

Supplemental Tables

Supplemental Table 1: Cholesterol Levels by Statin Use

	Statin Use (N=67)	No Statin Use (N=103)	P-value
Initial Total Cholesterol (mg/dL)	106.1 (31.2)	99.8 (35.1)	0.238
Initial LDL (mg/dL)	49.8 (25.9)	50.1 (27.0)	0.954
Initial HDL (mg/dL)	30.4 (19.1)	24.9 (18.0)	0.059
Initial Triglycerides (mg/dL)	129.1 (78.3)	123.1 (58.2)	0.587
48-hour Total Cholesterol (mg/dL)	100.5 (28.3)	106.4 (34.8)	0.264
48-hour LDL (mg/dL)	49.4 (20.4)	54.2 (26.4)	0.228
48-hour HDL (mg/dL)	21.2 (16.4)	17.8 (15.4)	0.194
48-hour Triglycerides (mg/dL)	154.4 (88.9)	164.8 (92.4)	0.485

Data are mean and (standard deviations); Student's t-test for all tests of association

Supplemental Table 2: Quantitative and Qualitative Cholesterol Differences by Infection Type

	Overall^Ψ N=160	Gram Negative N=67	Gram Positive N=46	Culture Negative N=47	P-value
Initial Total Cholesterol (mg/dL)	101.50 (33.24)	92.14 (29.23)	99.56 (30.56)	116.85 (36.19)	0.0004^a
Initial LDL (mg/dL)	49.21 (26.13)	41.05 (21.93)	46.91 (23.41)	62.59 (28.96)	0.0001^a
Initial HDL (mg/dL)	26.98 (18.47)	24.22 (18.53)	24.96 (19.05)	32.89 (16.75)	0.0313^a
Initial Triglycerides (mg/dL)	125.69 (67.92)	132.49 (62.38)	134.29 (88.71)	107.67 (46.79)	0.0993 ^a
48-hour Total Cholesterol (mg/dL)	103.19 (31.63)	97.66 (28.18)	99.52 (29.69)	114.48 (35.57)	0.0167^a
48-hour LDL (mg/dL)	51.68 (23.60)	49.36 (23.02)	47.21 (22.45)	59.16 (24.22)	0.0399^a
48-hour HDL (mg/dL)	18.92 (15.65)	15.53 (14.45)	17.24 (14.77)	25.30 (16.51)	0.0042^a
48-hour Triglycerides (mg/dL)	160.55 (91.20)	172.58 (98.19)	157.90 (89.63)	146.11 (81.65)	0.3323 ^a
T0 HII*	2.22 (1.45; 3.45)	2.25 (1.25;3.04)	2.56 (1.90;4.07)	1.82 (1.35;3.13)	0.1020 ^b
T48 HII*	2.03 (1.41; 2.94)	2.03 (1.33; 3.14)	2.21 (1.49; 3.19)	1.68 (1.21; 2.42)	0.2291 ^b

HII, HDL Inflammatory Index; Ψ: 11 patients with mixed growth cultures excluded; Data are mean and (standard deviations), unless otherwise specified: * median and [IQR]; a) ANOVA, b) Kruskal-Wallis

Supplemental Table 3: Pairwise Comparisons of Quantitative Cholesterol Differences

<i>Gram Negative vs. Gram Positive*</i>			
	Gram Negative	Gram Positive	P value (t-test)
T0 Total Cholesterol	92.14 (29.23)	99.56 (30.56)	0.2001
T0 LDL	41.05 (21.93)	46.91 (23.41)	0.1886
T0 HDL	24.22 (18.53)	24.96 (19.05)	0.8386
T0 Triglycerides	132.49 (62.38)	134.29 (88.71)	0.9009
T48 Total Cholesterol	97.66 (28.18)	99.52 (29.69)	0.7469
T48 LDL	49.36 (23.02)	47.21 (22.45)	0.6428
T48 HDL	15.53 (14.45)	15.53 (14.45)	0.5595
T48 Triglycerides	172.58 (98.19)	157.90 (89.63)	0.4405
<i>Gram Negative vs. Culture Negative*</i>			
	Gram Negative	Culture Negative	P value (t-test)
T0 Total Cholesterol	92.14 (29.23)	116.74 (35.80)	0.0001
T0 LDL	41.05 (21.93)	62.02 (28.90)	<0.0001
T0 HDL	24.22 (18.53)	32.83 (16.57)	0.0116
T0 Triglycerides	132.49 (62.38)	110.32 (49.70)	0.0462
T48 Total Cholesterol	97.66 (28.18)	114.49 (35.16)	0.0071
T48 LDL	49.36 (23.02)	58.43 (24.42)	0.0578
T48 HDL	15.53 (14.45)	25.27 (16.32)	0.0015
T48 Triglycerides	172.58 (98.19)	150 (84.83)	0.2169
<i>Gram Positive vs. Culture Negative*</i>			
	Gram Positive	Culture Negative	P value (t-test)
T0 Total Cholesterol	99.56 (30.56)	116.85 (36.19)	0.0158
T0 LDL	46.91 (23.41)	62.59 (28.96)	0.0060
T0 HDL	24.96 (19.05)	32.89 (16.75)	0.0354
T0 Triglycerides	134.29 (88.71)	107.67 (46.79)	0.0759
T48 Total Cholesterol	99.52 (29.69)	114.48 (35.57)	0.0377
T48 LDL	47.21 (22.45)	59.16 (24.22)	0.0208
T48 HDL	17.24 (14.77)	25.30 (16.51)	0.0195
T48 Triglycerides	157.90 (89.63)	146.11 (81.65)	0.5251
<i>Culture Positive vs. Culture Negative</i>			
	Culture Positive	Culture Negative	P value (t-test)
T0 Total Cholesterol	96.67 (30.87)	116.85 (36.19)	0.0004
T0 LDL	44.95 (23.68)	62.59 (28.96)	0.0001
T0 HDL	24.85 (18.76)	32.89 (16.75)	0.0109
T0 Triglycerides	132.21 (71.70)	107.67 (46.79)	0.0329
T48 Total Cholesterol	100.03 (30.35)	114.48 (35.57)	0.0116
T48 LDL	49.67 (23.90)	59.16 (24.22)	0.0294
T48 HDL	16.76 (14.94)	25.30 (16.51)	0.0021
T48 Triglycerides	166.30 (93.96)	146.11 (81.65)	0.2119

Data are mean and (standard deviations). *Data from 11 patients with mixed growth cultures excluded from analyses.

Supplemental Table 4: Quantitative Differences in Cholesterol Levels Controlling for Organ Failure Severity

	Odds Ratio	P-Value	95% CI
4A: Enrollment Differences Accounting for Initial Organ Failure Severity*			
Outcome Variable: <i>Culture Positive Sepsis vs. Culture Negative Sepsis</i>			
T0 Total Cholesterol	0.98	0.006	0.97-1.00
T0 LDL	0.98	0.004	0.96-0.99
T0 HDL	0.98	0.023	0.96-1.00
T0 Triglycerides	1.01	0.068	1.00-1.01
Outcome Variable: <i>Bacteremia vs. No Bacteremia</i>			
T0 Total Cholesterol	0.99	0.021	0.98-1.00
T0 LDL	0.99	0.026	0.97-1.00
T0 HDL	0.97	0.002	0.95-0.99
T0 Triglycerides	1.01	0.012	1.00-1.01
Outcome Variable: <i>Gram Negative Bacteremia vs. Gram Positive Bacteremia</i>			
T0 Total Cholesterol	0.98	0.042	0.96-1.00
T0 LDL	0.97	0.016	0.94-0.99
T0 HDL	1.01	0.681	0.98-1.04
T0 Triglycerides	1.00	0.531	0.99-1.00
4B: 48 Hour Differences Accounting for 48 Hour Organ Failure Severity*			
Outcome Variable: <i>Culture Positive Sepsis vs. Culture Negative Sepsis</i>			
T48 Total Cholesterol	0.99	0.076	0.98-1.00
T48 LDL	0.99	0.202	0.97-1.01
T48 HDL	0.97	0.020	0.95-1.00
T48 Triglycerides	1.00	0.224	1.00-1.01
Outcome Variable: <i>Bacteremia vs. No Bacteremia</i>			
T48 Total Cholesterol	0.99	0.157	0.98-1.00
T48 LDL	0.99	0.084	0.97-1.00
T48 HDL	0.95	<0.001	0.92-0.98
T48 Triglycerides	1.00	0.024	1.00-1.01
Outcome Variable: <i>Gram Negative Bacteremia vs. Gram Positive Bacteremia</i>			
T48 Total Cholesterol	1.00	0.994	0.98-1.02
T48 LDL	1.01	0.688	0.98-1.03
T48 HDL	0.98	0.421	0.94-1.03
T48 Triglycerides	1.00	0.312	1.00-1.01

*Logistic regression was used to control for organ severity, quantified as SOFA score at enrollment for T0 comparisons or 48 hours for T48 comparisons.

Supplementary Table 5: Qualitative Cholesterol Differences (Dysfunctional HDL) in the Bacteremia Subgroup

<i>Bacteremia vs No Bacteremia</i>				
	<i>Overall (N=171)</i>	<i>Blood Culture Positive (N=78)</i>	<i>Blood Culture Negative (N=93)</i>	<i>P-Value</i>
T0 HII	2.22 [1.48, 3.48]	2.25 [1.46, 3.54]	2.14 [1.49, 3.29]	0.6636 ^a
T48 HII	2.03 [1.34, 2.98]	2.22 [1.43, 3.19]	1.84 [1.22, 2.60]	0.1916 ^a
<i>Gram Negative Bacteremia vs Gram Positive Bacteremia</i> [‡]				
	<i>Overall (N=75)[‡]</i>	<i>Gram Negative (N=46)</i>	<i>Gram Positive (N=29)</i>	<i>P-Value</i>
T0 HII	2.31 [1.47, 3.57]	2.26 [1.25, 2.81]	2.52 [1.74, 4.39]	0.2141 ^a
T48 HII	2.30 [1.46, 3.27]	2.30 [1.43, 3.56]	2.31 [1.49, 3.02]	0.9597 ^a

HII, HDL Inflammatory Index; Data are median and (interquartile ranges); a) Wilcoxon ranksum, b) Kruskal-Wallis; ‡: 3 patients with mixed growth blood cultures excluded