

**Supplementary Material**

**FOLFIRINOX or gemcitabine/nab-paclitaxel in advanced pancreatic adenocarcinoma –  
A novel validated prognostic score to facilitate treatment decision-making in real-  
world**

Norbert Marschner, MD; Susanna Hegewisch-Becker, Prof, MD; Marcel Reiser, PD, MD; Eyck von der Heyde, MD; Mathias Bertram, MD; Stephan H. Hollerbach, Prof, MD; Stephan Kreher, PD, MD; Thomas Wolf, MD; Adrian Binninger, MSc; Marco Chiabudini, PhD; Anja Kaiser-Osterhues, PhD; Martina Jänicke, PhD and the TPK-Group (Tumour Registry Pancreatic Cancer)

**Table of contents**

**Table S1. Patient and tumour characteristics for learning and validation sample.....2**

**Table S2: The Pancreatic Cancer Score (PCS) / Real-World.....3**

**Table S3. Patient and tumour characteristics for learning and validation sample according to risk groups.4**

**Table S1. Patient and tumour characteristics for learning and validation sample**

Characteristic at start of first-line treatment	Learning sample n= 1,027	Validation sample n= 513
Age [yrs], mean ( $\pm$ StD)	69.2 ( $\pm$ 9.60)	68.8 ( $\pm$ 9.52)
Sex		
Female	477 (46.4%)	230 (44.8%)
Male	550 (53.6%)	283 (55.2%)
BMI		
<24	469 (45.7%)	247 (48.1%)
$\geq$ 24	558 (54.3%)	266 (51.9%)
ECOG performance status		
0	367 (35.7%)	166 (32.4%)
$\geq$ 1	660 (64.3%)	347 (67.6%)
CCI <sup>a</sup>		
0/unknown	701 (68.3%)	362 (70.6%)
$\geq$ 1	326 (31.7%)	151 (29.4%)
Localisation of tumour at diagnosis		
Pancreas body/tail/unknown	491 (47.8%)	256 (49.9%)
Pancreas head	536 (52.2%)	257 (50.1%)
Tumour staging at diagnosis		
I-III	127 (12.4%)	47 (9.2%)
IV/unknown	900 (87.6%)	466 (90.8%)
Metastases		
No/unknown	158 (15.4%)	89 (17.3%)
Yes	869 (84.6%)	424 (82.7%)
Liver metastases		
No/unknown	462 (45.0%)	230 (44.8%)
Yes	565 (55.0%)	283 (55.2%)
Bilirubin		
$\leq$ 1.5x ULN/unknown	907 (88.3%)	443 (86.4%)
>1.5x ULN	120 (11.7%)	70 (13.6%)
Leukocytes above ULN		
No	755 (73.5%)	381 (74.3%)
Yes/unknown	272 (26.5%)	132 (25.7%)
Neutrophil-to-lymphocyte ratio		
<4/unknown	647 (63.0%)	304 (59.3%)
$\geq$ 4	380 (37.0%)	209 (40.7%)

Data are number (%), unless indicated otherwise.

<sup>a</sup> Charlson comorbidity index (CCI) according to Quan et al., 2011.

**Abbreviations:** BMI, body mass index; CCI, Charlson comorbidity index; ECOG, Eastern Cooperative Oncology Group; ULN, upper limit of the norm.

**Table S2: The Pancreatic Cancer Score (PCS) / Real-World**

Patient's ID:

Date:

<b>Prognostic factor</b>	<b>yes</b>	<b>no</b>
Female sex		
Diagnosed with synchronous metastasis (M1/stage IV at diagnosis)		
<i>At start of first-line treatment:</i>		
BMI* $\geq 24$		
ECOG performance status** $\geq 1$		
CCI*** $\geq 1$		
Liver metastases present		
Bilirubin $>1.5 \times$ ULN		
Leukocytes $>ULN$		
NLR $\geq 4$		
<b><i>SUM of existent prognostic factors</i></b>		

0-3 risk factors: → **favourable risk**

4-5 risk factors: → **intermediate risk**

6-9 risk factors: → **poor risk**

\* Body mass index (BMI) = patient's weight [kg] / square of height [m<sup>2</sup>]

\*\* ECOG performance status 0 = fully active, able to carry on all pre-disease performance without restrictions; 1 = restricted in physical strenuous activity but ambulatory and able to carry out work of light or sedentary nature; 2+ = increasingly restricted in ability to work and selfcare

\*\*\* Presence of (at least) one of the following comorbidities: chronic pulmonary disease, congestive heart failure, collagenosis / rheumatologic disease, dementia, diabetes with end organ damage, hemiplegia / paraplegia, HIV / AIDS, liver disease, moderator to severe renal disease, secondary tumours

**Abbreviations:** BMI, Body mass index; CCI, Charlson comorbidity index nach Quan et al. 2011; ECOG, Eastern Cooperative Oncology Group; NLR, neutrophil-to-lymphocyte ratio; ULN, upper limit of the norm

**Table S3. Patient and tumour characteristics for learning and validation sample according to risk groups**

Characteristic at start of first-line treatment	Learning sample n= 1,027			Validation sample n= 513		
	Favourable n= 324	Intermed. n= 540	Poor n= 163	Favourable n= 169	Intermed. n= 256	Poor n= 88
Age [y], mean (±StD)	67.9 (10.08)	69.5 (9.44)	70.6 (8.90)	68.9 (9.83)	68.7 (9.84)	69.1 (7.90)
Sex						
Female	116 (35.8%)	259 (48.0%)	102 (62.6%)	58 (34.3%)	118 (46.1%)	54 (61.4%)
Male	208 (64.2%)	281 (52.0%)	61 (37.4%)	111 (65.7%)	138 (53.9%)	34 (38.6%)
BMI						
<24	219 (67.6%)	222 (41.1%)	28 (17.2%)	112 (66.3%)	115 (44.9%)	20 (22.7%)
≥24/unknown	105 (32.4%)	318 (58.9%)	135 (82.8%)	57 (33.7%)	141 (55.1%)	68 (77.3%)
ECOG performance status						
ECOG 0	176 (54.3%)	167 (30.9%)	24 (14.7%)	90 (53.3%)	70 (27.3%)	6 (6.8%)
ECOG ≥1	148 (45.7%)	373 (69.1%)	139 (85.3%)	79 (46.7%)	186 (72.7%)	82 (93.2%)
CCI <sup>a</sup>						
0/unknown	271 (83.6%)	376 (69.6%)	54 (33.1%)	148 (87.6%)	173 (67.6%)	41 (46.6%)
≥1	53 (16.4%)	164 (30.4%)	109 (66.9%)	21 (12.4%)	83 (32.4%)	47 (53.4%)
Localisation of tumour <sup>b</sup>						
Pancreas body/tail/unknown	140 (43.2%)	268 (49.6%)	83 (50.9%)	84 (49.7%)	133 (52.0%)	39 (44.3%)
Pancreas head	184 (56.8%)	272 (50.4%)	80 (49.1%)	85 (50.3%)	123 (48.0%)	49 (55.7%)
Tumour staging <sup>b</sup>						
I-III	96 (29.6%)	28 (5.2%)	3 (1.8%)	34 (20.1%)	12 (4.7%)	1 (1.1%)
IV/unknown	228 (70.4%)	512 (94.8%)	160 (98.2%)	135 (79.9%)	244 (95.3%)	87 (98.9%)
Metastases						
No/unknown	87 (26.9%)	58 (10.7%)	13 (8.0%)	51 (30.2%)	33 (12.9%)	5 (5.7%)
Yes	237 (73.1%)	482 (89.3%)	150 (92.0%)	118 (69.8%)	223 (87.1%)	83 (94.3%)
Liver metastases						
No/unknown	240 (74.1%)	193 (35.7%)	29 (17.8%)	124 (73.4%)	93 (36.3%)	13 (14.8%)
Yes	84 (25.9%)	347 (64.3%)	134 (82.2%)	45 (26.6%)	163 (63.7%)	75 (85.2%)
Bilirubin						
≤ 1.5x ULN/unknown	303 (93.5%)	483 (89.4%)	121 (74.2%)	162 (95.9%)	226 (88.3%)	55 (62.5%)
>1.5x ULN	21 (6.5%)	57 (10.6%)	42 (25.8%)	7 (4.1%)	30 (11.7%)	33 (37.5%)
Leukocytes above ULN						
No	294 (90.7%)	397 (73.5%)	64 (39.3%)	155 (91.7%)	190 (74.2%)	36 (40.9%)
Yes/unknown	30 (9.3%)	143 (26.5%)	99 (60.7%)	14 (8.3%)	66 (25.8%)	52 (59.1%)
Neutrophil-to-lymphocyte ratio						
<4/unknown	273 (84.3%)	318 (58.9%)	56 (34.4%)	148 (87.6%)	136 (53.1%)	20 (22.7%)
≥4	51 (15.7%)	222 (41.1%)	107 (65.6%)	21 (12.4%)	120 (46.9%)	68 (77.3%)

Data are number (%), unless indicated otherwise.

<sup>a</sup> Charlson comorbidity index (CCI) according to Quan et al., 2011;

<sup>b</sup> at diagnosis.

**Abbreviations:** BMI, body mass index; CCI, Charlson comorbidity index; ECOG, Eastern Cooperative Oncology Group; Intermed., intermediate risk; ULN, upper limit of the norm.