



Carbone Cancer Center
UNIVERSITY OF WISCONSIN
SCHOOL OF MEDICINE AND PUBLIC HEALTH

For Release:

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New study to create and test a personalized vaccine against multiple myeloma

MADISON, Wis. — The UW Carbone Cancer Center is launching a clinical trial that will create a customized vaccine using a patient's own tumor and immune cells, in order to prevent myeloma relapse.

This is one of the first, large-scale, clinical trials in an exciting new area in oncology — making tumor specific vaccines using both cancer and cancer-fighting cells collected from the patient.

"This trial is taking personalized medicine to the next level, by making a vaccine from the patient's own tumors," says Dr. Natalie Callander, associate professor of medicine. She will be heading the UW Carbone effort, which is one of 15 cancer centers nationwide who are part of the study.

Multiple myeloma is a type of blood cancer that can be treated, but not cured. In the new trial, newly diagnosed patients will have tumor cells removed from their bone marrow and frozen.

After that, they will go through standard chemotherapy to lessen the cancer burden, then a self-donated bone marrow transplant to restore their immune system. Nevertheless, even with the best of current treatments, multiple myeloma eventually returns. This is where the new trial begins.

About three months after the bone marrow transplant, patients in the treatment arm will have their frozen tumor cells fused with freshly harvested blood cells to create a vaccine that will identify and kill the myeloma cells. Because the vaccine is made by cells from the patient's own body, researchers expect it will be especially effective at stimulating an immune response that will locate and kill myeloma cells when they start to develop. These cellular vaccines will be manufactured by senior medical technicians at Clinical Hematopoietic Cell Processing Lab under the supervision of lab director Dr. Peiman Hematti.

"We're trying to train the immune system to be constantly surveying to identify and wipe out the re-emerging cancer cells," Dr. Callander says. Half of the patients enrolled in the study will receive a vaccine and all patients will receive standard maintenance with a drug called lenalidomide (Revlimid).

Even patients assigned to the non-vaccine arm of the trial will have their tumors frozen, so that if the vaccine proves to be a success, they can have the chance to receive their own personalized vaccine generated after the trial concludes, Callander says.

Newly diagnosed multiple myeloma patients interested in the trial can contact Dr. Callander at (608) 265-8690 or nsc@medicine.wisc.edu.

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