

# Herpes Zoster Vaccine Cost/Benefit Ages Well

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LOS ANGELES — An attenuated herpes zoster virus vaccine effectively prevents herpes zoster and postherpetic neuralgia, according to a presentation by Dr. Samuel Cykert at the annual meeting of the Society of General Internal Medicine.

The vaccine (Zostavax, Merck & Co.), which was licensed for use in people age 60 years and older by the Food and Drug

Administration in late May, is administered as a single injection. The lifetime risk of symptomatic shingles is estimated at 2 in every 10 people, the FDA noted in a statement announcing the licensure of the vaccine.

The vaccine's cost-effectiveness is dependent on the price of the vaccine and the age of the patients being vaccinated, said Dr. Cykert of the University of North Carolina at Chapel Hill.

The incidence of shingles nearly triples

between the ages of 60 and 75 years, he added.

Prednisone and the prescription antivirals that are currently used to shorten symptom duration are not effective in preventing postherpetic neuralgia (PHN), Dr. Cykert said.

In the Shingles Prevention Study, more than 38,000 adults (median age, 69 years) were randomized to receive the live attenuated varicella-zoster virus vaccine, or placebo. The subjects were followed for an

average of 3 years to determine whether they developed shingles, and if so, to assess the duration of the pain.

The vaccine reduced the occurrence of shingles by about 50% in participants aged 60 years and older, and by 64% in those aged 60-69 years. In those participants who received the vaccine but who still developed shingles, pain duration was reduced slightly, according to the FDA statement.

The most frequently reported side effects in subjects who received Zostavax were itching, headache, and redness, swelling, and pain at the injection site. Significant adverse events were not found to

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be more common among participants in the vaccine group, compared with those in the placebo group, the FDA noted.

The primary goals of Dr. Cykert's pharmacoeconomic study were to define the circumstances under

which the vaccine would be considered cost effective, using the criterion of \$50,000 per quality-adjusted life year (QALY) gained.

The analysis estimated the cost-effectiveness of the vaccine by calculating the savings expected from prevention of herpes zoster (including reductions in treatment and in loss of work time for those younger than age 65) and subtracting that from the cost of the vaccine, Dr. Cykert explained.

"Our strategy of targeting 65-year-olds would create the best bang for the buck," he said, because of the high incidence of shingles and the responsiveness to the vaccine at that age.

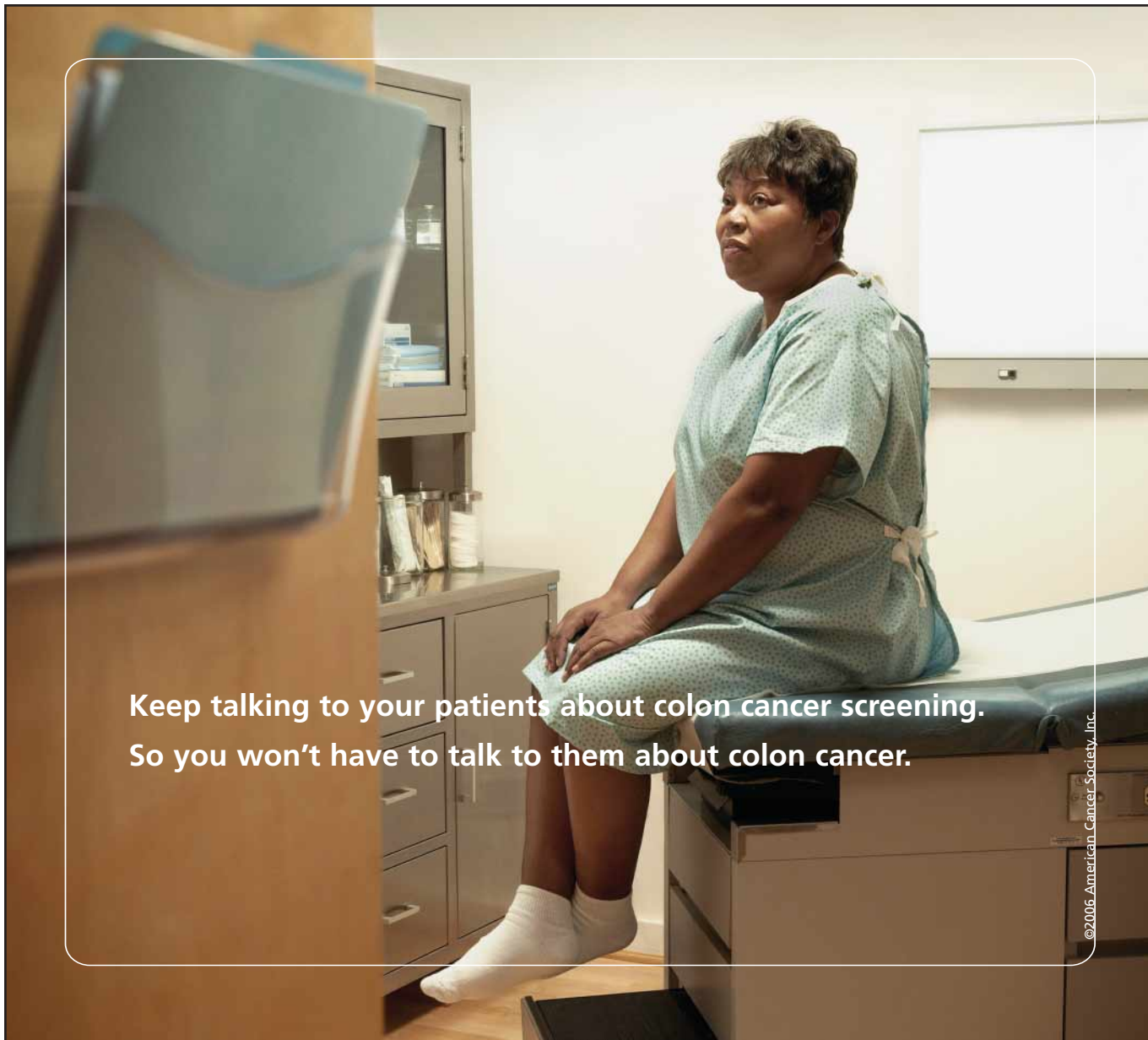
Among a cohort of 65-year-olds, the cost-effectiveness would be \$57,840 per QALY. For all age groups combined, however, when the base model was run assuming lifetime vaccine efficacy, the cost per QALY would be \$92,900. When the duration of vaccine efficacy was limited to 10 years, the base cost per QALY for all age groups would increase to \$97,600, the analysis showed.

If the cost of the vaccine in the base model is reduced to \$313 per unit, the cost meets the \$50,000 per QALY cutoff. For the age-65 model, a vaccine price of \$452 meets the same cutoff.

If the vaccine could be sold for \$100 per dose, the vaccination strategy for 65-year-olds would actually save money, Dr. Cykert said.

According to Dr. Cykert, however, if the vaccine price remains high, other health care priorities would be likely to take precedence over a vaccine that does not actually save lives.

In contrast, if the vaccine is priced "responsibly," he said, many older adults at risk of shingles are likely to benefit from an improved quality of life. ■



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