

Supplementary table 1: Clinicopathological correlation between group I and group II uveal melanoma patients using Mann-Whitney Wilcoxon Test

Clinicopathological parameters (N=71)	N=71 (%)	UM with Tumour Infiltrating Lymphocytes (Group I) N=33 (%)	UM without Tumour Infiltrating Lymphocytes (Group II) N=38 (%)	*p-value	**p-value
Sex					
Male	46 (64%)	24 (72%)	22 (57%)	0.19	0.304
Female	25 (35%)	9 (27)	16 (42%)		
Age					
≤ 45 years	18 (25%)	7 (21%)	11 (28%)	0.45	0.554
> 45 years	53 (74%)	26 (78%)	27 (71%)		
AJCC clinical staging					
T1-T2	44 (61%)	19 (57%)	25 (65%)	0.48	0.549
T3-T4	27 (38%)	14 (42%)	13 (34%)		
Scleral invasion					
Absent	52 (73%)	21 (63%)	31 (81%)	0.09	0.160
Present	19 (26%)	12 (36%)	7 (18%)		
Ciliary body invasion					
Absent	54 (76%)	22 (66%)	32 (84%)	0.08	0.160
Present	17 (23%)	11 (33%)	6 (15%)		
Extraocular extension					
Absent	62 (87%)	28 (84%)	34 (89%)	0.56	0.597
Present	9 (12%)	5 (15%)	4 (10%)		
Tumour pigmentation					
Decrease	20 (28%)	10 (30%)	10 (26%)	0.71	0.710
Increase	51 (71%)	23 (69%)	28 (73%)		
Necrosis					
Absent	46 (64%)	23 (69%)	23 (60%)	0.42	0.560
Present	25 (35%)	10 (30%)	15 (39%)		
Liver Metastasis					
Absent	57 (80%)	24 (72%)	33 (86%)	0.24	0.349
Present	14 (19%)	9 (27%)	5 (13%)		

* p-value before Benjamini-Hochberg correction; **p-value adjusted after Benjamini-Hochberg correction

Supplementary Table 2: Correlation of PD 1 and PD L1 immunoeexpression with the clinicopathological parameters in group I and group II uveal melanoma patients

Clinicopathological parameters	N=33	Uveal melanoma with tumor infiltrating lymphocytes (TILs) (Group I)								N=38	Uveal melanoma without tumor infiltrating lymphocytes (TILs) (Group II)							
		PD-1 Immunoeexpression				PD-L1 Immunoeexpression					PD-1 Immunoeexpression				PD-L1 Immunoeexpression			
		Absent (10)	Present (23)	*p-value	**p-value	Absent (8)	Present (25)	*p-value	**p-value		Absent (31)	Present (7)	*p-value	**p-value	Absent (19)	Present (19)	*p-value	**p-value
Sex																		
Male	24	8	16	0.53	0.652	7	17	0.28	0.640	22	19	3	0.37	0.658	11	11	1.00	1.000
Female	9	2	7			1	8			16	12	4			8	8		
Age																		
≤ 45 years	7	4	3	0.08	0.160	1	6	0.48	0.698	11	9	2	0.98	0.980	3	8	0.07	0.373
> 45 years	26	6	20			7	19			27	22	5			16	11		
Largest tumor basal diameter																		
≤ 15mm	6	2	4	0.85	0.850	2	4	0.56	0.689	16	14	2	0.42	0.672	10	6	0.18	0.576
> 15mm	27	8	19			6	21			22	17	5			9	13		
Tumor thickness																		
≤ 8mm	12	2	10	0.19	0.304	5	7	0.07	0.280	24	20	4	0.71	0.947	11	13	0.50	0.889
> 8mm	21	8	13			3	18			14	11	3			8	6		
Scleral invasion																		
Absent	21	6	15	0.77	0.880	7	14	0.10	0.320	31	27	4	0.06	0.192	16	15	0.67	1.072
Present	12	4	8			1	11			7	4	3			3	4		
Extraocular extension																		
Absent	28	7	21	0.11	0.196	7	21	0.81	0.810	34	29	5	0.08	0.213	18	16	0.29	0.773
Present	5	3	2			1	4			4	2	2			1	3		
Mitotic count																		
<4/40HPF	12	5	7	0.28	0.407	4	8	0.35	0.700	31	26	5	0.44	0.640	16	15	0.67	0.975
≥4/40HPF	21	5	16			4	13			7	5	2			3	4		
Microvascular density																		
≤50 vessels/0.25mm ²	12	4	8	0.77	0.821	4	8	0.35	0.622	26	23	3	0.10	0.229	14	12	0.48	1.097
>50 vessels/0.25mm ²	21	6	15			4	17			12	8	4			5	7		
Necrosis																		
Absent	23	6	17	0.4	0.533	5	18	0.61	0.697	23	19	4	0.83	0.949	12	11	0.74	0.846
Present	10	4	6			3	7			15	12	3			7	8		

* p-value before Benjamini-Hochberg correction; **p-value adjusted after Benjamini-Hochberg correction

Supplementary Table 3: Correlation of PD-1 and PD-L1 mRNA expression with the clinicopathological parameters in uveal melanoma patients

Clinicopathological parameters (N=71)	N=71	PD-1 mRNA Expression		*p-value	**p-value	PD-L1 mRNA Expression		*p-value	**p-value
		Absent (n=45)	Present (n=26)			Absent (n=32)	Present (n=39)		
<u>Sex</u>									
Male	46	28	18	0.55	0.779	20	26	0.80	0.907
Female	25	17	8			12	13		
<u>Age</u>									
≤ 45 years	18	11	7	0.81	0.861	8	10	1.00	1.063
> 45 years	53	34	19			24	29		
<u>Largest tumor basal diameter</u>									
≤ 15mm	22	17	5	0.10	0.213	12	10	0.31	0.586
> 15mm	49	28	21			20	29		
<u>Tumour thickness</u>									
≤ 8mm (36)	36	27	9	0.039	0.095	21	15	0.032	0.136
> 8mm (35)	35	18	17			11	24		
<u>AJCC clinical staging</u>									
T1-T2	44	29	15	0.57	0.692	24	20	0.05	0.170
T3-T4	27	16	11			8	19		
<u>Scleral invasion</u>									
Absent	52	34	18	0.56	0.732	24	28	0.79	0.959
Present	19	11	8			8	11		
<u>Ciliary body invasion</u>									
Absent	54	37	17	0.10	0.189	26	28	0.41	0.697
Present	17	8	9			6	11		
<u>Extraocular extension</u>									
Absent	62	41	21	0.27	0.417	29	33	0.49	0.694
Present	9	4	5			3	6		
<u>Tumour pigmentation</u>									
Decrease	20	13	7	1.00	1.000	12	8	0.18	0.383
Increase	51	32	19			20	31		
<u>Epithelioid cell type</u>									
Absent	31	27	4	<0.001	0.017	15	16	0.63	0.824
Present	40	18	22			17	23		
<u>Mitotic count</u>									
<4/40HPF	43	35	8	<0.001	0.009	24	19	0.029	0.164
≥4/40HPF	28	10	18			8	20		

<u>Infiltrating macrophages</u>									
≤50% CD68 positivity	40	35	5	<0.001	0.006	24	16	0.007	0.119
>50% CD68 positivity	31	10	21			8	23		
<u>Microvascular density</u>									
≤50 vessels/0.25mm ²	38	32	6	<0.001	0.004	21	17	0.09	0.219
>50 vessels/0.25mm ²	33	13	20			11	22		
<u>Necrosis</u>									
Absent	46	28	18	0.61	0.691	21	25	1.00	1.000
Present	25	17	8			11	14		
<u>BAP1 staining</u>									
Present	29	26	3	<0.001	0.003	15	14	0.46	0.711
Absent	42	19	23			17	25		
<u>Liver Metastasis</u>									
Absent	57	39	18	0.11	0.187	29	28	0.07	0.198
Present	14	6	8			3	11		
<u>TILs</u>									
Absent	38	34	4	<0.001	0.003	23	15	0.008	0.068
Present	33	11	22			9	24		

* p-value before Benjamini-Hochberg correction; **p-value adjusted after Benjamini-Hochberg correction

Bold signifies statistically significant value

Supplementary Table 4: Expression of Immune checkpoint markers with the patient outcome using Kaplan-Meier Analysis and Log-rank test

No. of cases	Immunoexpression					mRNA expression				
	Immune checkpoint markers	DFS	HR (95%CI)	*p-value	**p-value	Immune checkpoint markers	DFS	HR (95%CI)	*p-value	**p-value
UM Cases (n=71)	PD-1 Absent (41) Present (30)	85% 70%	0.41 (0.14-1.17) 2.40 (0.84-6.79)	0.08	0.12	PD-1 Absent (45) Present (26)	86% 65%	0.30 (0.10-0.89) 3.32 (1.11-9.92)	0.013	0.039
	PD-L1 Absent (27) Present (44)	96% 68%	0.10 (0.03-0.30) 9.30 (3.30-26.14)	0.007	0.021	PD-L1 Absent (32) Present (39)	87% 71%	0.48 (0.17-1.36) 2.04 (0.10-5.68)	0.20	0.4
UM with TILs; Group I (n=33)	PD-1 Absent (10) Present (23)	69% 60%	0.5(0.13-2.15) 1.8(0.46-7.58)	0.29	0.348	PD-1 Absent (11) Present (22)	68% 63%	0.6(0.16-2.41) 1.5(0.41-6.01)	0.45	0.54
	PD-L1 Absent (8) Present (25)	87% 60%	0.4(0.09-1.77) 2.4(0.56-10.88)	0.36	0.36	PD-L1 Absent (9) Present (24)	66% 66%	1.6(0.36-7.74) 0.5(0.12-2.75)	0.43	0.645
UM without TILs; Group II (n=38)	PD-1 Absent (31) Present (7)	93% 42%	0.1(0.00-0.79) 14.9(1.25-179.1)	<0.001	0.006	PD-1 Absent (34) Present (4)	88% 50%	0.1(0.00-3.64) 7.5(0.27-207)	0.004	0.024
	PD-L1 Absent (19) Present (19)	73% 94%	6.65(1.32-33.49) 0.15(0.02-0.75)	0.036	0.072	PD-L1 Absent (23) Present (15)	73% 91%	1.1(0.22-6.25) 0.8(0.15-4.35)	0.81	0.81

* p-value before Benjamini-Hochberg correction; **p-value adjusted after Benjamini-Hochberg correction