Immunotherapy agent yields full and partial remissions in aggressive non-Hodgkin lymphomas

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An immunotherapy drug able to induce lasting remissions in classical Hodgkin lymphoma may be equally effective in patients with either of two rare, aggressive forms of non-Hodgkin lymphoma, results from a small case series indicate. Dana-Farber Cancer Institute investigators who treated the patients will report their findings at the 58th annual meeting of the American Society of Hematology (ASH) on Monday, December 5, 2016.

The research involved five patients with recurrent or refractory primary central nervous system lymphoma (PCNSL) or primary testicular lymphoma (PTL) who were treated with nivolumab, a drug that blocks a key protein, PD-1, on immune system T cells. The blocking allows the T cells to ignore signals that would dampen their attack on the lymphoma cells. Four of the patients had a complete response to the drug - showing no evidence of tumor on brain imaging - and one had a partial response.

Both PCNSL and PTL are aggressive non-Hodgkin's lymphomas that occur outside the lymph nodes and respond poorly to conventional therapy. Nearly half of patients with PCNSL relapse within two years of diagnosis, and almost half of patients with PTL have their disease worsen after initial chemotherapy. For patients whose disease recurs or resists frontline therapy, there are few treatment options.

Nivolumab has had striking success in clinical trials involving patients
with classical Hodgkin lymphoma. Results from phase 1 and 2 trials show that approximately 70 percent of patients, all with drug-resistant forms of the disease, had full or partial remissions after treatment with the drug. Researchers in the lab of senior author Margaret Shipp, MD, of Dana-Farber discovered that PCNSL and PTL share a key molecular abnormality with classic Hodgkin lymphoma, leading them to hypothesize that nivolumab could be effective against these diseases as well.

"There have been major advances in treatment of PCNSL, including high-dose chemotherapy and autologous stem cell transplant, particularly for young and healthy patients," said study lead author Lakshmi Nayak, MD, of Dana-Farber. "But because the median age at which patients are diagnosed is 65, transplant is often not an option. Our findings are very encouraging, particularly as the responses to nivolumab in our patients have been durable for more than 10 months."

Based on their laboratory findings and clinical results, investigators have now opened a phase 2 trial of nivolumab in patients with relapsed or treatment-resistant PCNSL and PTL.

Provided by Dana-Farber Cancer Institute


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