Studies suggest immunotherapy adds punch to earlier attempts

December 2 2018

New drugs that harness the body's immune system to destroy cancer cells appear to increase the effectiveness of later drug therapies for non-Hodgkin and Hodgkin lymphoma patients, new research suggests. This happens, scientists say, even for repeat drug therapies whose initial attempts failed to stop or reverse the disease.

Researchers at NYU School of Medicine and its Perlmutter Cancer Center who led the pair of new studies, both presented Dec. 1 at the annual meeting of the American Society of Hematology in San Diego, say their findings are the first multicenter data to show that even when "second-line" immunotherapy fails to control the disease, it likely "sensitizes" lymphoma patients to better respond to future use of drugs that did not work very well the first time. Few treatment options exist, researchers say, for relapsing non-Hodgkin lymphoma patients.

Both studies involved a review of the medical records of men and women treated between 2012 and 2018 at 17 medical centers in the United States and Canada, all of whom failed to have a lasting response to initial therapy, including stem cell transplantations and/or standard chemotherapy with or without brentuximab vedotin (marketed as Adcentris), a drug that primes the immune system and aids chemotherapy. Subsequent therapy with so-called checkpoint-blockade inhibitors, such as ipilimumab (Yervoy) and nivolumab (Opdivo), were also not successful in controlling cancer spread. When effective, such drugs work by turning off inhibitory switches, or "checkpoints," on immune T cell surfaces, which are known to prevent the immune system

from identifying and attacking tumor cells.

However, in 59 patients with non-Hodgkin lymphoma, 30 responded to additional chemotherapy or other drug treatment after having received checkpoint inhibitors. Of the 29 patients still alive and receiving therapy, 16 have not seen any cancer spread.

In 112 patients with Hodgkin lymphoma who received checkpoint blockade therapy, 81 needed some form of follow-up drug treatment. Sixty-six remain alive, and 30 have not experienced any worsening of their disease.

"These are very high success rates for post-checkpoint blockade therapy, especially in patients for whom several drug therapies have failed, including the same or similar drugs used again after checkpoint therapy," says senior study investigator and hematologist-oncologist Catherine Diefenbach, MD.

Diefenbach, an assistant professor at NYU Langone and clinical director of lymphoma program services at its Perlmutter Cancer Center, cautioned that prospective clinical trials, in which patients are closely monitored from the start of their therapy over long periods of time, are needed before researchers can conclude whether or not checkpoint blockade therapy was responsible for the greater effectiveness of subsequent treatments.

"What our current study strongly suggests, however, is that the benefits of checkpoint blockade therapy are not limited to their initial ability to stop the disease," says lead study investigator Nicole Carreau, MD, a postdoctoral hematology and oncology fellow at NYU Langone and Perlmutter.

Both kinds of lymphoma are cancers of immune cells that help the body

fight off infections and other diseases, says Carreau. Non-Hodgkin lymphoma is more common in the United States, with more than 72,000 new cases diagnosed each year (with more than 20,000 deaths from the disease), compared with about 8,500 for Hodgkin lymphoma (and over 1,000 deaths).

More information: These presentations at the American Society of Hematology Annual Meeting are abstracts #93 and #1626. Abstract #93 is titled Checkpoint Blockade Therapy May Sensitize Aggressive and Indolent Non-Hodgkin Lymphoma to Subsequent Therapy. Abstract #1626 is titled Checkpoint Blockade Therapy May Sensitize Hodgkin Lymphoma to Subsequent Therapy.

Provided by NYU Langone Health