

**Supplemental Table S1. Adjusted parameter estimates from mixed models examining group differences in changes in biomarkers of inflammation among patients with gynecologic cancer treated with chemotherapy and non-cancer controls**

|                 | IL-10   | IL-1b    | TNF-alpha | TNFR1   | TNFR2     | CRP       | IL-6^     | IL-1ra^ |
|-----------------|---------|----------|-----------|---------|-----------|-----------|-----------|---------|
| Intercept       | 21.84** | 2.85**   | 6.77*     | 102.98* | 403.24*   | 3.58*     | 0.77      | 1.69**  |
| Group           | -2.51   | -0.76*   | 3.26***   | 43.39** | 256.07*** | 3.37***   | 0.35*     | 0.74**  |
| Time            | -0.09   | -0.01    | -0.01     | 0.70    | 3.81      | 0.06      | -1.86E-03 | 0.02    |
| Group*Time      | 0.05    | 7.27E-03 | -0.07     | -1.48*  | -9.03**   | -0.42***  | -6.10E-03 | -0.03*  |
| Time*Time       | -       | -        | -         | -       | -         | -3.40E-03 | -         | -       |
| Group*Time*Time | -       | -        | -         | -       | -         | 0.02***   | -         | -       |

Note: Analyses controlled for age, education, comorbidities, and menopausal status.

^ IL-6 and IL-1ra were natural log-transformed. A main effect of group indicates group differences at the intercept (i.e., pre-chemotherapy baseline). An interaction between group and time indicates differences in changes in biomarkers of inflammation by treatment group (i.e., patients vs. non-cancer controls). When there was not a significant quadratic effect, linear estimates are presented.

\*\*\* =  $p < 0.001$ ; \*\* =  $p < 0.01$ ; \* =  $p < 0.05$

**Supplemental Table S2. Adjusted parameter estimates from mixed models examining group differences in changes in treatment-related symptoms among patients with gynecologic cancer treated with chemotherapy and non-cancer controls**

|                 | Fatigue  | Depression | Overall Sleep Quality | Physical Activity |
|-----------------|----------|------------|-----------------------|-------------------|
| Intercept       | 2.76***  | 2.27*      | 5.26***               | 3630.03           |
| Group           | 1.26***  | 2.71***    | 2.47***               | -898.82*          |
| Time            | 3.13E-03 | -1.33E-03  | -0.03                 | 142.32**          |
| Group*Time      | -0.02    | -0.04*     | -0.01                 | 217.33**          |
| Time*Time       | -        | -          | -                     | 7.57**            |
| Group*Time*Time | -        | -          | -                     | -8.90*            |

Note: Analyses controlled for age, education, comorbidities, and menopausal status. A main effect of group indicates group differences at the intercept (i.e., pre-chemotherapy baseline). An interaction between group and time indicates differences in changes in symptoms by treatment group (i.e., patients vs. non-cancer controls). When there was not a significant quadratic effect, linear estimates are presented.

\*\*\* =  $p < 0.001$ ; \*\* =  $p < 0.01$ ; \* =  $p < 0.05$

**Supplemental Table S3. Adjusted parameter estimates from mixed models examining associations between fluctuations in biomarkers of inflammation with symptoms among patients with gynecologic cancer treated with chemotherapy and non-cancer controls**

|                                 | Fatigue Severity |         |           |           |           |           |         |         |
|---------------------------------|------------------|---------|-----------|-----------|-----------|-----------|---------|---------|
|                                 | IL-10            | IL-1b   | TNF-alpha | TNFR1     | TNFR2     | CRP       | IL6^    | IL-1ra^ |
| Intercept                       | 2.60***          | 3.00*** | 2.86***   | 2.65***   | 2.51**    | 2.71***   | 2.98*** | 3.05*** |
| Group                           | 1.52***          | 1.14**  | 1.11*     | 1.34**    | 1.62**    | 1.19**    | 1.18*** | 1.15**  |
| Between-person cytokine         | 0.02             | -0.01   | 0.02      | 2.28E-03  | 4.98E-04  | 0.09      | 0.04    | -0.07   |
| Within-person cytokine          | -0.02            | -0.02   | -0.03     | 2.08E-03  | 3.92E-04  | -2.80E-04 | -0.03   | 0.03    |
| Group x between-person cytokine | -0.01            | 0.01    | 2.90E-04  | -1.28E-03 | -4.80E-04 | -4.05E-02 | -0.08   | 0.09    |
| Group x within-person cytokine  | 7.33E-03         | -0.03   | 0.03      | -5.20E-04 | 1.40E-05  | -3.03E-03 | 0.01    | -0.11   |

  

| Variable                        | Depression |           |           |           |           |          |         |         |
|---------------------------------|------------|-----------|-----------|-----------|-----------|----------|---------|---------|
|                                 | IL-10      | IL-1b     | TNF-alpha | TNFR1     | TNFR2     | CRP      | IL6^    | IL-1ra^ |
| Intercept                       | 2.07       | 2.74*     | 2.85*     | 1.91      | 1.32      | 1.18     | 2.29    | 2.84*   |
| Group                           | 2.11**     | 2.11**    | 0.88      | 2.78**    | 3.50***   | 2.63***  | 2.28*** | 1.56*   |
| Between-person cytokine         | -9.22E-03  | -0.13     | -0.05     | 2.02E-03  | 1.23E-03  | 0.27*    | -0.23   | -0.23   |
| Within-person cytokine          | -9.16E-03  | -8.11E-03 | 6.59E-03  | -1.17E-03 | -1.20E-04 | 4.95E-04 | -0.07   | -0.01   |
| Group x between-person cytokine | 0.03       | 0.13      | 0.12*     | -1.00E-03 | -1.08E-03 | -0.13    | 0.60    | 0.59*   |
| Group x within-person cytokine  | -0.01      | 1.68E-03  | 5.27E-03  | 1.72E-03  | 7.88E-04  | 0.04     | 0.19    | -0.07   |

  

| Variable                        | Overall Sleep Quality |         |           |           |           |         |         |         |
|---------------------------------|-----------------------|---------|-----------|-----------|-----------|---------|---------|---------|
|                                 | IL-10                 | IL-1b   | TNF-alpha | TNFR1     | TNFR2     | CRP     | IL6^    | IL-1ra^ |
| Intercept                       | 5.56***               | 5.36*** | 4.68***   | 5.51***   | 4.81***   | 5.25*** | 5.42*** | 5.72*** |
| Group                           | 2.28**                | 2.08*** | 3.94***   | 2.88**    | 4.13***   | 2.13**  | 2.30*** | 3.01*** |
| Between-person cytokine         | -5.84E-03             | -0.02   | 0.08      | 1.84E-04  | 7.70E-04  | 0.10    | -0.13   | -0.24   |
| Within-person cytokine          | -0.02                 | 0.05    | -1.48E-03 | 8.85E-04  | 2.26E-04  | 0.10    | 0.05    | -0.15   |
| Group x between-person cytokine | 9.89E-03              | -0.18   | -0.11     | -2.53E-03 | -1.75E-03 | 0.03    | -0.03   | -0.28   |
| Group x within-person cytokine  | 0.02                  | -0.15   | 0.06      | 4.86E-03  | 6.76E-04  | 0.10    | 0.15    | 0.17    |

  

| Variable                        | Total METS |            |           |           |            |            |           |            |
|---------------------------------|------------|------------|-----------|-----------|------------|------------|-----------|------------|
|                                 | IL-10      | IL-1b      | TNF-alpha | TNFR1     | TNFR2      | CRP        | IL6^      | IL-1ra^    |
| Intercept                       | 3128.75**  | 3506.85*** | 2934.28** | 3193.57** | 3871.27*** | 3941.09*** | 3040.65** | 3363.51*** |
| Group                           | -68.91     | -829.62    | -482.03   | -585.85   | -1656.34*  | -979.92    | -70.86    | -1186.30*  |
| Between-person cytokine         | 2.35       | 112.69     | 31.99     | 0.36      | -0.62      | -159.65    | -16.13    | -206.74    |
| Within-person cytokine          | 14.67      | -38.37     | -31.53    | 1.18      | 0.14       | -142.79*   | -25.54    | 7.00       |
| Group x between-person cytokine | -15.32     | 115.43     | -2.56     | 0.81      | 1.30       | 176.37     | -134.35   | 460.69*    |
| Group x within-person cytokine  | -21.27     | 70.13      | -9.42     | -8.42*    | -1.28      | 30.72      | -215.11   | -71.09     |

Note: Analyses controlled for age, education, comorbidities, and menopausal status.

^ IL-6 and IL-1ra were natural log-transformed.

\*\*\* = p<0.001; \*\* = p<0.01; \* = p<0.05