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ASCO: Nivolumab treatment in melanoma patients has manageable safety profile

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The monoclonal antibody nivolumab has shown promise as a therapeutic agent, particularly by improving the survival rates of melanoma patients. Jeffrey S. Weber, M.D., Ph.D., director of the Donald A. Adam Comprehensive Melanoma Research Center at Moffitt Cancer Center will be presenting data from a retrospective analysis of the safety of nivolumab in 4 ongoing phase I-III studies in melanoma patients at the 2015 American Society of Clinical Oncology Annual Meeting in Chicago.

Nivolumab targets a protein called the programmed death-1 (PD-1) receptor. The PD-1 pathway plays an important role in controlling the immune system to prevent inadvertent immune cell activation and autoimmune disease. PD-1 is found on immune cells called T cells, while its ligand PD-L1 is expressed on antigen presenting cells. Binding of PD-L1 to PD-1 inhibits the replication and activity of immune cells and prevents an immune response. Melanoma cells express high levels of PD-L1 to avoid immune detection and improve their survival potential.

The Moffitt team and their collaborators analyzed safety data from 576 patients who received at least one dose of nivolumab. They report that drug-related adverse events were primarily low-grade. The most common adverse events included fatigue (25 percent), pruritus (17 percent), diarrhea (13 percent), and rash (13 percent). Grade 3/4 adverse events occurred in 10 percent of the patients, and prior treatment with the CTLA-4 inhibitor ipilimumab did not affect the incidence of subsequent adverse events with nivolumab.

The adverse events that occurred during nivolumab treatment were manageable. Immunomodulatory (IM) drugs were administered to resolve toxicity to 166 out of 474 patients on the phase III studies, with 114 patients receiving corticosteroids. Resolution of symptoms was dependent on the type of adverse event, with a median time of resolution of 3 weeks for hepatic adverse events and 29 weeks for skin adverse events. Only 1 patient out of 21 who had a select grade 3/4 adverse event did not have resolution following IM treatment.

Importantly, treatment with IM agents did not affect response rates; 44 percent of patients who received an IM for an adverse event responded to therapy, while 36 percent of patients who did not receive an IM responded.

The safety analysis of nivolumab in melanoma patients will be presented during a poster discussion session on Monday, June 1, 4:45 to 6 p.m. in room S100bc. There will also be a poster session on Monday, June 1, 1:15 to 4:45 p.m. in S Hall A.

Provided by H. Lee Moffitt Cancer Center & Research Institute