Glucosamine and chondroitin decrease colorectal cancer risk

Key point
A 23% reduction in the risk of colorectal cancer was associated with use of glucosamine and chondroitin supplements over an 8-year follow-up period, according to results of an observational study published in the International Journal of Cancer.

Finer points
To assess the chemoprotective effects of glucosamine and chondroitin on colorectal cancer risk, Kantor et al. analyzed data that were collected over an 8-year period (2002–10) from 68,466 women and 27,934 men from the Nurses’ Health Study (NHS) and Health Professionals Follow-up Study (HPFS). In the NHS, 8,835 participants used glucosamine and chondroitin and 59,631 did not, and in the HPFS study, the numbers were 3,620 and 24,314, respectively.

A total of 672 cases of colorectal cancer occurred over the follow-up period. Compared with nonuse, use of glucosamine was associated with a 21% reduction in colorectal cancer risk, use of chondroitin with a 23% reduction, and use of the combination with a 23% reduction in multivariable-adjusted analyses. A sensitivity analysis showed that use of glucosamine alone was not associated with a reduction in colorectal cancer risk, even after accounting for factors such as gender, aspirin use, body mass index, or physical activity.

What you need to know
Although observational, the results of this analysis and the previously published exploratory analysis of the VITAL study suggest that use of glucosamine and chondroitin may decrease colorectal cancer risk. In VITAL, any use of glucosamine and chondroitin over the previous 10 years was associated with a significantly lower colorectal cancer risk.

The authors of the current study suggest mechanisms for this effect, such as anti-inflammatory effects of glucosamine and chondroitin. They also noted that glucosamine and chondroitin have been shown to have anti-inflammatory effects in the colon of animal models. Additional prospective, well-designed studies are needed to confirm these observational findings.

What your patients need to know
Inform patients that new study results suggest that use of glucosamine and chondroitin may decrease colorectal cancer risk. In addition, explain that dietary supplements such as glucosamine and chondroitin do not undergo a formal FDA approval process and that data on their benefits have been mixed.

Encourage patients to inform their health care provider about all the supplements they take, as some may be associated with limited efficacy and adverse effects and may interact with their medications.

Sources