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Drug aids destruction of lymphoma cells

In the cancer called diffuse large B-cell lymphoma, certain white blood cells—B cells—in the lymph tissues proliferate out of control. These malignant immune cells crowd out their healthy comrades and impair a person's ability to fight disease. Standard chemotherapy sends this lymphoma into remission only in 30 to 40 percent of patients.

Scientists in Europe now report that a drug called rituximab, or Rituxan, boosts the remission rate significantly. The researchers treated more than 300 patients who had large B-cell lymphoma, giving about half of them intravenous rituximab plus an infusion of four standard chemotherapy drugs. The other patients received standard chemotherapy alone. Treated in hospitals and clinics in France, Belgium, or Switzerland, all were between age 60 and 80. They each received eight treatments over 6 weeks.

One year after the treatments, 83 percent of the people getting rituximab were still alive, compared with 68 percent of the patients receiving standard chemotherapy. Lymphoma in 76 percent of the survivors on rituximab had gone into complete remission, compared with 60 percent of the other survivors, reports Bertrand Coiffier of the Centre Hospitalier in Lyon, France. Coiffier described the results in San Francisco at the 42nd annual meeting of the American Society of Hematology. He says that when completed sometime next year, the study will include data on 400 patients observed for 18 months.

"I believe this is a landmark study," says Oliver W. Press of the Fred Hutchinson Cancer Research Center in Seattle. He adds that tests on more patients, including younger people, are needed.

Rituximab has been marketed in the United States since 1997. It's a monoclonal antibody, a protein designed to bind to a specific molecule.

Rituximab locks onto CD20 antigen, a molecule found on mature B cells whether or not they're malignant. This binding recruits other immune cells and proteins to kill off these B cells. Because nascent stem cells in the bone marrow lack CD20 antigen, they avoid rituximab's onslaught and then gradually replenish the supply of B cells.

"We think this antibody, plus [chemotherapy], may be a new standard of care for this lymphoma," Coiffier says.

The cause of diffuse large B-cell lymphoma remains unknown. In the United States this year, about 17,000 people, at an average age of 64, will receive a diagnosis of diffuse large B-cell lymphoma, Press notes.

—N. Seppa