

Decline of hormone therapy decreases breast cancer cases, analysis finds

December 9 2009, By John Fauber

The declining use of hormone therapy among women has led to 6,000 fewer invasive breast cancer cases a year, according to an analysis by researchers at the University of Wisconsin-Madison. The research quantifies and advances what doctors had suspected: that the dramatic decline in hormone use beginning in 2002 was the cause of a reduction in the breast cancer rate that began the following year.

The finding, which was presented at a medical meeting Monday, comes as a separate report shows that cancer rates and cancer deaths for men and [women](#) in the United States have dropped every year for several years.

New cancer cases dropped 0.7 percent a year from 1999 to 2006 while cancer deaths dropped 1.6 percent a year from 2001 to 2006, according to a report from the National Cancer Institute.

"The patterns are going in the right direction, but there still is a large cancer problem in the U.S.," said lead author Brenda Edward, a researcher with the institute.

One factor might be the declining use of hormone therapy products by women.

In 2002, a large clinical trial of estrogen-progestin was stopped early when more breast cancers were detected in women taking the hormone pill Prempro. The trial led to many women discontinuing use of

Prempro. Subsequent research also linked the pill to a higher rate of death from [lung cancer](#).

A year or so after the trial, known as the Women's Health Initiative, the invasive [breast cancer](#) rates unexpectedly dropped from an annual rate of 138 per 100,000 women in 2001 to 125 per 100,000 in 2003 where it remained for several years.

Because hormones can fuel breast cancer tumors, doctors suspected the drop might have something to do with a reduction in hormone use from 61 million prescriptions in 2001 to 21 million in 2004.

On Monday, UW researchers quantified the effect.

Using a [mathematical model](#), they found that 42 percent of the decline in invasive breast cancer from 2002 to 2003, or 6,000 cases, was due to less use of hormones. What accounted for the rest of the decline is not known. The research was presented at the American Association for Cancer Research Frontiers in Cancer Prevention Research Conference in Houston.

"We think that hormones are promoting the growth of tumors rather than causing the tumor," said lead researcher Brian Sprague, a postdoctoral fellow at the UW Carbone Cancer Center.

The Women's Health Initiative found about a 25 percent higher risk of breast cancer in the estrogen/progestin users.

A 2007 report in the *New England Journal of Medicine* first raised the issue of a decline in breast cancer cases and decreasing hormone use. The report noted that hormone use was the only one of several risk factors that had changed substantially from 2002 to 2003. The research puts a number on what doctors have suspected for years, said

Christopher Chitambar, a breast cancer specialist at Froedtert Hospital who was not involved in the study.

"It is a strong case for incriminating hormone replacement therapy," said Chitambar, a professor of medicine at the Medical College of Wisconsin in Wauwatosa. "Estrogen can fertilize breast cancer cells."

Chitambar said he has seen lots of breast cancer cases in women who had been on hormones, which are immediately stopped when breast cancer is detected.

Chitambar and Scott Maul, medical oncologist with Oncology Alliance, said for some women, [hormone therapy](#) is needed because their menopausal symptoms are severe.

The therapy should be at the lowest possible dose for the shortest period of time in those cases.

"That's probably a minority of women," said Maul, who was not involved in the study. "For the majority of women, [hormone](#) replacement therapy is not a good idea."

While the incidence of all cancers for men and women has dropped in recent years, the improvement was uneven. For men, the drop was 1.3 percent a year from 2000 to 2006. For women, there was a 0.5 percent annual drop from 1998 to 2006.

For men, the incidence of prostate, lung, oral, stomach, brain and colorectal cancers dropped while kidney, liver, esophagus, leukemia, myeloma and melanoma increased.

For women, incidence rates for breast, colorectal, uterine, ovarian, cervix and oral cancers decreased while lung, thyroid, pancreas, bladder,

kidney, non-Hodgkin lymphoma, melanoma and leukemia increased.

One of the brightest trends has been significantly declining rates and deaths for men and women from colorectal cancer, the second-leading cause of cancer deaths in the U.S.

For instance, the colorectal cancer death rate dropped 3.9 percent a year for men from 2002 to 2006. For women, it dropped 3.4 percent a year from 2001 to 2006.

"The extraordinary progress on colorectal cancer shows what can be achieved ... ," John Seffrin, chief executive officer of the American Cancer Society, said in a statement.

Much of the mortality improvement is attributed to increased screening and early detection.

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