Supplemental tables

Supplemental Table 1: Characteristics of SLN positive and negative patients (n=664)

Parameter		positive SLNB n=86 (13.0%)	negative SLNB n=578 (87.0%)	p-value
Gender				
	Male	50 (58.1%)	263 (45.5%)	**0.028**
	Female	36 (41.9%)	315 (54.5%)	
Age				
	Mean	56.31 +/- 13.9	57.60 +/- 14.9	0.478.
Location				
	Head/Neck	6 (7.1%)	53 (9.7%)	0.541.
	Upper Extremity	14 (16.5%)	98 (17.9%)	
	Trunk	36 (42.4%)	215 (39.2%)	
	Lower Extremity	28 (32.9%)	181 (33.0%)	
	Mucous membrane	1 (1.2%)	1 (0.2%)	
Subtype				
	SSM	34 (40.5%)	206 (39.2%)	0.146.
	LMM	1 (1.2%)	23 (4.4%)	
	NMM	27 (32.1%)	136 (25.9%)	
	ALM	9 (10.7%)	35 (6.7%)	
	Other	13 (15.5%)	125 (23.8%)	
Breslow thickness				
	< 1mm	6 (7.2%)	213 (37.4%)	**0.001**
	1.01-2 mm	17 (20.5%)	191 (33.5%)	
	2.01-4.0 mm	34 (41.0%)	105 (18.4%)	
	> 4.01mm	26 (31.3%)	61 (10.7%)	
	mean	3.59 ± 2.39	1.98 ± 2.12	**0.001**
Clark Level				
	I	0 (0%)	2 (0.3%)	**0.001**
	II	2 (2.3%)	30 (5.2%)	
	III	17 (19.8%)	255 (44.4%)	
	IV	52 (60.5%)	256 (44.6%)	
	V	15 (16.3%)	30 (5.2%)	
Ulceration				
	No	46 (53.5%)	467 (80.9%)	**0.001**
	Yes	40 (46.5%)	110 (19.1%)	
Regression				
	No	82 (95.3%)	551 (95.5%)	0.952.
	Yes	4 (4.7%)	26 (4.5%)	
Progress	No	51 (60.0%)	511(88.6%)	**0.001**
	Yes	34 (40.0%)	66 (11.4%)	

n= numbers

Supplemental Table 2: Uni- and multivariate Cox regression of risk factors in Stage II (T4 N0 M0) patients for recurrence-free survival (T4)

	univariate		multivariate	
	recurrence-free survival		recurrence-free survival	
	Hazard ratio(95% CI)	p-value	Hazard ratio(95% CI)	p-value
Ulceration	2.571 (1.028 – 6.431)	**0.043**	2.738 (1.077 – 6.961)	**0.034**
Clark Level	1.134 (0.574 – 2.241)	0.717		eliminated
Breslow thickness	1.072 (0.973 – 1.180)	0.153	1.150 (1.023 – 1.292)	**0.019**
Age	1.020 (0.992 – 1.049)	0.162		eliminated
Site of melanoma	0.853 (0.584 – 1.244)	0.407	0.899 (0.809 – 0.999)	**0.047**
Melanoma Subtyp	1.047 (0.766 – 1.432)	0.772		eliminated
Regression	1.153 (0.156 – 8.533)	0.889		eliminated
Gender	1.020 (0.932 – 1.049)	0.161		eliminated

Supplemental Table 3: Uni- and multivariate Cox regression of risk factors in Stage II (T4 N0 M0) patients for overall survival (T4)

	univariate		multivariate	
	overall survival		overall survival	
	Hazard ratio(95% CI)	p-value	Hazard ratio(95% CI)	p-value
Ulceration	3.087 (1.024 – 9.313)	**0.045**		eliminated
Clark Level	0.937 (0.437 – 2.010)	0.867		eliminated
Breslow thickness	1.020 (0.896 – 1.160)	0.766		eliminated
Age	1.043 (1.003 – 1.884)	**0.033**	1,048 (1,066 – 1,092)	**0.026**
Site of melanoma	1.304 (0.797 – 2.134)	0.290		eliminated
Melanoma Subtyp	1.015 (0.717 – 1.438)	0.933		eliminated
Regression	1.479 (0.197 – 11.091)	0.703		eliminated
Gender	0.843 (0.344 – 2.068)	0.709		eliminated

Supplemental Table 4: Uni- and multivariate Cox regression of risk factors in Stage III (T4 N1/2 M0) patients for recurrence-free survival (T4)

	univariate		multivariate	
	recurrence-free survival		recurrence-free survival	
	Hazard ratio(95% CI)	p-value	Hazard ratio(95% CI)	p-value
Ulceration	0.538 (0.063 – 4.612)	0.565		eliminated
Clark Level	1.665 (0.618 – 4.480)	0.308		eliminated
Breslow thickness	1.060 (0.784 – 1.435)	0.703		eliminated
Age	0.993 (0.944 – 1.043)	0.769		eliminated
SLN Micro-, Macrometastasis	0.958 (0.776 – 1.182)	0.449		eliminated
Site of melanoma	0.518 (0.291 – 0.922)	0.025	0.517 (0.289 – 0.927)	**0.027**
Melanoma Subtyp	1.014 (0.602 – 1.708)	0.958		eliminated
Regression		eliminated		eliminated
Gender	1.097 (0.379 – 3.175)	0.864		eliminated

Supplemental Table 5: Uni- and multivariate Cox regression of risk factors in Stage III (T4 N1/2 M0) patients for overall survival (T4)

	univariate		multivariate	
	recurrence-free survival		overall survival	
	Hazard ratio(95% CI)	p-value	Hazard ratio(95% CI)	p-value
Ulceration		eliminated		eliminated
Clark Level	1.548 (0.536 – 4.473)	0.416		eliminated
Breslow thickness	1.104 (0.810 – 1.504)	0.531		eliminated
Age	1.028 (0.967 – 1.092)	0.377		eliminated
SLN Micro-, Macrometastasis	1.018 (0.994 – 1.042)	0.097		eliminated
Site of melanoma	0.564 (0.316 – 1.009)	0.053		eliminated
Melanoma Subtyp	0.933 (0.510 – 1.707)	0.823		eliminated
Regression		eliminated		eliminated
Gender	1.028 (0.967 – 1.092)	0.375		eliminated

Supplemental Table 6: Uni- and multivariate Cox regression of risk factors for recurrence-free survival (whole cohort)

	univariate		multivariate	
	recurrence-free survival		recurrence-free survival	
	Hazard ratio(95% CI)	p-value	Hazard ratio(95% CI)	p-value
Sentinel lymph node status	5.095 (3.363 – 7.720))	**0.001**	2.673 (1.705 – 4.191)	**0.001**
Ulceration	7.189 (4.806 - 10.753)	**0.001**	2.679 (1.664 – 4.131)	**0.001**
Clark Level	3.450 (2.562 - 4.645)	**0,001**	1.664 (1.140 – 2.430)	**0.008**
Breslow thickness	1.253 (1.207 - 1.301)	**0.001**	1.153 (1.074 - 1.238)	**0.001**
Age	1.028 (1.012 - 1.043)	**0.001**		eliminated
SL Micro-, Macrometastasis	0.990 (0.924 – 1.062)	0.787		
Site of melanoma	0.977 (0.931 – 1.027)	0.363		
Melanoma Subtyp	1.077 (0.954 – 1.217)	0.231		
Regression	0.564 (0.139 – 2.286)	0.422		
Gender	0.517 (0.346 - 0.774)	**0.001**		eliminated

Supplemental Table 7: Uni- and multivariate Cox regression of risk factors for overall survival (whole cohort)

	univariate		multivariate	
	overall survival		overall survival	
	Hazard ratio(95% CI)	p-value	Hazard ratio(95% CI)	p-value
Sentinel lymph node status	4.846 (3.078 – 7.629)	**0.001**	3.096 (1.885 - 5.038)	**0.001**
Ulceration	6.476 (4.195 – 10.000)	**0.001**	2.329 (1.371 – 3.955)	**0.002**
Clark Level	2.904 (2.124 – 3.970)	**0,001**	1.585 (1.054 – 2.382)	**0.007**
Breslow thickness	1.222 (1.170 – 1.276)	**0.001**		eliminated.
Age	1.045 (1.027 – 1.064)	**0.001**	1.039 (1.017 -1.058)	**0.001**
SLN Micro-, Macrometastasis	1.024 (1.003 – 1.046	**0.024**		eliminated.
Site of melanoma	0.995 (0.788 – 1.256)	0.967.		
Melanoma Subtyp	1.100 (0.965 – 1.254)	0.153		
Regression	1.069 (0.338 – 3.385)	0.909		
Gender	0.470 (0.303 - 0.729)	**0.001**	0.563 (0.359- 0.833)	**0.012**