

Cytokine profile in acute chikungunya infection is predictive of chronic arthritis 20-months post-infection

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Supplemental Tables

Supplemental Table 1. Normality tests for cytokines and age. Cytokines all have significant positive skew, while age is normally distributed.

Cytokine	Mean $\pm$ sd	Median [IQR]	Skewness	Non-normality (Shapiro-Wilk test p)
IL-10	20.6 $\pm$ 28.3	9.3 [4.7-15.4]	1.9	<.0001
IL-1 β	8.9 $\pm$ 18.6	3.4 [2.0-6.0]	5.7	<.0001
IL-6	7.1 $\pm$ 12.0	2.7 [1.6-8.7]	4.8	<.0001
TNF- α	12.6 $\pm$ 11.4	7.8 [5.2-14.7]	1.8	<.0001
IL-12	11.6 $\pm$ 12.3	6.9 [4.2-10.1]	2.1	<.0001
IL-13	7.7 $\pm$ 9.7	5.1 [2.6-8.8]	4.9	<.0001
IL-17	16.2 $\pm$ 16.3	10.7 [5.4-17.7]	1.9	<.0001
IL-2	6.6 $\pm$ 9.0	3.1 [1.7-5.0]	2.0	<.0001
IL-4	51.9 $\pm$ 45.2	34.8 [22.9-59.9]	1.4	<.0001
IL-5	7.8 $\pm$ 10.1	4.1 [2.6-6.0]	2.0	<.0001
AGE	48.6 $\pm$ 16.9	48.0 [37.0-60.0]	0.1	0.21

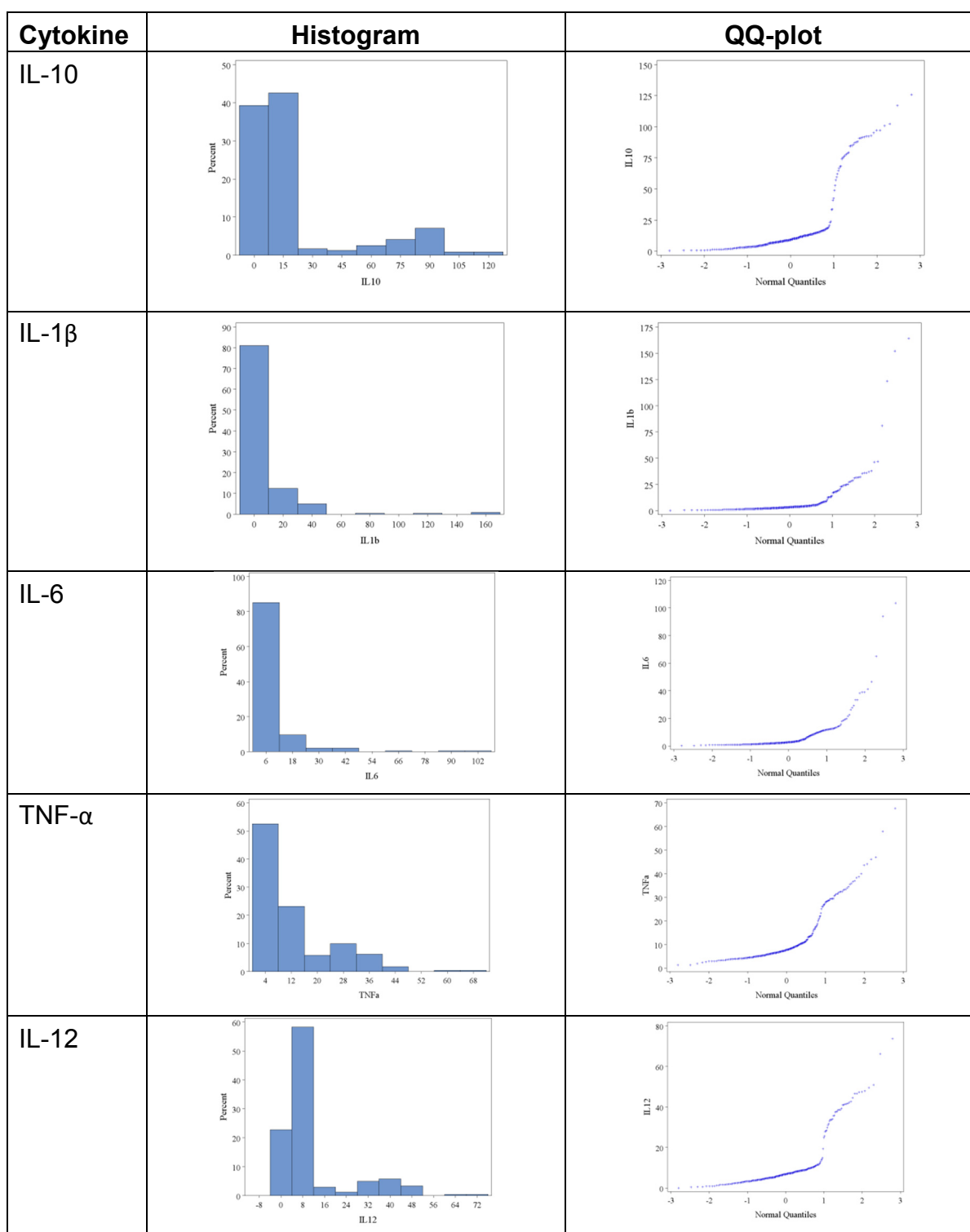
Supplemental Table 2. Distribution of cytokines, stratified by joint pain. Kruskal-Wallis test shows significant non-overlap for all cytokine distributions for those patients with vs without joint pain.

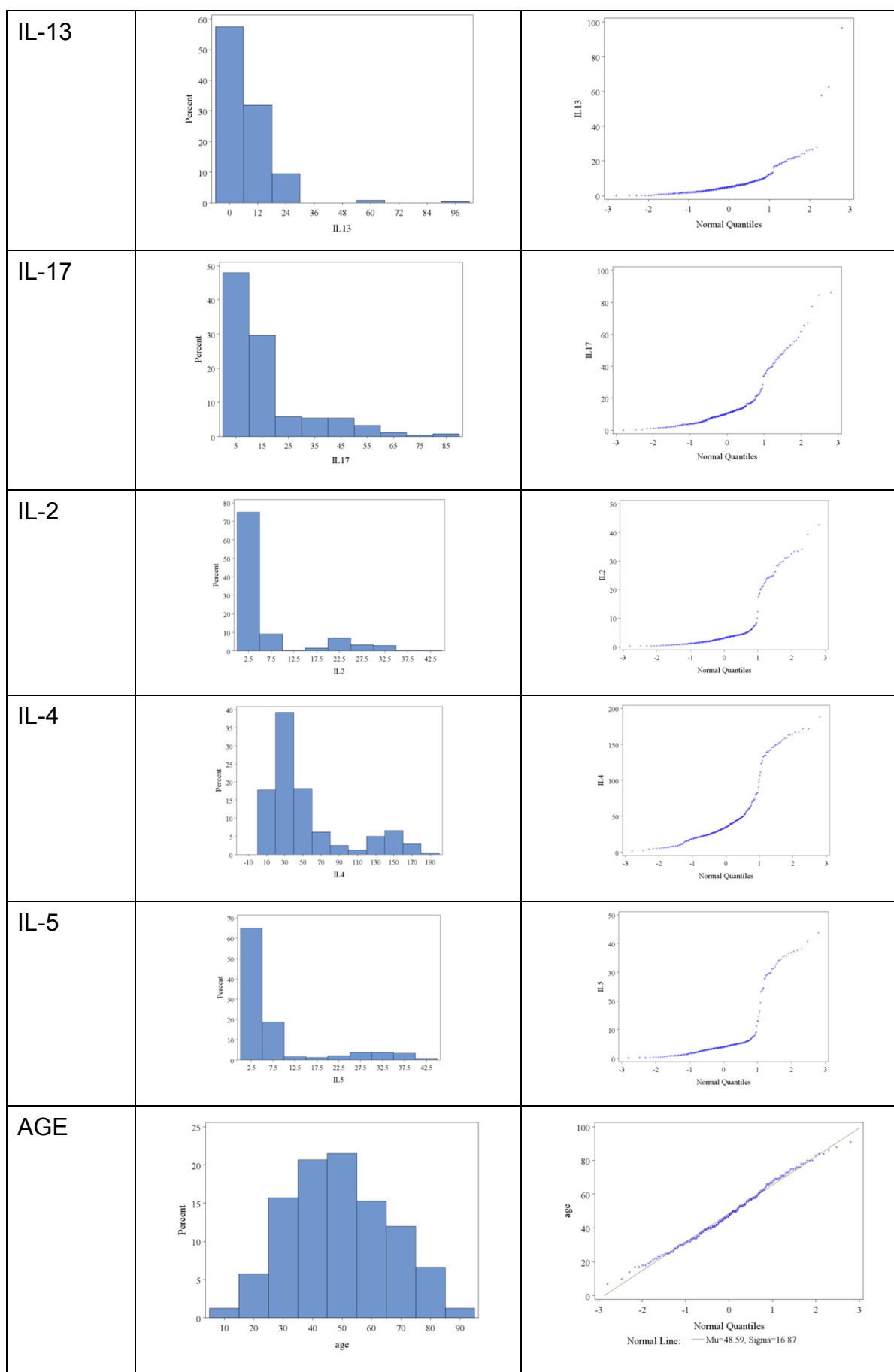
Cytokine	No joint pain		Had joint pain		Kruskal-Wallis Test
	Mean $\pm$ sd	Median [IQR]	Mean $\pm$ sd	Median [IQR]	p-value
IL-10	33.0 $\pm$ 35.0	13.6 [8.6-66.5]	8.1 $\pm$ 8.2	6.7 [3.5-10.1]	<.0001
IL-1 β	13.9 $\pm$ 24.2	4.5 [2.8-18.1]	3.9 $\pm$ 7.9	2.6 [1.7-3.9]	<.0001
IL-6	9.0 $\pm$ 12.2	4.9 [2.2-11.4]	5.1 $\pm$ 11.6	2.0 [1.2-3.8]	<.0001
TNF- α	17.0 $\pm$ 13.0	9.9 [6.9-28.7]	8.3 $\pm$ 7.5	6.0 [4.2-9.9]	<.0001
IL-12	17.4 $\pm$ 16.4	8.9 [5.8-31.7]	5.8 $\pm$ 4.0	5.3 [3.4-7.4]	<.0001
IL-13	10.4 $\pm$ 8.3	8.0 [4.9-16.2]	5.0 $\pm$ 10.2	3.5 [1.9-5.3]	<.0001

IL-17	23.5 ± 19.4	14.2 [10.6-38.3]	8.8 ± 6.9	7.6 [4.2-11.4]	<.0001
IL-2	10.9 ± 11.1	4.6 [3.0-21.2]	2.3 ± 1.7	2.0 [1.2-3.2]	<.0001
IL-4	75.5 ± 51.2	50.5 [33.9-133.5]	28.4 ± 19.0	25.0 [17.3-35.8]	<.0001
IL-5	12.4 ± 12.6	5.5 [3.8-23.9]	3.2 ± 2.0	3.1 [1.8-4.3]	<.0001

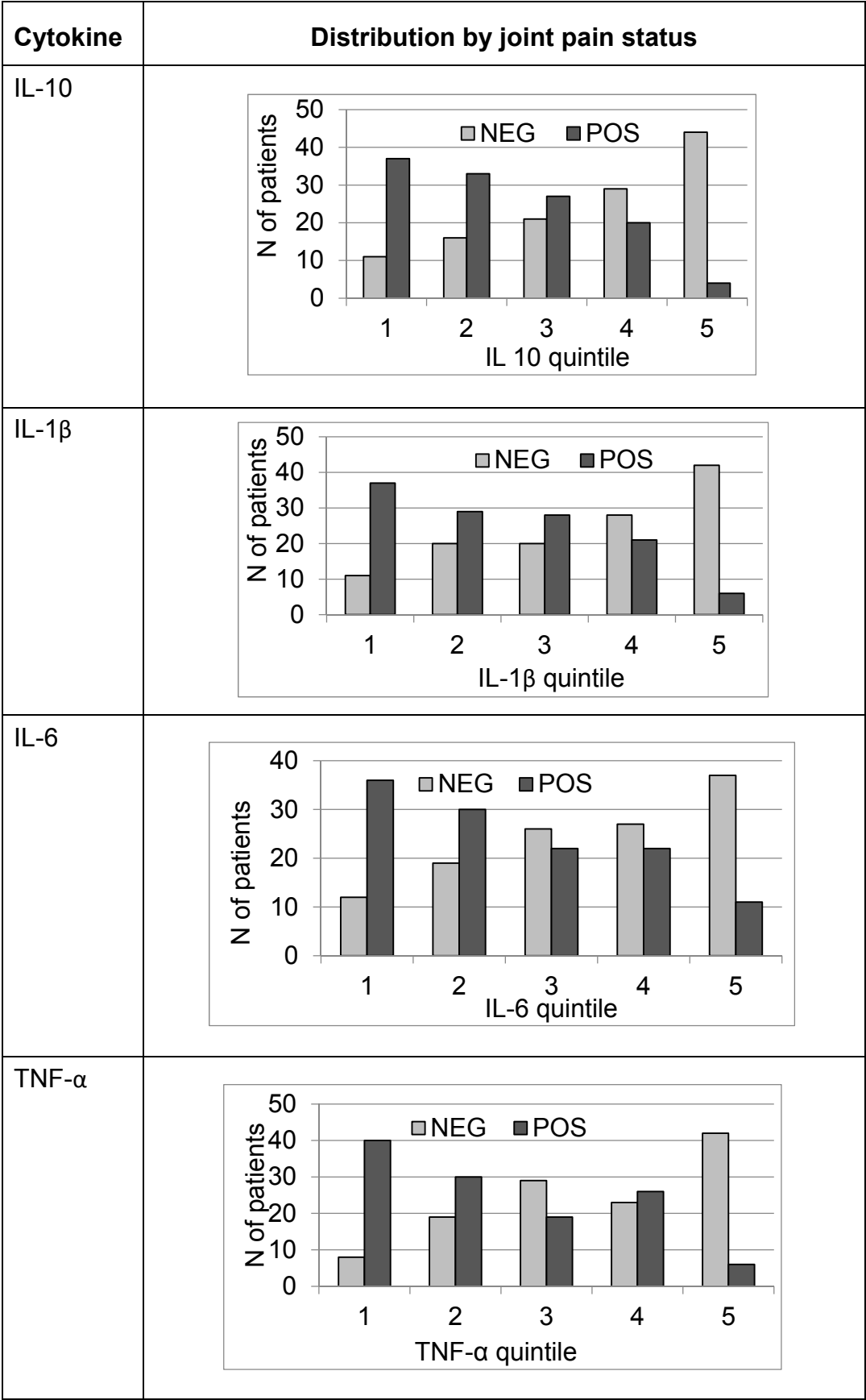
Supplemental Figures

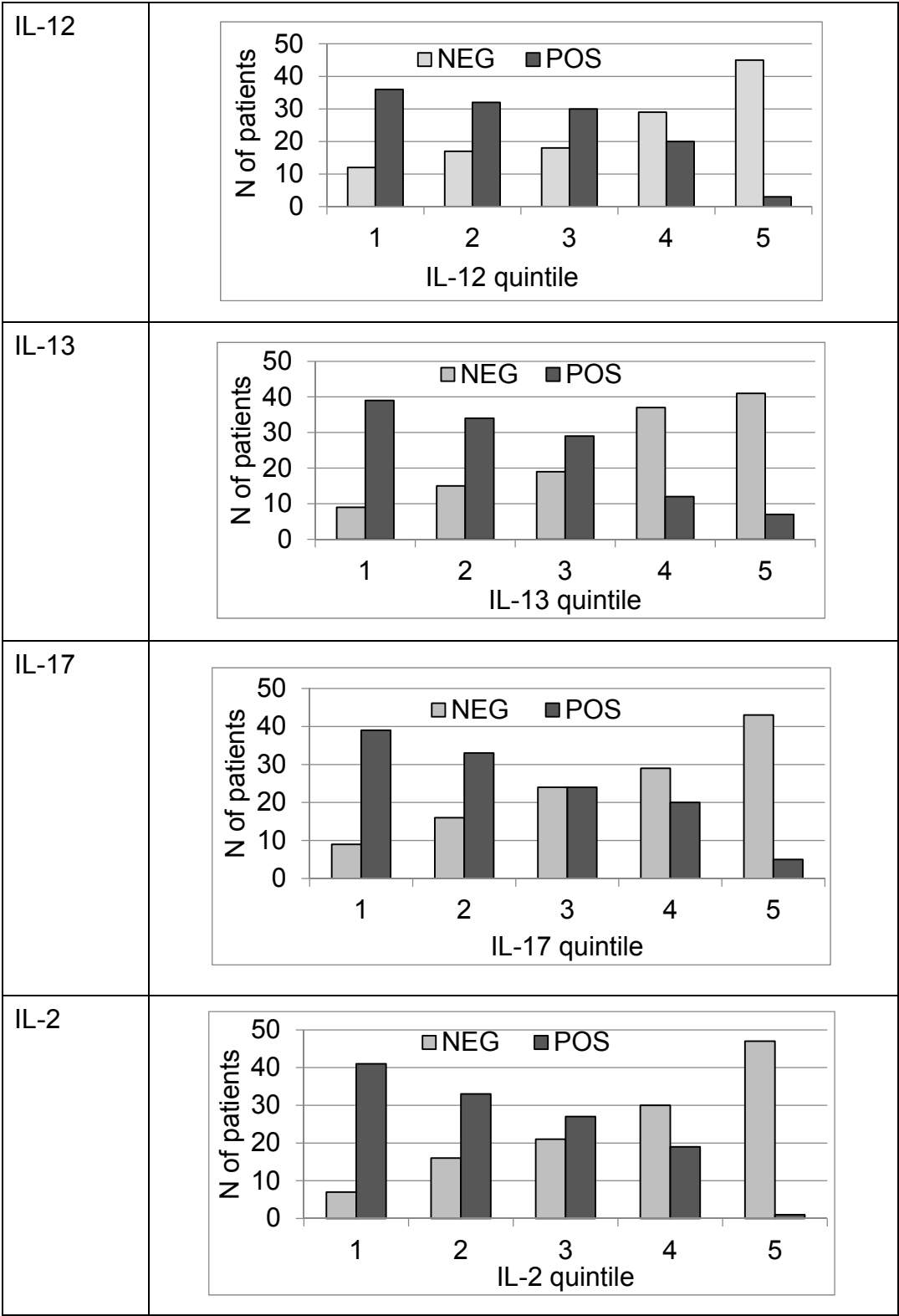
Supplemental Figure 1. Frequency histograms and QQ plots for cytokines and age.

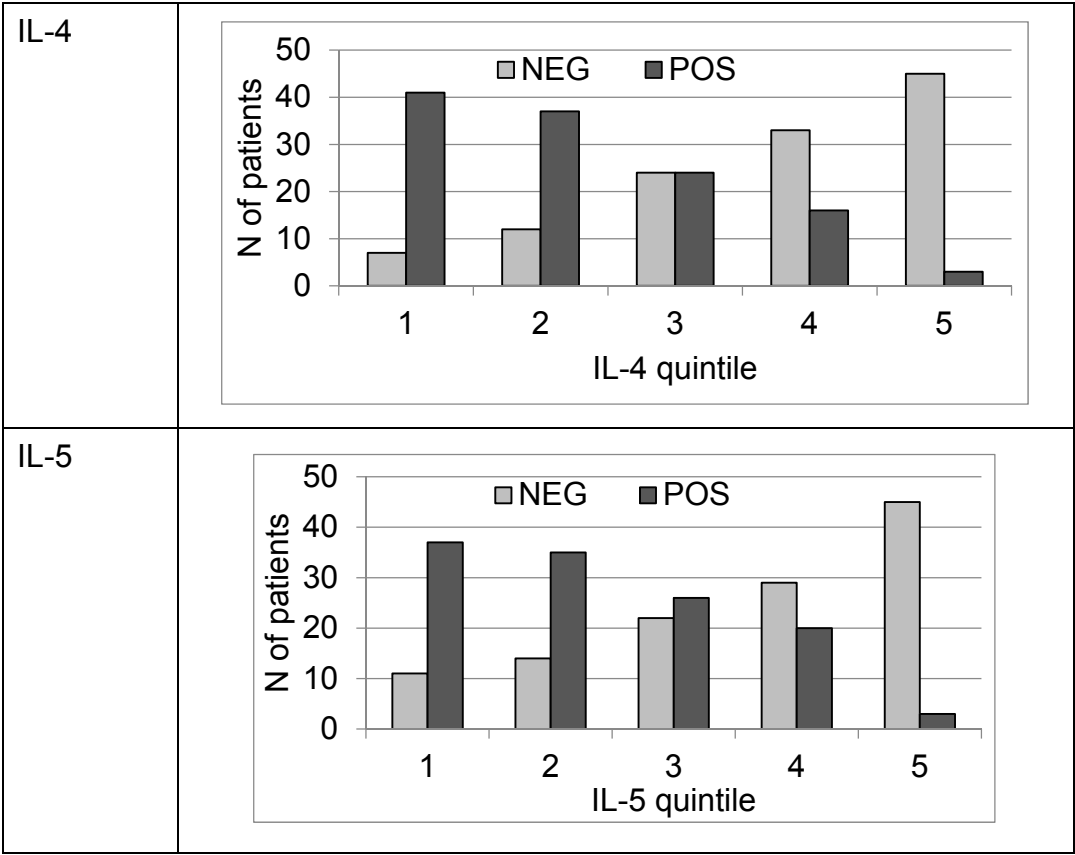




Supplemental Figure 2. Distribution of cytokine quintiles by joint pain.







Supplemental Figure 3. Pattern of mean baseline quintile for four cytokines, stratified by later joint pain. The cytokine profiles are similar in shape, but patients with joint pain have lower baseline levels for each cytokine. Error bars show the 95% confidence interval for mean quintile.

