

**Table SI.** Correlation between the expression of nuclear receptors, PD-L1 and glucose metabolic markers in periocular sebaceous carcinoma (n=19) using nonparametric Spearman's rank correlation analysis.

Marker	Spearman's rank correlation coefficients				
	MCT1	MCT4	GLUT1	CD147	pAMPK
GR	0.144	-0.424	0.019	-0.044	0.241
AR	-0.407	0.303	0.033	-0.479	-0.479 <sup>a</sup>
ER	0.168	0.055	-0.051	-0.044	-0.053
PR	0.042	-0.255	-0.668 <sup>a</sup>	-0.283	0.434
PD-L1	-0.238	-0.174	-0.191	0.174	-0.139

<sup>a</sup>P<0.05. AR, androgen receptor; ER, estrogen receptor; GLUT, glucose transporter; GR, glucocorticoid receptor; MCT, monocarboxylate transporter; pAMPK, phosphorylated-AMP-activated protein kinase; PD-L1, programmed cell death ligand1; PR, progesterone receptor.

**Table SII.** Correlation between the expression of nuclear receptors, PD-L1, and glucose metabolic markers in extraocular sebaceous carcinoma (n=20) using nonparametric Spearman's rank correlation analysis.

Marker	Spearman's rank correlation coefficients				
	MCT1	MCT4	GLUT1	CD147	pAMPK
GR	0.005	-0.171	-0.236	0.138	0.587
AR	0.077	0.087	0.005	0.335	-0.020
ER	-0.068	-0.063	0.486 <sup>a</sup>	-0.392	-0.438
PR	0.562 <sup>a</sup>	-0.085	-0.349	0.132	0.669 <sup>a</sup>
PD-L1	0.038	-0.159	-0.170	0.086	0.172

<sup>a</sup>P<0.05. AR, androgen receptor; ER, estrogen receptor; GLUT, glucose transporter; GR, glucocorticoid receptor; MCT, monocarboxylate transporter; pAMPK, phosphorylated-AMP-activated protein kinase; PD-L1, programmed cell death ligand1; PR, progesterone receptor.

**Table III.** Comparison of clinicopathologic findings based on disease progression in periocular sebaceous carcinoma (n=19).

Characteristic	Sebaceous carcinoma without progression <sup>a</sup> (n=11)	Sebaceous carcinoma with progression (n=8)	P-value <sup>b</sup>
Sex, n (%)			
Male	3 (27.3)	3 (37.5)	>0.999
Female	8 (72.7)	5 (62.5)	
Mean ±SD age, years (range)	78.1±12.0 (60-97)	65.6±16.5 (36-80)	0.075
Mean ±SD follow-up, months (range)	41.3±32.3 (5-99)	43.0±25.5 (12-95)	0.710
T category, n (%)			
T2 or lesser	9 (81.8)	4 (50.0)	0.319
T3 or higher	4 (18.2)	4 (50.0)	
Initial stage, n (%)			
Localized	11 (100)	4 (50.0)	0.018 <sup>c</sup>
Advanced (lymph node involvement or distant metastasis)	0 (0)	4 (50.0)	
GR, n (%)			
Negative	0 (0)	1 (12.5)	0.421
Positive	11 (100)	7 (87.5)	
AR, n (%)			
Low	5 (45.5)	7 (87.5)	0.147
High	6 (54.5)	1 (12.5)	
ER, n (%)			
Negative	3 (27.5)	5 (62.5)	0.181
Positive	8 (72.7)	3 (37.5)	
PR, n (%)			

Negative	5 (45.5)	5 (62.5)	0.650
Positive	6 (54.5)	3 (37.5)	
PD-L1, n (%)			
Negative	10 (90.9)	8 (100)	>0.999
Positive	1 (9.1)	0 (0)	
MCT1, n (%)			
Low	5(45.5)	3 (37.5)	>0.999
High	6 (54.5)	5 (62.5)	
MCT4, n (%)			
Low	5 (45.5)	7 (87.5)	0.147
High	6 (54.5)	1 (12.5)	
GLUT1, n (%)			
Low	5 (45.5)	2 (25.0)	0.633
High	6 (54.5)	6 (75.0)	
CD147, n (%)			
Low	6 (54.5)	1 (12.5)	0.147
High	5 (45.5)	7 (87.5)	
pAMPK, n (%)			
Low	9 (81.8)	5 (62.5)	0.603
High	2 (18.2)	3 (37.5)	

<sup>a</sup>Disease progression: Postoperative lymph node involvement or distant metastasis. <sup>b</sup> $\chi^2$  test or Fisher's exact test were used to compare categorical variables; the comparison of mean values was performed using the Mann-Whitney U test. <sup>c</sup>P<0.05. AR, androgen receptor; ER, estrogen receptor; GLUT, glucose transporter; GR, glucocorticoid receptor; MCT, monocarboxylate transporter; pAMPK, phosphorylated-AMP-activated protein kinase; PD-L1, programmed cell death ligand1; PR, progesterone receptor; SD, standard deviation.

**Table SIV.** Comparison of clinicopathologic findings based on disease progression in extraocular sebaceous carcinoma (n=20).

Characteristic	Sebaceous carcinoma without progression <sup>a</sup> (n=16)	Sebaceous carcinoma with progression (n=4)	P value <sup>b</sup>
Sex, n (%)			
Male	8 (50.0)	3 (75.0)	0.591
Female	8 (50.0)	1 (25.0)	
Mean ± SD age, years (range)	65.0±16.4 (26-90)	71.7±12.5 (60-89)	0.570
Mean ± SD follow-up, months (range)	56.7±34.7 (15-136)	75.0±122.2 (8-258)	0.219
T category, n (%)			
T2 or lesser	16 (100)	3 (75.5)	0.200
T3 or higher	0 (0)	1 (25.5)	
Initial stage, n (%)			
Localized	15 (93.8)	2 (50.0)	0.088
Advanced (lymph node involvement or distant metastasis)	1 (6.3)	2 (50.0)	
GR, n (%)			
Negative	2 (12.5)	1 (25.0)	0.509
Positive	14 (87.5)	3 (75.5)	
AR, n (%)			
Low	6 (37.5)	3 (75.0)	0.285
High	10 (62.5)	1 (25.0)	
ER, n (%)			
Negative	9 (56.3)	2 (50.0)	>0.999
Positive	7 (43.8)	2 (50.0)	
PR, n (%)			

Negative	11 (68.8)	2 (50.0)	0.587
Positive	5 (31.3)	2 (50.0)	
PD-L1, n (%)			
Negative	13 (81.2)	3 (75.0)	>0.999
Positive	3 (18.8)	1 (25.0)	
MCT1, n (%)			
Low	6 (37.5)	2 (50.0)	>0.999
High	10 (62.5)	2 (50.0)	
MCT4, n (%)			
Low	9 (56.3)	3 (75.0)	0.619
High	7 (43.8)	1 (25.0)	
GLUT1, n (%)			
Low	9 (56.3)	2 (50.0)	>0.999
High	7 (43.8)	2 (50.0)	
CD147, n (%)			
Low	7(43.8)	2 (50.0)	>0.999
High	9 (56.3)	2 (50.0)	
pAMPK, n (%)			
Low	8 (50.0)	3 (75.0)	0.591
High	8 (50.0)	1 (25.0)	

<sup>a</sup>Disease progression: Postoperative lymph node involvement or distant metastasis. <sup>b</sup> $\chi^2$  test or Fisher's exact test were used to compare categorical variables; the comparison of mean values was performed using the Mann-Whitney U test. AR, androgen receptor; ER, estrogen receptor; GLUT, glucose transporter; GR, glucocorticoid receptor; MCT, monocarboxylate transporter; pAMPK, phosphorylated-AMP-activated protein kinase; PD-L1, programmed cell death ligand1; PR, progesterone receptor; SD, standard deviation.