

Green tea and leukemia

After the publication of an article on laboratory studies of green tea and leukemia, many patients with leukemia (blood cancer) began taking high-dose green tea. Four patients with chronic lymphocytic leukemia at the Mayo Clinic who were taking green tea were evaluated, and it was found that they had all experienced partial regressions of their disease, which had previously been progressing. Subsequently, the Mayo Clinic began a systematic trial of a green tea extract in patients with stages 0 to 2 chronic lymphocytic leukemia who were not experiencing disease symptoms. This recently published study was a Phase I trial, which is structured to determine the optimal dosage for later randomized trials. Thirty-three patients participated in the trial, taking dosages from 400 mg to 2 grams per day of decaffeinated green tea extract. While there were some side effects, including mildly elevated liver enzymes, nausea or abdominal pain, most patients tolerated the extract well. One patient had a partial remission. Eleven of 12 patients who had swollen (palpable) lymph nodes were found to have improved with a 50% shrinkage of nodes. Eleven of the 33 patients had reductions of at least 20% in their absolute lymphocyte counts. Thus, the majority of patients had at least some sign of benefit from the extract. Because of the possible benefit, and because the extract was well-tolerated, a trial to evaluate efficacy of the extract in treating leukemia has begun.

Shanafelt et al. Clinical effects of oral green tea extracts in four patients with low grade B-cell malignancies. *Leuk Res.* 2006 Jun;30(6):707-12.

Shanafelt et al. Phase I trial of daily oral Polyphenon E in patients with asymptomatic Rai Stage 0 to II chronic lymphocytic leukemia. *J Clin Oncol.* 2009 May 26, Epublication.

To summarize: Leukemia patients took green tea extracts in a recent trial aimed at exploring side effects and optimal dosing. The side effects of the tea extract were mild, and the majority of patients showed some type of good response to the supplement. Further trials are planned.