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Drug combination shows promise for newly diagnosed blood cancer patients, study finds

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A new three-drug combination used to treat the blood cancer multiple myeloma may be effective as a front-line therapy for newly diagnosed patients, according to a study led by the University of Michigan Comprehensive Cancer Center.

The drug combination includes a novel proteasome inhibitor called carfilzomib, combined with lenalidomide and low-dose dexamethasone. This is the first study to look at carfilzomib as a front-line treatment of patients with myeloma, a type of cancer that arises in the plasma cells.

Initial results of the phase I study were presented at the American Society of Hematology Annual Meeting and Exposition.

"This combination treatment appears to deliver everything we expected and more. We have seen no neurotoxicity and fantastic efficacy, the best reported to date," says study author Andrzej Jakubowiak, M.D., Ph.D., director of the multiple myeloma program at the University of Michigan Comprehensive Cancer Center.

The study, which still is accruing participants, has enrolled 31 people to date. All patients responded to this combination, measured by at least a 50 percent reduction of the disease, and the disease was completely or nearly eliminated in a significant portion of patients.

Responses were rapid, and the depth of response continued to improve with additional treatment. Of patients who completed eight cycles of

therapy, more than two-thirds achieved a complete response, meaning they showed little or no signs of cancer. These response rates appear to be higher than those achieved by the best current regimens in newly diagnosed multiple myeloma.

After a median follow-up of six months, all patients were alive with no progression of their cancer.

Researchers found that the three-drug combination, called CRd, was well-tolerated, with few serious side effects. Most notably, peripheral neuropathy -- which is marked by numbness or tingling of the fingers and toes and can cause significant pain, depending on the severity -- was infrequent and mild with this treatment. This side effect typically limits extended use of currently available multiple myeloma treatments and is often the reason patients discontinue a therapy.

The study also included patients who were eligible for a stem cell transplant. The researchers found that these patients were able to remain on CRd treatment and achieved responses similar to or better than those observed after a stem cell transplant. This outcome delayed the need for a stem cell transplant in these patients.

"Newly diagnosed myeloma is most sensitive to treatment. A great response in the initial phase of treatment is critical because it projects how long patients will remain in remission, as well as their overall survival. Patients have a better chance of living longer if their response to initial treatment is better," says Jakubowiak, associate professor of internal medicine at the U-M Medical School.

Carfilzomib has recently emerged as an important drug in treatment of multiple myeloma. It has previously been tested as a single-agent in patients who have exhausted all available treatment options and in relapsed disease. Currently, a Phase III trial is ongoing looking at CRd

compared with lenalidomide and low dose dexamethasone alone for patients with relapsed multiple myeloma.

Multiple myeloma statistics: 20,180 Americans will be diagnosed with multiple myeloma this year and 10,650 will die from the disease, according to the American Cancer Society

More information: Reference: 52nd American Society of Hematology Annual Meeting and Exposition, Dec. 4-7, 2010, Orlando, Fla.

Provided by University of Michigan Health System