

Endogenous IL-7 variation in relation to lymphocytes subtypes in septic patients

Supplementary materials

Table S1. Descriptive statistics of the determined biomarkers for the entire lot of patients on day 1 and day 5.

	Lymphocyte D1 (%)	Lymphocyte D5 (%)	CD4+ D1 (%)	CD4+ D5 (%)	CD8+ D1 (%)	CD8+ D5 (%)
Number of values	87	52	87	52	87	52
Minimum	0.01800	0.008000	0.2380	0.2800	0.04200	0.04800
Median	0.06300	0.07450	0.6300	0.6670	0.2930	0.3000
Maximum	0.5580	0.3170	0.9300	0.9440	0.6880	0.5670
Mean	0.07919	0.09390	0.6346	0.6540	0.3070	0.3074

	NKT D1 (%)	NKT D5 (%)	CD 19+ D1 (%)	CD 19+ D5 (%)	IL-7 D1 (pg/ml)	IL-7 D5 (pg/ml)
Number of values	83	51	84	50	83	46
Minimum	0.000	0.000	0.01000	0.001000	0.1620	0.008000
Median	0.06000	0.06000	0.1350	0.1030	4.307	2.866
Maximum	0.5380	0.3200	0.7300	0.5200	37.43	15.33
Mean	0.07831	0.07559	0.1713	0.1442	5.087	3.574

Legend: CD: cluster of differentiation, CD4+: T helper CD4+ lymphocytes, CD8+: T cytotoxic CD8+ lymphocytes, CD19+: B CD19+ lymphocytes, D1: day 1, D5: day 5, IL-7: interleukin-7, NKT: natural killer T lymphocytes.

Table S2. Descriptive statistics of the determined biomarkers for patients with sepsis on day 1 and day 5.

	Lymphocyte D1 (%)	Lymphocyte D5 (%)	CD4 D1 (%)	CD4 D5 (%)	CD8 D1 (%)	CD8 D5 (%)
Number of values	57	35	57	35	57	35
Minimum	0.01800	0.01900	0.2730	0.2800	0.06400	0.07200
Median	0.06700	0.08500	0.6040	0.6500	0.3450	0.3000
Maximum	0.5580	0.3170	0.9120	0.9240	0.6880	0.5670
Mean	0.08838	0.09849	0.6238	0.6427	0.3302	0.3232

	NKT D1 (%)	NKT D5 (%)	CD 19 D1 (%)	CD 19 D5 (%)	IL-7 D1 (pg/ml)	IL-7 D5 (pg/ml)
Number of values	54	34	55	33	54	31
Minimum	0.000	0.000	0.01000	0.01700	0.2580	0.008000
Median	0.06650	0.06450	0.1200	0.08700	3.459	2.382
Maximum	0.5380	0.3200	0.7300	0.4780	13.30	11.19
Mean	0.08470	0.08315	0.1605	0.1236	4.092	3.047

Legend: CD: cluster of differentiation, CD4+: T helper CD4+ lymphocytes, CD8+: T cytotoxic CD8+ lymphocytes, CD19+: B CD19+ lymphocytes, D1: day 1, D5: day 5, IL-7: interleukin-7, NKT: natural killer T lymphocytes.

Table S3. Descriptive statistics of the determined biomarkers for patients with septic shock on day 1 and day 5.

	Lymphocyte D1 (%)	Lymphocyte D5 (%)	CD4 D1 (%)	CD4 D5 (%)	CD8 D1 (%)	CD8 D5 (%)
Number of values	30	17	30	17	30	17
Minimum	0.02000	0.008000	0.2380	0.4400	0.04200	0.04800
Median	0.05025	0.06400	0.6795	0.6780	0.2410	0.2600
Maximum	0.1690	0.3070	0.9300	0.9440	0.5040	0.4940
Mean	0.06174	0.08446	0.6550	0.6774	0.2629	0.2748

	NKT D1 (%)	NKT D5 (%)	CD 19 D1 (%)	CD 19 D5 (%)	IL-7 D1 (pg/ml)	IL-7 D5 (pg/ml)
Number of values	29	17	29	17	29	15
Minimum	0.005000	0.000	0.01000	0.001000	0.1620	0.6890
Median	0.05500	0.02900	0.1730	0.1550	5.415	3.459
Maximum	0.2050	0.1770	0.5150	0.5200	37.43	15.33
Mean	0.06641	0.06047	0.1918	0.1842	6.941	4.665

Legend: CD: cluster of differentiation, CD4+: T helper CD4+ lymphocytes, CD8+: T cytotoxic CD8+ lymphocytes, CD19+: B CD19+ lymphocytes, D1: day 1, D5: day 5, IL-7: interleukin-7, NKT: natural killer T lymphocytes.

Table S4. Correlations for the group of sepsis survivors on day 1 and day 5.

		Th cells, %	Tc cells, %	NKT, %	B cells, %	IL-7, pg/ml
Lymphocytes, %	Day 1	r = -0.01904 (-0.5262 to 0.4981) $p^b = 0.9463$	r = 0.0936 (-0.4397 to 0.5781) $p^a = 0.74$	r = 0.3503 (-0.2215 to 0.7428) $p^b = 0.2195$	r = -0.1286 (-0.6118 to 0.4246) $p^a = 0.6482$	r = -0.1055 (-0.6024 to 0.4503) $p^b = 0.7196$
	Day 5	r = 0.1101 (-0.5977 to 0.7215) $p^b = 0.7779$	r = -0.1602 (-0.7451 to 0.5639) $p^b = 0.6804$	r = 0.2639 (-0.5415 to 0.8167) $p^b = 0.5277$	r = -0.07598 (-0.7842 to 0.7182) $p^b = 0.8714$	r = 0.2619 $p^a = 0.5364$
Th cells, %	Day 1		r = -0.9206 (-0.9737 to -0.7728) $p^b < 0.0001$	r = -0.1901 (-0.6546 to 0.3787) $p^b = 0.5151$	r = 0.05 (-0.4873 to 0.5598) $p^a = 0.8626$	r = 0.06391 (-0.4830 to 0.5750) $p^b = 0.8282$
	Day 5		r = -0.9841 (-0.996 to -0.9379) $p^b < 0.0001$	r = -0.6073 (-0.8948 to 0.03611) $p^b = 0.0626$	r = 0.7763 (0.2315 to 0.9504) $p^b = 0.0139$	r = -0.4545 $p^a = 0.1912$
Tc cells, %	Day 1			r = 0.3790 (-0.1897 to 0.7573) $p^b = 0.1814$	r = -0.2071 (-0.6599 to 0.3560) $p^a = 0.4578$	r = -0.1063 (-0.6029 to 0.4496) $p^b = 0.7176$
	Day 5			r = 0.5296 (-0.1500 to 0.8694) $p^b = 0.1154$	r = -0.7780 (-0.9508 to -0.2356) $p^b = 0.0136$	r = 0.4061 $p^a = 0.2475$
NKT, %	Day 1				r = -0.3982 (-0.7739 to 0.1847) $p^a = 0.1584$	r = -0.5895 (-0.8609 to -0.05701) $p^b = 0.0340$
	Day 5				r = -0.4305 (-0.8710 to 0.3936)	r = 0.2167 $p^a = 0.5809$

		$p^b = 0.2870$
B cells, %	Day 1	$r = 0.2002$ (-0.3846 to 0.6704) $p^a = 0.4893$
	Day 5	$r = 0.2619$ $p^a = 0.5364$

Legend: ^aSpearman test, ^bPearson test. Bold type indicates significance, B cells: B CD19+ lymphocytes, CD: cluster of differentiation, IL-7: interleukin-7, NKT: natural killer T CD3+ lymphocytes, Tc cells: T cytotoxic CD8+ lymphocytes, Th cells: T helper CD4+ lymphocytes.

Table S5. Correlations for the group of sepsis non-survivors on day 1 and day 5.

		Th cells, %	Tc cells, %	NKT, %	B cells, %	IL-7, pg/ml
Lymphocytes, %	Day 1	$r = 0.02501$ (-0.3016 to 0.3464) $p^a = 0.8799$	$r = -0.07098$ (-0.3863 to 0.2592) $p^a = 0.6676$	$r = -0.01151$ (-0.3431 to 0.3226) $p^a = 0.9461$	$r = 0.06404$ (-0.2701 to 0.3844) $p^a = 0.7025$	$r = 0.03547$ (-0.2879 to 0.3516) $p^a = 0.8280$
	Day 5	$r = -0.1444$ (-0.5060 to 0.2603) $p^a = 0.4724$	$r = -0.1918$ (-0.5414 to 0.2143) $p^a = 0.3378$	$r = 0.2589$ (-0.1459 to 0.5895) $p^a = 0.1923$	$r = -0.3444$ (-0.6637 to 0.08106) $p^a = 0.0993$	$r = 0.08834$ (-0.3688 to 0.5111) $p^a = 0.7034$
Th cells, %	Day 1		$r = -0.8410$ (-0.9156 to -0.7106) $p^a < 0.0001$	$r = -0.4990$ (-0.7085 to -0.2087) $p^b = 0.0017$	$r = -0.006623$ (-0.3343 to 0.3225) $p^a = 0.9685$	$r = 0.04257$ (-0.2945 to 0.3702) $p^a = 0.8025$
	Day 5		$r = -0.3471$ (-0.6424 to 0.03796) $p^b = 0.0761$	$r = -0.4415$ (-0.7094 to -0.06214) $p^a = 0.0211$	$r = 0.2240$ (-0.2093 to 0.5838) $p^a = 0.2927$	$r = -0.1418$ (-0.5599 to 0.3339) $p^b = 0.5626$
Tc cells, %	Day 1			$r = 0.7123$ (0.4974 to 0.8449) $p^a < 0.0001$	$r = -0.1281$ (-0.4381 to 0.2092) $p^a = 0.4435$	$r = -0.09581$ (-0.4154 to 0.2449) $p^a = 0.5727$
	Day 5			$r = 0.2105$ (-0.1957 to 0.5550) $p^a = 0.2920$	$r = -0.1911$ (-0.5607 to 0.2420) $p^a = 0.3711$	$r = 0.1118$ (-0.3607 to 0.5387) $p^b = 0.6485$
NKT, %	Day 1				$r = -0.1218$ (-0.4412 to 0.2249) $p^a = 0.4790$	$r = -0.03714$ (-0.3747 to 0.3091) $p^a = 0.8323$
	Day 5				$r = -0.2262$ (-0.5853 to 0.2071) $p^a = 0.2879$	$r = 0.009653$ (-0.4580 to 0.4732) $p^a = 0.9687$
B cells, %	Day 1					$r = 0.3627$ (0.03388 to 0.6206) $p^a = 0.0274$
	Day 5					$r = -0.09215$ (-0.5348 to 0.3902)

$$p^a = 0.7075$$

Legend: ^aSpearman test, ^bPearson test. Bold type indicates significance, B cells: B CD19+ lymphocytes, CD: cluster of differentiation, IL-7: interleukin-7, NKT: natural killer T CD3+ lymphocytes, Tc cells: T cytotoxic CD8+ lymphocytes, Th cells: T helper CD4+ lymphocytes.

Table S6. Correlations for the group of septic shock survivors on day 1 and day 5.

		Th cells, %	Tc cells, %	NKT, %	B cells, %	IL-7, pg/ml
Lymphocytes, %	Day 1	r = -0.4634 (-0.8622 to 0.2900) $p^b = 0.2091$	r = 0.4790 (-0.2715 to 0.8672) $p^b = 0.1920$	r = 0.4742 (-0.3462 to 0.8836) $p^b = 0.2352$	r = -0.3164 (-0.8103 to 0.4402) $p^b = 0.4068$	r = 0.06523 (-0.6260 to 0.6991) $p^b = 0.8676$
	Day 5	r = -0.6562 (-0.9432 to 0.1914) $p^b = 0.1094$	r = 0.6191 (-0.2509 to 0.9359) $p^b = 0.1382$	r = 0.5706 (-0.3200 to 0.9258) $p^b = 0.1810$	r = 0.03307 (-0.7384 to 0.7670) $p^b = 0.9439$	r = -0.2909 (-0.8919 to 0.6815) $p^b = 0.5759$
Th cells, %	Day 1		r = -0.9410 (-0.9878 to -0.7383) $p^b = 0.0002$	r = -0.9493 (-0.9910 to -0.7390) $p^b = 0.0003$	r = 0.7467 (0.1639 to 0.9431) $p^b = 0.0208$	r = -0.09205 $p^a = 0.8186$
	Day 5		r = -0.9696 (-0.9957 to -0.8027) $p^b = 0.0003$	r = -0.8601 (-0.9790 to -0.3038) $p^b = 0.0130$	r = 0.6235 (-0.2442 to 0.9367) $p^b = 0.1346$	r = -0.4248 (-0.9194 to 0.5903) $p^b = 0.4011$
Tc cells, %	Day 1			r = 0.8954 (0.5170 to 0.9811) $p^b = 0.0026$	r = -0.6865 (-0.9277 to -0.04109) $p^b = 0.0411$	r = 0.2594 $p^a = 0.4978$
	Day 5			r = 0.8103 (0.1468 to 0.9709) $p^b = 0.0271$	r = -0.6089 (-0.9338 to 0.2662) $p^b = 0.1467$	r = 0.06683 (-0.7874 to 0.8332) $p^b = 0.8999$
NKT, %	Day 1				r = -0.7394 (-0.9494 to -0.07247) $p^b = 0.0361$	r = 0.2684 $p^a = 0.5315$
	Day 5				r = -0.5748 (-0.9267 to 0.3143) $p^b = 0.1770$	r = -0.02330 (-0.8194 to 0.8035) $p^b = 0.9650$
B cells, %	Day 1					r = -0.2000 $p^a = 0.6134$
	Day 5					r = -0.2233 (-0.8761 to 0.7185) $p^b = 0.6706$

Legend: ^aSpearman test, ^bPearson test. Bold type indicates significance, B cells: B CD19+ lymphocytes, CD: cluster of differentiation, IL-7: interleukin-7, NKT: natural killer T CD3+ lymphocytes, Tc cells: T cytotoxic CD8+ lymphocytes, Th cells: T helper CD4+ lymphocytes.

Table S7. Correlations for the group of septic shock non-survivors on day 1 and day 5.

		Th cells, %	Tc cells, %	NKT, %	B cells, %	IL-7, pg/ml
Lymphocytes, %	Day 1	r = -0.0747 (-0.5009 to 0.3806) <i>p</i> ^a = 0.7475	r = 0.1078 (-0.3517 to 0.5255) <i>p</i> ^a = 0.6418	r = 0.07637 (-0.3792 to 0.5021) <i>p</i> ^a = 0.7421	r = -0.2363 (-0.6232 to 0.2436) <i>p</i> ^a = 0.3159	r = -0.1970 (-0.5973 to 0.2820) <i>p</i> ^a = 0.4052
	Day 5	r = -0.0423 (-0.6545 to 0.6034) <i>p</i> ^b = 0.9076	r = -0.03400 (-0.6497 to 0.6087) <i>p</i> ^b = 0.9257	r = 0.4788 <i>p</i> ^a = 0.1663	r = 0.1199 (-0.5513 to 0.6969) <i>p</i> ^b = 0.7414	r = 0.3833 <i>p</i> ^a = 0.3125
Th cells, %	Day 1		r = -0.3763 (-0.6951 to 0.06611) <i>p</i> ^b = 0.0927	r = -0.6039 (-0.8214 to -0.2329) <i>p</i>^b = 0.0037	r = 0.1279 (-0.3335 to 0.5398) <i>p</i> ^b = 0.5912	r = 0.3631 (-0.09462 to 0.6941) <i>p</i> ^b = 0.1156
	Day 5		r = -0.8582 (-0.9659 to -0.4973) <i>p</i>^b = 0.0015	r = -0.4545 <i>p</i> ^a = 0.1912	r = 0.008600 (-0.6244 to 0.6348) <i>p</i> ^b = 0.9812	r = -0.2667 <i>p</i> ^a = 0.4933
Tc cells, %	Day 1			r = 0.1403 (-0.3102 to 0.5393) <i>p</i> ^b = 0.5443	r = 0.2641 (-0.2020 to 0.6327) <i>p</i> ^b = 0.2604	r = -0.2375 (-0.6153 to 0.2291) <i>p</i> ^b = 0.3134
	Day 5			r = 0.03030 <i>p</i> ^a = 0.9460	r = 0.01834 (-0.6184 to 0.6406) <i>p</i> ^b = 0.9599	r = 0.1333 <i>p</i> ^a = 0.7435
NKT, %	Day 1				r = -0.2987 (-0.6547 to 0.1657) <i>p</i> ^b = 0.2008	r = -0.1187 (-0.5332 to 0.3418) <i>p</i> ^b = 0.6183
	Day 5				r = -0.1030 <i>p</i> ^a = 0.7850	r = 0.3833 <i>p</i> ^a = 0.3125
B cells, %	Day 1					r = -0.2048 (-0.6029 to 0.2750) <i>p</i> ^b = 0.4004
	Day 5					r = -0.6167 <i>p</i> ^a = 0.0857

Legend: ^aSpearman test, ^bPearson test. Bold type indicates significance, B cells: B CD19+ lymphocytes, CD: cluster of differentiation, IL-7: interleukin-7, NKT: natural killer T CD3+ lymphocytes, Tc cells: T cytotoxic CD8+ lymphocytes, Th cells: T helper CD4+ lymphocytes.