



Using digital 3D modeling, radiology researchers found erectile dysfunction may be affected by bike-riding, due to arterial constriction. Rider position and seat design are the key factors.

Weather and distance affect care choices

It's distressing for a woman to learn that she has breast cancer, even if it is caught early. First comes the shock of the diagnosis. Then comes the realization, if she has early-stage cancer, that she has to choose between two treatments with similar long-term survival: a total mastectomy or breast-conserving surgery followed by radiation therapy. For women who live in rural areas, that decision is complicated by the inconvenience, cost, and, in some cases, impossibility of a long, daily commute to a radiation treatment facility. Then add wintry weather to the mix, and the decision can be downright devastating.

Basis: This quandary was the basis for a research project led by Maria Celaya, the assistant director of operations at the New Hampshire State Cancer Registry (NHSCR), based in the Department of Community and Family Medicine at Dartmouth. The project was influenced by similar research done by E. Robert Greenberg, M.D., Celaya's mentor and former director of both the NHSCR and Dartmouth's Norris Cotton Cancer Center, regarding lung cancer treatment decisions. "I was doing the M.P.H. program at [the University of New Hampshire], and Dr. Greenberg had suggested that I focus on early-

stage breast cancer," Celaya explains.

She based her study on data collected by the NHSCR, which maintains a database documenting cancer incidence in the state. Celaya, Greenberg, and others—including the registry's director, Judy Rees, M.P.H., and manager, Bruce Riddle—identified 2,795 women diagnosed from 1998 to 2001 with stage I or II breast cancer, then examined their places of residence, dates of diagnosis, and treatment choices. The team also identified all facilities that provide radiation treatment in New Hampshire and surrounding states. "Then Bruce [Riddle] calculated the straight-line distance between the nearest radiation facility and the residence of the patient," explains Rees.

They found that the farther women lived from a radiation facility, the less likely they were to choose breast-conserving surgery. In addition, says Rees, among those who chose the breast-conserving surgery, follow-up "radiation was less likely to be used by women 20 miles or more away from the radiation treatment facility . . . who were diagnosed during the winter." That, the authors noted in their paper, could put women "at increased risk of recurrence and lower survival."

Cold: The findings, published in *Cancer Causes and Control*, were disturbing but not surprising to Celaya, who "was expecting that New Hampshire's unique characteristics of a large rural population and cold winters would affect treatment choices for women."

She and her colleagues hope that their work will influence the planning of future cancer treatment centers. "There's been growing recognition that people do not have equal access to health care for a variety of reasons," observes Riddle. "As people try to rationalize health-care allocations . . . this is something that needs to be addressed." ANN PATTERSON



JON GILBERT FOX

Rees, left, and Celaya found that snow may be scenic, but it can also affect cancer-care choices.

Take this to heart

Wider use of a new cardiovascular screening test—for a substance called c-reactive protein (CRP)—"doesn't make much sense," according to Steven Woloshin, M.D., and colleagues. DMS researchers reported in the *Journal of General Internal Medicine* that adding CRP testing to routine assessments would increase the number of Americans eligible for cholesterol-lowering medication by about 2 million if used judiciously and by over 25 million if used broadly—with most of those people being at low risk for heart problems. Doctors should instead focus on treating high-risk patients, the authors argued.



Totally random

A team of Dartmouth researchers compared four different statistical methods for analyzing data in observational studies—that is, studies of patients who have already been treated, rather than randomly assigned to get one or another treatment. Observational studies are less expensive and less cumbersome, but, said the authors in the *Journal of the American Medical Association*, caution needs to be used in interpreting their findings. They analyzed a single set of data four ways; a method called instrumental variable analysis proved most consistent with the findings of randomized studies.

