

Common bone drugs may reduce colon cancer risk

February 16 2011, By Kevin Hattori

An international team of researchers has found that the use of bisphosphonates - drugs already taken by millions of healthy women to prevent bone-loss - for more than one year was associated with a 50 percent reduction in the risk of postmenopausal colorectal cancer. The results were published this week in the *Journal of Clinical Oncology*.

According to lead researcher Prof. Gad Rennert, M.D., Ph.D., of the Technion-Israel Institute of Technology Faculty of Medicine and chairman of the Department of Community Medicine and Epidemiology at the Carmel Medical Center of Clalit Health Services, these findings further support the role of [bisphosphonates](#) as a possible new drug class for cancer prevention.

"We formerly identified a new class of drugs associated with a reduced risk of [breast cancer](#)," said Rennert. "And, now, by showing a similar effect on [colorectal cancer](#) risk reduction, we can assume that this class of medications has a broad effect - not necessarily limited to a specific cancer site." Such an effect, if proven in randomized trials, could lead to the recommendation for the use of these medications by the general population for [cancer prevention](#), he added.

Rennert and colleagues extracted data from the Molecular Epidemiology of Colorectal Cancer (MECC) study, a population-based case-control study in northern Israel, conducted together with senior author Stephen Gruber, M.D., MPH, Ph.D. of the University of Michigan, Ann Arbor. Using pharmacy records, the team evaluated the use of bisphosphonates

in 1,866 postmenopausal female participants.

The researchers found that the use of bisphosphonates prior to diagnosis was strongly associated with a significant reduced relative risk for colorectal cancer - even after making adjustments for a large variety of known risk or protective factors for colorectal cancer such as family history, [dietary components](#), physical activity, [body mass index](#), and the use of other medications such as aspirin, statins and hormone replacement therapy.

"Bisphosphonates share the same mevalonate metabolic pathway as do statins, which we have previously shown to be associated with risk reduction of colorectal cancer," said Dr. Gruber. "This fact adds to the credibility of the current finding by adding biological plausibility."

Colorectal cancer is among the leading cancers in western countries, with more than 150,000 new cases diagnosed every year. In the U.S. alone, colorectal cancer kills some 50,000 deaths per year, making it one of the country's leading causes of cancer death.

"While the disease is generally caused by bad dietary habits and lack of physical activity, it can possibly be prevented by several medications, such as aspirin and cholesterol-lowering medication of the statins group," said Prof. Rennert. "And now, we can add bisphosphonates to the list of tools for potential prevention of colorectal [cancer](#)."

Provided by American Technion Society

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