

Table SI. Cox regression analyses for recurrence-free survival and distant metastasis-free survival

Variable	Recurrence-free Survival		Distant Metastasis-free Survival	
	Univariable HR (95% CI); <i>P</i>	Multivariable ^a HR (95% CI); <i>P</i>	Univariable HR (95% CI); <i>P</i>	Multivariable ^a HR (95% CI); <i>P</i>
Sex				
Female	Reference		Reference	
Male	0.92 (0.33–2.55); .880		1.06 (0.26–4.23); .937	
Age				
Continuous (per year)	1.05 (1.01–1.10); .026*	1.05 (1.01–1.10); .026* ^b	1.05 (0.99–1.11); .082	1.05 (1.00–1.11); .069
Group > 60 y (vs ≤ 60)	2.03 (0.71–5.82); .186		8.28 (1.01–67.65); .049*	
Tumor location				
Trunk	Reference			
Head and neck	0.99 (0.26–3.77); .991			

Variable	Recurrence-free Survival	Distant Metastasis-free Survival	
Extremities	0.99 (0.42–2.35); .988		
Melanoma type			
Melanoma in situ	Reference	Reference	
Thin melanoma	2.04 (0.70–5.98); .194	6.35 (0.78–51.67); .084	6.52 (0.80–53.09); .080
Breslow thickness			
In situ	Reference	Reference	
< 0.8 mm	2.02 (0.58–7.02); .270	5.10 (0.53–49.01); .158	
≥ 0.8 mm	2.06 (0.60–7.15); .253	7.80 (0.87–69.91); .066	
Ulceration			
Absent	Reference	Reference	
Present	1.85 (0.24–14.16); .554	2.68 (0.33–21.84); .358	
Mitotic rate			

Variable	Recurrence-free Survival	Distant Metastasis-free Survival
< 1/mm ²	Reference	Reference
≥ 1/mm ²	2.60 (0.56–12.06); .224	4.88 (0.43–55.05); .200
Tumor-infiltrating lymphocytes		
Absent	Reference	
Brisk	1.15 (0.19–6.83); .876	
Non-brisk	0.84 (0.06–11.39); .897	
Surgical wait time (days)	0.96 (0.90–1.02); .158	0.95 (0.87–1.04); .232

Abbreviations: HR, hazard ratio; CI, confidence interval. ^aVariables with $P < 0.10$ in univariable analysis were entered into the multivariable model; final adjusted models are presented. ^bIn the RFS model, Age (continuous) was the only variable meeting the entry criteria ($P < 0.10$), so the multivariable result mirrors the univariable analysis. *Statistically significant.

Table III. Fine-Gray competing-risk regression analyses for melanoma-specific survival, distant metastasis-free survival, and recurrence-free survival

Variable	Melanoma-specific Survival		Distant Metastasis-free Survival		Recurrence-free Survival	
	Univariable SHR (95% CI); <i>P</i>	Multivariable ^a SHR (95% CI); <i>P</i>	Univariable SHR (95% CI); <i>P</i>	Multivariable ^a SHR (95% CI); <i>P</i>	Univariable SHR (95% CI); <i>P</i>	Multivariable ^a SHR (95% CI); <i>P</i>
Sex						
Female	Reference		Reference		Reference	
Male	0.82 (0.22– 3.01); .761		1.04 (0.27– 4.10); .954		0.90 (0.33– 2.45); .842	
Age						
Continuous (per year)	1.05 (1.02– 1.08); .0004*		1.05 (1.02– 1.08); .001*		1.03 (1.01– 1.06); .013*	
Group > 60 y (vs ≤ 60)	8.25 (1.08– 62.79); .042*		7.36 (0.92– 58.74); .060		1.62 (0.59– 4.45); .346	
Tumor location						

Variable	Melanoma-specific Survival		Distant Metastasis-free Survival		Recurrence-free Survival
Trunk	Reference		Reference		Reference
Head and neck	1.00 (0.28–3.61); 1.00		1.00 (0.29–3.49); .999		0.99 (0.26–3.77); .991
Extremities	1.00 (0.45–2.21); .996		1.00 (0.46–2.17); .999		0.99 (0.42–2.35); .988
Melanoma type					
Melanoma in situ	Reference		Reference	Reference	Reference
Thin melanoma	3.04 (0.63–14.72); .168		6.18 (0.77–49.81); .087	6.13 (0.75–50.06); .091	1.96 (0.70–5.44); .198
Breslow thickness					
In situ	Reference		Reference		Reference
< 0.8 mm	1.58 (0.22–11.24); .649	1.43 (0.20–10.30); .724	4.74 (0.50–44.93); .175		1.82 (0.56–5.90); .317

Variable	Melanoma-specific Survival	Distant Metastasis-free Survival	Recurrence-free Survival
≥ 0.8 mm	4.84 (0.92–25.39); .063	5.17 (1.02–26.20); .048*	8.02 (0.90–71.27); .062
Ulceration			
Absent	Reference	Reference	Reference
Present	2.40 (0.25–22.77); .447	2.74 (0.28–26.45); .383	1.60 (0.18–14.60); .678
Mitotic rate			
$< 1/\text{mm}^2$	Reference	Reference	Reference
$\geq 1/\text{mm}^2$	4.43 (0.43–45.67); .212	4.86 (0.50–47.42); .174	2.72 (0.68–10.90); .158
Tumor-infiltrating lymphocytes			
Absent	Reference		Reference

Variable	Melanoma-specific Survival	Distant Metastasis-free Survival	Recurrence-free Survival
Brisk			1.02 (0.23–4.50); .979
Non-brisk	0.98 (0.32–2.99); .965		0.91 (0.22–3.68); .889
Associated melanocytic lesion			
Absent	Reference		
Present	1.65 (0.23–11.94); .621		
Surgical wait time (days)	0.95 (0.87–1.04); .264	0.95 (0.87–1.04); .263	0.95 (0.90–1.01); .103

Abbreviations: SHR, subdistribution hazard ratio; CI, confidence interval. ^aVariables with $P < 0.10$ in univariable analysis were entered into the multivariable model; final adjusted models are presented. Dashes indicate variables not listed in the original source table. ^bIn the RFS model, Age (continuous) was the only variable meeting the entry criteria ($P < 0.10$), so the multivariable result mirrors the univariable analysis. Competing event was non-melanoma-related death.

*Statistically significant.

Table SIII. Clinical and pathologic characteristics of patients who developed distant metastasis

Patient	Breslow thickness (mm)	Age (years)	Sex	Tumor location	Histologic subtype	Ulceration	Distant metastasis	Time for metastasis (months)	Treatment	Survival time (months)	Death by melanoma	<i>BRAF</i> mutation
1	0	73	M	Right thumb	ALM	No	Lung, soft tissue, other viscera	37	R/T, clinical trial	42	Yes	
2	0.25	73	F	Left big toe, subungual	ALM	No	CNS, lymph node	24	Amputation	39	Yes	
3	0.3	68	M	Left heel	ALM	No	Liver	40		43	Yes	
4	0.5	54	F	Left sole	ALM	No	Bone	62	ICI, interferon alpha-2b	151	No	
5	1	62	M	Left sole	ALM	Yes	Liver, bone	14		16	Yes	
6	1	71	F	Right foot	ALM	No	Bone	57	R/T	60	Yes	
7	1	68	M	Right foot	ALM	No	CNS	119	BRAF/MEK inhibitors, R/T	125	No	<i>BRAF</i> <i>V600E</i>
8	1	64	F	Right thumb, subungual	ALM	No	Liver, spleen, lung, lymph node	20		21	Yes	

This table lists each patient's Breslow thickness, age at diagnosis (y), sex, primary site (head/neck, trunk, extremity, acral), histologic subtype (ALM, SSM, NM, LMM), ulceration (yes/no), time to distant metastasis (mo), metastatic sites, treatments received (eg, surgery, systemic therapy, radiotherapy), survival time from diagnosis (mo), melanoma-specific death (yes/no), and *BRAF* status when available. *Abbreviations:* ALM, acral lentiginous melanoma; SSM, superficial spreading melanoma; NM, nodular melanoma; LMM, lentigo maligna melanoma; TIL, tumor-infiltrating lymphocyte; CNS, Central Nervous System; ICI, Immune Checkpoint Inhibitor; R/T, Radiation Therapy; V600E, Valine-to-Glutamate substitution at position 600.