

Table S4.1

bv0 = BV negative

bv1 = BV positive

beta = estimated difference

Softcup cytokine and chemokine analysis - greater than or equal to 80% of samples detectable

cytokine/ chemokine	bv0 n	bv0 mean log10 quantity	bv1 n	bv1 mean log10 quantity	unadjusted beta	unadjusted confidence interval	unadjusted p-value	adjusted beta	adjusted confidence interval	adjusted p- value
IL.1B	128	2.91	53	2.947	0.037	(-0.265 , 0.338)	0.809	0.042	(-0.270 , 0.354)	0.791
IL.6	128	2.511	53	2.348	-0.163	(-0.416 , 0.091)	0.207	-0.134	(-0.397 , 0.128)	0.314
IL.8	128	3.923	53	3.845	-0.078	(-0.169 , 0.013)	0.092	-0.067	(-0.162 , 0.027)	0.16
RANTES	128	1.726	53	1.591	-0.136	(-0.381 , 0.109)	0.276	-0.105	(-0.359 , 0.149)	0.416
sCD40L	128	1.755	53	1.817	0.062	(-0.088 , 0.212)	0.416	0.081	(-0.074 , 0.237)	0.303
EGF	128	1.933	53	1.972	0.04	(-0.161 , 0.241)	0.697	0.086	(-0.120 , 0.291)	0.413
Eotaxin	128	1.203	53	1.278	0.074	(-0.013 , 0.136)	0.019	0.065	(-0.001 , 0.129)	0.048
FGF.2	128	1.891	53	1.837	-0.054	(-0.100 , 0.123)	0.549	-0.051	(-0.233 , 0.131)	0.584
FLT.3L	128	1.263	53	1.3	0.038	(-0.051 , 0.175)	0.589	0.05	(-0.090 , 0.190)	0.478
Fractalkine	128	1.715	53	1.79	0.075	(-0.274 , 0.201)	0.241	0.085	(-0.046 , 0.216)	0.204
G.CSF	128	3.72	53	3.743	0.023	(-0.285 , 0.321)	0.877	0.026	(-0.285 , 0.337)	0.869

GROa	128	3.765	53	3.425	(-0.726 , -0.34 0.047) (-0.085 , 0.154 0.393) (-0.377 , -0.125 0.127) (-0.257 , -0.081 0.095) (-0.255 , -0.113 0.028) (-0.147 , 0.068 0.283) (-0.203 , -0.009 0.185) (-0.217 , -0.036 0.145) (-0.111 , 0.043 0.197) (-0.371 , -0.05 0.270) (-0.161 , 0.054 0.268) (0.030 , 0.296 0.563) (-0.063 , 0.08 0.223) (-0.156 , 0.018 0.192) (-0.330 , -0.097 0.136) (-0.072 , 0.036 0.145)	0.085 0.205 0.329 0.367 0.116 0.534 0.93 0.694 0.584 0.758 0.622 0.029 0.27 0.838 0.414 0.51	(-0.767 , -0.363 0.041) (-0.048 , 0.199 0.446) (-0.383 , -0.122 0.140) (-0.262 , -0.079 0.105) (-0.247 , -0.101 0.045) (-0.153 , 0.068 0.288) (-0.180 , 0.023 0.226) (-0.231 , -0.042 0.147) (-0.092 , 0.066 0.225) (-0.377 , -0.044 0.290) (-0.155 , 0.067 0.289) (0.047 , 0.325 0.604) (-0.051 , 0.098 0.247) (-0.169 , 0.011 0.191) (-0.341 , -0.101 0.139) (-0.058 , 0.055 0.168)	0.078 0.113 0.361 0.399 0.173 0.546 0.822 0.659 0.41 0.795 0.553 0.022 0.197 0.907 0.406 0.336
IFN.a2	128	0.867	53	1.021				
IFNg	128	0.515	53	0.39				
IL.1a	128	3.724	53	3.643				
IL.1RA	128	4.062	53	3.949				
IL.2	127	0.245	52	0.313				
IL.4	126	-0.394	51	-0.402				
IL.5	128	-0.629	53	-0.665				
IL.9	128	0.607	53	0.65				
IL.10	128	0.674	53	0.624				
IL.12p40	128	1.507	53	1.56				
IL.12p70	128	0.319	53	0.615				
IL.13	128	1.456	53	1.536				
IL.15	128	0.778	53	0.796				
IL.17A	128	1.028	53	0.931				
IL.17E_IL.2								
5	128	1.002	53	1.039				

IL.17F	128	1.17	53	1.111	(-0.275 , -0.06 0.156)	0.585	(-0.284 , -0.059 0.166)	0.603
IL.18	128	2.547	53	2.61	(-0.212 , 0.063 0.339)	0.65	(-0.205 , 0.083 0.371)	0.569
IL.27	128	1.896	53	1.955	(-0.025 , 0.059 0.143)	0.169	(-0.022 , 0.066 0.153)	0.141
IP.10	128	3.623	53	3.179	(-1.000 , -0.444 0.112)	0.117	(-1.026 , -0.451 0.124)	0.124
MCP.1	128	2.915	53	2.718	(-0.418 , -0.197 0.024)	0.08	(-0.426 , -0.196 0.033)	0.093
MCP.3	128	0.97	53	0.871	(-0.274 , -0.099 0.075)	0.263	(-0.255 , -0.073 0.109)	0.428
M.CSF	128	3.202	53	3.475	(0.068 , 0.273 0.478)	0.009	(0.255 0.466)	0.018
MDC	128	2.465	53	2.393	(-0.231 , -0.072 0.087)	0.373	(-0.252 , -0.088 0.076)	0.292
MIG_CXCL9	128	3.537	53	3.339	(-0.370 , - -0.198 0.025)	0.025	(-0.366 , - -0.186 0.007)	0.041
MIP.1a	128	1.759	53	1.637	(-0.350 , -0.123 0.105)	0.289	(-0.316 , -0.08 0.156)	0.504
MIP.1B	128	1.313	53	1.229	(-0.400 , -0.084 0.232)	0.601	(-0.416 , -0.086 0.244)	0.606
PDGF.AA	128	1.6	53	1.611	(-0.221 , 0.011 0.244)	0.924	(-0.188 , 0.054 0.295)	0.662
PDGF.AB_BB	128	2.151	53	2.27	(-0.044 , 0.119 0.281)	0.152	(-0.030 , 0.138 0.305)	0.106
TGFa	128	1.509	53	1.504	(-0.099 , -0.005 0.089)	0.916	(-0.104 , -0.006 0.092)	0.907
TNFa	128	1.386	53	1.364	(-0.222 , -0.021 0.179)	0.833	(-0.248 , -0.039 0.169)	0.71
TNFB	128	1.338	53	1.329	(-0.147 , -0.009 0.128)	0.895	(-0.151 , -0.007 0.138)	0.929

VEGF.A	128	2.79	53	2.562	(-0.499 , -0.228 0.044)	0.099	(-0.509 , -0.225 0.059)	0.12
BCA.1	128	1.557	53	1.377	(-0.438 , -0.18 0.079)	0.171	(-0.422 , -0.157 0.108)	0.243
ENA.78	128	3.54	53	3.379	(-0.371 , -0.161 0.048)	0.131	(-0.360 , -0.143 0.075)	0.197
Eotaxin.2	128	2.967	53	2.869	(-0.256 , -0.098 0.061)	0.225	(-0.264 , -0.101 0.063)	0.227
Eotaxin.3	128	1.183	53	1.176	(-0.161 , -0.007 0.147)	0.931	(-0.167 , -0.007 0.154)	0.932
I.309	128	0.182	53	0.182	(-0.146 , 0 0.146)	1	(-0.145 , 0.008 0.160)	0.918
IL.16	128	2.383	53	2.423	(-0.238 , 0.04 0.318)	0.776	(-0.209 , 0.08 0.369)	0.586
IL.21	128	0.641	53	0.724	(-0.003 , 0.084 0.165)	0.043	(-0.007 , 0.077 0.160)	0.071
IL.23	128	1.768	53	2.065	(-0.006 , 0.298 0.601)	0.055	(0.013 , 0.328 0.642)	0.041
IL.33	128	0.059	53	0.194	(-0.152 , 0.136 0.423)	0.353	(-0.184 , 0.114 0.412)	0.45
LIF	127	1.074	53	1.441	(-0.128 , 0.367 0.607)	0.003	(-0.143 , 0.388 0.633)	0.002
MCP.2	128	1.226	53	1.183	(-0.207 , -0.043 0.122)	0.61	(-0.213 , -0.043 0.127)	0.615
MCP.4	128	0.961	53	1.073	(-0.071 , 0.112 0.296)	0.228	(-0.115 , 0.074 0.262)	0.44
MIP.1d	128	2.453	53	2.421	(-0.233 , -0.031 0.171)	0.759	(-0.253 , -0.045 0.163)	0.67
TARC	126	0.849	53	0.595	(-0.468 , -0.254 0.041)	0.02	(-0.477 , -0.254 0.031)	0.026
TPO	128	1.513	53	1.597	(-0.083 , 0.083 0.250)	0.323	(-0.076 , 0.097 0.271)	0.268

					(-0.146 ,			(-0.157 ,	
TRAIL	128	1.385	53	1.522	0.138 0.421)		0.338	0.136 0.428)	0.361
TSLP	128	-0.174	53	-0.072	(-0.078 , 0.102 0.282)		0.264	(-0.081 , 0.105 0.290)	0.267

Softcup cytokine and chemokine analysis - less than 80% of samples detectable

cytokine/ chemokine	percent undetected	percent detected	total n	unadjusted		adjusted		adjusted p- value
				odds ratio	confidence interval	p-value	odds ratio	
GM.CSF	29.3	70.7	181	0.94 1.925)	(0.471 , 0.725 ,	0.863	0.821 1.750)	0.603
IL.3	96.1	3.9	181	3.401 17.793)	(0.537 , 1.037 1.982)	0.118	3.972 22.649)	0.096
IL.7	59.1	40.9	181	0.829 1.852)	(0.387 , 0.643 ,	0.912	1.08 2.136)	0.824
IL.22	20.4	79.6	181	1.503 3.384)	(0.635 , 1.374 3.179)	0.637	0.794 1.832)	0.578
X6CKine	83.4	16.6	181	1.494 3.337)	(0.710 , 0.786 ,	0.333	1.727 4.165)	0.226
CTACK	22.7	77.3	181	1.502 2.925)	(0.868 , 1.66 3.181)	0.435	1.4 3.340)	0.427
IL.20	26	74	181	1.502 2.925)	(1.065 , 2.304 5.441)	0.305	1.545 3.554)	0.285
IL.28A	44.8	55.2	181	1.502 2.925)	(0.868 , 1.66 3.181)	0.223	1.533 3.103)	0.227
SCF	59.7	40.3	181	1.502 2.925)	(1.065 , 2.304 5.441)	0.125	1.823 3.616)	0.083
SDF.1a.B	27.6	72.4	181	1.502 2.925)	(1.065 , 2.304 5.441)	0.043	2.721 6.680)	0.020

BV negative/positive by softcup cytokine and chemokine undetected/detected 2x2 contingency tables

GM.CSF

BV	percent		percent		percent	
	undetected	undetected	detected	detected	total	total
negative	37	69.80%	91	71.10%	128	70.70%
positive	16	30.20%	37	28.90%	53	29.30%
TOTAL		53	29.3	128	70.7	181

IL.3

BV	percent		percent		percent	
	undetected	undetected	detected	detected	total	total
negative	125	71.80%	3	42.90%	128	70.70%
positive	49	28.20%	4	57.10%	53	29.30%
TOTAL		174	96.1	7	3.9	181

IL.7

BV	percent		percent		percent	
	undetected	undetected	detected	detected	total	total
negative	76	71.00%	52	70.30%	128	70.70%
positive	31	29.00%	22	29.70%	53	29.30%
TOTAL		107	59.1	74	40.9	181

IL.22

BV	percent		percent		percent	
	undetected	undetected	detected	detected	total	total
negative	25	67.60%	103	71.50%	128	70.70%
positive	12	32.40%	41	28.50%	53	29.30%
TOTAL		37	20.4	144	79.6	181

X6CKine

BV	percent		percent		percent	
	undetected	undetected	detected	detected	total	total
negative	109	72.20%	19	63.30%	128	70.70%
positive	42	27.80%	11	36.70%	53	29.30%

TOTAL	151	83.4	30	16.6	181
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CTACK

BV	percent		percent		percent	
	undetected	undetected	detected	detected	total	total
negative	31	75.60%	97	69.30%	128	70.70%
positive	10	24.40%	43	30.70%	53	29.30%
TOTAL	41	22.7	140	77.3	181	

IL.20

BV	percent		percent		percent	
	undetected	undetected	detected	detected	total	total
negative	36	76.60%	92	68.70%	128	70.70%
positive	11	23.40%	42	31.30%	53	29.30%
TOTAL	47	26	134	74	181	

IL.28A

BV	percent		percent		percent	
	undetected	undetected	detected	detected	total	total
negative	61	75.30%	67	67.00%	128	70.70%
positive	20	24.70%	33	33.00%	53	29.30%
TOTAL	81	44.8	100	55.2	181	

SCF

BV	percent		percent		percent	
	undetected	undetected	detected	detected	total	total
negative	81	75.00%	47	64.40%	128	70.70%
positive	27	25.00%	26	35.60%	53	29.30%
TOTAL	108	59.7	73	40.3	181	

SDF.1a.B

BV	percent		percent		percent	
	undetected	undetected	detected	detected	total	total
negative	41	82.00%	87	66.40%	128	70.70%
positive	9	18.00%	44	33.60%	53	29.30%
TOTAL		50	27.6	131	72.4	181

IL.28A

BV	percent		percent		percent	
	undetected	undetected	detected	detected	total	total
negative	134	71.70%	15	68.20%	149	71.30%
positive	53	28.30%	7	31.80%	60	28.70%
TOTAL	187	89.5	22	10.5	209	100%

IL.33

BV	percent		percent		percent	
	undetected	undetected	detected	detected	total	total
negative	85	72.00%	64	70.30%	149	71.30%
positive	33	28.00%	27	29.70%	60	28.70%
TOTAL	118	56.5	91	43.5	209	100%

SCF

BV	percent		percent		percent	
	undetected	undetected	detected	detected	total	total
negative	129	71.30%	20	71.40%	149	71.30%
positive	52	28.70%	8	28.60%	60	28.70%
TOTAL	181	86.6	28	13.4	209	100%

TSLP

BV	percent		percent		percent	
	undetected	undetected	detected	detected	total	total
negative	88	71.00%	61	71.80%	149	71.30%
positive	36	29.00%	24	28.20%	60	28.70%

TOTAL	124	59.3	85	40.7	209	100%
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Table S4.2

bv0 = BV negative

bv1 = BV positive

beta = estimated difference

Serum cytokine and chemokine analysis - greater than or equal to 80% of samples detectable

cytokine/ chemokine	bv0 n	bv0 mean log10 quantity	bv1 n	bv1 mean log10 quantity	unadjusted beta	unadjusted confidence interval	unadjusted p-value	adjusted beta	adjusted confidence interval	adjusted p-value
IL.1B	149	0.904	60	0.806	-0.099	(-0.259 , 0.062)	0.228	-0.103	(-0.265 , 0.059)	0.211
IL.6	149	-0.022	60	-0.106	-0.084	(-0.298 , 0.130)	0.441	-0.093	(-0.308 , 0.122)	0.394
IL.8	149	0.842	60	0.868	0.026	(-0.078 , 0.130)	0.622	0.03	(-0.075 , 0.135)	0.571
sCD40L	149	3.596	60	3.564	-0.031	(-0.117 , 0.054)	0.47	-0.022	(-0.107 , 0.063)	0.609
EGF	149	2.032	60	2.068	0.036	(-0.098 , 0.170)	0.596	0.045	(-0.089 , 0.179)	0.512
Eotaxin	149	1.363	60	1.339	-0.024	(-0.101 , 0.054)	0.546	-0.026	(-0.104 , 0.052)	0.516
FGF.2	149	1.475	60	1.372	-0.103	(-0.236 , 0.030)	0.127	-0.105	(-0.239 , 0.029)	0.124
FLT.3L	149	1.145	60	1.239	0.094	(-0.189 , 0.188)	0.049	0.09	(-0.195 , 0.184)	0.063
Fractalkine	149	2.352	60	2.282	-0.07	(-0.299 , 0.050)	0.251	-0.075	(-0.307 , 0.045)	0.218
G.CSF	149	1.186	60	1.063	-0.123	(-0.062 , 0.053)	0.17	-0.13	(-0.054 , 0.047)	0.148
GROa	149	1.896	60	1.906	0.01	(0.082)	0.786	0.018	(0.090)	0.625

					(-0.206 ,		(-0.214 ,	
IFN.a2	149	1.589	60	1.496	-0.093 0.021)	0.108	-0.101 0.013)	0.082
					(-0.379 ,		(-0.396 ,	
IFNg	149	-0.222	60	-0.252	-0.03 0.319)	0.866	-0.044 0.308)	0.805
					(-0.270 ,		(-0.265 ,	
IL.1a	149	1.039	60	0.95	-0.089 0.092)	0.334	-0.083 0.100)	0.373
					(-0.229 ,		(-0.231 ,	
IL.1RA	149	0.63	60	0.583	-0.046 0.136)	0.617	-0.047 0.137)	0.617
					(-0.197 ,		(-0.198 ,	
IL.4	149	0.248	60	0.176	-0.072 0.052)	0.254	-0.072 0.054)	0.262
					(-0.168 ,		(-0.173 ,	
IL.5	149	0.292	60	0.318	0.025 0.219)	0.797	0.022 0.217)	0.826
					(-0.203 ,		(-0.206 ,	
IL.7	149	0.792	60	0.692	-0.1 0.003)	0.058	-0.102 0.002)	0.055
					(-0.334 ,		(-0.327 ,	
IL.10	149	-0.116	60	-0.199	-0.084 0.166)	0.51	-0.075 0.176)	0.556
					(-0.200 ,		(-0.204 ,	
IL.12p40	149	1.533	60	1.528	-0.006 0.189)	0.955	-0.009 0.186)	0.928
					(-0.278 ,		(-0.286 ,	
IL.13	149	1.864	60	1.764	-0.1 0.078)	0.27	-0.108 0.071)	0.235
					(-0.081 ,		(-0.081 ,	
IL.15	149	0.876	60	0.872	-0.004 0.072)	0.913	-0.004 0.073)	0.921
IL.17E.IL.2					(-0.119 ,		(-0.116 ,	
5	149	2.497	60	2.485	-0.012 0.095)	0.823	-0.009 0.099)	0.876
					(-0.374 ,		(-0.389 ,	
IL.17F	149	0.889	60	0.871	-0.018 0.338)	0.921	-0.031 0.326)	0.864
					(-0.150 ,		(-0.149 ,	
IL.18	149	1.575	60	1.517	-0.058 0.035)	0.223	-0.055 0.038)	0.247
					(-0.044 ,		(-0.048 ,	
IL.27	149	3.129	60	3.162	0.033 0.110)	0.403	0.03 0.108)	0.445
					(-0.020 ,		(-0.022 ,	
IP.10	149	2.021	60	2.095	0.073 0.167)	0.123	0.072 0.167)	0.132

					(-0.102 ,		(-0.105 ,	
MCP.1	149	2.237	60	2.211	-0.027 0.049)	0.488	-0.03 0.046)	0.436
MCP.3	149	1.183	60	1.143	(-0.147 , -0.04 0.067)	0.465	(-0.150 , -0.042 0.067)	0.449
MDC	149	3.287	60	3.189	(-0.218 , -0.098 0.022)	0.11	(-0.219 , -0.098 0.023)	0.113
MIG_CXCL9	149	3.304	60	3.343	(-0.043 , 0.04 0.122)	0.346	(-0.044 , 0.04 0.123)	0.35
MIP.1	149	1.595	60	1.603	(-0.173 , 0.008 0.190)	0.929	(-0.162 , 0.02 0.202)	0.832
MIP.1B	149	1.764	60	1.786	(-0.050 , 0.022 0.094)	0.545	(-0.047 , 0.025 0.097)	0.5
PDGF-AA	149	3.504	60	3.456	(-0.105 , -0.048 0.009)	0.096	(-0.101 , -0.044 0.013)	0.131
TGF α	149	1.234	60	1.16	(-0.252 , -0.074 0.104)	0.412	(-0.257 , -0.078 0.102)	0.395
TNF α	149	1.768	60	1.739	(-0.122 , -0.029 0.064)	0.536	(-0.124 , -0.031 0.061)	0.506
TNFB	149	1.079	60	1.004	(-0.199 , -0.075 0.049)	0.234	(-0.204 , -0.079 0.045)	0.211
VEGFA	149	2.373	60	2.237	(-0.277 , -0.136 0.004)	0.057	(-0.272 , -0.131 0.009)	0.067
BCA.1	149	1.977	60	2.011	(-0.065 , 0.033 0.132)	0.503	(-0.049 , 0.048 0.144)	0.332
CTACK	149	2.874	60	2.922	(-0.002 , 0.047 0.096)	0.058	(-0.001 , 0.048 0.097)	0.053
ENA.78	149	3.374	60	3.398	(-0.032 , 0.024 0.080)	0.397	(-0.032 , 0.025 0.081)	0.393
Eotaxin.2	149	2.388	60	2.38	(-0.094 , -0.008 0.079)	0.862	(-0.091 , -0.004 0.083)	0.936
Eotaxin.3	149	1.255	60	1.211	(-0.169 , -0.044 0.081)	0.486	(-0.173 , -0.047 0.078)	0.458

I.309	149	0.09	60	0.096	(-0.074 , 0.006 0.086) (-0.224 , 0.01 0.245) (-0.053 , 0.002 0.057) (-0.155 , 0.035 0.225) (-0.173 , -0.072 0.029) (-0.034 , 0.078 0.190) (-0.056 , 0.018 0.092) (-0.236 , -0.002 0.231) (-0.034 , 0.043 0.120)	0.882 0.931 0.946 0.717 0.16 0.171 0.635 0.983 0.274	(-0.077 , 0.003 0.082) (-0.227 , 0.01 0.246) (-0.053 , 0.003 0.059) (-0.159 , 0.033 0.225) (-0.177 , -0.075 0.026) (-0.034 , 0.078 0.191) (-0.057 , 0.018 0.092) (-0.242 , -0.007 0.228) (-0.040 , 0.036 0.113)	0.948 0.937 0.911 0.738 0.145 0.17 0.637 0.955 0.348
LIF	149	0.423	60	0.433	(-0.224 , 0.01 0.245) (-0.053 , 0.002 0.057) (-0.155 , 0.035 0.225) (-0.173 , -0.072 0.029) (-0.034 , 0.078 0.190) (-0.056 , 0.018 0.092) (-0.236 , -0.002 0.231) (-0.034 , 0.043 0.120)	0.931	0.01 0.246) (-0.053 , 0.003 0.059) (-0.159 , 0.033 0.225) (-0.177 , -0.075 0.026) (-0.034 , 0.078 0.191) (-0.057 , 0.018 0.092) (-0.242 , -0.007 0.228) (-0.040 , 0.036 0.113)	0.937
MCP.2	149	1.684	60	1.686	(-0.053 , 0.002 0.057) (-0.155 , 0.035 0.225) (-0.173 , -0.072 0.029) (-0.034 , 0.078 0.190) (-0.056 , 0.018 0.092) (-0.236 , -0.002 0.231) (-0.034 , 0.043 0.120)	0.946	0.003 0.059) (-0.159 , 0.033 0.225) (-0.177 , -0.075 0.026) (-0.034 , 0.078 0.191) (-0.057 , 0.018 0.092) (-0.242 , -0.007 0.228) (-0.040 , 0.036 0.113)	0.911
MCP.4	149	1.405	60	1.44	(-0.173 , -0.072 0.029) (-0.034 , 0.078 0.190) (-0.056 , 0.018 0.092) (-0.236 , -0.002 0.231) (-0.034 , 0.043 0.120)	0.717	0.033 0.225) (-0.177 , -0.075 0.026) (-0.034 , 0.078 0.191) (-0.057 , 0.018 0.092) (-0.242 , -0.007 0.228) (-0.040 , 0.036 0.113)	0.738
MIP.1d	149	3.538	60	3.466	(-0.173 , -0.072 0.029) (-0.034 , 0.078 0.190) (-0.056 , 0.018 0.092) (-0.236 , -0.002 0.231) (-0.034 , 0.043 0.120)	0.16	-0.075 0.026) (-0.034 , 0.078 0.191) (-0.057 , 0.018 0.092) (-0.242 , -0.007 0.228) (-0.040 , 0.036 0.113)	0.145
SDF.1a.B	149	3.397	60	3.475	(-0.034 , 0.078 0.190) (-0.056 , 0.018 0.092) (-0.236 , -0.002 0.231) (-0.034 , 0.043 0.120)	0.171	0.078 0.191) (-0.057 , 0.018 0.092) (-0.242 , -0.007 0.228) (-0.040 , 0.036 0.113)	0.17
TARC	149	2.064	60	2.082	(-0.236 , -0.002 0.231) (-0.034 , 0.043 0.120)	0.635	0.018 0.092) (-0.242 , -0.007 0.228) (-0.040 , 0.036 0.113)	0.637
TPO	149	2.269	60	2.267	(-0.236 , -0.002 0.231) (-0.034 , 0.043 0.120)	0.983	-0.007 0.228) (-0.040 , 0.036 0.113)	0.955
TRAIL	149	1.593	60	1.636	(-0.034 , 0.043 0.120)	0.274	0.036 0.113)	0.348

Serum cytokine and chemokine analysis - less than 80% of samples detectable

cytokine/ chemokine	percent undetected	percent detected	total n	unadjusted				adjusted confidence interval	adjusted p- value
				unadjusted odds ratio	confidence interval	unadjusted p-value	adjusted odds ratio		
GM.CSF	87.6	12.4	209	0.554 (0.555 , 1.441)	(0.178 , 1.441)	0.259	0.559 (0.571 , 1.465)	(0.179 , 1.465)	0.27
IL.2	46.9	53.1	209	1.013 (0.145 , 1.853)	(0.535 , 1.853)	0.967	1.045 (0.141 , 1.924)	(0.535 , 1.924)	0.886
IL.3	93.3	6.7	209	0.66 (0.539 , 2.208)	(0.145 , 2.208)	0.536	0.642 (0.495 , 2.162)	(0.141 , 2.162)	0.511
IL.9	33.5	66.5	209	1.01 (0.539 , 1.930)	(0.145 , 1.930)	0.975	0.94 (0.495 , 1.815)	(0.141 , 1.815)	0.851

				(0.210 ,		(0.208 ,	
IL.12p70	71.3	28.7	209	0.458 0.931)	0.038	0.455 0.928)	0.037
				(0.495 ,		(0.474 ,	
IL.17A	41.6	58.4	209	0.906 1.670)	0.751	0.873 1.617)	0.665
				(0.594 ,		(0.588 ,	
IL.22	23.9	76.1	209	1.194 2.518)	0.628	1.189 2.516)	0.638
				(0.695 ,		(0.671 ,	
M.CSF	39.2	60.8	209	1.287 2.428)	0.427	1.248 2.363)	0.489
				(0.393 ,		(0.378 ,	
X6CKine	22	78	209	0.788 1.627)	0.508	0.762 1.581)	0.454
				(0.536 ,		(0.503 ,	
IL.16	90.9	9.1	209	1.508 3.959)	0.414	1.424 3.765)	0.484
				(0.251 ,		(0.244 ,	
IL.20	87.6	12.4	209	0.717 1.788)	0.499	0.703 1.766)	0.477
				(0.688 ,		(0.664 ,	
IL.21	44	56	209	1.259 2.334)	0.458	1.221 2.271)	0.523
				(0.685 ,		(0.658 ,	
IL.23	67.5	32.5	209	1.296 2.423)	0.419	1.252 2.350)	0.487
				(0.430 ,		(0.402 ,	
IL.28A	89.5	10.5	209	1.18 2.967)	0.733	1.112 2.817)	0.828
				(0.592 ,		(0.575 ,	
IL.33	56.5	43.5	209	1.087 1.985)	0.787	1.06 1.944)	0.851
				(0.390 ,		(0.403 ,	
SCF	86.6	13.4	209	0.992 2.322)	0.986	1.044 2.500)	0.925
				(0.518 ,		(0.489 ,	
TSLP	59.3	40.7	209	0.962 1.766)	0.9	0.914 1.689)	0.776

BV negative/positive by serum cytokine and chemokine undetected/detected 2x2 contingency tables

GM.CSF

BV negative	percent		percent		percent	
	undetected	detected	undetected	detected	total	total
	128	21	69.90%	80.80%	149	71.30%

positive	55	30.10%	5	19.20%	60	28.70%
TOTAL	183	87.6	26	12.4	209	100%

IL.2

BV	percent		percent		percent	
	undetected	undetected	detected	detected	total	total
negative	70	71.40%	79	71.20%	149	71.30%
positive	28	28.60%	32	28.80%	60	28.70%
TOTAL	98	46.9	111	53.1	209	100%

IL.3

BV	percent		percent		percent	
	undetected	undetected	detected	detected	total	total
negative	138	70.80%	11	78.60%	149	71.30%
positive	57	29.20%	3	21.40%	60	28.70%
TOTAL	195	93.3	14	6.7	209	100%

IL.9

BV	percent		percent		percent	
	undetected	undetected	detected	detected	total	total
negative	50	71.40%	99	71.20%	149	71.30%
positive	20	28.60%	40	28.80%	60	28.70%
TOTAL	70	33.5	139	66.5	209	100%

IL.12p70

BV	percent		percent		percent	
	undetected	undetected	detected	detected	total	total
negative	100	67.10%	49	81.70%	149	71.30%
positive	49	32.90%	11	18.30%	60	28.70%
TOTAL	149	71.3	60	28.7	209	100%

IL.17A

BV	percent		percent		percent	
	undetected	undetected	detected	detected	total	total
negative	61	70.10%	88	72.10%	149	71.30%
positive	26	29.90%	34	27.90%	60	28.70%
TOTAL	87	41.6	122	58.4	209	100%

IL.22

BV	percent		percent		percent	
	undetected	undetected	detected	detected	total	total
negative	37	74.00%	112	70.40%	149	71.30%
positive	13	26.00%	47	29.60%	60	28.70%
TOTAL	50	23.9	159	76.1	209	100%

M.CSF

BV	percent		percent		percent	
	undetected	undetected	detected	detected	total	total
negative	61	74.40%	88	69.30%	149	71.30%
positive	21	25.60%	39	30.70%	60	28.70%
TOTAL	82	39.2	127	60.8	209	100%

X6CKine

BV	percent		percent		percent	
	undetected	undetected	detected	detected	total	total
negative	31	67.40%	118	72.40%	149	71.30%
positive	15	32.60%	45	27.60%	60	28.70%
TOTAL	46	22	163	78	209	100%

IL.16

BV	percent		percent		percent	
	undetected	undetected	detected	detected	total	total
negative	137	72.10%	12	63.20%	149	71.30%
positive	53	27.90%	7	36.80%	60	28.70%

TOTAL	190	90.9	19	9.1	209	100%
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IL.20

BV	percent		percent		percent	
	undetected	undetected	detected	detected	total	total
negative	129	70.50%	20	76.90%	149	71.30%
positive	54	29.50%	6	23.10%	60	28.70%
TOTAL	183	87.6	26	12.4	209	100%

IL.21

BV	percent		percent		percent	
	undetected	undetected	detected	detected	total	total
negative	68	73.90%	81	69.20%	149	71.30%
positive	24	26.10%	36	30.80%	60	28.70%
TOTAL	92	44	117	56	209	100%

IL.23

BV	percent		percent		percent	
	undetected	undetected	detected	detected	total	total
negative	103	73.00%	46	67.60%	149	71.30%
positive	38	27.00%	22	32.40%	60	28.70%
TOTAL	141	67.5	68	32.5	209	100%

IL.28A

BV	percent		percent		percent	
	undetected	undetected	detected	detected	total	total
negative	134	71.70%	15	68.20%	149	71.30%
positive	53	28.30%	7	31.80%	60	28.70%
TOTAL	187	89.5	22	10.5	209	100%

IL.33

BV	percent		percent		percent	
	undetected	undetected	detected	detected	total	total
negative	85	72.00%	64	70.30%	149	71.30%
positive	33	28.00%	27	29.70%	60	28.70%
TOTAL	118	56.5	91	43.5	209	100%

SCF

BV	percent		percent		percent	
	undetected	undetected	detected	detected	total	total
negative	129	71.30%	20	71.40%	149	71.30%
positive	52	28.70%	8	28.60%	60	28.70%
TOTAL	181	86.6	28	13.4	209	100%

TSLP

BV	percent		percent		percent	
	undetected	undetected	detected	detected	total	total
negative	88	71.00%	61	71.80%	149	71.30%
positive	36	29.00%	24	28.20%	60	28.70%
TOTAL	124	59.3	85	40.7	209	100%