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CORRIGENDUM

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In: *Lonsdorf AS., Edelmann D., Albrecht T., Brobeil A., Labrenz J., Johanning M., Schlenk R.F, Goeppert B., Enk AH., Toberer F. Differential Immunoexpression of Inhibitory Immune Checkpoint Molecules and Clinicopathological Correlates in Keratoacanthoma, Primary Cutaneous Squamous Cell Carcinoma and Metastases. Acta Derm Venereol. 2024 Feb 7;104:adv13381. doi: 10.2340/actadv.v104.13381*, the authors have unfortunately discovered that the originally published version of this article contains a transmission error which needs to be corrected.

In the originally published version of the paper data for PD-L1 TPS positivity are unintentionally provided at a ≥5% cut-off and not as intended and specified at a ≥1% cut-off. This error led to minor changes of the paper regrading reported data on the PD-L1 TPS positivity status.

In this corrigendum, we supply the corrected data for PD-L1 TPS positivity at a ≥1% cut-off in Table II and Figure 3 (corrected panels A, E and G) along with pertaining corrections in the Results and Discussion section.

These corrections do not alter the study's findings of significance, the scientific conclusions of the article or overall interpretation of the study results.

The authors regret for any inconvenience caused.

RESULTS

Correlations of iICP positivity and CD8+ profiles with clinicopathological parameters

In the Results section the following sentences are changed:

Original sentences

Tumour type ($p < 0.01$) and differentiation ($p < 0.01$) were significantly associated with PD-L1 TPS positivity, with a higher proportion of PD-L1 TPS positive primary cSCC (24/36, 66.7%) compared with KA (1/9, 11.1%) or metastases (1/5, 20.0%). The majority of G3-cSCC displayed PD-L1 TPS positivity (13/16, 81.3%), in sharp contrast to highly differentiated KA (1/9, 11.1%).

Corrected sentences

Tumour type ($p < 0.01$) and differentiation ($p < 0.01$) were significantly associated with PD-L1 TPS positivity, with a higher proportion of PD-L1 TPS positive primary cSCC (34/36, 94.4%) compared with KA (5/9, 55.6%) or metastases (2/5, 40.0%). All G3-cSCC and G2-cSCC displayed PD-L1 TPS positivity (G3-cSCC: 16/16, 100%; G2-cSCC: 11/11, 100%), in sharp contrast to highly differentiated KA (5/9, 55.6%)

Reciprocal relationships between iICP expression patterns and CD8+ host immunity

Original sentences

Furthermore, TIGIT+ infiltrates were significantly increased in PD-L1 IC positive tumours (Fig. 3F, $p = 0.05$), while stratification for tumoural PD-L1 expression did not reveal a significant difference (Fig. 3E, $p = 0.13$). Conversely, PD-L1 TPS-positive specimens displayed significantly higher tumoural expression of the TIGIT ligand CD155 (Fig. 3G, $p = 0.001$), while the difference in CD155 expression did not reach significance when tumours were stratified for PD-L1 IC positivity (Fig. 3H) or TIGIT (Fig. 3I).

Corrected sentences

Furthermore, TIGIT+ infiltrates were significantly increased in PD-L1 IC positive tumours (Fig. 3F, $p = 0.05$), while stratification for tumoural PD-L1 expression did not reveal a significant difference (Fig. 3E, $p = 0.57$). Conversely, PD-L1 TPS-positive specimens displayed significantly higher tumoural expression of the TIGIT ligand CD155 (Fig. 3G, $p = 0.03$), while the difference in CD155 expression did not reach significance when tumours were stratified for PD-L1 IC positivity (Fig. 3H) or TIGIT (Fig. 3I).

DISCUSSION

In the Discussion section the following sentences are changed:

Original sentence

In line with previous research (28, 38), differentiation of primary tumours, an established prognosticator for metastatic risk, had a significant impact on tumoural PD-L1 expression in the current study, with a particularly high proportion of PD-L1 TPS-positive poorly differentiated cSCC (13/16, 81.3%) contrasting a low proportion of highly differentiated, non-metastasizing KA (1/9, 11%).

Corrected sentence

In line with previous research (28, 38), differentiation of primary tumours, an established prognosticator for metastatic risk, had a significant impact on tumoural PD-L1 expression in the current study, with a particularly high proportion of PD-L1 TPS-positive poorly differentiated cSCC (16/16, 100%) contrasting a lower proportion of highly differentiated, non-metastasizing KA (5/9, 55.6%).

Original sentences

The current study found significantly higher CD155 immunoexpression in PD-L1 positive compared with PD-L1 negative tumours ($p<0.01$) along with a strong positive CD155/PD-L1 TPS correlation in cSCC ($p<0.001$) but not KA ($p=0.79$). Furthermore, at a ≥5% cut-off, the vast majority of high-risk G3-cSCC displayed positivity for the CD155 ligand TIGIT (14/16, 87.5%) along with a non-significant trend towards higher TIGIT expression in PD-L1-negative cSCC ($p<0.08$).

Corrected sentences

The current study found significantly higher CD155 immunoexpression in PD-L1 positive compared with PD-L1 negative tumours ($p=0.03$) along with a strong positive CD155/PD-L1 TPS correlation in cSCC ($p<0.001$) but not KA ($p=0.79$). Furthermore, at a ≥5% cut-off, the vast majority of high-risk G3-cSCC displayed positivity for the CD155 ligand TIGIT (14/16, 87.5%) along with a non-significant trend towards higher TIGIT expression in PD-L1-negative cSCC ($p=0.57$).

Original Table II

Table II. Clinicopathological parameters by programmed death-ligand 1 (PD-L1), T-cell immunoreceptor with immunoglobulin and immunoreceptor tyrosine-based inhibition motif domain (TIGIT), CD155 expression status and CD8⁺ immune cell density at indicated cut-offs and associated standard deviations (SD)

	PD-L1 neg. (TPS <1%)	PD-L1 pos. (TPS ≥1%)	*p*-value	TIGIT neg. (<5%)	TIGIT pos. (≥5%)	*p*-value	CD155 neg. (<1%)	CD155 pos. (≥1%)	*p*-value	CD8⁺ low (<median)	CD8⁺ high (≥median)	*p*-value
All samples, *n*	24	26		9	40		16	34		30	19	
Sex, *n* (%)												
Female	5 (20.8)	6 (23.1)	1.000	2 (22.2)	9 (22.5)	1.000	5 (31.2)	6 (17.6)	0.297	5 (16.7)	6 (31.6)	0.298
Male	19 (79.2)	20 (76.9)		7 (77.8)	31 (77.5)		11 (68.8)	28 (82.4)		25 (83.3)	13 (68.4)	
Age, years, median (range)	75.5 (48–87)	81.0 (67–95)	**0.01**	77.0 (68–85)	79.5 (48–95)	0.27	76.0 (67–87)	80.0 (48–95)	0.23	79.5 (68–92)	76.0 (48–95)	0.24
Tumour thickness, *n* (%)												
<6 mm	14 (70.0)	11 (44.0)	0.149	7 (87.5)	17 (42.2)	0.054	10 (71.4)	15 (48.4)	0.264	12 (46.2)	12 (66.7)	0.300
≥6 mm	6 (30.0)	14 (56.0)		1 (12.5)	19 (52.8)		4 (28.6)	16 (51.6)		14 (53.8)	6 (33.3)	
Tumour type, *n* (%)												
Keratoacanthoma	8 (33.3)	1 (3.8)	**0.003**	0 (0.0)	9 (22.5)	0.286	5 (31.2)	4 (11.8)	0.177	3 (10.0)	6 (31.6)	0.207
cSCC	12 (50.0)	24 (92.3)		8 (88.9)	27 (67.5)		9 (56.2)	27 (79.4)		23 (76.7)	12 (63.2)	
Metastasis	4 (16.7)	1 (3.8)		1 (11.1)	4 (10.0)		2 (12.5)	3 (8.8)		4 (13.3)	1 (5.3)	
Tissue differentiation, *n* (%)												
Keratoacanthoma	8 (40.0)	1 (4.0)	**0.008**	0 (0.0)	9 (25.0)	0.066	5 (35.7)	4 (12.9)	0.270	3 (11.5)	6 (33.3)	**0.024**
Well (G1)	4 (20.0)	5 (20.0)		4 (50.0)	4 (11.1)		2 (14.3)	7 (22.6)		8 (30.8)	0 (0.0)	
Moderate (G2)	5 (25.0)	6 (24.0)		2 (25.0)	9 (25.0)		4 (28.6)	7 (22.6)		5 (19.2)	6 (33.3)	
Poor (G3)	3 (15.0)	13 (52.0)		2 (25.0)	14 (38.9)		3 (21.4)	13 (41.9)		10 (38.5)	6 (33.3)	

p-values were obtained by conducting Fisher's exact test or t-test (for age). Statistical significance ($p<0.05$) in **bold**.
cSCC: cutaneous squamous cell carcinoma; TPS: Tumor Proportion Score.

Corrected Table II

Table II. Clinicopathological parameters by programmed death-ligand 1 (PD-L1), T-cell immunoreceptor with immunoglobulin and immunoreceptor tyrosine-based inhibition motif domain (TIGIT), CD155 expression status and CD8⁺ immune density at indicated cut-offs and associated standard deviations (SD)

	PD-L1 neg. (TPS <1%)	PD-L1 pos. (TPS ≥1%)	*p*-value	TIGIT neg. (<5%)	TIGIT pos. (≥5%)	*p*-value	CD155 neg. (<1%)	CD155 pos. (≥1%)	*p*-value	CD8⁺ low (<median)	CD8⁺ high (≥median)	*p*-value
All samples, *n*	9	41		9	40		16	34		30	19	
Sex, *n* (%)												
Female	2 (22.2)	9 (22.0)	1.000	2 (22.2)	9 (22.5)	1.000	5 (31.2)	6 (17.6)	0.297	5 (16.7)	6 (31.6)	0.298
Male	7 (77.8)	32 (78.0)		7 (77.8)	31 (77.5)		11 (68.8)	28 (82.4)		25 (83.3)	13 (68.4)	
Age, years, median (range)	73 (69–80)	80 (48–95)	**<0.001**	77.0 (68–85)	79.5 (48–95)	0.27	76.0 (67–87)	80.0 (48–95)	0.23	79.5 (68–92)	76.0 (48–95)	0.24
Tumour thickness, *n* (%)												
<6 mm	3 (50.0)	22 (56.4)	1.000	7 (87.5)	17 (42.2)	0.054	10 (71.4)	15 (48.4)	0.264	12 (46.2)	12 (66.7)	0.300
≥6 mm	3 (50.0)	17 (43.6)		1 (12.5)	19 (52.8)		4 (28.6)	16 (51.6)		14 (53.8)	6 (33.3)	
Tumour type, *n* (%)												
Keratoacanthoma	4 (44.4)	5 (12.2)	**0.001**	0 (0.0)	9 (22.5)	0.286	5 (31.2)	4 (11.8)	0.177	3 (10.0)	6 (31.6)	0.207
cSCC	2 (22.2)	34 (82.9)		8 (88.9)	27 (67.5)		9 (56.2)	27 (79.4)		23 (76.7)	12 (63.2)	
Metastasis	3 (33.3)	2 (4.9)		1 (11.1)	4 (10.0)		2 (12.5)	3 (8.8)		4 (13.3)	1 (5.3)	
Tissue differentiation, *n* (%)												
Keratoacanthoma	4 (66.7)	5 (12.8)	**0.003**	0 (0.0)	9 (25.0)	0.066	5 (35.7)	4 (12.9)	0.270	3 (11.5)	6 (33.3)	**0.024**
Well (G1)	2 (33.3)	7 (17.9)		4 (50.0)	4 (11.1)		2 (14.3)	7 (22.6)		8 (30.8)	0 (0.0)	
Moderate (G2)	0 (0.0)	11 (28.2)		2 (25.0)	9 (25.0)		4 (28.6)	7 (22.6)		5 (19.2)	6 (33.3)	
Poor (G3)	0 (0.0)	16 (41.0)		2 (25.0)	14 (38.9)		3 (21.4)	13 (41.9)		10 (38.5)	6 (33.3)	

p-values are calculated by conducting Fisher's exact test or *t*-test for age. Statistical significance ($p<0.05$) in **bold**.
cSCC: cutaneous squamous cell carcinoma; TPS: Tumor Proportion Score.

Corrected Fig. 3

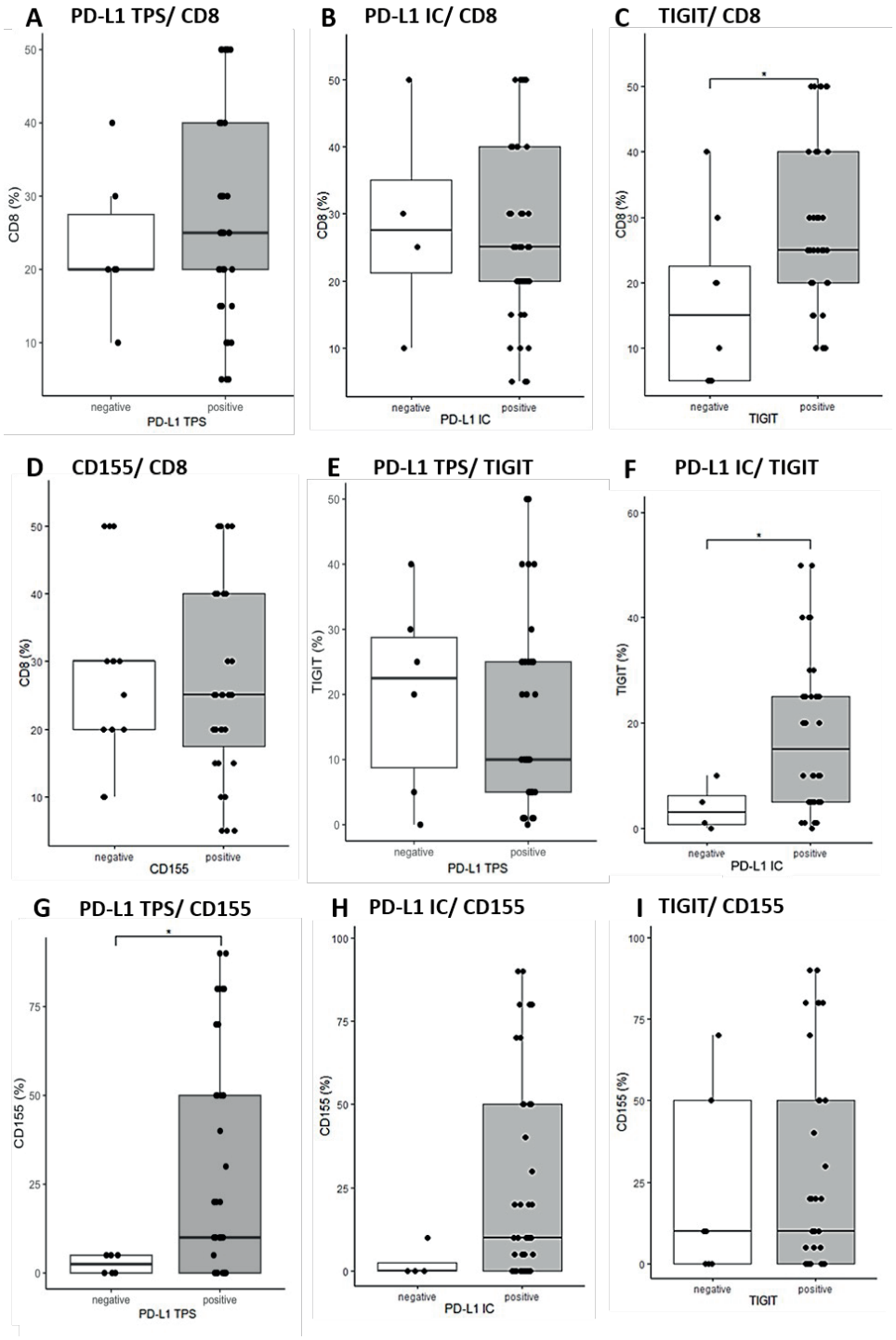

Fig. 3. Reciprocal relationships between inhibitory immune checkpoint (iICP) expression patterns and CD8+ host immunity in cutaneous squamous cell carcinoma and keratoacanthoma. (A) Programmed death-ligand 1 (PD-L1) expression status (Tumor Proportion Score (TPS))/CD8 immunoexpression (%). (B) PD-L1 expression status (Immune Cell Score (IC))/CD8 immunoexpression (%). (C) T-cell immunoreceptor with immunoglobulin and immunoreceptor tyrosine-based inhibition motif domain (TIGIT) expression status/CD8 immunoexpression (%). (D) CD155 expression status/CD8 immunoexpression (%). (E) PD-L1 expression status (TPS)/TIGIT immunoexpression (%). (F) PD-L1 expression status (IC)/TIGIT immunoexpression (%). (G) PD-L1 expression status (TPS) /CD155 immunoexpression (%). (H) PD-L1 expression status (IC)/CD155 immunoexpression (%). (I) TIGIT expression status/CD155 immunoexpression (%). Cut-off values: PD-L1 TPS: negative: <1%, positive: ≥1%; PD-L1 IC: negative: < 5%, positive ≥ 5%;TIGIT: negative: < 5%, positive ≥ 5%; CD155: negative: < 1%, positive: ≥ 1%.* $p<0.05$; p-values are obtained by applying Wilcoxon's ranked-sum test. $p<0.05$ was considered statistically significant.