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Press Releases

Black Raspberries Studied to Slow Return of Oral Cancer Posted 6/14/2006

COLUMBUS, Ohio – Freeze-dried black raspberries will be used in a study this summer by Ohio State University cancer researchers to see if the berries can slow or stop the return of oral cancer, which has one of the highest rates of recurrence.

“Unfortunately, oral cancer returns in 20 percent of patients within 18 months,” said Christopher M. Weghorst, a researcher at the Ohio State University Comprehensive Cancer Center – Arthur G. James Cancer Hospital and Richard J. Solove Research Institute (OSUCCC – James).

“We want to see what happens in patients who take freeze-dried black raspberry lozenges daily for six months after their surgery to remove oral cancer. Some of the patients will have chemotherapy and/or irradiation treatments while taking the berries. In these patients, we will see if the berries have a ‘helper effect.’ We’ve seen good short-term results in earlier patient studies, and now we’re hoping to see long-term results,” said Weghorst, a member of the OSU Comprehensive Cancer Center’s Molecular Carcinogenesis and Chemoprevention Program.



A new four-year, \$960,000 study funded by the American Cancer Society will allow Weghorst to study the effects of freeze-dried black raspberries in 120 oral cancer patients from 29 Appalachian Ohio counties. The study targets the Appalachian area of eastern and southeastern Ohio because the region has a higher incidence of oral cancer than non-Appalachian counties in Ohio, said Weghorst, who also is an associate professor in the OSU School of Public Health.

The patients will use the berry troches (medicinal lozenges) for six months after surgery to see if the treatment will slow recurrence rates. Many of these patients will have had their surgery performed at the James Cancer Hospital after being referred by their local physician.

Dr. Gary D. Stoner, also an OSUCCC researcher, has been studying the chemopreventive properties of black raspberries for years. His initial research demonstrated that a diet rich in black raspberries slowed and reduced the growth of colon and esophageal tumors in rodents, whereas Weghorst’s group demonstrated a similar effect in oral cancers. Another study conducted by Weghorst showed that freeze-dried black raspberries reduced the growth of cultured human oral cancer cells and modified growth control genes in oral cancers in humans.

In the new study, each patient will consume 12 troches daily – which is the equivalent of consuming 12 to 15 black raspberries – during the first six months following surgery, Weghorst said.

“We are trying to increase the amount of time the berries are in contact with the oral cavity,” Weghorst said. “Each troche (about the size of a penny) dissolves in about 15 minutes, giving adequate time for berry components to get into the cells. We want to understand the mechanisms that are involved in the chemopreventive activity of black raspberries by focusing on how the pathways that regulate tumor growth and maintenance are modulated.”

Berries are loaded with vitamins and other beneficial compounds that are powerful

antioxidants, Stoner said. Berries also have abundant polyphenols, many of which inhibit the cell growth process and stimulate cell death, he added.

“Our studies suggest that berries are a cancer preventive because of their antioxidant and other activities,” said Stoner, professor in the OSU College of Medicine and School of Public Health. “Eating three to five servings of berries each week might be somewhat helpful to your health.”

Other berries, including blackberries, red raspberries, strawberries, cranberries and blueberries, also contain cancer-fighting components, but in lesser amounts than found in black raspberries, Stoner said.

Oral cancer accounts for 3 percent of all new cancers and 2 percent of cancer deaths in the United States and is the sixth most prevalent cancer in the world. In 2006 in the United States, an estimated 38,530 new cases will be diagnosed, with an estimated 7,400 deaths.

The Ohio State University Comprehensive Cancer Center – Arthur G. James Cancer Hospital and Richard J. Solove Research Institute is one of the nation’s leading centers for research on the prevention, detection, diagnosis and treatment of cancer. The OSUCCC – James encompasses seven interdisciplinary research programs and includes more than 250 investigators who generate over \$100 million annually in external funding. It is a founding member of the National Comprehensive Cancer Network, and OSU’s James Cancer Hospital is consistently ranked by U.S. News & World Report as one of America’s best hospitals for cancer care.

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