

Radioimmunotherapy could extend lives of advanced lymphoma patients

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A new patient protocol for aggressive and recurrent lymphoma that combines intensive chemotherapy and radioimmunotherapy (RIT) may become the most powerful cancer-killing therapy available, with the hope that patients' lymphoma can be eradicated as they prepare for bone marrow transplant, say researchers at the 2013 Annual Meeting of the Society of Nuclear Medicine and Molecular Imaging. In a study presented at the meeting, survival rates without recurrence improved with the addition of RIT, with some having a 100 percent chance of survival over two years.

"This is a unique randomized study aimed at evaluating a novel treatment approach in patients who have relapsed and [aggressive lymphoma](#) with a grave prognosis," said S. Tzila Zwas, MD, professor of nuclear medicine at Sackler School of Medicine, Tel-Aviv University, and Sheba Medical Center in Ramat Gan, Israel. "Currently the best choice for these patients is [bone marrow transplantation](#) preceded by high dose chemotherapy with a preparation called BEAM to enhance their response to this engraftment treatment. Here we are studying the effectiveness of a new treatment adding targeted RIT to this standard in order to improve patients' survival."

BEAM is a high-dose chemotherapy—named after its drug constituents carmustine (BiCNU), etoposide, [cytarabine](#) (arabinoside) and melphalan—developed to treat invasive bone marrow cancer. This research compares standard BEAM with BEAM and the addition of RIT with Y-90 ibritumomab tiuxetan (Zevalin), a radionuclide that emits a

cancer-killing dose of radiation. This allows doctors to monitor how patients respond to therapy. The new treatment combination is known as Z-BEAM.

In this two-part multicenter prospective study, a total of 43 patients with remaining or relapsed lymphoma were randomized and received one of the two possible treatments prior to [bone marrow transplant](#). Patients who underwent BEAM chemotherapy alone had a 43 percent chance of survival without [cancer recurrence](#), whereas those who received Z-BEAM were shown to have a 64 percent chance of survival, a significant improvement for lymphoma patients. Prognosis varied widely depending on the circumstances of disease and patient age, but those who did not have limiting factors and received Z-BEAM were shown to have a 100 percent chance of survival at two-year follow-up.

"The major significance of this study is in its encouraging overall survival rate—results improved to survival of more than two years in increasing numbers of patients, giving them a better chance overall with very low side effects with Z-BEAM compared to BEAM alone, which appeared to be rather inferior in its results during this study," said Zwas, who also mentioned that further studies are required to expand this regimen into general clinical practice.

Approximately 79,030 people are expected to be diagnosed with lymphoma in 2013. Lymphoma-associated deaths are estimated at 20,200 this year, according to the National Cancer Institute.

Provided by Society of Nuclear Medicine

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