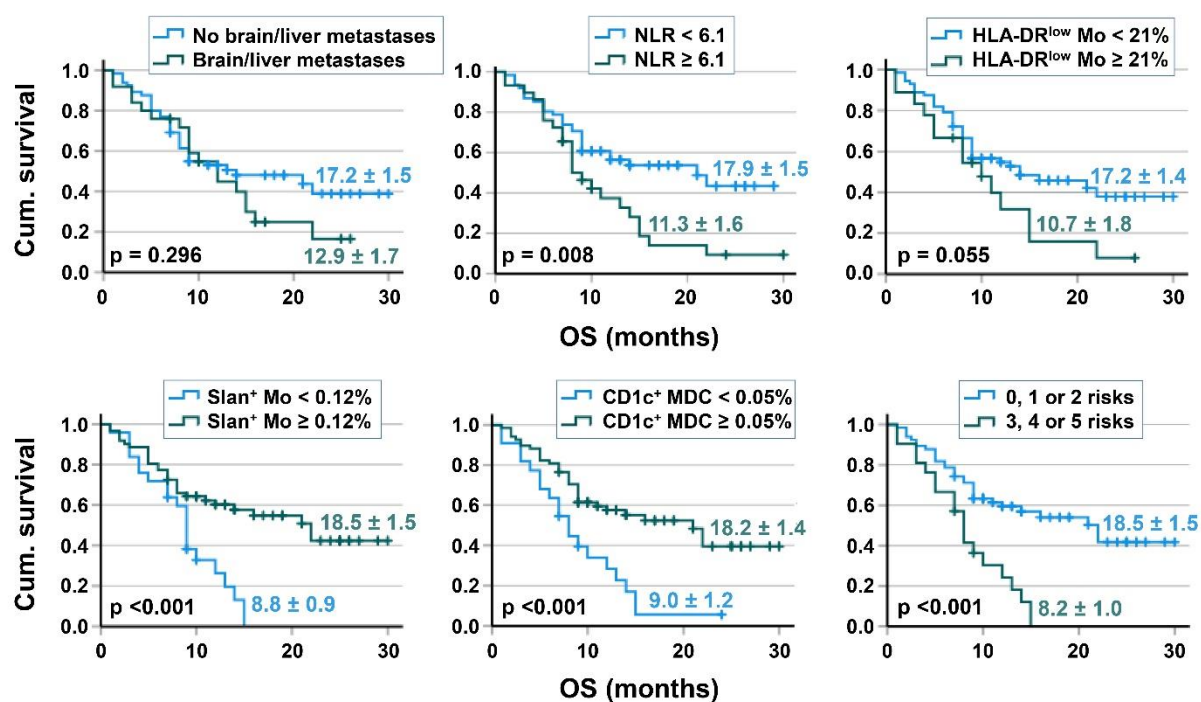


**Suppl. Figure S1.** Relationship between risk factors/baseline immune cell parameters and OS in 84 NSCLC patients based on cutoffs of the SCLC group. Mean survival time and p value of the log rank test are given.



**Table S1.** Comparison of baseline and third cycle values of blood immune cells in 33 SCLC patients with therapy response to chemo/immunotherapy. Median and interquartile range are given. Bold values highlight significant differences in Wilcoxon test.

Parameters	Baseline	Third cycle	<i>P value</i>
Neutrophil counts (cells/ $\mu$ l)	7600 (3500)	9090 (6825)	<b>0.043</b>
Lymphocyte counts (cells/ $\mu$ l)	1690 (3500)	2070 (1255)	0.051
NLR	5.1 (6.7)	4.9 (3.8)	
CD3+ T cells	1098 (1156)	1560 (985)	<b>0.019</b>
CD19+ B cells	180 (172)	163 (190)	
NK cells	245 (242)	198 (160)	
Monocytes (cells/ $\mu$ l)	660 (467)	850 (340)	<b>0.032</b>
HLA-DR <sup>low</sup> MDSC (% of monocytes)	7.4 (10.4)	8.5 (13.3)	
Slan+ non-classical monocytes (% of leukocytes)	0.227 (0.485)	0.219 (0.376)	
CD1c+ MDC (% of leukocytes)	0.07 (0.068)	0.109 (0.155)	<b>0.004</b>
CD141+ MDC (% of leukocytes)	0.004 (0.005)	0.006 (0.006)	
CD303+ PDC (% of leukocytes)	0.051 (0.072)	0.069 (0.074)	
Sum of MDC/PDC (% of leukocytes)	0.126 (0.147)	0.186 (0.187)	<b>0.008</b>

**Table S2.** Comparison of blood immune cells in SCLC patients with or without brain/liver metastases. Median and interquartile range are given. Bold values highlight significant differences in Mann Whitney U test.

Parameters	No brain/liver metastases	brain/liver metastases	<i>P value</i>
n	17	23	
Neutrophil counts (cells/ $\mu$ l)	6880 (2555)	9050 (8420)	
Lymphocyte counts (cells/ $\mu$ l)	1560 (1075)	1560 (1034)	
NLR	4.9 (4.4)	6.9 (8.9)	0.066
CD3+ T cells	1136 (1112)	1024 (922)	
CD19+ B cells	186 (176)	170 (167)	
NK cells	255 (252)	201 (179)	
Monocytes (cells/ $\mu$ l)	665 (501)	660 (510)	
HLA-DR <sup>low</sup> MDSC (% of monocytes)	5.3 (9.1)	12.2 (24.5)	<b>0.034</b>
Slan+ non-classical monocytes (% of leukocytes)	0.30 (0.36)	0.19 (0.61)	
CD1c+ MDC (% of leukocytes)	0.07 (0.048)	0.031 (0.079)	
CD141+ MDC (% of leukocytes)	0.004 (0.003)	0.002 (0.005)	
CD303+ PDC (% of leukocytes)	0.05 (0.08)	0.05 (0.06)	
Sum of MDC/PDC (% of leukocytes)	0.124 (0.111)	0.086 (0.135)	

**Table S3.** Relationship between baseline immune-cell parameters with patients' OS for 34 SCLC patients responding to chemo/immunotherapy. Data of univariate prognostic factor analysis is provided with estimated mean of survival  $\pm$  standard error, hazard ratios (HR) with 95% confidence interval (CI) and *p* values.

	Cutoff	n	Kaplan-Meier OS			Cox Regression, OS		
			% censored	OS (months)	<i>p</i> value	HR	95% CI	<i>p</i> value
Neutrophil counts (cells/ $\mu$ l)	$\leq 10,000$	28	25	$12.6 \pm 1.28$	<b>0.018</b>		1.1-7.5	<b>0.031</b>
	$> 10,000$	6	0	$7.67 \pm 1.2$		2.87		
NLR	$< 6.1$	19	31.6	$14.0 \pm 1.69$	<b>0.009</b>		1.18-6.26	<b>0.019</b>
	$\geq 6.1$	15	6.7	$8.67 \pm 0.77$		2.72		
HLA-DR <sup>low</sup> MDSC (% of monocytes)	$< 21$	29	24.1	$12.3 \pm 1.26$	0.112		0.77-5.66	0.150
	$\geq 21$	5	0	$8.2 \pm 1.39$		2.084		
Slan+ monocytes (% of leukocytes)	$< 0.12$	10	0	$8.2 \pm 1.05$	<b>0.023</b>	2.36	1.04-5.36	<b>0.040</b>
	$\geq 0.12$	24	29.2	$13.3 \pm 1.44$				
CD1c+ MDC (% of leukocytes)	$< 0.05$	15	13.3	$9.4 \pm 1.19$	0.140	1.70	0.79-3.67	0.173
	$\geq 0.05$	19	26.3	$13.2 \pm 1.56$				
Baseline risk score (5 factors)	0-2 risk factors	22	31.8	$13.76 \pm 1.53$	<b>0.006</b>		1.24-6.31	<b>0.013</b>
	3-5 risk factors	12	0	$8.17 \pm 0.9$		2.80		

**Table S4.** Relationship between third-cycle blood immune cell parameters with patients' OS for 35 SCLC patients. Data of univariate prognostic factor analysis is provided, with estimated mean of overall survival  $\pm$  standard error, hazard ratios (HR) with 95% confidence interval (CI) and *p* values.

	Cutoff	n	Kaplan-Meier OS			Cox Regression, OS		
			% censored	OS (months)	<i>p</i> value	HR	95% CI	<i>p</i> value
Neutrophil counts (cells/ $\mu$ l)	$\leq 10,000$	21	28.6	$13.2 \pm 1.4$	0.076		0.88-3.93	0.101
	$> 10,000$	14	7.1	$9.2 \pm 1.4$		1.86		
NLR	$< 6.1$	23	26.1	$13.3 \pm 1.4$	<b>0.045</b>		0.94-4.61	0.07
	$\geq 6.1$	12	8.3	$8.5 \pm 1.15$		2.08		
HLA-DR <sup>low</sup> MDSC (% of monocytes)	$< 21$	31	22.6	$12.4 \pm 1.1$	<b>0.011</b>		1.17-10.4	<b>0.025</b>
	$\geq 21$	4	0	$5.8 \pm 1.9$		3.49		
Slan+ monocytes (% of leukocytes)	$< 0.12$	13	7.7	$8.6 \pm 1.3$	<b>0.018</b>	2.32	1.08-5.0	<b>0.032</b>
	$\geq 0.12$	22	27.3	$13.5 \pm 1.4$				
CD1c+ MDC (% of leukocytes)	$< 0.05$	9	0	$6.8 \pm 1.3$	<b>&lt;0.001</b>	3.51	1.53-8.04	<b>0.003</b>
	$\geq 0.05$	29	26.9	$13.4 \pm 1.25$				
CD141+ MDC (% of leukocytes)	$< 0.0015$	7	0	$5.9 \pm 1.45$	<b>&lt;0.001</b>	3.86	1.59-9.37	<b>0.003</b>
	$\geq 0.0015$	28	25	$12.9 \pm 1.2$				
PDC (% of leukocytes)	$< 0.014$	6	0	$5.7 \pm 1.45$	<b>&lt;0.001</b>	4.57	1.76-11.88	<b>0.002</b>
	$\geq 0.014$	29	24.1	$12.9 \pm 1.2$				

**Table S5.** Baseline blood immune cells parameters of SCLC compared to NSCLC histotypes. Data represent median and interquartile range (IQR), results of Mann-Whitney U-test are shown.

	SCLC	NSCLC	<i>P value</i>
n	40	83	
Neutrophil counts (cells/ $\mu$ l)	7680 (5155)	6590 (5330)	
Lymphocyte counts (cells/ $\mu$ l)	1560 (1018)	1650 (740)	
NLR	6.12 (7.1)	3.96 (4.42)	<b>0.04</b>
T cells (cells/ $\mu$ l)	1051 (1024)	1110 (690)	
B cells (cells/ $\mu$ l)	178 (172)	111 (156)	0.05
NK cells (cells/ $\mu$ l)	204 (226)	255 (310)	<b>0.009</b>
Monocytes	660 (483)	705 (356)	
HLA-DR <sup>low</sup> MDSC (% of monocytes)	9.6 (17.2)	6.9 (14.2)	
Slan+ non-classical monocytes (% of leukocytes)	0.23 (0.46)	0.23 (0.45)	
CD1c+ MDC (% of leukocytes)	0.048 (0.069)	0.099 (0.096)	<b>0.002</b>
CD141+ MDC (% of leukocytes)	0.003 (0.005)	0.006 (0.006)	<b>&lt;0.001</b>
PDC (% of leukocytes)	0.05 (0.07)	0.077 (0.091)	<b>&lt;0.001</b>
MDC/PDC sum	0.10 (0.13)		