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WOMAN'S RECOVERY FROM ADVANCED MELANOMA COULD HELP GUIDE RESEARCH

Combining the immune-based drug ipilimumab with targeted radiation therapy improved one advanced melanoma patient's ability to fight the deadly skin cancer, a new study says.

The treatment triggered a strong immune response, which resulted in shrinkage of both the tumor treated with radiation as well as tumors located at distant locations in the body, according to the study, published in the March 8 issue of the *New England Journal of Medicine*.

The patient was followed for seven years, from her initial diagnosis of melanoma in 2004, through a series of treatments, to her eventual disease regression in April 2011.

According to health experts, this is a rare documented case of an immune response called the "abscopal effect" that can occur in cancer treatment.

Although the results were dramatic in this patient, one expert said such cases are isolated.

"Although this patient represents a successful outcome, it does not mean that this treatment approach will be as effective in other patients," said Dr. Craig Devoe, oncologist at the Monter Cancer Center, part of the North Shore-Long Island Jewish Health System, in Lake Success, N.Y. He was not involved in the study.

In this case, the patient had a preexisting immune response to an antigen called NY-ESO-1. This immune response occurs in certain cancer patients and they are more likely to respond to ipilimumab than others, explained the scientists at the Ludwig Institute for Cancer Research and Memorial Sloan-Kettering Cancer Center in New York City.

"The use of radiation therapy modulated the patient's immune system, resulting in an increased antibody response to one portion of the NY-ESO-1 protein, as well as increased antibody responses to other antigens," research leader Dr. Jedd Wolchok said in a Ludwig Institute news release. Wolchok is associate attending physician and director of Immunotherapy Clinical Trials at Memorial Sloan-Kettering, and director of the Ludwig Institute/Cancer Research Institute Cancer Vaccine Collaborative.

At the same time that the therapy was evoking this strong immune-system response, "the radiation lowered the level of a population of [immunosuppressive] cells, allowing the immune system to function more robustly, leading to better recognition and control of the disease," Wolchok said.

This case report illustrates the power of harnessing the human immune system to fight cancer, the researchers said.

"The immune system differs in each of us," Wolchok said. "In studying one person's response, we were able to carefully investigate the clinical findings with in-depth laboratory studies, which suggested that a change in the immune system was vital to the successful results."

This case has sparked interest in clinical trials to test this treatment approach for melanoma and prostate cancer, the research team said.

Devoe agreed that the woman's successful treatment may offer intriguing new avenues of research.

"Dr. Wolchok and his team are outstanding researchers in the field of melanoma," Devoe said. "The immune system has been and continues to be one of the most important aspects of melanoma treatment."

Devoe believes the case of this one patient "does increase the evidence that the NY-ESO-1 protein is a very important immune system target and further study of this particular phenomenon is needed."