# Ginseng May Reduce Fatigue in Cancer Patients

BY KERRI WACHTER
*Senior Writer*

CHICAGO — American ginseng showed promise for reducing fatigue among patients with several types of cancer in a placebo-controlled, randomized pilot trial presented at the annual meeting of the American Society of Clinical Oncology.

Patients on higher doses of ginseng—1,000 mg and 2,000 mg/day—had a better mean change on the vitality subscale of the SF-36 than did those on placebo or on the 750-mg/day dose during 8 weeks of treatment.

"We believe that ginseng doses of 1,000-2,000 mg should be evaluated [further] for the treatment of cancer-related fatigue," said Debra Barton, Ph.D., an associate professor of oncology at the Mayo Clinic in Rochester, Minn.

Up to 90% of cancer survivors experience fatigue. So far, exercise is the only treatment with a well-established evidence base.

Evidence from animal studies has suggested that American ginseng could be useful for treating fatigue in these patients, but there have been no well-designed clinical trials.

Results from a randomized, controlled trial are welcome news for many physicians who struggle with what to tell their patients about herbal supplements, said Dr. Bruce D. Cheson, director of hematology services at the Lombardi Comprehensive Cancer Center at Georgetown University Hospital in Washington, and moderator of a press briefing on alternative therapies.

"One of the most common questions my patients ask me is about these things they have snookered away in their purses and pocketbooks. They pull out a whole big bag of [supplements] and say, 'Can I take this?' or 'Is this going to help me?' …Most of the time we can't answer that," Dr. Cheson said.

For this study, 282 patients were randomized to placebo or to 750 mg, 1,000 mg, or 2,000 mg/day of American ginseng for 8 weeks. Patients assigned to the intervention received powdered extract of 4-year-old Wisconsin ginseng root in capsules. The placebo group received matching placebo capsules. The ginseng capsules were standardized to a 5% ginsenoside content. Ginsenosides, found exclusively in ginseng, are phytoestrogens with a common steroidlike chemical structure; they are thought to be the active compounds responsible for reducing fatigue.

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**DR. BARTON**

Patients were included if they had cancer-related fatigue rated as at least 4 on a 0- to 10-point scale. They also had to have fatigue for at least a month but no other reasons for fatigue. They could not be on any treatments for fatigue.

Patients were assessed using the vitality subscale of the SF-36 health survey (0-100 points), a linear analog self-assessment scale, and the Global Impression of Change tool.

A total of 175 patients completed the trial. Those who dropped out were fairly evenly distributed among the groups. Patient were more likely to drop out during the first 4 weeks. Patients who dropped out were also twice as likely to have stage III or IV disease. Patients on 1,000-mg and 2,000-mg doses had mean improvements of 14.6 and 10.5, respectively, on the vitality subscale of the SF-36. Those on placebo or 750 mg had improvements of 7.3 and 7.8, respectively.

Patients on 1,000 mg had the greatest mean change in overall physical well-being, improving 12 points on the 100-point scale.

Those on placebo, 750 mg, and 2,000 mg improved by 5.6, 5.3, and 6.5 points, respectively. Only 10% of patients in the placebo and 750-mg groups perceived that their fatigue improved moderately or very much, compared with 25% of those in the 1,000-mg group and 27% of those in the 2,000-mg group.

"[Roughly] three times as many patients in the higher-dose arms were more likely to be satisfied with treatment" than those on placebo, Dr. Barton said. A third of patients in the 1,000-mg and 2,000-mg groups were satisfied, compared with 13% in the placebo group and 24% in the 750-mg group.

Side effects were assessed using a questionnaire that asked patients to rate various symptoms, such as nausea, on a scale of 0-10. There was no suggestion of gastrointestinal symptoms, neurologic symptoms, or sleep trouble.

Despite the positive findings, patients shouldn't rush right out and start taking ginseng, Dr. Barton indicated.

"As a physician or nurse, what I would recommend patients do is the evidence-based, proven treatment for fatigue, which right now is exercise," she said. "If a patient really insisted that they wanted to take something now and they wanted to take ginseng, it's their right to do so. I would guide them to a product that I knew had ginseng in it."

Supplement purity is often a stumbling block in trial design and something that patients often don't consider.

When patients buy supplements, "they may not be getting pure anything," Dr. Cheson pointed out. ■

*The National Center for Complementary and Alternative Medicine offers tips to help physicians and patients evaluate dietary supplements at http://nccam.nih.gov/health/supplements.htm.*

**Ginseng Study Patient Characteristics**

| | Placebo (n = 69) | 750 mg (n = 70) | 1,000 mg (n = 72) | 2,000 mg (n = 71) |
|---|---|---|---|---|
| White | 96% | 91% | 97% | 94% |
| Women | 66% | 66% | 65% | 68% |
| Average age (yr) | 62 | 58 | 60 | 62 |
| Breast cancer | 35% | 41% | 36% | 42% |
| Lung cancer | 12% | 11% | 14% | 13% |
| Colon cancer | 10% | 10% | 7% | 14% |
| Current chemotherapy | 56% | 56% | 58% | 56% |
| Current radiotherapy | 17% | 17% | 19% | 18% |
| Baseline fatigue (scale of 0-10) | 6.6 | 6.6 | 6.7 | 6.4 |

Source: Dr. Barton



# Interim Results: Bivalent HPV Vaccine Tops 90% Efficacy

BY ROBERT FINN
*San Francisco Bureau*

A bivalent vaccine for human papillomavirus manufactured by GlaxoSmithKline has shown greater than 90% efficacy against high-grade cervical intraepithelial neoplasia, according to interim results from a large, randomized controlled trial published online in the Lancet.

The study, led by Dr. Jorma Paavonen and colleagues, is called the Papilloma Trial to Prevent Cervical Cancer in Young Adults (PATRICIA), and involves 18,644 women, aged 15-25 years, from 14 countries in Europe, Asia, and North America.

The participants were randomly assigned to receive three injections of the human papillomavirus (HPV) vaccine or a hepatitis A vaccine at months 0, 1, and 6 (Lancet 2007; DOI:10.1016/S0140-6736[07]60946-5).

The study was sponsored by GlaxoSmithKline. Several study investigators were employees of the company, and others, including Dr. Paavonen of the University of Helsinki received consulting and lecture fees from the pharmaceutical firm.

The vaccine, Cervarix, has not yet been approved by the Food and Drug Administration. If it is approved, it will be competing against Merck's already released HPV vaccine, Gardasil. Cervarix is a bivalent vaccine, active against HPV types 16 and 18, which account for 70% of all cases of cervical cancer. Gardasil is a quadrivalent vaccine, active against HPV types 6 and 11 (the cause of 90% of genital warts) in addition to types 16 and 18.

In the current study, only 2 of the 9,319 women receiving Cervarix developed cervical intraepithelial neoplasia (CIN) of grade 2 or 3 and related to HPV 16 or 18, compared with 21 of the 9,325 women in the control group. This translates into an efficacy of 90%.

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The vaccine also showed 89% efficacy against grade 1 or higher CIN.

Virtually all the women receiving the HPV vaccine (99.5%) had developed antibodies against HPV 16 and 18 after the second of the three injections.

In an accompanying editorial, Dr. Jessica A. Kahn of the University of Cincinnati and Dr. Robert D. Burk of the Albert Einstein College of Medicine, New York, described these results as "encouraging," while sounding a note of caution (Lancet 2007; DOI:10.1016/S0140-6736[07]60947-7).

They noted that the follow-up time was only about 15 months, which is short compared with the several decades over which cervical cancer often evolves. The enrollment criteria in the trial were relatively narrow, so it's unknown whether seroconversion rates, antibody titers, and efficacy rates will be as high when the vaccine is distributed to a wider population.

Dr. Kahn and Dr. Burk also emphasized that the vaccine was not without side effects. Although generally well tolerated and safe, the HPV vaccine caused significantly more local adverse events such as pain, redness, and swelling, than did the hepatitis A vaccine. Risks of general adverse events, including arthralgia, fatigue, and myalgia, also were significantly higher in the HPV group.

Dr. Kahn and Dr. Burk stressed the need for the vaccine to be made available in less-developed regions of the world, where cervical cancer makes the largest contribution to years of life lost to cancer. "Poverty is strongly associated with high-risk HPV infection and cervical cancer," they wrote. "If those who live in poverty cannot access highly effective interventions such as HPV vaccines, disparities could worsen dramatically." ■