

Drop in cancer deaths tied primarily to gains in behavior and screening

December 2 2008

Improvements in behavior and screening have contributed greatly to the 13 percent decline in cancer mortality since 1990, with better cancer treatments playing a supporting role, according to new research from David Cutler of Harvard University.

While not the first to report a long-term decline in cancer mortality, Cutler's is the first study to examine the reasons for this decline. Published in the fall edition of the *Journal of Economic Perspectives*, Cutler's paper, titled "Are We Finally Winning the War on Cancer?", looks at data for lung, colorectal, breast and prostate cancer.

"The decline in cancer is much larger than we commonly understand," says Cutler, who is Otto Eckstein Professor of Applied Economics in Harvard's Faculty of Arts and Sciences, "and thus the benefits to society from reduced cancer mortality are even bigger than previously thought."

Cutler added that it had been unclear which of the many steps that have been taken to fight cancer have been most effective. In this research, he found that while reasons for the decline vary by type of cancer, screening and behavioral changes have contributed both equally and substantially.

Behavioral changes have had the greatest effect on lung cancer, Cutler says, where smoking cessation has had a tremendous impact. Other types of cancer have not been similarly impacted by the reduction in smoking. "The immense effort put into reducing smoking the past few decades has

really paid off," Cutler noted.

In contrast, screening has proven especially effective in early detection of colorectal and breast cancer, but less so in identifying lung or prostate cancer. Colonoscopies also have a preventive value in removing polyps, and so preventing the formation of colon cancer.

"Among types of cancer where screening is valuable," Cutler says, "the question becomes: How can we increase the number of people who are being screened? Although costly, many types of screening are an enormous value."

Cutler found that treatment of cancer after its detection has been the least decisive of the three factors in cutting the cancer mortality rate.

"Drugs that are quite expensive have been shown to extend life by only a few months among patients with metastatic cancer, which raises questions about the relative value of such costly treatments," he says. "In contrast, while screening can be expensive, increased screening has led to significantly longer life expectancy for those diagnosed early with colorectal or breast cancer."

Cutler examined these four types of cancer because they are the most common, with abundant data on patient outcomes. Data was examined from population registries of individuals with cancer, as well as clinical literature about the effectiveness of behavioral changes, screenings and treatment.

"We typically think of the war on cancer as developing a new cure," says Cutler. "An equally important question is figuring out how we can take what we know and make it work for more people. We should think about the war as not just developing the next weapon, but using what we have in a smarter way. A health care system working for cancer would

prevent people from getting it, catch it early, and then treat people accordingly. If our healthcare system was focused in this way, there could be a huge benefit."

Source: Harvard University

Citation: Drop in cancer deaths tied primarily to gains in behavior and screening (2008, December 2) retrieved 20 April 2024 from <https://medicalxpress.com/news/2008-12-cancer-deaths-tied-primarily-gains.html>

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