

**Supplementary Table 1. Uni- and multivariate analysis of progression-free survival in patients with HCC treated with nivolumab.**

Variable	Univariable HR (95% CI)	p value	Multivariable HR (95% CI)	p value
Baseline AFP, >400/<400 IU/mL	1.30 (0.85-1.99)	0.22		
BCLC Stage, C+D/A+B	2.82 (1.46-5.44)	<b>0.002*</b>	2.58 (1.33-5.01)	<b>0.005*</b>
Child-Pugh, B/A	1.04 (0.66-1.62)	0.86		
Cirrhosis, present/absent	1.01 (0.66-1.54)	0.97		
Concomitant steroid use, present/absent	0.95 (0.65-1.39)	0.95		
Objective response CR+PR/SD+PD	0.26 (0.18-0.39)	<b>&lt;0.001*</b>	0.20 (0.11-0.37)	<b>&lt;0.001*</b>
ECOG-PS, 0/1-3	0.60 (0.25-1.44)	0.25		
Extrahepatic spread, present/absent	1.04 (0.56-1.93)	0.89		
Immunotherapy line, 1 <sup>st</sup> /2 <sup>nd</sup> -4 <sup>th</sup>	0.60 (0.39-0.93)	<b>0.02*</b>	0.60 (0.38-0.93)	<b>0.023</b>
PVT, present/absent	1.09 (0.58-2.03)	0.80		

**Supplementary Table 2. Baseline patient characteristics stratified according to line of therapy.**

		<b>1L (%)</b>	<b>&gt;1L (%)</b>	<b><math>\chi^2</math> test p value</b>
<b>AFP &gt;400 iU/mL</b> (n=225)		36/84 (42.9)	57/141 (40.4)	0.72
<b>BCLC stage</b> (n=233)	A-B	23/85 (27.1)	31/148 (20.9)	0.29
	C-D	62/85 (72.9)	117/148 (79.1)	
<b>Cirrhosis</b> (n=233)		65/85 (76.5)	111/148 (75.0)	0.80
<b>Concomitant steroid use</b> (n=233)		30/85 (35.3)	38/148 (25.7)	0.12
<b>CP class</b> (n=233)	A	54/85 (63.5)	104/148 (70.3)	0.29
	B	31/85 (36.5)	44/148 (29.7)	
<b>ECOG PS</b> (n=157)	0	4/27 (14.8)	23/112 (20.5)	0.29
	1-3	23/27 (85.2)	89/112 (79.5)	
<b>Extrahepatic spread</b> (n=157)		10/27 (37.0)	56/113 (49.6)	0.24
<b>Objective response</b> (n=233)		21/85 (24.7)	28/148 (18.9)	0.30
<b>Portal vein thrombosis</b> (n=157)		8/27 (29.6)	51/113 (34.5)	0.14
<b>Post-ICI active anti-cancer therapy</b> (n=140)		9/27 (33.3)	33/113 (29.2)	0.67