

Correction

Correction: Felsenstein M. et al. Perineural Invasion in Pancreatic Ductal Adenocarcinoma (PDAC): A Saboteur of Curative Intended Therapies? *J. Clin. Med.* 2022, 11, 2367

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1. Error in Table

In the original publication [1], there was an error in Tables 1 and 2, as published. There was an inaccuracy in the data transfer from the primary Excel files. The corrected tables can be found below.

Table 1. Patient characteristics of entire study cohort, Pn0 and Pn1 groups.

	Total	%	Pn0	%	Pn1	%	Statistics *
Cases	571		40		531		
Age (years)	65.6 (+/-11.1)		64.7 (+/-10.5)		65.6 (+/-10.8)		<i>p</i> = 0.58
Sex	female 264 male 307	46.2 53.8	female 22 male 18	55 45	female 242 male 289	45.6 54.4	<i>p</i> = 0.26
Body mass index (BMI) (in kg/m²)	25.1 (+/-4.3)		23.6 (+/-4.0)		25.2 (+/-4.3)		<i>p</i> = 0.05
Diabetes mellitus (DM)							
DM I	19	3.3	0	0	19	3.6	<i>p</i> = 0.39
DM II	116	20.3	7	17.5	109	20.5	<i>p</i> = 0.84
Beta blocker							
β1 selective	168	29.4	9	22.5	159	29.9	<i>p</i> = 0.22
Non-selective	12	2.1	0	0	12	2.3	
Carbohydrate-antigen 19-9 (in U/mL)	846.3 (+/-3014)		453.6 (+/-1303)		888.5 (+/-3142)		<i>p</i> = 0.49
Carcinoembryonic antigen (in µg/L)	18.8 (+/-67.9)		4.5 (+/-3.2)		20.0 (+/-72.9)		<i>p</i> = 0.28
Tumor entity							
Head	427	74.8	28	70	399	75.1	
Tail	70	12.3	7	17.5	63	11.9	<i>p</i> = 0.77
Body	46	8.1	3	7.5	43	8.1	
Uncinate	28	4.9	2	5	26	4.9	
Surgical procedure							
PPPD **	363	63.6	20	50	343	64.6	
Whipple	29	5.1	5	12.5	24	4.5	<i>p</i> = 0.05
Total	94	16.5	6	15	88	16.5	
Distal	85	14.9	9	22.5	76	14.3	
Chemotherapy							
Pre-operative	64	11.2	8	20	56	10.5	<i>p</i> = 0.11
Post-operative	353	61.8	28	70	325	61.2	<i>p</i> = 0.31

Table 1. Cont.

	Total	%	Pn0	%	Pn1	%	Statistics *
Clinical Outcome							
Follow-up (months)	17.2		24.2		16.6		$p = 0.04$
30-day mortality	28	5.2	0	0	28	5.6	$p = 0.25$
Death	383	78.8	15	41.7	368	81.8	$p < 0.001$
Alive	103	18.0	21	52.5	82	15.4	$p < 0.001$
Lost to follow-up	85	14.9	4	10	81	15.3	$p = 0.49$
LTS *** (>5 years)	19	3.3	4	10	15	2.8	$p = 0.04$
Recurrence							
Yes	167	29.2	11	27.5	156	29.4	
No	404	70.8	29	72.5	375	70.6	$p = 0.86$

* Fisher’s exact test for categorical variables and Student’s *t*-test for continuous variables. ** Pylorus preserving pancreaticoduodenectomy. *** Long-term survivors (>5 years).

Table 2. Histopathological assessment of tumors in Pn0 and Pn1 groups.

	Total	%	Pn0	%	Pn1	%	Statistics *
Cases	571		40		531		
Tumor stage							
pT1 (<2 cm)	68	11.9	12	30	56	10.5	
pT2 (2–4 cm)	323	56.6	20	50	299	57.1	$p = 0.007$
pT3 (>4 cm)	176	27.3	8	20	148	27.9	
pT4 (vessel infiltration)	24	4.2	0	0	24	4.5	
Lymph node metastasis							
N–	154	27	24	60	130	24.5	$p < 0.001$
N+	417	73	16	40	401	75.5	
Distant metastasis							
M0	510	89.3	38	95	472	88.9	$p = 0.3$
M1	61	10.7	2	5	59	11.1	
Histologic grade							
G1	20	3.5	4	10	16	3	
G2	348	60.9	27	67.5	321	60.5	$p = 0.03$
G3	203	35.6	9	22.5	194	36.5	
Resection margin							
R0	359	62.9	31	77.5	328	61.8	$p = 0.06$
R1	212	37.1	9	22.5	203	38.2	
Vascular invasion							
V0	467	81.8	37	92.5	430	81	$p = 0.09$
V1	104	18.2	3	7.5	101	19	
Lymphatic invasion							
L0	330	57.8	33	82.5	297	55.9	$p < 0.001$
L1	241	42.2	7	17.5	234	44.1	

* Fisher’s exact test for categorical variables and Student’s *t*-test for continuous variables.

2. Text Correction

The authors state that the scientific conclusions are unaffected. Based on the modified Tables 1 and 2, the following sentences need to be adjusted:

- Section 3, Section 3.1, Paragraph 1, from fifth to seventh sentences should be: “There were 22 female (55%) and 18 male (45%) patients negative for perineural invasion (Pn0 group) with a median age of 64.7 years (range 35–84). The group of patients positive for perineural invasion (Pn1 group) consisted of 242 female (45.6%) and 289 male (54.4%) individuals with a median age of 65.6 years (range 37–83). Tumor location in over 70% of both groups was the head of the pancreas (Pn0 group: 70 %, Pn1 group: 75.1%), followed by the pancreatic tail (Pn0 group: 17.5%, Pn1 group: 11.9%) and pancreatic body (Pn0 group: 7.5%, Pn1 group: 8.1%).”
- Section 3, Section 3.2, Paragraph 2, the last two sentence should be: “There was a significant difference between the BMI of the Pn0 and Pn1 group ($p = 0.05$). Pre-operative tumor markers (CA19-9, CEA) that well reflect the overall tumor burden, including micro-metastases, did not reveal strong correlations.”
- Section 3, Section 3.3, the first sentence should be: “Studying long-term survivors (LTS with survival >5 years) in our study cohorts, we discriminated a significantly increased number of LTS in the Pn0 group compared to Pn1 patients ($p = 0.04$).”
- Section 3, Section 3.2, Paragraph 1, from third to fifth sentences should be: “In our cohort, 30% of Pn0 patients presented with early stage pT1 tumors (Pn0, pT1: 30%; Pn0, pT2: 50%; Pn0, pT3: 20%; Pn0, pT4: 0%), while only 10.5% of Pn1 patients presented with pT1 tumors (Pn1, pT1: 10.5%; Pn1, pT2: 57.1%; Pn1, pT3: 27.9%; Pn1,

pT4: 4.5%; $p = 0.007$). The majority of Pn1 tumors showed lymph node metastasis (Pn1, pN+: 75.5% versus Pn1, pN0: 24.5%), while lymph node infiltration occurred only in 40% of Pn0 tumors (Pn0, pN+: 40% versus Pn0, pN0: 60%; $p < 0.001$). This also significantly correlated with lymphatic invasion; 44.1% of the Pn1 tumors were positive for lymphatic invasion (Pn1 L1: 44.1%; Pn1 L0: 55.9%)."

5. Section 3, Section 3.2, Paragraph 1, the last two sentence should be: "There also appeared to be a detectable difference in the grading of Pn1 tumors compared to Pn0 tumors with a shift toward less-differentiated tumors in the Pn1 group (Pn1 G1: 3%; Pn1 G2: 60.5%; Pn1 G3: 36.5%—Pn0 G1: 10%; Pn0 G2: 67.5%; Pn0 G3: 22.5%; $p = 0.03$). However, vascular invasion and resection margin did not significantly correlate with either Pn0 or Pn1 tumors."

For a more complete understanding and clarification of our conducted analyses and exclusion criteria, we needed to modify the following sentence (Section 2, Section 2.1, the last two sentences):

"Patients with incomplete medical history documentation, R-status, PNI status and tumor stage were excluded. Patients with in-hospital mortality (<30 days survival) or who were lost to follow-up during that time were excluded for analyses of time to event outcomes (Kaplan–Meier curves and Multivariate Cox regression on overall- and disease-free survival)."

In addition, we detected an error as we included patients starting from March 2008, not January. We request to modify the sentence as follows (Section 2, Section 2.1, the first sentence):

"Patients undergoing curative intended surgical resection for PDAC at the Department of Surgery, Campus Charité Mitte | Campus Virchow, Charité—Universitätsmedizin, Berlin, Germany, between March 2008 and December 2019 were included."

For a validation of our results, we have used additional statistical software, now also included in the Section 2, Section 2.3, the first sentence:

"For statistical analysis, the statistical software R (The R Foundation, Version 4.0.0), SPSS (IBM SPSS Statistic, Version 28.0) and Prism (Graph Pad Software, La Jolla, CA, USA) were used."

Section 4, Paragraph 5, the third sentence should be: "During the entire study period, 11.2% of the patients received neoadjuvant treatment."

A correction has been made to Funding section:

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We also modified the Supplementary Table S1 for a better overview of adjuvant chemotherapy regimen across all patients, which was missing in the previously published version. There were no modifications needed in the table content/numbers.

The authors state that the scientific conclusions are unaffected. This correction was approved by the Academic Editor. The original publication has also been updated.

Reference

1. Felsenstein, M.; Lindhammer, F.; Feist, M.; Hillebrandt, K.H.; Timmermann, L.; Benzing, C.; Globke, B.; Zocholl, D.; Hu, M.; Fehrenbach, U.; et al. Perineural Invasion in Pancreatic Ductal Adenocarcinoma (PDAC): A Saboteur of Curative Intended Therapies? *J. Clin. Med.* **2022**, *11*, 2367. [[CrossRef](#)] [[PubMed](#)]

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