vs No	2.60	1.50	4.53	<0.01

Variable	Comparison	Progression-Free Survival			
		Hazard Ratio	95% CI		P-value
Osseous Metastasis	Yes vs No	1.75	1.16	2.63	<0.01
Visceral Metastasis	Yes vs No	1.97	1.30	2.98	<0.01
SRS	Yes vs No	0.67	0.46	0.98	0.04
Surgery	Yes vs No	0.55	0.38	0.81	<0.01
BRAF/MEK	Yes vs No	1.37	0.89	2.11	0.15
PD-1	Yes vs No	0.90	0.61	1.31	0.57
CTLA4	Yes vs No	0.76	0.47	1.25	0.29
Other (Chemo + Epigenetic + Other)	Yes vs No	2.55	1.77	3.68	<0.01
Year of Brain Met	Units=1	0.96	0.92	1.01	0.10
Age at Brain Met	Units=10	1.04	0.92	1.17	0.53

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