SCIENCE & TECHNOLOGY

Curing Cancer

"Cure" by Haydn Bush, in *Science 84* (Sept. 1984), P.O. Box 3207, Harlan, Iowa 51593-2053.

To judge by press releases and newspaper headlines, the cure rate for cancer has been improving steadily for years. Actually, writes Bush, director of the London Regional Cancer Centre in Canada, "we're not curing much more cancer than we were a generation ago."

Doctors can claim real progress in effecting cures for a few relatively rare cancers (e.g., childhood leukemia, Hodgkin's disease) but for only two of the more common types, stomach and uterine cancers. The cure rates for the biggest killers—cancer of the lung, breast, colon, and prostate—have improved very little during the last 25 years. What good news there is regarding these diseases, Bush adds, is often misinterpreted.

The survival rate for women with breast cancer, for example, climbed from 57 percent during the early 1950s to 66 percent 20 years later. Bush believes that earlier *detection*, not more effective *treatment*, was behind the change. "Most potentially fatal human cancers," he notes, "eventually kill because they have already spread to distant sites in the body before the disease is diagnosed." Moreover, cancer statistics count patients who live for five years after their diagnosis without a recurrence as "survivors," even though they are at risk for up to 30 years.

The treatment of cancer today is at a comparatively primitive stage, Bush says, and it may be years until substantial gains are made. In the meantime, he favors a diversion of some money from cancer cure studies into research on treatments that are more humane than today's radical surgery and debilitating drug and radiation therapies; these are sometimes of little use and "far worse than the early physical effects of the disease."

RESOURCES & ENVIRONMENT

Learning to Live In a 'Greenhouse'

"Anticipating Climate Change" by Thomas C. Schelling, in *Environment* (Oct. 1984), 4000 Albemarle St. N.W., Washington, D.C. 20016.

At the rate that carbon dioxide (CO_2) is accumulating in the Earth's atmosphere today, mankind is virtually certain to suffer the results of a "greenhouse effect" within a century. But the obvious solution—to cut back on carbon dioxide output—is not as logical as it seems.

So argues Schelling, a Harvard political economist. Higher atmospheric concentrations of CO_2, chiefly the result of burning such fossil fuels as oil, coal, and gas, would trap heat in the Earth's atmosphere and raise the global temperature. That, in turn, would have two serious effects: a drop in rain and snowfall (though some areas would experi-