

# Acupuncture Protects White Blood Cells During Chemotherapy

## CONCLUSIONS:

We observed clinically relevant trends of higher WBC values during one cycle of chemotherapy in patients with ovarian cancer, which suggests a potential myeloprotective effect of acupuncture. A larger trial is warranted to more definitively determine the efficacy of acupuncture on clinically important outcomes of chemotherapy-induced neutropenia.

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## Acupuncture for chemotherapy-induced neutropenia in patients with gynecologic malignancies: a pilot randomized, sham-controlled clinical trial.

Lu W, Matulonis UA, Doherty-Gilman A, Lee H, Dean-Clower E, Rosulek A, Gibson C, Goodman A, Davis RB, Buring JE, Wayne PM, Rosenthal DS, Penson RT.

Abstract

## OBJECTIVES:

The objective of this study was to investigate the effect of acupuncture administered during myelosuppressive chemotherapy on white blood cell (WBC) count and absolute neutrophil count (ANC) in patients with ovarian cancer.

## DESIGN:

This study is a pilot, randomized, sham-controlled clinical trial. Patients received active acupuncture versus sham acupuncture while undergoing chemotherapy. A standardized acupuncture protocol was employed with manual and electrostimulation. The frequency of treatment was 2-3 times per week for a total of 10 sessions, starting 1 week before the second cycle of chemotherapy.

## SETTING:

The setting was two outpatient academic centers for patients with cancer.

## SUBJECTS:

Twenty-one (21) newly diagnosed and recurrent ovarian cancer patients were the subjects.

## OUTCOME MEASURES:

WBC count, ANC, and plasma granulocyte colony-stimulating factor (G-CSF) were assessed weekly.

## RESULTS:

The median leukocyte value in the acupuncture arm at the first day of the third cycle of chemotherapy was significantly higher than in the control arm after adjusting for baseline value (8600 cells/microL, range: 4800-12,000 versus 4400 cell/microL, range: 2300-10,000) ( $p = 0.046$ ). The incidence of grade 2-4 leukopenia was less in the acupuncture arm than in the sham arm (30% versus 90%;  $p = 0.02$ ). However, the median leukocyte nadir, neutrophil nadir, and recovering ANC were all higher but not statistically significantly different ( $p = 0.116-0.16$ ), after adjusting for baseline differences. There were no statistically significant differences in plasma G-CSF between the two groups.

## CONCLUSIONS:

We observed clinically relevant trends of higher WBC values during one cycle of chemotherapy in patients with ovarian cancer, which suggests a potential myeloprotective effect of acupuncture. A larger trial is warranted to more definitively determine the efficacy of acupuncture on clinically important outcomes of chemotherapy-induced neutropenia.

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