Influenza Vaccination of Children and Infection Rates in the Community Reply

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In Reply: In response to Drs Rusthoven and Pugh, several prospective series have shown a rather low rate of regional recurrence after SBRT, perhaps different than would be predicted based on larger surgical series defining pathological tumor involvement within nodes of initially clinically staged patients.[1,2] A number of possible explanations have been offered, including a theory regarding immune stimulation after tumor ablative SBRT as suggested by Rusthoven and Pugh.[3] Counter to this argument, however, is the higher rate of distant dissemination observed in our study. If the primed immune system is capable of eliminating micrometastases in the regional lymphatics, it is not clear why it would be less effective in distant organs.

It is problematic to compare the results of the RTOG 0236 trial with results from surgically staged and treated patients. In contrast to surgically treated patients, patients in this trial were staged and followed exclusively with noninvasive clinical tests, which was appropriate given the selection of patients in the purely medically inoperable risk group. All patients had localized, nonbulky, stage I tumor on computed tomography that was confirmed on positron emission tomography testing prior to enrollment. In such a group, the low rate of subsequent regional recurrence may not be surprising. In a study of patients with similar apparent tumor burden treated with surgery at the Mayo Clinic, there was a very high negative predictive value for this type of staging procedure as validated by pathological lymph node assessment.[4]

Although I do not advocate comparison of our data directly with surgically treated patients, a potentially valid comparison will be undertaken in North America. The American College of Surgeons Oncology Group (ACOSOG) and the RTOG will be conducting a randomized phase 3 comparison of SBRT with sublobar surgical resection (ACOSOG Z4099/RTOG 1021) in a group of well-defined high-risk patients (those who would have difficulty tolerating a lobectomy). This trial will use an intent-to-treat methodology after clinical staging, in which patients found to have regional metastases at surgery will still be followed up for all protocol end points. This study may help resolve issues such as those posed by Rusthoven and Pugh.

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Influenza Vaccination of Children and Infection Rates in the Community

To the Editor: The randomized study by Dr Loeb and colleagues[1] of communities receiving either inactivated influenza vaccine or hepatitis A vaccine supports school-based influenza immunization and adds credence to a nationwide Japanese study that concluded that 1 life was saved for every 420 children immunized against influenza.[2] The study by Loeb et al showed protection of community members against clinical illness, confirmed by real-time reverse transcriptase–polymerase chain reaction assay, but failed to show protection against infection as determined by hemagglutination inhibition titers. The authors speculated that "[o]ne possible explanation for the lack of significant differences in serologic outcomes is that the influenza vaccination may have attenuated infection that . . . rendered it subclinical but without preventing infection."

We agree with this explanation and hypothesize that this difference would not have existed if the study had used live attenuated influenza vaccine (LAIV), which has been shown to provide better protection in children than inactivated vaccine.[3] Based on animal models, it seems reasonable that the IgA antibody induced by LAIV would prevent nasal infection.[4] The difference between the 2 vaccines is important because mice studies have shown that inactivated vaccine did not stop transmission,[5] so it is possible that there might have been even better protection of nonvaccinated individuals had LAIV been used. A saline-controlled study comparing inactivated influenza vaccine with LAIV would be interesting.

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In Reply: Drs Small and Morris hypothesize that the lack of significant differences in serological infection rates between study groups may not have existed had we used LAIV. We agree that this is a possibility, particularly given the number of studies showing indirect benefits with live vaccine.[1-3] We sought to test the effect of inactivated vaccine given its more widespread use and the relative lack of randomized trials evaluating it for indirect benefit.

Although it is unclear whether prevention of infection with live vaccination would lead to greater indirect benefit via elimination of subclinical infection (since the extent to which asymptomatic transmission occurs is uncertain), the fact that live vaccine has been demonstrated to have a greater effect at preventing clinical illness in children would suggest potentially greater indirect benefit.[4] Since there have been few direct comparisons of vaccine formulation with respect to indirect benefit,[5] we believe further studies in this area are of importance.

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Laparoscopic Gastric Banding vs Lifestyle Intervention in Severely Obese Adolescents

To the Editor: In their randomized controlled trial, Dr O'Brien and colleagues[1] assessed the effectiveness of laparoscopic gastric banding compared with lifestyle intervention in achieving weight loss in severely obese adolescents. The trial would have been more credible had the study compared gastric banding with a structured nonsurgical, medically managed weight loss program.

The lifestyle group in the study was allowed a wide variation of diets, as well as inadequate exercise requirements and little physician supervision; it was not offered a comprehensive weight management program, which should include counseling on diet and nutrition, exercise, behavior, and prescription medications if needed. The gastric banding program was based on a much more structured system, including specific protein-rich meals and periodic band adjustments. Had the lifestyle group received adequately clinical monitoring, the results may have been quite different.

The gastric banding group benefited from a mean of 20.4 visits, while the lifestyle group had a mean of only 15.5 visits. One-third of the gastric banding patients required reoperation procedures after the gastric banding took place, while there were no similar adverse effects in the lifestyle group.

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1. O'Brien PE, Sawyer SM, Laurie C, et al. Laparoscopic adjustable gastric banding in severely obese adolescents: a randomized trial. *JAMA*. 2010;303(6): 519-526.

In Reply: In response to Dr Richardson, at the planning stages of the trial we sought to ensure that we provided an intensive and comprehensive program of care for adolescents in the lifestyle group. This included monitoring by an adolescent physician and a bariatric physician, but not pharmacotherapy because there is still an insufficient evidence base for its use in the long-term care of adolescents.

The adequacy of the lifestyle intervention can be judged by the outcomes. The patients in the lifestyle group achieved weight loss that was at least comparable with that achieved in other published trials.[1] The lifestyle group lost a mean of 6.2 kg at 12 months but then regained to a 3 kg weight loss at 24 months. We are not aware of studies that have had better outcomes than this.[1] This is a very wide gap when compared with the mean weight loss of 34.6 kg in the gastric banding group.