

OBESITY

Weight-loss surgery reduces cancer risk in patients with obesity

Patients with obesity who undergo weight-loss surgery have a reduced risk of developing cancer, according to a report from the Swedish Obese Subjects (SOS) study. “Bariatric surgery was associated with a 42% reduction in the incidence of cancer in women while the risk was not influenced at all in men,” says lead researcher Lars Sjöström from the University of Gothenburg, Sweden.

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Obesity has been established as a risk factor for cancer. Previous results from the SOS study found that cancer was the most common cause of death in the obese population. Hypothetically, weight loss

should, therefore, reduce the risk of cancer morbidity and mortality, although there is a paucity of evidence to support this theory. As bariatric surgery results in long-term weight loss, Sjöström and colleagues investigated the effects of this surgery on incidence of fatal and non-fatal cancer.

The analysis included 2,010 patients with obesity (BMI ≥ 34 kg/m² in men and ≥ 38 kg/m² in women) who underwent bariatric surgery and 2,037 matched control individuals with obesity, who received lifestyle advice or no treatment at all. During follow-up (median 10.9 years), 117 first-time cancers (after enrollment) were recorded in the surgery group (mean weight reduction 19.9 kg) compared with 169 cancers in the control group (mean weight gain 1.3 kg). Overall, cancer risk was 33% lower in the surgery group than in the control group; however, only women in

the surgery group displayed a reduction in the overall incidence of cancer (42%).

The investigators note that the extent of weight loss was not related to the reduction in cancer incidence. “We are currently trying to understand why bariatric surgery is associated with decreased cancer incidence in women but not in men,” Sjöström comments. “If the mechanisms behind these observations can be clarified it may be possible to introduce drug or other treatments that mimic the favorable effects of bariatric surgery,” he adds.

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Original article Sjöström, L. *et al.* Effects of bariatric surgery on cancer incidence in obese patients in Sweden (Swedish Obese Subjects Study): a prospective, controlled intervention trial. *Lancet Oncol.* 10, 653–662 (2009).