Rare angiosarcoma tumors respond well to immunotherapy combination

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SWOG Cancer Research Network investigator Dr. Michael Wagner. Credit: Seattle Cancer Care Alliance

Researchers from SWOG Cancer Research Network, a cancer clinical trials group funded by the National Cancer Institute's (NCI) Division of Cancer Diagnosis and Treatment (DCTD), part of the National Institutes of Health, have shown that the immunotherapy combination of ipilimumab and nivolumab shrinks rare angiosarcoma tumors in 25 percent of all patients, with some having an even stronger response to the drug combination.

Results of the SWOG study, led by Michael Wagner, MD, of the University of Washington, the Fred Hutchinson Cancer Research Center, and the Seattle Cancer Care Alliance, and conducted by the NCI National Clinical Trials Network (NCTN), were shared in a virtual oral presentation today at The Society for Immunotherapy of Cancer's (SITC) 35th Anniversary Annual Meeting. The findings provide the first rigorous evidence that immunotherapies can treat angiosarcoma, a rare cancer of blood and lymph vessels that often develops in the skin. About 500 Americans are diagnosed with angiosarcoma each year.

Wagner's study is part of a path-breaking clinical trial called DART, short for Dual Anti-CTLA-4 & Anti-PD-1 blockade in Rare Tumors. Launched in 2017 with sponsorship by the NCI, DART is proving a successful model for the study of rare cancers. Using an innovative "basket" design, DART tests the effectiveness of the ipilimumab and nivolumab combination in a variety of rare tumor types, thanks to a Cooperative Research and Development Agreement (CRADA) between the NCI and Bristol-Myers Squibb, the maker of both immunotherapy drugs. Through DART, the drug combination has completed testing in 36 cohorts of rare cancer patients, with another 12 cohorts still taking the drugs, and four cohorts temporarily closed for data analysis. Promising results have previously been reported in patients with other rare cancers, including neuroendocrine tumors and metaplastic breast cancer, while results from patients with thyroid tumors will also be reported at the 2020 SITC meeting.

An expert in sarcoma, Wagner wanted to replace anecdotal reports that immune checkpoint inhibitors like ipilimumab and nivolumab can successfully treat angiosarcoma with a prospective phase II trial. Wagner and his SWOG team enrolled 16 patients, all with advanced or inoperable cancer and all of whom were previously treated with chemotherapy. They found that 25 percent of patients saw their tumors shrink, regardless of where in the body their angiosarcoma occurred. The news was even better for patients whose cancer presented on the face or scalp. Those patients saw a 60 percent response rate to the drugs. In some cases, the response was long lasting. Two patients remain cancer free one year after treatment.

"These results open a new way to treat angiosarcoma—with immunotherapy," Wagner said. "At SWOG, we're planning a larger follow-up study to see if this combination can work as a first line of treatment."

The SWOG team also found that most patients—75 percent—experienced side effects from the drugs and 25 percent experienced severe side effects.

Provided by SWOG